

Appendix F – Mitigation Treatment Measures

Mitigation Treatment Measures

In the event that the Project becomes a federally funded construction Undertaking and avoidance and/or minimization of adverse effects is not feasible and/or prudent after considering the Project's purpose and need, the following mitigation treatment measures are suggested as possible methods to resolve adverse effects. Pursuant to Stipulation III Resolution of Adverse Effects - Mitigation Treatment Measures & Plans, if the Federal Railroad Administration (FRA), or another federal agency that is a Signatory to this Programmatic Agreement (PA) funds construction, the federal funding agency may develop mitigation treatment measure plans that take into account the severity and magnitude of adverse effects.

A. Context-Sensitive Design

Prosper Portland, in consultation with the Oregon State Historic Preservation Officer (SHPO), will develop and apply context-sensitive design treatments for specified new construction and alterations to existing historic materials with the standards and guidelines outlined in the Secretary of the Interior's Standards for the Treatment for Historic Properties. The treatments will be informed by, and responsive to, the significance of character-defining features affected by the proposed work and will include consideration of form, scale, design, material, color, and texture. Character-defining features are defined in the February 2016 Determination of Eligibility (DOE) and Prosper Portland will ensure that contributing elements are clearly labeled on all relevant engineering plans.

Prosper Portland will share design guidance, as well as, 60 percent and 90 percent Project plans sheets and specification documents with the Signatories and Consulting Parties for review and comment following the steps described in Stipulation I.F. Document Review.

Prosper Portland will consider design review comments provided by the Signatories and Consulting Parties, but ultimately is responsible for ensuring that the architectural, structural and engineering design of new construction and improvements meets engineering and safety standards for passenger and freight railroads.

B. Revised NRHP Nomination Form – Portland Union Station Building & Grounds

Prosper Portland shall prepare a revised National Register of Historic Places (NRHP) nomination form for Portland Union Station buildings and grounds for review following Stipulation I.F Document Review. Prosper Portland shall update the existing August 6, 1975 NRHP nomination form using information from the February 2016 revised DOE. The SHPO shall provide adequate guidance to Prosper Portland during the preparation of the revised nomination form and shall formally submit the final revised nomination form to the Keeper of the NRHP. Prosper Portland shall use staff or contractors that meet the Secretary's Professional Qualifications for the appropriate discipline.

C. Preservation Plan/Manual for Historic Properties Management

Prosper Portland will develop an umbrella framework for the long-term management of the historic properties at Portland Union Station and submit the document for review following Stipulation I.F. Document Review. This framework will consist of a Preservation Plan that would meld the long-term management needs of above-ground and below-ground historic properties within the industrial landscape of Portland Union Station (see the Secretary of Interior's Standards for Preservation Planning, https://www.nps.gov/history/local-law/arch_stnds_1.htm). This Preservation Plan would be based on the most recent revised DOE and the ATP, and would be combined with on-going results from historical and archaeological investigations. The plan could take the form of a Manual for Historic Properties Management (MHPM), highlighting the built, landscape, and archaeological elements of Portland Union Station's resources that contribute to its NRHP eligibility, as well as acceptable treatment options for maintenance, rehabilitation, and design and construction of compatible non-historic elements. An MHPM, like the Archaeological Treatment Plan (ATP), should retain flexibility to incorporate results of future findings. The purpose of an integrated approach for management of historic properties within the Area of Potential Effects (APE) is to ensure long-term consistency of treatment for retaining the integrity and historic character of Portland Union Station. Prosper Portland shall use staff or contractors that meet the Secretary's Professional Qualifications for the appropriate discipline.

D. Electronic Informational Platforms

Prosper Portland will add a new section concerning the PA implementation to the Portland Union Station website. The purpose of this mitigation treatment measure is to provide a platform for the electronic storage and public dissemination of information and content on Project, and future Undertaking, activities and findings related to historic architecture and archaeology, including, but not limited to, identified historic properties, effects on historic properties, and mitigation treatment measures addressed in this PA. Examples of content include, but are not limited to, copies of research materials such as historic maps and photographs, a copy of the Historic Resources Baseline Study and revised DOE, interpretive content and materials, oral histories, selective architectural salvage efforts and availability of materials, updates on archaeological discoveries, and user friendly outlines of relevant preservation plans.

