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## Acronyms and Abbreviations

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<th>Definition</th>
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<tr>
<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
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<tr>
<td>API</td>
<td>area of potential impact</td>
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<td>B.P.</td>
<td>before the present</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<tr>
<td>CH2M</td>
<td>CH2M HILL, Inc.</td>
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<tr>
<td>cm</td>
<td>centimeter</td>
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<tr>
<td>Commercial/Liberty couplet</td>
<td>Commercial Street/Liberty Street couplet (that is, paired one-way streets)</td>
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<tr>
<td>FEIS</td>
<td>Final Environmental Impact Statement</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
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<td>GLO</td>
<td>General Land Office</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<td>NHPA</td>
<td>National Historic Preservation Act of 1966</td>
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<td>NRHP</td>
<td>National Register of Historic Places</td>
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<tr>
<td>ODOT</td>
<td>Oregon Department of Transportation</td>
</tr>
<tr>
<td>OR 22</td>
<td>Oregon State Route 22</td>
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<tr>
<td>ORS</td>
<td>Oregon Revised Statute</td>
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<tr>
<td>Pine/Hickory couplet</td>
<td>Pine Street/Hickory Street couplet (that is, paired one-way streets)</td>
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<tr>
<td>project</td>
<td>Salem River Crossing Project</td>
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<tr>
<td>SHPO</td>
<td>Oregon State Historic Preservation Office</td>
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<tr>
<td>STU</td>
<td>shovel test unit</td>
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CHAPTER 1

Introduction

This addendum to the Draft Archaeological Resources Technical Report, which was submitted as an appendix of the Draft Environmental Impact Statement (Federal Highway Administration [FHWA], Oregon Department of Transportation [ODOT], and City of Salem, 2012; DEIS), that was published in April 2012, describes the Salem River Crossing Project Final Environmental Impact Statement (FEIS) preferred alternative, assesses archaeological resources impacts, and describes associated mitigation actions.

1.1 Summary of Project Purpose and Need

The purpose of the Salem River Crossing Project (project) is to improve mobility and safety for people and freight for local, regional, and through travel across the Willamette River in the Salem-Keizer metropolitan area while alleviating congestion on the Center Street and Marion Street Bridges and on the connecting highway and arterial street systems.

Primary measures to satisfy the purpose statement include the following:

- Reducing congestion levels at the existing bridgeheads
- Remediating safety and operational deficiencies on the existing bridges and in the study area in locations where crash rates are higher than average

The following statements identify the need for the project:

- Need Statement #1. Based on available data, the existing river crossing facilities and local bridge system in Salem are inadequate for current and future traffic demand, resulting in a need to improve traffic operations in the study area over the No Build Alternative conditions.

- Need Statement #2. Based on available data, the existing river crossing facilities and local bridge connections in Salem are inadequate for current and future users (vehicles, freight, bicycles, and pedestrians) with regard to safety conditions, resulting in a need to improve traffic safety for all these users.

- Need Statement #3. Based on available data, the existing river crossing facilities and local bridge system in Salem are inadequate for current and future freight-vehicle capacity, resulting in a need to improve freight mobility in the area of the Center Street and Marion Street Bridges.

- Need Statement #4. Congestion levels on the existing river crossing facilities result in unreliable public transportation service, thereby necessitating an improvement in transit travel time and reliability from/to West Salem.

- Need Statement #5. The existing river crossing options in Salem are inadequate to accommodate emergency response vehicles in the event of restricted access to and/or closure of the existing bridges because of an emergency or other incident, resulting in
the need to provide improved crossings or an additional crossing in case the Center Street and Marion Street Bridges are closed or limited because of an incident.

1.2 Description of the Preferred Alternative

This section describes the project preferred alternative evaluated in the FEIS. An overview of the preferred alternative is shown on Figure 1.2-1.

1.2.1 National Environmental Policy Act

Compliance with the National Environmental Policy Act (NEPA) is required because the proposed action intends to satisfy a transportation need and is funded or partially funded with FHWA funds. NEPA provides the overall regulatory setting for this section. With regard to traffic forecasts, in general, the design traffic year should be set so as to accommodate a 20-year period from the expected date of completion of the facility (Title 23, United States Code [U.S.C.], Highways Section 109 Standards).

1.2.2 Crossing Location and Bridge Description

Under the preferred alternative, a new bridge would be constructed. The bridge would connect to Hope Avenue at Wallace Road on the west, cross Wallace Marine Park at its northern tip, cross the Willamette River and McLane Island, and cross over a realigned Front Street (see Figure 1.2-2). The bridge would connect to Pine and Hickory Streets at Commercial Street on the east. The bridge could be constructed as a single structure or two side-by-side structures.

In order to ensure adequate right-of-way to accommodate all modes, the new bridge would include, in each direction of travel:

- Two 12-foot-wide travel lanes
- 8-foot-wide left-hand shoulders
- 10-foot-wide right-hand shoulders
- 10-foot-wide multi-use paths on outermost part of both sides of the bridge that would be separated from the paved roadway raised by a barrier

The new bridge span would also have a 16-foot-wide center median. The cross-section of the proposed new bridge main span is shown on Figure 1.2-3. The existing Center Street and Marion Street Bridges would remain in service, without modification.

1.2.3 Eastside Bridgehead and Distribution Network

This subsection describes the preferred alternative on the east side of the new bridgehead and on the road network east of the Willamette River (see Figure 1.2-4).
Figure 1.2-1: Overview of Preferred Alternative
Figure 1.2-2: Preferred Alternative Crossing Location
Figure 1.2-3: Cross-Section of Preferred Alternative New Bridge (Main Span)
Figure 1.2-4: Preferred Alternative – Eastside Bridgehead and Distribution Network
The preferred alternative new bridge would have an eastbound connection at Commercial Street (via an exit ramp aligned with Pine Street) and a westbound connection (via an entrance ramp aligned with Hickory Street). Entrance and exit ramps would connect at-grade to a proposed short Pine Street/Hickory Street couplet (that is, paired one-way streets) just east of Front Street. This couplet would be only two blocks in length, extending from the bridge ramps to Liberty Street, including the respective Pine and Hickory Street intersections with Commercial Street. Bridge access to and from Salem Parkway would be via the existing north-south Commercial/Liberty couplet. The new bridge would also be accessible from the north from River Road (via Commercial Street).

