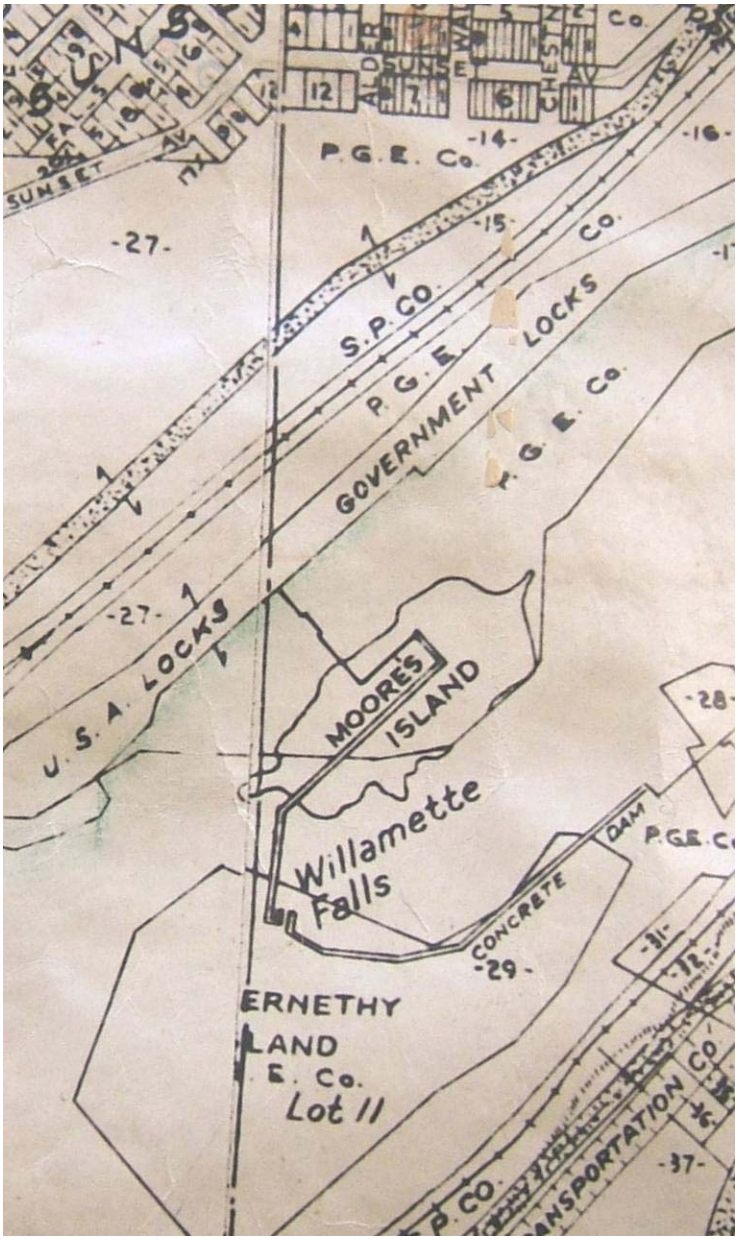
WEST LINN
WATERFRONT INDUSTRIAL AREA
DESIGN GUIDELINES

August 2010



Prepared for the City of West Linn

by Andrews History Group

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INTRODUCTION

West Linn's Waterfront Industrial Area (WIA) is a dense complex of utilitarian and industrial buildings and structures located along the Willamette River. First established for industrial purposes in the mid-19th century, the traditional uses of hydroelectric generation, river transportation, and the manufacture of paper products continue to this day. The WIA forms the western portion of a larger district that was determined to be eligible for listing in the National Register of Historic Places in 2002 (Willamette Falls Industrial Area). The Willamette Falls Locks, which are located in the WIA, are listed in the National Register of Historic Places.

