APPENDIX D - 1: TRAFFIC MODELING ASSUMPTIONS AND LEVEL OF SERVICE REPORTS

This appendix describes the traffic modeling assumptions used to forecast future traffic operations in the City of Kenmore and describes the level of service (LOS) calculations at 19 intersections for year 2022 Existing conditions, 2030 year No Action conditions, year 2044 No Action conditions, and year 2044 With Improvements conditions.

Traffic Modeling Assumptions

Data Collection

Turning Movement Counts

Table 1 summarizes the 19 intersections in the City were evaluated for LOS operations, including where PM peak period turning movement counts (TMCs) were available and intersections where counts were needed. TMCs were collected in 15-minute increments and included heavy vehicle percentage and pedestrian and bicycle volumes. The City provided TMC data for the remaining two locations.

Table 1. Study Intersections – Proposed Data Collection for PM Peak Period

#	Intersection	Collected 1/25/22	PM Peak Period to be collected	Data provided by City
1	NE 193rd St / 61st Ave NE	x	PM 16:00 to 18:00	
2	SR 522 / 61st Ave NE	x	PM 16:00 to 18:00	
3	NE 181st St / 65th Ave NE	x	PM 16:00 to 18:00	
4	NE 175th St / 65th Ave NE	x	PM 15:00 to 17:00	
5	NE 181st ST / 68th Ave NE	x	PM 15:45 to 17:45	
6	SR 522 / 68th Ave NE	x	PM 16:00 to 18:00	
7	NE 175th St / 68th Ave NE	x	PM 15:00 to 17:00	
8	NE 170th St / 68th Ave NE	-	-	Gridsmart
9	NE 155th Pl / Juanita Drive NE	x	PM 16:45 to 18:45	
10	NE 153rd Pl / Juanita Drive NE	x	PM 17:00 to 19:00	
11	NE 192nd St / 73rd Ave NE	x	PM 15:00 to 17:00	
12	NE 181st St / 73rd Ave NE	x	PM 16:00 to 18:00	
13	SR 522 / 73rd Ave NE	x	PM 16:00 to 18:00	
14	NE 192nd St / 80th Ave NE	x	PM 15:45 to 17:45	
15	SR 522 / 80th Ave NE	x	PM 16:00 to 18:00	
16	SR 522 /83rd PL NE	x	PM 16:00 to 18:00	
17	Simonds Road NE / 84th Ave NE	x	PM 15:30 to 17:30	
18	NE 155th St / 84th Ave NE	x	PM 16:00 to 18:00	
19	NE 155th St / Simonds Road NE	-	-	Gridsmart

Average Daily Traffic

Average daily traffic (ADT) volumes were provided by the City and the Washington State Department of Transportation (WSDOT). ADT volumes from WSDOT were acquired from https://www.wsdot.wa.gov/data/tools/geoportal/?config=traffic Table 2 illustrates locations and sources of ADT data.

Table 2: Average Daily Traffic Counts – Data Location and Source

#	Roadways	Data Source	Location of Counts
1	SR 522	WSDOT Geoportal	west of 68th Avenue
2	SR 522	WSDOT Geoportal	east of 68th Avenue
3	68th Ave NE	City	175th St & 68th Avenue
4	68th Ave NE	City	68th Av btw 181st St and 182nd St 11/12/2021
5	Juanita Drive	City	Juanita Dr btw 166th Ct and 170th St (Cont. Count)
6	NE 170th	City	170th St btw Juanita Dr and 70th Av (Cont. Count)
7	61st Ave NE	City	61st Av n/o 190th St, 61st Av n/o 193rd St, both 6/7/2021
8	80th Ave NE	City	80th Av n/o 192nd St 8/16/2021
9	Simonds Rd NE	City	155th St & Simonds Rd
10	73rd Ave NE	City	73rd Av n/o 185th St 3/15/2021

Historical Count Data

The City also provided historic TMCs collected in 2013. This data was used to help validate the existing conditions EMME model. This data was also used to make possible adjustments to future travel patterns. It was noted that current construction projects, including the West Sammamish River Bridge project and the Juanita Drive NE Sidewalk and Bicycle Improvement projects, have heavily influenced route choice. The City is expecting route choices and travel patterns to change once construction on these projects in complete.

Pedestrian and Bicycle Volumes

Pedestrian and bicycle volumes at additional locations not collected with the TMCs was provided by the City. Pedestrian and bicycle data from WSDOT's Bicycle and Pedestrian Count Portal https://wsdot.wa.gov/data/tools/bikepedcounts/ was evaluated to confirm the data was relevant and useful.

Crash Data

Citywide crash data was provided by the City for the years 2016 to 2020. They City also provided all the available data for 2021.

Traffic Operations Analysis

Traffic operations analysis for this project included PM peak hour conditions for the following years:

- Existing Conditions (2022)
- Year 2030
- Year 2044

Intersections were analyzed based on WSDOT's analysis policies and Synchro protocols (August 2018).

Synchro 11 software was used to analyze the operation of signalized and stop-controlled intersections.

Existing Conditions

Existing conditions traffic volumes were baselined using the following approach:

- **Pandemic adjustments**: Given the change in travel patterns and traffic volumes since the beginning of the COVID pandemic in March 2020, turning movement counts taken after March 2020 were adjusted as needed. Data collected as part of this study was compared to counts taken prior to March 2020 to gauge changes in traffic growth and potential changes in mode. If current counts were significantly lower than pre-March 2020 conditions, volumes were adjusted to pre- pandemic conditions using data from nearby WSDOT permanent traffic recorders (PTR) and other historic traffic data available from the City.
  As future traffic volumes were built from forecasting from baseline conditions, the goal was to model an existing 2022 baseline condition that best reflects overall trends from the past several years. Overestimating volumes would lead to future forecasts that may be too high, potentially leading to infrastructure that is overbuilt for future conditions. Conversely, underestimating baseline conditions could lead to future forecasts that may be too low, leading to infrastructure that would be potentially underbuilt for future conditions.
- **Seasonal adjustments**: Existing volumes were seasonally adjusted based on information from WSDOT and the City.
- **Signal timing** - Existing signal timing plans for signalized intersections were used to model existing conditions. Existing signal timing cards were provided by the City.
- **Geometrics**: The roadway network and geometrics for the 2022 Existing Condition reflected current conditions.

Future Conditions

The goal of modeling future conditions was to identify demands placed on the existing transportation infrastructure and services by expected growth in traffic. For the 2030 Future Baseline conditions, the existing Synchro model was updated to reflect forecasted growth. Projects needed to maintain minimum LOS standards under the 2030 conditions were identified and analyzed in Synchro. To model 2044 conditions, the 2030 Build Synchro models were updated to reflect forecasted growth as described in the Land Use Element and Appendix D-2. Projects needed to maintain minimum LOS standards under the 2044 condition were identified and analyzed in Synchro. Cycle lengths, offsets and splits were optimized for all future Synchro models.

Level of Service Reports

The 2044 With Improvements conditions include channelization and signal timing changes at 7 intersections. The 2022 volumes represent counts collected in January 2022. It was assumed that construction on Juanita Drive during January 2022 influenced route choices between Juanita Drive and Simonds Road. Post-construction, it is expected that travel patterns along Juanita Drive and Simonds Road would return to pre-construction conditions. 2030 traffic forecasts and analysis was adjusted to reflect such changes.

For the 2030 scenario and for both 2044 future scenarios, volumes represent traffic forecasts developed using the Kenmore City Model and the traffic growth assumptions described in Appendix D-2. For the 2044 No Action LOS calculations assume the P-suffix transportation projects defined as part of the Lakepoint Mixed Use Master Plan The 2044 With Improvements LOS calculations assume the improvements recommended as a part of this plan are in place.

As noted in the Transportation Element, the City measures LOS at the corridor level on SR 522 and 68th Avenue / Juanita Drive / Simonds Road rather than at the intersection level. Though a single intersection on these corridors may experience longer delays than indicated by the standard, the overall concern for residents and travelers on these roadways is to get through multiple intersections in a reasonable amount of time. For this reason, average delay along the corridor is a more meaningful level of service standard than the experience at a single intersection. Table 3 summarizes these average delay calculations for existing and forecasted conditions.

Table 3. Corridor LOS Values (Weighted Averages)

Corridor	2022 Existing	2030 No Action	2044 No Action	2044 with improvements
SR 522[1]	D / 35.5	D / 53.9	E / 72.8	E / 64.1
68th Ave Corridor[2]	D / 46	D / 54.2	F / 84.5	E / 72.7

[1] Intersections: 61st Ave NE, 68th Ave NE, 73rd Ave NE, 80th Ave NE, 83rd Ave NE
[2] Intersections: NE 181st St, SR 522, NE 175th St, NE 170th St

APPENDIX D - 2: LAND USE MAPS

Figures 1 through 10 depict employment and housing land uses by traffic analysis zone (TAZ) around Kenmore. The 2018 maps represent the base year for the travel model, which was reviewed for consistency with the city's data on employment and housing. The 2044 maps show the forecasted future levels of jobs and housing based on the amount of growth assigned by the Puget Sound Regional Council (PSRC) local target representation data set that was reviewed by the City and adjusted within City limits based on more detailed information about known development and growth targets in specific parcels. The growth maps display where employment and housing growth is expected to occur around Kenmore. This land use growth informs the City on where to expect increases in travel volumes and translates into future traffic levels through the travel demand forecasting process.

	Housing Units	Employment
2018	9,429	4,012
2044	12,499	7,212
Growth	33%	90%

Travel Demand Forecasting

The PSRC regional Activity Based Travel Demand model will be used for existing baseline and future travel demand forecasting.

Validation

The underlying input assumptions of the existing conditions were reviewed and updated to reflect appropriate level of detail for the City. The existing traffic analysis zones (TAZs) in the PSRC model were scaled to match the City's data on existing employment and housing. The existing conditions model was validated against available count data. To improve the model's performance, the following adjustments were made:

- Updated the quantity and location of housing units and employment estimates within the model area by zone.
- Calculated households for use in the model by assuming a 5 percent housing unit vacancy rate after discussing the conversion with PSRC staff.
- Adjusted PM peak hour vehicle trip generation rates by comparing with Institute of Traffic Engineers (ITE) most recent trip generation rates, local traffic studies, or vehicle driveway counts.
- Calibrated the roadway network parameters (speeds, capacities, and functional class) to better reflect the routes that people use throughout the model area.
- Adjusted the number of the trips that enter or exit the model area based on observed vehicle counts.

Future land use was developed using a variety of sources including city staff input, growth assigned by the PSRC Land Use Vision data set, and previous land use forecasts from the 2014 Transportation Element Update. Future land was allocated through the following process:

- Using the 2050 PSRC Land Use Vision representation data, provided by regional model TAZs, the land use for the Kenmore model was scaled to match City-approved growth targets for housing units and employment.
- Housing units and employment data was disaggregated to the Kenmore TAZ system using land use intensity ratios created for the 2014 Transportation Element update and discussions with City staff.
- The 2050 land use by Kenmore TAZ produced in the previous step was reviewed by city staff and the project team during an in-person working session. Based on specific knowledge of future developments and zoning allowances as well as review of aerial imagery, housing unit and employment growth was reallocated between Kenmore TAZs.
- Any specific housing unit and/or employment growth for a Kenmore TAZ not established during the working session was assumed to have the same amount of growth as the 2030 land use forecast.
- Housing units were converted to households for use in the PSRC model using a 5 percent vacancy rate that was arrived at in coordination with PSRC staff.

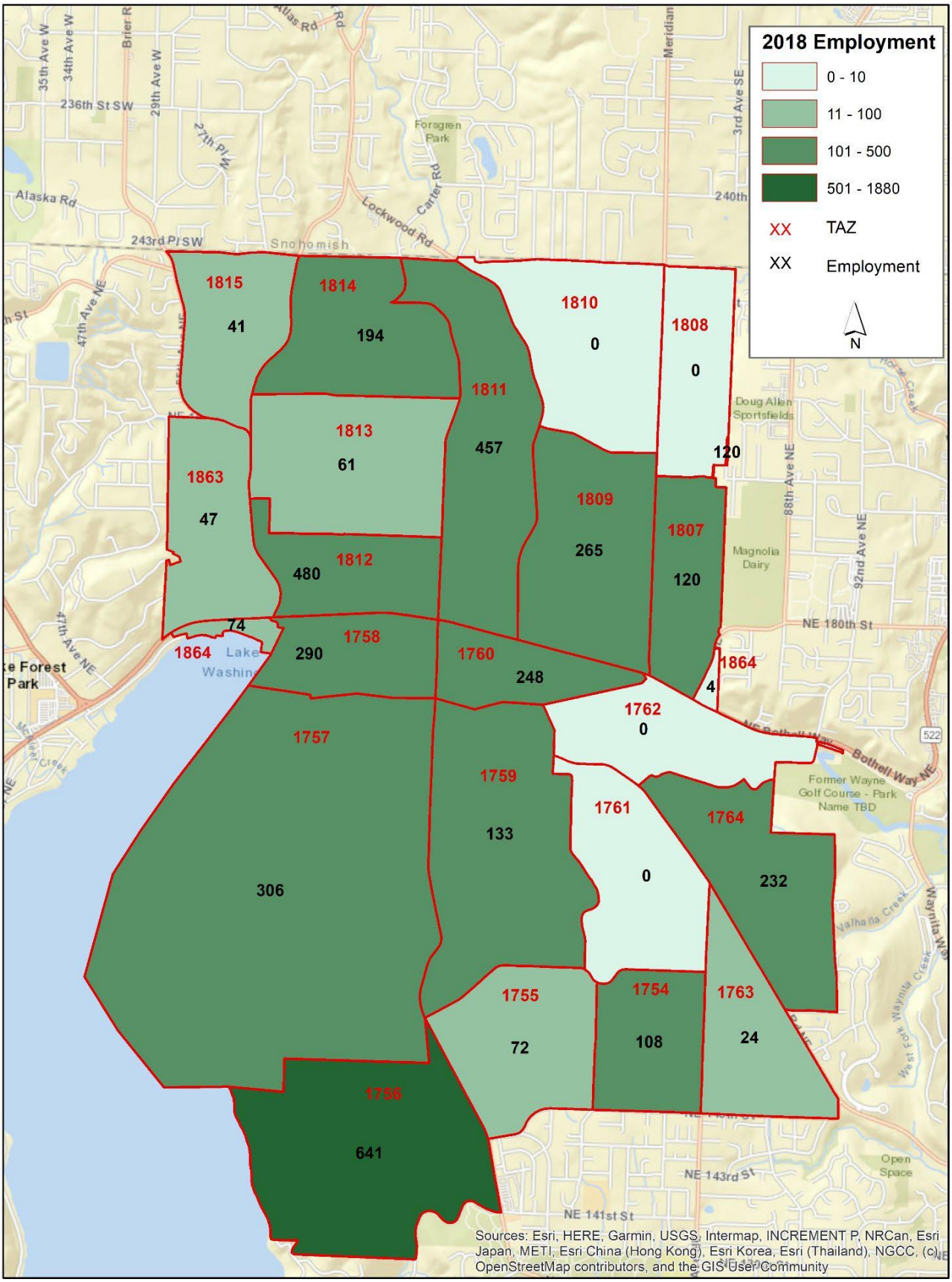
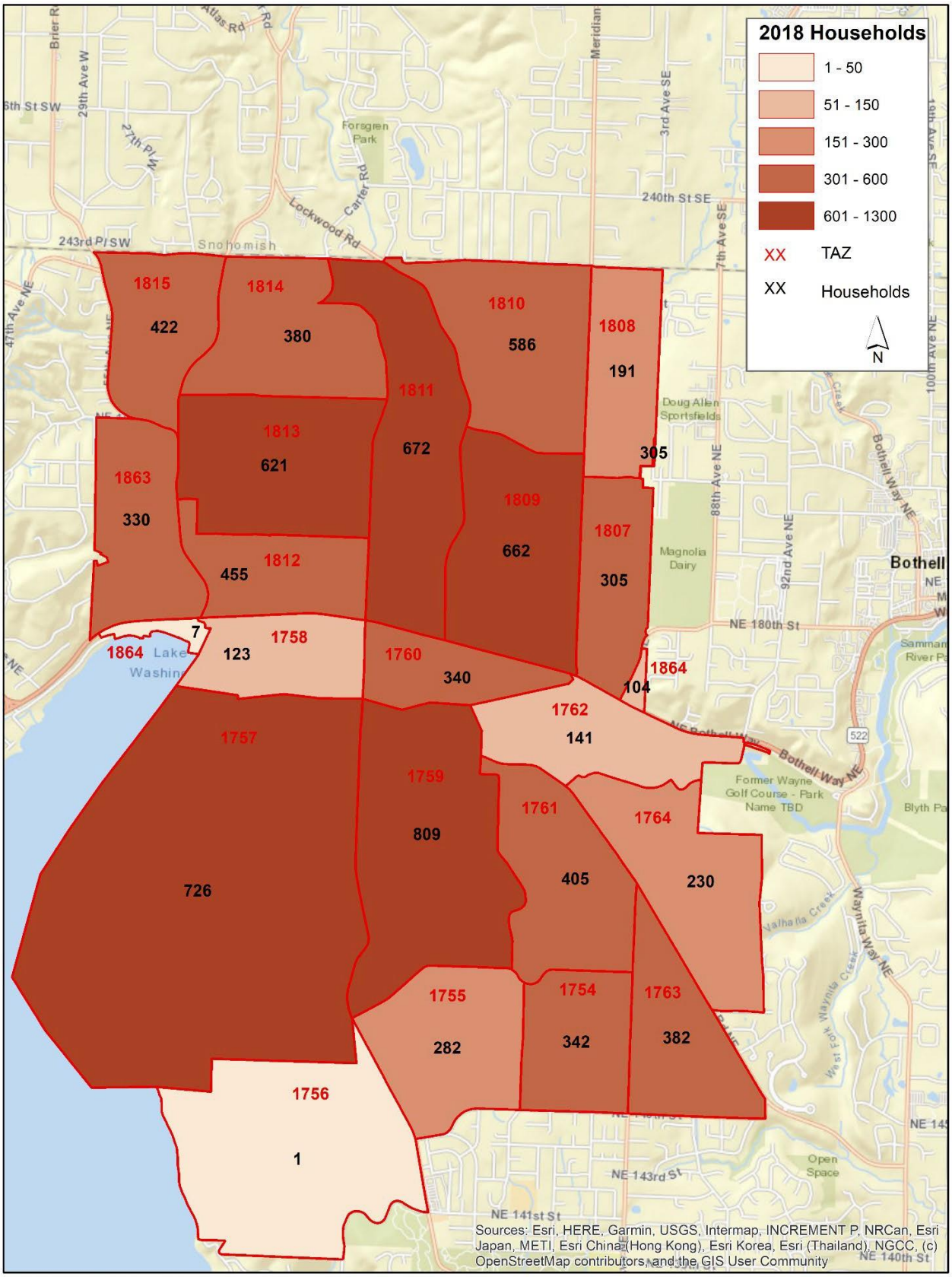


Figure 1. 2018 Employment in Kenmore by TAZ



This map reflects PSRC model input values for households that were arrived at through assuming a 5% vacancy rate of housing units.

Figure 2. 2018 Households in Kenmore by TAZ

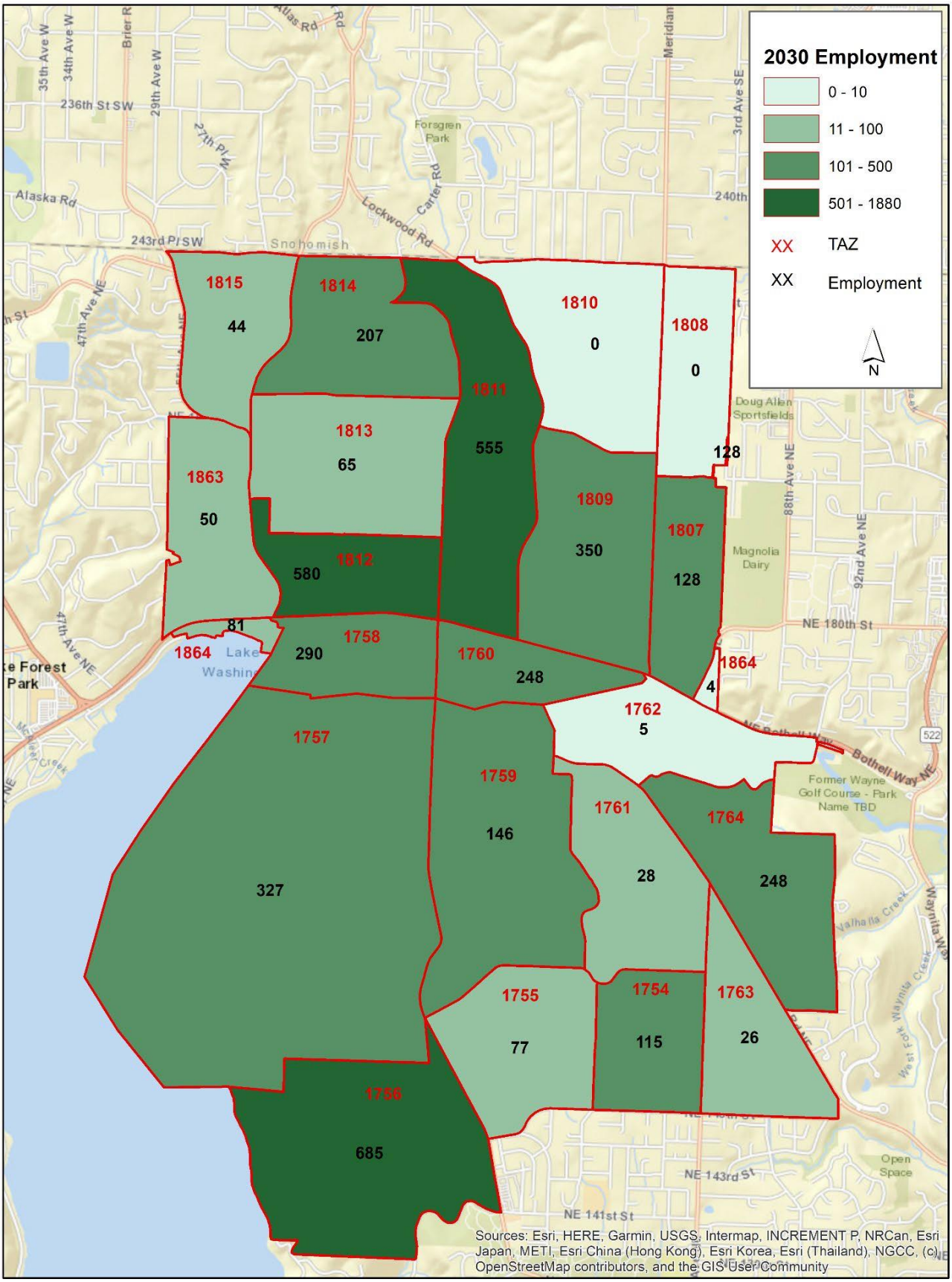
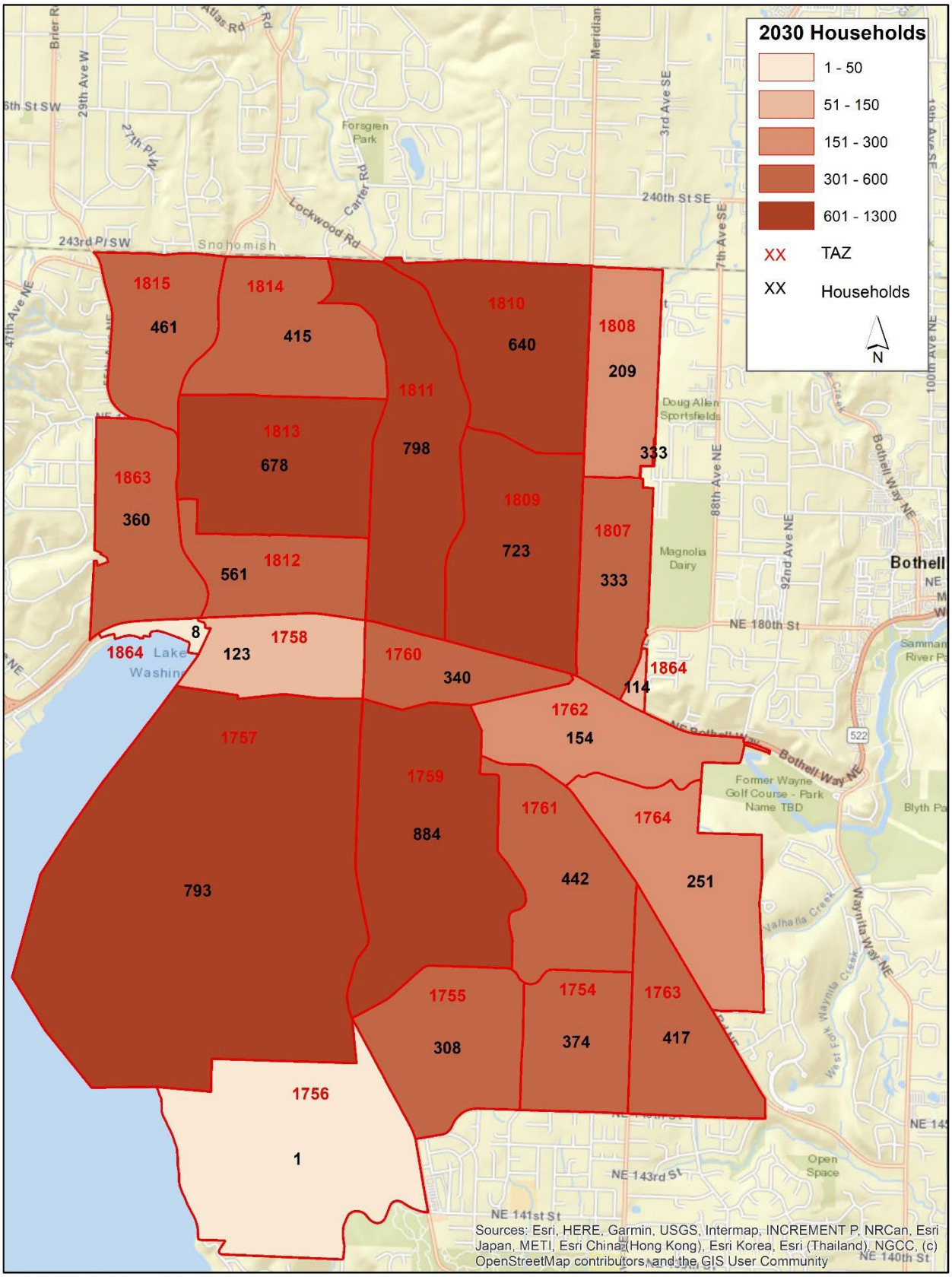


Figure 3. 2030 Employment in Kenmore by TAZ



This map reflects PSRC model input values for households that were arrived at through assuming a 5% vacancy rate of housing units.

