

HISTORIC STRUCTURES REPORT  
for  
VANCOUVER BARRACKS, WEST BARRACKS  
Vancouver National Historic Reserve

**PART II: TREATMENT AND USE**



Building 607 Infantry Barracks  
Building 614 Post Hospital  
Building 626 Dental Surgery  
Building 636 Convalescent House  
Building 638 Artillery Barracks  
Building 630 Quartermaster's Storehouse  
Building 631 Hospital Steward's Quarters  
Building 621 Hospital Sergeant's Quarters  
Building 628 Mess Hall  
Building 635-665 (7) NCO Duplexes  
Building 602-673 (3) Multiple Garages

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## Introduction

### Philosophy/ Basis

This report is a record of the study of the uses and alternatives explored in arriving at a recommendation for the appropriate treatment of the buildings in the West Barracks. The document defines the most beneficial treatments and uses for the buildings. It is meant to be a compliance document and guideline for the development of the buildings. The recommendations were made based on several elements, primarily the Secretary of the Interior's Standards for the Treatment of Historic Properties. Other important components included the character-defining features and the physical condition of the building. The place of the building within the West Barracks and Fort Vancouver National Reserve, physically and culturally, was also taken into account.

### Procedure

#### Conditions Assessment

The physical condition of each building was investigated in the field. The information collected was compiled into a matrix for each building, including the interior and exterior, broken down by room or by elevation, by feature and by system, with location and material description of the individual elements being evaluated.

First a significance rating was assigned to each item as 'Significant', 'Contributing', or 'Non-contributing'. 'Significant' is a label assigned to a feature that is original historical material which would be difficult or prohibitively expensive to re-create or duplicate and is a character-defining feature of the building. 'Contributing' is a term applied to those items that are contributing to the general historical character of the building but could be re-created or duplicated easily. 'Non-contributing' describes an item that dates subsequent to the period of significance and does not contribute to the character of the building.

Secondly, a condition rating is assigned to each material as 'Good', 'Fair', and 'Poor'. 'Good' is a material that is in a condition that would require little or no maintenance or repair. 'Fair' is applied to a material that would require more repair and maintenance but is still fundamentally sound and would not require replacement as a whole. 'Poor' is used for materials or features which would require replacement of the material with new or extensive repairs. Some materials have two ratings. This indicates that the condition of the material varies throughout the feature. Some portions may require replacement while others just need repair. Repair should be undertaken if the goal is to retain as much historical material as possible, or if cost is an issue. If it is not then replacement should be followed.

Thirdly, a repair rating is assigned to some elements, not all, to indicate the level of repair required. 'Minor' indicates that the material is repairable. 'Major' indicates that the material will need replacement and extensive repair. In some cases a percentage is given, particularly with a surface material like siding or plaster, that indicates the percentage of the material that needs repair. More specific or detailed information is provided for a feature or element in the comments section. First pass recommendations regarding code or repair issues are also written here. Full Conditions Assessments on each building in matrix form are included in Appendix A.

### Writing/ Research

The report is based on the conditions assessment and existing maintenance documents from the Army Corps of Engineers, Physical History Reports and the Historic Structures Report Part 1: Historical Background and Context from the National Park Service, among other resources.

#### Task One

For each building there is a description of the structure and its context within the West Barracks and the Reserve as a whole. This is followed by a description of the vehicular and pedestrian access that focuses on the location and then the condition of existing circulation.

The next section deals with the exterior assessment, giving a general description of the conditions found and causes of deterioration. It is broken up by element starting at the ground level with the immediate site and moves by element up to the roof.

The interior assessment is a general description for smaller buildings. For larger buildings some rooms are broken out to have their own assessment if the conditions differ from the typical found. Electrical and Mechanical assessments are included in this section.

#### Task Two

This section deals with the Ultimate Treatment that is developed within the Secretary of the Interior's Standards, cultural resource, historic integrity, and the character-defining features in mind and finally the existing physical condition. Here it is indicated which type of treatment is recommended and is generally either restoration or rehabilitation. Sometimes the treatment type differs between the interior of the building and the exterior. The exterior recommendations address each element as the assessment did. The recommendations for the interior then follow. The proposed use comes from the West Vancouver Barracks Reuse Plan and is illustrated by plan sketches. The plan sketches are suggestions only and are meant to illustrate the recommendations made in the report.

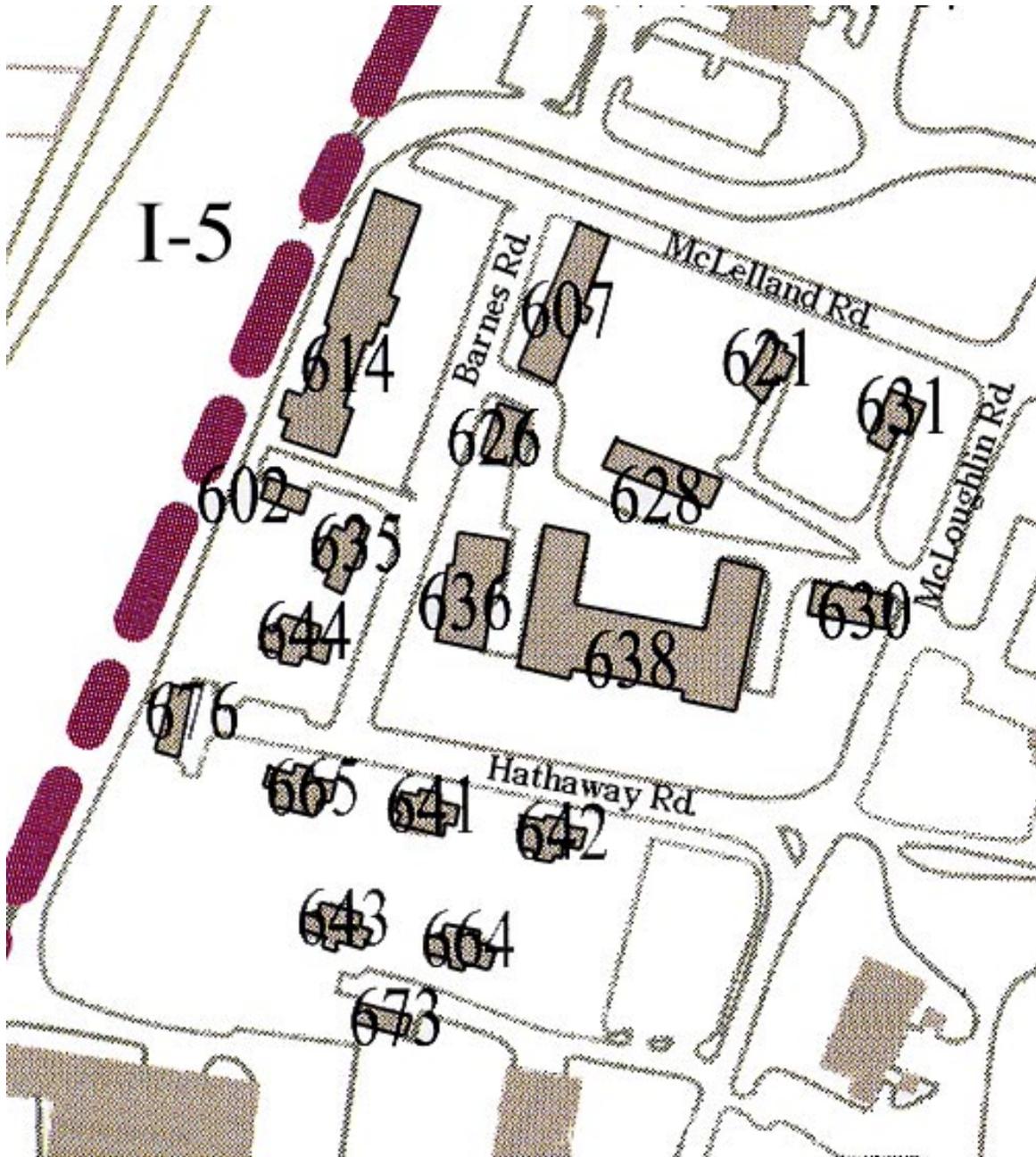
#### Task Three

The third section reviews the building with a code analysis based upon the treatment and the suggested use in section two. Code review is done for the treatment and use proposed in Task Two. It is evaluated in terms of life safety, fire protection, energy conservation, abatement of hazardous materials, and universal accessibility.

#### Task Four

The last section offers an alternative treatment to the one suggested in Task Two if the first treatment should impact the significant historical integrity of the building. These are also supplemented by plan sketches and class 'C' cost estimates.

Treatment suggestions are made in regard to the proposed uses in the context of the physical conditions of the building, the Secretary of the Interior's Standards for the Treatment of Historic Properties, and the governing applicable codes.



**Building Number:** 607  
**Area:** West Barracks  
**Date of Construction:** 1887  
**Period of Significance:** 1880-1899  
 (per HSR Part One)  
**Historic Use:** Infantry Barracks  
**Current/Recent Use:** Office use 1939

**Occupancy:** R-1 then B  
**Hazard Level:** Not Available  
**Number of Floors:** 2 Story  
     **Basement Floor:** 1,776 sq. ft. (per January 2000 SERA report)  
     **First Floor:** 2,946 sq. ft. (per January 2000 SERA report)  
     **Second Floor:** 2,980 sq. ft. (per January 2000 SERA report)  
**Exterior Materials:** Rustic drop siding



#### Task One: Conditions Assessment

#### ***Site Context***

The Infantry Barracks is located on the corner of McLelland Road and Barnes Road, directly across Barnes Road from the post Hospital (Building #614). As the last remaining 19<sup>th</sup> century buildings Vancouver Barracks, this building is an important example of standard military plans and architectural design. It is the westernmost barracks building of the present day Vancouver Barracks.

#### ***Vehicular Circulation***

The Infantry Barracks is located on the southeast corner of McLelland Road and Barnes Road, with an alley that runs just to the south of the building, between McLoughlin and Barnes Roads. There is parking on both McLelland and Barnes Roads, although the parking on Barnes is limited to the Post Hospital side of the street.

#### ***Pedestrian Circulation***

The Infantry barracks faces Barnes Road, with a small parade ground on the opposite side. Pedestrian sidewalks and access are located on both McLoughlin and Barnes Roads. There is a walk from McLelland to the east porch along the east side of the building.

#### ***Exterior Assessment***

- **General:** Minor changes have been made over the years to the exterior of the building. Sometime before 1917, the second story porch was removed and



replaced by a shed roof. Two doors at this level have been removed and filled in with windows. The building originally stood on brick piers. In 1936 the bays between piers were filled in with concrete. Like many of the other buildings in the West Barracks, the original cedar shingle roof has been replaced with asphalt composition shingles. Several chimneys have been removed and replaced with sheet metal attic ventilators. One of the missing flues is clearly visible in historic photos on front of the west elevation. The missing flues were presumably for wood or coal stoves that were the primary source of heat prior to the installation of the radiator system. The brick flue near the south end of the building still serves the boiler room in the basement. The front porch stair on the center of the west elevation has been dismantled and replaced with lattice skirting. All other exterior elements are original or have been replaced in-kind. Two steel exit stairs were added on to the east side of the building to provide exiting from the second floor.

- Site: The site slopes from McLelland road on the north side of the building to the south. On the north side of the building, drainage is very poor, with runoff from the road draining onto the concrete porch. The southwest corner also lacks positive drainage away from the building. The bushes on the west elevation need to be trimmed, as do the evergreen trees on the east side.
- Foundation: The Foundation has been painted. The paint and mortar on the brick piers are deteriorating. The concrete infill is in good condition.
- Walls: The exterior walls are wood frame with rustic drop siding. A 1x12 belly band without a drip cap wraps the building just above the foundation. The siding and belly band need to be scraped and painted. Many layers of paint have accumulated over the years. Some boards have deteriorated and may need to be replaced. The south elevation is in the worst condition, and at least half of the boards need to be replaced due to chipping, cracking, and buckling.
- Windows: The windows on the first and second floors are four-over-four double hung wood units. The basement windows are a mixture of six-lite fixed wood windows, nine-lite fixed windows, and two-lite fixed windows. Security bars protect the windows on the east side of the basement. Sills generally need to be refurbished, and probably the jambs as well. The windows on the south elevation need major repairs. There are triangle shaped, wood louvered gable end attic vents on the north and south elevations. The north vents have bird screening attached loosely to the outside of the vent that tends to collect debris. All four are in fair condition and need minor repair.
- Doors: Original doors were four-panel wood. Between 1903-1917, these were replaced with five-panel doors. The front entry, on the west side, has double



doors with a four-lite transom that is original to the building. A slot has been cut into the lower panel of one of the doors. The south door on the west side is a non-contributing three-panel door. The north doors are flush and non-contributing. The exit doors on the east side of the second story to the metal exit stair are flush and non-contributing. The east porch doors are similar to the west doors except that the two-lite transom above has been painted out, and the doors are single leaf doors set slightly apart. The east basement door needs to be refurbished, and is a single-panel wood door with a four-lite window above it. It looks more contemporary than the other doors. The original west door to the carpenter's shop is missing. The original east doors to the supply and furnace rooms are also missing. The two doors on the south elevation were double doors, the east one was filled in and a single leaf door installed and at the west door a rolling door was installed. All three doors on the south elevation need to be replaced.

- Trim: The window trim on the west and east elevations needs to be refurbished. Fascia, molding, and vertical corner boards need replacement on the north and south elevations.
- Roof, Gutters and Eaves: The eaves are boxed-in with painted wood and a painted fascia. On the gable ends, a cornice molding is present at the top of the rake board. The eaves need to be refurbished on the west, east, and south elevations. The north elevation is in fair condition. The roof is drained with painted metal gutters and downspouts. Many gutter seams on the west side are broken and the downspouts are also in poor condition. The east side appears to be in fair condition. The southeast downspout discharges onto the ground in an area that lacks proper drainage. The roof is relatively new asphalt composition shingles in fair condition. A ventilated wood cupola is located at the center of the ridge with louvered openings on the west and the east sides. It was not examined closely so condition is unknown. A painted black sheet metal ventilator is located to the north of the cupola. It may have been installed when the fire-walls were constructed and the barracks sleeping room was divided in two. The center wood ventilator may have become obsolete when this upgrade was done.
- Porches and Stairs: The west elevation features a porch along the entire west side of the building and wrapping the north end as well. A center stair that has since been removed, was originally on axis with the double doors on the west side of the building. The original porch had an upper deck. This deck and railings have been removed, and a hip roof with asphalt composition shingles constructed protecting the lower level. The reconstruction of the porch roof shortened the columns, eliminating the original column capitals and knee braces. The roof is in fair condition. Wood lattice infill between the posts at the north end of the porch needs to be painted and has probably deteriorated near the ground. The painted wood T&G decking needs to be replaced. The majority of columns also need to



be replaced. More than half of the wood ceiling slats need to be replaced due to water damage and the rest should be scraped and painted due to the many layers of paint that have accumulated over the years. All the railings should be replaced and evaluated for code compliance. The south end of the porch is enclosed for the carpenter's shop.

The east porch is in poor condition, the decking, guardrail and columns need to be replaced in-kind and brought up to meet current codes. There is no handrail. The condition of the roofing material is unknown and the underside of the roof is in fair condition. The gutters appear to be intact. The north porch was redone to have a scored concrete floor. The wood columns need repair and should be elevated above the concrete on bases to keep water from wicking up the end grain of the wood. They also need to be protected from cars as they are very close to the edge of the road with no curb to provide protection. The wood stairs from the concrete floor to the doors are in poor condition and appear temporary. The two sets of steel exit stairs on the east side are in fair condition and need to be refinished.

- Miscellaneous: The exterior security lights are not appropriate to the character of the building. Cables and conduit attached to the outside of the building also need to be removed. Plumbing vents for the bathroom facilities have been attached to the east side of the building. This piping should be brought within the building envelope.

### *Interior Assessment*

- General: In general the interior has retained its character and integrity of the spaces and finishes. Some partition walls have been added, but for the most part the original floor plan is still discernible. The Rooms A, B, and C were one room that was subdivided with two partition walls. There is an added partition wall in room D at the north to create a stair hall. The Rooms H, I, J were a lavatory room, a toilet room, and a shower room respectively. Room J has since been walled off from Room I and access made from Room K. Room I has also been walled off from Room H. Access is currently from Room E. The second floor was originally completely open with no partition walls. The basement stair was added at a later date. As of the 1939 floor plans there was no interior access to the basement from the first floor as there was a closet underneath the stair to the second floor. There was an enclosed room in the basement. There was a wood floor in the Carpenter's Shop. The room names used are based on the designations given in the 1952 record drawings from the Office of the Post Engineer.
- Significant Features and Typical Materials: Two-over-two windows, siding, plaster finish on walls and ceiling, the floor plans.



- Typical Conditions: Fair.
- Special or Unusual Conditions: None.
- Floor: The basement floor is concrete and in fair condition. The first floor and second floors are finished with 12" x 12" resilient floor tile over fiberboard underlayment. The original floor material and its condition are unknown although it is assumed to be wood flooring. The floor is sloping in Room I, the toilet room. Original plans show this floor and that of Room H and J as being concrete with floor drains. The slope is most likely due to the slope to the drain but this assumption should be verified.
- Stairs: The basement stairs are wood with wood treads, and may not comply with current codes. They do not on the 1939 plans, so presumably date from some time after this date. The basement was also extended to the north to accommodate the stair. The first floor stair has wood treads and risers with vinyl treads covering the wood, and probably does not comply with current codes.
- Walls: The basement walls are exposed painted brick and concrete in fair condition. On the first floor, in general, the walls are lath and plaster. Some original walls have been repaired with gypsum wallboard. Newer partition walls are also wallboard. There is minor cracking and a lot of conduit and exposed cabling attached to the walls. Rooms A and D have cracking over approximately 75% of the walls. Some painted wood bead board wainscot with a cap is located on one wall of Room B/C. The lath and plaster walls in the first floor stair hall have 50% cracking and some bead board wainscot that is in fair condition. The cap is a bullnose with a cavetto trim at 30-32" in height. Room H, the toilet room, has extensive damage and cracking to its plaster walls. The 3/4 height wall partitions are in poor condition in Rooms H and I. Room E has extensive cracking damage as well. The partition wall between Rooms E and F has a multi-lite window and was not original to the plan. The walls in the rooms north of the stairs have major damage to the plaster except for Rooms G and K that appear to have gypsum wall board. There is the 'ghost' of a door on the wall between Rooms H and I. Second floor Rooms Q and R exterior walls are lath and plaster and have minor cracking and generally shows wear and tear. There is paneling on the partition wall between Room Q and R. There are bulletin boards that can be removed. The lath and plaster walls in Room L, M, N, O and P have a lot of minor cracking, about 75% of the wall. The north and south walls are not original. Room N has a painted wainscot with a half-round cap. The second story stair hall has minor cracking in the lath and plaster walls. The wall configuration does not allow for stair landings that meet current codes.



- **Ceiling:** The basement ceiling is primarily painted wood boards that are in fair condition. Room A, Room D, and the first floor stair hall ceilings have large cracks in them. Room C has a 10 square foot piece of plaster missing from the ceiling. The toilet room ceiling has peeling paint, cracking plaster, and is in poor condition. The Room E ceiling is in poor condition. The ceilings in the rooms north of the stairs have major damage except for Rooms G and K that appear to have gypsum wallboard installed on them. On the second floor, the gypsum wallboard ceiling in Room Q is in fair condition with cracking and staining. There is a large piece of plaster that has fallen in Room O, the closet. There are significant cracks in the ceilings of Room L, M, and N.
- **Windows:** The basement windows are wood and in fair condition. The first and second floor windows are four-over-four double hung windows and are in fair to good condition.
- **Doors:** Interior doors in general are non-contributing with the exception of transoms where extant.
- **Trim:** A vinyl base has been glued to the original flat stock wood base. Picture rails align with top of window head casing on Room A and Room D and in the first floor stair hall. Window and door trim is wood flat stock with a rounded stool at the windows. A wood 1x rail runs around the walls at about 6' in Rooms L, M, N, O and P.
- **Miscellaneous:** The metal storage cages in the basement are in good condition. The light fixtures throughout are fluorescent and non-contributing. In some rooms the original light fixture locations are visible. There is a significant amount of conduit and plumbing running haphazardly throughout the basement, especially in the carpenter's shop under the porch. The radiators throughout appear to be contributing. The coal bin room and old boiler are intact. There is a lot of surface-mounted conduit on the second floor.

### ***Electrical Assessment***

- **Service:** Overhead service is derived from the site overhead power distribution system. Service entrance conductors are installed in conduit. Equipment is circuit breaker type, 120/240-volt, 400-ampere, 1-phase, and is in good condition.
- **Power Distribution System:** Service equipment supplies 3-circuit breaker panelboards, 2 rated 150 amperes and 1 rated 200 amperes.
- **Wiring:** Feeders consist of conduit and wire, and are in good condition. Original branch circuit wiring has been removed and replaced with surface mounted



- conduit containing type THHN wire circuit conductors. Branch wiring is in good condition.
- Wiring Devices: Light switches are newer silent type. Receptacles are newer grounding type. Devices are in fair condition.
  - Lighting: Light fixtures are typically 4 foot fluorescent with T-12 lamps and are not in compliance with current energy efficiency codes.
  - Fire Alarm: The control panel is a 6 zone non-addressable type. System is without smoke detection and is non-automatic. Alarm initiation is by activation of manual pull stations. One bell provides notification to the facility, and is not in compliance with current fire and ADA requirements for audio/visual notification.
  - Telecommunications: Service is overhead wiring. Distribution consists of non-category rated wiring from 66 type terminal blocks to various surface mounted outlets located throughout the building. Wiring and components are in poor condition and are not in compliance with current standards for modern data telecommunications functions.
  - Emergency: There is no emergency egress lighting. Battery backup illuminated exit signs provide exit identification. Signs are in poor condition.
  - Recommendations: The electrical service and power distribution systems are suitable for reuse. If outlet locations are suitable for future use, wiring devices and branch circuit wiring could remain. Demolish and replace light fixtures & wiring, fire alarm, telecommunications system and emergency lighting/exit identification.

### ***Mechanical Assessment***

- Description: The heating in this building is by a steam radiator system. The steam piping is carbon steel and appears to be the original installation. This piping system serving this building comes from the boiler located in the Basement Mechanical Room. The steam radiators appear to be in fair to good condition. The radiators have a control valve at the top for temperature adjustment and a steam trap at the bottom for condensate drain return back to the system. Two exhaust fans have been installed in the ceiling of the second floor open area and route up to the roof. These fans were recently installed to provide air circulation throughout the building. There are four existing shafts in each corner of the into the open space. There are individual steam unit heaters located in the basement level for space heating.



- **Recommendations:** The boiler system in this building was upgraded in 1989, looks to be in good condition and should be adequate as is. The steam radiators could be refurbished for re-use. Re-use of these radiators would help maintain the historical character of the building. New control valves are recommended to provide temperature control of the space. The steam piping should be replaced, as it is near the end of its useful life. For ventilation, operable windows and the use of the existing natural ventilation shafts would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.

### ***Plumbing Assessment***

- **Description:** Existing plumbing fixtures are in good to fair condition. The existing waste piping is cast iron. The existing water heater is located in the Women's Restroom and is in fair condition. Domestic water piping is carbon steel and appears to be the original installation. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.
- **Recommendations:** Depending on the building usage, the restrooms may need to be reconfigured to be in accordance with ADA requirements. This may change fixture layout. Retaining the existing plumbing fixtures would not add much to the historical value. New fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed to replace existing domestic carbon steel piping since it is probably nearing the end of its useful life. The water heater should be replaced because of the age of the heater and the deleterious effects of intermittent use.

### **Task Two: Ultimate Treatment and Use**

As the sole remaining of the original six barracks buildings, the Infantry Barracks (Building #607) has played an important role in the history of the Vancouver Barracks, and is a candidate for limited interior as well as exterior restoration according to the *Secretary of Interior's Standards*. Additional steps to complete the exterior restoration would include reintroduction of the second story balcony that was removed prior to 1917. Given the age of these changes, consideration should be given to their significance as a part of the history of the structure.

The *West Vancouver Barracks Reuse Plan* suggests that a residential use would be the preferred use for the building. Such a use would allow the floor plan to remain intact or



be restored to the original (See Plan A). Uses that can function well with an open floor plan would fit this building the best. However, accessibility is an issue. It is easily provided to the basement and the first floor by the use of short ramps, but access to the second floor is another matter. A new elevator and stair core might be accommodated in a wing perpendicular to the building's primary axis. The quartermaster's drawings from 1872 show such a wing as an option for this standard plan.

The Class 'C' cost estimate for a hostel use for the year 2003 is \$238.82 per square foot. This includes interior changes for use (i.e. kitchen equipment and shower rooms) and new partition walls on the second floor.

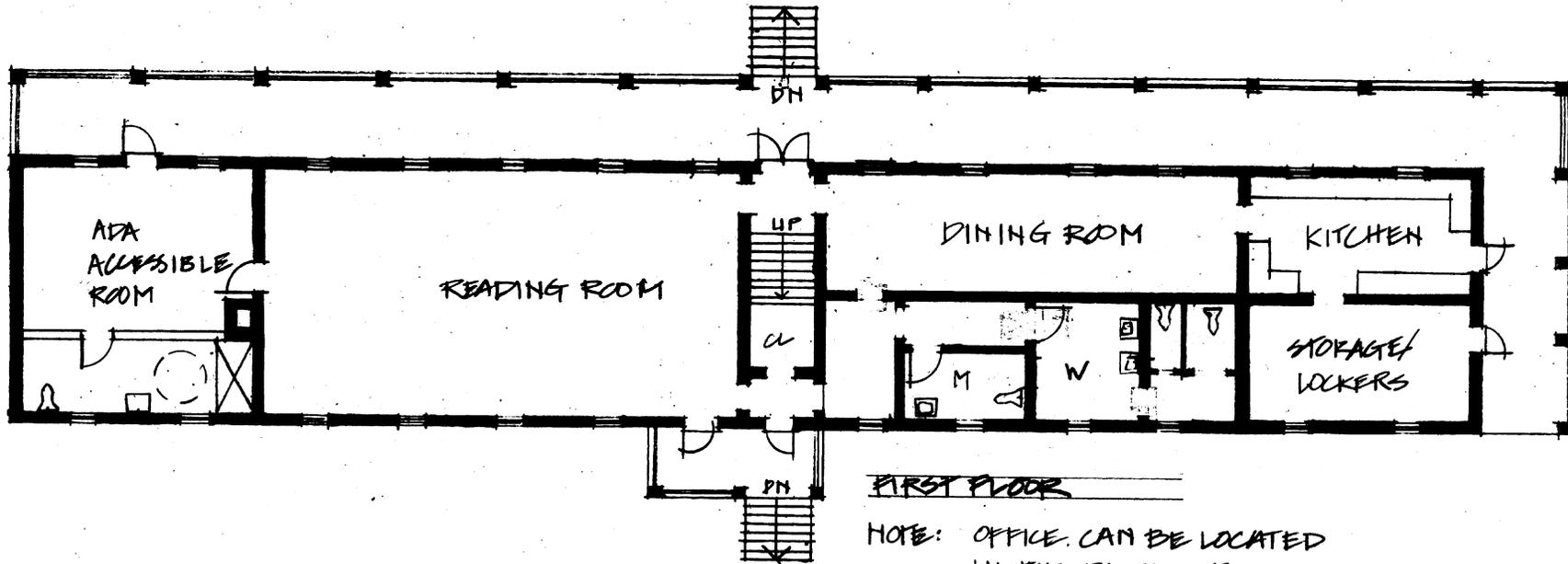
### ***Exterior Character Defining Features (From Part One of the HSR)***

- Long rectangular two-story building.
- Gable roof, wooden roof vent with louvered sides and pitched roof, short masonry chimney, metal roof vent.
- Horizontal drop siding, triangular louvered vents at north and south gable ends.
- 4-over-4 double hung windows, four-light transom over front door, six-lite and nine-lite fixed windows at foundation level.
- Door and window surrounds.
- Five-panel exterior doors, four-lite one-panel basement door, sliding door on south elevation.
- Porch on west elevation, thin chamfered posts, shed roof, cross-beam railing, back porch on the east elevation with supporting posts and roof, porch wood flooring.
- Lattice foundation skirting, brick foundation.

### ***Exterior Recommendations***

- Vehicular Circulation: Provide dedicated on-street parking. Additional parking can be provided by redesigning the parking lot to the south of the O.O. Howard house.
- Pedestrian Circulation: Rebuild the sidewalks to meet current codes.
- Site: Correct drainage problems. Trim plants that are close to the building.
- The Foundation: Remove paint from the foundation. Repoint brick joints. Provide concrete and masonry sealant to correct moisture problems in basement if required.
- Walls: Refurbish belly band. Replace siding boards as necessary, especially the south side. Scrape and repaint the building with the original paint scheme.
- Windows: Refurbish as necessary. Replace damaged sills and jambs. Replace or restore damaged or missing hardware.



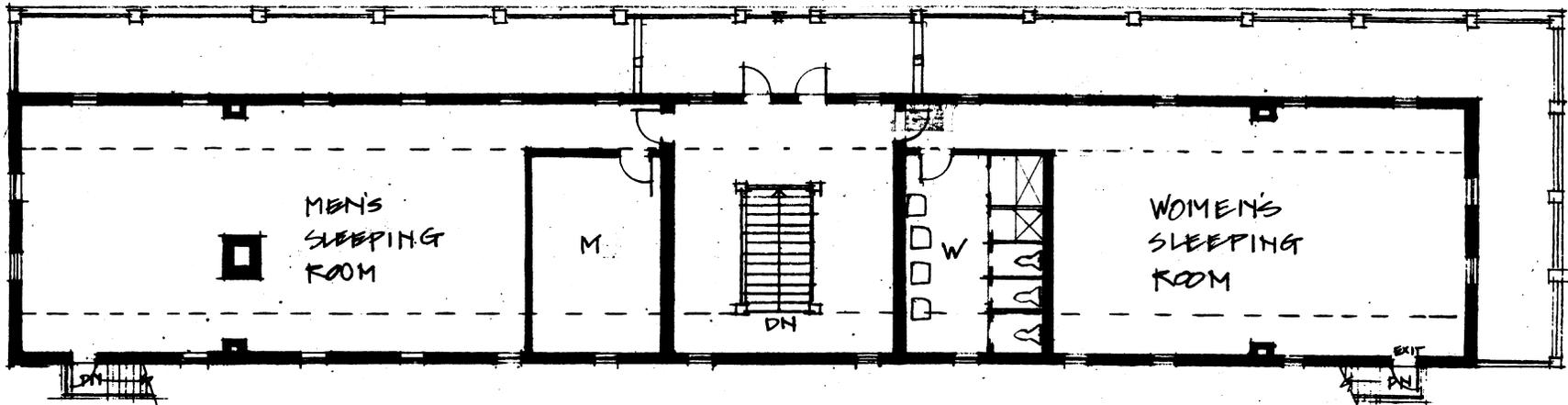


FIRST FLOOR

NOTE: OFFICE CAN BE LOCATED  
IN THE BASEMENT.

BUILDING 607 HOSTEL  
SCALE: 1/16" = 1'-0"

**PLAN A**



SECOND FLOOR

- Doors: While the doors have been replaced, the existing five-panel doors are now a part of the historic fabric of the building. They should be refurbished. Replace or restore damaged or missing hardware.
- Trim: Refurbish the window trim on the east and west elevations. Replace fascia, molding, and vertical corner boards on the north and south elevations.
- Roof, Gutters and Eaves: The gutters should be cleaned, and the east side gutter and downspout system should be examined more closely for damage. Screens might need to be installed to keep the gutters and downspouts clear. Refurbish eaves on the west, east, and south elevations. Repair or replace the west gutter system. Investigate more closely the condition of the roof and ventilators.
- Porches and Stairs: Rebuild center stairs and railings at the west porch. Repair deck and ceiling. Repair or replace lattice between posts. Replace deteriorated porch columns. Replace east porch in-kind. The north porch columns need to be repaired or replaced and placed on raised bases above the concrete so they do not absorb standing water. Install bollards or a curb to protect the structure from cars.
- Miscellaneous: Replace exterior light fixtures with period-appropriate fixtures. Remove surface-mounted cable and conduit and place underground or inside wall cavities prior to repairing wall finishes.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- The original floor plan is intact with few modifications. The floor plan at the north end of first floor room is intact, and partition walls on second floor, while not original, are still historic.
- Original volume and proportion of rooms.
- Original ceiling height.
- Original stair location and configuration with some replacement pieces, metal banisters, stair treads.
- Moldings, chair rails, picture rails, simple window and door casing.
- Rough plaster walls, vertical beaded wood siding, basement has exposed wood paneling and brick foundation walls.
- Five-panel and four-panel doors, fifteen-lite window in room divider.
- Sinks and soap dishes in first floor men's room, cast iron wash sinks, metal radiators.

#### ***Interior Recommendations***

- General: The interior should be restored to its original finishes, especially the floor. Restoring the open floor plan on the second floor would facilitate understanding the military use of the building. The fire separation walls should



- be removed to allow visitors to perceive the original open floor plan. The stair enclosure does not provide for proper landings at the stairs.
- **Specific Space with Unique Treatment:** The squad room on the second floor offers an opportunity to create an interpretive space for barracks and military life of this era. This would be a good space for that because it has its own entry from the west porch and could function independently of the other rooms on the first floor. The basement might also be a good place for an interpretive use.
  - **Typical:** Restore the wood floors and wood trim. Remove surface mounted conduit and outlets. Re-plaster walls and ceilings. Re-paint where paint is peeling. The first floor toilet room is in poor condition and should be remodeled, and brought up to meet current codes. The door hardware is not accessible. Replace door with period appropriate doors, preferably the four-panel version seen in photographs. Reroute the plumbing in the basement so that space is more useable.

### Task Three: Requirement for Treatment

#### ***Compliance with Codes***

##### Uniform Building Code (UBC):

- Occupancy Proposed: R-1 (residential, multi-unit).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories Permitted: 6,000 S.F. / 2 stories (complies).
- Building Area: 5,926 S.F. for upper 2 stories over 1,776 S.F. basement.
- Occupancy Loads:
  - Main Floor: (2,946 S.F.) 15 persons.
  - Upper Floor: Office (2,980 S.F.) 15 persons.
  - Basement: Storage / Mechanical (1,776 S.F.) 6 persons.
- Exits Required: 2 required; 4 provided.
  - Upper Floor Exit: 2 required.
- Crawlspace ventilation: Verify.
- Attic ventilation: Verify.
- Plumbing: Per residential use.
  - Basement: Unisex restroom.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Structural: Needs structural assessment.

##### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington



State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. The basement and first floor can be made accessible with exterior ramps. Accessible bathroom facilities and hardware will need to be upgraded. The second floor needs to have an elevator to be accessible. This may be problematic within the existing footprint of the building. Consideration should be given to locating new vertical circulation in a separate annex on a secondary elevation, to minimize the visual impact.

Uniform Mechanical Code (UMC):

- Mechanical : See mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Data: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire Protection System: See electrical assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. Wall cavities should be insulated as possible without destroying historic materials. If the siding is removed, it would present an opportunity to insulated large portions of the building without disturbing historic materials. The attic should be insulated, with provisions made for ventilation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated .

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Infantry Barracks (Building #607) is historically significant, not only as an individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks as well. Currently, the Barracks serves as office space so no real change of use is proposed for this



building. Any necessary changes to the exterior of the building should be undertaken in such a manner as to complement the historic character of the entire West Barracks, and comply with the Secretary of Interior Standards.

- Interior: The proposed renovation of the Infantry Barracks should have minimal impact on the historic character of the interior. Because of the age of the structure and its uniqueness as the only surviving original barracks building, original walls and finishes should be preserved whenever possible. New finishes should match the existing. Window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to non-historic interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

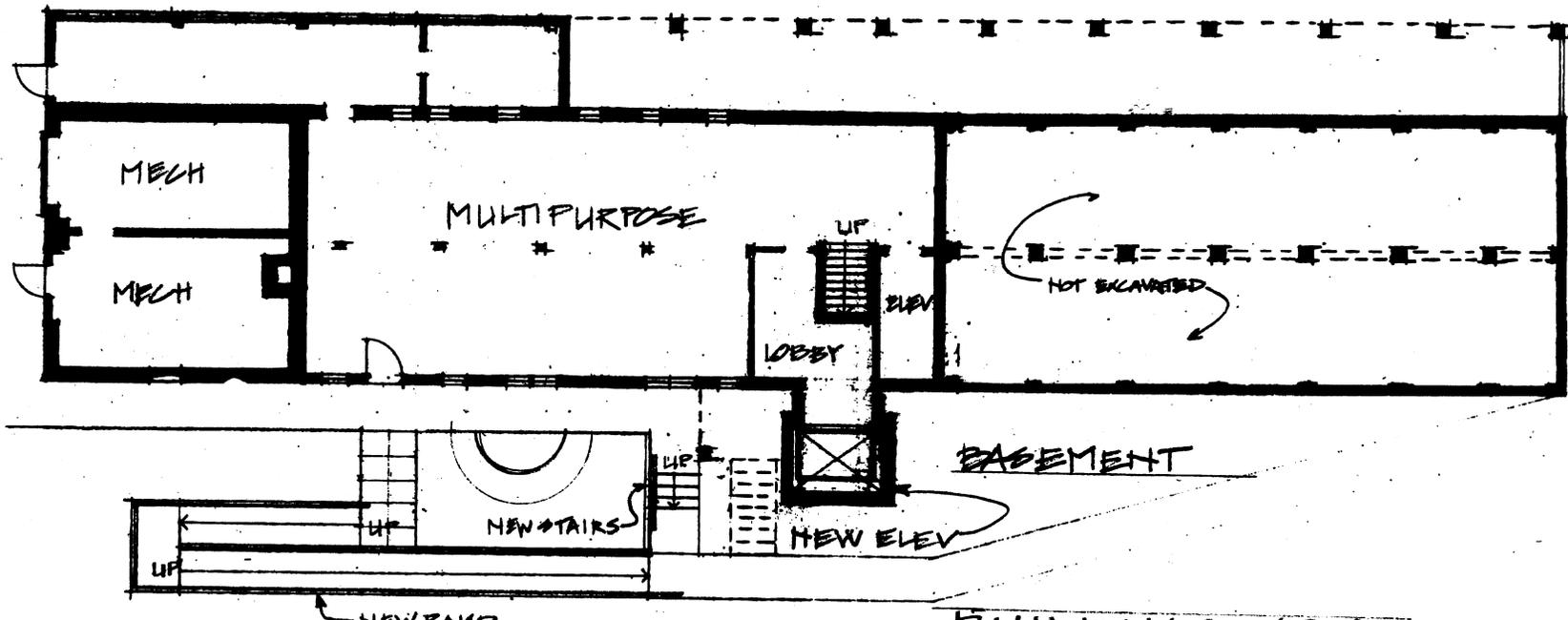
#### Task Four: Alternative Treatments

Rehabilitating the Infantry Barracks (Building #607) for use as lodging space or an elder hostel could have significant impacts on the character of the interior. Any residential use would require a number of additional partitions, detracting from the open floor plan of the Squad Room on the second story. A hostel or elder hostel might leave larger rooms open, and retain some sense of the character of the barracks.

As an alternative, the Infantry Barracks could be reused as artists' studios or classrooms (See Plan B). These uses could either serve as an interim role, providing an immediate tenant to use the building, or take on a more permanent role. These arts uses could have a lesser impact on the interior of the barracks than the lodging use, with larger studios or classrooms located on the upper floor, and uses requiring less square footage located on the ground floor. The largest variable would be the size of the restrooms required, which will vary depending on the particular tenant mix. Impacts on the exterior would be similar to the lodging use.

