IOCO TOWNSITE

HERITAGE CONSERVATION AREA
PORT MOODY, B.C.

PRESERVATION AND PREVENTATIVE MAINTENANCE PLAN

NOVEMBER 2015

DONALD LUXTON AND ASSOCIATES INC

DONALD LUXTON AND ASSOCIATES INC.
1030 - 470 GRANVILLE STEET VANCOUVER BC V6C 1V5
info@donaldluxton.com 604 688 1216 **www.donaldluxton.com**

TABLE OF CONTENTS

Cover Image: Aerial Photo of Ioco (colour added later), 1930-1946 (PMSM 2009.012.028)

Aerial View of Ioco Townsite and Refinery, 1950-1970 (PMSM 2009.012.026)

1.0 INTRODUCTION

INTRODUCTION

The Ioco Townsite Heritage Conservation Area is one of the last remaining company townsites in the Lower Mainland, and represents a unique moment in Port Moody's history. The surviving buildings sit vacant, and are vulnerable to weather, vandalism, and structural deterioration. A site visit was conducted in August 2015 to visually assess the condition of thirteen of the remaining buildings. This report outlines preventative maintenance measures that should be taken in order to preserve the thirteen buildings until plans are in place to begin full conservation work. This report is limited in its scope, and does not provide in-depth recommendations for structure, building envelope, mold, asbestos, or other hazardous materials.

HISTORIC CONTEXT

First established in Ontario in 1880, by 1912 the Imperial Oil Company had expanded across the country and built a storage distribution facility at Berry Point in Burnaby. Looking to acquire more land along the Burrard Inlet, the company eventually secured a 100 acre site in Port Moody. Alfred James Towle Taylor, businessman and engineer, was the visionary mind behind the major project. After meeting with Tom Montgomery, Chief Engineer, and Walter Teagle, President of Imperial Oil, Taylor's company, Taylor & Young Engineering, was awarded the master plan. In addition to overseeing the construction of the new refinery, Taylor was responsible for the development of the first townsite on the lower slope of the property.

The First World War did not impede construction on the refinery itself and operations were underway by January 1915. The war did, however, have an impact on the development of the town. Two bunkhouses, a dining hall and cottages for engineers and supervisors were constructed, but by 1919, three quarters of the workers lived in shacks under derelict and unsanitary conditions. With no electricity, no heating and communal outhouses for the majority of the workers, the company underwent severe backlash. The Ioco Housing Company was founded, and, after petitioning, land directly east of the refinery was acquired for a new townsite. Dominion Construction Company was awarded the contract to build the new worker's houses, which were designed by prominent North Shore architects Blackadder & Mackay.

After the land was subdivided in 1921, workers were able to purchase the plots from Imperial Oil and modify the house plans. This flexibility allowed for various exterior colours, materials and new layouts to suit the taste of the owners. An article from the June 1923 issue of Country Life in British Columbia states that, "the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders." In addition to the newly built homes, fifteen other homes were moved from the Ioco grounds to the new settlement.

Prior to the late 1920s, the town was only accessible by ferry. This changed with the construction of a road, after which point the community flourished. The Ioco Community Hall hosted several gatherings, including dances and movie screenings. St. Andrew's Presbyterian Church (soon after to become known as the Ioco United Church) was a place of worship for the town, and the children attended the community school. The town also had a general store, post office and a bowling green for leisure activity. Abundant celebratory events were organized by the company, church, or one of the several clubs and organizations.

The height of the townsite peaked in the 1930s and 40s. After the end of World War II, Ioco saw a decline as more of its population was drawn to live outside the town borders. The ease of transport provided by cars, and the construction of paved roads made other areas of the Lower Mainland more desirable. More and more of the houses were either rented out, or sat vacant and were bought back by Imperial Oil. Several of the houses were later demolished, and the land grassed over. Though the townsite once boasted over eighty buildings, less than two dozen survive today.

2.0 METHODOLOGY

This report provides recommendations for the preservation of thirteen buildings within the Ioco Townsite Heritage Conservation Area until a future plan for their use is determined. The *Standards and Guidelines for the Conservation of Historic Places in Canada* by Parks Canada (2010) recognizes that a historic place may face temporary closure, in which case the historic resource should be protected through a process known as *mothballing*. The intent of mothballing is to protect a building from sudden loss (e.g. through arson or structural failure due to deterioration).

As outlined in the National Park Service's *Preservation Brief 31: Mothballing Historic Buildings*, the process is divided into nine steps described by three main phases; documentation, stabilization, and mothballing. See table on the facing page. This report follows the structure of the three main phases as outlined in the Preservation Brief, but has tailored the steps within each phase to suit the current condition of the thirteen buildings.

The documentation phase began with the preparation of Statements of Significance for each of the buildings in 2008 by Donald Luxton & Associates. These Statements of Significance have been included in Appendix A for reference. A structural condition assessment for the buildings was prepared by Siefken Engineering in June 2012, and this report provides an update on the condition of the heritage buildings based on a visual review. Further, more detailed structural condition assessments may be required. The main content of this report, however, is recommendations on the stabilization and mothballing of the thirteen buildings.

Specific recommendations are made for the Ioco Grocery Store and Ioco Hall, whereas the houses are all experiencing similar deterioration and have been treated differently. A general checklist has been provided that can be utilized for each of the houses, which is to be supplemented by specific instructions for each house in Section 4.3.2 Residential Building Catalogue.

Since the thirteen buildings have already been boarded up, some remedial stabilization is required. This work should be undertaken in a timely manner, to ensure that further deterioration is halted.

Some of the highest aims of mothballing are to keep water out of vacant buildings and to control the interior moisture level. If water enters the building, or if interior moisture is not controlled then the structure is more vulnerable to accelerated deterioration. A lot of emphasis is placed on having a reliable roof and water drainage system, as these are some of the best protections against water entering the building. Another important concern when mothballing is to secure the building from vandalism. This includes, but is not limited to damage through spray-paint, break-ins and arson.

In addition to the initial measures taken to stabilize a building and temporarily board up the exterior, monitoring and continued maintenance are a vital part of the preservation process. One of the most effective ways of preventing the sudden loss of a mothballed building is through monitoring and continued maintenance. The Maintenance Plan in Section 5.0 should be carefully reviewed and followed.

A building cannot survive forever in a mothballed condition. Eventually the thirteen buildings will require more intensive conservation work. The recommendations in this report are made in order to slow down the deterioration of the buildings during the period of vacancy, so that full conservation work can be undertaken in the future. These recommendations are based on a mothballing period of no more than ten years, which is the prescribed limit of how long a building should be left vacant before more serious conservation work is required. The longer that the buildings remain mothballed, the more expensive it will be to repair them in the future. The measures outlined in this report are preventative maintenance aimed at reducing the amount of repair work required in the future.

PHASES	STEPS
DOCUMENTATION	1. Document the architectural and historical significance of the building. 2. Prepare a condition assessment of the building.
STABILIZATION	3. Structurally stabilize the building, based on a professional condition assessment. 4. Exterminate or control pests, including termites and rodents. 5. Protect the exterior from moisture penetration.
MOTHBALLING	6. Secure the building and its component features to reduce vandalism or break-ins. 7. Provide adequate ventilation to the interior. 8. Secure or modify utilities and mechanical systems. 9. Develop and implement a maintenance and monitoring plan for protection.

Table Showing the Phases and Steps of Mothballing

Information from National Park Service's *Preservation Brief 31: Mothballing Historic Buildings.*
http://www.nps.gov/tps/how-to-preserve/briefs/31-mothballing.htm

3.0 CONSERVATION GUIDELINES

3.1 STANDARDS AND GUIDELINES

The Ioco Townsite is an important historic resource in Port Moody, and its historic buildings should be preserved as a record of the early development of the area. The Parks Canada *Standards and Guidelines for the Conservation of Historic Places in Canada* (2010) is the source used to assess the appropriate level of conservation and intervention when undertaking work on historic buildings in Canada. Under the *Standards and Guidelines*, the work proposed to ensure the survival of thirteen of the remaining buildings in the Ioco Townsite involves preservation of the historic resources.

Preservation: the action or process of protecting, maintaining, and/or stabilizing the existing materials, form, and integrity of a historic place or of an individual component, while protecting its heritage value.

The best method for ensuring that the thirteen buildings within the Ioco Townsite are brought into compliance with Port Moody's Heritage Maintenance Standards Bylaw, 2001, No. 2490 without undertaking restoration or rehabilitation work is to mothball the structures. The mothballing process involves temporarily closing up a building to prevent the structure deteriorating from the weather and to protect the historic materials from vandalism.

All measures taken during the mothballing process should comply with the Standards outlined in the *Standards and Guidelines*, which are conservation principles of best practice.

STANDARDS

Standards relating to all Conservation Projects

1. Conserve the heritage value of a historic place. Do not remove, replace, or substantially alter its intact or repairable character-defining elements. Do not move a part of a historic place if its current location is a character-defining element.
2. Conserve changes to a historic place, which over time, have become character-defining elements in their own right.
3. Conserve heritage value by adopting an approach calling for minimal intervention.
4. Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties or by combining features of the same property that never coexisted.
5. Find a use for a historic place that requires minimal or no change to its character defining elements.
6. Protect and, if necessary, stabilize a historic place until any subsequent intervention is undertaken. Protect and preserve archaeological resources in place. Where there is potential for disturbance of archaeological resources, take mitigation measures to limit damage and loss of information.
7. Evaluate the existing condition of character-defining element to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.
8. Maintain character-defining elements on an ongoing basis. Repair character-defining element by reinforcing the materials using recognized conservation methods. Replace in kind any extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.
9. Make any intervention needed to preserve character-defining elements physically and visually compatible with the historic place and identifiable upon close inspection. Document any intervention for future reference.

Construction of the Ioco Townsite, c. 1921 (PMSM 1994.019.001)

3.2 CONSERVATION REFERENCES

The recommended measures involve mothballing the thirteen buildings in order to preserve these historic resources for any conservation work proposed in the future. The following conservation resources should be referred to:

Standards and Guidelines for the Conservation of Historic Places in Canada, Parks Canada, 2010. http://www.historicplaces.ca/en/pages/standards-normes/document.aspx

National Park Service, Technical Preservation Services Preservation Briefs:

Preservation Brief 31: Mothballing Historic Buildings. http://www.nps.gov/tps/how-to-preserve/briefs/31-mothballing.htm

Preservation Brief 39: Holding the Line: Controlling Unwanted Moisture in Historic Buildings. http://www.nps.gov/tps/how-to-preserve/briefs/39-control-unwanted-moisture.htm

Preservation Brief 47: Maintaining the Exterior of Small and Medium Size Historic Buildings. http://www.nps.gov/tps/how-to-preserve/briefs/47-maintaining-exteriors.htm

3.3 SUMMARY OF CONSERVATION STRATEGY

The primary intent is to *preserve* the thirteen heritage buildings within the Ioco Townsite. It is not currently proposed to undertake any restoration or rehabilitation work. The best solution to preserve the historic structures is to mothball the buildings during a temporary period of vacancy.

3.4 SITE PROTECTION

It is the responsibility of the owner to ensure the heritage resource is protected from damage at all times. Sources of damage include, but are not limited to weather, moisture, structure deterioration, vandalism, organic buildup, and rodent or insect infestation.

Site protection is one of the overall goals of the mothballing process, and specific recommendations for the thirteen buildings can be found in Section 4.0. of this document. These recommendations are based on the City of Port Moody's Heritage Maintenance Standards Bylaw, 2001, No. 2490, which calls for all work on protected heritage properties to conform to accepted heritage conservation principles and practices as outlined in the *Standards and Guidelines*.

4.0 CONDITION REVIEW & PREVENTATIVE MAINTENANCE RECOMMENDATIONS

Ioco General Store, c. 1921 (PMSM 2009.012.023)

4.1 IOCO GROCERY STORE

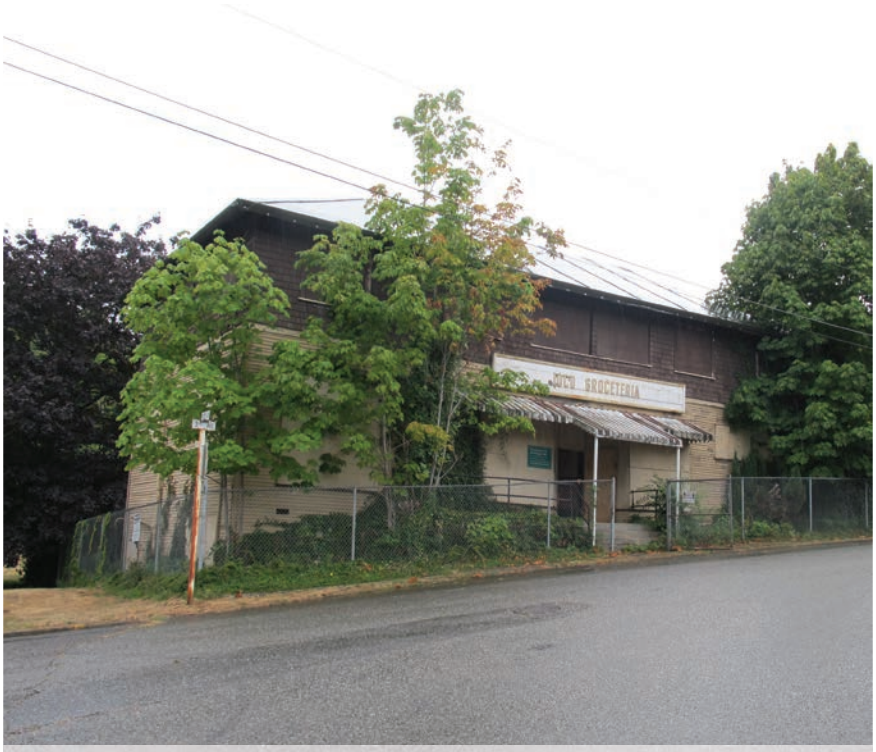
Address: Third Avenue at Ioco Road
Heritage Designation: Protected Heritage Property
Date: 1922

The Ioco Grocery Store is a large two-storey Arts and Crafts commercial building within the Ioco Heritage Conservation Area. The building has seen changes to its storefront over the course of time, however the basic form of the building has survived, including a later addition on the north elevation. A visual review of the exterior and parts of the interior was conducted in August 2015 to assess the condition of the heritage building.

4.1.1 STABILIZATION

SITE

The Ioco Grocery Store is sited prominently on Third Avenue, adjacent to Ioco Hall. The site features mature deciduous and coniferous trees that create an informal landscape. The site slopes gently downward to the south, and there are signs indicating that trespassing is forbidden and that the building is a protected heritage site. Currently the site is fenced off, and many of the plantings near the building have begun to grow into to cladding, causing damage to the building materials.



Ioco Grocery Store in 2015

Recommended Actions:

- Trees in close proximity to the historic building should be pruned so that no branches are touching the structure or holding moisture against the envelope. Potentially hazardous branches should be removed. Trees should not be removed unless posing a significant threat to the building.
- Carefully remove all other plants from within the fenced-off area. The use of chemicals can potentially harm the historic building materials and should be avoided. Extra precaution should be taken when removing plants that have begun to grow into the narrow wood lap siding of the building, as not to damage the historic cladding. Once cleared, the landscaping should be maintained to ensure that plants do not hold moisture against the building, or grow into the building materials.
- Remove any trash or animal nests from the site.
- A new sign should be added in a prominent location that lists a phone number for citizens to call with questions or concerns or report vandals. The fire and police departments should be notified that the building is vacant.
- Periodically inspect the fencing for signs of breaches or damage.
- Ensure that utilities have been properly shut off. It is recommended to install a new temporary exposed electric line and panel to power a small fire detection and alarm system, as well as any interior moisture detection or heating systems. Interior pipes should be drained to avoid damage from burst pipes, and sewer connections should be capped off to avoid explosive sewer gas.
- Ensure that the site is adequately draining water. If not, then the site should be properly graded for water run-off.

Wood Structure of the Ioco Grocery Store

FOUNDATION

The existing foundation was not reviewed during the site visit, but consists of poured-in-place concrete foundation walls and slab. Parts of the foundation are covered with overgrown vegetation on the exterior.

Recommended Actions:

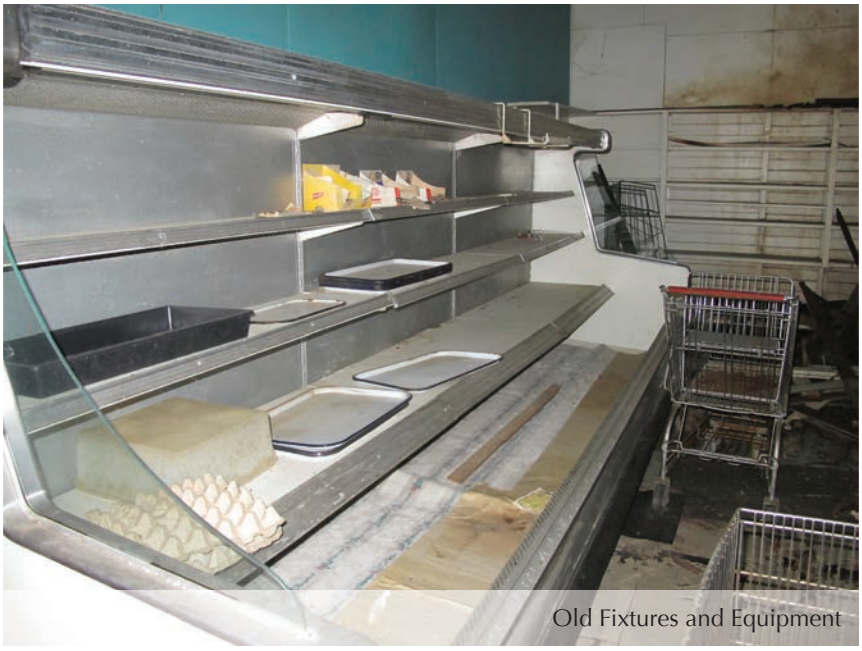
- The foundations should be inspected by a qualified structural engineer to ensure that they can hold the building up until further work is undertaken. If the foundations require upgrading, the work should not impact the historic exterior appearance of the building, if possible.
- Areas of heavy organic buildup on the foundation walls should be cleaned once the grounds have been cleared of excess vegetation. Cleaning should be undertaken using the gentlest means possible, which involves a soft, natural bristle brush, without water. For more intensive cleaning, mild detergent and warm water wash may be required. Power washing is not permitted.