A portion of Front Street would be reconstructed closer to the river below the bridge ramps in the segment between Columbia Street and a point approximately 540 feet south of Tryon Street to maintain Front Street’s north-south connectivity. The remnant segments of Front Street in this area would allow access to existing businesses (on both sides of the bridge approaches). The former segment of Front Street below the bridge approaches would be closed to vehicles.

Commercial Street would be widened in its segment between Tryon Avenue and Hickory Street to provide enough space for the installation of two right turn-only lanes from southbound Commercial Street to the westbound bridge approach on Hickory Street. The segment of Pine Street between Liberty Street and 4th Street would be widened slightly to accommodate the proposed double-right turn lane from westbound Pine Street to northbound Liberty Street.

### 1.2.4 Westside Bridgehead and Distribution Network

This subsection describes the preferred alternative on the west side of the new bridgehead and on the road network west of the Willamette River (see Figures 1.2-5 through 1.2-9).

The westside bridgehead approaches would combine into a single roadway at the intersection with Marine Drive (which would be constructed as part of the preferred alternative). This roadway (“Hope Avenue Extension”) would then continue to the Wallace Road intersection at Hope Avenue. There would be no driveway access to the Hope Avenue Extension roadway (either westbound or eastbound) from Wallace Road eastward; all existing driveway access to Wallace Road and Hope Avenue (west of Wallace Road) would be maintained.

The Wallace Road/Hope Avenue intersection would be widened to accommodate the additional traffic traveling to and from the new bridge. There would also be a widening of the Wallace Road/Orchard Heights Road intersection to accommodate increased traffic volumes, including widening along Wallace Road between Taybin Road and Narcissus Court to accommodate the additional turn lanes; Orchard Heights Road would remain in its current alignment. See Figures 1.2-5 and 1.2-7.
Figure 1.2-5: Preferred Alternative – Westside Bridgeshead and Distribution Network
Figure 1.2-6: Preferred Alternative – Westside Distribution Network 1 of 4
Figure 1.2-7: Preferred Alternative – Westside Distribution Network 2 of 4
Figure 1.2-9: Preferred Alternative – Westside Distribution Network 4 of 4
Marine Drive would be constructed at-grade from River Bend Road in the north to Glen Creek Road in the south. South of Glen Creek Road, Marine Drive would ramp up to an elevated structure that would cross over the existing pedestrian/bicycle multi-use trail as well as the existing Marion Street Bridge exit ramp before descending back to grade near its connection with Oregon State Route 22 (OR 22). Marine Drive would contain one through-lane in each direction of travel with turn lanes at intersections. A 12-foot-wide paved multi-use path would be constructed adjacent to the east side of Marine Drive from River Bend Road to Glen Creek Road (a 5-foot buffer strip would separate the multi-use path from the northbound Marine Drive travel lane). The proposed alignment of Marine Drive, as well as all new proposed roadway connections from Marine Drive to Wallace Road, is consistent with the Salem Transportation System Plan (TSP).

At its northern terminus, Marine Drive would intersect with River Bend Road via a three-legged roundabout (see Figure 1.2-6). The segment of Marine Drive between River Bend Road and the Hope Avenue Extension would include a connection to existing Harritt Drive. South of the Hope Avenue Extension, a new roadway would be built between Marine Drive and Wallace Road ("Beckett Street") as well as between Marine Drive and the Cameo Street/5th Avenue intersection ("5th Avenue"). There would be a new full intersection at Marine Drive and Glen Creek Road (at the entrance to Wallace Marine Park).

Eastbound OR 22 would need to be widened out onto the riverbank (not into the river itself) to allow for the installation of the flyover ramp from OR 22 to Marine Drive. When the Marine Drive-OR 22 connection ramps are installed, the existing Rosemont Avenue westbound exit-ramp would be closed (see Figure 1.2-9). This closure would be done for safety reasons – the existence of both a Marine Drive-to-OR 22 ramp and a westbound Rosemont exit-ramp at its current location would result in undesirable weaving conditions; the potential for conflict would occur during all periods of the day, but would likely be more severe during the off-peak periods when speeds are higher. With the closure of the Rosemont Avenue exit-ramp, it is forecasted that former Rosemont Avenue-bound traffic wishing to access West Salem neighborhoods would shift to the Wallace Road exit (either to access Edgewater Street or to continue north on Wallace Road) or would continue west on OR 22 to Rosewood Drive, College Drive, or Doaks Ferry Road. The eastbound on-ramp from Rosemont Avenue to OR 22 would continue to function as it does today, but would not have access to the eastbound ramps exiting to northbound Marine Drive.

1.2.5 Bridge Type

In September 2014, the project Oversight Team identified a segmental precast concrete box as the recommended bridge type for the preferred alternative new bridge over the Willamette River. A visual simulation and engineering plan/profile drawing of this bridge type are provided on Figures 1.2-10 and 1.2-11.

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1 Between Hope Avenue and the new Beckett Street, Marine Drive would have two southbound lanes to receive traffic going from the bridge south onto Marine Drive. This additional lane would drop as a right-turn lane at Beckett Street.
This bridge type would have 300-foot spans between piers across the river, thereby allowing for full navigational clearance in both channels of the river astride McLane Island (see the orange pier symbols on Figure 1.2-11). This bridge type would have a vertical clearance of 45 feet over mean high water and 53 feet over mean low water.