Following the process outlined in Stipulation I. F Document Review, Prosper Portland will consult with the Signatory Parties, any interested or affected federally recognized tribes, and other Consulting Parties on the final scope and format of the new PA implementation portion of the Project website, including opportunities to partner with, and hyperlink to, other relevant preservation/history-based organizations or to utilize other forms of electronic communication.

Prosper Portland will initiate this mitigation treatment measure at the start of any design past the 30% preliminary engineering plans and will maintain and update the PA implementation section, as needed, until the completion of all of the Project phases.

E. Selective Architectural Salvage

Prior to Project the initiation of construction, Prosper Portland will engage a qualified professional(s) meeting the Secretary of the Interior's *Professional Qualification Standards for Archeology and Historic Preservation* in the disciplines of Architectural History or Historic Architecture to examine buildings, structures, and individual character-defining features slated for demolition and identify materials recommended for salvage. Examples of appropriate salvage materials include, but are not limited to: decorative roofing, decorative metal work, stone steps, stone/terra cotta coping, stone sills, stone lintels, cornices, window sashes, doors, architraves, balusters, newels, stair rails, hearth stones, and fireplace surrounds. As a specific example, the salvage, relocation or potential repurposing of some parts of the current platform canopies and or High Shed may be highly desirable as partial mitigation for their loss, should there be entities able to do so.

Prosper Portland will secure, stockpile, and make available character-defining features of historic buildings salvaged from any Project-related demolition. Prosper Portland will make a reasonable and good-faith effort to ensure standard care is used in removing the materials identified for salvage, transporting them to storage, and securing them from vandalism, theft, and weather, in accordance with all applicable statues and regulations. If salvaged items are found to possess or are judged likely to be contaminated by hazardous materials or waste, Prosper Portland may withdraw the material without making it available for use and dispose of the same in accordance with applicable statues and regulations. However, Prosper Portland will not be required to affirmatively certify the condition of salvaged materials as safe or appropriate for any particular use.

Prosper Portland will hold the character-defining salvaged material for a period of 12 months from the time it is placed into storage, and make it available free of charge and during reasonable hours to parties involved in the rehabilitation or renovations of historic properties and the public interpretation of history within the greater Portland area. At the end of the retention period, Prosper Portland may sell or dispose of the remaining unused materials in accordance with applicable statues and regulations.

Prosper Portland will provide for a means of notifying the public as to the availability of the salvaged material. Prosper Portland will provide all materials for salvage on as "as-is", "where-as" basis, and will make no warranty as to the condition, suitability, serviceability, or degree of contamination for any intended subsequent use. Prosper Portland will prepare and deliver a written receipt to that effect to every recipient for their review and signature, and the receipts will become a part of the official Project record. Recipients will sign a release indemnifying themselves and the other Signatories to this PA against any and all claims arising from the acquisition and use of received salvage materials.

Prosper Portland will consult with the Signatures and Consulting parties, in accordance with Stipulation I.F Document Review, on the character-defining materials proposed for salvage and the provisions and procedures for notification to the public of the availability of salvaged materials. Prosper Portland will incorporate the same into its final plans and specifications for the removal and staging/storage of the character-defining salvaged materials.

F. Data Recovery Plan for Below-Ground Historic Properties

If an adverse effect cannot be avoided or alternatively mitigated, Prosper Portland, in consultation with Signatories and Consulting Parties, will mitigate the adverse effect through a program of data recovery that is consistent with the ATP, the Inadvertent Discoveries Plan (IDP), the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Fed. Reg. 44716), and "*State of Oregon Archaeological Reporting Guidelines*" (2011).

