



APPEALS
City of Portland
Bureau of Development Services
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Building Code Appeal Form (Appeal Information Sheet)

BLD

To Appellant:

Each item you are appealing requires a separate Appeal Information Sheet to be filled out. All requested information is to be filled out completely with as much detail as possible. **Failure to do so may cause your appeal to be held over until adequate information is received.** For help in filling out these forms, consult with the Plans Examiner assigned to your project or with a Plans Examiner in the Development Services Center.

Any modifications of the Building Code requirements requires an appeal. A reasonable degree of equivalent health, accessibility, structural capacity, energy conservation, life safety or fire protection **must** be demonstrated before an appeal may be considered.

Code Section being appealed: OSSC Section 1004.1

Regulation Requirement: Oregon Structural Specialty Code (OSSC) Section 1004.1 requires that the means of egress systems for buildings be designed to provide adequate exit capacity to serve the number of occupants determined based on the rate of one occupant per unit of area prescribed in Table 1004.1.1. When approved by the building official, the actual number of occupants for whom each occupied space, floor, or building is designed, although less than those determined by calculation, shall be permitted to be used in the determination of the design occupant load.

Proposed Design: (Describe the alternate methods or materials of construction to be used or that exist. Be as specific as possible)

This appeal is being submitted to document the overall building occupant load and upgrade approach, based on the current design scheme and future proposed use of the building. The project involves the modernization of the existing federal building at 511 NW Broadway. Alterations to existing buildings that result in a change in occupancy or a large increase in occupant load are required by OSSC Section 3406.1 to comply with the provision of the code for new construction. The design proposes to limit the overall increase in occupant load and to maintain the same basic occupancy classification for the majority of the building areas, to limit the scope of the building upgrades. This is a follow-up to the general seismic upgrade appeal for the building, originally heard on August 11, 2010. This previous appeal (Appeal number 7292) is attached for reference. The previously August 11, 2010 appeal approved an engineered seismic upgrade approach to the underside of the 2nd floor only, based on the proposed modification from the existing federal building use to the PNCA academic use, as long as the overall increase in calculated occupant load of the revised use did not exceed 149, based on of the design requirements outlined in City of Portland Title 24 Building Regulations, Chapter 24.85.

This new appeal is being submitted to document the overall building use and upgrade approach, based on the current PNCA space planning and use restrictions, and the existing fire/life safety related systems. This appeal will document the overall occupant load permitted within the building and within the individual floors. A separate group of appeals is being submitted simultaneously to document the acceptability of several existing fire/life safety related conditions.

The original building was constructed in 1915 as a Post Office facility, with associated office support areas. Over time, the federal government use of the building has been modified from a post office use, but the majority of the existing areas still house Group B office space. The existing building use also includes some assembly use areas, classified as Group A-2 and A-3 occupancy in accordance with the OSSC. The building will be taken over by PNCA, and the existing spaces will be converted to instructional spaces for students above the 12th grade and the associated administrative support areas. The primary occupancy classification of these building areas will remain Group B. The revised building use will also include some assembly use areas that will be classified as Group A-2 and A-3 occupancy. The renovated building will be provided with a new mezzanine level between the first and second floors. The historic and new uses are illustrated on the attached drawings

The table below presents a comparison between the existing and proposed occupant loads for the building, based on the current proposed uses of the different building areas. The occupant load calculation approach is illustrated

on the attached sheets. The calculated occupant loads of the PNCA spaces reflect the following key assumptions:

- Assembly use occupant load factors in the assembly use areas, including the performance space on the first floor, the queuing and seating area in the multiple story tall lobby space, and conference rooms on the upper floors. These areas will be calculated at 1 person per 15 square feet.
- Non-occupied circulation paths between the different new and gross occupied areas on the levels. These areas will be considered not occupied.
- Actual seat count will be used to calculate the occupant load of the study/seminar rooms on the mezzanine levels
- 50 sf/occupant net used to calculate the occupant load of the art studio spaces. This is based on actual historic uses at PNCA and uses similar to vocational/shop areas on the OSSC.
- 100 sf/occupant gross used to calculate the occupant load of the office areas and the assigned student work areas.
- 20 sf/occupant net used to calculate the occupant load of the classroom spaces on the 2nd floor, which will be used for a lecture-type classroom setting.
- 21 total occupants used for the art teaching studio spaces on floors 3 – 6, reflecting a maximum of 20 students and 1 instructor. This is based on PNCA programmatic specifications, which may slightly exceed the typical 1 person per 50 square foot assignment.

Building Floor	Existing Occ. Load	Future Proposed Use Occ. Load
Basement	51	59
First	563	430
First Floor Mezzanine	Not included in existing building	135
Second	401	382
Third	150	172
Fourth	118	169
Fifth	118	142
Sixth	118	174
Roof	Unoccupied	117 ^a
Total	1519	1663

a. Roof deck space to be used by occupants of the PNCA building only, such that this space is not simultaneously loaded as the interior building areas, and is not additive to the interior spaces to determine the overall building load.