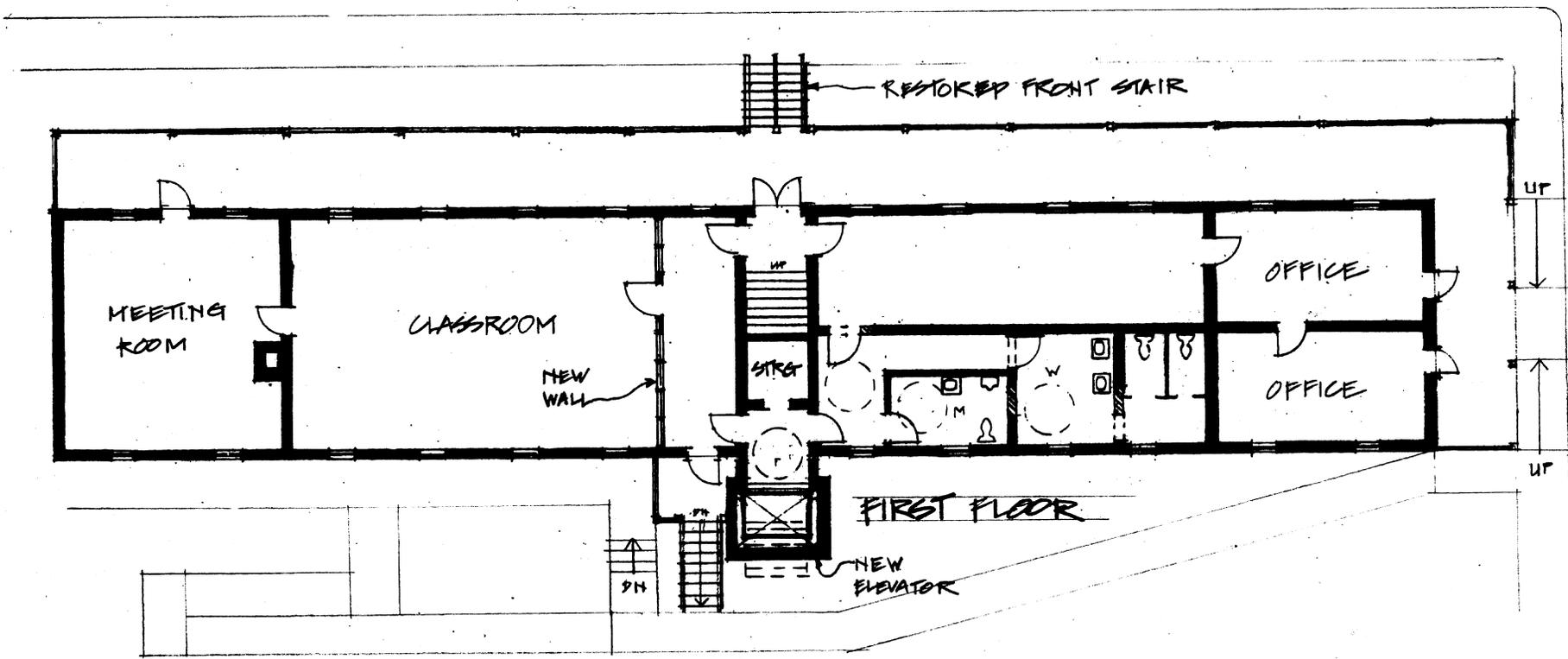
The Class 'C' cost estimate for an arts/education use for the year 2003 is \$133.01 per square foot. This includes minimal interior changes for a range of arts uses and media, including pottery and painting studios to a foundry.

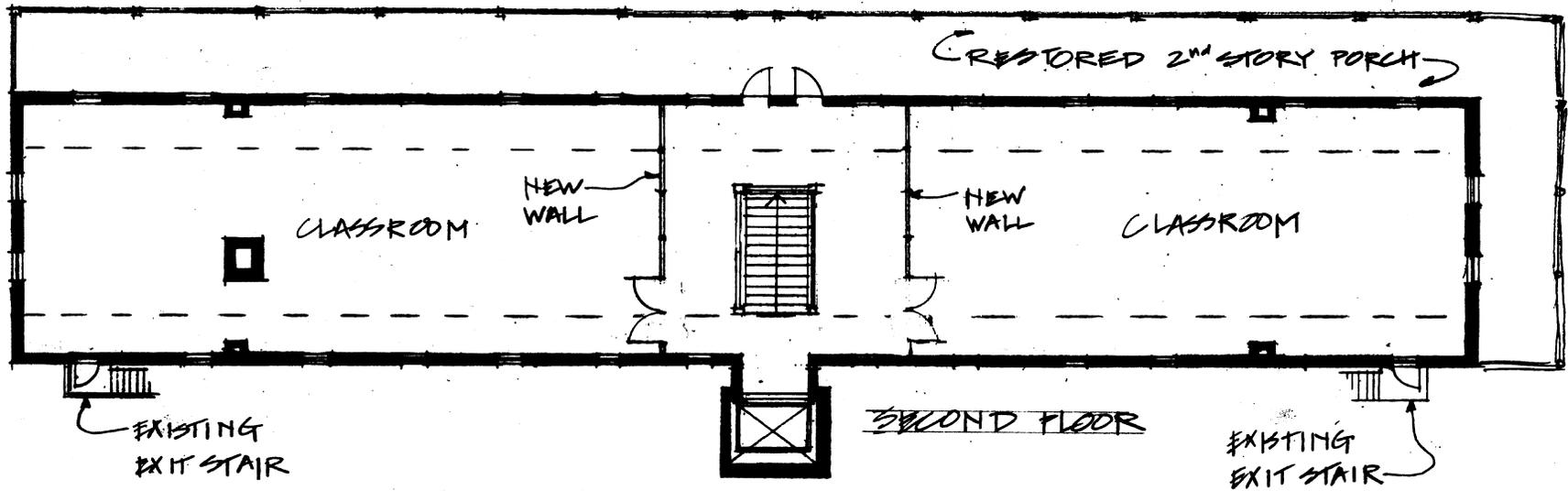




**BUILDING 607 EDUCATION/ARTS**  
**SCALE: 1/16" = 1'-0"**

**PLAN B**





<b>Building Number:</b>	<b>614</b>
Area:	West Barracks
Date of Construction:	1904
Period of Significance:	1900-1919 (per HSR Part One)
Historic Use:	Hospital
Current/Recent Use:	Offices
Occupancy:	I-1.2 then B
Hazard Level:	Not Available
Number of Floors:	Three stories
Basement Floor:	7,026 sq. ft. (per January 2000 SERA report)
First Floor:	8,082 sq. ft. (per January 2000 SERA report)
Second Floor:	8,082 sq. ft. (per January 2000 SERA report)
Third Floor:	6,064 sq. ft. (per January 2000 SERA report)
Exterior Materials:	Painted red brick, wood tongue and groove at porches, wood shingle siding at dormers.



### Task One: Conditions Assessment

#### *Site Context*

The hospital sits slightly higher than the other buildings in the West Barracks. It faces the Infantry Barracks (Building #607) across Barnes Road. As the westernmost building of the area, the hospital's west elevation is visible to travelers on I-5 from both directions. Its close proximity to the freeway subjects the building to air and noise pollution. The mix of air pollutants with rain and direct sun exposure has caused the west side of the building to deteriorate faster than the east side.

#### *Vehicular Circulation*

Vehicular access is from Barnes Road on the east side of the building. There is parking on the street. Access is also provided on the south side of the Annex, but no parking is provided. Another road wraps the building from the north to the west of the building and continues south, but is separated from the building by a chain-link fence.

#### *Pedestrian Circulation*

There are concrete walks to the main entry, on the east to the north entry and to the south entry of the Annex. A walk wraps around to the west side but ends at the west basement entry. Another walk begins at the south porch on the west side but only



extends a short distance to the south. The walks are in fair condition; they are cracked in many places and have biological growth.

### *Exterior Assessment of Main Hospital Building*

- **Summary:** The Post Hospital or Barnes Hospital has undergone many changes in the last years. The porches were enclosed in the 1930's to increase bed space. The most noticeable change is the Annex that was originally located to the west but was moved to the south end of the building in 1952 when I-5 was constructed. The hospital is significant in that it was a built from a plan provided by the Surgeon General's Office, not the Quartermaster's Office as was typical. The layout reflects the new philosophies being practiced in medicine at the time, particularly in treating tuberculosis. Elements such as the natural ventilation system and other features of the plan relating to patient care are significant.

The porches are in poor condition with significant deterioration that may be compromising their structural integrity. The red brick walls have been painted or treated with a red mortar wash. The wood siding at the porches and the wood trim are in fair to poor condition. The collection and drainage system directing water from the roof away from the building has deteriorated and the surrounding grade does carry run-off away from the structure. This has contributed to the demise of some areas of the structure. Other building elements, particularly the stair penthouses at the roof, also inhibit proper draining.



The front porch of the hospital is in poor condition. The gutters are not working properly and the concrete steps are broken.

- **Site:** A chain link fence surrounds the building on the west and north sides. The landscaping features overgrown grass and bushes. The holly trees at the east side entry are overgrown and need to be trimmed. The concrete stairs are in fair

condition and the railing does not meet current codes. The west side drainage is poor and the east side drainage is fair.

- **Foundation:** The foundation is brick and rubble stone with rusticated ashlar sandstone facing laid in a four-height pattern. A heavy, rusticated sandstone belt course circles the building above the foundation. In general, the foundation is in fair condition with some biological growth near grade and some red staining from the brick deteriorating above.



The west elevation of the hospital shows the location of the walkways to the Annex building.

- **Walls:** The exterior walls of the main building are red brick laid in a common bond pattern. The brickwork is in fair to poor condition and has either been painted or treated with a mortar wash that has altered the original character of the mortar joints. This has trapped moisture within the wall and is causing deterioration of the brick face and mortar. There is no apparent damage due to displacement or settlement to the main body of the Hospital. The west side of the main building reveals where the connecting walkways to the Annex were originally located. Ghosts of the walkway outlines and railing attachments at the second floor are visible. The openings have been filled in with brick and matching windows installed. The mortar joints, however, do not match at these locations of infill. At the south corner, some efflorescence and mortar loss are evident where a downspout appears to have been removed. The north corner is in better condition, but shows some mortar loss. The ward wings are brick as well and have been painted white at what was the exterior but is now the inside of the enclosed porch.

- Windows: (See interior notes.) The exterior wood trim is in fair condition. The sandstone sills are in poor condition with portions that are spalling and blistering. The enclosed north and south porches have sixteen-over-sixteen lite windows with sliding middle sashes. In general, they are in fair condition.



The exits from the porches are in poor condition.

- Doors: The porch exterior door on the southeast side is two panel with a four-lite window in poor condition. The front porch doors are double doors, with two lower panels and upper windows. They are in fair condition. The north entry doors into the auditorium are double doors with two panels and upper windows. They are in fair condition. The other doors to the porches are three-panel with a window above and are in fair condition. The exit doors on the west side are flush doors in poor condition. The basement doors to the boiler room on the west elevation are in poor condition and do not contribute to the character of the building. The basement entry doors at the south wing are in fair to poor condition. They are wood paneled doors with upper windows that have been covered with plywood.
- Trim: The wood fascia and eave soffit board are in poor condition. The damage to the soffit boards indicates water damage from the gutters. The belly band and cap need to be refurbished and replaced in some locations.
- Roof, Gutters and Eaves: The eaves are boxed-out with painted wood soffit boards that are in poor condition. The built-in gutters and roof leaders at the corners are in fair to poor condition. There is corrosion and evidence of leaking from the gutters. The northwest leader on the north porch is corroded as is the cast iron riser from the subsurface drainage system. The structure was re-roofed in the last year with asphalt composition shingles and is in good condition. In



general, the step flashing between the porch and the brick walls of the Annex or main building is in poor condition, as is the painted copper flashing at cornice lines. There are penthouses above the exit stairs on the west side at both the north and south porches. These are not contributing and do not comply with current codes. Other options for egress should be explored.



The south porch where it meets the relocated Annex shows a lot of damage.

- Porches:** The porches are supported on masonry piers with skirting in between. The skirting is a painted wood frame with painted metal screen panels. The bottom rail sits on grass or a concrete curb and tends to wick up moisture. In general the piers and skirting are in fair to poor condition and are the worst on the west side. On all the porches the structure is sagging in between the piers and the southeast porch is showing signs of separating from the Annex building. These conditions need to be investigated further. The porch floor is painted tongue-and-groove wood in fair condition with a considerable slope to the outside for drainage. The siding is painted vertical tongue-and-groove in fair to poor condition. There is biological growth present and the paint is peeling. The bottom sill plate is in poor condition on all the porches. The wood columns are in fair to poor condition, with pronounced deterioration. The bellyband and cap are in fair to poor condition. The west side of the north porch has a birdhouse on the northernmost column on the first floor. The west elevation of the south ward wing porch is in the worst condition perhaps due to the close proximity of the freeway and the exposure to the pollutants created by the cars. In conjunction with precipitation, that face of the building is bombarded with acid wash as the rain mixes with air pollution. In addition, there are no trees or vegetation on that side of the building to protect it from the afternoon sun.
- Entries:** The front porch is 6" to 8" below the first floor level. The front porch is in fair to poor condition and needs a new gutter and downspout system. The masonry piers are in fair to good condition as is the infill skirting between the piers. The concrete stairs are in poor condition and have split in two. There is no handrail and the railings do not meet current codes. There is no center rail despite the width of the stairs. The metal railings are rusting and staining the wood at the



brackets at the columns. The east and north porch railings have cast-iron newel posts decorated in a spiral pattern. The bellyband at the front porch is in fair to poor condition. The portion just above the top concrete tread has some rust staining. The decking is tongue and groove painted wood that is in poor condition and should be replaced. The columns are painted wood with painted cast iron bases. The columns are in poor condition and some capitals are broken or missing. The bases are corroding. The porch roof is EPDM roofing material that appears to be poorly installed, possibly directly over the original metal roof. The built-in gutters are leaking in the middle. There is deterioration at the roof due to blockages at roof leaders. Corrosion is present at the low point of the gutter. The painted copper flashing is in poor condition.

The north porch stairs and cast iron railings are in poor condition. A railing on one side is missing and they do not meet current codes. Wood infill panels underneath the stair have fallen and are in poor condition. There is a step up from the north entry landing into the auditorium.

The exit stairs from the sun porches are in poor condition. They are open-riser wood stairs on concrete stoops. The railings are wood 2x4 or pipe railings that do not meet current codes and are in poor condition. The west side basement service entrance stairs are concrete with no handrails and are in poor condition. The landing at the bottom of the stair does not appear to have a drain and is full of vegetation and debris. The basement entry on the west side of the south wing is concrete stairs down to the entry with no handrails. The concrete is in fair condition. The drain at the bottom landing needs to be checked.

- Dormers: The dormers are roofed with asphalt composition shingles and sided with painted slate shingles. There is evidence of the old roof leaking on the interior of the building (see interior notes for third floor). The slate shingle siding is in fair condition with a lot of biological growth at the junction of the wall and the roof. The presence and condition of flashing at this junction of wall and roof needs to be investigated. The windows are paired painted wood four-light casements. Many of them are missing, broken, blocked by plywood, or missing muntins.
- Miscellaneous: There are many exterior surface mounted and loose utilities including phone cable, electrical wiring, conduit, plumbing, and electrical junction boxes. There is jacking occurring at conduit locations from corrosion of the connections to the brick wall. There is a plumbing vent stack on the outside of the wall at the south end of the building. At the main entry porch there are two non-contributing light fixtures that are surface mounted on electrical junction boxes attached to the gutters. Flag holders are mounted on the columns. The



brick chimneys are in fair condition but may require seismic bracing. The black sheet metal ventilators on the roof are in fair condition. The exterior light fixtures in general do not contribute to the character of the building.

### ***Exterior Assessment of Hospital Annex***

- **Site**: A tree is located too close to the southwest corner of the building.
- **Foundation**: Because this building was moved from its original location, the foundation is newer and is a mixture of ashlar sandstone, brick and concrete with a cement parge coating. The stone and brick need some repair. The stone is stained with biological growth, particularly on the north side of the building. Red dust from the deteriorating brick has also stained the stone and concrete. There is cracking in the parge coat. The north side of the building has been attached to the south ward wing of the main hospital and the corners where the wall meets the porch are in poor condition, especially near the downspouts. There is some efflorescence and biological growth on the brick and stone there.
- **Walls**: The exterior walls of the Annex are red brick laid in a common bond pattern. The brickwork is in fair to poor condition and has been painted. This has trapped moisture within the wall and is causing deterioration of the brick face and mortar. Many patches are visible in the walls from the relocation. They are very apparent as the brick and the pointing is poorly done and does not match. Diagonal cracks have propagated from a number of openings, and again, of repairs were poorly executed and presumably date from when the building was relocated. Efflorescence and deteriorating mortar are present at the north and south corners of the west side of the building.
- **Windows**: The basement windows are center pivot hoppers with security bars on the inside and outside of the window. The windows on the first and second floor and in the third floor gable ends are four-over-four double hung windows. The sandstone sills on these windows need to be cleaned and evaluated for more extensive treatments. The westernmost window on the south side appears to have originally been a door that was filled in with a window and new brick. The vent on the next window to the east was filled in. On the north side, the basement windows and the first floor and second floor windows where the porch wall meets the Annex wall have been removed and are filled in with brick.
- **Doors**: The west side doors have been the entry location of choice for transients trying to get into the building. As a result the glass is broken and the doors have been boarded up. Both first and second floor doors are in poor condition but are contributing to the character of the building. The south side doors are newer paneled double doors. Unlike the other doors, these doors have panels that are



vertical, and the windows above are also boarded over for security. The exterior is painted and the interior is stained. The six-lite transom above is intact. First, second, and third floor doors are wood paneled with upper windows and retrofitted panic hardware.

- Porch: The west side porch is in very poor condition. The concrete piers (footings) are in fair to poor condition. The wood stairs are pulling away from the building. The wood columns and cast iron pipe railings are in poor condition. The painted tongue and groove ceiling is in fair condition having been protected from the weather for the most part. A closer inspection of the ceiling materials should be done to verify their condition. The roof has been recently replaced with the same asphalt composition shingles used on the main building and is in good condition. The built-in gutters and downspout system are in poor shape and need to be replaced. Corrosion, water damage, debris build-up, and new plant growth are visible.
- Trim: The fascia, soffits, and eave returns are in fair to poor condition and will require some repair.
- Roof, Gutters and Eaves: The roof has been recently replaced with the same asphalt composition shingles used on the main building and is in good condition. The built-in gutters and the downspouts need major repair and the gutter leaks in many places. The downspouts are corroded or misaligned and the subsurface standpipe is also severely deteriorated. The eaves are in fair to poor condition requiring major repair. The painted copper flashing is in poor condition.
- Entries: The concrete on the south entry stairs is spalling and jacking from exposed re-bar. There is also biological growth on the stairs. The cast iron pipe railing does not meet current codes and is in poor condition.
- Dormers: There are three dormers on the south side of the building. They all have new roofs and painted slate shingle siding in fair condition. There is a lot of biological growth on the shingles near the roof. The windows are paired six-over-six double hung windows on the two outside dormers and a single four-over-four double hung on the middle dormer. On the north side are two dormers at either end. The middle dormer is a doorway to the roof and access to the main building attic space. They are in similar condition to the other dormers.
- Miscellaneous: The fresh air vents under the windows have been blocked on the interior, but most are still visible from the outside. The chimneys may need seismic braces. The interior natural ventilation system is intact although hindered by the placement of partition walls. This natural ventilation system is a major



characteristic of sanatoria and reflects the philosophies of medical treatment of the time. Exterior light fixtures are not historic and should be replaced.

### ***Interior Assessment***

(Room numbers are as designated on the 1952 floor plans by the Post Engineer.)

- General: The interior finishes and plan layout are remarkably intact.
- Significant Features and Typical Materials: Pressed tin ceiling tile and cove ceilings. Plaster finishes and wood strip floors. Paneled doors.
- Special or unusual conditions: Egress issues including fire separation wall placement and egress needs should be resolved. The interior stair is leaning and should be evaluated by a structural engineer.

### ***Basement Conditions***

- General: The basement was remodeled in 1939 to divide former storage space into examination and treatment rooms, a sick call room, pharmacy, toilets, and other spaces.
- Floor: Typically the floor is scored concrete and is generally in fair condition. There is some water staining on the floors. One room in the Annex basement has a wood strip floor in fair condition. The surgeries and examination rooms and part of the corridor have 8” or 9” square vinyl tiles that may contain asbestos. These rooms also have painted 6” square metal tile base and cove most of which are missing. Some rooms have floor drains. The floor in Room 6, the boiler room, floor is lower than the surrounding rooms. Some of the rooms have a painted concrete floor, on most the paint is wearing off. Room 15 was a latrine at one time. All of the fixtures are gone but the plumbing and the floor drains remain.
- Walls: The walls are painted concrete or brick and generally in fair condition. In the north part of the basement the brick and rock meet in an interlocking pattern. Some rooms have water damage on at least one wall. There are plaster walls and areas of black and white 4” square ceramic tile in the surgeries and exam rooms. Similar tile is found in the restrooms at the sink locations. The plaster walls are 50% covered with minor cracking. The Annex has a few rooms that differ in finishes from the main building.
- Ceiling: The ceiling is plaster or gypsum wallboard and generally in fair condition. A couple of rooms have soffits. The north stair ceiling is pressed tin



- tile. There is minor cracking in the plaster ceiling of the restrooms. In the Annex, the ceiling is a painted wood panel system in fair condition.
- Windows: The windows are painted wood, the majority of which are pairs of one-over-one in-swinging casements in fair condition. The glazing of a few windows is painted, broken, or covered with plywood. There are two-over-two double hung windows in the surgeries and examination rooms. Some of the windows have broken glazing. The windows in Room 9 are three-over-three double hung windows. The windows in the bathroom have obscure glass. The windows in the Annex are metal frames on a center pivot with security bars on the inside and the outside of the frame. The window openings on the north side of the building have been filled in with concrete.
  - Doors: The doors are five-panel painted wood doors in fair to good condition. Most of the doors retain their period hardware. There are some flush doors that are not contributing to the character of the building. Some doors have been modified with panels cut out or made into Dutch doors. The restroom doors are flush with period push/pull hardware. The corridor doors are unique with a width of four feet and have original heavy-duty brass double acting hinge hardware. They are flush with a four-lite window with obscure glass. There is a metal grate sliding door over Room 15. The exit doors on the south side of the Annex are newer and non-contributing. They are boarded up and chained.
  - Stairs: The north stair is wood tread and riser, with vinyl tread and metal nosing over the wood tread. There is a wood 2x railing on one side and 2" diameter handrail on the other. The door placement at the top of the stairs doesn't allow for a proper landing before opening the door. In general the stair does not meet current codes. The south stair is made of wood treads and risers with vinyl tread and metal nosing on top. There is a 2x railing. As with the north stair, the door placement at the top of the stairs doesn't allow for a proper landing before opening the door.



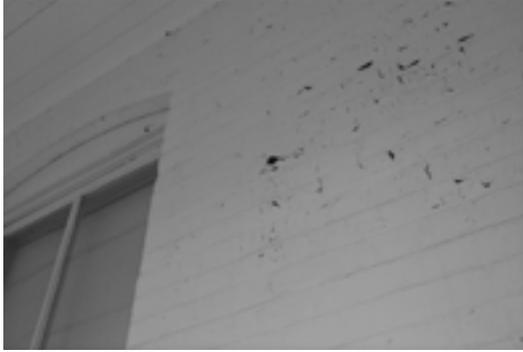
- **Miscellaneous:** The light fixtures are contemporary fluorescent fixtures. There are maybe two original fixtures left. There is a lot of conduit and piping on the walls and ceilings throughout. The piping may be covered in asbestos insulation. Rooms 2 and 21 have painted cast iron ornamental ventilation grilles. There is an ash clean-out in Room 5 for the Furnace Room (Room 6) chimney. Surface mounted conduit is found in the majority of rooms. The boiler is intact in Room 6. Room 9 has built in metal cabinetry, probably from the 1939 remodel of the basement into surgeries and exam rooms. There are radiators throughout. Electrical panels are located in the south part of the corridor. The plumbing fixtures are porcelain fixtures dating from 1939 with nickel-plated faucets.



Room 9 in the basement has metal cabinetry and a tile wall.

### ***First and Second Floor Conditions***

- **Floor:** The original sheet linoleum floors have been covered with the same resilient tile flooring as the other non-residential buildings in the West Barracks. Vinyl cove base has been glued directly to the existing wood base. The condition of the original floor is unknown. There are a few missing floor tiles scattered, especially in the toilet rooms and hallways. The entry vestibule has hexagon tile. Room 220 and room 221 both have terrazzo floors and tile bases underneath the typical resilient floor tile. The floors are also slightly higher than the hall floor and have marble thresholds.



The exterior wall of one of the ward wings has paint peeling on the brick wall.

- Walls:** In general the walls are lath and plaster. Typical damage includes minor cracking, peeling paint, loosening of the key of the plaster, and minor loss of plaster. Room 103 has been altered by removal of a few walls so that the room extends into the rooms that were probably originally a bathroom and vestibule. The chimneys in this room were removed as well. Columns replaced the walls that were removed. Rooms 104, 116, 202, and 219 were divided with a partition walls. Room 107 had a wall removed. There is a black and white tile wall behind the sinks in the restroom. The ward room walls are masonry with lath and plaster. The corners are curved which is probably a characteristic of the sanatoria of the time. The cracking damage to the plaster is much less in the open ward rooms than in other rooms. The brick walls, now interior walls with the enclosure of the porches, have been painted white and the paint is peeling in some places. Room 207 and Room 105 were the hallways that connected to the walkway to the Annex. The closet made from part of Room 207, the toilet room, was not original.
- Ceiling:** The ceilings are typically painted pressed tin tile with a pressed tin cove. Rooms 101 and 117 have a particularly decorative pattern. Peeling paint, holes from surface-mounted conduit and light fixtures, and the separation of tile joints are common conditions of the ceiling system. There are also holes in the ceilings from pipes and conduits. The ceilings in the south part of Room 103 are in particularly poor condition.
- Windows:** The typical windows are painted wood two-over-two double hung windows. Some windows have security bars and wood diverters. The jambs of these windows will need repair. Pull down roller shades on the windows should be removed. The window sills slope downward at an angle which is a significant feature of this hospital type.
- Doors:** The majority of interior doors are painted wood five panel with three-lite transoms. Most transoms have been fixed in the closed position for fire safety.

Some doors have been altered into Dutch doors or have had panels removed, among other alterations. The glazing has been painted on the toilet room doors on the porches. Double doors at the south vestibules on both floors are missing.

- Trim: Interior trim in general is half-round casing on the doors in the ward rooms. This appears to be a feature of the sanatoria.
- Stairs: The stair up to the second floor has wood risers and treads covered with rubber treads and nosing. The newel post is a built-up square profile. The railing does not meet current codes and no handrail is present.
- Miscellaneous: There are ornamental cast iron grilles on the wall at chase locations with particularly large ones on the ceiling in the ward rooms. Louvers on some of the wall grilles do not function. The majority of the original radiators are intact, and light fixtures are non-contributing fluorescent. The toilet rooms have plumbing fixtures and stalls intact. The stalls are deteriorating from use and wear and many repairs are evident, especially at the legs. They are older fixtures, probably installed in the 1930's. Overhead track with presentation boards have been installed in the ward rooms. They do not contribute to the character of the building. Room 207 has plumbing in it and was probably a toilet for staff.
- Annex: Typical floor finishes in the Annex are resilient floor tile or sheet flooring. The condition of the original flooring underneath is not known. The exception is Room 113 which has 8" square red quarry tile with marble thresholds, a floor drain, and 6" square black tile base in good condition. Other finishes in the Annex are typical of the main hospital building. The walls are plaster and the ceiling is painted pressed tin tile ceiling and cove. In the larger rooms the tile has been pock-marked, for unknown reasons, and in some places it is patched and repaired. There are many pipes penetrating the cove in the rooms. The decorative pattern is different from the main building. Room 112 was a concrete-walled cold-storage room, with a raised and scored floor. The doorway is smaller than most doorways, and a wood five panel door was cut down to fit it. Room 114 has painted tongue and groove wainscot and a lath and plaster ceiling. The stair from the first floor to the second is a nice wood tread and riser with rubber treads and nosing applied on top. It has wood spindles, newel post, and railing, but no handrail. The stringer has a decorative bracket applied at each step. The stair to the third floor is similar but the fire wall covers most of the stair. The doors on the exterior to the north are fit into jack arches with transoms. The interior finishes must have been replaced subsequent to the building being relocated. The damage visible on the exterior is not visible on the interior.



### ***Third Floor Conditions***

- **Floor:** Floors are typically fir strip flooring with a wood base and shoe that is in fair to good condition with some minor water staining. The north and south attic spaces have rough wood strip flooring. Room 303, the toilet room, has sheet linoleum and a raised plinth for the toilets with metal nosing at the edge. It was most likely retrofitted to serve as a bathroom.
- **Walls:** The walls are lath and plaster in fair to good condition. The typical damage is from peeling paint, limited areas of loss of key, and some water damage. The hall wall has a 1x6 board chair rail at gurney height. The north attic space walls are finished with 4" ceiling board. The south attic is not finished.
- **Ceiling:** The lath and plaster ceiling is in fair to good condition in the rooms. The ceiling in the hallway is pressed tin tile and cove. The north attic space is finished with 4" ceiling board. The south attic is not finished. The hall ceiling shows typical damage similar to the first and second floors. Plastered areas have water damage, cracking, and some loss of key that probably occurred prior to the roofing being replaced. Room 309 has a large area of ceiling that has lost plaster.
- **Windows:** The attic dormers have four-lite casement windows. The dormer windows in the main building are six-over-six double hung units. Some need repair, like sash cord replacement and sash repair. The glazing is generally intact.
- **Doors:** There is a metal sliding fire door south of the stair in the hall. The doors at the top of the stairs do not comply with current codes. Interior doors are typically wood five-panel doors.
- **Miscellaneous:** The original light fixtures have been replaced with fluorescent fixtures. Surface-mounted conduit, fire alarms, and plumbing are everywhere. Ornamental painted cast-iron grilles are still in place. The pressed metal radiators are still intact. Plumbing fixtures have been removed except for a urinal and a slop sink in Room 303. The old electrical panel is still located in this room. The door to Room 304 is locked.
- **Annex:** The third floor finish is brown sheet linoleum with wood base and shoe. Room 308 and Room 305 have wood strip flooring. Everything else is similar to the main building third floor finishes. Room 307, the toilet room, has painted tongue and groove wainscot. The windows are in fair to good condition. Interior doors are in fair condition, and exterior doors are in poor condition. The hallway has pressed tin tile and cove.



### ***Electrical Evaluation***

- **Service:** Overhead service is derived from the site overhead power distribution system. Service entrance conductors are installed in conduit. The length of the conduit inside the building substantially exceeds the maximum distance of 15' allowed by code. Equipment is in fair condition and consists of a 120/240-volt, 400-ampere, main circuit breaker switchboard.
- **Power Distribution System:** Service equipment supplies feeders to circuit breaker panelboards that are in fair condition.
- **Wiring:** Feeders and branch circuit wiring are installed in conduit and surface metal raceway. Conductors are type TW copper wire. Wiring is in fair condition.
- **Wiring Devices:** Original outlets are removed, blanked and replaced with surface outlets. Light switches are newer silent type. Receptacles are newer grounding type. Devices are functional and in fair condition.
- **Lighting:** Light fixture lamps consist of a mixture of incandescent and T-12 fluorescent that are not in compliance with current energy efficiency codes.
- **Fire Alarm:** The FCI make control panel is a non-addressable and provides floor annunciation only. Corridors are equipped with smoke detection, and heat detection is installed in most other rooms. Alarm initiation is by activation of automatic detection devices. Exit doors do not have code required manual pull stations. Notification devices are not correctly spaced, not visual and do not comply with current code requirements. Wiring is installed in surface metal raceway.
- **Telecommunications:** The main terminal consists of 66-type distribution blocks mounted on a plywood backboard. Distribution consists of Cat. 2 wiring from the terminal block to various telecommunications outlets located throughout the building. Wiring and components are in fair condition and are not in compliance with current standards for modern data telecommunications functions.
- **Emergency:** There is no illuminated exit identification or emergency egress lighting.
- **Recommendations:** The existing electrical power systems to include service, panels, receptacle outlets, switches and lighting circuitry are functional, essentially safe and free of hazard. Lighting should be upgraded to high efficiency newer fixtures and lamps for compliance with current energy code. Replace complete fire alarm with new addressable system and code compliant



devices. Install emergency egress and exit identification lighting. Replace telecommunications with Cat. 5-E system.

### ***Mechanical Assessment***

- **Description:** The heating in this building is by a heating hot water radiator system. The heating hot water piping is carbon steel and appears to be the original installation. This piping serving this building comes from the boiler system located in the Basement Mechanical Room of the building. The boiler is in poor condition and needs replacement. The heating hot water radiators appear to be in fair to good condition. New exhaust fans have been installed in the open area of the upper floor and route to the roof. These fans provide air circulation in the space.
- **Recommendations:** The boiler system that serves this building was installed in 1982 and is in need of replacement. The heating hot water radiators could be refurbished for re-use. Re-use of these radiators would help maintain the historical character of the building. New control valves are recommended to provide temperature control of the space. The heating hot water piping should be replaced, as it is probably near the end of its useful life. For ventilation, operable windows would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in interior areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.

### ***Plumbing Assessment***

- **Description:** Existing plumbing fixtures, when present, are in fair condition. Existing waste piping is cast iron. Existing domestic water piping is carbon steel and appears to be the original installation. The domestic water heaters are located in the first floor Men's and Women's restrooms. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.



- **Recommendations:** Depending on building usage, the restrooms may need to be reconfigured to be in accordance with ADA requirements. This may change fixture layout. Retaining the existing plumbing fixtures would not add much to the historical value. New fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed to replace existing domestic carbon steel piping since it is probably nearing the end of its useful life. We recommend replacing both water heaters due to the age of the heaters and the deleterious effects of intermittent use.

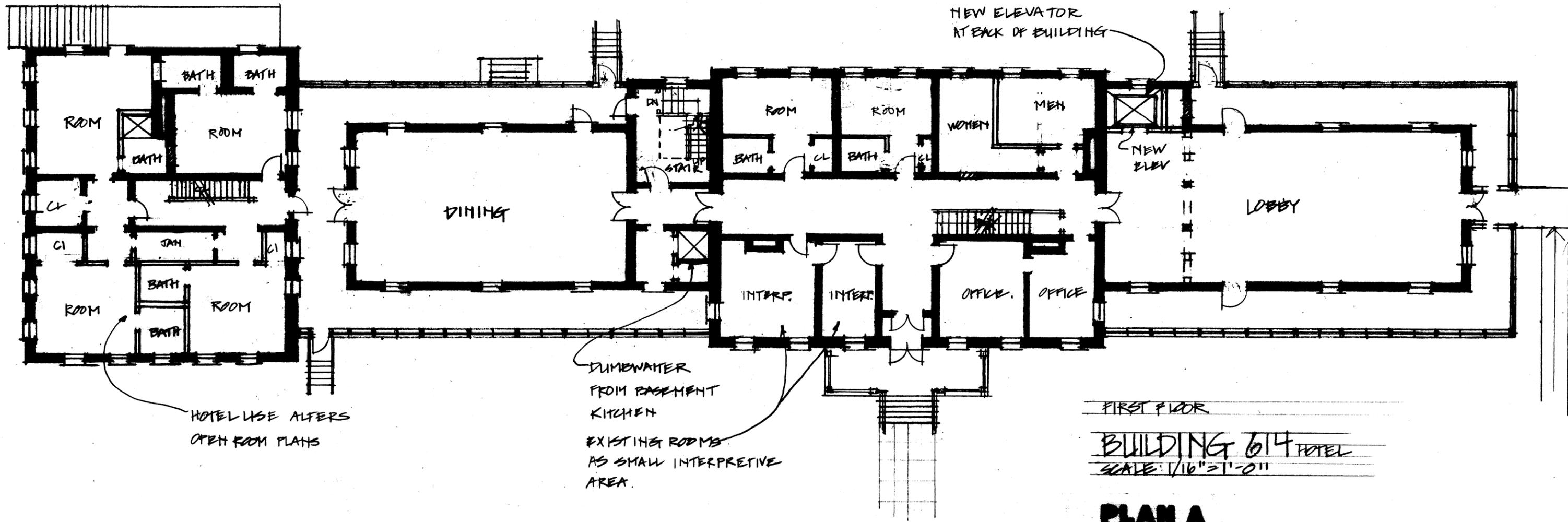
### Task Two: Ultimate Treatment and Use

The Hospital (Building #614) is a good candidate for exterior restoration and limited interior restoration and rehabilitation according to the *Secretary of Interior's Standards*. It is an excellent example of a sanatorium from the beginning of the 20<sup>th</sup> century that is remarkably intact. Although the Annex has been relocated to the south end of the south porch it is still valuable, useable floor area and the building has retained much of its original character even if repairs subsequent to the relocation of the building were not well executed.

The *West Vancouver Barracks Reuse Plan* suggests that lodging (See Plan A) would be the preferred use of the spaces within the hospital and annex. The public presence of the building certainly lends itself to this kind of use and its varied spaces provide rooms for uses such as a café, meeting rooms, and a reception hall. The smaller rooms would be guest rooms. Unfortunately only about 30 guestrooms could be created in the Hospital and Annex. As a result, the success of a hotel in this building is tied to the inclusion of the Infantry Barracks (Building #607) and the Red Cross Service Club (Building #636) in the development scheme to provide additional guestrooms and full service dining facilities.

For any new use, ADA access and egress will need to be provided. The location and configuration of the main stair in the hospital presents challenges to its continued use without altering greatly the feeling of the hallway. An elevator and stair tower could be built to the west of the hospital in the original location of the Annex, recognizing the historic configuration of the buildings. At the very least, an elevator should be provided within the footprint of the building and existing stairs enclosed for egress. Retrofitting an elevator within the existing building envelope has the potential to greatly alter the existing roof shape, assuming it will provide access to all four floors.





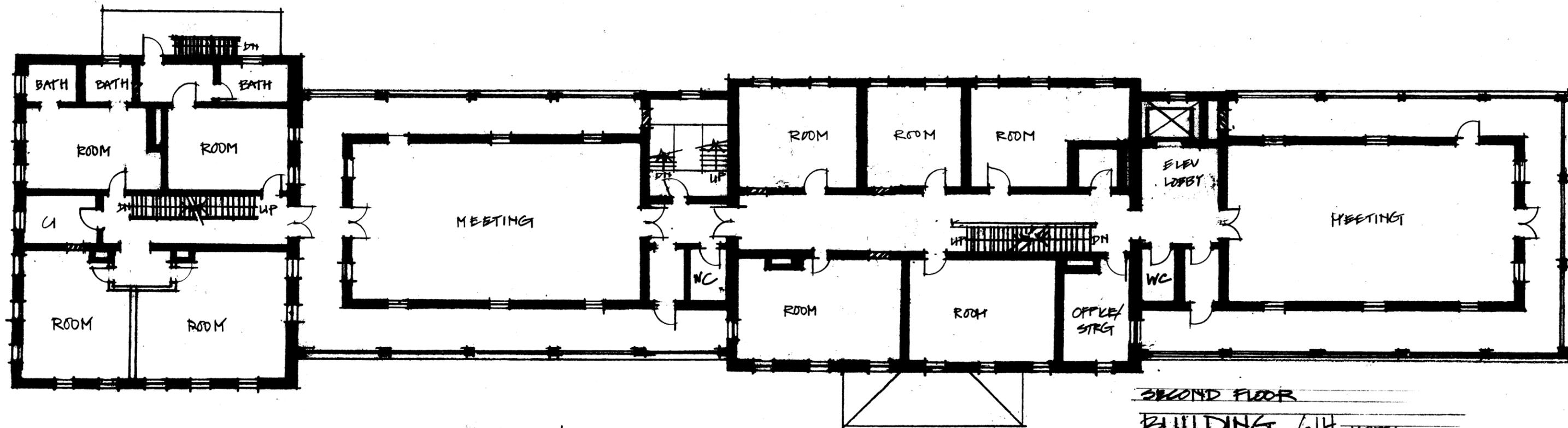
HOTEL USE ALTERS  
OPEN ROOM PLANS

DUMBWATER  
FROM BASEMENT  
KITCHEN  
EXISTING ROOMS  
AS SMALL INTERPRETIVE  
AREA.

NEW ELEVATOR  
AT BACK OF BUILDING

FIRST FLOOR  
BUILDING 614 HOTEL  
SCALE 1/16" = 1'-0"

**PLAN A**



NOTE: 3rd FLOOR CAN  
 ACCOMMODATE 8 ROOMS.  
 BASEMENT CAN HOUSE  
 SUPPORT STAIRS.

SECOND FLOOR  
 BUILDING 614 HOTEL  
 SCALE 1/16" = 1'-0"

The Class 'C' cost estimate for a hotel/lodging use for the year 2003 is \$205.19 per square foot. This would cover code compliance and interior changes required for a hospitality use.

Seismic analysis and retrofitting will be necessary for a masonry structure such as this. While the hospital at Fort Lewis offers a successful example of the adaptive reuse of a similar building, consideration of the impacts of retrofitting on the character, finishes, and historic fabric of this building should be given.

***Exterior Character Defining Features (From Part One of the HSR)***

- **Building Form, Shape, and Massing:** Main rectangular building with two flanking enclosed sun porches.
- **Roof Shape and Elements:** Gable roof with end returns, windowed dormers with classical pediment top, wood shingle siding, six-over-six double-hung windows and four-lite paired casement windows, corbelled chimney tops, metal roof vents.
- **Exterior Surfaces:** Common bond brick, vertical wood siding, louvered vents under windows.
- **Fenestration Pattern:** Main building has two-over two double-hung windows, concrete sills, arched brick lintels, side porches have sixteen-over-sixteen lite glazing with sliding middle panes, Annex at south elevation has six-lite transom over the door.
- **Porches:** Enclosed sun porches with thin chamfered wood posts with base and column, metal pipe railings, front porch has spiral pipe newel post, concrete stairs, tongue-and-groove wood flooring, shed roof.
- **Foundation Elements:** Wood and iron mesh foundation skirt, rusticated sandstone block.

***Exterior Recommendations***

- **Vehicular Circulation:** There is a lack of dedicated parking for this structure. More on-street parking will be needed with any new use, and the possibility of creating additional dedicated parking lots to the north and south of the building should be explored.
- **Pedestrian Circulation:** Concrete sidewalks need to be rebuilt and brought up to code. Ramps need to be provided at the front from Barnes Road to the front door.



