Right-of-Way Supplemental Memorandum

Multnomah County | Earthquake Ready Burnside Bridge Project

Portland, OR

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Earthquake Ready Burnside Bridge Right-of-Way Supplemental Memorandum

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Contents

Tables

Figures

Acronyms, Initialisms, and Abbreviations

ADA	American with Disabilities Act
AMR	American Medical Response
API	Area of Potential Impact
CSZ	Cascadia Subduction Zone
EIS	environmental impact statement
EQRB	Earthquake Ready Burnside Bridge
I-5	Interstate 5
I-84	Interstate 84
ID	identification
NEPA	National Environmental Policy Act
ODOT	Oregon Department of Transportation
PCFC	Pacific Coast Fruit Company
PSM	Portland Saturday Market
ROW	right-of-way
TCE	Temporary Construction Easement
UPRR	Union Pacific Railroad

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Executive Summary

The Right-of-Way Supplemental Memorandum has been prepared to expand on the Right-of-Way Technical Report for the National Environmental Policy Act (NEPA) review of the Earthquake Ready Burnside Bridge project (EQRB). This supplemental technical memorandum has been prepared to evaluate the potential impacts of proposed design refinements to the Preferred Alternative on Right-of-Way (ROW) within the project's Area of Potential Impact (API).

All Draft EIS Long-span Alternative and Refined Long-span Alternative options would require the acquisition of ROW and potential non-residential and personal property only relocations. The Cable-stayed and Tied Arch options would require the fewest acquisition files and the Cable-stayed option is estimated to have the lowest ROW costs of the Long-span options. All draft EIS Long-span Alternative and Refined Long-span Alternative options would require the same number of relocations, but two of them would be simpler and/or temporary with the Cable-stayed and Tied Arch options.

ROW Impact Summary

- The Refined Long-span Alternative Cable-stayed and Tied Arch Options require the fewest ROW acquisitions (21 total).
- The Refined Long-span Alternative Cable-stayed Option requires the lowest estimated ROW costs of the Long-span options.
- The following businesses are potentially or partially displaced by all Draft EIS Long-span Alternative and Refined Long-span Alternative options: Portland Saturday Market administration building and storage, Diamond Parking Services, University of Oregon classroom, Rose City Transportation, AMR, and PCFC. It is assumed that AMR would be personal property only displacements rather than full displacements with the Refined Long-span Alternative. The Refined Long-span Alternative would reduce impacts to the Rose City Transportation building and Pacific Coast Fruit Company (PCFC) property in such a way that PCFC's relocation is not anticipated to be necessary.

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1 Introduction

In support of the Supplemental Draft Environmental Impact Statement (SDEIS) for the Earthquake Ready Burnside Bridge (EQRB) Project, this supplemental technical memorandum has been prepared to evaluate the impacts of potential design refinements to the Preferred Alternative on Right-of-Way (ROW) within the project's Area of Potential Impact (API). The intent of the design modifications is to reduce the overall cost and improve the affordability of the EQRB Project. This technical memorandum is a supplement to the Draft EIS technical reports and as such does not repeat all of the information in those reports, but instead focuses on the impacts of the design modification options, how they compare to each other, and how they compare to the version of the Preferred Alternative that was evaluated in the *EQRB Draft Environmental Impact Statement* (Multnomah County 2021b).

Much of the information included in the Draft EIS and Draft EIS technical reports, including project purpose, relevant regulations, analysis methodology and affected environment, is incorporated by reference because it has not changed, except where noted in this technical memorandum.