The need for Phase III data recovery excavations to mitigate impacts to archaeological resources in advance of construction will be considered on an area-by-area and case-by-case basis and will be weighed against the feasibility and long-term advantages of preservation in place. A specific Data Recovery Plan, tailored to a specific feature or locale within Portland Union Station will be prepared for review and comment following the steps described in Stipulation I.F Document Review. At a minimum, each Data Recovery Plan will include:

- A list of research questions to be addressed, with a discussion of their relevance and importance;
- Methods to be used for fieldwork and laboratory analysis, with a justification of their cost-effectiveness and how they apply to the particular sites and the research questions;
- A schedule for completing field and laboratory work, and submitting draft and final documents for SHPO's review and comment;
- Methods to be used in managing and curating artifacts, data, and other records in accordance with 36 CFR Part 79, as appropriate;
- Procedures for evaluating and treating unanticipated discoveries consistent with the guidance and protocols outlined in the ATP and IDP;
- A procedure for documenting the completion of fieldwork and releasing sites for construction activities; and
- Provisions for disseminating the research findings to other Consulting Parties, professional peers, and the general public.

G. Public Interpretation

Prior to Project implementation, Prosper Portland, shall submit public interpretation proposals and plans for review and consideration in accordance with Stipulation I.F Document Review. Plans may include signs, displays, cell phone applications, educational pamphlets, websites, multi-media productions, oral history gathering efforts, workshops and other similar mechanisms to educate the public on historic properties surrounding and affected by Portland Union Station. Once an interpretive plan to address adverse effects has been agreed to by Signatories and Consulting Parties, Prosper Portland and other responsible parties identified in the plan will continue to consult throughout implementation of the plan until all agreed upon actions addressed in the plan have been completed.

During the development of the PA, the Signatories and Consulting Parties identified prominent themes of historical interest. The following broad themes were identified as holding the strongest potential for interpretation efforts:

- Union Station's Role in Portland's History, Culture, and Economy
- Architecture of Union Station/Architects Involved in Union Station
- Changing Landscape of Union Station
- Passenger Rail History and Railroad History
- Who's Been Working at Union Station, including, but not limited to Black Porters

Interrelated themes were generally outline in the Historic Resources Baseline Study, revised DOE, ATP, and IDP documents. A brief summary of these themes is provided below for future use by the Signatories and Consulting Parties to implement the mitigation treatment measure plan(s).

Native American History at Union Station

Union Station was constructed on top of fill material deposited in historic Couch Lake. Historical accounts place Native Americans at campsites on Couch Lake in the historic period, and there are reports of Native American archaeological sites, apparently prehistoric in age, associated with other nearby lakes on the floodplain along the west bank of the Willamette River in NW Portland. Couch Lake once covered 150 acres. The Portland Terminal Rail Company decided to build Union Station on this centrally located, but low ground, in 1888. By late 1892, contracts to fill Couch Lake were signed. Plans were approved to fill the lake and begin driving piles for the station's foundation.

Architecture of Union Station/Architects Involved in Union Station

The original station design was by Van Brunt & Howe, well known architects with multiple commissions for the Union Pacific Railroad for grand stations in western cities, including Ogden, Utah, Denver, Colorado Cheyenne, Wyoming, and Omaha, Nebraska. By 1892, over 100 pages of contract specifications were completed and sent out for bid in Portland and Kansas City. The total estimated price of the station and annex came to \$310,420. Construction started early in 1893 with the filling of Couch Lake and driving piles for the foundation. Construction was delayed with the national financial panic of 1893 and again with floods of 1894. The station officially opened on February 14, 1896. It is the oldest major passenger terminal on the West Coast, and the oldest big city "Union Station" west of St. Louis. Dissatisfaction with the lack of a clear, formal entry and confusing circulation patterns and dramatically increased passenger load were factors that led to the need to remodel.

In 1927, the prestigious Portland architectural firm of A.E. Doyle was hired by the Terminal Rail Company to remodel the station. Pietro Belluschi, a young designer with little architectural training, was put in charge of the remodel. With input from Southern Pacific, Union Pacific and Northern Pacific, the owners of the Terminal Rail Company, the drawings were finished in 1929. Major changes included:

structural, functional and formal reordering of the main waiting room and associated public spaces; reorganizing the entry and exit sequences from the street and tracks; and functional and formal reorganization of the wing between the dining room and the main hall. Little has changed in the station since this remodel in 1930.

Rail Passenger History and Railroad History

At the station's opening in 1896, the yards in front of the station contained six parallel railroad tracks. Passengers gained entry to the tracks by passing through a long, narrow, enclosed one-story shed appended to the east side of the station. The tracks remained unsheltered for almost 10 years. A roundhouse at Glisan and Front Streets had stalls for 20 locomotives. Coach yards, a cleaning system, a fuel house, ice house, gas house and a turntable were located near 8th Avenue.

