



Tacoma Dome Link Extension

Draft Environmental Impact Statement

SUPPORTING INFORMATION FOR OTHER TECHNICAL ANALYSIS

Appendix H



Tacoma Dome Link Extension

Draft Environmental Impact Statement

POTENTIALLY AFFECTED PARCELS

Appendix H1

APPENDIX H1 POTENTIALLY AFFECTED PARCELS

1 PARCELS POTENTIALLY AFFECTED FOR THE BUILD ALTERNATIVE

All TDLE alternatives would permanently affect public and private property for track and station right-of-way as well as transit integration, road realignment, staging, and mitigation. This appendix lists likely property acquisitions based on current conceptual designs and the existing conditions at the time the analysis was conducted. The properties listed and mapped in this appendix should not be interpreted as the final determination regarding property acquisitions because the list will be updated as the project design is refined. Accordingly, the number and type of displacements could vary between what is disclosed in this Draft Environmental Impact Statement (EIS) and what is ultimately required. For example, currently vacant properties might be developed between the publication date of this EIS and the beginning of project construction.

There are two types of potential affected properties reported in the table and maps:

- **Partial acquisition** – A portion of a parcel would be permanently acquired, but the current use would likely not be displaced. In some instances, such as larger parcels that hold multiple uses, a business or residential unit on a parcel could be displaced while other uses remain.
- **Full acquisition** – The entire parcel would be permanently acquired, and all current uses would be displaced. In some instances, full acquisitions include parcels that may not be needed for the project but would be affected to the extent that current uses would be substantially impacted.

Please note that the information in Tables H1-1 to H1-6 does not identify whether or not a property is a partial or full acquisition. The tables identify whether or not a property is affected for a particular alternative, which provides for comparison of the different alternatives. Figures H1-1 to H1-94 illustrate the permanent project footprint. During final design, the scope of impacts may or may not change. In addition to the potential property acquisitions described, the project would also require aerial and utility easements as well as temporary construction easements and use of public rights-of-way not listed here.

Table H1-1 TDLE Federal Way Segment Potential Acquisitions

Map I.D.	King County Parcel I.D.	Address	Preferred FW Enchanted Parkway	Preferred FW Enchanted Parkway with Design Option
1064	7622400019	2201 S COMMONS	Affected	Affected
1074	7622400020	32320 23RD AVE S	Affected	Affected
1075	7978200526	NA	Affected	Affected
1077	7622400021	NA	Not Affected	Affected
1100	162104UNKN	2101 S 324TH ST	Not Affected	Affected
1110	1621049037	2101 S 324TH ST	Affected	Affected
1241	7978200260	NA	Affected	Affected
1330	2121049003	33652 20TH AVE S	Affected	Affected
1391	2121049028	NA	Affected	Affected

Table H1-2 TDLE South Federal Way Segment Potential Acquisitions in King County

Map I.D.	King County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East
1431	2121049088	N/A	Affected	Not Affected	Affected	Affected
1440	2121049010	34520 16TH AVE S	Affected	Not Affected	Affected	Affected
1465	2121049012	1610 S 347TH PL	Not Affected	Not Affected	Affected	Affected
1478	2121049077	34726 16TH AVE S	Affected	Not Affected	Affected	Affected
1480	2121049078	1688 S 348TH ST	Affected	Not Affected	Affected	Affected
1497	1852950120	34919 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1498	2192600570	34900 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1500	1852950010	1405 S 348TH ST	Affected	Not Affected	Affected	Affected
1512	1852950020	35007 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1542	1852950030	35025 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1548	1852950040	35105 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1553	2192600180	35100 ENCHANTED PKWY S	Not Affected	Affected	Not Affected	Not Affected
1560	2021049116	1393 S 351ST ST	Affected	Not Affected	Affected	Affected
1577	2921049048	35200 PACIFIC HWY S	Not Affected	Not Affected	Affected	Affected
1579	2921049096	35205 ENCHANTED PKWY S	Affected	Not Affected	Affected	Affected
1581	2821049008	1715 S 352ND ST	Not Affected	Affected	Not Affected	Not Affected
1582	2921049158	N/A	Not Affected	Not Affected	Affected	Affected
1583	2921049002	1200 S 356TH ST	Not Affected	Not Affected	Affected	Affected
1584	2921049049	1220 S 356TH ST	Not Affected	Not Affected	Affected	Affected
1586	2921049159	N/A	Not Affected	Not Affected	Affected	Affected
1588	2921049125	35400 PACIFIC HWY S	Not Affected	Not Affected	Affected	Affected
1590	2921049077	35425 ENCHANTED PKWY S	Affected	Not Affected	Not Affected	Not Affected
1591	2921049160	N/A	Not Affected	Not Affected	Affected	Not Affected
1592	2500700020	N/A	Not Affected	Affected	Not Affected	Not Affected
1594	2921049003	35516 PACIFIC HWY S	Not Affected	Not Affected	Affected	Affected
1595	2821049113	N/A	Not Affected	Affected	Not Affected	Not Affected
1596	2921049127	35505 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1597	2821049112	N/A	Not Affected	Affected	Not Affected	Not Affected
1599	2921049090	N/A	Not Affected	Not Affected	Not Affected	Affected
1601	2821049146	N/A	Not Affected	Affected	Not Affected	Not Affected
1602	2821049125	1712 S 356TH ST	Not Affected	Affected	Not Affected	Not Affected
1604	2921049099	N/A	Not Affected	Not Affected	Not Affected	Affected

Table H1-2 TDLE South Federal Way Segment Potential Acquisitions in King County (continued)

Map I.D.	King County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East
1605	2821049172	35610 ENCHANTED PKWY S	Not Affected	Affected	Not Affected	Not Affected
1606	2921049039	N/A	Not Affected	Not Affected	Affected	Not Affected
1607	2821049178	1741 S 356TH ST	Not Affected	Affected	Not Affected	Not Affected
1608	2921049052	35620 PACIFIC HWY S	Not Affected	Not Affected	Not Affected	Affected
1610	2921049092	N/A	Affected	Not Affected	Not Affected	Not Affected
1611	2821049077	35620 ENCHANTED PKWY S	Not Affected	Affected	Not Affected	Not Affected
1614	2921049075	N/A	Not Affected	Not Affected	Not Affected	Affected
1617	2921049064	35717 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1618	2821049069	35700 ENCHANTED PKWY S	Not Affected	Affected	Not Affected	Not Affected
1619	2921049006	N/A	Not Affected	Not Affected	Not Affected	Affected
1620	2921049051	N/A	Not Affected	Not Affected	Affected	Not Affected
1621	2921049102	N/A	Not Affected	Not Affected	Affected	Affected
1622	2821049070	35810 16TH AVE S	Affected	Affected	Not Affected	Not Affected
1633	2921049038	N/A	Not Affected	Not Affected	Affected	Affected
1640	2921049020	35929 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1641	2921049088	N/A	Not Affected	Not Affected	Not Affected	Affected
1648	2921049104	N/A	Not Affected	Not Affected	Affected	Not Affected
1651	2821049135	1635 S 359TH ST	Affected	Not Affected	Not Affected	Not Affected
1658	2821049132	1649 S 359TH ST	Affected	Affected	Not Affected	Not Affected
1663	2821049009	N/A	Affected	Not Affected	Not Affected	Not Affected
1666	2921049087	N/A	Not Affected	Not Affected	Affected	Not Affected
1667	2821049013	N/A	Affected	Affected	Not Affected	Not Affected
1669	2921049080	N/A	Not Affected	Not Affected	Affected	Not Affected
1670	2821049107	36028 16TH AVE S	Affected	Affected	Not Affected	Not Affected
1672	2921049026	N/A	Not Affected	Not Affected	Not Affected	Affected
1674	2921049157	N/A	Not Affected	Not Affected	Not Affected	Affected
1675	2821049109	36200 16TH AVE S	Affected	Affected	Not Affected	Not Affected
1676	2921049021	36317 PACIFIC HWY S	Not Affected	Not Affected	Affected	Affected
1677	2921049153	N/A	Not Affected	Not Affected	Not Affected	Affected
1687	2921049024	N/A	Not Affected	Not Affected	Affected	Affected
1688	2921049028	N/A	Affected	Affected	Not Affected	Not Affected
1691	2921049074	36605 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected

Table H1-2 TDLE South Federal Way Segment Potential Acquisitions in King County (continued)

Map I.D.	King County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East
1696	2921049023	N/A	Not Affected	Not Affected	Affected	Not Affected
1702	2921049044	36606 PACIFIC HWY S	Not Affected	Not Affected	Not Affected	Affected
1706	3221049016	36815 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1709	3221049093	N/A	Not Affected	Not Affected	Not Affected	Affected
1716	3221049095	N/A	Not Affected	Not Affected	Not Affected	Affected
1717	3221049078	36903 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1719	3221049149	N/A	Not Affected	Not Affected	Affected	Affected
1722	3221049099	N/A	Affected	Affected	Not Affected	Not Affected
1724	3221049094	36928 PACIFIC HWY S	Not Affected	Not Affected	Not Affected	Affected
1731	3221049080	37006 12TH AVE S	Affected	Affected	Not Affected	Not Affected
1735	3221049084	N/A	Not Affected	Not Affected	Affected	Not Affected
1741	3221049049	N/A	Not Affected	Not Affected	Not Affected	Affected
1743	3221049083	N/A	Affected	Affected	Not Affected	Not Affected
1754	3221049072	N/A	Affected	Affected	Not Affected	Not Affected
1765	3221049107	37205 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1772	3221049055	N/A	Not Affected	Not Affected	Not Affected	Affected
1776	3221049121	1021 S 372ND WAY	Not Affected	Affected	Not Affected	Not Affected
1781	3221049046	N/A	Not Affected	Not Affected	Affected	Not Affected
1799	3221049087	215 S 373RD ST	Not Affected	Not Affected	Affected	Affected
1808	2188204205	37405 PACIFIC HWY S	Not Affected	Not Affected	Affected	Not Affected
1819	2188204245	N/A	Not Affected	Not Affected	Affected	Affected
1821	2188204285	N/A	Not Affected	Not Affected	Affected	Affected
1831	3221049070	37540 8TH AVE S	Affected	Affected	Not Affected	Not Affected
1833	2188204520	N/A	Not Affected	Not Affected	Affected	Affected
1835	2188204490	N/A	Not Affected	Not Affected	Affected	Affected
1838	2188204480	N/A	Not Affected	Not Affected	Affected	Affected
1839	2188204455	N/A	Not Affected	Not Affected	Affected	Affected
1841	3221049106	N/A	Affected	Affected	Not Affected	Not Affected
1927	3221049034	N/A	Affected	Affected	Not Affected	Not Affected
1933	3221049057	N/A	Affected	Affected	Not Affected	Not Affected

Table H1-3 TDLE South Federal Way Segment Potential Acquisitions in Pierce County

Map I.D.	Pierce County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-West with Porter Way Design Option	SF 99-East	SF 99-East with Porter Way Design Option
3003	421314133	8507 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3007	421314030	8425 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3009	421314125	8411 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3012	421314031	8323 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3016	421314032	8211 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Affected	Affected
3019	421314039	6911 JOHNSON RD NE	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Not Affected
3021	421314041	8217 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3022	421314096	8220 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Not Affected
3023	421314009	8209 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3024	421314046	8116 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Not Affected
3026	421314067	8117 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Affected	Affected
3027	421314068	8112 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected
3028	421314055	8111 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3029	421314122	8025 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3030	421314012	8110 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3031	421314131	8016 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3032	420061087	8011 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Not Affected
3033	420056002	7916 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3034	420056001	7916 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3035	420061029	7909 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Not Affected
3039	420052044	300 BIRCH ST	Affected	Affected	Not Affected	Not Affected	Not Affected	Not Affected
3040	420052045	320 BIRCH ST	Affected	Affected	Not Affected	Not Affected	Not Affected	Not Affected
3042	420052037	7900 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Affected
3049	420052039	XXX BIRCH ST	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3050	420061147	XXX PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Not Affected	Not Affected
3051	420052005	7808 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Affected

Table H1-3 TDLE South Federal Way Segment Potential Acquisitions in Pierce County (continued)

Map I.D.	Pierce County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-West with Porter Way Design Option	SF 99-East	SF 99-East with Porter Way Design Option
3053	420061145	XXX PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Affected
3058	420052026	7802 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Affected
3061	420061146	XXX PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Not Affected
3064	420061081	7721 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Not Affected
3078	420052007	7720 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3089	420061106	7715 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3090	420052035	7708 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Affected	Affected
3094	420061054	222 TO 224 70TH AV E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3098	420052053	7700 PACIFIC HWY E	Not Affected	Not Affected	Affected	Affected	Affected	Affected
3107	420061075	304 70TH AV E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3108	420056003	7607 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3111	420052054	7608 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3112	420052030	7700 PACIFIC HWY E	Affected	Affected	Not Affected	Affected	Not Affected	Affected
3123	420052042	XXX I5 HWY S	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Affected
3124	420052041	7608 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3128	5990000551	XXX I5 HWY S	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Affected
3129	420056009	7404 PACIFIC HWY E	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3141	420056005	XXX PORTER WY	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3145	5990000520	302 PORTER WY	Not Affected	Not Affected	Affected	Affected	Affected	Affected
3153	420056010	296 PORTER WY	Not Affected	Not Affected	Affected	Not Affected	Affected	Not Affected
3180	420056006	XXX PORTER WY	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Not Affected
3197	420052055	301 PORTER WY	Affected	Affected	Affected	Affected	Affected	Affected
3210	420052056	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3238	420053048	7224 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3240	420057003	7220 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3241	420057004	7200 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected

Table H1-3 TDLE South Federal Way Segment Potential Acquisitions in Pierce County (continued)

Map I.D.	Pierce County Parcel I.D.	Address	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-West with Porter Way Design Option	SF 99-East	SF 99-East with Porter Way Design Option
3243	420057005	7110 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3244	420057006	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3245	420057007	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3246	420057008	7110 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3247	420053075	7100 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3259	420053076	7100 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3290	420064062	6912 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected
3367	6025220360	TRACTS	Affected	Affected	Affected	Affected	Affected	Affected
3380	420064206	6723 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected

Table H1-4 TDLE Fife Segment Potential Acquisitions

Map I.D.	Pierce County Parcel I.D.	Address	Fife Pacific Highway	Fife Pacific Highway with 54th Avenue Design Option	Fife Pacific Highway with 54th Avenue Span Design Option	Fife Median	Fife Median with 54th Avenue Design Option	Fife Median with 54th Avenue Span Design Option	Fife I-5	Fife I-5 with 54th Avenue Design Option	Fife I-5 with 54th Avenue Span Design Option
3395	420064040	6717 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3415	2750000100	1415 67TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3439	2750000040	1414 67TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3459	420064113	6519 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3509	420064188	1415 62ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3516	420064123	6304 12TH ST E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3522	420064025	1403 62ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3535	420064023	1305 62ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3537	420064024	1309 62ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3558	420063016	1310 62ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3571	420063025	6130 12TH ST E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3591	420063080	5959 PACIFIC HWY E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3592	420063097	1208 59TH AV E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3593	420063058	1305 59TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3594	420063056	1315 59TH AV E	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected
3595	420063088	5959 PACIFIC HWY E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3598	420063051	XXX 59TH AVCT E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3610	420063096	1208 59TH AV E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3611	420063095	1208 59TH AV E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3612	420063068	1224 59TH AV E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3615	420063070	XXX 59TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3629	420063110	5802 12TH ST E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3647	420063107	1317 54TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3663	420063012	5410 12TH ST E	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3668	420067011	1321 54TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3682	420067019	1307 54TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3689	9315000070	1409 54TH AV E	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected	Affected
3693	320018018	1414 54TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3698	320018002	5308 12TH ST E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3700	320014106	1334 54TH AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3710	320018003	5224 12TH ST E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3721	320014037	1327 52ND AV E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3722	320018004	5210 12TH ST E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3724	320014108	1334 54TH AVE E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3730	320014084	XXX 12TH ST E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3732	320014109	XXX 54TH AVE E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Not Affected	Affected	Affected
3740	320014032	5121 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3748	320014096	5119 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3756	320018016	5115 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3757	320018015	5017 PACIFIC HWY E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Affected	Affected	Affected
3760	320014010	XXX 12TH ST E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3768	320014026	5011 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3772	320014020	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
3775	320125017	5002 PACIFIC HWY E	Not Affected	Affected	Not Affected	Not Affected	Affected	Not Affected	Affected	Affected	Affected
3783	320121127	UNDETERMINED SITUS	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Not Affected	Not Affected
3784	320121032	4912 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3786	320018008	4910 PACIFIC HWY E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Affected	Affected	Affected
3789	320014075	5013 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3797	320121128	4902 PACIFIC HWY E	Not Affected	Affected	Affected	Not Affected	Affected	Affected	Affected	Affected	Affected
3814	8905000850	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3817	320018005	4802 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected

Table H1-4 TDLE Fife Segment Potential Acquisitions (continued)

Map I.D.	Pierce County Parcel I.D.	Address	Fife Pacific Highway	Fife Pacific Highway with 54th Avenue Design Option	Fife Pacific Highway with 54th Avenue Span Design Option	Fife Median	Fife Median with 54th Avenue Design Option	Fife Median with 54th Avenue Span Design Option	Fife I-5	Fife I-5 with 54th Avenue Design Option	Fife I-5 with 54th Avenue Span Design Option
3834	8905000700	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3839	320014090	XXX WILLOW RD E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3849	320121083	4650 16TH ST E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3866	320014061	4716 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3868	320121084	XXX 16TH ST E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3888	320125002	4630 16TH ST E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3900	320014081	4600 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3903	320013112	XXX 16TH ST E	Affected	Affected	Not Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3906	320013139	4500 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3915	320013140	4420 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3919	320122028	4600 16TH ST E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3933	320013141	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3947	320013136	4310 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3950	320122036	1701 ALEXANDER AV E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3964	320013135	4306 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3973	320126021	1700 ALEXANDER AV E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3981	320126020	1700 ALEXANDER AV E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3984	320017019	1601 40TH AVCT E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3988	320126019	1708 40TH AVCT E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
3991	320017013	1602 40TH AVCT E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
3999	320013125	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4000	320122050	3914 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
4005	320122071	3812 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4007	320122045	3812 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
4011	320013089	3801 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4015	320013124	3700 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4018	320024086	3700 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4028	320024085	3516 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4030	320111049	3520 PACIFIC HWY E	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected	Affected	Affected
4032	320024106	3518 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4047	320111067	3410 PACIFIC HWY S	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
4050	320024105	3408 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4067	320024104	3402 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4073	320024054	XXX PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Not Affected	Not Affected	Not Affected
4113	320112046	2950 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
4121	320112045	2820 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
4127	320112044	2802 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
4130	320116003	2614 PACIFIC HWY E	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected
4171	320112020	XXX I5 HWY N	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected	Affected

Table H1-5 TDLE Tacoma Segment Potential Acquisitions

Map I.D.	Pierce County Parcel I.D.	Address	Preferred Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street
4433	2076270010	XXX E 26th Street	Not Affected	Affected	Not Affected	Affected
4447	2076260030	2620 East G Street	Not Affected	Not Affected	Not Affected	Affected
4192	4715023600	1901 Puyallup Avenue	Affected	Affected	Affected	Affected
4280	4715011101	1425 E 27th Street	Affected	Affected	Affected	Affected
4315	4715010800	XXX E 26th Street	Not Affected	Not Affected	Affected	Affected
4322	4715010790	1301 E 26th Street	Not Affected	Not Affected	Affected	Affected
4329	4715010780	1301 E 26th Street	Not Affected	Not Affected	Affected	Affected
4363	2076350050	1119 to 1121 E 26th Street	Not Affected	Not Affected	Affected	Not Affected
4369	2076350040	1111 E 26th Street	Not Affected	Not Affected	Affected	Affected
4375	2076350031	1109 E 26th Street	Not Affected	Not Affected	Affected	Affected
4379	2076350010	1101 E 26th Street	Not Affected	Not Affected	Affected	Affected
4349	4715010590	1211 E 25th Street	Affected	Affected	Not Affected	Not Affected
4350	2075380010	1202 E 25th Street	Not Affected	Not Affected	Not Affected	Affected
4355	2075370010	1201 E 25th Street	Affected	Not Affected	Not Affected	Not Affected
4365	2075350040	1115 E 25th Street	Affected	Affected	Not Affected	Not Affected
4373	2075360011	XXX E 25th Street	Affected	Affected	Not Affected	Not Affected
4374	2075350030	1115 E 25th Street	Affected	Affected	Not Affected	Not Affected
4381	2075350010	1115 E 25th Street	Affected	Affected	Not Affected	Not Affected
4389	2074340020	1001 E 25th Street	Affected	Affected	Not Affected	Not Affected
4394	2075340011	XXX E 25th Street	Not Affected	Affected	Not Affected	Not Affected
4401	2074340010	1001 E 25th Street	Affected	Affected	Not Affected	Not Affected
4404	2075310012	925 E 25th Street	Affected	Affected	Not Affected	Not Affected
4415	2075310011	XXX E 25th Street	Affected	Affected	Not Affected	Not Affected
4416	2075290020	811 E 25th Street	Affected	Affected	Not Affected	Not Affected
4419	2076300010	808 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4423	2075290010	801 E 25th Street	Affected	Affected	Not Affected	Not Affected
4429	2076280020	718 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4453	2076260011	2601 East F Street	Not Affected	Not Affected	Not Affected	Affected
4469	2078211001	2727 East D Street	Not Affected	Not Affected	Not Affected	Affected
4471	2076240011	2611 East E Street	Not Affected	Not Affected	Not Affected	Affected
4487	2078211001	2727 East D Street	Not Affected	Not Affected	Not Affected	Affected
4493	2075210034	415 E 25th Street	Affected	Not Affected	Not Affected	Not Affected
4495	2076210030	411 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4500	2077210010	401 E 27th Street	Not Affected	Not Affected	Not Affected	Affected
4501	2076210020	409 E 26th Street	Not Affected	Not Affected	Not Affected	Affected

Table H1-5 TDLE Tacoma Segment Potential Acquisitions (continued)

Map I.D.	Pierce County Parcel I.D.	Address	Preferred Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street
4504	2076220011	402 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4505	2075210020	405 E 25th Street	Affected	Not Affected	Not Affected	Not Affected
4507	2076210010	401 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4510	2075210010	401 E 25th Street	Affected	Not Affected	Not Affected	Not Affected
4515	2076200070	324 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4517	2076200060	324 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4525	2076200041	314 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4532	2076200030	308 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4538	2076200020	306 E 26th Street, Unit A B	Not Affected	Not Affected	Not Affected	Affected
4542	2076200010	302 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4555	2076170050	223 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4558	2076170040	219 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4559	2076180030	216 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4566	2076170030	213 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4569	2076170020	209 E 26th Street	Not Affected	Not Affected	Not Affected	Affected
4230	4715011411	2650 E Bay Street	Affected	Affected	Affected	Affected
4242	4715011400	2610 E Bay Street	Affected	Affected	Affected	Affected
4245	4715011171	2610 E Bay Street	Affected	Affected	Affected	Affected
4252	4715011390	2603 E Portland Avenue	Affected	Affected	Affected	Affected
4259	4715011142	2603 E Portland Avenue	Affected	Affected	Affected	Affected
4266	4715011001	1455 E 26th Street	Affected	Affected	Affected	Affected
4269	4715010981	1453 E 26th Street	Affected	Affected	Affected	Affected
4273	4715010970	1445 E 26th Street	Affected	Affected	Affected	Affected
4293	4715010811	1427 E 26th Street	Affected	Affected	Affected	Affected
4393	2076330010	1001 E 26th Street	Not Affected	Not Affected	Affected	Affected
4408	2076310010	923 E 26 Street	Not Affected	Affected	Affected	Affected
4420	2076290010	801 E 26th Street	Not Affected	Not Affected	Affected	Affected
4435	2074280020	716 Puyallup Avenue	Affected	Affected	Affected	Not Affected
4437	2075270010	725 E 25th Street	Affected	Affected	Affected	Not Affected
4443	2074280010	704 Puyallup Avenue	Affected	Affected	Affected	Not Affected
4452	2076250090	XXX E 26th Street	Affected	Affected	Affected	Affected
4454	2076250080	XXX E 26th Street	Affected	Affected	Affected	Affected
4456	2076250051	609 E 26th Street	Affected	Affected	Affected	Affected
4457	2076250052	XXX E 26th Street	Affected	Not Affected	Affected	Not Affected
4459	2076250030	601 E 26th Street	Affected	Not Affected	Affected	Not Affected

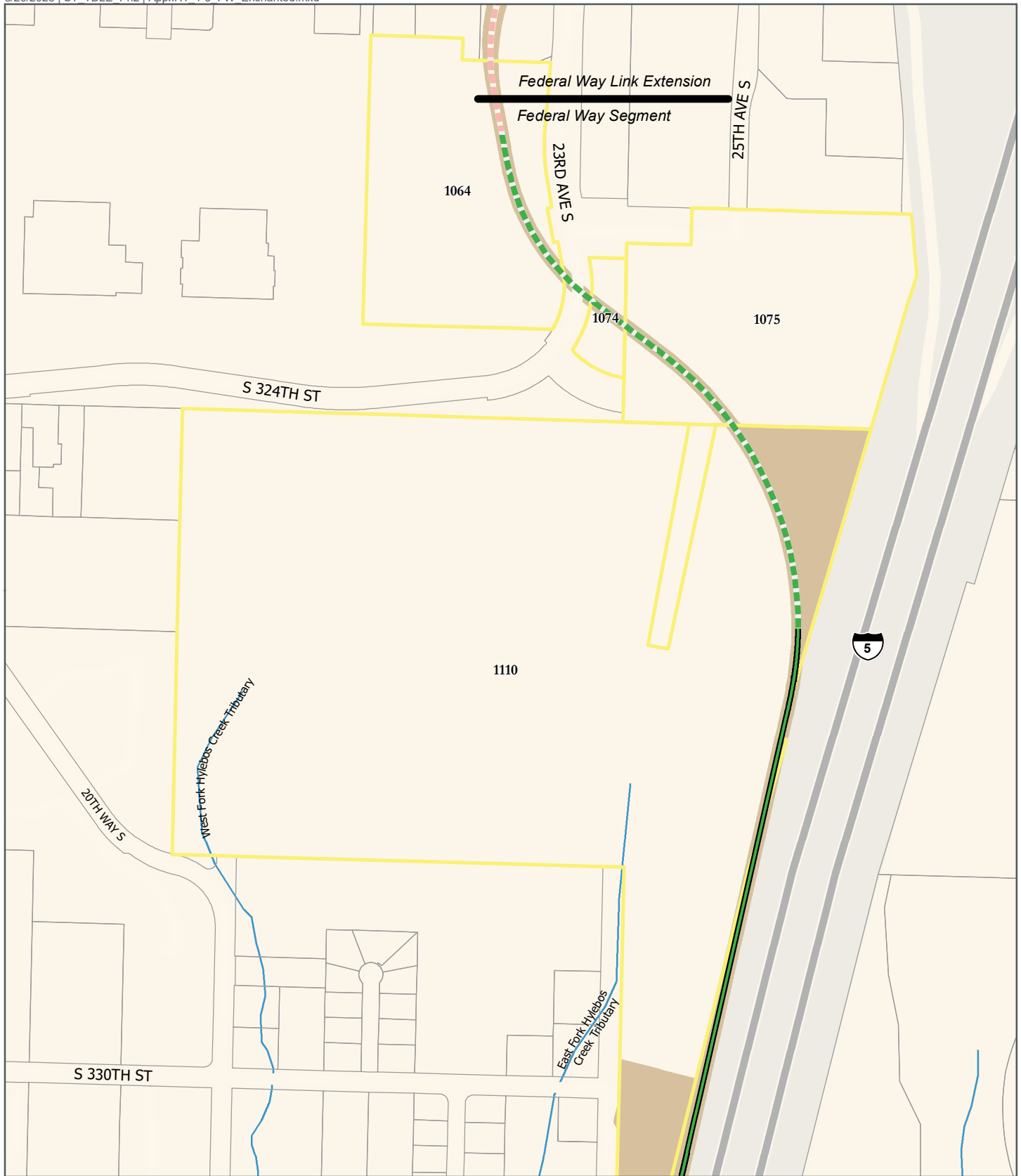
Table H1-5 TDLE Tacoma Segment Potential Acquisitions (continued)

Map I.D.	Pierce County Parcel I.D.	Address	Preferred Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street
4461	2075240013	602 E 25th Street	Not Affected	Not Affected	Affected	Not Affected
4463	2076250011	601 E 25th Street	Affected	Not Affected	Affected	Not Affected
4476	2075240011	430 E 25th Street	Not Affected	Not Affected	Affected	Affected
4506	2075220021	2501 East D Street	Not Affected	Not Affected	Affected	Affected
4530	2075200011	XXX E 25th Street	Not Affected	Not Affected	Affected	Affected
—	—	Puyallup River	Affected	Affected	Affected	Affected

**Table H1-6 TDLE Tacoma Segment Potential Acquisitions for
Optional Portland Avenue Bike and Pedestrian Bridge**

Map I.D.	Pierce County Parcel I.D.	Address	East Option	West Option
4201	4715012344	1811 E 29th Street	Affected	Not Affected
4203	4715012330	1811 E 29th Street	Affected	Not Affected
4204	4715012310	1807 E 29th Street	Affected	Not Affected
4209	4715012300	1801 E 29th Street	Affected	Not Affected
4219	4715012140	1653 E 29th Street	Affected	Not Affected
4220	4715011620	2808 East R Street	Affected	Not Affected
4221	4715011610	2802 East R Street	Affected	Not Affected
4223	4715012130	1651 E 29th Street	Affected	Not Affected
4254	4715012030	2811 E Portland Avenue	Not Affected	Affected
4257	4715011512	2809 E Portland Avenue	Not Affected	Affected
5000	4715012151	XXX E Portland Avenue	Not Affected	Affected
5001	4715012720	2919 E Portland Avenue	Not Affected	Affected

Note: Affected parcels and footprint for the optional Portland Avenue bike and pedestrian bridge are the same for all alternatives in the Tacoma Segment. This bridge is not currently funded.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Preferred FW
Enchanted Parkway

Alternative Profile

At-Grade
Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

Permanent Footprint

Preferred FW Enchanted Parkway Alternative
Affected Parcels
Federal Way Segment

Tacoma Dome Link Extension

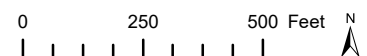
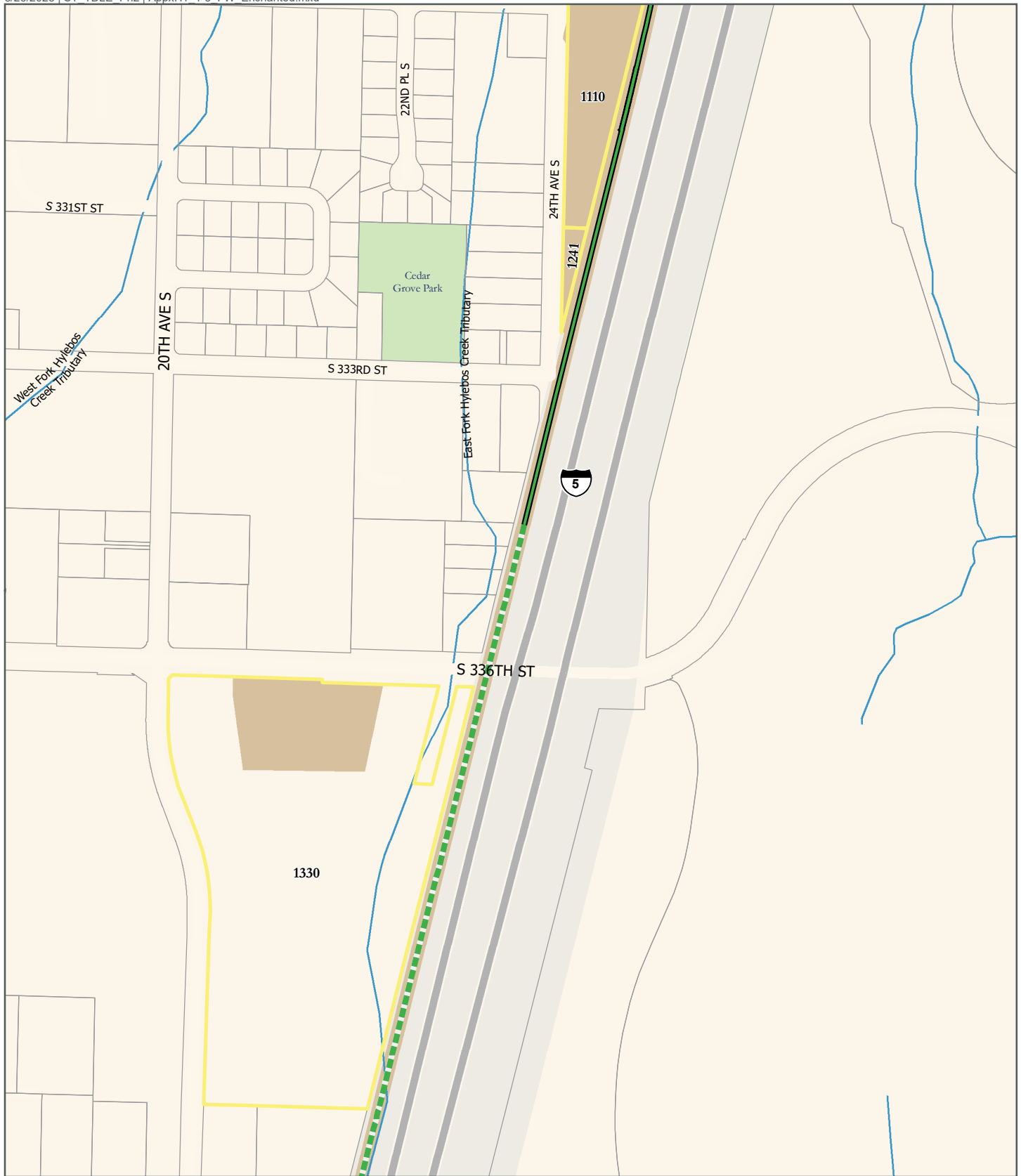


Figure H1-1



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Preferred FW
Enchanted Parkway

Alternative Profile

At-Grade
Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

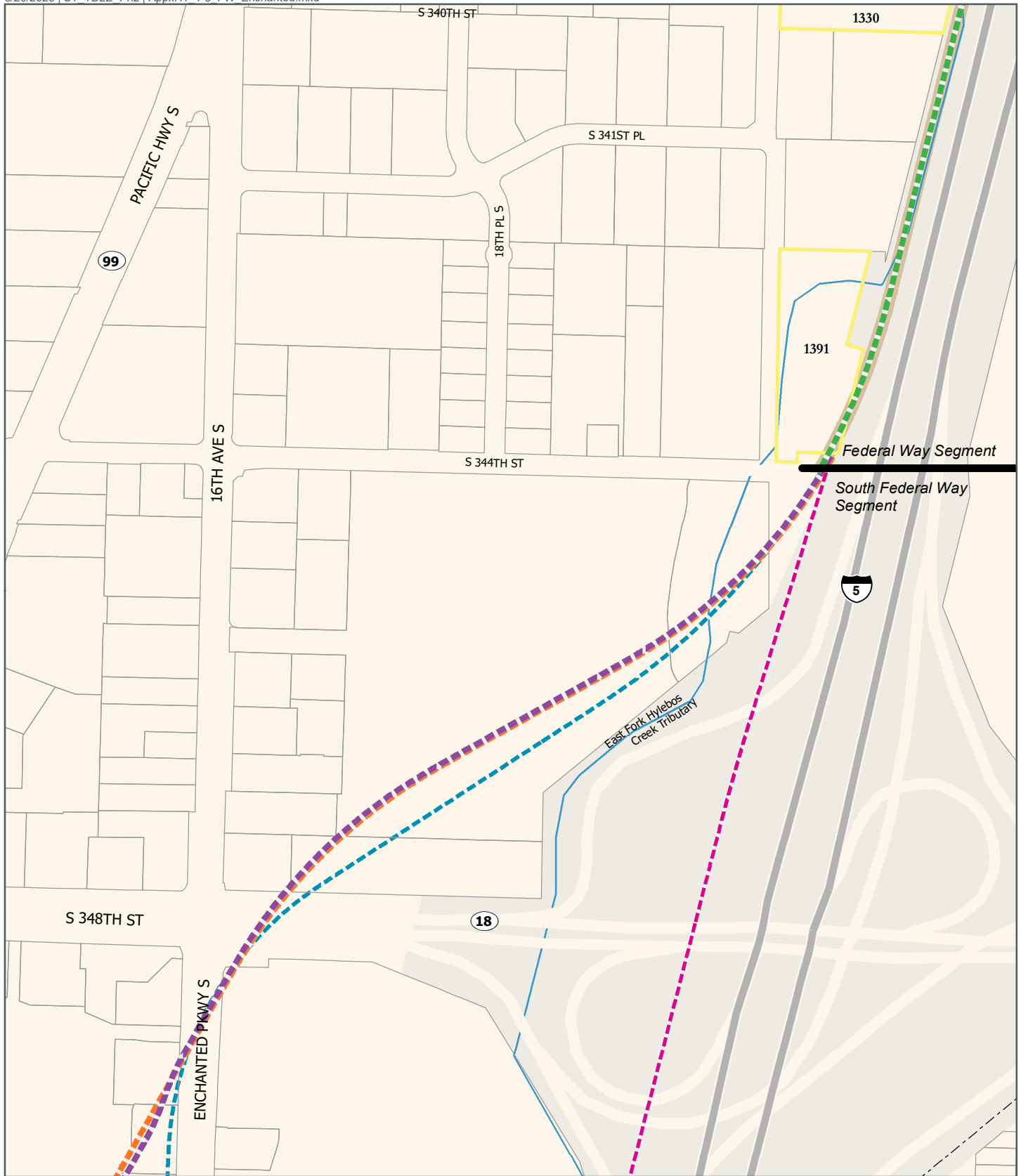
Permanent Footprint

Preferred FW Enchanted Parkway Alternative Affected Parcels Federal Way Segment

Tacoma Dome Link Extension



Figure H1-2



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Preferred FW
Enchanted Parkway