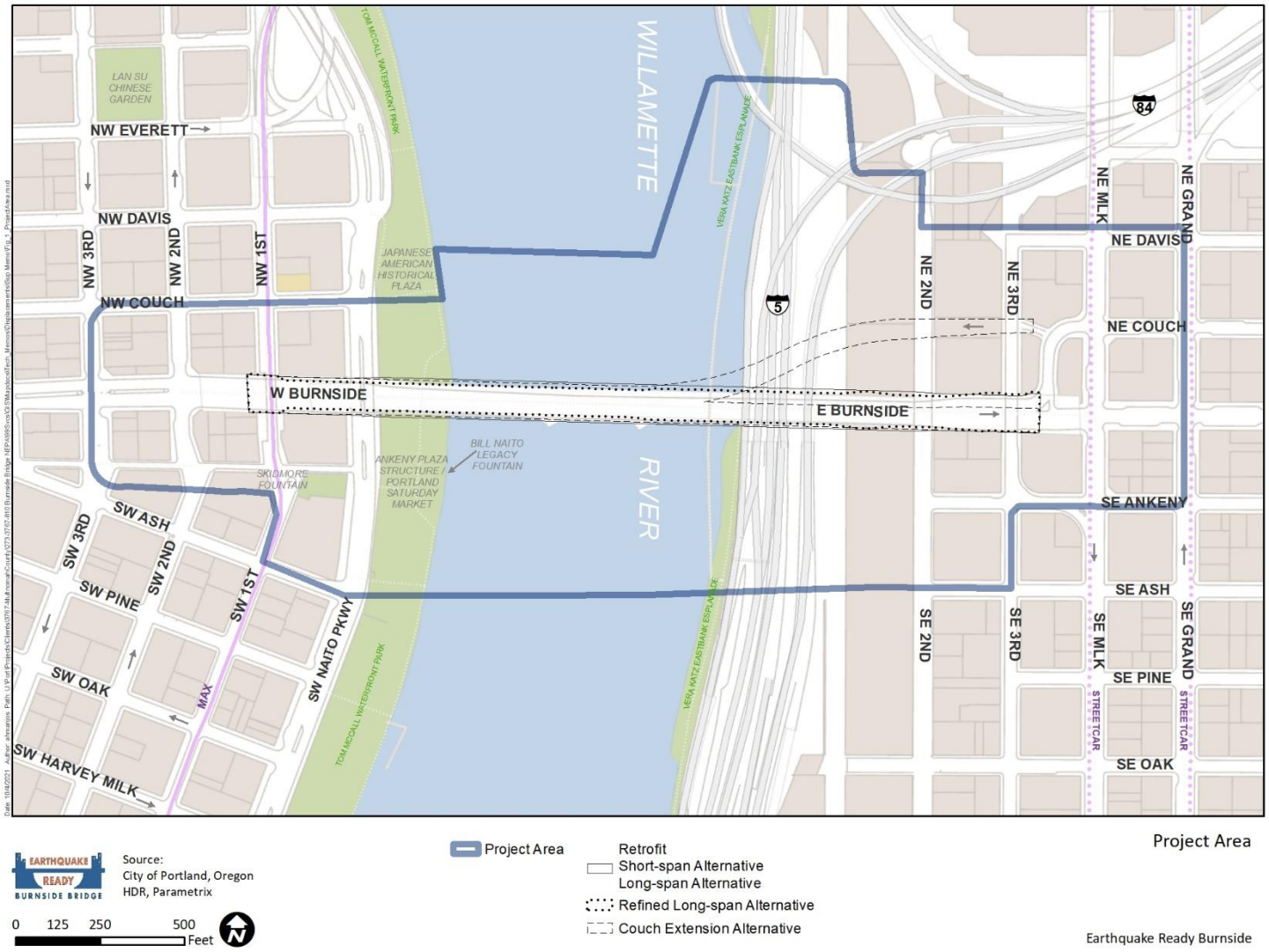
1.1 Project Location

The Project Area is located within the central city of Portland. The Burnside Bridge crosses the Willamette River connecting the west and east sides of the city. The Project Area encompasses a one-block radius around the existing Burnside Bridge and W/E Burnside Street, from NW/SW 3rd Avenue on the west side of the river and NE/SE Grand Avenue on the east side. Several neighborhoods surround the area including Old Town/Chinatown, Downtown, Kerns, and Buckman. Figure 1 shows the Project Area.

1.2 Project Purpose

The primary purpose of the Project is to build a seismically resilient Burnside Street lifeline crossing over the Willamette River that will remain fully operational and accessible for vehicles and other modes of transportation following a major Cascadia Subduction Zone (CSZ) earthquake. The Burnside Bridge will provide a reliable crossing for emergency response, evacuation, and economic recovery after an earthquake. Additionally, the bridge will provide a multi-modal, long-term safe crossing with low-maintenance needs.

Figure 1. Project Area



2 Project Alternatives

This technical memorandum evaluates potential design refinements to the Draft EIS Preferred Alternative. All of the Project Alternatives evaluated in the Draft EIS are summarized in Chapter 2 of the Draft EIS and described in detail in the EQRB *Description of Alternatives Report* (Multnomah County 2021a). Briefly, the Draft EIS evaluated a No-Build Alternative and four Build Alternatives. One of the Build Alternatives, the Long-span Alternative, was identified as the Preferred Alternative. The potential refinements evaluated in this technical memo are collectively referred to as the "Refined Long-span Alternative (Four-lane Version)" or the "Refined Long-span." The Refined Long-span includes Project elements that were studied in the Draft EIS but have been modified as well as new options that were not studied in the Draft EIS. These refinements and new options are intended to provide lower cost and, in some cases, lower impact designs and ideas that could be adopted to reduce the cost of the Draft EIS Preferred Alternative while still achieving seismic resiliency. The potential design refinements, and how they differ from the Draft EIS Long-span Alternative, are described below.

- Bridge width – The total width of the bridge over the river would be approximately 82 to 93 feet (the range varies depending on the bridge type and segment). For comparison, the Draft EIS Replacement Alternatives were approximately 110 to 120 feet wide over the river. The refined bridge width would accommodate approximately 78 feet for vehicle lanes, bike lanes, and pedestrians, which is comparable to the existing bridge.
    - The refined bridge design would accommodate four vehicle lanes (rather than five as evaluated in the Draft EIS). The following lane configuration options are being evaluated:
        - Lane Option 1 (Balanced) – Two westbound lanes (general-purpose) plus two eastbound lanes (one general-purpose and one bus-only lane)
        - Lane Option 2 (Eastbound Focus) – One westbound lane (general-purpose) plus three eastbound lanes (two general purpose and one bus only)
        - Lane Option 3 (Reversible Lane) – One westbound lane (general-purpose) plus two eastbound lanes (one general-purpose and one bus-only) plus one reversible lane (westbound AM peak and eastbound PM peak)
        - Lane Option 4 (General Purpose with Bus Priority) – Two westbound general-purpose lanes plus two eastbound general-purpose lanes, plus bus priority access (e.g., queue bypass) at each end of the bridge.
    - The width of the vehicle lanes would be, at minimum, 10 feet and could vary depending on how the total bridge width is allocated between the different modes.
    - The total width of the bicycle lanes and pedestrian sidewalks would be approximately 28 to 34 feet. This is wider than the existing bridge but 9 feet narrower than what was proposed in the Draft EIS for the replacement

alternatives. Physical barriers between vehicle lanes and the bicycle lanes are proposed and are in addition to the above dimensions.

  - The refined bridge would allow narrower in-water piers, due to less weight needing to be transferred to the in-water supports.

- Other design refinements being evaluated:
  - West approach – This memorandum evaluates a refined girder bridge type for the approach over the west channel of the river, Tom McCall Waterfront Park, and Naito Parkway. Compared to the cable-stayed and tied-arch options evaluated in the Draft EIS, this option would not only reduce costs but also avoid an adverse effect to the Skidmore/Old Town National Historic Landmark District. It would have two sets of columns in Tom McCall Waterfront Park compared to just one with the Draft EIS tied-arch option and five with the existing bridge.