STRUCTURE

The Ioco Grocery Store is built in traditional wood-frame construction with dimensional lumber. Wood-frame construction is one of the most affordable housing construction methods that utilized old growth lumber in the past. The framing type could not be determined during the site visit. The structural report by Siefken Engineering from June 2012 indicates that several of the structural members have deteriorated, and some members have suffered fire damage.

Recommended Actions:

- The structure should be inspected by a qualified structural engineer, and reinforced as required to ensure that the building can survive until further work is undertaken.
- Structural stabilization should take place from the interior, so that the historic exterior appearance is not disturbed.
- Where possible, the historic structural members should be preserved. New structural members should not impact the historic exterior appearance of the building.



Old Fixtures and Equipment

INTERIOR

The interior of the historic structure has numerous areas of water damage, and has suffered fire damage in places. There is debris and some grocer's equipment remaining inside the building.

Recommended Actions:

- Trash, hazardous materials such as inflammable liquids, poisons, paints, and canned goods that could freeze and burst should be removed from the interior of the building.
- The interior should be broom clean.
- Damp areas or materials with water damage should be inspected for mold, and all materials with mold removed or adequately treated.
- Devices for measuring the interior moisture level should be installed and monitored regularly at first, and then periodically once the moisture level has stabilized at an appropriate level.
- Interior doors should be left open for ventilation purposes.
- Furnishings that are to be preserved, if any, should be protected from dust, pests, and ultraviolet light.
- Minimal heating should occur during cold weather to ensure that the interior can dry out. A mechanical engineer should advise on the required temperature. Mothballed buildings are typically heated to seven degrees celsius during the winter.
- The interior moisture levels and temperature should remain as stable as possible. Frequent fluctuations in moisture and temperature cause some of the most damaging effects to historic materials.

Wild Blackberries Penetrating the Narrow Wood Lap Siding

Later Concrete Stairs and Metal Pipe Railings

4.1.2 MOTHBALLING

EXTERIOR WOOD CLADDING

The exterior walls of the Ioco Grocery Store are clad with narrow wood lap siding and cornerboards on the main floor and lower level, and cedar shingles with a slight bellcast flare on the shorter upper floor. As previously mentioned, the narrow wood lap siding has been penetrated in several areas by overgrown vegetation.

Recommended Actions:

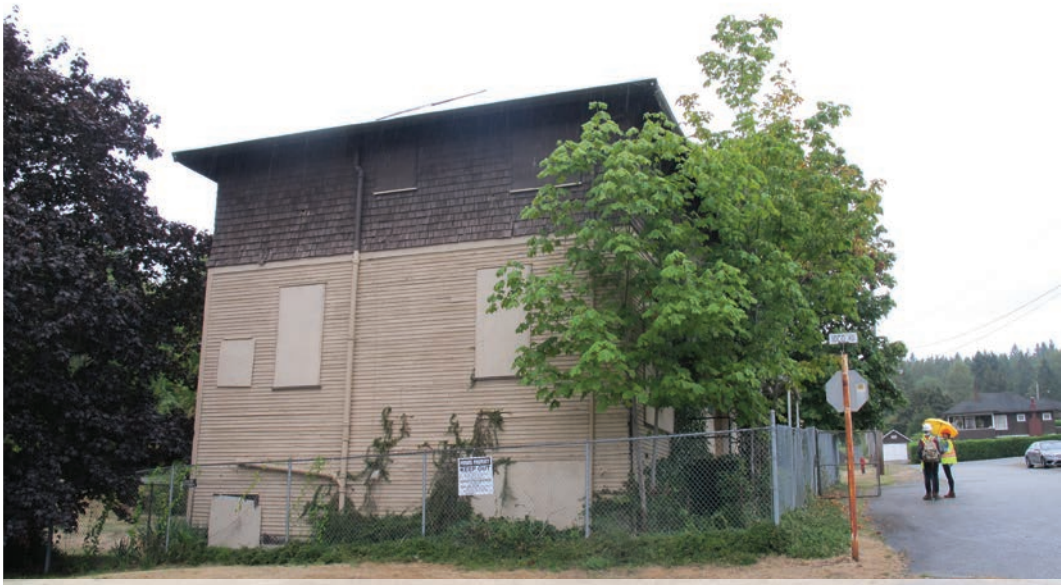
- The exterior wood cladding should be regularly monitored once the vegetation has been removed from the site, to ensure that no new vegetation is damaging the historic materials.
- All holes or openings in the cladding should be covered so that water and/or rodents cannot enter.
- Narrow wood lap siding that has been lifted from the surface of the building due to plant infiltration should be re-affixed.
- If further repairs to the exterior wood cladding are undertaken at this time, the repairs should be done in-kind using wood. Combed and/or textured lumber, as well as vinyl or fibre cementitious cladding are not acceptable materials for use on the historic building.

FRONT ENTRY STAIRS

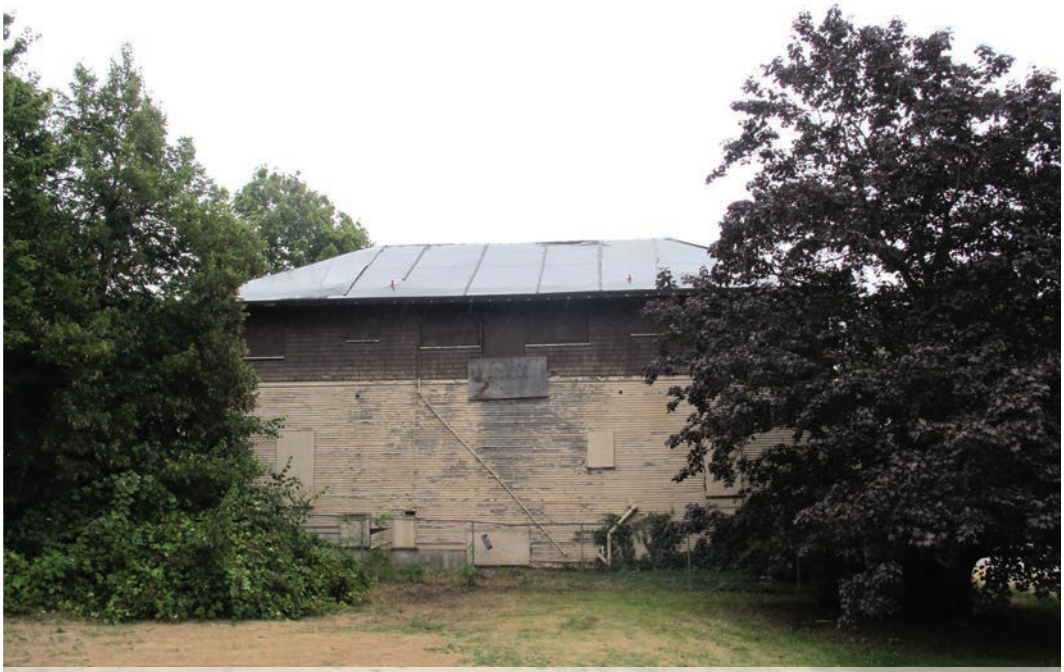
The Ioco Grocery Store is accessed by a set of later concrete stairs with metal pipe railings. Concrete is a durable material, and these stairs have survived in better condition than many of the exterior wood stairs on other buildings within the Ioco Townsite.

Recommended Actions:

- Ensure that the later concrete stairs with metal pipe railings are maintained, clear of plants and garbage, and that the handrails are securely fastened.



Boarded Up Windows on the South Elevation



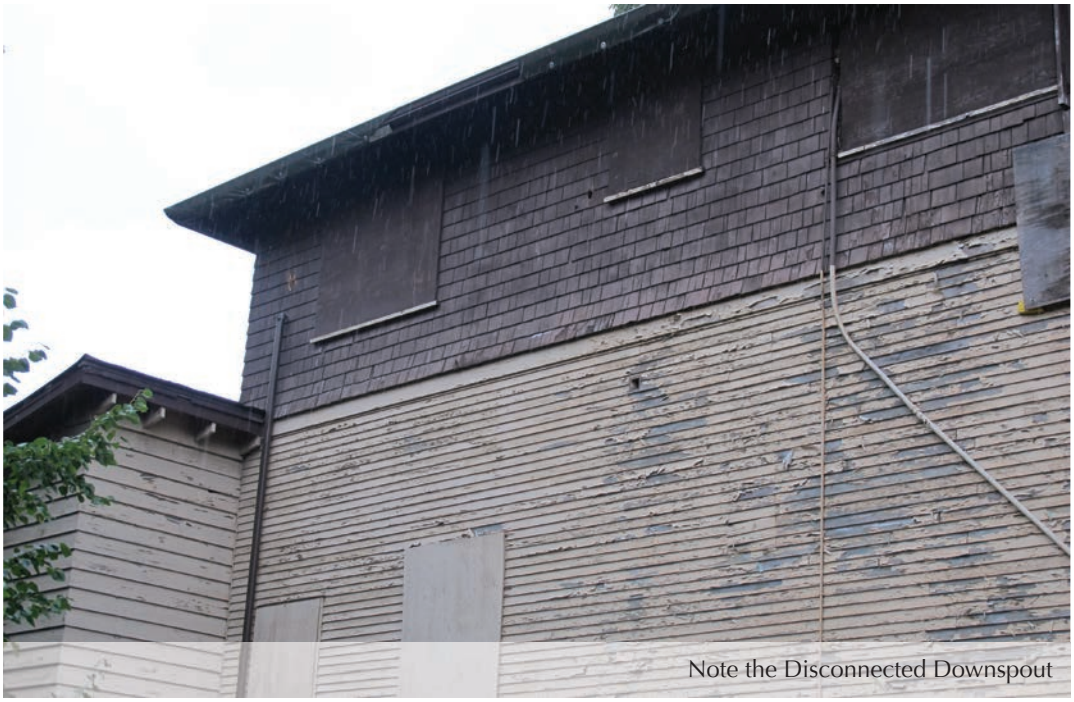
Boarded Up Windows on the West Elevation

WINDOWS AND DOORS

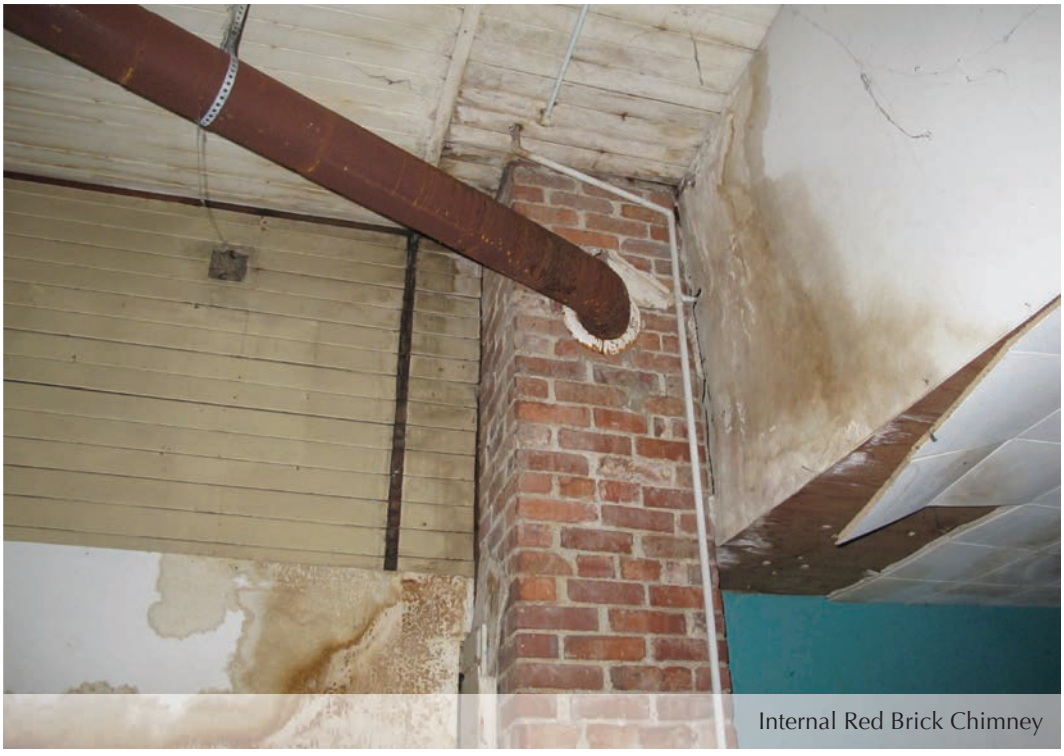
The window and door openings on the historic building have been covered in plywood sheets to protect the glazing from damage and to discourage break-ins. The plywood sheets have been painted to match the surrounding cladding, which can indicate to passers-by that the building is valued. Several of the panels were reviewed and found to be fixed using screws, which is the preferred system. The use of nails or staples should be avoided, as these systems require the boards to be pried off, which can cause damage to the materials that the plywood is attached to. The window function and condition were not reviewed during the site visit.

Recommended Actions:

- All plywood panels should be fixed to the historic building using screws. Any plywood panels fixed with nails or staples should be carefully removed without damaging the historic materials of the building, and re-applied using screws.
- In order to provide ventilation for the interior of the building, some windows will need to accommodate vented louvres. Due to the wet climate of the Lower Mainland, as well as the proximity of the Ioco Townsite to the Burrard Inlet, the building will require special attention to the number of air exchanges per hour. Typically the absolute minimum number of air exchanges per hour is two to four, though this minimal exchange can still foster mold and mildew in damp climates. A mechanical engineer should be consulted to assist in determining the level of ventilation required, as well as devising a strategy for ensuring that the necessary ventilation is occurring.
- Vented louvres should be placed in window openings to assist with the ventilation of the building. Secure vented louvres should be placed into the plywood covering the windows, and should not allow for rodents or water to enter the opening. The amount of vented louvreing is typically five to ten percent of the area of each floor in the building, but may be greater in damp climates. Louvres should be placed to encourage cross-ventilation. In situations where double or single-hung windows exist, one of the sashes can be left open and the vented louvre aligned with the opening. In situations where fixed, casement, awning or hopper windows exist, the sash should be carefully removed, labelled, and stored safely in the building, and the plywood panel with vented louvres placed over the opening.
- Exterior doors should be closed, locked, and covered with plywood panels, and the keys stored in a secure but accessible place.



Note the Disconnected Downspout



Internal Red Brick Chimney

ROOF AND GUTTERS

The roof and gutters of the Ioco Grocery Store have been tarped over, allowing water to fall from the edge of the roofline and splash back against the exterior walls. Most, if not all of the downspouts are disconnected from the gutters. A later metal canopy exists over the main entrance to the building, and the metal roof of the later addition remain uncovered.

Recommended Actions:

- Tarps are not a durable roof covering, as they can be blown off or ripped by the wind, and should not be used on the Ioco Grocery Store. The tarps should be replaced with a more heavy duty temporary roof covering while leaving the existing roof shingles intact. Appropriate temporary roofing materials may include ninety-pound rolled roofing or a rubberized membrane.
- The new temporary roofing should be applied so that it does not damage the historic roofing materials. The temporary roof should be periodically visually inspected to look for rips or holes, and the interior ceiling on the upper level should be periodically checked for signs of water infiltration.
- The gutters should not be covered, as they are an important part of the water-shedding capability of the roof system. The temporary roofing should not cover the gutters, and the gutters should be regularly cleared of all debris.
- All downspouts should be properly connected to the gutter system and free of debris. Downspouts should direct water far away from the foundation wall using flexible extender pipes, if necessary.
- Missing or damaged portions of the gutter or downspout should be replaced. Replacement gutters and downspouts do not need to match the historic appearance of the building if they are to be temporary.

CHIMNEYS

The Ioco Grocery Store features two internal red-brick chimneys. The exterior portions of the chimneys have been removed and tarped over, with ventilation pipes penetrating through the tarped surface.

Recommended Actions:

- If salvaged, the bricks from the external portion of the chimney should be labelled and carefully stored within the Ioco Grocery Store, along with documentation (e.g. photographs in a plastic sleeve) depicting the exterior portions of the chimney prior to disassembly.