The first industrial structures in the larger district were a sawmill (1832) and flour mill (1840s), both located on the Oregon City side of the river. A paper mill was established on that side of the river in 1866, and hydroelectric power production began in 1888. The West Linn side first saw development with the construction of the Willamette Falls Locks in 1873 and a paper mill in 1890. A new dam in 1892 spurred the expansion of power production with a new plant (Station B, or Sullivan Powerhouse) located adjacent to the locks. It started operation in 1895 and remains the oldest continuously operating hydroelectric plant west of the Mississippi River.

The WIA is regulated by several government entities including the Federal Energy Regulatory Corporation (FERC) which has oversight over the Sullivan Powerhouse, electrical substation and transmission lines; the U.S. Army Corps of Engineers (ACE) which owns and regulates the Willamette Falls Locks and associated lock buildings; the Oregon Department of Fish and Wildlife which has oversight over fish ladders at the site; and the City of West Linn Parks and Recreation Department which manages park facilities located on the riverbank. (Fig. 1) These guidelines are intended to provide an overarching direction for all of these facilities when exterior modification of historic buildings or structures will occur, or when there is new construction proposed anywhere in the WIA.

Existing Characteristics

The Waterfront Industrial Area is located largely on Moore's Island, a long narrow strip of land separated from the shore by the Willamette Falls Locks. The area contains a variety of long, linear industrial buildings and exposed structural systems which have an overall neutral palette of poured concrete, weathered wood and metal. Many buildings have been added to the site since 1893 when the oldest extant building was constructed, and most have been significantly altered since they were originally constructed. These changes have introduced a wide variety of new materials and forms to

the WIA; however, most of these changes are illustrative of the evolution and use of the site over time and have gained significance in their own right.

The WIA is loosely organized into three sub-areas. With minor exceptions, the first sub-area contains the oldest buildings which are located at the southwest end of the island. They were constructed from a variety of materials with wood and metal being the most common. The second group is a large collection of concrete buildings constructed east of the first sub-area. These buildings were constructed primarily between about 1920 and 1950. They are almost entirely built of poured concrete, and have large banks of windows and flat roofs. The third sub-area consists of buildings located on the riverbank. They vary somewhat in form, are much smaller in size than those in the first two groups, and wood is the predominant construction material. These buildings date from the 1910s.

Design Standards

The Secretary of the Interior's Standards for the Rehabilitation of Historic Buildings (Secretary's Standards) are used throughout the country to guide alterations and new construction in historic districts. The Secretary's Standards are a solid set of principles that can be applied to any historic building. They form the basis for the standards used by both FERC and ACE to manage their historic properties. This document contains additional design guidelines intended to supplement the Secretary's Standards, and which specifically address the unique characteristics of the WIA. Buildings and structures in the WIA are identified as either contributing or non-contributing in terms of their significance to the area. Contributing resources are listed in the accompanying *West Linn Waterfront Industrial Area Historic Resources* document. These properties are subject to extra scrutiny because they are important character-defining features of the WIA. The guidelines in this chapter should also be applied to non-contributing buildings but more flexibility is allowed. Other helpful guidelines include the National Park Service's Preservation Briefs. These are available online at