Figure 4. 2030 Households in Kenmore by TAZ

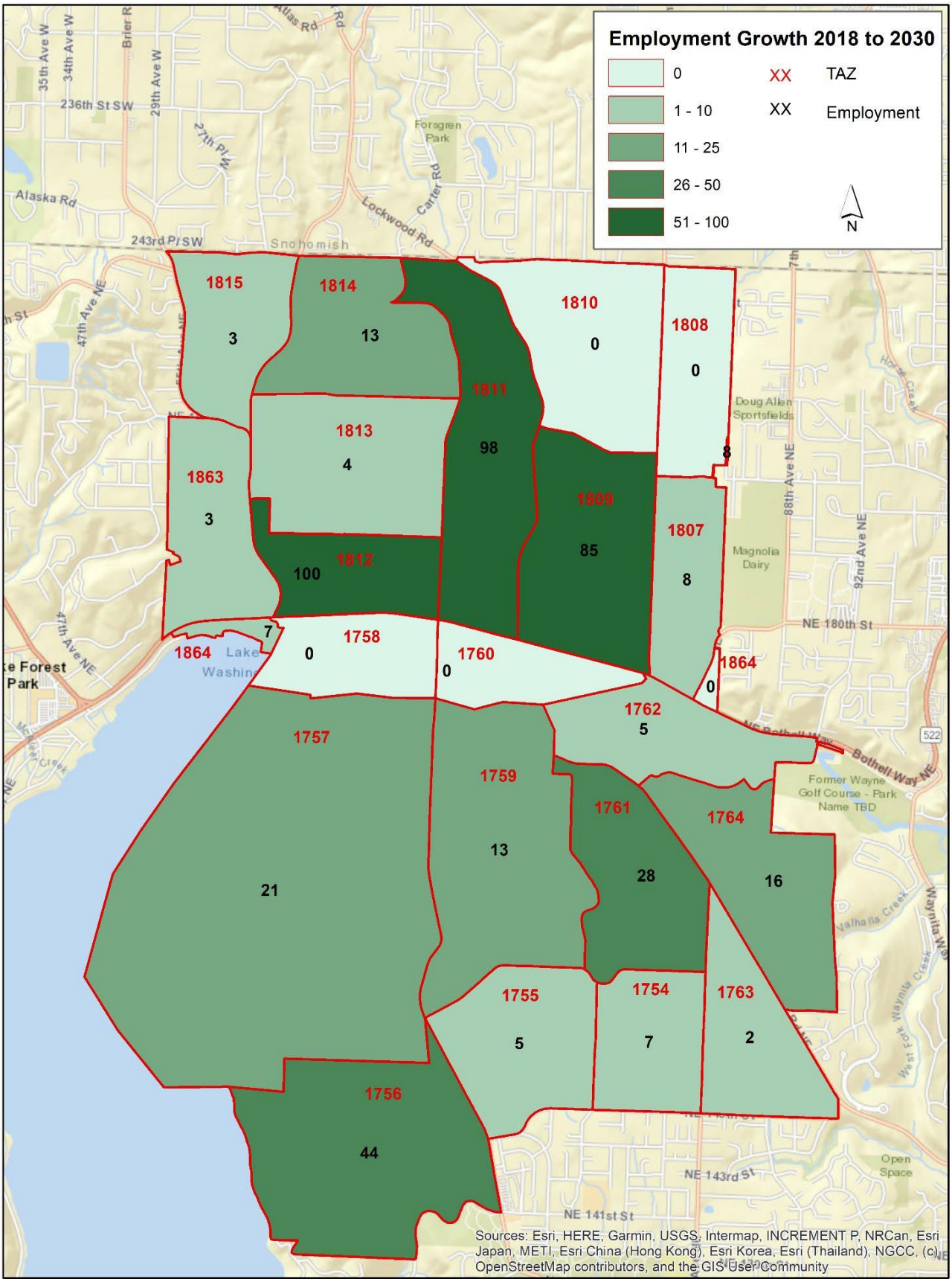


Figure 5. 2018-2030 Employment Change in Kenmore by TAZ

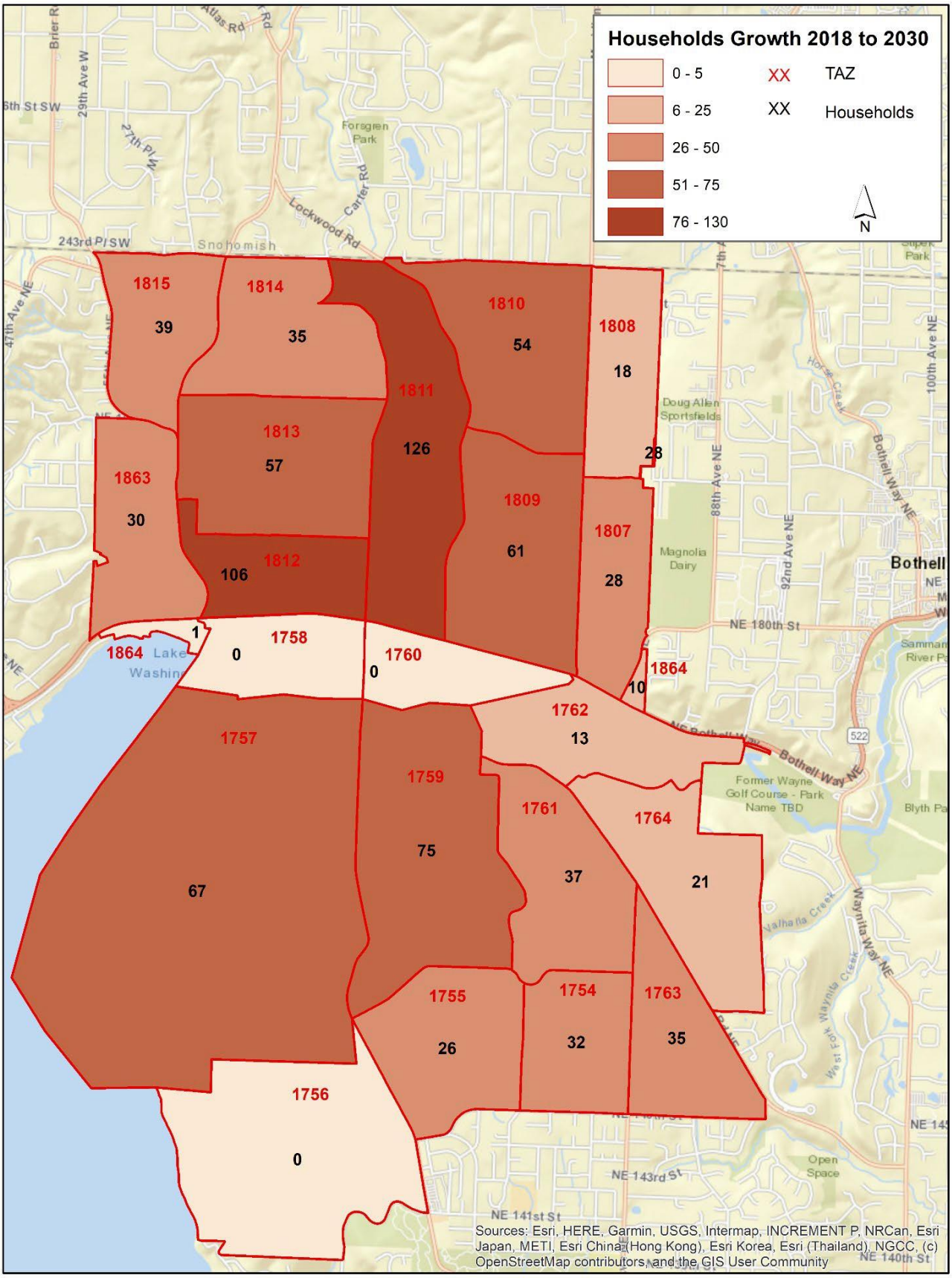


Figure 6. 2018-2030 Households Change in Kenmore by TAZ

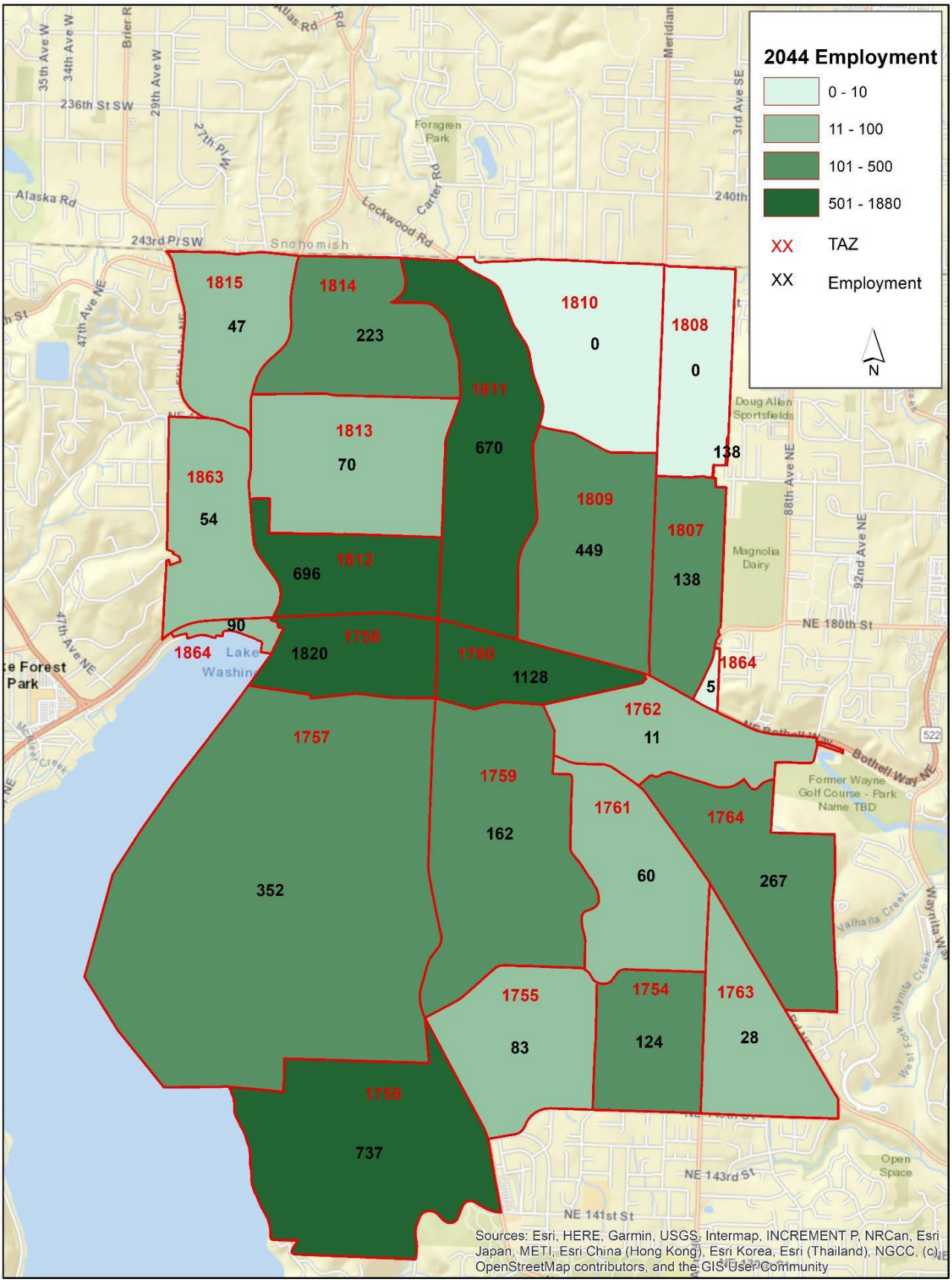
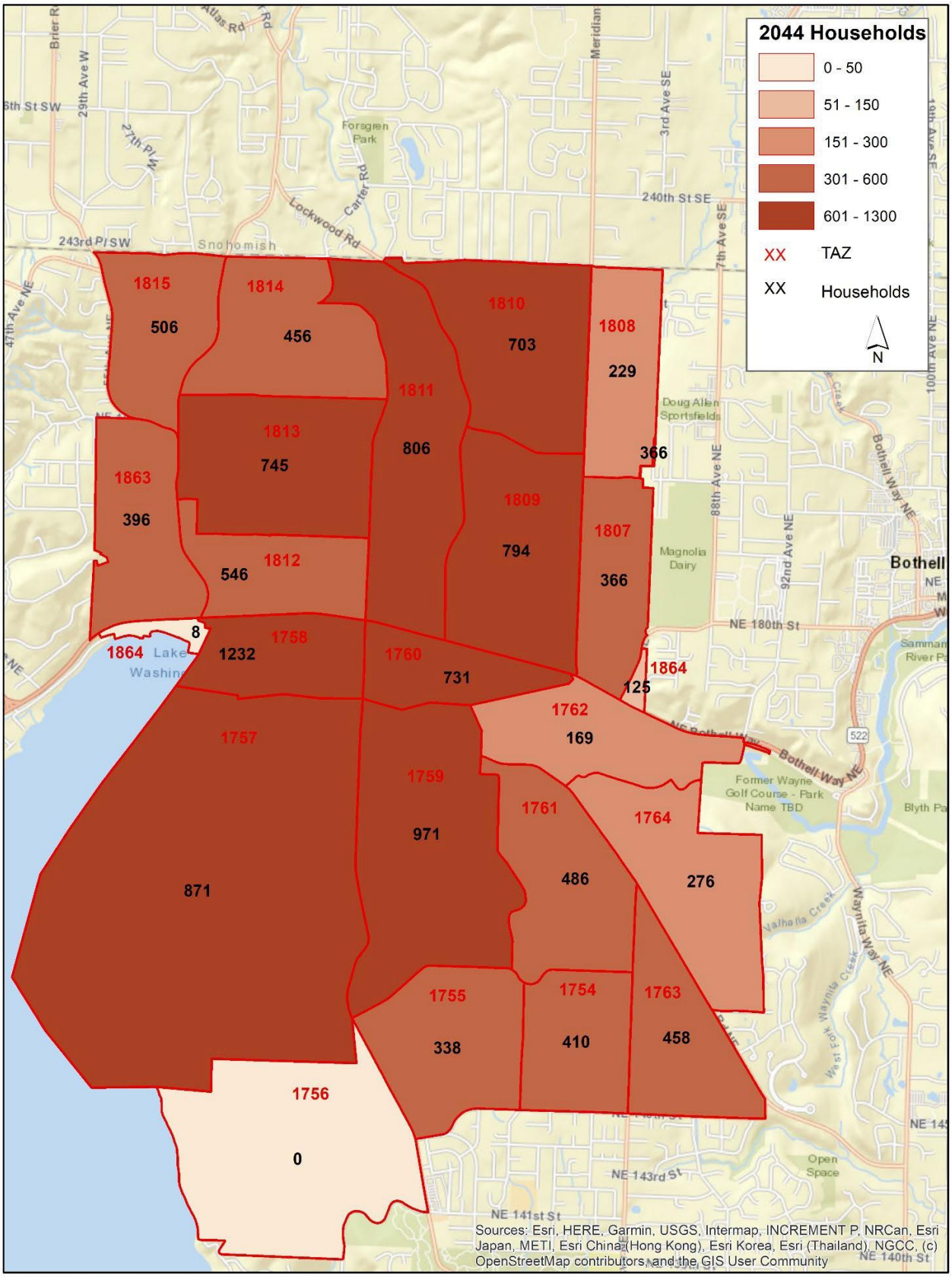


Figure 7. 2044 Employment in Kenmore by TAZ



This map reflects PSRC model input values for households that were arrived at through assuming a 5% vacancy rate of housing units.

Figure 8. 2044 Households in Kenmore by TAZ

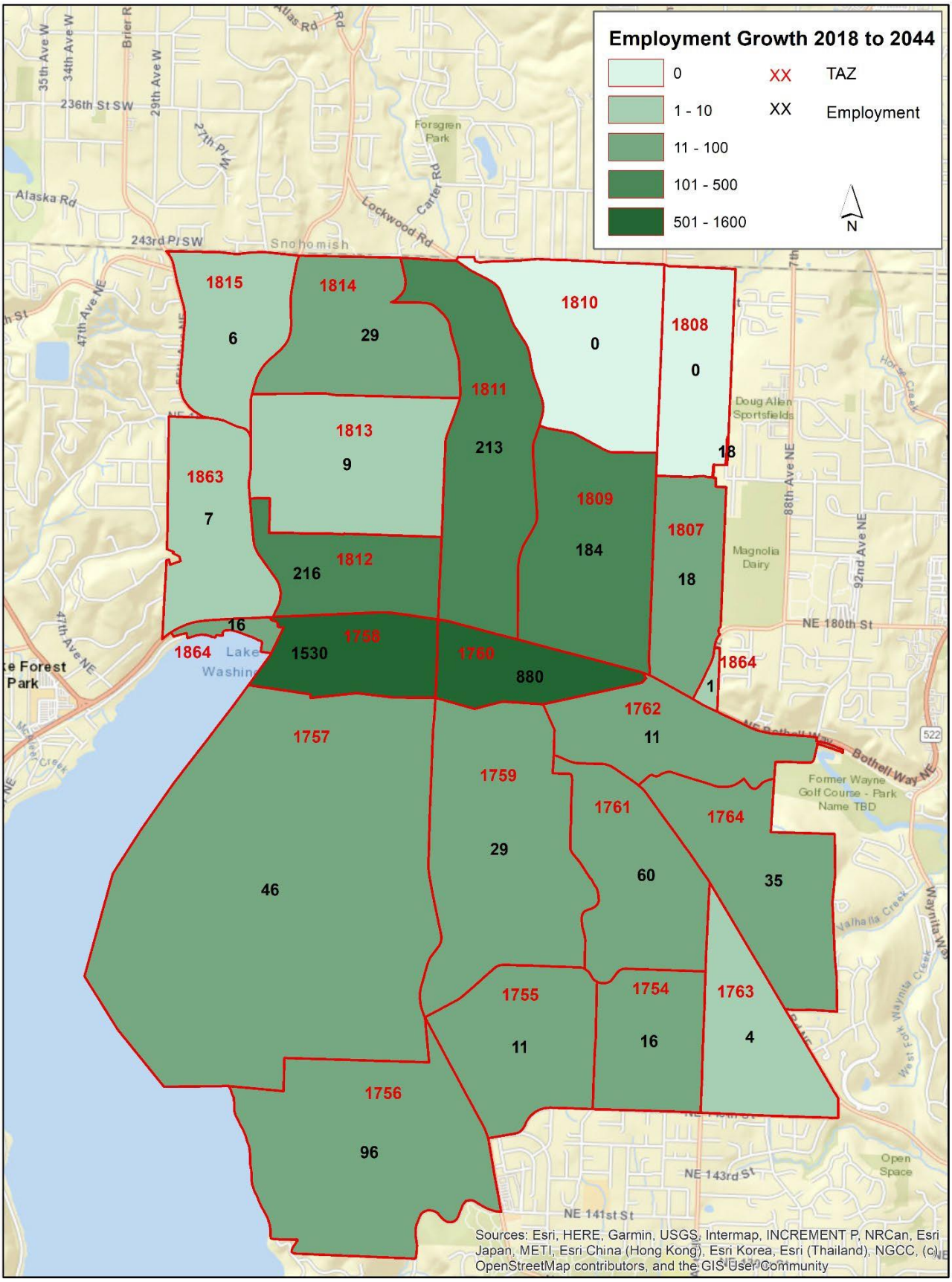


Figure 9. 2018-2044 Employment Change in Kenmore by TAZ

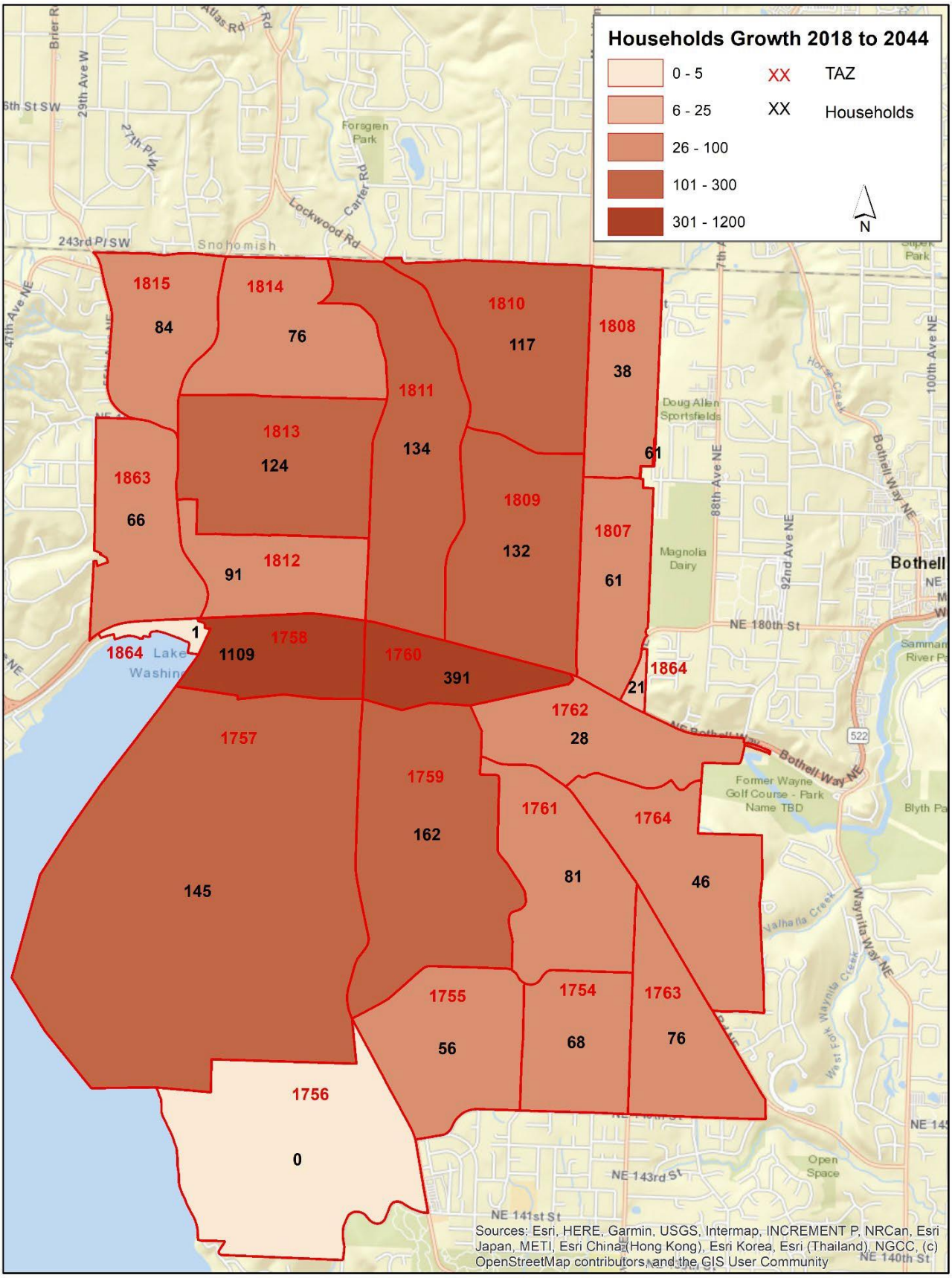


Figure 10. 2018-2044 Households Change in Kenmore by TAZ

APPENDIX D - 3: ROADWAY FACT SHEETS

The following street typology fact sheets specify the form and intended functions of roadways in Kenmore. Each fact sheet provides the travel purposes, features, example locations and conceptual cross-sections for the given roadway type. The City of Kenmore's Road Standards provide supplemental detail associated with cross-sections for specific roadways.