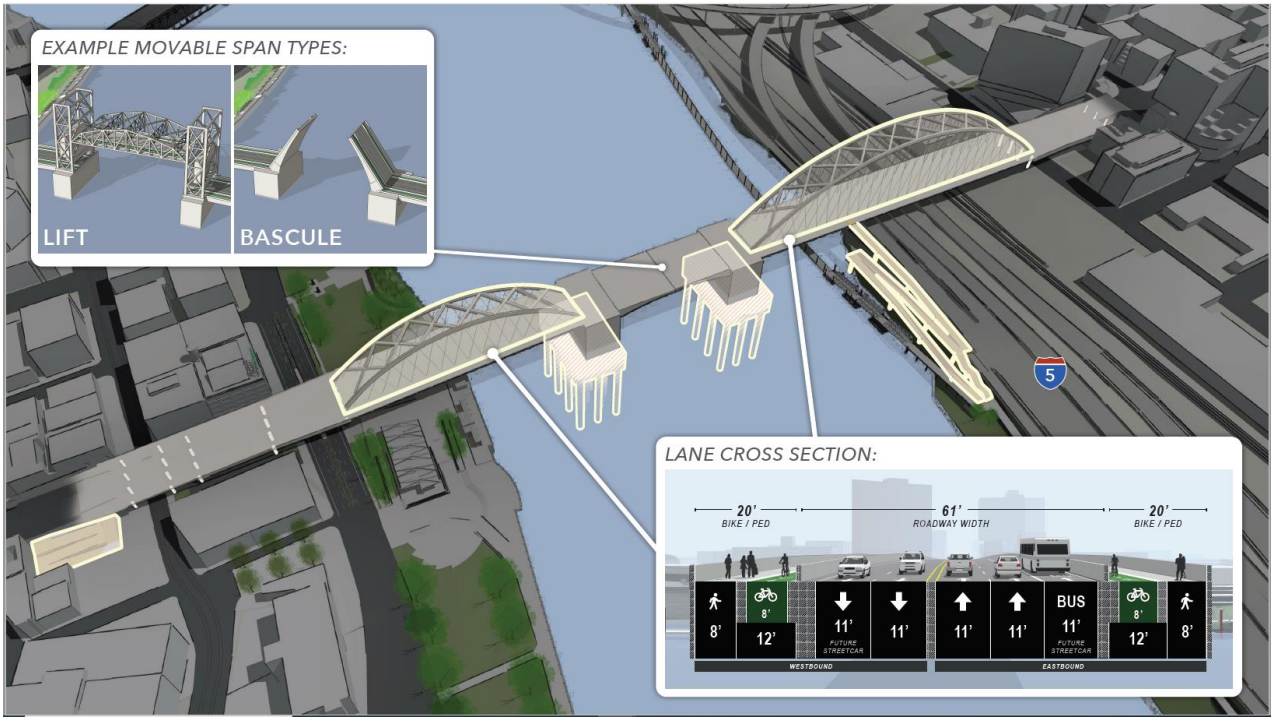
  - East approach – This memorandum evaluates a potential span length change for the east approach tied-arch option that would minimize the risks and reduce costs associated with placing a pier and foundation in the geologic hazard zone that extends from the river to about E 2nd Avenue. The refined tied-arch option would be about 720 to 820 feet long and approximately 150 feet tall (the Draft EIS Long-span Alternative was the same height and 740 feet long). The refined alternative would place the eastern pier of the tied-arch span either on the east side of 2nd Avenue (Option 1) or just west of 2nd Avenue (Option 2). Increasing the length of the tied-arch span would also reduce the length and depth of the subsequent girder span to the east.

  - Americans with Disabilities Act (ADA) access – This memorandum evaluates a refined approach for providing direct ADA access between the bridge and the Eastbank Esplanade, as well as between the bridge and W 1st Avenue and the Skidmore Fountain MAX station. The Draft EIS evaluated multiple ramp, stair, and elevator options for these locations. This SDEIS memo evaluates a refined option that would provide enhanced ADA access at both locations using both elevators and stairs. These facilities would also provide pedestrian and potentially bicycle access. For the west end, there is also the potential for replacing the existing stairs with improved sidewalk access from the west end of the bridge to 1st Avenue.

Figure 3 highlights the elements of the Draft EIS Long-span Alternative that have been modified to create the Refined Long-span Alternative, as described above. Figure 2 shows the Draft EIS Long-span Alternative and Figure 3 shows the Refined Long-span Alternative. Both figures include the tied-arch option for the east approach and the bascule option for the center movable span, but the east span could also be a cable-stayed bridge and the movable span could be a vertical lift bridge. For the west approach, the Draft EIS Long-span Alternative shows the tied-arch option while the Refined Long-span Alternative shows the refined girder bridge. The Refined Long-span Alternative image shows just one of the four possible lane configuration options being studied. All four configuration options, as well as many more graphics of the Refined Long-span Alternative, and how it compares to the Draft EIS Long-span Alternative, can be found in the *EQRB Supplemental Draft Environmental Impact Statement* (Multnomah

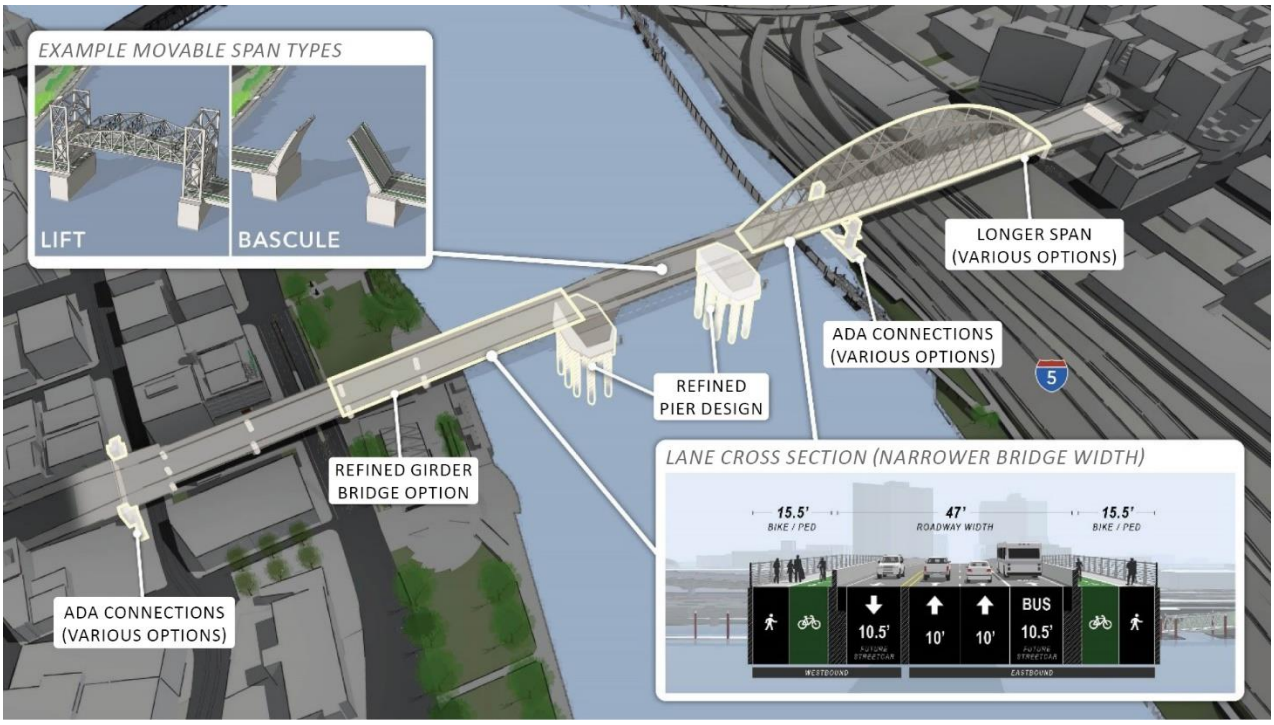
County 2022b). Figure 3 also shows just one of the possible ways to allocate the bridge width between vehicle lanes, bicycle lanes and sidewalks; the total width of the bicycle and pedestrian facilities could range from approximately 28 to 34 feet.

