



**CITY OF KIRKLAND**  
**City Manager's Office**  
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[www.ci.kirkland.wa.us](http://www.ci.kirkland.wa.us)

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## MEMORANDUM

**To:** David Ramsay, City Manager

**From:** Kirkland Cultural Council Members  
Tracy Burrows, Sr. Management Analyst

**Date:** January 8, 2007

**Subject:** Kirkland Cannery Pre-Design Study

Recommendation:

It is recommended that the City Council accept the Kirkland Cannery Pre-Design Study and authorize the Cultural Council to begin to identify partners in a restoration effort.

Background:

The Kirkland Cultural Council, in collaboration with the Kirkland Heritage Society and Koppe Wagoner Architects, recently completed a pre-design study that examined the potential for conversion of the historic Kirkland Cannery Building to a new use within the community. The study identified potential uses and constraints of the building and developed rough cost estimates for its renovation.

The Kirkland Cannery is an 11,000 square foot building located on Eighth Avenue in the light industrial area near the Kirkland Maintenance Center. It is a wood stud framed building with a pitched three tab asphalt shingle roof and horizontal lapped wood siding on the west, east and north sides and vinyl siding on the south. The Cannery was built by the Works Progress Administration (WPA) in 1936 during the Great Depression and is one of the most historically significant buildings in Kirkland. From its inception, the Cannery helped create rich community connections. Residents came to the Cannery to can their homegrown fruits and vegetables, in doing so, agreed to leave a share of their annual communal harvest for neighbors in need. More recently the building operated as a custom salmon smokery where local residents could bring in their salmon catch and have it smoked and canned for later consumption. The Pound family has operated the Cannery since the late 1930's and continues to own the property today.

In June of 2006, the Cultural Council, Heritage Society and Pound family hosted an open house at the Cannery to help generate a vision for the building's future. A wide variety of possible uses were suggested by the community at the gathering. The ideas included a broad range of uses from public community uses such as a community center, arts center, dance center and museum to private uses including a winery, hardware store, a wood-working co-op, a food co-op and a marketplace.

To develop rough cost estimates for the building's use, the architects examined costed out the renovation of the building for uses that were most compatible with the historic building fabric (least exterior

modification) and those that utilized the existing major spaces within the building without changing their spatial quality. The use options included artist studios, administrative offices or gallery space on the main floor and climate-controlled storage or cottage industry space in the basement floor. The architectural team first identified the basic improvements needed to upgrade the core and shell of the building. These improvements would be needed for any of the identified re-uses of the building. They include:

- Site improvements for parking and ADA access/parking
- Site landscaping
- Site utility improvements including storm water detention and sidewalks
- Fire egress/exiting/stair improvements
- Installation of new energy efficient, historical windows
- Upgrades to the building envelope to meet the energy code – insulation at walls and roof
- New wood siding to match original siding
- Interior reconfiguration of walls to meet new uses
- Upgrades of interior finishes to suit the intended use – floor, walls and ceilings
- Installation of new restrooms that comply with the ADA
- Installation of an elevator to comply with the ADA
- Structural improvements to resist earthquakes and addition of post metal connections top and bottom and removal of clay tile walls
- New mechanical heating/ventilating system – type of system dependant on proposed use
- New plumbing system
- Installation of fire suppression system
- New electrical, lighting, data, emergency lighting, fire alarm and phone system– type of system dependant on proposed use

The pre-design study estimated the cost of these core and shell improvements at approximately \$1.4 million.

The cost to complete the interior work (tenant improvements) to meet the specific requirements for new uses can vary considerably depending on the type of use, their space needs, their mechanical and electrical requirements and the level of finishes needed. For the study, the architectural team projected these costs on "a cost per square foot" basis. These interior improvement costs were estimated at \$1.0 million. Thus, the total estimated cost for the Cannery renovation is estimated at \$2.4 million. This cost does not include the cost of acquisition of the building.

### Options

As a next step, the Kirkland Cultural Council would like to move forward to identify potential partners for the effort to preserve this important piece of Kirkland's heritage. Cannery owner Thad Pound has indicated an interest in selling the property within the next one to three years. Given that timeframe, it seems prudent to explore the potential for the acquisition and restoration of the building at this time.

The Cultural Council, in coordination with the City's economic development staff, intends to meet with leaders from a broad range of organizations and businesses such as, non-profits arts and cultural organizations, green industry representatives, food and wine-related commerce, and holistic health partnerships to determine the interest in the Cannery Building. This could lead to a proposal for a public-

private partnership in which the City of Kirkland plays a key role in the restoration of the building for community use. Alternatively, it could result in a private venture taking the lead in the restoration of the building, with potential public partnership on a community use for a portion of the building. Any effort to preserve the Cannery solely for public use will likely depend on successfully engaging a wide range of partners in a community-wide fundraising effort.

Through this dialogue with potential partners, the Cultural Council hopes to identify the possible role the city might play in bringing the Kirkland Cannery back to life in our community. The Council's broad goal is to recapture the communal spirit of reciprocity and interdependence that infused the original WPA creation of the building. Given these broad guidelines, it is the Cultural Council's hope that the energies and care that will go into the restoration of the Kirkland Cannery will yield profound rewards not only for the local citizenry who live in the greater Kirkland community, but visitors who share the desire to cultivate a sense of history and respect for Kirkland's meaningful past.

PRE-DESIGN STUDY

# THE HISTORIC KIRKLAND CANNERY PROJECT

City of Kirkland



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November 8, 2006

**Kirkland Cannery Building – Study for Adaptive Re-Use**  
City of Kirkland

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EastSide Journal 1975

Interior of Kirkland Cannery

**PRE-DESIGN STUDY FOR THE KIRKLAND CANNERY**

**Kirkland Cannery Building – Study for Adaptive Re-Use**  
**City of Kirkland**

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Rooftop ventilation

**Kirkland Cannery Building – Study for Adaptive Re-Use**  
**City of Kirkland**

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**Building Committee**

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**City of Kirkland**

425.887.3009

Tracy Burrows, Sr. Management Analyst  
Tom Radford, Plans Examiner  
Grace Steuart, Fire Marshal  
Jenny Gaus, Senior Storm water Utility Engineer

**Community Members**

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Linda Meuter, Kirkland Cultural Council  
Kathy Page Feek, Kirkland Cultural Council  
Bob Burke, Kirkland Historical Society  
Thad C. Pound, Cannery Property Owner

**Architectural and Engineering Team**

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Cost Estimating:

**The Rafn Company**

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Chip Gregory, Estimator

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## **Executive Summary**

This study explores the conversion of the historic Kirkland Cannery to a new use within the community.

The Cannery is a wood stud framed building with a pitched three tab asphalt shingle roof and horizontal lapped wood siding on the west, east and north sides and vinyl siding on the south. It was built under the Works Progress Administration in 1936. It has 5,100 sf on the Main First Floor with a large canning area, smaller canning areas, offices, loading/storage area, and an existing residence with kitchen and bathroom. It has a full Basement of 5,100 sf that contains a mechanical room, a processing room, and an array of spaces that are used primarily for storage and garage. The Ground Floor (Basement) is limited due to very closely spaced wood columns that limit the flexibility of the space for many uses. The existing building systems (mechanical, electrical, lighting and data are old, non-code complying and in need of replacement for some projected new uses. The building is ventilated with a heating system with a minimal capacity to heat as the processing equipment provided most of the building heating.

## **Building Drawings**

No as-built drawings were available for investigation of the building or for estimating purposes. Koppe Wagoner Architects enlisted a UW graduate student, who was interested in doing her Masters of Architecture thesis on the Cannery. As a part of her thesis, she prepared measured plans and elevations of the building for use in this study.

## **Core and Shell Improvements**

Improvements (core and shell improvements) that are needed to allow the Cannery to be adaptively reused for a number of different uses include:

- Site improvements for parking and ADA access/parking
- Site landscaping
- Site utility improvements including storm water detention and sidewalks
- Fire egress/exiting/stair improvements
- Installation of new energy efficient, historical windows
- Upgrades to the building envelope to meet the energy code – insulation at walls and roof
- New wood siding to match original siding
- Interior reconfiguration of walls to meet new uses
- Upgrades of interior finishes to suit the intended use – floor, walls and ceilings
- Installation of new restrooms that comply with the ADA
- Installation of an elevator to comply with the ADA

- Structural improvements to resist earthquakes and addition of post metal connections top and bottom and removal of clay tile walls
- New mechanical heating/ventilating system – type of system dependant on proposed use
- New plumbing system
- Installation of fire suppression system
- New electrical, lighting, data, emergency lighting, fire alarm and phone system– type of system dependant on proposed use

### **Proposed Uses**

On June 2, 2006, a community open house was held at the Cannery with a large representation from the community present. The party intent was to be a format to solicit ideas regarding the future of the Cannery and potential uses to be included in a renovation.

The community at the gathering suggested a wide variety of possible uses. The ideas included a broad range of uses from public community uses such as a community center, arts center, dance center and museum to private uses including a winery, hardware store, a wood-working co-op, a food co-op and a marketplace.

The most viable use options were reduced to those that were most compatible with the historic building fabric (least exterior modification) and those that utilized the existing major spaces within the building without changing their spatial quality. The use options include:

### **MAIN FLOOR**

Existing Living Areas  
Canning Rooms #2 and 3  
Office  
Main Canning Room #1

**Option 1:** Artist studios (work only, not living space)

**Option 2:** Administrative Office Space  
Open exhibit/gallery space suitable for historic museum/art space or a tasting room

### **GROUND FLOOR**

Ground Floor (entire space)

**Option 1:** Climate-controlled space suitable for museum or wine storage

**Option 2:** Climate-controlled space suitable for cottage industry, such as cheese-making

**Improvements Needed That are Specific to Users (Tenant Improvements)**

**Main Floor**

Option 1: Artist studios at all areas

Improvements to redevelop the interior spaces for artist studio use will be limited. Interior demolition will be limited. Finishes will be replaced only where they are deteriorated. New ADA restrooms and janitor area will be included. The heating system will be limited in nature with the use of area gas space heaters and a ventilation system. New plumbing and utility sinks will be installed throughout the spaces. Electrical branch circuitry will be rewired to code; new industrial-type lighting will be included.