Modifications to tracks in the yard were made to accommodate piers for the Broadway Bridge built in 1910. Additional track modifications were made to connect tracks to the new Steel Bridge, which replaced the original 1888 bridge and re-opened in 1912.

The construction of the Steel Bridge coincided with greater train lengths and a need for larger station platforms. The tall shed [concourse shed, high shed] and platform canopies were modified to accommodate longer trains and Tracks 6 and 7 were added with a new canopy. Electric trains were added by 1914.

Portland had two major passenger and freight railroad terminals at this point: Union Station and the North Bank Depot, built on the north side of Hoyt Street between 10th and 12th Avenues, which was constructed in 1908 and renovated and converted to residential use in the late 1990s.

Railroads at Union Station

- Portland Terminal Railroad Company: made up of UP and BNSF
- Northern Pacific Terminal Company (1882): made up of
 - 40% Northern Pacific Railroad (west from Duluth, MN to Portland)
 - 40% Oregon Railway and Navigation Company-ORN (1879, steamship lines shipping and unfinished railroads)
 - 20% Oregon & California Railroad Company-O&C (line from Portland to OR-CA border), eventually held by Southern Pacific
- Oregon and Transcontinental
- Oregon Central Railroad (2 lines in Portland, one on each side of the Willamette, east side line later renamed the Oregon and California Railroad Company)
- Spokane, Portland and Seattle Railroad
- Great Northern
- Oregon Electric lines
- United Railways Company (Electric)
- Southern Pacific, O&C
- Union Pacific, eventually controlled ORN

- Portland, Eugene, and Eastern Railway Company (PEE) Electric, Southern Pacific Red Electrics (1914)
- BNSF, bought Northern Pacific, Spokane, Portland and Seattle among other lines.

Expansion of service at Union Station related to the Spokane, Portland, and Seattle Railway line in 1920s required significant changes to the building and track, and at its peak period of operation in the late 1940s Union Station had as many as 30 separate tracks, continuing east to Front Avenue. Over time, freight rail became less utilized as some businesses turned to trucks instead of railroads for shipment of goods. In the 1950s, the US interstate highway system created a new way to ship goods and move people. Removal of tracks, as the result of the associated reduction in rail traffic, and the sale of portions of the property for private development have contracted the rail yard back to the original five track configuration.

Clock Tower

Built instead of the originally planned train shed over the five tracks, the 150-foot Clock Tower with its four-sided Seth Thomas clock has become one of the most iconic and recognizable features of the station. The “Union Station” and “Go By Train” neon sign panels were added to all four elevations of the Clock Tower in 1948.

Steel Bridge (1912)

In the late 1880s, a rail bridge was seen as vital to Portland’s west side development. The original Steel Bridge was finished in July, 1888. The construction of the Steel Bridge required the removal of the roundhouse and the wood switch tower that moved trains off the old bridge and into the terminal yards. The original Steel Bridge was replaced in 1912 by a vertical lift bridge designed by famous engineers and vertical lift proponents Waddell and Harrington. The double-deck structure carries vehicular traffic on the upper level and railroad traffic on the lower level.

Interlocking Tower/VC (1914)

This brick structure was built in 1914 to replace an earlier, wooden feature at the same location. This location controlled the complex switching necessary for the operation of the yard. The Interlocking Tower’s construction was likely related to improvements required based on changes in operation after the Terminal Rail Company granted use of Tracks 1 and 2 to the Oregon & California and Southern Pacific railroads. During the early 20th century, interlocking towers were sited to provide the operator with a clear view of the yard, like an airport control tower, and contained manual switching and signaling controls. The interlocking function ended in November 1977. Today, the interlocking function is all done via computer with electric-powered relays. The Interlocking Tower at Union Station is believed to be the only remaining resource of its type in Oregon and one of just five in the western United States. It is now leased to Tri-Met, the local transit provider.

High Shed/ Platform Canopies

The original Union Station design had a single train shed - a large steel and glass barn-like feature – that covered all of the tracks. This feature was eventually cut to save on construction costs, and so the clock tower could be built. In 1900, the Northern Pacific Terminal Company considered constructing a glass and steel train shed “of rather magnificent proportion” before the rainy season began. However, there were no platform canopies constructed until after 1904 in anticipation of the Lewis and Clark Exposition’s crowds. A large, two story gable-roofed shed was constructed perpendicular to the station, extending out over four tracks. Two smaller one-story iron and steel umbrella sheds extended north and south from this structure. Construction of the Broadway Bridge, which opened in 1912, required modifications to the platforms and canopies. By the end of 1930s, there were five umbrella canopies. As train travel decreased, canopies and tracks were removed or serially modified to adapt to changing transportation needs at the station, including lengthening canopies, shortening them, and periodic re-roofing.

Industrial Archaeology of Union Station Site

As the City of Portland’s hub for transport and travel by rail since 1896, Union Station is the premier transportation-related industrial archaeological site in Oregon. More specifically, Union Station represents a specific type of historical archaeological site—one related to transportation--whose significance is derived from its industrial heritage that can be examined and documented through the methods and approaches of Industrial Archaeology. This field of study began as an effort to document the surviving physical evidence of past industries, with an emphasis on contributing to the history of technology. Building on this base, in more recent decades, the field has expanded to examine the experiences of people who lived and worked at sites associated with various industries.

Union Station is much more than just the historic terminal building. It is also the physical remains buried in the industrial landscape, which encompasses railroad history from the earliest developments by the ORN Company and the Northern Pacific Terminal Company extending through time at least up to the end of World War II. Any archaeological investigations (including monitoring, evaluative testing, or data recovery) should be conducted in an integrated fashion with studies of the built environment at the depot to obtain a fuller picture of the thousands of people who worked on the railroad as well as the millions of passengers who traveled through Union Station for more than 120 years.

Who’s been Working at Union Station, Black Porters

Portland’s Union Station represents a significant landmark for African American history in Oregon. It stands as a reminder of the late 1800s when the first influx of African Americans in Oregon took place in response to the recruitment of African Americans from the south to work for the railroad. By 1941, an industrial survey revealed that 98.6% of Portland’s African American men worked on the railroads as waiters, cooks, porters, redcaps and shop laborers.

A vibrant African American community grew up around Union Station including homes, churches, businesses, newspapers, and civic organizations, in spite of discrimination in housing, employment and public accommodations in Portland. In effect, Union Station became the center of the African American community in Oregon.

Lewis & Clark Exposition (1905)

Portland staged its first and only World's Fair from June 1 through October 15, 1905. During those four and a half months, 1,588,000 paying visitors passed through the gates to the 400-acre fairgrounds on the northwest edge of town. More than 400,000 were from outside the Pacific Northwest, a huge number of tourists for a city that was, at the time, perhaps 120,000 people. The exposition was expected to boost to the regional economy. Visitors would spend money on train tickets, hotel rooms, food, and drink, and the Northern Pacific Railroad and brewer Henry Weinhard were among the biggest financial backers. It is supposed that the High Shed and platform canopies at Union Station were added to the tracks because of the anticipated number of exposition visitors and the need for protecting passengers from the weather.

World War I History (1914-1918)

Between 1917 and 1920, the federal government assumed operation of all railroads and railroad terminals to create a coordinated national transportation system in waning months of World War I. During this time, the Spokane, Portland and Seattle Railroad and Great Northern were allowed access to Union Station. In 1920, two (2) more passenger tracks were added along with an additional umbrella shed and an extension to the “concourse” shed. After World War I, national and regional railroad politics and public dissatisfaction led to Union Station’s only major remodel.

Front Yard/Block Y

The “Front Yard,” on the southwest of the terminal, refers to the area historically termed the Rose Garden, being the triangular-shaped landscaped area immediately in front of the projecting circular bay (the restaurant) south of the Terminal’s main entry and extending to NW Irving Street. This area occupies portions of Block X of Couch’s Addition. Historic images document that for much of its early history this area was simply a fenced lawn, later improved with a few roses, flowers and climbing ivy on the building behind a metal rail fence.

In 1929, following a well-attended train history exhibit at the station, the “Oregon Pony,” an early Oregon—built locomotive owned by the Oregon Historical Society, was installed on permanent display in the Rose Garden. During World War II, the Rose Garden was the location of the USO Canteen and then returned to a simple lawn upon its removal. Shrubs or trees in the middle of the front yard first appear in 1963 aerial views and have now grown into the lushly landscaped area of today. While some reports indicate that the fence, which originally framed the Front Yard, was removed after WWII, it appears to have been removed earlier, at the latest in

connection with the construction of the USO Canteen. The Oregon Pony, the small pioneer locomotive, was removed from Union Station in 1978 and relocated to its current location, at Cascade Locks Marina Park.

Today the Front Yard consists of large, mature, trees and plantings that continue the historic landscaped character adjacent to the terminal. The Front Yard additionally may retain archaeological information related to the history and original construction of Union Station, to the Oregon Pony and to its location as the USO Canteen during WWII.

In 1915, vehicular congestion in front of the station caused by the dead end formed by the approaches to the Broadway Bridge, led to the purchase of the business block bounded by 6th and 7th Avenues and Irving and Johnson Streets [Block Y]. The one-story buildings on the block across the street from Union Station's main entrance were razed and the block was leased to the City of Portland in 1920. A landscaped parking area was then developed on the lot.

Immigrants and Union Station

In the original design, at the south end of the building and beyond the passage that originally led to the tracks, were stairs and a separate immigrant's waiting room with separate men's and women's toilets.

Union Station's Role in Old Town/Chinatown/Japantown

As California increased its exclusionary laws during its work shortage, Oregon saw a huge increase in Asian workers, primarily Chinese, who arrived mostly to mine and construct railroads. The Chinese Exclusion Act was passed prohibiting all immigration of Chinese laborers. This act provided an opportunity for Japanese laborers to assume the roles of the Chinese in the Oregon workforce. By the turn of the century, Portland was the hub from which Japanese immigrants were sent to work on railroads, and for lumber companies, canneries and farms throughout Oregon. A surplus of Japanese immigrant laborers in Portland led to nearly 100 Japanese owned businesses. In 1942, after America entered into World War II, the Army was authorized to designate the entire West Coast as a Strategic Zone and exclusion orders were issued with instructions for Japanese Portlanders to report to what is now the Expo Center.

World War II History (1939-1945), USO Canteen, Women and Union Station Nursery

Train travel in Oregon and through Union Station grew significantly during the World War II era as gas-rationing for private vehicles forced increased reliance on trains, buses, and other forms of public transportation. Almost 5 million passengers in Oregon took the train during the war years; the majority passing through Portland. This included hundreds of thousands of military personnel and their families.

Two entirely new structures were built at Union Station as part of the Portland's WWII home front effort. In March 1943, construction began on the USO "Depot

Canteen” in the rose garden. The one-story building housed a Red Cross canteen, and a USO lounge for the use and comfort of troops in transit. By the time the Canteen closed in 1946, more than 1,100,000 soldiers, sailors, and marines had been served by its volunteer staff. It was removed by 1948.

Another major WWII-era effort at Union Station provided increased service to traveling mothers and young children. In March 1944, the American Association of University Women in collaboration with the Traveler’s Aid Society announced their plans to build a Nursery, also referred to as the “Diaper Depot”, where mothers could find shelter and assistance and their children would have a quiet place to sleep, eat or play. The structure attached to the trackside of the station was located with an entry into the women’s rest room. It was one of a handful of cities in the nation to provide such services. The unused structure has since fallen into disrepair due to water-related deterioration.

Union Station and Natural Disasters – Earthquakes, Fires and Floods

In May and June of 1894, during construction of the station, early warm weather melted an unusually deep snow pack causing the Columbia and Willamette Rivers to reach 33 feet above the low water mark, exceeding the great flood of 1876 by over four feet. By this time the Union Station Main Terminal had been roofed and tiled, some windows were installed, and the tower was completed up to the third floor. The site was inundated by the flood waters and rail operations ceased. Work resumed after the flood. In 1922 an electrical fire damaged the northern portion of the station, which was further damaged by water during fire suppression, including significant roof damage and water damage to the waiting room. Another fire in 1937 damaged the building once again. The Vanport Flood in 1948 submerged the railyard and surrounded the station with floodwaters.