Detail of Ioco Community Hall, View of houses in Ioco townsite, 1923 (CVA PAN N138A)

4.2 IOCO HALL

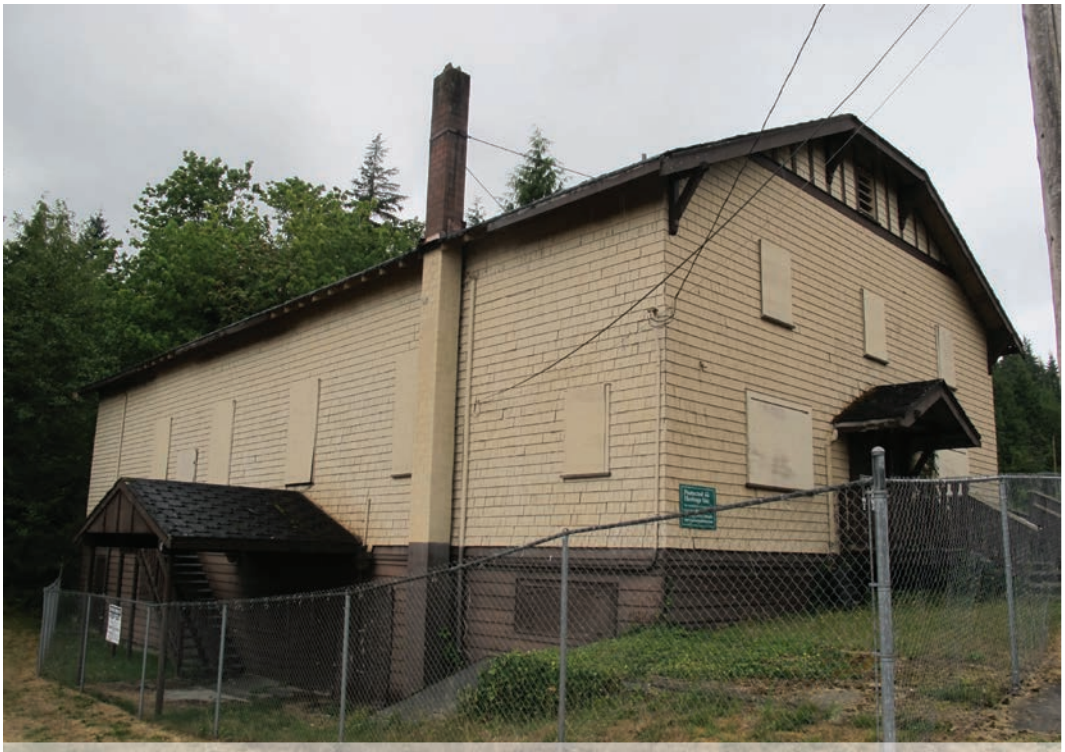
Address: Third Avenue
Heritage Designation: Protected Heritage Property
Date: 1921

Ioco Hall is a large one-storey utilitarian wood-frame building located within the Ioco Heritage Conservation Area. Several changes have occurred to the building since it was originally built, including a later entry on the south and the removal of an original internal chimney for replacement with a later external chimney. A visual review of the exterior and parts of the interior was conducted in August 2015 to assess the condition of the heritage building.

4.2.1 STABILIZATION

SITE

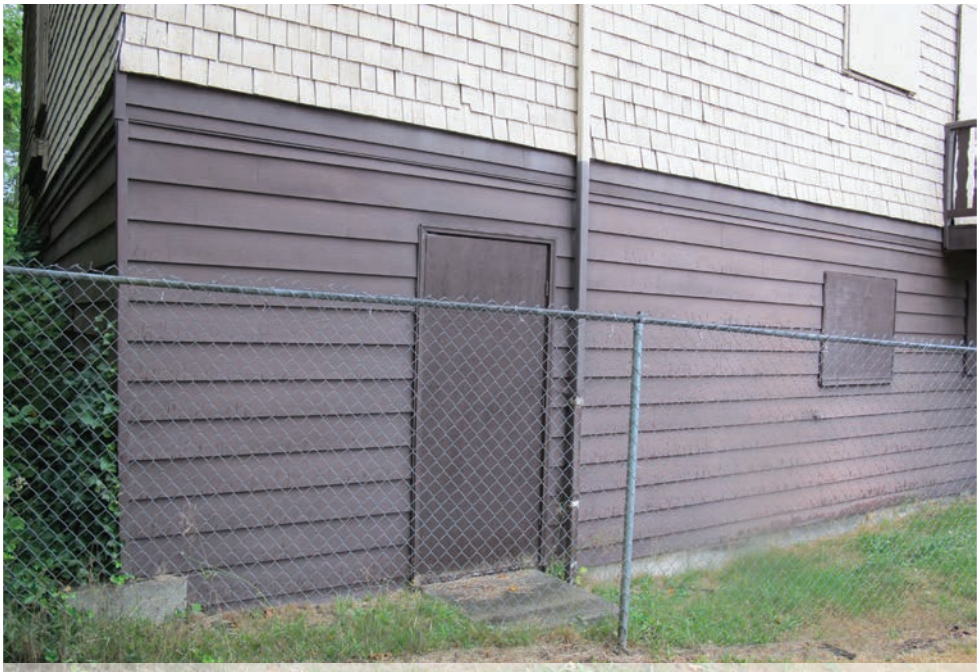
Ioco Hall is sited on the west side of Third Avenue, adjacent to Ioco Grocery Store. The site features fewer mature trees than the grocery store to the south, mostly at the rear of the building. The site slopes gently downward to the west, and there are signs indicating that trespassing is forbidden and that the building is a protected heritage site. Currently the site is fenced off, and many of the plantings near the building have begun to grow into to cladding, causing damage to the building materials.



Ioco Hall in 2015

Recommended Actions:

- Trees in close proximity to the historic building should be pruned so that no branches are touching the structure or holding moisture against the envelope. Potentially hazardous branches should be removed. Trees should not be removed unless posing a significant threat to the building.
- Carefully remove all other plants from within the fenced-off area. The use of chemicals can potentially harm the historic building materials and should be avoided. Extra precaution should be taken when removing plants that have begun to grow into the cedar shingle cladding of the building, as not to damage them. Once cleared, the landscaping should be maintained to ensure that plants do not hold moisture against the building, or grow into the building materials.
- Remove any trash or animal nests from the site.
- A new sign should be added in a prominent location that lists a phone number for citizens to call with questions or concerns or report vandals. The fire and police departments should be notified that the building is vacant.
- Periodically inspect the fencing for signs of breaches or damage.
- Ensure that utilities have been properly shut off. It is recommended to install a new temporary exposed electric line and panel to power a small fire detection and alarm system, as well as any interior moisture detection or heating systems. Interior pipes should be drained to avoid damage from burst pipes, and sewer connections should be capped off to avoid explosive sewer gas.
- Ensure that the site is adequately draining water. If not, then the site should be properly graded for water run-off.



Foundation Walls and Later Vinyl Siding

FOUNDATION

The existing foundation was not reviewed during the site visit, but consists of poured-in-place concrete foundation walls and slab. Parts of the foundation are covered with overgrown vegetation on the exterior.

Recommended Actions:

- The foundations should be inspected by a qualified structural engineer to ensure that they can hold the building up until further work is undertaken. If the foundations require upgrading, the work should not impact the historic exterior appearance of the building, if possible.
- Areas of heavy organic buildup on the foundation walls should be cleaned once the grounds have been cleared of excess vegetation. Cleaning should be undertaken using the gentlest means possible, which involves a soft, natural bristle brush, without water. For more intensive cleaning, mild detergent and warm water wash may be required. Power washing is not permitted.

STRUCTURE

Ioco Hall is built in traditional wood-frame construction with dimensional lumber. Wood-frame construction is one of the most affordable housing construction methods that utilized old growth lumber in the past. The framing type could not be determined during the site visit. The structural report by Siefken Engineering from June 2012 indicates that the structure is generally in good condition, and that the roof was constructed using a hand-built truss system.

Recommended Actions:

- The structure should be inspected by a qualified structural engineer, and reinforced as required to ensure that the building can survive until further work is undertaken.
- Structural stabilization should take place from the interior, so that the historic exterior appearance is not disturbed.
- Where possible, the historic structural members should be preserved. New structural members should not impact the historic exterior appearance of the building.

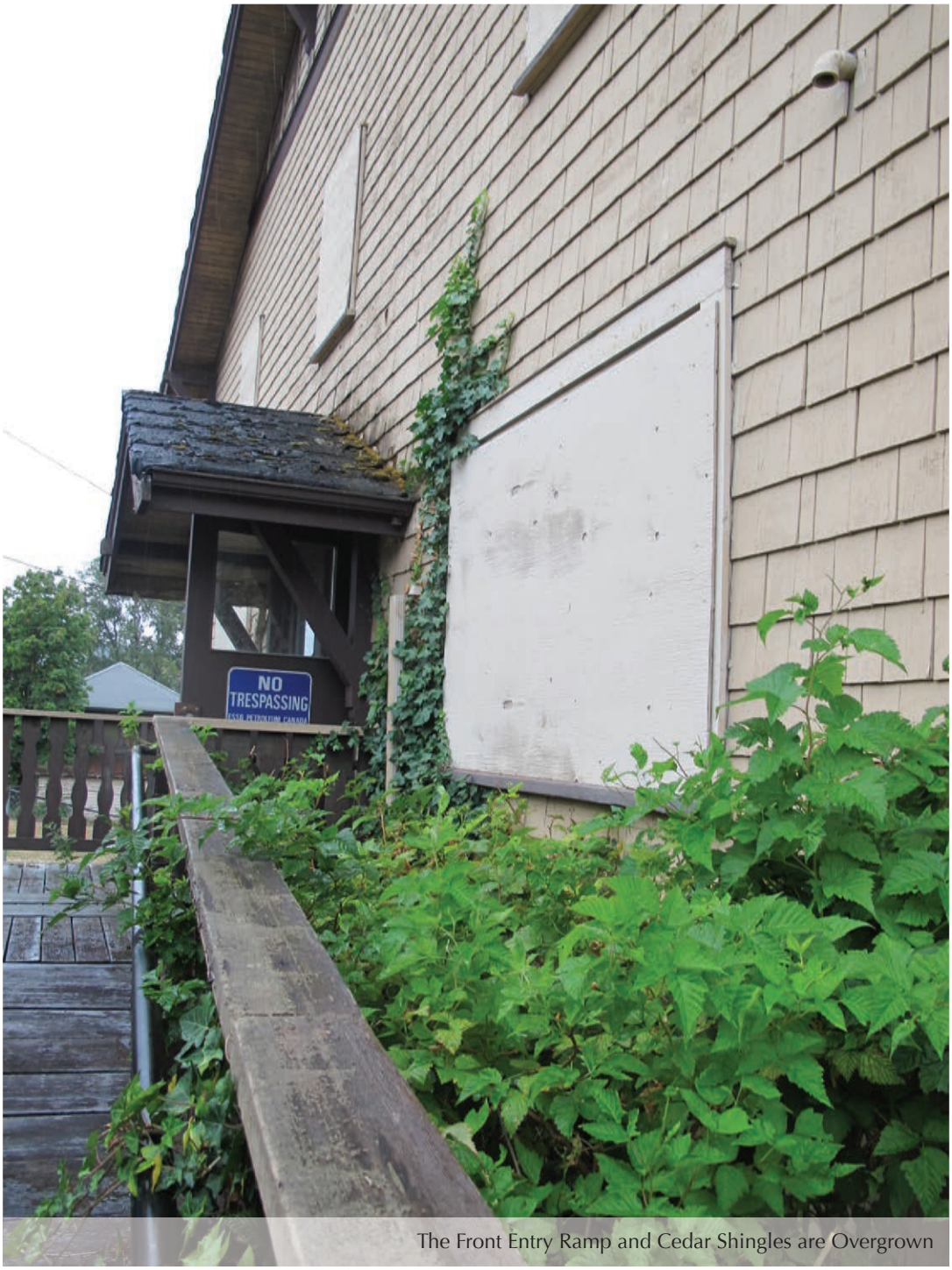
Interior of Ioco Hall

INTERIOR

The main interior hall has minor signs of water damage, and is broom-clean. The other areas of the interior were not reviewed and require further investigation

Recommended Actions:

- Trash, hazardous materials such as inflammable liquids, poisons, paints, and canned goods that could freeze and burst should be removed from the interior of the building.
- The interior should be broom clean.
- Damp areas or materials with water damage should be inspected for mold, and all materials with mold removed or adequately treated.
- Devices for measuring the interior moisture level should be installed and monitored regularly at first, and then periodically once the moisture level has stabilized at an appropriate level.
- Interior doors should be left open for ventilation purposes.
- Furnishings that are to be preserved, if any, should be protected from dust, pests, and ultraviolet light.
- A number of chairs and tables are being stored in the main hall, neatly stacked along the sides of the hall. The chairs and tables may continue to be stored in this manner in the hall, as long as the configuration does not impede access or circulation.
- Minimal heating should occur during cold weather to ensure that the interior can dry out. A mechanical engineer should advise on the required temperature. Mothballed buildings are typically heated to seven degrees celsius during the winter.
- The interior moisture levels and temperature should remain as stable as possible. Frequent fluctuations in moisture and temperature cause some of the most damaging effects to historic materials.



The Front Entry Ramp and Cedar Shingles are Overgrown

4.2.2 MOTHBALLING

EXTERIOR WOOD CLADDING

The exterior walls of Ioco Hall are clad in cedar shingles with a slight bellcast flare. The original narrow wood lap siding has either been removed or simply covered up with the later vinyl siding. There is a trim board running the perimeter of the building, and half-timbering on the front gable. As previously mentioned, the cedar shingles have been penetrated in some areas by overgrown vegetation.

Recommended Actions:

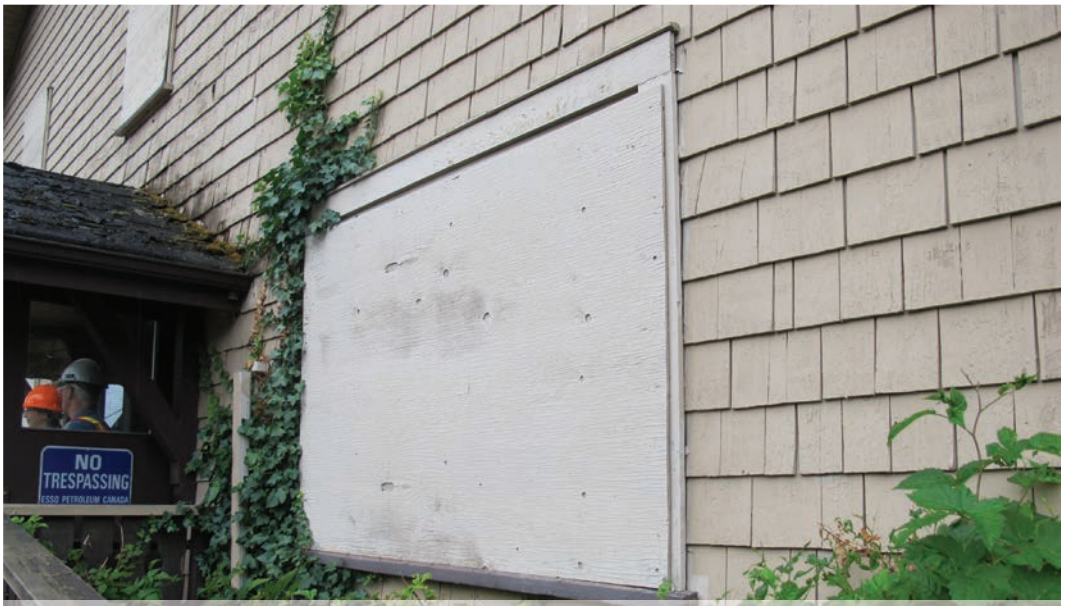
- The exterior wood cladding should be regularly monitored once the vegetation has been removed from the site, to ensure that no new vegetation is damaging the historic materials.
- All holes or openings in the building envelope should be covered so that water and/or rodents cannot enter.
- Cedar shingles that have been lifted from the surface of the building due to plant infiltration should be re-affixed.
- If further repairs to the exterior wood cladding are undertaken at this time, the repairs should be done in-kind using wood. Combed and/or textured lumber, as well as vinyl or fibre cementitious cladding are not acceptable materials for use on the historic building.

FRONT ENTRY STAIRS

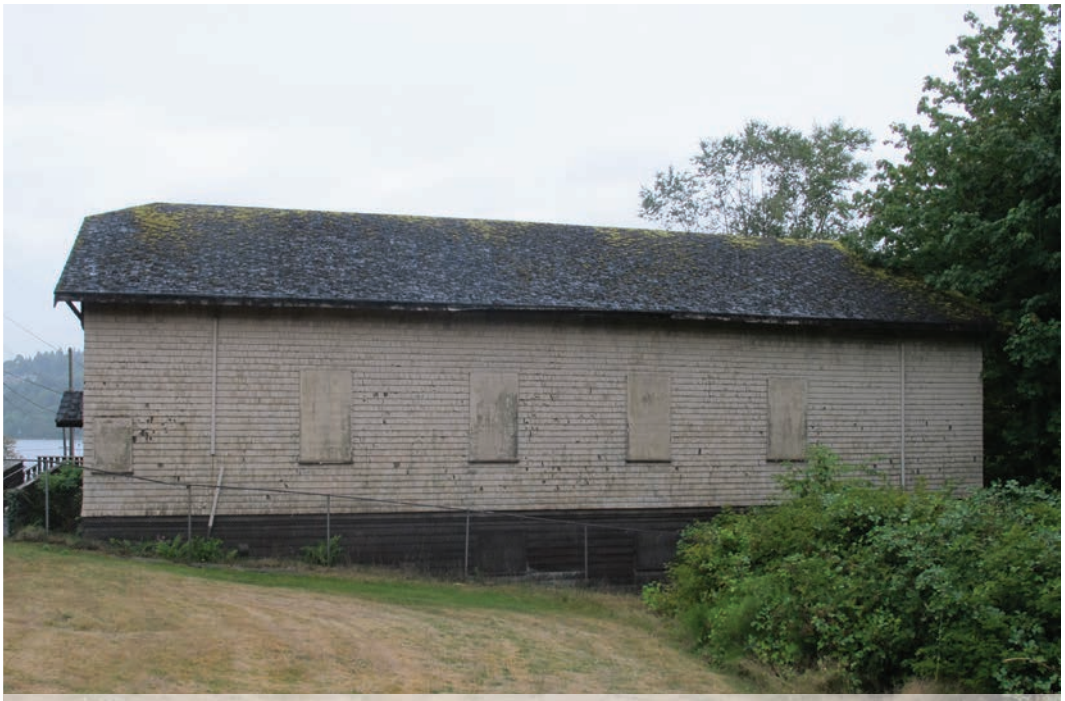
Ioco Hall is accessed by a set of later wood stairs with decorative wood balustrades. Attached to the north of the stairs is a wood ramp with matching wood balustrades and metal pipe railings mounted on the inside of the wood balustrade. The wood stairs and ramp appear to be in good condition, but are heavily overgrown with plants on some parts.

Recommended Actions:

- Ensure that the later wood stairs and ramp with decorative wood balustrades and metal pipe railings are maintained, clear of plants and garbage, and that the handrails are securely fastened.