On the east side of the river at Commercial Street, the new bridge would connect to a realigned Pine Street with a three-lane exit ramp for eastbound traffic, and to Hickory Street with a two-lane entrance ramp for westbound traffic. Construction of these two bridge ramps would require the realignment of Front Street closer to the riverfront. The east leg of the Hickory Street/Liberty Street intersection would be converted to a right-in only configuration. Pine Street between Commercial and Liberty streets would be realigned to
connect to the new bridge exit ramp. Bicycles on Commercial Street would be directed to a separated multi-use path from Taylor Street to south of Pine Street.

### 1.2.6 Construction Activities

The estimated total project cost of the preferred alternative is $424.6 million (in 2020 dollars); this includes the cost associated with purchasing right-of-way. If built as a single project, the preferred alternative would take approximately 4 years to construct.

#### 1.2.6.1 Construction Impacts on East Side of Willamette River

Construction staging on the east side of the river would be relatively minor due to the localized nature of the work. Modifications of the Commercial Street/Liberty Street and Pine Street/Liberty Street intersections would interrupt traffic for one construction season and would include lane closures. Front Street would be out of service for at least two construction seasons due to overhead bridge construction and realignment of the street. Other construction activities on the east side of the river would primarily be offline of the existing transportation system. Temporary construction impacts to properties in the immediate four-block area such as noise, dust, and traffic delays could be high for at least one construction season. Alternate routes for impacted traffic include Broadway Street and Cherry Avenue.

#### 1.2.6.2 Construction Impacts on West Side of Willamette River

Construction staging of the preferred alternative on the west side of the river would consist of work both online and offline of the existing transportation system. Offline work would include the construction of Marine Drive from Glen Creek Road to River Bend Road, the new river crossing and its connection to Marine Drive, the extension of 5th Avenue to Marine Drive, and Beckett Street between Wallace Road and Marine Drive.

Online work would include the intersection construction work on Wallace Road, Orchard Heights Road, Glen Creek Road, and River Bend Road. Construction activities on Wallace Road would entail widening for additional turn lanes at Hope Avenue and Orchard Heights Road. On River Bend Road, activities would entail the construction of a roundabout at the new intersection with the proposed Marine Drive. On Glen Creek Road, activities would entail a new intersection with proposed Marine Drive.

A major component of the preferred alternative is the construction of a new elevated flyover roadway connection from proposed Marine Drive to OR 22 in the Edgewater Street area. This work would cause disruptions to OR 22 and Edgewater Street for at least two to three construction seasons.

If built as a single project, the duration of construction activities on the west side of the river would be completed in two to three construction seasons.

#### 1.2.6.3 Construction Mitigation Measures

The preferred alternative creates opportunities to implement best practices for construction staging. Many measures can be implemented to mitigate temporary impacts caused by construction, including the following:
1. Minimize construction duration using alternative delivery methods that place a high emphasis on an accelerated construction schedule.

2. Implement a highly effective public involvement/public relations plan to educate travelers about the project and keep them regularly informed of construction activities.

3. Place a high priority on maintaining regional mobility during construction; the existing Marion/Center Street Bridge river crossing is pivotal and must continue to operate during construction.

4. Develop high-quality construction staging and traffic control plans that balance the needs of the construction contractor with the ongoing needs of the traveling public and local landowners.

5. Demonstrate strong community leadership in the planning, design, and construction of the project.

1.2.7 River Traffic

No impacts to river traffic (e.g., recreational boating, Willamette River Queen tours) in the Willamette River are anticipated as a result of the preferred alternative. The preferred alternative new bridge would have full navigational clearance in both channels of the river around McLane Island and it is located far north of the boat ramp.
CHAPTER 2
Affected Environment

2.1 Area of Potential Impact

The archaeological area of potential impact (API) includes the right-of-way footprint of the preferred alternative and all ancillary materials storage or staging areas associated with construction. On the east side of the Willamette River, the preferred alternative is largely a modification of existing streets plus the construction of the new elevated bridge. On the west side of the Willamette River are modifications to Wallace Road, Orchard Heights Road, the new construction of Marine Drive, the new construction of elevated ramps to OR 22, and the new bridge crossing the Willamette River. Marine Drive intersects residential and agricultural parcels and undeveloped lands, and follows some existing paved roadways. At the current stage of conceptual design, right-of-way widths along Marine Drive have not been determined, but for the purposes of this investigation are assumed to be between 60 and 75 feet. As project construction details are further refined in the future, the right-of-way and subsequently the API are likely to be revised and additional archaeological investigation may be required to assess areas not investigated in this analysis.

2.2 Cultural Context

Although the Willamette Valley has been the subject of a fair amount of archaeological research, little of that research has been focused on the City of Salem. The extensively modified landscape and impermeable surfaces of Salem’s developed urban core provide limited opportunities for the discovery of previously unknown archaeological deposits. What little research has been conducted has not identified archaeological sites within the API. While some archaeological resources of both prehistoric and historic origins have likely been destroyed, such resources could still be present, but may be obscured by the developed and modified landscape.

2.2.1 Willamette Valley Cultural Chronology

The first peoples in the Willamette Valley were probably Paleo-Indians, small groups of nomadic hunter-gatherers who left little trace of their visits (Connolly 1994).

Later peoples in the valley were groups whose culture is characterized as Archaic, an adaptive strategy whereby groups seasonally acquired plant and animal resources within a variety of local and regional microenvironments.