Option 2: Administrative Office Space all areas

**Ground Floor**

Option 1: Museum Storage or Wine Storage

Option 2: Cottage Industry (like cheese making)

**Projected Budget for Improvements**

A goal of this study was to determine a magnitude of costs to improve the Cannery for new community uses while maintaining its historic character and place in the community. The costs projected represent budgets only at this time and are based on limited information as to proposed uses, structural issues and field in conditions. The costs are the result of an initial review and several site visits only.

To complete the project budgeting, Koppe Wagoner Architects worked with Chip Gregory, estimator from The Rafn Company, a local contractor with a significant resume in completing renovations of historic buildings. The Rafn Company contributed their time to complete the budgets. The Rafn Company prepared estimates based on their history of costing on similar projects they have completed escalated to mid-2007. The costs are based on their familiarity with this kind of renovation. The estimates includes a 20% Design Contingency and Escalation to mid- 2007.

To complete the work noted under “Core and Shell Improvements and site improvements” above the budget is a follows:

Core and Shell work	\$1,034,400
Project Soft Costs* (estimated at 36% of Construction Cost)	<u>\$372,384</u>
<b>TOTAL CORE AND SHELL COSTS</b>	<b>\$1,406,784</b>

\* Project Soft Costs include: A & E fees, permits, sales tax, special inspections, bidding costs, project management, testing, construction contingency, etc.

The cost to complete the interior work (tenant improvements) to meet the specific requirements for new uses can vary considerably depending on the type of use, their space needs, their mechanical and electrical requirements and the level of finishes needed. For this study, based on input from the City of Kirkland and the community, we have projected the following costs for several uses base on "a cost per square foot" basis.

**OPTION ONE**

Main Floor -Artist studios at all areas  
Ground Floor - Museum Storage or Wine Storage (not including humidity control and coolers)

Tenant Improvement Cost: \$66/sf x \$10,344 =	\$682,704
<u>Project Soft Costs* (estimated at 36% of Construction Cost)</u>	<u>\$245,773</u>
<b>TOTAL OPTION ONE COSTS</b>	<b>\$928,477</b>

**OPTION TWO**

Main Floor: Administrative Office Space all areas  
Ground Floor: Cottage Industry

Tenant Improvement Cost: \$73/sf x \$10,344 =	\$755,112
<u>Project Soft Costs* (estimated at 36% of Construction Cost)</u>	<u>\$271,840</u>
<b>TOTAL OPTION TWO COSTS</b>	<b>\$1,026,952</b>

**ALTERNATES**

**Alternate One: Remove structural columns at the Basement and Reframe Floor**

The Rafn Company could not estimate this alternate until specific structural engineering is completed. This will occur in future phases of the project.

**Alternate Two: Install a two stop elevator**

The cost would be \$74,000 to complete this addition. The building could meet ADA requirements without an elevator if ADA restrooms are located on each floor.

\* Project Soft Costs include: A & E fees, permits, sales tax, special inspections, bidding costs, project management, testing, construction contingency, etc.

## Specific Report Information

### **The Cannery, A Kirkland Community Historical Icon**

The Cannery is located on the northeast side of downtown Kirkland, WA. It was constructed in 1935-36 as a part of the Federal Works Progress Administration (WPA) Program. It is typical of WPA funded Projects of the era with a simple form and straightforward construction. W.J. Henry, a social worker from Seattle was the driving force to get the cannery built on land donated by the City of Kirkland.

Since it's construction it has served as a food canning facility. During the depression years, it was available to local farmers to can farm products, the first of its kind to provide canning facilities for peoples own gardens. In payment for canning, the farmers gave a 1/3 portion of their canned goods to the cannery for distribution to community members severely affected by the depression. In 1938 it produced 400,000 cans of food and helped 10,000 people. Later, the cannery became a facility supporting the canning of sport fisheries and smoking of local salmon. The canning use was closed down a number of years ago. Since that time, a portion of it has been occupied by the original family descendents as their residence. The building has had a visible presence in the community for the past 71 years and is one of the most significant buildings in Kirkland.

As a part of any renovation of the Cannery, there is historic building fabric that should be retained. The exterior is a building form with a strong, simple solid massing with “punched”, paned wood windows. It has some original wood siding. Several ventilation dormers that are unique and identifiable in the building punctuate the roof form. A metal smoke stack is located to the east helping to express the past canning/smoker function of the building operation. All of these features should be retained in a sensitive renovation.

### **Existing Condition**

The Cannery is situated between 6<sup>th</sup> St. and 8<sup>th</sup> St on Eighth Avenue in Kirkland. It is sited between a single-family residential area to the west and light industrial buildings to the south, east and north. The site has informal gravel and asphalt areas around the building for parking. It has a large loading dock on the north side and a small amount of mature landscaping near the building.

The Cannery is of wood frame construction with a gable roof, heavy beams and columns, wood dropped siding, and wood paned windows. It has not yet been designated a landmark on either the National Register of historic Place or the King County Landmarks Register. The building's exterior features would be designated in any nomination process as important to its character. A Landmarks designation will require review by the King County Landmarks Board for improvements to the buildings exterior.

The buildings Main Floor (5,172 sf) includes a 29' ft x 49' ft main space that is 25'-8" high that was the original canning and smoker room. The main space contains a cooler and smoking chamber. At the west end of the main space is an existing residential unit that is currently occupied by the building owner. The buildings use has decreased in recent years due to the inefficiency of a small cannery operation relative to a large one and the decline of locally available fish. The Main Floor Level has limited finishes and lacks basic amenities for many uses.

The Ground Floor (Basement) (5,172 sf) is partially below grade on two sides with high windows and 9'-8" feet high floor to ceiling height. At the Ground Floor, the building has a network of closely spaced wood columns that are roughly in a 7' x 10' grid. For the most part, the Ground Floor has limited finishes for most uses.

The building has a boiler for use in the canning process and a limited heating system serving the Main Floor and Ground Floor. The building heating system is minimal at best. The system appears to be the original system and is in need of replacement. The boiler probably contains asbestos insulation and should be tested for hazardous materials (see report following by the Mechanical Engineer)

The electrical system has been added to and modified over the years. Changes to the building may require some rewiring, a fire alarm, lighting revisions, etc. (see report following by the Electrical Engineer). The existing electrical service is of adequate size to address most possible uses.



Pressure vessel

**Uses That Have Been Discussed by the Community**

Community members have suggested possible uses during a public “Open House” conducted on June 2, 2006. The uses suggested are the result of notes left by community members and those verbalized at the Open House. They include the following:

**Comments From Cannery Open House**

<b>Proposed Use</b>	<b># of Comments</b>
Community Center/Meeting Space	9
Artist Studios	8
Winery with Restaurant	7
Museum	6
Hardware Store	3
Cooking School/Café with Small Cannery	3
Restaurant	2
Ballet School	2
Artist Welding/Woodworking Coop	2
Performing Arts Theater	2
Cooperative Market – produce and arts	2
High Tech Office	1
Pub	1
Transitional Housing/Human Service Center	1
Wellness Community/Gardens	1
Recreation Use- Tie to Rail Trail	1

Ideas for the Use of the Cannery from Comments at the Open House

**1. Meeting Rooms**

- Free to non-profits
  - Can book regular schedule/monthly/long term
- “City should buy-rent as facility for meetings, weddings, etc.”
- “Concerned about becoming a community center/meeting place because of neighboring residential and traffic”.
- Need free/cheap meeting space for regular events, example Tuesday 8-9:30.
  - with art and music classes (like NKCC).
- “ I would like to see it a community center (like NKCC). Concern would be to 1. Maintain the historic look and feel of the cannery and 2. Provide adequate parking.”

**2. Regional Heritage Center**

- Offices
- Exhibits
- Storage

“In my opinion the cannery should become a historical landmark & a new cannery should be built to have the same purpose”

**3. Artist Studios/Lofts with public view of artists at work (i.e. glass)**

“Maybe have a studio open for the public for public use and have supplies so if anyone wants to do something creative, artsy that they can come and have supplies to use with an informal structure. Possibly have some artists to give advice/suggestions.”

**4. Chamber of Commerce Space**

**5. Museum**

- Tour gift shop (Salmon)
- Kids canning section. Display of assembly line
- Restore a small home canning kitchen on a small scale.
- Combine with potential cooking school.
- Heritage exhibit space and interpretation

**6. Cooking school: (like California Culinary Institute in Napa Valley) with café. "Emphasis on local produce and fish".**

**7. Amphitheater:**

- Concerts
- Readings
- Children’s Theater
- Adult Theater
- Events

**8. Arts**

- Studios-artists
- Iron work
- Welding
- Sculpture
- Large area for rental
- Small café-organic-with art and history
- Sculpture
- Local Artists Gallery
- Artist/solo work-live spaces.

“The arts in Kirkland need space to expand class rooms, studios, space for large functions, arts and community org. needs space for offices. There needs to be space for history of cannery.”

“Artist’s studio that brings some unique art like blown glass or bronze to Kirkland.”(With Gallery).”