Boarded Up Window on the East Elevation



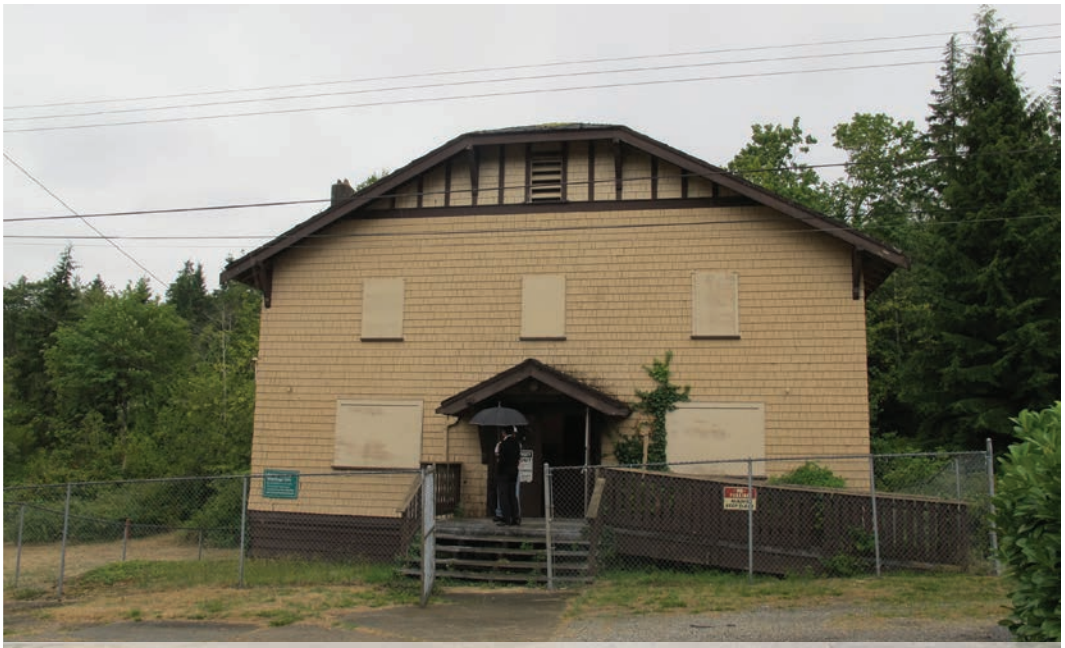
Boarded Up Windows on the North Elevation

WINDOWS AND DOORS

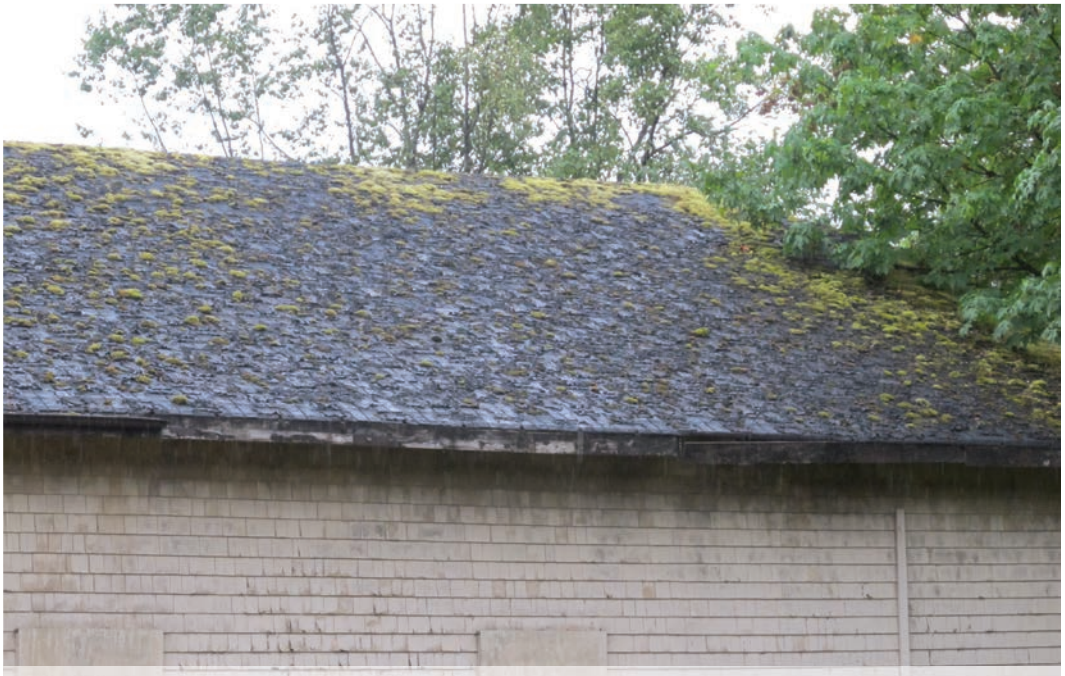
The window and door openings on the historic building have been covered in plywood sheets to protect the glazing from damage and to discourage break-ins. The plywood sheets have been painted to match the trim, which can indicate to passers-by that the building is valued. Several of the panels were reviewed and found to be fixed using screws, which is the preferred system. The use of nails or staples should be avoided, as these systems require the boards to be pried off, which can cause damage to the materials that the plywood is attached to. The window function and condition were not reviewed during the site visit.

Recommended Actions:

- All plywood panels should be fixed to the historic building using screws. Any plywood panels fixed with nails or staples should be carefully removed without damaging the historic materials of the building, and re-applied using screws.
- In order to provide ventilation for the interior of the building, some windows will need to accommodate vented louvres. Due to the wet climate of the Lower Mainland, as well as the proximity of the Ioco Townsite to the Burrard Inlet, the building will require special attention to the number of air exchanges per hour. Typically the absolute minimum number of air exchanges per hour is two to four, though this minimal exchange can still foster mold and mildew in damp climates. A mechanical engineer should be consulted to assist in determining the level of ventilation required, as well as devising a strategy for ensuring that the necessary ventilation is occurring.
- Vented louvres should be placed in window openings to assist with the ventilation of the building. Secure vented louvres should be placed into the plywood covering the windows, and should not allow for rodents or water to enter the opening. The amount of vented louvreing is typically five to ten percent of the area of each floor in the building, but may be greater in damp climates. Louvres should be placed to encourage cross-ventilation. In situations where double or single-hung windows exist, one of the sashes can be left open and the vented louvre aligned with the opening. In situations where fixed, casement, awning or hopper windows exist, the sash should be carefully removed, labelled, and stored safely in the building, and the plywood panel with vented louvres placed over the opening.
- Exterior doors should be closed, locked, and covered with plywood panels, and the keys stored in a secure but accessible place.



Primary Façade of Ioco Hall



Organic Buildup on the Roof of Ioco Hall

ROOF AND GUTTERS

The roof of Ioco Hall has not been covered, and heavy organic buildup has begun to occur on the existing asphalt shingles, which are in poor condition. The fascia is missing or damaged in several locations, and most if not all of the downspouts are disconnected from the gutters. The original small roof over the front entry is currently covered with asphalt shingles, which are in poor condition and developing organic buildup. The later roof over the later entrance on the south elevation is currently covered with asphalt shingles which are in poor condition. During the site review it was noted that there were multiple holes or gaps in the later roof on the south elevation, which had been covered with wood or stuffed with cloth. These holes or gaps should be properly covered so that rodents and moisture cannot enter, but not completely sealed.

Recommended Actions:

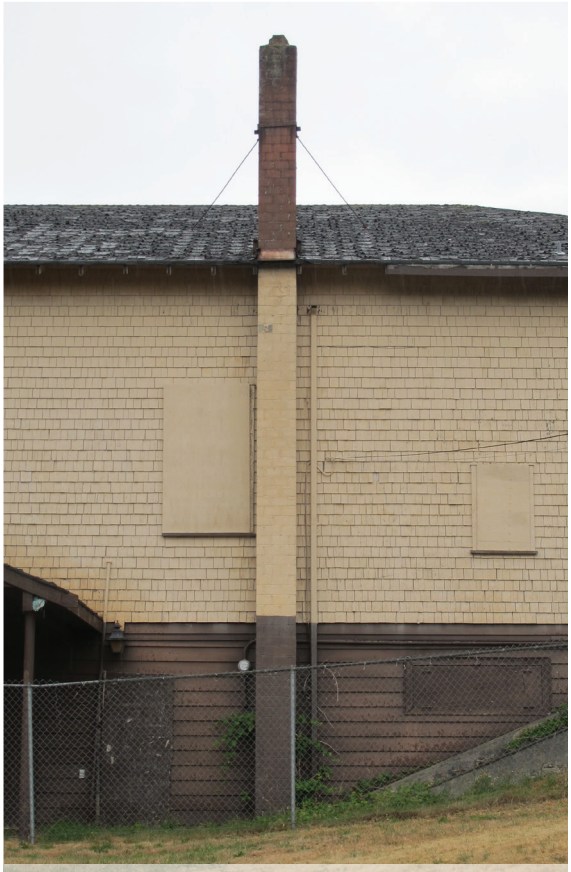
- Tarps are not a durable roof covering, as they can be blown off or ripped by the wind, and should not be used on Ioco Hall. A heavy duty temporary roof covering should be implemented while leaving the existing roof shingles intact. Appropriate temporary roofing materials may include ninety-pound rolled roofing or a rubberized membrane.
- The new temporary roofing should be applied so that it does not damage the existing roofing materials. The temporary roof should be periodically visually inspected to look for rips or holes, and the interior ceiling on the upper level should be periodically checked for signs of water infiltration.
- The gutters should not be covered, as they are an important part of the water-shedding capability of the roof system. The temporary roofing should not cover the gutters, and the gutters should be regularly cleared of all debris.
- All downspouts should be properly connected to the gutter system and free of debris. Downspouts should direct water far away from the foundation wall using flexible extender pipes, if necessary.
- Missing or damaged portions of the gutter or downspout should be replaced. Replacement gutters and downspouts do not need to match the historic appearance of the building if they are to be temporary.

CHIMNEY

Ioco Hall features a later external pressed brick chimney. At some point in time the later chimney received metal restraints. The portion of the chimney below the roofline has been painted to match the surrounding cladding materials, and the upper portion remains unpainted.

Recommended Actions:

- The chimney should be preserved in situ, if possible. Review and replace the restraints as needed.
- If removed, the bricks from the chimney should be salvaged, labelled and carefully stored within Ioco Hall, along with documentation (e.g. photographs in a plastic sleeve) depicting the exterior portions of the chimney prior to disassembly.



Later External Pressed Brick Chimney

4.3 RESIDENTIAL BUILDINGS

The eleven residential buildings reviewed during the site visit were generally experiencing similar issues. It is recommended that the following checklist be utilized for the eleven residential buildings, and supplemented by further, site-specific recommendations in section 4.3.2.

4.3.1 RESIDENTIAL BUILDING CHECKLIST

STABILIZATION

Site

- ❑ Prune trees in close proximity to the house so that no branches are touching the structure or holding moisture against the envelope.
- ❑ Remove potentially hazardous branches.
- ❑ Carefully remove all plants from around the house, without the use of chemicals. Extra precaution should be taken when removing plants that have begun to grow into the cladding, as not to damage the historic material(s).
- ❑ Remove any trash or animal nests from the site.
- ❑ Ensure that the site is adequately draining water. If not, then the site should be properly graded for water run-off.
- ❑ Ensure that utilities have been properly shut off. It is recommended to install a new temporary exposed electric line and panel to power a small fire detection and alarm system, as well as any interior moisture detection or heating systems. Interior pipes should be drained to avoid damage from burst pipes, and sewer connections should be capped off to avoid explosive sewer gas.
- ❑ Fence off the site.
- ❑ Add a new sign in a prominent location that lists a phone number for citizens to call with questions or concerns or report vandals.
- ❑ Notify the fire and police departments that the building is vacant.

Foundation

- ❑ Have the foundations inspected by a qualified structural engineer to ensure that they can hold the building up until further work is undertaken.
- ❑ If the foundations require upgrading, undertake the work without impacting the historic exterior appearance of the building, if possible.
- ❑ Clean areas of heavy organic buildup on the foundation walls using the gentlest means possible once the grounds have been cleared of excess vegetation. Power washing is not permitted.

Structure

- ❑ Have the structure inspected by a qualified structural engineer, and reinforced as required to ensure that the building can survive until further work is undertaken. This includes the structure of any porches, porch stairs, or decks associated with the house.
- ❑ If required, perform structural stabilization work from the interior, so that the historic exterior appearance is not disturbed.
- ❑ Preserve historic structural members where possible. New structural members should not impact the historic exterior appearance of the building, if possible.
- ❑ If severely damaged or deteriorated to the extent that they cannot be repaired, the porch stairs should be rebuilt to match the historic appearance.

Interior

- ❑ Remove trash, hazardous materials such as inflammable liquids, poisons, paints, and canned goods that could freeze and burst.
- ❑ Sweep the interior.
- ❑ Inspect damp areas or materials with water damage for mold.
- ❑ Remove or treat all materials with mold.
- ❑ Install devices for measuring the interior moisture level.
- ❑ Leave interior doors open, for ventilation purposes.
- ❑ Protect furnishings or finishes that are to be preserved, if any, from dust, pests, and ultraviolet light.
- ❑ Heat the interior minimally.

MOTHBALLING

Exterior Wood Cladding

- ❑ Ensure that all vegetation has been removed from the exterior wood cladding.
- ❑ Cover any holes or openings in the building envelope so that water and/or rodents cannot enter.
- ❑ Re-affix any pieces of cladding that have been lifted from the surface of the building due to plant infiltration.
- ❑ If further repairs to the exterior wood cladding are undertaken at this time, the repairs should be done in-kind using wood and no substitute materials.

Porch(es), if Applicable

- ❑ Ensure that the porch and stairs have been properly stabilized.
- ❑ Ensure that the porch decking is in good condition and has been properly stabilized.
- ❑ Ensure that any balustrades and/or handrails are securely fastened.
- ❑ Cover any holes in the porch soffit to prevent pests from entering.
- ❑ Remove plants from any open areas underneath the porch or porch stairs, if applicable.

Window and Doors

- ❑ Ensure that all plywood panels have been fixed to the historic building using screws. Any plywood panels fixed with nails or staples should be carefully removed without damaging the historic materials of the building, and re-applied using screws.
- ❑ Consult a mechanical engineer to determine the level of ventilation required to ensure that rot and mold are not fostered. Develop a strategy with the mechanical engineer for achieving the required ventilation.
- ❑ Set vented louvres or other means of ventilation into the plywood panels over windows as per the mechanical engineer. Vented louvres or other means of ventilation should be secure, and not allow for moisture or rodents to enter.
- ❑ In situations where double or single-hung windows exist, one of the sashes can be left open and the vented louvre aligned with the opening. In situations where fixed, casement, awning or hopper windows exist, the sash should be carefully removed, labelled, and stored safely in the building, and the plywood panel with vented louvres placed over the opening.
- ❑ Exterior doors should be closed, locked, and covered with plywood panels, and the keys stored in a secure but accessible place.

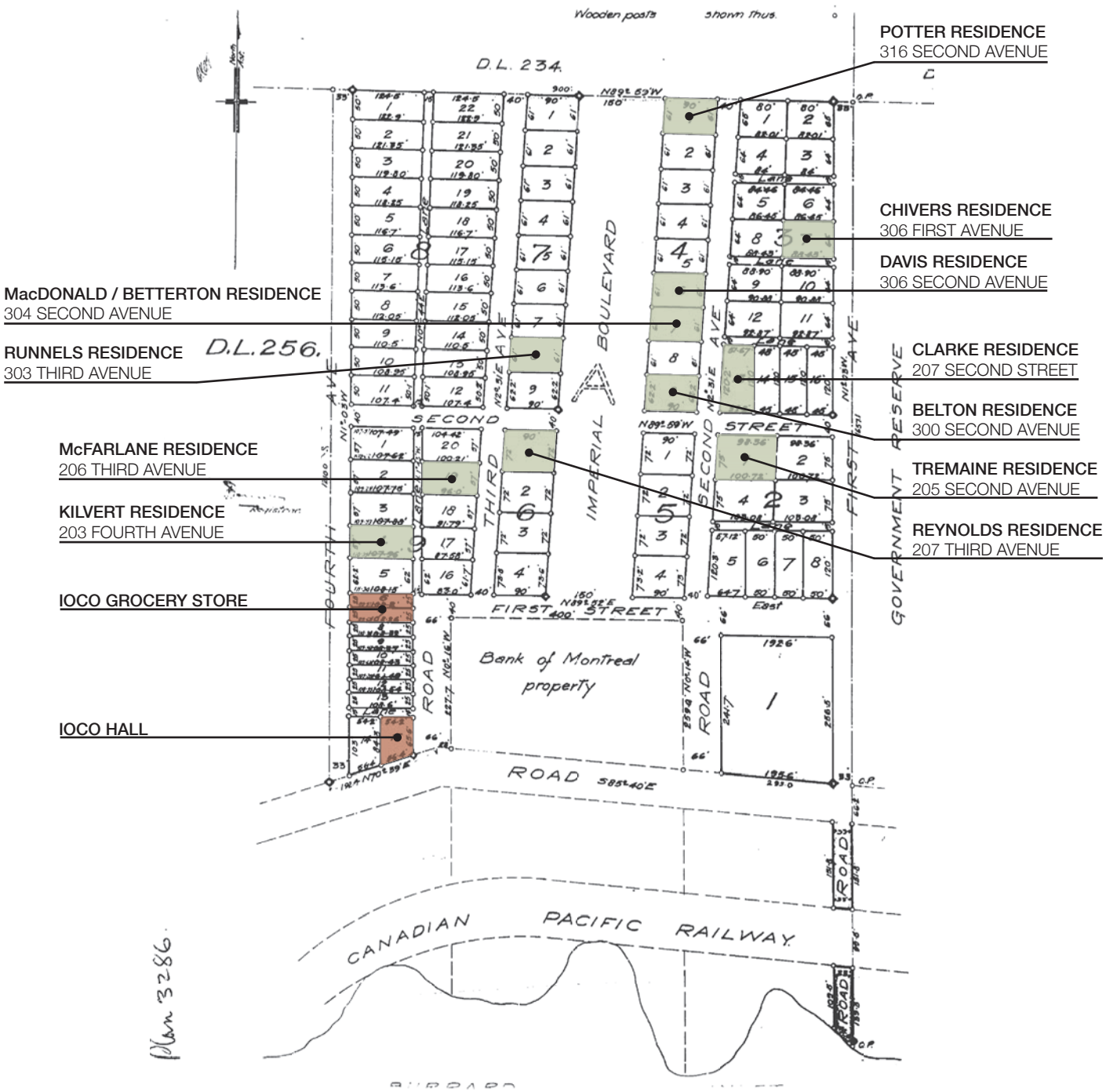
Roof and Gutters

- ❑ Remove any tarps covering the roof and/or gutters.
- ❑ Install a heavy duty temporary roof covering, while leaving the existing roof shingles intact. Appropriate temporary roofing materials may include ninety-pound rolled roofing or a rubberized membrane.
- ❑ Apply the new temporary roofing so that it does not permanently damage the existing roofing materials.
- ❑ Ensure that the gutters are not covered, are clear, and in good working condition.
- ❑ Replace any damaged or missing sections of gutter.
- ❑ Ensure that all downspouts are properly connected to the gutter system and free of debris.
- ❑ Replace any damaged or missing downspouts.
- ❑ Ensure that downspouts are directing water far away from the foundation wall. Use flexible extender pipes, if necessary.