- Site: The construction of an acoustic wall along I-5 should be considered to mitigate traffic noise and air pollution. Plantings located close to the building should be trimmed. Dead and dying plants should be removed and replaced. Site drainage needs to be modified to direct runoff away from the foundation. The concrete stairs should be re-built.
- Foundation: The stone needs to be cleaned. This should be done as part of a regular maintenance program.
- Walls: The painted brick and the loss of its weather face is a serious problem. The paint should be removed as a first step to the restoration of the historic character of the exterior. Further steps to mitigate the damage should be based on the advice of a masonry restoration specialist.
- Windows: The sandstone sills need to be cleaned and possible consolidated. The wood trim should be scraped and painted. Repair damaged windows.
- Doors: Refurbish existing historic doors. Replace flush doors with doors matching the originals. Where possible, retain original door hardware. Where necessary, replace the historic hardware with new accessible hardware that is appropriate to the style of the building.
- Trim: Replace damaged soffit boards and belly band and cap that are too deteriorated to be salvaged and refurbished.
- Roof, Gutters and Eaves: Replace gutter system and leaders. Replacing the asphalt shingle roof with the original material, slate, should be considered. All flashing should be replaced. Consider Removing the exit stair penthouses and providing egress by another means.
- Porches: Replace the damaged elements of the skirting and evaluate their effectiveness of skirting to keep animals out from the area below the porches. Evaluate the porches for structural and seismic stability. The floor, siding, columns, and sills need to be refurbished or replaced. Some mitigation is needed on the west side of the building to protect that side of the building from weather and pollution from I-5. An acoustical wall and some trees will help, but an acoustical engineer should be consulted.
- Entries: The stairs and railings need to be replaced and updated to comply with current codes. The front porch gutters and downspouts need to be replaced and the roofing material replaced. The columns need to be replaced and railings brought up to meet current codes.



- Dormers: Replace damaged and missing slate shingles and all flashing. Repair and refurbish existing windows.
- Miscellaneous: Place telephone, data and electrical services underground and bring into the building through the basement. Replace exterior light fixtures with fixtures that complement the historic character of the hospital. Remove flag holders, birdhouses, and other miscellaneous items. Surface-mounted conduit should be removed and relocated inside the building and the existing attachment locations repaired. A structural assessment of the chimneys and ventilators should be conducted.

***Interior Character Defining Features (From Part One of the HSR, Kristin Baron)***

- Floor Plan: Original floor plan very much intact, some unique rooms include the morgue and operating rooms in the basement, wood-paneled storage room in the attic.
- Original volume and proportions of rooms.
- Original ceiling height.
- Stairs: Wooden stairs with simple wooden balusters and trim.
- Moldings: Simple baseboard, picture railings, simple window sill in basement, wide chair rail in attic, no interior trim, only deep reveals around interior of windows, sloped sills.
- Interior Finishes: Plaster walls, decorative pressed tin ceilings, tongue-and-groove sun porch flooring, ceramic hexagonal tiles in front entrance, hardwood floors, black and white ceramic tile in bathrooms. Basement: wood flooring, black and white tiles in operating rooms, exposed brick and concrete walls. Attic rooms: horizontal wood paneling, interior walls of enclosed sun porches are the original exterior brick walls.
- Interior Doors and Windows: Five-panel doors with three-light transom, one-lite two-panel doors, six-lite transom over paired doors.
- Unique Fixtures or Appliances: Decorative metal radiators, decorative metal fireplace cover. Second floor ladies room contains wooden stalls, bathroom sinks and utilitarian wash sinks.



### ***Interior Recommendations***

- **General:** The interior would be best rehabilitated to allow for new uses of the building, while retaining existing finishes to the extent possible. The plaster, floors and pressed tin ceiling tile are unusually intact for a building of this age. In addition the terrazzo floors in the surgeries on the second floor should be retained. The attic space could be finished or left as is. For any new use an elevator and stairs would need to be added for increased accessibility and egress requirements.
- **Specific Space with Unique Treatment:** Room 117, the head surgeon's office, is in wonderful condition with the finishes and fireplace intact. It has the original coal-burning fireplace with a decorative summer cover and tile surround. The original fir wood floors are intact. The room should be retained and perhaps made into a small interpretive area for the hospital.
- **Floors:** Clean concrete floors, seal, or paint. Refurbish wood floor in Annex basement. Remove asbestos floor tile; consult hazardous materials consultant. Remove resilient floor tile and underlayment and cove base throughout first and second floor. Restore terrazzo floor and tile base in two rooms on second floor.
- **Walls:** Correct water infiltration problems. Remove paint from stone, brick, and concrete walls. Repair damaged plaster or gypsum wall board. Refinish hardwood floors. Remove resilient floor tile and vinyl cove base. Repair wood base and replace flooring with new sheet linoleum. Refurbish black and white tile at all locations. Fire separation requirements and the sensitive placement of walls must be researched, relating to stair enclosures. Strip and repaint or stain tongue and groove wainscot.
- **Ceiling:** Refurbish pressed tin ceiling tile, strip and repaint. Repair holes and joints. Repair plaster cracks.
- **Windows:** Refurbish existing windows. Remove non-contributing wood diverters, security bars, and roller shades. Replace broken glazing. Remove plywood. Repair or replace sash cords and weights. Refurbish sash, jambs, and sills.
- **Doors:** In general, the doors need minor refurbishment. Scrape and paint the doors and repair the joints that are separating. Replace the north and south doors to the attic with fire-rated doors. Refurbish door hardware. Replace non-original doors and modified doors with new doors to match original. Refurbish transoms to meet current codes and secure them in the closed position.
- **Stairs:** New handrail and railings to meet current codes.



- Miscellaneous: Remove contemporary light fixtures and replace with new fixtures appropriate to the historic character of the building. New fixtures should be placed within the module of the pressed tin ceiling. Refurbish ornamental cast iron ventilation grilles and radiators. Demolish bathroom stalls and plumbing fixtures, replace with new period-appropriate pieces. Demolish presentation boards and ceiling track. Surface-mounted conduit and other items should be removed and placed in the floor or wall cavities.

**Task Three: Requirement for Treatment**

***Compliance with Codes***

Uniform Building Code (UBC):

- Proposed Use: Lodging (guestrooms and public rooms).
- Occupancy Proposed: Mixed R-1 (multi-family) and A-3 (assembly).
- Construction Type: V-one hour (wood frame, one hour fire-rated). Fire rating is based on the installation of automatic fire sprinklers.
- Base Area / Stories Permitted: 10,500 S.F. / 3 stories.  
 (+100%) 10,500 = 21,000 S.F. (multistory bonus)  
 (+50%) 10,500 = 31,500 S.F. (separation on four sides estimated at 30 feet)
- Building Area: 22,228 S.F. for upper 3 stories over 7,028 S.F. basement.
- Occupancy Loads: Vary according to use.
 

Basement:	Storage / Mechanical (7,028 S.F.) 24 persons
Main Floor:	70% Lodging (5,582 S.F.) 30 persons
Main Floor:	30% Assembly (2,500 S.F.) 167 persons
Second Floor:	70% Lodging (5,582 S.F.) 30 persons
Second Floor:	30% Assembly (2,500 S.F.) 167 persons
Third Floor:	70% Lodging (5,582 S.F.) 30 persons
Third Floor:	30% Storage (2,500 S.F.) 9 persons
- Exits Required: 2 required; 2 provided.
- Upper Floor Exits: 2 required. Exit width varies according to occupancy load.
- Crawlspace Ventilation: Verify.
- Attic Ventilation: Verify.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Plumbing: UBC Table 29-A.  
 First and Second Floor: Separate restrooms on each floor with 3 W.C.'s and 3 lavatories minimum in each for assembly uses. Individual restrooms would be provided for the guestrooms.
- Structural: Needs structural assessment.



Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. There are a number of challenges to making this building accessible. The main floor is set about three above ground level, so ramps must be fairly long. An elevator must be installed to access the upper levels.

Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Data: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire Protection System: Needs assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the basement provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Hospital (Building #614) has historic significance as an individual structure, with unique architectural elements and social roles within the Vancouver Barracks. It also has significance as a contributing part of a coherent ensemble of buildings. The proposed change of use from a Hospital to lodging



space has minimal impact on the historic character of the exterior. Necessary changes to existing porches, ramps and stairs, mechanical penetrations in the roof, and crawlspace skirting are to non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks. If

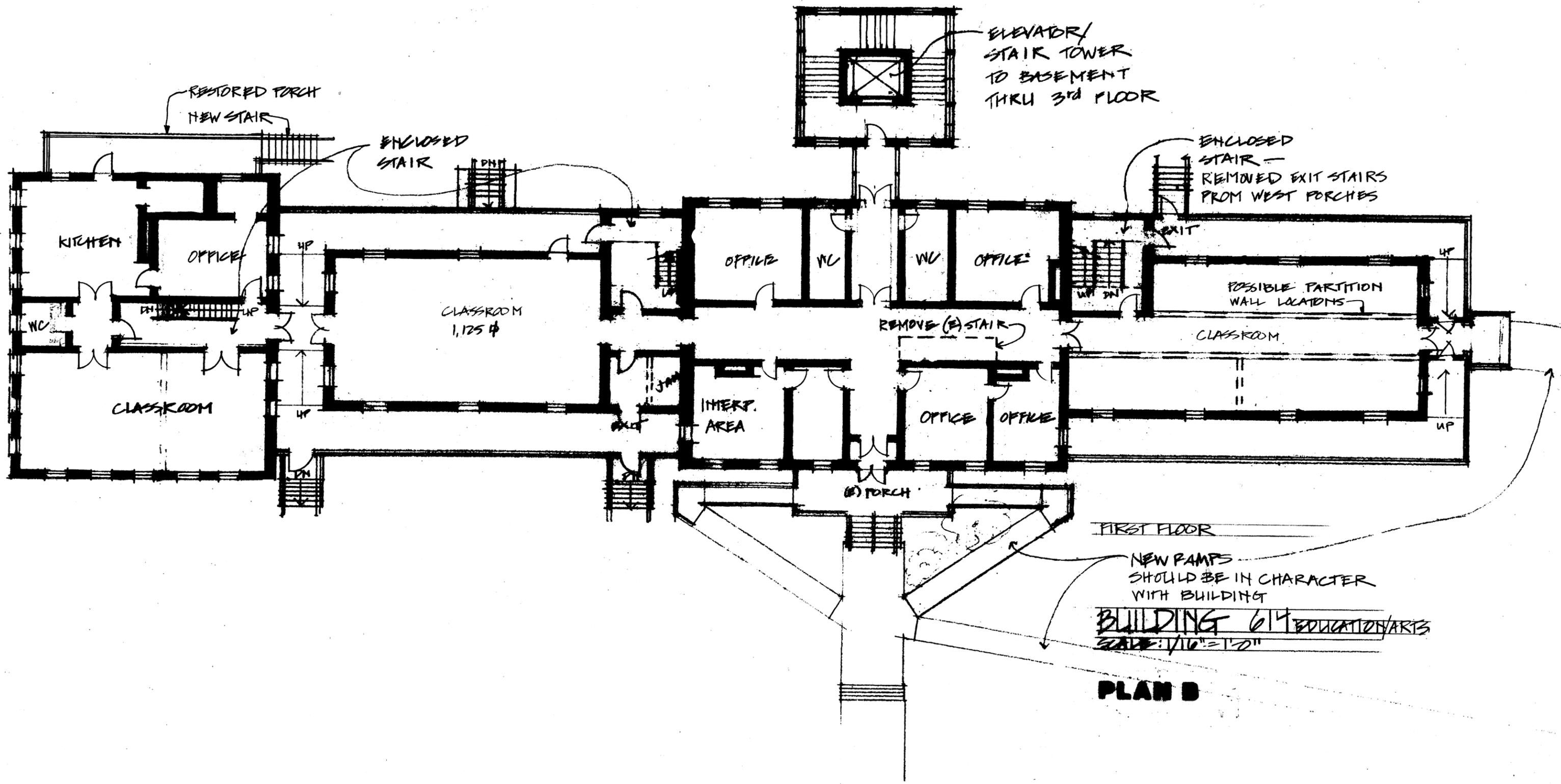
- **Interior:** The proposed change of use from a Hospital to lodging space presents some challenges to maintain the historic character of the interior. The four large rooms on the first and second floors should not be sub-divided into guestrooms. To do so would destroy their historic integrity. These spaces should be used for the public functions of the hotel, including conference rooms, meeting rooms, and a café. The existing stairs do not meet current codes, and bringing them into compliance will significantly alter their character and the character of the interior. Locating a new stair and elevator tower on the west side of the building where the annex once stood is one solution. Other locations within the footprint of the building present additional challenges.

#### Task Four: Alternative Treatments

This building would also be efficiently re-used as an educational facility (See Plan B). It would require approximately the same amount of alteration as an office use. The large open ward rooms would serve well as classrooms. Circulation could be diverted to the porches around the rooms if a class was going on, in order to maintain access between the Annex and the main building. The smaller ward rooms in the Annex would work well as smaller classrooms. The smaller rooms in the main building could be offices. As with the office use an elevator and interior enclosed stairs would need to be added.

The Class 'C' cost estimate for an arts/education use for the year 2003 is \$107.49 per square foot. This would cover code compliance and interior changes for a range of arts uses and media.





ELEVATOR/  
STAIR TOWER  
TO BASEMENT  
THRU 3rd FLOOR

RESTORED PORCH  
NEW STAIR

ENCLOSED  
STAIR

ENCLOSED  
STAIR -  
REMOVED EXIT STAIRS  
FROM WEST PORCHES

KITCHEN

OFFICE

CLASSROOM  
1,125 sq ft

OFFICE

WC

WC

OFFICE

POSSIBLE PARTITION  
WALL LOCATIONS

CLASSROOM

CLASSROOM

INTERP.  
AREA

OFFICE

OFFICE

REMOVE (B) STAIR

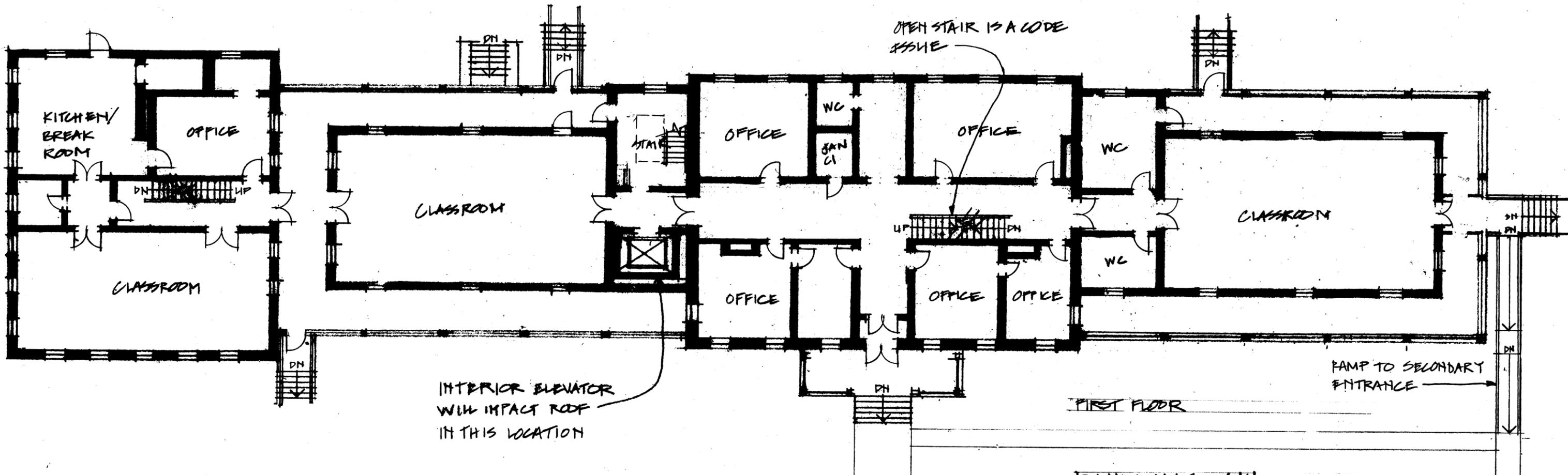
(B) PORCH

FIRST FLOOR

NEW PUMPS  
SHOULD BE IN CHARACTER  
WITH BUILDING

**BUILDING 64 EDUCATION/ARTS**  
SCALE: 1/16" = 1'-0"

**PLAN B**



OPEN STAIR IS A CODE ISSUE

INTERIOR ELEVATOR WITH IMPACT ROOF IN THIS LOCATION

RAMP TO SECONDARY ENTRANCE

FIRST FLOOR

BUILDING 014  
SCALE: 1/16" = 1'-0"

**Building Number:** 621  
**Area:** West Barracks  
**Date of Construction:** 1907  
**Period of Significance:** 1900-1919  
 (per HSR Part One)  
**Historic Use:** Hospital Corps  
 Sergeant's Quarters  
**Current/Recent Use:** Quarters



**Occupancy:** R-3  
**Hazard Level:** Not Available  
**Number of Floors:** 2 Stories and a full basement  
     **Basement:** 1,511 sq. ft. (per January 2000 SERA report)  
     **First Floor:** 1,711 sq. ft. (per January 2000 SERA report)  
     **Second Floor:** 810 sq. ft. (per January 2000 SERA report)  
**Exterior Materials:** Painted brick, painted wood lap siding at porches

#### Task One: Conditions Assessment

##### ***Site Context***

This residential structure was originally located west of the Post Hospital (Building #614). It was relocated to its current location when Interstate-5 was built. It now sits to the west of the Hospital Steward's Quarters (Building #631). It faces the O.O. Howard House across a rather desolate parking lot

##### ***Vehicular Circulation***

Vehicular access to the front of the building is on McLelland Road, with a driveway to the rear of the house from McLoughlin Road that serves both building #621 and building #631. There is parallel parking along McLelland Road. A turn around is located at the end of the driveway. Parking is also available in the lot between the house and the O.O. Howard House.

##### ***Pedestrian Circulation***

There is a sidewalk on McLelland Road in front of the house with a walk up to the front door. Access is also provided from the driveway in the back by a stair to the back utility room. There is a door between the driveway and the basement.



### ***Exterior Assessment***

- **Summary:** The foundation dates from after the relocation of the structure in 1952 and is painted CMU and brick. The original house is painted brick with a slate shingle roof. The north porch and east and south additions are wood frame with wood lap siding. The east and south additions have asphalt composition shingle roofs. The north porch has a standing metal seam roof. Overall, the house is in fair to good condition. The areas that need the most attention are the wood trim and stone sills at the windows. The north porch needs to be repaired because the grading at the north side of the house directs water runoff toward the porch.
- **Site:** The site slopes toward the south from the front of the house. This brings runoff against the north face of the house, and the wood at the north porch is deteriorating. The concrete walk is in poor condition and slopes toward the south, contributing to the drainage problem. Although a few plants need to be cut back from the building, the landscaping is not contributing significantly to problems. A structural engineer needs to evaluate the retaining wall at the driveway at the back of the house. There is evidence of poor drainage in the driveway and the drain does not appear to be functioning. There is a significant amount of plant debris in the driveway and some new plant life that has grown through cracks in the asphalt.
- **Foundation:** Because the house was moved in 1952, the foundation is a newer CMU foundation. It is in good condition.
- **Walls:** The main body of the house is brick that has been painted. The paint, in general, is peeling and some bricks at the southeast corner are spalling, indicating that there may be water damage there. There are multiple layers of paint on the brick. The paint at the wood lap siding of the south addition and on the corner boards is also peeling due to moisture damage. The east addition has a belly band of vertical wood channel lock and a drip cap that are in poor condition and should be refurbished or replaced. The wood trim in general is in poor condition.
- **Windows:** The main body house has painted wood six-over-six lite double hung windows. The window on the southeast side of the south elevation has been covered with plywood because of a newer shower unit in the bathroom. The wood trim at the window arches needs to be refurbished and the stone sills have biological growth and dirt. There are six-over-six lite double hung wood windows in poor condition on the south addition. The south addition and the basement have aluminum frame windows that are not contributing.
- **Doors:** The front and back exterior doors are contributing. The front door is a panel door with 24 lites that is significant and would be difficult to replace. The back door is a wood three-panel door with a four-lite window. The aluminum



screen door is non-contributing, as is the flush door from the driveway to the basement.

- Roof, Gutters and Eaves: There are curved wood eave brackets on the original house that are in good condition. The additions have exposed rafters at the eaves. All around the house there are painted metal downspouts and gutters. The downspout at the southwest corner of the building needs an extension. The gutter and downspout system should be redone on the east side of the main house. The roof at the east addition is in poor condition. The slate roof needs cleaning and the other roofs need closer inspection to verify their condition, with special attention to flashing.
- Porches and Stairs: The cement parging is separating from the brick wall at the stair at the south entry. The concrete stair and metal railings do not meet current codes and the north stair needs to be re-constructed.
- Miscellaneous: Exterior light fixtures are not contributing. The exterior chimney is partially painted and is not original. The flue to the furnace initially came up from the basement in between the dining room and the living room. The telephone and electrical wiring should be placed underground and brought in through the basement.

### *Interior Assessment*

- General: In general the interior is in good condition. The wood floors as well as wall and ceiling finishes have been well maintained. With the two exterior additions as well as the interior changes within the original footprint of the house, the original character of the building has been significantly altered.
- Significant Features and Typical Materials: The front and back doors, the brick walls and their original windows, the wood floors, and the slate roof are character-defining features and should be retained and maintained.
- Typical Conditions: Fair to good.
- Special or Unusual Conditions: None.
- Floor: The house has wood floors: oak on the first floor and fir on the second floor and in the first floor east addition. All the wood floors have been refinished. The resilient sheet flooring in the kitchen is in good condition. The north porch has the original wood porch floor with resilient sheet flooring over it that is in poor condition.



- Walls: The walls are lath and plaster in the original 1907 house with gypsum wallboard elsewhere and some tongue-and-groove paneling. There is a V-groove, tongue-and-groove wainscot in the north porch. The base trim is typically 8” square wood, sometimes with a cap and a shoe.
- Ceilings: Ceilings are plaster with added cottage cheese texture in the living room, dining room. The ceiling in the north porch is V-groove tongue-and-groove.
- Windows: The windows in the north porch are wood four-over-four double hung. They are six-over-six double hung in the original part of the house.
- Doors: The doors are painted wood five-panel doors that are contributing. The flush doors are not contributing.
- Miscellaneous: The original radiators (fin tube in the kitchen) are still intact. The kitchen cabinetry dates from the 1950’s. The fireplace on the west wall is a relatively recent addition and it is not shown on the 1937 plans. It was probably added after 1952 when the building was relocated. Originally, a centrally located furnace flue stood between the living and the dining room. This flue is now incorporated in the newer chimney.

### ***Electrical Assessment***

- Service: Overhead conductors from the site overhead power distribution system supply the electrical service. Service entrance conductors are installed in conduit. The service equipment is circuit breaker load center, 120/240-volt, 1-phase, 3-wire, 200-ampere. Equipment is in good condition.
- Power Distribution System: There is no distribution. Branch circuits are derived directly from the service equipment.
- Wiring: Wiring is single conductor copper wire in metallic conduit and non-metallic sheathed cable.
- Wiring Devices: Receptacles outlets are grounding and GFI type. Light switches are silent. Receptacle quantity and spacing do not comply with current code requirements. Devices are in good condition.
- Lighting: Some light fixtures are missing components. Fixtures are in fair-poor condition.



- Fire Alarm: Single station smoke detectors are installed in all sleeping areas as required by code.
- Telecommunications: Outlets and wiring is a simple residential phone system served overhead from the exterior.
- Emergency: Not applicable, residential occupancy usage.
- Recommendations: Repair or replace select light fixtures.

### ***Mechanical Assessment***

- Description: The heating system serving each housing unit is a hot water radiator system. The boilers serving the stand up radiators or baseboard type radiators are located in the basements of each housing unit. Bathroom exhaust fans are installed in each unit. Each kitchen has a range hood over the stove/oven. All equipment in housing units is residential type.
- Recommendations: Heating systems appear to be in very good operating condition. Because of residential usage, we would recommend checking each system for problems, leaks, etc and repair as needed. Fans and hoods should be checked for proper operation.

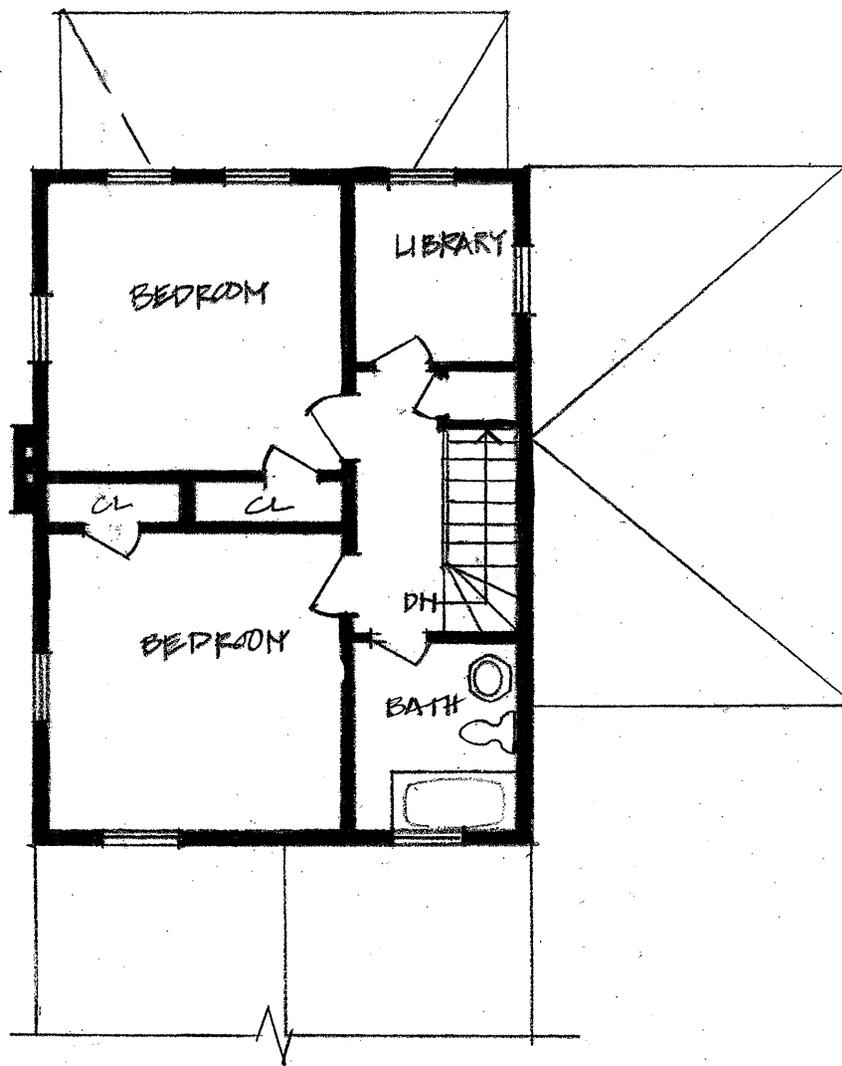
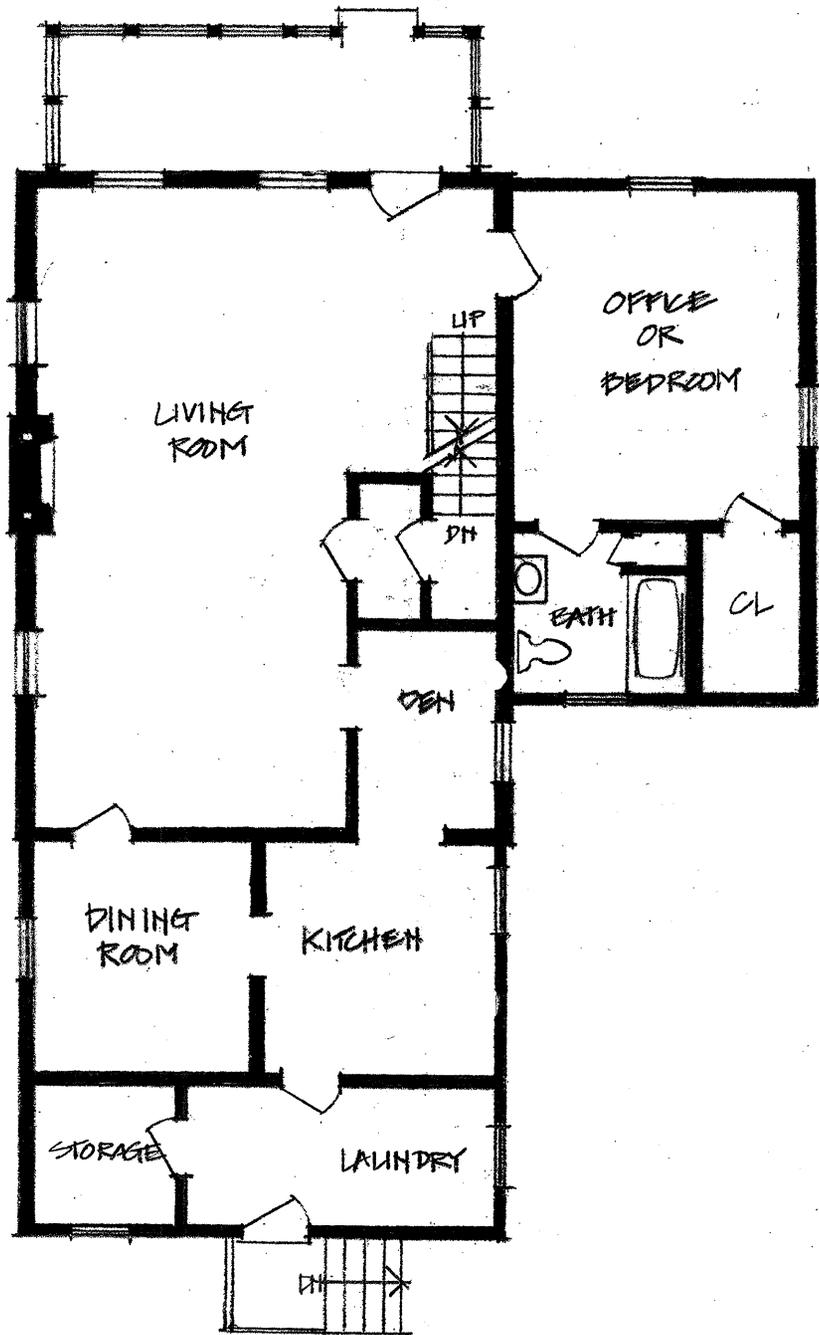
### ***Plumbing Assessment***

- Description: Existing plumbing fixtures are in good condition. Existing waste piping is cast iron. Existing water heaters are located in the basement near each unit boilers. Domestic water piping is carbon steel. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.
- Recommendations: Water Heaters appear to be in good condition and recommend replacement on an as needed condition. Domestic water piping can remain as is for residential type usage.

## **Task Two: Ultimate Treatment and Use**

The Hospital Steward's Quarters (Building #621) is a good candidate for exterior restoration according to the *Secretary of Interior's Standards* and interior rehabilitation. The *West Vancouver Barracks Reuse Plan* suggests that residential use combined with an in-house office or business (live/work) would be the most appropriate re-use of the building (See Plan). Very little work is necessary to bring this building to a point where it can be leased.





BUILDING 621  
 SCALE: 1/8" = 1'0"

The Class 'C' cost estimate for a live/work use for the year 2003 is \$8.90 per square foot. This includes no major interior or exterior work, just the necessary most minimal repair work for a residential tenant.

***Exterior Character Defining Features (From Part One of the HSR)***

- Brick construction.
- Horizontal siding.
- Slate roofing.
- Hipped roof on main volume.
- Six-over-six double hung sash windows.
- Four-over-one entry porch windows.
- Two-over-two sidelights on sun porch.
- Arched brick lintels and stone sills.
- Hipped porch roof.
- Boxed cornices with decorative rafter ends.

***Exterior Recommendations***

- Vehicular Circulation: While parking is sufficient for a residential use, additional parking is needed for office uses. The on-street spaces could serve as visitor or client parking. Additional parking should be provided by adding more spaces in the back, or by redesigning the parking lot north of McLelland Road. The reconfiguration of the parking spaces and landscaping would help make this area more pleasant.
- Pedestrian Circulation: The sidewalks should be repaired and widened.
- Site: Re-grade site as required to provide positive drainage away from the building. This is especially true at the front of the house. Retaining walls at the driveway also need to be repaired.
- The Foundation: It is in good condition and would not require any major repairs at this point.
- Walls: Check for and evaluate water infiltration at gutters and downspouts. Remove plant material and biological growth.
- Trim: Repair corner boards and belly band elements. Scrape and re-paint.
- Windows: Remove plywood from the window on the southeast side of the south elevation and restore window operation. Refurbish the wood trim at the window arches and clean the stone sills. Consider replacing the windows in the basement and additions with period-appropriate windows. especially if the windows need to be repaired.



- Doors: Replace non-contributing doors with period doors. Refurbish contributing doors, including the front and back doors.
- Roof, Gutters and Eaves: Replace gutter/downspout system.
- Porches and Stairs: Replace or modify stairs and to meet current codes with the addition of new guardrails and handrails, especially the brick and concrete stair at the south entry. Remove the wood lattice at the railing at the south entry. Check the north porch for dry rot.
- Miscellaneous: Replace fluorescent lighting with period light fixtures.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original.
- Lighting fixtures in period.
- Fireplace detailing.
- Hardwood floors.
- Stairwell millwork.
- Doors (five panel).

#### ***Interior Recommendations***

- General: The interior functions well as an office with individual offices located in the bedrooms. Secondary rooms such as the kitchen, basement and back porch could be remodeled. Valences at the arched windows in living room/dining room should be removed. Contemporary light fixtures should be replaced with period appropriate light fixtures.
- Specific Space with Unique Treatment: None.
- Typical Condition: Good.

#### **Task Three: Requirement for Treatment**

#### ***Compliance with Codes***

##### Uniform Building Code (UBC):

- Occupancy Proposed: R-3/B (residential single-family and office combined).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories permitted: 8,000 S.F. / 2 stories (complies).
- Building Area: 2,521 S.F. for upper 2 stories over 1,511 S.F. basement.
- Exits Required: 2 required; 3 provided
- Upper floor exit: 1 required.



- Crawlspace ventilation: Not applicable.
- Attic ventilation: Verify.
- Structural: Needs structural assessment.

Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. A ramp needs to be provided to make the first floor of this building accessible. The first floor restroom, kitchen and doorways should also be modified to meet ADA requirements. The basement entry should be made accessible.

Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire Protection System: See electrical assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. Wall cavities should be insulated as possible without destroying historic materials. If the siding is removed, it would present an opportunity to insulated large portions of the building without disturbing historic materials. The attic should be insulated, with provisions made for ventilation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***



- Exterior: The Hospital Corps Sergeant's Quarters (Building #621) gains historic significance not as individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks. The proposed change of use from living quarters to live/work space has minimal impact on the historic character of the exterior. Necessary changes to existing porches and stairs, and the addition of an accessible ramp impact non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.
- Interior: The proposed change of use from living quarters to live/work space has minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic features including all trim and the wood floors should be preserved and can serve as patterns for new material as it is installed. Other original materials such as plaster surfaces should be preserved to the extent practicable. Necessary changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

#### Task Four: Alternative Treatments

Rehabilitating the Hospital Steward's Quarters (Building #621) for use as a live/work space within the existing single-family residence does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. The first floor bedroom could be converted to nice office space, and the basement with its separate entrance, could also serve as a part a business function. However, as the character of the West Barracks changes, it may no longer be possible or desirable to have single-family uses within the Barracks.

The best alternative would be to convert this building to a purely office function. The example of the conversion of the houses on Officer's Row demonstrates the viability and challenges of the proposed reuse. Issues of accessibility must be addressed, as it is not practical to install an elevator in such a small structure.

The Class 'C' cost estimate for an office use for the year 2003 is \$80.33 per square foot. This includes no major interior work, except for code upgrades, but would include work on the exterior to provide universal accessibility as required by code.



**Building Number: 626**

Area: West Barracks  
 Date of Construction: 1910 (1888,  
 1930, & 1940 per  
 January 2000  
 SERA report)

Period of Significance: 1900-1919  
 (per HSR Part  
 One)

Historic Use: Purported to have been the Morgue, and then used for Dental  
 Offices, and lastly JAG Offices (Judge Advocate General)

Current/Recent Use: Offices

Occupancy: B

Hazard Level: Not Available

Number of Floors: One Story

First Floor: 1710 sq. ft. (per January 2000 SERA report)

Exterior Materials: Concrete Foundation, Drop Siding Exterior, and Composition  
 Shingle Roof



### Task One: Conditions Assessment

#### ***Site Context***

Building 626 is located mid-block on Barnes Road, between the Infantry Barracks (Building #607) and the Red Cross Service Club (Building #636) to the east of the Hospital, (Building #614). This building is a simple gable-roofed structure with entries on both its north and south ends. Though it is reported to have been a small “T”-shaped “Dead House” (Morgue), few physical vestiges of this previous configuration and use remain.

#### ***Vehicular Circulation***

The west side of the building faces Barnes Road, and an alley wraps the north and east sides of the building. The alley continues behind Barracks 638 and connects to Fort Vancouver Way. No designated parking spaces exist for this building aside from parallel parking on Barnes Street. The roads are in good condition and appear to have been recently maintained.

#### ***Pedestrian Circulation***

A concrete sidewalk is located along Barnes Street with two short branches to the front and rear entries. The north sidewalk is in fair condition due to differential



settlement related to the foundation issues discussed in the related section of this document. The sidewalk leading to the south entry stairs is short and in good condition.

### ***Exterior Assessment***

- **Summary:** The exterior is in good overall condition. Minor damage and repairs over the history of the building are evident, but can be easily reversed or repaired. The most intrusive elements are exposed, surface-mounted conduit, cabling and miscellaneous items that have been haphazardly run and attached to the exterior over the course of the building's history. Damage to the siding and wood trim, related to these intrusive elements, is minor and primarily cosmetic in nature. The exterior paint is peeling, blistering and generally losing adhesion, and shows signs of improper or inadequate preparation during previous applications.
- **Site:** Poor drainage appears to be the primary cause of deterioration to the building. Site drainage currently pitches toward the structure. Inadequate measures have been taken to direct site and roof runoff away from the structure.
- **Foundation:** The foundation is a perimeter concrete stemwall surrounding a crawlspace. A concrete utility well is located under one of the restrooms. A thin, cement parge coating covers the primary foundation. Minor cracking related to settlement is evident on southwest corner as well as east and west walls. These cracks are telegraphing through the parge coat. Prior repairs to the parge coat are evident, indicating a recurring settlement issue. The settlement appears to be related to the site and roof drainage issues discussed previously. Internal pier supports were unavailable for inspection, but are noted as in need of repair in Corps survey. These are purported to be wood piers in direct contact with ground. Crawlspace ventilation appears to be below current code requirements.
- **Walls:** The building is a simple platform-framed wood structure on a concrete foundation. The siding is a simple drop pattern with a 5" exposure. A water table with a drip cap encircles the building at the base of the siding. A quarter round molding is used below the drip cap.
- **Windows:** All windows and doors are trimmed with simple 1x flat stock with a drip cap above the window head trim and quarter round moldings below the drip cap and the window sill. The windows are double-hung sashes of varying sizes and configurations. Most of the windows are 1-over-1 sashes in a square frame opening. A pair of 2-over-2 units is used on the east elevation, with a 6-over-6 window at the north gable, and an 8-over-8 window at the south gable. Windows similar to these last two appear in historic photographs of the building, and may have been re-used during the various alterations to this structure. The 1-over-1 windows appear to be from the 1940's according to Part One of the HSR. The



purpose of the over-sized attic windows is unclear as no access to the attic is provided on the interior or exterior of the building. Two windows in the women's restroom at the northeast corner of the structure have been removed from their frames and replaced with solid panels. A fan unit is framed within one window opening to the north while the other on the east wall is blocked off with plywood. Another window on the south elevation has been blocked with plywood on the interior. The window sash and glazing remains intact and visible on the exterior. All trim remains extant and it is presumed that the frames of the windows removed will still be able to receive new sash units if desired.

- Doors: The doors are in various conditions. Trim resembles window casing assembly described above. The north entry door is a multi-panel with an upper glazed panel. It is in good condition with contributing hardware. There are two entry doors off the south porch. The doors are 3-panel units with raised lower panels and glazed upper panel. The center door leading into the X-Ray Room is in good condition with a fair to poor sill. The Kitchen entry on the east elevation of the porch is in fair to poor condition. This unit's sill is in poor condition with deteriorated head trim as well. The wire safety glass is in good condition.
- Roof, Gutters and Eaves: The composition shingles are in good condition and appear to have been recently installed. The eaves and rake boards are in fair to good condition. Roof leaders expel roof water adjacent to the foundation. This appears to be a major factor in the settlement present in the foundation. The roofleaders are not in their original locations (as is evident from the 'ghosts' on the walls which correspond with the foundation cracks).
- Porches and Stairs: The north entry porch is in fair to poor condition. Its wood columns are wicking water up from the concrete landing and are deteriorating. The wooden Railings are deteriorated and in poor condition.