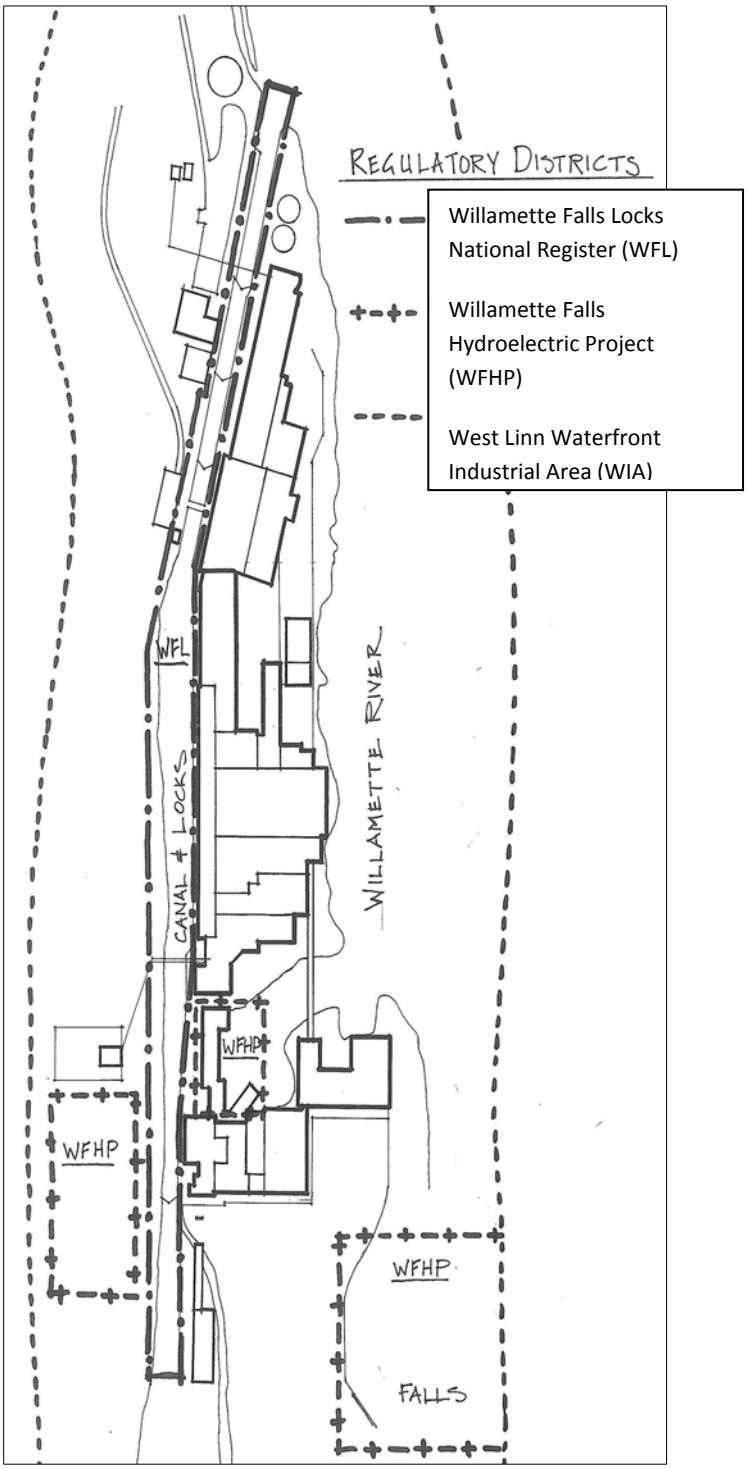


Figure 1 – Regulatory Districts

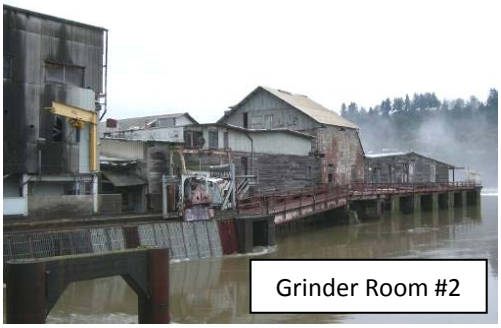
http://www.nps.gov/hps/tps/briefs/presbhom.htm and are referenced in several of the specifications below.

Waterfront Industrial Area Design Guidelines

Siting and Relationship to the River

Waterfront Industrial Area Character

- Buildings are sited close to the water.
- Only a small percentage actually span areas of the river (hydroelectric plant, log hauling facility).
- Buildings are most often attached or separated from the adjacent building by only a narrow space.



Grinder Room #2

History

- Earliest buildings were built to harness the hydraulic power of the Willamette Falls for sawmills, flour mills, and power generation.
- Other facilities took advantage of the river as a method of transportation for logs.
- Later buildings did not need to be placed over the water, but needed access to the locks for loading and unloading materials.