Chimney(s)

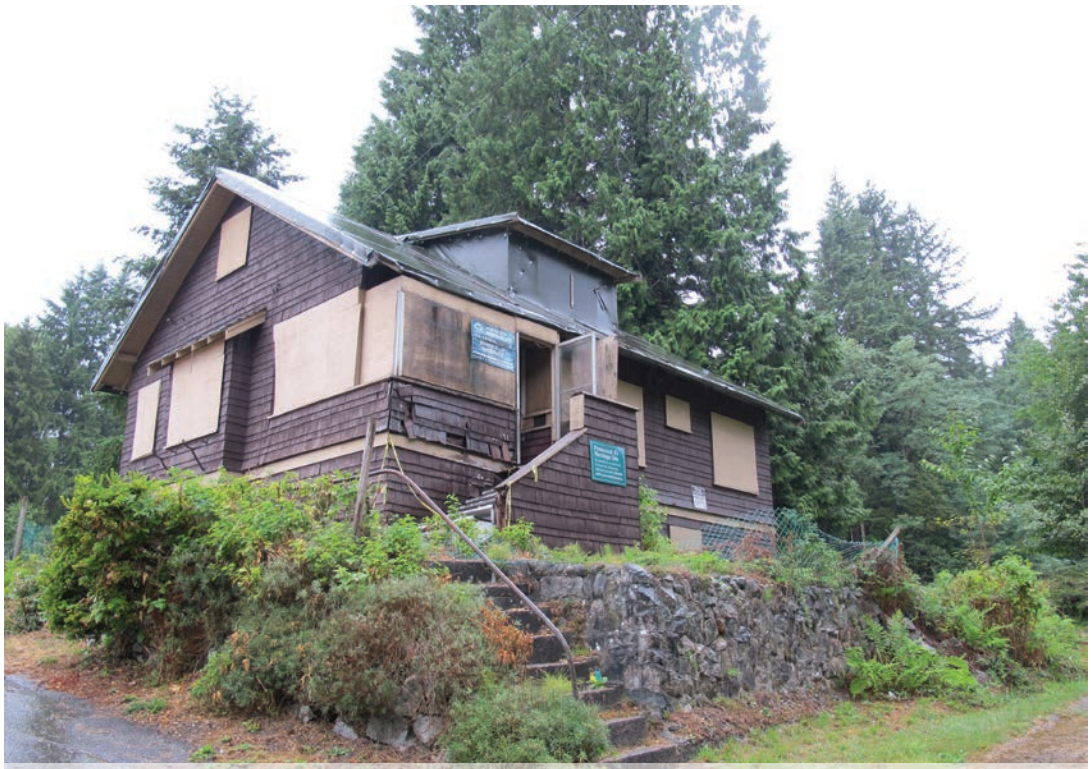
- ❑ If removed, the bricks from the exterior portion of the chimney should be salvaged, labelled and carefully stored within the house, along with documentation (e.g. photographs in a plastic sleeve) depicting the exterior portions of the chimney prior to disassembly.
- ❑ The chimney should be inspected by a qualified structural engineer and protected with bracing, if necessary.
- ❑ Protect chimney openings from moisture/pests.

4.3.2 RESIDENTIAL BUILDING CATALOGUE



Ioco Townsite Subdivision Plan Map 3286 (Colour Added)

CHIVERS RESIDENCE 306 FIRST AVENUE



The Chivers Residence in 2015

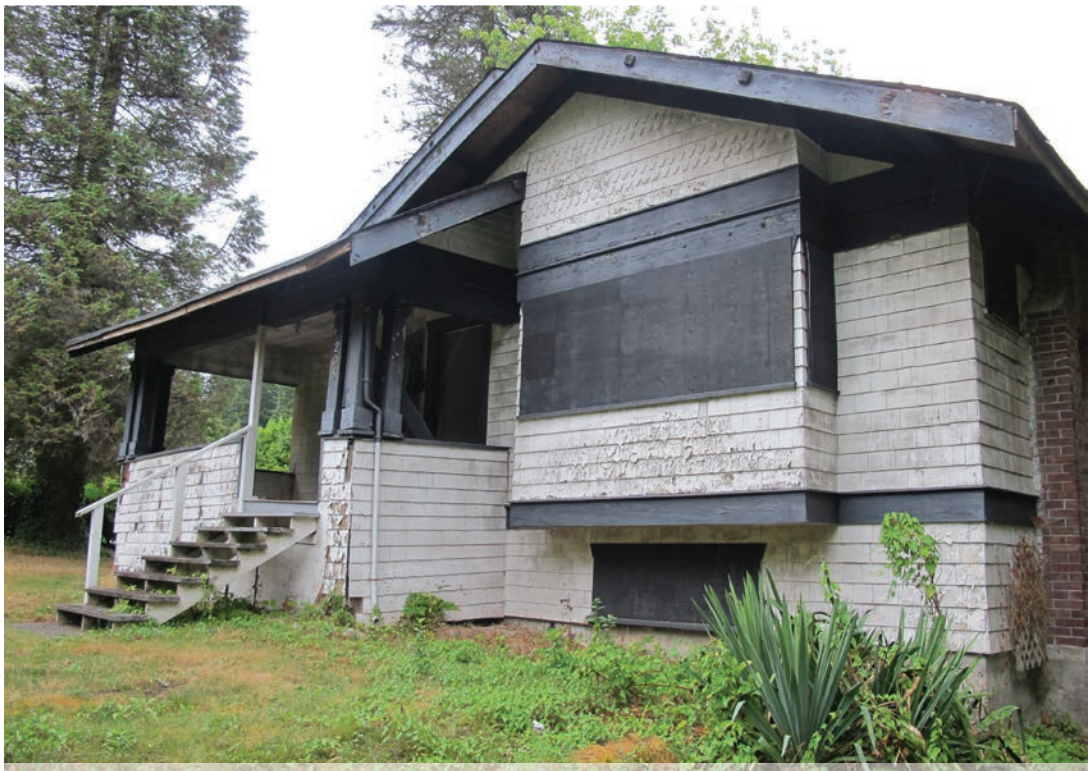
Heritage Designation: Protected Heritage Property
Date: 1921

The Chivers Residence is a modest one and one-half storey plus basement Arts and Crafts bungalow with twin-coursed shingle siding, a low-pitched side gable roof with overhanging eaves, exposed rafters and prominent shed roof dormer. The site is partially fenced off, and features a stone retaining wall that has concrete steps with a metal pipe railing leading to the street, and a separate set of concrete stairs leading to the lane at the south of the property. The roof and gutters of the house are currently tarped over, and the windows and doors are covered with plywood sheets. A car port or garage structure has been removed from the north side of the house, and parts of the envelope are open.

Special Considerations (additional to Checklist 4.3.1)

- The stone retaining wall should be inspected for loose or failing stones. The overgrown plantings should be removed from the wall to ensure that they are not growing into the mortar joints between the stones. If mortar joints have been damaged by plants, they should be repaired using mortar with the same colour, consistency, strength, and profile of the original.
- Both sets of concrete steps should be clear of garbage and vegetation.
- Ensure that the metal pipe railing is secure.
- Areas where the garage/carport used to attach to should be covered, but not patched with shingles.

TREMAINE RESIDENCE 205 SECOND AVENUE



The Tremaine Residence in 2015

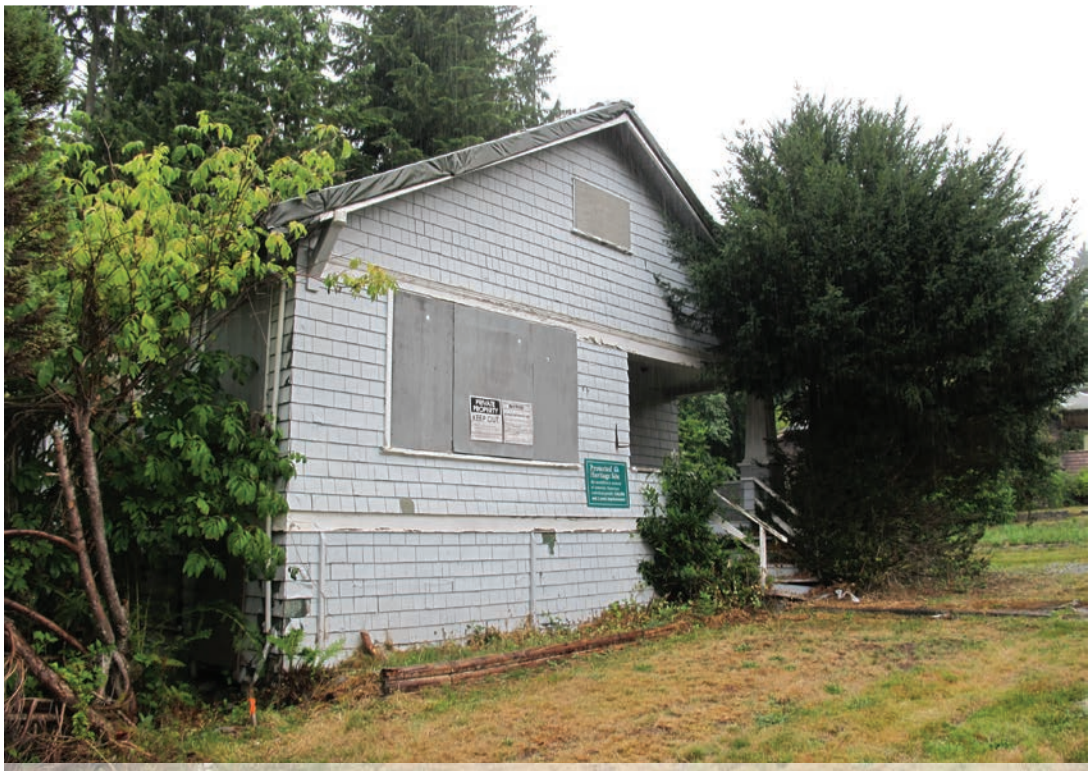
Heritage Designation: Protected Heritage Property
Date: 1921

The Tremaine Residence is a one-storey, front-gabled Craftsman bungalow with a complex multi-pitched roofline, a projecting rectangular front bay and a partial-width verandah. The house features decorative shingling in the gable peaks and tripled square verandah columns. The roof has not been tarped over, and parts of the soffit have been replaced. The porch has settled significantly and requires stabilization. The house is partially surrounded by a tall, thick hedge.

Special Considerations (additional to Checklist 4.3.1)

- The roof has begun to accumulate organic buildup, which should be cleaned off prior to installing a temporary roof.
- The hedge partially surrounding the house should be maintained so that it does not become overgrown.

BELTON RESIDENCE 300 SECOND AVENUE



The Belton Residence in 2015

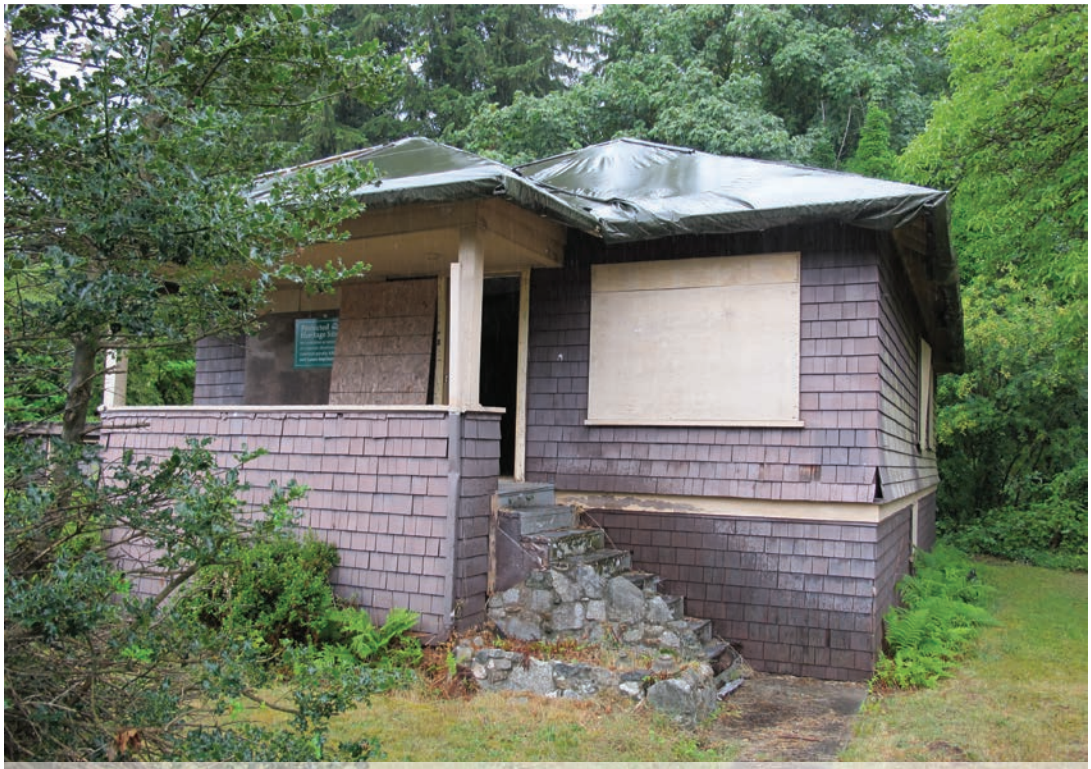
Heritage Designation: Protected Heritage Property
Date: 1923

The Belton Residence is a modest one-storey, side-gabled Arts and Crafts-style house with an inset corner verandah.

Special Considerations (additional to Checklist 4.3.1)

- None.

MacDONALD / BETTERTON RESIDENCE 304 SECOND AVENUE



The MacDonald/Betterton Residence in 2015

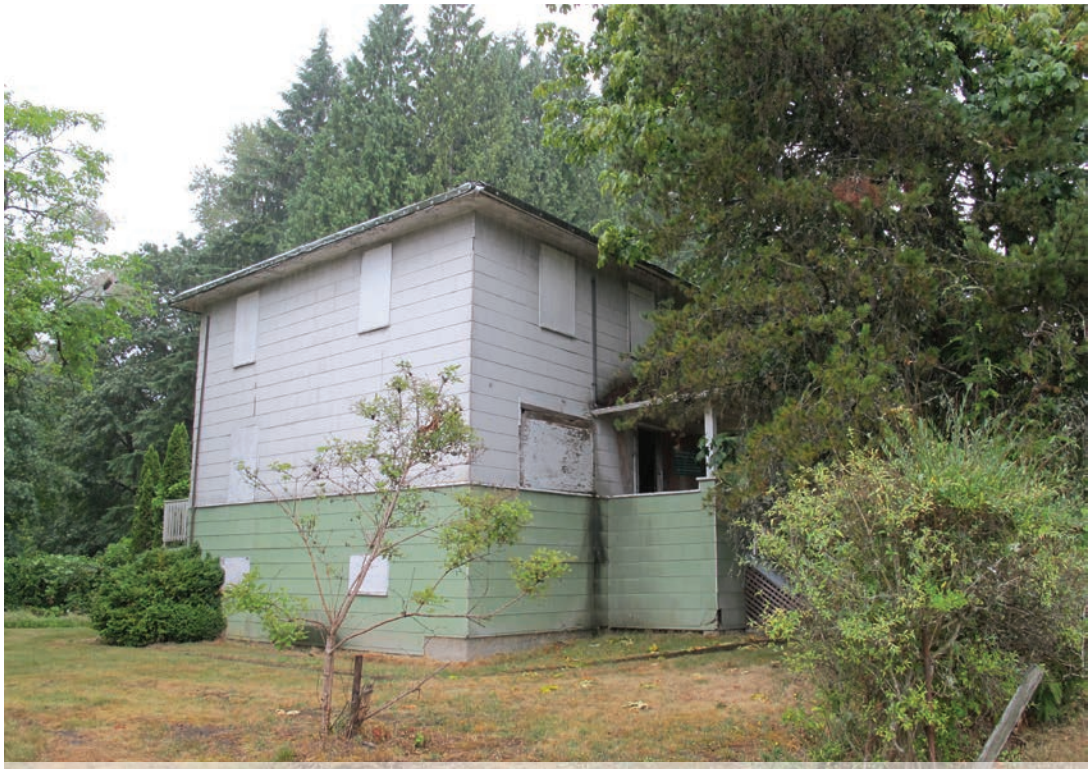
Heritage Designation: Protected Heritage Property
Date: 1921

The MacDonald/Betterton Residence is a modest one-storey Arts and Crafts bungalow with a hipped roof and projecting front verandah with closed balustrades. The house is accessed by a wood staircase with a stone wall, which has begun to crumble. The chimney has been dismantled above the roof and the chimney concrete is spalling. There is a white substance on the surface of the chimney masonry.