### *Interior Assessment*

- General: In general, the interior of the building is in good condition with only two areas of probable water damage. The existing lath and plaster exterior walls and a couple of interior walls have sustained minor cracking. The interior of the building was remodeled around 1950 with gypsum wallboard interior partition walls, which have sustained little or no damage. Typical finish treatments include non-contributing resilient tile flooring with vinyl cove base that, in most cases, was glued directly onto the existing wood base. The wood base shoe has been removed. A painted wainscot is located on the exterior walls in the main rooms. The ceiling is lath and plaster with some long cracks, and some water damage. Other damage can be attributed to the attachment of non-contributing conduit, light fixtures, fire alarms, and other surface-mounted items. In general, the light



- fixtures are non-contributing. Windows, doors, and door hardware in general are contributing and in good condition.
- Significant Features and Typical Materials: The Interior three-panel doors are from the 1940's remodel. Five-panel and glazed doors are older.
  - Typical Conditions: Fair.
  - Special or Unusual Conditions: Water damage in the rooms at the northwest corner of the building. There is the potential for hazardous materials in the old X-Ray room, at the southwest corner of the building.
  - Floor: There is possible water damage near the south exterior door of the southwest room, formerly the X-ray room. The men's and women's restrooms have resilient sheet flooring that is in fair condition. The floor in the men's room is lifting up at the seams and at the threshold. The loss of adhesion may indicate water damage. A plywood access panel is located in the women's room floor. This provides access to the utility pit, which contains the hot water heater and sump pump according to the Quartermaster's drawings of 1952.
  - Walls: In general, the gypsum wallboard partition walls have fared well. In the old X-ray room there is a partial height wall with an observation window. There is also a non-contributing partial height paneling on the north and east walls. Because of its probable use as an X-ray room, these walls may contain lead (Refer to the Hazardous Materials report). An approximately 1'-0" square piece of plaster is missing on the west wall above an electric heater. There is some cracking under the north windows on the east wall of the Dental Office/kitchen. In the reception area there is minor cracking of the plaster walls. The reception area and the treatment/examination rooms have a painted wainscot. In the north exam room the west wall is cracking and the wood base on that wall is in poor condition.
  - Ceiling: In the Dental Office/kitchen, the walls and ceiling are covered in a panel and batten system, including a ceiling beam. The paint is peeling and the panels and battens are sagging in a few places. In the reception area there are three long straight and narrow cracks in the ceiling all oriented from north to south, possibly due to settlement. The ceilings of the rooms in the northeast corner of the building have sustained water damage. The treatment room ceiling has long straight cracks running from north to south from wall to wall.
  - Windows: In general, the windows are in fair shape and will require minor repairs. In the Dark Room/Storage closet the only window in the room has plywood applied to the interior of the window, which should be removed. The north window in the laboratory has a part of its sill missing. The men's room



window is in fair condition and needs minor repair at the joints of the sash and casing. In the women's room, both of the windows have been removed and filled in with plywood. The north one with has a recently installed fan that keeps the air circulating in the building.

- Doors: The typical interior door is a wood three-panel door and are in good condition, although a couple have been modified with slots or panels for functionality. The men's room door is an older five panel wood door. The north door of the office supply room is a Dutch door with a shelf on the lower half of the door.
- Miscellaneous: The sinks are non-contributing. Conduit and other service items have been attached to the walls and ceiling. In the kitchen, the cabinetry is non-contributing and could be altered or removed to support future use. The south part of the west wall in the laboratory is wood shelving and cabinetry that is shared with the room to the west. This is non-contributing and could be removed or altered.

### *Electrical Assessment*

- Service: Overhead conductors from the site overhead power distribution system supply the electrical service. Service entrance conductors are installed in conduit and terminate in the service equipment. The equipment is in poor condition and consists of a 120/240-volt, 200-ampere, single phase, 36 circuit breaker load center panel.
- Power Distribution System: There are no feeders or distribution panels. Distribution is obtained directly from the service equipment.
- Wiring: Branch circuit wiring consists of type R wire installed in metallic conduit. Conductor insulation is in poor condition.
- Wiring Devices: Light switches are non-silent type. Receptacles are non-grounding type and are not in compliance with current electrical codes. Devices are very old.
- Lighting: Light fixture lamps consist of a mixture of incandescent and T-12 fluorescent that are not in compliance with current energy efficiency codes. Fixtures are in poor condition.
- Fire Alarm: The control panel is a 4 zone non-addressable type. System is without smoke detection and is non-automatic. Alarm initiation is by activation of manual pull stations. One bell provides notification to the facility, and is not in compliance with current fire and ADA requirements for audio/visual appliances.



- **Telecommunications:** Service is overhead wiring from an adjacent building. Distribution consists of Cat. 2 wiring from a screw type terminal block to various surface mounted outlets located throughout the building. Wiring and components are in poor condition and are not in compliance with current standards for modern data telecommunications functions.
- **Emergency:** There is no illuminated exit identification or emergency egress lighting.

### ***Mechanical Assessment***

The heating system used in this building was a steam radiator system. The steam system serving this building comes from the boiler system located in the Basement Mechanical Room of the Infantry Barracks Building 607. The steam radiators appear to be in fair to good condition. The radiators have a control valve at the top for temperature adjustment and a steam trap at the bottom for condensate drain return back to the system. An exhaust fan has been installed in the existing window opening of the North exterior wall in the Women's Restroom. This fan was recently installed to provide ventilation and air circulation throughout the building.

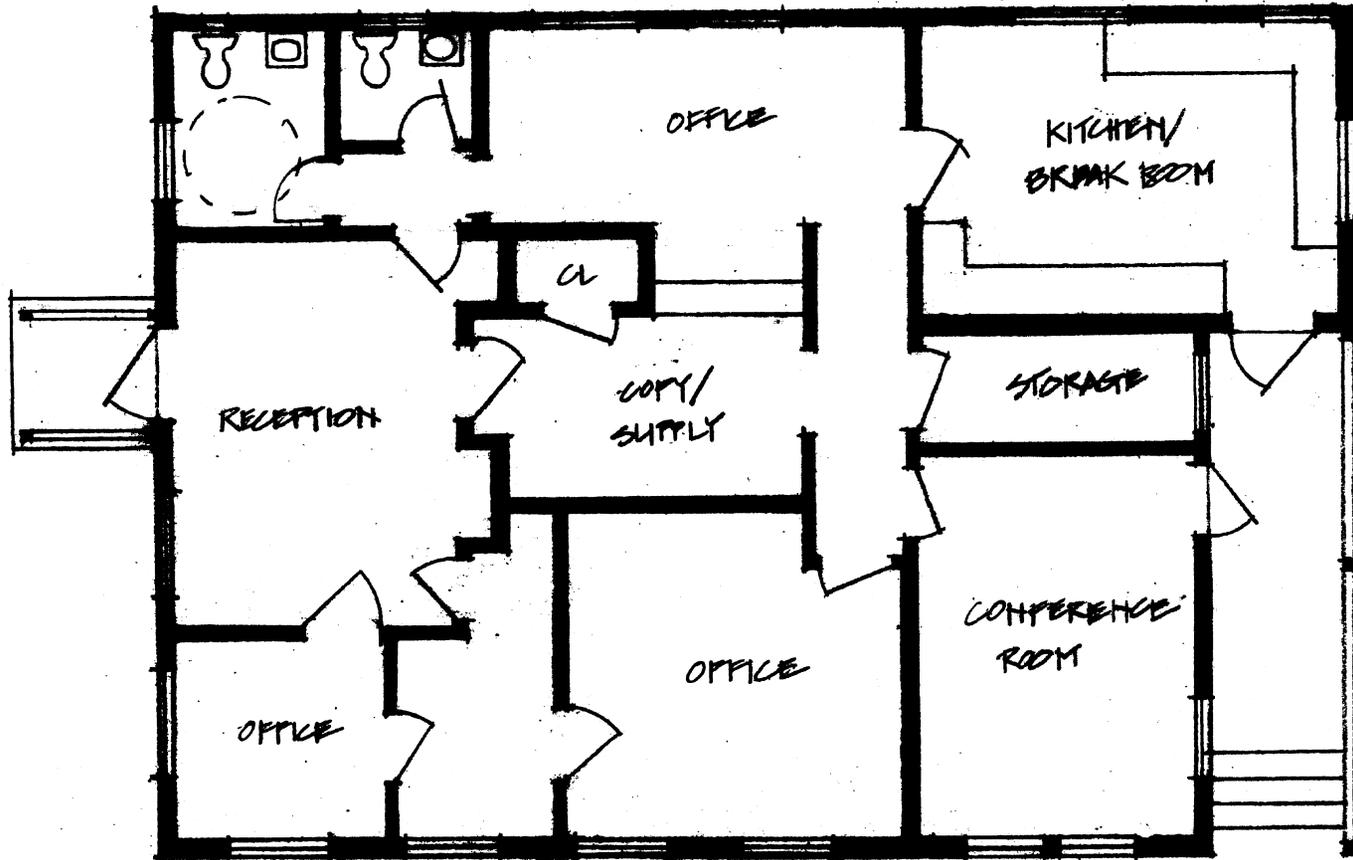
### ***Plumbing Assessment***

Existing plumbing fixtures, when present, are in fair condition. Existing waste piping is cast iron. Domestic water has been turned off to the building for an unknown period of time. An existing water heater and sump pump are located in the utility pit below the Women's Restroom according to Quartermaster's 1952 drawings. We were unable to verify condition or age of the water heater tank and sump pump.

## **Task Two: Ultimate Treatment and Use**

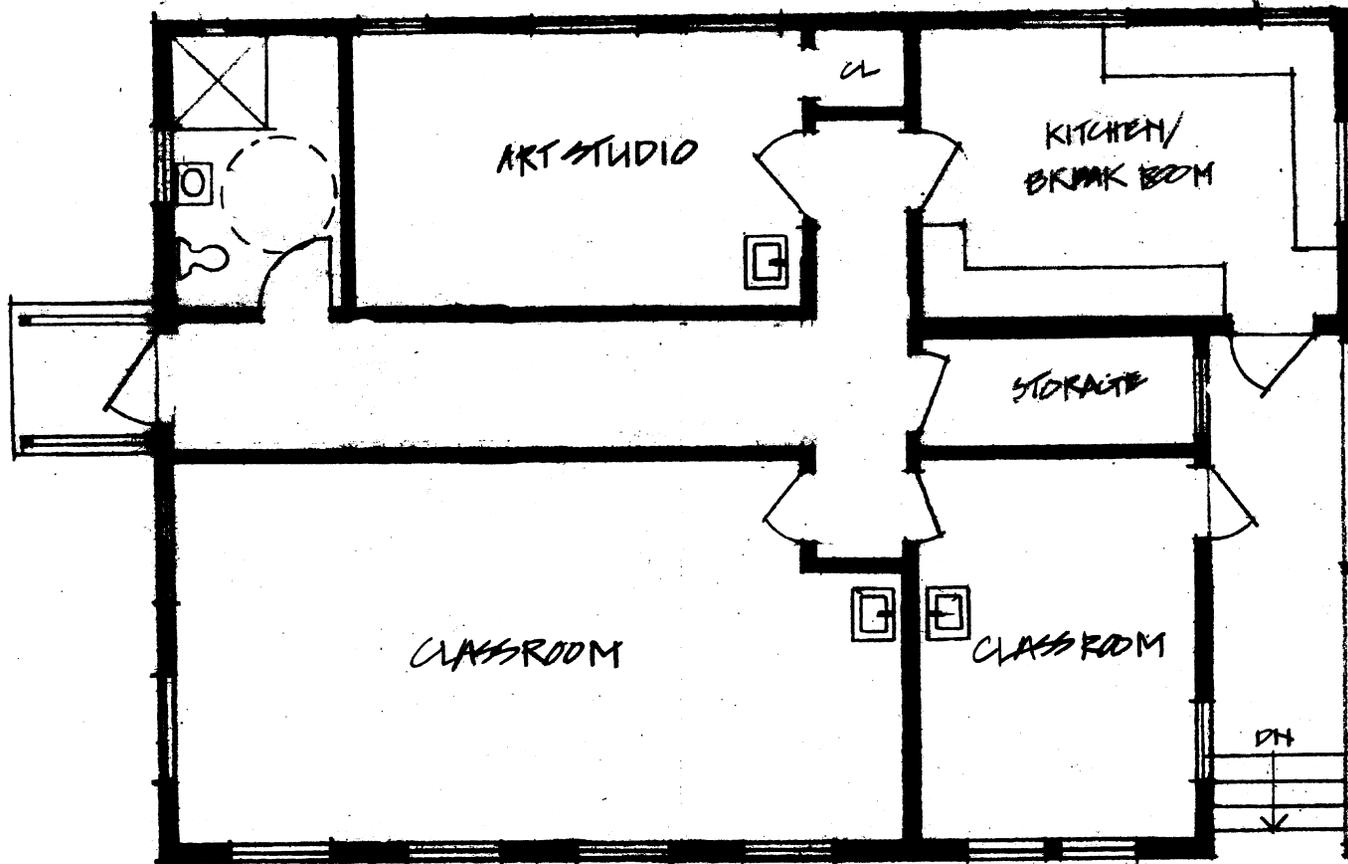
The Dental Surgeon's Office (Building #626) is an excellent candidate for exterior restoration and interior rehabilitation according to the *Secretary of Interior's Standards*. The *Vancouver Barracks Reuse Plan* suggests that office space would be the preferred re-use of the building (See Plan). The exterior would be restored, and the interior could be remodeled to suit the tenant. The interior of the building has been partitioned off for office-type use and could be re-used with minimal changes. With a single floor level and rooms of varying sizes, this building lends itself well to a small office and provides good accessibility. Interior walls are considered non-contributing. The alteration, removal, or addition of interior walls would not detract from the historical integrity of the building within the district.





NOTE: INTERIOR WALL  
CONFIGURATION  
CAN BE RETAINED

BUILDING 626 OFFICE  
SCALE: 1/8" = 1'-0"



NOTE: INTERIOR WALL  
CONFIGURATION  
ALTERED DRASTICALLY

BUILDING 626 EDUCATION ARTS  
SCALE: 1/8" = 1'-0"

The Class 'C' cost estimate for an office use for the year 2003 is \$32.17 per square foot. This assumes minimal interior changes.

***Exterior Character Defining Features (From Part One of the HSR)***

- Rustic drop siding.
- One-over-one lite double hung sash windows.
- Window trim.
- Inset porch.
- Panel door with single lite.
- Hipped roof porch overhang.
- Wood louvered ventilators.
- Five-panel entry door.
- Railing on porch.

***Exterior Recommendations***

- Vehicular Circulation: Provide designated parking spaces and off-street drop-off area for disabled near or adjacent to north entry (at grade) to discourage dropping off of disabled person in traffic on Barnes Road.
- Pedestrian Circulation: The north side of the building provides good access at grade and would be the logical primary entry to the building. Using the south side as an accessible entry will require a significant reconstruction of the porch and stairs including a ramp approximately 30 feet in length. This would significantly impact the historic character of the building.
- Site: A concrete landing located at the south entry and may need to be removed to accommodate drainage repairs. Also see *Foundation* section.
- The Foundation: Mitigating the source of the foundation settlement is critical to stabilizing the structure. Establishing positive drainage away from the structure for a minimum of five feet is of primary importance. Foundation ventilation and structural upgrades should also be addressed. Cosmetic repairing the parge coat is of minor importance.
- Walls: Remove surface-mounted cables and conduits. Patch holes, repair split boards, and repaint the siding and trim on the exterior.
- Windows: All windows are in good to fair condition requiring minor repairs more along the lines of maintenance than restorative procedures. This work includes replacement of worn parting beads and the refurbishment of the counterweights and full operation of the double hung windows. This will promote the use of the passive cooling systems inherent in the design of these historic buildings.



- Doors: Repair the south doors by securing loose casing and replacing worn or damaged sills. All new sills shall meet codes accessibility and egress. Replacement of all weather stripping is recommended to provide for a weather-tight and energy efficient building. The north doors will require modified hardware to facilitate accessibility.
- Roof, Gutters and Eaves: Gutters and downspouts need to be modified to carry water away from the building (see *Foundation* section). An attic access panel needs to be provided on the interior of the building.
- Porches and Stairs: The landing at the north porch should be replaced to help correct the drainage issues. The replacement pathway and landing shall be configured to meet accessibility requirements for landings at doorways.
- Miscellaneous: The removal of intrusive cabling and other surface-mounted items should correspond to the upgrades of those related systems. New systems should be installed in concealed locations such as the crawlspace or attic. Once these systems are replaced, contributing siding and other damaged wood members may be repaired in an appropriate manner.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original.
- Paneling where original.

#### ***Interior Recommendations***

- General: The interior would be open to a remodel determined by the new use, while keeping all the remaining original materials and details intact. The building is such a conglomeration of buildings anyway and has changed so much over the years that there are no certainties with regards to detailing and materials.
- Typical: Restore the remaining wood trim details and doors, windows, and casing. The interior lath and plaster finish could be repaired by patching with wallboard and plaster or, be replaced wholesale. The ceiling should be repaired where the damage is most dire, at the northeast corner of the building. The cabinetry and shelving could be removed.
- Specific Space with Unique Treatment: None.



### Task Three: Requirement for Treatment

#### ***Compliance with Codes***

##### Uniform Building Code (UBC):

- Proposed Use: Arts or education office.
- Occupancy Proposed: B (office).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories Permitted: 8,000 S.F. / 2 stories (complies).
- Occupancy Load: (100 S.F. / person) 18 persons.
- Exits Required: 1 required; 3 provided.
- Crawlspace Ventilation: Provided (verify adequate sizing).
- Attic ventilation: Provided (verify adequate sizing).
- Attic access: Needs to be provided from building interior.
- Plumbing: UBC Table 29-A requires separate facilities for men and women. Each should include a toilet and a lav., and comply with ADA standards.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Structural: Needs structural assessment.

##### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance. The existing toilet rooms should be appropriately renovated to make them accessible, or they should be replaced. Because of the slope of the site, a ramp can easily be added to the rear of the building. ADA, however, requires that in general, access should be provided at a structure's public entrance, although exceptions for existing buildings are possible. The interior program needs to address this issue, to insure practical access to the structure.

##### Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

##### National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

##### National Fire Protection Association Standards (NFPA):



- Fire Protection System: See electrical assessment; automatic fire sprinklers are not installed.

#### Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the *National Register of Historic Places*. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the crawlspace provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

#### Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

#### ***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: Although a portion of what is now the Dental Surgery dates from some time after 1888, it has been significantly renovated several times as its use changed from a morgue, to the post dental surgery, to finally serving as office space for the Judge Advocate General (JAG). Building #626 gains historic significance not as an individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks.
- Interior: There is no proposed change of use for this building. It has already been converted to office space, and any additional renovation to meet new tenant and code requirements should have minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

#### Task Four: Alternative Treatments

Given its central location on Barnes Road, Building #626 could function alone, or be useful as support space for new uses in the Red Cross Service Club (Building #636), the



Hospital (Building #614), the Infantry Barracks (Building #607), or Artillery Barracks (Building #638). Rehabilitating Building 626 for use as office space does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. However, given the amount of space available in the surrounding buildings, the additional office space provided by this structure may not be immediately required.

Using this building as flexible classroom space or artists' studios, might be an acceptable interim solution, to provide some immediate income and use. Impacts on the interior fabric would be greater than simply adapting the existing office plan, with larger restrooms required, but these are differences limited to non-contributing features. Exterior impacts are similar to those of the proposed office space, and should comply with the *Secretary of the Interior's Standards*.

The Class 'C' cost estimate for an education/arts use for the year 2003 can range from \$32.17 per square foot for minimal interior changes to \$110.73 for more extensive interior changes, i.e. reconfiguration of interior walls.



<b>Building Number:</b>	<b>628</b>
Area:	West Barracks
Date of Construction:	1914 (per HSR Part One)
Period of Significance:	1900-1919 (per HSR Part One)
Historic Use:	Mess Hall and Kitchen
Current/Recent Use:	same as above
Occupancy:	A-3
Hazard Level:	Not Available
Number of Floors:	One Story
First Floor:	2,621 sq. ft. (per January 2000 SERA report)
Exterior Materials:	Brick Pier Foundation, Drop Siding Exterior, and Composition Shingle Roof



### Task One: Conditions Assessment

#### ***Site Context***

Located to the north of the Artillery Barracks (Building #638) and to the south east of the Infantry Barracks (Building #607), the Mess Hall (Building #628) is a simple utilitarian building intended to house support functions for the barracks buildings in the West Barracks. Built in 1914, it is labeled on the Quartermaster's drawings as a Mess Hall and Kitchen. As a utilitarian structure, it takes a subservient position to the surrounding buildings. Within Vancouver Barracks it is an element that contributes to the background fabric of the area.

#### ***Vehicular Circulation***

The nearest vehicular access is an alleyway on the south side of the building that runs from McLoughlin Road to Barnes Road. There are no parking spaces on this narrow street, but there are limited spaces in the courtyard at the back of the Artillery Barracks (Building #638).

#### ***Pedestrian Circulation***

A sidewalk that runs on the north side of the building west from the northwest door, meeting up with the alleyway as it curves up to the Infantry Barracks (Building #607). There is also a walk that connects the alley directly to the door and stair on the south side of the building.



### ***Exterior Assessment***

- **Site**: The ground on the north side of the Mess Hall slopes toward the building, and needs to be re-graded to provide positive drainage away from the structure. The other three sides of the building would also benefit from a slight re-grading. The landscaping is not really a problem except for some grass that is overgrown in spots. A tree on the north side is probably contributing to the moss problem on the roof by holding moisture close to the building.
- **Foundation**: The Mess Hall rests on painted brick piers that are in fair condition and are probably not reinforced. The crawlspace is enclosed with painted plywood panels that are in poor condition and not vented.
- **Walls**: The siding is a rustic drop siding that is used on many of the buildings in the Vancouver Barracks. It is in fair condition with peeling paint and biological growth. There are rust stains from the nails. The wall has been patched at several locations where doors or windows were removed. The vertical joints of the new siding were not staggered with the existing siding and as a result the infill is very visible.
- **Windows**: The windows are painted wood two-over-two double hung with wood screens. The paint is peeling and deteriorated, and the screens have only been primed.
- **Doors**: The doors have been recently added to the building. They are in good condition but are not appropriate to the historic character of the structure. The transom of the east door has been obscured. The northwestern-most door is oversized for equipment and deliveries and is in the location of what was originally a window. The west door has been filled in with a wall patch. The south door is not original to the building according to the plans from 1937.
- **Trim**: The trim is a flat painted wood trim at the door and window casing. The belly-band and corner boards are painted 1x flat stock. A flat belly band with a drip cap circles the building above the foundation. All are in good condition with minor staining from rusting nails and biological growth.
- **Roof, Gutters and Eaves**: The original wood shingle roof has been replaced with composition shingles and is covered in biological growth. This growth is heaviest on the north side of the building. The gutters and downspouts are galvanized metal and are in poor condition. The downspout on the northwest side of the building deposits water onto a sidewalk immediately adjacent to the building. The water ponds there or runs back onto the building foundation. The eaves are boxed-in with painted T & G boards. There is deterioration visible at the eave and soffit attachment that may be due to gutter failure.



- Porches and Stairs: There are concrete stairs and a ramp on the north side of the building that are recent additions and do not meet current accessibility requirements. Wood stairs and landings on the south and east sides of the building need to be brought up to meet current codes. The west stair has been removed along with the door. This and the east side were the historic locations for entrances.
- Miscellaneous: The exterior light fixtures, cables, conduit, flues and vents are non-contributing. The metal flashing on the south chimney is poorly installed. The vent/louver unit on the west side is not original.

### *Interior Assessment*

- General: In general, the interior does not retain any features of layout or content from the original building, but it is in good condition. All the original cabinetry and wood details (see HSR Part One for original detail sheets) have been removed except for the window and door casings and trim.
- Significant Features and Typical Materials: Some original door and window trim and paneling remain and should be retained.
- Typical Conditions: The floor has been covered with sheet vinyl. The original wood flooring is only visible in the storage rooms and is in fair condition. It will require light refinishing. The wood base has been replaced with vinyl cove base. The finish on the perimeter walls is plaster and in fair condition. The partition walls are all gypsum wallboard. The interior doors are non-contributing. The ceiling is plaster and in fair condition and has been obscured by a dropped acoustic tile ceiling. The light fixtures are non-contributing and surface-mounted conduit is attached to the wall.
- Special or Unusual Conditions: None.

### *Electrical Assessment*

- Service: Underground conductors from the site overhead power distribution system supply the electrical service. Service entrance conductors are installed in conduit. The service equipment is circuit breaker type, 120/208-volt, 3-phase, 4-wire, 350-ampere and is in very good condition.
- Power Distribution System: The service supplies a single feeder to a 3-phase, 4-wire, 125-ampere, 24 circuit, ITE Pushmatic circuit breaker load center.



- Wiring: Feeders and branch circuit wiring methods consist of single conductor copper conductors installed in metallic conduit that is routed concealed and exposed. Wiring is in very good conditioning.
- Wiring Devices: Receptacles outlets are grounding type and are in compliance with current electrical codes. Light switches are silent, commercial grade. Devices are in good condition.
- Lighting: Fixtures are 2 x 4 recessed and 1 x 4 surface type fluorescent with T-12 lamps. Fixtures are in good condition.
- Fire Alarm: There is no fire alarm system.
- Telecommunications: Service is overhead wiring from the site system. No outlets were observed in the interior.
- Emergency: The exits are identified with non-emergency, illuminated exit fixtures. There is no emergency egress lighting.
- Recommendations: Replace exit signs with LED emergency type. Provide emergency egress lighting with supplemental equipment, or install emergency power adapters selected existing fixtures.

### ***Mechanical Assessment***

- Description: The heating in this building is by twin gas furnaces located in an enclosed closet in the center of the mess hall dining area. The supply ductwork routes from the unit up into the ceiling space and out to the supply grilles located throughout the ceiling. The return air is routed through return grilles and ductwork back to the unit. Exhaust fans are located in restrooms. The kitchen exhaust hood looks to be newly installed and is adequate as is.
- Recommendations: This furnace system looks like a relatively new installation and should be acceptable to serve a large open space with no cooling. The ceiling grilles appear adequate as is. For ventilation, the operable windows would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned.

### ***Plumbing Assessment***

- Description: Existing plumbing fixtures are in good condition and appear to be new. Existing waste piping is cast iron. The kitchen fixtures are stainless steel and are in good condition. There are two hot water tanks located in the kitchen area and are in very good condition. The smaller one serves restroom fixtures and the larger one services the kitchen equipment. The domestic water piping is



copper and looks to be a recent installation. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.

- **Recommendations:** This building looks to be recently remodeled. The restrooms appear to be in accordance with ADA requirements. The water heaters are in very good condition and can remain for re-use.

### Task Two: Ultimate Treatment and Use

The Mess Hall (Building #628) is an excellent candidate for exterior restoration according to the *Secretary of Interior's Standards* and interior rehabilitation. It has always been a utilitarian structure, and interior work could range from the minimum changes required to bring the current configuration into compliance with codes, to a complete removal of all partitions and construction of new bathrooms and application of new finishes, leaving the bulk of the space open for classroom space or meetings. The *West Vancouver Barracks Reuse Plan* suggests using the structure for food service, which makes the best use of the building's relatively modern (circa.1980) commercial kitchen. Although there is no real change of use, the building must still be brought up to meet current codes including the installation of ADA compliant restrooms.

The Class 'C' cost estimate for a food service use for the year 2003 is \$21.62. Because the building already has a commercial kitchen and an open floor plan, costs incurred would be mostly due to code and finish upgrades.

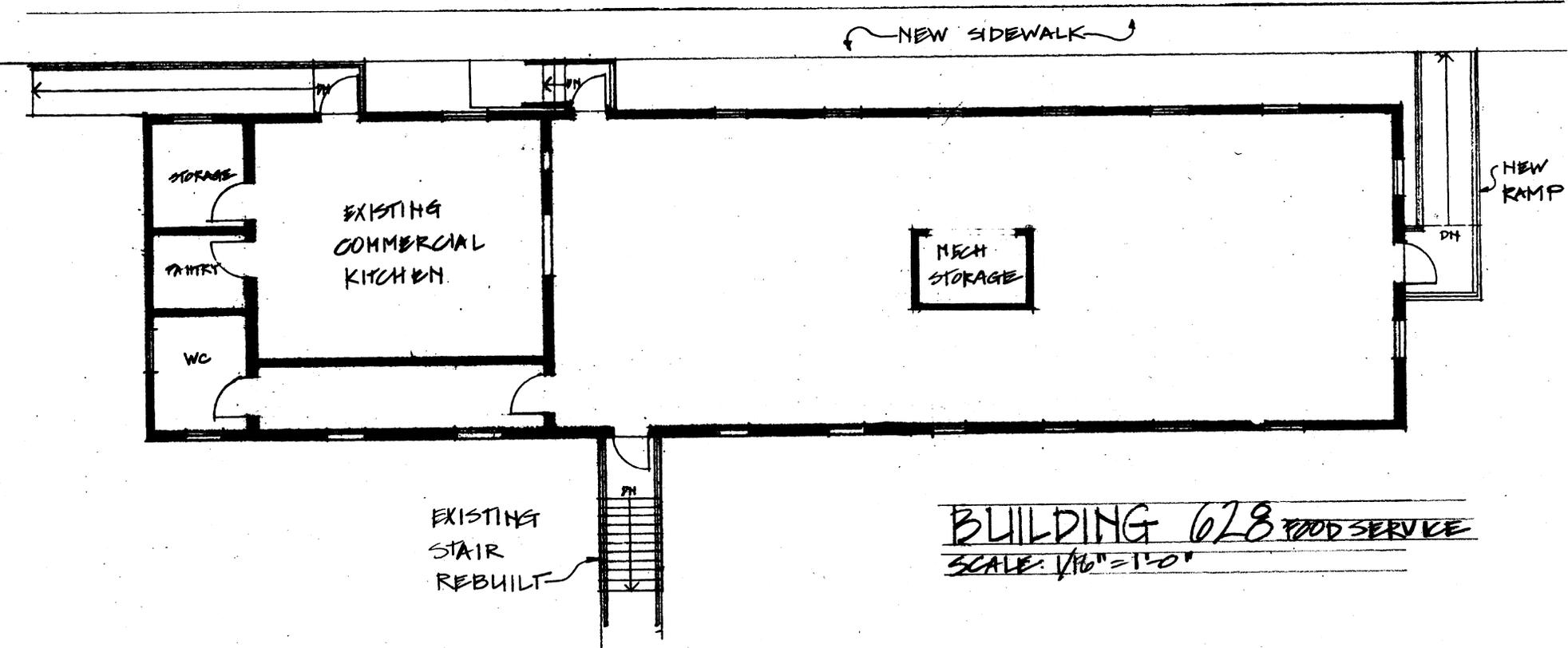
#### ***Exterior Character Defining Features (From Part One of the HSR)***

- Rectangular shape.
- Gable roof.
- Simple cornices and frieze boards.
- Wood siding and plain corner boards.
- Double hung sash windows.
- Window trim with simple drip cap and sill.
- Five-panel entry door.

#### ***Exterior Recommendations***

- **Foundations:** A structural engineer should check the foundation. Paint should be removed from the brick piers and they should be re-pointed as required. The plywood panels between the piers should be removed and a more appropriate infill panel designed to replace it that would facilitate ventilation under the building but keep animals out.





**BUILDING 028 FOOD SERVICE**  
SCALE: 1/16" = 1'-0"

- **Walls:** The siding and trim should be refinished and re-painted and the walls checked for water infiltration. The patches should be re-done or the door or window restored in its original location depending on the programmatic requirements dictated by the office use. The windows and screens should be refurbished and re-painted. The doors should be replaced with a period-appropriate style and the transoms restored. Light fixtures should be replaced with period appropriate fixtures and cabling and conduit placed underground and in the crawlspace. The vent/louver unit on the west side could be replaced or removed if the use of the building changes to one that doesn't require a kitchen. An historic paint scheme should be researched for the exterior. Historic photographs suggest that the trim color was originally much darker than the siding color. The doors appear to be painted with a two-color scheme as well.
- **Roof and Gutters:** The gutters and downspouts should be replaced, and the site drainage reworked. The heavy biological growth should be removed from the roof and copper strips installed to inhibit growth in the future. The flashing at the chimney should be replaced.
- **Porches and Stairs:** The existing exterior stairs do not meet current codes and need to be replaced. New stairs should have closed risers and appropriate exterior landings, guardrails, and handrails. In addition, a ramp needs to be provided for ADA compliance. Care should be taken that all new exterior elements complement the historic character of the Vancouver Barracks.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original.
- Paneling where original.

#### ***Interior Recommendations***

- **Specific Space with Unique Treatment:** None.
- **Typical:** Retain the existing original wood trim including door and window casings, and base. Historic paneling should also be saved if possible. New construction should follow with the existing details and in general, compliment the historic character of the building. Dropped ceilings should be removed, and consideration given to the installation of light fixtures that are compatible with the historic character of the building.

#### **Task Three: Requirement for Treatment**

#### ***Compliance with Codes***

Uniform Building Code (UBC):



- Proposed Use: Food service.
- Occupancy Proposed: A-3 (assembly).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories permitted: 6,000 S.F. / 1 story (complies).
- Occupancy Load: Dining Room (1,400 S.F.) 94 persons.  
Kitchen and Storage (825 S.F.) 5 persons.
- Exits Required: 2 required; 3 provided.
- Crawlspace Ventilation: not provided.
- Attic Ventilation: Appears to be adequate, but metal ridge vents intrude on south elevation. Verify the presence of low-side vents in eave.
- Plumbing: UBC Table 29-A requires separate facilities for men and women. Each should include two toilets and two lavatories, and comply with ADA standards.
- Structural: Needs structural assessment.

#### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance. The existing toilet room should be appropriately renovated to make it accessible, or replaced. An additional accessible toilet room also needs to be constructed. Although a ramp is currently located on the north side of the building, ADA requires that in general, access should be provided at a structure's public entrance. This ramp should be carefully evaluated to determine if it can be brought into compliance with ADA standards, as well as if its location serves the programmatic needs of the structure.

#### Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

#### National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

#### National Fire Protection Association Standards (NFPA):

- Fire protection system: See electrical assessment; automatic fire sprinklers are not installed.

#### Washington State Energy Code (WSEC):



- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the *National Register of Historic Places*. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the crawlspace provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

#### Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

#### ***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Mess Hall (Building #628) gains historic significance not as an individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks. The proposed re-use of the Mess Hall as a food service, has minimal impact on the historic character of the exterior. Necessary changes to existing porches, ramps and stairs, mechanical penetrations in the roof, and crawlspace skirting are to non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.
- Interior: The proposed re-use of the Mess Hall as a food service has minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

#### Task Four: Alternative Treatments

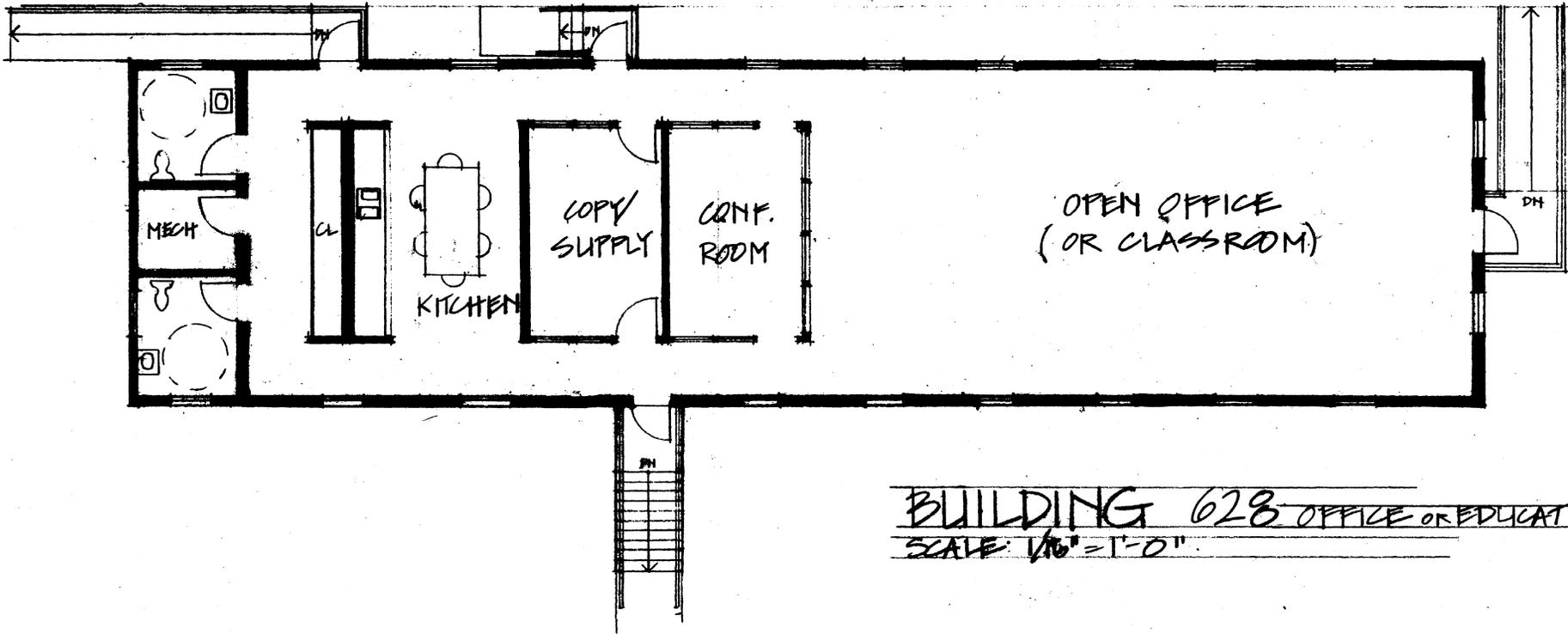
Rehabilitating Building 628 for use as a food service space (See Plan) does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. However, given the lack proximity to the main roads within the West Barracks, combined with a lack of identified parking, a food service business may not be economical here at this time, if it cannot draw enough customers from the other buildings of the West Barracks.



Using this building as office space or art studios (See Plan), might be an acceptable interim solution, to provide some immediate income and use, until such a time that a food service is economically viable. One possibility would be to “mothball” the kitchen and use the dining area for the alternate use. Only minimal rehabilitation would be required to make this space usable. Impacts on the interior fabric would be minimal, if the kitchen is not removed. Exterior impacts are similar to those of the proposed food service, and are limited to non-contributing features.

The Class ‘C’ cost estimate for an office or art use for the year 2003 is \$98.74. The interior would have to be dramatically changed to accommodate these uses that are drastically different from its current use.





BUILDING 628 OFFICE OR EDUCATION  
SCALE 1/16" = 1'-0"

<b>Building Number:</b>	<b>630</b>	
Area:	West Barracks	
Date of Construction:	1914 (per HSR Part One)	
Period of Significance:	1900-1919 (per HSR Part One)	
Historic Use:	Mess Hall	
Current/Recent Use:	Quartermaster Storehouse, most recently Quarters	
Occupancy:	U, more recently R-1	
Hazard Level:	Not Available	
Number of Floors:	One Story	
First Floor:	1,836 sq. ft. (per January 2000 SERA report)	
Exterior Materials:	Brick Pier Foundation, Drop Siding Exterior, and Composition Shingle Roof	

### Task One: Conditions Assessment

#### ***Site Context***

Built in 1914, Building #630 is labeled as a Mess Hall on the Quartermaster's drawings. This is a secondary structure within the context of the West Barracks and is overshadowed by the adjacent Artillery Barracks (Building #638). The mess was converted to a storehouse for records for the Spruce Production Corporation in 1936. In 1953 it became quarters and was divided into 10 rooms, a hallway, two bathrooms and a kitchen. It is located just to the east of the Artillery Barracks with one end facing McLoughlin Road. A grass lawn on its south side extends to Hathaway Road, between McLoughlin Road and the Artillery Barracks.

#### ***Vehicular Circulation***

Vehicular access is on the north side of the building, in the alleyway that runs from McLoughlin Road to Barnes Road. There are no parking spaces on this narrow street, but a few spaces are located in the courtyard at the rear of the Artillery Barracks.

#### ***Pedestrian Circulation***

Asphalt sidewalks are located on the north, west and east sides of the building. They are in fair to poor condition with cracking and biological growth. Curb cuts for accessibility have not been provided. Their width varies, extending in some places to within inches of the building. The sidewalk on the east side runs in the middle of the grass lawn to connect with the stair but does not continue further.