STATE HIGHWAYS AND MAJOR ARTERIALS

Major arterials, most conducive for cross-town trips and through traffic, are roadways that serve all transportation modes and vehicle types. The focus is to provide an efficient travel experience for vehicles, which includes trucks, transit, and emergency services, while accommodating pedestrian and bicyclist movement through effective modal separation. The Washington State Department of Transportation classifies SR 522 as a principal arterial.

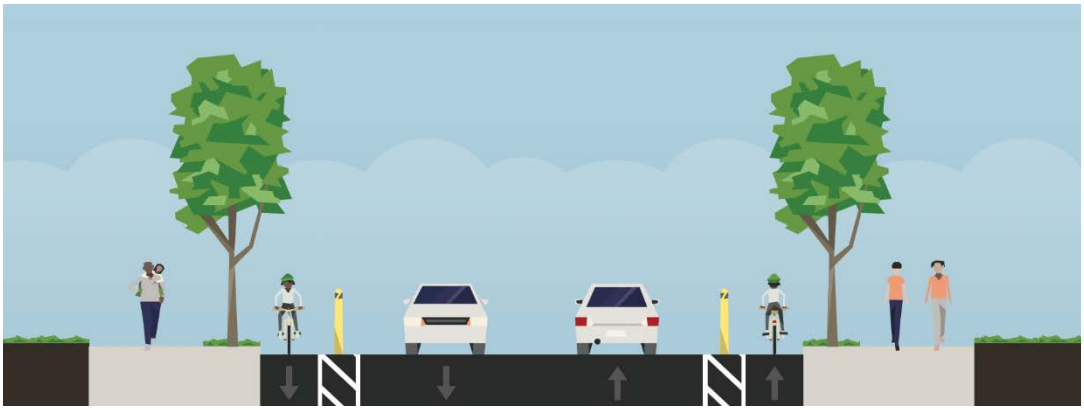
Features:

- Priority users - vehicles, bicycles, pedestrians, and transit
- Serves all trip types but accommodates cross-town trips best of all street typologies. Also serves the highest volume of trips within the City. Direct access by adjacent land uses more limited.
- Turn lanes provided at key intersections to facilitate through traffic. Pedestrian crossings are be provided at intersections and considered for mid-block crossings when appropriate.
- Where space is available, add bicycle facilities, or landscape buffers for additional multimodal opportunities.

Example Locations:

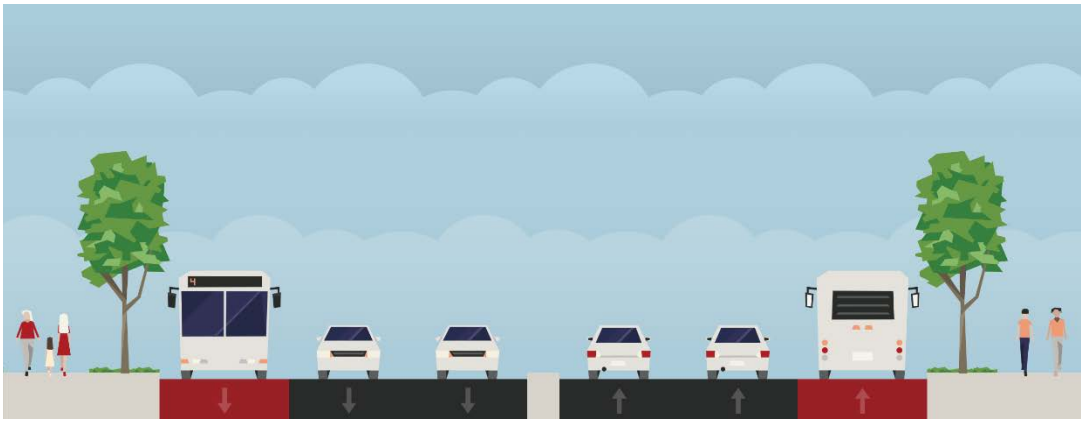
- SR 522
- Simonds Road NE
- 68th Avenue NE (SR 522 to NE 170th Street)

Figure 1: Major Arterial Conceptual Cross Section 1



Source: Streetmix

Figure 2: State Highway Conceptual Cross Section 1



Source: Streetmix

MINOR ARTERIALS

Minor arterials serve all modes and trip types but are focused on signaling the entry into a higher-density commercial or residential zone. Minor arterials accommodate larger vehicles but provide a lower speed alternative to major arterials or State Highways, encouraging multimodal transportation options.

Features:

- Priority users: pedestrians, bicycles, vehicles
- Serves as a major travel route for local, inter-neighborhood, and through trips.
- Generally provide more direct access to adjacent land uses than major arterials or State Highways.
- Nonmotorized treatments include high visibility crosswalks, landscape buffers, and curb extensions.
- Travel lanes may be shared between bicycles and vehicles due to slower speeds.

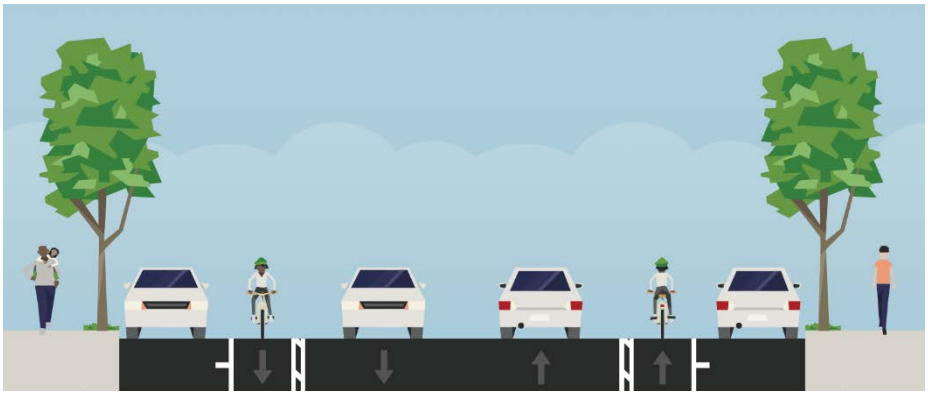
Example Locations:

- 61st Avenue NE (north of SR 522)
- 80th Avenue NE
- NE 175th Street
- NE 181st Street (65th Avenue NE to 73rd Avenue NE)
- Juanita Drive NE

Figure 3: Minor Arterial Conceptual Cross Section 1

Source: Streetmix

Figure 4: Minor Arterial Conceptual Cross Section 2



Source: Streetmix

COLLECTORS

Collector streets are focused on providing a safe and enjoyable travel experience for bicycles and pedestrians, and school children. Collector streets have narrow travel lanes, bike facilities, and sidewalks. These streets feature high-visibility, mid-block pedestrian crossings.

Features:

- Priority users: school children, non-motorized modes
- Serves as a major travel route for school trips, bicycle and pedestrian travel
- Consolidates local road trips and connects to arterials
- Nonmotorized treatments include, mid-block crossings, high visibility or raised crosswalks, and curb extensions.

Example Locations:

- 68th Avenue NE (north of SR 522)
- 73rd Avenue NE
- 84th Avenue NE
- NE 153rd Place/NE 155th Street
- NE 181st Street (61st Avenue NE to 65th Avenue NE)

Figure 5: Collector Conceptual Cross Section 1

Source: Streetmix

Figure 6: Collector Conceptual Cross Section 2

Source: Streetmix

LOCAL STREET

Local streets are walkable, low-speed facilities that serve abutting property (mostly single-family residential homes). Because of the low travel speeds, bicycles and vehicles share the right-of-way. Goods movement on these streets is restricted to local deliveries only.

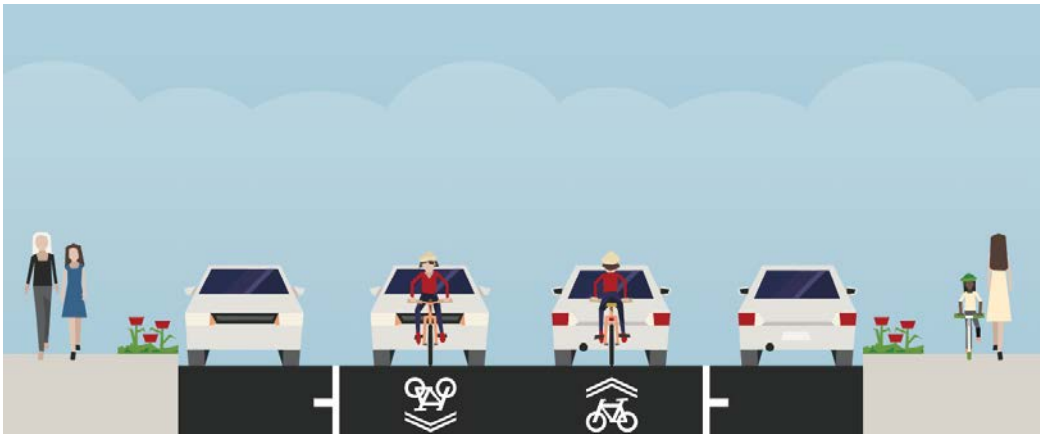
Features:

- Priority users - local traffic, pedestrians, and bicycles
- Serves as a direct connection to most local residences but does not encourage through traffic.
- Serves the lowest volume trips in the City
- Can serve as quiet streets that are welcoming to cyclists with no additional improvement.

Example Locations:

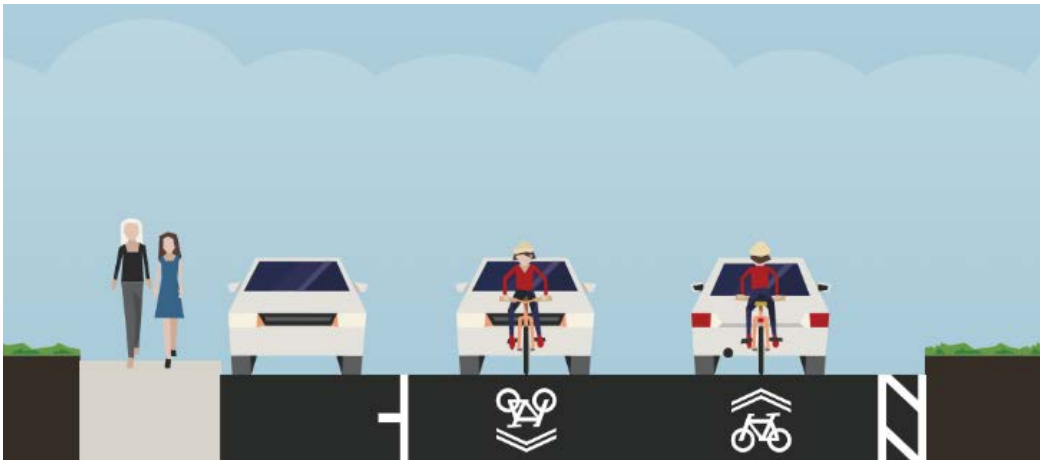
- 81st Avenue NE
- NE 154th Street
- NE 185th Street
- NE 198th Street

Figure 7: Local Conceptual Cross Section 1



Source: Streetmix

Figure 8: Local Conceptual Cross Section 2



Source: Streetmix

APPENDIX D-4
CONCEPTUAL DESIGN AND COST ESTIMATES

Site specific project costs for programs can be found in:

- ADA Transition Plan
- Pedestrian Facilities Plan

SR 522 West B

CITY OF KENMORE

Date Prepared: January 26, 2023

Construction Days: 120

Engineer's Estimate -- Planning Level

Construction Year: 2026

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	97,226.10	$	97,226.10
2	Project Temporary Traffic Control	1	LS	$	85,904.00	$	85,904.00
3	Removal of Structure and Obstruction	1	LS	$	14,337.00	$	14,337.00
4	Clearing and Grubbing	1	LS	$	29,500.00	$	29,500.00
5	Permanent Signing	1	LS	$	2,360.00	$	2,360.00
6	Construction Surveying	1	LS	$	44,545.00	$	44,545.00
7	Landscaping/Landscape Restoration	1	LS	$	44,545.00	$	44,545.00
8	Sawcutting	220	LF	$	5.90	$	1,298.00
9	Backfill for walls	2,000.0	CY	$	46.02	$	92,040.00
10	Handrailing	390	LF	$	236.00	$	92,040.00
11	HMA	180	Ton	$	236.00	$	42,480.00
12	Crushed Surfacing Top Course	200.0	Ton	$	70.80	$	14,160.00
13	Soldier Pile Wall	1,485.0	SF	$	236.00	$	350,460.00
14	Cement Conc. Sidewalk	210.0	SY	$	59.00	$	12,390.00
15	Cement Conc. Curb and Gutter	220.0	LF	$	53.10	$	11,682.00
16	Wetland Mitigation	1.0	LS	$	35,400.00	$	35,400.00
17	Shoring	--	CY	$	47.20	$	--
18	Roadway Excavation incl haul	140	CY	$	118.00	$	16,520.00
19	Ped Lighting Pole	7	EA	$	11,800.00	$	82,600.00
	SubTotal Cost					$	1,069,487.10
	Contingency				30%	$	320,846.13
	Total Construction Cost with Contingency				% of Const. Const	$	1,390,333.23
	Design		Consultant		30%	$	417,099.97
	Predesign					$	--
	ROW				3%	$	41,710.00
	City Staff				10%	$	139,033.32
	Const. Management		Consultant		15%	$	208,549.98
	Construction Management (consultant)						
	Total Project Cost					**$**	**2,196,726.50**

NE 181st Sidewalks (61st-63rd Southside)

CITY OF KENMORE

Date Prepared: November 8, 2022

Construction Days: 80

Engineer's Estimate -- Planning Level

Construction Year: 2025

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	50,691	$	50,691
2	Project Temporary Traffic Control	1	LS	$	137,280	$	137,280
3	Removal of Structure and Obstruction	1	LS	$	5,000	$	5,000
4	Clearing and Grubbing	1	LS	$	1,180	$	1,180
5	Permanent Signing	1	LS	$	3,250	$	3,250
6	Construction Surveying	1	LS	$	50,000	$	50,000
7	Landscaping	1	LS	$	46,374	$	46,374
8	Remove Asphalt Pavement	345	SY	$	24	$	8,142
9	Pedestrian Hand Railing	75	LF	$	177	$	13,346
10	Cement Conc. Driveway Entrance Type 1	64	SY	$	83	$	5,286
11	Paint Line	725	LF	$	2	$	1,283
12	Storm Drainage Pipe 12" Diam	590	EA	$	59	$	34,810
13	HMA Cl. xx PG. xx-xx	120	Ton	$	177	$	21,240
14	Catch Basin Inserts	7	EA	$	89	$	620
15	Catch Basin Type 2, 48" Diam	1	EA	$	4,720	$	4,720
16	Cement Conc. Sidewalk	840	SY	$	71	$	59,472
17	Sawcutting	660	LF	$	6	$	3,894
18	Cement Conc. Curb Ramp Type x	4	EA	$	2,360	$	9,440
19	Crushed Surfacing Top Course	50	Ton	$	59	$	2,950
20	Cement Conc. Traffic Curb and Gutter	660	LF	$	47	$	31,152
21	Structure Excavation Class B Incl. Haul	370	CY	$	47	$	17,464
22	Shoring or Extra Excavation Class B	2470	SF	$	4	$	8,744
23	Gravel Backfill for Wall	172	Ton	$	59	$	10,148
24	Testing Storm Sewer Pipe	590	LF	$	12	$	6,962
25	Connection to Existing Storm Sewer	2	EA	$	1,180	$	2,360
26	Erosion/Water Pollution Control	1	LS	$	15,000	$	15,000
27	Gravity Block Wall	195	SF	$	59	$	11,505
28	Cem. Conc. Sidewalk w/ Thickened Edge	114	LF	$	118	$	13,452
29	Catch Basin Type 1	4	EA	$	1,652	$	6,608
30	Soldier Pile Wall (61st-62nd)	720	SF	$	142	$	101,952
	SubTotal Cost					$	684,324
	Contingency				40%	$	273,730
	Total Construction Cost with Contingency				% of Const. Const	$	958,054
	Design		Consultant		20%	$	191,611
	ROW/Permitting		Consultant		5%	$	47,903
	City Staff				12%	$	114,967
	Const. Management		Consultant		20%	$	191,611
	Construction Management (consultant)						
	Total Project Cost					**$**	**1,504,145**

61st Ave NE Sidewalk Replacement Project (181st-62nd Ave)

CITY OF KENMORE

Date Prepared: October 20, 2022
Engineer's Estimate -- Planning Level
Construction Days: 200
Construction Year: 2026

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	219,690	$	219,690
2	Project Temporary Traffic Control	1	LS	$	136,170	$	136,170
3	Removal of Structure and Obstruction	1	LS	$	18,900	$	18,900
4	Clearing and Grubbing	1	LS	$	105,000	$	105,000
5	Permanent Signing (+RRFB and feedback)	1	LS	$	118,650	$	118,650
6	Construction Surveying	1	LS	$	124,034	$	124,034
7	Sawcutting	3,064	LF	$	7	$	22,796
8	SPCC	1	LS	$	2,000	$	2,000
9	Sidewalk	3,123	SY	$	99	$	309,802
10	Curb and Gutter	2,414	LF	$	50	$	119,724
11	Remove Curb and Gutter	2,946	LF	$	9	$	25,571
12	Remove Sidewalk	3,268	SY	$	15	$	48,628
13	Lighting	1	EA	$	15,000	$	15,000
14	Inlet protection	35	EA	$	99	$	3,472
15	Curb Ramp	15	EA	$	4,960	$	74,400
16	Driveway Approach	1,093	SY	$	149	$	162,638
17	Landscape Restoration/Stream Mitigation	1	LS	$	1,163,280	$	1,163,280
18	Crushed Surfacing Top Course	566	Ton	$	50	$	28,074
19	Storm Sewer Pipe 12"	495	LF	$	174	$	85,932
20	Catch Basin Type 1	7	EA	$	3,100	$	21,700
21	Adjust Catch Basin	5	EA	$	496	$	2,480
22	Fencing	1,700	LF	$	68	$	115,940
23	Crosswalk	768	SF	$	5	$	3,840
24	Remove Asphalt	2,560	SY	$	15	$	38,093
	SubTotal Cost					$	2,965,814
	Contingency				40%	$	1,186,325
	Total Construction Cost with Contingency				% of Const. Const	$	4,152,139
	Total Design		Consultant		10%	$	415,214
	ROW Easements/Acquisition					$	50,000
	City Staff				5%	$	207,607
	Const. Management		Consultant		13%	$	539,778
	Total Project Cost					**$**	**5,364,738**

Lower Swamp Creek Bridge Replacement		CITY OF KENMORE	
Date Prepared	October 20, 2022	Construction Days:	60
Engineer's Estimate --	Planning Level	Construction Year	2027

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	112,611	$	112,611
2	Project Temporary Traffic Control	1	LS	$	39,810	$	39,810
3	Removal of Structure and Obstruction	1	LS	$	10,000	$	10,000
4	Clearing and Grubbing	1	LS	$	16,100	$	16,100
5	Permit Mitigation Work	1	LS	$	210,000	$	210,000
6	Construction Surveying	1	LS	$	73,892	$	73,892
7	Deck Area	1540	SF	$	444	$	683,760
8	Removal of Existing Bridge	1	LS	$	29,600	$	29,600
9	Temporary Bridge	1.0	LS	$	142,080	$	142,080
10	Road Approaches	1	LS	$	202,393	$	202,393
	SubTotal Cost					$	1,520,245
	Contingency				40%	$	608,098
	Total Construction Cost with Contingency				% of Const. Const	$	2,128,344
	Total Design		Consultant		20%	$	425,669
	Predesign		Consultant		2.5%		53,209
	ROW Acquisition				2%	$	42,567
	City Staff				12%	$	255,401
	Const. Management		Consultant		8%	$	170,267
	Total Project Cost					**$**	**3,075,456**