Why these characteristics are important

- The WIA's relationship to the water is its most important characteristic.
- The site is unique in this respect.

Specifications for existing buildings

- Historic setbacks should be maintained.
- Historic sightlines and access to the water should be maintained.

Specifications for new construction (including additions to existing buildings)

- Should be placed no further from nor closer to the water than adjacent buildings or facades along the same waterfront. (Fig. 2)
- Should have visual or pedestrian access to the water.
- If located on the site of a historic building should utilize the former building's footprint and incorporate existing foundations if possible.

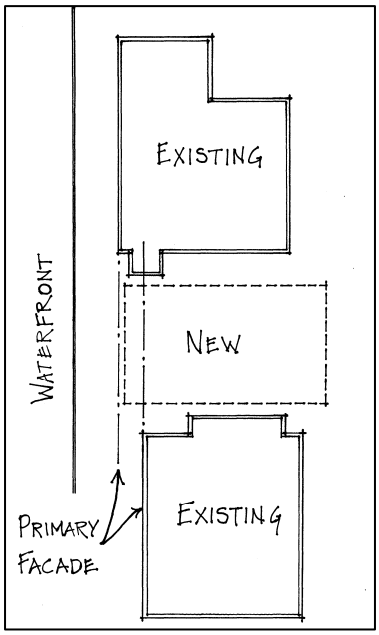
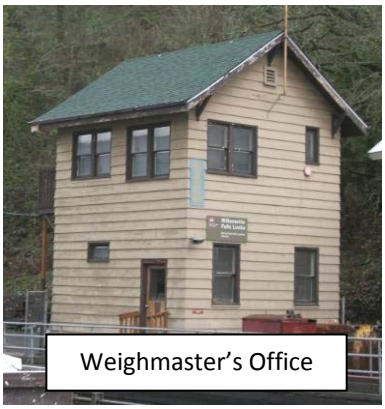


Figure 2 – New Setbacks

Building Form and Height

Waterfront Industrial Area Character

- Most buildings are rectilinear in form.
- Most buildings are more horizontal than vertical.



Weighmaster's Office

- Vertical exceptions include weighmaster's office and bleach plant; both have less than 1000 square feet footprint.
- Most buildings are relatively low in height. A few stand out as tall singular elements, and those closest to the falls have tall sides on the downriver side of the falls.

History

- Prior to industrial development, Native Americans built long linear houses parallel to the river.
- This pattern continued with Euro-American development of the site.
- Long rectilinear buildings were used for paper production and storage.
- Vertical buildings were used to provide views of the locks, retrieval of long logs, or gravity flow of materials.

Why these characteristics are important

- Building forms not only reflect the function within, but also the topography of the Willamette River Falls area - long narrow banks along the river's edge, nestled below higher cliffs that provide dramatic views.
- These long, linear building forms are punctuated by vertical elements illustrative of a history of trying to harness the river.
- Buildings still in active use are most adaptable to new equipment, particularly the long rectilinear ones. (See Preservation Brief 31 for information on mothballing buildings that are not in active use.)
- Varied height of the buildings provides visual interest.

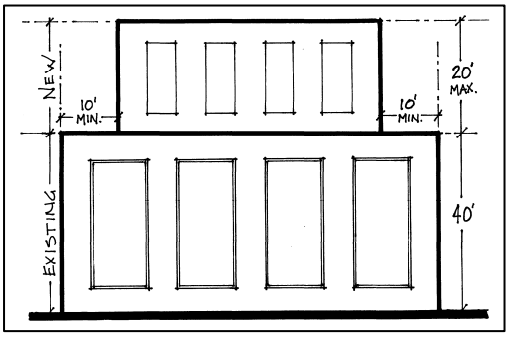


Figure 3 – Height Limits for Existing

Specifications for existing buildings

- Forms and heights should be maintained.
- New floors added to existing buildings should not be more than ½ the height of the building on which it is placed. (Fig. 3)
- New floors should be no more than ¼ the area of the top floor of the building on which it is placed. (Fig. 4)
- New floors should be set back from the exterior wall of the building on which it is placed a minimum of ½ the height of the new floor. (Fig. 3)