Alternative Profile

At-Grade
Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

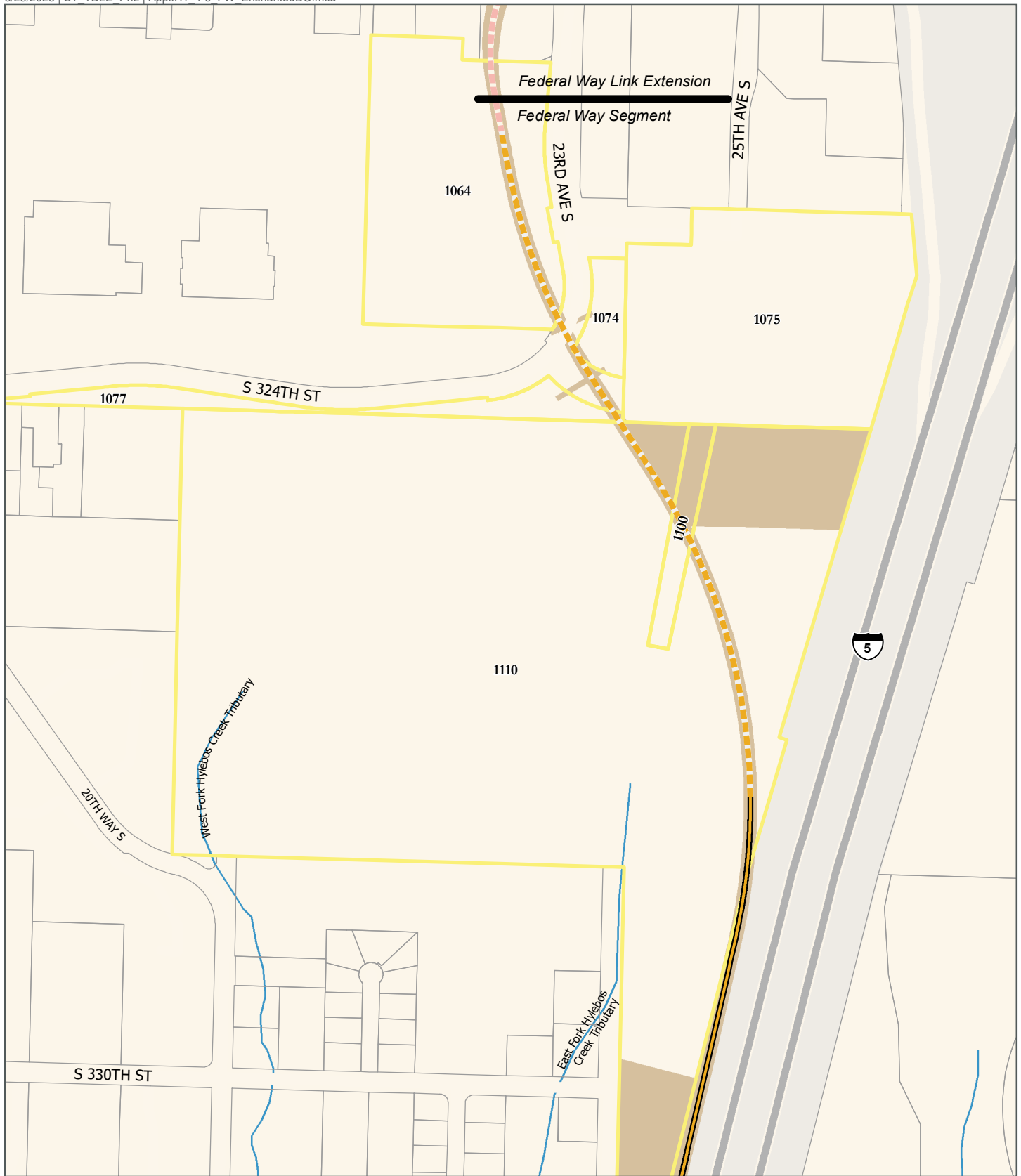
Permanent Footprint

Preferred FW Enchanted Parkway Alternative Affected Parcels Federal Way Segment

Tacoma Dome Link Extension



Figure H1-3



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Design Option
- Preferred FW Enchanted Parkway

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

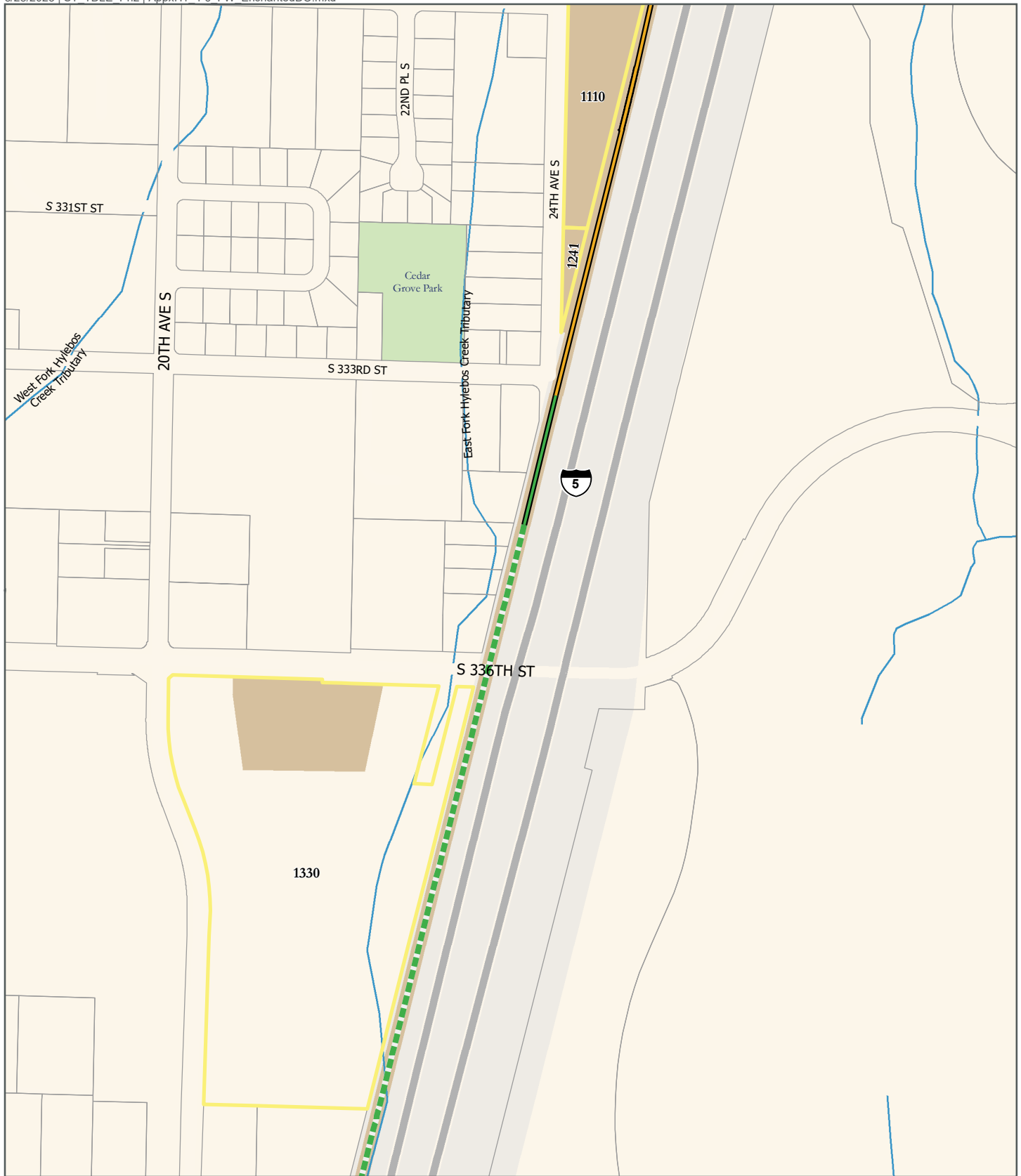
- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

FW Enchanted Parkway with Design Option Affected Parcels

Tacoma Dome Link Extension



Figure H1-4



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Design Option
- - - Preferred FW Enchanted Parkway

Alternative Profile

- At-Grade
- - - Elevated

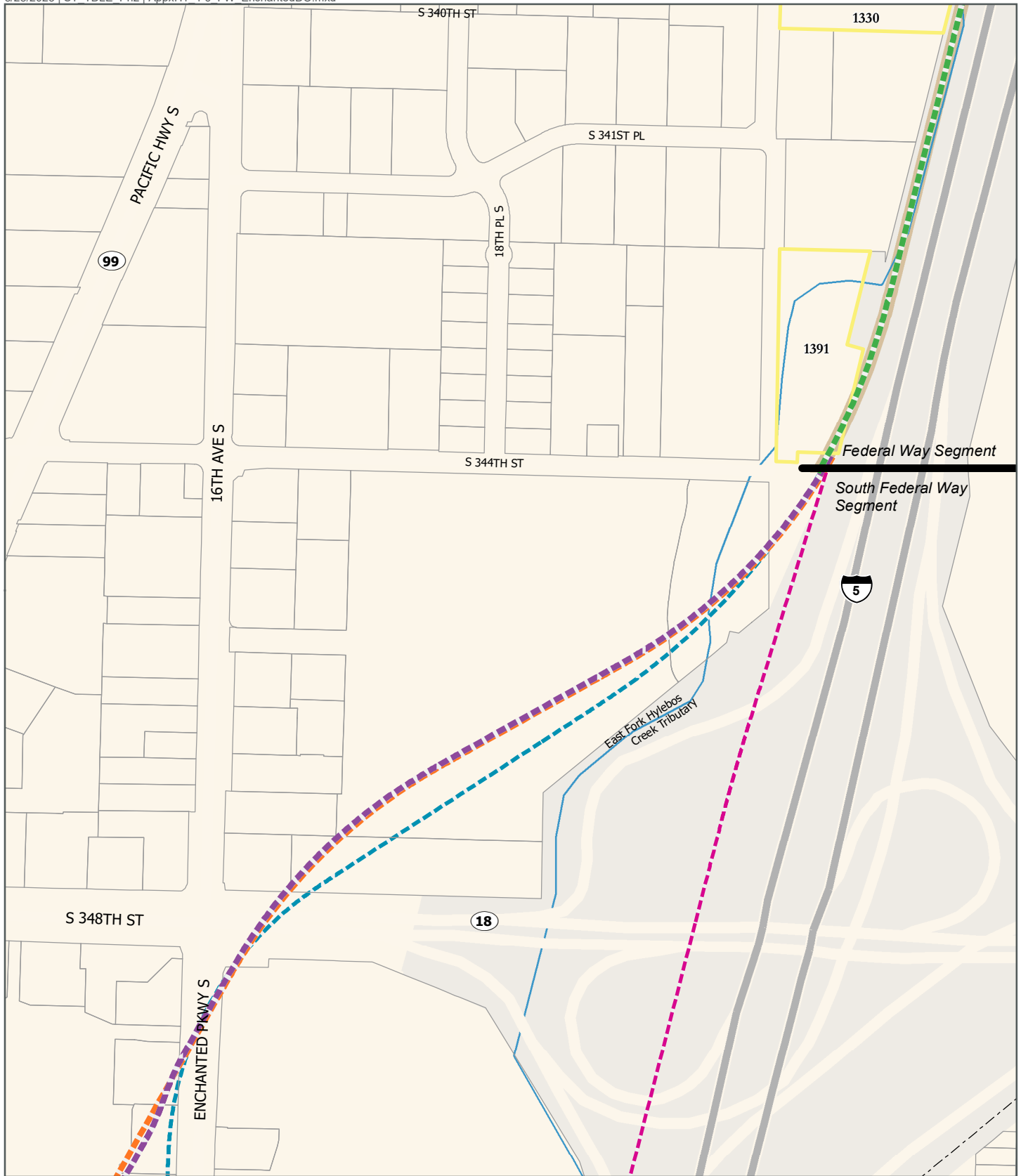
Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-5
FW Enchanted Parkway with Design Option
Affected Parcels
Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Design Option
- Preferred FW Enchanted Parkway

Alternative Profile

- At-Grade
- - - Elevated

Station

- █ New

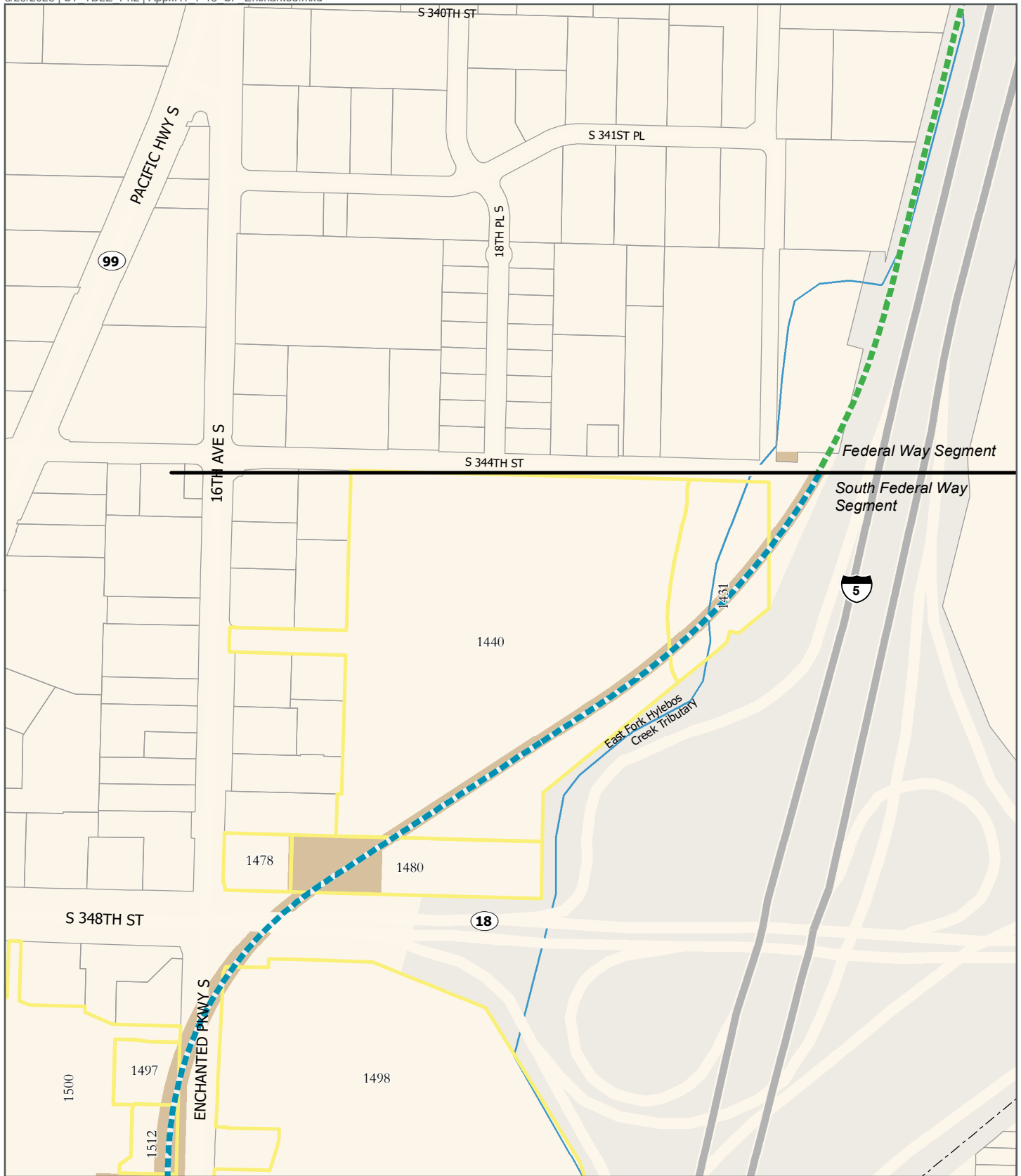
- Stream
- █ Park
- █ Affected Parcel
- █ Parcel
- █ Permanent Footprint

FW Enchanted Parkway with Design Option Affected Parcels Federal Way Segment

Tacoma Dome Link Extension



Figure H1-6



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-7
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment

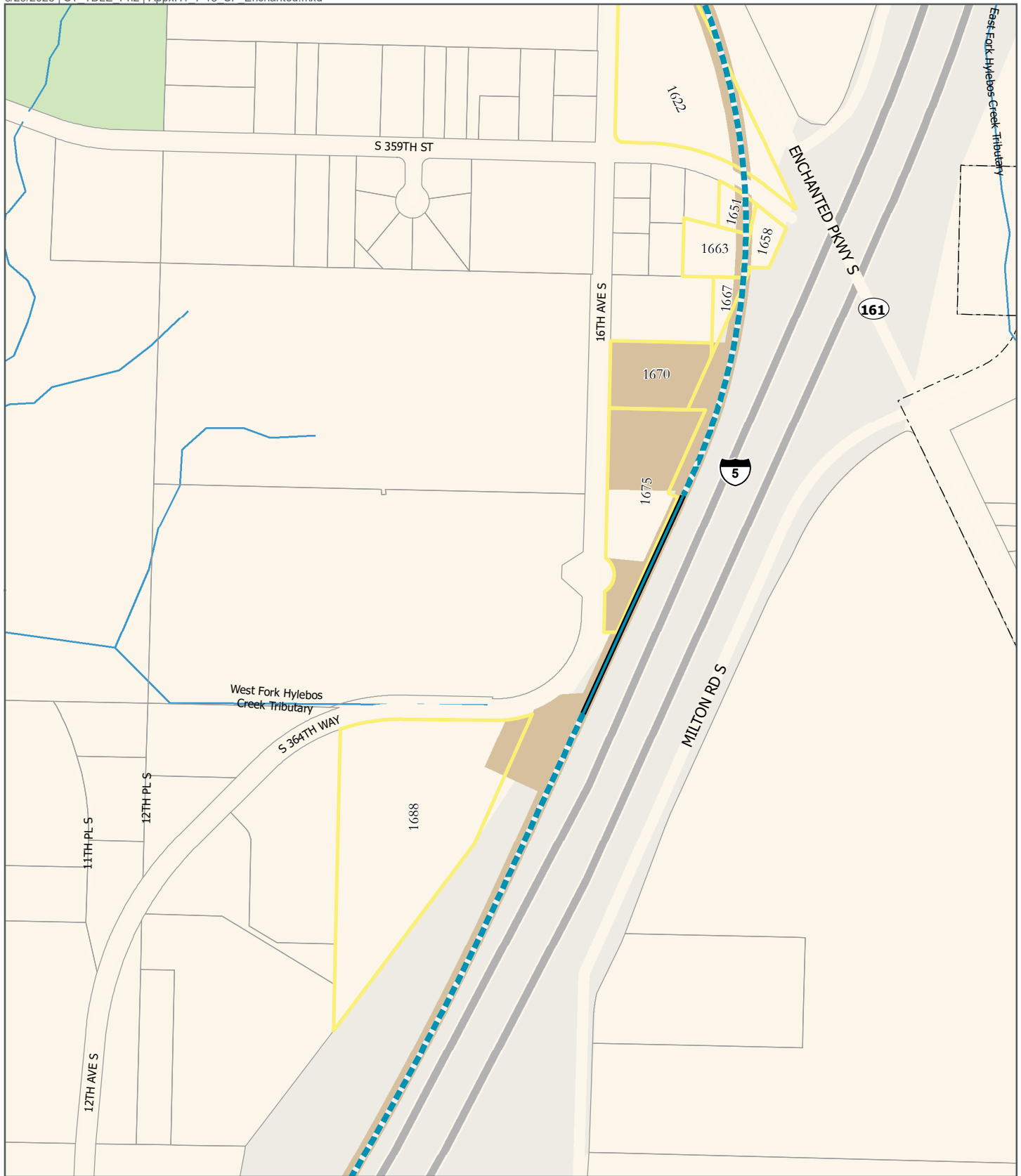
Tacoma Dome Link Extension
0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-8
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF Enchanted Parkway

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

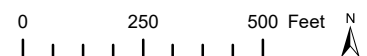
Affected Parcel

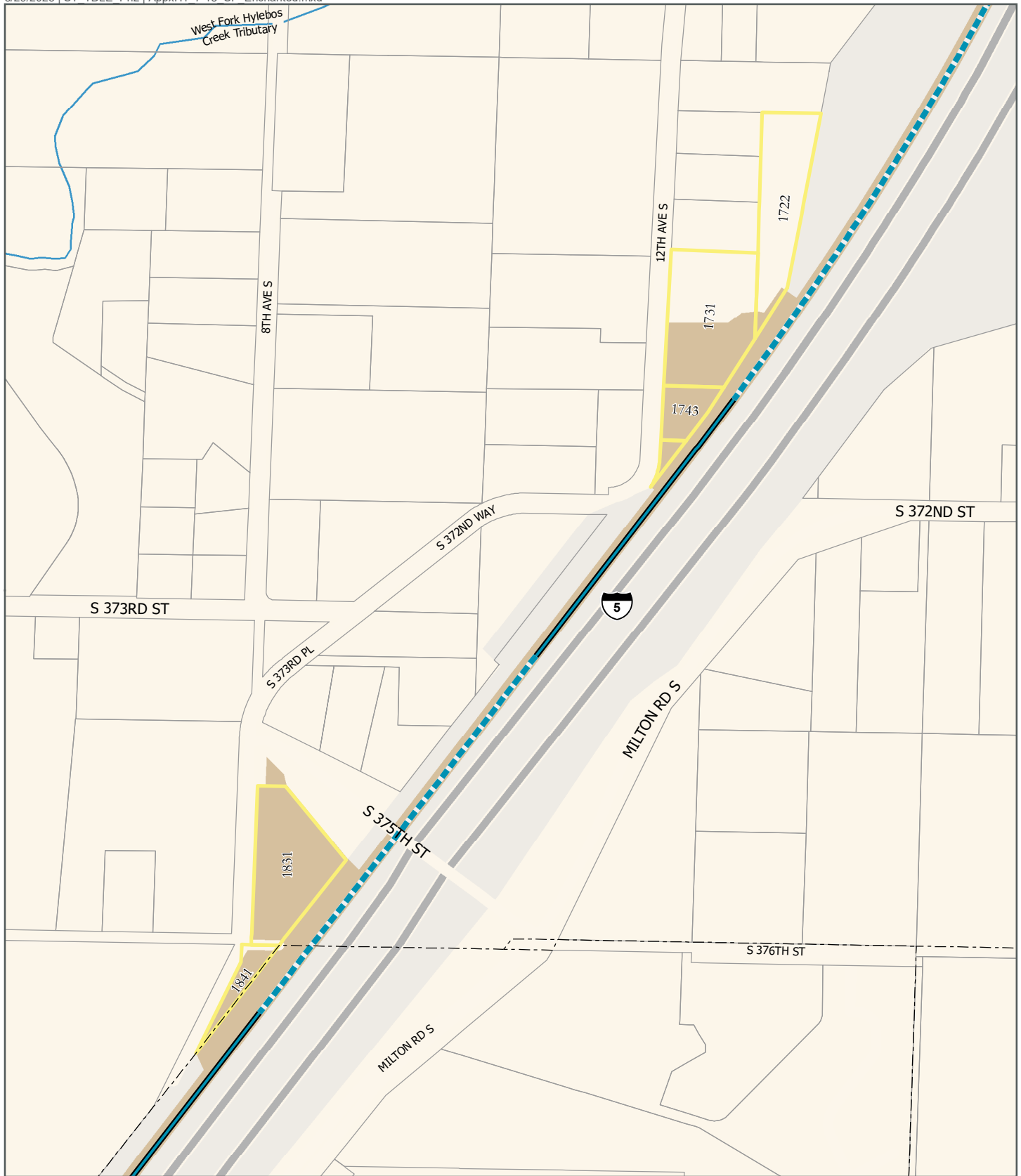
Parcel

Permanent Footprint

Figure H1-9
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-10
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

Alternatives

SF Enchanted Parkway

Alternative Profile

At-Grade
Elevated

Station

New

Stream

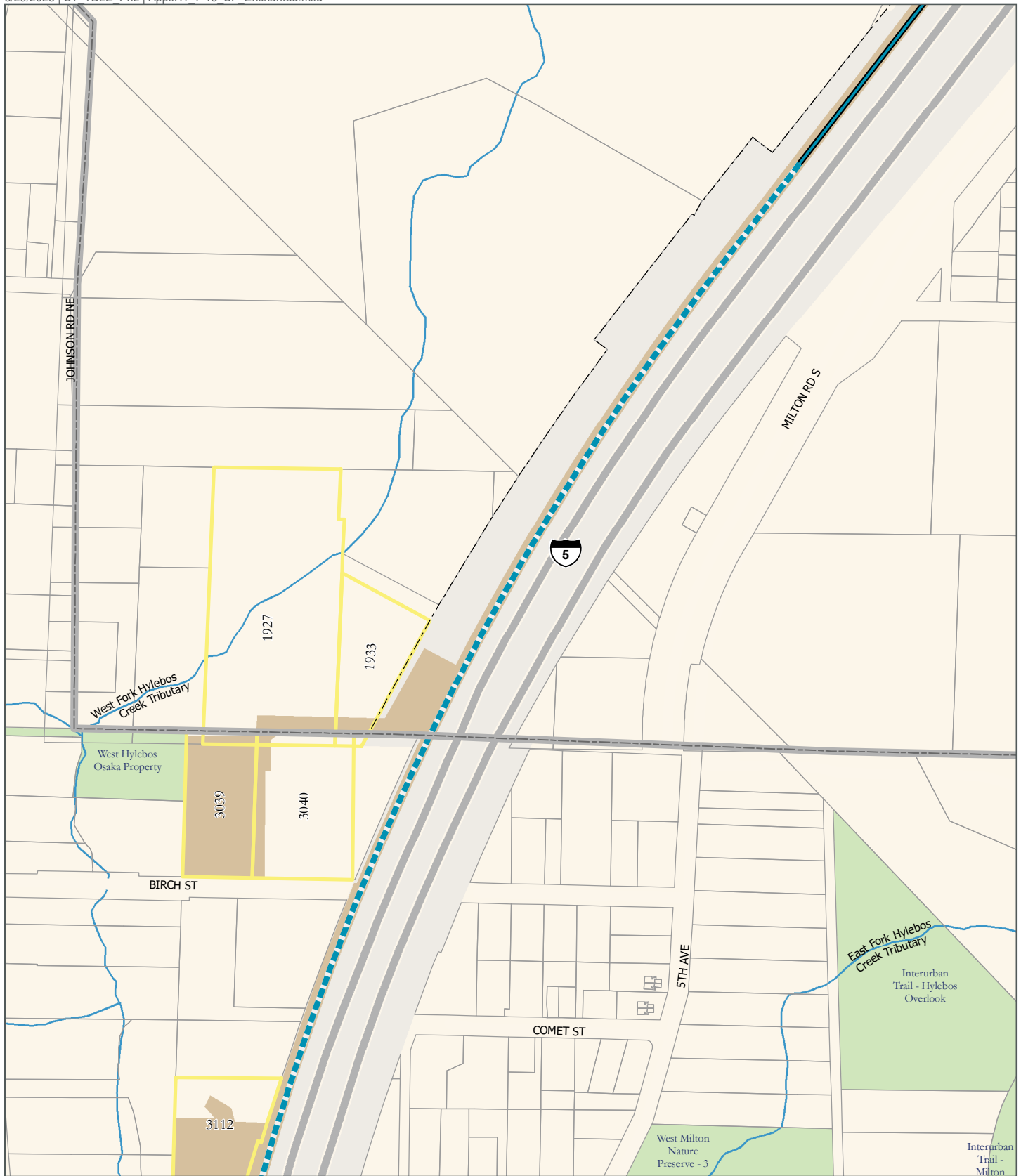
Park

Affected Parcel

Parcel

Permanent Footprint

0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF Enchanted Parkway

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

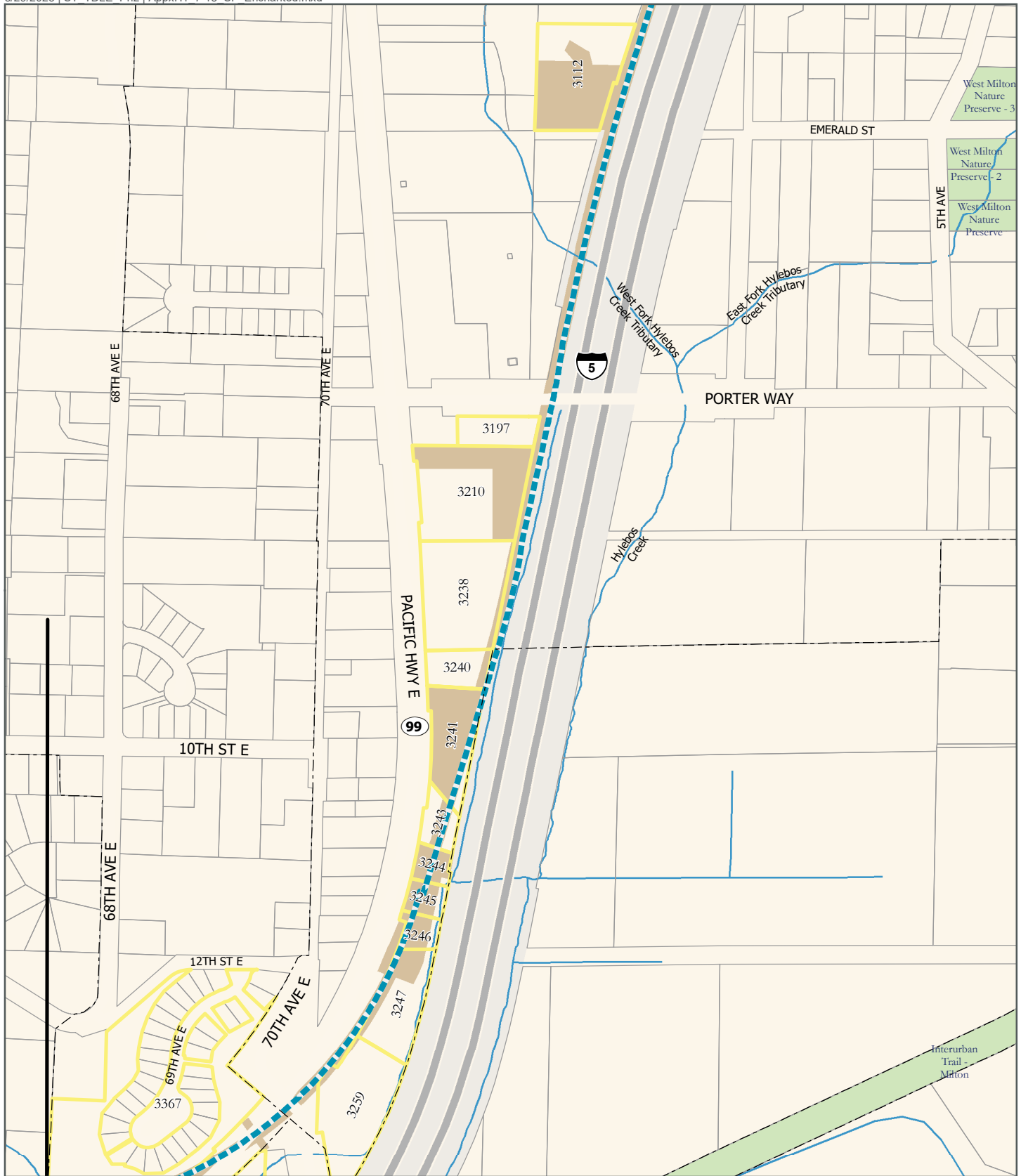
□ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-11
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF Enchanted Parkway

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

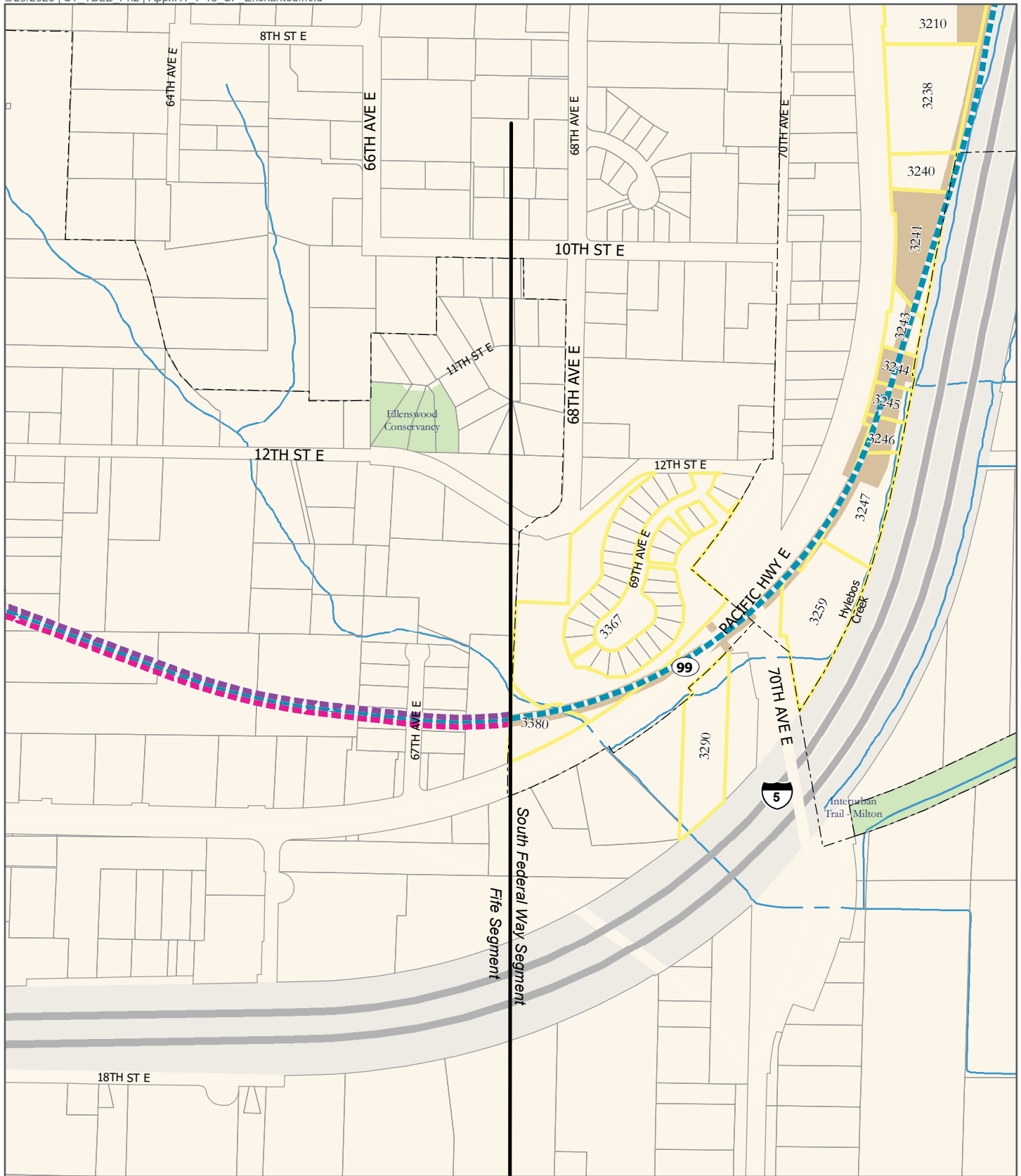
Parcel

Permanent Footprint

Figure H1-12
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF Enchanted Parkway

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

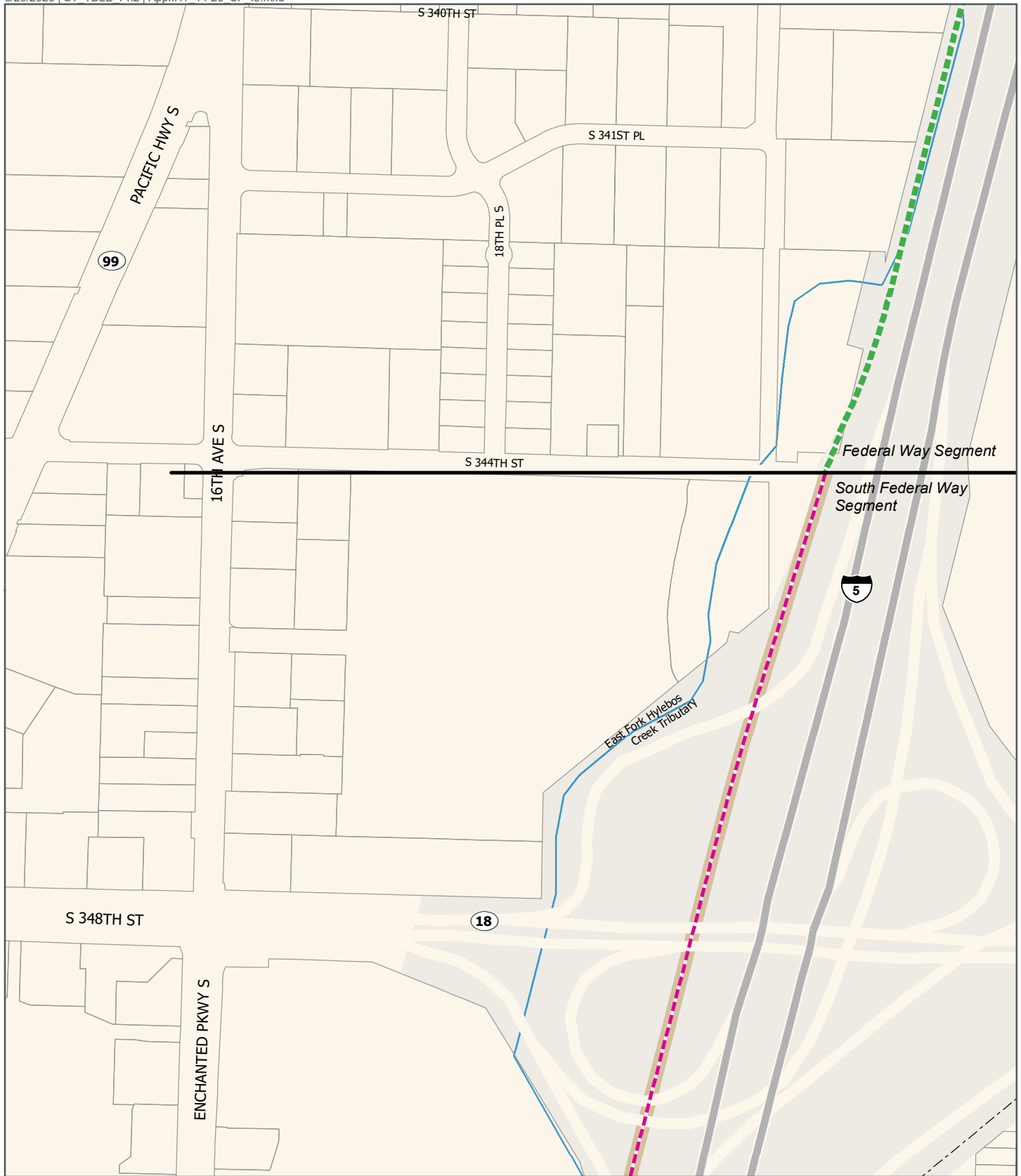
Parcel

Permanent Footprint

Figure H1-13
SF Enchanted Parkway Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