61st Ave NE/NE 193rd St Intersection

CITY OF KENMORE

Date Prepared October 20, 2022

Construction Days: 40

Engineer's Estimate -- Planning Level

Construction Year ----

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	86,184	$	86,184
2	Project Temporary Traffic Control	1	LS	$	65,290	$	65,290
3	Removal of Structure and Obstruction	1	LS	$	3,500	$	3,500
4	Clearing and Grubbing	1	LS	$	14,000	$	14,000
5	Permanent Signing	1	LS	$	5,600	$	5,600
6	Construction Surveying	1	LS	$	47,624	$	47,624
7	Sawcutting	3870	LF	$	8	$	32,508
8	SPCC	1	LS	$	1,500	$	1,500
9	Roadway Excavation Incl. Haul	680.0	CY	$	42	$	28,560
10	Erosion and Sediment Control	1.0	FA	$	10,000	$	10,000
11	Curb and Gutter	20	LF	$	56	$	1,120
12	Cement Concrete Sidewalk	930	SY	$	119	$	110,670
13	Remove Cement Concrete Pavement	660.0	SY	$	28	$	18,480
14	HMA Cl. xx PG. xx-xx	930.0	Ton	$	210	$	195,300
15	Inlet protection	6.0	EA	$	112	$	672
16	Curb Ramp	6.0	EA	$	5,600	$	33,600
17	Driveway Approach	70.0	SY	$	140	$	9,800
18	Landscape Restoration	1.0	LS	$	78,000	$	78,000
19	"Crushed Surfacing Top Course	1000	Ton	$	56	$	56,000
20	High-Density Polyethylene (HDPE) Storm"	850	LF	$	112	$	95,200
21	Sewer Pipe 12" Diam	6	EA	$	3,500	$	21,000
22	Catch Basin Type 1	2	EA	$	5,600	$	11,200
23	Catch Basin Type 2	210	SY	$	42	$	8,820
24	Truck Apron	1500	LF	$	42	$	63,000
25	Vertical Curb and Gutter	1500	LF	$	35	$	52,500
26	Mountable Traffic Curb	1	LS	$	70,000	$	70,000
27	Illumination	370	SF	$	8	$	3,108
28	Crosswalk	1330	LF	$	14	$	18,620
29	Pavement Markings	3090	SY	$	7	$	21,630
30	Planing Bituminous Pavement	1	LS	$	86,184	$	86,184
	SubTotal Cost					$	1,163,487
	Contingency				40%	$	465,395
	Total Construction Cost with Contingency				% of Const. Const	$	1,628,881
	Total Design		Consultant		15%	$	244,332
	ROW Acquisition					$	25,000
	City Staff				10%	$	162,888
	Const. Management		Consultant		10%	$	162,888
	Total Project Cost					**$**	**2,223,990**

NE 192nd ST (73rd Av-75th Av) Sidewalks

CITY OF KENMORE

Date Prepared: October 20, 2022

Construction Days: 60

Engineer's Estimate -- Planning Level

Construction Year: 2025

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	30,550	$	30,550
2	Project Temporary Traffic Control	1	LS	$	88,920	$	88,920
3	Removal of Structure and Obstruction	1	LS	$	11,730	$	11,730
4	Clearing and Grubbing	1	LS	$	2,000	$	2,000
5	Permanent Signing	1	LS	$	11,000	$	11,000
6	Construction Surveying	1	LS	$	10,070	$	10,070
7	sawcutting	840	LF	$	5	$	4,200
8	SPCC / SWPPP	1	LS	$	2,000	$	2,000
9	Roadway excavation	48	CY	$	75	$	3,600
10	Structure excavation incl haul	11	CY	$	52	$	572
11	Private Property Restoration	1	LS	$	5,000	$	5,000
12	CSBC	143	TON	$	50	$	7,150
13	HMA	97	TON	$	180	$	17,460
14	Curb and gutter	380	LF	$	46	$	17,480
15	Driveway approach	75	SY	$	115	$	8,625
16	Sidewalk transition	1	EA	$	2,300	$	2,300
17	Sidewalk	360	SY	$	69	$	24,840
18	Connection to existing sewer/structure	2	EA	$	920	$	1,840
19	12 In pipe	330	LF	$	69	$	22,770
20	CB Type 1	3	EA	$	2,875	$	8,625
21	TESC	1	EST	$	5,750	$	5,750
22	AC thickened edge curb	400	LF	$	15	$	6,000
23	Seeding and Fertilizing	192	SY	$	6	$	1,152
24	Curb Ramp	2	EA	$	2,875	$	5,750
25	PSIPE	1	LS	$	31,575	$	31,575
26	Adjust Catch Basin	3	EA	$	690	$	2,070
27	Relocate Fire Hydrant	1	EA	$	3,000	$	3,000
	SubTotal Cost					$	336,029
	Contingency				40%	$	134,412
	Construction Contract				% of Const. Const	$	470,441
	Design		Consultant		30%	$	141,132
	City Staff				20%	$	94,088
	Const. Management		Consultant		20%	$	94,088
	Total Project Cost					**$**	**799,749**

Arrowhead Dr Sidewalks

CITY OF KENMORE

Date Prepared October 21, 2022

Construction Days: 90

Engineer's Estimate -- Planning Level

Construction Year 2026

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	101,368	$	101,368
2	Project Temporary Traffic Control	1	LS	$	142,740	$	142,740
3	Removal of Structure and Obstruction	1	LS	$	12,538	$	12,538
4	Clearing and Grubbing	1	LS	$	10,000	$	10,000
5	Permanent Signing	1	LS	$	6,655	$	6,655
6	Construction Surveying	1	LS	$	12,100	$	12,100
7	sawcutting	2500	LF	$	5	$	12,100
8	spcc	1	LS	$	1,210	$	1,210
9	roadway excavation	650	CY	$	91	$	58,988
10	structure excavation	100	CY	$	42	$	4,235
11	block wall	200	SF	$	61	$	12,100
12	Private Property Restoration	1	LS	$	98,736	$	98,736
13	gravel backfill for wall	50	CY	$	73	$	3,630
14	4 In pipe	50	LF	$	30	$	1,513
15	CSBC	230	TON	$	54	$	12,524
16	HMA	240	TON	$	212	$	50,820
17	Curb and gutter	2100	LF	$	48	$	101,640
18	Driveway approach	360	SY	$	97	$	34,848
19	Sidewalk transition	3	EA	$	1,815	$	5,445
20	Sidewalk	770	SY	$	85	$	65,219
21	Connection to existing sewer/structure	18	EA	$	605	$	10,890
22	12 In pipe	500	LF	$	61	$	30,250
23	CB Type 1	18	EA	$	3,025	$	54,450
24	TESC	1	LS	$	24,200	$	24,200
25	SWPPP	1	LS	$	6,050	$	6,050
26	Striping	1	LS	$	6,050	$	6,050
27	seeding and fertilizing	650	SY	$	6	$	3,933
28	Curb Ramp	5	EA	$	3,630	$	18,150
29	Cement Conc. Sidewalk with Integral Curb	738	LF	$	36	$	26,789
30	School Zone Flashers	3	EA	$	18,150	$	54,450
31	PSIPE	1	LS	$	43,318	$	43,318
32	RRFB	1	LS	$	24,200	$	24,200
33	Traffic Calming	1	LS	$	50,000	$	50,000
34	Adjust Catch Basin	15	EA	$	605	$	9,075
35	CB Type 2	1	EA	$	4,840	$	4,840
	SubTotal Cost					$	1,115,053
	Contingency				40%	$	446,021
	Construction Contract				% of Const. Const	$	1,561,074
	Design		Consultant		18%	$	280,993
	City Staff				10%	$	156,107
	Right of Way				3%		46,832
	Const. Management		Consultant		15%	$	234,161
	Total Project Cost					**$**	**2,279,167**

84th Ave NE (NE 150th St-NE 155th St)
Sidewalk and Bike Lanes

CITY OF KENMORE

Date Prepared May 5, 2022

Construction Days: 90

Engineer's Estimate -- Planning Level

Construction Year 2026

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	109,222.08	$	109,222.08
2	Project Temporary Traffic Control	1	LS	$	120,380.00	$	120,380.00
3	Removal of Structure and Obstruction	1	LS	$	8,336.90	$	8,336.90
4	Clearing and Grubbing	1	LS	$	17,100.00	$	17,100.00
5	Permanent Signing	1	LS	$	3,250.00	$	3,250.00
6	Construction Surveying	1	LS	$	71,995.00	$	71,995.00
7	Sawcutting	1,600	LF	$	5.00	$	8,000.00
8	Cement Conc. Driveway Entrance Type 1	275	SY	$	90.75	$	24,956.25
9	Cement Conc. Curb Ramp Type x	3	EA	$	3,025.00	$	9,075.00
10	Paint Line	4,963	LF	$	1.82	$	9,007.85
11	Plastic Crosswalk Line	107	SF	$	6.05	$	647.35
12	Gravel Backfill	1,930.0	ton	$	54.45	$	105,088.50
13	HMA Cl. xx PG. xx-xx	132.0	Ton	$	211.75	$	27,951.00
14	Catch Basin Inserts	21.0	EA	$	121.00	$	2,541.00
15	Raised Pavement Marker Type 1	3.0	Hund	$	847.00	$	2,541.00
16	Pedestrian Lighting	3.0	EA	$	6,050.00	$	18,150.00
17	Cement Conc. Sidewalk	1,055.0	SY	$	90.75	$	95,741.25
18	Cement Conc. Curb Ramp Perpendicular	13	EA	$	4,114.00	$	53,482.00
19	Cement Conc. Traffic Curb and Gutter	1580	LF	$	48.40	$	76,472.00
20	psiPE	1	LS	$	71,995.00	$	71,995.00
21	Plastic Bicycle Lane Symbol	10	EA	$	605.00	$	6,050.00
22	Catch Basin Type 1	6	EA	$	3,025.00	$	18,150.00
23	Storm Sewer Pipe 12" In. Diam	755	LF	$	78.65	$	59,380.75
24	Plastic Green Bike Crossing	160	SF	$	24.20	$	3,872.00
25	RRFB	1	LS	$	24,200.00	$	24,200.00
26	Plastic Green Pavement marking	1500	SF	$	24.20	$	36,300.00
27	Gravity Block Wall	2490	SF	$	60.50	$	150,645.00
28	Connection to Drainage Structure	5	EA	$	605.00	$	3,025.00
29	Private Driveway Restoration	11	EA	$	5,808.00	$	63,888.00
30	Mobilization	1	LS	$	109,222.08	$	109,222.08
	SubTotal Cost					$	1,201,442.93
	Contingency				40%	$	480,577.17
	Construction Contract				% of Const. Const	$	1,682,020.10
	Design		Consultant		13%		218,662.61
	City Staff				10%		168,202.01
	Right of Way				3%		50,460.60
	Const. Management		Consultant		15%		252,303.02
	Total Project Cost					**$**	**2,371,648.34**

80th Ave NE (SR 522-NE 185th St)
Sidewalk and Bike Lanes

CITY OF KENMORE

Date Prepared May 5, 2022
Engineer's Estimate -- Planning Level

Construction Days: 90
Construction Year 2026

Item No.	Description	Quantity	Unit		Unit Rate		Total
1	Mobilization	1	LS	$	99,273.25	$	99,273.25
2	Project Temporary Traffic Control	1	LS	$	69,420.00	$	69,420.00
3	Removal of Structure and Obstruction	1	LS	$	7,586.70	$	7,586.70
4	Clearing and Grubbing	1	LS	$	14,840.00	$	14,840.00
5	Permanent Signing	1	LS	$	5,000.00	$	5,000.00
6	Construction Surveying	1	LS	$	109,347.70	$	109,347.70
7	Sawcutting	1773	LF	$	5.00	$	8,865.00
8	Cement Conc. Driveway Entrance Type 1	325	SY	$	121.00	$	39,325.00
9	Cement Conc. Curb Ramp Type x	2	EA	$	605.00	$	1,210.00
10	Paint Line	9640	LF	$	1.82	$	17,496.60
11	Plastic Crosswalk Line	56	SF	$	6.05	$	338.80
12	Gravel Backfill	1,140.0	ton	$	54.45	$	62,073.00
13	HMA Cl. xx PG. xx-xx	150.0	Ton	$	242.00	$	36,300.00
14	Catch Basin Inserts	50.0	EA	$	211.75	$	10,587.50
15	Raised Pavement Marker Type 1	14.0	Hund	$	847.00	$	11,858.00
16	Pedestrian Lighting	3.0	EA	$	6,050.00	$	18,150.00
17	Cement Conc. Sidewalk	1,182.0	SY	$	84.70	$	100,115.40
18	Cement Conc. Curb Ramp Perpendicular	20	EA	$	3,630.00	$	72,600.00
19	Cement Conc. Traffic Curb and Gutter	1773	LF	$	42.35	$	75,086.55
20	psiPE	1	LS	$	109,347.70	$	109,347.70
21	Plastic Bicycle Lane Symbol	15	EA	$	484.00	$	7,260.00
22	Catch Basin Type 1	5	EA	$	3,025.00	$	15,125.00
23	Schedule Storm Sewer Pipe 12" In. Diam	1,095.00	LF	$	78.65	$	86,121.75
24	Plastic Green Bike Crossing/Bike Box	1095	SF	$	24.20	$	26,499.00
25	RRFB	3	LS	$	24,200.00	$	72,600.00
26	Plastic Green Pavement marking	3750	SF	$	3.03	$	11,343.75
27	Connection to Drainage Structure	7	EA	$	605.00	$	4,235.00
	SubTotal Cost					$	1,092,005.70
	Contingency				40%	$	436,802.28
	Construction Cost				% of Const. Const	$	1,528,807.97
	Total Design		Consultant		25%	$	382,201.99
	ROW Acquisition						100,000.00
	City Staff				12%		183,456.96
	Const. Management		Consultant		18%	$	275,185.44
	Total Project Cost					**$**	**2,469,652.36**

BASIS OF ESTIMATE

Project Name	73rd Ave NE & NE 192nd St Intersection Improvements
Project Number	554-3744-004
Date Prepared	12/20/2022
Prepared by	Jenna Anderson, PE, and Edward Wang, EIT
Estimate Classification	Unclassified
Estimate Purpose	Long-term Planning for Transportation Element
Estimate ID (Version)	
Project Manager	McIntire, Alicia

Note that the accuracy of the associated cost estimate is dependent upon the various underlying assumptions, inclusions, and exclusions described herein. Actual project costs may differ and can be significantly affected by factors such as changes in the external environment, the manner in which the project is executed and controlled, and other factors that may impact the estimate basis or otherwise affect the project. Estimate accuracy ranges are only assessments based upon the cost estimating methods and data employed in preparing the estimate and are not a guarantee of actual project costs.

BASIS OF ESTIMATE

Project Name: *73rd Ave NE & NE 192nd St Intersection Improvements*

Project Number: *554-3744-004* Date: 12/20/2022

1.0 Purpose

This project is located at the intersection of 73rd Avenue NE and NE 192nd Street in Kenmore. The project will replace the existing stop-controlled T intersection with a single-lane roundabout to improve safety and traffic flow for motorists, pedestrians, and cyclists.

This cost estimate is based on the attached conceptual design and is intended to provide planning guidance for the City.

2.0 Project Scope Definition

This project will include surveys, design, permitting, and construction of the roundabout and bicycle/pedestrian facilities as well as the removal of existing roadway facilities. The project scope includes the removal of existing stormwater facilities but does not include franchise utility relocations.

The scope includes realignment of existing driveway accesses as required.

Surveys will entail a review of existing data as well as collection of field data as necessary to complete design.

Design will entail advancing the conceptual design to a detailed final design, with reviews occurring at intermediate plan completion percentages.

3.0 Design Basis

The cross section for 73rd Avenue NE is in accordance with the City of Kenmore Engineering Department's *73rd Ave NE (181st St to 205th St) Cross Section* (Figure B-4) in the 2021 ROAD Standards document. The cross section for NE 192nd Street is in accordance with the City of Kenmore Engineering Department's *NE 192nd St Cross Section* (Figure B-8) specified in the 2021 ROAD Standards document. Both sections consist of a 6-foot sidewalk, 4-foot amenity strip, 6-inch curb, 5-foot bike lane, 2-foot bike lane buffer, and 10-foot travel lane on each side of the roadway.

The roundabout design adheres to the WSDOT Design Manual M 22-01, Chapter 1320 Roundabouts. The roundabout uses a 100-foot inscribed circle diameter (ICD) and provides a 17-foot wide circulating lane to allow 40-foot bus turning movements without use of a truck apron. A 10-foot wide truck apron is anticipated to accommodate larger truck movements. A 10-foot wide bicycle and pedestrian pathway is provided around the roundabout, with ramps to and from the bicycle lane on all approaches.

Six existing driveways entrances within the project area are reconstructed to meet the new roadway alignment.

The conceptual roundabout design ties into the existing roadway section as shown in Attachment A.

4.0 Cost Basis

The unit costs are sourced from projects within the Puget Sound region that have been bid out between January 2021 and November 2022.

Escalation cost is assumed to be 4.4% per year from the current year, 2022, to the forecasted construction year of 2044.

The engineering design fees were increased to account for the complexities of roundabout design, assumed outreach to affected homeowners, and coordination with adjacent existing utilities, including the King County Brightwater lift station.

5.0 Allowances

The survey costs are calculated based on the length of the project, using an assumed hourly rate and productivity rate based on other projects estimated in 2021 and 2022. The estimate includes both field time and office time.

The estimated scope of proposed signage accounts for the following:

- W2-6 (circular intersection) and W16-17P (roundabout) signs, facing each approach
- R1-2 (yield) sign, facing each approach
- R6-1R (one way) and R6-4A (roundabout directional) signs, facing each approach
- W11-2 (pedestrian) and W16-7P (downward diagonal arrow right) signs, facing each roadway direction at each crosswalk
- D3-302 (roundabout street name) sign, at each roundabout exit

The proposed illumination system consists of six luminaires, two on each approach to the roundabout. This allows for a luminaire spacing of less than 200 feet on all approaches.

6.0 Exclusions

The scope of this estimate does not include franchise utility relocations, such as the King County Brightwater lift station. Franchise utilities within City right-of-way are to be relocated at the utility company's expense per city franchise agreements.

7.0 Exclusions

The estimate makes the following construction assumptions:

- All crushed surfacing used beneath sidewalks and the roadway, as well as for trench backfill for the storm sewers, is assumed to be crushed surfacing base course (CSBC).
- Stormwater flow control and treatment are assumed to not be triggered by the project due to the amount of existing pollution generating impervious surface area.
- The existing retaining wall along the west side of 73rd Ave NE will be protected and maintained for continued use. The sidewalk will widen on the inside edge.

8.0 Risks (Threats and Opportunities)

This estimate was prepared without the use of detailed survey information, so utility locations, detailed topography, and other potential obstructions have not been precisely identified. There is potential for unforeseen survey details to add additional cost.

A King County Brightwater sewer lift station is located within the proposed roundabout footprint and may affect the design due to the difficulty of relocating or adjusting the lift station. Early coordination with King County will be critical when this project advances.

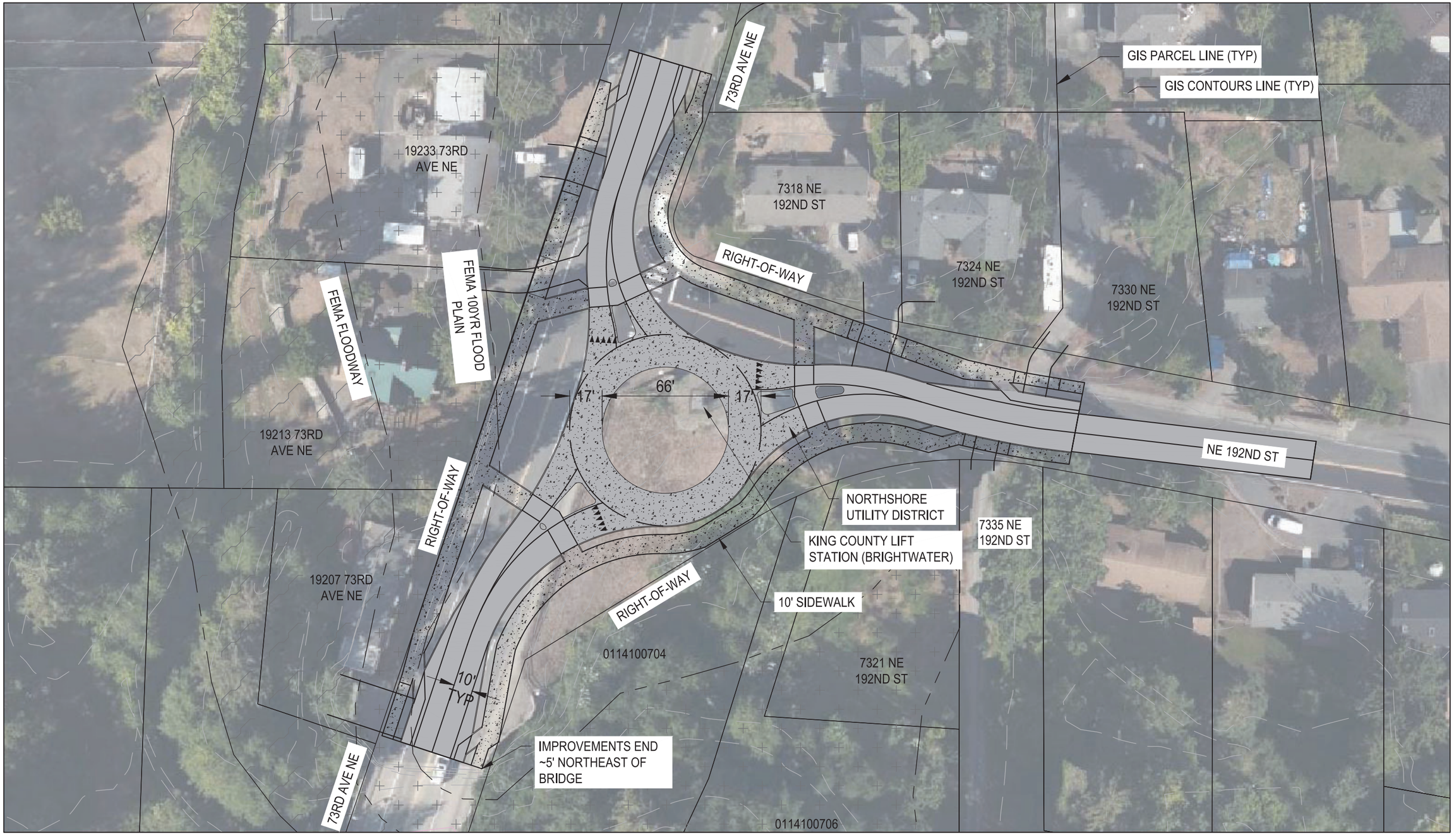
9.0 Contingency

The project includes a 30% allowance for indeterminates (AFI) based on the level of design applied to the subtotal of construction costs and a 30% project contingency applied to construction and non-construction costs. The AFI and contingency are intended to cover uncertainties and unforeseeable elements of cost within the defined project scope.

The 30% AFI was chosen in coordination with City of Kenmore staff due to the uncertainty of existing site conditions and the long-term nature of this estimate.