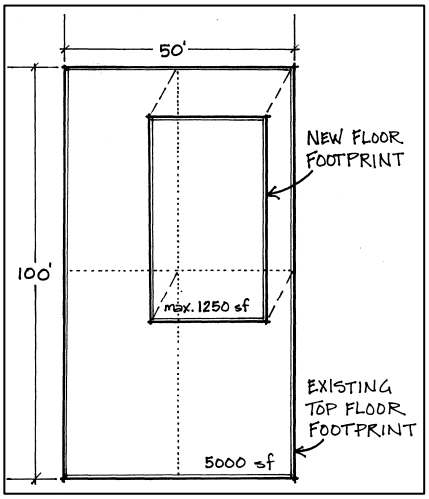


Figure 4 – Maximum Area

Specifications for new construction (including additions to existing buildings)

- Should be linear and horizontal in form. (See Preservation Brief 14 for more information on additions to existing buildings.)
- When the footprint of a new building or addition is smaller than 2000 square feet it may be vertical in form.
- Larger buildings that are more square in footprint should be composed of linear elements and oriented parallel to the water.

- Should be no taller or shorter than adjacent buildings.
- Over-water construction is allowed provided it meets state and federal regulations.

Primary Facades

Waterfront Industrial Area Character

- Façade treatments vary widely. There are very few common elements between them.
- Most do not have clearly visible primary entries, and it is often not clear which elevation is the primary facade.
- Primary facades will be considered those that are most visible from Willamette Falls Drive and from the locks.

Station B

History

- The WIA consists entirely of industrial buildings, often with the original primary entry oriented upriver or toward the locks. These buildings were never intended for public use and therefore they did not have significantly defined entryways.

Why these characteristics are important

- Facades are the visible face of the area and therefore the most important character-defining feature of the WIA.
- They reflect the evolution of the site over time.

Specifications for existing buildings

- Primary facades should not be altered unless they're being restored to an original condition.

Specifications for new construction (including additions to existing buildings)

- Should not block primary facades of contributing buildings.
- Should have simple entryways.
- Should be oriented to the water.

Exterior Finish Materials

Waterfront Industrial Area Character

- Most buildings are constructed of poured concrete.
- A large number are also constructed of wood or steel structural components, with vertical corrugated paneling made of metal or mineral fiber (often asbestos).
- A few older buildings have horizontal wood siding.
- Other materials include terra cotta block and brick, but these are only a small part of the materials palette.
- Most buildings have been painted at some time.

Mill A

- The colors used were fairly neutral, including grays, browns, powder blue and dark green.
- Most paint has weathered over the years.
- Signs are a distinctive visual element and colorful, usually red or yellow, particularly warning signs. (See Preservation Brief 25 for more information on preserving historic signs.)

History

- The earliest buildings were constructed of wood because it was readily available in the Willamette Valley before 1900.
- Wood siding was painted, a necessary action to help preserve it.
- As the mill grew, more permanent materials were used including brick and steel or iron; these buildings were typically left unpainted.
- By the 1920s, most buildings were constructed of poured concrete because it was superior in terms of cost and durability; it was typically not painted.

Why these characteristics are important

- Exterior materials are one of the strongest visual indicators of the evolution of a site over time.
- The weathered appearance of many buildings creates a patina that is an important part of the WIA's character.
- Painting buildings helps preserve exterior finish materials. This is appropriate for wood or weathered metal.

Specifications for existing buildings

- Exterior wood siding and exterior weathered metal should be painted regularly. (See Preservation Brief 10 for more information on exterior paint.)
- Loose paint or rust should be removed prior to painting. (See Preservation Brief 6 for more information on cleaning historic buildings.)
- Concrete should not be painted, unless it has previously received a stucco treatment. (See Preservation Brief 15 for more information on exterior concrete.)
- Replacement doors for vehicular openings should be industrial in character, utilizing sheet metal or horizontal rolling panels. Residential style paneled doors should not be used.
- Use trained and licensed professionals and methods when removing or repairing asbestos-containing siding.
- On roofs visible from the waterways, replacement roof materials should match existing or those of the original roof.