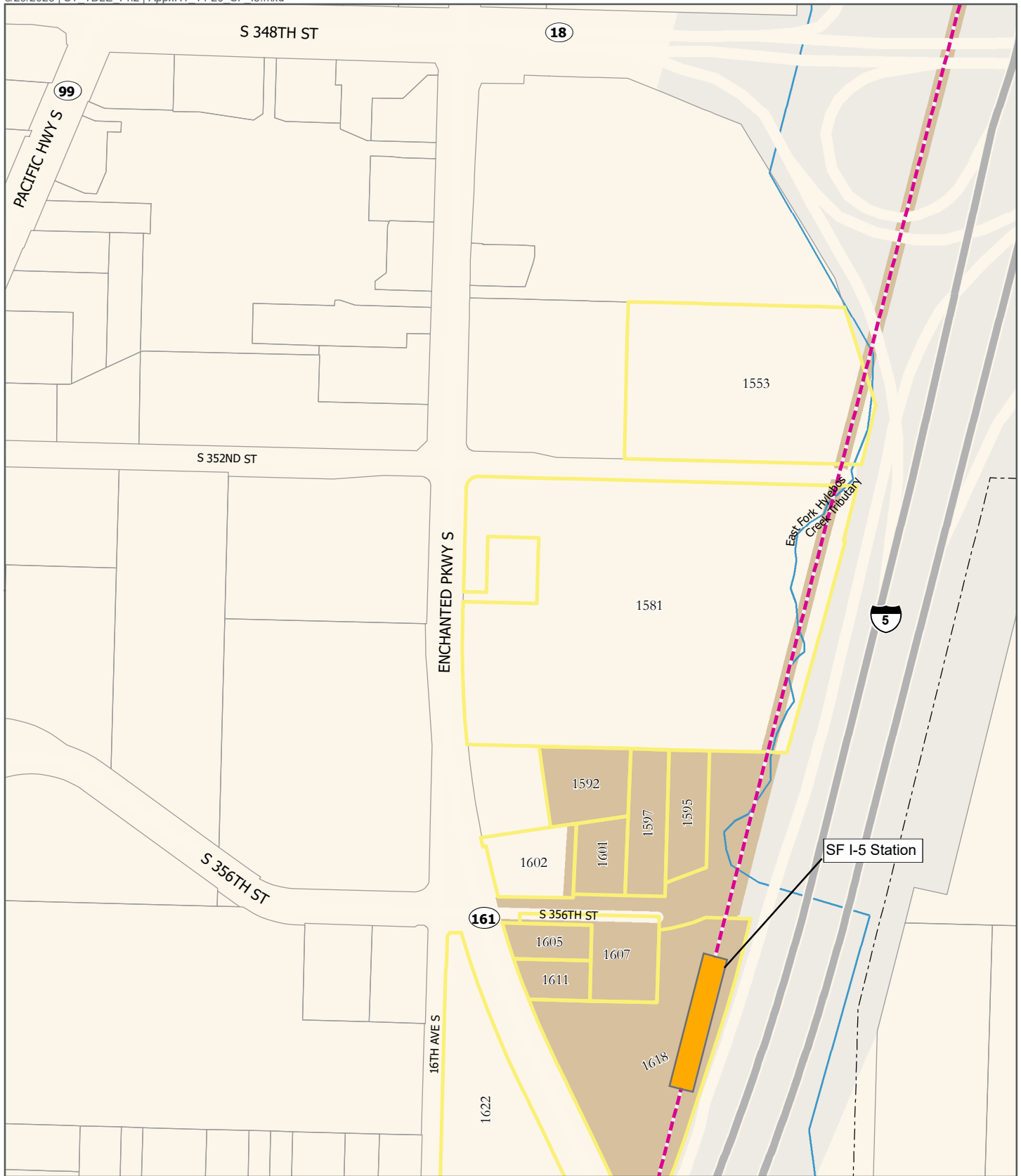
Parcel

Permanent Footprint

Figure H1-14
SF I-5 Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension

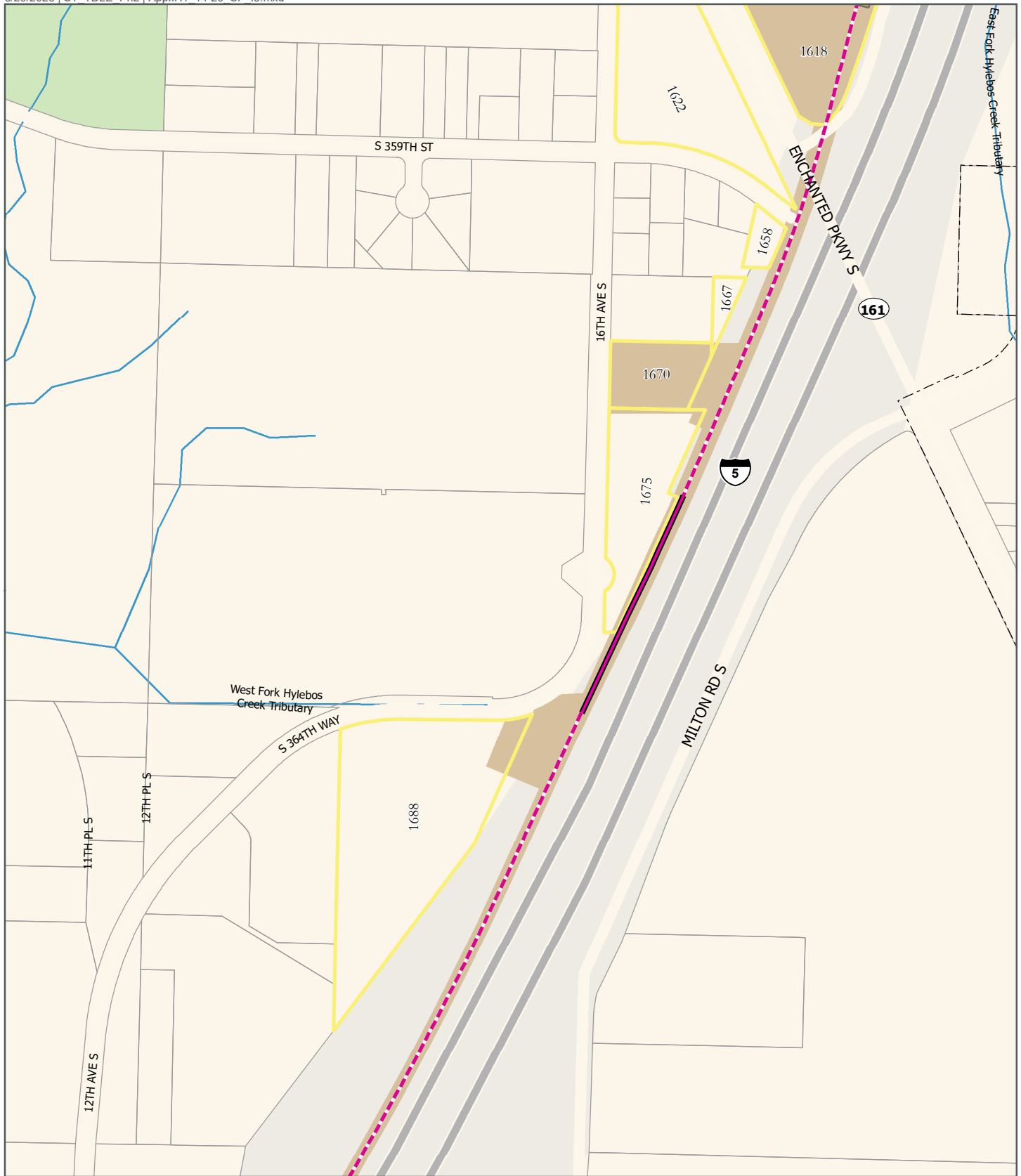




Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-15
SF I-5 Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

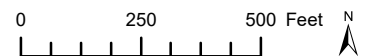
Affected Parcel

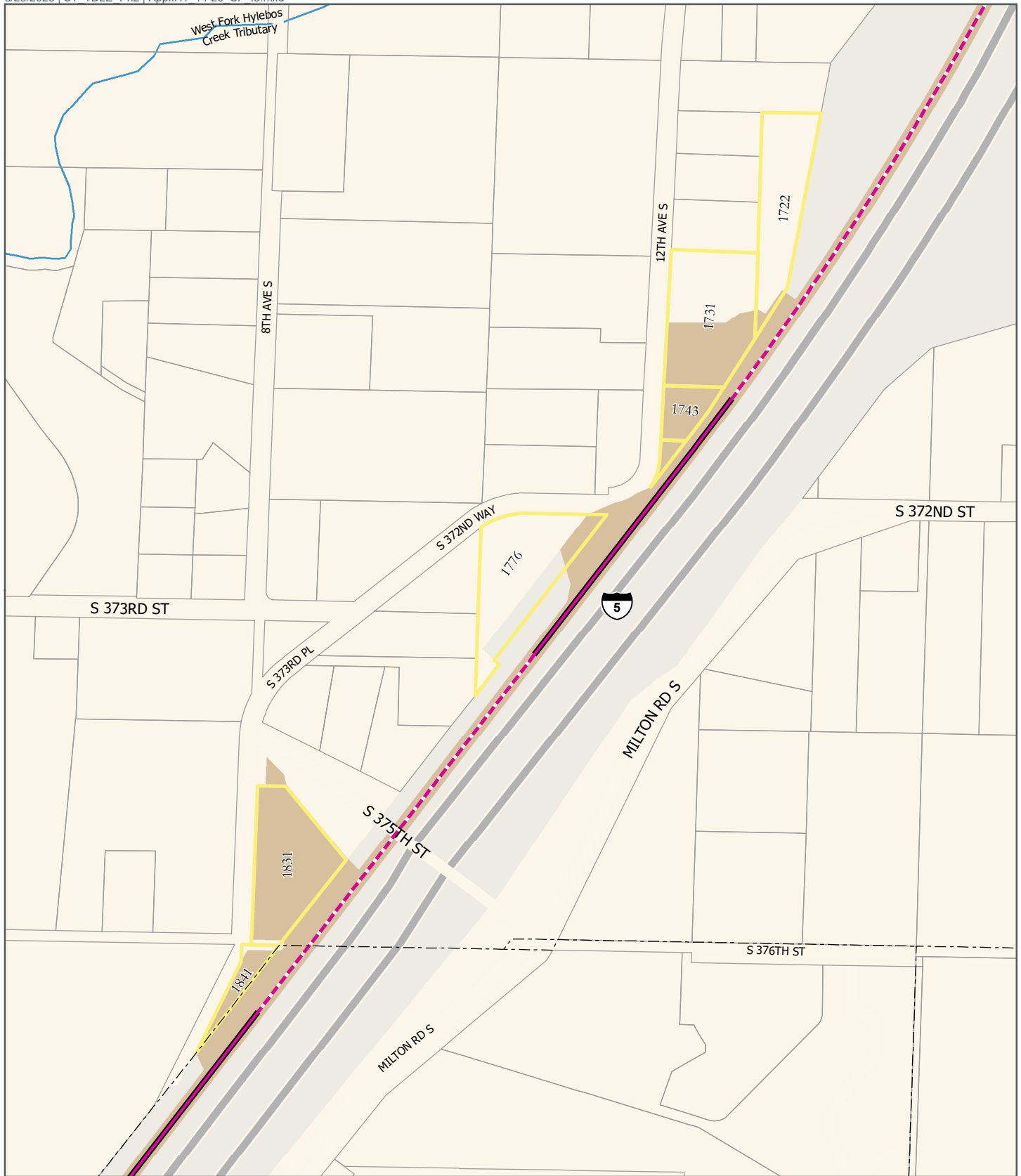
Parcel

Permanent Footprint

Figure H1-16
SF I-5 Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

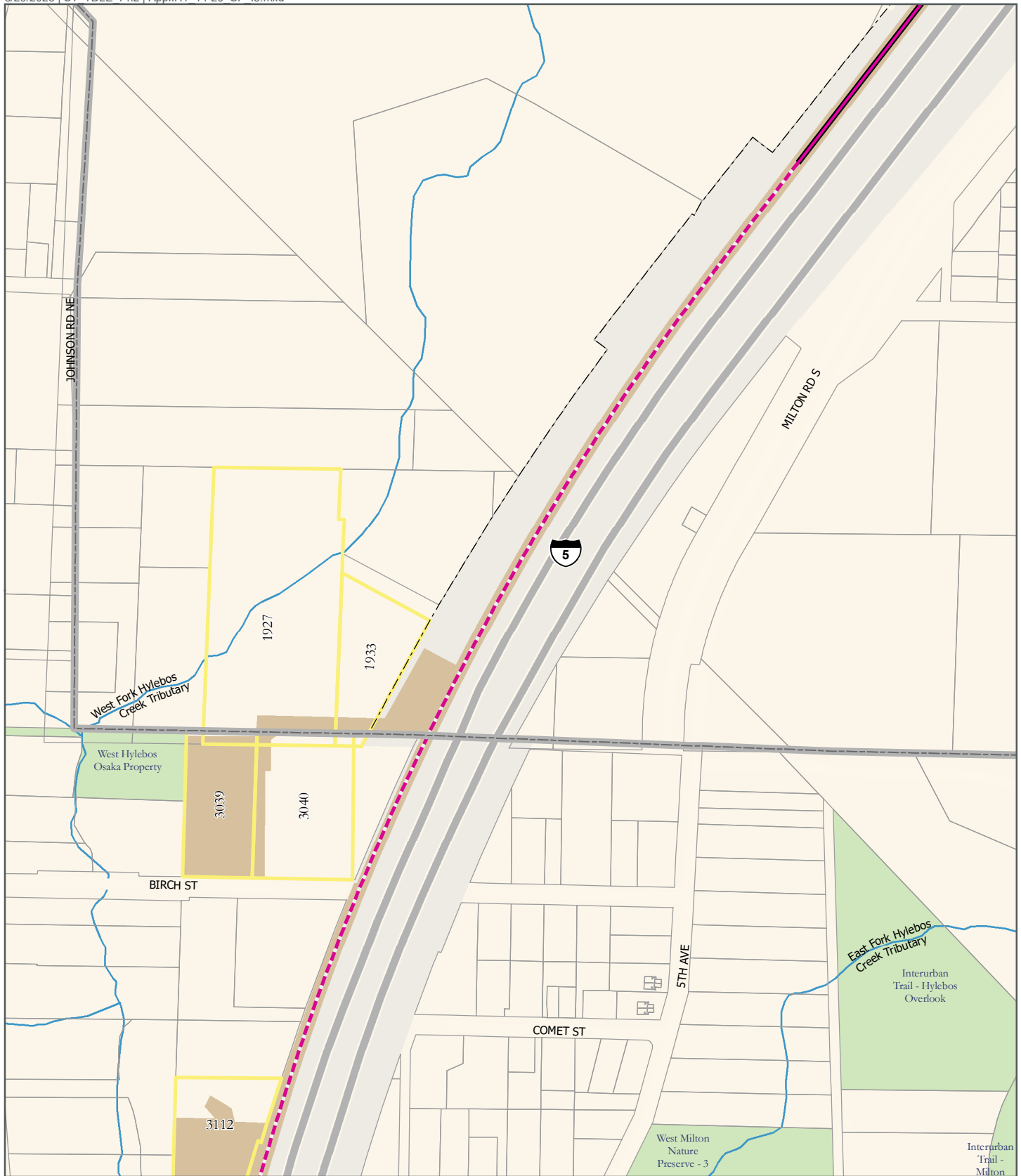
Parcel

Permanent Footprint

Figure H1-17
SF I-5 Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

Permanent Footprint

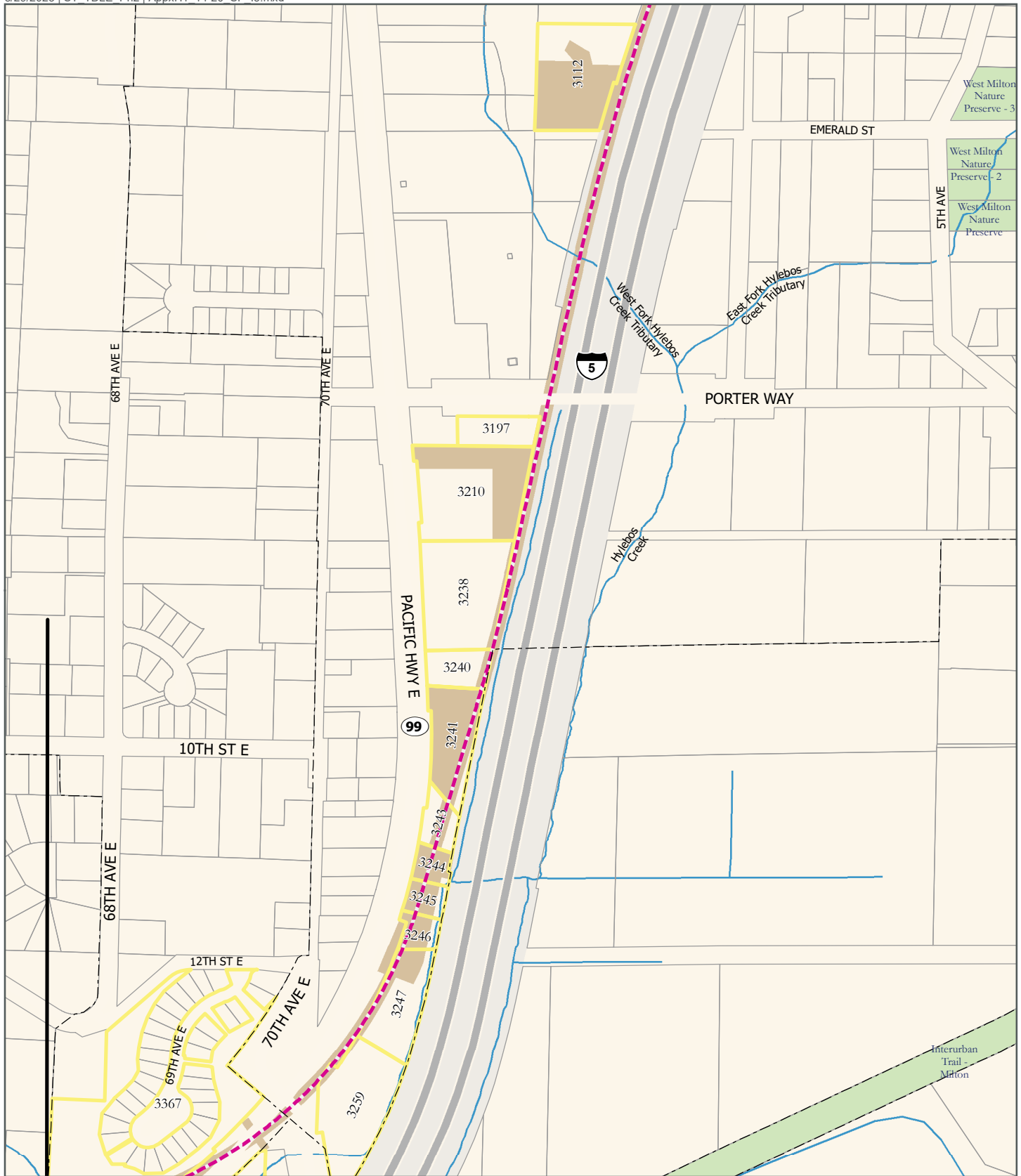
Figure H1-18

SF I-5 Alternative
Affected Parcels

South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

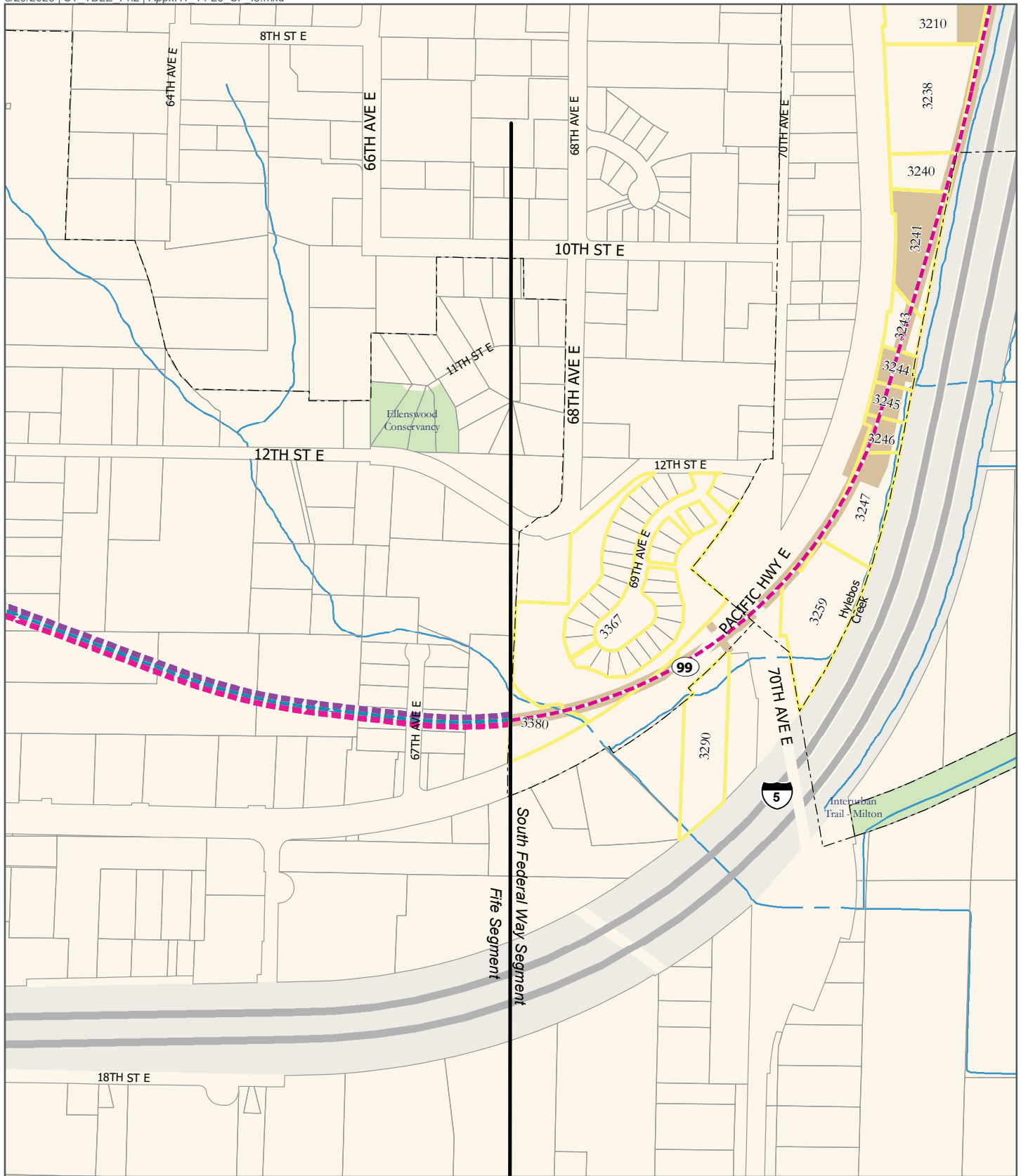
Affected Parcel

Parcel

Permanent Footprint

Figure H1-19
SF I-5 Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF I-5

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

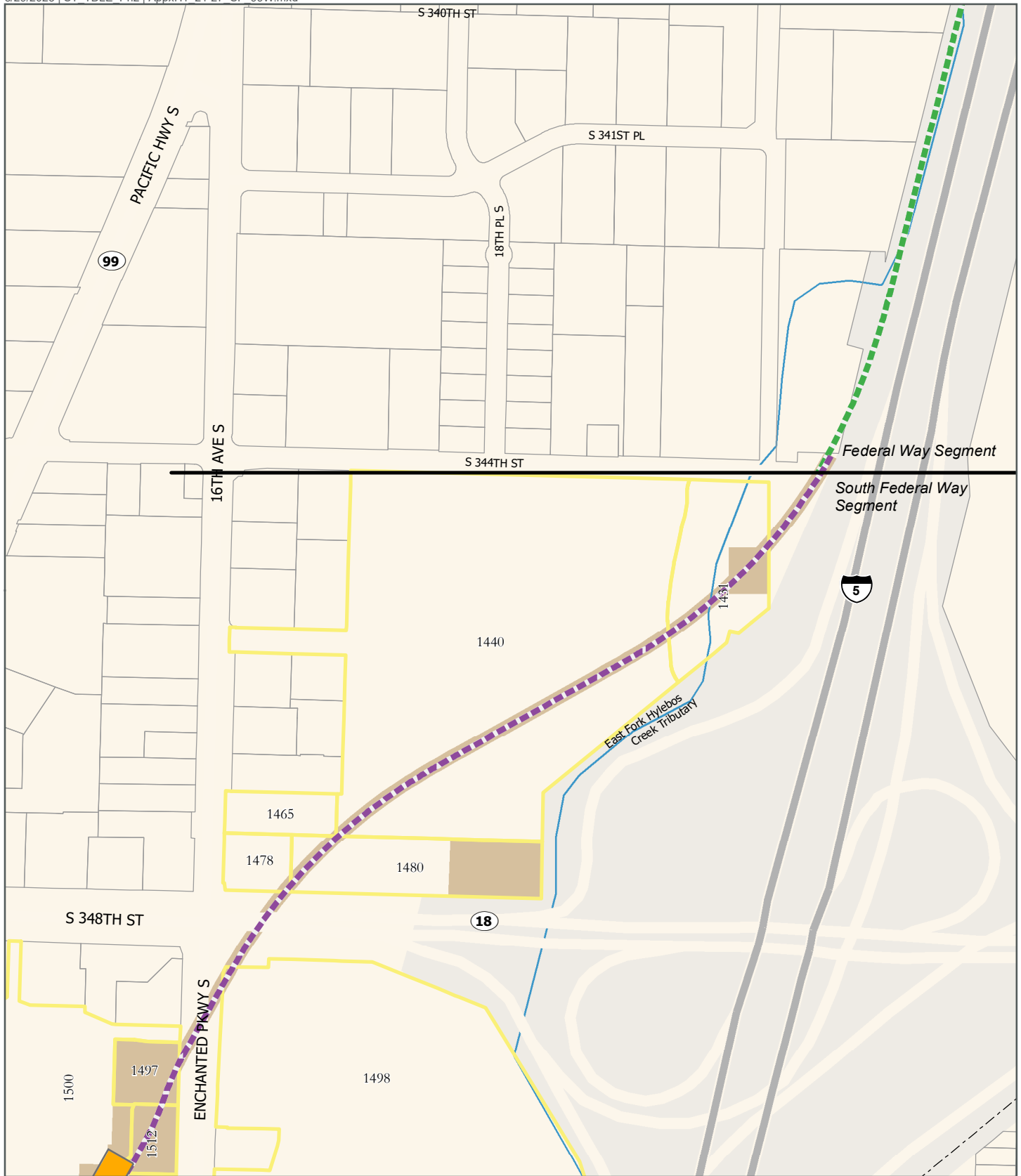
Affected Parcel

Parcel

Permanent Footprint

Figure H1-20
SF I-5 Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

■ Parcel

■ Permanent Footprint

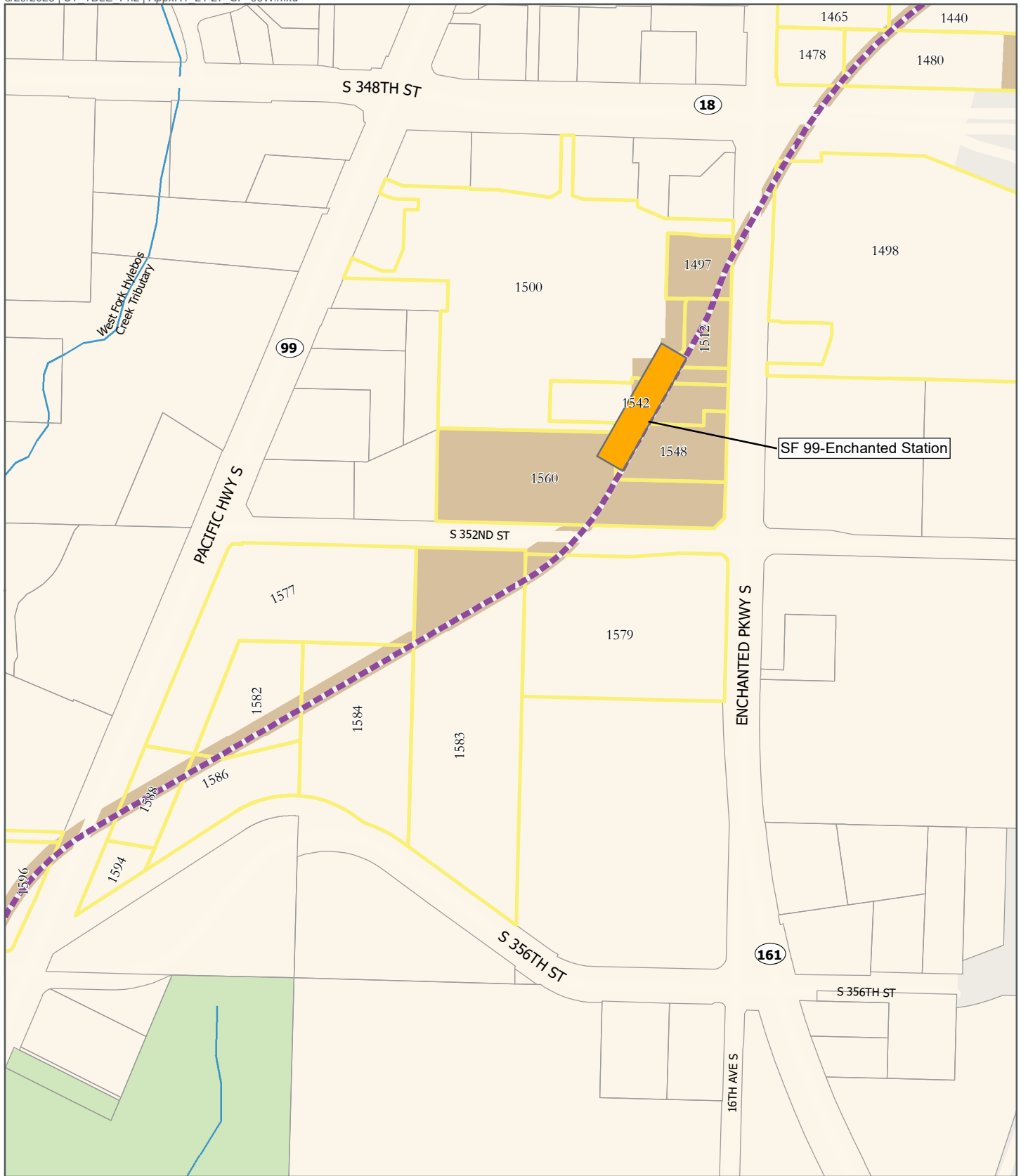
Figure H1-21

SF 99-West Alternative
Affected Parcels

South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

□ Parcel

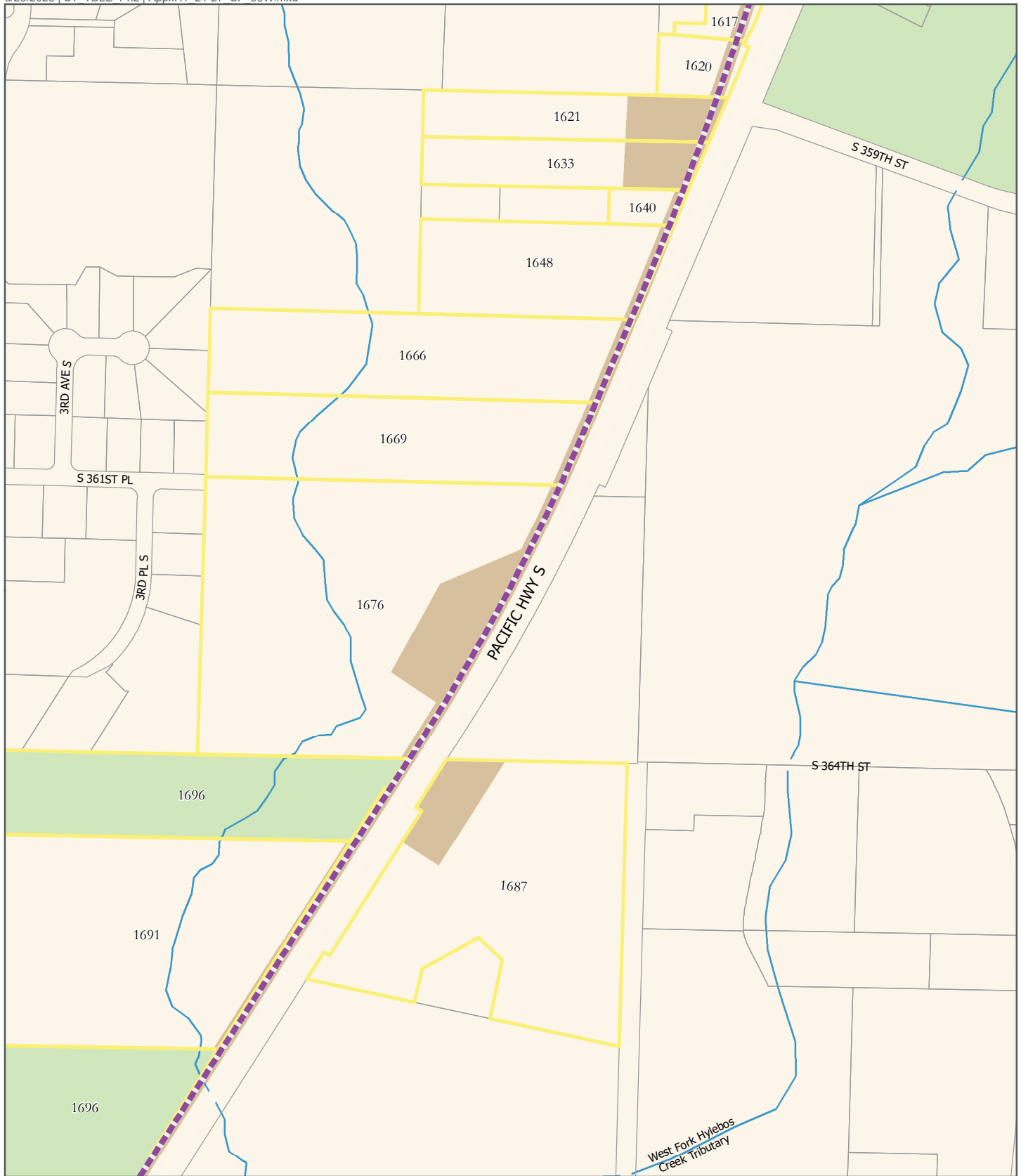
■ Permanent Footprint

Figure H1-22

SF 99-West Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-23
SF 99-West Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