The cultural chronology most often cited for the Willamette Valley divides the cultural history of the region into four basic periods: The Paleo-Indian (11500 - 8000 before the present [B.P.]), the Early Archaic (ca. 8000 – 6000 B.P.), the Middle Archaic (ca. 6000 – 1750 B.P.) and the Late Archaic (ca. 1750 – 200 B.P.). Although Paleo-Indian peoples may have populated the Willamette Valley, it has yet to be confirmed archaeologically. The Early Archaic period took place during a time of warmer temperatures and sparser rainfall that followed a cool and moist period at the end of the Pleistocene. The Early Archaic
subsistence pattern emphasized the hunting of numerous species as well as gathering of plant resources (Minor et al. 1982). Large, lanceolate Cascade projectile points are associated with this period. Other Early Archaic stone tools included knives, scrapers, drills, manos, metates, hammerstones, and edge ground cobbles. Sites dating to the Early Archaic period have been found in the foothills of the Cascade and Coast ranges, and in valley settings. Animal bones recovered from these sites indicates that deer, elk, marmot, rabbit, and weasel were used (Newman 1966), while the presence of manos, metates, and edge ground cobbles indicate use of plant resources.

Archaeologists consider the Middle Archaic period (ca. 6000 - 1750 B.P.) to be a time when the patterns of resource acquisition established in the Early Archaic period expanded and intensified (Minor et al. 1982). Artifacts used during the Middle Archaic period include side-notched and large, stemmed projectile points with broad necks. Cascade-style points also occur in this period, but in fewer numbers compared to the preceding Early Archaic period. Stone knives, drills, gravers, scrapers, reamers, spokeshaves, hammerstones, choppers, anvils, scraper planes, and abrading stones were also used at this time (Cheatham 1988). Plant foods may have been of greater importance during this period as seen by an increase in the recovery of mortars and pestles at some Middle Archaic sites.

Evidence from late Middle Archaic sites indicates that the basic subsistence and settlement patterns recorded for the ethnographic Kalapuya Indians were in place by approximately 4000 B.P. This included a seasonal round during which both valley and upland environments were used for hunting and gathering. Deer, elk, and a variety of small mammal bones have been found at Middle Archaic sites. A semi-subterranean house pit with a central hearth excavated at the Hurd site, near Coburg in the southern Willamette Valley, dates to the late Middle Archaic period and is the earliest (and only) prehistoric structure thus far excavated in the Willamette Valley (White 1975). The Hurd site pit house suggests that by this time winter villages, summer base camps, and other small special task sites were being used (Cheatham 1988:201; White 1975).

The Late Archaic period dates to between ca. 1750 to 200 B.P. The settlement and subsistence patterns identified by archaeologists in the late Middle Archaic period appear to remain largely unchanged during this time. However, the earlier and larger broad-necked projectile points were mostly replaced by small, narrow-necked projectile points, reflecting the change in use from darts or spears to the bow and arrow (Toepel 1985). Other items included in the Late Archaic toolkit include spokeshaves, reamers, denticulates, scrapers, gravers, drills, reamers, hammerstones, anvils, mortars, and pestles. Euro-American contact and the presence of non-native, Euro-American trade goods mark the end of this period.

### 2.2.2 Ethnography

At the time of Euro-American contact, the Willamette Valley was occupied by the Kalapuya Indians. Kalapuya refers to a family of languages of which there were several tribal divisions. As described by Zenk (1990:549) each tribe was politically autonomous and was headed by tribal chiefs although this may be a historical development that resulted from catastrophic population declines in the 1780s and 1830s, and the demands of government agents to deal with authoritative representatives of the tribes. Chiefs were invariably wealthy and stood at one extreme of the social organization; slaves were at the other extreme.
Kalapuyan houses at winter village sites were rectangular in plan, constructed of bark, planks, or both, and had shed or gable roofs. It is unclear if these types of houses were in use only in the more recent past or during earlier prehistoric times. Structures were not typically used at warm-weather camps, but those that were consisted of grass and fir-bough huts or windbreaks (Zenk 1976:42).

Kalapuyan subsistence included a wide range of animal and plant resources, but was heavily dependent on vegetal products, especially camas. These roots were gathered in large quantities during the summer and fall, roasted in oven-pits and dried, and often pressed into cakes. Tarweed seeds, wapato, hazel nuts, and assorted berries were also important resources. Tarweed seeds were of particular importance and were gathered from burned-over prairies. Other important resources included large and small mammals, birds, lampreys, and insects.

The Santiam band of the Kalapuya lived in or near what is now the City of Salem. Chemeketa is the name given by the Kalapuyans for a village site near the river in what is now downtown Salem. “Chemeketa” is thought to mean “meeting or resting place” in the Central Kalapuya language (Santiam) (Mersinger 2005-2006). Tomkins (1962-1964: 44), a local amateur historian, mentioned that “Many relics [Indian artifacts] were found in the Twelfth and Mission Streets area” of Salem, while Judson (1959) notes that “The street named Chemeketa perpetuated the Indians’ name for their village, which was located…” from the present Liberty Street on the east and Mill Creek and the Willamette River on the north and narrowing to a point at Pringle Creek on the south.”.

Perhaps the most informative description of Chemeketa village comes from Henry Brown, a Salem resident who in 1878 reminisced about Quinaby, a Native American known to Brown (Brown 1878). Quinaby was the son of a Chemeketa Indian father and a Chemewa Indian mother who lived in the Salem area in the mid to late 1800s. The Chemeketa and Chemewa were local bands of the Santiam Kalapuyans living in the Salem area at the time of Euro-American contact (Gustafson 2007; Hemesath and Nunez 2002). Brown remembered Quinaby telling him that he, his family, and some 400 other Chemeketa and Chemawa Indians had their winter camp in Salem in 1847. According to Brown, “The camp commenced at the northern edge of Marion Square and extended down to North Mill creek….and back to the river and mouth of the creek.” That winter a measles epidemic killed “at least one half of the encampment.” The dead were buried “in the flat above the Capitol Lumbering Mill where the unoccupied warehouse now stands” (Brown 1977-78:30).

In the 1950s, Lewis Judson, recalling stories about the early life of his grandfather, an early pioneer with the Methodist Mission and Jason Lee, places the cemetery “…on a little island on the east side of the Willamette River, at about the present site of the Oregon Pulp and Paper Company’s sawmill” (Strozut 1955:22). The Oregon Pulp & Paper Company began production in 1920 at the site of the Capital Lumbering Company, which was organized and built on the river between Trade and Ferry Streets and was the principal sawmill in the Salem area for many decades (Meyering 2005-2006). Sybil Westenhouse describes the location of the Indian cemetery as either “… under Front Street or on Block 46 which lies east of Block 65” (Westenhouse 1998:3). A map accompanying the Westenhouse article shows Block 46 bound by Ferry Street on the north, Front Street on the west, and Trade Street on the south (the eastern margin of Block 46 is not shown). Brown (1977-78),
Judson (1955), and Westenhouse all describe an area near the mouth of Pringle Creek on the south end of the former Chemeketa village.

Boyd (1975:135) estimates that there were 12,000 Kalapuyans prior to Euro-American contact. However, the Kalapuya suffered catastrophic population losses during the late eighteenth and early nineteenth centuries from diseases introduced by Euro-American traders and fur trappers. By the end of the 1830s, perhaps only 600 Kalapuyans remained and by the 1910 census, only nine Santiam Kalapuya were enumerated (Swanton 1952:468). Efforts to place the Kalapuya onto reservation lands began in 1851. In 1855, a treaty that encompassed all Kalapuyans was signed, and in 1856, all but a few of the remaining Kalapuyans were moved onto the Grand Ronde Reservation.

2.2.3 Historical Background

The earliest documented non-native entrants into the greater Salem area were fur traders representing competing companies. In the winter of 1812-1813, 16 Pacific Fur Company personnel from Fort Astoria established the first trading post, Wallace House, in the valley near what is now Salem (Barry 1941). The post was basically an overwintering locale, but also served to relieve some of the chronic food shortages at Fort Astoria. The post apparently operated until 1814, and while some trading was conducted, its most important function was to supply meat to Fort Astoria. Using historic-era maps and comparing the locations of Wallace House and the Willamette River with modern maps, the house was probably located in what is now the south section of Keizer in River’s Edge Park (City of Keizer, n.d.). This location is outside the API of the preferred alternative.

The history of white settlement in the Salem area begins in 1834, when Jason Lee and several other missionary families associated with the Methodist Episcopal Church settled on the east side of the Willamette River on what is now Wheatland Ferry, 10 miles north of Salem. That location proved inadequate to their needs, and the missionaries relocated to an area near the mouth of Mill Creek, just north of what is now downtown Salem. The missionaries established a combined saw and gristmill as well as a house and parsonage on what was at that time called the Chemeketa Plain (Stein 1981:12; Westenhouse et al. 1998:28). The Jason Lee House was built in 1841 on what would later become Broadway Street. A parsonage was built south of Lee’s home on land later occupied by the Kay Woolen Mill. Lee’s home, the woolen mill, and the parsonage are now on the grounds of the Mission Mill Museum in downtown Salem (Morrison and Wallig 2006).

The missionaries came to “educate” the native people living in the area but after some years living amongst the local tribes, the missionaries realized that their intent was misunderstood and not appreciated. They turned instead to providing ministerial and educational services to the increasing number of white settlers who came to the area, attracted by the potential of the fertile Willamette Valley. These missionaries were responsible for the first platting of the town and lots were sold beginning in 1846. According to several sources, the name “Salem” was chosen for the new town at this time, by W.H. Wilson. Within a few years, the town had a dry goods store and a blacksmith.

As with most river communities, Salem both depended on and was at the mercy of the river. It provided transportation of goods, services, and people as well as power for the mills, which in turn provided for local employment. However, the river did flood the lower areas of the town, which could be devastating in both loss of life and economic output. Despite...
this threat, the town built up along the river; by the early 1850s, the boundaries of the town were roughly Division Street and Mill Creek on the north, Cottage Street on the east, and Mission Street on the south, with the river marking the western boundary (Stein 1981). While the river was the main source for transportation purposes, overland transportation developed as well. By the late 1850s, stagecoaches ran along a 50-mile route between Salem and Portland (Schwantes 1999).

Across the river, West Salem was platted in 1849 as Cincinnati, and was renamed Eola in 1855, when its boundaries were recorded (Kadas 1992). One hundred years after West Salem was founded, it would be annexed by the City of Salem. Eola vied unsuccessfully to become the territorial seat of Oregon in the mid-1850s (West Salem City Hall National Register Nomination 1990). As West Salem was coming into being, Salem became the county seat; within a few years, it was the territorial seat.

The educational institute that the missionaries in Salem had started in 1840 became the Oregon Institute in 1853 (Willamette University 2008). The first session of the territorial legislature and court was held at the Oregon Institute, which later became Willamette University. These events led a new industry that provided the means for the growth of the community: government. General Land Office (GLO) maps from 1852 and 1861 provide an indication of development up to that time (Figure 2.2-1).

When Oregon joined the Union in 1859, Salem fought to become the state capital; it was so named in 1864 (Clark 1927). In the interim, Salem incorporated. The same year that Salem became the state capital, telegraph service began in the city and railroad service arrived in town a few years later. By 1870, the population of Salem had grown to 1,000 people (Stein 1981). The area around the city was still rural and agricultural, and the many people earned their incomes from the production and sale of livestock and wheat. People also found work in the increasing number of grist, woolen, and flour mills. Other industries in the growing city included lumber-related businesses, and an iron works, but government would soon become the city’s biggest business. The commercial and governmental buildings centered in the downtown area. This included a second courthouse that was constructed in 1873, replacing the 1854 building, which previously burned. In 1876, the state Capitol building was constructed. By 1880, the population reached 2,500 and it continued to grow through the end of the nineteenth century (Stein 1981).

As with Salem, West Salem depended on the river for transportation, commerce, and power. The populated commercial and residential areas along the flats of the river made the community susceptible to the river’s periodic floods even while it provided the means for living. The commercial area of the town was destroyed by flooding in 1890, and suffered again in 1943 (Salem Public Library 2006). Following the 1890 flood, the West Salem Addition was purchased and subdivided, north of Gerth Avenue (West Salem City Hall National Register Nomination 1990). Despite the dangers of living and making a living on the river’s banks, the town continued to attract new residents and it incorporated in 1913. Between 1890 and 1913, an additional six areas were annexed to West Salem, to the north and west of the original plat along West Front Street (West Salem City Hall National Register Nomination 1990).
Figure 2.2-1: 1852 and 1861 General Land Office Maps
The year 1913 also marked the opening of a Union Street Railroad Bridge over the river, linking West Salem and Salem. The Salem, Falls City & Western Railway was also known as the Dallas-Falls City Union Street Railroad Bridge and the Portland, Eugene & Eastern Bridge. This route, a subsidiary line of the Southern Pacific Railroad, had been laid between Black Rock and Salem in 1909 and with the construction of the river bridge, provided access to the Salem train depot on the east side of the city.

The rail bridge was not the first transportation link between the two cities; ferries were utilized throughout the late nineteenth century and into the early twentieth century. As early as 1886, West Salem and Salem were connected via the Center Street Bridge, which was the first constructed across the Willamette River in Oregon. The wood span cost $49,901 to build (Salem Public Library 2006). This bridge collapsed during the 1890 flood and was replaced three times. In West Salem, this bridge joined West Front Street, which was later renamed Edgewater Street.

There appeared to be little residential development north of West Front Street and south of West Bassett Street even into the late 1920s. Even in 1920, just 7 years after the city incorporated, the population of West Salem stood at only 208 persons (West Salem City Hall National Register Nomination 1990). The 1930 census had the West Salem population at 974 persons; by 1940, just over 1,900 people lived in the city (West Salem City Hall National Register Nomination 1990). In 1936, a City Hall building was built as part of the Depression-era Public Works Administration program, located on the south side Edgewater Street at West Kingwood Avenue. In 1949, West Salem was annexed to the City of Salem.

By 1950, many of the lots west of Patterson Avenue (formerly West Division Avenue) and north of Edgewater Street were occupied by single-family dwellings. Several multi-family residences and courtyard housing developments also appeared by this time. As seen on the 1950 Sanborn Fire Insurance Maps, a commercial district had located along Edgewater Street, around the intersections with north-south streets such as Patterson Avenue, McNary Avenue, and West Kingwood Avenue. These businesses included markets, restaurants, auto repair shops, and at least one bank.

Development along Wallace Road, which runs north from Edgewater Street, was mainly commercial/industrial and confined to the intersection of those two streets in the early decades of the twentieth century. Outside of the city boundaries, the land was used for agricultural purposes. The city limits on the north side of West Salem shifted to Orchard Heights Road by the time the city was annexed by Salem, as seen in the 1950 Sanborn Fire Insurance Maps. The city boundary at that time included some of the land on the east side of Wallace Road, and Glen Creek Road west from Wallace Road to roughly Parkway Road and Kingwood Road. The Sanborn maps note that the population of West Salem at the time was 2,200 people.

Since the 1950s, most of the buildings constructed along Wallace Road, from Edgewater Street north toward Orchard Heights Road have been for commercial use. The majority of the construction north of Orchard Heights Road is residential. Most of the homes are single family and, with few exceptions, are typical of the architectural styles that were popularized in the 1950s and 1960s. A few homes situated on large lots are still extant on the east side of Wallace Road, especially around River Bend Road.
In Salem, residential areas began to spread out from downtown, south of the original city border of Mission Street and the north boundary of Mill Creek. Residential development continued east past 12th Street. Some additional areas to the north were annexed in 1903. This was made easier when streetcars were introduced in 1889, which provided easier travel around and through the city. The first streetcar company, the Salem Street Railway Company, folded in 1897 and was replaced by the Capital City Railway Company, which utilized electric cars (Duniway 1982). The laying of power lines to provide the electricity to run the streetcars also provided the means to light homes and businesses along those routes. By 1900, 4,000 people lived in Salem (Stein 1981).

In the early decades of the twentieth century, the industries that had spurred the growth of the city, such as farming and lumber mills, in turn spurred new related industries, such as fruit and vegetable canning and packers, and paper companies. The Oregon Pulp and Paper Company started in 1920, for example (Stein 1981). Many of these industries remained close to the water or railroad lines, but with the advent of the automotive age, many moved away from these traditional transportation corridors.

As with the rest of the county, the introduction of the automobile had a significant impact on the landscape of the city and manner in which business was conducted. The increased use of cars and trucks spurred the growth of residential development further from the historic core of downtown Salem, new shopping areas appeared in or near those neighborhoods, and the downtown area began a slow decline in occupancy and relevance. By 1927, the streetcar era was ending, as buses replaced the trolley as the popular and profitable form of mass transportation (Stein 1981). Within a few years, commercial traffic along the river also ceased, as better roads inland made trucking goods a more appealing option.

The population of Salem almost doubled between 1920 and 1940 so that by World War II, 30,000 people lived in Salem. Residential areas north, south, and east of the downtown area grew and the downtown area began to decline. Part of this was due to the rise in automobile ownership and use, better roads, the relocation of prime businesses and industries away from the river and downtown, and annexation of more land. One reason given in addition to these aforementioned was the increasing traffic in the downtown area (Stein 1981).

The Marion Street Bridge was built in 1952, which supplemented the existing Center Street Bridge immediately adjacent to the south. It increased the amount of traffic that could cross the river to the West Salem neighborhood from downtown Salem. According to one source, this was the longest bridge of its type (plate girder) west of the Mississippi (Salem Online History).

The Marion Street Bridge carries OR 22 westbound from Salem into the West Salem neighborhood, where an exit drops traffic at the intersection of Edgewater Street and Wallace Road. OR 22 is located between the river and Edgewater Road and the current road was constructed in the early 1930s. It runs east to west, connecting to Highway 101 at Hebo near the coast and to OR 20 at the Santiam Pass in Cascade Mountains West of Salem. OR 22 combined with OR 20 creates a primary east-west highway from the coast across the central part of the state to near the eastern border with Idaho. In Salem, the Center Street Bridge carries OR 22 traffic eastbound from West Salem into Salem.
2.2.4 Archaeological Investigation Sites

Based on a record and file search performed at the Oregon State Historic Preservation (SHPO) office in Salem, at least 35 archaeological investigations have been performed within approximately 1 mile of the API. Five of the previous archaeological investigations intersected the API. Two of these investigations were conducted as part of the early planning stages of the project. The investigations encompassed a variety of methods, including pedestrian surveys, subsurface shovel testing, archaeological monitoring, and the recording of inadvertent discoveries. Four archaeological sites have been recorded in the course of these investigations.

Because archaeological information is protected by state (ORS 190.501) and federal law (Freedom of Information Act) this summary report does not provide specific archaeological site details, locations, or maps. Per ORS 192.501:

Public records conditionally exempt from disclosure, the following public records are exempt from disclosure under ORS 192.410 to 192.505 unless the public interest requires disclosure in the particular instance:

(11) Information concerning the location of archaeological sites or objects as those terms are defined in ORS 358.905, except if the governing body of an Indian tribe requests the information and the need for the information is related to that Indian tribe’s cultural or religious activities. This exemption does not include information relating to a site that is all or part of an existing, commonly known and publicized tourist facility or attraction.
3.1 Research Methods

This investigation consisted of background research conducted at the Oregon SHPO and during archaeological field surveys. On the east side of the Willamette River, most of the project consists of modifications of existing roads, from restriping to widening and redesigning intersections. In these areas, there is often little opportunity for subsurface exploration. The new bridge will require deep piers that intersect undeveloped ground near its approach to the Willamette River. With the exception of where the bridge approaches the river, no subsurface investigations were conducted on the east side of the river.

On the west side of the river, the API intersects agricultural and other relatively undeveloped parcels where surface and subsurface investigations were conducted.

This report was prepared by CH2M HILL, Inc. (CH2M) archaeologists Robin McClintock B.S., David Sheldon M.S., and Doug McFarland M.S. Fieldwork was conducted by CH2M archaeologists Robin McClintock, B.S., David Sheldon, M.S., and archaeologists Ryan Rolston, B.A. and Humphrey Calicher, B.A.

3.1.1 Subsurface Field Sampling

The STUs were hand-excavated in undeveloped, unpaved, and accessible portions of the API. Conditions across the linear API were variable, from agricultural areas, to surfaces impervious to hand shovel excavation, to landscaped private residences, to impenetrable (without the use of heavy equipment) blackberry bramble, to areas of standing water. Even in areas not developed with existing facilities, almost all areas encountered had been the subject of significant surface and subsurface disturbances. Given the early design stage of the project, future modifications to the alignment that would require additional subsurface exploration were assumed. Where possible, STUs were placed approximately 100 feet (30 meters) apart. In practice the excavations were often more opportunistically placed in locations where surface conditions allowed hand excavations. This resulted in somewhat irregular spacing of STUs in some areas. Permission was not granted by property owners for some parcels. STUs were cylindrical, hand-dug excavations minimally 30 cm in diameter, by 60 cm below the ground surface unless immovable obstructions were encountered. Material from the STUs was screened through ¼-inch hardware cloth to separate cultural artifacts. In some areas, a hand auger was used to penetrate to depths of up to 150 cm. A total of 125 STUs were excavated for the project. Field notes from each STU included dimensions, sediment characteristics (color, texture), stratigraphy, and findings.

3.1.2 Areas Not Tested and Recommendations for Additional Work

Some areas were not accessible for archaeological subsurface field testing, either as a result of impassable barriers or conditions, or because landowner permission was not granted. As previously noted, on the east side of the river, most of the API is constructed on paved or other impervious surfaces that render hand tool excavation impracticable. McLane Island
was not investigated due to the logistical and environmental challenges of landing a
geotechnical drill vehicle on the island.

3.1.2.1 Recommended Additional Work

ODOT is drafting a Programmatic Agreement that will discuss in detail any additional
fieldwork and archaeological monitoring that should occur if the project development
proceeds.

3.2 Regulatory Environment

“Historic resources,” as used in this document, refers to all historic and archaeological
resources, regardless of era or significance. Partially funded by the FHWA and requiring
multiple federal permits, the project’s cultural resources requirements are primarily guided
by the National Historic Preservation Act of 1966 (NHPA), as amended. The NHPA sets
forth national policy and procedures regarding historic properties, defined as districts, sites,
buildings, structures, and objects included in, or eligible for, the NRHP. Section 106 of
NHPA requires federal agencies to take into account the effects of their undertakings on
such properties and to allow the Advisory Council on Historic Preservation (ACHP) the
opportunity to comment on those undertakings, following regulations issued by the ACHP

Laws and regulations pertaining to historic resources that apply to the project include the
following:

<table>
<thead>
<tr>
<th>Regulation (Law/Guidance)</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td></td>
</tr>
<tr>
<td>Section 106 of the National Historic Preservation Act</td>
<td>Federal agency considers effect of undertaking on historic properties.</td>
</tr>
<tr>
<td>36 CFR Part 800</td>
<td>Details the Section 106 compliance process.</td>
</tr>
<tr>
<td>National Environmental Policy Act</td>
<td>Determines whether a federal agency project will have a significant effect on the quality of the human environment.</td>
</tr>
<tr>
<td>Executive Order 13175</td>
<td>Consultation and Coordination with Indian Tribal Governments</td>
</tr>
<tr>
<td>Section 4(f) of the U.S. Department of Transportation Act of 1966</td>
<td>Requires that the U.S. Secretary of Transportation approve a project that uses publicly owned land or historic properties only if there are no prudent and feasible alternatives to using that land and that all possible planning is made to minimize harm to that property.</td>
</tr>
<tr>
<td>Secretary of Interior’s Standards and Guidelines (National Park Service, 1983)</td>
<td>The Secretary of Interior’s standards and guidelines for archaeology and historic preservation (National Park Service 1983) provide guidance for conducting archaeological investigations.</td>
</tr>
<tr>
<td>State of Oregon</td>
<td></td>
</tr>
<tr>
<td>Oregon Revised Statute (ORS) 358.905 - 358.961</td>
<td>Archaeological Objects and Sites. Law provides definition of archaeological sites 75 years of age or older, significance, and cultural patrimony, and prohibits sale and exchange of cultural items or damage to archaeological sites on public and private lands. Items of cultural patrimony or associated with human remains are protected everywhere, unless the activity is authorized by an archaeological</td>
</tr>
</tbody>
</table>
### 3.3 Findings

Field investigations conducted in 2016 detected no archaeological sites or other resources within the preferred alternative API. Subsurface investigations were conducted where field conditions permitted and where rights of entry were granted by property owners. Most of these areas were in open fields, in cultivation, or otherwise undeveloped.
CHAPTER 4

Impacts Analysis

4.1 Overview of Impact Analysis

This chapter contains an analysis of the direct, indirect, cumulative, and temporary impacts related to the preferred alternative. This chapter also discusses measures to mitigate anticipated negative impacts from preferred alternative actions.

- **Direct impacts** are defined as those permanent impacts that are caused by preferred alternative actions and occur at the same time and place as those actions. For the purpose of the archaeological resources report, direct impacts are considered to be those related to the vehicle emissions during project operations.

- **Indirect impacts** are defined as those permanent impacts that are caused by preferred alternative actions and are later in time or farther removed in distance but are still reasonably foreseeable.

- **Cumulative impacts** are defined as impacts on the environment resulting from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions. A number of actions have been (or are likely to be) undertaken that, when combined with any of the alternatives, would have cumulative impacts on the social and natural environment in the study area. To evaluate cumulative impacts, the project team established a time frame of reference for evaluating how past actions have shaped the social and natural environment of the study area, and how future actions might further change the conditions resulting from these past actions. The “past” runs from the 1840s (settlement of the Salem area) to the present. Past, present, and reasonably foreseeable future actions related to archaeological resources are addressed in Sections 4.1.1 and 4.1.2.

- **Temporary construction impacts** are defined as those short-term impacts that are caused by constructing the preferred alternative.

4.1.1 Past and Present Actions

All ground-disturbing development in Salem since the earliest Euro-American settlement in the mid-nineteenth century has had the potential to destroy archaeological resources. Expansion of the urban growth boundary has the potential to obscure or destroy still extant archaeological deposits on currently undeveloped or agricultural lands.

4.1.2 Reasonably Foreseeable Future Actions

Although specific archaeological resources are not known to be associated with them, the actions below are representative of future actions that have the potential to further obscure or destroy currently undetected archaeological sites of both prehistoric and historic origin.

- Willamette University expansion toward downtown Salem (to include a new performing arts center)
State of Oregon office space expansion in Capitol Mall

Existing Wells Fargo building in downtown Salem to be torn down and replaced with a three-to-four-story office/retail building (to include a grocery store, a floor of parking, residential units on the top floor, and a pedestrian connection on the second level to an adjacent building that would have an additional floor of underground parking)

Undeveloped 27.4-acre parcel on Brush College Road, approximately 1.2 miles west of Wallace Road, to be subdivided into approximately 166 lots; these lots would be located on land zoned Residential Agriculture

Redevelopment of Boise-Cascade near the mouth of Pringle Creek

4.2 Direct Impacts

The preferred alternative does not intersect any known archaeological sites or resources.

4.3 Indirect Impacts

Since no archaeological sites or resources have been recorded within or adjacent to the API, there are no known indirect impacts to NRHP-listed or NRHP-eligible properties under this alternative.

4.4 Cumulative Impacts

Prehistoric-era archaeological sites are finite resources and the destruction of any site results in a cumulative impact to the finite universe of archaeological sites. In a highly developed, urban landscape, archaeological sites are particularly valuable because much nineteenth and twentieth century development is likely to have destroyed many sites before they were recognized as having cultural and scientific value. Since archaeological sites are not currently known to be present within the API, no cumulative impacts to archaeological resources can currently be ascertained.

4.5 Temporary Impacts

Physical impacts to archaeological sites are permanent and sites cannot be repaired or reconstructed once impacted. Data recovery mitigation itself requires destruction of an archaeological site. Thus, “temporary impacts” is not a concept applicable to impact assessments of archaeological sites.

4.6 Mitigation Measures

There are no archaeological sites currently known to exist within the API. However, the project sponsor will adopt an Inadvertent Discovery Plan in consultation with SHPO and interested tribes to clarify procedures for all project personnel to follow in the event that an archeological resource is inadvertently discovered during ground disturbing site work. Should NRHP-eligible archaeological sites be detected during subsequent investigations, and should impacts to those resources prove to be unavoidable, mitigation in the form of data recovery (archaeological excavation) would be recommended.
CHAPTER 5

Contacts and Coordination

CH2M cultural resources specialist Robin McClintock coordinated directly with Kurt Roedel/ODOT, archaeologist, via phone and email regarding planning and execution of fieldwork on the project.

Oregon Archaeological Excavation permits (No. 2016-2203 and No. 2016-2204), required for subsurface testing on public lands were acquired through application to the Oregon SHPO.
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