Figure 2. Draft EIS Long-Span Alternative



Note: The Draft EIS Long-span Alternative included multiple bridge types for both the east and west approach. This figure shows only the tied arch option.

Figure 3. Refined Long-Span Alternative



Notes: The Refined Long-span Alternative evaluated in this SDEIS includes both cable-stayed and tied arch options for the east span. This figure shows only the tied arch option. The Draft EIS studied, and SDEIS further studies, a bascule option and vertical lift option for the center movable span. The inset shows both options but the main figure shows the bascule option. This figure also shows just one of the lane configuration options considered in the SDEIS.

- Construction assumptions:
  - Construction duration – The expected duration of project construction is 4.5 to 5.5 years, dependent upon the design option. See Table 1 for more information regarding construction impact extent and closure timeframes.
  - Construction area – Compared to the Draft EIS Long-span Alternative, the main refinement is that the construction area would be smaller for the west approach south of the bridge, including a smaller area within Tom McCall Waterfront Park south of the bridge,
  - Construction access and staging – The construction access and staging is expected to be the same as that described in the Draft EIS.
  - Vegetation – The Refined Long-span Alternative would remove slightly fewer trees and vegetation impacts than the Draft EIS Long-span Alternative, primarily within Tom McCall Waterfront Park south of the bridge.
  - In-water work activity – The in-water work would be similar to that described in the Draft EIS, except that the replacement bridge in-water foundations would consist of a perched footing cap and a group of drilled shafts. Whereas the Draft EIS discussed the use of cofferdams to isolate in-water work, the Refined Long-span Alternative proposes to use a temporary caisson lowered to an elevation about mid-height of the water column to construct footing caps, avoiding additional disturbance of the riverbed that would be needed for a cofferdam.

Additionally, the existing Pier 4 would be fully removed, Pier 1 would be partially removed below the mudline and Piers 2 and 3 removed to below the mudline. Existing in-water piles would be removed, subject to the design option advanced.

- Temporary freeway, rail, street, and trail closures – Temporary closures are expected to be the same as those described in the Draft EIS.
- Access for pedestrians and vehicles to businesses, residences, and public services – Access is expected to be the same as that described in the Draft EIS.
- On-street parking impacts – On-street parking impacts are expected to be the same as those described in the Draft EIS.
- Property acquisitions and relocations – Property acquisitions and relocations are similar to those listed in the Draft EIS, except that they have been modified to reflect a narrower set of bridge design options.
- Temporary use of Governor Tom McCall Waterfront Park – The park area that would be temporarily closed for construction has changed since the Draft EIS. On the north side of the bridge, the closure area has been reduced to avoid removing ten cherry trees and a berm that are part of the Japanese American Historical Plaza; this change would apply to all of the build alternatives. On the south side of the bridge, the park closure area has also been reduced to include only the area north of the Tom McCall Waterfront Park trellis; this revision applies only to the Refined Long-span Alternative.

Table 1. Construction Impacts, Closure Extents, and Timeframes by Build Alternative

Facility Impacted	Draft EIS Long-Span Alternative	Refined Long-Span Alternative
Tom McCall Waterfront Park	4.5-year closure within boundary of potential construction impacts	Same; Smaller closure area south of the bridge
Willamette River Greenway Trail	Portion of trail within Tom McCall Waterfront Park closed for same duration as park; detours in place for construction duration	Same
Japanese American Historical Plaza	Southern portion of plaza would be closed for same duration as Tom McCall Waterfront Park	Same
Ankeny Plaza Structure	Closure for duration of construction but no impacts to Ankeny Plaza structure	Plaza Structure would not be closed during construction or impacted
Bill Naito Legacy Fountain	No closure of fountain and associated hardscape	Same
Vera Katz Eastbank Esplanade	18 months (this could extend to 3.5 to 4.5 years if project builds ramps rather than elevators and stairs for the ADA/bicycle/pedestrian connection); detours in place for construction duration	Same
Burnside Skatepark	4 months full closure	Same
River Crossing on Burnside Street	4- to 5-year closure	Same

Facility Impacted	Draft EIS Long-Span Alternative	Refined Long-Span Alternative
Saturday Market Location	4.5-year closure or use of alternative location	Same
Skidmore Fountain MAX Station	Approximately 5 weeks	Same
Navigation Channel/Willamette River Water Trail	Intermittent closures; 2 to 10 closures; each closure up to 3 weeks	Same
Overall Construction Duration	**4.5 to 5.5 years**	**Same**

3 Definitions

The following terminology is used when discussing geographic areas in the EIS:

- **Project Area** – The area within which improvements associated with the Project Alternatives would occur and the area needed to construct these improvements. The Project Area includes the area needed to construct all permanent infrastructure, including adjacent parcels where modifications are required for associated work such as utility realignments or upgrades. For the EQRB Project, the Project Area includes approximately a one-block radius around the existing Burnside Bridge and W/E Burnside Street, from NW/SW 3rd Avenue on the west side of the river and NE/SE Grand Avenue on the east side.
- **Area of Potential Impact (API)** – This is the geographic boundary within which physical impacts to the environment could occur with the Project Alternatives. The API is resource-specific and differs depending on the environmental topic being addressed. For all topics, the API will encompass the Project Area, and for some topics, the geographic extent of the API will be the same as that for the Project Area; for other topics (such as for transportation effects) the API will be substantially larger to account for impacts that could occur outside of the Project Area. The same API was used in the SDEIS as was used in the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c).
- **Project vicinity** – The environs surrounding the Project Area. The project vicinity does not have a distinct geographic boundary but is used in general discussion to denote the larger area, inclusive of the Old Town/Chinatown, Downtown, Kerns, and Buckman neighborhoods.

4 Relevant Regulations

There are no differences in regulations with the Refined Long-span Alternative.

5 Analysis Methodology

The analysis methodology is the same as was used in the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c).

6 Affected Environment

The affected environment for the Refined Long-span Alternative is the same as was included in the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c).

7 Impacts from the Design Modifications and Comparison to Draft EIS Alternatives

7.1 Introduction

ROW impacts are the same across all of the Refined Long-span Alternative options with the exception of the east approach Tied Arch and Cable-stayed options. As such, this report will be comparing the Tied Arch and Cable-stayed options with the Draft EIS Long-span Alternative only. Bent locations for the Tied Arch Options A & B are all within existing ROW, therefore there are no differences in ROW impacts between the two Tied Arch options and will not be discussed separately in this report.

7.2 Long-Term Acquisition Impacts

The Draft EIS Long-span Alternative had several proposed fee acquisition areas. Per Multnomah County direction, all permanent rights are now to be acquired as permanent easements for bridge improvements. Table 2 is a ROW Acquisition Summary that compares the Draft EIS Long-span Alternative and the Refined Long-span Alternative Tied Arch and Cable-stayed Options.

Table 2. ROW Acquisitions Summary

Displacements and Acquisitions by Long-span Option	Fee Full & Partial Acquisitions	Easements	TCEs	Business Displaced Permanent (Temporary)
Draft EIS Long-span Alternative	8	1	17	6(0)
Refined Long-span Alternative – Tied Arch	0	12	18	5(1)
Refined Long-span Alternative – Cable-stayed	0	12	18	5(1)

Table 3 is a list of all impacted properties associated with the Draft EIS Long-span Alternative and the Refined Long-span Alternative Tied Arch and Cable-stayed Options, for comparison.

Table 3. Impacted Properties

ID	TLID	Property Name	Draft EIS Long-span (bus. displ.)	Refined Long-span Tied Arch (bus. displ.)	Refined Long-span Cable-stayed (bus. displ.)
1	1N1E34CA-09200	Central City Concern (Shoreline Building)	TCE Access	-	-
2	1N1E34DB-00900	Portland Rescue Mission	TCE access	Easement & TCE	Easement & TCE
3	1N1E34DB-01500	Portland Saturday Market Storage (City of Portland)	Easement***(1)	Easement***(1)	Easement***(1)
4	1N1E34DB-01400	University of Oregon Classroom (City of Portland)	Full** (1)	Easement** (1)	Easement** (1)
5	1N1E34DC-00800	Portland Saturday Market Administration Offices (Skidmore Fountain Plaza, LLC)	Full*** (1)	Easement & TCE*** (1)	Easement & TCE*** (1)
6	1N1E34CD-00300	Salvation Army	TCE Access	-	-
7	1N1E34CD-00100	Vacant Lot (Skidmore Fountain Plaza, LLC)	Full	TCE	TCE
8	1N1E34DC-00900	Diamond Parking Services (Skidmore Fountain Plaza, LLC)	Full**** (1)	TCE**** (1)	TCE**** (1)
9	1N1E34DC-01000	Diamond Parking Services (Skidmore Fountain Plaza, LLC)	Full	TCE	TCE
10	1N1E34DB-00600	University of Oregon (White Stag Building)	TCE Access	TCE Access	TCE Access
11	1N1E34DC-90000	Mercy Corps	TCE	Easement & TCE	Easement & TCE
12	1N1E34DB-01300	Japanese American Plaza (City of Portland)	TCE	TCE	TCE
13	1N1E34DC-03600	Ankeny Plaza Structure (City of Portland)	TCE***	TCE***	TCE***
14	1N1E34DC-00100	BES Pump Station (City of Portland)	TCE	TCE	TCE
15	1N1E34DC-03700	Bill Naito Legacy Fountain (City of Portland)	-	-	-
16	1N1E34DA-01500	Pacific Coast Fruit Company	TCE*****(1)	-	-
17	1N1E34DA-01900	Rose City Transportation (David Nemarnik)	Full (1)	Easement & TCE***** (1)	Easement & TCE***** (1)
18	1N1E34DD-01000	American Medical Response (Produce Row LLC)	Partial (1)	Easement & TCE (1)	Easement & TCE (1)
19	1N1E34DA-02800	Eastside Exchange Building (Bridgehead Development LLC)	-	-	-

ID	TLID	Property Name	Draft EIS Long-span (bus. displ.)	Refined Long-span Tied Arch (bus. displ.)	Refined Long-span Cable-stayed (bus. displ.)
20	1N1E34DA-02602	The Yard – Pedestrian / Bike Right-of-Way (Bridgehead Development LLC)	-	-	-
21	1N1E34DA-02001	The Yard (Yard Residences LLC)	TCE	Easement	Easement
22	1N1E34DD-00900	Nemarnik Family Properties Parking Lot	-	TCE (1)	TCE (1)
23	1N1E34DD-00700	230 E Burnside Building (Templeton Office Investments LLC)	TCE Access	TCE Access	TCE Access
24	1N1E34DA-03100	Union Arms Apartments	-	-	-
25	1N1E34DA-02900	The Slate (Block 75)	-	-	-
26	1N1E34DA-03300	Block 76	Partial	Easement & TCE	Easement & TCE
27	1N1E34DA-3500	Fair-Haired Dumbbell	TCE Access		
28	1N1E34DD-00100	5 MLK (Under Construction)	TCE Access	-	-
A	NA	Willamette River (Dept. of State Lands)	TCE	Easement & TCE	Easement & TCE
B	NA	Vera Katz Eastbank Esplanade (City of Portland)	TCE	-	-
C	NA	I-5 & I-84 (ODOT)	TCE	Easement & TCE	Easement & TCE
D	NA	Union Pacific Railroad	TCE	Easement & TCE	Easement & TCE

TLID = Tax lot ID | Full = Full Acquisition | Partial = Partial Acquisition| Easement = Permanent Easement| TCE = Temporary Construction Easement| TCE Access = Temporary Construction Easement for access closures only | bus. displ. = business displacements | Temp. = Temporary

**The University of Oregon uses this space, and this is identified as a displacement of personal property.

***Portland Saturday Market would be permanently displaced from their administration offices and temporarily displaced from the storage and market space under the bridge.

****Diamond Parking Services would be displaced from Map IDs 8 and 9 but are only counted as one business displacement.

*****The Draft EIS Long-span Alternative could potentially displace the Pacific Coast Fruit Company business due to impacts to the Rose City Transportation building next door which shares a wall.