0 250 500 Feet N

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

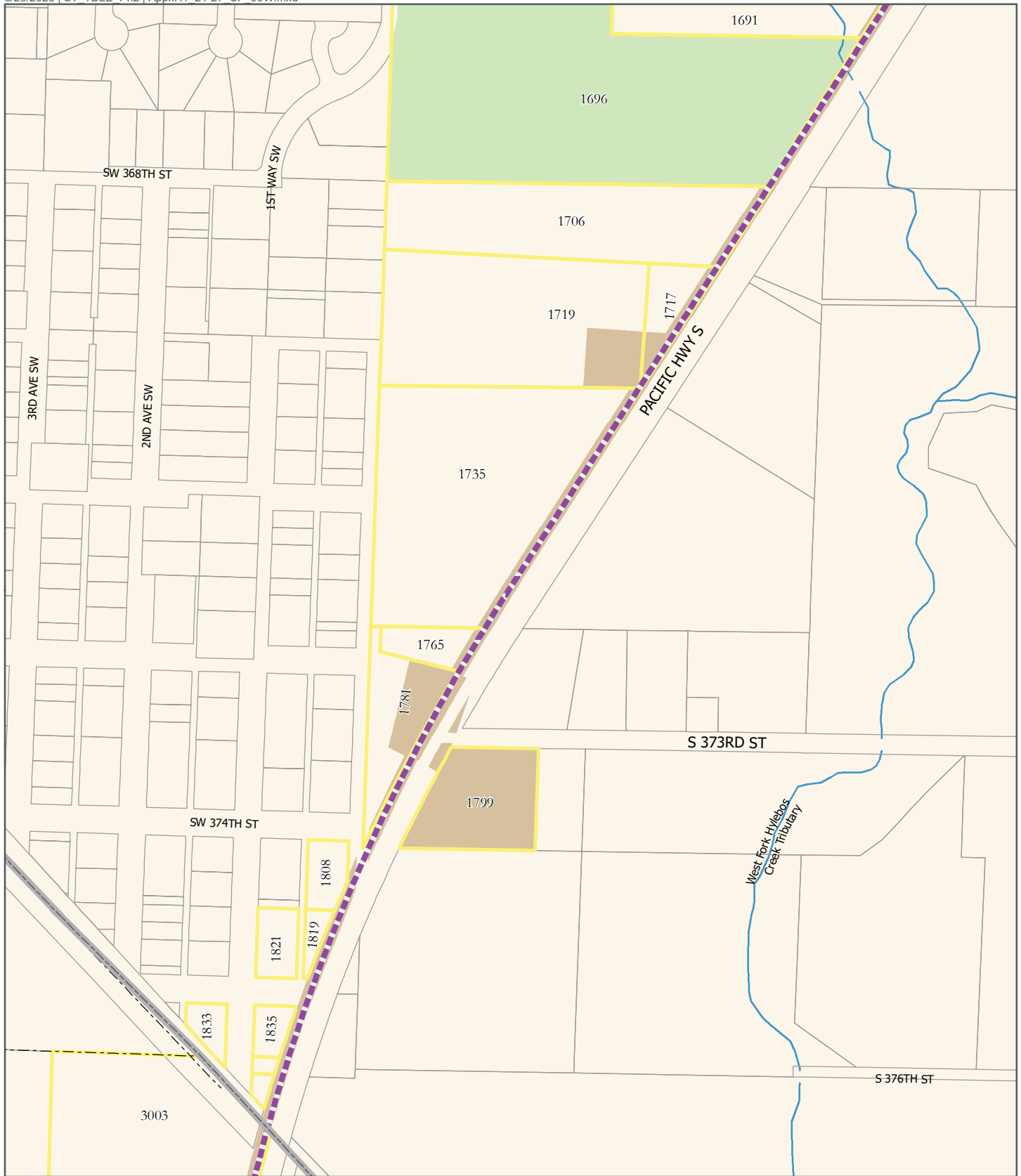
— Stream

■ Park

□ Affected Parcel

□ Parcel

■ Permanent Footprint



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

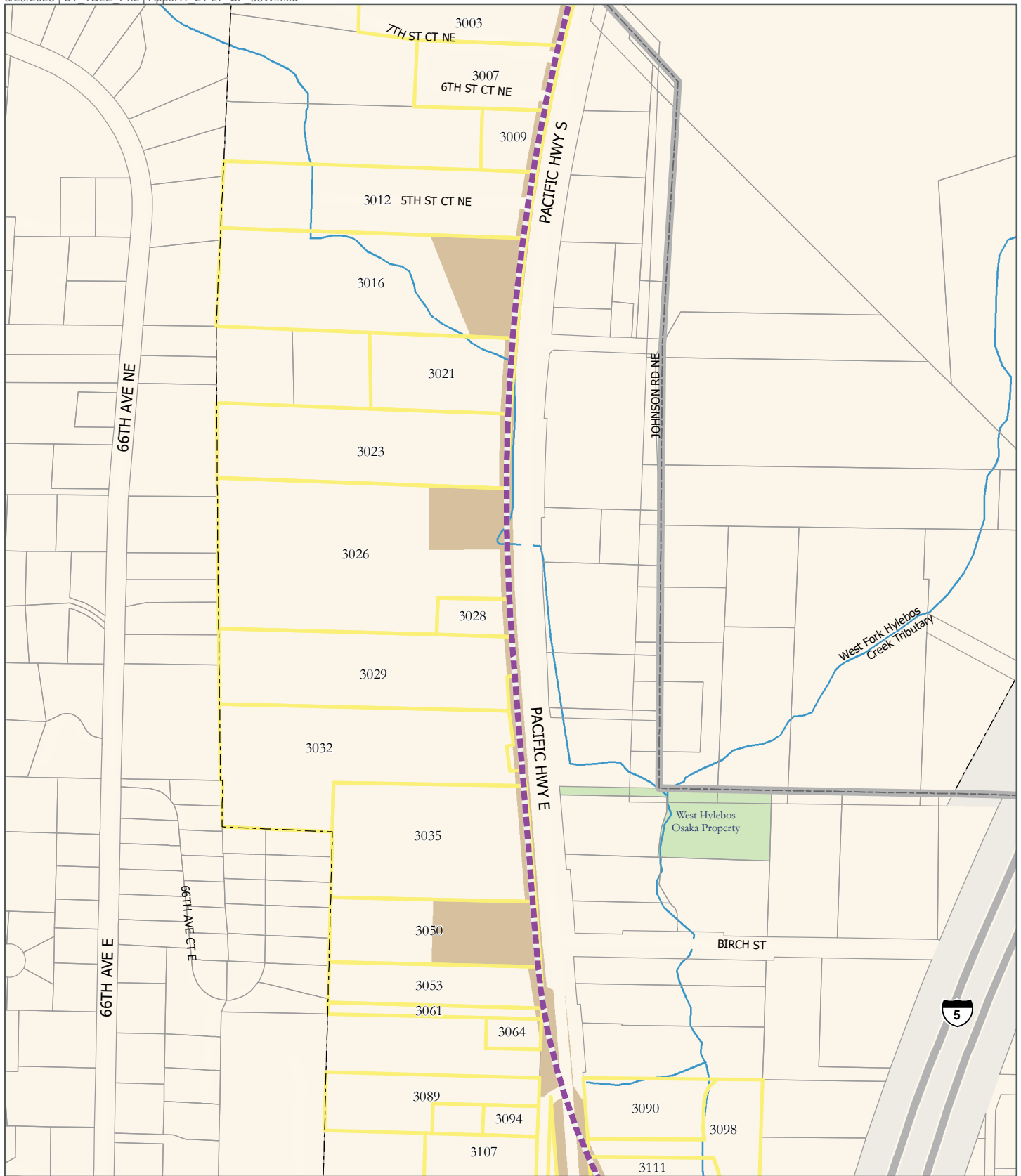
■ Parcel

■ Permanent Footprint

Figure H1-24
SF 99-West Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

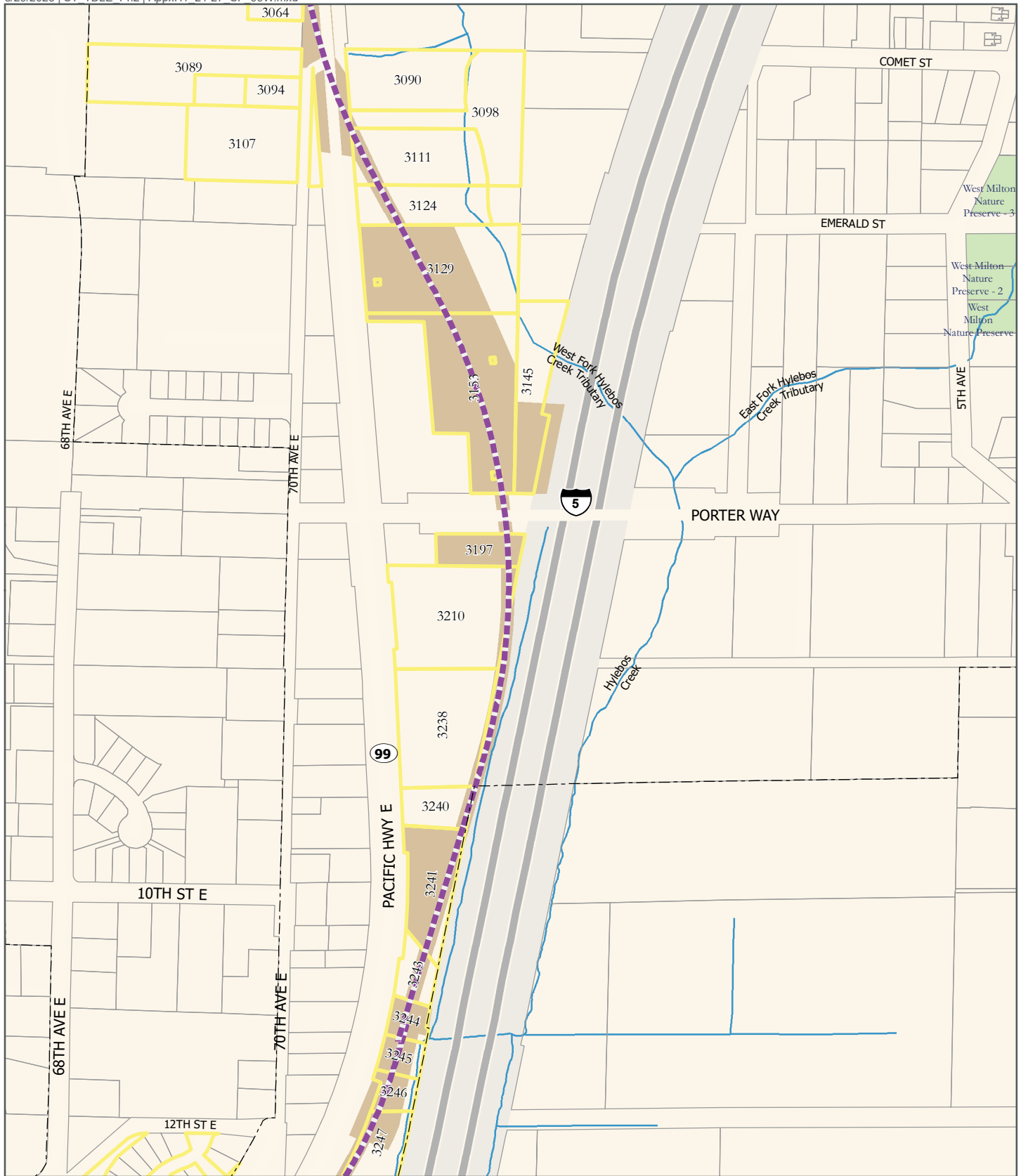
■ Affected Parcel

■ Parcel

■ Permanent Footprint

Figure H1-25
SF 99-West Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

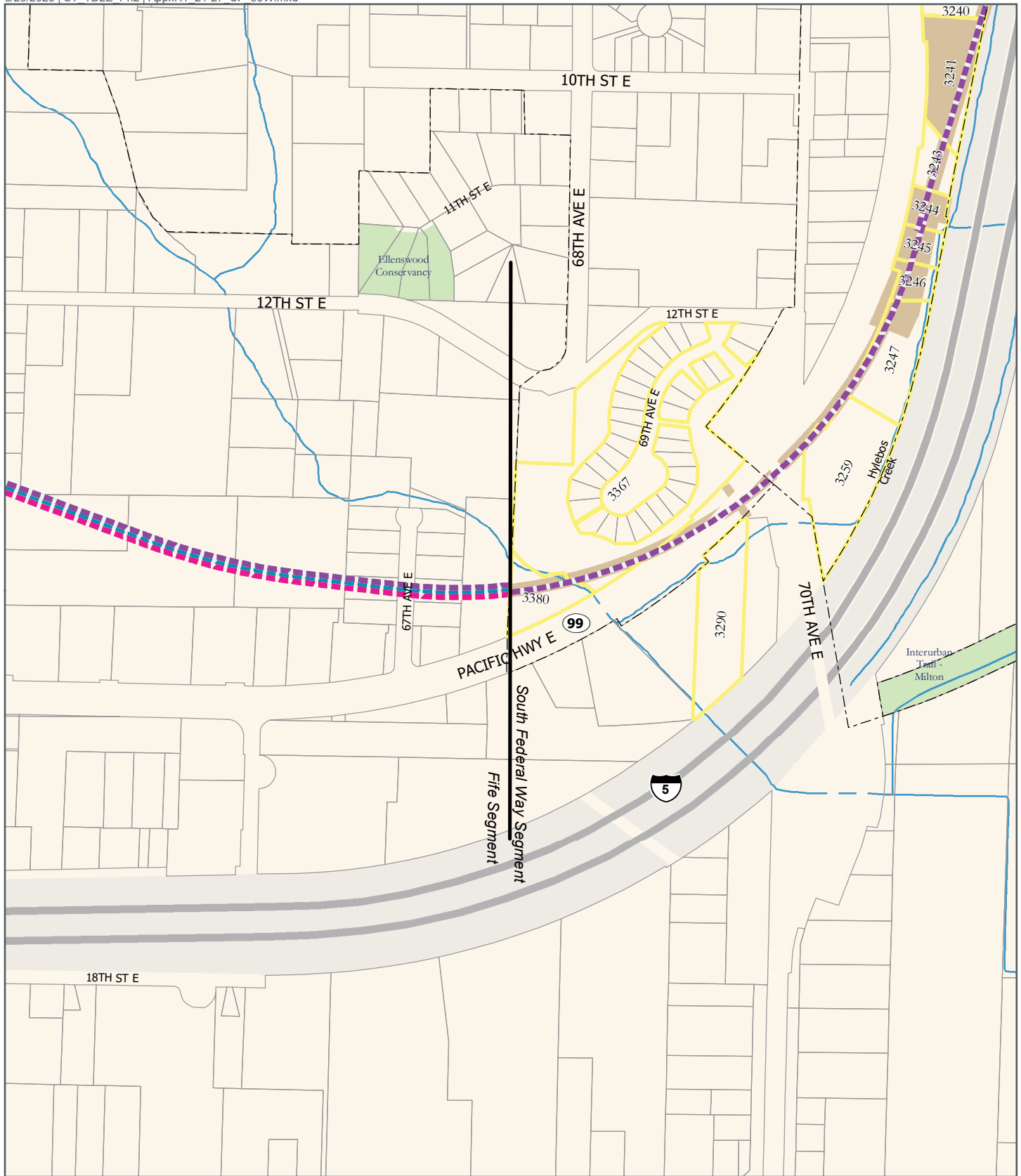
■ Affected Parcel

■ Parcel

■ Permanent Footprint

Figure H1-26
SF 99-West Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-West

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

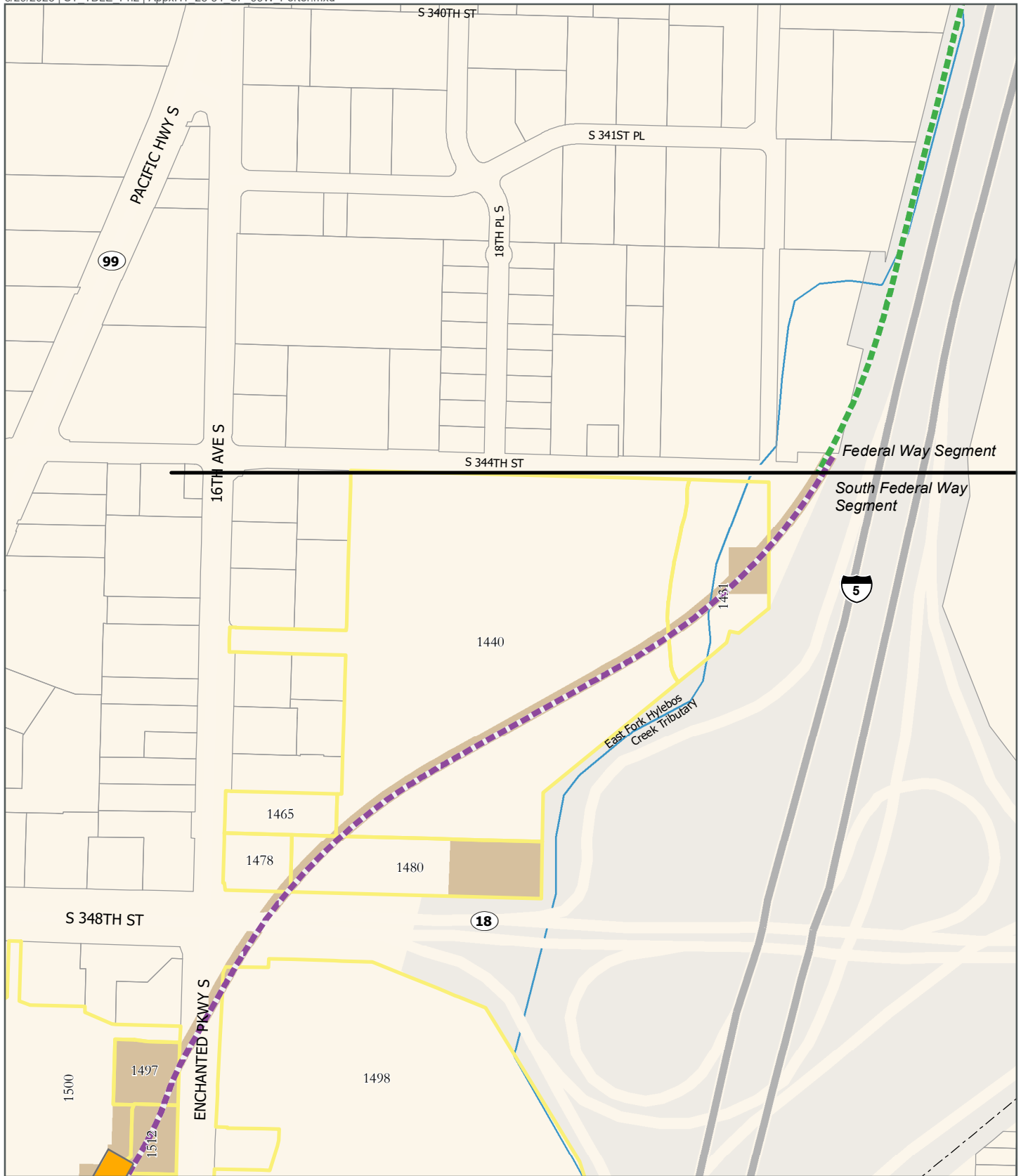
■ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-27
SF 99-West Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-28
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension
0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

■ Park

□ Affected Parcel

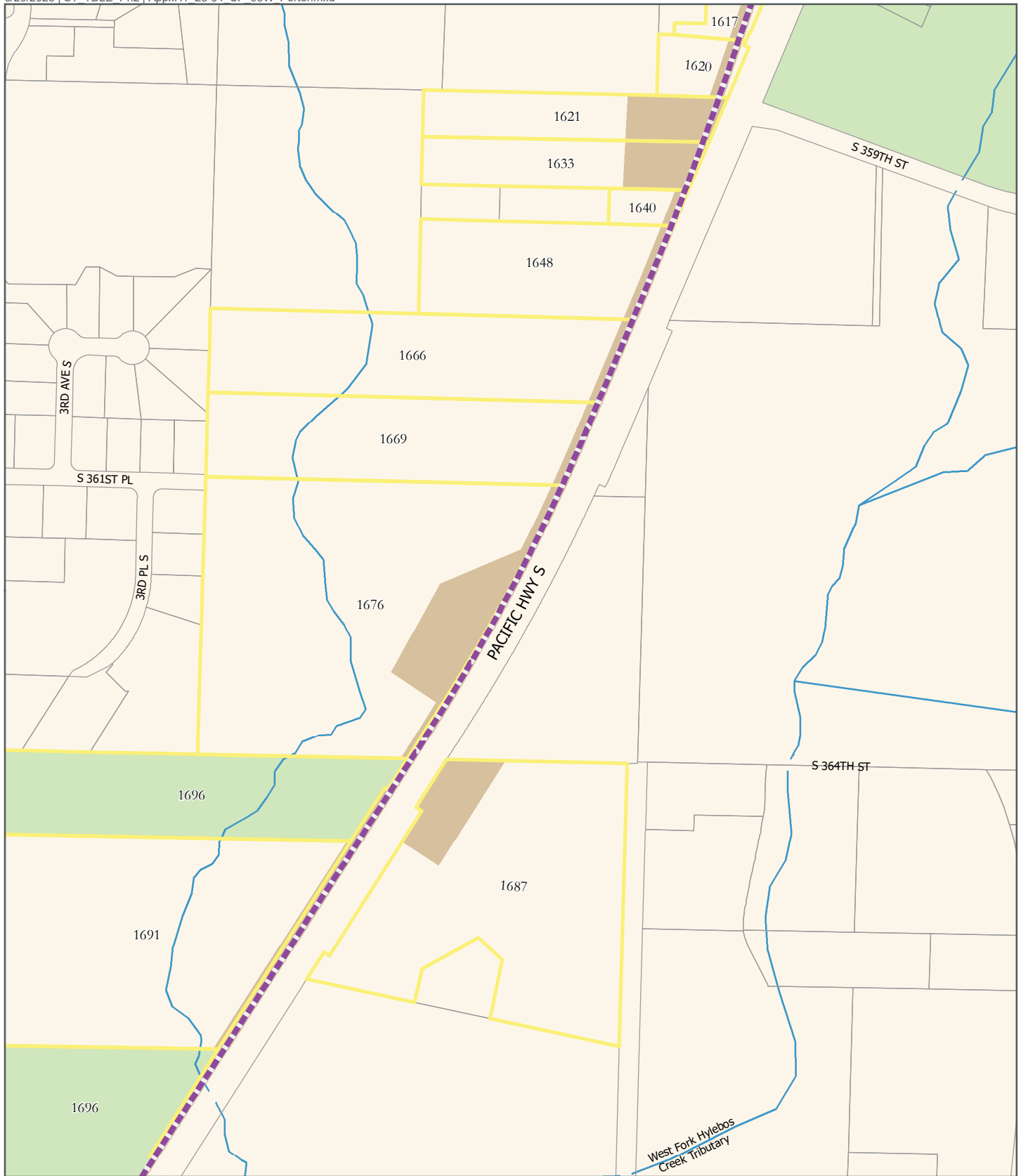
□ Parcel

■ Permanent Footprint

Figure H1-29
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

■ Park

— Affected Parcel

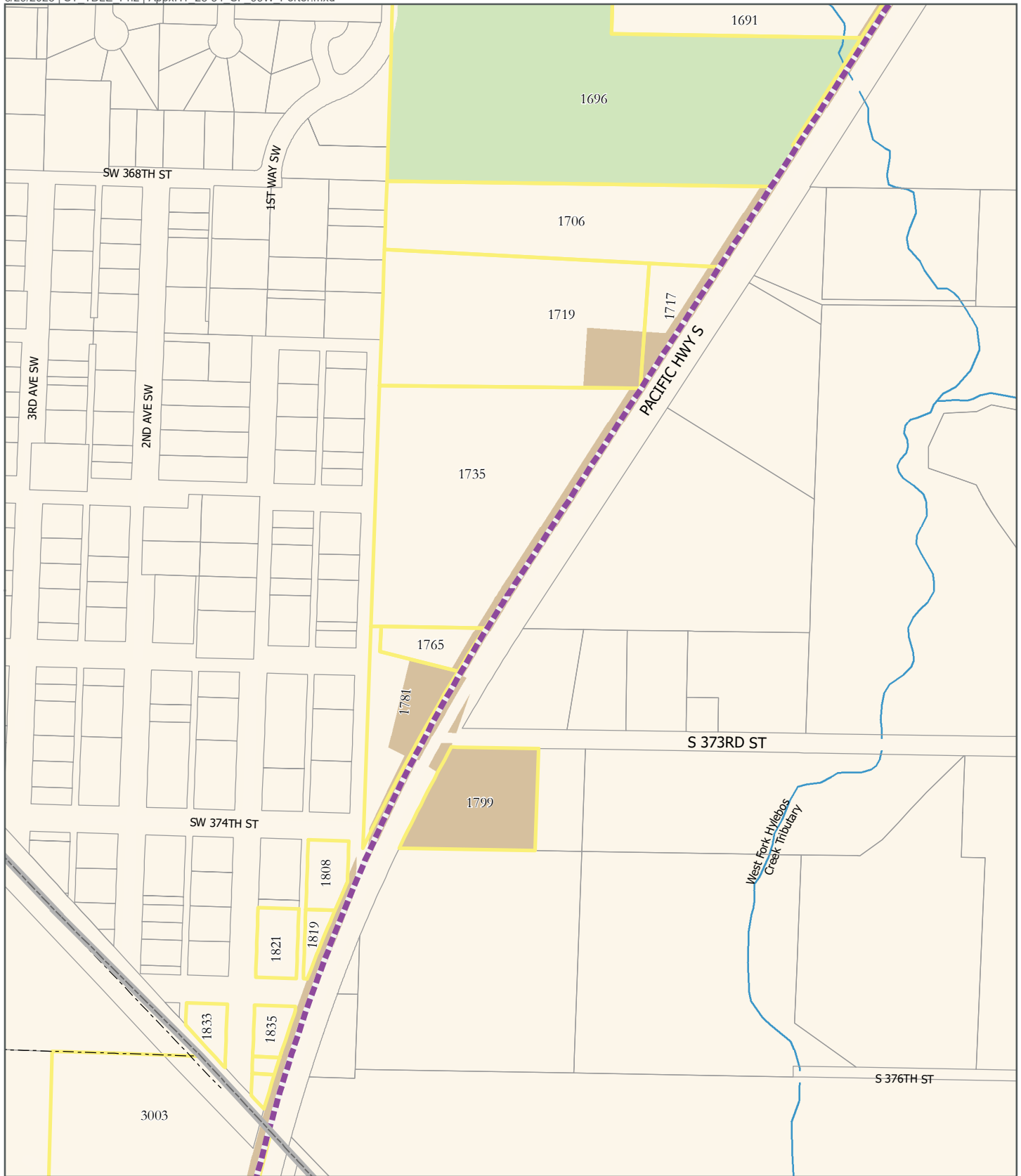
— Parcel

■ Permanent Footprint

Figure H1-30
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-31
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

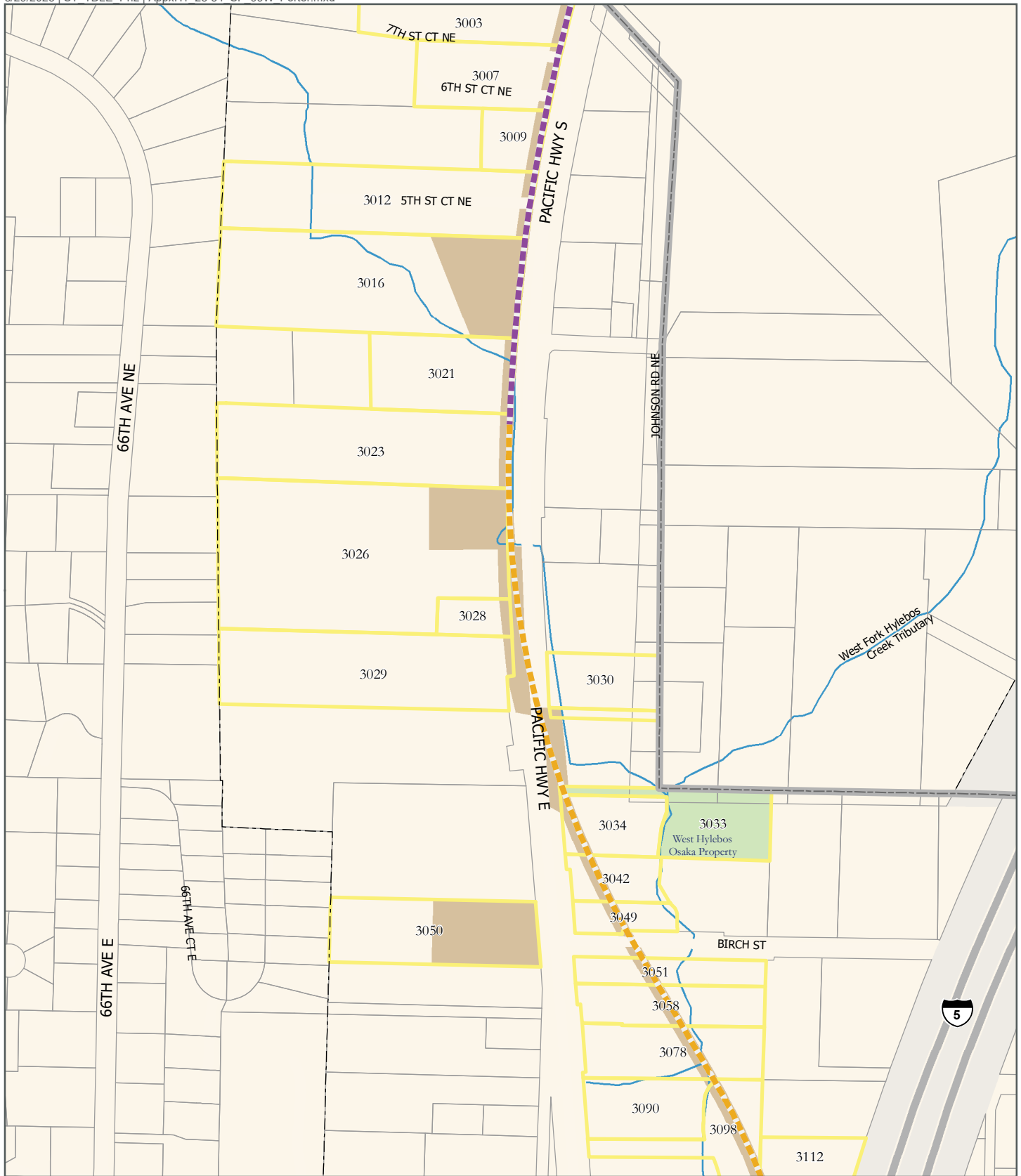
■ Park

■ Affected Parcel

■ Parcel

■ Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

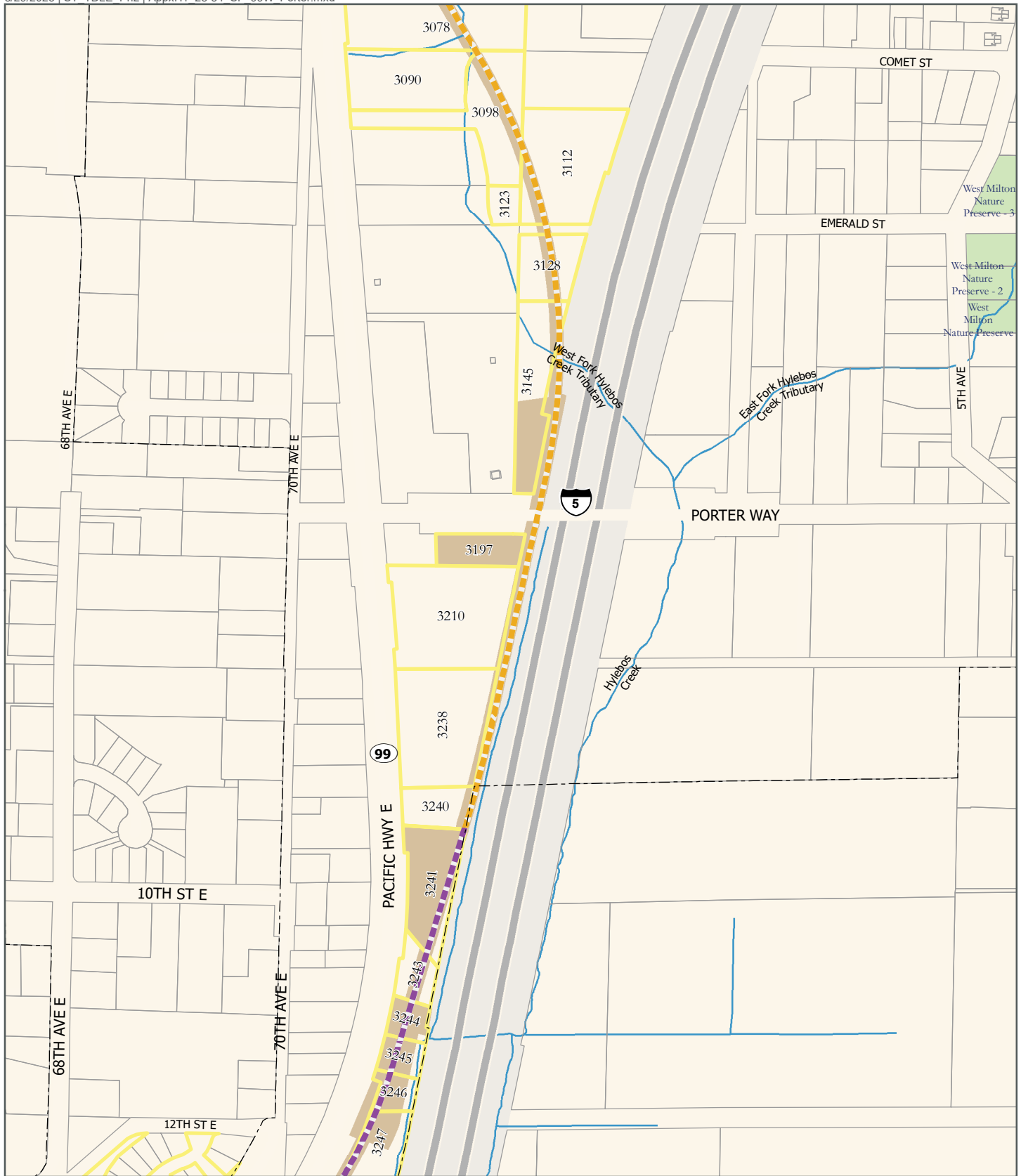
Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-32
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension
0 250 500 Feet



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

■ Park

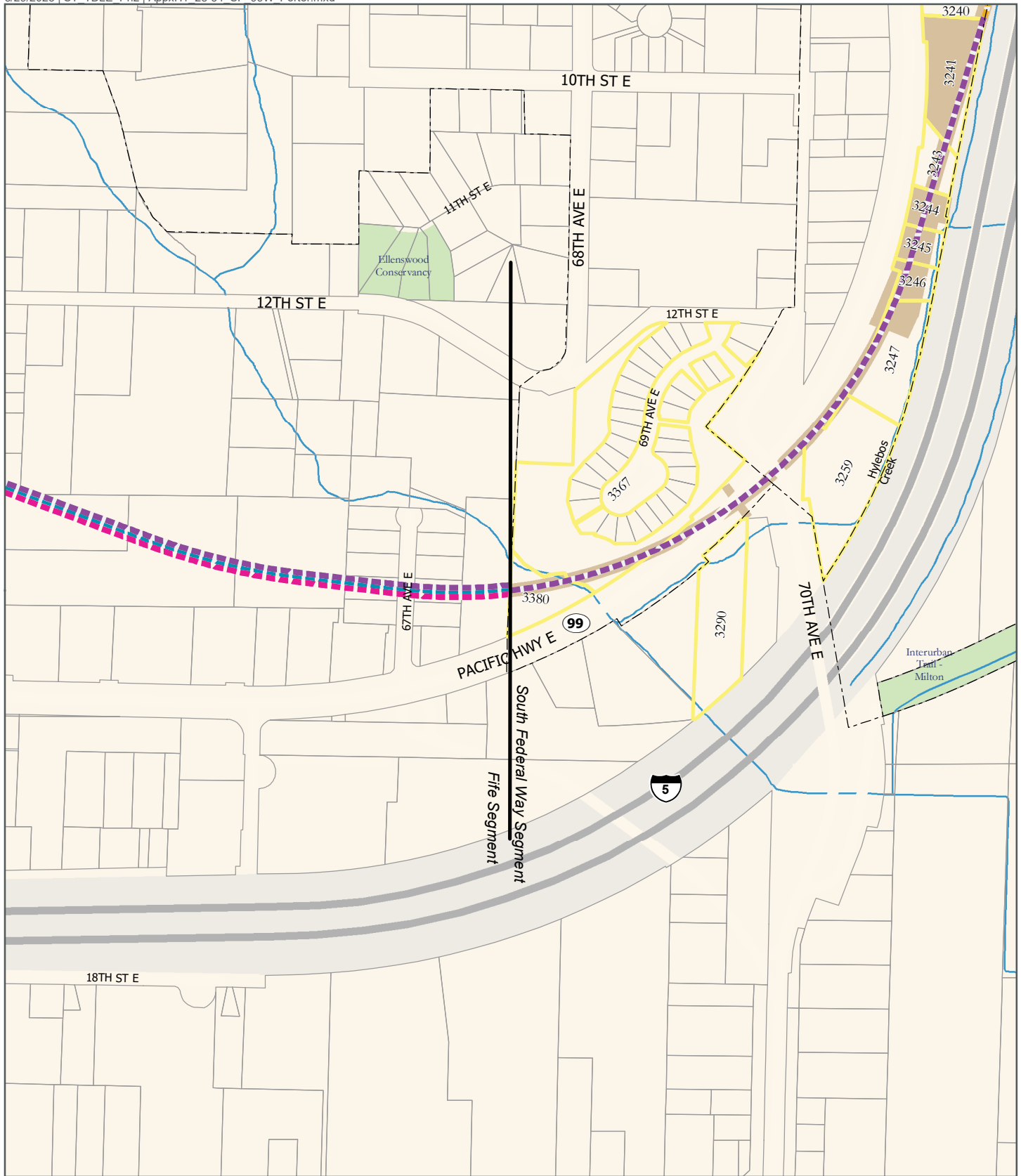
□ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-33
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension
0 250 500 Feet