10.0 Attachments

Attachment A: Kenmore 73rd/192nd Draft Conceptual Layout (October 20, 2022)

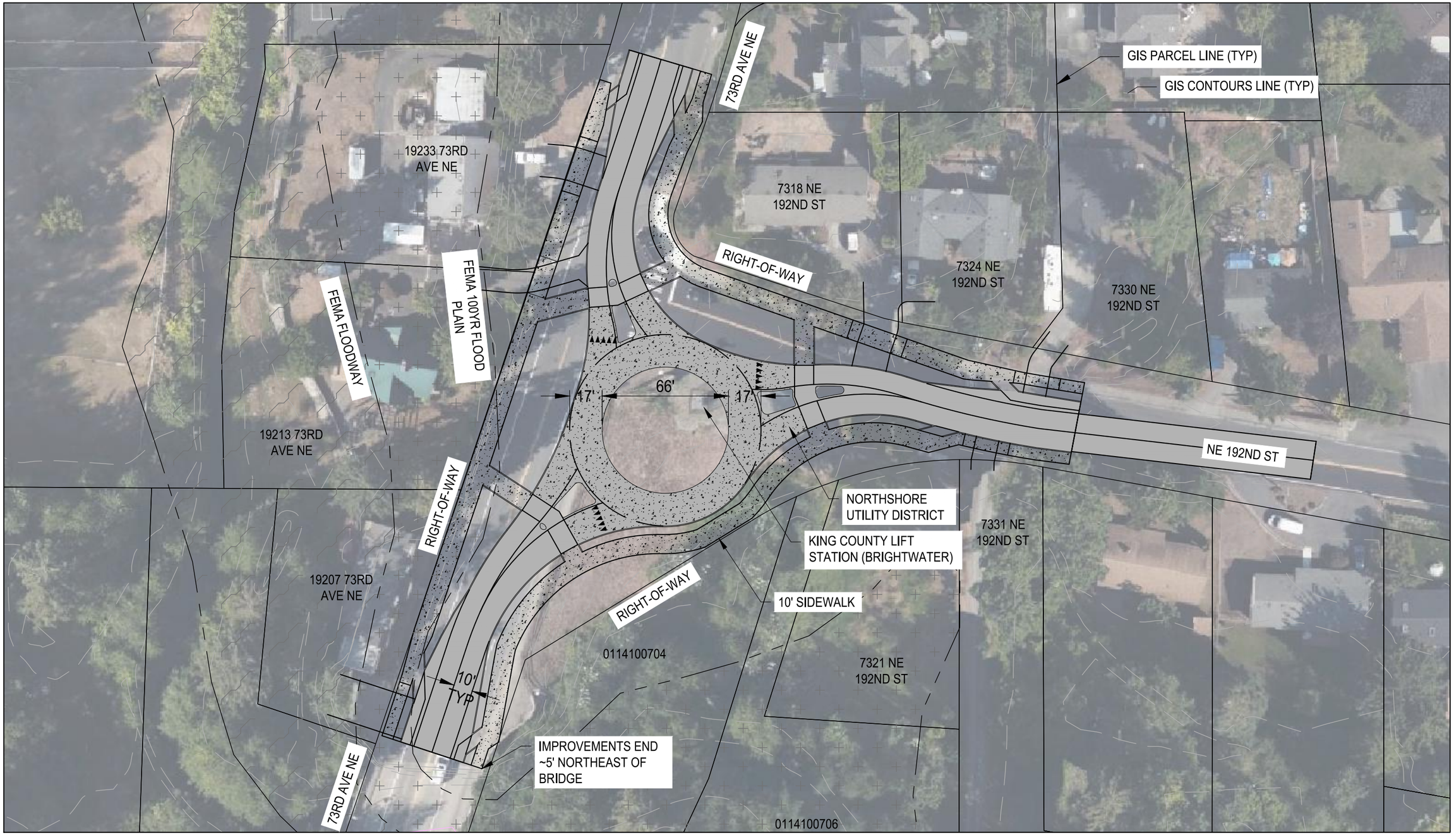


Parametrix DATE: October 20, 2022 FILE: ROUNDABOUTLAYOUT

0 N 50

1 INCH = 50 FT.

Kenmore 73rd/192nd Draft Conceptual Layout



Parametrix DATE: October 20, 2022 FILE: ROUNDABOUTLAYOUT

0 N 50

1 INCH = 50 FT.

Kenmore 73rd/192nd Draft Conceptual Layout

73rd Ave NE & NE 192nd St Intersection Improvements
CITY OF KENMORE

ENGINEER'S ESTIMATE - PLANNING LEVEL
AACE International Unclassified Estimate
PREPARED BY: Jenna Anderson, PE and Edward Wang, EIT DATE: 12/15/2022
CHECKED BY: Cindy Clark, PE DATE: 12/19/2022

NO.	ITEM	QUANT.	UNIT	UNIT COST	AMOUNT
1	ROADWAY SURVEY	1	LS	$ 15,000	$ 15,000
2	CLEARING AND GRUBBING	0.4	ACRE	$ 25,000	$ 10,000
3	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS	$ 5,000	$ 5,000
4	REMOVAL OF STORM PIPE	1000	LF	$ 12	$ 12,000
5	REMOVAL OF DRAINAGE STRUCTURE	7	EACH	$ 600	$ 5,000
6	REMOVAL OF CEMENT CONC. SIDEWALKS	620	SY	$ 30	$ 19,000
7	REMOVAL OF ASPHALT CONC. PAVEMENT	2700	SY	$ 57	$ 154,000
8	REMOVAL OF CEMENT CONC. CURB	1000	LF	$ 15	$ 15,000
9	ROADWAY EXCAVATION INCL. HAUL	1000	CY	$ 40	$ 40,000
10	CATCH BASIN TYPE 1	12	EACH	$ 2,500	$ 30,000
11	STORM SEWER PIPE, 12 IN. DIAM.	1300	LF	$ 55	$ 72,000
12	CRUSHED SURFACING BASE COURSE	1000	TON	$ 50	$ 50,000
13	CRUSHED SURFACING TOP COURSE	0	TON	$ -	$ -
14	HMA CL 1/2 IN. PG 58H-22	700	TON	$ 160	$ 112,000
15	TEXTURED CONCRETE FOR TRUCK APRON	200	SY	$ 200	$ 40,000
16	CEMENT CONC. TRAFFIC CURB AND GUTTER	1200	LF	$ 50	$ 60,000
17	ROUNDABOUT TRUCK APRON CURB	210	LF	$ 45	$ 10,000
18	CEMENT CONC. TRAFFIC CURB	400	LF	$ 45	$ 18,000
19	CEMENT CONC. SIDEWALK	1300	SY	$ 100	$ 130,000
20	CEMENT CONC. CURB RAMP	15	EACH	$ 4,000	$ 60,000
21	PAVEMENT MARKINGS	1400	LF	$ 10	$ 14,000
22	DRIVEWAY ENTRANCE	300	SY	$ 100	$ 30,000
23	PERMANENT SIGNING	1	LS	$ 9,000	$ 9,000
24	RECTANGULAR RAPID FLASHING BEACON SYSTEM	0	EACH	$ -	$ -
25	ILLUMINATION SYSTEM, COMPLETE	1	LS	$ 120,000	$ 120,000
26	TRAFFIC SIGNAL SYSTEMS MODIFICATIONS	0	LS	$ -	$ -
27	GRAVEL BACKFILL FOR PIPE ZONE	300	CY	$ 50	$ 15,000
28	SELECT BORROW INCL. HAUL	1200	CY	$ 90	$ 108,000
29	EMBANKMENT COMPACTION	1200	CY	$ 20	$ 24,000
30	STREET TREE	28	EACH	$ 500	$ 14,000
31	SEEDING AND FERTILIZING	1200	SY	$ 36	$ 44,000
	Subtotal				$ 1,235,000
	Erosion Controls and Water Pollution	5%			$ 61,750
	Prevention Temporary Traffic Controls	12%			$ 155,610
	Mobilization	10%			$ 145,236
	Allowance for Indeterminates	30%			$ 479,279
	CONSTRUCTION SUBTOTAL (ROUNDED)				**$2,080,000**
	Engineering Design Fees	15%			$ 312,000
	Construction Administration Fees ($50000 per	5 MOS		$ 50,000	$ 250,000
	month) Right of Way Cost				$ 13,000
	City of Kenmore Staff Labor	8%			$ 166,400
	NON-CONSTRUCTION SUBTOTAL				**$741,400**
	Project Contingency	30%			$ 846,420
	YEAR 2022 PROJECT TOTAL (ROUNDED)				$ 3,700,000
	Year 2044 Escalation	4.4%			$ 6,270,000
	YEAR 2044 PROJECT TOTAL (ROUNDED)				$ 9,970,000

ESCALATION FORECAST ASSUMPTION

CURRENT DATE 11/1/2022
FORECAST DATE 12/31/2044

BASIS OF ESTIMATE

Project Name	NE 181st Street/SR 522 East Connection
Project Number	554-3744-004
Date Prepared	12/1/2022
Prepared by	Jenna Anderson, PE, and Edward Wang
Estimate Classification	Unclassified
Estimate Purpose	Long-term Planning for Transportation Element
Estimate ID (Version)	
Project Manager	McIntire, Alicia

Note that the accuracy of the associated cost estimate is dependent upon the various underlying assumptions, inclusions, and exclusions described herein. Actual project costs may differ and can be significantly affected by factors such as changes in the external environment, the manner in which the project is executed and controlled, and other factors that may impact the estimate basis or otherwise affect the project. Estimate accuracy ranges are only assessments based upon the cost estimating methods and data employed in preparing the estimate and are not a guarantee of actual project costs.

BASIS OF ESTIMATE

Project Name: *NE 181st Street/SR 522 East Connection*

Project Number: *554-3744-004* Date: 12/1/2022

1.0 Purpose

This project improves the portion of NE 181st Street east of 73rd Avenue NE and extends it eastward and southward to intersect with SR 522/NE Bothell Way at the 7700 block. This project will create a local street connection to serve existing development and future transit-oriented development north of SR 522/NE Bothell Way and east of 73rd Avenue NE.

This cost estimate is based on the attached conceptual design and is intended to provide planning guidance for the City.

2.0 Project Scope Definition

The project includes the survey, design, right-of-way acquisition, permitting, and construction of a roadway corridor according to City of Kenmore's local street standard section. The project scope does not include utility relocations or building demolition.

Surveys will entail a review of existing data as well as the collection of field data as necessary to complete design.

Design will entail advancing the conceptual design to a detailed final design, with reviews occurring at intermediate plan completion percentages.

3.0 Design Basis

The cross section of this roadway uses a standard City of Kenmore local street section based on the City's Road Standards Table 6.1, with the following elements:

- 6-foot sidewalk on both sides of the street
- 4-foot amenity strip on both sides of the street
- Curb and gutter on both sides of the street
- 20-foot roadway width, measured from curb to curb
- 46-foot total right-of-way width

The 4-foot amenity strip is narrowed or removed at a few locations along the Heron Rookery to prevent encroachment into the wetland and rookery while also providing space for turning vehicle movements.

The standard design speed of the segment is 25mph. There are four reduced-speed curves: two 15mph curves and two 10mph curves. The design vehicle is SU-30, and the horizontal curves are widened to allow two SU-30 vehicles to pass within the curve. Eight traffic-calming speed

humps are included in the estimate. These humps will be located on the approaches to the reduced-speed curves to ensure vehicles approach these curves at safe speeds.

No channelization changes are made at the intersection with 73rd Avenue NE, which remains one lane westbound and one lane eastbound. The intersection at SR 522/NE Bothell Way also matches the existing configuration, with one southbound right-turn lane and one southbound left-turn lane.

From Station 100+00 to 104+00, the proposed roadway alignment follows an existing roadway. In this segment, a 2-inch grind and overlay is assumed. For the remainder of the roadway, a full-depth reconstruction is assumed. This includes a 6-inch depth of hot mix asphalt for all roadways and 2 inches of crushed surfacing under all paved and sidewalk areas, per City of Kenmore Road Standards.

A new proposed storm drainage system meets the catch basin spacing, pipe diameter, pipe zone backfill, and trench backfill specifications in the City of Kenmore Road Standards.

Street trees are assumed to be placed at a 40-foot interval, on average, for the entire length of the corridor and on both sides of the street. The remainder of amenity strip will be seeded and fertilized. In accordance with Downtown Improvements Standard 4 in the City of Kenmore Road Standards Figure 2.2, the street trees will be equipped with irrigation and electrical receptacles. Street and pedestrian lighting will also be provided in accordance with Downtown Improvements Standard 4.

No driveways or intersections are included in the conceptual design because these are expected to be configured and provided by development activity.

4.0 Cost Basis

Unit costs are sourced from projects within the Puget Sound region that have been bid out between January 2021 and November 2022.

Escalation cost is assumed to be 4.4% per year from the current year, 2022, to the forecasted construction year of 2044.

5.0 Allowances

Survey costs are calculated based on the length of the project, using an assumed hourly rate and productivity rate based on other projects estimated in 2021 and 2022. The estimate includes both field time and office time.

The estimated traffic signal modifications at 73rd Avenue NE include the relocation of one junction box, the relocation of two pedestrian push button poles, and the installation of four new accessible pedestrian signals at the east leg of the intersection.

The estimated traffic signal modifications at SR 522/NE Bothell Way include a new or relocated signal pole and mast arm to accommodate the new southbound approach, which has been realigned to meet SR 522 at a right angle. This also includes relocating one pedestrian push button pole, one pedestrian signal pole, and new accessible pedestrian signals on the north side of the intersection.

The estimated scope of proposed signage accounts for:

- R2-1 (speed limit) signs, two in each direction
- W1-1a (combination turn/advisory speed) and W1-6 (single direction large arrow) facing each direction at each reduced speed curve
- W17-1 (speed hump) facing each direction at each speed hump

The proposed illumination system adheres to Downtown Street Lighting (2.08.F) and Downtown Pedestrian Lighting (2.08.H) standards per the City of Kenmore Road Standards. Spacing of luminaries is assumed to match existing spacing of approximately 150 feet on other streets in Downtown Kenmore.

6.0 Exclusions

The estimate excludes the following costs. The scope of these items is expected to be borne by redevelopment activity:

- Utility relocations
- Removal of structures, including buildings, retaining walls, and other obstructions

7.0 Assumptions

The estimate makes the following construction assumptions:

- Roadway fill sections can be filled using material excavated from cut sections of the roadway. The feasibility of this assumption will need verification by a geotechnical engineer.
- All crushed surfacing used beneath sidewalks and the roadway, as well as for trench backfill for the storm sewers, is assumed to be crushed surfacing base course (CSBC).
- Continuous centerline striping is assumed for the full length of the corridor.

It is assumed that portions of the roadway conflicting with existing structures will only be built either concurrently with redevelopment or after redevelopment occurs. This allows the removal

of structures and obstructions to be borne by developers, as mentioned in the Exclusions section.

8.0 Risks (Threats and Opportunities)

This estimate was prepared without the use of detailed survey information, so utility locations, detailed topography, and other potential obstructions have not been precisely identified. There is potential for unforeseen survey details to add additional cost.

If the roadway excavation material is not suitable for fill, the borrowed material will need to be hauled in at additional cost.

9.0 Contingency

The project includes a 30% allowance for indeterminates (AFI) based on the level of design applied to the subtotal of construction costs and a 30% project contingency applied to construction and non-construction costs. The AFI and contingency are intended to cover uncertainties and unforeseeable elements of cost within the defined project scope.

The 30% AFI was chosen in coordination with City of Kenmore staff due to the uncertainty of existing site conditions and the long-term nature of this estimate.

10.0 Attachments

Attachment A: Kenmore NE 181st Street/SR 522 East Connection Draft Concept Plan Sheets (October 19, 2022)

Station

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00

Elevation

50 40 30 20 10

NE 181st St
Edge of Traveled Way

SR522
Edge of Travel Lanes

SR522
Back of North Sidewalk

Edge of Burke–Gilman Trail

6ft Bridge
Deck

NE 175th St
Edge of Traveled Way

Existing Grade

Max Grade
–15.0%

-3.33%

3.12%

Crest SSD 155ft
Design Speed 20mph

BVCS: 0+31.14
BVCE: 43.21

PVI STA: 1+01.76
PVI ELEV: 40.85
K: 12.00
LVC: 141.23

EVCS: 1+72.37
EVCE: 30.19

16.5ft Clearance
Under SR522 Bridge Deck

BVCS: 5+54.93
BVCE: 21.20

PVI STA: 5+98.62
PVI ELEV: 25.74
K: 12.00
LVC: 87.39

EVCS: 6+42.32
EVCE: 27.10

Crest SSD 155ft
Design Speed 20mph

BVCS: 1+72.37
BVCE: 30.19

Sag SSD 70.3ft
Design Exception & Adequate Illumination Required

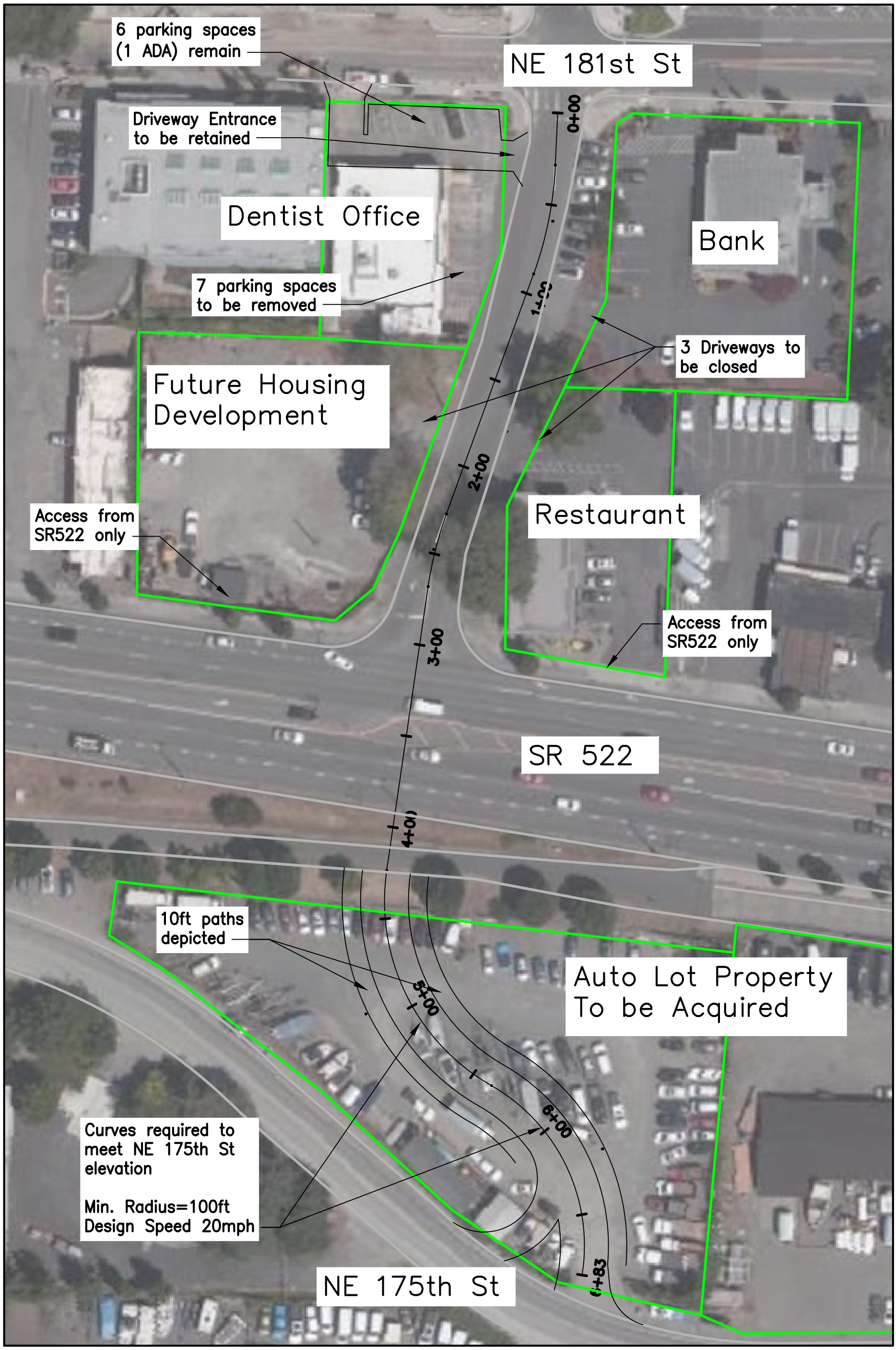
PVI STA: 3+63.65
PVI ELEV: 1.30
K: 15.00
LVC: 382.55