Special Considerations (additional to Checklist 4.3.1)

- The stone staircase wall should be inspected for loose or failing stones. Overgrown plantings should be removed from the wall to ensure that they are not growing into the mortar joints between the stones. Loose or fallen stones should be labelled and stored carefully inside the house.
- Clean the white substance on the surface of the chimney masonry using the gentlest means possible.

DAVIS RESIDENCE 306 SECOND AVENUE



The Davis Residence in 2015

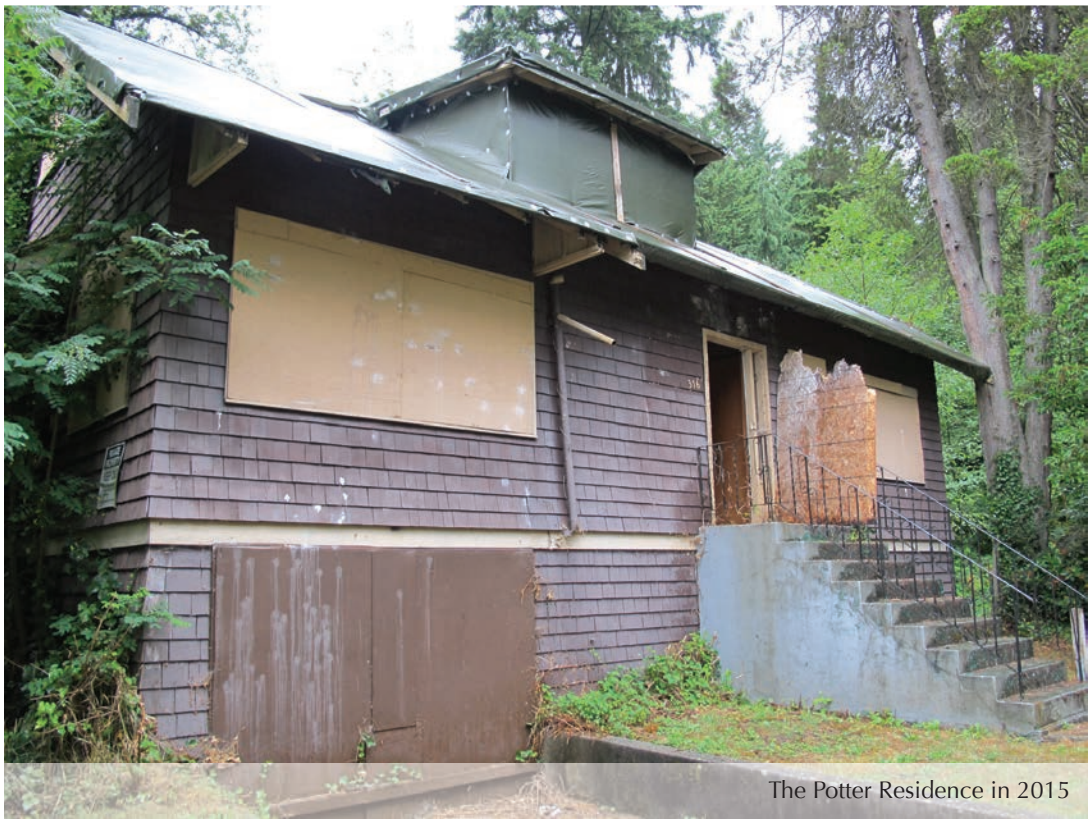
Heritage Designation: Protected Heritage Property
Date: 1914

The Davis Residence is a two-storey, wood frame Edwardian-era residence in the Foursquare style with a pyramidal hip roof and projecting front verandah. This house is the only one surviving from the original Ioco Settlement. The original siding has been covered with later siding that appears to be asbestos cement siding. One door and one window on the rear elevation have not been covered with plywood panels. The roof and gutters have been tarped over, causing backsplash to occur on parts of the cladding. This has resulted in severe staining in places.

Special Considerations (additional to Checklist 4.3.1)

- Extra precaution should be taken when undertaking any work, including cleaning, on or around this house due to the possible presence of asbestos cement siding. Activities such as drilling into the siding, or breaking pieces of siding can release asbestos into the air. It is recommended at this stage to have testing done to determine if asbestos is present. All work on or around this house should conform with any relevant WorkSafe BC and Occupational Health and Safety regulations.

POTTER RESIDENCE 316 SECOND AVENUE



The Potter Residence in 2015

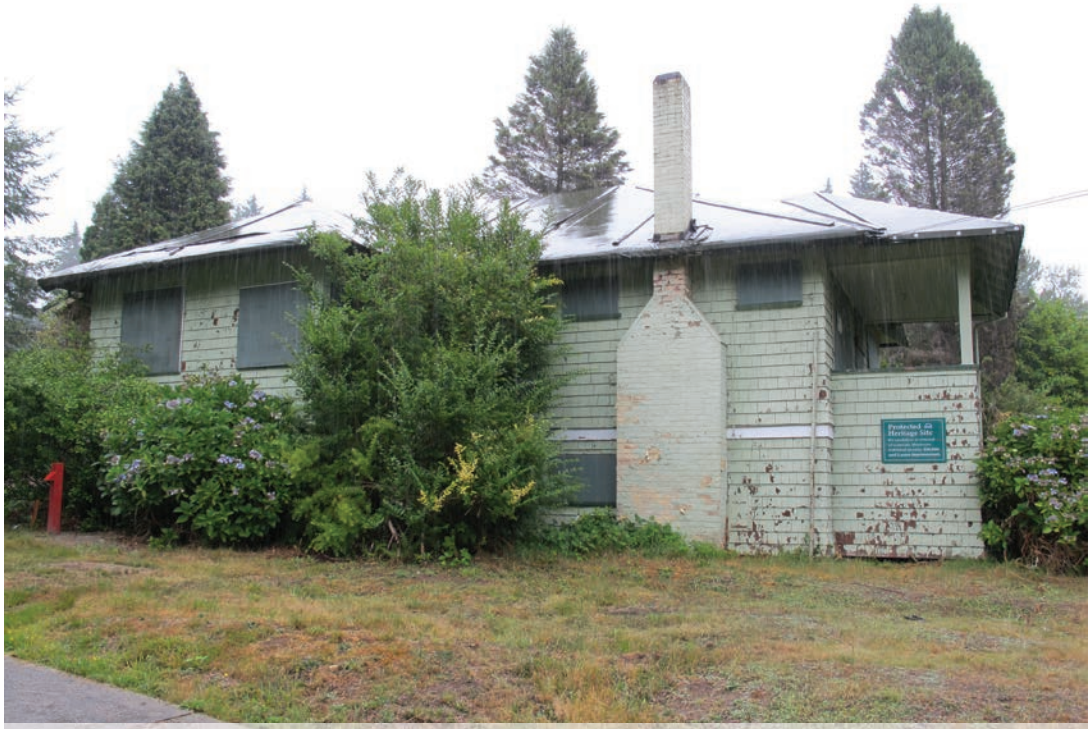
Heritage Designation: Protected Heritage Property
Date: 1922

The Potter Residence is a modest one and one-half storey plus basement Arts and Crafts house with a low-pitched, side-gabled roof, shingle siding and a shed-roofed dormer. Organic buildup was observed to be growing underneath the tarp on parts of the roof. Paintball stains are present on multiple areas of the siding. The site of the Potter Residence is peripheral and sheltered from view.

Special Considerations (additional to Checklist 4.3.1)

- Due to its secluded location, this house may require increased site protection measures. These measures may include the installation of motion sensor lighting on the exterior, as well as removing plants that obstruct views of the house and surrounding areas.
- Organic buildup on the roof should be removed before the new temporary roof is installed.

CLARKE RESIDENCE 207 SECOND STREET



The Clarke Residence in 2015

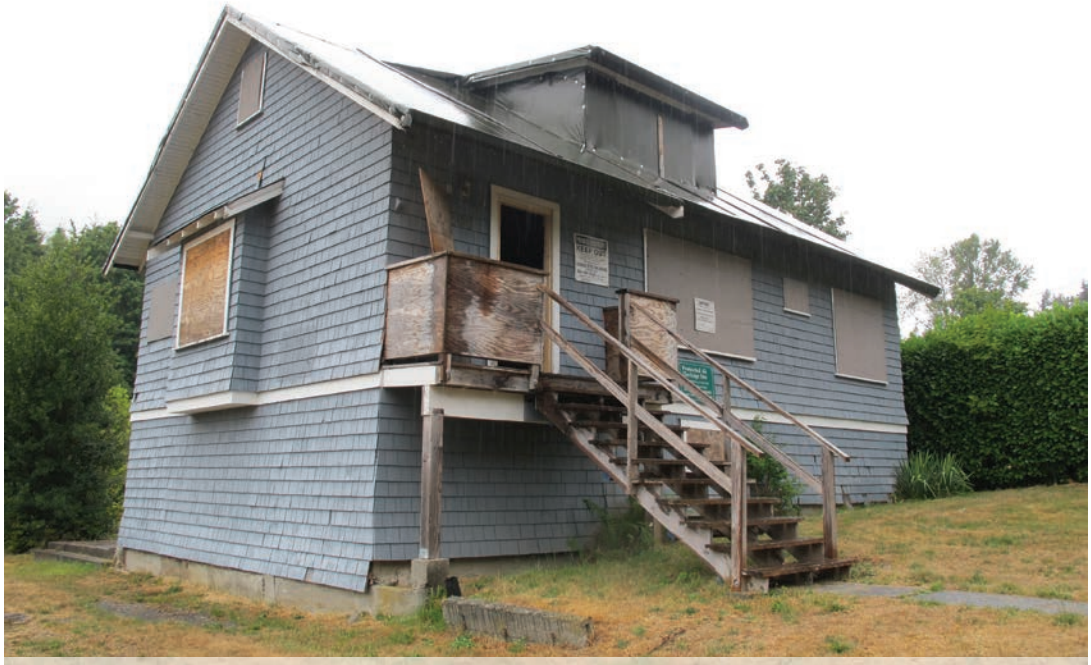
Heritage Designation: Protected Heritage Property
Date: 1921

The Clarke Residence is a modest one-storey Arts and Crafts bungalow with a hipped roof and projecting front verandah with closed balustrades. The roof over the rear porch has not been tarped, and organic buildup has begun to occur. The site features a mature English-inspired landscape on a terraced site.

Special Considerations (additional to Checklist 4.3.1)

- Organic buildup should be removed prior to installing the new temporary roof.
- The English-inspired plantings should be maintained rather than removed. Plants should not touch the historic house, and should not become overgrown.

McFARLANE RESIDENCE 206 THIRD AVENUE



The McFarlane Residence in 2015

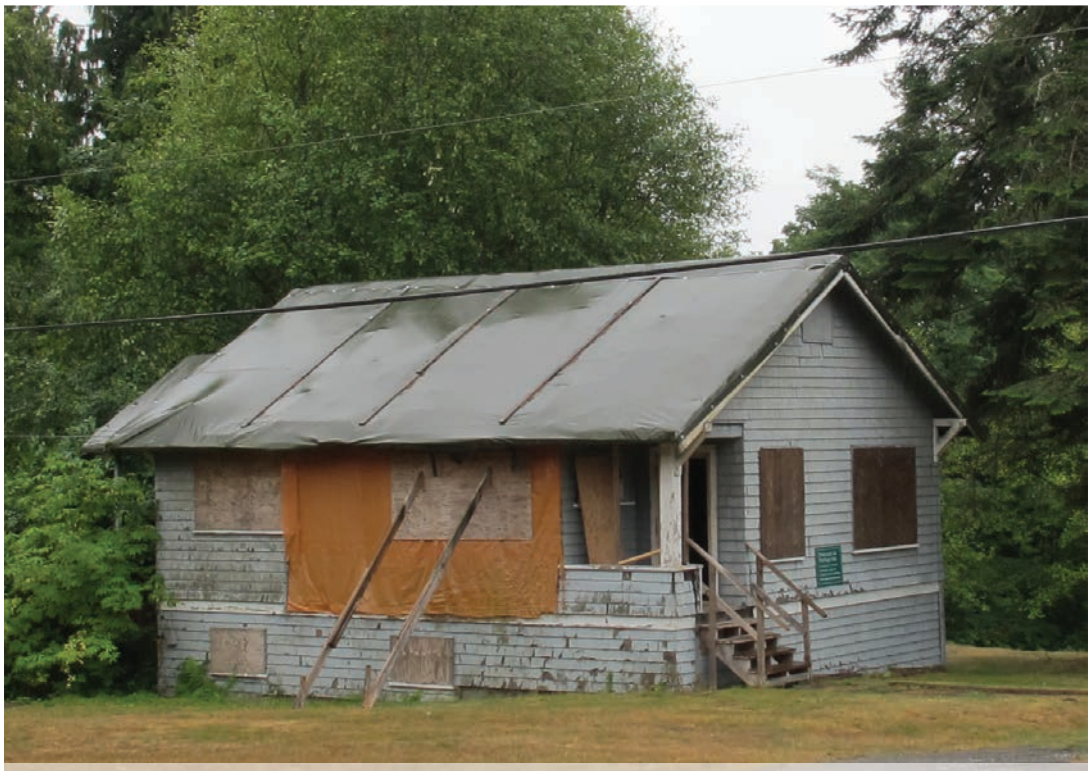
Heritage Designation: Protected Heritage Property
Date: 1922

The McFarlane Residence is a modest one and one-half storey plus basement Arts and Crafts house with a low-pitched side-gabled roof, shingle siding, a modest entry porch and a shed-roofed dormer. Parts of the tarp covering the roof have ripped, and a section of foundation on the south elevation appears to be buckling.

Special Considerations (additional to Checklist 4.3.1)

- Special attention should be paid to the foundation to ensure that the foundation is in good condition.

REYNOLDS RESIDENCE 207 THIRD AVENUE



The Reynolds Residence in 2015

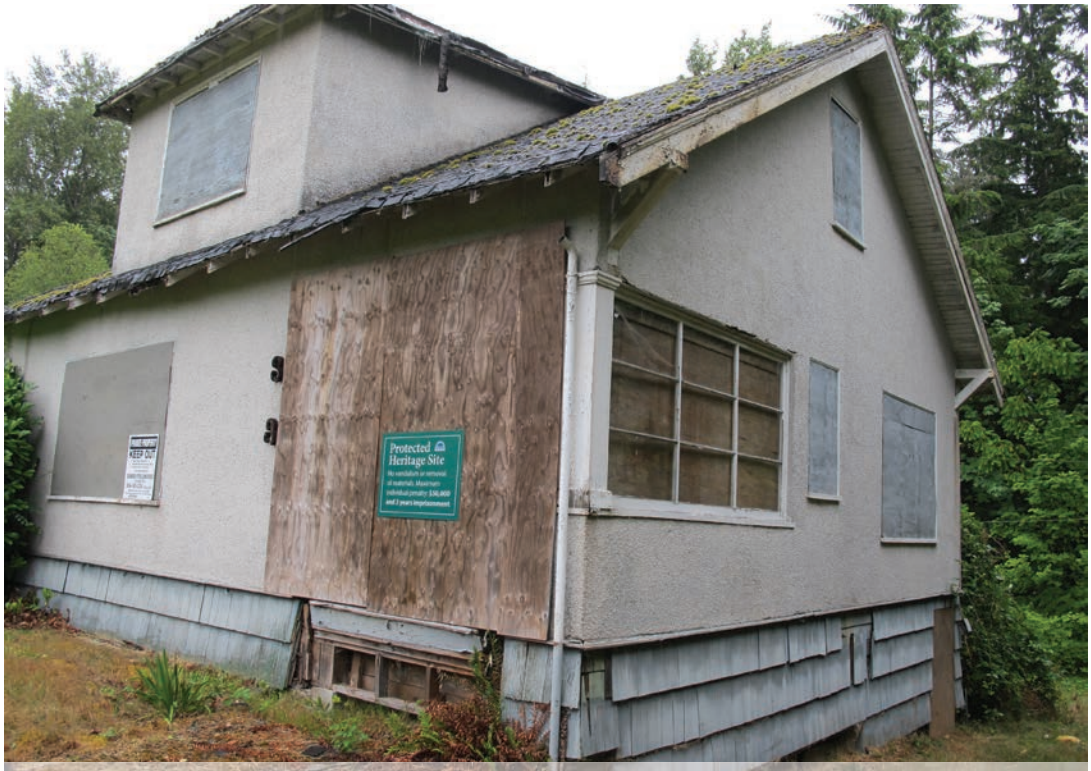
Heritage Designation: Protected Heritage Property
Date: 1922

The Reynolds Residence is a modest one-storey Arts and Crafts bungalow with a front-gabled roof, an inset corner entry porch, triangular eave brackets, and open soffits. There is shoring on the north elevation to hold up the partially collapsed north wall. During the review it was noted that there are some holes or gaps in the tarping covering up the collapse on the north wall.

Special Considerations (additional to Checklist 4.3.1)

- Any gaps or holes in the tarping on the north wall should be covered so that moisture and/or rodents cannot enter.
- The shoring should be periodically inspected to ensure that it is secure and performing properly.

RUNNELS RESIDENCE 303 THIRD AVENUE



The Runnels Residence in 2015

Heritage Designation: Protected Heritage Property
Date: 1922

The Runnels Residence is a modest one-storey Arts and Crafts bungalow with a side-gabled roof, shed-roofed front dormer and an inset corner verandah. The roof of the house has not been covered and is developing organic buildup, and some glazing along the front porch has not been covered with plywood. In the report by Siefken Engineering from June 6, 2012 it is noted that the building's structure is severely deteriorated, partial collapses have occurred, and that the building is not safe to enter. The report states that the building cannot be reconstructed and should be demolished.

Special Considerations (additional to Checklist 4.3.1)

- A second opinion should be obtained by a qualified structural engineer who is experienced in the restoration of heritage buildings, to determine how the structure can be stabilized and rebuilt.
- Once the engineer's report has been finalized, stabilization work should be undertaken immediately to ensure that the house is conserved. This should include structural stabilization and sufficient waterproofing to ensure that there is no more ingress of water.
- Further conservation work can be undertaken once stabilization has occurred and deterioration has been decelerated.