**9. Winery/Restaurant**

Wine tasting -local wineries

- Small restaurant (Walla Walla connection)
- Winery: Wine making co-op

**10. Convention Center**

**11. Co-op for produce and/or arts and crafts**

- A “canning” operation-food products, line of marinades, salad dressings, desserts and wines
- Cooking classes, providing some support for community services.
- Lease booths with works like Pike Place Market

**12. Transitional housing for women and children at risk.**

- Place to hold retraining classes or job training classes to help homeless/unemployed.

**13. Organic foods co-op**

- A “canning” operation-food products, line of marinades, salad dressings, desserts and wines
- Cooking classes, providing some support for community services.

**14. Wine and/ or beer co-op for local home wines and brews**

**15. Microbrew pub**

**16. High Tech office**

**17. Ballet School**

**18. Community Center**

**19. Wellness Community:**

- Intergenerational Teaching Environment
- Environmental Gardens
- Art Experiences

**20. Hardware Store**

- Historic/modern hardware
- Similar to Harrison Brothers Hardware, Huntsville, AL.
- Hardware Store w/gifts-garden. Similar to City People on Sandpoint
- “For the People”

**21. Wood-work Cooperative Shop**

- Place to “rent” workspace for individual projects, furniture upholstery, woodworking, scrap booking, craft/art projects that require space
- Welding, stained glass, ceramics, etc.
- Class or group meetings (sewing bee, craft group).

**22. Miscellaneous Comments**

- Neighboring traffic concerns for 8<sup>th</sup>, 9<sup>th</sup> avenues
- City should purchase and use for community events

**Preferred Uses**

The Cannery Building Study Committee reviewed the uses that were suggested in the community open house for viability, appropriateness to the historic structure, economic viability and need within the community. Suggested uses that would adversely affect the buildings historic exterior appearance were set aside. Uses that would require significant interior alterations were also removed from the list of viable uses. The selected uses to further investigate include the following. These uses will be considered to help determine project budgets for rehabilitation of the Cannery Building.

<b>Potential Uses Selected to Cost for Tenant Improvements</b>	
Location	Use
<b>MAIN FLOOR</b>	
Existing Living Areas Canning Rooms #2 and 3 Office	<b>Option 1:</b> Artist studios (work only, not living space) <b>Option 2:</b> Administrative Office Space
Main Canning Room #1	Open exhibit/gallery space suitable for historic museum/art space or a tasting room
<b>GROUND FLOOR</b>	
Ground Floor (entire space)	<b>Option 1:</b> Climate-controlled space suitable for museum or wine storage <b>Option 2:</b> Climate-controlled space suitable for cottage industry, such as cheese-making

**Renovation Issues**

Since its construction, the Cannery has undergone little remodeling to improve the building systems, seismic performance, or functionality. Its exterior appearance is almost as it was when it was originally constructed. Additions to the building that appear to be added include a stair at the southwest corner and single paned windows at the north side in lieu of the multi-paned original wood windows. The building has retained its charm and character and historic qualities.

The mechanical and some electrical systems are in need of replacement. The original Cannery use did not require sophisticated building systems or high quality finishes.

To adaptively re-use the building will require significant improvements to the basic building systems, addition of public restrooms and some spatial reorganization. Additional structural

framing ties will need to be added at the wood wall to foundation and beam to post connections as well as additional plywood shear walls to increase the building's resistance to a seismic event. See the "Architectural Deficiency Review", "Structural Review" and "Mechanical /Electrical" Sections for specific recommendations.

### **Green Building Design**

There is considerable community interest in approaching this renovation with a sincere attitude of building preservation and rehabilitation that is conscious of green building practices. A view towards green building practices begins with the notion of recycling our built environment with new adaptive new uses in lieu of destroying the existing structure and creation of a wholly new facility. In the case of the Cannery, saving historic fabric within the community with significant cultural history as well as materials preservation is significant step towards green building design. This represents a solid first step towards environmentally conscious design.

As a next step, the renovation can include components of green architecture by: 1. designing building systems and insulation with regard to energy conservation; 2. requiring on-site recycling of construction scrap materials; 3. specifying materials made from recycled products; 4. using materials that can be recycled at the end of their effective life; 5. using low VOC toxic materials in the construction. These considerations are easy to incorporate in the Cannery's development if there is a conscious intent to make this a priority.

The most comprehensive approach would be to approach the building with the goal of achieving a LEED certification. There are several levels of certification possible. When the project is more clearly understood, and funded, this goal should be discussed and considered.