***Exterior Assessment***

- **Site**: The grade on the north side of the building does not direct site runoff away from the building. No drainage system for roof runoff is present. Grass around the building is overgrown.
- **Foundation**: The brick foundation piers have been painted and are in fair condition. They are almost certainly not reinforced. Mortar joints are deteriorating, except the west side where the mortar appears to be new. Lattice infill panels are not original.
- **Walls**: The wood siding is the rustic drop pattern used on many of the buildings in the West Barracks and Vancouver Barracks. It is in fair condition with blistering and peeling paint and biological growth present. Rust stains from nails are visible. Doors and windows have been removed from several locations and these areas patched. These patches were poorly executed with vertical joints clearly visible outlining the former opening. The siding on the south side is in worse condition than the other sides, with poor paint adhesion and a rough surface.
- **Windows**: The windows are painted wood two-over-two double hung with wood screens. The paint is peeling, and the wood screens have only been primed. Additional aluminum screens detract from the character of the building. A plywood “hood” is present on the center window of the south elevation. The two easternmost windows are not original, as is the south unit on the east elevation. They are replacement windows for those damaged in the fire.
- **Doors**: The flush doors have been recently installed. The north door has a transom that has been painted. The door on the south side has been removed and the siding patched. The transom on the east elevation is intact. The west door is original but in poor condition.
- **Trim**: The trim is flat painted wood at the door and window casing. The belly band is a flat stock with a drip cap. The corner boards are painted flat stock. All are in fair condition with minor staining from rusting nails and biological growth. The close proximity to the ground is contributing to the deterioration of these elements on the north elevation. The other elevations have minor biological growth and staining. The trim on the east side is in worse condition than the other sides, with poor paint adhesion and a rough surface.
- **Roof, Gutters and Eaves**: The original wood shingle roof has been replaced with composition shingles and is covered in biological growth. The eaves are wood with open rafter tails. There is damage at the eave and soffit attachment that may be due to leaks in deteriorating gutters. The gutters are not original and do not



closely match the original profile. The gutters on the south elevation are newer. On the north side, flexible plastic tubing at the ends of the downspouts is in the way of pedestrian movement and the water discharges onto the sidewalk. On the south the downspouts also discharge water too close to the building.

- Porches and Stairs: The stairs on the north (wood), east (concrete) and west (concrete) stairs while not original, are in their appropriate historic locations. None of the three stairs meet current codes.
- Miscellaneous: The exterior light fixtures, cable and conduit, and flues and vents are intrusive and non-contributing. The chimneys have been removed and are no longer visible on the exterior, although portions of them remain on the interior of the building. The vents on the west elevation are non-contributing and the rack on the wall is corroding. Its importance should be verified and it should be removed if it is not found to be significant.

### ***Interior Assessment***

- General: In general the interior is in poor condition. It does not retain any features of layout or content from the original building. Partitions and HVAC work have been poorly executed in an ad hoc manner. A fire in the 1990's heavily damaged the interior of the southeast corner of the building.
- Significant Features and Typical Materials: Some original door and window trim remain, and some wood paneling remains.
- Typical Conditions: The floor has been covered with carpet. The original wood flooring is not visible and its condition is unknown. A vinyl cove base has been glued to the original wood base. The original plaster walls are in poor condition. The partitions walls are all gypsum wallboard. The interior doors are not original. The plaster ceiling is in fair condition and has been obscured by a dropped acoustic tile ceiling at the east end of the building. The light fixtures are non-contributing and there is surface-mounted conduit attached to the wall.
- Special or Unusual Conditions: Heavy damage in the southeast corner of the building due to fire.

### ***Electrical Assessment***

- Service: Overhead conductors from the site overhead power distribution system supply the electrical service. Service entrance conductors are installed in conduit. The service equipment is ITE Pushmatic, circuit breaker type, 120/240-volt, 1-phase, 3-wire, 100-ampere and is in very good condition.



- Power Distribution System: There is no distribution. Branch circuits are derived directly from the service equipment.
- Wiring: Wiring methods consist of single conductor copper conductors installed in metallic conduit that is routed concealed and exposed. Wiring is in good condition.
- Wiring Devices: Receptacles outlets are grounding type and are in compliance with current electrical codes. Light switches are silent, commercial grade. Devices are in poor condition.
- Lighting: Fixtures are 1 x 4 surface type fluorescent with T-12 lamps. Fixtures are in poor condition.
- Fire Alarm: The control panel is a Fire-Lite, 2 zone, non-addressable. Manual pull stations are located at all exits and smoke detectors are installed in all rooms. Audio/visual notification devices are located in the central corridor. The equipment is in fair condition.
- Telecommunications: Service is overhead wiring from the site system. Category 2 wiring, routed in the crawl space, connects surface mounted outlets.
- Emergency: There is no emergency egress lighting or emergency illuminated exit identification lighting.
- Recommendations: Replace wiring devices. Replace lighting with energy efficient fixtures. Install emergency egress lighting and emergency exit identification lighting.

### ***Mechanical Assessment***

- Description: The heating in this building is by an indoor gas furnace. The furnace is located in a small room with a window. In the top of the window is a weatherproof louver used for combustion air and the bottom part of the window has an exhaust fan used for air circulation in the building. The supply ductwork is routed exposed at the ceiling throughout the building to grilles and registers. There is a residential type range hood in the kitchen located over the range.
- Recommendations: The furnace appears to be recently installed and is in good condition. The ductwork and grilles are in poor condition and should be replaced. For ventilation, operable windows would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in interior areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.



### ***Plumbing Assessment***

- **Description:** Existing plumbing fixtures are in fair to good condition. Existing waste piping is cast iron. The domestic water piping is carbon steel and appears to be the original installation. The existing water heater is located in the back porch entryway and looks to be in good condition. To provide freeze protection during this unoccupied time, the existing domestic water piping has been drained and turned off to the building. The gas service to the building has been shut off as well.
- **Recommendations:** Depending on building usage, the restrooms may need reconfiguration to be in accordance with ADA requirements. This may change fixture layout. The existing fixtures appear to be residential type. Some new fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed to replace existing domestic carbon steel piping, as the piping is probably nearing the end of its useful life. The water heater could remain for use.

### **Task Two: Ultimate Treatment and Use**

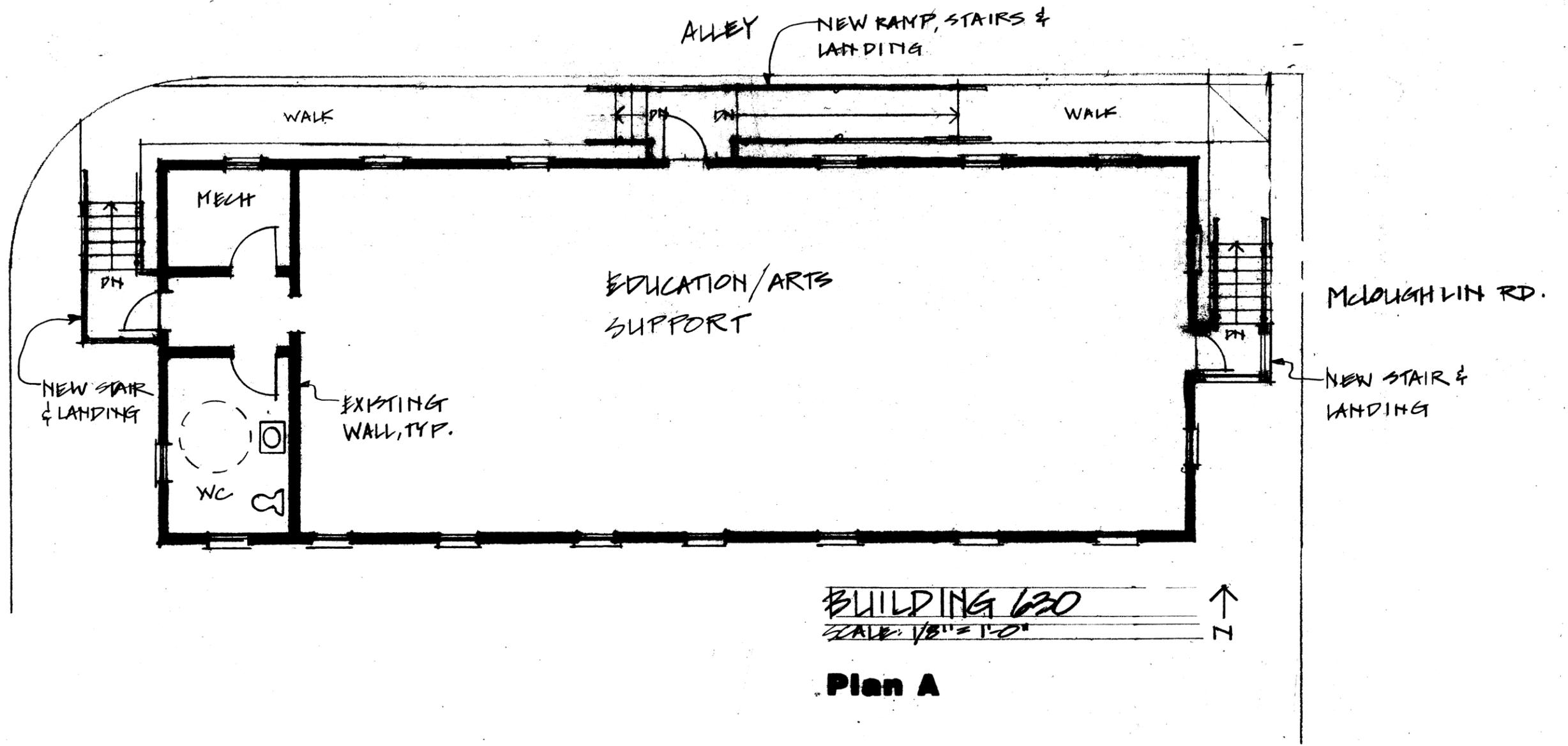
The Quartermaster Storehouse (Building #630) is an excellent candidate for exterior restoration and interior rehabilitation according to the *Secretary of Interior's Standards*. It has always been a utilitarian structure, changing as required to fit each newly assigned role in the West Barracks. A partial rehabilitation to an open space would best fit the proposed use. This would include a complete removal of all partitions and construction of new bathrooms and application of new finishes, leaving the bulk of the space open for classroom space or meetings (See Plan A). The *West Vancouver Barracks Reuse Plan* suggests using the structure for arts and education as the preferred option.

The Class 'C' cost estimate for an arts education use for the year 2003 is \$125.83. This would restore the open floor plan and provide facilities for an arts use.

### ***Exterior Character Defining Features (From Part One of the HSR)***

- Rectangular shape.
- Gable roof.
- Simple cornices and frieze boards.
- Wood siding and plain corner boards.
- Double hung sash windows.
- Window trim with simple drip cap and sill.
- Five-panel entry door.





**BUILDING 630**  
 SCALE: 1/8" = 1'-0"

**Plan A**

***Exterior Recommendations***

- **Site**: The grades and sidewalk around the north side of the building need to be adjusted to direct site runoff way from the building and eliminate the ground contact with the belly-band. A new drainage system should be installed to accept roof runoff and either tie into the storm sewer system or to appropriately sized and located drywells. Overgrown grass around the building needs to be cut.
- **Foundation**: A structural engineer should evaluate the brick piers. The paint should be removed from the piers and their mortar joints re-pointed. The painted lattice between the piers should be removed and a more appropriate infill panel designed to replace it that would maintain ventilation under the building but still keep animals out. Historically, the spaces between piers were left open.
- **Walls**: The siding and trim should be refinished and re-painted and the walls checked for water infiltration. The siding patches should be removed and the missing window should be restored. The siding at the missing door should be replaced.
- **Windows**: The windows and screens should be refurbished and re-painted. Repair and repaint wood screens. Aluminum screens should be replaced to match the existing wood screens. Replace and restore window on the west elevation that has been removed.
- **Doors**: The doors should be replaced with ones compatible with the historic character of the West Barracks, and their transoms should be restored. The west door is original but in poor condition and should be replaced with a similar unit. Existing original hardware should be refurbished when possible, and any new hardware selected to match the character of the original.
- **Trim**: Deteriorated trim elements on the north should be replaced. All trim should be scraped and painted.
- **Roof, Gutters and Eaves**: The gutters and downspouts should be replaced with an appropriate historic profile, and connected to a new drainage discharge system. Biological growth should be removed from the roof and copper strips installed to inhibit growth in the future.
- **Porches and Stairs**: The existing exterior stairs do not meet current codes and need to be replaced. New stairs should have closed risers and appropriate exterior landings, guardrails, and handrails. In addition, a ramp needs to be provided for ADA compliance. Care should be taken that all new exterior elements complement the historic character of the Vancouver Barracks.



- Miscellaneous: Exterior light fixtures should be replaced with historically appropriate fixtures and cabling and conduit placed underground and in the crawlspace. An analysis of the historic paint scheme should be conducted. An older photograph suggests that the trim color was once much darker than the siding color. The doors appear to be painted with a two-color scheme as well.

### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original.
- Paneling where original.

### ***Interior Recommendations***

- Specific Space with Unique Treatment: This building was originally primarily one open volume. Removing the interior partitions, to the extent possible, would allow the interior to take full advantage of the natural light and ventilation provided.
- Typical: Retain the existing original wood trim including door and window casings, and base. Historic paneling should also be saved if possible. New construction should follow with the existing details and in general, compliment the historic character of the building. Dropped ceilings should be removed, and consideration given to the installation of light fixtures that are compatible with the historic character of the building.

## **Task Three: Requirement for Treatment**

### ***Compliance with Codes***

#### Uniform Building Code (UBC):

- Proposed use: Education (open classroom).
- Occupancy Proposed: A-3 (assembly).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories Permitted: 6,000 S.F. / 1 story (complies).
- Building Area: 1,836 S.F.
- Occupancy Load: (20 S.F. / person) 92 persons.
- Exits Required: 2 required; 3 provided.
- Crawlspace Ventilation: Provided.
- Attic ventilation: Verify the presence of eave vents and ridge vents.
- Plumbing Fixtures Required: UBC Table 29-A requires separate facilities. Net square footages will determine the final fixture counts, but they will require up to two toilets and two lavatories in each restroom, and comply with ADA standards.
- Structural: needs structural and seismic assessment.



Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance. The existing toilet rooms should be replaced. No ramp is provided to facilitate access this building, and ADA requires that in general, access should be provided at a structure's public entrance. Its location should serve the programmatic needs of the structure.

Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire protection system: See electrical assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the crawlspace provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Quartermaster Storehouse (Building #630) gains historic significance not as individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks. The proposed change of use from living quarters to educational space has minimal



impact on the historic character of the exterior. Necessary changes to existing porches and stairs, and the addition of an accessible ramp, have minimal impact on contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.

- Interior: The proposed change of use from living quarters to educational space has minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

#### Task Four: Alternative Treatments

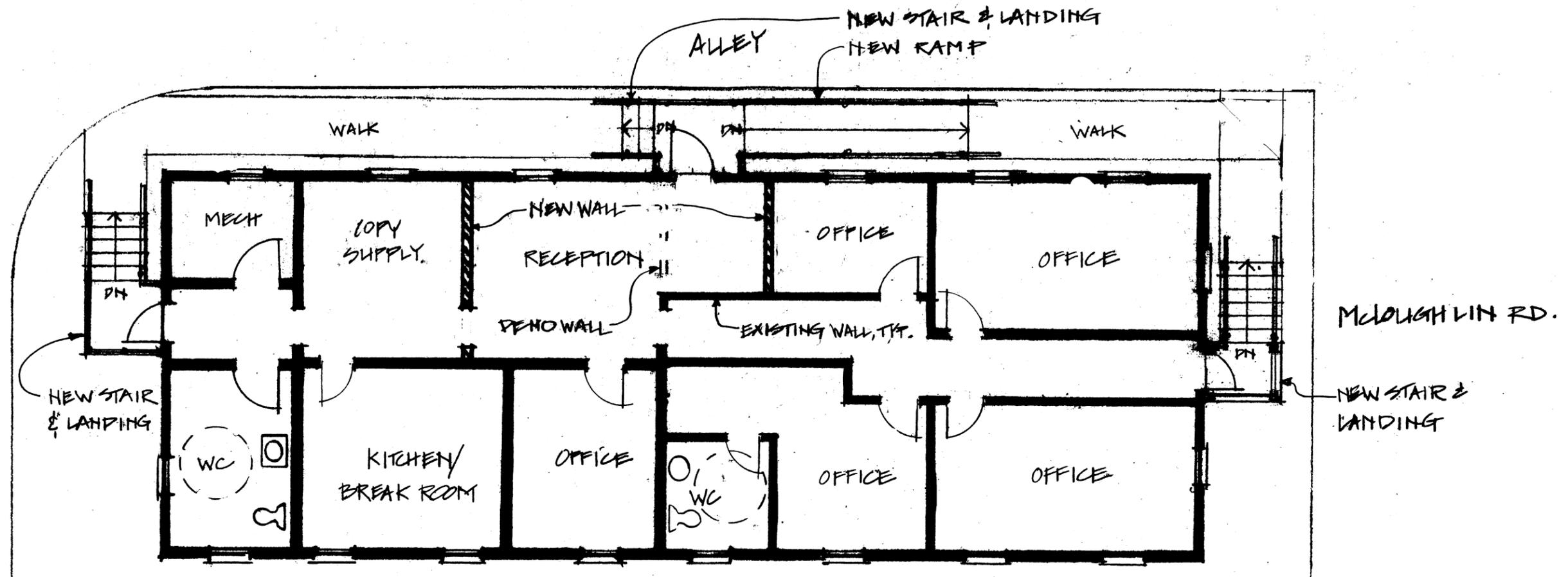
Rehabilitating Building #630 for use as educational space does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. However, options for the space need to be considered. Education and arts functions are fairly similar, but this building might function better as a support space for the Artillery Barracks (Building #638) with offices and administrative functions.

Interior work would include the minimum changes required to bring the current configuration into compliance with codes. The existing room configuration could be retained (See Plan B). The primary difference with this use would be to the restroom fixture counts. An office located in this building would have the option, at the discretion of the building official, of having only one, unisex restroom, potentially reducing the cost of rehabilitation.

With any of the proposed new uses for Building #630, impacts on the interior fabric would be minimal, as the interior has been extensively altered. Exterior impacts are similar to those of the proposed educational space, and are limited to non-contributing features.

The Class 'C' cost estimate for an office use for the year 2003 is \$78.08. This cost assumes that the interior wall configuration would remain and that the majority of the cost would be applied to code upgrade and finishes.





BUILDING 630-OFFICE ↑  
 SCALE: 1/8" = 1'-0" ↓

**Plan B**

<b>Building Number:</b>	<b>631</b>
Area:	West Barracks
Date of Construction:	1887-1888
Period of Significance:	1880-1899
Historic Use:	Hospital Steward's Quarters
Current/Recent Use:	Commanding Officer's Quarters
Occupancy:	R
Hazard Level:	Not Available
Number of Floors:	2 Stories and a full basement
Basement:	1,058 sq. ft. (per January 2000 SERA report)
First Floor:	1,043 sq. ft. (per January 2000 SERA report)
Second Floor:	775 sq. ft. (per January 2000 SERA report)
Exterior Materials:	Painted wood rustic drop siding



### Task One: Conditions Assessment

#### *Site Context*

- This building originally sat west of the Post Hospital (Building #614) but was relocated to its current location when Interstate-5 was built. It is located at the corner of McLelland Road and McLoughlin Road to the east of the Hospital Steward's Quarters (Building #621). It faces the O.O. Howard House across a rather desolate parking lot.

#### *Vehicular Circulation*

- Vehicular access to the front of the building is on McLelland Road, with a driveway to the rear of the house from McLoughlin Road that serves both building #621 and building #631. There is parallel parking along McLelland Road. Parking is also available in the lot between the house and the O.O. Howard House.

#### *Pedestrian Circulation*

- There is a sidewalk at the front of the house that is connected to the front door by a walk. There is also a sidewalk that connects the front walk and the back of the house along the west side of the house.

#### *Exterior Assessment*

- Summary: This house has seen many changes over the years, and only a small part of the original remains. The style of the house is a simplified Queen Anne,



which originally had an asymmetrical façade with one dormer in the front. Additions were built in 1952 after the move. The porch to the east was removed to accommodate a two-story addition with bedrooms on the first and second floors, over a garage in the basement. A new kitchen and dining room were added at the back. A small center gable dormer was also added over the entry.

Architectural details including window shutters and trim have been removed. The additions to the south and the east are intrusive, altering the massing of the original house, greatly increasing the building's footprint. The furnace chimney was moved to the west wall in order to accommodate a new fireplace in the living room. The house also sits lower to the ground, further emphasizing the horizontal lines of the additions as opposed to the original vertical orientation.

- Site: The concrete walks are in poor to fair condition with a lot of biological growth. A structural engineer should check the retaining wall at the garage. There may need to be a guardrail where the height difference from the yard is 30" or more. There is a lot of debris in the driveway and it should be checked for proper drainage and that the drain is working.
- Foundation: The CMU foundation from the relocation in 1952 is in good condition. There is a blocked vent on the west side.
- Walls: The exterior walls are wood frame with rustic drop siding that is in fair condition. The paint is peeling. There are some split boards and evidence of corroding nail heads staining through the paint. The siding at the dormers on the south side needs repair.
- Trim: The window and door casing is flat. The bay window to the right of the entry retains the original drip cap and moldings at the head trim. These were typical of the original building, but have been removed from other windows. The belly band consists of a sill and a 1x skirt board. The corner boards are simple 1x boards that are loose and have peeling paint. In general there is deterioration at the bottom of vertical trim pieces.
- Windows: The windows are wood double-hung one-over-one and two-over-two lites with non-contributing aluminum screens. There are large picture windows on the west that are not appropriate to the building's style. Glazing stops in many of the windows need to be replaced. Deteriorated sills and jambs also need repair.
- Doors: The front door is an ornate paneled door with a large upper light and profiled moldings. The south door is also a wood paneled door with an upper light. The aluminum screen door is non-contributing.



- Roof, Gutters & Eaves: The roof is covered with asphalt composition shingles that have biological growth. The upper eaves are supported by decorative wood brackets, which show some deterioration, particularly at the west gable. The lower soffit is wood tongue and groove on the historic house, with plywood used at the 1950's addition. Deterioration present at the northeast corner soffit coincides with the upstairs bathroom location. The painted metal gutters and downspouts have been poorly installed. The front valleys do not require gutters but just conductor heads. Metal flashings are in generally poor condition and the roof edge flashing has not been painted. The dormers on the south side and the chimney need new step flashing. The boxed-in eaves at the rear addition have some deterioration. Cracks are present in the soffits on the west elevation. According to the Army Corps of Engineers conditions survey the attic ventilation is not adequate.
- Porches and Stairs: The front entry has carpet that is in poor condition. The condition of the floor underneath is unknown. The stairs up to the front entry are concrete and are in fair condition. The south stairs are deteriorating wood and do not comply with current codes.
- Miscellaneous: The bay window shows evidence of settlement. Some of the boards are cracked. The surface-mounted cabling and conduit detract from the character of this building. The light fixtures are not period appropriate.

### *Interior Assessment*

- General: Overall the interior is in good condition.
- Significant features and Typical Materials: The hardwood floors are in good condition and the plaster walls and ceilings show some cracking. The gypsum wall board at the newer addition is in good condition.
- Typical Conditions: Good
- Special or Unusual Conditions: None
- Floor: The basement floor is concrete with a floor drain in the laundry room. The wood flooring in the living room is in good condition with the wood base, shoe and rounded cap intact. The kitchen has resilient sheet flooring, as does the bathroom, which is in poor condition. The other rooms have typical oak strip flooring in good condition.
- Walls: There are CMU block walls in the basement, and plaster or gypsum wall board in the rest of the house. There is some cracking in the plastered areas.



- Stair: The handrail offset doesn't comply with current codes. The treads and risers are painted wood. The basement stair needs a complying handrail.
- Ceiling: There is a drop ceiling and fluorescent light fixtures in the basement rooms. The other ceilings are plaster or gypsum wall board.
- Windows: The windows from the 1950's era additions are non-contributing. These include large picture windows in the living room and dining room that are not in character with the original house and windows.
- Doors: The front entry is a wood three-panel door with glazed top panel. The other interior doors are single flat panel doors.
- Miscellaneous: The electrical panel and the plumbing for the washer/dryer and utility sink are in the basement. The kitchen has 1960's plywood cabinets and a beat-up baseboard radiator. The fireplace is enclosed with glass doors and is painted brick with a plain brick hearth. The smoke detectors are intact.

### *Electrical Evaluation*

- Service: Overhead conductors from the site overhead power distribution system supply the electrical service. Service entrance conductors are installed in conduit. The service equipment is circuit breaker load center, 120/240-volt, 1-phase, 3-wire, 200-ampere. Equipment is in good condition.
- Power Distribution System: There is no distribution. Branch circuits are derived directly from the service equipment.
- Wiring: Wiring method is older cloth/rubber non-metallic sheathed cable.
- Wiring Devices: Receptacles outlets are grounding and GFI type. Light switches are silent. Receptacle quantity and spacing do not comply with current code requirements. Devices are in fair condition.
- Lighting: Some light fixtures are missing components. Fixtures are in poor condition.
- Fire Alarm: Single station smoke detectors are installed in all sleeping areas as required by code.
- Telecommunications: Outlets and wiring is a simple residential phone system served overhead from the exterior.
- Emergency: Not applicable, residential occupancy usage.



- Recommendations: Repair or replace select light fixtures.

### ***Mechanical Assessment***

- Description: The heating system serving each housing unit is a hot water radiator system. The boilers serving the stand up radiators or baseboard type radiators are located in the basements of each housing unit. Bathroom exhaust fans are installed in each unit. Each kitchen has a range hood over the stove/oven. All equipment in housing units is residential type.
- Recommendations: Heating systems appear to be in very good operating condition. Because of residential usage, we would recommend checking each system for problems, leaks, etc and repair as needed. Fans and hoods should be checked for proper operation.

### ***Plumbing Assessment***

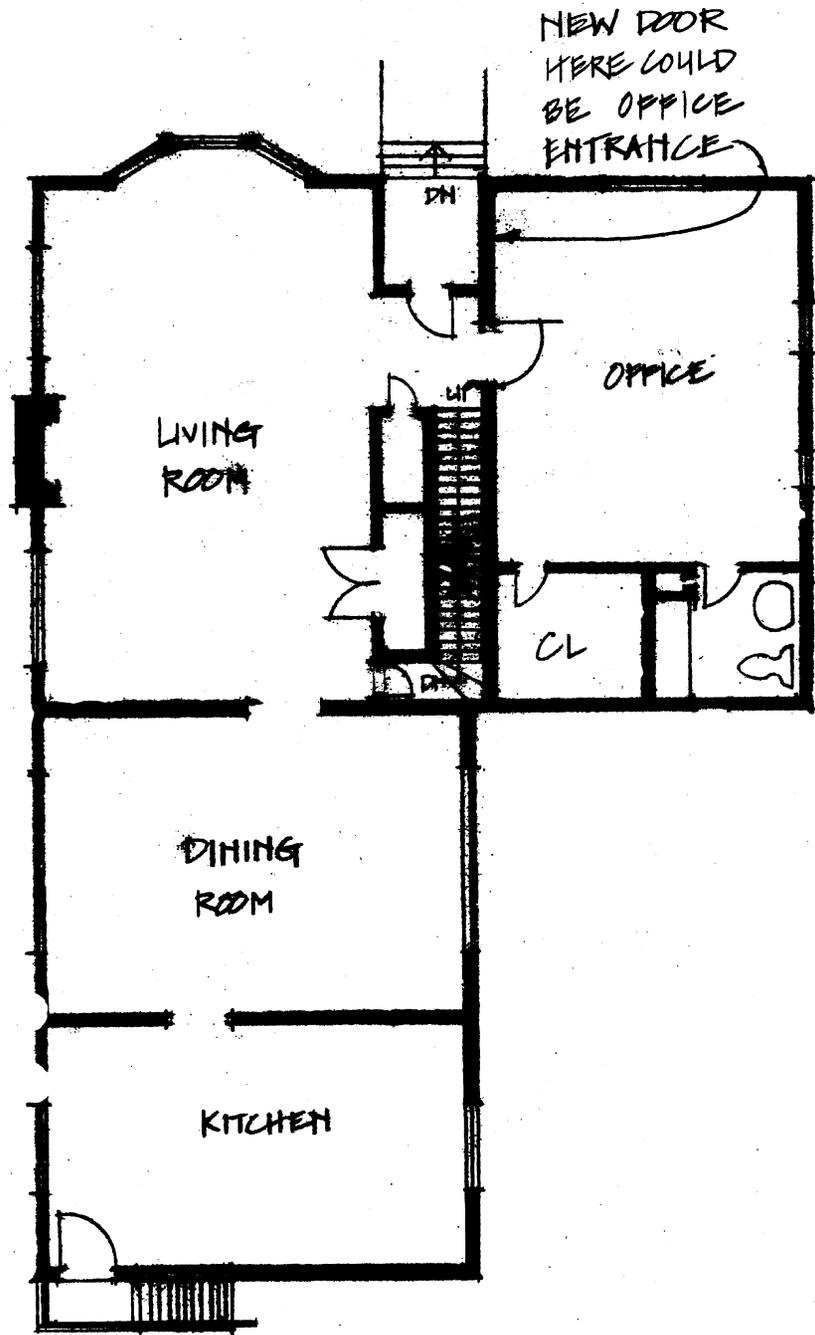
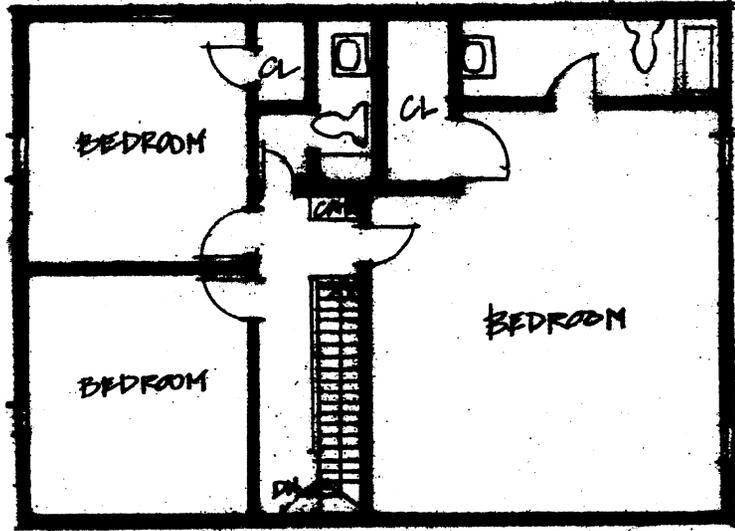
- Description: Existing plumbing fixtures are in good condition. Existing waste piping is cast iron. Existing water heaters are located in the basement near each unit boilers. Domestic water piping is carbon steel. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.
- Recommendations: Water heaters appear to be in good condition and recommend replacement on an as needed basis. Domestic water piping can remain as is for residential type usage.

## **Task Two: Ultimate Treatment and Use**

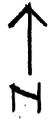
The Commanding Officer's Quarters (Building #631) is a good candidate for exterior restoration and interior rehabilitation according to the *Secretary of the Interior's Standards*. The *West Vancouver Barracks Reuse Plan* (August 2002) suggests that a residential use combined with an in-house office or business (live/work) would be the most appropriate reuse of the building. Very little work is necessary to bring this building to a point where it can be leased.

The Class 'C' cost estimate for a live/work use for the year 2003 is \$8.59 per square foot. This includes no major interior or exterior work, just the necessary most minimal repair work for a residential tenant.





BUILDING 03 LIVE/WORK  
 SCALE: 1/8" = 1'-0"



***Exterior Character Defining Features (From Part One of the HSR)***

- Three-sided projecting bay on the lower façade
- Decorative brackets supporting eaves
- Horizontal drop siding and corner boards
- Tall, narrow windows
- Brick chimney

***Exterior Recommendations***

- Vehicular Circulation: While parking is sufficient for a residential use, additional parking is needed for office uses. The on-street spaces could serve as visitor or client parking. Additional parking should be provided by adding more spaces in the back, or by redesigning the parking lot north of McLelland Road. The reconfiguration of the parking spaces and landscaping would help make this area more pleasant.
- Pedestrian Circulation: The sidewalks should be repaired and widened.
- Site: A structural evaluation should be done of the retaining wall. A guardrail should be installed as required by code.
- Foundation: The vent on the west side should be re-established.
- Walls: Check for water infiltration at gutters and downspouts. Repair flashing, replace water damaged boards and siding. Replace rusting nails with galvanized nails.
- Trim: Repair or replace corner boards and repair belly band elements. Scrape and re-paint as required.
- Windows: Refurbish sash and repair sills and jambs, replace if necessary. Restore windows to full operation. Replacement of the picture windows with period-appropriate windows should be considered.
- Doors: Replace non-contributing doors with period doors. Refurbish contributing doors, especially the front and back doors.
- Roof, Gutters and Eaves: Remove the biological growth from the roof and insert zinc or copper strips to inhibit future growth. Repair eaves with appropriate material. Install new gutters and downspouts appropriately. Reconnect leaders to sub-surface drainage after ensuring full operation of system. Replace ridge flashing. Prepare and paint roof edge flashing. Repair flashing at the dormers on the south side. Replace flashing at the chimney.



- Porches and Stairs: Remove carpet in front entry and repair the floor underneath as needed. Replace front stairs. Replace south stairs as a whole.
- Miscellaneous: Repair bay window and correct settlement problem without causing additional damage. Otherwise, stabilize window in place and repair trim and siding as required. The cabling and conduit on the exterior of the building should be relocated. Remove all exposed elements and run through interior walls or concealed in-wall cavities. Active and inactive lines should be verified. Repair the adjacent material as required. Replace lighting fixtures with period-appropriate fixtures.

### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original
- Lighting fixtures in period
- Fireplace detail
- Hardwood floors
- Stairwell millwork
- Doors

### ***Interior Recommendations***

- General: The interior is already in good condition. The stairs need to be upgraded with code complying handrails. The kitchen, while functional, is not an asset and will need to be updated with a new tenant. Non-contributing interior doors should be replaced.
- Specific Space with Unique Treatment: None
- Typical: Maintain existing finishes.

### **Task Three: Requirement for Treatment**

#### ***Compliance with Codes***

##### Uniform Building Code (UBC):

- Occupancy proposed: R-3/B (residential and single-family and office combined)
- Construction Type: V-N (wood frame, non-rated)
- Base Area / Stories permitted: 8,000 S.F. / 2 stories (complies)
- Building Area 1,818 S.F. for upper 2 stories over 1,056 S.F. basement.
- Exits Required: 2 required; 2 provided
- Upper floor exit: 1 required.
- Crawlspace ventilation: Not applicable.
- Attic ventilation: Verify.
- Structural: Needs structural assessment.



Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. A ramp needs to be provided to make the first floor of this building accessible. The first floor restroom, kitchen and doorways should also be modified to meet ADA requirements. The basement entry should be made accessible.

Uniform Mechanical Code (UMC):

- Mechanical – needs mechanical assessment.

National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

National Fire Protection Association Standards (NFPA):

- Fire protection system: See electrical assessment; automatic fire sprinklers are not installed.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. Wall cavities should be insulated as much as possible without destroying historic materials. If the siding is removed it would present an opportunity to insulate large portions of the building without disturbing historic materials. The attic should be insulated, with provisions made for ventilation. The existing windows, however, are contributing elements to the significance of the structure in the context of the west Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of the Interior's Standards***

- Exterior: The Commanding Officer's Quarters (Building #631) gains historic significance not as individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks. The



proposed change of use from living quarters to live/work space has minimal impact on the historic character of the exterior. Necessary changes to existing porches and stairs, and the addition of an accessible ramp impact non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.

- **Interior:** The proposed change of use from living quarters to live/work space has minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic features including all trim and the wood floors should be preserved and can serve as patterns for new material as it is installed. Other original materials such as plaster surfaces should be preserved to the extent practicable. Necessary changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

#### Task Four: Alternative Treatments

Rehabilitating the Commanding Officer's Quarters (Building #631) for use as a live/work space within the existing single-family residence does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. The first floor bedroom could be converted to a nice office space, and the basement, with its separate entrance, could also serve a business function. However, as the character of the West Barracks changes, it may no longer be possible or desirable to have single-family uses within the Barracks.

The best alternative would be to convert this building to a purely office function. The example of the conversion to the houses on Officer's Row demonstrates the viability and challenges of the proposed reuse. Issues of accessibility must be addressed, as it is not practical to install an elevator in such a small structure.

The Class 'C' cost estimate for an office use for the year 2003 is \$79.75 per square foot. This includes no major interior work, except for code upgrades, but would include work on the exterior to provide universal accessibility as required by code.



**Building Number: 636**

Area: West Barracks  
 Date of Construction: 1918-1919  
 Period of Significance: 1920-1941  
 (per HSR Part One)  
 Historic Use: Convalescent Home  
 Current/Recent Use: Service Club



Occupancy: Mixed, A and R  
 Hazard Level: Not Available

Number of Floors: Two Story  
 Basement: 3,503 sq. ft. (per January 2000 SERA report)  
 First Floor: 4,200 sq. ft. (per January 2000 SERA report)  
 Second Floor: 1,333 sq. ft. (per January 2000 SERA report)

Exterior Materials: Stucco, composition shingle roof, wood lap siding, concrete foundation

**Task One: Conditions Assessment*****Site Context***

- Located on the northeast corner of Hathaway Road and Barnes Road, the Red Cross Convalescent Home sits to the west of the Artillery Barracks (Building #638) and to the south of the Dental Surgeon's Office (Building #626). As a facility for convalescing patients, it was sited across Barnes Road and to the southeast of the Post Hospital (Building #614). This building is varied in its massing and by stepping down in height from the north to the south, it transitions nicely from the large Artillery Barracks building to the Dental Surgeon's Office and the residential duplexes across the street. The formal entry to the building is on the west from Barnes Road into the auditorium space. Secondary entries are located on the north, south, and east elevations. The north entry has a pediment porch roof with columns that create a restrained but formal entry.

***Vehicular Circulation***

- Paved asphalt roadways on the west and the south provide vehicular access. An alley runs along the east side of the building. The roads are in fair condition.



### ***Pedestrian Circulation***

- A concrete sidewalk runs along Barnes Road and turns the corner to Hathaway Road. The sidewalk at Barnes is at least 8” lower than the street and has some minor cracking and biological growth. There are concrete walks to the south, north and west entry doors. The east porch is accessed from the alley. As the site drops to the south, the walks at the west and south have steps to accommodate the change in grade. These will not meet the requirements of the Americans with Disabilities Act (ADA).

### ***Exterior Assessment***

- Summary: The massing of the building reflects its inclusion of both public and private functions. The north portion of the structure is two stories with a gabled roof running east to west. This wing contained bedrooms for the patients that were later used as offices. Although it has been removed, a cupola was originally centered on this portion of the roof.

The south wing of the building is a single story, with a large open room beneath a gabled roof running north to south. This room was originally a sunroom or solarium for convalescing patients. Later it became a social hall and an improvised movie theater when the building was turned over to the Army and converted to a service club. The ceiling was raised to accommodate movie projection from a closet on the second floor of the north wing. An enclosed vestibule with a flat roof and decorative balustrade (now removed) extends from the south end of this wing. An open porch extended the length of the gabled roof along the west side. This porch was later extended to the south and enclosed with wood lap siding.

This building is unique within Vancouver Barracks as it does not follow the Army Quartermaster’s stock plans, but was designed and constructed by the Red Cross. While its restrained Colonial and Georgian style is compatible with the other post buildings, its massing and stucco exterior make it distinctive within the fabric of the other red brick or clapboard sided West Barracks buildings.

In Historic Structures Report (HSR) Part One it is noted that the building was designed to be pleasing to the eye and restful to the patients that convalesced there.

The north wing is in fair condition and needs basic maintenance and repairs. The south wing has serious structural issues that need to be addressed. According to HSR Part One the ceiling in the auditorium room was raised at some time between 1930 and 1940 to accommodate movie projection. Perhaps as a result of this, the west and east walls of the auditorium have rotated outward and collar ties



were installed to try to correct the problem. It is recommended that a licensed structural engineer complete an assessment of the building.

- **Site:** Insufficient measures have been taken to direct runoff from both the roof and the adjacent roadways away from the building. The site pitches toward the north side of the structure rather than away from the building. In addition, the adjacent plantings are overgrown and in close proximity to the building. These plantings prevent air circulation and hold moisture against building surfaces.
- **Foundation:** The foundation is poured concrete walls with a full basement under the entire building except for the west porch that is located over a crawlspace. A cement parge coating is present on the exterior of the foundation on the north side of the building. There are several light wells for the basement windows and three exterior concrete stairwells for access to the basement. These stairs and the light wells have collected debris and biological growth and their drains should be checked. A few cracks are visible in the foundation walls, especially near the southeast corner of the building. There is some water damage on the east wall near the coal bin and the exterior stair. Deteriorating wood lattice skirting and trim cover the foundation of the west porch. Both the ventilation of this crawlspace and the construction of the foundation itself should be investigated to determine their conditions.
- **Walls:** This is a conventional wood framed building with cement stucco siding. Numerous cracks are present in the stucco siding. These cracks are concentrated on the south wall, and appear to be a result of the movement of the auditorium wall. A stucco water table and drip cap is present at the bottom of the siding. Cracks in the siding above continue down into the water table. Elsewhere, shear cracks radiate from the corners of windows and doors. The west porch has been enclosed with painted wood lap siding that is in fair to poor condition. Frieze trim is in fair condition with water damage in some locations. A brick chimney on the east side of the south wing has been painted, but appears to be in good condition. Some repointing is necessary, but a sheet metal cap has kept water out of the chimney, minimizing deterioration here.
- **Windows:** The windows vary in sizes and styles. The basement has awning and hopper windows. The west porch features paired six-lite casement windows with six-lite transoms above. The north wing has six-over-six double hung windows with a half-round gable vent on the west and a half-round gable window on the east. The south auditorium wing has six-over-six double hung windows as well. There is no wood trim on the windows on the exterior, save for wood sills and mullions between the ganged windows. The stucco wraps the jambs and projecting sub-sill. The west porch has flat 1x head and side trim with wood sills and no aprons. Damage is mostly limited to the jambs and sills and is caused by



water. These will need to be replaced or refurbished. The windows are intact for the most part, but there is one missing or broken window and a few that have broken glazing.