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- - - SF 99-West

Alternative Profile

- At-Grade
- - - Elevated

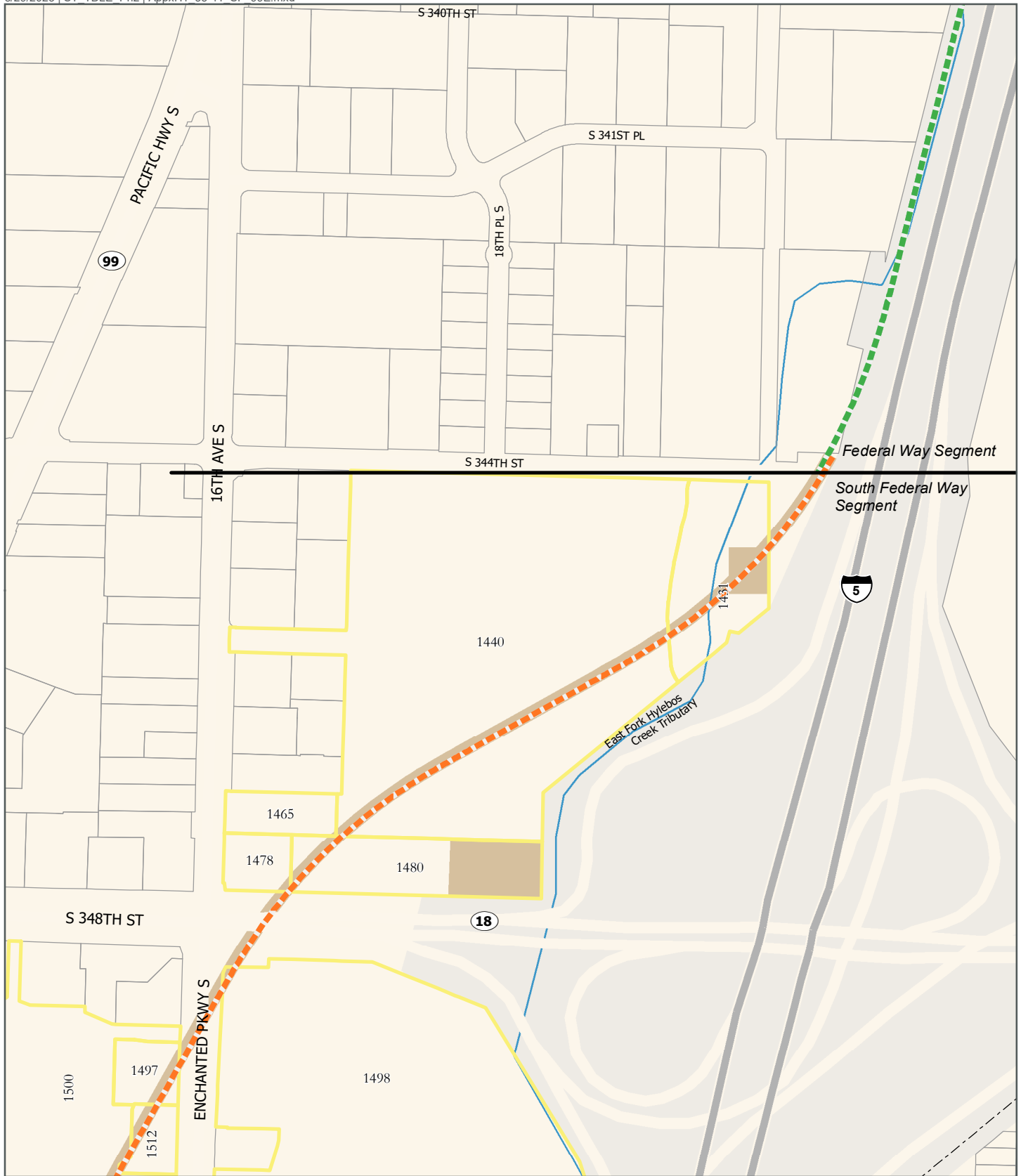
Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-34
SF 99-West with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension
0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

SF 99-East

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

Permanent Footprint

Figure H1-35

SF 99-East Alternative

Affected Parcels

South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-East

Alternative Profile

— At-Grade

- - - Elevated

Station

— New

— Stream

— Park

— Affected Parcel

— Parcel

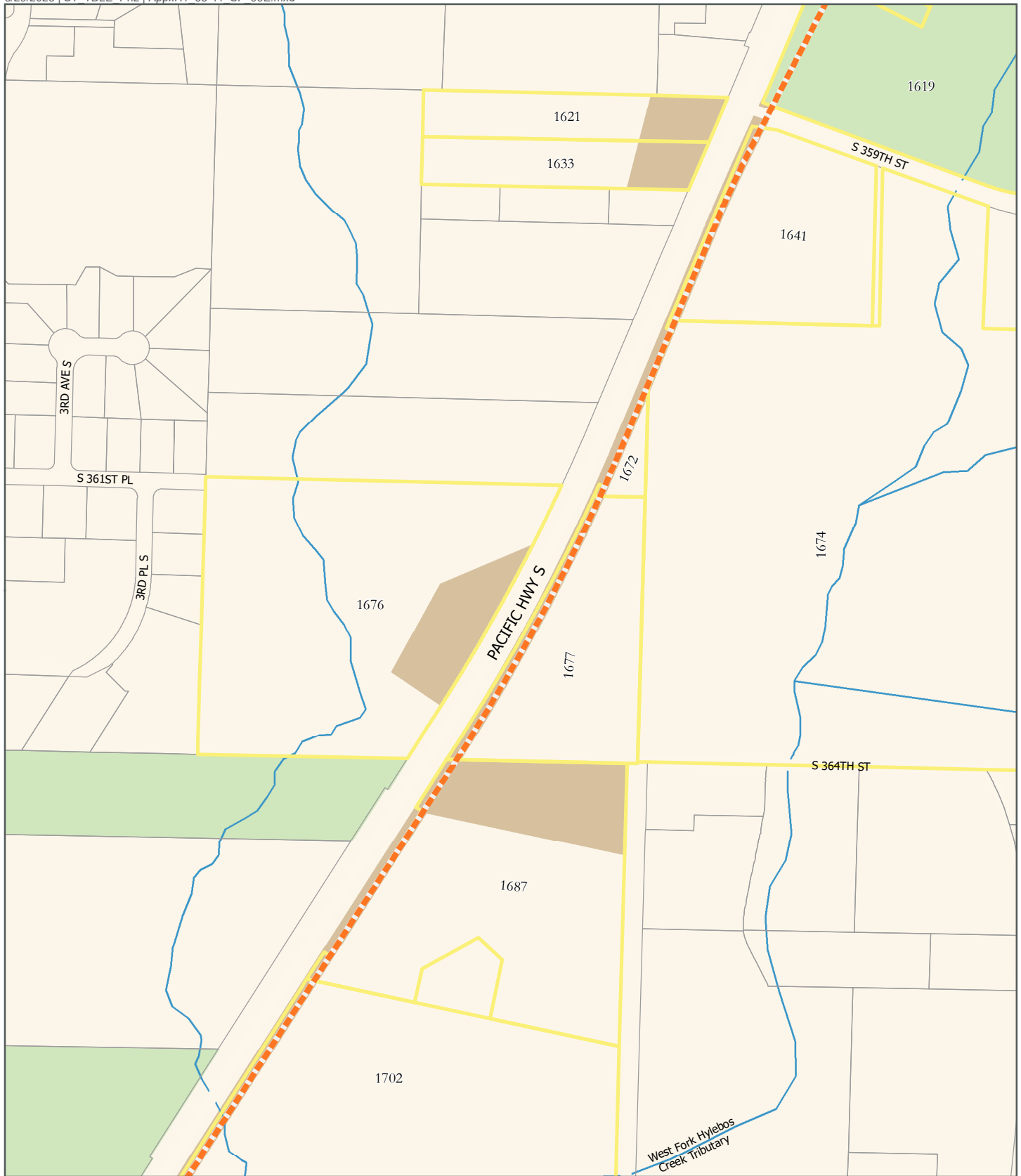
— Permanent Footprint

Figure H1-36

SF 99-East Alternative
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-East

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

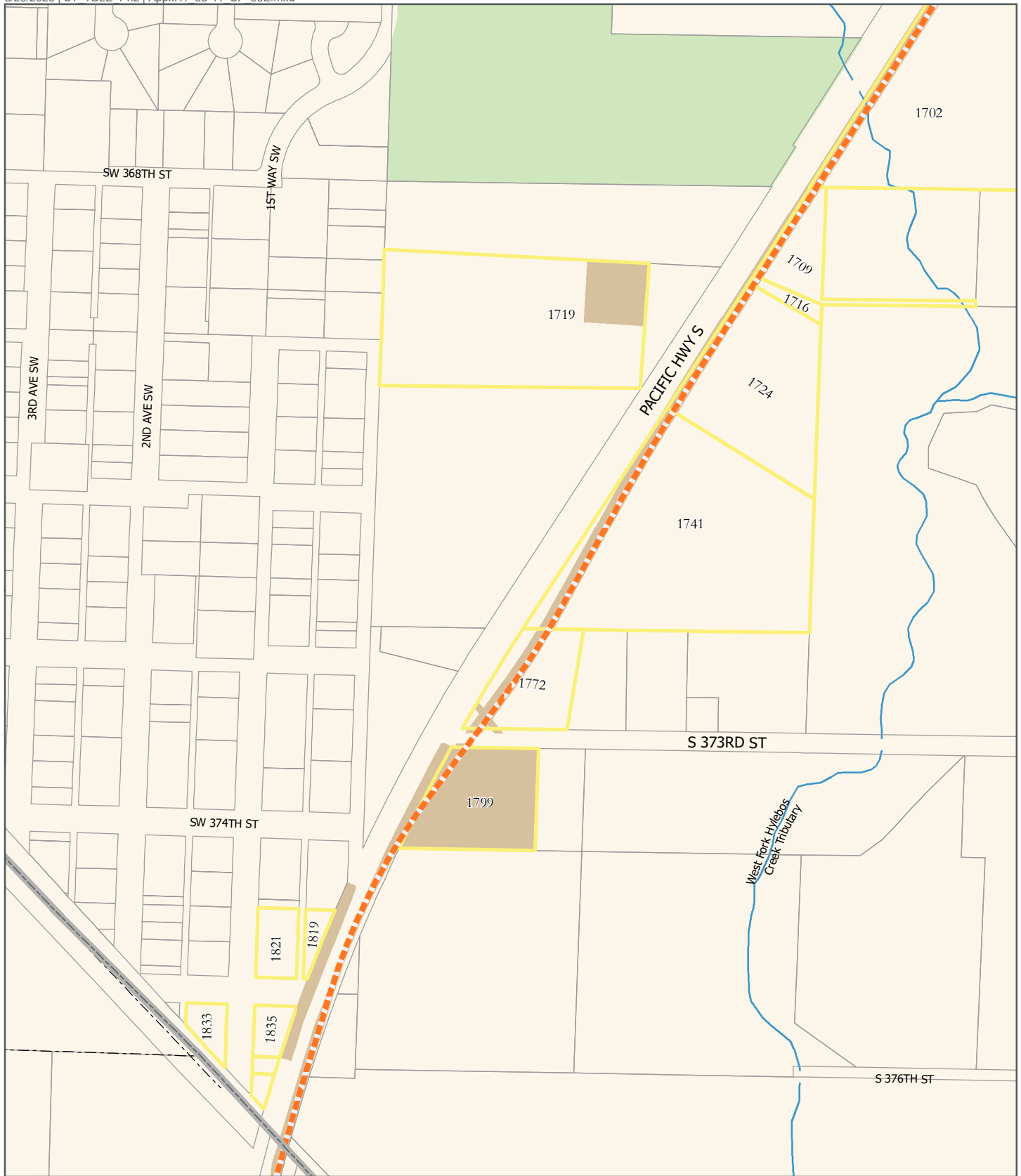
□ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-37
SF 99-East Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-East

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

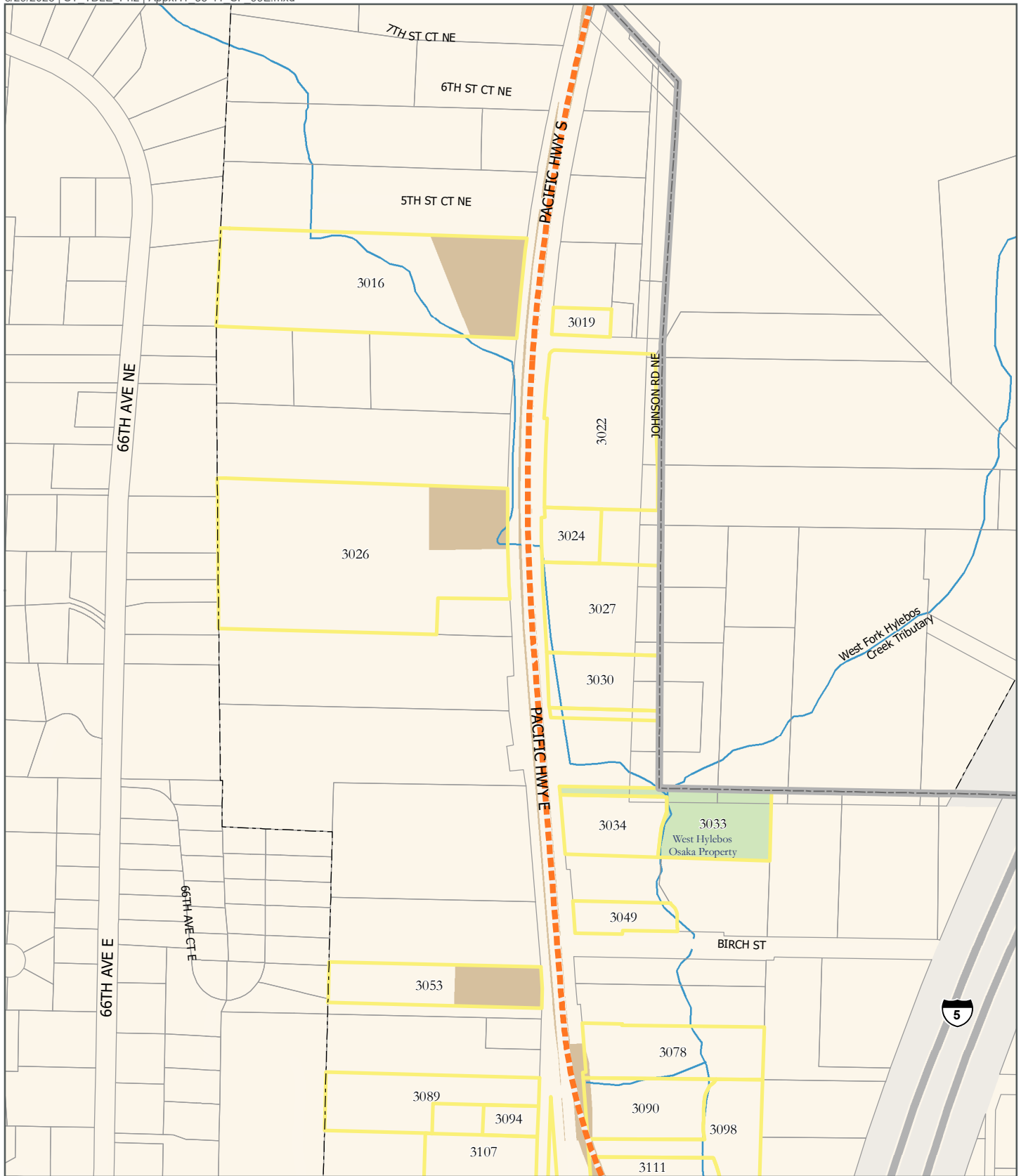
■ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-38
SF 99-East Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-East

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

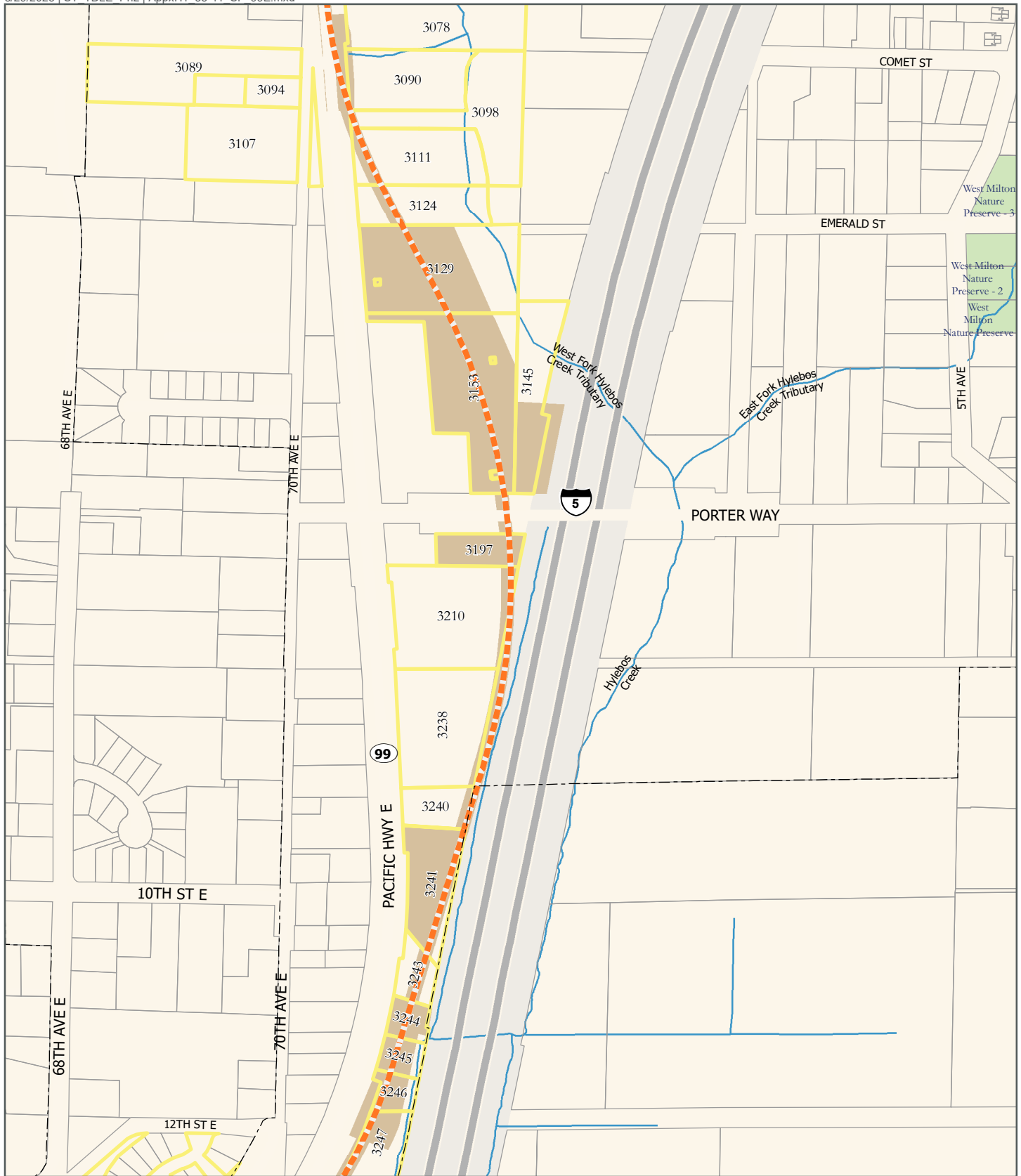
□ Affected Parcel

□ Parcel

■ Permanent Footprint

Figure H1-39
SF 99-East Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— SF 99-East

Alternative Profile

— At-Grade

--- Elevated

Station

■ New

— Stream

■ Park

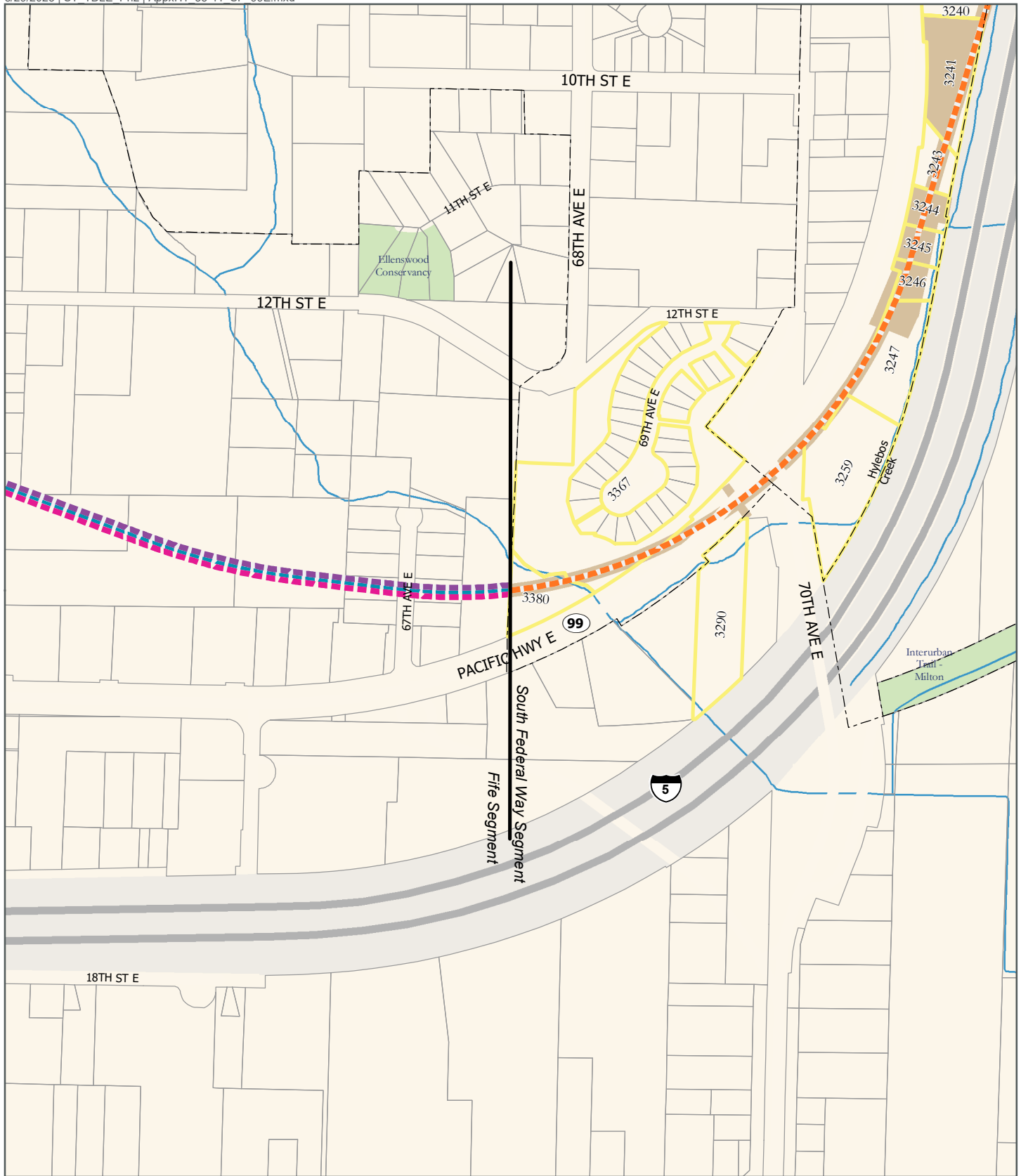
■ Affected Parcel

■ Parcel

■ Permanent Footprint

Figure H1-40
SF 99-East Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

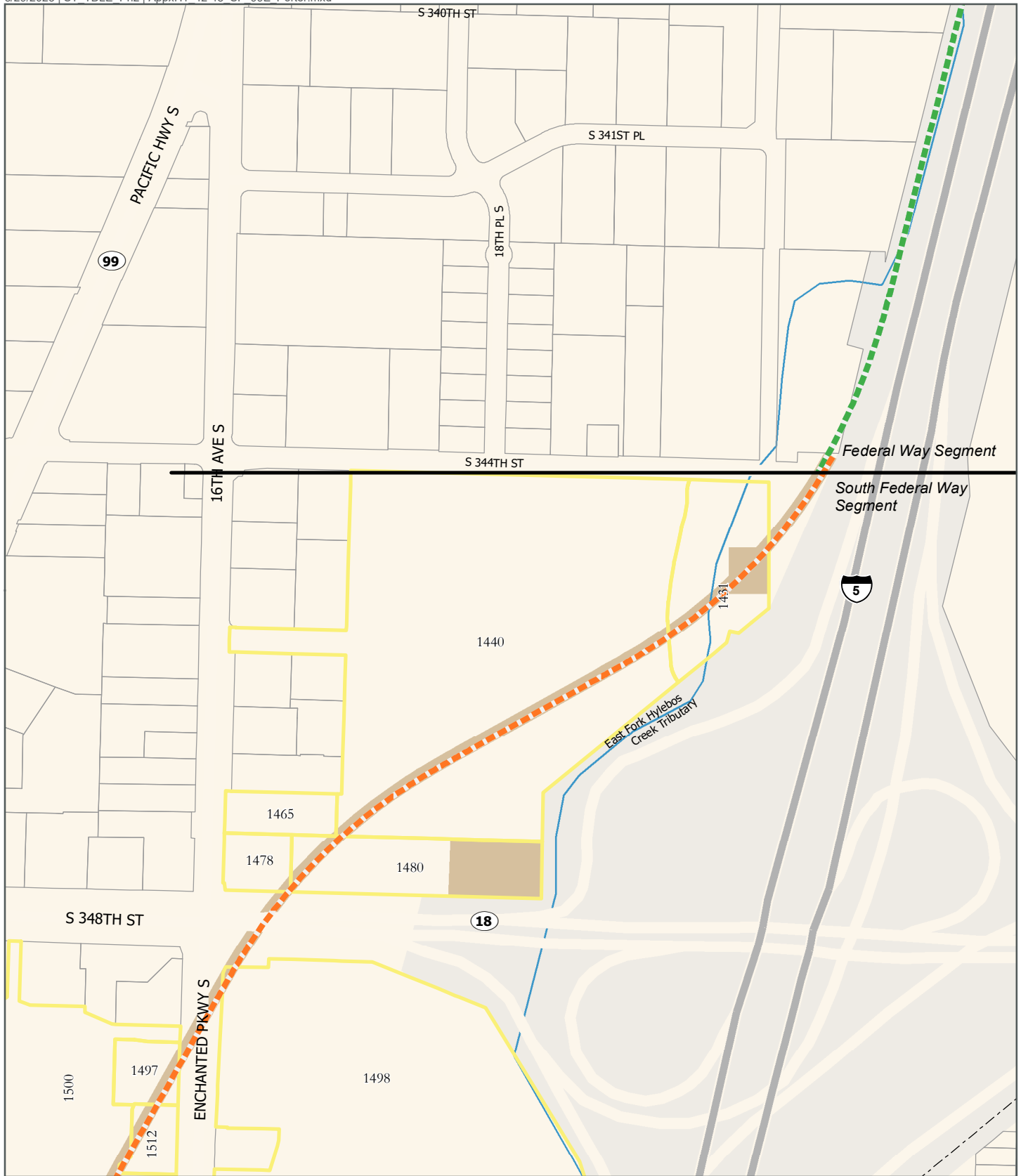




Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-41
SF 99-East Alternative
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-42

SF 99-East with Porter Way Design Option

Affected Parcels

South Federal Way Segment

Tacoma Dome Link Extension

0 250 500 Feet

N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-43
SF 99-East with Porter Way Design Option
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

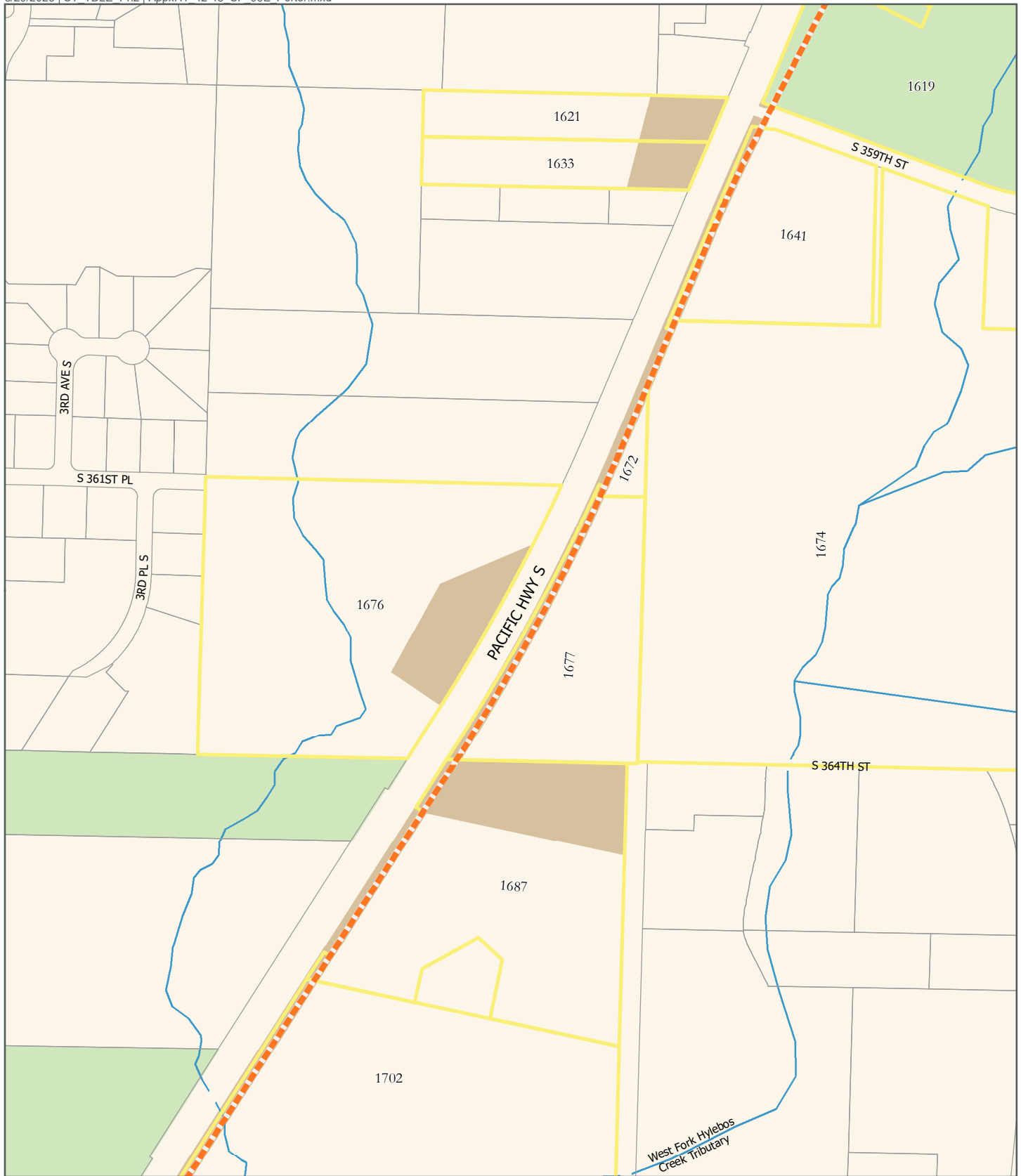
- At-Grade
- - - Elevated

Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-44

SF 99-East with Porter Way Design Option

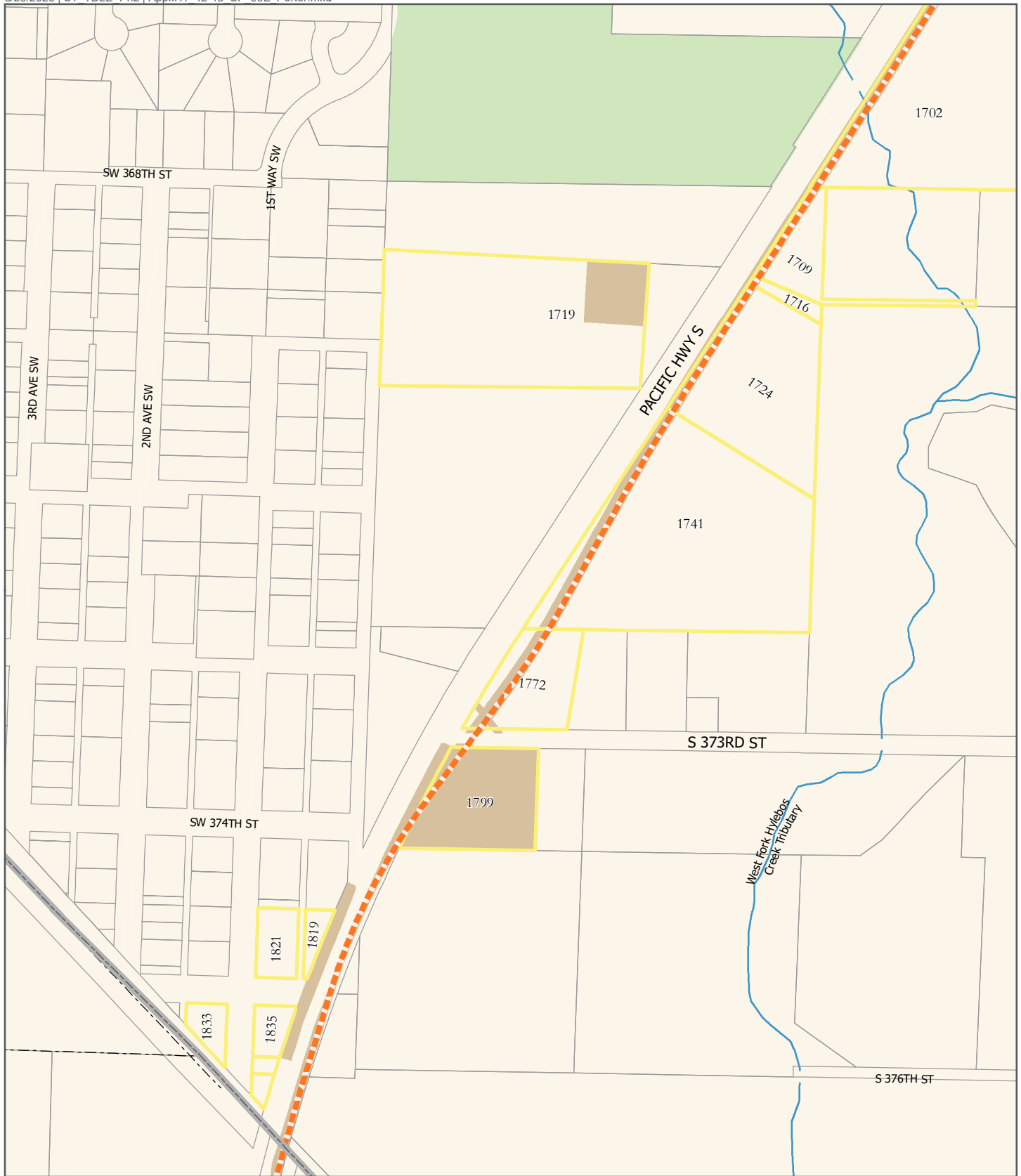
Affected Parcels

South Federal Way Segment

Tacoma Dome Link Extension

0 250 500 Feet

N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

■ Park

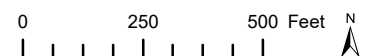
■ Affected Parcel

■ Parcel

■ Permanent Footprint

Figure H1-45
SF 99-East with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

- At-Grade
- - - Elevated

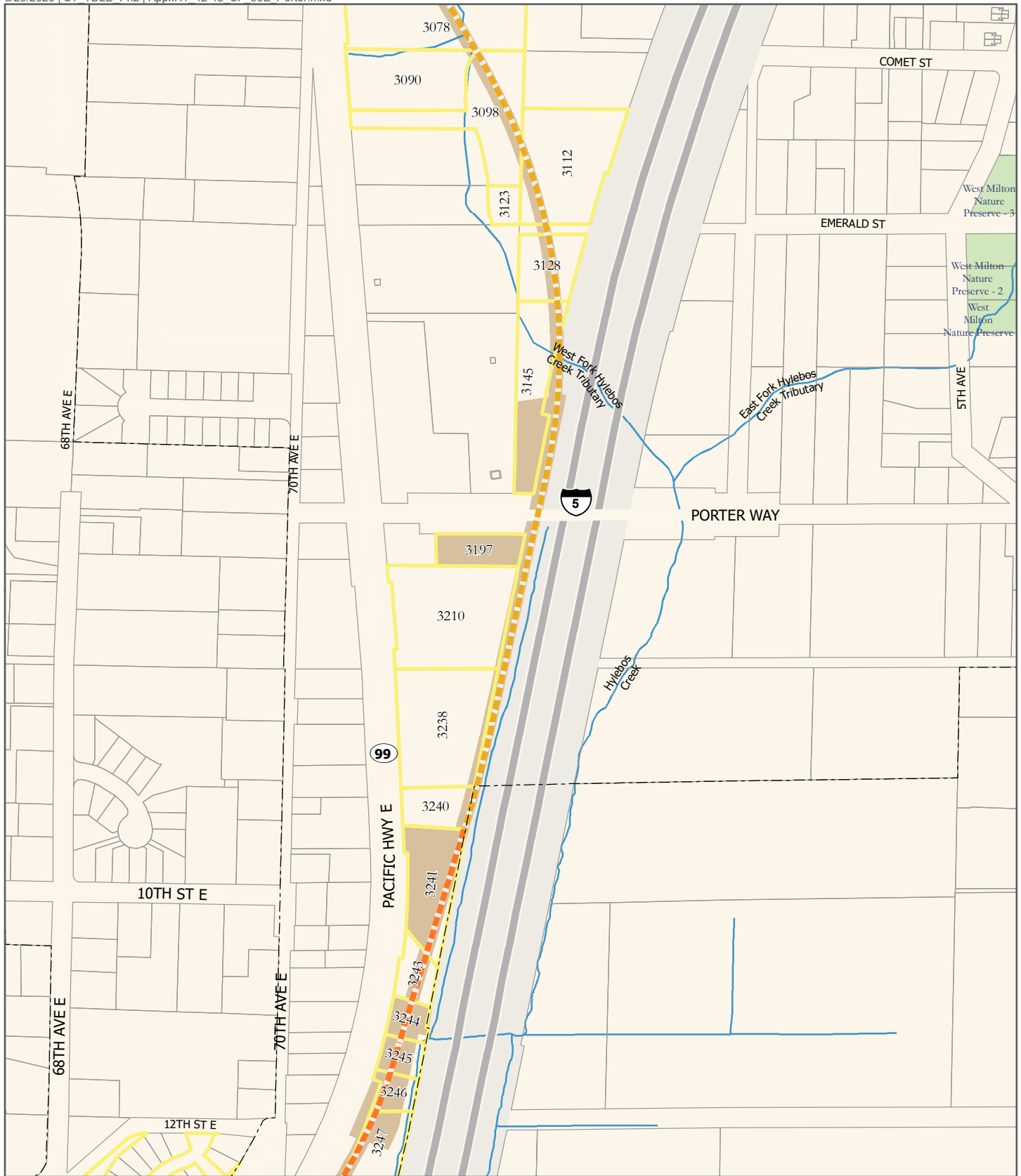
Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-46
SF 99-East with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension
0 250 500 Feet N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Porter Way Design Option
- - - SF 99-East

