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: 15935	**Project Address:** 915 NE Schuyler St
Hearing Date: 10/11/17	**Appellant Name:** Sebastian Busby
Case No.: B-004	**Appellant Phone:** 5033880803
Appeal Type: Building	**Plans Examiner/Inspector:** Emily Hays, Thomas Ng
Project Type: commercial	**Stories:** 9 **Occupancy:** RHd - High Density Residential **Construction Type:** TYPE 1: FIRE RESISTIVE
Building/Business Name: Dahlke Manor (Home Forward)	**Fire Sprinklers:** Yes -
Appeal Involves: Addition to an existing structure	**LUR or Permit Application No.:** 17-194718-LU - Radon Mitigation
Plan Submitted Option: pdf [File 1] [File 2] [File 3] [File 4]	**Proposed use:** Radon Mitigation System

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	OSSC 1812.3.7.5 - Termination
Requires	OSSC 1812.3.7.5 - Termination: SSESDs shall extend through the roof and terminate at least 6 inches (304.8 mm) above the roof and at least 10 feet (3048 mm) from any operable openings or air intake.
Proposed Design	Each radon system's exhaust-point will exhaust sub-soil radon gas to the outdoor air at a distance equal to or greater than 10 horizontal ft from any balcony or operable window AND 10ft or greater distance above grade level, below roofline.
Reason for alternative	Dahlke Manor is a 9-story multifamily high-rise building. Following OSSC 1812.3.7.5 would require routing ventilation pipe to above roofline, which would impact the following: Significantly increased cost of project for client. Would require installation of scaffolding on the building. Would reduce the aesthetic value of the building by exposing ventilation pipe up the entire side of four corners of the building. Would reduce radon mitigation system performance, requiring potentially multiple fans per vent stack to create enough suction in vent pipe to mitigate the radon issue in the building. Increase energy usage by fan units to compensate for very long pipe runs. Increase maintenance costs. The alternative solution asks to terminate sub-soil radon gas 10ft above grade and 10ft of horizontal distance from all operable windows and balconies. Proposed design meets health and life safety requirements of code as radon gas diffuses to a non-harmful concentration within 10ft of

the termination point, removing the risk of radon re-entering living spaces or pedestrians being exposed. Gas will be expelled at a 90' angle away from building, removing risk of water vapor accumulate or irradiation of building materials.

APPEAL DECISION

Termination of radon vent: Granted provided a minimum of 30" x 30" clear space is maintained in front of the fan and a minimum of 36" x 36" is maintained in front of the electrical disconnect.

Appellant may contact John Butler (503-823-7339) 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 180 calendar days of the date this decision is published. For information on the appeals process and costs, including forms, appeal fee, payment methods and fee waivers, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

PROJECT ADDRESS
915 NE SCHUYLER ST
PORTLAND, OR 97204

LEGAL DESCRIPTION
HOLLADAYS ADD, BLOCK 254, LOT 1-8
R-182554

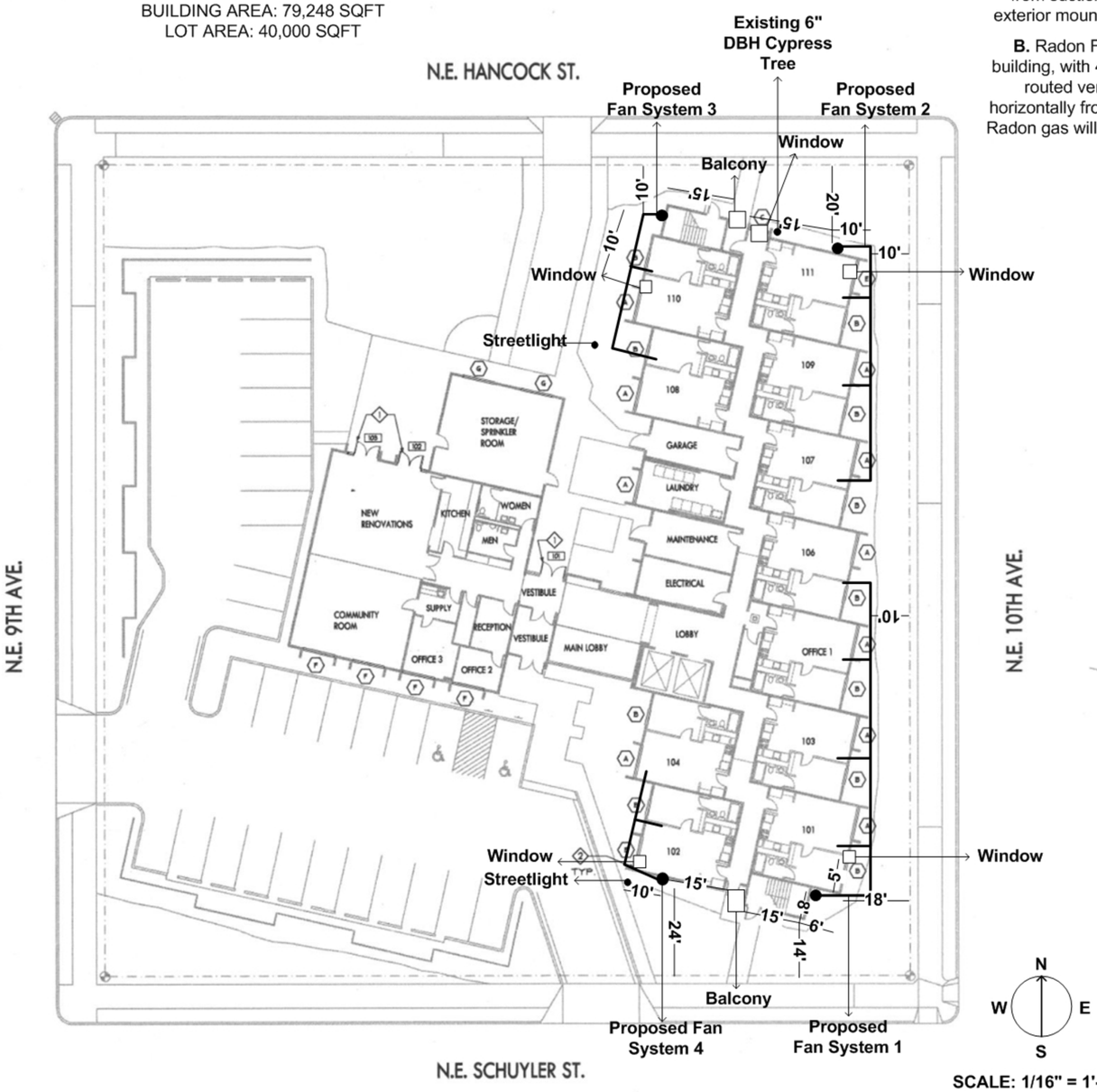
BUILDING AREA: 79,248 SQFT
LOT AREA: 40,000 SQFT

Dahlke Manor Radon Mitigation Project

● **Proposed Exterior Mounted Radon Fan & Exhaust Point**
— **Proposed Sub-Grade Radon Vent Pipe**

A. 3" Sub-Grade Schedule-40 PVC radon vent pipe will penetrate through sub-grade foundation wall from exterior of building in 11 locations to ventilate sub-soil radon gas from below building. Sub-grade 3" vent pipe will connect to 4" sub-grade vent pipe main from suction points, to be routed to one of four exterior mounted above-grade radon exhaust fans.

B. Radon Fans to be mounted on exterior of building, with 4" Schedule-40 PVC vent pipe to be routed vertically 10' above grade, and 10' horizontally from operable windows and balconies. Radon gas will be exhausted to diffuse into outdoor air at these locations.



SCALE: 1/16" = 1'-0"

1 1ST FLOOR PLAN / SITE PLAN
SCALE: 1/16" = 1'-0"

Original Plans
William F Hart Jr

2 2ND - 9TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

FLOOR PLAN LEGEND

(A) WINDOW TYPE REFERENCE SYMBOL
SEE SHEET A-3 FOR WINDOW TYPES.

(D) DOOR TYPE REFERENCE SYMBOL
SEE SHEET A-3 FOR DOOR TYPES.

FLOOR PLAN GENERAL NOTES

1. EXISTING ALUM. WINDOW FRAMES, SASHES, SCREENS, STORM WINDOWS, & PLASTIC LAMINATE SILLS TO BE REMOVED & REPLACED WITH NEW TYPE VINYL WINDOWS AT WINDOW TYPES 'A' THROUGH 'G'. PREP ROUGH OPENINGS BEFORE INSTALLATION - REMOVE ALL LOOSE MATERIAL, PREPARE SURFACES LEVEL AND SEAL ALL HOLES & CRACKS WITH SEALANT.

2. ALL EXISTING FINISHES TO BE PROTECTED DURING WORK AND PATCHED & FINISHED AS REQUIRED TO MATCH EXISTING AFTER WINDOW INSTALLATION.

3. NEWLY INSTALLED WINDOWS SHALL BE TESTED FOR AIR AND WATER INFILTRATION BY A QUALIFIED TESTING COMPANY COMMISSIONED BY THE OWNER. THE TESTS SHALL BE RANDOM. CONTRACTOR SHALL COORDINATE SCHEDULING WITH THE OWNER AND TESTING COMPANY.

4. THE OWNER WILL RANDOMLY TEST UP TO 12 WINDOWS IN STAGES AS INSTALLATION PROGRESSES. IF ANY OF THE TESTED WINDOWS FAIL THE CONTRACTOR SHALL, AT THEIR EXPENSE, MODIFY THE FAILED WINDOW AND ALL PREVIOUSLY INSTALLED WINDOWS, RETEST THE FAILED WINDOW AND TEST TWO ADDITIONAL WINDOWS. ANY SUBSEQUENT TESTING FAILURES WILL REQUIRE ADDITIONAL MODIFICATION OF ALL WINDOWS & TESTING AS DESCRIBED ABOVE. THE OWNER RESERVES THE RIGHT TO RETEST ANY OR ALL OF THE REPAIRED OR REINSTALLED WINDOWS. CONTRACTOR TO SCHEDULE, ARRANGE FOR AND COORDINATE THE WORK OF TESTING AGENCY.

5. CONTRACTOR TO REMOVE EXISTING APARTMENT AIR CONDITIONERS. OWNER TO STORE & REINSTALL AFTER COMPLETION OF WORK.

FLOOR PLAN KEY NOTES

(1) EXISTING ALUM. STOREFRONT DOORS & RELITES TO BE REMOVED & REPLACED WITH NEW IN CONFIGURATIONS SHOWN. EXISTING MAGNETIC LOCKS & SECURITY HARDWARE TO BE REINSTALLED ON NEW DOOR & RECONNECTED TO SYSTEMS.