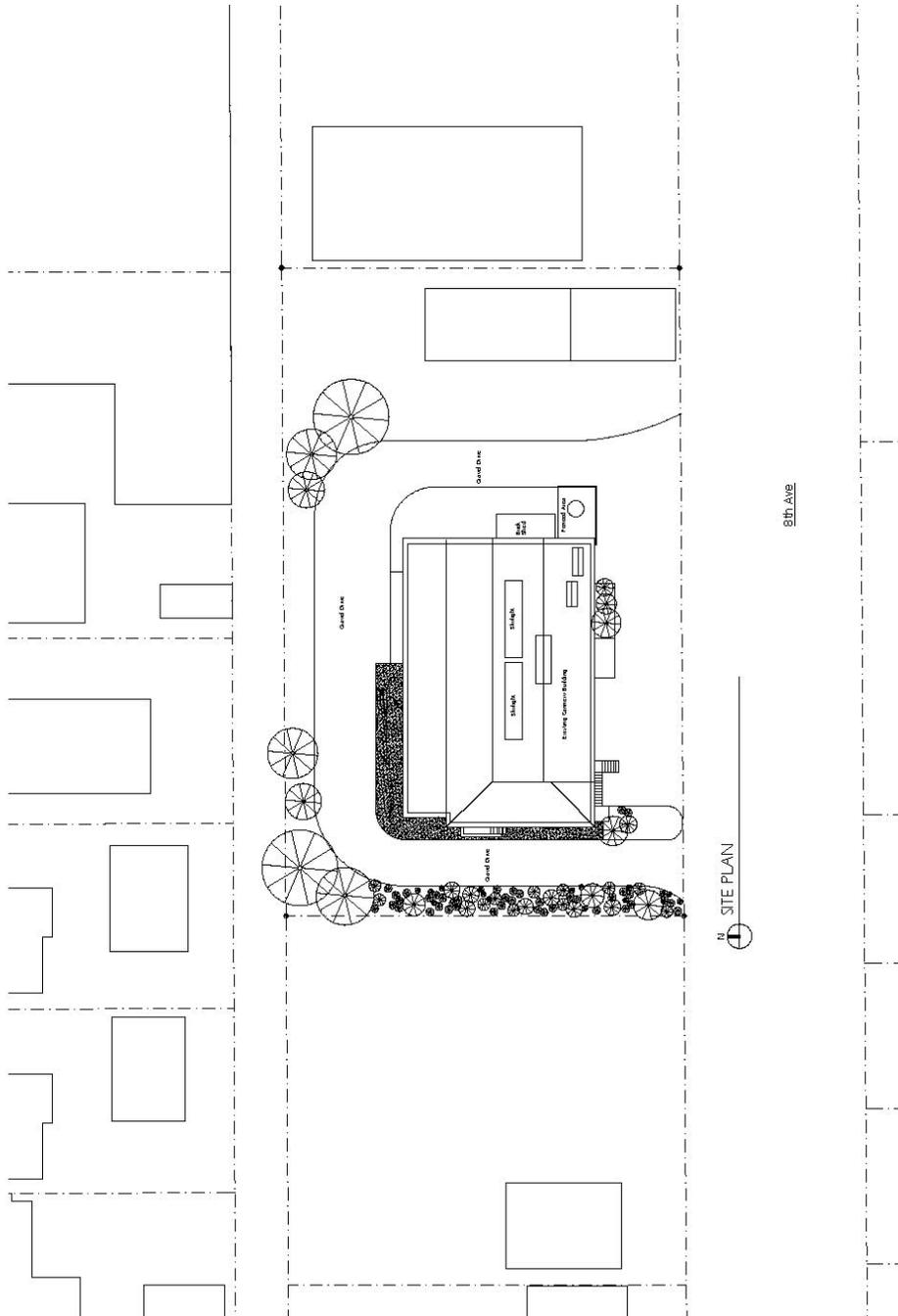
Cannery smoker

## **As-Built Floor Plans**

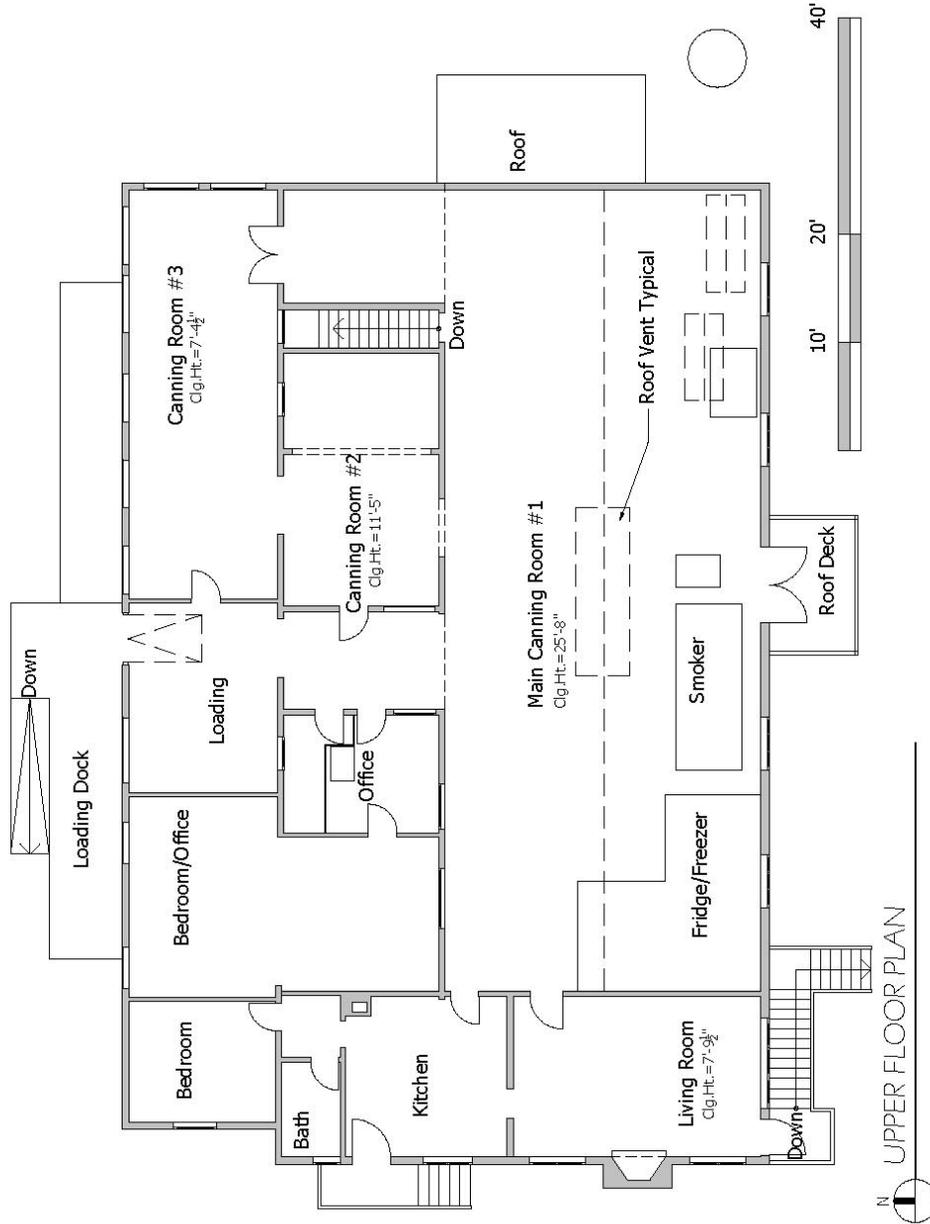
See the following sheets for:

- As-Built Site Plan
- As-Built Upper Plan
- As-Built Lower Plan
- As-Built South and West Elevations
- As-Built East and North Elevations

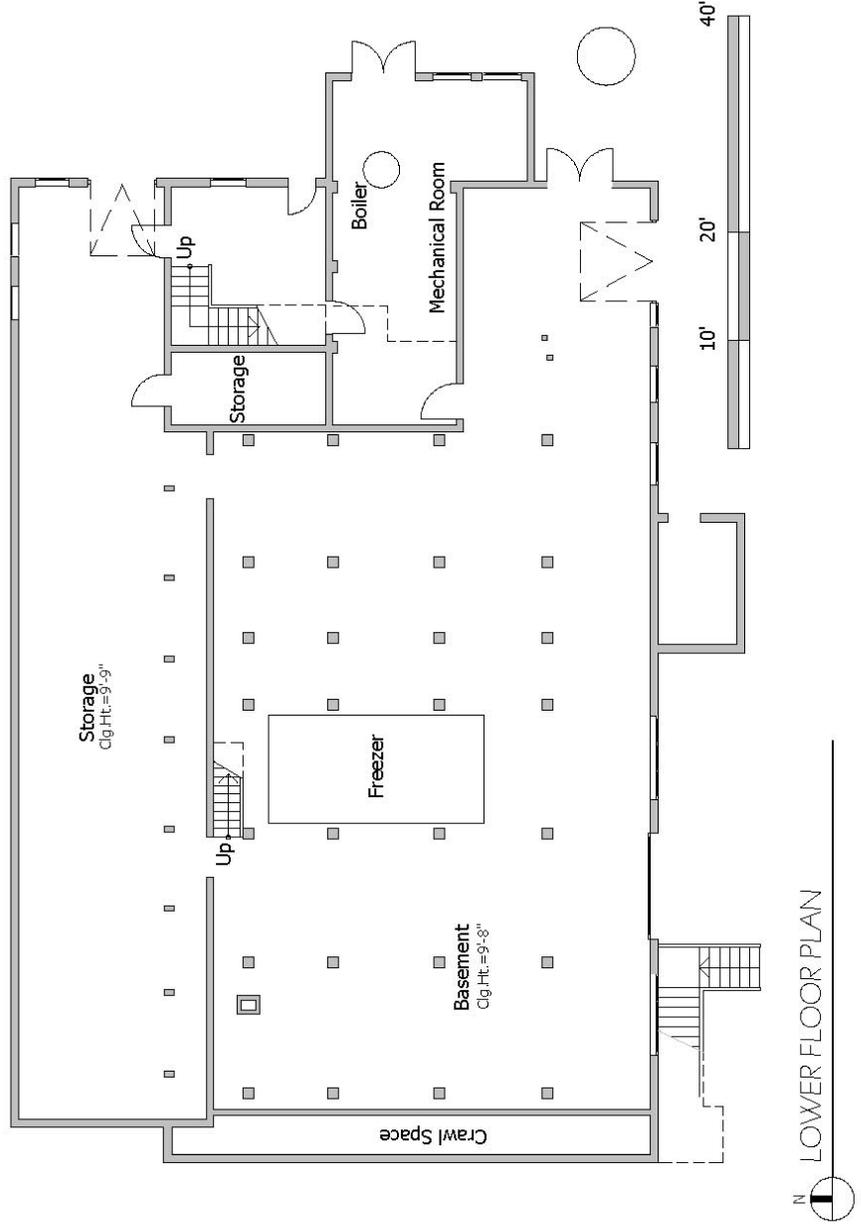
**As-Built Site Plan**



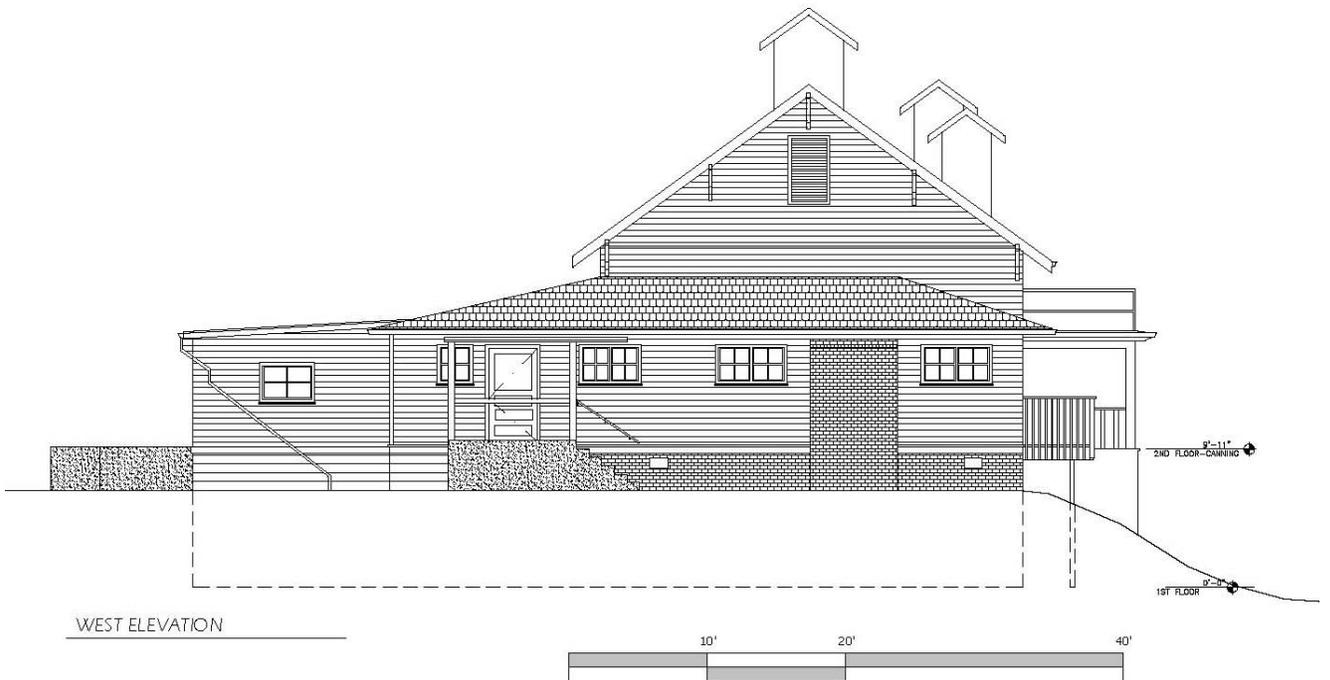
**As-Built Upper Floor Plan**



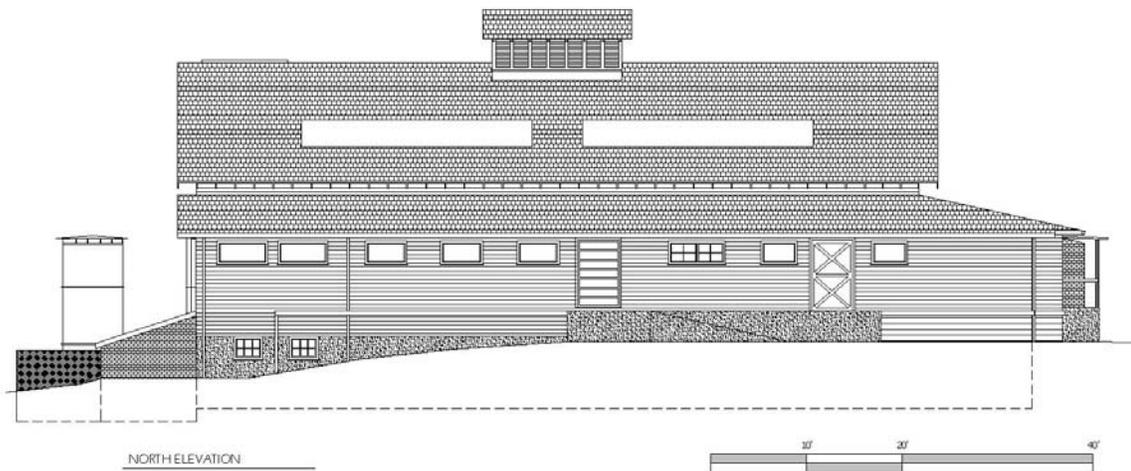
**As-Built Lower Floor Plan**



**As-Built South and West Elevations**



**As-Built North and East Elevations**



## **Cost Estimate**

## **KIRKLAND CANNERY – Potential Uses and Core/Shell Costs**

KWA worked with Chip Gregory of The Rafn Company, a local contractor with a depth of knowledge on projects similar to the Cannery Project. The costs noted below are their best estimate of the rehabilitation costs based on historical cost data they have on similar projects. At this point in time, the City of Kirkland has opted to use this cost comparison model and not complete a line item take off of labor and materials. This type of estimating will occur in future phases, as more information related to structural work, mechanical, civil and electrical systems are known and a building plan is completed. The following costs are very rough at this point.