- Doors: The doors vary in condition from fair to good. Their trim is similar to the window assembly described above. All exterior doors on the first floor, except for the west porch, are single leaf three-panel with a four-lite window above. The west porch entry doors are double eight-lite doors with a four-lite transom above. The north and south entry doors may have been altered from their original configuration. Other doors have been altered or replaced with newer non-contributing doors, particularly leading to the basement. For example, the east basement door is a flush door with a louvered opening. The glazing in many of the door transoms has been painted. Door conditions are also noted per room in the Conditions Assessment matrices in the appendix.
- Roof, Gutters and Eaves: The asphalt composition shingles are in good condition and appear to have been recently installed. Flashing, in general, needs to be replaced. The eaves and rake boards are in fair condition, with the exception of the east porch that should be replaced. The gutters and downspouts are severely deteriorated. Roof leaders expel roof runoff water directly adjacent to the foundation. Several of the connecting pipes to the underground waste lines are corroded or damaged, and water from these downspouts needs to be collected and directed away from the building. The attic space above the auditorium is vented through black sheet metal ventilators on the roof. The roof ventilators are in good condition. The north building was vented through a steeple, but the steeple was removed in the 1930's.
- Porches and Stairs: All of the entry porches are in fair to poor condition. The wood stairs and guardrails are deteriorating from exposure to the elements, and do not meet current codes. They all lack handrails and the concrete stoops are cracked and have biological growth. The porch on the east elevation is in particularly bad shape due to the poor condition of the gutters and downspouts.

### ***Interior Assessment***

- General: In general the interior is in good condition. The majority of damage to lath and plaster is minor; it is often caused by the attachment of non-contributing light fixtures and conduit.

With the exception of the basement, the original wood floor has been covered with a fiberboard underlayment and resilient tile flooring. It is difficult to determine the condition of the original flooring. A vinyl cove base is glued directly to the existing wood base. The wood base and the door and window casing are original and contributing elements to the historic character of the space.



The west porch has been enclosed and partition walls added to divide it into three rooms. Throughout the building there are non-contributing light fixtures, surface-applied conduit, fire alarms and other wiring and piping. Very few, if any, of the original light fixtures remain.

The room designations are based on the Post Engineer's record drawings (refer to Appendix). The existing conditions of the significant rooms are addressed individually.

- Significant features and typical materials: These include the plaster walls, door and window casings, raised panel doors, and the six-over-six double hung windows.
- Typical conditions: Fair.
- Special or unusual conditions: Water damage in basement at various locations on the walls.

### ***Basement***

- Floor: The typical floor finish for the basement is painted concrete and the paint is wearing off. The basement kitchen's concrete floor has cracks and water damage from a water pipe in the room that has leaked. The concrete floor in the south rooms is scored in a 12" square pattern and painted to look like quarry tile.
- Stairs: The northeast basement stair served as a service stair access from the first floor kitchen to the storerooms and service areas in the basement. Made simply of wood treads and risers and a 2x guardrail, it lacks a proper handrail and does not meet riser and tread dimensional requirements. It is constructed of wood and is not stable. The door at the top of the stair does not provide room for a proper landing. The stair from the Auditorium to the basement is wood and is L-shaped. The door at the bottom of the stair is too close to the bottom tread and does not meet code for landing requirements. The stair does not seem to be original to the building. It will need to be rebuilt to meet current codes and program requirements.
- Walls: The basement has painted concrete or plaster walls in fair to good condition. There is moisture damage on the east wall. The kitchen walls have water damage. The paint is peeling on the hallway walls. The south rooms once spanned the full width of the basement but a partition wall now divides the room in half. It was constructed on center with the columns that were trimmed out decoratively with wood. They now appear as pilasters. The trim in the room is wood and a chair rail that once wrapped the room was removed when the room



was converted to a storage room. There is some water damage on the east wall under the windows.



Basement Billiard Hall room shows columns engulfed by the partition wall. Surface mounted conduit and plumbing run helter-skelter throughout. The windows open onto a generous light well but are currently covered with security grating.

- Ceiling: The basement has a plaster ceiling in fair to good condition. There are exposed pipes and conduit on the ceiling. The kitchen ceiling has water damage. The hallway plaster is in fair condition. In the south rooms there are battens forming a rectangular pattern on the ceiling. Some of the battens have partially detached due to the attachment of light fixtures and conduit.
- Windows: The basement windows are painted wood and are either three-lite awnings or six-over-six double hung windows in good condition. In the south room, a light well outside the east wall allows for larger six-over-six double hung windows. They have been covered with white metal grating for security.
- Doors: The basement doors vary in style and are all painted wood.
- Miscellaneous: The northwest storage room is enclosed by a metal cage and door. There are non-contributing light fixtures and conduit throughout.

### ***First and Second Floor***

- Floor: The resilient floor tiles are cupping at the corners near the south entry of the auditorium in what was the south porch. In the hallway, the floor tends to slope to the west. In the restrooms, both on the first floor and the second, the floors are covered with resilient sheet flooring and have signs of water damage. The condition of the original floor and subfloor is unknown. In the northwest offices there are some tiles that are missing and broken, indicating that there may be damage to the original floor underneath. The second floor hallway floor tiles are also buckling. The projector room floor is a galvanized metal floor.

- Stairs: The wood treads of the stairs to the second floor are covered with several layers of vinyl tile with rubber nosings. The wood newel post, spindles and guardrail have been painted but are still intact. The stringer trim and details under the nosing are still present as well. There are no handrails. The newel post appears to be an unusual element with an egg and dart trim and is rectangular in shape. The guardrail is painted wood and does not comply with current codes.
- Walls: In general, the lath and plaster walls have minor cracking. In the hallway there is a wood picture rail in good condition at the top of the wall. The diagonal wall is non-contributing and detracts from the sense of space of the hallway. The wall also intrudes into the required landing at the bottom of the stair. There are extensive cracks and water damage to the plaster walls in the restrooms. In the northwest office there is a painted wood picture rail. The trim is typical of the building and is in good condition. In the northeast office the plaster has major cracking and will require repair. Walls on the second floor have been modified, but for the most part, the original room configuration upstairs remains intact. The southwest room on the second floor has damage to the south wall and to the finishes in the closet. The projector room will need repair to the walls, especially on the south wall.
- Ceiling: The ceiling and beam in the south vestibule has water damage. The beam is articulated with wood trim. In general, the ceiling on the first floor has major cracking that will require repair.
- Windows: In the south vestibule and auditorium, the windows are six-over-six double hung and have been fixed in a closed position. In general the windows on the first and second floors need to be refurbished, especially the sashes, and missing or broken hardware replaced. The hopper window in the southeast room on the second floor is missing.
- Doors: The south entry door has replaced the original double doors. The south doors in the hallway are wood with eight-lites and sidelights will need to be modified to comply with code for kick height. The transom glazing has been painted. The north entry door is a replacement for the original pair of doors or larger door that was there. The door casings are original and intact. The west door of the northeast office has been modified to a Dutch door. On the second floor all the door openings appear to be intact except for a door on the south wall of the hallway that has been covered over with plywood. This door appears to have been to a closet and became redundant when the closets were joined to make the projector room. The interior of the projector room doors is covered with metal.



- Miscellaneous: The water fountain in the hallway is not an accessible unit and should be replaced. The original radiators are intact. Some of the light switches on the first floor and most on the second floor are the button-type with inlaid mother-of-pearl. Other buildings have had the light switches replaced, and it is unusual to see the button switches still intact. The fire extinguisher is missing. Upstairs rooms have lavatories in the rooms.

### *Conditions of Historically Significant Spaces*

- Auditorium: This was originally a Solarium or Sun Room for the residents. The Auditorium is the most important space of the Red Cross Building, and one of the most significant individual spaces on the West Barracks. It is a large room running north to south with a partially vaulted ceiling. This room was originally the lounge and sunroom for the patients convalescing there. The west side of the room was once an open porch with French doors. The east wall features a fireplace with a decorative wood mantel, tile hearth, and a Red Cross insignia molded in the plaster above. It is the focal point of the room. Groups using the service club have used it as a backdrop for many photos.

The room was also used for showing films. The ceiling was raised to allow for film projection from an upstairs closet in the north wing. Metal tie rods were added in an effort to arrest the outward rotation of the east and west walls. This movement is presumably a result of the removal of the wood ceiling joists. The tie rods were often removed to prevent them from casting shadows when movies were shown. In addition, initially, according to the Army Corps of Engineers' Maintenance records, the ties were only attached to the trim on the wall. They are now attached to steel plates on the exterior of the building.

The condition of the floor is fair. The walls show substantial damage. The west wall of the auditorium has undergone major changes. The original French doors have been removed and the openings remodeled into a series of arches. These arches, in turn, have been filled in with lath and plaster walls with the exception of two openings. In addition, the Army Corps of Engineers' Maintenance records indicate that the walls have been furred out, obscuring some trim and relief details. This has not been field verified. The windows are six-over-six double hung and need to be refurbished, with missing or broken hardware replaced. Some water damage is present in the ceiling, and cracks should be monitored. A false beam with wood trim is applied to the plaster ceiling. Surface mounted conduit and fluorescent light fixtures attached to the ceiling should be removed.

The fireplace remains the focal point of the room and bears the molded plaster insignia for the Red Cross. Other relief decoration was present at one time but has been removed or obscured. The fire brick needs to be pointed and regular

maintenance check done on the flue and the dampers. The original sconces should be restored. The original radiators are intact and remain in place.



The Auditorium was opened up to the south porch (seen on the left of the photo) and the west wall doorways were filled in (seen on the right of the photo). The collar ties can be seen at the top of the photo.

- Front (west) Entry: This was the west porch, and is now enclosed and serves as the primary entrance to the building.

The floors are not level, possibly because of foundation settlement. The resilient tiles are cupping at the corners near the door, indicating water damage. There is substantial damage to the lath and plaster walls. The east wall was more open at one time (see the notes for the Auditorium's west wall). The north and south walls are partitions and are non-contributing. The wood casement windows have been fixed shut and the sashes need to be refurbished and missing hardware replaced. There are hooks in the head casings for screens. The double leaf entry door is still intact but will need some refurbishing, particularly the bottom rails. There is no threshold or weather-stripping. The lath and plaster ceiling is in fair to poor condition with water damage. The lighting fixtures are non-contributing.

A small room at the north part of the porch now serves as coat check and storage room. It is located to the north of the front entry. This room was created with the erection of a partition wall at the north end of what was the west porch. Conditions and materials are similar to those of the front entry and the enclosed porch area.

The south part of the west porch was also enclosed with a partition wall. Conditions and materials are similar to those of the rest of the porch. The floors are not level, possibly due to differential settlement. The condition of the original finish is unknown. There is substantial damage to the lath and plaster walls. The east wall has been altered (see the notes for the Auditorium's west wall). The north wall is a non-contributing partition. The wood casement windows have been fixed shut and the sashes need to be refurbished and missing hardware replaced. There are hooks in the head casings for screens. The lath and plaster ceiling is in fair to poor condition with water damage. The lighting fixtures are

non-contributing (typical). The radiators are old, but may have been added to the room as it changed use.

- South Porch: This was originally a vestibule projecting from the primary mass of the south wing of the building. It probably served as a sunroom, but lost much of its architectural identity when the west porch was extended to the south and enclosed. Originally a wall with two pairs of French doors separated it from the Auditorium space but was removed. In its place are a beam and three cast iron columns. The west windows were filled in with the extension of the west porch to the south. Double doors entered the space from the south side of the building.

### ***Electrical Assessment***

- Service: Underground conductors from the site overhead power distribution system supply the electrical service located in the basement. Service entrance conductors are installed in conduit. The service equipment is circuit breaker load center, 120/240-volt, 1-phase, 3-wire, 150-ampere. Equipment is in fair condition.
- Power Distribution System: Service equipment supplies 150-ampere branch circuit panel. Panel is in fair condition.
- Wiring: Wiring methods are a mixture of very old type R copper wire installed in metallic conduit, MC cable, some exposed newer metallic conduit and surface metal raceway containing modern thermoplastic insulated copper wire. Older wiring is the predominate method and is in very poor condition.
- Wiring Devices: Receptacles outlets are non-grounding. Light switches are non-silent snap type and push button. Devices are very old and are in poor condition.
- Lighting: The majority of light fixtures are 8' slim line fluorescent equipped with old T-12 technology lamps. Fixtures are in poor condition.
- Fire Alarm: No fire alarm system is present.
- Telecommunications: Service wiring is obtained overhead from an adjacent building and this building sub-supplies other adjacent facilities with overhead wire. Outlets are surface mount, screw terminal type. Wire is non-category rated older RJ-11 and is in poor condition.
- Emergency: Exits are identified with battery powered, emergency illuminated signs that are in poor condition. No emergency egress lighting.



- Recommendations: Maintain existing electrical service. Demolish and replace remaining electrical systems with new.

### ***Mechanical Assessment***

- Description: The heating in this building is by a hot water radiator system. The hot water piping is carbon steel and appears to be the original installation. This piping system serving this building comes from the boiler located in the Basement Mechanical Room. The hot water radiators appear to be in fair to good condition. The radiators have a control valve at the top for temperature adjustment and return at the bottom back to the system. There are three existing grated openings in the Great Room ceiling that look to have been used for natural ventilation. There is also an existing fireplace in the Great Room. An exhaust fan has recently been installed in the upstairs hallway to provide air circulation throughout the building.
- Recommendations: The boiler system serving this building was upgraded in 1990 but has major scaling damage and is in need of repair work. The heating hot water radiators could be refurbished for re-use. Re-use of these radiators would help maintain the historical character of the building. New control valves would need to be installed to provide temperature control of the space. The heating water piping should be replaced, as it is probably near the end of its useful life. For ventilation, operable windows along with the use of the existing Great Room ceiling openings would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.

### ***Plumbing Assessment***

Description: Existing plumbing fixtures, when present, are in fair condition. Existing waste piping is cast iron. Some copper domestic water has been installed. Un-insulated domestic water copper piping and asbestos free insulated domestic water and hot water piping is routed in the basement level. The existing water heater and sump pump are located in the basement mechanical room and look to be in good condition. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service has been shut-off as well.

Recommendations: Depending on the building usage, the restrooms may need to be reconfigured to be in accordance with ADA requirements. This may change fixture layout. Restoring the existing plumbing fixtures would not add much to the historical value. New fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed in places where



existing domestic carbon steel piping may still be in use. The water heater should be adequate and can remain for re-use.

### Task Two: Ultimate Treatment and Use

This building is a candidate for exterior restoration and limited interior restoration according to the *Secretary of Interior's Standards*. On the exterior, it is clear from historic drawings that the west porch had already been enclosed by the early 1930's, and historic photos could help pinpoint when the balustrade and steeple were removed. The enclosure of the west porch probably coincided with the modification of the auditorium ceiling to accommodate movie projection. Given the age of these changes, consideration should be given to their significance as a part of the history of the structure.

The Auditorium is an historically significant space and should be restored to its period of significance as a service club before World War II (See Plan A and historic photo). As a unique space in the Vancouver Barracks complex, it is important to maintain the historic integrity of the volume of the auditorium and to restore its historic details. The *West Vancouver Barracks Reuse Plan* suggests that this building should house educational uses. This space could easily be used for larger meetings, lectures, and other functions requiring a large place to convene.

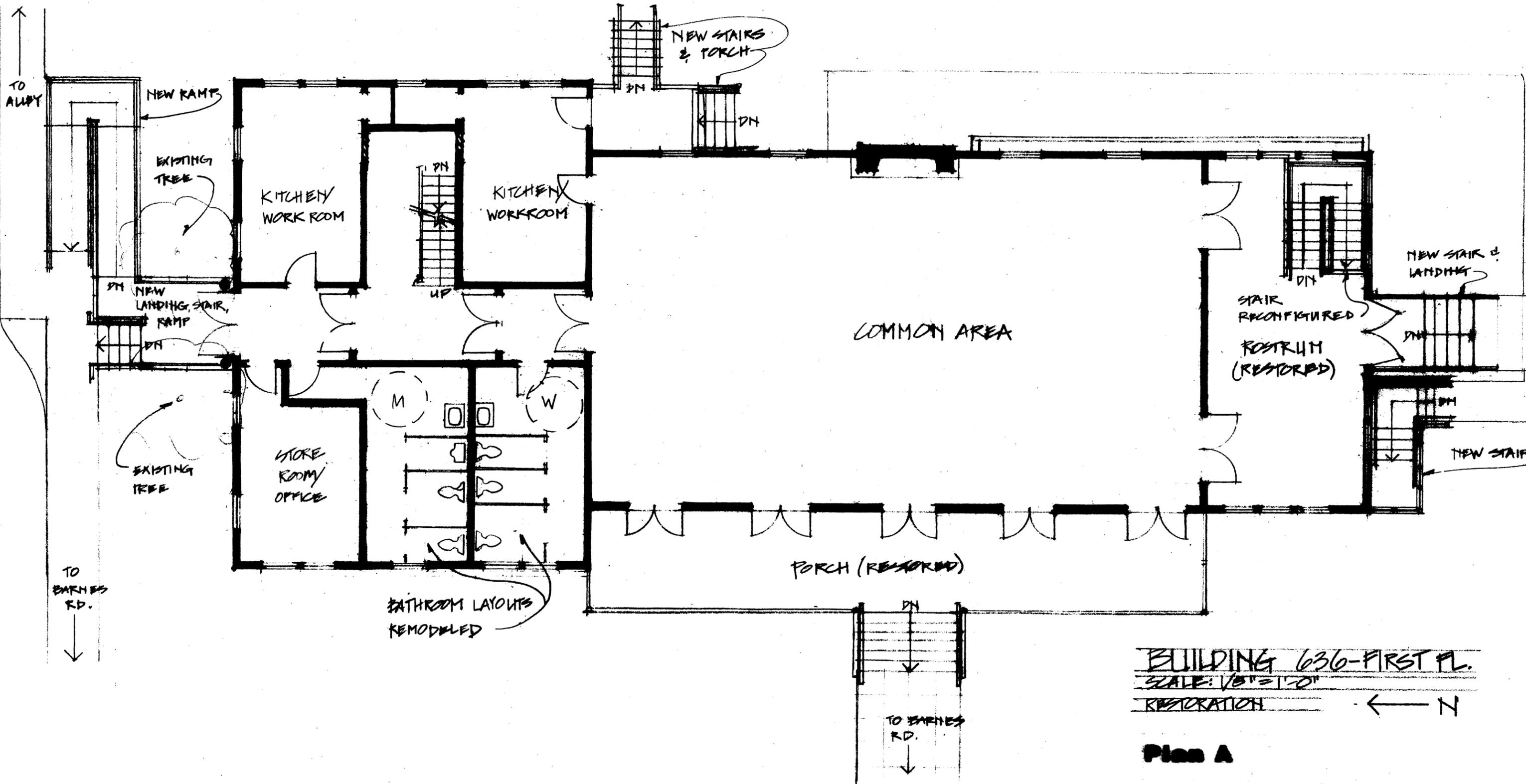
Other interior spaces do not warrant the level of treatment that the Auditorium deserves. These spaces should be rehabilitated in a sensitive manner, but with a greater range of options. The north wing can house individual offices or classes on the first floor. The second floor, however, with only one stair and no ADA access, cannot house public functions. The large basement could house mechanical systems and provide additional storage space for tenants. The Billiard Hall at the south end under the Auditorium, with a large window bank in a light well on the east side, might even be usable as support space for the Auditorium above.

The Class 'C' cost estimate for an arts/education use for the year 2003 is \$68.81 per square foot. This includes minimal interior changes for a range of educational uses and minimal code upgrades.

### ***Exterior Character Defining Features (From Part One of the HSR and Kristin Baron, NPS)***

- Gable roof.
- Steeple (removed shortly after completion).
- North Entry porch with Tuscan columns and pediment.
- Six-over-six double hung sash windows.
- Bilateral symmetry in façade organization.
- Gable end lunettes.





- Boxed cornice and returns at eaves.
- Pilasters at front entry.
- Transom over front entry door.

### ***Exterior Recommendations***

- **Vehicular Circulation**: Accessible parking spaces could be provided at the east side of the building where the existing alleyway extends to the south. Dedicated on-street parking would increase the utility of this building. If the roads are widened for the additional parking, grades could be adjusted to bring the sidewalks up to the level of the street. This would eliminate some accessibility and pedestrian safety issues currently present.
- **Pedestrian Circulation**: Re-grading the streets and sidewalks at the southwest corner of the site could eliminate steps in the walks up to the building. The slope of the walks could also be reduced. The north side would be a good location to place a ramp as the elevation difference is less on that side, and it is on a less prominent elevation than the west or the south. It is also in close proximity to the east side of the building where potential accessible parking could be located.
- **Site**: The sidewalk and street at the southwest corner need to be re-graded. The grade at the north elevation needs to be adjusted for positive drainage away from the building. The plantings should be trimmed back from the building and dead or dying plants removed.
- **Foundation**: A structural engineer should inspect the foundation, especially the northwest side of the building, the southeast corner, and the east wall. The light wells and the basement stairs need to be cleaned and their drains and the sewage lines checked for integrity. Painted lattice underneath the enclosed west porch needs to be replaced with a material or detail that is more compatible with a wet environment. The condition and the type of foundation at the west porch need to be verified.
- **Walls**: Stucco cracks need to be repaired. A structural engineer should evaluate the condition of the walls of the auditorium. The stucco siding should be repaired after the walls at the Auditorium have been stabilized. Temporary siding repairs may be required if the final stabilization and restoration of the building is delayed. The wood siding and trim on the enclosed porch should be refurbished. Sills need to be repaired, especially those where the orange mastic has been used as waterproofing. Remove the paint from the masonry chimney and repoint as required. Remove the old utility service bracket on the north elevation. Remove service head near roof on west elevation and any other surface-mounted items.



- Windows: Refurbish the wood sashes and replace missing or broken glazing. At least one window was missing as of June 2002.
- Doors: The existing contributing doors should be refurbished and non-contributing doors replaced with new doors to match the original raised five-panel style. Restore the transoms and replace glazing as necessary. Existing original hardware should be refurbished when possible, and any new hardware selected to match the character of the original.
- Roof, Gutters and Eaves: Attic ventilation needs to be investigated. Eave vents could not be field verified, nor could the presence of a ridge vent. Missing significant architectural elements such as the steeple and the balustrade over the south entry should be replaced. Biological growth should be removed from the roof and zinc or copper strips inserted to inhibit re-growth. The condition of the low-pitch roofs at the south porch and west porch should be carefully evaluated. The east porch will need to be entirely rebuilt. The entire roof drainage system should be replaced and tied into a comprehensive drainage system. Replace flashing.
- Porches and Stairs: All the wood and concrete stairs should be replaced. New stairs, handrails and guardrails should meet current codes and be designed with detailing and style appropriate to the historic character of the West Barracks. The east porch is in very poor condition due to the deteriorated condition of the gutters and downspouts above and deferred maintenance.
- Miscellaneous: Light fixtures are non-contributing and should be replaced with new fixtures in the style of the period. Utilities should be placed underground and brought in through the building's basement.

### ***Interior Recommendations***

With the exception of the Auditorium, which should be restored, the interior is a candidate for rehabilitation. This need not be an effort to recreate a certain period of time (Convalescent House vs. Service Club) but rather an effort to understand this building's character defining features, and using these features to inform the creation of a new life for this structure. The first floor bathrooms will need to be reconfigured for ADA access. Given the limited area on the second floor, and a basement limited to secondary uses and storage, access to these floors for disabled persons need not be provided. If primary uses or tenants are located in these spaces, access will need to be provided.

### ***Interior Character Defining Features (From Kristin Baron, NPS)***

- Floor plan and room proportions and volumes.
- Stairs, main.



- Wood trim.
- Interior finishes.
- Interior doors and windows.
- Hardware, button light switches.
- Original radiators.

### ***Interior Recommendations***

- **Floors**: Floors should be restored to the original wood flooring, and the wood base, cap and shoe also restored. The plaster walls and ceiling should be repaired or replaced in cases of extreme damage. Wood picture rails could be replaced where missing.
- **Stairs**: The stairs need to be refurbished and updated to meet current codes. The stairs in the Auditorium need to be rebuilt.
- **Second Floor**: Lavatories present in the patient rooms upstairs should be retained. If it is not practical to maintain water supplies and drains to these locations, the sinks should still be retained, with drain lines removed, as significant elements from a previous use of the building.
- **Basement**: Partitions within the basement Billiard Hall should be removed, restoring the room to its original size. Posts and beams should be restored, and the windows rehabilitated.
- **Specific Spaces with Unique Treatment**: The Solarium/Auditorium space should be restored. While the room has been altered with the changes to the ceiling line, these changes have acquired their own significance as a part of the history of the building. Engineering recommendations should be considered within this framework. The arches along the west wall should be restored, opening the Auditorium to the enclosed west porch. Partitions at the coat check room should be removed as well.

### **Task Three: Requirement for Treatment**

#### ***Compliance with Codes***

##### **Uniform Building Code (UBC):**

- Proposed Use: Arts and Education (auditorium, classrooms, and offices).
- Occupancy Proposed: Mixed A-3 (Assembly) and B (Office).
- Construction Type: V-one hour (wood frame, one hour fire-rated). Fire rating is based on the installation of automatic fire sprinklers.
- Base Area / Stories permitted: 10,500 S.F. / 2 stories (complies).
- Building Area: 5,533 S.F. for upper 2 stories over 3,503 S.F. basement.



- Occupancy Loads:
  - Basement: Office use in Billiard Hall (1020 S.F.) 11 persons.  
Storage / Mechanical (2150 S.F.) 8 persons.
  - Main Floor: Auditorium (A-3) 2,720 S.F. 388 persons.  
Classrooms (396 S.F.) 20 persons.
  - Upper Floor: Office (860 S.F.) 9 persons.
- Exits Required: 2 required; 4 provided.
- Upper Floor Exits: (not including hall, W.C. or projection room) 1 required.
- Crawlspace ventilation: Verify.
- Attic Ventilation: Verify.
- Plumbing fixtures required:
  - Basement: Unisex restroom with 1 W.C. and 1 lavatory.
  - Main Floor: Men's room - 4 W.C.'s and 2 lavatories.  
Women's room - 6 W.C.'s and 2 lavatories.
  - Upper Floor: Unisex restroom with 1 W.C. and 1 lavatory.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Structural: Needs structural assessment.

#### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance. The existing toilet rooms should be replaced. No ramp is provided to facilitate access this building, and ADA requires that in general, access should be provided at a structure's public entrance. Its location should serve the programmatic needs of the structure.

#### Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

#### National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

#### National Fire Protection Association Standards (NFPA):

- Fire protection system: See electrical assessment; automatic fire sprinklers are not installed.

#### Washington State Energy Code (WSEC):



- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the crawlspace provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Service Club (Building #636) has historic significance as an individual structure, with unique architectural elements and social roles within the Vancouver Barracks. It also has significance as a contributing part of a coherent ensemble of buildings. The proposed change of use from a Service Club to educational use has minimal impact on the historic character of the exterior. Necessary changes to existing porches, ramps and stairs, mechanical penetrations in the roof, and crawlspace skirting are to non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.
- Interior: The proposed change of use from a Service Club to educational space presents some challenges to maintain the historic character of the interior. The use of the upper floor is severely constrained. If it is substantially remodeled, an elevator must be provided. If more than 900 square feet of net area is usable as office space, a second stair needs to be provided.

Although the north wing generally lacks features contributing to the historic significance of the West Barracks, the south wing and the auditorium are significant. Interior alterations should be limited to the stairs, the basement, and to the infill partitions along the west porch. Existing historic window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.



#### Task Four: Alternative Treatments

Exterior and interior rehabilitation would be the best treatment for the alternate use proposed by the *West Vancouver Barracks Reuse Plan* (See Plan B). This keeps the existing wall locations regardless of the original plan and advises a repair plan that would expedite use of the building while still following the *Secretary of the Interior's Standards for Rehabilitation*. In addition, keeping the west porch enclosed gains 540 square feet of useable interior space.

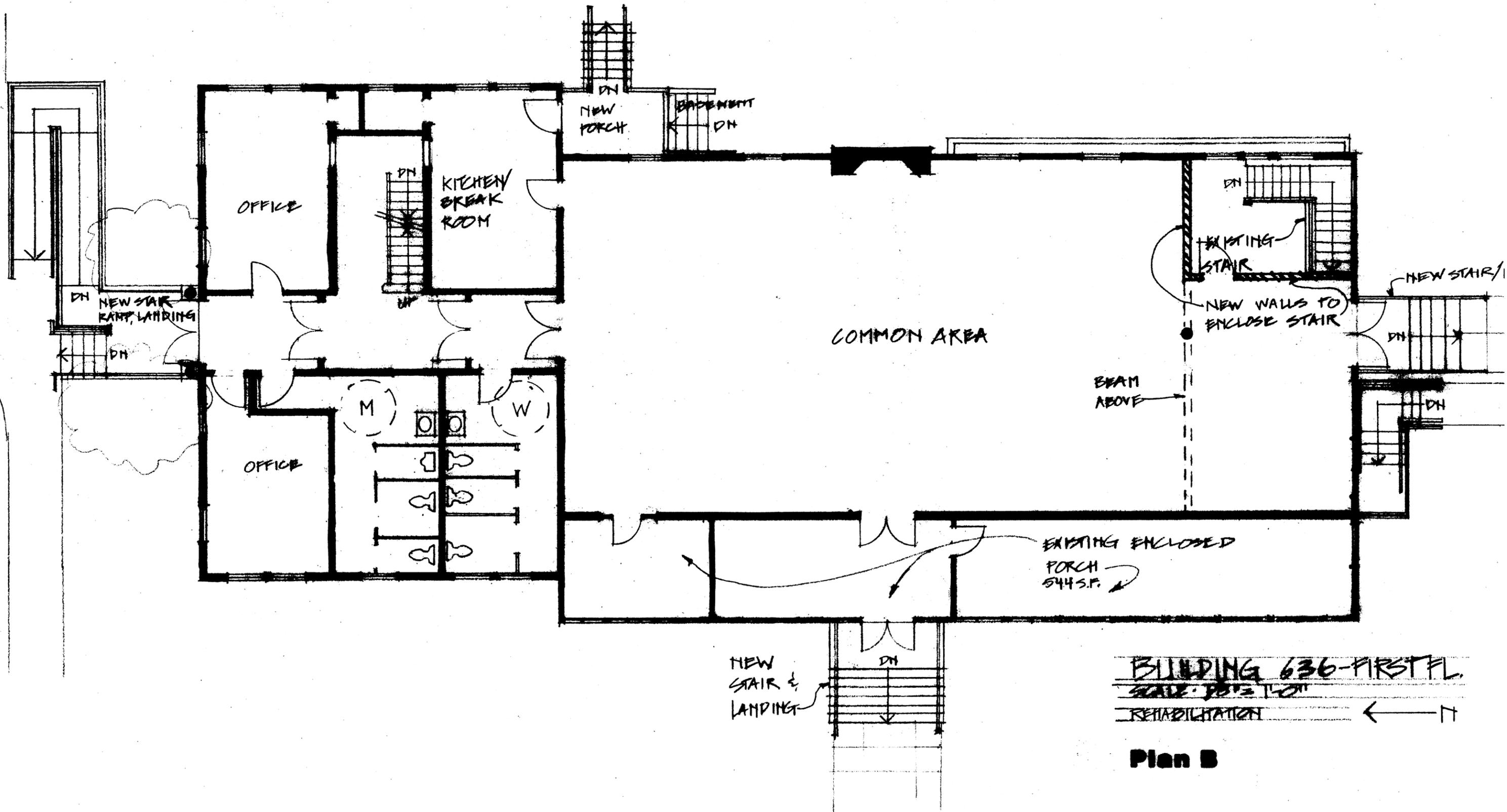
Rehabilitating Building #636 for use as educational space does not significantly impact the historic materials of the structure itself or the historic character of the West Barracks as a whole. However, options for the space need to be considered. This building might also function as a support space for a proposed hospitality use located in the Infantry Barracks (Building #607) and the Hospital (Building #614) with food service, catering, and other group activities using the Auditorium.

The largest challenge would be incorporating a kitchen on the main floor to service the Auditorium. This would have a greater impact on the existing fabric of the north wing, but this area is much more suitable to renovation than the south wing. The upper floor in the north wing would still serve as office space and other supporting roles. If access were somehow provided, the basement Billiard Hall could serve as a lounge.

Building #636 is unique in the Fort Vancouver's West Barracks. Whatever use is housed there should become the heart to the redevelopment effort. The Auditorium is the single largest space in all of these buildings, and should serve a variety of roles, much as it did in its former role as a Service Club. It should be a place of gathering, eating, learning, and living.

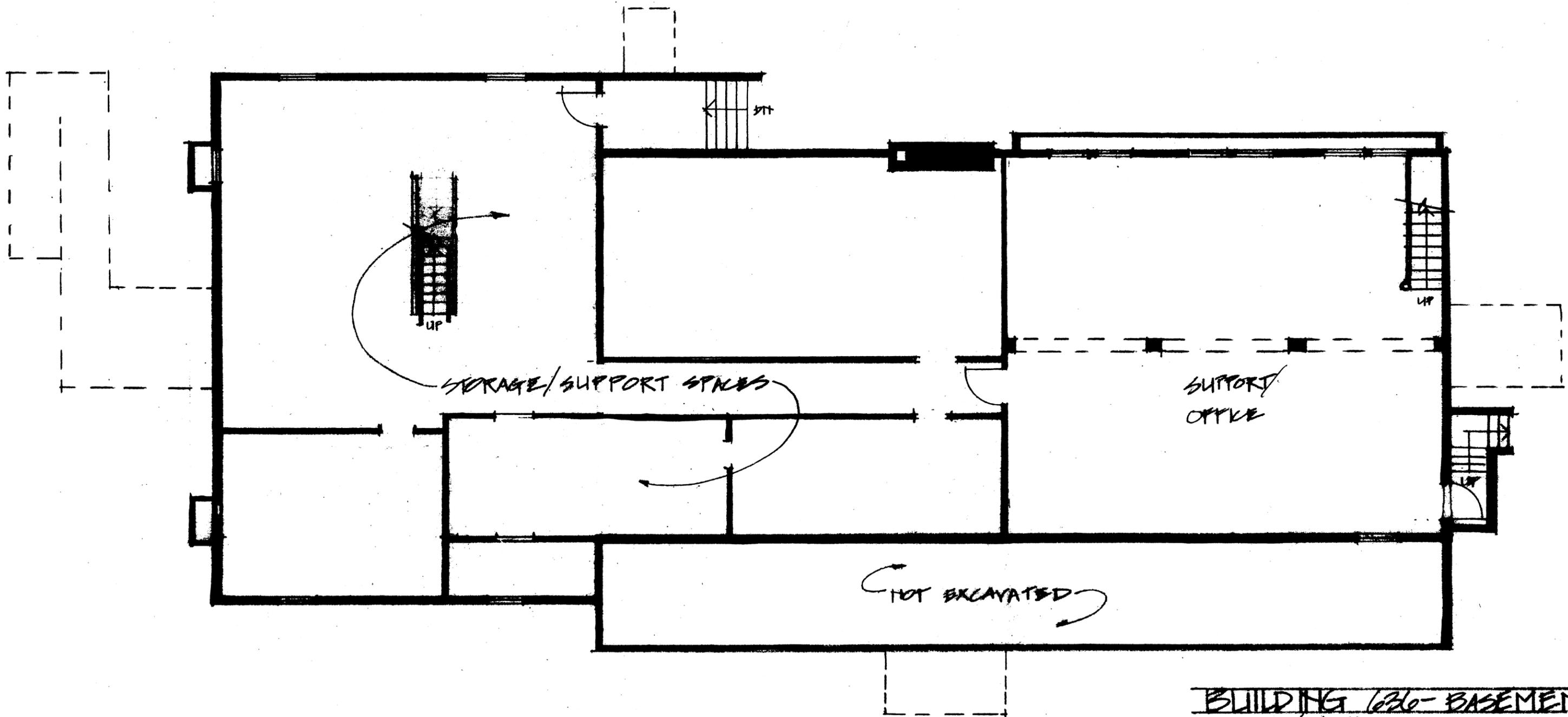
The Class 'C' cost estimate for a food service use for the year 2003 would be between \$68.81 and \$122.80 per square foot. This range represents values that run from minimal changes for a code upgrade and food service use to an extreme for new high quality finishes and equipment and the changes required for public use of the basement level.





BUILDING 636-FIRST FL.  
 SCALE: 1/8" = 1'-0"  
 REHABILITATION

**Plan B**

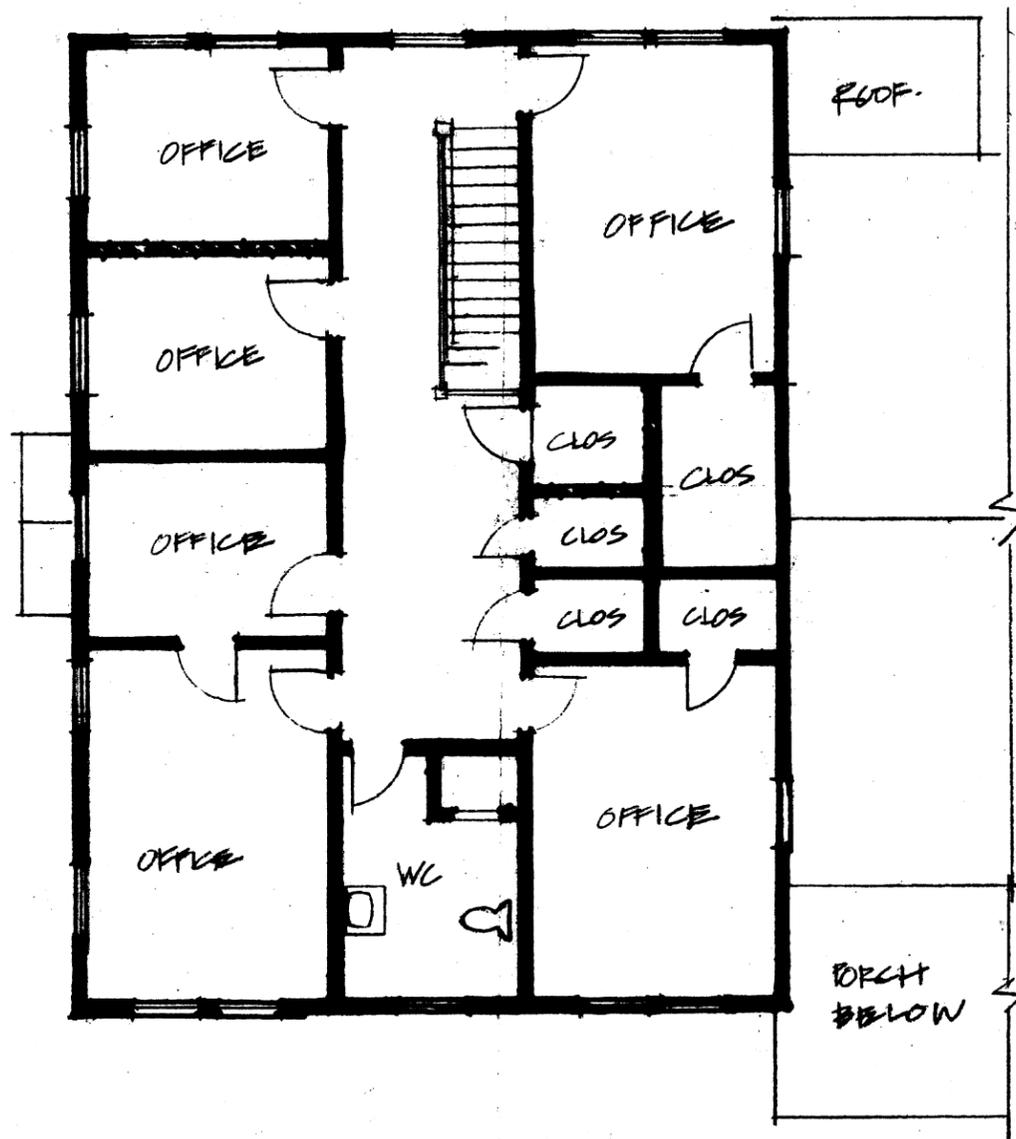


BUILDING 6360 - BASEMENT

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

**Plan A/B**





BUILDING 636-2<sup>ND</sup> FL  
SCALE: 1/8" = 1'-0"

**Plan A/B**



**Building Number:** 638  
**Area:** West Barracks  
**Date of Construction:** 1904  
**Period of Significance:** 1900-1919  
 (per HSR Part One)  
**Historic Use:** Barracks  
**Current/Recent Use:** Office

**Occupancy:** R-1 then B  
**Hazard Level:** Not Available  
**Number of Floors:** Two and a half stories

Basement Floor: 13,338 sq. ft. (per January 2000 SERA report)  
 First Floor: 13,338 sq. ft. (per January 2000 SERA report)  
 Second Floor: 13,338 sq. ft. (per January 2000 SERA report)  
**Exterior Materials:** Beveled wood siding



#### Task One: Conditions Assessment

##### ***Site Context***

The Artillery Barracks (Building #638) dominates the area, being only one of two large buildings in the West Barracks. The surrounding structures served as support buildings for the Artillery Barracks and its inhabitants. It serves as an anchor for the entire West Barracks facing Hathaway Road between McLoughlin Road and Barnes Road.