The total calculated occupant load of the new PNCA space is estimated to be 1663, which will be an increase of 144, less than the 149 occupants increase limitation imposed by the existing appeal and the Title 24 requirements. The specialized nature of the PNCA space, and the limited enrollment of the school is such that the actual occupant loads of the overall building will remain significantly below the limits outlined above.

The architectural design of the new PNCA space proposes to add an occupied roof deck atop the existing 6th floor space, for use by occupants of the PNCA building. This roof deck will have a maximum capacity of 117 occupants at 15 square feet per person. However, the roof deck is for use by occupants of the PNCA building only, so the occupant load of this space will not be additive to the overall occupant load of the building for the purposes of comparing the new occupant load of the space to the existing building occupant load. The roof deck will be provided with access to two exits as required by the current OSSC.

The studio and open use areas on the lower floors of the building may also be used by PNCA for special events outside of normal school hours. These special use events will have a limited overall attendance and will be held after the normal building use hours, such that the overall occupant load within the building will be managed to maintain a total occupant load less than 1,663, and to maintain an occupant load of any individual floor less than that outlined in the table above. Prior to holding any special use events in the building, PNCA will obtain a special event permit from the City.

The design proposes to complete a partial structural upgrade, which will include installing a new vertical lateral force resisting system between the basement and the second floor structure. The lateral system will be designed and permitted for the entire building, however, the first phase of work will involve installing only the portion between the basement and second floor, to mitigate the soft story deficiency at the first floor level. As resources allow, and if necessary to allow for changing programmatic needs within the building, the remainder of the system could be installed in future phases.

The building will include architectural upgrades to reflect the new academic use of the spaces, and the previously

described structural upgrades. The configuration of the exit access system on the occupied floors will be designed to comply with the current OSSC requirements for exit access travel distance, common path of travel distances, and the number of exits. The building egress system will maintain compliance with the minimum egress capacity requirements of the OSSC at each floor, based on the occupant loads described above.

Reason for Alternate: (Describe why the alternate is required and how it will provide equivalent health, accessibility, structural capacity, energy conservation, life safety or fire protection to what the code requires)

The school and architectural team propose an engineered seismic upgrade approach for the existing building at 511 NW Broadway, based on the proposed use of the building to meet needs specific for PNCA. This is based on the structural engineers evaluation of the existing building, and PNCA's proposed use of the building. The first phase of the structural upgrades will be limited to the installation of a new vertical lateral force resisting system between the basement and second floor structure to address the soft story deficiency at the first floor level. Because the project does not involve a change in use to a higher occupancy classification or an increase in the calculated occupant load of more than 149, a full structural upgrade is not required. The building use will be managed by PNCA to maintain the overall occupant load within the limits set forth in this appeal. The school will limit access to the new occupied roof deck to staff and students during normal school hours. If the building is used by PNCA for special events outside of normal school hours, the overall occupant load within the building will be managed to maintain a total occupant load less than 1,663, and to maintain an occupant load of any individual floor less than that outlined above.

PNCA has a limited overall enrollment, and future projections of the schools staff and enrollment result in overall occupant loads significantly below the calculated occupant load of the renovated building. The current number of staff and students at the school is 730, and the future projected staff and student enrollment is 1,200. These current and future numbers of staff and students are spread over two separate buildings, and it is unlikely that all students and staff will be located within either of the buildings simultaneously. These load values are less than the calculated occupant load of the building, as the calculation assumes that all areas are occupied simultaneously. Based on this, we feel that the current design approach relative to the seismic upgrade of the building complies with the OSSC and the City of Portland Title 24 requirements. The building design also complies with the occupant load limitations associated with the available exit capacity from each level. The occupant load tabulation is specifically related to the specialized use of the building for PNCA, so that this calculation approach applies to the PNCA use only. Any future change in ownership of the building, or future changes to the use and occupancy of the building would need to be re-evaluated relative to the OSSC and Title 24 seismic upgrade requirements.

The primary occupancy classification of the new PNCA use remains the same as the historic building occupancy classification. The design is limited to a total occupant load increase of 144 occupants above the previous occupant load, without triggering a full seismic upgrade to the entire existing structure in accordance with the City of Portland Title 24 requirements and the conditions of the August 11, 2010 appeal. Based on this design approach and the occupant load tabulation information illustrated on the attached drawings, we request approval of this appeal in accordance with OSSC Section 104.11.

Submitted By: (Appellant)

Received/Reviewed By: (BDS Staff)

Denied: Occupant load analysis does not support the assumptions stated in the appeal.