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

— Stream

■ Park

□ Affected Parcel

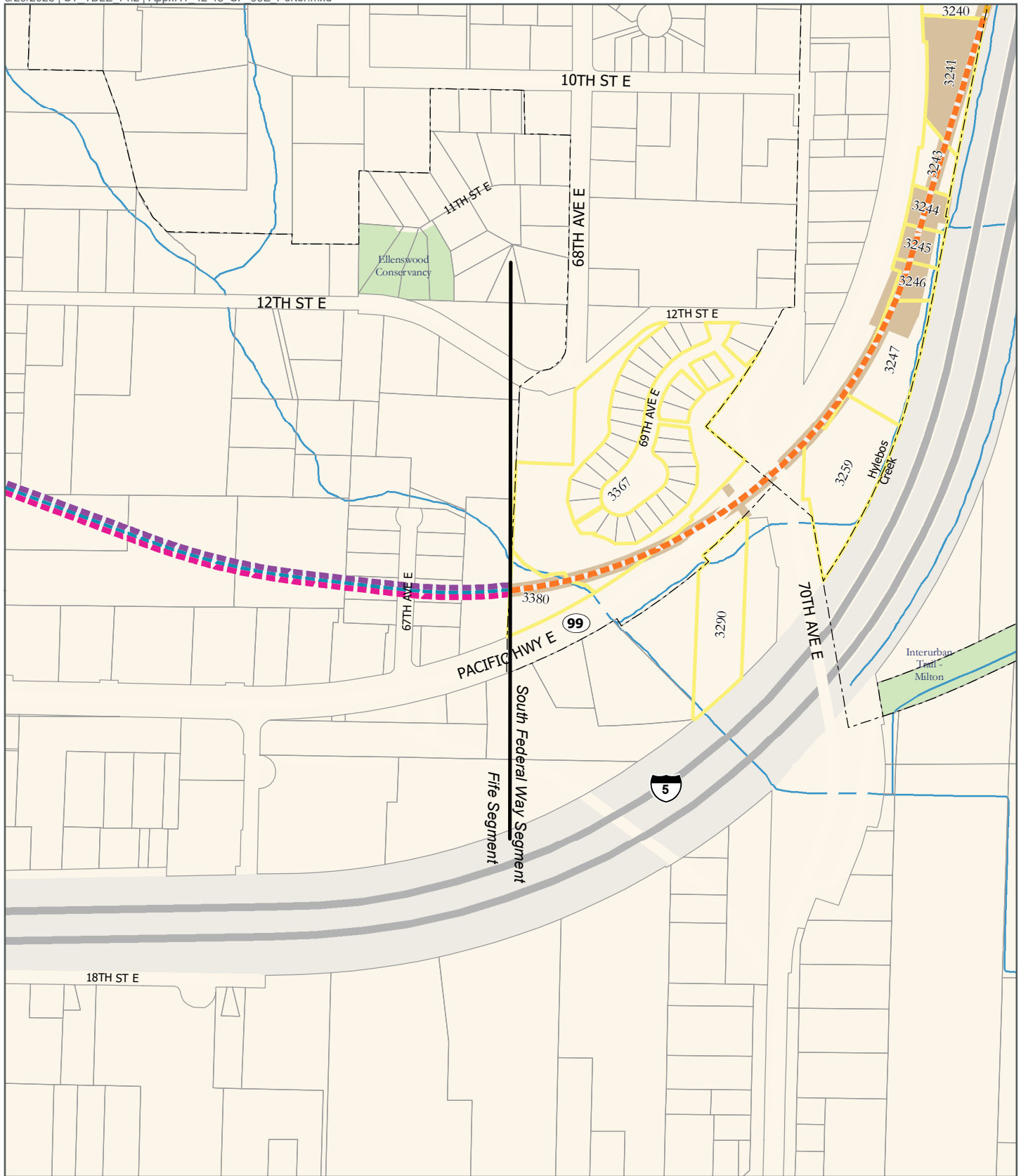
□ Parcel

■ Permanent Footprint

Figure H1-47
SF 99-East with Porter Way Design Option
Affected Parcels
South Federal Way Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-48
SF 99-East with Porter Way Design Option
Affected Parcels
South Federal Way Segment
Tacoma Dome Link Extension

Alternatives

- Porter Way Design Option
- SF 99-East

Alternative Profile

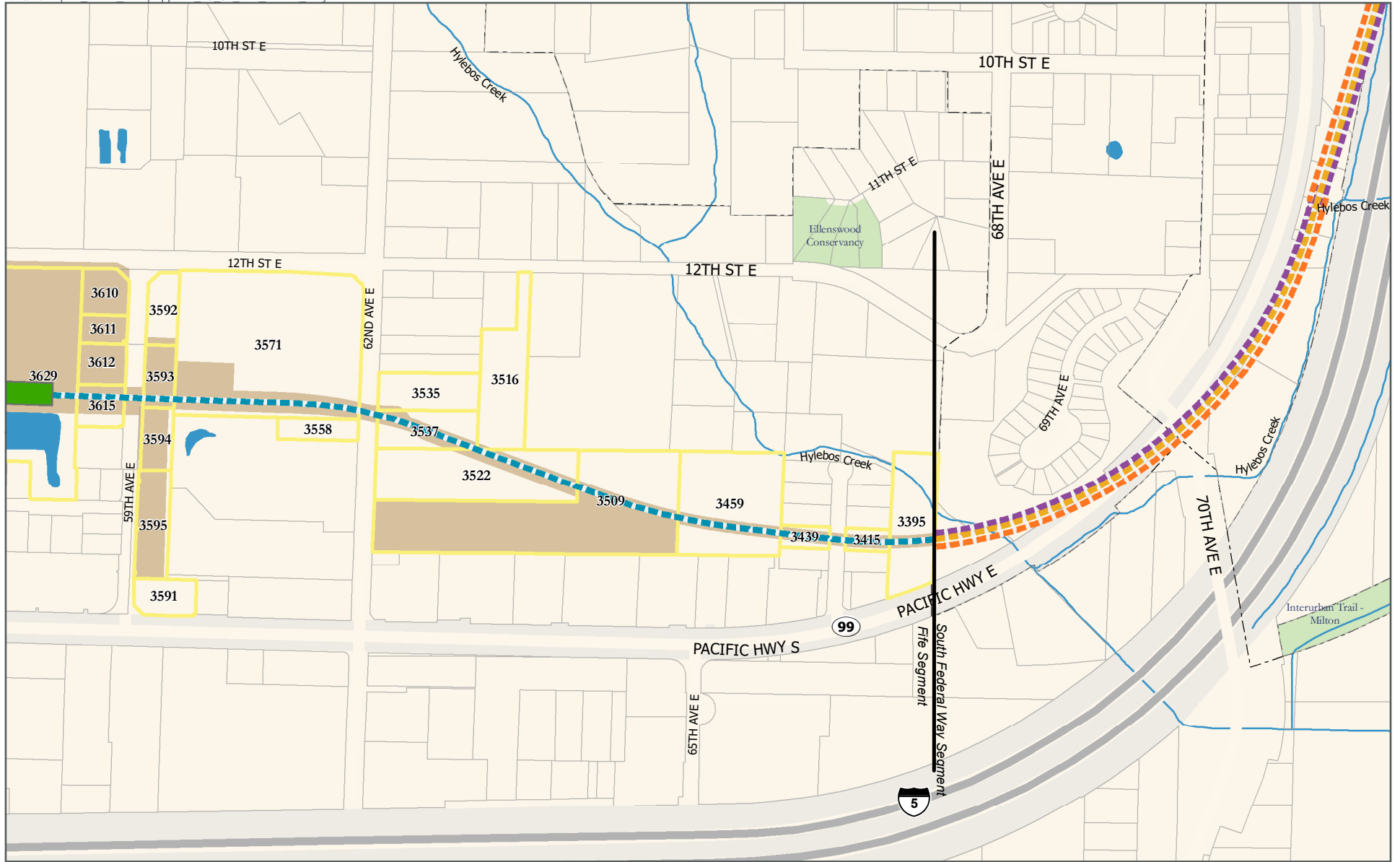
- At-Grade
- Elevated

Station

- New

- Stream
- Park
- Affected Parcel
- Parcel
- Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

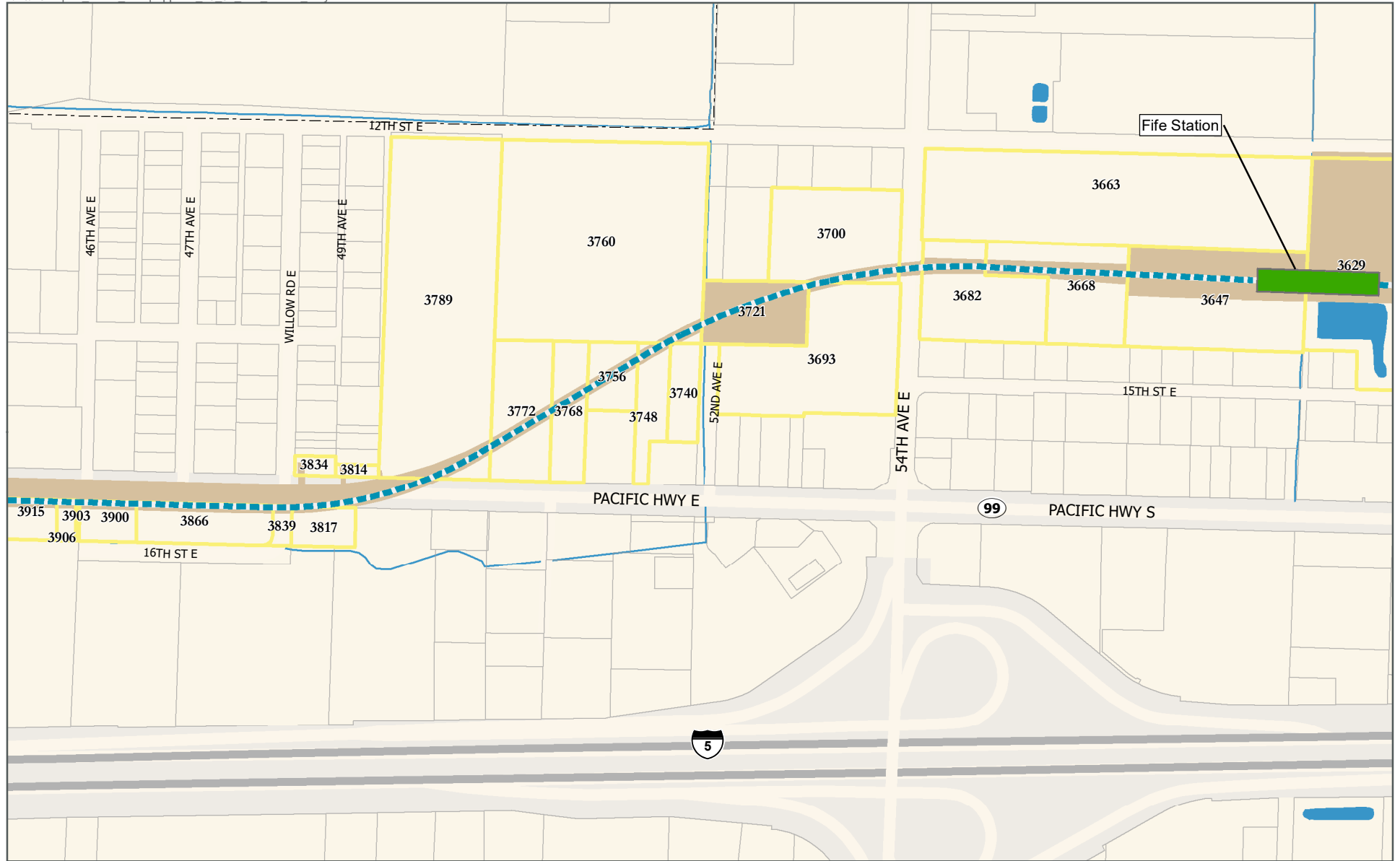
■ Parcel

■ Permanent Footprint

Figure H1-49
Fife Pacific Highway Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

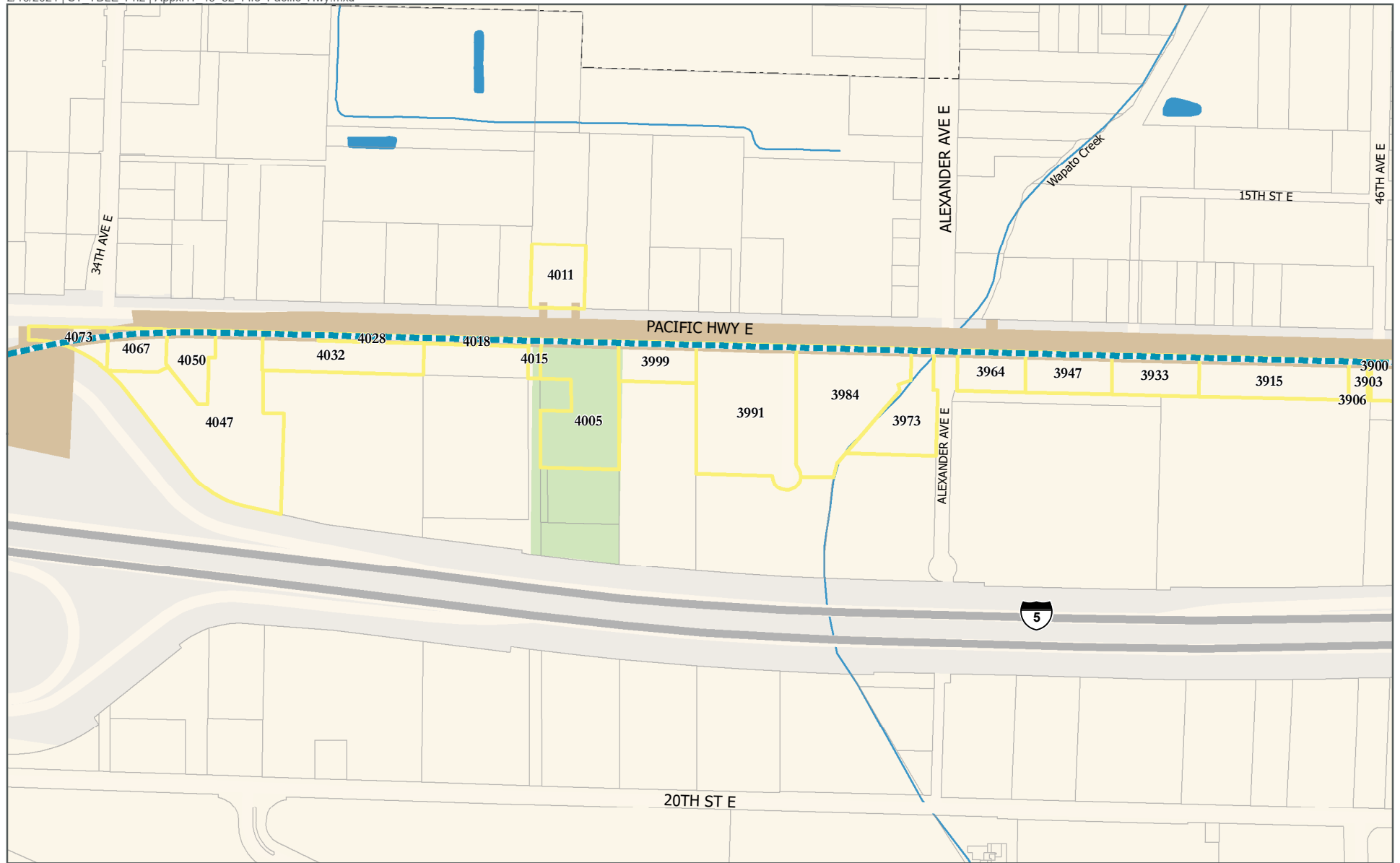
■ Parcel

■ Permanent Footprint

Figure H1-50
Fife Pacific Highway Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

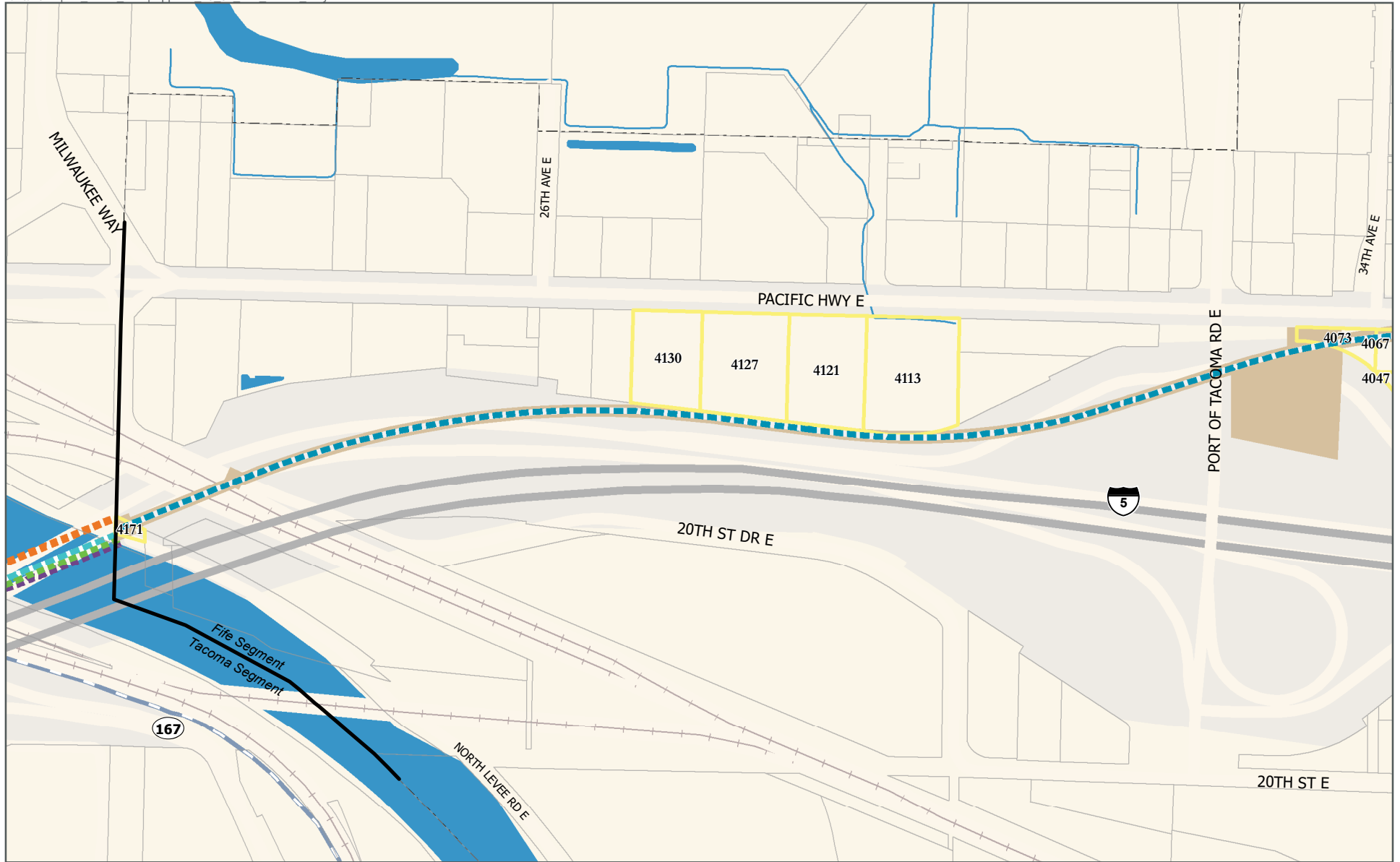
■ Parcel

■ Permanent Footprint

Figure H1-51
Fife Pacific Highway Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

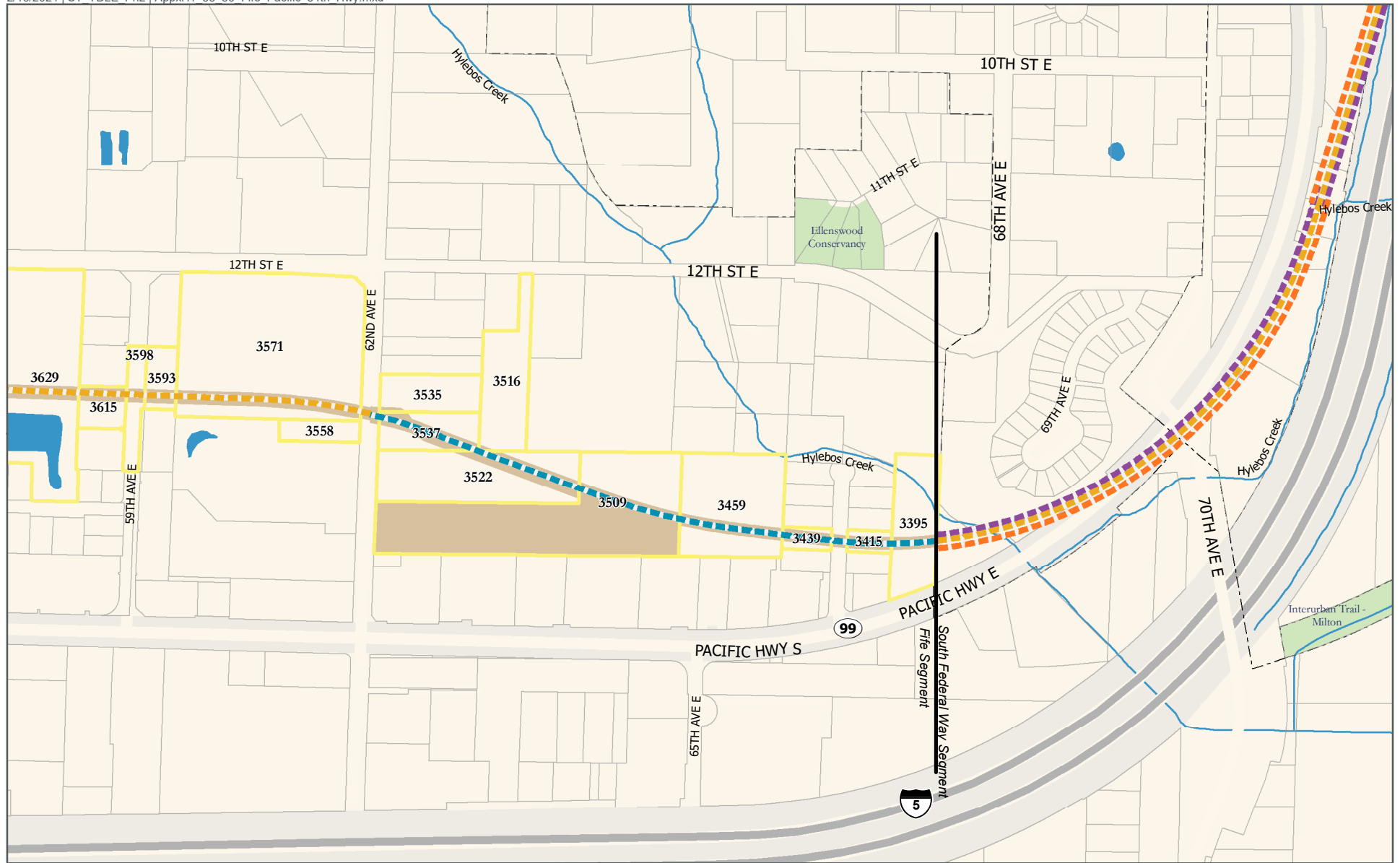
■ Parcel

■ Permanent Footprint

Figure H1-52
Fife Pacific Highway Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

- Stream

- Park

- Affected Parcel

- Parcel

- Permanent Footprint

Figure H1-53
Fife Pacific Highway with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

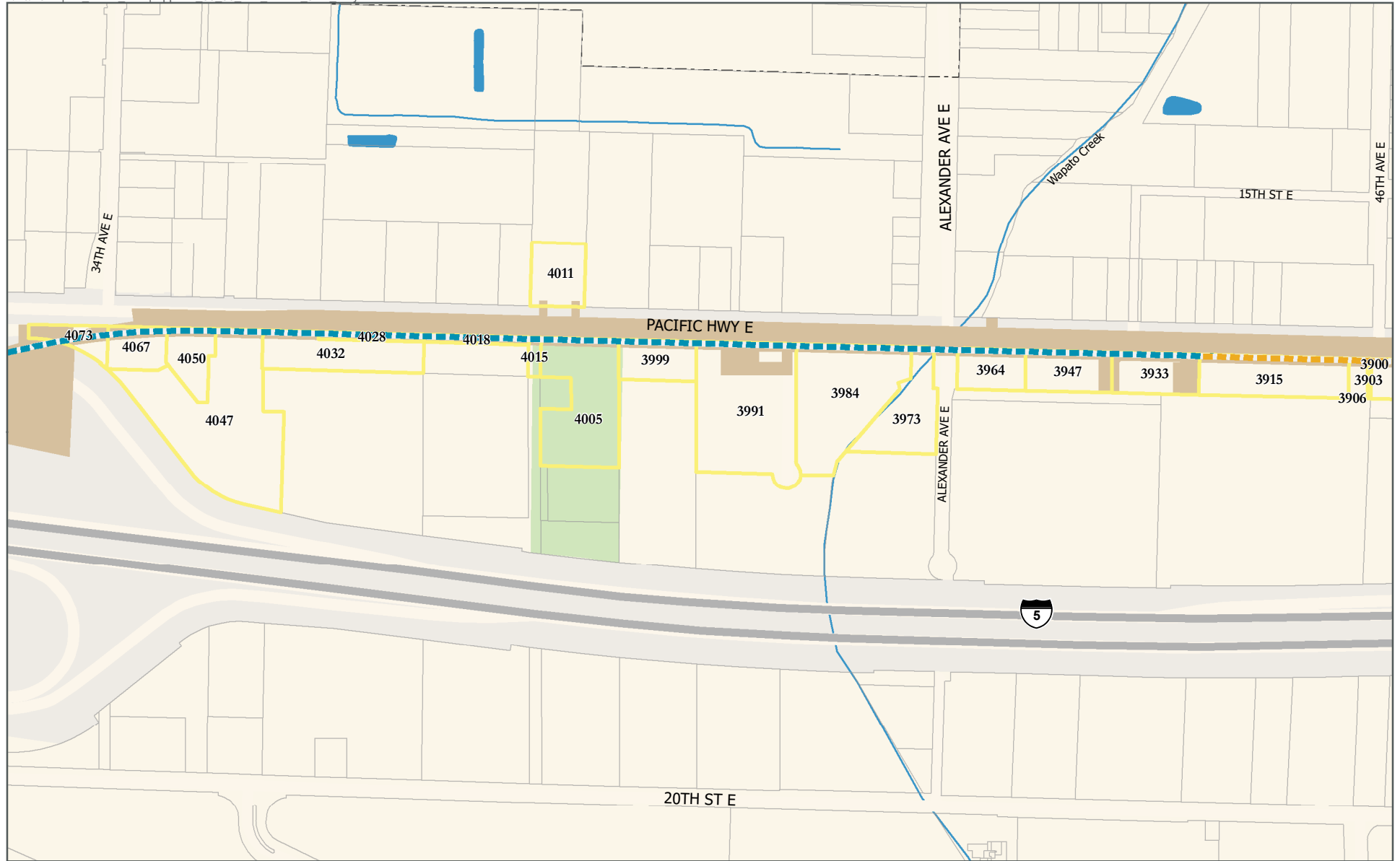
- Parcel

Permanent Footprint

Figure H1-54
Fife Pacific Highway with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

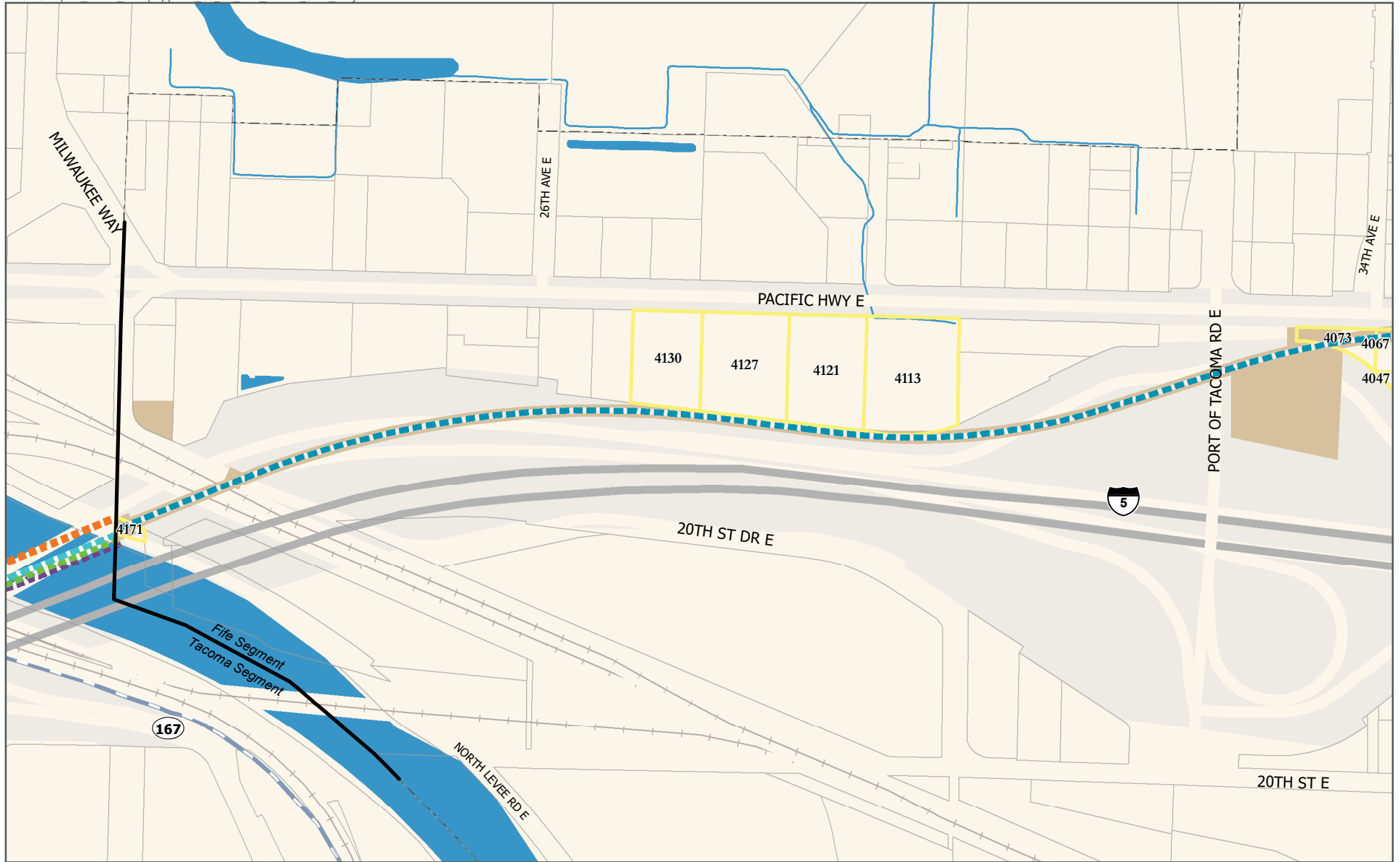
Stream

- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-55
Fife Pacific Highway with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

- Stream

- Park

- Affected Parcel

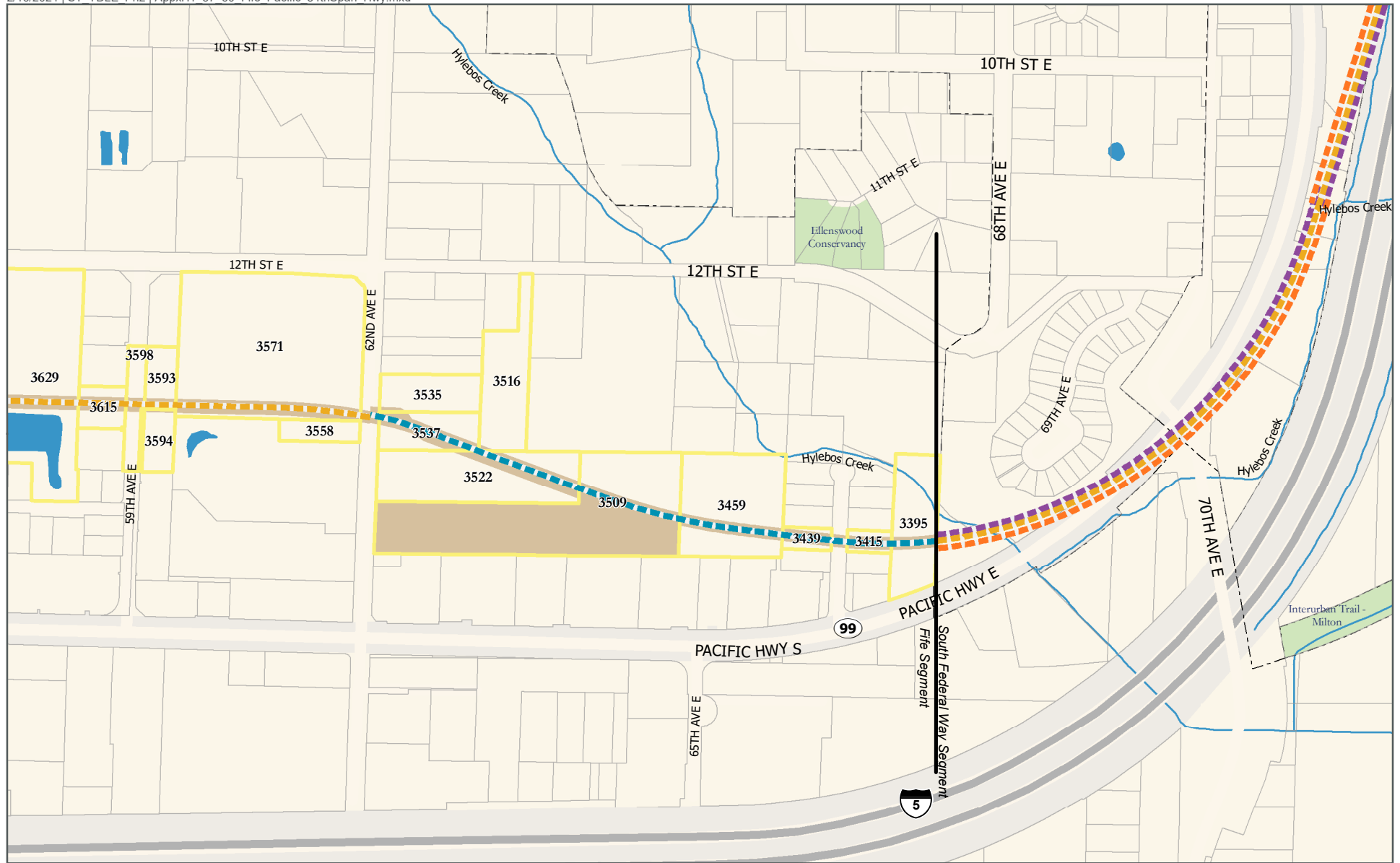
- Parcel

- Permanent Footprint

Figure H1-56
Fife Pacific Highway with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

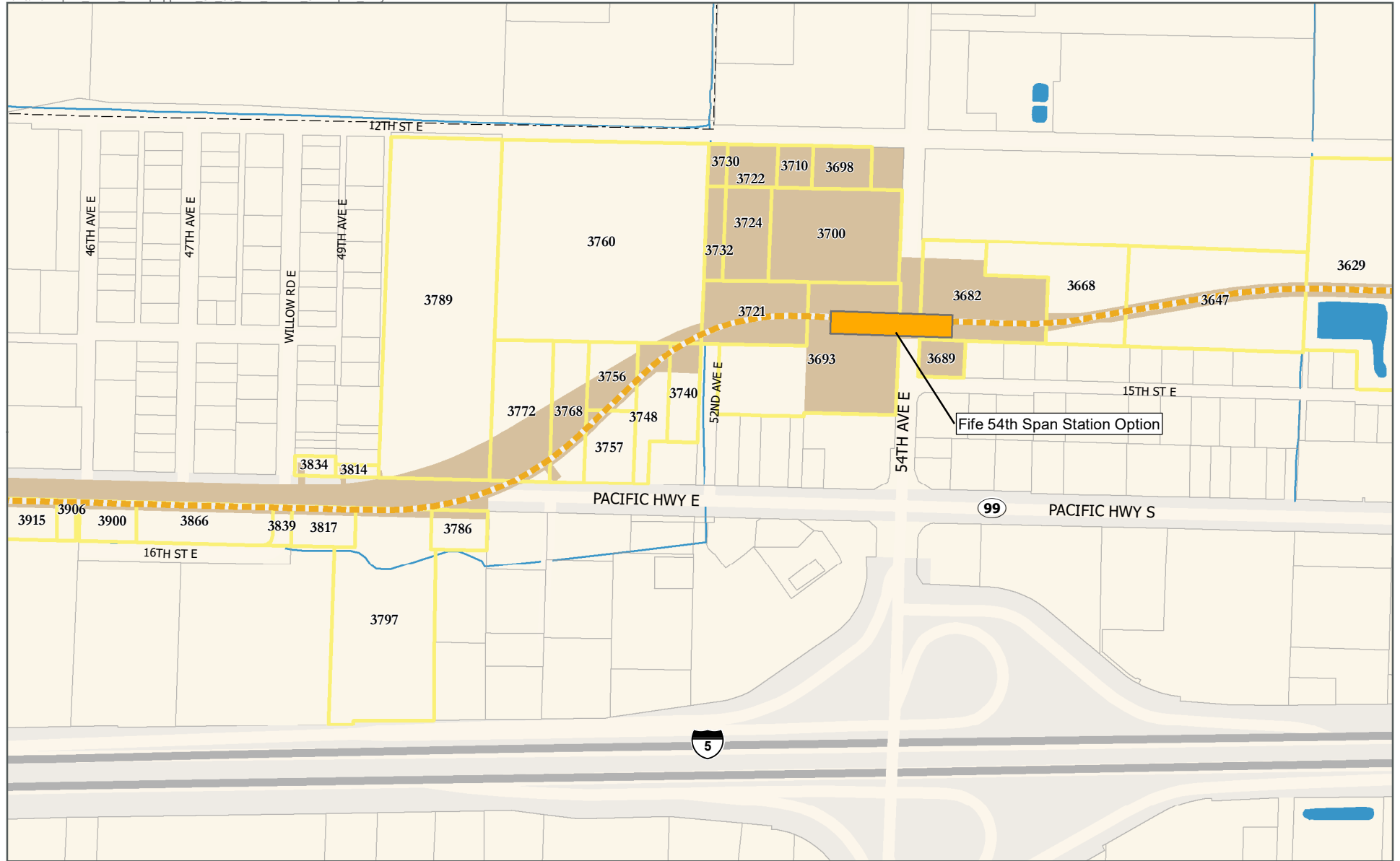
Affected Parcel

- Parcel

Permanent Footprint

Figure H1-57
Fife Pacific Highway with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension
0 250 500 Feet
N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