##### ***Vehicular Circulation***

On street parking for the Artillery Barracks is located along Hathaway Road to the south of the building. It is also accessible by car from the north side alley between McLoughlin and Barnes Roads. There is a limited amount of parking available in the rear courtyard of the building.

##### ***Pedestrian Circulation***

Two concrete walks extend from the Hathaway Road sidewalk to the front porch of the building. These walks are flanked by two stone piers that at one time had cannonballs sitting on top of them. The cannonballs are now being used as doorstops inside the building. The approaches to the west, east and north sides of the building are paved with asphalt. Four concrete stairs provide direct access to the basement. There are no ramps for ADA access.



### ***Exterior Assessment***

- **Summary:** Trim is relatively simple, but still more ornate than most of the buildings in the West Barracks. The details reflect the utilitarian nature of the colonial revival style provided for the standard military building plans.
- **Site:** Little effort has been made to direct runoff away from the building. The paved courtyard to the north has catch basins to collect the large amount of water from the impervious asphalt. Remnants of an historic dry well are located to the west of the front porch. This corresponds to a downspout from the roof. Other dry wells may exist but their presence has not been confirmed.

Making this building accessible is challenging. There are significant elevation differences between the ground level, the first floor porches and the basement level. The first floor is also several inches above the porches. The exterior basement stairs have no handrails and there is biological growth on the concrete. The head clearance does not comply with code at the basement's north entrances due to the porch above.

- **Foundation:** The foundation is faced with quarry-faced three-height ashlar laid up in a random pattern with mortar joints tooled with a raised bead. The stone is stained with rust and biological growth in some locations and needs to be cleaned. It is in good condition requiring minor repairs in general. The stone flanking the basement entries shows some chipping, spalling, and deteriorating mortar.
- **Walls:** The walls are wood frame with painted bevel siding. In general, there is damage due to surface-mounted conduit and cabling and other items. Vents under the windows corresponding to radiator locations have been blocked. In general the siding is in fair condition requiring minor repairs.
- **Windows:** The typical two-over-two wood double hung windows are arranged in a symmetrical 1-2-1-3-3-1-2-1 pattern on the north and south elevations of the center wing. The windows are evenly spaced on the west and east wing elevations. The windows are generally in fair condition requiring minor repairs. The east and west wing gable ends have Palladian windows on the south side on the attic level. These are a prominent feature and are in good condition. The basement features wood hopper type three-lite windows and two-over-two double hung windows on the outside walls of the wings. There are a few windows at the southwest corner of the basement that have been filled in with CMU block.
- **Doors:** The exterior doors are generally wood five-panel doors with three-lite transom windows. The hardware is period hardware in fair to good condition. They occur in pairs and as single-leaf doors. They do not meet accessibility requirements. The basement doors and first floor doors on the north side are



paneled doors with multiple-lite windows that make them significant to the building. The exit doors on the second floor on the west and east elevations are flush, as is the basement door on the west elevation at the southwest corner. The doors to the boiler room and the basement door on the east elevation are in fair to poor condition and they do not close properly. Their hardware is damaged or missing.

- Trim: Door and window casings are flat, with projecting drip caps above and projecting sills. A belly band with wood 1x skirt board, drip cap and quarter round trim circles the building above the stone foundation. Cornerboards are flat stock and are in good shape generally requiring minor repair. There are damaged and modified sills in some locations.
- Roof, Gutters and Eaves: The eaves are boxed-in and the soffit boards are in poor condition requiring major repair at both the porch roofs and the main roof. The built-in gutters contribute to the overall character of the building and should be preserved and repaired. The downspout system is in poor condition. Many downspouts and leaders are not attached to the gutters at many locations and there is plant growth visible in the gutters. Corrosion is also evident in the metal components of the system. The downspouts drain to subsurface drain pipes, the condition of which is unknown. The structure has recently been re-roofed with asphalt composition shingles that are generally in good condition. The north porch roof, however, is not in good condition with biological growth and flashings that are in poor condition. Chimney flashing is poorly installed. The metal roof ventilators leak in a driving rain according to the Army Reserve maintenance crew. The design of the ventilators may allow this to happen. Some are no longer plumb and they all need to be re-painted.
- Porches and Stairs: The north and south porches are in fair condition overall. The T&G decking and the stair treads need to be replaced. The structure, however, appears to be newer and in good condition. The Tuscan columns and their painted cast-iron bases are in fair condition. They are sinking into the decking because of the deteriorated condition of the wood. The column pieces are separating in some places. The railings and handrails are cast iron pipe and in good condition, but do not comply with code. Their connections should be checked closely. The exiting railings on the west and east sides of the building are non-contributing, non-historic and do not meet code. The north porches, east and west sides, have non-contributing concrete docks. The structure of the north porches is older than the south side but appears to be in sound condition. Wood "X" railings are in poor condition and should be replaced. The wood stairs at the west porch should be replaced to code. The center porch on the north side has cast iron pipe railings, a portion of which has been altered. This porch interferes with proper head clearance at the basement entries below it.



- Miscellaneous: The doors are missing on the basement hatch entries but the hinge pins are still intact. The floor drains require testing and clean-out. The east elevation of the west wing has security bars on the windows. There are bird control issues as evidenced by the bird houses at some columns on the porches. Although historic and quaint, they are not being used well by the bird population. There is a need for cleaning up guano at the porch and other locations.

### ***Interior Assessment - Basement***

- General: Room designations are based on the 1952 floor plans by the Quartermaster's Office. The basement floor is scored concrete. The walls are painted stone with a wood base. The interior partition walls are lath and plaster. The interior stairs to the first floor are wood. The lath and plaster ceiling has been damaged by surface-mounted conduit and light fixtures. There are cast iron columns that have no base and an integral cap. There is exposed piping on the ceiling and ceiling radiators. The typical casing is 1x3.
- Room 'K': This room was originally the scullery. There are some partition walls that are not original as well as carpeting and other finishes that are also non-contributing. Some water damage is apparent at the east wall, corresponding with the location of the ramp on the exterior.
- Stair 'B': The stair has well worn wood treads and risers and does not meet current codes. The middle landing is narrowed by the thick foundation walls and not wide enough to meet current codes. The doorway is also too narrow because of the stone walls.
- Latrine 'B': An opening has been cut in the north wall from the scullery. The raised floor shower area doesn't match the one in Latrine 'A'. The urinals have been removed and the concrete floor patched. Portions of the base are damaged or do not match at this location. The bathroom in the northwest corner is non-contributing and should be removed. A window on the west side has been removed and filled in.
- Stair Hall 'B': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.
- Room H: There is minor water damage at the exterior foundation walls.
- Room I: This is the boiler room for the 'B' side of the barracks. The boiler is intact. The interior stairs do not comply with current codes. The landing and door need to be repaired.



- Stair Hall 'A': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.
- Rooms 'G' and 'P': These rooms were used as supply rooms and are filled with metal cages and a small room with insulated partition walls for refrigeration.
- Room 'F': This is the boiler room for the 'A' side of the barracks. The boiler is intact. There is a CMU partition wall in the room with no access from the inside. It was not accessible. The windows in rooms 'D' and 'E' have been filled in as well.
- Latrine 'A': The floor of the shower area is raised about 4" and enclosed with stone slabs with a drain in middle of the floor. The plumbing fixtures and layout of the room are intact except for the north wall where half of the toilets have been removed for a new doorway to Room 'A'. The fixtures still have nickel-plated controls and faucets.

Room 'A': There is water damage in the northeast corner of the room on the walls and the floor, and there is efflorescence on the walls. There is also water damage to the plaster ceiling.

Stair 'A': The stair hall steps down 14" with one wood tread to the latrine area. This will present a challenge making the space accessible. The base is concrete. The concrete stair to the first floor does not comply with current codes.

### ***Interior Assessment - First and Second Floors***

- General: Room designations are based on the 1952 floor plans by the Quartermaster's Office. The floors are originally 2 1/2" wood strip flooring or sheet linoleum but all are covered with 12" square resilient floor tile over a fiberboard underlayment. A vinyl cove base has been glued to the original wood base. The walls are lath and plaster. The newer partition walls are gypsum wall board. The windows are painted wood sash with painted wood trim and sills. The window casing is half-round and the apron is a large quarter-round profile. On the second floor the window apron is 1x flat stock. The original interior doors that are five-panel wood doors with a three-lite transom, many of which are no longer operable. Many other doors are non-contributing. The door casing is half-round, as is the chair rail in many rooms. The ceiling on the first floor is painted pressed tin tile and cornice. The ceilings on the second floor are lath and plaster. The original light fixtures have been replaced with fluorescent fixtures, but some of the original fixture canopies remain in place. There is a significant amount of surface-mounted conduit and other items that are not contributing to the original character of the building. Cast-iron columns and beams "boxed out" in painted



wood are in the large open rooms. The ornamental cast-iron grilles and louvers of the natural ventilation system are unique and in varying conditions. The stamped metal radiators are original.

- Significant Features and Typical Materials: The Palladian windows in the south gable ends of the wings and the intact latrine on the west side are significant. The multi-lite windowed doors at the north entries of the first floor and basement are also significant as they would be hard to replace in kind. The shooting ranges in the attics and the graffiti on the ventilation ducts in the attic from 1916 are artifacts of relevance to the building's history.
- Typical conditions: In general, the condition of the original flooring is unknown. There are some floor locations that have water damage. The wood base is damaged by the vinyl cove being glued directly to it. Cracking in the plaster walls is mostly hairline cracks. The walls and ceiling have been damaged by the attachment of surface-mounted conduit, light fixtures and other items. Some rooms have a wainscot with painted T&G bead board, a flat panel with battens, or fake wood paneling. The windows and doors are generally in good condition, although most transom windows are no longer operable, and in some cases, the glass has been painted. The pressed tin ceiling has a significant amount of peeling paint and separating joints. In many cases the surface attachment of conduit and similar items has pulled the tiles away from the ceiling substrate.
- Special or Unusual Conditions: The natural ventilation system works best with the open floor plan in the large rooms. The attics are unfinished and contain the ductwork for the ventilation system and the shooting ranges.
- Room 117: The base of one of the columns is missing.
- Rooms 113 and 114: The chair rail has been removed. The original partition dividing these rooms has been removed. A ghost of the original door location is visible on the east wall. The flue between these two rooms has been removed.
- Rooms 115 and 116: The original partition dividing these rooms has been removed. A bathroom has been installed in the former closet, and the west wall furred out for plumbing. It is big enough to provide ADA access should it remain a bathroom.
- Stair 'B': The stair does not meet current codes. There is no handrail, and the guardrail height and spindle spacing are not in compliance. Some spindles have been replaced, and the new ones do not match the profile of the originals.

- Room 112: The base of a cast iron column is missing. A ventilation grille is covered. Southwest and southeast columns are furred out because of partition walls. The north doorways, to Room 111, are filled in.
- Room 112 Vestibule: A partition wall has been added on the west side at the top of the stairs directly on an original light fixture location.
- Room 111 Bathroom: The floor is water-damaged. There are smoke stains on the north wall and ceiling. The top vent on the northwest corner chase has been covered.
- Room 110: There is water damage visible on the floor and wall at the north end of the room. The plaster on the east wall has lost its key.
- Room 107: The plaster on the east wall has lost its key.
- Room 106: The wainscot is modern era fake wood paneling. The chimney has been removed.
- Entry and Stair Hall 'A': There is a cap on the wood base. The storage closets are located on either side of the entry that are not original and appear to be ad hoc additions.
- Stair 'A': The stair does not meet current codes. There is no handrail, and the guardrail height and spindle spacing are not in compliance. Some spindles have been replaced, but the new ones do not match the profile of the originals. There is an approximately 25 square foot loss of plaster on the underside of the stair.
- Room 105: The original flooring may be asbestos tile underneath the fiberboard underlayment and resilient floor tile. There is damage at the west end of the floor. Places where the paint is chipped on T&G V-groove panel wainscot reveals a nice dark stain and lacquer. Strip paint and refurbish original finish.
- Room 104: The walls have a T&G V-groove wainscot with a half round cap. It is painted but places where the paint is chipped reveals dark-stained wood with a clear finish. The storage closet is non-contributing. Two of the windows have safety glass. The casing in this room is flat stock.
- Room 101: There is a bump in the floor in the east room (restroom). The base and chair rail are missing in the northeast corner room.



- Room 201: There is an approximately 64 square foot loss of plaster in the southwest corner of the room. There are additional partition walls and an added doorway to Room 205.
- Room 205: There are added doorways to Room 201 and Room 204.
- Room 204: There is damage to the floor at the south end of the room. There is an added doorway on the east wall.
- Room 203: There is an added doorway on the east wall.
- Stair 'A' to Attic: The stair has wood treads and risers. The handrail and guardrail do not meet current codes.
- Room 206: Water damage is visible on the floor at radiator locations.
- Room 207: There is a hole in the wall and about a 64 square foot loss of plaster in ceiling and loose plaster key east of the hole.
- Room 210: There is fake wood paneling wainscot and no base.
- Rooms 208 and 209: The ceilings have textured plaster on them, presumably to cover up plaster cracks.
- Stair 'B' to Attic: The paint is peeling on the wall and there is cracking in the plaster. The stair has wood treads and risers. The handrail and guardrail do not meet current codes.
- Room 212: There is an approximately 100 square foot loss of plaster in the northwest corner of the room. There is some cracking and some loss of key.

### *Electrical Evaluation*

- Service: Overhead conductors from the site overhead power distribution system supply 2 electrical services in separate locations. Service entrance conductors are installed in conduit. Equipment for each service is circuit breaker type, 120/240-volt, 1-phase, 3-wire, 400-ampere. Equipment is in good condition. The 2 services in one building is a violation of the National Electrical Code.
- Power Distribution System: Each service supplies 3-200 ampere feeders to 3 branch circuit panels. The branch panels are in good condition.
- Wiring: Wiring methods are a mixture of very old type R copper wire installed in metallic conduit, MC cable, non-metallic sheathed cable and surface metal



- raceway containing modern thermoplastic insulated copper wire. Older type wiring is in poor condition. Wiring in surface raceway is in fair condition.
- Wiring Devices: Receptacles consist of a mixture of older non-grounding and newer grounding type. Newer receptacles are supplied by the surface raceway wiring. Older devices are in poor condition and newer are fair condition.
  - Lighting: The majority of light fixtures are 8' slim line fluorescent equipped with old T-12 technology lamps. Fixtures are in poor condition.
  - Fire Alarm: Control panel is non-addressable, Silent Knight 5207/5204. Initiation devices consist of manual pull stations located at exits and heat detectors in most rooms. Alarm bells and spacing fail comply with code required audio/visual notification.
  - Telecommunications: Service is overhead wiring. Distribution consists of non-category rated wiring from 66 type terminal blocks to various surface mounted outlets located throughout the building. Wiring and components are in poor condition and are not in compliance with current standards for modern data telecommunications functions.
  - Emergency: Exits are identified with non-emergency illuminated signs that are insufficient in quantity and in poor condition. No emergency egress lighting.
  - Recommendations: Demolish and replace all electrical systems.

### ***Mechanical Evaluation***

- Description: A steam radiator system heats the building. The steam serving this building is generated by a boiler in the Basement Mechanical Rooms located at each side of the building. The steam piping is carbon steel and appears to be the original installation. The steam radiators appear to be in fair to good condition. The radiators have a control valve at the top for temperature regulation. This is a single pipe steam system with no separate condensate return. There are several shafts that start at the first floor level with a grille at the base and top of each floor and route up to the attic where they connect to ductwork that extends up through the roof. This system pulls in outside air and provides natural ventilation into the open spaces through stack effect. Exhaust fans were recently installed in the main ductwork to provide air circulation throughout the building in its unoccupied state.
- Recommendations: The boilers in this building were upgraded in 1989 and should be adequate as is. The steam radiators could be refurbished for re-use. Re-use of these radiators would help maintain the historical character of the



building. New control valves are recommended to provide temperature control of the space. The steam piping should be replaced, as it is near the end of its useful life. We also recommend converting to a steam condensate system from the single pipe system to improve temperature control. For ventilation, operable windows and the use of the existing natural ventilation shafts would provide adequate ventilation and meet current code requirements as long as the interior is not significantly partitioned. Exhaust fans will be required in areas such as restrooms, storage rooms, and the janitors closet for ventilation purposes.

### ***Plumbing Evaluation***

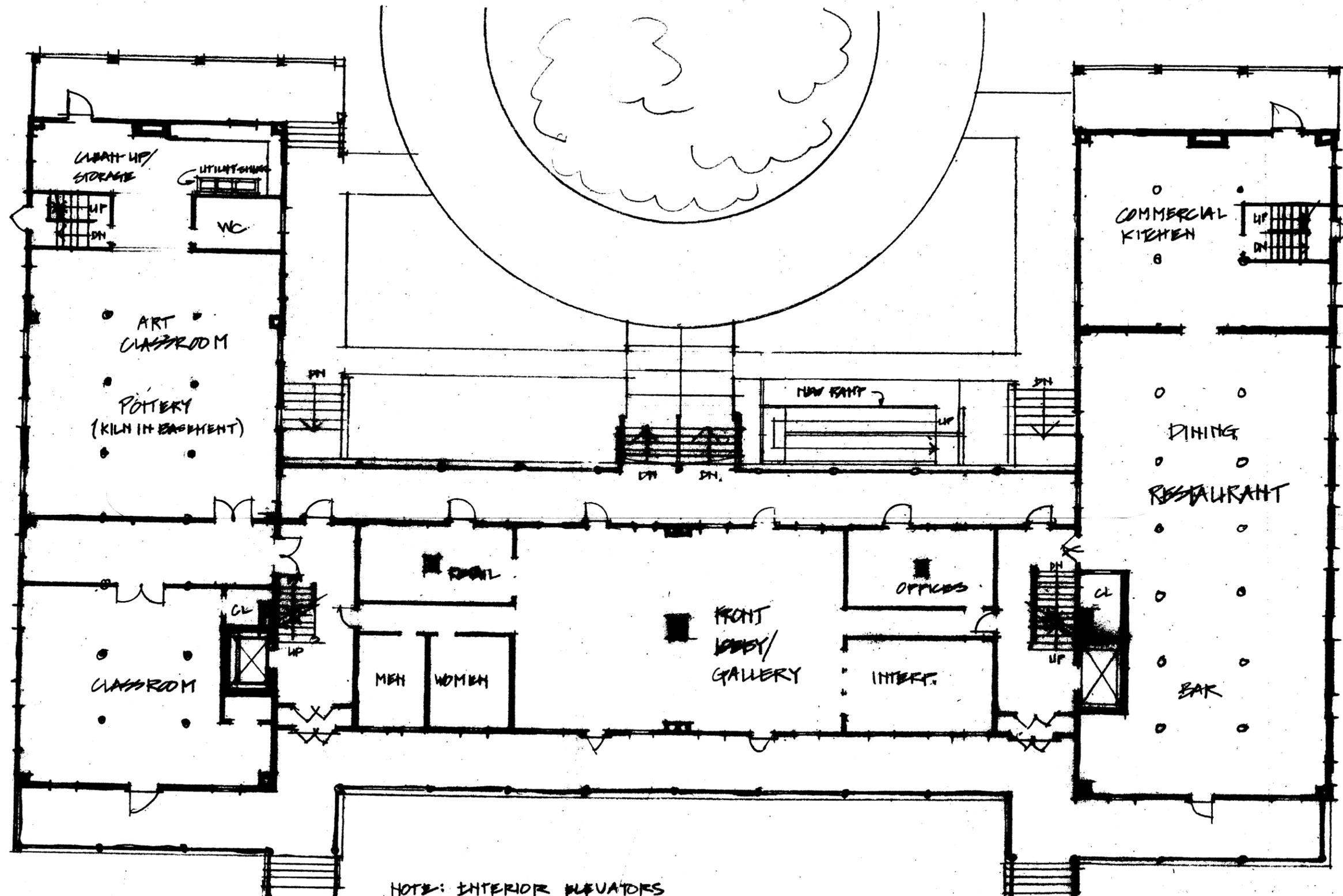
- **Description:** Existing plumbing fixtures are in fair to poor condition. Existing waste piping is cast iron. The existing domestic water piping is carbon steel. The Basement level was previously used as bath/shower/toilet facilities for barracks occupants. Fixtures are in poor condition and do not have proper supply and waste piping connections. To provide freeze protection during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service has been shut-off as well.
- **Recommendations:** Depending on the building usage, the restrooms may need to be reconfigured to be in accordance with ADA requirements. This may change fixture layout. Restoring the existing plumbing fixtures would not add much to the historical value. New fixtures are recommended as the cost for new will probably be less than refurbishment costs. Fixtures should be ADA compliant to conform to current codes. New copper piping should be installed to replace existing domestic carbon steel piping since it is probably nearing the end of its useful life. The water heater is recommended to be replaced due to the age of the heater, change in fixture demand and the deleterious effects of intermittent use.

### **Task Two: Ultimate Treatment and Use**

The Artillery Barracks (Building #638) is an excellent candidate for exterior restoration according to the *Secretary of Interior's Standards* and interior rehabilitation. The *West Vancouver Barracks Reuse Plan* suggests that this structure will serve as the anchor for the arts and education uses to be located on the West Barracks (See Plan A). This takes advantage of the large open rooms of the original floor plan. The natural ventilation system will also function best with an open floor plan. Any tenant in the larger rooms should use low walls, cubicles and office furniture systems to subdivide the space as needed.

The Artillery Barracks is currently divided in half, with a separation wall running north to south in the middle of the center wing of the building. Because of the symmetrical floor plan and the two distinct sides of the building it would seem that it would be necessary to





CLEAN UP/  
STORAGE

UTILITY ROOM

WC

ART  
CLASSROOM

POTTERY  
(KILN IN BASEMENT)

COMMERCIAL  
KITCHEN

DINING  
RESTAURANT

CLASSROOM

REAR

OFFICES

FRONT  
LOBBY/  
GALLERY

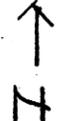
INTER.

MEH

WOMEN

BAR

NOTE: INTERIOR ELEVATORS  
BASEMENT THRU 2<sup>ND</sup> FLOOR  
IF HYDRAULIC MAY NOT  
INTACT ROOF.  
SUPPORT FUNCTIONS IN  
BASEMENT.

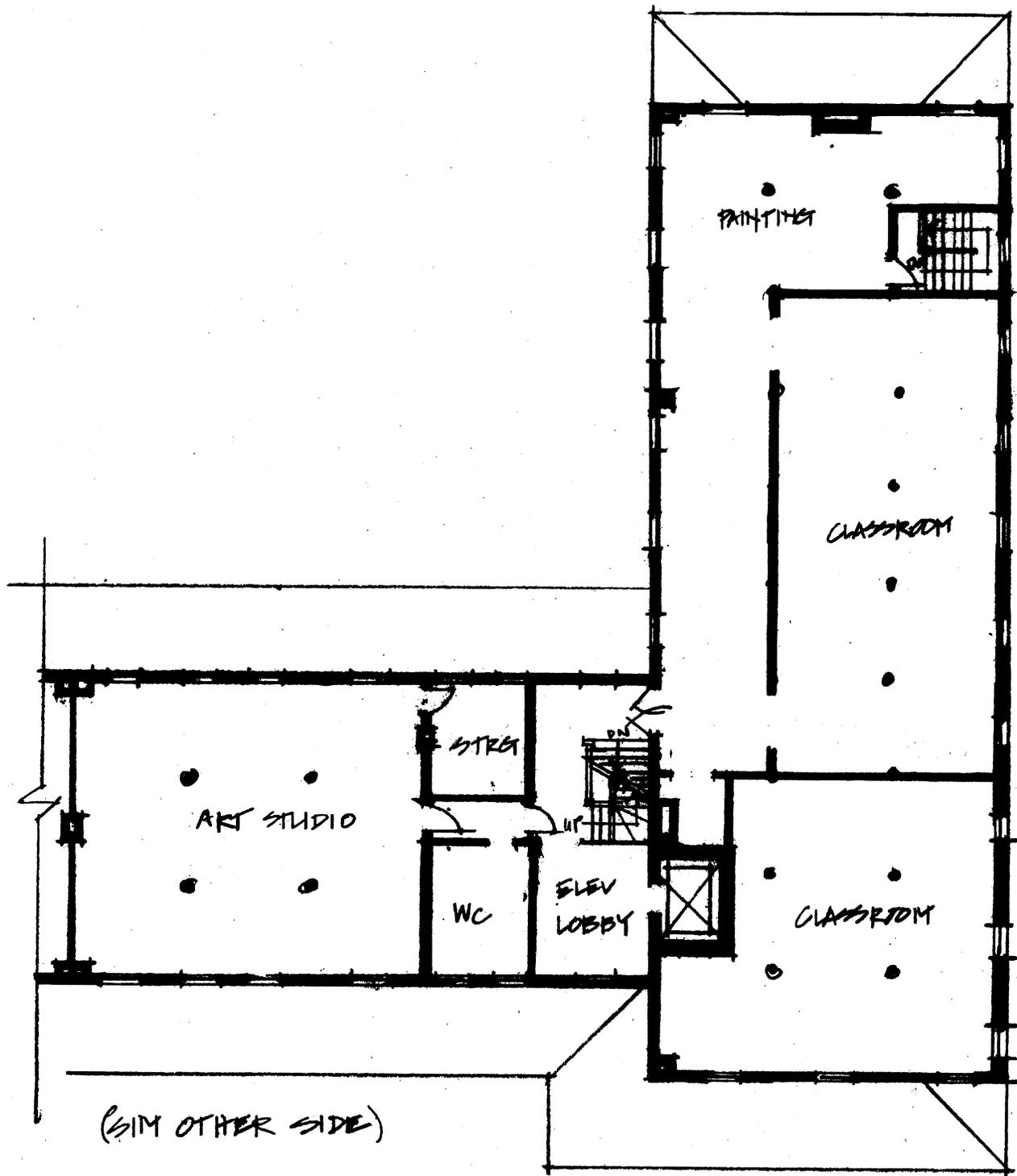


FIRST FLOOR

BUILDING 638 EDUCATION/ARTS

SCALE 1/16" = 1'-0"

PLAN A



(SIM OTHER SIDE)

SECOND FLOOR

NOTE: CLASSROOM SPACES BREAK UP OPEN ROOM PLAN, BUT NOT AS BAD AS OFFICE USE. TRANSPARENT MATERIAL AT TOP OF PARTITION WALLS WILL MAINTAIN FEELING OF ONE LARGE ROOM.

duplicate changes, i.e. install two elevators, one at each entry, as opposed to just one for the whole building. According to the *Uniform Building Code* (UBC), however, the structure can meet the area allowed for this type of structure without an area separation wall. This would create the opportunity to revise the circulation, allowing one elevator to serve the entire building.

The large stairs in the center wing of the building can serve as the primary exits for the basement and the upper floor. Two exterior metal stairs provide additional exits from the second floor of the east and west wings. These stairs should be removed, and the interior northwest and northeast stairs extended up to the second floor and brought up to meet current codes.

Extensive remodeling would be required to make the basement accessible. A false floor in the latrine area 'B' would be one solution. This would be the only space capable of functioning as office space. The other rooms would be best utilized as support spaces, mechanical rooms, and storage areas.

The Class 'C' cost estimate for an arts/education use for the year 2003 is \$72.22 to \$86.44 per square foot. Code upgrade would be an important part of this cost. It also includes minimal interior changes for a range of arts and educational uses and media, which may include from pottery and painting studios to a foundry.

#### ***Exterior Character Defining Features (From Part One of the HSR)***

- **Building Form, Shape, and Massing:** A long rectangular building with two rear projecting wings.
- **Roof Shape and Elements:** H-shaped roof with symmetrical gables on either side of the north elevations, gable roofs have end returns, five chimneys with corbeled caps, and metal roof vents.
- **Exterior Surfaces:** Horizontal wood bevel siding, exposed roof rafters inside front porch.
- **Fenestration Pattern:** Two-over-two double-hung wood-frame windows, three-lite and six-lite transoms, Palladian window of four-lite fixed with two-over-two arched windows and keystone at the east and west ends of the south elevation, three-over-three double-hung windows at foundation level, four-lite windows at gable ends at north elevation.
- **Moldings:** Simple door and window surrounds, picture-rail type molding along inside entablature of front porch, decorative frieze below roof line.



- Doors: Single and double five-panel doors, fleur-de-lis hardware at south elevation, double doors at east elevation.
- Porches: Front porch at south elevation, thin columns with Doric capitals, metal pipe railing, tongue-and-groove wood flooring, cross-member railings at north elevation porch.
- Foundation Elements: Ashlar-faced stone foundation with beaded mortar joints, stone basement stairs at east elevation, underneath porch is exposed at south elevation due to lack of foundation skirting.

### *Exterior Recommendations*

- Vehicular Circulation: Provide additional on-street parking on Hathaway Road.
- Pedestrian Circulation: Bring the walks up to code and repair and clean concrete sidewalks.
- Site: Re-grade the surrounding area to slope away from the building or provide a substantial perimeter drainage system to direct surface water away from structure. Removal of paved surface to the east may be necessary when lowering grade. The dry well remnants should be preserved as an example of early 20<sup>th</sup> century military life.
- Foundation: Clean stone and re-point. New pointing should match existing beaded mortar joint.
- Walls: Repair holes and other damage related to surface-mounted conduit and cabling. Scrape and paint siding. Re-paint with historic color scheme. Either restore vents under windows to working order, or remove boxes and patch permanently. They should only be restored if the radiators are re-used. The fresh air coming into the building through the vent will be heated by the radiator and warm the air next to the window. If the HVAC system is changed then the vent should probably be patched permanently.
- Windows: All windows are significant to the character of the building. Restore all to proper working order. Provide screens for the basement windows and under the porches to keep animals out. Re-open and replace windows at the southwest corner of the basement to restore historic character.
- Doors: Refurbish doors and hardware. Repair doors to full operation and to meet current codes if possible. Flush doors should be replaced with period-appropriate doors. New doors should resemble historic doors as closely as possible.



- Trim: Repair damaged and modified sill elements. Replace damaged trim, especially corner boards. Scrape and paint trim.
- Roof, Gutters and Eaves: Evaluate waterproofing of built-in gutter system. Replace gutter and downspout system prior to repairing eaves. Consideration should be given to replacing the roof with the historic roof materials: metal roof on the porches and slate shingle on the main roof. New chimney flashing is needed. The ventilators should be re-set on the roof and prepped and painted. Monitor flashed areas for leaks and repair as required.
- Porches and Stairs: Replace decking and provide additional blocking to strengthen deck. Restore wood porch columns and prime cast iron bases prior to re-installation. Re-paint all. Replace wood stairs to code. Cast iron pipe railings are historic material and should be saved and maintained. Metal exiting stair assembly on the west and east sides of the building should be removed with the introduction of an interior exiting stair enclosure from the basement to the second floor. Repair and replace railing on the north porch. Rebuild stair and wood cross member railings at the northwest porch. The railing might be rebuilt as it is if the height of the porch from grade does not exceed 30". The basement stair needs to be redesigned for head clearance and code while incorporating ramping for increased accessibility.
- Miscellaneous: Remove security bars from basement windows. Bird control options should be explored. Replace hatch doors at basement entries not reused as exits. Clean drains and test.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- Floor Plan: Original floor plan still extant, large open rooms on the 2<sup>nd</sup> level, unfinished attic space, intact latrine in basement with urinals, sinks, wash basins.
- Original volume and proportion of rooms.
- Original ceiling height in some areas.
- Stairs: Wide wooden staircase with decorative newel posts, turned balusters and drop finials.
- Moldings: Tall base boards, picture railings, simple door and window casings.
- Interior Finishes: Plaster walls, pressed tin ceilings, exposed cast iron columns, chair rails, vertical wood paneling.
- Interior Doors and Windows: Five-panel doors, five-lite and six-lite transoms.



- Unique Fixtures or Appliances: Air vent ductwork in attic, decorative metal heating grates.

### ***Interior Recommendations***

- General: The interior floor plan is still intact except for the addition of some partition walls and relocation or addition of some doors. Additional exit stairs are required from the east and west wings if the exterior metal stairs are removed. The existing stair from the basement to the first floor should be rebuilt and extended up to the second floor. The stairs in the main center wing should be updated as well, with particular attention paid to the basement run where the doors are right on the top tread of the stair. All stairs need to be placed in fire rated enclosures. The building needs to be evaluated by a structural engineer. Some of the brick chimneys may need to be braced. Water damaged areas should be investigated and infiltration corrected. Historic paint colors should be used for the interior.
- Specific Space with Unique Treatment: Latrine 'A' is an intact example of the original military latrine and should be preserved.
- Typical: Remove vinyl tile and cove base. Restore floors to original material. Repair plaster walls and ceilings. Repaint stone walls in basement. Remove partition walls. Repair, restore pressed tin ceilings. Remove fluorescent light fixtures and replace with period-appropriate light fixtures at original fixture locations and/or appropriately located to suit the period. Remove surface mounted conduit and cabling and run in-wall prior to repairing the plaster. Restore wainscot and trim to original state (stained) where applicable.

### **Task Three: Requirement for Treatment**

#### ***Compliance with Codes***

##### Uniform Building Code (UBC):

- Proposed Use: Arts and Education (classrooms, and offices).
- Occupancy Proposed: Mixed A-3 (assembly) and B (office).
- Construction Type: V-one hour (wood frame, one hour fire-rated). Fire rating is based on the installation of automatic fire sprinklers.
- Base Area / Stories Permitted: 10,500 S.F. / 2 stories.  
(+100%) 10,500 = 21,000 S.F. (multistory bonus)  
(+50%) 10,500 = 15,750 S.F. (separation on four sides estimated at 30 feet)
- Building Area: 26,678 S.F. for upper 2 stories over 13,338 S.F. basement.
- Occupancy Loads: Vary according to use.  
Basement: Storage / Mechanical (13,338 S.F.) 45 persons



Main Floor: 100% Office (13,338 S.F.) 134 persons  
 Main Floor: 60% Classrooms (8,000 S.F.) 400 persons  
 Main Floor: 40% Office (5,338 S.F.) 54 persons  
 Upper Floor: 100% Office (13,338 S.F.) 134 persons  
 Upper Floor: 100% Classrooms (13,338 S.F.) 667 persons

- Exits Required: 2 required; 4 provided.
- Upper Floor Exits: 2 required. Exit width varies according to occupancy load.
- Crawlspace Ventilation: Verify.
- Attic Ventilation: Verify.
- Stairs and Handrails: Upgrade as required to comply with current codes.
- Decks and Guardrails: Upgrade as required to comply with current codes.
- Plumbing: UBC Table 29-A.  
 First and Second Floor: Separate restrooms on each floor with 4 W.C.'s and 2 lavatories minimum in each for 100% office use. Larger restrooms would be required for other mixes of uses.
- Structural: Needs structural assessment.

#### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. There are a number of challenges to making this building accessible. The main floor is set three to four feet above ground level, with another step up from the porches to the interior. Ramps from grade will be relatively long, and should be located to the rear courtyard closer to dedicated parking and on the higher side of the building. It may also be possible to provide direct access to the basement. Internal vertical transportation will have to be by a new elevator.

#### Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

#### National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Data: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

#### National Fire Protection Association Standards (NFPA):

- Fire Protection System: Needs assessment; automatic fire sprinklers are not installed.

#### Washington State Energy Code (WSEC):



- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. It should be relatively easy to bring this building into compliance, given that the interior generally lacks historic significance, and that the attic and the basement provide framing cavities for insulation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Artillery Barracks (Building #638) has historic significance as an individual structure. This structure most recently served as the headquarters for the Vancouver Barracks housing the administrative functions for the base. In the past, it served as the largest of the barracks providing housing and services for the soldiers stationed there. With its prominent size and location within the West Barracks, the Artillery Barracks is significant as an example of the military architecture of the era, and as a contributing part of a coherent ensemble of buildings.

The proposed change of use from a barracks and office space to serve as the new anchor for the proposed arts and education uses has minimal impact on the historic character of the exterior. Necessary changes to existing porches, ramps and stairs are to non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.

- Interior: The proposed renovation of the Artillery Barracks (Building #638) should have minimal impact on the historic character of the interior. Because of its importance, original walls and finishes should be preserved whenever possible. New finishes should match the existing. Window and door trim should be preserved and can serve as patterns for new trim as it is installed. Other original materials such as wood flooring and plaster surfaces should be preserved to the extent practicable. Necessary changes to non-historic interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.

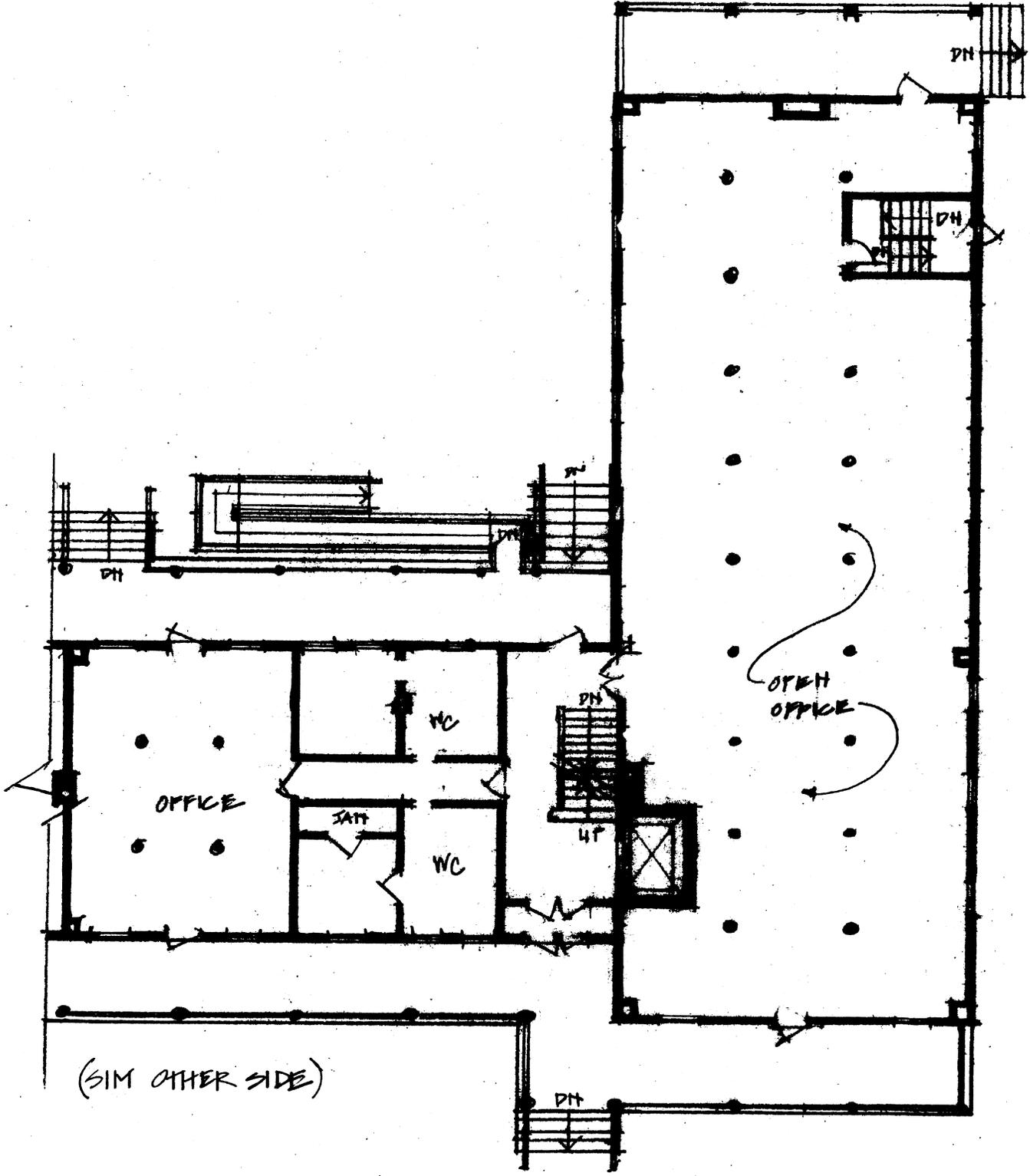


#### Task Four: Alternative Treatments

While the Artillery Barracks will clearly play an important role in the reuse of the West Barracks, it may be some period of time before a proposed arts and education function could fully utilize the large amount of floor space in this building. As an interim use, spaces not fully utilized could be leased to other businesses providing immediate income to offset renovation and maintenance costs. In this way the building could become a business incubator, until the space is needed for the primary tenant (See Plan B). Both the interior and exterior impacts should be similar to those of the proposed arts and education use. No additional changes should be required for the exterior, and any additional changes to the interior should be limited to the installation of low walls or cubicles to partition the larger rooms into individual work stations. As with the arts and education use, any changes to the larger rooms should be easily reversible and strive to maintain their open character.