Figure 4. Property Impacts – West Bridgehead, Draft EIS Long-span Alternative

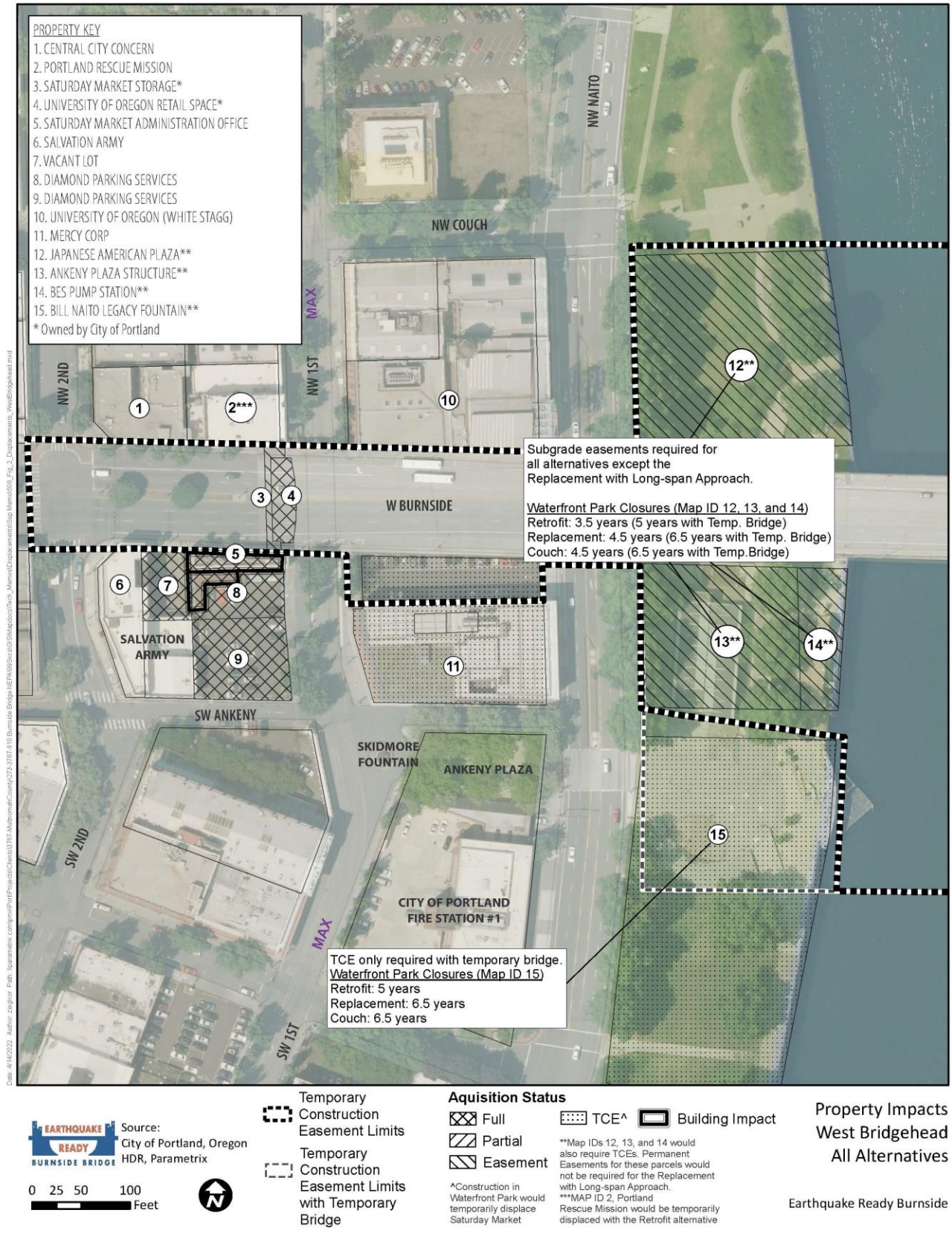


Figure 5. Property Impacts – East Bridgehead, Draft EIS Long-span Alternative

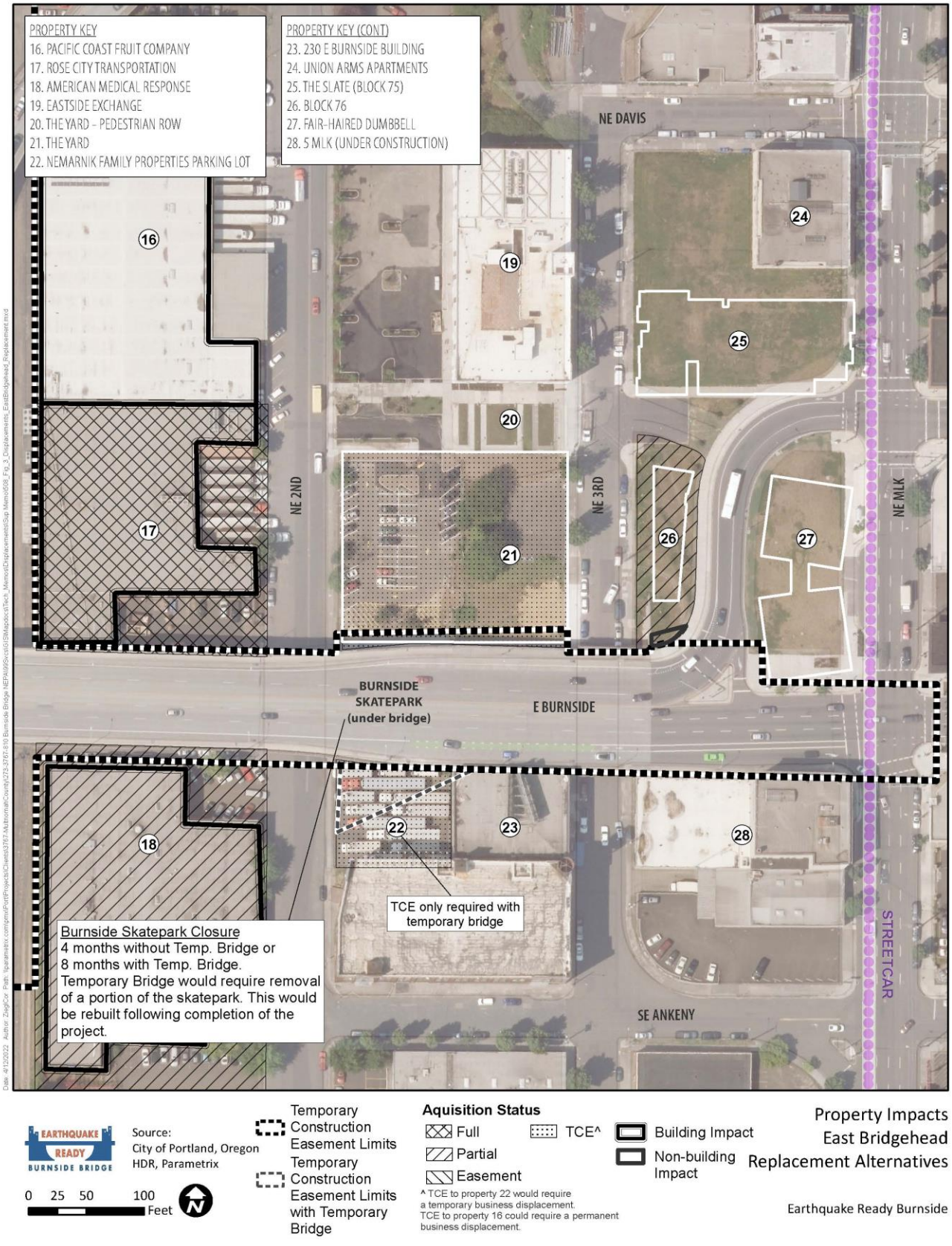
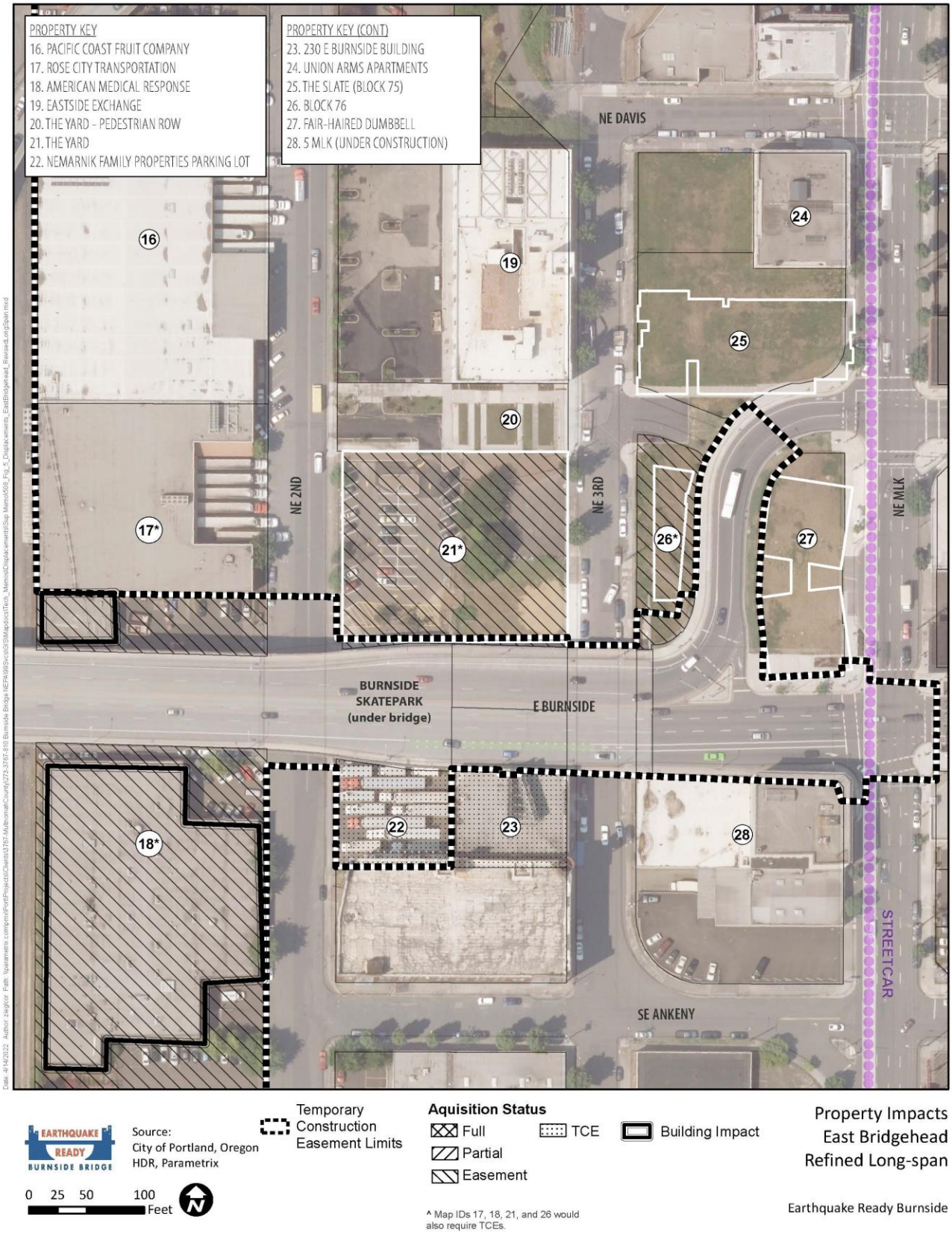


Figure 6. Property Impacts – West Bridgehead, Refined Long-span Alternative

Figure 7. Property Impacts – East Bridgehead, Refined Long-span Alternative



7.2.1 No-Build

Under pre-earthquake conditions, the No-Build Alternative would not require any new impacts to properties as the current structure and access to the bridge would remain as they are today.

7.2.2 Refined Long-span Alternative

While the Refined Long-span Alternative Tied Arch and Cable-stayed Options would have no full or partial fee acquisitions (compared to 8 for the Draft EIS Long-span Alternative), they would have 12 permanent easements compared to just one with the Draft EIS Long-span Alternative. The Tied Arch and Cable-stayed Options include the same types of acquisitions from each property, only varying in size.

Impacts for the Draft EIS Long-span Alternative are shown in Figure 4 and Figure 5 at the west and east bridgeheads, respectively. Impacts for the Refined Long-span Alternative (Tied Arch and Cable-stayed Options) are shown in Figure 6 and Figure 7.

Long-Term Impacts Summary

- Draft EIS Long-span Alternative: Six (potential) full acquisitions and two partial acquisitions
- Refined Long-span Alternative Tied Arch & Cable-stayed Options: 12 permanent easements

7.2.3 Unique Long-Term ROW Components

- The Draft EIS Long-span Alternative requires a temporary easement from Union Pacific Railroad (UPRR) at the east bridgehead. The Refined Long-span Alternative would require a temporary easement and a permanent easement for bridge facilities over UPRR property and along its tracks. Negotiations with UPRR have historically taken a minimum of 12 months, which will need to be accounted for in the project schedule, and permanent rights are likely to take longer to acquire from the railroad than temporary rights.
- Use of ODOT's I-5 and I-84 rights-of-way at the east bridgehead would be handled via a permitting process with ODOT. Associated ODOT personnel costs likely would be requested as compensation and have been included in estimated ROW costs per option. This agreement is no longer considered temporary and includes a Permanent Easement in Table 3.