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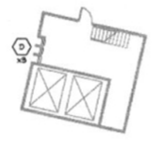

3 10TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

4 11TH FLOOR PLAN
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HOUSING AUTHORITY OF PORTLAND

REGISTERED ARCHITECT
WILLIAM F. HART, JR.
PORTLAND, OREGON
STATE OF OREGON

WINDOW REPLACEMENT AT VARIOUS SITES
THE HOUSING AUTHORITY OF PORTLAND
WILLIAMS PLAZA / DAHLKE MANOR / CIELLO COURT

HAP PROJECT NO: DM 11-4-04-01 PROJECT NO: 20447

SHEET TITLE
FLOOR PLANS & SITE PLAN

DATE: 11/29/2004
DRAWN BY: DH
FILE NAME: C-S Cover Sheet

REVISIONS	DATE

DRAWING NO.
DAHLKE
A-1

SHEET NO.
5 OF 10

Radon Exhaust Point

8'

6'

Operable
Window

2nd Floor

5'

4"

Schedule-40 PVC

Radon Exhaust Fan

12"

12"

Grade-Level

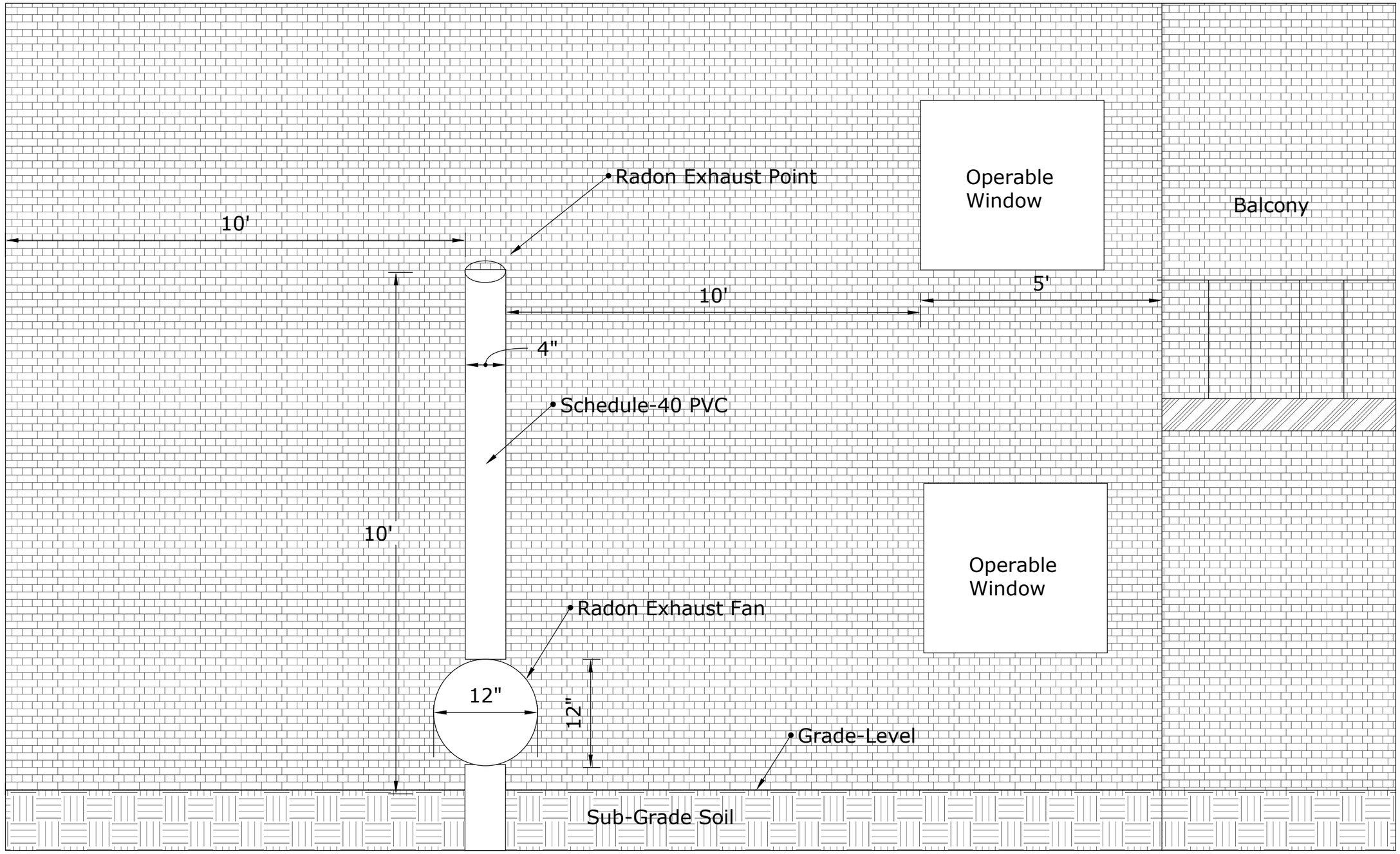
Sub-Grade Soil

Operable
Window

1st Floor

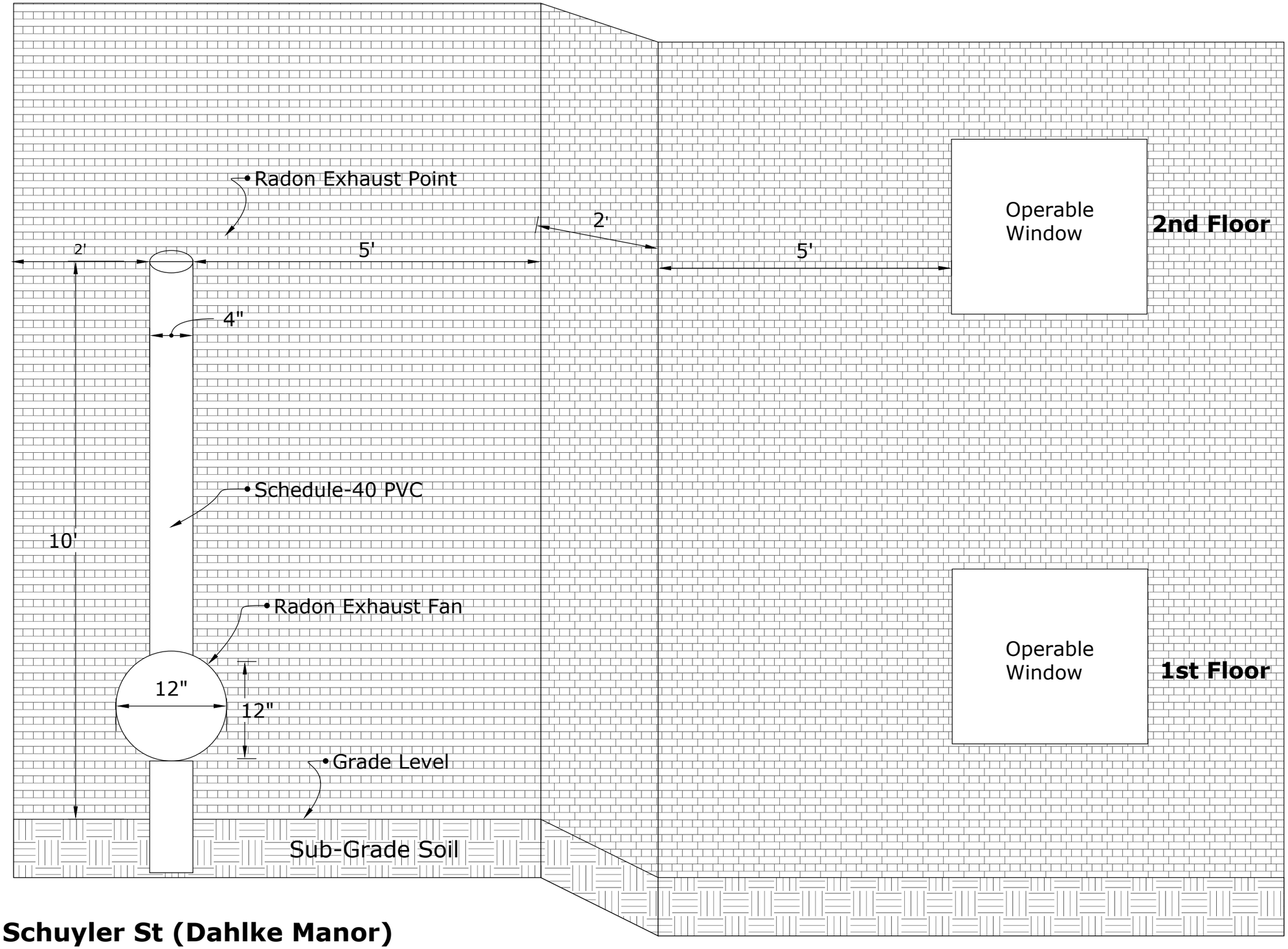
915 NE Schuyler St (Dahlke Manor)
East Elevation, Southeast Corner, Floors 1&2
Proposed Radon System 1 Detail

N



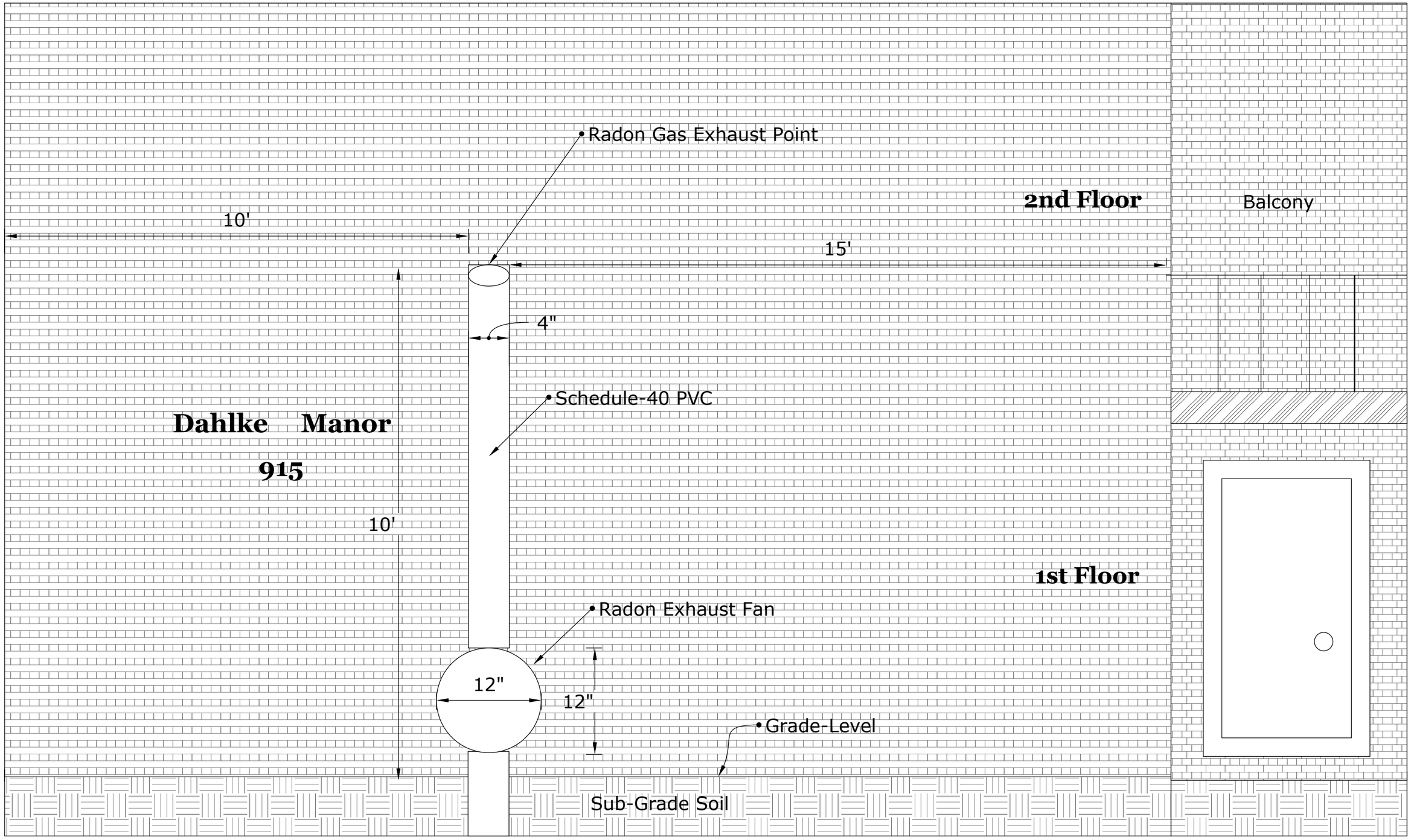
915 NE Schuyler St (Dahlke Manor)
North Elevation, Northeast Corner, Floors 1&2
Proposed Radon System 2 Detail

N

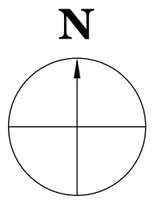


915 NE Schuyler St (Dahlke Manor)
West Elevation, Northwest Corner, Floors 1&2
Proposed Radon System 3 Detail

N



915 NE Schuyler St (Dahlke Manor)
South Elevation, Southwest Corner, Floor 1&2
Proposed Radon System 4 Detail



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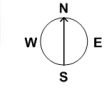
Dahlke Manor Radon Mitigation Project
Landscaping Screen Site Plan

● **Proposed Exterior Mounted Radon Fan & Exhaust Point**

⬟ **Italian Buckthorne (Rhamnus alaternus) Evergreen Shrub**

- Two shrubs per fan location will be planted within 3ft of each other to provide a drought-tolerant evergreen screen for exterior mounted radon fans and vent pipe.