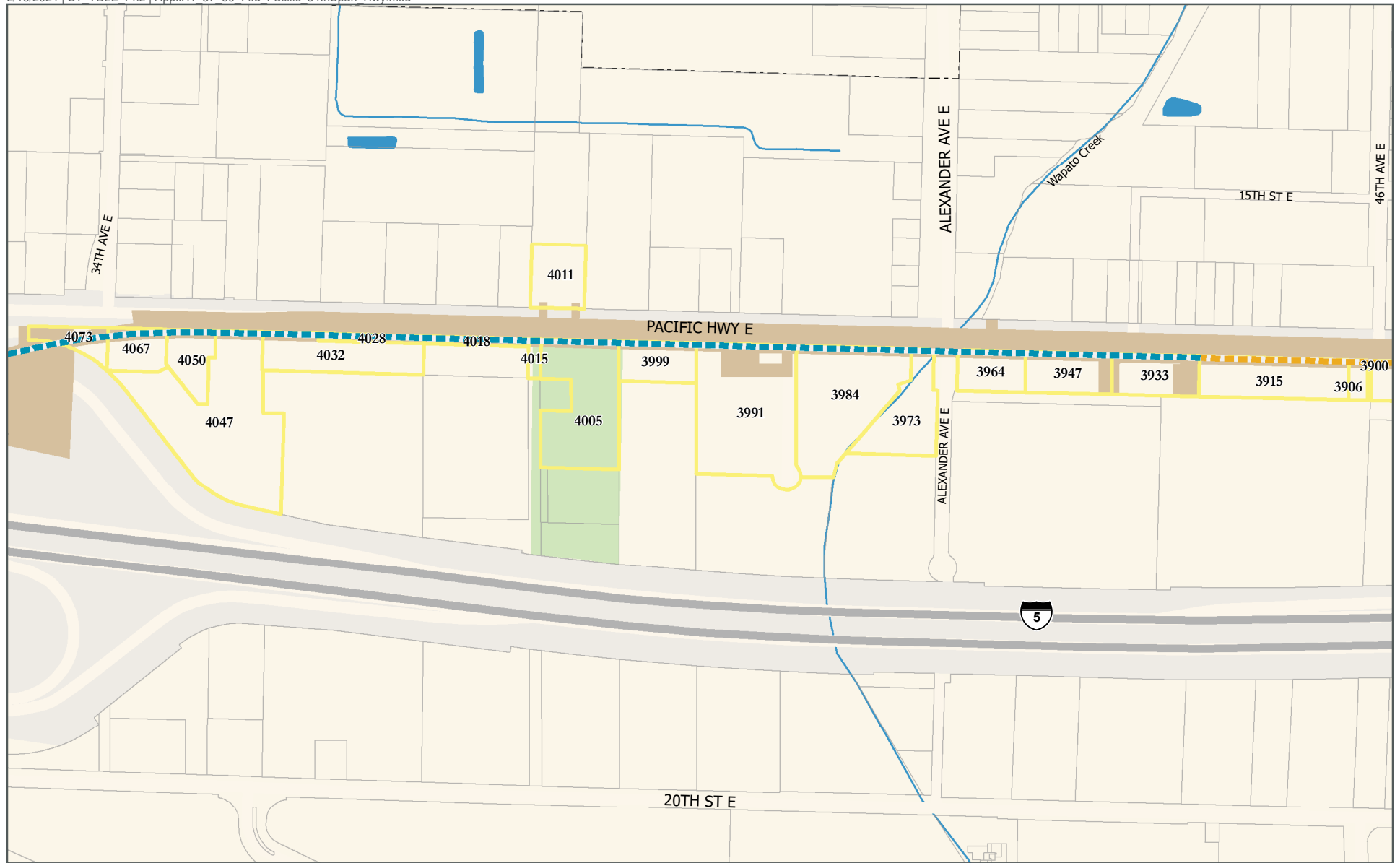
- Parcel

Permanent Footprint

Figure H1-58
Fife Pacific Highway with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park
- Affected Parcel

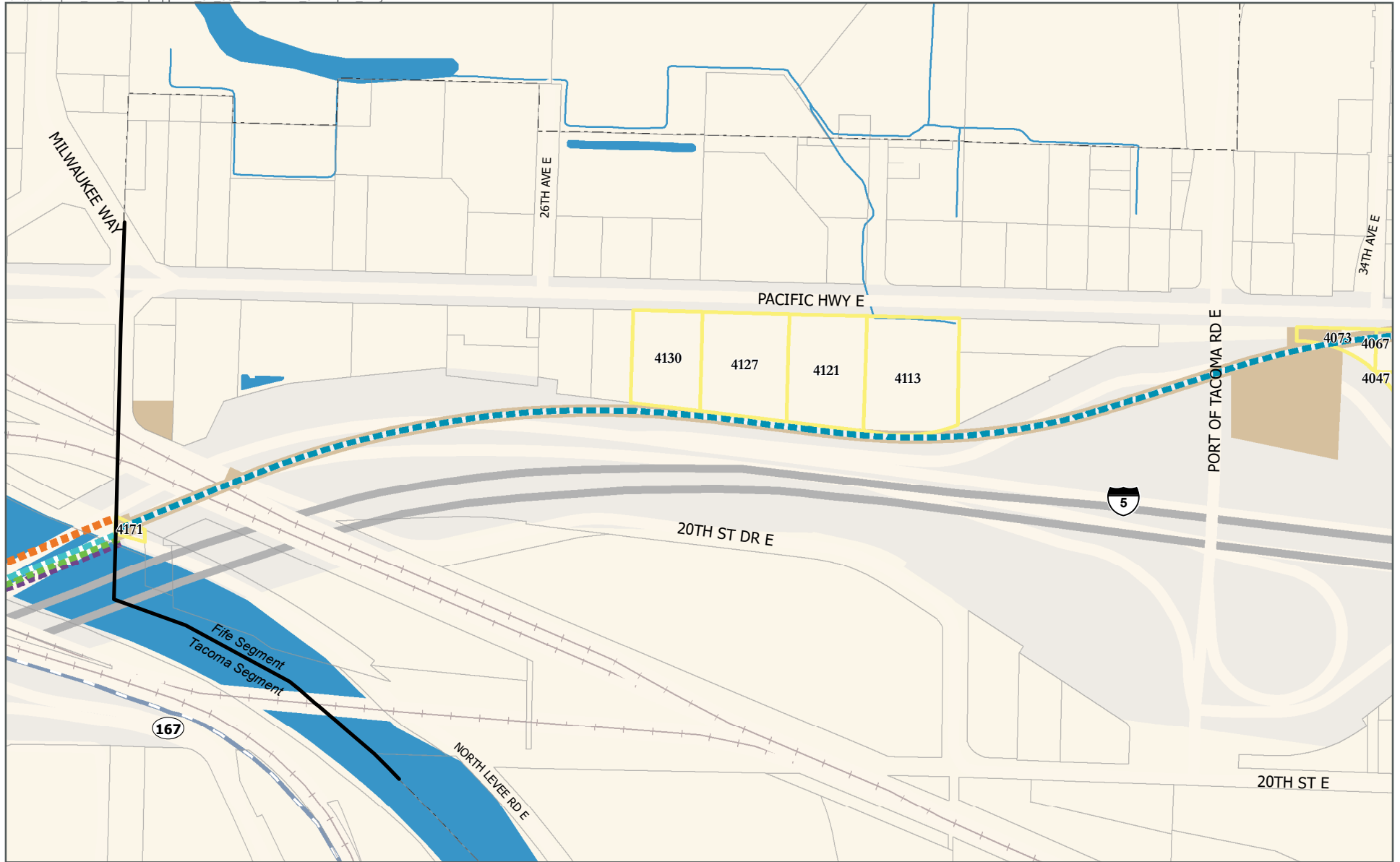
Parcel

- Permanent Footprint

Figure H1-59
Fife Pacific Highway with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

Park

Affected Parcel

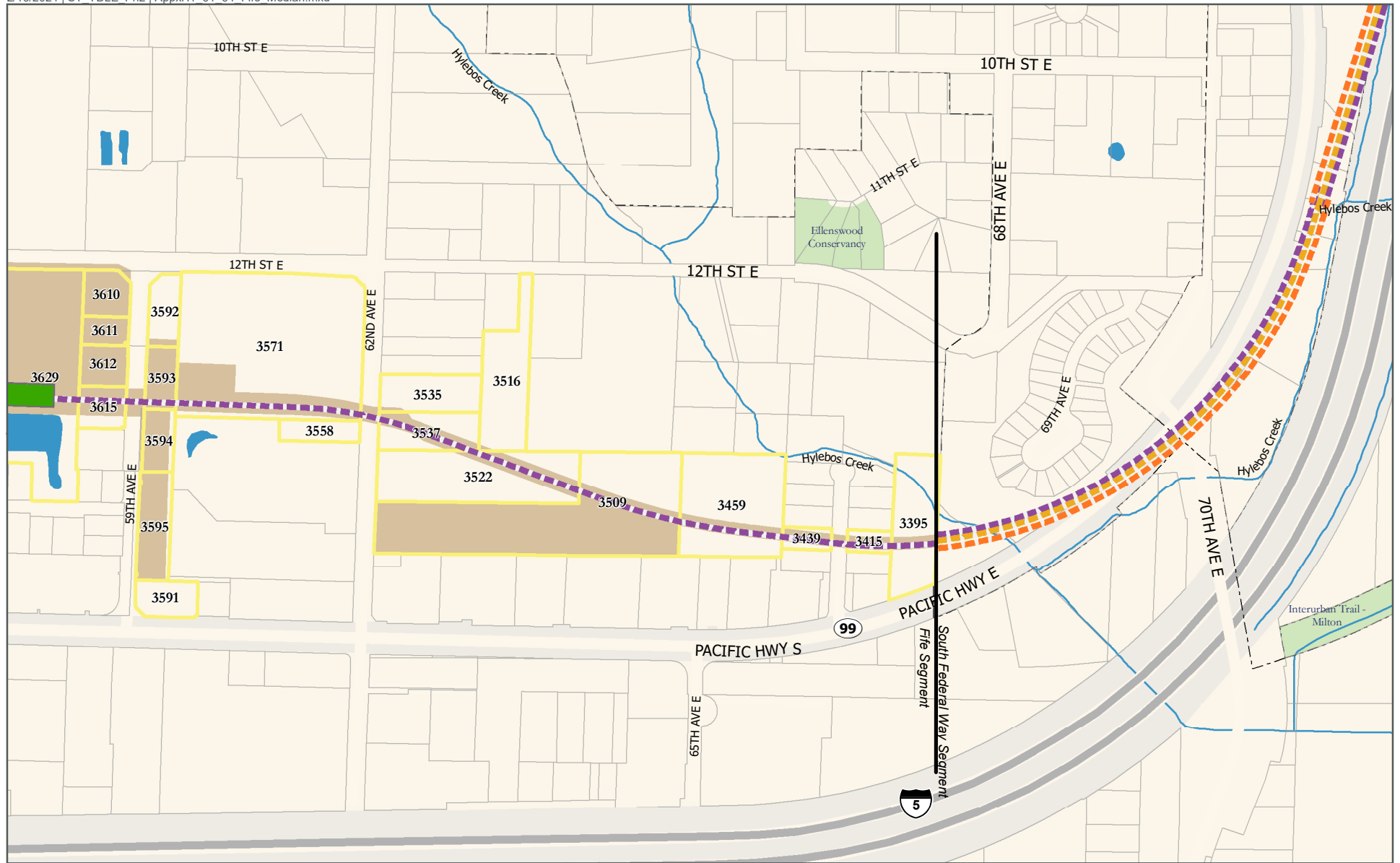
Parcel

Permanent Footprint

Figure H1-60
Fife Pacific Highway with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway Median

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

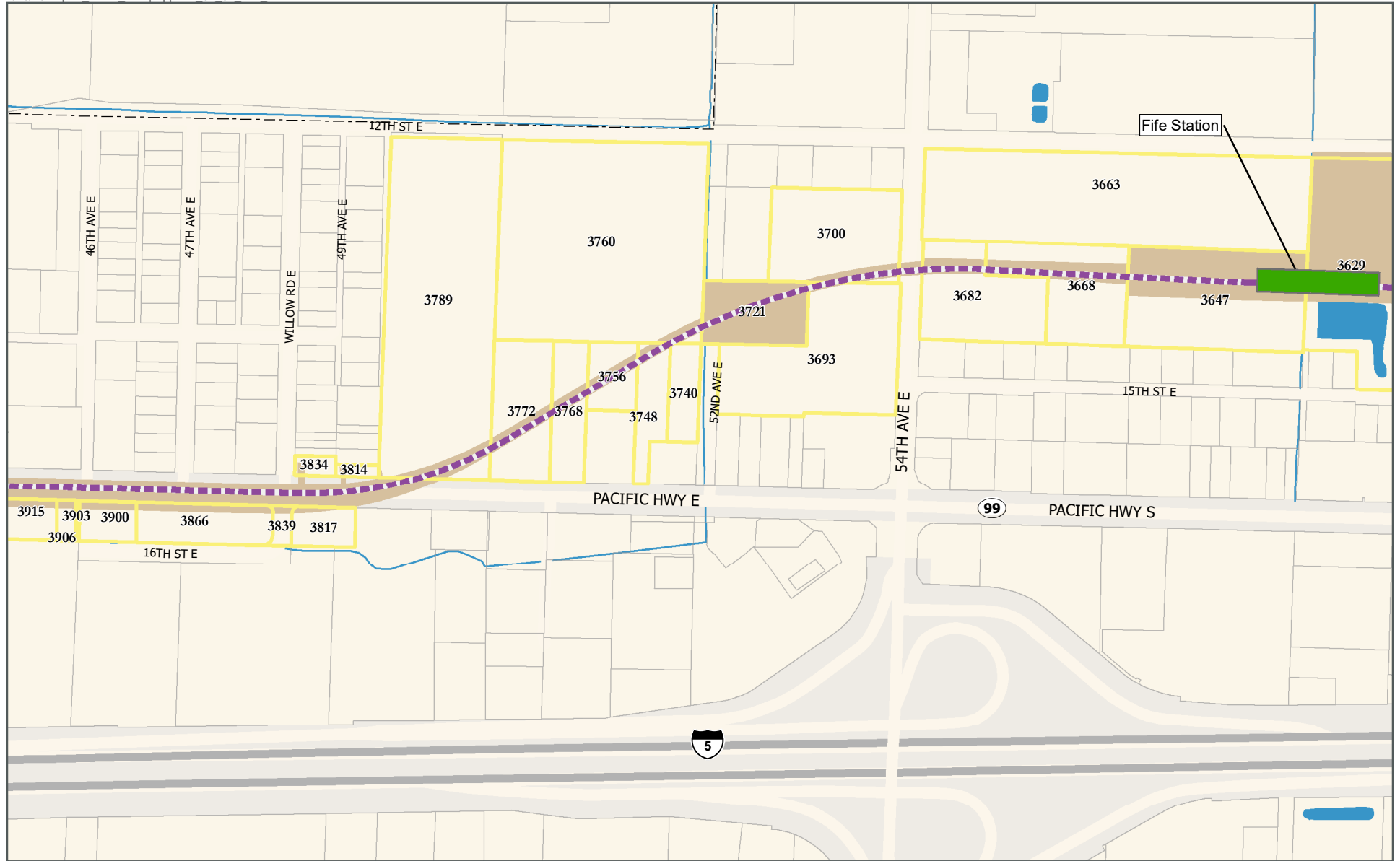
■ Parcel

■ Permanent Footprint

Figure H1-61
Fife Pacific Highway Median Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway Median

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

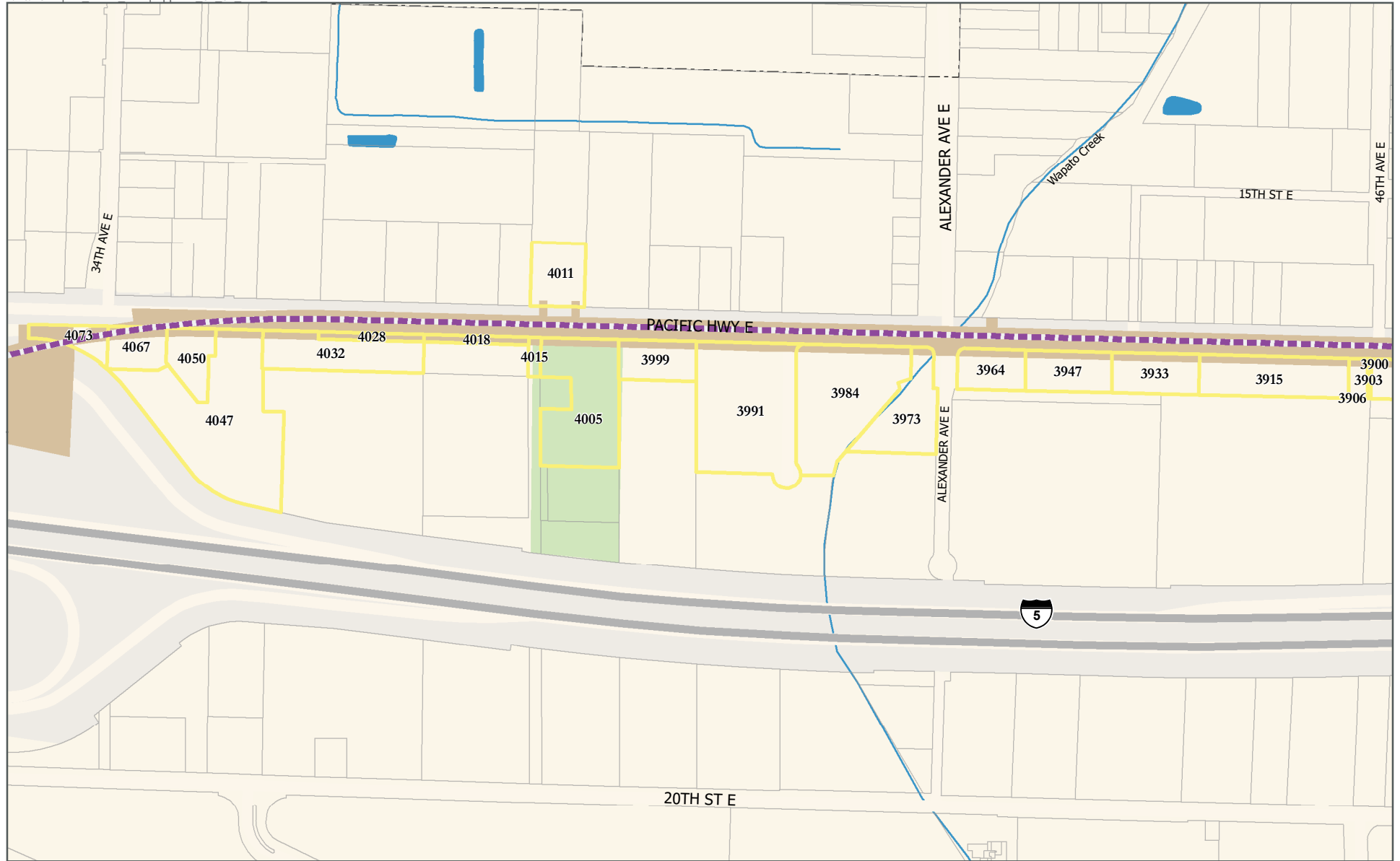
■ Parcel

■ Permanent Footprint

Figure H1-62
Fife Pacific Highway Median Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway Median

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

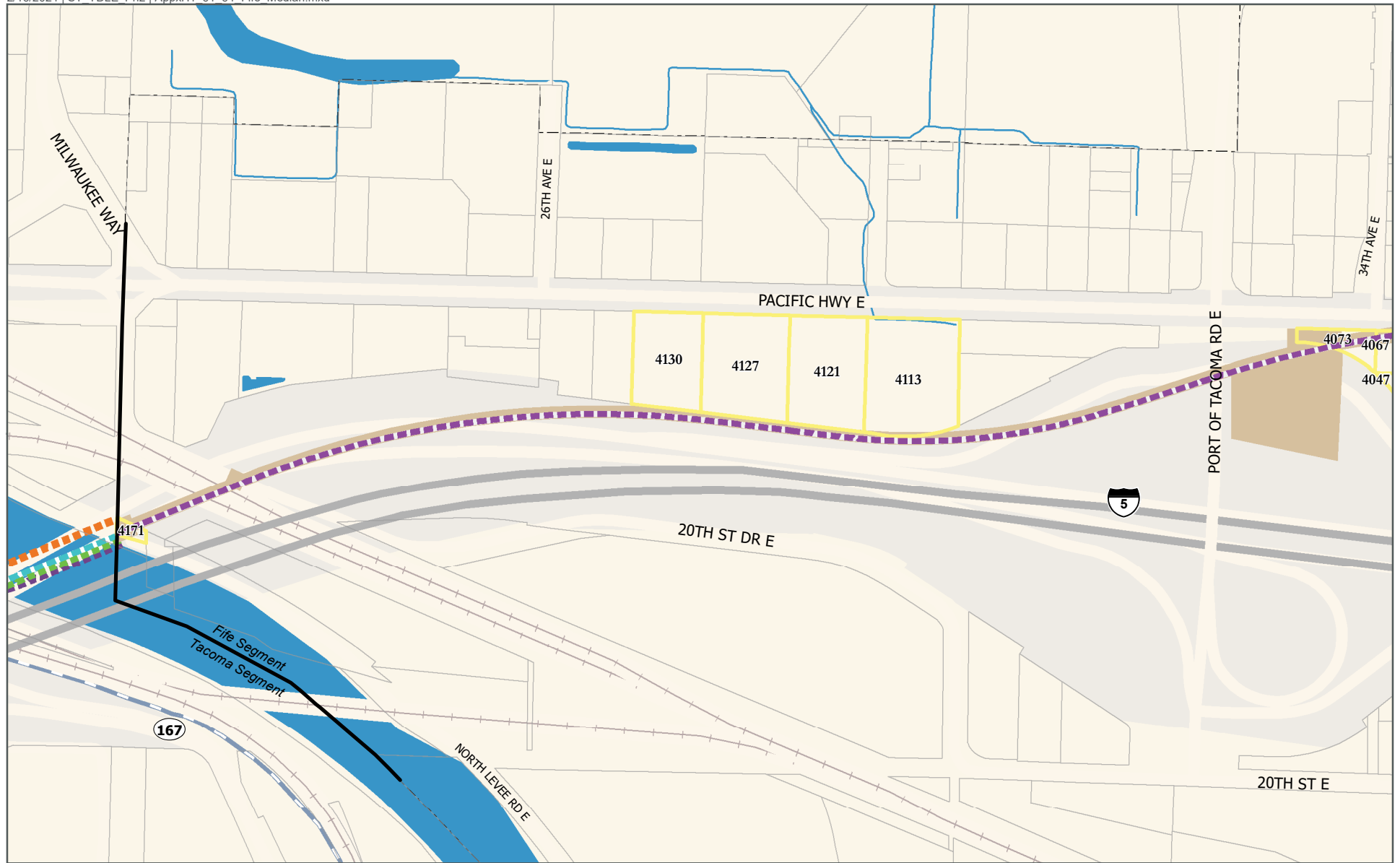
■ Parcel

■ Permanent Footprint

Figure H1-63
Fife Pacific Highway Median Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Fife Pacific Highway Median

Alternative Profile

— At-Grade

--- Elevated

Station

■ New

— Stream

■ Park

■ Affected Parcel

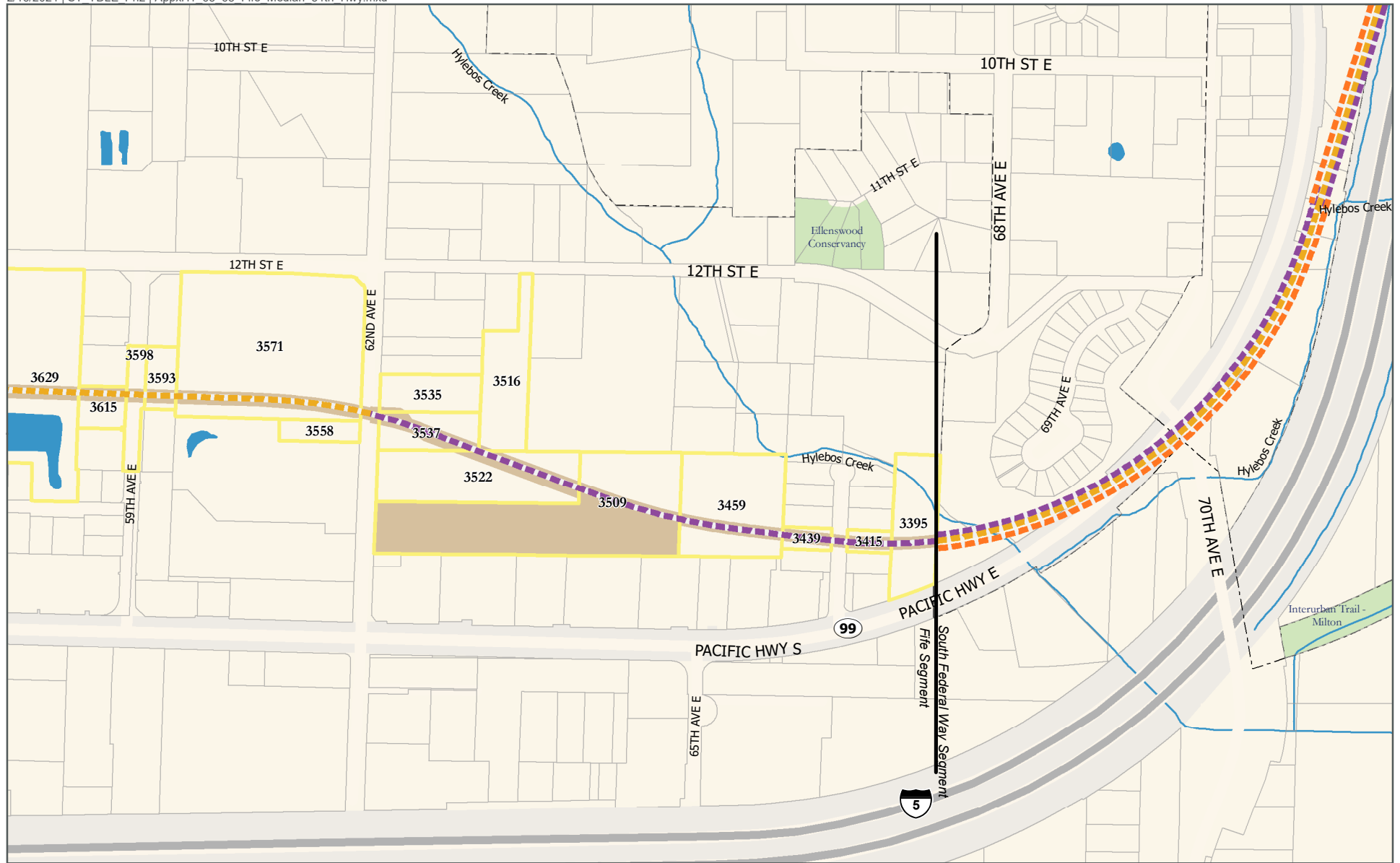
■ Parcel

■ Permanent Footprint

Figure H1-64
Fife Pacific Highway Median Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-65
 Fife Pacific Highway Median with 54th Avenue Design Option
 Affected Parcels
 Fife Segment
 Tacoma Dome Link Extension

Alternatives

- 54th Avenue Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

Station

- New

— Stream

— Park

— Affected Parcel

— Parcel

— Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-66
Fife Pacific Highway Median with 54th Avenue Design Option
Affected Parcels
Fife Segment
Tacoma Dome Link Extension

Alternatives

- 54th Avenue Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- - - Elevated

Station

- New

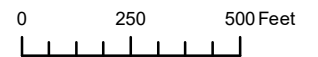
Stream

- Park

Affected Parcel

- Parcel

Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-67
Fife Pacific Highway Median with 54th Avenue Design Option
Affected Parcels
Fife Segment
Tacoma Dome Link Extension

Alternatives

- 54th Avenue Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

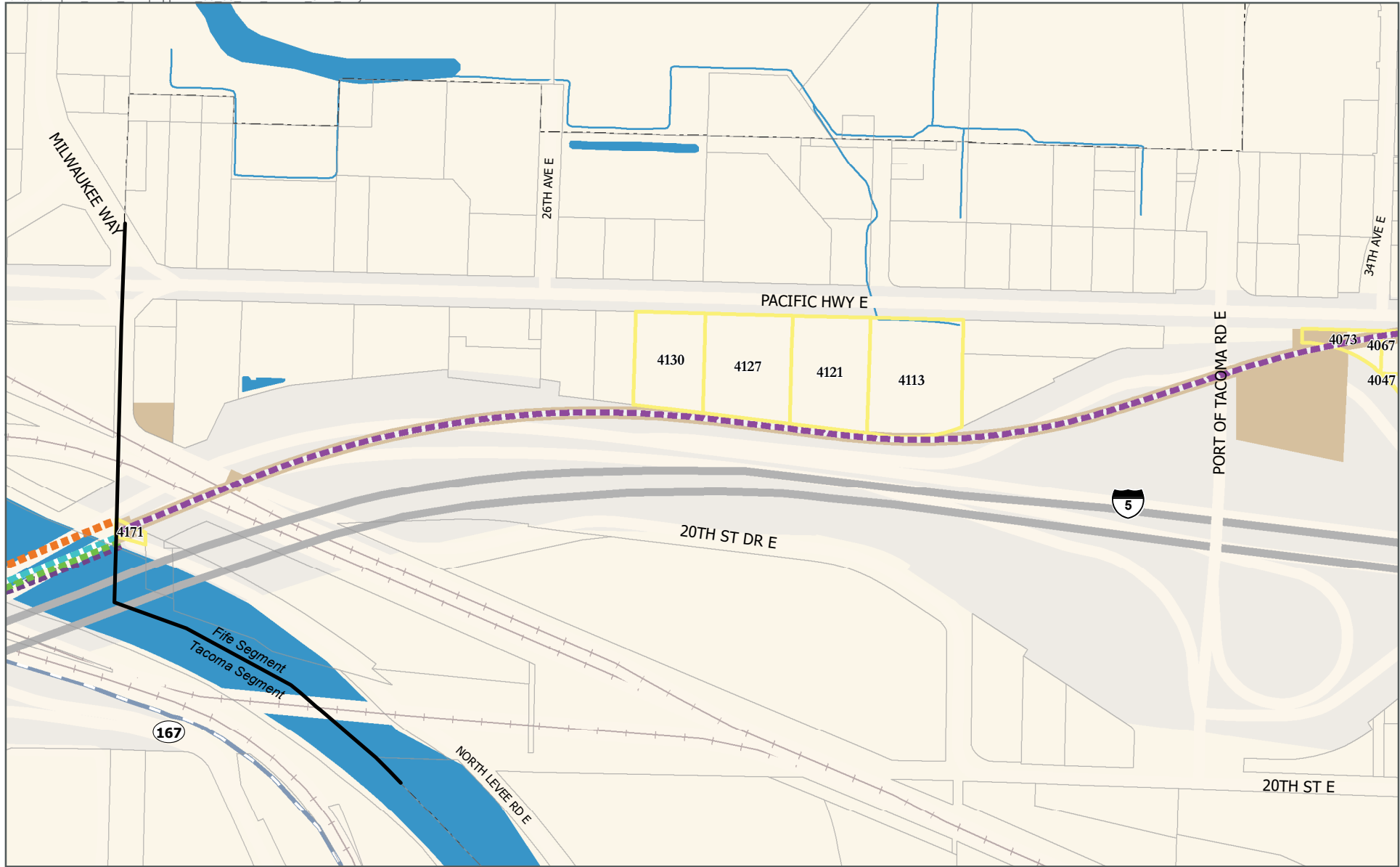
Station

- New

Stream

- Park
- Affected Parcel
- Parcel
- Permanent Footprint





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

Park

Affected Parcel

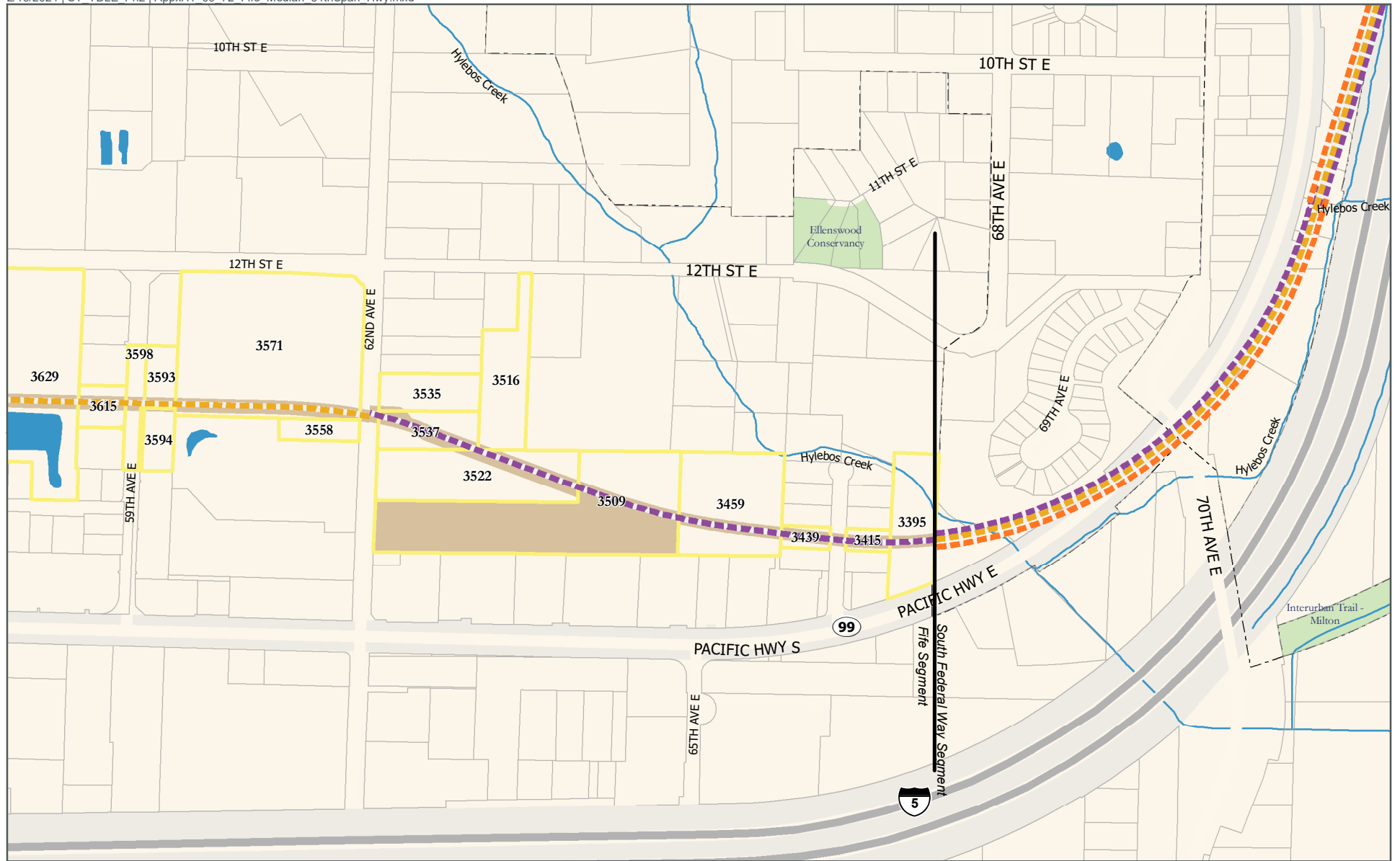
Parcel

Permanent Footprint

Figure H1-68
Fife Pacific Highway Median with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

Station

- New

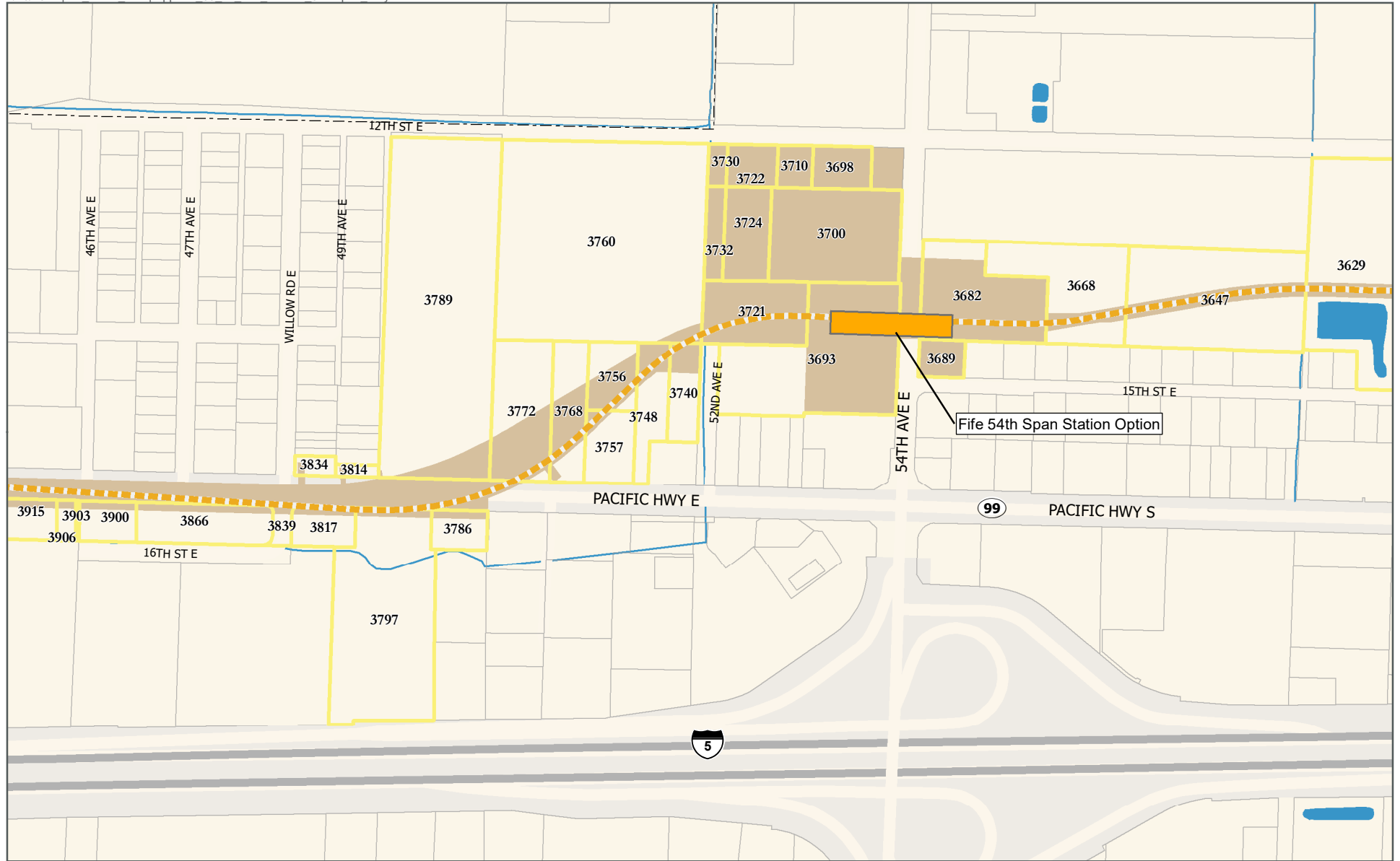
Stream

- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-69
Fife Pacific Highway Median with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