See section 7.2.5 of the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c) for other long-term acquisition impacts.

7.3 Short-Term Acquisition Impacts

Temporary construction impacts associated with the Refined Long-span Alternative Cable-stayed and Tied Arch Options would impact 19 properties which is two additional properties compared to the Draft EIS Long-span Alternative. Some fee acquisition areas that were assumed for the Draft EIS Long-span Alternative have been converted to TCE

areas for the Refined Long-span Alternative Cable-stayed and Tied Arch Options, as the County would not be needing the majority of those areas permanently.

During construction of all Draft EIS Long-span Alternative and Refined Long-span Alternative options, 51 doorways and garage/parking lot entrances would be temporarily affected. These access closures would require three additional TCEs to allow the County to compensate property owners for building modifications that are necessary to provide alternate access for businesses during construction.

It is now assumed that access accommodations will be made for sidewalk construction and other short-term access impacts, therefore a number of temporary easements for access closures that were assumed for the Draft EIS Long-span Alternative will no longer be needed. See Figures 8 and 9 from the *EQRB Acquisitions and Displacements Supplemental Memorandum* (Multnomah County 2022a) for updated access and parking impact maps for the east and west bridgeheads.

See section 7.3 of the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c) for other short-term acquisition impacts.

Short-Term Construction Impacts Summary

- Draft EIS Long-span Alternative
  - 10 properties affected by TCEs
  - 7 additional properties affected by TCEs for access only
  - 51 building and parking lot entrances would be temporarily closed
- Refined Long-span Alternative Tied Arch & Cable-stayed Options
  - 15 properties affected by TCEs
  - 3 additional properties affected by TCEs for access only
  - 51 building and parking lot entrances would be temporarily closed

7.4 Relocations

Table 4 presents anticipated relocations for the Draft EIS Long-span Alternative and the Refined Long-span Alternative Cable-stayed and Tied Arch Options.

Table 4. Displacements/Relocations

Option	Residential	Non-Residential	Personal Property Only
Draft EIS Long-span Alternative	0	6	0
Refined Long-span Alternative – Tied Arch	0	4	2
Refined Long-span Alternative – Cable-stayed	0	4	2

7.4.1 Residential Relocation

There are no residential relocations anticipated with any option.

7.4.2 Non-Residential Relocation

The following are the differences in non-residential displacements across the Long-span Alternative options:

- Pacific Coast Fruit Company (PCFC) (east – Map ID 16): The Draft EIS Long-span Alternative, though not directly affecting the PCFC parcel, would require relocation of the business due to an important portion of their operations being located within the Rose City Transportation building (Map ID 17) which is 100% affected by the Draft EIS Long-span Alternative. The Refined Long-span Alternative Tied Arch and Cable-stayed Options reduce impacts to a small section of the Rose City Transportation building, which would require some reconfiguration of PCFC's operations, some personal property relocation and re-routing of PCFC's rooftop conveyor system, but no longer anticipate requiring a full business relocation. This could change depending on a professional architect analysis of the building impact, but for the purpose of this report, it is believed that the interior of the building can be reconfigured, and the business would not be displaced. PCFC is also leasing the Nemarnik Family commercial parking lot (east - Map ID 22) for their freight trucks. The parking lot would be temporarily closed for the duration of the project. It is assumed that a portion of the Produce Row property (east - Map ID 18) that is being acquired and cleared for the project can be used to mitigate PCFC truck parking during construction.
- Rose City Transportation freight business (east – Map ID 17): As mentioned above, impacts to the Rose City Transportation building are minimized with the Refined Long-span Alternative Tied Arch and Cable-stayed Options. The portion of the building that would need to be removed for construction is currently being utilized by PCFC, so no impacts to Rose City Transportation are assumed due to the building impact. Rose City Transportation also leases the Nemarnik Family commercial parking lot (east - Map ID 22) and would be considered a temporary personal property relocation.

See Section 7.4.2 of the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c) for descriptions of the other displacements that are assumed with the Long-span Alternative options.

7.4.3 Personal Property Relocation

Per above, PCFC and Rose City Transportation would be considered personal property relocations with the Refined Long-span Alternative Tied Arch and Cable-stayed Options.

8 ROW Cost Estimates

Acquisition and relocation ROW costs for the Refined Long-span Alternative options include permanent ROW, TCEs, improvements within the acquisition area, damages/cost to cure, relocation benefits, personnel (project management staff, acquisition and relocation agents, appraisal, and title review, etc.), legal, and contingency. These estimated costs are summarized per Long-span option in Table 5. Due to unknown future

market prices and inflation rates, all values are estimated in current dollar values, with adjustments made for the year of expenditure.

Narrowing of the bridge footprint and switching fee acquisitions to permanent easements and TCEs has decreased right of way impacts and costs by 9-10% for the Tied Arch and Cable-stayed options.

Table 5. Estimated ROW Costs

Alternative	Permanent ROW & Improvements	Temporary Easements	Damages	Relocation	Personnel & Title Reports	Legal & Contingency (30%)	Total
Draft EIS Long-span	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline
Refined Long-span Alternative - Tied Arch Option	-40%	28%	30%	-29%	-1%	-7%	-9%
Refined Long-span Alternative - Cable-stayed Option	-36%	23%	7%	-29%	-4%	-7%	-10%

9 Potential Mitigation

The potential mitigation measures are the same as was used in the *EQRB Right-of-Way Technical Report* (Multnomah County 2021c).

10 Preparers

Name	Professional Affiliation	Education	Years of Experience
Hannah Halpenny	HDR, Inc.	Bachelor of Art in Economics, SR/WA	8
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11 References

Multnomah County

2021a EQRB Description of Alternatives Supplemental Memo. https://www.multco.us/earthquake-ready-burnside-bridge/project-library

2021b EQRB Draft Environmental Impact Statement. https://www.multco.us/earthquake-ready-burnside-bridge/project-library.

2021c EQRB Right-of-Way Technical Report. https://www.multco.us/earthquake-ready-burnside-bridge/project-library.

2022a EQRB Acquisitions and Relocations Supplemental Memorandum. https://www.multco.us/earthquake-ready-burnside-bridge/project-library.

2022b EQRB Supplemental Draft Environmental Impact Statement. https://www.multco.us/earthquake-ready-burnside-bridge/project-library.