KILVERT RESIDENCE 203 FOURTH AVENUE

The Kilvert Residence in 2015

Heritage Designation: Protected Heritage Property
Date: 1923

The Kilvert Residence is a modest one-storey, front-gabled Arts and Crafts bungalow with an inset corner porch, cedar shingle siding and triangular eave brackets. During the review it was noted that some of the plywood boards are attached using staples, and crowbar damage was noted in at least one area. The roof over the rear porch has not been covered, and is covered with organic buildup.

Special Considerations (additional to Checklist 4.3.1)

- Carefully remove all plywood panels that are fixed using staples. The existing plywood panels may be re-used if the staples are either removed or hammered flat so that no pieces protrude. Alternately, new plywood panels may be used, and should be painted to match the brown shingles.
- Organic buildup on the roof should be removed before the new temporary roof is installed.

5.0 MAINTENANCE PLAN

A Maintenance Plan should be devised and implemented for the entire period that the buildings remain mothballed. The Maintenance Plan should include provisions for:

- Cyclical maintenance procedures to be adopted as outlined below.
- Records, including drawings and photos of the building, to be kept by the owners and maintenance contractor(s), if any.
- Records of all maintenance procedures to be kept by the owners.

A thorough Maintenance Plan will ensure that the deterioration of the historic fabric is not accelerated. If existing materials are regularly maintained and deterioration is significantly reduced or prevented, the buildings will be in better condition when it comes time to undertake further conservation work. Proper maintenance is an integral part of ensuring the survival of mothballed buildings.

Maintenance: Routine, cyclical, non-destructive actions necessary to slow the deterioration of a historic place. It entails periodic inspection; routine, cyclical, non-destructive cleaning; minor repair and refinishing operations; replacement of damaged or deteriorated materials that are impractical to save.

5.1 MAINTENANCE GUIDELINES

A maintenance schedule should be formulated that adheres to the *Standards and Guidelines for the Conservation of Historic Places in Canada* (2010).

Routine maintenance aims to keep water out of the building, which is the single most damaging element to a heritage building. Maintenance also prevents damage by sun, wind, snow, frost and all weather; prevents damage by insects and vermin; and aids in protecting all parts of the building against deterioration.

The effort and expense expended on an aggressive maintenance will not only lead to a higher degree of preservation, but also potentially save large amounts of money over time which might be required for later repairs. A comprehensive mothballing program can be expensive, and routine cyclical maintenance will protect the investment made in preserving the heritage resources.

5.2 ROUTINE CYCLICAL AND NON-DESTRUCTIVE CLEANING

Following the *Standards and Guidelines for the Conservation of Historic Places in Canada*, cleaning should be undertaken using the gentlest means possible. This approach ensures that unnecessary damage does not occur. Cleaning procedures should be undertaken on a routine basis, and should use non-destructive methods. Exterior elements are usually easily cleaned, simply with a soft, natural bristle brush, without water, to remove dirt and other material. If a more intensive cleaning is required, this can be accomplished with warm water, mild detergent and a soft bristle brush. High-pressure washing, sandblasting or other abrasive cleaning is damaging to historic materials and should not be undertaken under any circumstances.

5.3 REPAIRS AND REPLACEMENT OF DETERIORATED MATERIALS

Interventions such as repairs and replacements must conform to the *Standards and Guidelines for the Conservation of Historic Places in Canada*. The building's character-defining elements – characteristics of the building that contribute to its heritage value (and identified in the Statement of Significance) such as materials, form, configuration, etc. - must be conserved, referencing the following principles to guide interventions:

- An approach of minimal intervention must be adopted - where intervention is carried out it should be by the least intrusive & gentlest means possible.
- Repair rather than replace character-defining elements.
- Repair character-defining elements using recognized conservation methods.
- Replace 'in-kind' extensively deteriorated or missing parts of character-defining elements.
- Make interventions physically and visually compatible with the historic place.

5.4 INSPECTIONS

Inspections are a key element in the maintenance plan, and should be carried out by a qualified person or firm, preferably with experience in the assessment of heritage buildings. These inspections should be conducted twice a year during the spring and fall, and after major storms. The spring inspection should be more rigorous since in spring moisture-related deterioration is most visible, and because needed work can be completed during the summer. The fall inspection should focus on seasonal issues such as weather-sealants, heating systems and drainage. The inspection should address all aspects of the building including exterior, interior and site conditions. A report should be generated from the inspection, corrective actions logged, and the report filed.

Comprehensive inspections should occur at the five and ten year milestones, should the buildings still be mothballed. Inspections should compare records from previous inspections, particularly in monitoring structural movement and the durability of the roof.

5.5 INFORMATION FILE

Each building should have its own information file where an inspection report can be filed. This file should also contain the log book that itemizes problems and corrective action. Additionally, this file should contain building plans, building permits, heritage reports, photographs and other relevant documentation so that a complete understanding of the building and its evolution is readily available, which will aid in determining appropriate interventions when needed.

LOG BOOK
The maintenance log book is an important maintenance tool that should be kept to record all maintenance activities, recurring problems and building observations. Entries will assist in tracking and identifying problems that arise in the historic building.

5.6 EXTERIOR MAINTENANCE

Water, in all its forms and sources (rain, snow, frost, rising ground water, leaking pipes, back-splash, etc.) is the single most damaging element to historic buildings. The most common place for water to enter a building is through the roof. Installing and maintaining temporary roofs on the thirteen buildings is the most effective maintenance option for preserving the structures. All of the buildings reviewed had evidence of interior water damage, which often indicates a larger water ingress problem. One of the main purposes of mothballing is to keep water and moisture out of historic buildings during the period of vacancy, and continued maintenance will protect the investment made in mothballing the thirteen buildings.

5.7 INSPECTION CHECKLIST

5.7.1 SPRING / FALL INSPECTION

Site
- ❑ Is the lot well drained?
- ❑ Is there pooling of water?
- ❑ Does water drain away from foundation?
- ❑ Are plants overgrown or attaching to the building?
- ❑ Are trees in need of pruning?
- ❑ Is the site free of garbage?

Foundation
- ❑ Moisture: Is rising damp present?
- ❑ Is there back-splashing from ground to structure?
- ❑ Is any moisture problem general or localized?
- ❑ Is uneven foundation settlement evident?
- ❑ Do foundation openings (doors and windows) show: rust; rot; insect attack; paint failure; soil build-up?

Structure
- ❑ Are wood elements deteriorating?
- ❑ Do any structural members show signs of failure?
- ❑ Are nails/screws pulling loose or rusted?

Interior
- ❑ Is there water damage? Dampness? Mold?
- ❑ Are walls even or buckling or cracked? Is the floor cracked or heaved?
- ❑ Are there signs of vandalism and/or break-ins?
- ❑ Are there signs of pests/rodents?
- ❑ Is the interior broom-clean?

Exterior Wood Elements
- ❑ Are there moisture problems present?
- ❑ Is there insect or fungal attack present? Where and probable source?
- ❑ Are there any other forms of biological attack? (Moss, birds, etc.) Where and probable source?
- ❑ Is any wood surface damaged from UV radiation? (bleached surface, loose surface fibres)
- ❑ Is any wood warped, cupped or twisted?
- ❑ Is any wood split? Are there loose knots?
- ❑ Are nails pulling loose or rusted?
- ❑ Is there any staining of wood elements? Source?
- ❑ Has routine cleaning been completed?

Condition of Exterior Painted Materials
- ❑ Does the paint show: blistering, sagging or wrinkling, alligatoring, peeling, rust, bleeding knots, mildew, etc?
- ❑ How clean is the paint?

Porches
- ❑ Are steps safe? Handrails secure?
- ❑ Attachment – are porches, steps, etc. securely connected to the building?

Windows and Doors
- ❑ Are the plywood panels secure?
- ❑ Are vented louvres unobstructed?
- ❑ Is there evidence of cracked or missing glass?
- ❑ Are the frames free from distortion?
- ❑ Do sills show weathering or deterioration?
- ❑ Are any windows stored inside the building in good condition?
- ❑ Are the door locks functioning?
- ❑ Are door frames wicking up water?

Roof and Chimney
- ❑ Is the temporary roof in good condition?
- ❑ Are there blisters or slits in the membrane?
- ❑ Are there water blockage points?
- ❑ Is the leading edge of the roof wet?
- ❑ Is there evidence of biological attack? (Fungus, moss, birds, insects) Is there organic debris build-up on the roof?
- ❑ Are joints and seams sound?
- ❑ Does the soffit show any signs of water damage? Insect or bird infestation?
- ❑ Are the drain pipes plugged or standing proud?
- ❑ Are any flashings well positioned and sealed?
- ❑ Is water ponding present?
- ❑ Are gutters and downspouts leaking? Clogged?
- ❑ Are gutters and downspouts complete without any missing sections? Are they properly connected?
- ❑ Is the water being effectively carried away from the downspout by a drainage system?
- ❑ Do downspouts drain away from the building?
- ❑ Is the chimney in good condition? Is it leaning?
- ❑ Are the roof and chimney clean?

Aerial View of Ioco Townsite and Refinery (PMSM 1982.001.028)

5.7.2 OTHER INSPECTIONS

Weekly (Drive By)

- ❑ Visually inspect for signs of vandalism. Remove spray-paint or other vandalism immediately.
- ❑ Check that fencing has not been breached or tampered with, and that all signs are still attached.

Five-Year Cycle

- ❑ An inspection report should be complied analyzing and comparing the results of previous inspections.
- ❑ Repaint the exteriors between the five to ten year period, depending on condition.
- ❑ Check the condition of the exterior wood elements and repair as necessary.
- ❑ Check the condition of the temporary roof and repair/replace as necessary.

Ten-Year Cycle

- ❑ Buildings typically should not be mothballed for periods longer than ten years. Once the Ioco buildings have been mothballed for ten years, major conservation work will likely be required on the structure, roof, and building envelope. At the ten year cycle detailed condition assessments should be completed by a Structural Engineer, an Envelope Consultant, and by a Heritage Consultant.

Major Maintenance Work (as required)

- ❑ Replacement of damaged deteriorated building materials as required.
- ❑ Notify the city of major damage or incidents.

6.0 APPENDIX A: STATEMENTS OF SIGNIFICANCE

IOCO GROCERY STORE THIRD AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1922

Description of Historic Place
The Ioco Grocery Store is a large two-storey Arts and Crafts commercial building with a broad hipped roof, lapped wooden siding at the ground floor level, and shingle siding at the second floor level. It is sited prominently on Third Avenue, near the entry to the Imperial Oil refinery, in Ioco, an early Company town in Port Moody. Adjacent and to the north is the Ioco Hall, another large early surviving landmark. The Ioco Grocery Store is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Ioco Grocery Store, built in 1922, is a testament to the origins of Ioco as a community company town and is valued for its economic link to the community. It reflects the ongoing development of the Ioco townsite, which was linked to the growth of the Ioco Refinery. By January 1914, Imperial Oil had selected a location for a refinery on the North Shore of Burrard Inlet. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. To house its workers, the Imperial Oil Company contracted architects Blackadder & MacKay, and the Dominion Construction Company, one of Vancouver's most successful construction firms, to build forty houses on a site across from the refinery in 1921. The surviving buildings at Ioco represent the life of an early company town in the 1920s, which originally included a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s. As the townsite was remote, its self-sufficiency was paramount to attracting and retaining skilled workers.

The Ioco Grocery Store is further valued for its modest Arts and Crafts styling. The consistent use of this domestic style for all of the town's buildings reinforced both the coherent nature of this tightly-knit, isolated community and the benevolent but paternalistic control exerted by Imperial Oil over every aspect of its existence. The Grocery Store is also significant for its association with its first owner, John P. Grant. In 1922, Grant acquired this property and constructed this store, which also had a residence located above. In 1924, Grant sold the store to Swan Goranson (born 1872) and R. Larson, who continued its commercial operations.

Character-Defining Elements
Key elements that define the heritage character of the Ioco Grocery Store include its:

- location, on Third Avenue, near the entrance to the Imperial Oil refinery in Ioco, the historic company town, with views of Burrard Inlet
- location adjacent to the Ioco Hall
- commercial form, scale and massing as expressed by its two-storey plus basement height, broad-hipped roof, rectangular plan, and symmetrical plan with central entry
- wood-frame construction, clad with lapped wooden siding with corner boards at the ground level, and cedar shingles with slight bellcast flare on the second floor level
- Arts and Crafts details such as open soffits and exposed rafter tails
- two internal red-brick chimneys
- variety of windows including multi-paned wooden sash casement windows in double-assembly, and 1-over-1 double-hung wooden sash windows, now boarded over
- mature informal landscape including deciduous and coniferous trees

IOCO HALL THIRD AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1921

Description of Historic Place
Ioco Hall is a large one-storey, utilitarian wood-frame building located on the west side of Ioco, an early Imperial Oil Company town in Port Moody. Located on Third Avenue, Ioco Hall features a distinctive jerkin-headed roof, triangular brackets and shingle siding. Adjacent and to the south is the Ioco Grocery Store, another large early surviving landmark. Ioco Hall is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
Built in 1921, and contemporaneous with other structures in the Ioco area, the Ioco Hall is a testament to the origins of Ioco as a community company town and is valued for its social links to the community. It reflects the ongoing development of the Ioco townsite, which was linked to the growth of the Ioco Refinery. By January 1914, Imperial Oil had selected a location for a refinery on the North Shore of Burrard Inlet. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. To house its workers, the Imperial Oil Company contracted architects Blackadder & MacKay, and the Dominion Construction Company, one of Vancouver's most successful construction firms, to build forty houses on a site across from the refinery in 1921. The surviving buildings at Ioco represent the life of an early company town in the 1920s, which originally included this community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s. As the site was remote, its self-sufficiency was paramount to attracting and retaining skilled workers. As the townsite was remote, the provision of community amenities was paramount to attracting and retaining skilled workers. The Hall was an important part of the social life of the close-knit Ioco community.

The Ioco Community Hall is additionally valued for its connection and contribution to the growth of the Ioco townsite and for its Arts and Crafts architecture. The rapid influx of Ioco's population necessitated the construction of a community hall to serve the town's social functions and recreational needs, and Ioco Hall is valued for its association with many of the early settlers of the area, acting as a prominent social hub. The scale of the Hall reflects the size of the early community, while its modest design and simple ornamentation demonstrate the constraints on construction in this isolated company town.

Character-Defining Elements
Key elements that define the heritage character of the Ioco Hall include its:

- location on the west side of Third Avenue, set close to the road, within the historic company town of Ioco, with views of Burrard Inlet
- location adjacent to the Ioco Grocery Store
- commercial form, scale and massing as expressed by its one-storey plus basement height, low-pitched front jerkin-headed roof, symmetrical massing, rectangular plan and central front entry
- wood-frame construction, with shingle siding on the main level, and lapped wooden siding at the lower level
- Arts and Crafts details such as half timbering and louvred vent at the gable peak, exposed rafters, and triangular brackets
- additional exterior details such as an external pressed-brick chimney
- variety of windows now boarded over

CHIVERS RESIDENCE 306 FIRST AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1921

Description of Historic Place
The Chivers Residence is a modest one and one-half storey plus basement Arts and Crafts bungalow. It is located on a terraced site bordered by a coursed granite wall, on First Avenue in Ioco, an early Imperial Oil Company town in Port Moody. Similar in design to other houses in the Townsite, it features twin-coursed shingle siding, a low-pitched side gable roof with overhanging eaves, exposed rafters and prominent shed roof dormer. The Chivers Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Chivers Residence is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Built in 1921, the Chivers Residence is also significant for its modest Arts and Crafts detailing and for its association with first owner Charles George Chivers. He was born in Ontario in 1887, and lived in the house until his death in 1973. His wife, Patricia Chivers, née Bartie, was born in 1900 and passed away in 1977. Charles Chivers worked as a Treater at the Imperial Oil Refinery for 40 years, retiring in 1945. The residence displays elements of the Craftsman movement popularized through countless periodicals and plan books, expressing both the traditional aspects of the Arts and Crafts movement as well as modern domestic lifestyles. Efficient, rational floor plans combined with a modest design are reflected in the residence's simple rectangular plan, overhanging eaves with exposed rafters and purlins, and an inset verandah.

Character-Defining Elements
Key elements that define the heritage character of the Chivers Residence include its:

- location, on the west side of First Avenue within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, rectangular plan, side-gabled roof with overhanging eaves, and prominent shed roof dormer
- wood-frame construction, with twin-coursed cedar shingle siding
- Arts and Crafts details such as exposed rafters and purlins
- central red-brick chimney
- variety of windows including multi-paned casement windows in single and multiple assembly, now boarded over
- associated landscape features such as the terraced site with coursed-granite wall fronting First Avenue, and mature coniferous trees at rear of property

TREMAINE RESIDENCE 205 SECOND AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1921

Description of Historic Place
The Tremaine Residence is a one-storey, front-gabled Craftsman bungalow with a complex multi-pitched roofline, a projecting rectangular front bay and a partial-width verandah. The house is distinctive for its decorative shingling in the gable peaks and tripled square verandah columns. The house is situated on a large lot on the east side of Second Avenue in Ioco, an early Imperial Oil Company town in Port Moody. The Tremaine Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Tremaine Residence is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. As described in 'Country Life in British Columbia', June 1923: 'the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders.' The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Built in 1921, the Tremaine Residence is additionally significant for its Craftsman bungalow form, and for its association with first owner, William A. Tremaine (1887-1974). Ontario-born Tremaine was employed as a Purchasing Agent at the Imperial Oil Company Refinery and later as a clerk. He was also active in Ioco's community, and served as an employee representative for the Ioco Townsite Committee. This particular house features more refined Arts and Crafts details than other houses in Ioco, indicating that it was occupied by someone in a senior position with the company.