Specifications for new construction (including additions to existing buildings)

- Exterior materials should consist of poured concrete, vertical corrugated metal siding or horizontal wood siding.
- Paint should be in a neutral palette or based on paint analysis of existing buildings.
- Signage is encouraged and can consist of any color.
- Signage should be made of durable materials with painted metal the preferred option. Plastic signs should not be used.

Roof forms

Waterfront Industrial Area Character

- Majority of roofs are flat.
- Several flat roofs are topped with shallow gabled doghouses, mechanical penthouses, or skylights.
- A significant minority of buildings have gabled roofs with varying pitches.
- Most gabled roofs are relatively small.

History

- Roof form is indicative of the use of the building and the materials and methods of construction available at the time of construction.
- Smaller gabled roofs are found on the older buildings, primarily to shed water, and to make use of shorter wood roof members or smaller metal trusses.
- Interior volume of newer buildings was minimized by taking advantage of new structural components that were stronger and more highly designed.

Why these characteristics are important

- Roof forms are a prominent visual feature.
- They are useful for identifying certain site components and functions.
- They provide visual interest for the area as a whole.

Specifications for existing buildings

- Roof forms should be maintained.
- Solar equipment may be allowed if it doesn't destroy essential elements of a building's character and is not visible from the waterways.

Specifications for new construction (including additions to existing buildings)

- Should be flat or gabled with no pitch greater than 12/12.

Windows

Waterfront Industrial Area Character

- Majority of windows are steel industrial sash.
- Significant number of window openings are filled with glass block.
- Older buildings have double-hung wood windows.

History

- Window forms are indicative of the age of the buildings.
- Earliest buildings had double-hung wood windows as these

materials were readily available, and the windows were the primary method of ventilating interiors and providing daylight.

- Large multi-light steel window systems were generally installed on buildings constructed after 1920 because they could span greater openings.
- Steel windows had operating sash within the window system that functioned as hoppers, awnings, or casements to provide better ventilation.
- Glass block was prevalent in the International and Moderne style buildings of the 1930s and 40s; as mechanical ventilation took over the primary need for windows was to provide daylight.

Why these characteristics are important

- Windows are significant character-defining features of historic buildings in general, but less significant in the WIA.
- Many of the original windows have been replaced with other window types.
- For the older, smaller buildings, the rhythmic placing of double-hung wood windows is an important character-defining feature.
- For newer buildings with large banks of windows, the window style is less important than the proportion of wall surface to window surface.

Specifications for existing buildings

- Maintain historic window configurations. (See Preservation Briefs 9 and 13 for more information on repairing windows and improving their thermal qualities.)
- Window openings that have been closed should be re-opened when possible. (See the National Park Service's Tech Notes for more information on using aluminum windows as replacements for steel sash windows. http://www.nps.gov/history/hps/tps/technotes/ptn48/intro.htm)
- Replacement windows should reflect the size, style, function, and material of the historic window.
- False muntins should not be used in any replacement window.

Specifications for new construction (including additions to existing buildings)

- Steel sash windows or glass block should be used for concrete buildings.
- Double or single-hung windows should be used with wood and metal sided buildings.
- False muntins should not be used in any new window.

Exposed Utilities

Waterfront Industrial Area Character

- Many buildings have exposed utilities both inside and outside.
- Most visible are electrical transmission lines, wall vents, and variously sized round pipes.
- Many of these utilities are grouped near corners of buildings.

Steel Bridge

History

- Exposed utilities are found in many industrial buildings.
- Electrical transmission lines are especially common because of the historic and continued hydro-power generation.
- Pipes carrying water, steam, or other liquids have also been used off and on over time.

Why these characteristics are important

- Exposed utilities in and on buildings are a significant feature of the site, and are illustrative of the site's industrial heritage.
- Exposed utilities allow for easier access for maintenance purposes.

Specifications for existing buildings

- Use non-ferrous anchors when attaching utility components or signs to existing walls or columns.
- Non-historic utility components should be removed carefully to avoid damage to existing walls or columns.
- New exposed utilities should not be installed on primary facades.
- Retrofit wall vents should fill the opening into which they're placed.
- All wall vents in a single wall should approximate the overall dimension and the louver dimensions of other vents in the same wall.

Specifications for new construction (including additions to existing buildings)

- Utilize exposed utilities both inside and out. This includes gas, water, air, and electrical or information technology conduits.
- Forced air ducts should be round rather than square or rectangular.
- Exposed utilities should not be installed on primary facades.
- New wall vents should approximate the overall dimension and the louver dimensions of other vents in the same wall.

Parking

Waterfront Industrial Area Character

- Parking areas consist primarily of small surface lots on the fringes of the WIA.
- Most vehicles do not have access to the island, except for forklifts and maintenance vehicles.
- Vehicular access to the island is also restricted because of the need to cross the Willamette Falls Locks, and interrupt their operation.

History

- Parking was not a concern early in the site's history, because most transportation was focused on the river.
- Logs, goods, and other materials were delivered via the Willamette River.
- Eventually cars and trucks had to be accommodated on site, but by this time much of the island had been developed and there was little space on the west bank for large parking lots.

Why these characteristics are important

- Minimal parking lots are necessary to maintain the dense character of the area.
- It is necessary for trucks to access the facility in order to keep the plant functioning.
- The presence of the locks and mooring of vessels nearby contribute significantly to active use of the site.

Specifications for existing parking

- Parking lots should not be enlarged.

Specifications for new construction

- Parking lots should be small. Maximum area should be no greater than the largest existing lot.

Hardscape/Landscape

Waterfront Industrial Area Character

Mill D

- Most buildings are surrounded on several sides by concrete pedestrian walkways or loading zones.
- Many loading zones along the locks have simple timber guards to prevent forklifts and other vehicles from going into the water.
- Other areas of the site adjacent to the river or falls have pipe railings to prevent pedestrians from falling into the water.
- Some walkways have diamond-patterned or mesh steel plates.
- Stone is prevalent along the locks and against the cliff walls.
- Landscaping on the island is minimal, often restricted to volunteer blackberry vines or other bushes and weeds, although some plantings have been established to screen offensive views or uses.
- Landscaping on the riverbank consists of simply designed (often volunteer) plantings that help the buildings blend into the cliff walls.

History

- Hardscaping has consisted almost entirely of loading docks and walkways along the water's edge.
- Originally these docks were constructed of timbers, but concrete became more prevalent in the early part of the 20th century.
- Cut stone was used to construct the locks in the 1870s because of its durability and strength.

Why these characteristics are important

- Minimal use of simple materials is characteristic of historic industrial sites.
- Most industrial sites have little, if any, landscaping.
- Landscape screening is a reasonable method for screening incompatible views or components.
- Many plant materials have invasive root structures that can damage adjacent buildings.
- Large amounts of plant material near the base of a building will hold moisture and accelerate deterioration of wood, steel, or concrete. (See Preservation Brief 36 for more information on protecting this unique cultural landscape.)

Specifications for existing buildings

- Plant material that has grown at the base of buildings should be removed.
- Foundation plants should not be encouraged.
- When plants are used, they should be small native perennials or shrubs.
- Loading docks should be maintained in their historic configurations, and should not be enclosed or made inaccessible from watercraft.

Specifications for new construction (including additions to existing buildings)

- Decks or walkways should be constructed of simply finished poured concrete or timbers.
- Decorative concrete or wood patterns should not be used.
- Railings should not be used except where required by code.
- Railings should be made of pipe and painted to match existing railings (yellow) or be allowed to weather.
- Decorative railings should not be installed.