EVCS: 5+54.93
EVCE: 21.20

Parametrix DATE: September 26, 2022 FILE: 522CROSSING

0 N 1
1 INCH = 1 INCH

67th ave NE Vehicle Tunnel Option
DRAFT Concept

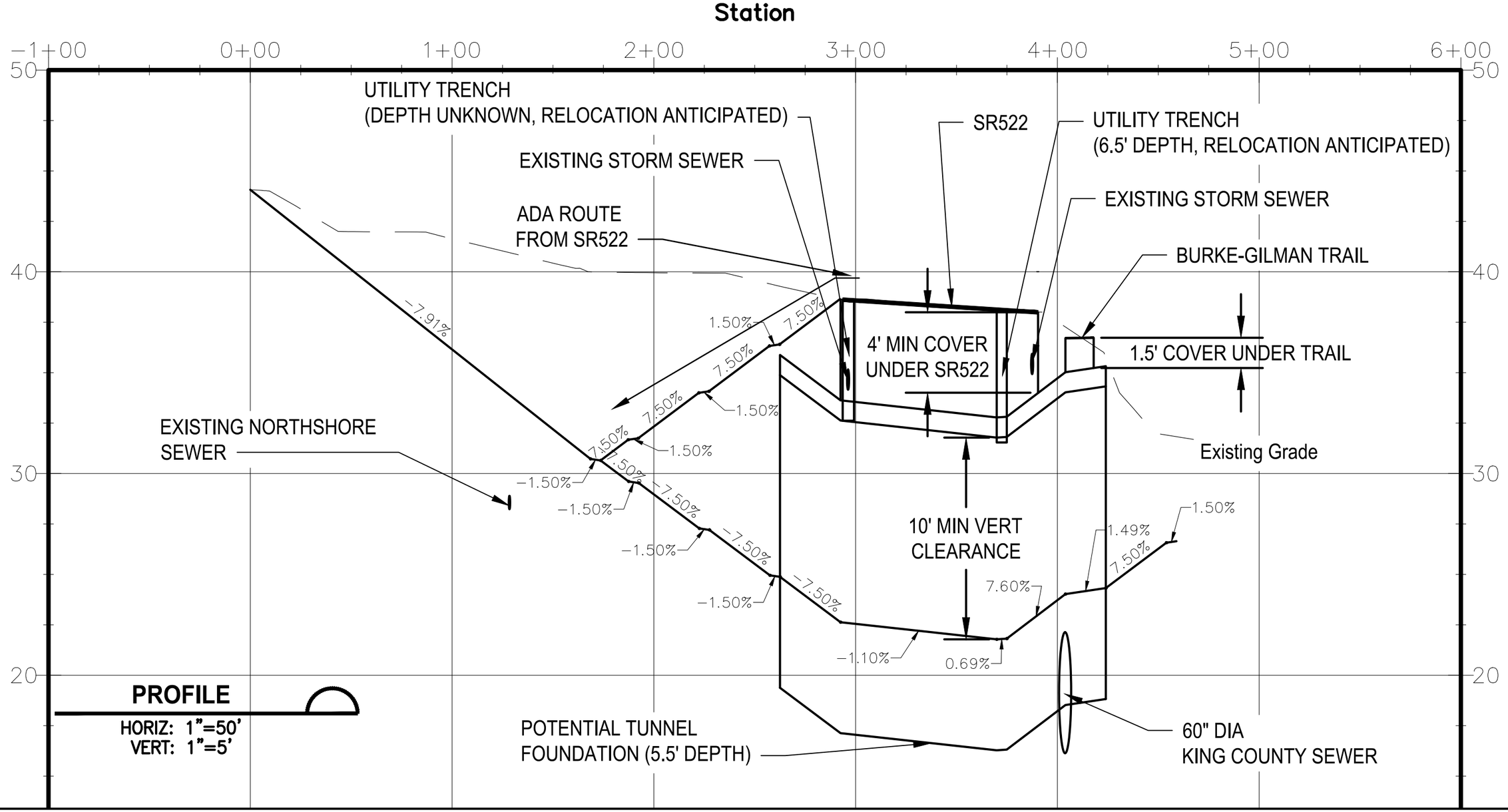


Parametrix DATE: September 26, 2022 FILE: 522CROSSING

0 N 1
1 INCH = 1 INCH

67th Ave NE Vehicle Tunnel Option
DRAFT Concept

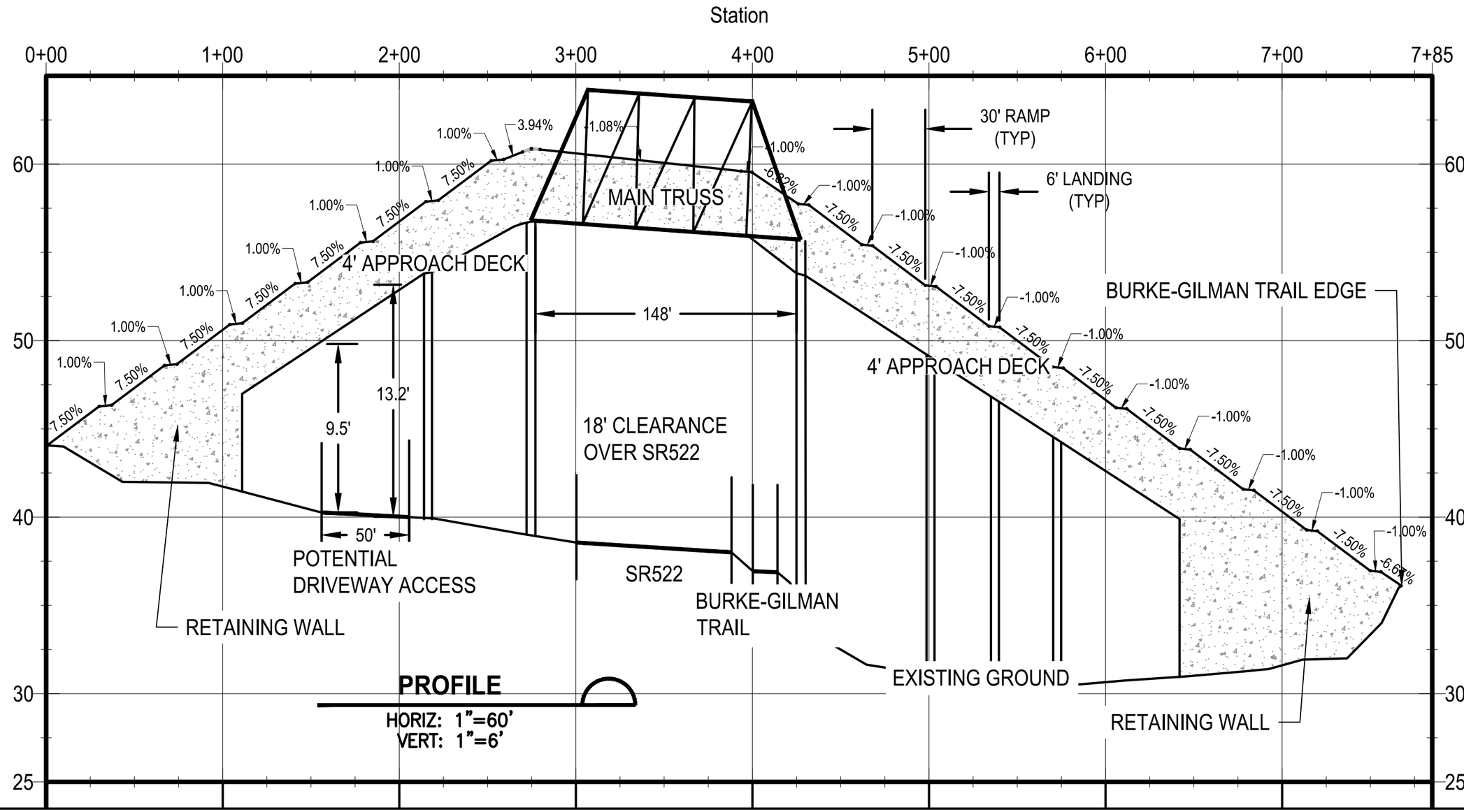
Ped&Bike Tunnel Alignment PROFILE



Parametrix DATE: November 4, 2022 FILE: 522CROSSING–PEDBIKETUNNELV3

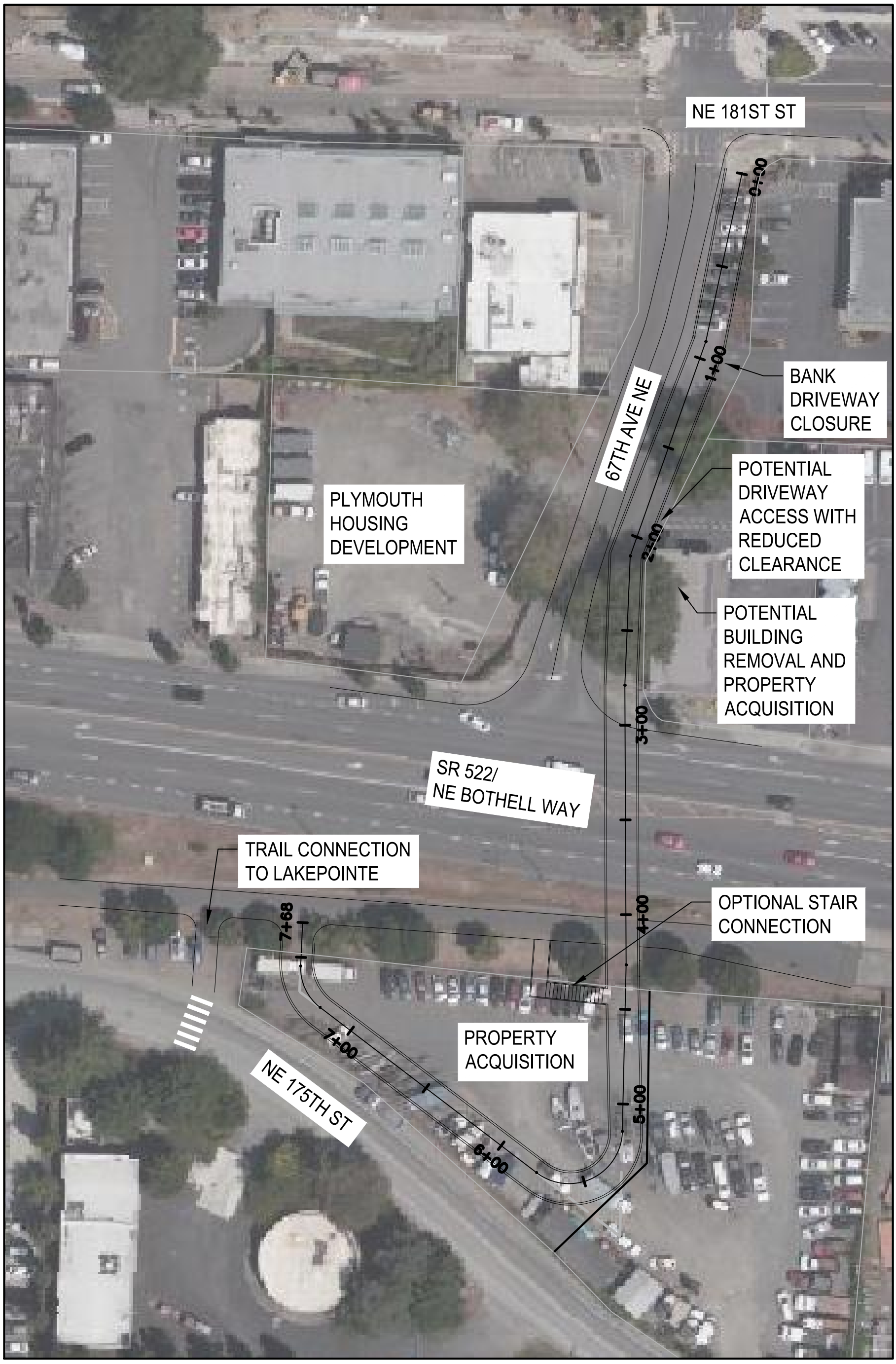
SR 522 Crossing
Ped/Bike Tunnel
DRAFT Concept

Potential Bridge Alignment PROFILE



Parametrix DATE: December 12, 2022 FILE: 522CROSSING-BRIDGE-V2

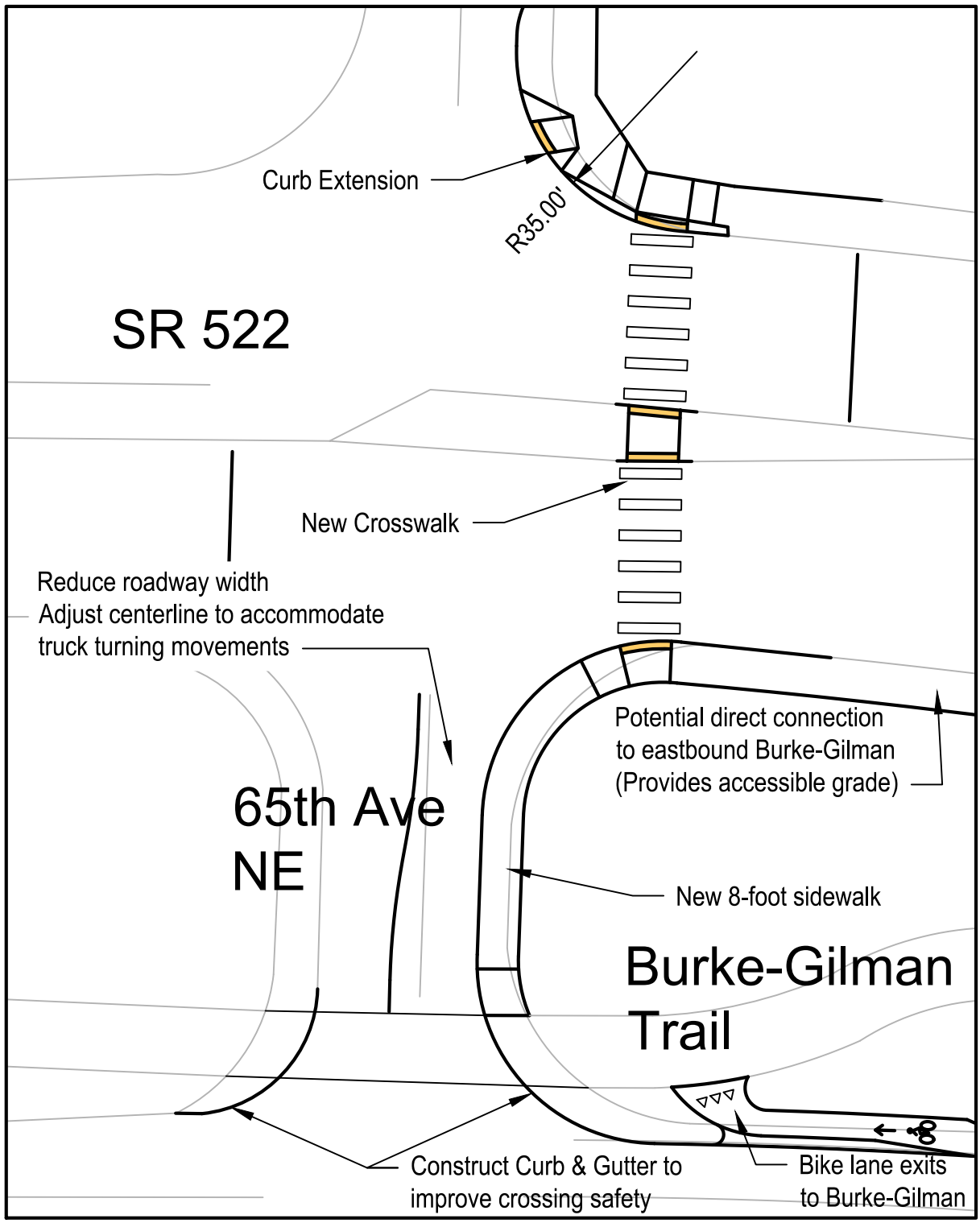
SR 522 Crossing
Potential Bridge Profile
DRAFT Concept



Parametrix DATE: December 12, 2022 FILE: 522CROSSING–BRIDGE–V2

0 N 50
1 INCH = 50 FT.

SR522 Crossing
Potential Bridge Alignment
DRAFT Concept



SR 522 Crossing
At-Grade Crossing
DRAFT Concept

Parametrix DATE: September 13, 2022 FILE: 522CROSSING–ATGRADE

NE 181st Street/SR 522 East Connection
CITY OF KENMORE

ENGINEER'S ESTIMATE - PLANNING LEVEL
AACE International Unclassified Estimate
PREPARED BY: Jenna Anderson, PE and Edward Wang DATE: 11/18/2022
CHECKED BY: Cindy Clark, PE DATE: 11/20/2022

NO.	ITEM	QUANT.	UNIT	UNIT COST	AMOUNT
1	ROADWAY SURVEY	1	LS	$ 27,000	$ 27,000
2	CLEARING AND GRUBBING	1	ACRE	$ 25,000	$ 25,000
3	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	0	LS	$ -	$ -
4	REMOVAL OF CEMENT CONC. SIDEWALKS	40	SY	$ 30	$ 2,000
5	REMOVAL OF ASPHALT CONC. PAVEMENT	5800	SY	$ 57	$ 331,000
6	REMOVAL OF CEMENT CONC. CURB	3400	LF	$ 15	$ 51,000
7	ROADWAY EXCAVATION INCL. HAUL	2100	CY	$ 40	$ 84,000
8	CATCH BASIN TYPE 1	46	EACH	$ 2,500	$ 115,000
9	STORM SEWER PIPE, 12 IN. DIAM.	3000	LF	$ 55	$ 165,000
10	CRUSHED SURFACING BASE COURSE	2400	TON	$ 50	$ 120,000
11	CRUSHED SURFACING TOP COURSE	0	TON	$ -	$ -
12	HMA CL 1/2 IN. PG 58H-22	2100	TON	$ 160	$ 336,000
13	CEMENT CONC. TRAFFIC CURB AND GUTTER	4900	LF	$ 50	$ 245,000
14	CEMENT CONC. TRAFFIC CURB	0	LF	$ -	$ -
15	CEMENT CONC. SIDEWALK	3300	SY	$ 100	$ 330,000
16	CEMENT CONC. CURB RAMP	7	EACH	$ 4,000	$ 28,000
17	PAVEMENT MARKINGS	5400	LF	$ 10	$ 54,000
18	PERMANENT SIGNING	1	LS	$ 8,000	$ 8,000
19	RECTANGULAR RAPID FLASHING BEACON SYSTEM	0	EACH	$ -	$ -
20	ILLUMINATION SYSTEM, COMPLETE	1	LS	$ 510,000	$ 510,000
21	TRAFFIC SIGNAL SYSTEMS MODIFICATIONS	1	LS	$ 130,000	$ 130,000
22	PLANING BITUMINOUS PAVEMENT	1200	SY	$ 5	$ 6,000
23	GRAVEL BACKFILL FOR PIPE ZONE	700	CY	$ 50	$ 35,000
24	SPEED HUMP	8	EACH	$ 2,000	$ 16,000
25	EMBANKMENT COMPACTION	1400	CY	$ 5	$ 7,000
26	SEEDING AND FERTILIZING	2200	SY	$ 36	$ 80,000
27	STREET TREES WITH ELECTRICAL RECEPTACLE	120	EACH	$ 1,500	$ 180,000
28	STREET TREE IRRIGATION SYSTEM	1	LS	$ 70,000	$ 70,000
29	STORMWATER DETENTION & TREATMENT	1	LS	$ 650,000	$ 650,000
	Subtotal				$ 3,605,000
	Erosion Controls and Water Pollution	5%			$ 180,250
	Prevention Temporary Traffic Controls	12%			$ 454,230
	Mobilization	10%			$ 423,948
	Allowance for Indeterminates	30%			$ 1,399,028
	CONSTRUCTION SUBTOTAL (ROUNDED)				**$6,060,000**
	Engineering Design Fees	10%			$ 606,000
	Construction Administration Fees ($50000 per	12 MOS		$ 50,000	$ 600,000
	month) Right of Way Cost				$ 3,000,000
	City of Kenmore Staff Labor	8%			$ 484,800
	NON-CONSTRUCTION SUBTOTAL				**$4,690,800**
	Project Contingency	30%			$ 3,225,240
	YEAR 2022 PROJECT TOTAL (ROUNDED)				$ 1 4,000,000
	Year 2044 Escalation	4.4%			$ 23,700,000
	YEAR 2044 PROJECT TOTAL (ROUNDED)				$ 37,700,000

ESCALATION FORECAST ASSUMPTION

CURRENT DATE 11/1/2022
FORECAST DATE 12/31/2044

BASIS OF ESTIMATE

Project Name	SR 522 Crossing
Project Number	554-3744-004
Date Prepared	12/1/2022
Prepared by	Jenna Anderson, PE, and Edward Wang
Estimate Classification	Unclassified
Estimate Purpose	Long-term Planning for Transportation Element
Estimate ID (Version)	
Project Manager	McIntire, Alicia

Note that the accuracy of the associated cost estimate is dependent upon the various underlying assumptions, inclusions, and exclusions described herein. Actual project costs may differ and can be significantly affected by factors such as changes in the external environment, the manner in which the project is executed and controlled, and other factors that may impact the estimate basis or otherwise affect the project. Estimate accuracy ranges are only assessments based upon the cost estimating methods and data employed in preparing the estimate and are not a guarantee of actual project costs.

1.0 Purpose

This project provides a protected bicycle and pedestrian crossing of SR 522 (NE Bothell Way) between 65th Avenue NE and 68th Avenue NE, with a preferred location at 67th Avenue NE. The crossing limits extend from the existing NE 181st Street to NE 175th Street. This project will improve connectivity between Downtown Kenmore and the future Lakepointe development and improve bicycle and pedestrian safety.

This cost estimate is based on the attached conceptual design of the preferred alternative and is intended to provide planning guidance for the City.

2.0 Project Scope Definition

This project includes survey, design, right-of-way acquisition, permitting, removal of structures, and construction of a pedestrian/bicycle facility with connections to the Burke-Gilman Trail and existing infrastructure. The project scope does not include utility relocations.

Surveys will entail a review of existing data as well as the collection of field data as necessary to complete design.

Design will entail advancing the conceptual design to a detailed final design, with reviews occurring at intermediate plan completion percentages.

3.0 Design Basis

The City requested four alternatives to be evaluated during the conceptual design development:

1. Vehicle/Pedestrian/Bicycle Tunnel
2. Pedestrian/Bicycle-Only Tunnel
3. Pedestrian/Bicycle Bridge
4. At-Grade Pedestrian/Bicycle Crossing

1. Vehicle/Pedestrian/Bicycle Tunnel

The vehicle tunnel option faces multiple issues, making this option infeasible. Due to the short distance from SR 522 to the adjacent streets, NE 181st Street and NE 175th Street, extreme grades (15%) and vertical curvature are required to tie into these streets at their existing elevations while providing sufficient clearance beneath SR 522. Additionally, the parcel at 6532 NE Bothell Way is currently being developed as an affordable housing development and is proposed to be accessed from 67th Avenue NE; a vehicle tunnel would not allow for driveway

access. Finally, there are numerous utility conflicts further detailed for the pedestrian and bicycle tunnel option below.

2. Pedestrian/Bicycle-Only Tunnel

The conceptual pedestrian and bicycle tunnel option is aligned with the east side of 67th Avenue NE, between NE 181st Street and NE 175th Street. The tunnel would require closure of the existing bank and restaurant driveway accesses on the east side of 67th Avenue NE. A vertical clearance of 10 feet within the tunnel is assumed above the trail ground surface.

The following potential utility conflicts have been identified along the alignment:

- Northshore Utility District 8-inch sewer line crossing 67th Avenue NE near the boundary between the restaurant and bank properties. The approximate depth of this sewer is 12 feet.
- Northshore Utility District 8-inch water main running along 67th Avenue NE at an unknown depth. Some portions of this pipe may need to be relocated to the west.
- City stormwater system along the east side of 67th Avenue NE will need to be relocated.
- A joint utility trench along the north side of SR 522, at an unknown depth, may require relocation. The trench is known to contain the following utilities:
    - Northshore Utility District 10-foot water main with a 16-inch casing
    - Puget Sound Energy gas line
    - Verizon conduit
    - City storm drain pipe with approximately 3 feet of cover
- A joint utility trench on the south side of SR 522, located approximately 15 feet north of the southern edge of the roadway. The depth of the trench is approximately 6.5 feet and relocation is anticipated. This trench is known to contain the following:
    - Puget Sound Energy conduit
    - Comcast conduit
- King County 60-inch diameter sewer line approximately aligned with the northern edge of the Burke-Gilman trail. The top of this pipe is approximately 15 feet under the Burke-Gilman trail. Relocation of the sewer would be necessary since it is anticipated to conflict with the potential tunnel foundation.

Another challenge associated with the pedestrian/bicycle tunnel option is a below-grade switchback on the north side of SR 522 to meet ADA grade requirements and anticipated clearance needs.

The pedestrian/bicycle tunnel option is technically feasible with the aforementioned driveway closures and utility relocations. However, the pedestrian/bicycle tunnel option was considered infeasible due to the difficulty of relocating the King County 60-inch diameter sewer line.

3. Pedestrian/Bicycle Bridge

The conceptual pedestrian and bicycle bridge is also aligned with the east side of 67th Avenue NE. This requires closure of the bank driveway. It may be feasible to provide driveway access to the existing parcel with a reduced vertical clearance of approximately 8 feet. However, as the design progresses, the City should consider risk and liability in determining whether vehicle access should be maintained at this location. After crossing SR 522, the bridge ramps down in a large arc within a portion of the auto lot property south of SR 522 and intersects with the Burke-Gilman Trail. A separate trail connection provides access to NE 175th Street.

4. At-Grade Pedestrian/Bicycle Crossing

An at-grade pedestrian and bicycle crossing, assumed to be located at 65th Avenue NE, is feasible but would impact traffic operations on SR 522. The at-grade crossing option provides a lower level of service for crossing users and vehicles when compared with the grade-separated options. However, the at-grade crossing would be less expensive than the grade separated options.

The City requested the most expensive and feasible option to be used for the 20-year project preferred alternative. Therefore, the pedestrian and bicycle bridge option was advanced for this conceptual cost estimate.

4.0 Cost Basis

Unit costs are sourced from WSDOT unit bid analysis in the Northwest region and other projects from within the Puget Sound region that have been bid out between January 2021 and November 2022.

Escalation cost is assumed to be 4.4% per year from the current year, 2022, to the forecasted construction year of 2044.

5.0 Allowances

Survey costs are calculated based on the length of the project, using an assumed hourly rate and productivity rate based on other projects estimated in 2021 and 2022. The estimate includes both field time and office time.

Property acquisition includes a portion of the auto lot parcel, as shown on the design plan. This purchase is estimated based on square footage and does not consider loss of business revenue or other impacts. A full acquisition of the restaurant property is included; the existing restaurant is approximately 3 to 4 feet from the proposed bridge structure, and demolition of the restaurant

may be required for construction of the bridge. The cost of closing the bank driveway is included and assumed at 5% of the total value of the property. Finally, a 10-foot wide temporary construction easement on non-acquired parcels is included, with an assumed cost of 5% of the purchase value of the square footage used.

Removal of structures includes the removal of fencing and other structures in the acquired portion of the auto lot parcel, as well as demolition and removal of the restaurant building.

Signage costs encompass crosswalk signage on NE 175th Street, directional signs and stop signs at all trail junctions, and warning signs for the bridge curves. The proposed illumination system consists of pedestrian luminaires spaced 150 feet apart along the full length of the bridge.

The estimate includes the trail connection from the Burke-Gilman trail to NE 175th Street as well as the crosswalk across NE 175th Street, including curb ramps and pavement markings.

6.0 Exclusions

The scope of this estimate does not include any improvements to the Burke-Gilman Trail or NE 175th Street beyond the intersections and crosswalk. Also, the scope does not include utility relocations. Franchised utilities within City right-of-way are to be relocated at the utility company's expense.