Character-Defining Elements
Key elements that define the heritage character of the Tremaine Residence include its:

- location, on the east side of Second Avenue within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, complex multi-pitched roofline, rectangular plan, corner inset entry and partial-width verandah
- wood-frame construction, with cedar shingle siding and wooden detailing
- Craftsman bungalow form including the low-pitched roofline asymmetrical massing and the open front verandah with tripled columns
- external red-brick chimney with chimney pot
- variety of windows including multi-paned casement windows in single and multiple assembly, now boarded over
- mature informal associated landscape features including rock wall, hedgerow, and deciduous and coniferous trees

BELTON RESIDENCE 300 SECOND AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1923

Description of Historic Place
The Belton Residence is a modest one-storey, side-gabled Arts and Crafts-style house with an inset corner verandah. The rear of the lot backs onto a wooded creek. It is situated on Second Avenue in Ioco, an early Imperial Oil Company town in Port Moody. The Belton Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Belton Residence is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. As described in 'Country Life in British Columbia', June 1923: 'the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders.' The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Built in 1923, the Belton Residence is additionally significant for its modest Arts and Crafts styling and for its association with the Belton family, who occupied the house for years. Arthur Phillip Belton (1886-1963), who was originally from London, England, started working as a launch operator at the Imperial Oil Company Refinery. He was later promoted to the position of Purchaser. After marrying Nora Eileen (née Dockrill, 1893-1975) in 1921, the couple took up residence in this house. The modest detailing of this house reflects Belton's status with the company, while expressing the traditional aspects of the Arts and Crafts movement as well as modern domestic lifestyles. Efficient, rational floor plans reflected the reality that most families, especially after the end of the First World War, could no longer afford domestic help.

Character-Defining Elements
Key elements that define the heritage character of the Belton Residence include its:

- location, on Second Avenue, with lot backing onto a creek, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, front-gabled roof, and rectangular plan with inset corner verandah
- wood-frame construction with cedar shingle siding
- additional exterior details such as an internal red-brick chimney
- variety of windows including 4-over-1, 6-over-1 and 8-over-1 double-hung wooden sash casement windows in single and double assembly and triple assembly, now boarded over
- mature informal landscape including deciduous and coniferous trees; wooded creek at rear

MacDONALD / BETTERTON RESIDENCE 304 SECOND AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1921

Description of Historic Place
The MacDonald/Betterton Residence is a modest, one-storey Arts and Crafts bungalow with a hipped roof and projecting front verandah with closed balustrades. It is located on the west side of Second Avenue close to a central ravine at the back of the house in Ioco, an early Imperial Oil Company in Port Moody. The MacDonald/Betterton Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The MacDonald/Betterton Residence, built in 1921, is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

The MacDonald/Betterton Residence is further valued for its modest Arts and Crafts detailing and for its association with its first owners, Donald G. MacDonald (1898-1986) an oil worker for Imperial Oil, and Ida May Betterton (née MacDonald). At the age of 22, Ida May married Cherrill Roach Betterton, a twenty-four-year old from Seattle, who was killed in overseas service during the First World War. The residence was sold to William Benjamin Holgate Jr. (1877-1944) in 1923, a second generation Canadian born in 1877. His father, William Benjamin Holgate Sr., came to Canada in 1864 with the Shropshire Regiment to protect Canada from the Fenians who were raiding from the American side; he later worked for Imperial Oil in Ontario.

Character-Defining Elements
Key elements that define the heritage character of the MacDonald/Betterton Residence include its:

- location on a sloping site, on the west side of Second Avenue, with a lot backing onto a ravine, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, and hipped roof with hipped roof projections to the south and east sides
- wood-frame construction, with cedar shingle siding
- Arts and Crafts details such as open soffits with exposed rafters, and partial width verandah with hipped roof, square columns and closed balustrades
- additional exterior details such as an external red-brick chimney
- variety of windows including 3-over-2 double-hung wooden sash casement windows in double and triple-assembly, now boarded over
- mature informal landscape including deciduous and coniferous trees and stone wall, with a ravine to the rear

DAVIS RESIDENCE 306 SECOND AVENUE

Date: 1914

Description of Historic Place
The Davis Residence is a two-storey, wood-frame Edwardian-era residence at Ioco, an early Imperial Oil Company town in Port Moody. Designed in the Foursquare style, it is the only surviving house from the original Ioco settlement. It is situated on Second Avenue, and is notable for its square floor plan, pyramidal hip roof and projecting front verandah. The Davis Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Davis Residence, constructed in 1914, is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921 and forty new worker's houses were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses - including this one – that were originally situated on the Ioco grounds were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. As described in 'Country Life in British Columbia', June 1923: 'the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders.' The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

The Davis Residence is significant for dating to the earliest establishment of the townsite, and as Ioco's last remaining two-storey Edwardian-era residence. This house was among fourteen other houses, originally situated on the Ioco grounds, that were moved to the new townsite, creating an instant community. Foursquare in plan, this house is defined by its symmetrical massing, pyramidal roof and front projecting verandah. Its modest detailing and functionality reflects the needs of Ioco's working population. Further value is attained through the house's association with first owner, James Davis (1879-1928). English-born Davis was employed as a stillman at the Imperial Oil Company refinery.

Character-Defining Elements
Key elements that define the heritage character of the Davis Residence include its:

- location on Second Avenue, within the historic community of Ioco with views of Burrard Inlet
- residential form, scale and massing as expressed by its two-storey plus basement height, square plan, symmetrical massing, pyramidal roof, projecting front verandah with hipped roof, and rear verandah
- wood-frame construction, with original lapped wooden siding underneath the later asbestos siding
- elements of the Edwardian-era Foursquare style such as the overall symmetrical design with a vertical emphasis
- internal red-brick chimney
- variety of windows including 1-over-1 double-hung wooden sash windows in single assembly, now boarded over
- mature informal landscape including deciduous and coniferous trees, with a ravine to the rear

POTTER RESIDENCE 316 SECOND AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1922

Description of Historic Place
The Potter Residence is a modest one and one-half storey plus basement Arts and Crafts house, located on the west side at the north end of Second Avenue in Ioco, an early Imperial Oil Company town in Port Moody. The house is similar in design to others in the townsite and features a low-pitched, side gabled roof, shingle siding and a shed-roofed dormer. The residence is situated on a well landscaped lot with mature specimen plantings. The Potter Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Potter Residence is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Built in 1922, the Potter Residence is also significant for its modest Arts and Crafts detailing and for its association with first owner William Leslie Potter, born in Prince Edward County, Ontario in 1863, and who worked as a watchman and pumpman with the Imperial Oil Refinery for 16 years, retiring in 1932. He married Lella (née Ridley) May Potter, in 1917, a homemaker born in Guelph, Ontario. William died in 1945; Lella died in 1987, at the age of 101. The residence displays typical Arts and Crafts features popularized through countless periodicals and plan books Efficient, rational floor plans reflected a more modest design, as reflected in the residence's simple rectangular plan, overhanging eaves with exposed rafters with simple gable screen design at the gable peaks.

Character-Defining Elements
Key elements that define the heritage character of the Potter Residence include its:

- location at the north end of Second Avenue on the west side of the street, set back from the road, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one and one-half storey plus basement height, side-gabled roof, rectangular plan and shed-roofed front dormer
- wood-frame construction, with cedar shingle siding, bellcast at watertable and foundation
- Arts and Crafts details such as open soffits with exposed rafters and purlins, gable screens, and projecting square bay at south side of house
- additional features such as an internal red-brick chimney
- variety of windows including multi-paned wooden-sash casement windows and double assembly, double-hung wooden-sash windows, now boarded over
- associated landscape features including mature holly, rhododendron and deciduous and coniferous trees

CLARKE RESIDENCE 207 SECOND STREET

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1921

Description of Historic Place
The Clarke Residence is a modest, one-storey Arts and Crafts bungalow with a hipped roof and projecting front verandah with closed balustrades. It is located in Ioco, an early Imperial Oil Company town in Port Moody. The residence is one of the few properties facing Burrard Inlet and is located on a landscaped and terraced lot on the north side of Second Avenue. The Clarke Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Clarke Residence, built in 1921, is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. In order to provide local housing for the workers, the land for a residential townsite was subdivided in 1921. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

The Clarke Residence is further valued for its modest Arts and Crafts detailing and for its association with first owner, William T. Clarke. The residence's demure yet elegant Arts and Crafts detailing is reflected in its low pitched hipped roofs, exposed rafters, triangular brackets and projecting front verandah. The residence is set within an English-inspired garden and is of a standard, comfortable design that was targeted to a broad spectrum of the workers who lived and worked at Imperial Oil at the time.

Character-Defining Elements
Key elements that define the heritage character of the Clarke Residence include its:

- location, on the north side of Second Street facing south, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, and hipped roof with hipped roof projections to the side and front
- wood-frame construction, with cedar shingle siding
- Arts and Crafts details such as open soffits with exposed rafters, and partial width verandah with hipped roof, square columns and closed balustrades
- additional exterior details such as an external red-brick chimney
- variety of windows including 3-over-2 double-hung wooden sash casement windows in double and triple-assembly, now boarded over
- mature English inspired landscape on a terraced site, including deciduous and coniferous trees

McFARLANE RESIDENCE 206 THIRD AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1922

Description of Historic Place
The McFarlane Residence is a is a modest one and one-half storey plus basement Arts and Crafts house, located on the east side of Third Avenue in Ioco, an early Imperial Oil Company town in Port Moody. The house is similar in design to others in the townsite and features a low-pitched, side gabled roof, shingle siding, a modest entry porch and a shed-roofed dormer. The McFarlane Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
Built in 1922, and contemporaneous with other houses in the Ioco area, the McFarlane Residence is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Also significant is the association with its first owner, Wesley McFarlane (1898-1962), a pumpman and engineer with Imperial Oil refinery. McFarlane purchased house from Imperial Oil in 1922. It is a modest example of Arts and Crafts architecture, popular in the 1920s. The simple detailing includes a low pitched side-gabled roof, a projecting square bay with windows on the south side, a simple projecting front porch and shingle siding.

Character-Defining Elements
Key elements that define the heritage character of the McFarlane Residence include its:

- location on the east side of Third Avenue, close to the road within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet.
- residential form, scale and massing as expressed by its one and one-half storey plus basement height, side-gabled roof, rectangular plan, modest projecting entry porch and shed-roofed front dormer
- wood-frame construction, with cedar shingle siding, bellcast at the watertable and foundation
- Arts and Crafts details such as open soffits with exposed rafters and purlins, and projecting square bay at side
- additional features such as an internal red-brick chimney
- variety of windows including 6-over-1 double-hung wooden sash casement windows in single and double assembly, now boarded over

REYNOLDS RESIDENCE 207 THIRD AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1922

Description of Historic Place
The Reynolds Residence is a modest one-storey Arts and Crafts bungalow with a front-gabled roof, an inset corner entry porch, triangular eave brackets, and open soffits. The house is situated on Third Avenue in Ioco, an early Imperial Oil Company town in Port Moody. The rear of the lot slopes down to a ravine that runs through the centre of the townsite. The Reynolds Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Reynolds Residence, built in 1922, is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. As described in 'Country Life in British Columbia', June 1923: 'the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders.' The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

The Reynolds Residence is additionally valued for its modest Arts and Crafts details and for its association with its first owner, William John Reynolds (1872-1942). Employed as a still cleaner at the Imperial Oil Company Refinery, Ontario-born Reynolds occupied the house for many years. The house's modest detailing reflects the status of its owner, while expressing the traditional aspects of the Arts and Crafts movement as well as modern domestic lifestyles. Efficient, rational floor plans reflected the reality that most families, especially after the end of the First World War, could no longer afford domestic help.

Character-Defining Elements
Key elements that define the heritage character of the Reynolds Residence include its:

- location, on Third Avenue, with the rear of the lot sloping down to a ravine, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, front-gabled roof and inset front corner entry porch
- wood-frame construction, with cedar shingle siding
- Arts and Crafts details such as open soffits with exposed rafter ends, and triangular eave brackets
- additional exterior details such as an internal red-brick chimney with chimney pots
- variety of windows including 1-over-1 double-hung wooden sash casement windows in single and double-assembly, now boarded over
- - mature informal landscape including deciduous and coniferous trees
- hung wooden sash casement windows in double and triple-assembly, now boarded over
- mature English inspired landscape on a terraced site, including deciduous and coniferous trees

RUNNELS RESIDENCE 303 THIRD AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1922

Description of Historic Place
The Runnels Residence is a modest, one-storey side-gabled Arts and Crafts bungalow with a side-gabled roof, shed-roofed front dormer and an inset corner verandah. The house is situated on Third Avenue in Ioco, an early Imperial Oil Company town in Port Moody. It is concealed by a large hedge at the front, and the rear of the lot slopes down towards a creek. The Runnels Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Runnels Residence, built in 1922, is valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. As described in 'Country Life in British Columbia', June 1923: 'the homes have artistry both of plan and setting. Each shingled bungalow expresses in a peculiar way the personality of the builders.' The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

The Runnels Residence is also valued for its modest Arts and Crafts detailing and for its association with its owners, Maxwell Dickson Runnels (1900-1975), a pumpman at Imperial Oil Company Refinery, and his wife Florence Sarah (née Hailey, 1894-1980). The Runnels were married in Port Moody in 1920. The house's modest detailing reflects the status of its owners, while expressing the traditional aspects of the Arts and Crafts movement as well as modern domestic lifestyles. Efficient, rational floor plans reflected the reality that most families, especially after the end of the First World War, could no longer afford domestic help.

Character-Defining Elements
Key elements that define the heritage character of the Runnels Residence include its:

- location, on Third Avenue, within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, side-gabled roof, rectangular plan, inset corner verandah and shed-roofed front dormer
- wood-frame construction with heavy timber verandah post, and original shingle siding covered by a later coat of stucco
- masonry construction as expressed by red brick at the foundation level
- Arts and Crafts details such as triangular eave brackets, and open soffits with exposed rafters tails
- variety of windows including 1-over-1 double-hung wooden sash windows in double-assembly, and 6-over-1 double-hung wooden sash windows in single assembly, now boarded over
- mature informal landscape, including deciduous and coniferous trees, large hedge at front, and slope at rear down towards a creek

KILVERT RESIDENCE 203 FOURTH AVENUE

Architects: Blackadder & MacKay
Contractors: Dominion Construction Company Ltd.
Date: 1923

Description of Historic Place
The Kilvert Residence is a modest one-storey, front-gabled Arts and Crafts bungalow with an inset corner porch, cedar shingle siding and triangular eave brackets. The house is adjacent to the Ioco Community Hall within Ioco, an early Imperial Oil Company town in Port Moody. This is the last remaining early residence on Fourth Avenue, and is situated on the east side of the street on the top edge of a steeply sloped site. The Kilvert Residence is scheduled as a heritage site within the Ioco Heritage Conservation Area.

Heritage Value of Historic Place
The Kilvert Residence valued as a reflection of the early development of Ioco townsite, the company town developed by Imperial Oil near its refinery on the north shore of Burrard Inlet. The site was selected by Imperial Oil in 1914 and was the first major development in Port Moody that occurred outside of the immediate vicinity of Moody Centre. The refinery was located in an isolated area, that lacked road access until 1925. Prior to the development of the Ioco townsite, most of the refinery workers either lived in shacks or commuted by ferry from Port Moody. Forty new worker's houses designed by prominent North Shore architects Blackadder & Mackay were constructed by the Dominion Construction Company, one of Vancouver's most successful construction firms. Fifteen other houses, originally situated on the Ioco grounds, were also moved to the new townsite, creating an instant community. Workers of Ioco were entitled to purchase the houses at cost and then pay for them monthly. Houses were situated strategically according to rank, and lower paid workers were allocated to the western side of the townsite. The surviving residences represent the birth of Ioco as a community company town, which included the addition of a community hall, two grocery stores, a restaurant, a meat market, churches and a school in the 1920s.

Built in 1923, the Kilvert Residence is additionally significant for its modest Arts and Crafts details and for its association with the Kilvert family. John Archibald Kilvert (1898-1983), who was originally from Glasgow, Scotland, and his wife, Mabel Elizabeth (née Greenwood, born 1903) were the first owners of the house. John Kilvert was employed as an engineer at the Imperial Oil Company Refinery. The couple moved into this house shortly after their marriage in Vancouver in 1920.

Character-Defining Elements
Key elements that define the heritage character of the Kilvert Residence include its:

- location, as the last remaining house on Fourth Avenue within the historic company town of Ioco, amongst other houses of similar form and scale, with views of Burrard Inlet
- residential form, scale and massing as expressed by its one-storey plus basement height, front-gabled roof, rectangular plan, corner inset porch and projecting shed roof over front window
- wood-frame construction, with shingle siding and heavy timber porch piers
- modest Arts and Crafts detailing such as triangular eave brackets, and open soffits with exposed rafter ends
- additional details such as an internal red-brick chimney
- variety of windows including 6-over-1 double-hung wooden sash casement windows in single and double-assembly, now boarded over
- mature informal landscape including deciduous and coniferous trees; slope down to ravine at rear

7.0 CONSERVATION RESEARCH SOURCES

- *City of Port Moody Heritage Inventory*. Donald Luxton & Associates. Port Moody, B.C.: City of Port Moody, 1999. Print.

- The Preservation of Historic Architecture. Guilford, Connecticut: Lyons, 2004. Print.

- Standards and Guidelines for the Conservation of Historic Places in Canada. 2nd ed. Ottawa: Parks Canada, 2010. Print.

- *Tracks in Time: Port Moody's First 100 Years*. Port Moody, B.C.: Port Moody Heritage Society, 2012. Print.

- United States. National Park Service. "Preservation Briefs." National Parks Service. U.S. Department of the Interior, n.d. Web. 27 Aug. 2015.

Back Cover: View of houses in Ioco townsite, 1923 (CVA PAN N138)
View of houses in Ioco townsite, 1923 (CVA PAN N138A)
View of houses in Ioco townsite, 1923 (CVA PAN N139)

IOCO TOWNSITE

PRESERVATION AND PREVENTATIVE MAINTENANCE PLAN

DONALD LUXTON
AND ASSOCIATES INC