### **Exterior Site Improvements**

Provide asphalt paving at the south side with lined parking and ADA stalls. Pressure wash loading dock, provide for a landscape budget for landscaping of 600 s.f.

Cost per square foot: \$9.00  
Cost: 10,344 sf x \$9.00 = \$93,096

### **Core and Shell Rehabilitation**

Renovate the exterior including new Hardi-plank lap siding (4” to weather, new wood historic insulated glass windows and trim, new exterior doors, wall insulation to R-13, batt roof insulation to R-30, structural improvements for seismic (see structural report), new ADA ramp on the north side loading dock to the Main Floor, railings at the Loading Dock, removal and replacement of southwest exterior stair, reconstruction of wood stair from Main Floor to Ground Floor. The existing roofing is relatively new and will remain. Provide exterior lighting of the parking areas.

Cost per sf: \$91.00  
Cost: 10,344 sf x \$91.00 = \$941,304

### **Interior Rehabilitation**

Under either of the Two Options below, the renovated spaces will be simply renovated, with new GWB finishes, new flooring, new branch electrical and telephone, new electrical service gear, heating and ventilation only, new doors and hardware, demolition of interior surfaces and equipment, new lighting, new Men’s and Women’s Restrooms on each floor (2 lav’s and 2 toilets in each). There will be minor space reconfigurations (spaces to be used as they exist). A new leveling topping will be required at the Main Floor Main Canning Room.

PROPOSED OPTIONS

**Option One – Artist Use / Museum Use**

	<b><u>Cost per S.F.</u></b>
MAIN FLOOR	
Existing living areas - Artist studios (work only, not living space)	
Canning rooms #2 and 3 - Artist studios (work only, not living space)	
Office - Artist studios (work only, not living space)	
MAIN CANNING ROOM #1	
Open exhibit/gallery space suitable for historic museum/art space	\$71.00
GROUND FLOOR (Basement)	
Climate-controlled space suitable for museum storage (climate controlled spaces not in core/shell cost)	\$60.00
Average building cost for both floors	\$66/sf x 5 10,344 sf = \$682,704

**Option Two – Administrative Offices / Cottage Industry**

MAIN FLOOR	
Existing living areas - Administrative Office Space	
Canning rooms #2 and 3 - Administrative Office Space	
Office - Administrative Office Space	
MAIN CANNING ROOM #1	
Open exhibit/gallery space suitable for a tasting room	\$75.00
GROUND FLOOR (Basement)	
Climate-controlled space suitable for cottage industry, such as cheese-making or wine making. Climate controlled space /equipment NIC)	\$70.00
Average building cost for both floors	\$73/sf x 10,344 sf = \$755,112

**Cost Alternates**

**Alternate Number One:** A cost should be proposed for removal of columns in the Ground Floor (Basement) in the open areas. This would entail removal of columns, new beams and new foundations to remove every other column in open areas.

Cost: This is not possible to estimate without a structural engineers input (per The Rafn Company) Removal of columns will be addressed as to their costs in the next phase of work.

**Alternate Number Two:** A cost should be included for adding a 2 stop holeless elevator in the building with Basic Finishes.

Cost: \$74,000

## **Architectural Deficiency Report**

### **Introduction**

This Deficiency Report is based on visits to the Cannery by KWA, with visual surface inspections of the building's exterior and interior. The study is not based on any invasive investigations or revealing of hidden conditions. This report represents our general evaluation of the current condition of the building's architectural elements and is organized by exterior and interior building components. A code review of the Cannery and its projected use as artists studios/gallery/museum or offices/cottage industry is based on the 2003 International Building Code. A change of use from a cannery use to a public use may require code improvements to bring the building up to current code requirements. The building is a historic landmark. The 2003 International Building Code gives the local Building Department flexibility in requiring code compliance in all areas for historic structures. A more in-depth study should include a review with the local Building officials to determine code conformance requirements.

### **Architectural Observations**

#### **A. Exterior Condition**

##### **Site Improvements**

**Parking:** The areas available for parking are not delineated and are informal with head-in parking on the south side.

**Corrections:** Renovation will require formalizing parking, making provisions for adequate stalls for the projected uses, and ADA designated parking. The City will probably require curbs, gutters, storm water detention and connection and a designated single curb cut.

**Loading:** The existing loading dock on the north side of the building is serviceable for future tenant loading needs.

**Corrections:** It will need to be improved with railings and stair improvements.

**Landscaping:** There is minimal landscaping on-site, mostly confined to the west property line and close to the building on the west.

**Corrections:** Additional landscaping should be provided as a part of the renovation. The landscaping should not obscure the exterior of the south facade.

Storm Drainage: The existing site hardscape consists of gravel and paved areas. There is no collection system for runoff on-site.

Corrections: The City of Kirkland has indicated that collection of storm run-off will be required as the building will require a change of use permit. The system will need to include storm detention, catch basins, and a tie-in to the City storm sewer system.

### **Building Foundation**

The building has continuous concrete perimeter footings and stem walls, and concrete footings at post bearing lines within the building footprint. In addition, some areas have unreinforced (URM) brick masonry foundation walls. No visible problems, such as excessive settlement, cracking, or moisture intrusion, were detected or reported by the structural engineer.

Corrections: No significant structural connection currently exists between the perimeter wood stud walls and the concrete stem walls. During the seismic retrofit portion of the project, steps will need to be taken to establish a sufficient connection between the wood frame wall and the top of the concrete stem wall around the building perimeter. Additional measures may be required to ensure that moisture intrusion through the foundation walls will not occur if the perimeter Basement walls are to be furred out and used for an active function.

### **Exterior walls:**

Exterior walls are of 2x4 wood frame construction, though it has not been verified whether the structure is balloon or platform framed (old plans indicate the former). The walls are covered with ¾" horizontal shiplap sheathing and milled, dropped siding on the west, east and north walls. The south side has lapped vinyl siding. The original wood siding has a deteriorated paint finish and a significant weathered appearance. The existing exterior wall cavities are un-insulated.

Corrections: The wood siding is in need of repair and will require replacement. The vinyl siding should be replaced to return the exterior to its historic condition. Structurally, the exterior walls will need to be tied to the foundation, and new plywood added in some areas as shear walls to resist lateral earthquake forces. The preliminary structural walk-through and review, by Degenkolb Engineers has not included a structural analysis of the building's ability to withstand lateral seismic forces (see structural review following).

### **Roof:**

The main roof was recently re-roofed with three-tab asphalt shingles over plywood. The roof forms, together with the building's overall proportions, wood windows and siding, in large part, define its exterior aesthetic.

Corrections: The three-tab shingles are in good condition. No leaks have been reported. Replacement of the shingles is not required. The roof/attic is not vented. If a new ceiling and insulation are added over the First Floor, the attic should be vented with a new ridge vent and gable end wood vent louvers. The metal gutters and downspouts are in need of replacement. Tight line storm drainage to proper City storm drains needs to be installed. To meet current codes, fall arrest protection should be installed at the roof peak.

### **Porch:**

The south side of the building has a small porch that is not accessible from the interior. The porch roof was not investigated for dry rot or other issues.

Corrections: Although the porch deck is, for the most part, in reasonably good condition, it is not known what type of waterproofing exists at the porch deck. Further investigation of potential dry rot should occur. It is assumed that the membrane requires replacement.

### **Windows:**

The building's windows, with the exception of the north windows, date from the original construction of the building, and as such, are all single-paned wood windows. The exterior wood frames and sash of the windows is in poor condition. The north windows at the Main Floor have been replaced with windows that lack the divided lights typical of the original windows.

Corrections: To improve the building's energy performance, the frames and glazing should be replaced with new "in-kind" wood framed units with divided (dl) or simulated divided lites (sdl) with insulated glass to meet current energy codes and Landmarks requirements. The reduction in building air infiltration resulting from this upgrade may need to be addressed with mechanical ventilation.

### **Doors:**

The exterior doors are of an early vintage and are a style and rail type doors with raised panels and glazing. Most likely the glazing is not safety glass. There are original sliding "barn door" panel doors on the north and south side. They add to the historic building fabric and should be retained. They should be renovated and provided with new hardware.

Corrections: For aesthetic and historical reasons, it is recommended that the existing entry doors be retained; refurbished including new hardware and they should have new insulated safety glass.

### **Loading Dock:**

A loading dock, metal stair and ramp are on the north side of the building. The loading dock should be retained as an historic feature and renovated to suit a new use. The existing metal stair does not meet code as to its rise and run or railings.