Original Plans
William F Hart Jr

SCALE: 1/16" = 1'-0"

FLOOR PLAN LEGEND

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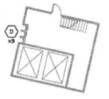

3 10TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

4 11TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

1 1ST FLOOR PLAN / SITE PLAN
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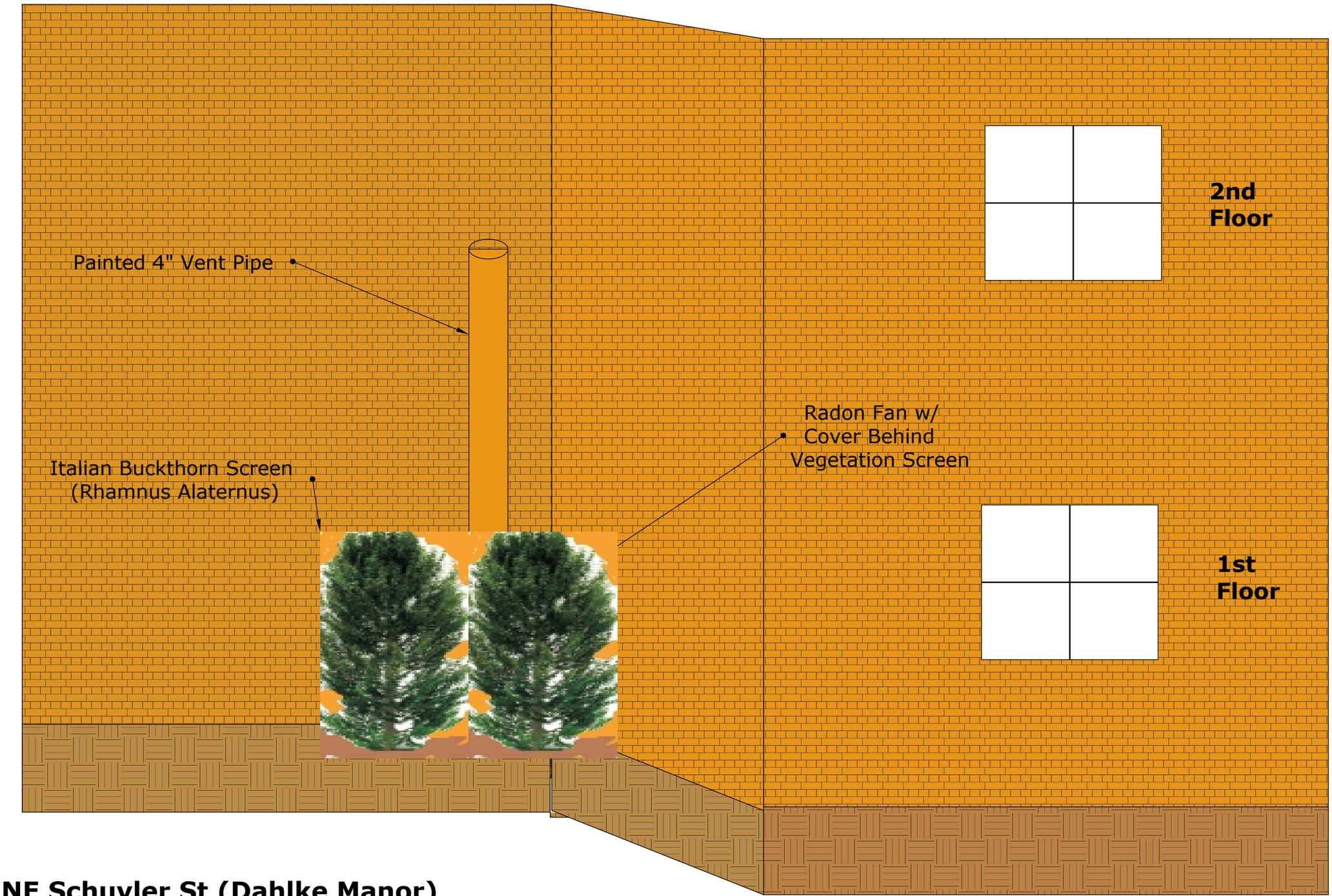


915 NE Schuyler St (Dahlke Manor)
East Elevation, Southeast Corner, Floors 1&2
Proposed Radon System 1 Landscape/Aesthetic Detail

N

Balcony

2nd Floor

Painted 4" Vent Pipe

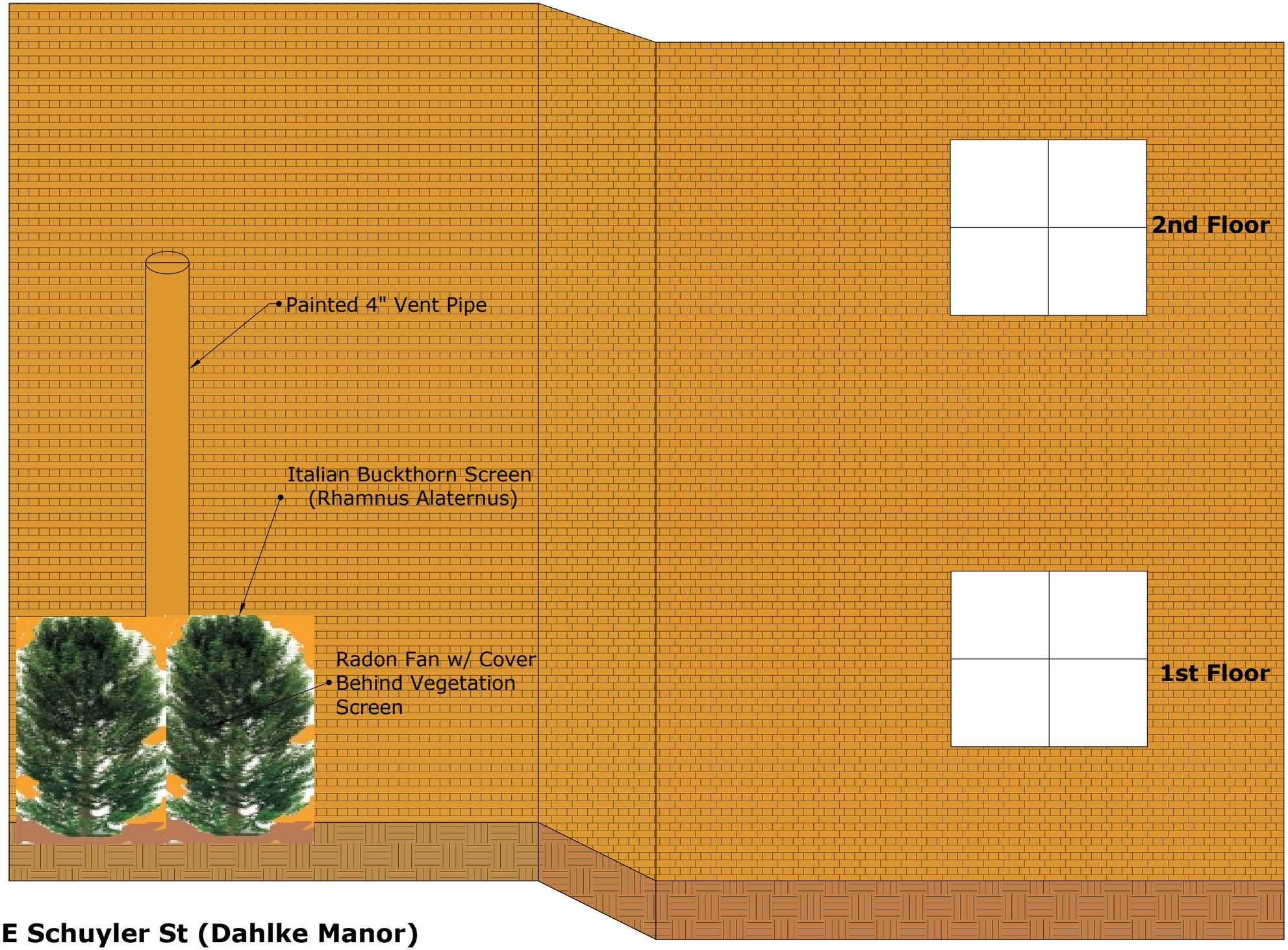
Italian Buckthorn Screen
(Rhamnus Alaternus)

Radon Fan w/ Cover
Behind Vegetation
Screen

1st Floor

915 NE Schuyler St (Dahlke Manor)
North Elevation, Northeast Corner, Floors 1&2
Proposed Radon System 2 Landscaping/Aesthetic Detail

N



915 NE Schuyler St (Dahlke Manor)
West Elevation, Northwest Corner, Floors 1&2
Proposed Radon System 3 Landscaping/Aesthetic Detail

N

2nd Floor

Balcony

Painted 4" Vent Pipe

Dahlke Manor

915

915

Radon Fan w/ Cover
Behind Vegetation
Screen

Italian Buckthorn Screen
(Rhamnus Alaternus)

1st Floor

915 NE Schuyler St (Dahlke Manor)
South Elevation, Southwest Corner, Floor 1&2
Proposed Radon System 4 Landscaping/Aesthetic Detail

N

City of Portland, Oregon
Bureau of Development Services
Land Use Services
FROM CONCEPT TO CONSTRUCTION

Chloe Eudaly, Commissioner
Rebecca Esau, Interim Director
Phone: (503) 823-7300
Fax: (503) 823-5630
TTY: (503) 823-6868
www.portlandoregon.gov/bds

Date: August 29, 2017

To: Interested Person

From: Emily Hays, Land Use Services
503-823-5676 / Emily.Hays@portlandoregon.gov

NOTICE OF A TYPE Ix DECISION ON A PROPOSAL IN YOUR NEIGHBORHOOD

The Bureau of Development Services has approved a proposal in your neighborhood. The mailed copy of this document is only a summary of the decision.
The reasons for the decision are included in the version located on the BDS website http://www.portlandonline.com/bds/index.cfm?c=46429. Click on the District Coalition then scroll to the relevant Neighborhood, and case number. If you disagree with the decision, you can appeal. Information on how to do so is included at the end of this decision.

CASE FILE NUMBER: LU 17-194718 HR – RADON MITIGATION

GENERAL INFORMATION

Applicant: Sebastian Busby | Environmental Works LLC
2634 SE Steele Street
Portland, OR 97202
503-388-0803
sebastian@eworksnw.com

Representative: Leslie Crehan | Home Forward
135 SW Ash Street
Portland, OR 97204-3540
503-802-8463
leslie.crehan@homeforward.org

Site Address: **915 NE Schuyler Street**

Legal Description: BLOCK 254 LOT 1-8, HOLLADAYS ADD
Tax Account No.: R396218540
State ID No.: 1N1E26CD 06400
Quarter Section: 2831

Neighborhood: Irvington, contact Dean Gisvold at 503-284-3885.
Business District: None
District Coalition: Northeast Coalition of Neighborhoods, contact Jessica Rojas at 503-388-5030.
Plan District: None
Other Designations: Non-contributing Resource in the Irvington Historic District
Zoning: **RHd** – High Density Residential with Design Overlay
Case Type: **HR** – Historic Resource Review
Procedure: **Type Ix**, an administrative decision with appeal to the Oregon Land Use Board of Appeals (LUBA).

Proposal:
The applicant is seeking Historic Resource Review for alterations to a non-contributing resource in the Irvington Historic District. Upon conducting a multifamily radon gas survey, the Dahlke Manor building was found to have elevated indoor radon gas concentrations. The proposed radon mitigation system involves sub-grade ventilation pipes that connect to four above-grade ventilation fans mounted on the SE, SW, NE, and NW corners of the building. The visible portions of the system will be painted to match the building color and a cover will be installed over the fan unit. The system will be further obscured from public view by evergreen landscaping.

The applicant has stated that radon is a naturally occurring, radioactive soil gas that can become an environmental health hazard when allowed to accumulate inside buildings; long-term exposure to radon at high levels can increase one's risk of developing lung-cancer. The planned radon mitigation system will remove radon gas from the soil under Dahlke Manor, preventing infiltration of radon gas into livable space. A series of ventilation pipes activated by fan units will exhaust sub-soil radon gas to the outdoor air, 10' above grade and 10' from windows/balconies. Nearby residents and pedestrians will not be exposed to increased levels of radon gas as a result of this mitigation system. Once the concentrated radon gas is exhausted into outdoor air, it diffuses to a low, non-hazardous level.

Historic Resource Review is required because the proposal is for non-exempt exterior alterations on a resource in the Irvington Historic District.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the approval criteria of Title 33, Portland Zoning Code. The relevant approval criteria are:

- Section 33.846.060.G, *Other Approval Criteria*

ANALYSIS

Site and Vicinity: The site is an entire city block bounded on the south by NE Schuyler and on the north by NE Hancock, and NE 9th and 10th Avenues west and east, respectively. The site is developed with a 9-story apartment building built in 1971, a non-contributing resource. The immediately surrounding area is characterized by lands in the RH zone east, southeast, and west of the site, R1a zoning to the north, and CXd zoning to the southwest. Development nearby is characterized by multi dwelling buildings consistent with the higher density residential zoning in the area. Development immediately to the south is characterized by buildings and uses that are allowed outright in the CXd zone.

Zoning: The High Density Residential (RH) is a high density multi-dwelling zone which allows the highest density of dwelling units of the residential zones. Density is not regulated by a maximum number of units per acre. Rather, the maximum size of buildings and intensity of use are regulated by floor area ratio (FAR) limits and other site development standards. Generally the density will range from 80 to 125 units per acre. Allowed housing is characterized by medium to high height and a relatively high percentage of building coverage. The major types of new housing development will be low, medium, and high-rise apartments and condominiums. Generally, RH zones will be well served by transit facilities or be near areas with supportive commercial services. Newly created lots in the RH zone must be at least 10,000 square feet in area for multi-dwelling development. There is no minimum lot area for development with detached or attached houses or for development with duplexes. Minimum lot width and depth standards may apply.

The Historic Resource Protection overlay is comprised of Historic and Conservation Districts, as well as Historic and Conservation Landmarks and protects certain historic resources in the region and preserves significant parts of the region's heritage. The regulations implement Portland's Comprehensive Plan policies that address historic preservation. These policies recognize the role historic resources have in promoting the education and enjoyment of those living in and visiting the region. The regulations foster pride among the region's

citizens in their city and its heritage. Historic preservation beautifies the city, promotes the city's economic health, and helps to preserve and enhance the value of historic properties.

Irvington Historic District Platted in the late Nineteenth Century as the first addition to Portland that employed restrictive covenants, the Irvington area developed intensely with a mix of middle class housing types and sizes during the first two decades of the Twentieth Century. The contributing resources in Irvington range in design character from expressions of the late Victorian Era styles, especially Queen Anne, through the many Period Revival modes of the early decades of the Twentieth Century, to a few early modernist examples. There is also a wide diversity in the sizes of lots and houses. In terms of the streetscape, the numbered north-south avenues in Irvington vary dramatically in width, and they mostly form rather long block faces which the houses generally face. The named east-west street block faces are more consistent in length, almost all being traditional 200' Portland blocks. All are lined with mature street trees. These patterns help to lend the neighborhood the distinctive and homogeneous historic character.

Land Use History: City records indicate that prior land use reviews include the following:
- CU 076-61
- VZ 238-70: Approval to reduce the number of off-street loading berths from the required 2 berths to 1 in order to erect an apartment structure for the low income elderly.
- PC 4909
- PC 5681: Zone change granted upon the condition that one off-street parking space for each four dwelling units shall be provided, and the use of the property shall be limited to an apartment building to be used as public housing for elderly persons, with a maximum of 115 units.
- LU 08-182809: Approval for a wireless facility consisting of 6 panel antennas and 3 small microwave dishes and associated equipment cabinet.
- LU 11-147515 CU HR: Conditional Use and Historic Design Review approval to add antenna and other equipment, and add cabinet to an existing cabinet.
- LU 14-129062 CU HR: Approval of a radio frequency facility in the Irvington Historic District.

Agency Review: A Notice of Proposal in your Neighborhood was mailed on **July 24, 2017**. The following Bureaus have responded with no issues or concerns about the proposal:

- Life Safety Section of BDS, See Exhibit E-1

Neighborhood Review: A Notice of Proposal in Your Neighborhood was mailed on **July 24, 2017**. One written response has been received from either the Neighborhood Association or notified property owners in response to the proposal.
- Dean Gisvold, Chair of the Irvington Land Use Committee, on August 17, 2017 wrote that the ICA land use committee has no objections to the proposal.

ZONING CODE APPROVAL CRITERIA

Chapter 33.846.060 - Historic Resource Review

Purpose of Historic Resource Review
Historic Resource Review ensures the conservation and enhancement of the special characteristics of historic resources.

Historic Resource Review Approval Criteria
Requests for Historic Resource Review will be approved if the review body finds the applicant has shown that all of the approval criteria have been met.

> **Findings:** The site is within the Irvington Historic District and the proposal is for non-exempt treatment. Therefore, Historic Resource Review approval is required. The approval criteria are those listed in *33.846.060 G – Other Approval Criteria*.

Staff has considered all guidelines and addressed only those applicable to this proposal.

33.846.060 G - Other Approval Criteria

1. Historic character. The historic character of the property will be retained and preserved. Removal of historic materials or alteration of features and spaces that contribute to the property's historic significance will be avoided.
2. Record of its time. The historic resource will remain a physical record of its time, place, and use. Changes that create a false sense of historic development, such as adding conjectural features or architectural elements from other buildings will be avoided.
3. Historic changes. Most properties change over time. Those changes that have acquired historic significance will be preserved.
4. Historic features. Generally, deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement, the new feature will match the old in design, color, texture, and other visual qualities and, where practical, in materials. Replacement of missing features must be substantiated by documentary, physical, or pictorial evidence.
5. Historic materials. Historic materials will be protected. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials will not be used.
7. Differentiate new from old. New additions, exterior alterations, or related new construction will not destroy historic materials that characterize a property. New work will be differentiated from the old.

> **Findings:** The subject property is a non-contributing resource, constructed in 1971, and is therefore not considered to be historic. As such, historic character, features, materials and changes will not be affected by the visible portion of the proposed radon mitigation system. The addition of conjectural features or architectural features from other buildings is not proposed. The resource is outside the period of significance and cannot by definition have acquired significance in the context of the Irvington Historic District. *These guidelines have been met.*

6. Archaeological resources. Significant archaeological resources affected by a proposal will be protected and preserved to the extent practical. When such resources are disturbed, mitigation measures will be undertaken.

> **Findings:** There are no known archaeological resources on this site. All penetrations will be sealed with hydraulic cement and trenches filled with native soil. *This guideline has been met.*

8. Architectural compatibility. New additions, exterior alterations, or related new construction will be compatible with the resource's massing, size, scale, and architectural features. When retrofitting buildings or sites to improve accessibility for persons with disabilities, design solutions will not compromise the architectural integrity of the historic resource.
9. Preserve the form and integrity of historic resources. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic resource and its environment would be unimpaired.
10. Hierarchy of compatibility. Exterior alterations and additions will be designed to be compatible primarily with the original resource, secondarily with adjacent properties, and finally, if located within a Historic or Conservation District, with the rest of the district. Where practical, compatibility will be pursued on all three levels.

> **Findings:** The existing 1971 9-story apartment building is of modern design when compared to neighboring residences which are typically single dwellings or 2- to 3-story apartment buildings from the period of significance. Given the height of the subject property, its non-contributing status, and its relative utilitarian design, the proposed locations of the above grade ventilation pipes are appropriate. The building

sits on a full block, making it challenging to screen the ventilation pipes from the public right of way, however, the visible portions of the exterior system will be painted to match the building color and fan cover will minimize visual clutter.

Taking into account soil quality and existing canopy cover, the applicant has further proposed screening the exterior portions of the system with evergreen species italian buckthorn and fraser photinia. Given the low-profile projection of the fan system and additional concealment methods, the proposed alterations will have little effect on the resource. *These guidelines have been met.*

DEVELOPMENT STANDARDS

Unless specifically required in the approval criteria listed above, this proposal does not have to meet the development standards in order to be approved during this review process. The plans submitted for a building or zoning permit must demonstrate that all development standards of Title 33 can be met, or have received an Adjustment or Modification via a land use review prior to the approval of a building or zoning permit.

CONCLUSIONS

The proposed minor alterations will accommodate the needs of the applicant without adverse effect on the character of the Irvington Historic District. The proposed alterations are compatible with the resource, adjacent properties, and the district as a whole. The purpose of the Historic Resource Review process is to ensure that additions, new construction, and exterior alterations to historic resources do not compromise their ability to convey historic significance. This proposal meets the applicable Historic Resource Review criteria and therefore warrants approval.

ADMINISTRATIVE DECISION

Approval of Historic Resource Review for alterations to a non-contributing resource in the Irvington Historic District, including visible portions of a radon mitigation system per the approved site plans, Exhibits C-1 through C-7, signed and dated August 24, 2017, subject to the following conditions:

A. As part of the building permit application submittal, the following development-related conditions (B through C) must be noted on each of the four required site plans or included as a sheet in the numbered set of plans. The sheet on which this information appears must be labeled "ZONING COMPLIANCE PAGE- Case File LU 17-194718 HR." All requirements must be graphically represented on the site plan, landscape, or other required plan and must be labeled "REQUIRED."

B. At the time of building permit submittal, a signed Certificate of Compliance form (https://www.portlandoregon.gov/bds/article/623658) must be submitted to ensure the permit plans comply with the Design/Historic Resource Review decision and approved exhibits.

C. No field changes allowed.

Staff Planner: Emily Hays

Decision rendered by: Emily Hays **on August 24, 2017**
By authority of the Director of the Bureau of Development Services

Decision mailed August 29, 2017

About this Decision. This land use decision is **not a permit** for development. Permits may be required prior to any work. Contact the Development Services Center at 503-823-7310 for information about permits.

Procedural Information. The application for this land use review was submitted on June 28, 2017, and was determined to be complete on July 19, 2017.

Zoning Code Section 33.700.080 states that Land Use Review applications are reviewed under the regulations in effect at the time the application was submitted, provided that the application is complete at the time of submittal, or complete within 180 days. Therefore, this application was reviewed against the Zoning Code in effect on June 28, 2017.

ORS 227.178 states the City must issue a final decision on Land Use Review applications within 120-days of the application being deemed complete. The 120-day review period may be waived or extended at the request of the applicant. In this case, the applicant did not waive or extend the 120-day review period. Unless further extended by the applicant, **the 120 days will expire on: November 16, 2017.**

Some of the information contained in this report was provided by the applicant. As required by Section 33.800.060 of the Portland Zoning Code, the burden of proof is on the applicant to show that the approval criteria are met. The Bureau of Development Services has independently reviewed the information submitted by the applicant and has included this information only where the Bureau of Development Services has determined the information satisfactorily demonstrates compliance with the applicable approval criteria. This report is the decision of the Bureau of Development Services with input from other City and public agencies.

Conditions of Approval. If approved, this project may be subject to a number of specific conditions, listed above. Compliance with the applicable conditions of approval must be documented in all related permit applications. Plans and drawings submitted during the permitting process must illustrate how applicable conditions of approval are met. Any project elements that are specifically required by conditions of approval must be shown on the plans, and labeled as such.

These conditions of approval run with the land, unless modified by future land use reviews. As used in the conditions, the term "applicant" includes the applicant for this land use review, any person undertaking development pursuant to this land use review, the proprietor of the use or development approved by this land use review, and the current owner and future owners of the property subject to this land use review.

This decision, and any conditions associated with it, is final. It may be appealed to the Oregon Land Use Board of Appeals (LUBA), within 21 days of the date the decision is mailed, as specified in the Oregon Revised Statute (ORS) 197.830. Among other things, ORS 197.830 requires that a petitioner at LUBA must have submitted written testimony during the comment period for this land use review. Contact LUBA at 775 Summer St NE Suite 330, Salem, OR 97301-1283 or phone 1-503-373-1265 for further information.

The file and all evidence on this case are available for your review by appointment only. Please call the Request Line at our office, 1900 SW Fourth Avenue, Suite 5000, phone 503-823-7617, to schedule an appointment. I can provide some information over the phone. Copies of all information in the file can be obtained for a fee equal to the cost of services. Additional information about the City of Portland, city bureaus, and a digital copy of the Portland Zoning Code is available on the internet at www.portlandonline.com.

Recording the final decision.
If this Land Use Review is approved the final decision will be recorded with the Multnomah County Recorder.

- *Unless appealed,* the final decision will be recorded after **August 30, 2017** by the Bureau of Development Services.

The applicant, builder, or a representative does not need to record the final decision with the Multnomah County Recorder.