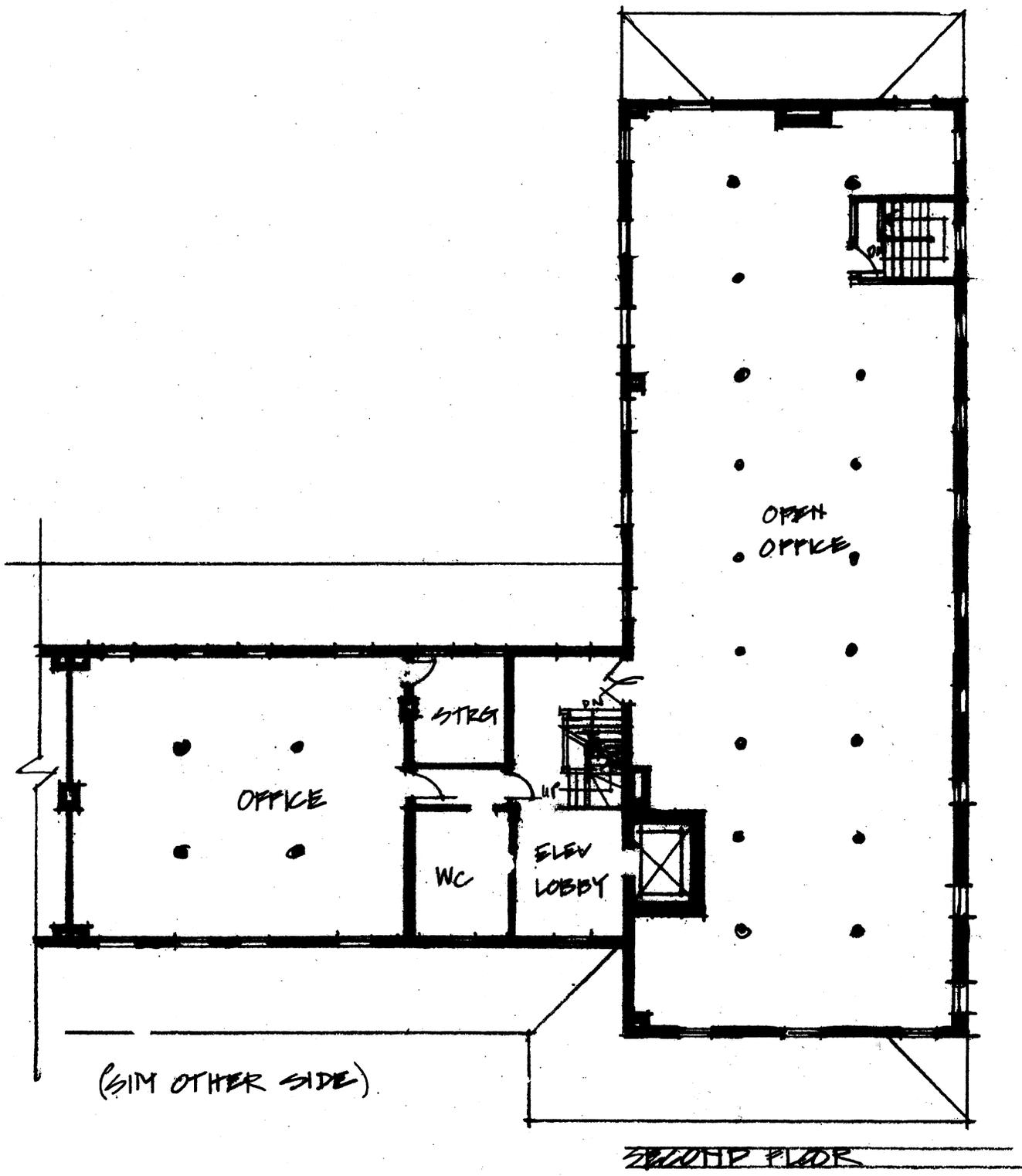
The Class 'C' cost estimate for an office use for the year 2003 is \$72.22 per square foot. Code upgrade would be an important part of this cost. It also includes the creation of interior partition walls to allow for a variety of sizes of businesses.



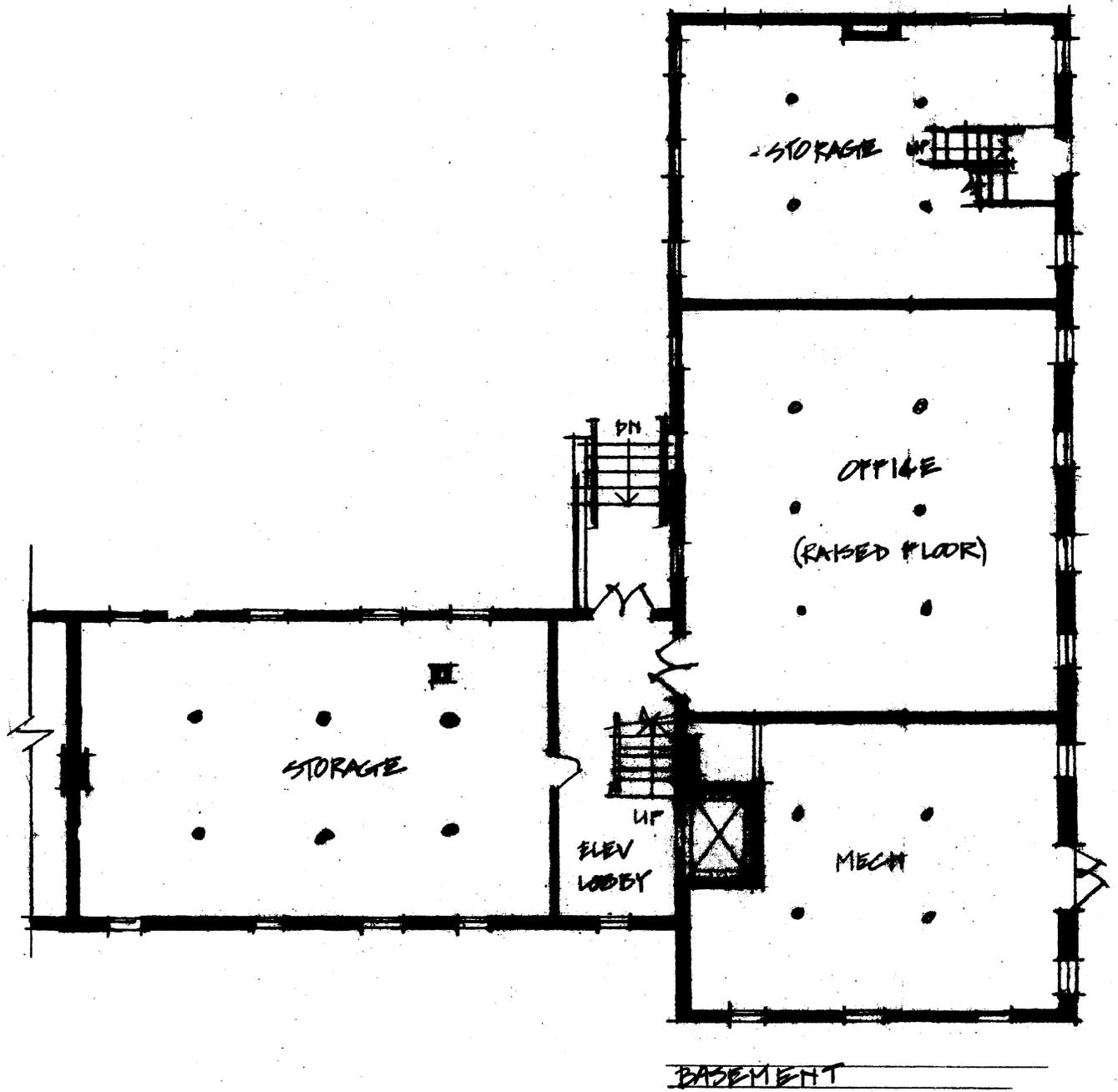


FIRST FLOOR  
 BUILDING 133 OFFICE  
 SCALE: 1/16" = 1'-0"

**PLAN B**







**Building Number:** 602, 676, 673  
**Area:** West Barracks  
**Date of Construction:** 1982  
**Historic Use:** None  
**Current/Recent Use:** Garages



**Occupancy:** U  
**Hazard Level:** Not Available  
**Number of Floors:** 1 Story  
     **First Floor:** Approx. 800 sq. ft.  
**Exterior Materials:** Beveled wood siding

These buildings are in relatively poor shape for being so recently constructed. They are not historic structures and therefore do not fit in to the overall West Barracks historic district. The only feature that ties them into their surroundings is the exterior finish material. However, in the short term they will be useful to tenants of the Duplexes and should be retained until the wherewithal to demolish them and build more compatible buildings is found.

<b>Building Number:</b>	<b>635, 641, 642, 643, 644, 664, 665 Duplexes</b>	
Area:	West Barracks	
Date of Construction:	1937-1938	
Period of Significance:	1920-1941 (per HSR Part One)	
Historic Use:	Non-Commissioned Officers Family Quarters	
Current/Recent Use:	Residential	
Occupancy:	R	
Hazard Level:	Not Available	
Number of Floors:	Two Stories and a full basement	
Basement:	1,512 sq. ft. (per January 2000 SERA report)	
First Floor:	1,984 sq. ft. (per January 2000 SERA report)	
Second Floor:	1,260 sq. ft. (per January 2000 SERA report)	
Exterior Materials:	Wire-cut red brick with painted wood trim, wood paneled porches	

### Task One: Conditions Assessment

#### *Site Context*

The duplexes comprise the southwest corner of the West Barracks. Originally all of these structures were located along Hathaway Road and Barnes Road, but #643 and #664 were moved to their present location when I-5 was constructed. They constitute the edge of the West Barracks and of Fort Vancouver as a whole. The duplexes have a much different character than the wood barracks buildings, and are also significantly different from the houses of Officer's Row.

#### *Vehicular Circulation*

Most of the automobile traffic and on-street parking is on Hathaway Road and Barnes Road. There are three garage buildings #602, #673 and #676 with single car garages for each unit that serve the duplexes. Garage #602 is accessed from Barnes Road and has a dedicated driveway and a turn-around. Garage #676 is located at the end of Hathaway Road. Garage #673 is accessed by an alley from McLoughlin Road. There are turn-arounds next to the garages but no additional parking except a parking lot at the corner of Hathaway Road and McLoughlin Road.



### ***Pedestrian Circulation***

Sidewalks are located along the streets with walks that extend to the front entries of each duplex unit. These in turn are connected to the back entrance with walks that follow the outline of the building.

### ***Exterior Assessment***

Due to the repetitive nature of the duplex units, a “typical” unit is described first, with deficiencies common to all units described. Then each unit will be listed with conditions unique to those units noted.

#### ***Typical Unit***

- **Summary**: The units are in good overall condition. Wooden trim, porches, windows, and other elements have varying degrees of deterioration that will require attention. This constitutes the worst of the damage on these buildings except for units #643 and #664 that were relocated in 1952 and have suffered some settlement of their foundations. Few changes have been made to these buildings, apart from the kitchen remodels and the conversion of the back porches to bathrooms.
- **Site**: The walks are located close to the building, leaving only a narrow planting strip adjacent to the walls. It has occasional flowers but no large plants.
- **Foundation**: The concrete foundations are in good condition.
- **Walls**: The exterior walls are in good condition with plain wire-cut brick laid in a common bond and sixth course headers. Conduit and other items have been attached to the brick wall at the mortar joints.
- **Windows**: The windows are wood six-over-six lite double hung units in fair condition. The paint is peeling on the sashes. The sidelights are wood two-over-two lite double hung units in fair condition that also have some damage to the sashes. The rear porch windows are wood four-over-four lite that are non-contributing, but are in good condition as they were installed in 1994. The wood casements and fanlights at the brick front porches are in good condition. The basement windows are three-lite hoppers; quite a few have been modified for dryer vents. Aluminum-frame screens at the hoppers have replaced the original wood screens.
- **Doors**: The front entry door is six-panel wood. The hardware needs to be restored and the frame connections checked for tightness. The rear entry is wood-paneled with divided lites. The basement is the same with separation at the frame



connections. The aluminum screen doors are non-contributing. The rear porch screen doors are generally in poor condition.

- Trim: The wood trim at the rear porches is in fair to poor condition probably due to inadequate preparation before painting.
- Roof, Gutters and Eaves: The wood at the eaves has been stained by water from overflowing gutters. The damage may not be limited to surface staining. The gutters fill quickly and easily with debris. Several roof leaders are damaged or blocked. The roofs are slate in either a gable or a hipped configuration. There is some biological growth but no immediate indications of waterproofing problems. There are copper roofs on the porches and the sun room that are covered with an elastomeric coating that is failing. No damage is visible, however, on the interior finishes that would indicate failure in the waterproofing. The flashing at the junction of roof and brick is loose.
- Porches and Stairs: The brick at the entry porches is in good condition. The French doors were modified and the metal railings in front of them removed in 1994. The concrete stairs have some biological growth on them and the metal railing connections are in good condition. The wood at the front entry porches has not fared so well. The wood trim is in fair to poor condition and the base elements in particular are deteriorating where they are in contact with the concrete slab. The rear porches have been modified for powder rooms in 1994 and are not aging well. The wood trim, in particular, is deteriorating. The back porch stairs were also reconfigured in 1994. They are in good condition. The concrete stairs to the basement collect debris and the drainage could be blocked. There is no handrail.
- Miscellaneous: The existing mailboxes are modern and should be replaced. Light fixtures at exterior porches are also inappropriate in style and the surface mounted conduit is intrusive. The coal chute cover was modified to allow for a vent insert that was installed poorly and has deteriorated over the years. There are temporary exhaust fans installed in the upper story windows.

### ***Building #635***

- Trim: The front porch trim has deteriorated at the base.
- Roof Drainage: Replace deteriorated and damaged roof leaders in-kind. Drain pipe inlet at the northwest corner appears bent; verify positive drainage and function.
- Porches: Repair concrete spalls at front porch.



***Building #614***

- Foundation: Repair concrete spall at East unit (SE corner of Sun Room).
- Walls: Clean staining from brick beneath hose bibbs.
- Trim: Replace deteriorated base trim.
- Roof Drainage: Replace or repair as required (3) deteriorated leaders at front elevation. Ensure positive drainage.
- Stairs: Clean biological growth from stairs, landing and lower sills at windows.
- Miscellaneous: Bracing the chimney may be required to reduce toppling risk during a seismic event; verify with Structural Engineer.

***Building #642***

- Walls: The sun room walls appear to have been re-pointed below sill level; monitor for additional deterioration or movement. Pointing with a softer mortar with a lower Portland cement content is recommended.
- Roof Drainage: The roof leaders on the east side are filled with acorns and their seams are splitting. Repair or provide new leader to match existing. Clear sub-surface drain and ensure proper drainage.

***Building #643***

- Foundation: The concrete foundation is cracking. The cause is possibly settlement related or due to seismic activity (see walls below). This was one of the units relocated in the 50's as part of I-5 project. Compaction and surface drainage of these two sites might be exacerbating the problem.
- Walls: There are cracks in the brick and open joints. The cracks are both settlement related (stair-step cracking along joints) and the result of shear movement (vertically-split brick units). They should be monitored to determine if settlement activity is continuing and the cause identified. Extensive re-pointing has occurred on this building already and will need to be replaced. Pointing with a mortar with lower Portland cement content (softer) recommended. Clean rust staining from the brick beneath the hose bibbs.
- Windows: The hopper units in the basement have been replaced and are not similar to the duplexes that were not moved for the construction of I-5.
- Trim: The front porch base trim has deteriorated and should be replaced.



- Roof Drainage: The sub-surface standpipes are corroded. Replace with appropriate pipe. Ensure positive drainage of system.
- Porches: The rear porch is in good condition relative to others.
- Miscellaneous: Bracing the chimney may be required to reduce toppling risk during a seismic event; verify with Structural Engineer.

#### ***Building #644***

- Walls: Clean biological growth from brick. It is primarily on the north and northeast facing elevations near flashing junctions.
- Windows: The paint is peeling on the south facing windows leaving the wood trim exposed. Wood surfaces should be thoroughly prepared and painted. Provide screens that fit properly to window frames. The windows on the north, east and west elevations are in better condition. Restore windows to full operation.
- Roof Drainage: Replace in-kind deteriorated and damaged roof leaders at the back of the house. Provide screens to prevent debris from the overhanging oak trees from blocking the free-flow of run-off. Check sub-surface drainage system for proper flow. Replace in-kind the crushed gutter at the west sun room on the south elevation.
- Porches: Verify soundness of wood members adjacent to gutters. There are signs of potential water damage from backed up gutters and roof leaders. Wood trim has deteriorated at the rear porches. Replace in-kind with properly prepared material.
- Miscellaneous: Remove tree stumps in the front yard near the building and walkways. These may continue to heave or potentially cause damage to the structure or utilities. There is extensive biological growth (moss & ferns) at the chimney cap that should be removed and the surfaces cleaned thoroughly. Repair cracks as required. The assembly for the radon exhaust system is an excellent example of a non-intrusive system that gives the appearance of a roof leader.

#### ***Building #664***

- Foundation: The concrete foundation is cracking. The cause is possibly settlement related or due to seismic activity (see walls below). This was one of the units relocated in the 50's as part of I-5 construction. Compaction and surface drainage of these two sites may be exacerbating the problem.



- Walls: There are cracks in the brick and open joints. The cracks are both settlement related (stair-step cracking along joints) and the result of shear movement (vertically-split brick units). They should be monitored to determine if settlement activity is continuing and the cause of the settlement identified. Extensive re-pointing has occurred on this building already and will need to be done. Pointing with a softer mortar with a lower Portland content is recommended. Clean rust staining from brick beneath hose bibbs.
- Roof: Replace deteriorated or damaged roof leaders at the rear. Sub-surface standpipes are damaged and out of plumb. Replace with appropriate pipe. Ensure positive drainage of system.

### ***Building #665***

- Walls: Old utility line wall penetrations need repair. The mortar is cracked.
- Windows: The paint is peeling on the south facing windows leaving the wood trim exposed. The sashes and trim should be thoroughly prepared and painted. Provide screens that fit properly to window frames. The hopper units in the basement have been replaced and are not similar to the duplexes that were not moved for the construction of I-5.
- Trim: Base trim is deteriorated at the front and rear porches. Replace in-kind with properly prepared material.
- Roof: Flashing above west sun room at junction to wall requires re-attachment and re-soldering.
- Miscellaneous: Remove sapling at southwest corner of building before it causes damage to foundation or walkways. Bracing on the chimney may be required to reduce toppling risk during a seismic event; verify with a Structural Engineer.

### ***Interior Assessment***

- General: The interiors of the duplexes are in good condition for the most part. There are some areas of damage to window sashes and blinds by trapped squirrels trying to escape. There are isolated areas of water damage on the wood floor but they are not extensive. Minor cracking is present in the plaster walls and ceiling.
- Significant Features and Typical Materials: Sun rooms, French doors, fireplaces. Plaster walls and ceilings, oak strip floors and wood trim and casing.
- Typical conditions: Good.



- Special or Unusual Conditions: Settlement in the foundations of Building #643 and #664.

### *Typical Unit*

- Note: For more building specific conditions assessments refer to the appendix.
- Life Safety: The smoke detectors are missing or are broken in many units, especially 665; see appendix for building-by-building condition assessments.
- Floor: The basement floor is concrete and is in fair to good condition. It has minor cracking and water stains. The back porch is sheet vinyl, probably dating from 1994, and needs to be replaced. The original flooring is unknown. The kitchen floor is sheet vinyl that needs to be replaced. There is oak strip flooring in the dining room, living room, and sun room that is in fair to good condition. It requires light refinishing. The front porch floor is quarry tile over concrete done in the 1990's. The upstairs floors are oak strip flooring in good condition that will require light refinishing. The wood base throughout is in fair condition. The bathroom floor is resilient sheet flooring that is in fair condition and should be replaced.
- Stairs: The basement stairs are made of wood treads with open risers. The risers, the handrails, and guardrails do not meet current codes. The stairs to the second floor have oak treads in good condition. The pickets are spaced 4.5" apart, which does not meet current codes, and no handrail is present.
- Walls: The basement concrete walls are in good condition. The gypsum wallboard is in good condition in the back porch. Kitchen plaster walls are in fair condition. The plaster walls in the dining room, living room, sun room, and front porch have been given an "orange peel" texture in the 1990's. They appear to be in good condition, but the texture may be hiding underlying damage. The upstairs plaster walls have also been done in the same "orange peel" texture in which the downstairs walls were refinished and are in good condition.

- **Doors:** The exterior door to the basement is a wood paneled door with a multi-lite upper window. It lacks weather-stripping. The door to the kitchen from the back porch was removed probably when the remodel was done. The exterior back porch door has a top-glazed panel with safety glass and an aluminum screen door. Both are non-contributing. The door from the kitchen to the dining room was removed. It was originally a double-acting door. The door to the basement from the kitchen is in good condition and needs minor repair to the hardware. There are wood French doors into the sun room from the living room. The front porch door is wood and is in good condition. The second floor doors are wood paneled doors in good condition. They are contributing.
- **Windows:** The wood hopper windows in the basement need weather stripping. The wood windows throughout the first floor and second floor are in good to poor condition depending on the level of squirrel-caused damage to sashes. Some of the window blinds have also been damaged by squirrels.
- **Ceiling:** The basement ceiling is open structure. The gypsum wall board ceiling in the back porch is in good condition. There is a painted metal duct for the exhaust fan above the stove in the kitchen. The kitchen plaster ceiling is in good condition. The plaster ceilings in the dining room, living room, sun room, front porch, and upstairs rooms have been given the “orange peel” texture. They appear to be in good condition, but the texture may be hiding underlying damage.
- **Miscellaneous:** The basement has a slop-sink and washer and dryer hook-ups. The exhaust vent for the dryer has been run through a retrofitted window. The hot water heater is typically newer but not insulated. A radon venting system has been installed in the basement and should be monitored for safety (Building #641 West does not have a radon vent). The kitchen and back porch light fixtures are not appropriate to the style of the house. The plywood kitchen cabinets date from the 1950’s and are inexpensive pieces and in fair condition. Appliances are inexpensive appliances in fair condition. Ceiling light fixtures vary throughout the duplexes; most are unique period pieces. They are not special items, but add a period feel. The brick in the fireplace in the living room needs re-pointing. The bathroom fixtures could be replaced, especially the vanity which takes up space.

### ***Electrical Assessment – Typical Unit***

- **Service:** The source consists of underground wiring in conduit from an outdoor pad mount transformer. The equipment consists of a 120/240-volt, 150-ampere, single phase, and 30-circuit breaker load center panel. Equipment is in good condition.



- Power Distribution System: There are no feeders or distribution panels. Branch circuits are obtained directly from the service equipment.
- Wiring: Branch circuit wiring consists of a mixture of single conductor wire installed in metallic conduit and surface metal raceway. Wiring is in fair condition.
- Wiring Devices: Receptacles and switches are in good condition. Switches are silent type, and receptacles are grounding. GFI receptacles are in accordance with current code requirements. Quantity and spacing of receptacles do not comply with current code.
- Lighting: Light fixtures condition varies from fair to poor.
- Fire Alarm: The facility is equipped with single station smoke detectors in all sleeping areas, and is in compliance with the Uniform Building Code. Some detectors are in poor condition.
- Telecommunications: Outlets and wiring is a simple residential phone system served underground from the exterior.
- Emergency: Not applicable, residential occupancy usage.
- Recommendations: Apply normal maintenance. Certain light fixtures and smoke detectors may require replacement.

#### ***Mechanical Assessment – Typical Unit***

- Description: The heating system serving each housing unit is a hot water radiator system. The boilers serving the stand up radiators or baseboard type radiators are located in the basements of each housing unit. Bathroom exhaust fans are installed in each unit. Each kitchen has a range hood over the cooktop and oven. All equipment in housing units is residential type.
- Recommendations: Heating systems appear to be in very good operating condition. Because of residential usage, we would recommend checking each system for problems, leaks, etc and repair as needed. Fans and hoods should be checked for proper operation.

#### ***Plumbing Assessment – Typical Unit***

- Description: Existing plumbing fixtures are in good condition. Existing waste piping is cast iron. Existing water heaters are located in the basement near each unit boilers. Domestic water piping is carbon steel. To provide freeze protection



during this unoccupied time, the domestic water has been drained and shut-off at the building. The gas service to the building has been shut-off as well.

- Recommendations: Water Heaters appear to be in good condition and recommend replacement on an as needed condition. Domestic water piping can remain as is for residential type usage.

### Task Two: Ultimate Treatment and Use

These buildings would be good candidates for exterior restoration and interior rehabilitation. The *West Vancouver Barracks Reuse Plan* suggests that continuing residential occupation with some limited business or office accessory use (See Plan) would be the most appropriate re-use of the building. This live/work use would represent the least amount of impact on the building while potentially providing additional amenities to potential tenants. The sun room would serve as a good office space. The basement could also be converted and the basement entrance used as an office entrance, separate from the residence entry.

The Class 'C' cost estimate for live/work use for the year 2003 is \$12.82 per square foot. This would include only minimal work required for a residential tenant.

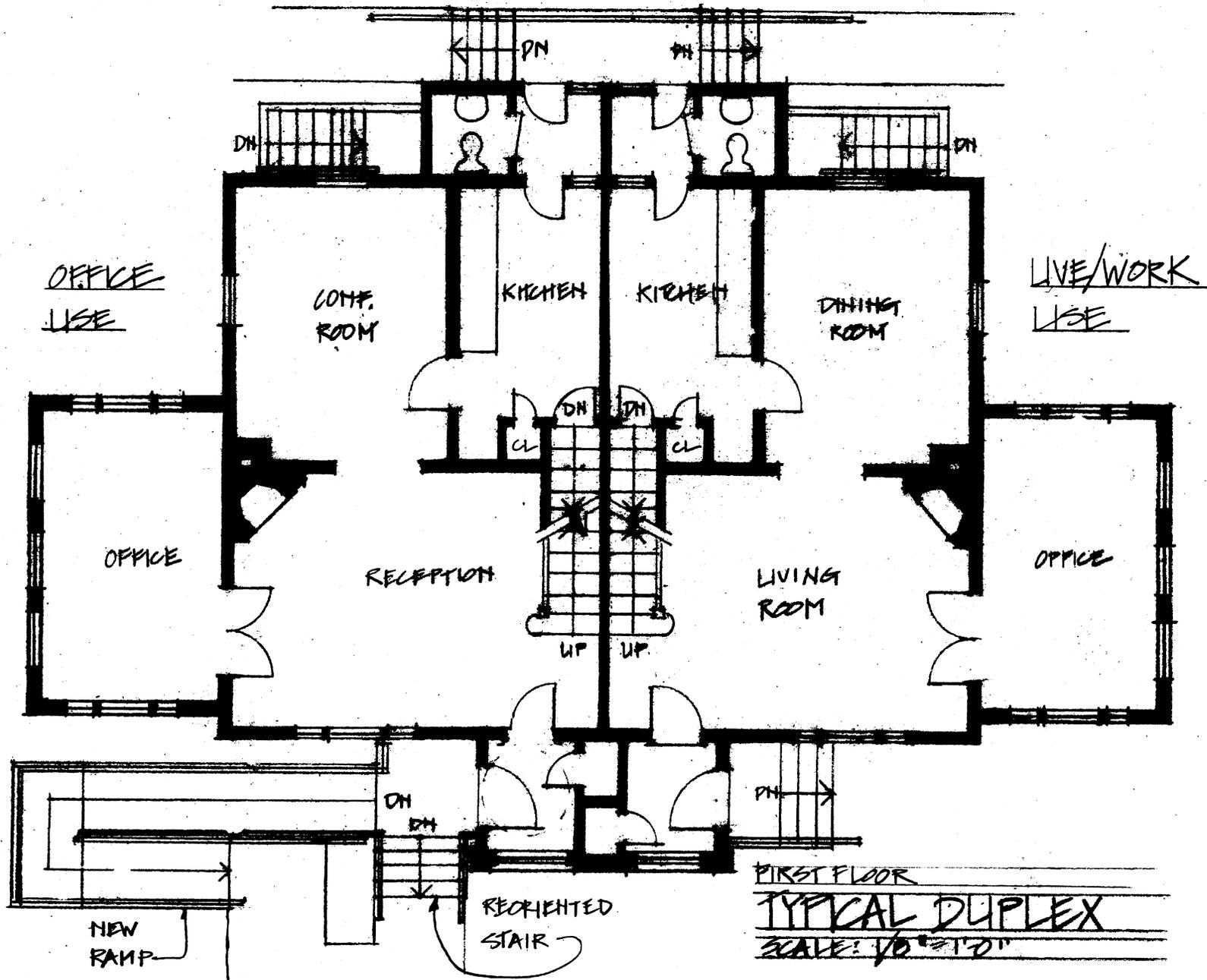
#### ***Exterior Character Defining Features (From Part One of the HSR)***

- Rectangular form.
- Bilateral symmetry.
- Hipped and gable roofs.
- Brick chimneys.
- Brick construction.
- Multi-light windows with brick lintels.
- Boxed cornices, architrave molding.
- Fanlights.
- Column pilasters and entablatures on vestibules.
- Slate roofs.

#### ***Exterior Recommendations***

- Vehicular Circulation: More parking would be required for an office use in the duplexes. It could probably be provided on the streets or in the parking lot at the southwest corner of Hathaway and McLoughlin Roads.
- Pedestrian Circulation: Sidewalks should be repaired and widened where necessitated by code.





OFFICE  
USE

LIVE/WORK  
USE

COMP.  
ROOM

KITCHEN

KITCHEN

DINING  
ROOM

OFFICE

RECEPTION

LIVING  
ROOM

OFFICE

UP

UP

DN

DN

DN

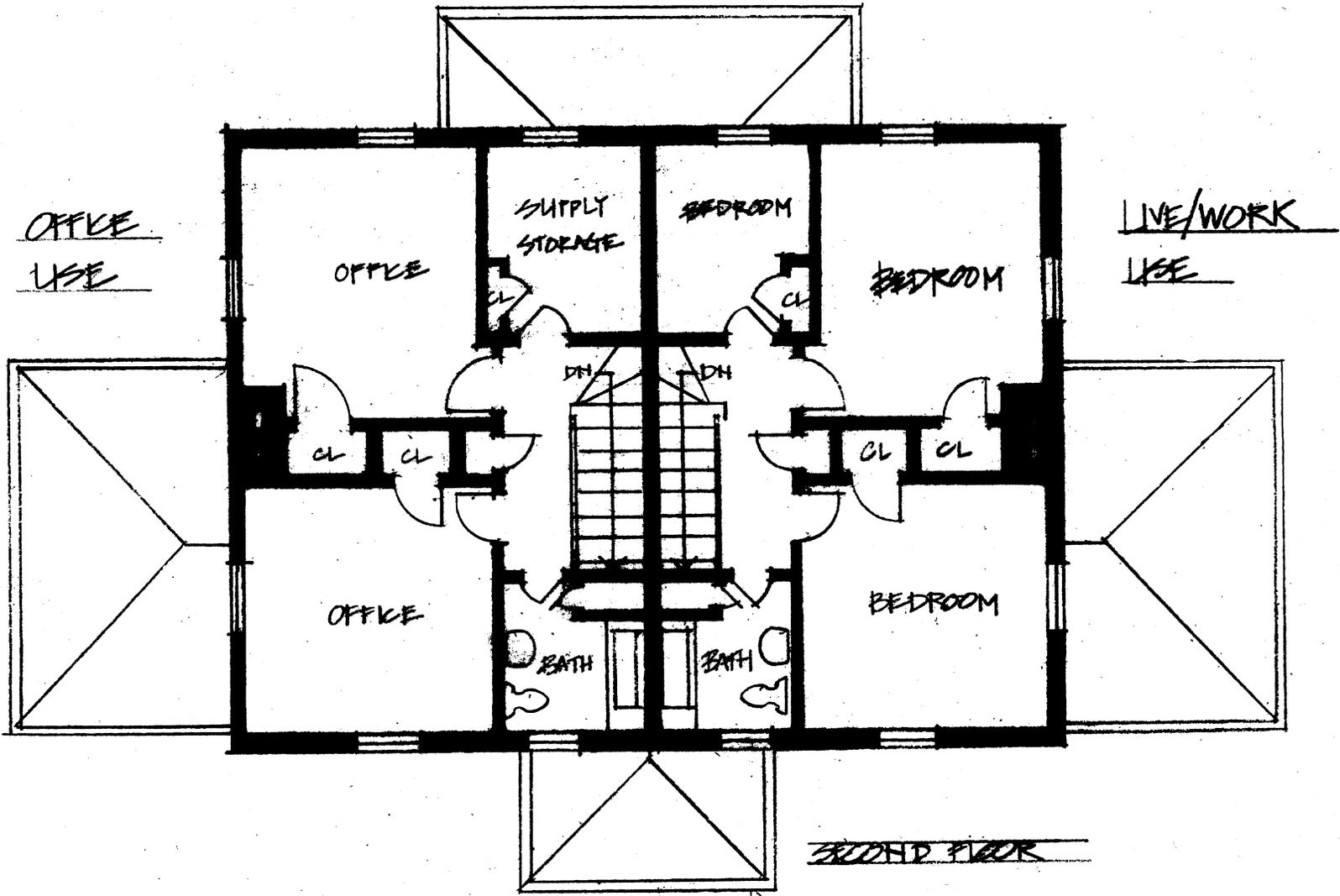
NEW  
RAMP

REORIENTED  
STAIR

FIRST FLOOR

TYPICAL DUPLEX

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



- Site: Re-grading should be explored for Buildings #643 and #664 and the settlement of these two building evaluated by a structural engineer.
- Foundations: They are generally in good condition except for Buildings #643 and #664.
- Walls: Remove conduit and other intrusive surface mounted items and re-point the brick as required.
- Windows: Scrape and paint sash and trim. Repair sashes that have been damaged by squirrels.
- Doors: Front and basement doors need to be refurbished with their rail and stile connections strengthened and hardware restored. Replace rear screen doors with new wood screen doors.
- Trim: Rear porches need replacement of some trim pieces and all should probably be refurbished (scrape and paint).
- Roof, Gutters and Eaves: Several sections of the eaves have been stained, probably by overflowing gutters. The extent of damage should be verified and deteriorated material replaced in-kind. Gutters that have been overflowing need to be cleared and proper drainage verified. Leaf guards and screening may be necessary to prevent blockage at gutters. Remove leaders, clean out subsurface drainage system and re-establish positive drainage. Sub-surface piping should be checked to ensure that all sections are not crushed, blocked by roots or silted-in. A surface draining system should be avoided due to the extensive footpaths that conflict with the 5 foot minimum dimension required to adequately discharge water away from the structure. Clean roof and install copper strips to inhibit future biological growth. The elastomeric coating should be removed from the copper roofs at the porches and sunrooms and the roofing seams and joints re-soldered. If well maintained, the copper roofs should last for years to come. Re-attach the flashing at the junction with the brick.
- Porches and Stairs: The character of the brick entry porches would benefit from reintroducing the metal railings and French doors. The concrete stairs should be cleaned and railing connections checked regularly. Replace damaged elements on the wood front entry porches in-kind, with pressure treated members if necessary. Replace trim elements on the rear porches. The drainage at the bottom of the basement stairs should be checked, the debris cleared, and handrails installed to comply with current codes.



- **Miscellaneous:** Replace exterior light fixtures with ones of a more appropriate style. Remove cabling and conduit that is surface mounted from the exterior of the building and run cabling and conduit through the interior of the building. Remove modified coal chute cover and replace with new cover. Remove exhaust fans in the upper story windows when building use is determined and patch wall where outlet was installed.

#### ***Interior Character Defining Features (From Part One of the HSR)***

- Window and door trim where original.
- Lighting fixtures in period.
- Hardwood floors.
- Fireplace.
- Stairwell/woodwork elements.
- Doors, molding.

#### ***Interior Recommendations***

- **General:** The interior of these buildings could be remodeled to an extent, especially the kitchen and basement. Retaining the floor plan, doors, windows and trim, hardwood floors, plaster walls and ceiling is important. In addition, replacing the light fixtures with period appropriate light fixtures would be beneficial to enhancing the character of the building. The kitchen could be remodeled and appliances upgraded to meet market requirements for rental units. Glass door enclosures for the fireplace may be a modern improvement to increase efficiency and safety in a rental environment. The bathroom fixtures could be replaced to meet market value for rental. A pedestal sink would provide more space and restore some character to the bathroom. Items that are normally stored in the vanity could be stored in the closet.
- **Specific Space with Unique Treatment:** None.
- **Typical:** Retain finishes (except bathrooms), trim where original, windows and doors.
- **Floor:** Clean and fill cracks in the basement floor. Elastomeric paint may be a good solution. Lightly refinish the oak floors. Repair wood base where necessary.
- **Stairs:** The basement stair carriages should be checked by a structural engineer for adequate splicing repairs. Bring the upstairs picket spacing up to meet current codes.



- Doors: Install weather stripping on the exterior door to the basement. The door hardware on the door to the basement from the kitchen needs repair.
- Windows: Install weather stripping on the wood hopper windows in the basement. Repair windows damaged by squirrels.
- Miscellaneous: The hot water heater should be insulated. The radon venting system should be monitored. Re-point the brick in the fireplace. Verify that smoke detectors are present and working in the appropriate places in each unit.

### Task Three: Requirement for Treatment

#### Uniform Building Code (UBC):

- Occupancy Proposed: R-3/B (residential duplex and office combined).
- Construction Type: V-N (wood frame, non-rated).
- Base Area / Stories permitted: 8,000 S.F. / 2 stories (complies).
- Building Area: 3,224 S.F. for upper 2 stories over 1,512 S.F. basement.
- Exits Required: 2 required; 2 provided (from each unit).
- Upper floor exit: 1 required (from each unit).
- Crawlspace ventilation: Verify.
- Attic ventilation: Verify.
- Structural: Needs structural assessment.

#### Americans with Disabilities Act (ADA):

- In general, ADA requires existing structures to be brought into compliance with the provisions of the current code. Chapter 9, Section 1113 of the Washington State Amendments to the UBC allows Building Officials some amount of discretion dealing with historic structures. If a business that attracts clients or customers is located in a duplex, a ramp needs to be provided to make the first floor of this building accessible. The first floor restroom, kitchen and doorways should also be modified to meet ADA requirements.

#### Uniform Mechanical Code (UMC):

- Mechanical: See mechanical assessment.

#### National Electrical Code (NEC):

- Electrical: See electrical assessment.
- Security: No security system is present, however, provisions should be made for future installation.

#### National Fire Protection Association Standards (NFPA):



- Fire Protection System: See electrical assessment; automatic fire sprinklers are not installed. Verify that smoke detectors are present and working in the appropriate places in each unit.

Washington State Energy Code (WSEC):

- In general, WSEC requires alterations to existing structures to comply with the provisions of the current code. Section 101.3.2.2 of the WSEC allows Building Officials some amount of discretion dealing with structures on the National Register of Historic Places. Wall cavities should be insulated as possible without destroying historic materials. The attic should be insulated, with provisions made for ventilation. The existing windows, however, are contributing elements to the significance of the structure in the context of the West Barracks and should be rehabilitated.

Hazardous Materials:

- A complete survey of hazardous materials present in the building needs to be conducted prior to commencing any work. Of particular concern is the possible presence of lead paint and asbestos.

***Functional requirements (program) suitability with Secretary of Interior's Standards***

- Exterior: The Duplexes gain historic significance not as individual structure, but as a contributing part of a coherent ensemble of buildings comprising Fort Vancouver's West Barracks. The proposed change of use from living quarters to live/work space has minimal impact on the historic character of the exterior. Necessary changes to existing porches and stairs, and the possible addition of an accessible ramp impact non-contributing elements, and should be undertaken in such a manner as to complement the historic character of the entire West Barracks.
- Interior: The proposed change of use from living quarters to live/work space has minimal impact on the historic character of the interior, as the interior generally lacks features contributing to the historic significance of the West Barracks. Existing historic features including all trim and the wood floors should be preserved and can serve as patterns for new material as it is installed. Other original materials such as plaster surfaces should be preserved to the extent practicable. Necessary changes to interior partitions, mechanical and electrical systems, and the restroom layout can be made, within this context, to allow the structure to continue to serve as a part of the fabric of the West Barracks.



#### Task Four: Alternative Treatments

The duplexes would work the best in a residential occupancy. This might be simply rental housing and live/work (See Plan), or as a part of an elder hostel, assisted-living, or hotel program as supplementary space. This building could be used as an office, but the use of the building would be severely limited by restricted accessibility to the basement and to the second floor. Providing interior access would mean altering the building drastically on the interior of the building for not much square footage gained in space. The addition of an elevator that serviced the basement and the second floor would be nearly impossible to add without destroying the character of the house. Except to provide accessibility, it would not be beneficial to the character of the building to add on to it. Despite the relative ease in re-using this building it is still not certain that the market could sustain additional office space at this point. In addition, the use would not match in terms of the historic function or use if it changes to an office type.

The Class 'C' cost estimate for office use for the year 2003 is \$69.70 per square foot. This would include code upgrades, especially a ramp on the exterior of the building and code compliant handrails etc. but would not include extensive interior work.



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