Corrections: The loading dock should have a guardrail added at its edges that conforms to building code requirements. Its design should be of metal and relate to the existing buildings character. The existing metal stair should be replaced with a stair that conforms to code.

### **ADA Access:**

The Basement Level has direct access to grade on the south side and can meet ADA access requirements through existing doorways. The Main Floor is raised above grade on all sides. It is possible to install an ADA ramp on the north side from grade to the loading dock level as access to this floor for the physically disabled. A ramp would be approximately 36' long at the ADA requirement of 1 to 12 slope. There is no ADA access within the building from the Basement Level to the Main Floor Level.

Corrections: The building has a number of issues that will need to be addressed to conform to ADA requirements for new uses. They include:

- ADA accessible restrooms
- Door widths that meet ADA requirements inc. 34" clear width, 18" clearance on door strike side, lever handles
- Possible addition of an elevator (connection from floor to floor)
- Possible addition of ADA high/low drinking fountain
- Possible ADA accessible Kitchenette for meeting spaces
- ADA signage
- ADA parking stalls near an accessible building entry
- ADA ramp to serve the Main First Floor if an accessible elevator is not accessible at the Basement level from the south side of the building

### **Energy Code Compliance:**

The existing building does not meet energy code requirements related to insulation, window glazing, required air changes and air infiltration.

Corrections: To meet the energy code and to minimize on-going energy costs, upgrades are very desirable. The following improvements should be made:

- Replace existing windows and skylights with low-e argon filled insulated glazing
- After siding is removed, apply infiltration sheathing such as "Tyvek" to the exterior sheathing

- Install R-13 kraft-faced fiberglass batt insulation at all exterior 2x4 stud walls
- Install R-30 kraft-faced fiberglass batt and/or blow-in insulation at the existing attic ceiling
- Install R-19 fiberglass batt insulation at all under-floor areas over crawl paces
- Provide thresholds and weather stripping at all exterior doors
- Provide foam sealant at all window/door frames to rough wood framing

**Other exterior elements:**

1. Southwest Stairway: A stairway has been added on the exterior of the building at some point in the past. It does not fit well with the existing historic image of the building, particularly the railing. The railing should be replaced with a railing more consistent with the original building detailing.
2. Miscellaneous: The past addition of exterior equipment has left the building facades with surface-mounted conduit and fixtures, which detract from its historical appearance. Removing or re-routing these elements is desirable.
3. Existing metal stack on the southeast corner: The existing stack should be retained, if feasible, as it aids in telling the story of the original building use. Further investigation of the feasibility of retaining it and its structural issues should be assessed.

**B. Interior Condition**

**Main Level Large Canning Room:**

The large Canning Room on the Main Floor is the architectural main area of the original canning operation, with a 25 ft. ceiling, warehouse-type construction and it contains the original smoking and canning equipment. It's exposed framing, industrial lighting, rough finishes and concrete floor with drains limit the types of uses the large Canning Room can be used for without significant renovation. Without major renovation, the uses will be limited to light industrial, or cottage industry uses.

Corrections: The renovation work needed to adaptively re-use this space will be a function of the type of use selected for the space.

**Adjacent Rooms:** As in the Main Canning Room, the finishes, mechanical and electrical systems are minimal. The new use will define the degree of replacement of systems and finishes.

Corrections: The renovation work needed to adaptively re-use this space will be a function of the type of use selected for the space.

**Residential Unit:** The residential unit is a non-conforming use in the building. There have been no comments from the community on the need to preserve this function. It should be removed from the structure and the space reconfigured for a new use compatible with other areas of the Main First floor.

Corrections: Demolish the interior residential unit and renovate for a new use. The degree of demolition will be a function of the projected new use.

**Existing Canning and Smoking Equipment:** The building has a strong heritage in the community related to its past function as a depression-era community canning facility. The canning equipment is a part of the historic fabric narrating the past use. The significant interior equipment includes the smoker, the pressure vessel, the overhead lifting track and the Basement canning equipment

Corrections: To the degree possible, with the new uses, preserve in place the existing equipment.

**Stairways:** The existing stairways may not meet code as to the width of the stairs and the rise and run of the stair. Depending on the use and the occupancy load the stairs may need to be re-constructed.

Corrections: The reconstruction of the stairs and location of the stairs should be assessed when the use of the building and occupancy load are known.

### **Basement Level:**

The Basement Level has a uniform ceiling height of 9'-8" ft. The floor consists of a concrete slab throughout. The floor is divided into two areas by a structural bearing wall that run the length of the building from east to west. The bearing wall is of 2x4 stud wall construction.

The perimeter walls consist of concrete board formed walls with un-reinforced brick masonry (URM) in some areas. The south side exterior wall is a 2x4 stud wall. Due to the heavy floor loading of the concrete/wood floor above there is a significant grid of wood posts at the Basement Level with wood beams running in the east-west direction. The posts are approximately in a grid of 7' x 10'. A Mechanical/Boiler Room is in the eastern section with un-reinforced clay tile walls at its perimeter. There is a large metal cooler near the center of the Basement.

Corrections – General: Surfaces, finishes, and fixtures are generally in poor condition and of low grade. The existing floor structure above and exterior stud walls are exposed on the interior. Lighting and ventilation are inadequate. The floor slab is reasonably level, but does exhibit localized cracking that should be addressed in order to accommodate future finished flooring.

## **Structural Deficiency Report**

This report presents the findings from a site visit by David Gonzales of Debenkolb Engineers on April 25, 2006 to the building and their review of the AutoCAD as-built drawings.

### **Existing Construction Conditions**

The Cannery was built in 1936 and has approximately 11,000 square feet. It is a two story wood framed building. The roof over the building is plywood nailed directly to purlins spanning between wood trusses supported by the perimeter walls. The building walls consist of vertical wood studs covered by horizontal boards. Blocking between trusses was not observed and it appears the trusses are toe nailed to the wall top plates, no metal clips or other mechanical connection was observed.

The main floor consists of a 4 in. to 6 in. concrete slab supported by 2x12 joists supported by wood beams spanning between wood columns. Although no signs of structural distress or excessive deflection were observed, a few of the beams and posts present large cracks and checks due to either the quality of the wood or shrinkage that has occurred over the years.

There is no mechanical connection between the joists, beams and columns. The joists overlap over the beams, which are directly placed over the large timber columns.

The lower level slab is a concrete slab extending almost the full area of the lower floor. The building site is sloped with the front South side of the structure at the lower grade and the back North entrance at a higher grade. There are concrete retaining walls on the North, East and West sides of the building.

A portion of the lower level in the East side of the building is enclosed by Hollow Clay Tile walls, used apparently as fire walls around the Steam Boiler Room. These Hollow Clay Tile partitions also extend around the stairwell that leads to the lower level from the Main Floor.

Over the years the building has experienced some relatively minor structural modifications. One of most significant modification is the addition of a living space area in the north and west sides of the building. This addition appears to have been constructed with modern materials such as those typically found in residential construction.

Another relatively recent modification was the replacement of the roofing and original sheathing with what appears to be plywood sheathing laid over the existing purlins spanning between trusses.

The South façade of the building presents a vinyl siding that replaced the original horizontal wood board siding, which is still present on the north, east and west sides of the structure.

### **Potential Structural Deficiencies**

Although a formal seismic evaluation has not been performed for the Cannery Building, the structure can be classified as type W2 according to the *ASCE 31: Seismic Evaluation of Existing Buildings* Standard.

The lateral forces are resisted by a roof wood diaphragm and a concrete diaphragm at the main floor level, which transfer the forces to the shear walls around the perimeter of the building formed by the stud walls sheathed with horizontal boards.

Based on the field observations and the typical deficiencies commonly found in this type of buildings, an estimate of the potential structural deficiencies includes the following:

- Roof and floor diaphragms are not positively connected to shear walls.
- Wood shear walls and sheathing lack adequate capacity to resist the seismic forces expected at the site.
- Wood shear walls lack adequate attachment to retaining or cripple walls. Hold-downs were not observed.
- Lack of positive connection between beams, joists and columns. Columns are not connected to footings.
- Roof chords are not continuous.
- The roof diaphragm most likely does not have enough capacity to resist the seismic forces expected at the site (inadequate nailing).
- Hollow Clay Tile partitions are not positively connected to the floors and do not have enough strength or reinforcing to resist out-of-plane seismic forces.
- Subsequent additions to the building may not have sound attachment to the lateral force resisting systems.

### **Potential Structural Upgrade Recommendations**

The structural upgrade recommendations listed below are intended to provide a schematic level perspective of the measurements that could be required to mitigate the deficiencies listed above.

- Provide positive connection of roof trusses and floor joists to the stud walls with metal clips.
- Install blocking between roof trusses around the perimeter and field blocking as required to increase diaphragm capacity.
- Verify/provide adequate roof's plywood panel nailing to increase diaphragm shear strength.

- Replace existing straight board sheathing with plywood to create several shear wall segments. Add hold-downs epoxied into foundation at each end of the shear walls and provide positive connection of the wood sill to concrete foundation.
- Add metal clips and straps to all beam/joist and beam/column connections.
- Attach wood columns to existing foundations with epoxy anchors and metal clips.
- Remove and replace Hollow Clay Tile partitions with gypsum board and studs.
- Add/supplement structural connection of addition to the main building.

It is recommended that a full seismic structural evaluation of the Cannery be performed to assess the structural capacity of the building for the intended safety performance objective.



Canning equipment

## **Mechanical and Electrical Deficiency Report**

This report presents the findings from a site visit by John Hunt of Hunt Engineering Services on April 25, 2006 to the building and their review of the AutoCAD as-built drawings.