For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625.

Expiration of this approval. An approval expires three years from the date the final decision is rendered unless a building permit has been issued, or the approved activity has begun.

Where a site has received approval for multiple developments, and a building permit is not issued for all of the approved development within three years of the date of the final decision, a new land use review will be required before a permit will be issued for the remaining development, subject to the Zoning Code in effect at that time.

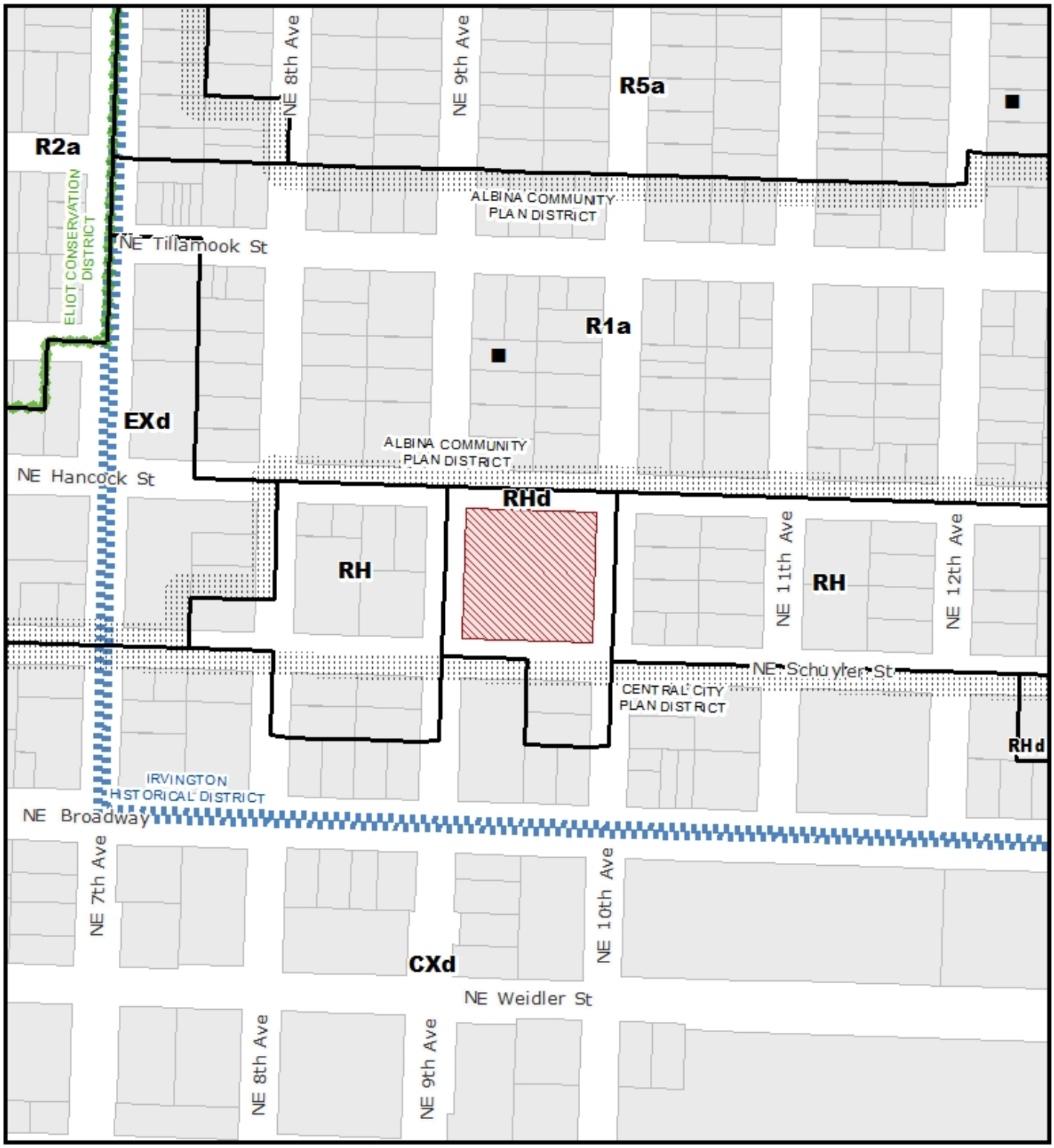
Applying for your permits. A building permit, occupancy permit, or development permit may be required before carrying out an approved project. At the time they apply for a permit, permitees must demonstrate compliance with:

- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code for the City of Portland, and all other applicable ordinances, provisions and regulations of the City.

EXHIBITS
NOT ATTACHED UNLESS INDICATED

A. Applicant's Submittal
   1. Project Proposal Summary
   2. Applicant's Photos
   3. Original Site Plan
   4. Partial East Elevation
   5. Partial North Elevation
   6. Partial West Elevation
   7. Partial South Elevation
B. Zoning Map (attached)
C. Plans/Drawings:
   1. Site Plan (attached)
   2. Partial East Elevation (attached)
   3. Partial North Elevation (attached)
   4. Partial West Elevation (attached)
   5. Partial South Elevation (attached)
   6. Radon System Primary Components & Information
   7. Radon Fan Cover Images
D. Notification information:
   1. Mailing list
   2. Mailed notice
E. Agency Responses:
   1. Life Safety Review Section of BDS
F. Correspondence:
   1. Dean Gisvold, August 17, 2017, ICA Land Use Committee – The ICA land use committee has reviewed this application and has no objections.
G. Other:
   1. Original LU Application
   2. Email Correspondence

The Bureau of Development Services is committed to providing equal access to information and hearings. Please notify us no less than five business days prior to the event if you need special accommodations. Call 503-823-7300 (TTY 503-823-6868).



ZONING

NORTH

THIS SITE LIES WITHIN THE:
IRVINGTON HISTORIC DISTRICT

Site

Historic Landmark

File No.	LU 17-194718 HR
1/4 Section	2831
Scale	1 inch = 200 feet
State ID	1N1E26CD 6400
Exhibit	B Jun 28, 2017

PROJECT ADDRESS
915 NE SCHUYLER ST
PORTLAND, OR 97204

LEGAL DESCRIPTION
HOLLADAYS ADD, BLOCK 254, LOT 1-8
R-182554

BUILDING AREA: 79,248 SQFT
LOT AREA: 40,000 SQFT

Dahlke Manor Radon Mitigation Project
Landscaping Screen Site Plan

- Proposed Exterior Mounted Radon Fan & Exhaust Point
- Italian Buckthorne (Rhamnus alaternus) Evergreen Shrub

- Two shrubs per fan location will be planted within 3ft of each other to provide a drought-tolerant evergreen screen for exterior mounted radon fans and vent pipe.

SCALE: 1/16" = 1'-0"

Original Plans
William F Hart Jr

1 1ST FLOOR PLAN / SITE PLAN
SCALE: 1/16" = 1'-0"

2 2ND - 9TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

3 10TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

4 11TH FLOOR PLAN
SCALE: 1/16" = 1'-0"

FLOOR PLAN LEGEND

(1) WINDOW TYPE REFERENCE SYMBOL
SEE SHEET A-5 FOR WINDOW TYPES

(101) DOOR TYPE REFERENCE SYMBOL
SEE SHEET A-5 FOR DOOR TYPES

FLOOR PLAN GENERAL NOTES

1. EXISTING ALUM. WINDOW FRAMES, SASHES, SCREENS, STORM WINDOWS, & PLASTIC LAMINATE SILLS TO BE REMOVED & REPLACED WITH NEW TYPE VINYL WINDOWS AT WINDOW TYPES 'A' THROUGH 'G'. PREP ROUGH OPENINGS BEFORE INSTALLATION - REMOVE ALL LOOSE MATERIAL, PREPARE SURFACES LEVEL AND SEAL ALL HOLES & CRACKS WITH SEALANT.

2. ALL EXISTING FINISHES TO BE PROTECTED DURING WORK AND PATCHED & FINISHED AS REQUIRED TO MATCH EXISTING AFTER WINDOW INSTALLATION.

3. NEWLY INSTALLED WINDOWS SHALL BE TESTED FOR AIR AND WATER INFILTRATION BY A QUALIFIED TESTING COMPANY COMMISSIONED BY THE OWNER. THE TESTS SHALL BE RANDOM. CONTRACTOR SHALL COORDINATE SCHEDULING WITH THE OWNER AND TESTING COMPANY.

4. THE OWNER WILL RANDOMLY TEST UP TO 12 WINDOWS IN STAGES AS INSTALLATION PROGRESSES. IF ANY OF THE TESTED WINDOWS FAIL THE CONTRACTOR SHALL, AT THEIR EXPENSE, MODIFY THE FAILED WINDOW AND ALL PREVIOUSLY INSTALLED WINDOWS, RETEST THE FAILED WINDOW AND TEST TWO ADDITIONAL WINDOWS. ANY SUBSEQUENT TESTING FAILURES WILL REQUIRE ADDITIONAL MODIFICATION OF ALL WINDOWS & TESTING AS DESCRIBED ABOVE. THE OWNER RESERVES THE RIGHT TO RETEST ANY OR ALL OF THE REPAIRED OR REINSTALLED WINDOWS. CONTRACTOR TO SCHEDULE, ARRANGE FOR AND COORDINATE THE WORK OF TESTING AGENCY.

5. CONTRACTOR TO REMOVE EXISTING APARTMENT AIR CONDITIONERS. OWNER TO STORE & REINSTALL AFTER COMPLETION OF WORK.

FLOOR PLAN KEY NOTES

(1) EXISTING ALUM. STOREFRONT DOORS & RELITES TO BE REMOVED & REPLACED WITH NEW IN CONFIGURATIONS SHOWN. EXISTING MAGNETIC LOCKS & SECURITY HARDWARE TO BE REINSTALLED ON NEW DOOR & RECONNECTED TO SYSTEMS.

(2) REMOVE ALL EXISTING EXTERIOR SECURITY GRILLES AT FIRST FLOOR WINDOW TYPES 'A', 'B', & 'E' (EXCEPT AT LAUNDRY ROOM). PATCH BOLT HOLES WITH COLOR MATCHED MORTAR. INTERIOR RELEASE LEVER TO BE REMOVED & CAPPED.

HAP
HOUSING AUTHORITY OF PORTLAND

STATE OF OREGON

WINDOW REPLACEMENT AT VARIOUS SITES
THE HOUSING AUTHORITY OF PORTLAND
915 N.E. 9TH PLACE / DAHLKE MANOR / CELLO COURT

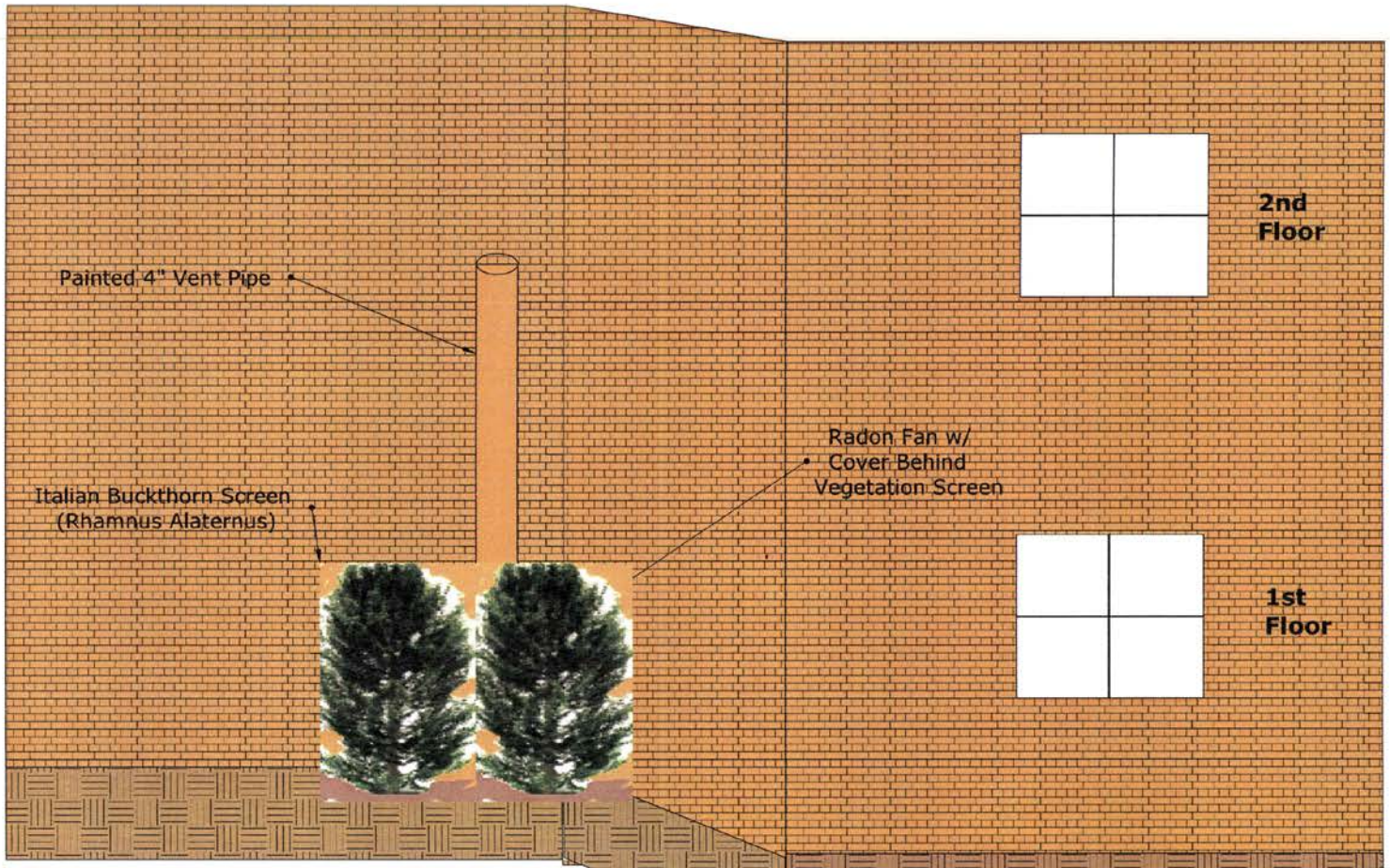
SHEET TITLE
FLOOR PLANS
& SITE PLAN

REVISIONS	DATE

DRAWING NO.
DAHLKE
A-1
SHEET NO.
5 OF 10

Approved
City of Portland - Bureau of Development Services
Planner Emily Hays Date 8/24/17
* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

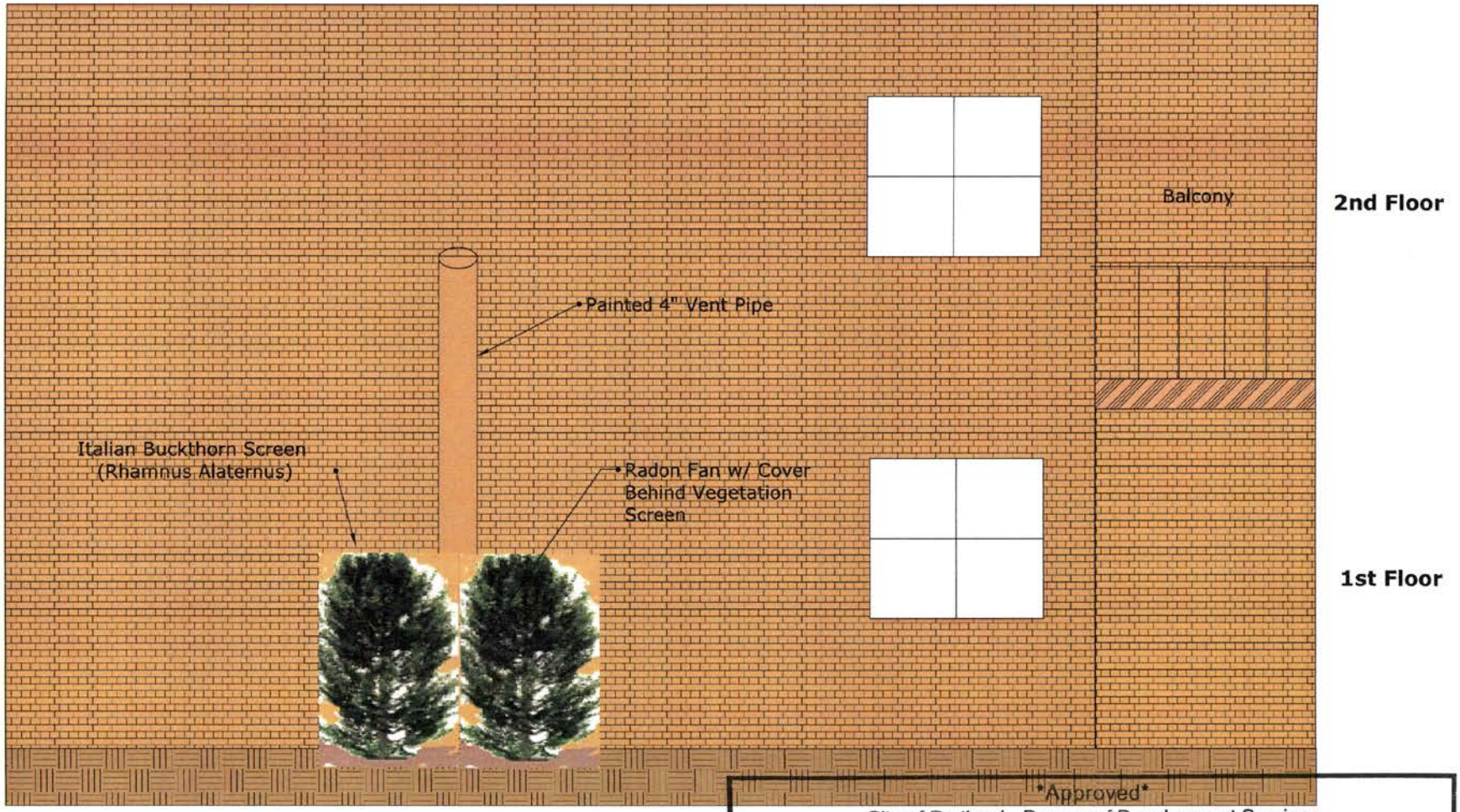
LU 17-194718 HR C1



915 NE Schuyler St (Dahlke Manor)
East Elevation, Southeast Corner, Floors 1&2
Proposed Radon System 1 Landscape/Aesthetic Detail

"Approved"
City of Portland - Bureau of Development Services
Planner Emily Hays Date 8/24/17
This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

LU 17-194718 HR C2

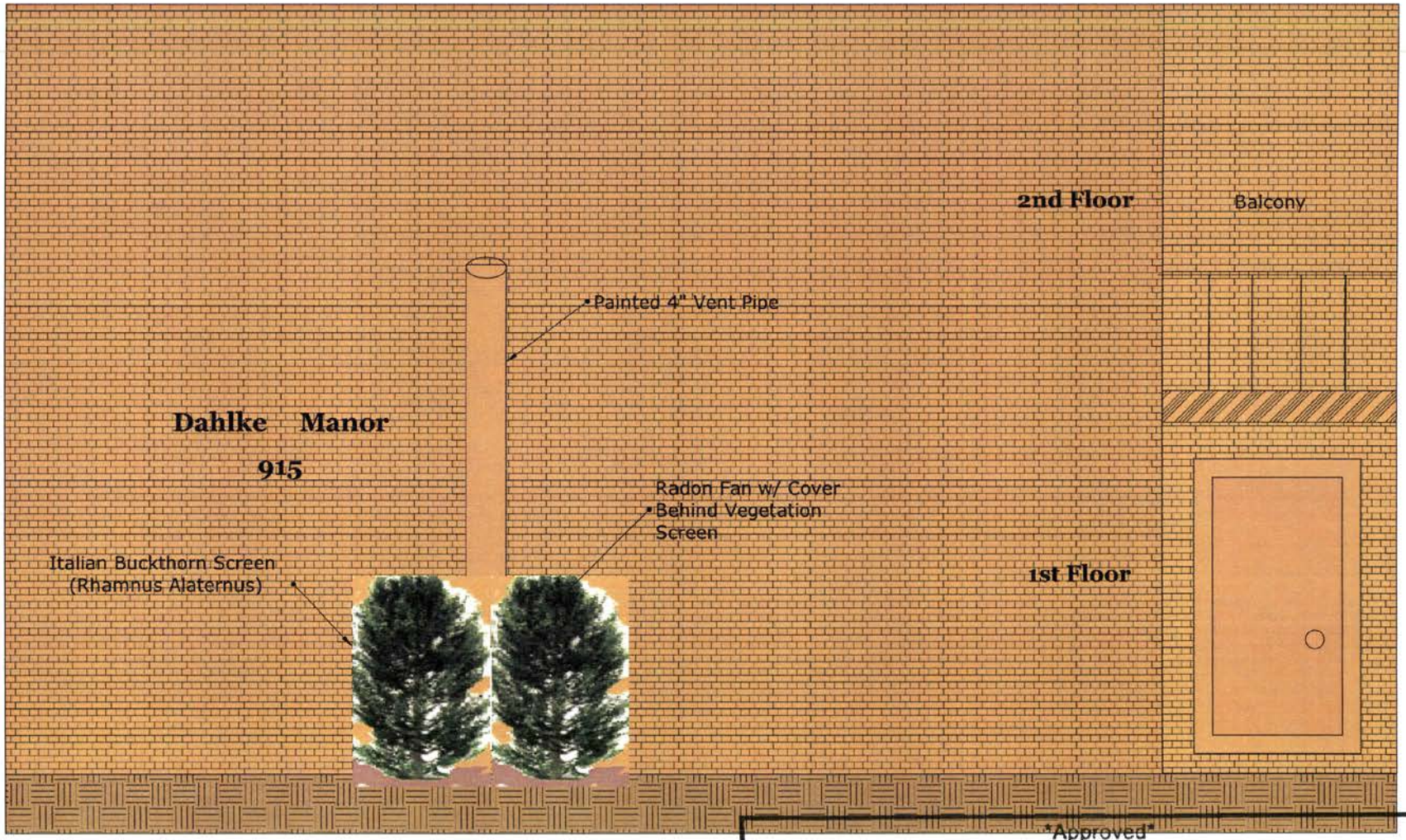


915 NE Schuyler St (Dahlke Manor)
North Elevation, Northeast Corner, Floors 1&2
Proposed Radon System 2 Landscaping/Aesthetic Detail

Approved
City of Portland - Bureau of Development Services
Planner Emily Hays Date 8/24/17
* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

N

LU 17-194718 HR C3

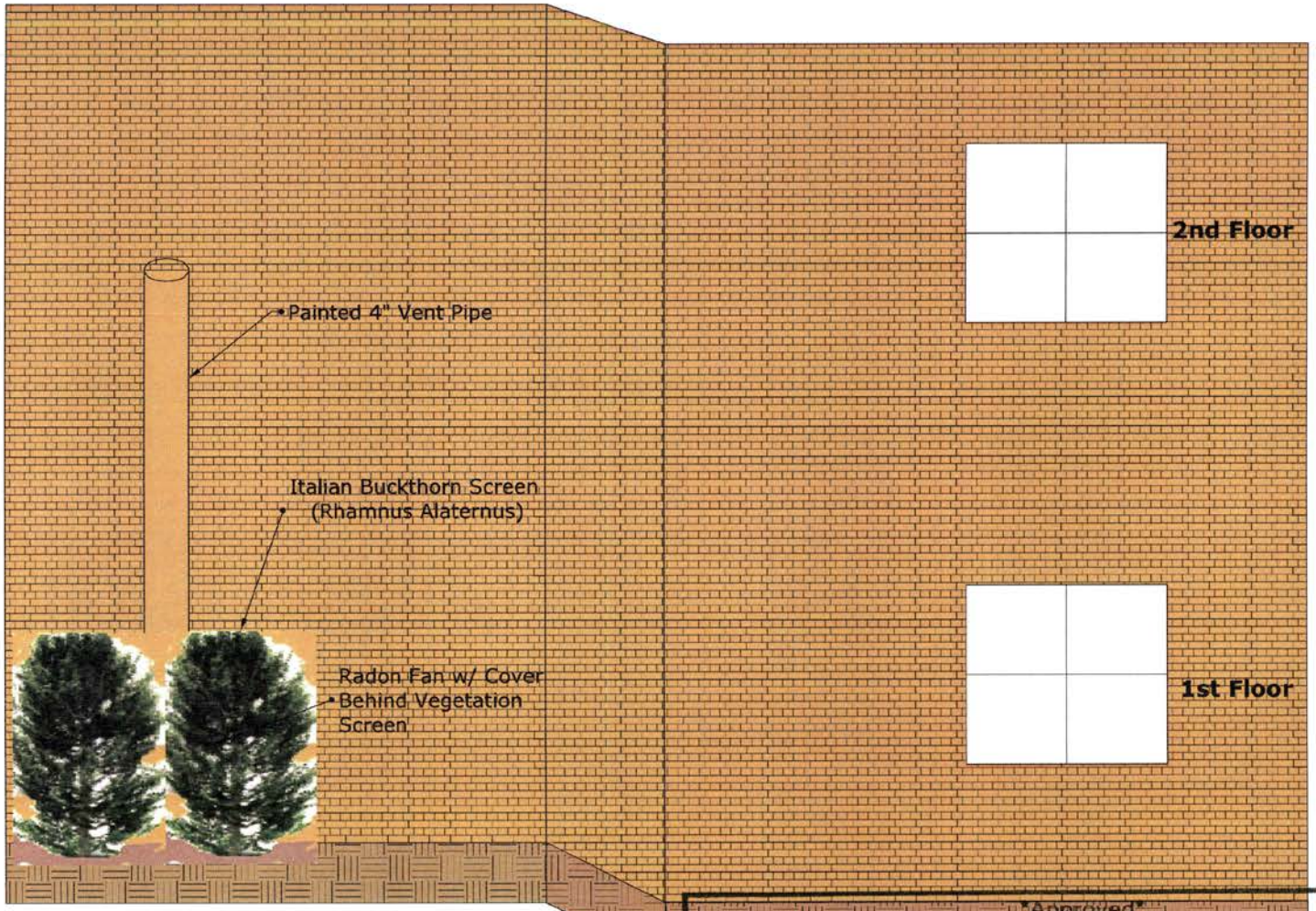


915 NE Schuyler St (Dahlke Manor)
South Elevation, Southwest Corner, Floor 1&2
Proposed Radon System 4 Landscaping/Aesthetic Detail

N

"Approved"
City of Portland - Bureau of Development Services
Planner Emily Hays Date 8/24/17
* This approval applies only to the reviews requested and is subject to all conditions of approval. Additional zoning requirements may apply.

LU17-194718 HR C4



915 NE Schuyler St (Dahlke Manor)
West Elevation, Northwest Corner, Floors 1&2
Proposed Radon System 3 Landscaping/Aesthetic Detail

"Approved"
City of Portland - Bureau of Development Services
Planner Emily Hays Date 8/24/17
Approval applies only to the reviews requested and is subject to all applicable approval. Additional zoning requirements may apply.

N

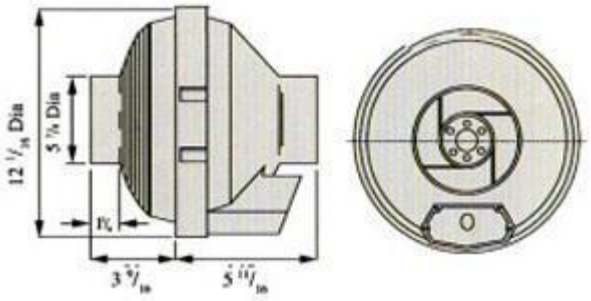
LU 17-194718 HR C5

Environmental Works

Radon System Primary Components and Information

1. Festa Radon Fan (Legend)
2. Fernco Flexible Coupler (PVC pipe to Fan connection)
3. Charlotte Sch-40 DWV Cellular Core PVC Pipe
4. Charlotte Sch-40 DWV PVC Fittings
5. Oatey PVC Cement/Glue
6. Minerallac 2-Hole Strap (mounting pipe)
7. Radon Fan Cover (Optional) & Exterior Installation Examples

Festa AMG Legend



Moderate Suction/Very High Flow
Very Large Footprint
Porous-Semi Porous Subslab

Volts	Watts	Max. Amps	CFM at STATIC PRESSURE in. w.g.										
115V 60Hz	125	1.32	0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	2.2"	2.4"	2.6"
Weight: 8 lbs 3 oz. Fan Speed: 3100 rpm			353	280	245	210	180	149	110	70	43	1	

Performance shown is for installation type D - Ducted inlet, Ducted outlet. Speed (rpm) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances in the airstream. The performance figures shown have been corrected to standard air density.

CHARLOTTE
PIPE AND FOUNDRY COMPANY

Plastic Pipe and Fittings Drainage Systems
Suggested Short Form Specifications

ABS Schedule 40 Cellular Core (Foam Core) Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from ABS compound with a cell class of 42222 for pipe and 32222 for fittings as per ASTM D 3965 and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM F 628. Fittings shall conform to ASTM D 2661.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in ABS pipe or fittings. Solvent cement shall conform to ASTM D 2235. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PVC Schedule 40 Cellular Core (Foam Core) Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from PVC compound with a cell class of 11432 per ASTM D 4396 for pipe and 12454 per ASTM D 1784 for fittings and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM F 891. Injection molded fittings shall conform to ASTM D 2665. Fabricated fittings shall conform to ASTM F 1866.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Solvent cements shall conform to ASTM D 2564. Primer shall conform to ASTM F 656. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PVC Schedule 40 Solid Wall Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from PVC compound with a cell class of 12454 per ASTM D 1784 and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM D 1785 and ASTM D 2665. Injection molded fittings shall conform to ASTM D 2665. Fabricated fittings shall conform to ASTM F 1866.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Solvent cements shall conform to ASTM D 2564. Primer shall conform to ASTM F 656. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PO Box 35430 Charlotte, NC 28235 USA 704/372-5030 800/438-6091 FAX 800/553-1605
www.charlottepipe.com

CHARLOTTE PIPE AND FOUNDRY COMPANY

SUBMITTAL FOR CHARLOTTE PIPE®
PVC CELLULAR (FOAM CORE) PIPE AND PVC DWV FITTING SYSTEM

Date:_____

Job Name:_____ Location:_____

Engineer:_____ Contractor:_____

Scope:

This specification covers PVC cellular (foam core) pipe and PVC DWV fittings used in sanitary drain, waste and vent (DWV), sewer, and storm drainage applications. This system is intended for use in non-pressure applications where the operating temperature will not exceed 140° F.

Specification:

Pipe shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a cell class of 11432 as identified in ASTM D 4396. Fittings shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a cell class of 12454 as identified in ASTM D 1784.

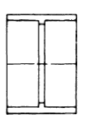
PVC cellular core pipe shall be Iron Pipe Size (IPS) conforming to ASTM F 891. Injection molded PVC DWV fittings shall conform to ASTM D 2665. Farbricated PVC DWV fittings shall conform to ASTM F 1866. All systems shall utilize a separate waste and vent system. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to NSF International Standard 14.

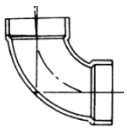
Installation:

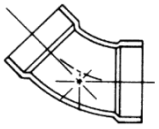
Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all applicable plumbing, fire, and building code requirements. Buried pipe shall be installed in accordance with ASTM D 2321 and ASTM F 1668. Solvent cement joints shall be made in a two-step process with primer conforming to ASTM F 656 and solvent cement conforming to ASTM D 2564. The system shall be protected from chemical agents, fire-stopping materials, thread sealant, plasticized-vinyl products or other aggressive chemical agents not compatible with PVC compounds. The system shall be hydrostatically tested after installation. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Doing so can result in explosive failures and cause severe injury or death.

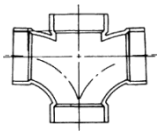
Referenced Standards:

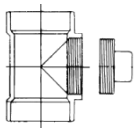
ASTM D 4396: Compounds for Cellular Core
ASTM F 891: Co-extruded PVC Pipe with Cellular Core
ASTM D 2665: PVC Drain, Waste and Vent Fittings ASTM D 2564: Solvent Cements for PVC Pipe and Fittings ASTM D 2321: Underground Installation of Thermoplastic Pipe (non-pressure applications)
ASTM F 1668: Procedures for Buried Plastic Pipe
ASTM F 1866: Fabricated PVC DWV Fittings NSF Standard 14: Plastic Piping Components and Related Materials

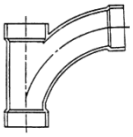

Coupling

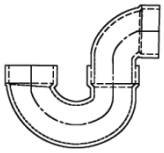

Quarter Bend

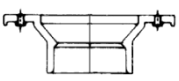

Eighth Bend


Double Sanitary Tee


Cleanout Tee w/Plug


Combination Wye & Eighth Bend


P-Trap


Closet Flange

Not all fitting patterns shown

PVC Foam Core Pipe

PVC Schedule 40 DWV Pipe (For Non-Pressure Applications)

NSF

PVC SCHEDULE 40 FOAM CORE (WHITE)			PLAIN END			ASTM F 891
PART NO.	NOM. SIZE	UPC # 611942-	QTY. PER SKID	AVG. OD (IN.)	MIN. WALL (IN.)	WT. PER 100 FT. (LBS.)
PVC 4112	1½" x 10'	04178	1650	1.900	0.145	32.3
PVC 4112	1½" x 20'	04177	3300	1.900	0.145	32.3
PVC 4200	2" x 10'	04174	1110	2.375	0.154	43.9
PVC 4200	2" x 20'	04173	1980	2.375	0.154	43.9
PVC 4300	3" x 10'	03934	1040	3.500	0.216	89.7
PVC 4300	3" x 20'	03935	920	3.500	0.216	89.7
PVC 4400	4" x 10'	03936	600	4.500	0.237	123.8
PVC 4400	4" x 20'	03937	1200	4.500	0.237	123.8
PVC 4600	6" x 10'	03938	280	6.625	0.280	235.0
PVC 4600	6" x 20'	03939	560	6.625	0.280	235.0
PVC 4800	8" x 20'	03941	360	8.625	0.322	371.0
PVC 4910	10" x 20'	03942	220	10.750	0.365	566.3
PVC 4912	12" x 20'	03943	120	12.750	0.406	700.0

Technical Specification

Rain-R-Shine® Medium Blue PVC Cement

Description

- Medium-bodied blue cement for use on all schedules and classes of PVC pipe and fittings up to 6" diameter with interference fit.
- Lo-V.O.C. Solvent Cement meets California South Coast Air Quality Management District (SCAQMD) 1168/316A or BAAQMD Method 40 and various environmental requirements.
- Very fast-setting "Hot" cement formulated for wet conditions and/or quick pressurization and fast installation.
- Recommended for pool, irrigation, potable water, pressure pipe, conduit and DWV.
- Recommended application temperature 40°F to 110°F / 4°C to 43°C.
- No primer needed on non-pressure DWV, where local codes permit.
- Meets ASTM D2564.

Listings

NSF Standard 61 for PW, DWV and Sewer Waste

IAPMO Listed

Maximum VOC per SCAQMD 1168/316A or BAAQMD Method 40: **510 g/L**

INGREDIENTS (CAS Number)

Acetone (67-64-1), Amorphous Silica (112945-52-5), Cyclohexanone (108-94-4), Methyl Ethyl Ketone (78-93-3), PVC Resin (9002-86-2), Tetrahydrofuran (109-99-9)

MSDS Number: 1104E

Product Number	Size	Qty	Wgt	Product Number	Size	Qty	Wgt
30890	4 oz.	24	8 lbs.	308903	4 oz.	48	9 lbs.
30891	8 oz.	24	15 lbs.	308913	8 oz.	36	16 lbs.
30893	16 oz.	24	28 lbs.	908933	16 oz.	10	28 lbs.
30894	32 oz.	12	28 lbs.	308943	32 oz.	6	28 lbs.
30895	Gallon	6	50 lbs.				

Oatey Co.
4700 West 160 th St.
Cleveland, OH 44135

Phone: 1-800-321-9532
Phone: 1-800-321-9535
Visit www.oatey.com for Update

Rain-R-Shine® Medium Blue PVC Cement

CHEMICAL PROPERTIES	
Appearance	Blue Liquid
Viscosity	Min. 500 cps @73° F ± 2° F
Density	7.83 ± 0.2 lbs/gallon
Shelf Life	3 years from manufacture date

PHYSICAL PROPERTIES	
Lap Shear Strength	(min. ASTM Standards)
2 hours	250 psi
16 hours	500 psi
72 hours	900 psi
Set Up Time	
30° F to 50° F	4 – 5 minutes
50° F to 70° F	3 – 4 minutes
70° F to 90° F	1 – 2 minutes

Precautions

Read all information carefully before using this product.