7.0 Assumptions

The bridge is assumed to provide 18 feet of clearance above SR 522, slightly more than the required 17.5 feet prescribed by WSDOT Design Manual 720.03(5)(b).

The proposed trail is a total of 16 feet wide, consisting of a 12-foot wide trail with 2 feet of clearance on both sides, in accordance with the desirable shared-use path width in WSDOT Design Manual Section 1515.02(2)(a). The bridge railing and structure is assumed to occupy an additional 1 foot on each side, for a total bridge cross section width of 18 feet.

Stormwater runoff is assumed to be routed to existing storm sewers on adjacent roadways. It is assumed that these storm sewers have the capacity to handle the runoff from the bridge and that additional detention infrastructure is not required.

The trail is supported on a retaining wall for the first 110 feet at the north landing of the bridge and the last 125 feet at the south landing. The bridge approach spans are assumed to have a 4-foot thick superstructure consisting of a concrete deck supported on steel girders. The main span crossing SR 522 and the Burke-Gilman Trail is supported by a prefabricated steel truss.

A higher construction administration fee of $60,000 per month was assumed due to the additional complexities of working on and around a high-volume state highway.

8.0 Risks (Threats and Opportunities)

This estimate was prepared without the use of detailed survey information, so utility locations, detailed topography, and other potential obstructions have not been precisely identified. There is potential for unforeseen survey details to add additional cost.

A geotechnical assessment was not performed as part of this estimate, and shaft foundation depths are assumed comparable to other Puget Sound-area nonmotorized bridge projects. Actual ground and soil conditions may necessitate deeper foundations, which would increase project cost.

Stormwater detention will add additional cost if adjacent stormwater facilities do not have the capacity to accommodate runoff from the bridge.

9.0 Contingency

The project includes a 30% allowance for indeterminates (AFI) based on the level of design applied to the subtotal of construction costs and a 30% project contingency applied to construction and non-construction costs. The AFI and contingency are intended to cover uncertainties and unforeseeable elements of cost within the defined project scope.

The 30% AFI was chosen in coordination with City of Kenmore staff due to the uncertainty of existing site conditions and the long-term nature of this estimate.

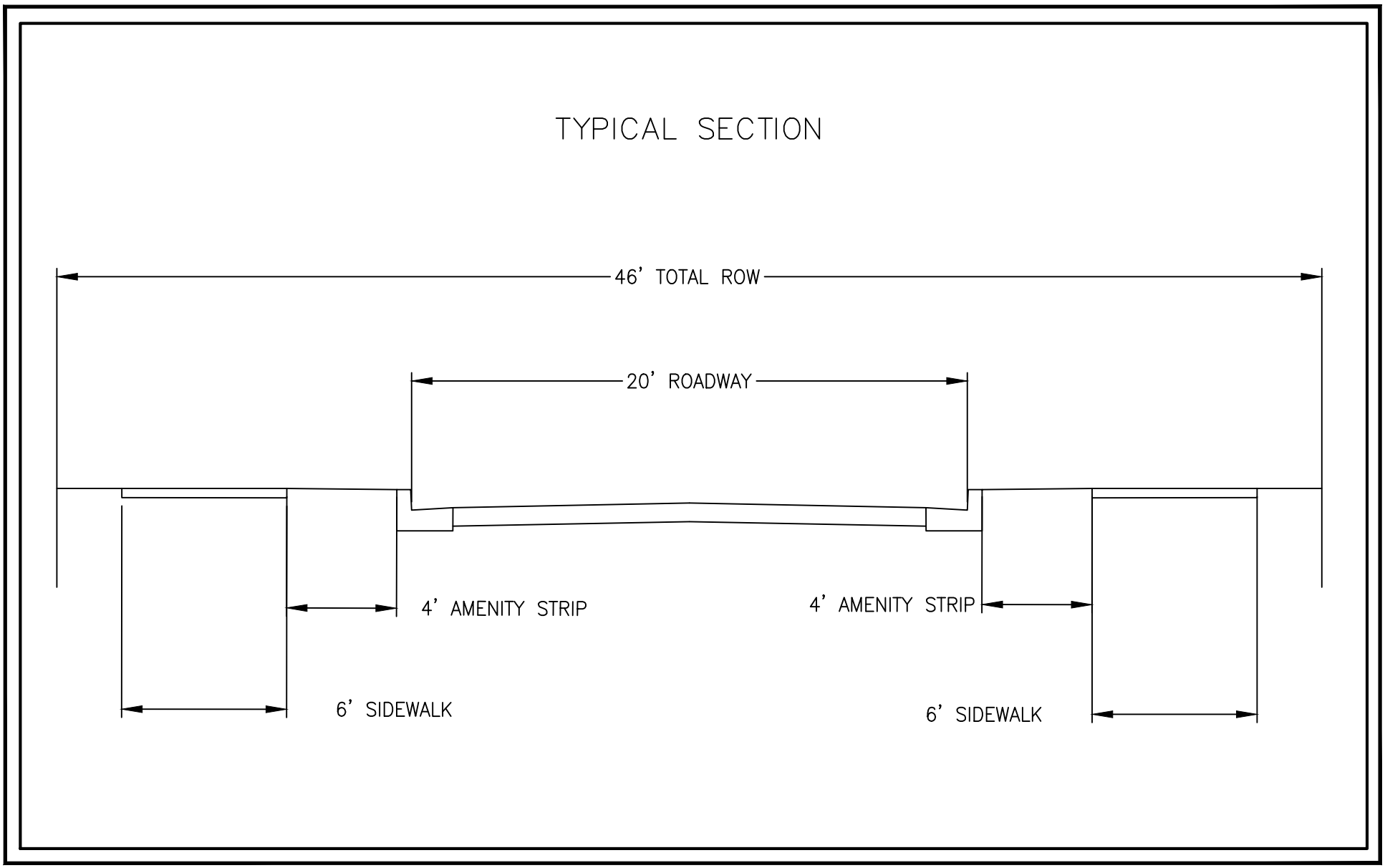
10.0 Attachments

Attachment A: SR 522 Crossing Vehicle Tunnel Plan and Profile Sheets (September 26, 2022)

Attachment B: SR 522 Crossing Pedestrian/Bicycle Tunnel Profile Sheet (November 4, 2022)

Attachment C: SR 522 Crossing Pedestrian/Bicycle Bridge Plan and Profile Sheets (November 14, 2022)

Attachment D: SR 522 Crossing At-grade Plan Sheet (September 13, 2022)



Parametrix DATE: October 19, 2022 FILE: ACCESSROAD_V3-FEATLINES

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1 INCH = 10 FT.

Kenmore NE 181st Street/SR 522 East Connection
Draft Concept

MARY'S PLACE NORTHSHORE
18118 73RD AVE NE

73RD AVE NE

COLUMBIA CREST
MONTESSORI
18030 73RD AVE NE

100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
108+00
109+00
110+00

CENTERLINE RADIUS 47FT
DESIGN SPEED 15MPH

AMENITY STRIP NARROWS
TO PRESERVE HERON
ROOKERY AND WETLANDS

HERON ROOKERY

CENTERLINE RADIUS 30FT
DESIGN SPEED 10MPH

ALL CURVES WIDENED FOR
SU-30 TURN WITHOUT LANE
ENCROACHMENT

KC METRO PARK AND RIDE
7340 NE BOTHELL WAY

CENTERLINE RADIUS 47FT
DESIGN SPEED 15MPH

Parametrix DATE: October 19, 2022 FILE: ACCESSROAD_V3-FEATLINES

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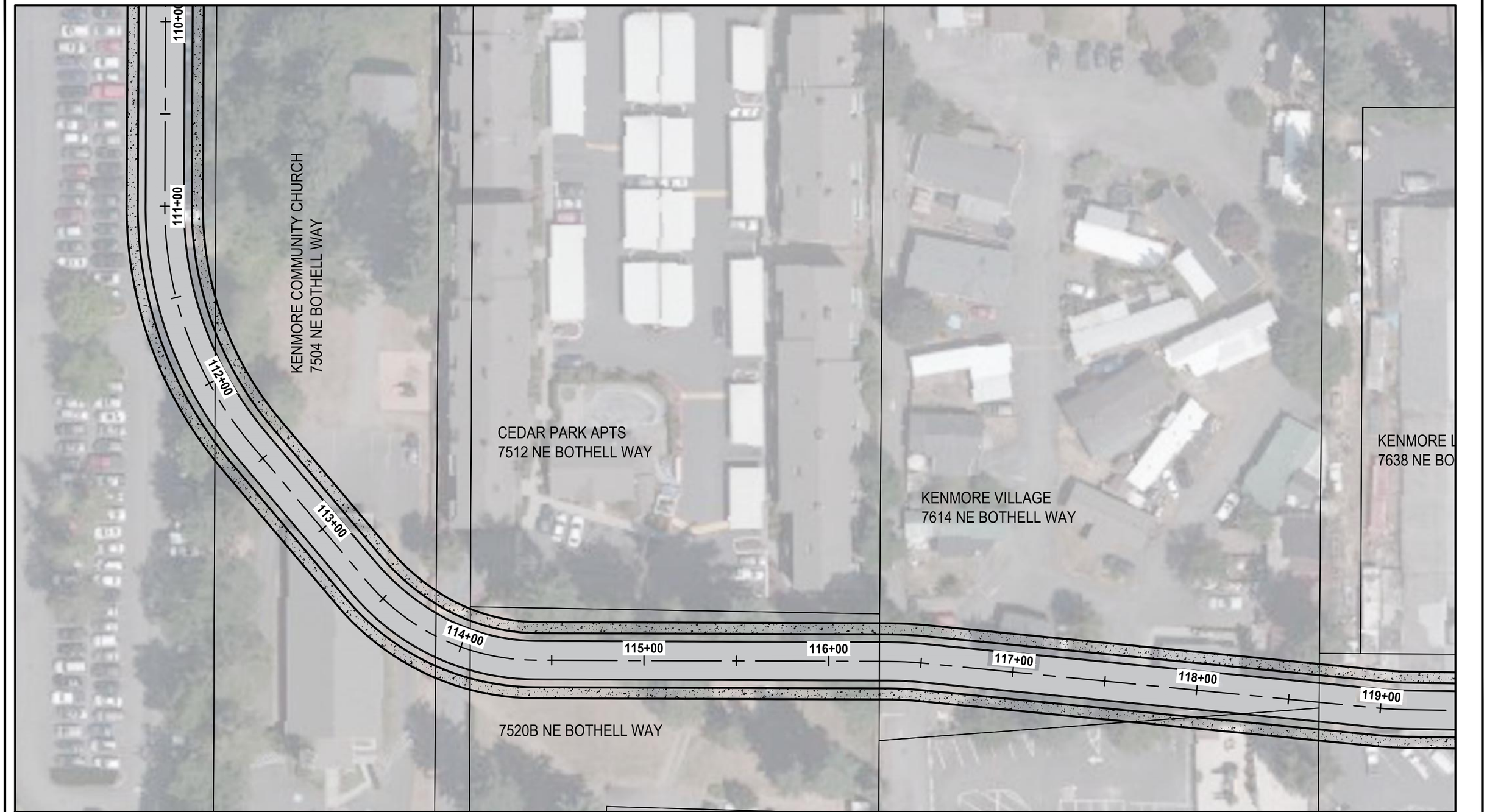
1 INCH = 50 FT.

Kenmore NE 181st Street/SR 522 East Connection
Draft Concept



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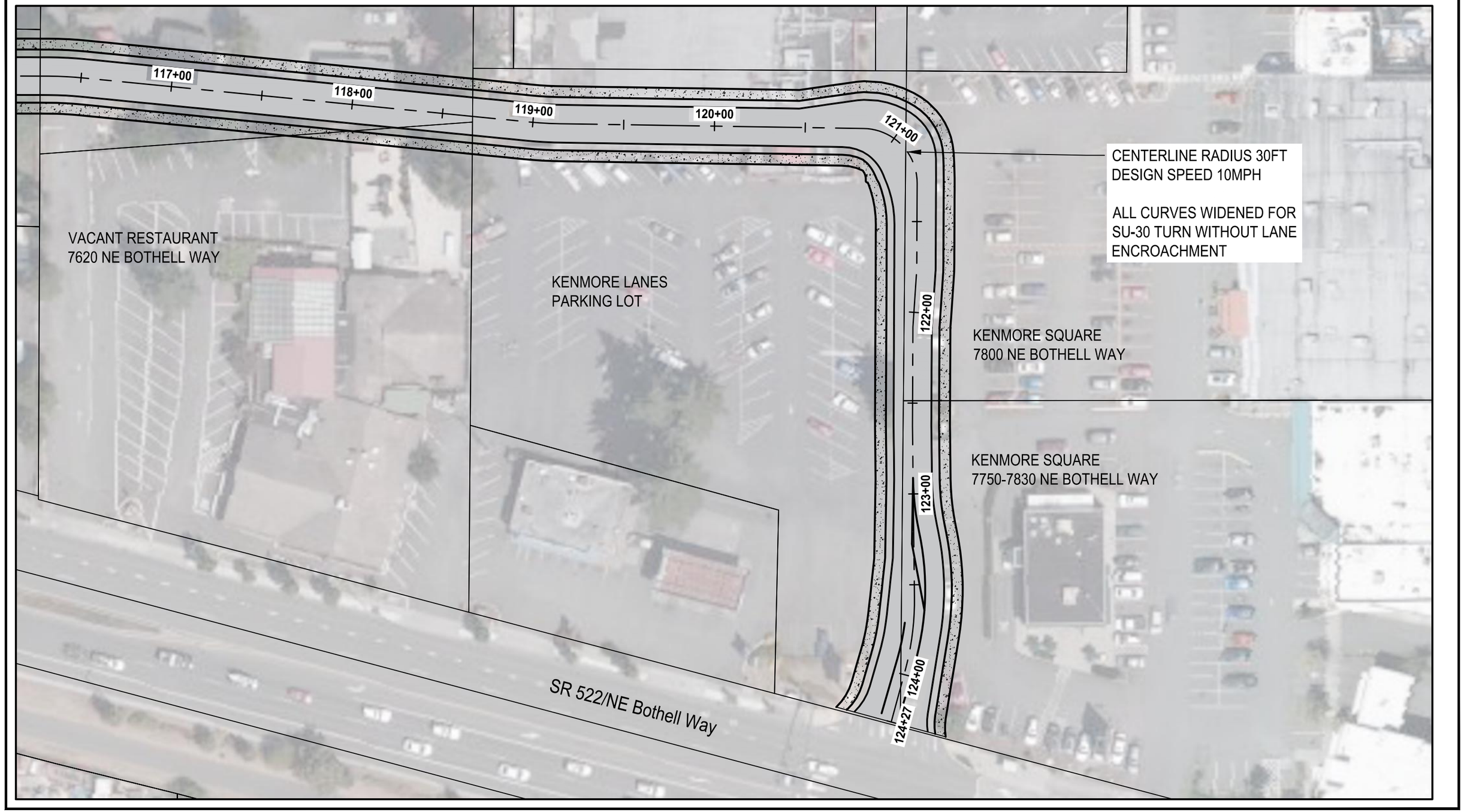

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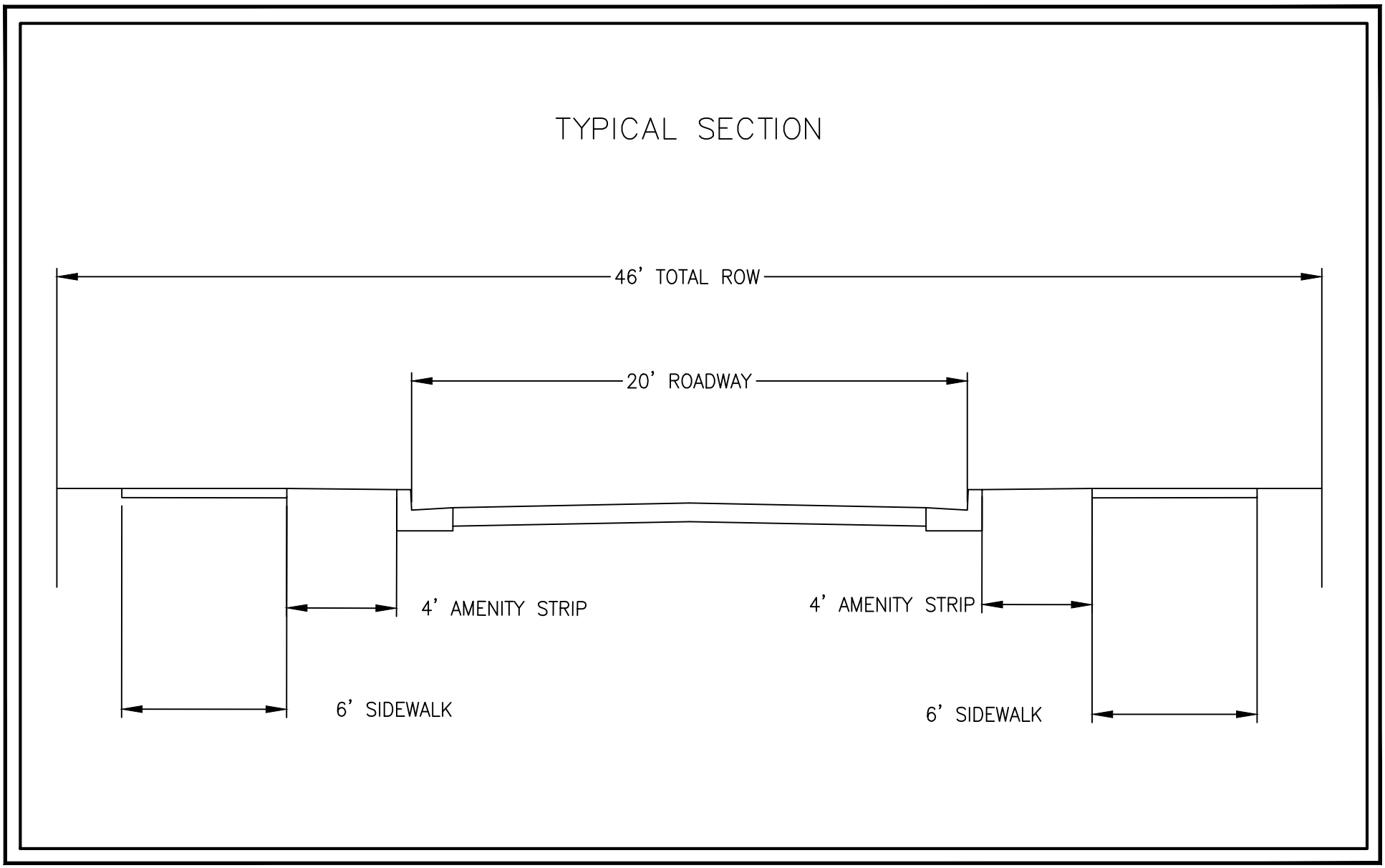
Kenmore NE 181st Street/SR 522 East Connection
Draft Concept



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Kenmore NE 181st Street/SR 522 East Connection
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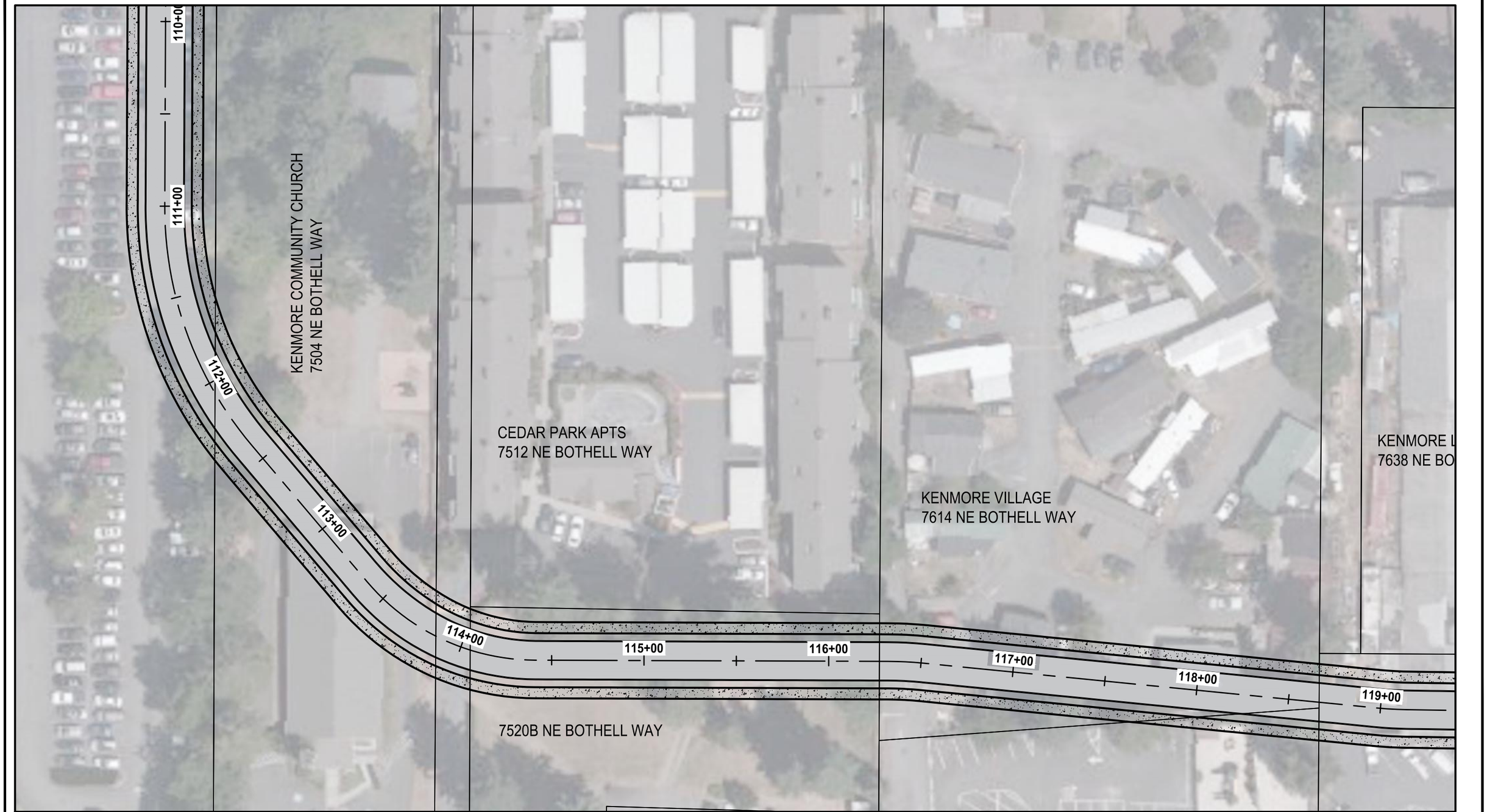