### **Mechanical:**

Overview: Overall the mechanical system is industrial in nature with the only HVAC being ventilation. The process equipment includes a smoker, a scrubber/burner (to clean the exhaust of the smoker), a vacuum system, and some other system piping. While some of these systems are in better shape than others, none of these systems will be needed with the new use of the building and will need to be removed. The Domestic water system and waste and vent are functional but have received many patches and upgrades through the years. These systems should be replaced to reduce future maintenance.

HVAC: The existing cannery has a basic ventilation system. With the heat loads from the process equipment no significant heating systems were required. Should the factory area be changed to a fully heated space it would need to be insulated per the Washington State Energy Code.

Process Equipment: There remains in the building an existing smoker, the exhaust is routed through an exterior gas fired scrubber unit, to clean the exhaust air. One of the vacuum pumps systems is still operational. The existing process systems will need to be removed for the new use of the space.

Plumbing: The domestic water system is a combination of galvanized piping and copper. The large hot water tanks and heaters are old and will not be needed for the new use. The waste and vent system consists of bell and socket and no-hub cast iron, supplemented with ABS piping. Both systems are currently functional but would need to be upgraded for dependable operation of the building. Many of the drains may no longer be needed. Fortunately, the building is very accessible with a full basement and exposed structure. This will allow any upgrades to the plumbing system to be implemented with minimal impact to the building.

Natural Gas: There is a large commercial natural gas service to the building. For a non-industrial use, this service will need to be reduced to a low-pressure system.

### **Electrical:**

Overview: The electrical service and branch panels could be reused. They are in reasonably good condition and are not too old. Branch circuits can be reused where feasible, but we anticipate that most will be replaced. Some romex (sheathed cable) has been installed for what is now a residential application. However, most of the systems are in conduit. The lighting is functional but should be upgraded to energy efficient lighting.

Electrical Service: The existing service 120/208 volts, 3 phase, 4 wire with multiple 200 amp disconnects. The service should have the capacity for any new use of the building unless a large air conditioning system is added.

Power: The existing power system is primarily in conduit with some sheathed cable. Branch panels are in good shape and branch circuits can be reused where applicable

Branch Receptacle Power: The branch wiring appears to be in serviceable condition. However, with any change of use we expect that the needed locations of receptacles will change and new branch circuits would be added. Additionally, many of the dedicated circuits for specialized equipment will no longer be needed and can be removed.

Lighting: The existing lighting is industrial in nature and working. The lighting system will benefit in being replaced both in the overall appearance and in the efficiency of the lights.

**Budget Cost for upgrades:**

Until the general use of the facility is decided upon it is difficult to provide a budget cost for the required upgrades. The follow rough order of magnitude costing is based on a general use. It is not estimated as new office space or retail. If this type of application were selected, the costs would be similar to a new tenant building in an existing core and shell building.

**Main Floor**

Mechanical

**Option 1**

Heating and ventilation only: \$30,000  
(basic HVAC, natural ventilation utilized)

**Option 2**

Full HVAC system: \$74,800

Plumbing: \$22,440 (basic plumbing for general use)  
(Plumbing costs are driven by the number of plumbing fixtures)

Electrical

Branch Circuiting: \$15,000  
Lighting: \$22,500  
Main Floor Estimated Cost \$80,000 to \$125,000

**Basement Floor (estimate 50% utilization):**

Mechanical

Basic heating /ventilation:	\$15,000
Plumbing:	\$12,000

Electrical

Branch circuiting:	\$7,000
Lighting:	<u>\$18,000</u>
Lower floor estimated cost	\$52,000

Total Mechanical and Electrical Upgrades: \$132,000 to \$177,000

**Zoning and Land Use Issues**

The following zoning summary was prepared by the City of Kirkland related to the future property development. It defines the requirements for various uses that could be included in the project.

- **Zone: L.I.T. ZONE**
- **Building Height Limit:**

**35' above average height elevation.** . Average Building Elevation – The average elevation of the topography, prior to any development activity, at the center of all exterior walls of a building or structure, including decks and porches, unless the deck or porch has no walls at or below the deck level and no roof above the deck or porch, and including cantilevered portions of a building which enclose interior space. When a building or structure contains townhouses or other attached, but otherwise independent building units, the average building elevation calculations are calculated separately for each unit.

- **Required Yards-** Front 20’; Side 0’; Rear 0’
- **Parking:** The parking requirement will vary significantly based on the building use. Some uses may be precluded due to limited areas for parking.
- **Lot Coverage:** The existing building area is well under the maximum allowed lot coverage for all of the uses noted in the table below. The actual lot coverage should be addressed when the uses are firmly known.

**Allowable Uses in the L.I.T. Zone**

<b>Allowed Use</b>	<b>Parking</b>	<b>Lot Coverage</b>
<p><b>Community Facility</b>                      A use which serves the public and is generally of a public service, noncommercial nature. Such use shall include food banks, clothing banks, and other nonprofit social service organizations; nonprofit recreational facilities; and nonprofit performing arts centers.</p>	<p>Established on a case-by-case basis based on actual parking demand of similar existing uses.</p>	<p><b>80%</b></p>
<p><b>Government Facility</b> A use consisting of services and facilities operated by any level of government.</p>	<p>Established on a case-by-case basis based on actual parking demand of similar existing uses.</p>	<p><b>80%</b></p>
<p><b>Restaurant</b> - Commercial use (excluding fast food restaurants) which sells prepared food or beverages and generally offers accommodations for consuming the food or beverage on the premises, and where the seating and associated circulation areas exceed 10 percent of the gross floor area of the use.</p>	<p><b>1 per 100 sf of GFA</b></p>	<p><b>80%</b></p>

**Allowable Uses in the L.I.T. Zone cont.**

<p><b>Commercial Recreation Area and Uses</b> -An area and use operated for profit, with private facilities, equipment or services for recreational purposes, including swimming pools, tennis courts, playgrounds and other similar uses. The use of such an area may be limited to private membership or may be open to the public upon the payment of a fee.</p>	<p>Established on a case-by-case basis based on actual parking demand of similar existing uses.</p>	<p><b>80%</b></p>
<p><b>Public Park</b></p>	<p>Established on a case-by-case basis based on actual parking demand of similar existing uses.</p>	<p><b>Established on a case by case basis</b></p>
<p><b>Manufacturing and Storage</b></p>	<p><b>1 per 1000 sf of GFA</b></p>	<p><b>90%</b></p>
<p><b>High Technology</b> A place of employment engaging in research, development and testing, assembly, office and manufacturing, including industries in biotechnology, medical instrumentation or supplies, communications and information technology, electronics and instrumentation, and computer hardware and software.</p>	<p><b>1 per 300 sf of GFA or if manufacturing, 1 per 1000 sf of GFA</b></p>	<p><b>80%</b></p>
<p><b>Office Uses</b></p>	<p><b>1 per 300 sf of GFA</b></p>	<p><b>70%</b></p>
<p><b>Day-Care Center</b></p>	<p>Established on a case-by-case basis based on actual parking demand of similar existing uses.</p>	<p><b>80%</b></p>
<p><b>Banking and Related Financial Services</b></p>	<p><b>1 per 300 sf of GFA</b></p>	<p><b>80%</b></p>

## Code Review Summary

*Project:*           **Kirkland Cannery Building**

*Project No.:*

*Code:*               **2003 IBC**

<i>Requirements</i>	<i>Code Reference:</i>
1. <b>Occupancy Use:</b> B-2 per page 47	303.1
2. <b>Occupancy Separation:</b> Depends on uses, except 1hr separation to incidental uses such as furnace/boiler rooms, storage rooms	table 302.1.1
3. <b>Construction Type:</b> Type V-B (current) Type V-A (with proposed sprinklers)	table 601
4. <b>Height &amp; Area:</b> unsprinklered:               (1) story, 40 ft, 6000 sf per floor (type V-B)	table 503
sprinklered:               (2) stories, 50 ft, 11,500 sf per floor (type V-A)	
The Building will be sprinkled per City Fire Marshal	
Frontage increase:           + 75% of allowed building area (given 30 ft frontage around entire building)	506.2
total permitted basic area = 6000 sf x 175% = <u>10,500 sf</u> (unsprinklered)	
total permitted basic area = 11,500sf x 175% = <u>20,125 sf</u>	
Therefore the building conforms to the area allowed for Type V-b for A b-2 use	

5.	<b>Fire-Resistive Ratings:</b> (for type V-A – proposed)	Rating in hours	
	Structural Frame:	0	
	Bearing Walls:		
	Exterior:	0	table 601
	Interior:	0	
	Nonbearing Walls:		
	Exterior:	0 (based on separation distance)	table 602
	Interior:	0	
	Floor Construction:		
	Roof Construction:	0	
	Corridors:	0	
	Stairways:		
	>30 occ. served	1	table 1016.1
		1	1019.1
6.	<b>Fire Alarm System</b>	Manual fire alarm system is required with an occupant load of 300 or more. A fire alarm will be required per the City Fire Marshal. EXCEPTION: “Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system and the notification appliances will activate upon sprinkler water flow.”	[F] 907.2.1
		Occupancies > 1000 require signal using an emergency voice/alarm communications system.	[F] 907.2.1.1
7.	<b>Minimum Egress Requirements:</b>		
	(2) Means of Egress required:	served occupant load > 50 persons	table 1005.1
		common path of travel > 75 ft	1013.3
		in boiler/furnace rooms > 500 sf & with equipment > 400,000 BTU	1014.3
	(3) Means of Egress required:	occupant load > 500 persons	table 1018.1

<b>Occupant load factor:</b>	<b>Occupancy</b>	<b>area / person</b>	<b>table 1004.1.2</b>
	Concentrated Assembly	7 sf net	
	Unconcentrated Assembly	15 sf net	
	Classrooms	20 sf net	
	Kitchens (industrial)	200 sf gross	
	Stages & Platforms	15 sf net	
	Storage & Mechanical	300 sf gross	

**8. Egress Requirements:**

Travel Distance	200 ft in non-sprinklered buildings 250 ft in sprinklered buildings	table 1015.1
Dead Ends	20 ft maximum in exit corridors (or < 2/3 of corridor width)	1016.3
ADA	“Accessible means of egress are not required in alterations to existing buildings.”	1007.1
Per the City Building Official, the building will be a change of use and as such, 20% of the cost of renovation may be required to apply to ADA access improvements.		