DANGER!: CAUSES SERIOUS EYE IRRITATION. HARMFUL IF INHALED. MAY CAUSE DROWSINESS OR DIZZINESS. MAY CAUSE RESPIRATORY IRRITATION. REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING. Long term overexposure to solvents may cause damage to the brain, nervous system, reproductive system, respiratory system, mucous membranes, liver and kidneys. Contains a chemical classified by the US EPA as a suspected possible carcinogen. KEEP OUT OF REACH OF CHILDREN.

PRECAUTIONS: Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Use explosion-proof electrical/ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear a NIOSH-approved respirator for organic solvents. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Vapors may accumulate in low places and may ignite explosively. Keep container tightly closed and cool. Wear protective gloves and eye protection. Wash thoroughly after handling. Do not eat or drink while using this product.

EMERGENCY/FIRST AID: CALL 1-877-740-5015 FOR INSTRUCTIONS.

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth. This product may be aspirated into the lungs and cause chemical pneumonitis, a potentially fatal condition. If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. If ON SKIN: Rinse skin with water/shower. Take off immediately all contaminated clothing. If INHALED: Remove person to fresh air and keep comfortable for breathing. Call POISON CENTER/doctor if you feel unwell. If medical advice is needed, have product container or label at hand. FIRE: Use dry chemical, foam, or carbon dioxide extinguisher. Water spray may be applied to reduce potential vapors or for cooling. Burning liquid extinguished with water will _oat and may re-ignite on surface of water. SPILLS: Remove all sources of ignition and ventilate area. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with absorbent material. Put absorbent material in covered, labeled metal containers. Dispose of contents/ container in accordance with local regulations. Store in a well-ventilated space. Store locked up.

Rain-R-Shine® Medium Blue PVC Cement

Directions for Use

Store and use at temperatures between 40°F and 110°F. At temperatures outside of this range, special care must be taken to prepare good joints and prevent exposure to solvents. Stir or shake before using; if jelly-like, don't use. Do not thin.

1. Cut pipe ends square, chamfer and clean pipe ends.
2. Check dry fit of pipe and fitting. Pipe should easily go 1/3 of the way into the fitting. If pipe bottoms, it should be snug.
3. Use a suitable applicator at least 1/2 the size of the pipe diameter. For larger size pipe systems use a natural bristle brush or roller.
4. Clean pipe and fitting with a listed primer.
5. Apply liberal coat of cement to pipe to the depth of the socket, leave no uncoated surface.
6. Apply a thin coat of cement to inside of fitting, avoid puddling of cement. Puddling can cause weakening and premature failure of pipe or fitting. Apply a second coat of cement to the pipe.
7. Assemble parts QUICKLY. Cement must be fluid. If cement surface has dried, recoat both parts.
8. Push pipe FULLY into fitting using a ¼ turning motion until pipe bottoms.
9. Hold pipe and fitting together for 30 seconds to prevent pipe push-out - longer at low temperatures. Wipe off excess.
10. Allow 15 minutes for good handling strength and 2 hours cure time at temperatures above 60°F before pressure testing up to 180 psi. Longer cure times may be required at temperatures below 60°F or with pipe above 3".

DO NOT TEST WITH AIR.

Revision Date: 3/15/2013

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Minerallac Company

Product Specification Sheet

HD295

2 HOLE STRAP HEAVY DUTY

UPC: 784610702959

UNSPSC: 31162310

Commodity: Mounting straps

Country of Origin:
USA

2-Hole straps are used to secure conduit, cable, tubing, pipe, etc. to mounting surface.

Product Attributes

Brand Name	Minerallac Company
Sub Brand	Minerallac Traditional
Type	2-Hole Strap
Application	Electrical Conduit
Special Features	Heavy-duty gauge material. Designed for use on loads too heavy to be s
Standard	UL# 9N38
Material	Steel
Finish	Zinc Plated
Mounting Holes	2
Mounting	Component, Wood, Steel, Concrete
Mounting Holes O.C.	5/8" IN
Mounting Hole Width	N/A
Number Of Holes	2
Size	4.10" x 8.75" x 1.25"
Color	Silver
Width	8.750"
Length	1.250"
Height	4.10"
Load Capacity	N/A
Breaking Strength	N/A
Working Load Limit	N/A
Trade Size	3-1/2"
Thickness	0.187"
Cable Size	Fits 3-1/2" EMT and Rigid/IMC .
Construction	Stamped
Fastening Hole	N/A

Item Status: Active

Standard Qty: 10

Minerallac Company

Tel: 800-927-3293

Fax: 800-824-8942

www.minerallac.com

Radon Fan Cover (Optional)

Radon Fan Cover

Radon Fan Cover Installation Example

Exterior Mounted Radon Fan Example

High-Rise Multifamily Radon Mitigation Proposal

Owner/Client Name: Home Forward
Address: 135 SW Ash St Portland, OR 97204

Work Performed At: 915 NE Schuyler St Portland, OR 97212 (Dahlke Manor)
Proposal Date: 6/20/17

Environmental Works is a licensed, bonded, and insured general contractor (CCB# 185781; WA# ENVIRWN906CS) and is certified by NEHA-NRPP (National Environmental Health Association- National Radon Proficiency Program #1061867 RMT) as a radon measurement and mitigation contractor. The following scope of work is to install an active radon mitigation system to reduce average long term radon levels to below the Environmental Protection Agency (EPA) action level of 4.0 pCi/L.

Project Proposal Summary:

Upon conducting a multifamily radon gas survey, the Dahlke Manor building was found to have elevated indoor radon gas concentrations. Radon is an environmental health hazard and must be remediated at or above the EPA's action level of 4.0 pCi/L. The proposed sub-slab depressurization radon mitigation system involves sub-grade ventilation pipes penetrating through the building's below-grade foundation wall and connecting to four, above-grade radon ventilation fans mounted on the SE, SW, NE and NW corners of the building respectively.

- 1ft x 1ft trenches will be dug for routing sub-grade piping.
- Each above-grade visible fan system will involve Schedule-40 4" PVC pipe exiting from soil against building, a 12"x12" continuously running AMG radon fan mounted inline of pipe, with pipe continuing above fan vertically against exterior of building to a distance of 10ft above grade-level.
- Pipe will be secured to exterior of building using metal straps.
- Each system's exhaust-point will exhaust sub-soil radon gas to the outdoor air at a distance equal to or greater than 10 horizontal ft from any balcony or operable window.
- Consultation with a structural engineer has confirmed that all penetrations through the sub-grade exterior foundation wall will not cause any structural issues for the building.
- This design meets all codes required of active sub-slab depressurization radon mitigation systems.

The design of this system took into account a variety of factors such as potential cost, impact to residents, impact to building structure and building aesthetics. By approving this exterior system:

- Resident's interior space will not be disturbed by construction.
- Ventilation pipe does not need to be routed internally through building to above roof line.
- Interior structural considerations of penetrations between floors are avoided.
- Exterior ventilation pipe need only be routed to 10ft above-grade, avoiding the need to route pipe to above roofline on a high-rise building.
- An optional cover can be installed over the fan unit for exterior aesthetics.
- The visible portions of the exterior system can be painted to match building color.
- Resident's health risk from radon exposure will be mitigated.

Scope of Services:

- **Radon Mitigation:**
  - Permanent sub-slab radon mitigation systems will be installed for all desired units. Systems to be installed as such:
    - Per desired unit, one 4" hole will be core drilled through the foundation wall from the exterior of building below slab-grade. Approximately 8-10 gallons of substrate will be removed to form a suction point under slab of unit.
    - **System 1 (Unit 101,103,106, Office 1):** 3" schedule 40 PVC vent piping will exit from suction points below-grade, to be linked together into a single 4" run. A trench will be dug and vent pipe will be routed below-grade to the exterior southeast corner of building. A permanent radon fan unit will be installed on the south side of the building inline of pipe above grade against exterior of building, with vent pipe to exhaust radon 10ft above grade level and 10ft of horizontal run from any operable window or standing space. Above-grade pipe will be secured to exterior of building with metal straps.
    - **System 2 (Unit 107,109,111):** 3" schedule 40 PVC vent piping will exit from suction points below-grade, to be linked together into a single 4" run. A trench will be dug and vent pipe will be routed below-grade to the exterior northeast corner of building. A permanent radon fan unit will be installed on the north side of the building inline of pipe above grade against exterior of building, with vent pipe to exhaust radon 10ft above grade level and 10ft of horizontal run from any operable window or standing space. Above-grade pipe will be secured to exterior of building with metal straps.
    - **System 3 (Unit 108,110):** 3" schedule 40 PVC vent piping will exit from suction points below-grade, to be linked together into a single 4" run. A trench will be dug and vent pipe will be routed below-grade to the exterior northwest corner of building. A permanent radon fan unit will be installed on the west side of the building inline of pipe above grade against exterior of building, with vent pipe to exhaust radon 10ft above grade level and 10ft of horizontal run from any operable window or standing space. Above-grade pipe will be secured to exterior of building with metal straps.
    - **System 4 (Unit 102, 104):** 3" schedule 40 vent piping will exit from suction points below-grade, to be linked together into a single 4" run. A trench will be dug and vent pipe will be routed below-grade to the exterior southwest corner of building. A permanent radon fan unit will be installed on the south side of the building inline of pipe above grade against exterior of building, with vent pipe to exhaust radon 10ft above grade level and 10ft of horizontal run from any operable window or standing space. Above-grade pipe will be secured to exterior of building with metal straps.

Post Mitigation Testing:

- A short-term radon survey will be conducted using the same protocol as the initial radon survey completed by Environmental Works. All tenant units will be tested, including Office 1 for a total of 11 units. The radon survey will be initiated after the installation of the radon mitigation systems. Short-term radon surveys will be used to confirm that any radon mitigation systems installed are working properly.

General System Features:

- This proposal includes system labeling, electrical work, a manometer for monitoring proper system function, screened vent end, and the removal of system related construction debris.
- All penetrations will be sealed with hydraulic cement and trenches filled back in with native soil.
- Environmental Works is not responsible for any damage to private utilities or irrigation lines while digging required trenching for system. A utility locate service will be used to avoid any potential damage.
- Environmental Works is not responsible for damage to property landscaping during the excavation process.

Lifetime System Performance Guarantee:

- Environmental Works guarantees that this system will maintain average long term radon levels below 4.0 pCi/L for a Lifetime*, based upon long term radon testing (91 days to 1 year) and subject to the Terms and Conditions of this agreement.
- The Client must perform a long term Alpha-Track test (Client to purchase and set up independently) and provide Environmental Works with the results. If average radon concentrations exceed 4.0 pCi/L, Environmental Works will make system modifications to reduce radon levels to below the EPA action level, and at no cost to the Client.
- Environmental Works will replace defective mechanical or electrical components of the system up to 20 years after system installation, and beginning at the time of system activation. (Radon fans covered under manufacturer's warranty).
- **AMG® Radon Fans** hold a full manufacturers replacement warranty of 5 years, and Environmental Works will replace the fan at no additional charge during the guarantee period of 5 years. AMG® fans are ***MADE IN THE U.S.A.*** with the industries best customer service and warranty.
- ***All guarantees and warranties are transferrable to future owners of the same property.***

Total Project Cost Estimate:

- ***This bid includes applicable Davis-Bacon Prevailing Wage rates***

CPPZC Historic Resource Review:		$1,360.00 + Plan Development Cost
Radon Mitigation, Cost per Unit:		$1,400.00
Total Potential Cost:	11 Units x $1,400	= $15,400.00
+ System 1-4 Fan Cost:	4 Fans x $800	= $3,200.00
+ Post-Mitigation Radon Retest:		$975.00
+ CPPZC Historic Resource Review:		$1,360.00
Radon Mitigation Cost Subtotal:		**$20,935.00**

Total Potential Project Cost: **$20,935.00**
+ Plan Development Cost
+ Potential Required Design Changes

Radon System 1 Fan Location

Radon System 2 Fan Location

Radon System 3 Fan Location

Radon System 4 Fan Location