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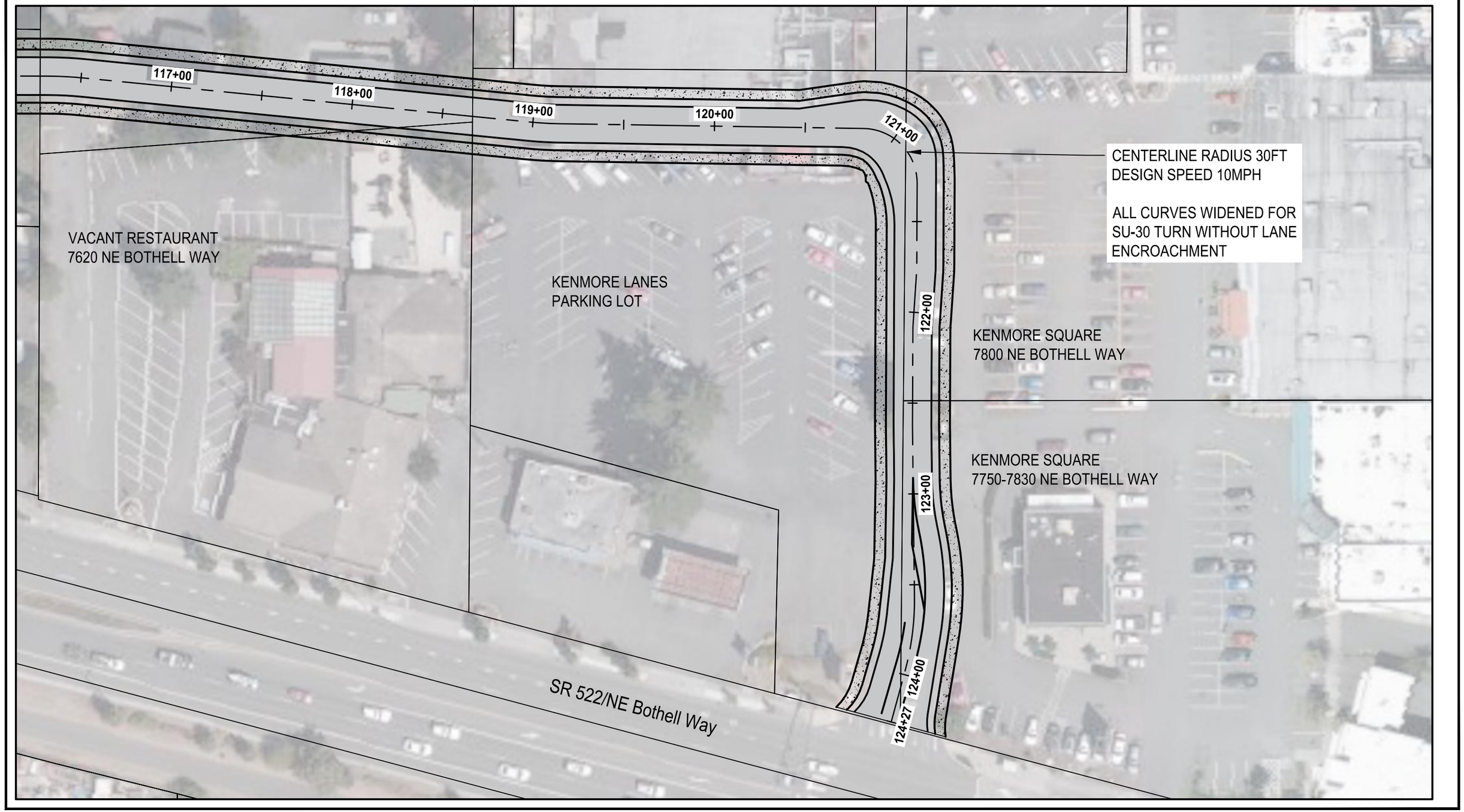
Kenmore NE 181st Street/SR 522 East Connection
Draft Concept



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Kenmore NE 181st Street/SR 522 East Connection
Draft Concept

SR 522 Pedestrian and Bicycle Bridge Crossing
CITY OF KENMORE

ENGINEER'S ESTIMATE - PLANNING LEVEL
AACE International Unclassified Estimate
PREPARED BY: Jenna Anderson, PE and Edward Wang DATE: 11/18/2022
CHECKED BY: Joe Merth, PE, and Cindy Clark, PE DATE: 11/20/2022

NO.	ITEM	QUANT.	UNIT	UNIT COST	AMOUNT
1	ROADWAY SURVEY	1	LS	$ 18,000	$ 18,000
2	CLEARING AND GRUBBING	0.2	ACRE	$ 25,000	$ 5,000
3	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS	$ 70,000	$ 70,000
4	REMOVAL OF CEMENT CONC. SIDEWALKS	10	SY	$ 30	$ 1,000
5	REMOVAL OF CEMENT CONC. PAVEMENT	0	SY	$ 57	$ -
6	REMOVAL OF CEMENT CONC. CURB	0	LF	$ 15	$ -
7	SELECT BORROW INCL. HAUL	2300	TON	$ 26	$ 60,000
8	CATCH BASIN TYPE 1	8	EACH	$ 2,500	$ 20,000
9	STORM SEWER PIPE, 12 IN. DIAM.	900	LF	$ 55	$ 50,000
10	CRUSHED SURFACING BASE COURSE	100	TON	$ 50	$ 5,000
11	HMA CL 1/2 IN. PG 58H-22	110	TON	$ 160	$ 18,000
12	LANDSCAPING/PLANTINGS	2300	SY	$ 36	$ 83,000
13	CEMENT CONC. SIDEWALK	10	SY	$ 100	$ 1,000
14	CEMENT CONC. CURB RAMP	2	EACH	$ 4,000	$ 8,000
15	PAVEMENT MARKINGS	1500	LF	$ 10	$ 15,000
16	PERMANENT SIGNING	1	LS	$ 5,000	$ 5,000
17	RECTANGULAR RAPID FLASHING BEACON SYSTEM	0	EACH	$ -	$ -
18	ILLUMINATION SYSTEM, COMPLETE	1	LS	$ 1 20,000	$ 120,000
19	MODULAR BLOCK WALL	5000	SF	$ 96	$ 480,000
	STRUCTURAL - MAIN & APPROACH BRIDGE SPANS				
20	SHORING OR EXTRA EXCAVATION CL. A	1	LS	$ 50,000	$ 50,000
21	CONSTRUCTING 6 FT DIAMETER SHAFT	120	LF	$ 2,500	$ 300,000
22	CONSTRUCTING 8 FT DIAMETER SHAFT	360	LF	$ 3,000	$ 1,080,000
23	REMOVING SHAFT OBSTRUCTIONS	1	LS	$ 1 45,000	$ 145,000
24	STEEL REINFORCING BAR FOR BRIDGE	34000	LB	$ 2.25	$ 77,000
25	CONC. CLASS 4000 FOR BRIDGE	200	CY	$ 1,200	$ 240,000
26	SUPERSTRUCTURE - APPROACH SPANS	1	LS	$ 6 00,000	$ 600,000
27	SUPERSTRUCTURE - MAIN TRUSS	1	LS	$ 6 00,000	$ 600,000
28	STRUCTURAL CARBON STEEL	220000	LB	$ 3.00	$ 660,000
29	**OPTIONAL SOUTH STAIRS**	1	LS	$ 4 00,000	$ 400,000
	Subtotal				$ 5,111,000
	Erosion Controls and Water Pollution Prevention Temporary Traffic Controls	5%			$ 255,550
		12%			$ 643,986
	Mobilization	10%			$ 601,054
	Allowance for Indeterminates	30%			$ 1,983,477
	CONSTRUCTION SUBTOTAL (ROUNDED)				**$8,600,000**
	Engineering Design Fees	12%			$ 1,032,000
	Construction Administration Fees ($60000 per month)	18 MOS		$ 60,000	$ 1,080,000
	Right of Way Cost				$ 1,800,000
	City of Kenmore Staff Labor	8%			$ 688,000
	NON-CONSTRUCTION SUBTOTAL				**$4,600,000**
	Project Contingency	30%			$ 3,960,000
	YEAR 2022 PROJECT TOTAL (ROUNDED)				**$ 17,160,000**
	Year 2044 Escalation	4.4%			$ 29,040,000
	YEAR 2044 PROJECT TOTAL (ROUNDED)				**$ 46,200,000**

ESCALATION FORECAST ASSUMPTION

CURRENT DATE 11/1/2022
FORECAST DATE 12/31/2044

APPENDIX D-5
POTENTIAL TRANSPORTATION PROJECT FUNDING SOURCES

Funding Sources	Funding Recipient	Focal Investment	Funding Description	Awarding Entity	Funding Type	Project Expenditure Type	Amount Available	Typical Award Amount	Local Match	Application Deadlines	Scoring Criteria	Application Process	Program Link/Contact
Highway Safety Improvement Program (HSIP)	Counties and Cities in Washington State are eligible to apply, other organizations may work with a county to propose/develop a project.	Roads, Transit	Provides funds to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The City Safety program provides funding for projects that reduce fatal and serious injury crashes on city/town streets and state highways using engineering improvements/countermeasures.	Federal	Grant	New Construction, Other Mass Transit, Maintenance, Engineering & Administration	$35 million of federal HSIP funds, $4 million of state Reducing Roadway Departures funds	Projects in Washington funded in 2021 ranged from $50,000 to$3,000,000 grants	Federal share is 90%	Closed March 2022. Allocated annually.	Selecting Emphasis Areas and Strategies, Strategic Data and Analysis Improvement, Program Management, Network Screening and Project Solicitation, Diagnosis and Countermeasure Selection, Economic Analysis and Eligibility Criteria, etc.	The BIL directs FHWA to apportion funding as a lump sum for each State then divide that total among apportioned programs	https://wsdot.wa.gov/sites/default/files/2021-11/LP-County-Safety-Awards-2021.pdf https://wsdot.wa.gov/business-wsdot/support-local- programs/funding-programs/highway-safety-improvement- program https://wsdot.wa.gov/business-wsdot/support-local- programs/funding-programs/highway-safety-improvement- program/highway-safety-improvement-program-call-projects
STBG set-aside for Transportation Alternatives (TA)	Funding is apportioned to the States and MPOs, then subrecipients can apply for the funding	Roads, Trails	Provides funds for smaller-scale transportation projects such as pedestrians and bicycle facilities, historic preservation, safe routes to school and other transportation-related activities. BIL increases TAP funding to 10% of the STBG amount.	Federal	Grant	New Construction, Reconstruction, Other Mass Transit, Engineering & Administration	$15,000,000	2022 funded project grants ranged from >$10,000 to $4.6 million	Federal share is 80 percent, HSIP funds may be used to meet the non-Federal share requirements up to 100% Federal share	Next PSRC TAP competition TBD	Scoring criteria are dependent on the MPOs that receive the federal apportionments, and which are responsible for allocating the apportioned funds to relevant projects	A State or MPO are required to obligate TA funds to develop a competitive process to allow eligible entities to submit projects for funding that achieves program objectives	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/ta.cfm https://wsdot.wa.gov/sites/default/files/2022-04/LP-STBG-Set-Aside-Allocation-Distribution-Final-2022.pdf
Surface Transportation Block Grant (STBG) [formerly STP]	Funding is apportioned to the States and MPOs, then subrecipients can apply for the funding	Roads, Transit	The Surface Transportation Block Grant Program (STBG) promotes flexibility in State and local transportation decisions and provides flexible funding to best address State and local transportation needs. Eligible projects include highway/bridge construction/repair; transit capital projects; bicycle, pedestrian and recreational trails; and construction of ferry boats and terminals. BIL adds several new eligibilities including wildlife crossings, EV charging infrastructure, and ITS technologies.	Federal	Grant	New Construction, Reconstruction, Other Mass Transit, Engineering & Administration	$64,800,000,000	$1 million to $5 million are the recommended grant amounts for the recently approved projects in Washington	Federal share is 80 percent	PSRC 2022 FHWA funding competitions concluded; Next competition in 2024.	Scoring criteria are dependent on the MPOs that receive the federal apportionments, and which are responsible for allocating the apportioned funds to relevant projects	The BIL directs FHWA to apportion funding as a lump sum for each State then divide that total among apportioned programs; 55% of a State's STBG apportionment is to obligated to urbanized areas with population greater than 200,000, urbanized areas with population of at least 50,000 but no more than 200,000, urbanized areas with population of 5,000- 49,999, and areas with population less than5,000	https://www.fhwa.dot.gov/bipartisan-infrastructure-law/stbg.cfm https://www.psrc.org/media/6965
Bridge Investment Program	States, MPOs serving an urbanized area with a population of over 200,000, a unit of local government, a political subdivision of a State or local government, a special purpose district or public authority with a transportation function, an FLMA, a Tribal government, some combination of any of the other eligiblerecipients	Bridges	Provide grants, on a competitive basis, to improve bridge condition and the safety, efficiency, and reliability of the movement of people and freight over bridges	Federal	Grant	Reconstruction, New Construction, Maintenance, Engineering & Administration	$12,200,000,000	Minimum grant of $50 million for Large Bridge Projects, or $2.5 million for other Bridge Projects	Up to 50% for "Large Bridge Projects", up to 80% for other BIP projects, up to 90% for off-system bridges	2022 funding has concluded, next NOFO is expected to start in 2023	DOT considers the Department's rating of the project, specified factors relating to bridge person and freight throughput, bridge condition in the State, geographic diversity and balance between the needs of rural and urban communities, the extent to which a bridge seeking BIP funding is in	Proposals will be submitted and then chosen off criteria	https://www.fhwa.dot.gov/bipartisan-infrastructure- law/bip_factsheet.cfm
Safe Streets and Roads for All	MPOs, counties, cities, towns, and transit agencies or other special districts that are subdivisions of a State, federal recognized Tribal governments, and multijurisdictional groups comprised of the above entities	All	Support local initiatives to prevent death and serious injury on roads and streets	Federal	Grant	Engineering & Administration	$5,000,000,000	For Action Plan Grants, minimum of$200,000 to maximum of$1,000,000 to $5,000,000. ForImplementation Plan Grants, minimum of $5,000,000 to maximum of $30,000,000 to$50,000,000	Federal share is 80 percent	Closed 9/15/22 for this year, next NOFO will open up in 2023, funds will be distributed over the next 5 years	BIL requires DOT to consider the extent to which an eligible applicant: is likely to significantly reduce or eliminate transportation-related fatalities and serious injuries involving road users, demonstrates engagement with a variety of public and private stakeholders, seeks to adopt innovative technologies/strategies to promote safety, employs low-cost, high-impact strategies that can improve safety, ensures equitable investment in the safety needs of underserved communities, includes evidence-based projects/strategies and achieves other conditions the Secretary deems necessary	Funding is allocated on a competitive basis, from proposals submitted to FTA in response to NOFOs	https://www.fhwa.dot.gov/bipartisan-infrastructure- law/ss4a_fact_sheet.cfm
Wildlife Crossings Pilot Program	State highway agency, MPO, unit of local government, regional transportation authority, special purpose district or public authority with a transportation function, an Indian tribe, a Federal land management agency, any combination of the others	Trails	Established to reduce the number of wildlife-vehicle collisions while improving habitat connectivity for terrestrial and aquatic species	Federal	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$350,000,000	No information currently available about typical award amounts as this is a new fund	Federal share is 80 percent	Has not been decided at this time	Proposals will be judged on the primary goal of reducing wildlife- vehicle collisions while improving connectivity, and the secondary goals of leveraging the investment of Federal funds by encouraging non- Federal contributions, supporting local economies and improving local visitation opportunities, integration of innovative technologies, inclusion of educational and outreach opportunities, incorporation of evaluative monitoring and/or research opportunities	Competitive program which will award grants to eligible recipients	https://arc-solutions.org/wp-content/uploads/2021/11/Wildlife-Crossings-Pilot-Program-Summary.pdf https://largelandscapes.org/wp- content/uploads/2021/12/Crossing-Toolkit_Final.pdf
Pedestrian and Bicycle Program	All public agencies in Washington, including tribal governments	Trails, Roads	Improve the transportation system to enhance safety and mobility for people who choose to walk or bike	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$56,700,000	Wide range from past projects ($10,000 to $1,750,000)	Match not required for requests of$800,000 or less, review criteria for requests greater than $800,000 will include a consideration of a match	Closed May 30, 2022 for this year, is a program that has been funding projects since 2005, and will continue to fund projects in the future. Funds are allocated on a 2-year basis.	The proposals will be judged on the following criteria: Safety (systemic safety approach or crash location improvement, up to 40% of consideration), Equity (up to 20% of consideration), Deliverability/other (up to 12% of consideration), Value (up to 10% of consideration), and Project Quality (up to 18% of consideration)	WSDOT staff will conduct a quantitative assessment of the applications using the applicant's responses, WSDOT 2017-2021 crash data, US Census data, and WSDOT local project search data	https://wsdot.wa.gov/business-wsdot/support-local- programs/funding-programs/pedestrian-bicycle- program/pedestrian-bicycle-program-call-projects
Safe Routes to School Program	All public agencies in Washington, including tribal governments, and nonprofit entities responsible for the administration transportation safety education and encouragement programs	Trails, Roads	Enable and encourage children to walk, roll, and bicycle to school; make bicycling and walking to school a safer and more appealing form of transportation; facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, etc.	Federal and State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$59,000,000	Wide range from past projects ($100,000 to $2,000,000)	Match not required for requests of$800,000 or less, review criteria for requests greater than $800,000 will include a consideration of a match	Closed June 6, 2022 for this year, is a program that has been funding projects since 2005, and will continue to fund projects in the future. Funds are allocated on a 2-year basis.	The proposals will be judged on the following criteria: Safety (systemic safety approach or crash location improvement, up to 40% of consideration), Equity (up to 20% of consideration), Deliverability/other (up to 12% of consideration), Value (up to 10% of consideration), and Project Quality (up to 18% of consideration)	WSDOT staff will conduct a quantitative assessment of the applications using the applicant's responses, WSDOT 2017-2021 crash data, US Census data, and WSDOT local project search data	https://wsdot.wa.gov/business-wsdot/support-local- programs/funding-programs/safe-routes-school-program/safe- routes-school-program-call-projects
Land and Water Conservation Fund	Local agencies, special purpose districts, Native American tribes, State agencies	Trails	Preserve and develop outdoor recreation resources, including parks, trails and wildlife lands	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$14,000,000	$2,000,000 at max	50% match requirement	Application due May 3, 2022	A proposal plan must have the following elements: goals and objectives; an inventory of current facilities and/or properties; public involvement in the process; a demand and need analysis; a capital improvement program; adoption by the organization's board, council, etc.	Submit a long-range comprehensive plan along with documentation of the public outreach used to develop the plan, completed self-certifaction form checklist, and submit a copy of the ordinance or resolution that indicates plan adoption.	https://rco.wa.gov/grant/land-and-water-conservation-fund/
Arterial Preservation Program	Cities with a population greater than 5,000 and assessed valuation less than $3 billion	Roads	Provides funding for overlay of federally classified arterial streets in cities	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$82,000,000	From previous projects: ~$200,000 to $600,000	Local match is based upon a city's assessed valuation	Applications due August 19, 2022, funding allocated on a yearly basis	Criteria scoring are based on the following criteria: agency rating and segment rating	Projects are selected annually on a competitive basis	http://www.tib.wa.gov/grants/Grants.cfm http://www.tib.wa.gov/grants/documents/2022%20APP%20criter ia.pdf
Urban Arterial Program	Counties with urban unincorporated areas and cities with a population of 5,000 or greater	Roads	Improves unsafe conditions, prevents human injury and property damage	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$82,000,000	Maximum request of $4.5M-$5M	Local match requirement is determined by the city's valuation, with minimum local match rangingfrom 10 to 20 percent	Applications due August 19, 2022, funding allocated on a yearly basis	Criteria scoring are based on the following criteria: safety; commercial growth & development; physical conditions; mobility; sustainability; and constructability	Projects are selected annually on a competitive basis	http://www.tib.wa.gov/grants/Grants.cfm http://www.tib.wa.gov/grants/documents/2022%20UAP%20criter ia.pdf
Active Transportation Program	Counties with urban unincorporated areas and cities with a population of 5,000 or greater	Roads	Provides funding to improve pedestrian and cyclist safety, enhanced pedestrian and cyclist mobility and connectivity, or improve the condition of existing facilities	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	$8,000,000	Minimum request for funds is$250,000	Local match requirement is determined by the city's valuation, with minimum local match rangingfrom 10 to 20 percent	Applications due August 19, 2022, funding allocated on a yearly basis	Criteria scoring are based on the following criteria: safety; mobility; physical condition; nature of project; constructability; and sustainability	Projects are selected annually on a competitive basis	http://www.tib.wa.gov/grants/Grants.cfm http://www.tib.wa.gov/grants/documents/2022%20AT%20criteria .pdf
Complete Streets Award	Any city or county that has an adopted completed streets ordinance	Roads	Funds for planning and building streets to accommodate all users, including pedestrians, access to transit, cyclists, and motorist of all ages and abilities	State	Grant	Engineering & Administration, New Construction, Reconstruction, Maintenance	N/A	Offers between $100,000 and $1 million grants to local governments	N/A	Next awards will be in 2023 or 2024	TIB staff will evaluate all nominations. There will not be set criteria established, and TIB staff will evaluate base on policy quality, plan integration, community outreach and engagement, past project actions, and future project plans	Nominating agencies will fill out a form describing what motivates a nominator to nominate a city for an award	http://www.tib.wa.gov/grants/Grants.cfm https://wacities.org/advocacy/news/advocacy- news/2021/07/12/complete-streets-grant-nominations-now-open

APPENDIX D-5
POTENTIAL TRANSPORTATION PROJECT FUNDING SOURCES

Funding Sources	Awarding Entity	Amount Available	Local Match	SR 522 West B (West boundary to 61st Ave NE)	NE 181st St South Side (61st Ave NE-63rd Ave NE) Sidewalk	61st Ave NE Sidewalk Replacement (NE 181st St-62nd Ave NE)	80th Ave NE Sidewalks (SR522-NE 185th St)	NE 192nd St Sidewalks (73rd Ave NE - 75th Ave NE)	Arrowhead Drive Sidewalks (NE 151st St - 64th Ave NE)	84th Ave NE Sidewalks (NE 150th St - NE 155thSt)	Lower Swamp Creek Bridge Replacement	Pavement Preservation Program (Short-term)	ADA Transition Plan Program (Short-term)	Pedestrian Facilities Plan Program (Sidewalk Program) (Short-term)	Pedestrian Facilities Plan Program (Sidewalk Program) (Long-term)	ADA Transition Plan Program (Long-term)	Pavement Preservation Program (Long-term)	61st Ave NE/NE 193rd St Intersection	73rd Ave NE/NE 192nd St Intersection	Nonmotorized crossing of SR 522	NE 181st Street/SR 522 East Connection
Highway Safety Improvement Program (HSIP)	Federal	$35 million of federal HSIP funds, $4 million of state Reducing Roadway Departures funds	Federal share is 90%	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STBG set-aside for Transportation Alternatives (TA)	Federal	$15,000,000	Federal share is 80 percent, HSIP funds may be used to meet the non-Federal share requirements up to 100% Federal share	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Surface Transportation Block Grant (STBG)[formerly STP]	Federal	$64,800,000,000	Federal share is 80 percent	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bridge Investment Program	Federal	$12,200,000,000	Up to 50% for "Large Bridge Projects", up to 80% for other BIP projects, up to 90% for off-system bridges								Yes										
Safe Streets and Roads for All	Federal	$5,000,000,000	Federal share is 80 percent	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wildlife Crossings Pilot Program	Federal	$350,000,000	Federal share is 80 percent			Yes					Yes										
Pedestrian and Bicycle Program	State	$56,700,000	Match not required for requests of$800,000 or less, review criteria for requests greater than $800,000 will include a consideration of a match	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Safe Routes to School Program	Federal and State	$59,000,000	Match not required for requests of$800,000 or less, review criteria for requests greater than $800,000 will include a consideration of a match	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)		Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)	Yes (if related to going to school)
Land and Water Conservation Fund	State	$14,000,000	50% match requirement			Yes					Yes							Yes	Yes	Yes	Yes
Arterial Preservation Program	State	$82,000,000	Local match is based upon a city's assessed valuation	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)		Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)	Yes (if federally classified arterial street)
Urban Arterial Program	State	$82,000,000	Local match requirement is determined by the city's valuation, with minimum local match ranging from 10 to 20 percent	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Active Transportation Program	State	$8,000,000	Local match requirement is determined by the city's valuation, with minimum local match ranging from 10 to 20 percent	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Complete Streets Award	State	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes