
Appendix H. Figure Descriptions

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Figure Descriptions

Table H-1 lists the figure descriptions for all figures included in this RSEA.

TABLE H-1. FIGURE DESCRIPTIONS

Figure Number	Figure Name	Description
Figure 1-1	Previous and Current Project Area	<p>Figure 1-1 compares the Project Area evaluated for the 2019 Environmental Assessment and the project area evaluated for the Revised Environmental Assessment. It shows the original study area and calls out an existing parking lot south of N Interstate Avenue and the Broadway Bridge that may be used for contractor staging during construction. The southern end of the Project Area is expanded to include the portion of I-5 south of the Burnside Bridge proposed for a retrofit of the existing bridge rail, restriping the existing highway, and installation of new guide signs. At the northernmost end of the Project Area, a small area is added along the I-5 shoulders for fiber optic conduit.</p> <p>The Project Area was increased west of the intersection of NE Clackamas Street and NE 2nd Avenue to include a parking lot (planned for acquisition under the 2019 Environmental Assessment) that is needed due to the inclusion of the Clackamas Pedestrian and Bicycle Bridge in the RSEA Revised Build Alternative.</p>
Figure 1-2	Project Goals	<p>Figure 1-2 provides the approximate locations of some of the project goals. Note: The project drawing is conceptual.</p> <p>N Flint Avenue is labeled “Restores the local street grid.”</p> <p>NE Hancock Street is labeled “Maximizes developable land on and off cover.”</p> <p>N Vancouver Avenue is labeled “Creates walkable bikeable vibrant community connections.”</p> <p>I-5 shoulders are labeled “Improves traffic flow and safety.”</p> <p>I-5 is labeled “I-5 between I-405 and I-84 has highest crash rate on urban interstates in the State of Oregon.</p> <p>I-5 in the vicinity of the Broadway/Weidler interchange experiences some of the highest traffic volumes in the State of Oregon, carrying approximately 121,400 vehicles each day, and experiences 12 hours of congestion each day.</p> <p>The complexity and congestion at the I-5 Broadway/Weidler interchange configuration is difficult to navigate for vehicles (including transit vehicles) and people who walk, bike, and roll which impacts access to and from I-5 as well as to and from local streets.”</p> <p>The Clackamas Pedestrian and Bicycle Bridge is shown.</p>
Figure 2-1	Hybrid 3 Highway Cover Design Concept	<p>Figure 2-1 shows an illustration of the Hybrid 3 Highway Cover Design Concept (called Revised Build Alternative).</p> <p>Callout box pointing to the highway cover is labeled “Maximizes developable land.” Callout box pointing to NE Hancock (a new street crossing) and N Flint (a reconnected street) is labeled “Restores the local street grid.” Callout box for the Green Loop is labeled “Creates walkable and bikeable community connection.” Arrows are also illustrating the new patterns of traffic using highway ramps from I-5.</p>

Figure Number	Figure Name	Description
Figure 2-2	Cross Section of I-5 under the No-Build Alternative	Figure 2-2 shows a cross section of I-5 under existing conditions. Existing conditions are the same for NB and SB traffic and include an inside and outside shoulder of varying width and two 12-foot-wide lanes.
Figure 2-3	Overview of the Revised Build Alternative	Figure 2-3 shows an illustration drawn on an aerial image. At the top of the figure the highway cover is shown spanning I-5 north of N Flint to just north of NE Victoria Avenue. NE Hancock is labeled showing a new east-west crossing under the highway cover. The Clackamas Pedestrian and Bicycle Bridge is shown in the middle of the Project Area, spanning west to east. The I-5 SB off-ramp relocation is shown with the flyover for EB traffic and the ramp to N Wheeler Avenue/N Williams Avenue/N Ramsay Way for WB traffic. The 2-Way Wheeler and 2-Way Ramsay Design Options are shown, which illustrate the path that WB traffic would take under each design option. The I-5 ramp to ramp auxiliary lanes and shoulder are shown extending the existing auxiliary lane on I-5 SB and adding a new auxiliary lane on I-5 SB.
Figure 2-4	Auxiliary Lane/Shoulder Improvements	Figure 2-4 shows the auxiliary lanes proposed under the Revised Build Alternative. Existing auxiliary lanes would remain, and a new NB auxiliary lane would be added to connect the I-84 WB on-ramp to the N Greeley Avenue off-ramp. The existing SB auxiliary lane currently ends just south of the N Broadway off-ramp (in the vicinity of the Broadway overcrossing structure) and would extend to the Morrison Bridge/Oregon Museum of Science and Industry off-ramp.
Figure 2-5	I-5 Auxiliary (Ramp-to-Ramp) Lanes – Existing Conditions and Proposed Improvements	Figure 2-5 shows the existing and proposed auxiliary lane configurations. SB auxiliary lane would be extended as a continuous auxiliary lane from the N Greeley on-ramp to the Morrison Bridge/Oregon Museum of Science and Industry off-ramp. A new NB auxiliary lane would be added to connect the I-84 WB on-ramp to the N Greeley off-ramp. The new flyover ramp is shown for EB traffic exiting to NE Weidler Street.
Figure 2-6	I-5 Cross Section (North/Northeast Weidler Overcrossing) – Proposed Improvements	Figure 2-6 shows a cross section of I-5 south of the Broadway/Weidler interchange area with the proposed auxiliary lanes and shoulder. South of the I-84 off-ramp, the I-5 SB auxiliary lanes would be added by re-striping the I-5 mainline in both the NB and SB directions. Through re-striping, the I-5 center median would be shifted to the east, and the existing shoulders on I-5 in the approximately 1,200-foot segment between the I-84 off-ramp and the Morrison Bridge/Oregon Museum of Science and Industry off-ramp would be narrowed to approximately 3 to 9 feet in both the NB and SB directions.
Figure 2-7	Building Parameters on the Cover	Figure 2-7 shows building parameters for the highway cover as follows: The northern portion of the highway cover (between N Tillamook Street to N Hancock) is described as “Spans over 80 feet with lightweight buildings up to 3-stories with reasonable constraints.” The southern portion of the highway cover (between N Hancock to just south of NE Weidler) is described as “Spans under 80 feet with buildings up to 3-stories with limited constraints. Up to 6-story lightweight buildings could be possible with strict constraints through design modifications to bridge type and roadway profiles.”

Figure Number	Figure Name	Description
Figure 2-8	Potential Highway Cover Uses	Figure 2-8 shows a rendering of potential immediate use of the highway cover. Features include added surface space for new local roadways and modern bicycle facilities that make the area more connected, walkable, and bike friendly.
Figure 2-9	Broadway/Weidler Interchange Area Improvements	Figure 2-9 shows the improvements at Broadway/Weidler Interchange including: I-5 ramp to ramp (auxiliary) lanes and shoulders Local street modifications including modifications Local pedestrian and bicycle facilities The highway cover Relocation of I-5 SB off-ramp Addition of new Hancock crossing I-5 SB off-ramp flyover for WB traffic exiting to NE Weidler Clackamas Pedestrian and Bicycle Bridge 2-Way Ramsay Design Option 2-Way Wheeler Design Option
Figure 2-10	I-5 Ramp Relocation	Figure 2-10 shows the relocation of the I-5 SB off-ramp. The figure shows the removal of the existing off-ramp and relocates it south of NE Weidler. The ramp would divide WB and EB traffic, with EB traffic using a flyover (a U-shaped ramp extending above the mainline of I-5) to exit at NE Weidler (east of NE Victoria), and WB traffic taking a ramp to the intersection of N Wheeler/N Williams/N Ramsay. The route of the Clackamas Pedestrian and Bicycle Bridge is shown, which extends over the highway.
Figure 2-11	Design Options for I-5 SB Off-Ramp: Traffic Heading West	Figure 2-11 shows the portion of the Project Area where the I-5 SB off-ramp would be relocated. The figure has two sides, with the left side showing the 2-Way Ramsay Design Option, where the I-5 SB off-ramp would terminate at the intersection of N Wheeler/N Williams/N Ramsay, and WB traffic would be directed onto N Ramsay. The flyover for EB traffic is also shown. The right side shows the 2-Way Wheeler Design Option, where the I-5 SB off-ramp would terminate at the intersection of N Wheeler/N Williams/N Ramsay, and WB traffic would be directed onto NE Wheeler, to make a left turn onto N Broadway. The flyover for EB traffic is also shown.

Figure Number	Figure Name	Description
Figure 2-12	Proposed Modifications to N Williams between N/NE Broadway and N/NE Weidler	<p>Figure 2-12 shows the N Williams bike facility/path and revised traffic flow as follows:</p> <p>Change current lane configuration from the intersection of N Wheeler/N Williams/N Ramsay to N Weidler to one through lane. Parking on the west side would remain. Convert existing angled parking on the east side of the roadway to parallel parking and add a raised and protected bike facility and sidewalk.</p> <p>Change the lane configuration between N/NE Weidler and N/NE Broadway to one left-turn lane to N Broadway, a combined left-turn/through lane, and a through lane.</p> <p>North of N Weidler, two NB travel lanes along the west side of N Williams would provide access to the I 5 NB on-ramp and allow through movements on N Williams.</p> <p>Add a raised and protected bike facility on the east side of N Williams from N Weidler to just north of the I-5 NB on-ramp at the intersection of N Williams and N/NE Broadway.</p> <p>Transition the raised and protected bike facility to a buffered bike lane just north of the I-5 ramp on-ramp.</p> <p>The buffered bike lane would cross diagonally from the east side to the existing buffered bike lane on the west side through a new signal at NE Hancock.</p>
Figure 3-1	Existing Land Use	<p>Figure 3-1 shows the existing land use near I-5.</p> <p>The land bounded by the northern API extent and I-405 is primarily industrial with a few blocks of commercial land use located just north of I-405.</p> <p>Land south of I-405 between the Willamette River and N Williams is dominated by commercial use.</p> <p>Land east of N Williams and north of NE Schuyler Street is dominated by single-family residential use with some multi-family residential mixed in.</p> <p>Land south of NE Broadway to the southern API extent is also dominated by commercial land use with small amounts of multi-family residential use and two parks.</p> <p>On the west side of the Willamette River, land uses are primarily commercial with some multi-family and park uses.</p>

Figure Number	Figure Name	Description
Figure 3-2	Comprehensive Plan Designations	<p>Figure 3-2 shows City of Portland Comprehensive Plan designations. This figure identifies the Central City 2035 Plan Area, and City of Portland Transportation System Street Plan Classifications near I-5, bounded by I-405 to the north and I-84 to the south.</p> <p>The figure extent includes area south of N/NE Morris Street to the Burnside Bridge and the eastern bank of the Willamette River extending east to Northeast 9th Avenue.</p> <p>The Central City 2035 Plan Area includes area east of I-5 between I-405 and N/NE Schuyler and all areas within the figure extent that are south of N/NE Schuyler.</p> <p>The following City of Portland Transportation System Plan Street Classifications are shown I-5, I-405, and I-84 are shown as “Urban Throughway”; N/NE Broadway, NE Martin Luther King Jr. Boulevard, and NE Grand Avenue are shown as “Main Civic”; N Interstate, N Thunderbird Way, and N Weidler on the east side of the Willamette and NW Naito Parkway on the west side of the Willamette are shown as “Corridors – Civic”; N/NE Holladay Street, NE Lloyd Boulevard, and NE 9th Avenue on the east side of the Willamette River and NW Everett Street on the west side of the Willamette River are shown as “Corridors – District/Neighborhood”; N Russell, N Williams (north of NE Russell), NE Multnomah, NE 7th Avenue, and NE Couch Street (west of NE 6th Avenue) are shown as “Main – District/Neighborhood”; and N Vancouver (north of N Broadway) and N Williams (north of N Russell) are shown as “Corridors – Community.”</p> <p>The following City of Portland Comprehensive Plan designations are shown: West of I-5, from the northern extent of the figure south to approximately North Broadway, is primarily “Industrial Sanctuary” with some areas of “Central Employment” and “Central Commercial”; east of I-5 south of North Broadway is primarily “Central Commercial” with some areas of “Open Space” and “Industrial Sanctuary.” East of I-5 from the northern figure extent south to NE Schuyler is variable with designations including “Industrial Campus”; “Open Space”; “Urban Commercial”; “Mixed Use – Urban Center”; “Multi-Dwelling 1,000, 2,000, and 5,000”; “High Density Residential”; “Central Residential”; and “Mixed Use Dispersed.” South of NE Schuyler to I-84 is almost entirely “Central Commercial,” and south of I-84 is “Industrial Sanctuary” and “Mixed Use – Urban Center.”</p>
Figure 3-3	Land Converted to Transportation Use	<p>Figure 3-3 shows the land that would be converted to transportation under the Revised Build Alternative.</p> <p>Temporary construction easement for construction staging (not permanently converted to transportation use) for a 3.7-acre paved parking lot located at 1225 N Thunderbird Way.</p> <p>Permanent easement for approximately 0.7 acres of surface and/or subsurface</p> <p>Temporary construction easement for 7.3 acres needed to accommodate supporting structures for the highway improvements, staging/work area, and for retaining walls adjacent to Harriet Tubman Middle School.</p>

Figure Number	Figure Name	Description
Figure 3-4	City of Portland Zoning on Highway Cover	<p>Figure 3-4 illustrates the potential future zoning for land use on the highway cover.</p> <p>Land use in the northeast portion of the highway cover (north of NE Schuyler) consists of “General Employment 1” use surrounding by “Commercial Mixed Use 3.”</p> <p>Land along the eastern portion of the highway cover (north of NE Schuyler) consists of “Central Employment” zoning.</p> <p>All land south of NE Schuyler consists of “Central Commercial” zoning.</p>
Figure 3-5	Estimated ROW Impacts	<p>Figure 3-5 shows the potential right of way impacts under the Revised Build Alternative. Impacts include:</p> <p>2.7 acres in fee simple (permanent acquisition) located near NE Victoria and NE Broadway and a small parcel west of I-5 along NE Broadway.</p> <p>2 acres of permanent easement for surface and/or subsurface uses (primarily related to retaining walls and maintenance access) located west of I-5 along N Vancouver and south of the I-5 and I-84 interchange.</p> <p>Approximately 8 acres of temporary easement for construction work areas, driveway reconnections, and staging dispersed throughout the API with one larger parcel west of N Interstate along the Willamette River.</p>
Figure 3-6	Public Service in the API and Surrounding Community	<p>Figure 3-6 shows the location of various public services within and around the API. There are 23 public service providers in and around the API. Only two public services are located inside the API. These include Grandma’s Place – Rose Quarter and the Hooper Detoxification Stabilization Center.</p>
Figure 3-7	Subdistricts in the API	<p>Figure 3-7 illustrates the boundary of the three subdistricts that encompass the API. These include Lower Albina (northern extent of API to Broadway Bridge), Lloyd (Broadway Bridge to I-84), and Central Eastside (from I-84 to southern API extent).</p>
Figure 3-8	Subsidized Housing in the API and Surrounding Community	<p>Figure 3-8 shows the location of subsidized housing located within and around the API. Seven housing units are identified; only Madrona Studies is located inside the API boundary. The remaining housing units are located west of the API.</p>
Figure 3-9	Bicycle Crossings with Exclusive Turning Lanes	<p>Figure 3-9 illustrates the location of bicycle crossings that include exclusive turning lanes, with intersections labeled with circles numbered 1 through 5 and directional arrows. Bicycle crossings with exclusive turn lanes would be added EB at N Weidler and N Vancouver (labeled as 2 on the figure) and NB at NE Weidler (labeled as 4 on the figure).</p> <p>Bicycle crossings with exclusive turning lanes would be maintained WB at NE Broadway and N Williams (labeled as 3 on the figure).</p> <p>Bicycle crossings with exclusive turn lanes would be added EB/WB at NE Broadway and N Larrabee Avenue under both the No-Build Alternative and the Revised Build Alternative (labeled as 1 on the figure).</p> <p>An additional signal would be added at the intersection of NE Weidler and N Vancouver (EB) (labeled as 2 on the figure), NE Weidler and N Williams (NB) (labeled as 4 on the figure), and N Williams and NE Hancock (NB) (labeled as 5 on the figure).</p>

Notes: API = Area of Potential Impact; EB = eastbound; I-405 = Interstate 405; I-5 = Interstate 5; I-84 = Interstate 84; N = North; NB = northbound; NE = Northeast; NW = Northwest; RSEA = Revised Supplemental Environmental Assessment; SB = southbound; WB = westbound