**9. Egress Widths**

Minimum Width (corridors)	36 in minimum for less than 50 people 44 in minimum for more than 50 people 24 in for access to electrical, plumbing, & mechanical equip.	1016.2
Calculated Width (un-sprinkled)	0.3 in / person for stairways 0.2 in / person for other egress components	table 1005.1

**10. Stairs**

Minimum Widths	36 in minimum for ≤ 50 people 44 in minimum for > 50 people 0.3 in / occupant served (un-sprinkled)	1009.1  table 1005.1
	Landing length to be at least equal to stair width, but need not exceed 48 in	1009.4
Treads & Risers	Risers to be ≤ 7 in Treads to be ≥ 11 in	1009.3
	EXCEPTION: “Existing stairways in an existing structure shall not be required to comply with the requirements of a new stairway as outlined in section 1009 where the existing space and construction will not allow a reduction in pitch or slope.”	3406.3
Other Requirements	12 ft maximum distance between landings Handrails required on both sides 34 in to 38 in handrail height (above nosings and landings)	
Guardrails (Guards)	Unenclosed floors and roof openings more than 30 ft above the floor below require guardrails. 42 in minimum height	1009.6 1009.11
Ramps	Minimum width same as minimum corridor width 1:12 maximum slope for accessible route of travel Maximum vertical rise is 30 in. without a landing Handrails required on both sides when rise > 6 in 34 in to 38 in handrail height	1009.11.1  1012.1  1012.2  1010.5.1 1010.2 1010.4 1010.8

**11. Door Ratings**

Location	table 715.3
20 minute	1 hr and 0.5 hr corridors
45 minute	other fire barriers & partitions, 1 hr exterior walls
60 minute	1 hr shaft exit enclosure and exit passageway walls
90 minute	any assembly with a 1.5 or 2 hr rating

### **Building Code Issues per City of Kirkland**

The following Building Code information was provided by Tom Radford, Plans Examiner, of the City of Kirkland on code issues that will need to be addressed in the building renovation.

1. **Building Type:** Per certificate of occupancy dated 12/8/1978, Group B2 and construction type VN. This building type translates to Type VB in the 2003 I.B.C.
2. **Occupancy types allowed:** B2. Per the 1976 UBC a B2 is; “Wholesale & retail stores, office buildings, drinking and dining establishments having an occupant load of less than 100, printing plants, municipal police and fire stations, factories and workshops using materials not highly flammable or combustible, storage and sales rooms for combustible goods, paint stores without bulk handling.”
3. **Allowable areas for 1. & 2 above:** A “B” occupancy in a VN (IBC now called VB) structure is limited to 9000 sq. ft. per floor
4. **Allowable Height per Building Code:** 2 story max height. Increases may be available. Increases would be reviewed under current codes.
6. **Structural Upgrade Level:** Viewing the supplied photographs there is no evidence of a structural upgrade. Positive connections are not evident on post to beam connections. A qualified structural engineer should make a structural analysis. There are many questions that can’t be addressed by a quick visit or pictures. Initial questions are footings, foundations, seismic concerns, non-reinforced masonry etc.
7. **Energy upgrade requirements of envelope:** See WA State Energy Code sec. 101.3.2; there are potential uses for this building that require an energy upgrade. The building is “Semi-heated” and would change to heated.
8. **Fire stair construction:** Rated stair shafts or exit enclosures are not evident. Depending on the use, stairs may not have to be rated. The code allows stairs in a two-story building to be open.
9. **ADA requirements:** Any alterations, change in use, should conform to current accessibility requirements. A minimum 20% of the total renovation value may be required to be spent on a route of travel to areas of primary function. If the City owns or occupies this building additional accessibility requirements will apply. The variety of potential uses and City involvement leave potential problems uncovered. If the City is involved, the building should be accessible. ADA requirements should be followed.
10. **Miscellaneous issues:** The pictures disclose some non-code issues such as missing stair guards, “B” vents too low, non-accessibility, missing stair treads, asbestos on pipes, height too low in the living area, and improper heat source in the living area. The living area is a non-conforming use.

### **Fire and Life Safety Issues per City of Kirkland**

The following information related to life safety issues that may need to be addressed in a renovation of the Cannery was prepared by Grace Steuart, Fire Marshal of the Kirkland Fire Department in discussions with Tom Radford, Plans Examiner.

1. **Fire Sprinkler Requirement:** If the building were built today, it would be required to be sprinkled. It needs to be sprinkled, based on IBC Section 3406 “Change of Occupancy,” which says *the building must be made to comply with the requirements of the current code.*  
If a winery with a restaurant is included in the planning, per Washington State and KMC Amendments to the IBC, an automatic sprinkler system is required in any A-2 (eating and/or drinking establishment) where the fire area exceeds 5,000 square feet; the occupant load exceeds 100; or the fire area is located on a floor other than the level of exit discharge.
2. **Fire Alarm System:** If the building is sprinkled, it must also have a monitored fire alarm which will alert fire authorities in the case of a water flow. Audible & visible devices would need to be incorporated into the system. In any building that has a fire alarm system, the visible devices are needed for compliance with Washington State Barrier Free requirements.
3. **Requirement for Additional Fire Hydrants:** There is No requirement for additional hydrants or any fire flow issues. There is an existing hydrant right outside the building, and the fire flow in the area is 2,500 gallons per minute, which is adequate.

### **Frontage Improvements**

#### **Utility Issues**

Jenny Gaus of the Kirkland Public Works Department prepared the following issues related to utilities at the Cannery site that may need to be addressed in a renovation of the Cannery.

1. **Storm water requirements for the Cannery:** These improvements may overlap significantly with requirements for other aspects of frontage improvements that may be required by Rob Jammerman. If street frontage improvements are required, the project will need to provide storm water conveyance along the front of the property that would be sized to convey flows from all upstream properties. This could take the form of low impact swales or other types of features, though in the past this has most commonly meant a curb/gutter/pipe system. The project would also need to provide water quality improvements if the total of removed/replaced/added pollution-generating impervious surface is > 5,000 square feet, and flow control for if new impervious surface is >5,000 square feet. It does not appear that any of the site is currently connected to the City

storm system via a pipe, so none of the current site coverage would count as existing impervious surface. Therefore, flow control (storm retention) would likely be required.

2. **Water Service:** The Cannery is served by a 2” water meter which is adequate for most uses that may be proposed. A separate service may be required for a fire suppression system.
3. **Sewer System:** No information is available. Since the previous use was fairly intensive, the existing system is probably adequate to serve new uses.
4. **Electrical Service and Data Service:** See Electrical Report.

### **Permitting Requirements**

A portion Main Floor of the facility is currently used as a single-family residence and the balance of the building is unoccupied. It is anticipated a Change of Use will be required to complete renovation work based on a new use for the building that is different than it’s industrial use. The following permits may be required to complete the project:

- A. Change of Use Permit
- B. Building Permit:
- C. Prior to the issuance of the Building Permit there will be a requirement to obtain approval from the King County Landmarks Commission if the building is placed on the King County Landmarks Register. This will necessitate meeting with the Architectural Committee of the Board in the Schematic Phase and near the end of Construction Documents and with the full Board at the end of the Construction Document Phase
- D. No other permits are anticipated to be required other than the standard permits related to normal construction.

## Appendix

### Photographs

Photographs of the Cannery in its current condition.



Figure 1: Exterior view of south façade



Figure 2: Stair to residential unit



Figure 3: Northwest corner of building with skylights and concrete ramp visible

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Figure 4: West face with brick shed, smokestack, and roof vents visible



Figure 5: Garage door and part of the mechanical system located on lower level in southeast corner

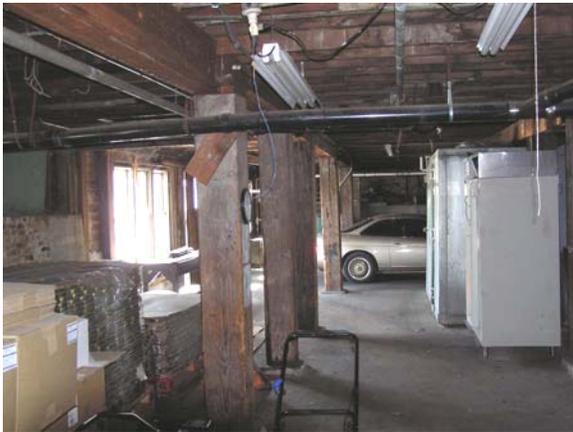


Figure 6: Looking west through lower level; walk-in freezer visible on right

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Figure 7: Looking northwest through lower level from sliding doors on south façade



Figure 8: Looking east through storage area on lower level



Figure 9: Entry into mechanical room located on the lower level

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Figure 10: Looking west through the main canning room on the upper level; smoker is visible to the left, hall and office to the right



Figure 11: Looking east through the main canning room, upper level



Figure 12: View of skylights overhead in main canning room, upper level



Figure 13: Office and hall to loading area; upper level



Figure 14: Smoker and mechanical equipment located on upper level in southwest corner of main canning room



Figure 15: Canning equipment located on upper level in southeast corner of main canning room