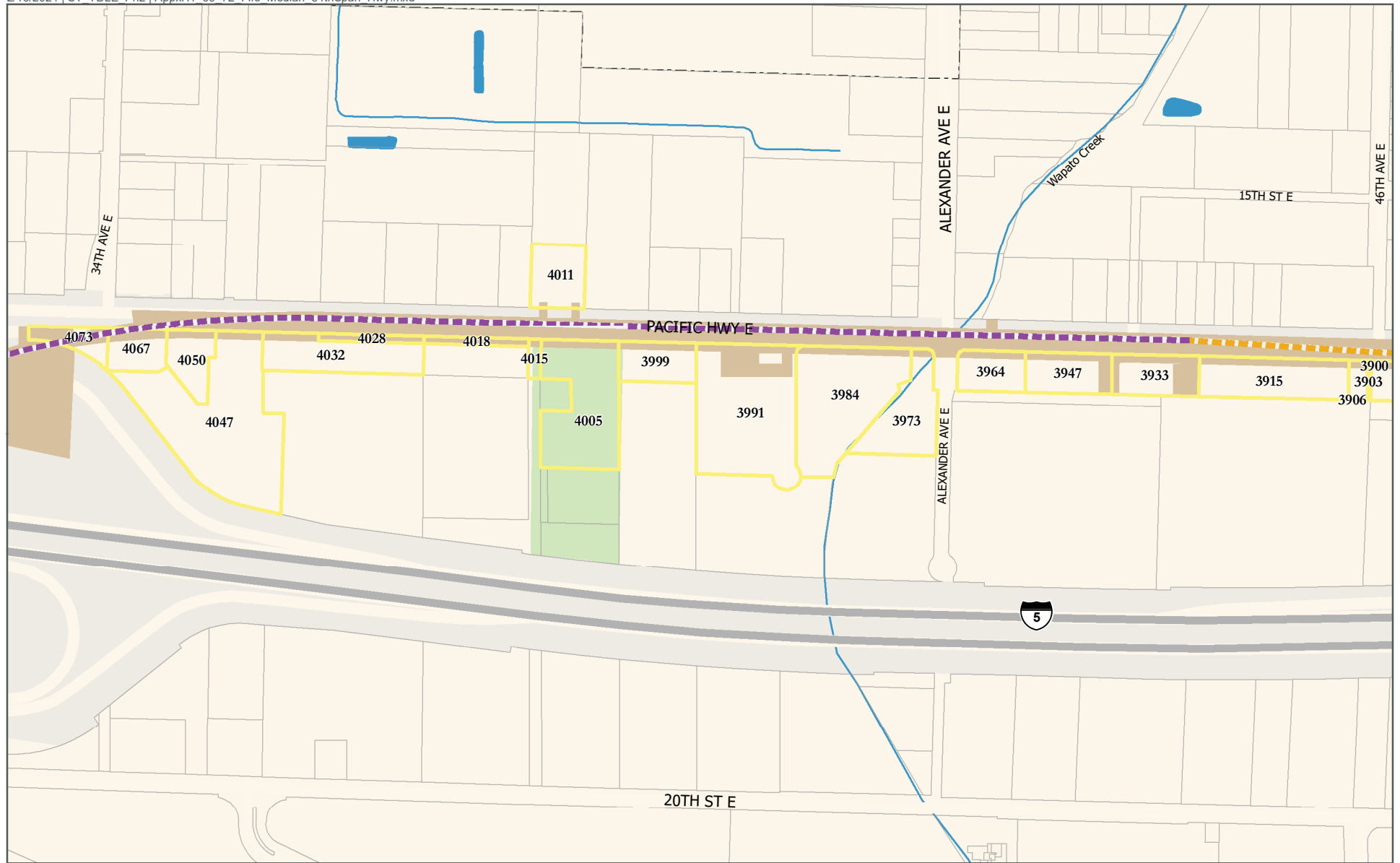
- Parcel

Permanent Footprint

Fife Pacific Highway Median with 54th Span Design Option Affected Parcels Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park
- Affected Parcel

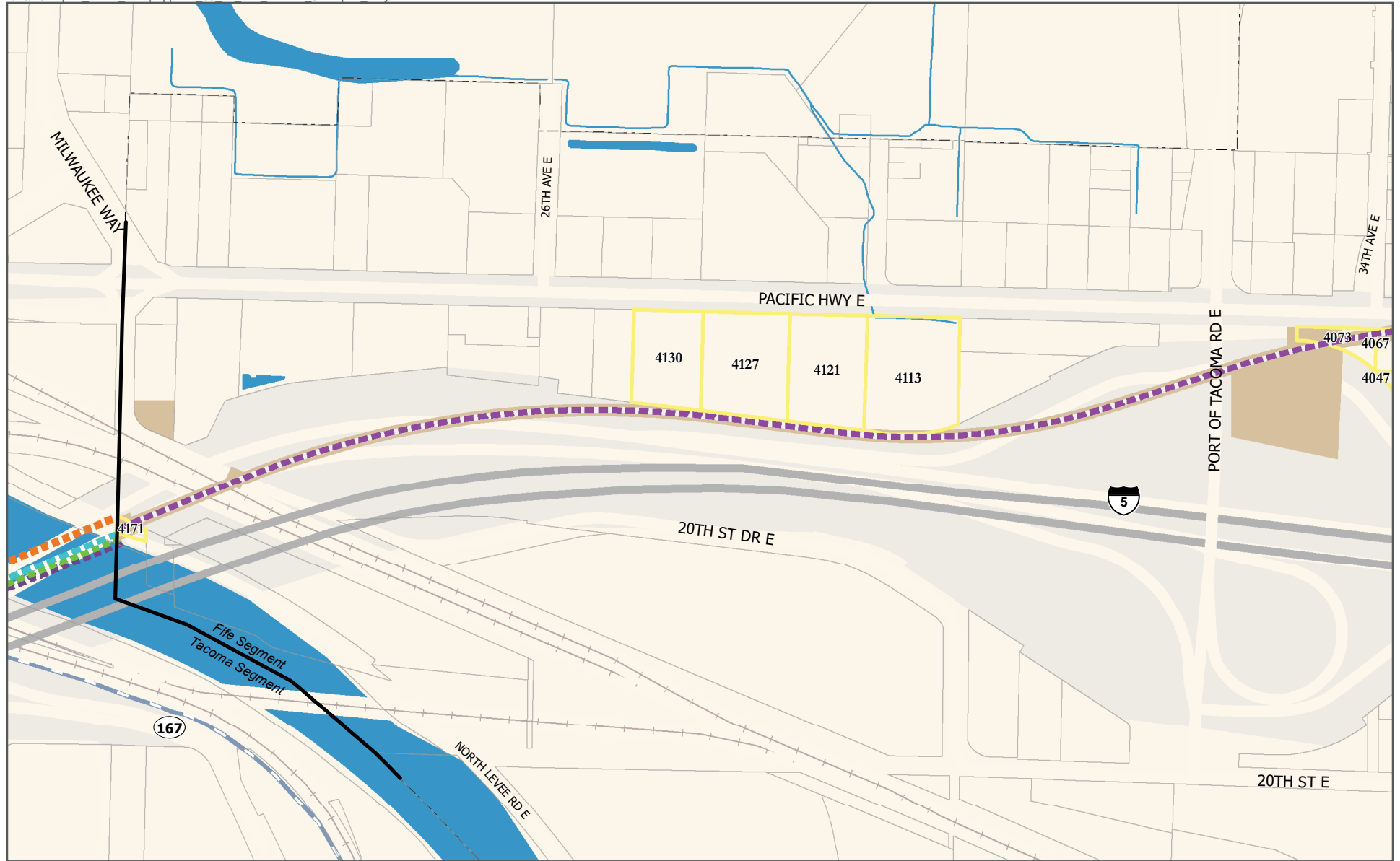
Parcel

- Permanent Footprint

Figure H1-71
Fife Pacific Highway Median with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife Pacific Highway Median

Alternative Profile

- At-Grade
- - - Elevated

Station

- █ New

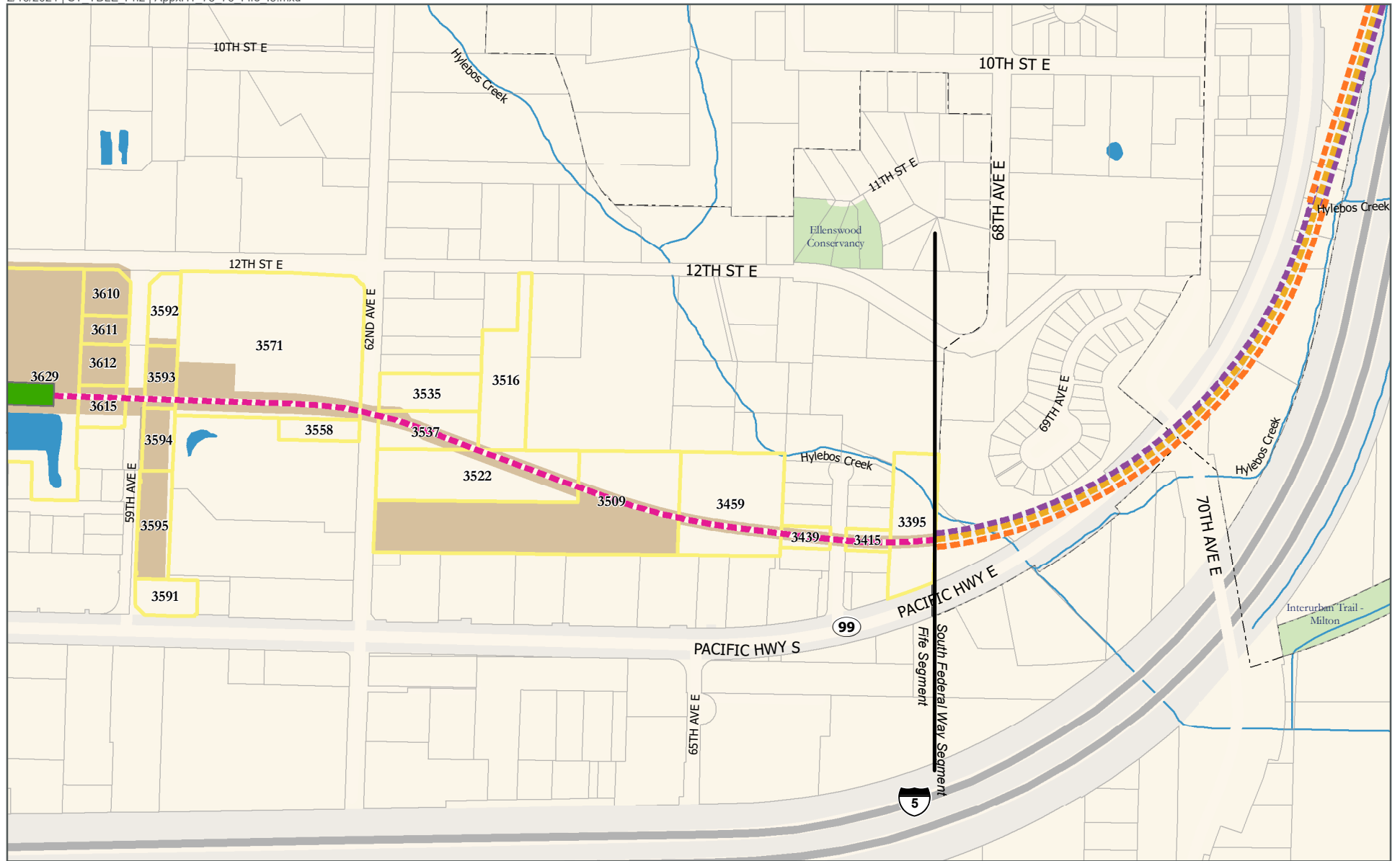
- Stream
- █ Park
- Affected Parcel
- Parcel
- █ Permanent Footprint

Figure H1-72
Fife Pacific Highway Median with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension

0 250 500 Feet

N



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

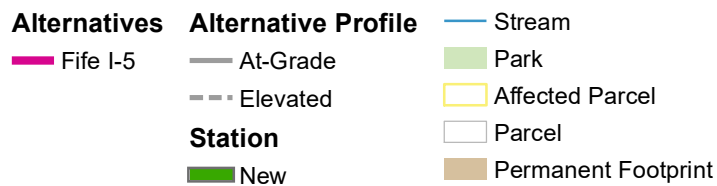
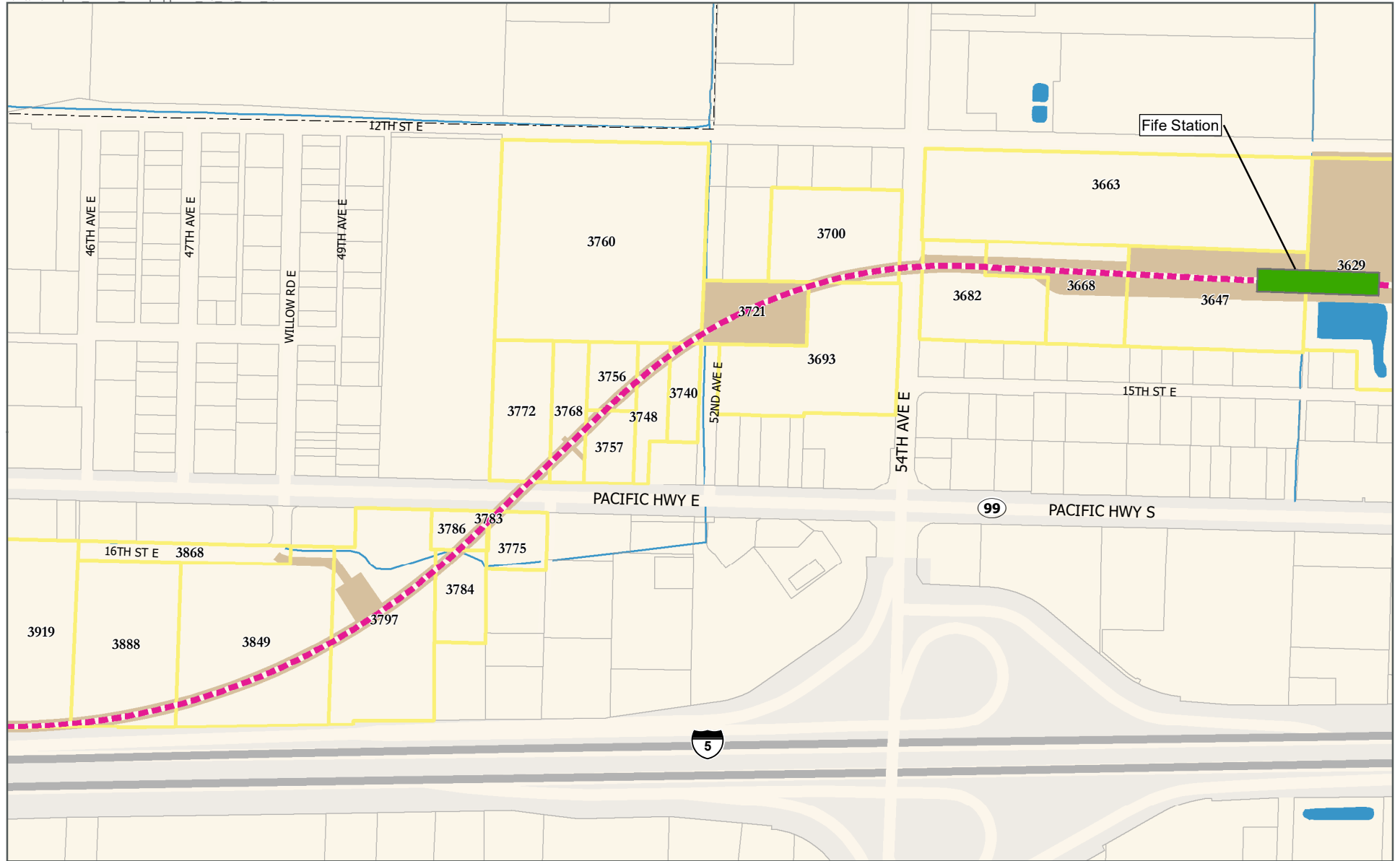


Figure H1-73
Fife I-5 Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

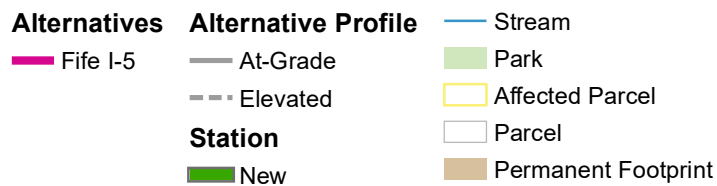
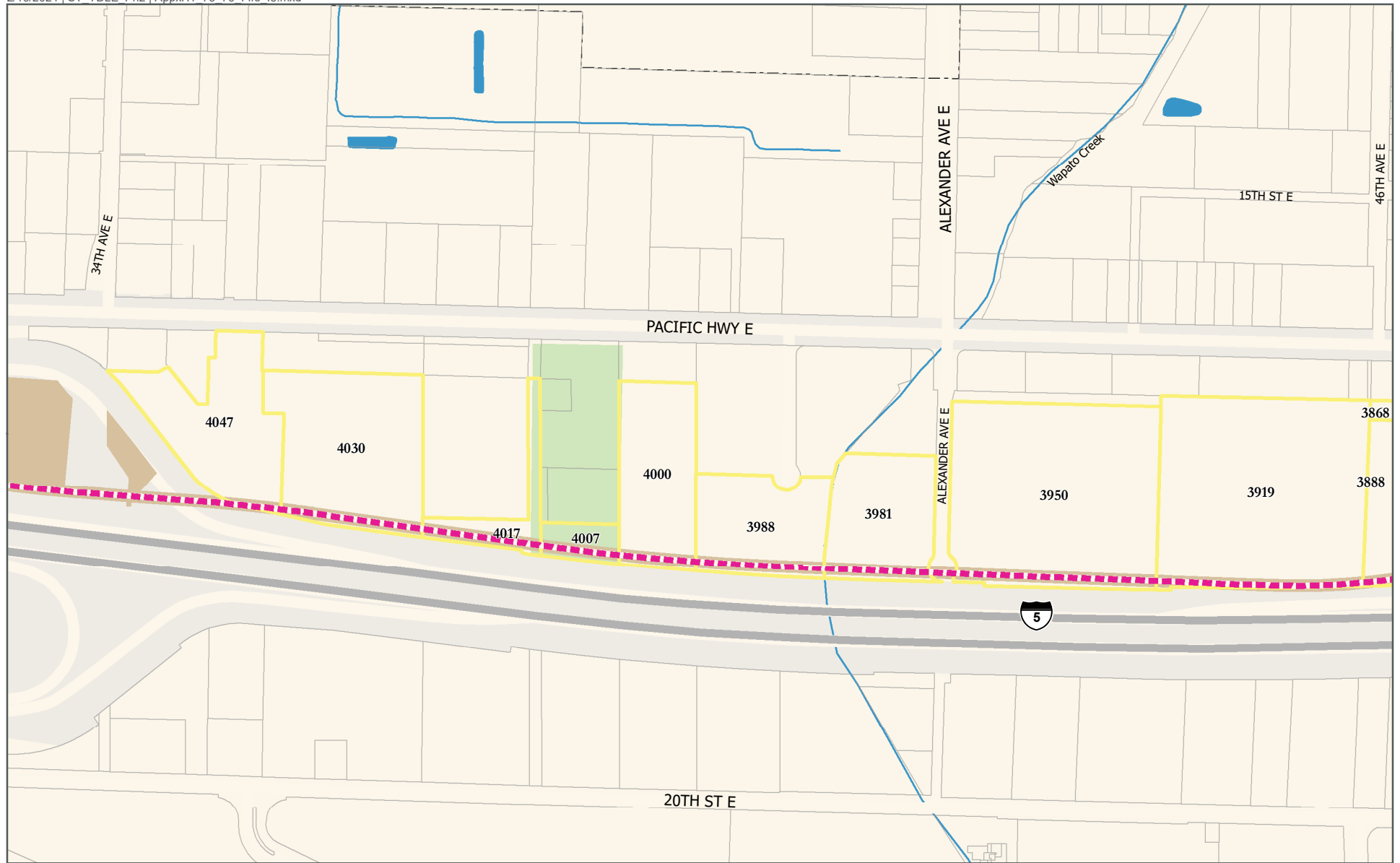


Figure H1-74
Fife I-5 Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

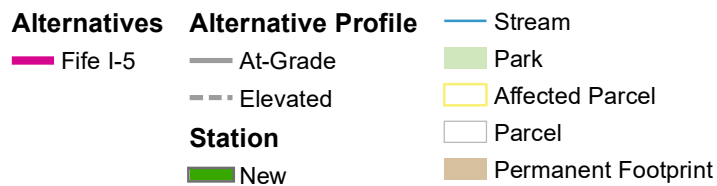
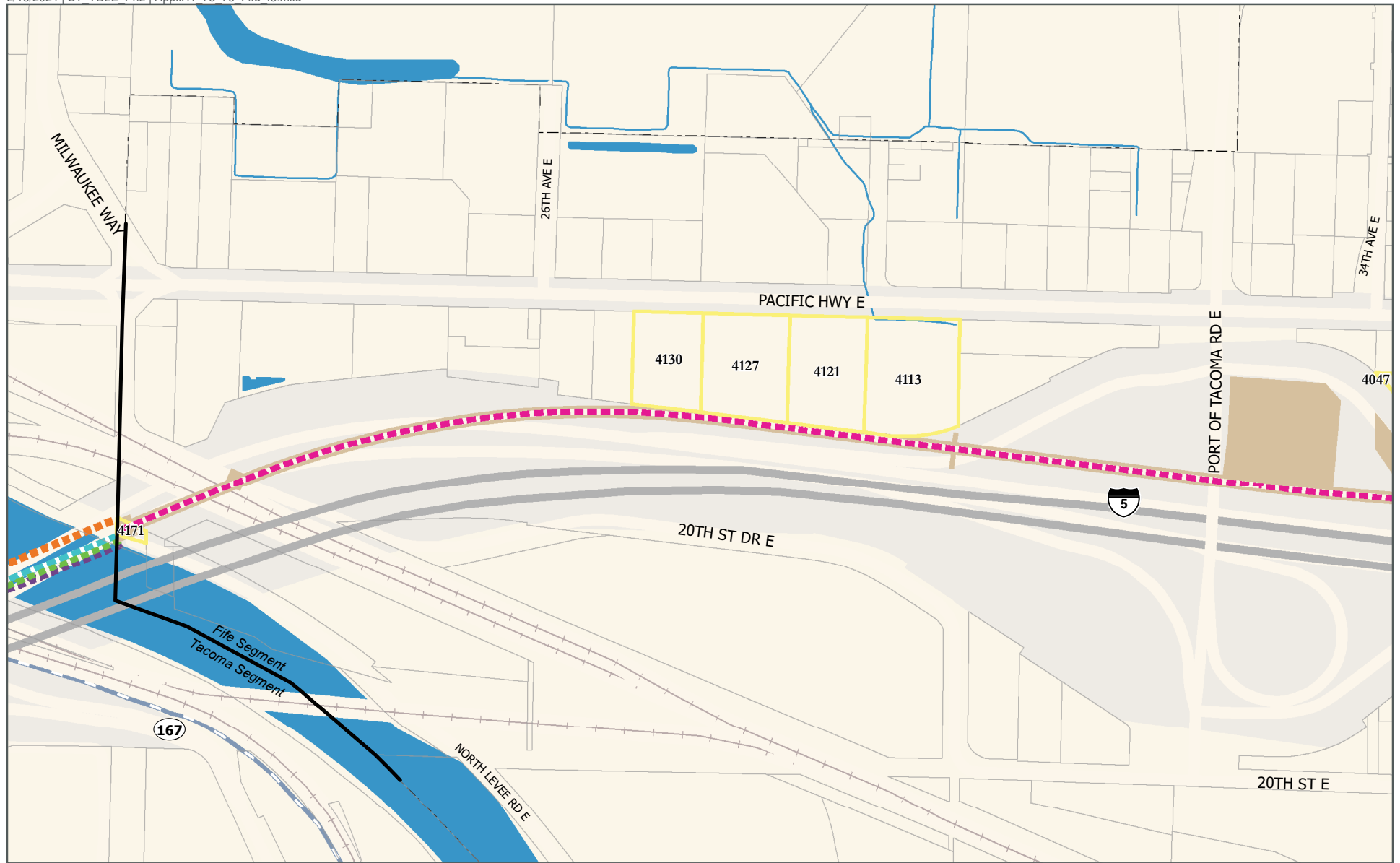


Figure H1-75
Fife I-5 Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

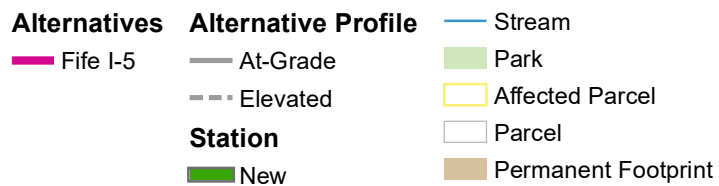
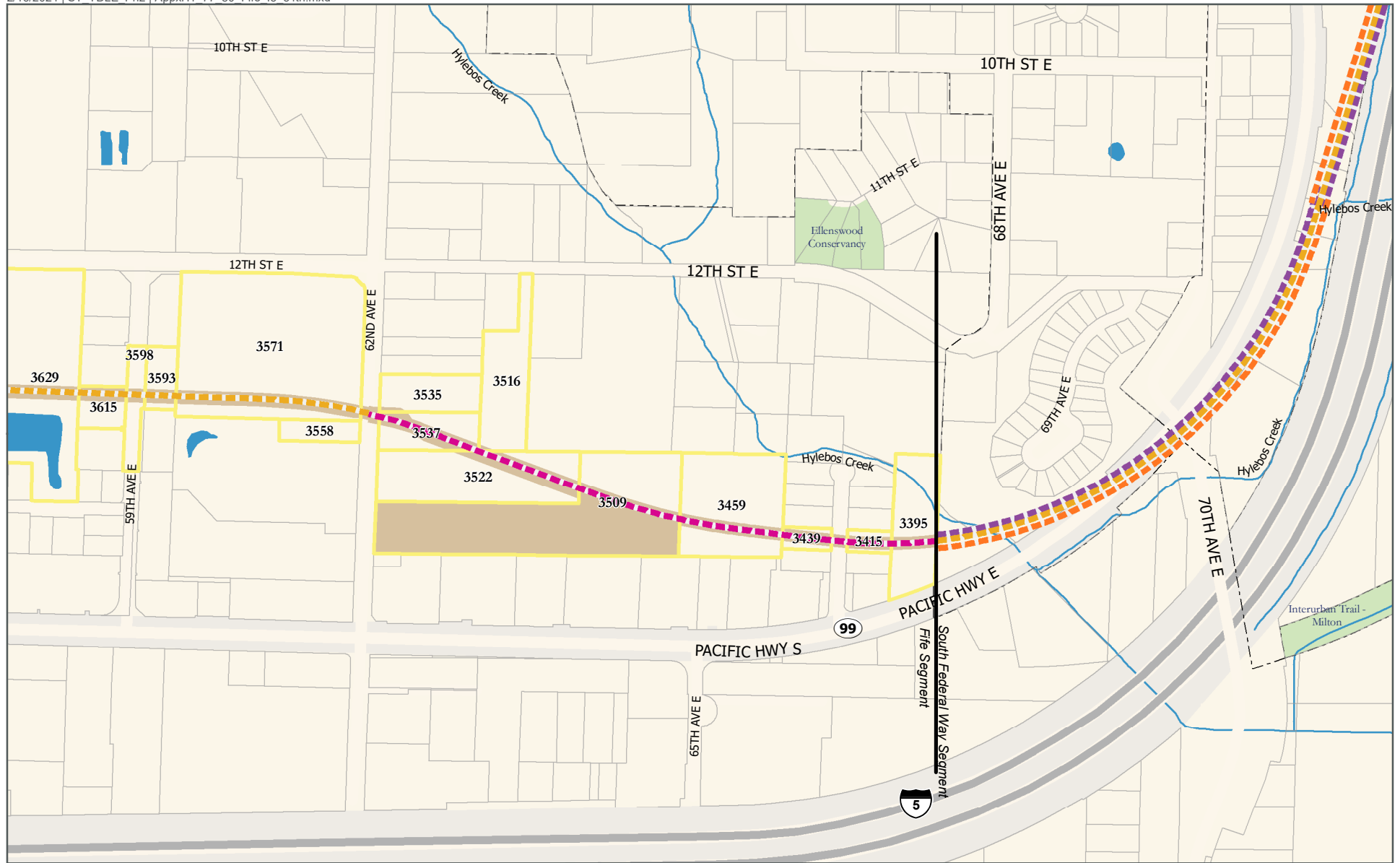


Figure H1-76
Fife I-5 Alternative
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

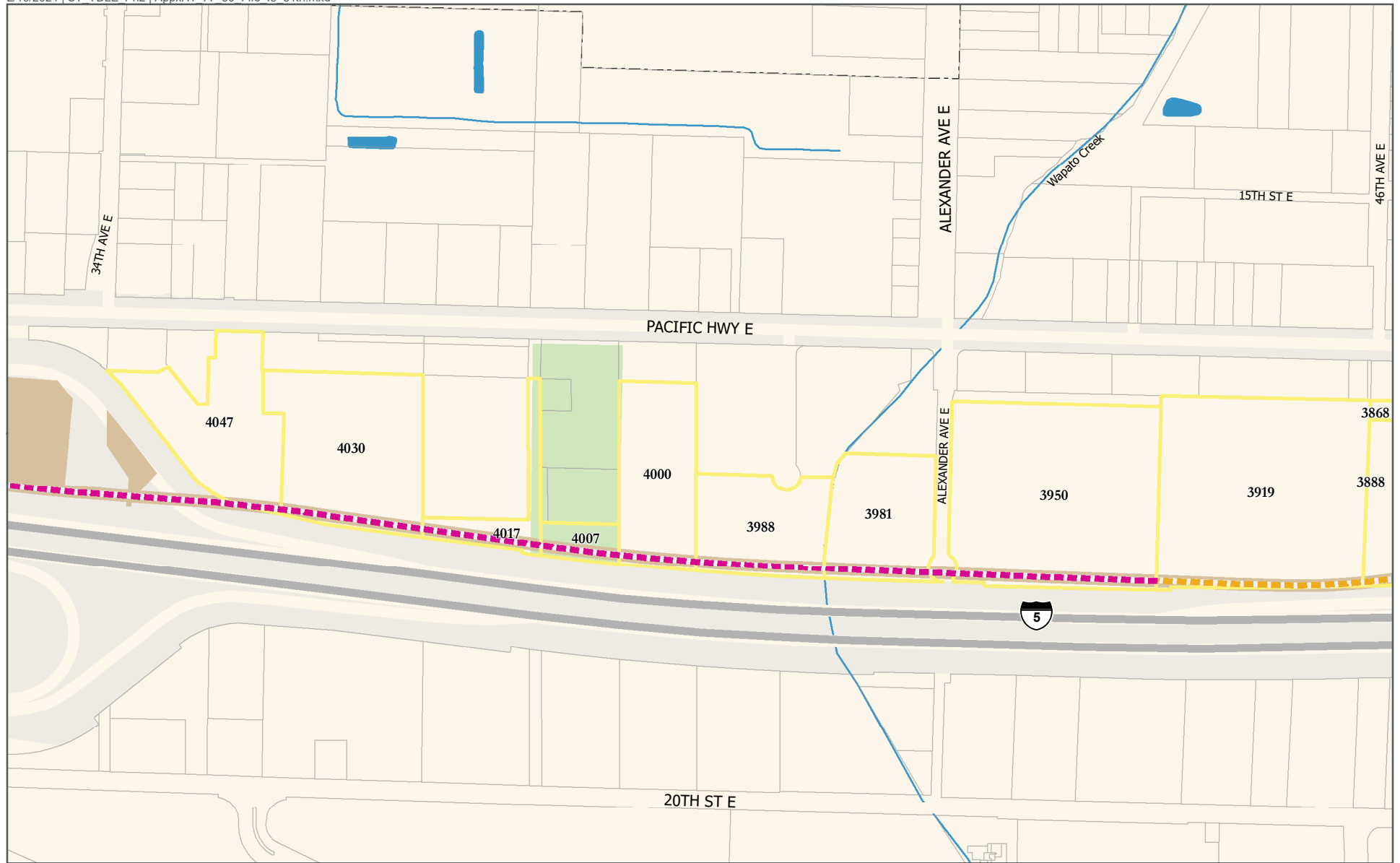
- Parcel

Permanent Footprint

Figure H1-77
Fife I-5 with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

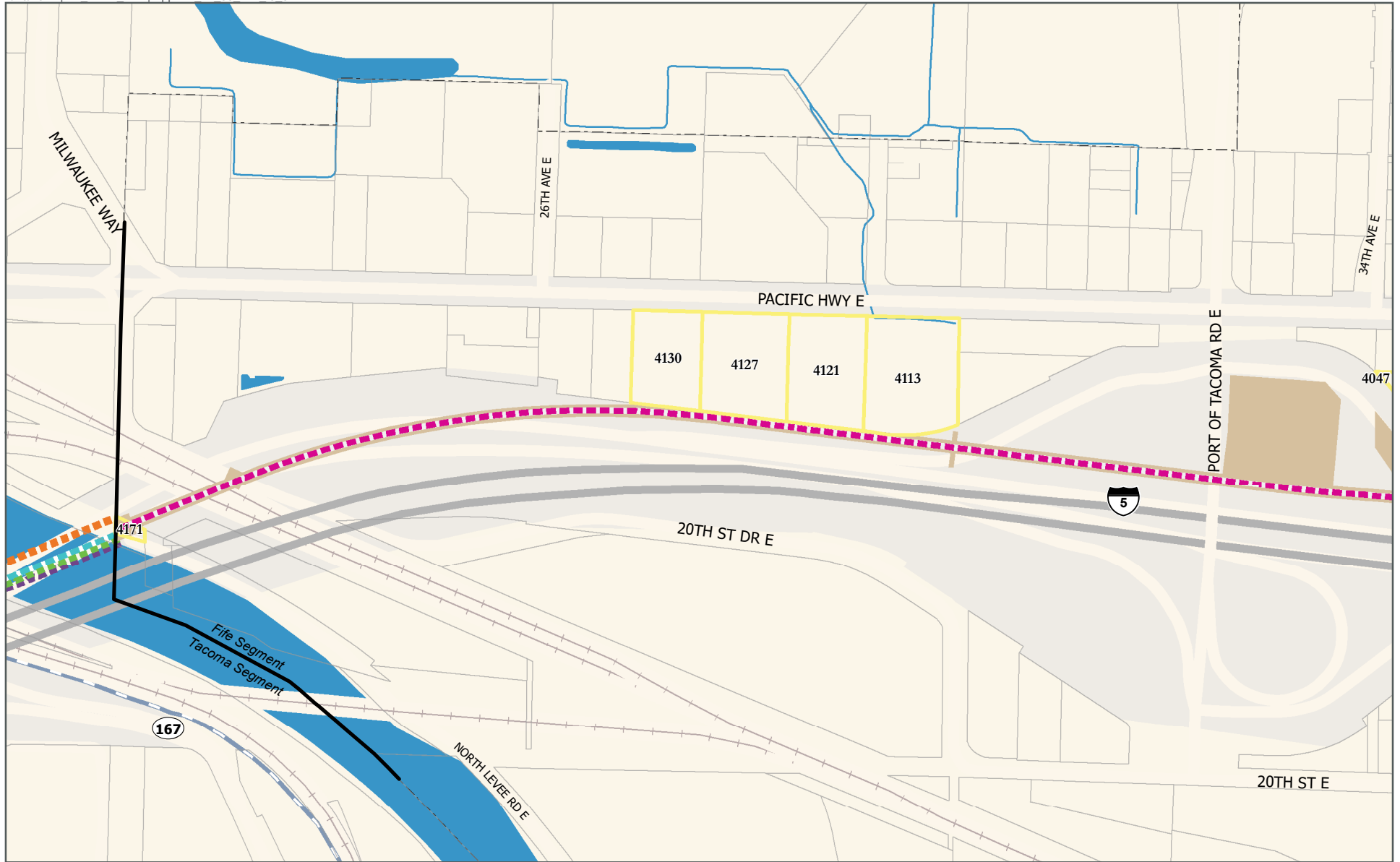
Stream

- Park
- Affected Parcel
- Parcel
- Permanent Footprint

Figure H1-79
Fife I-5 with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

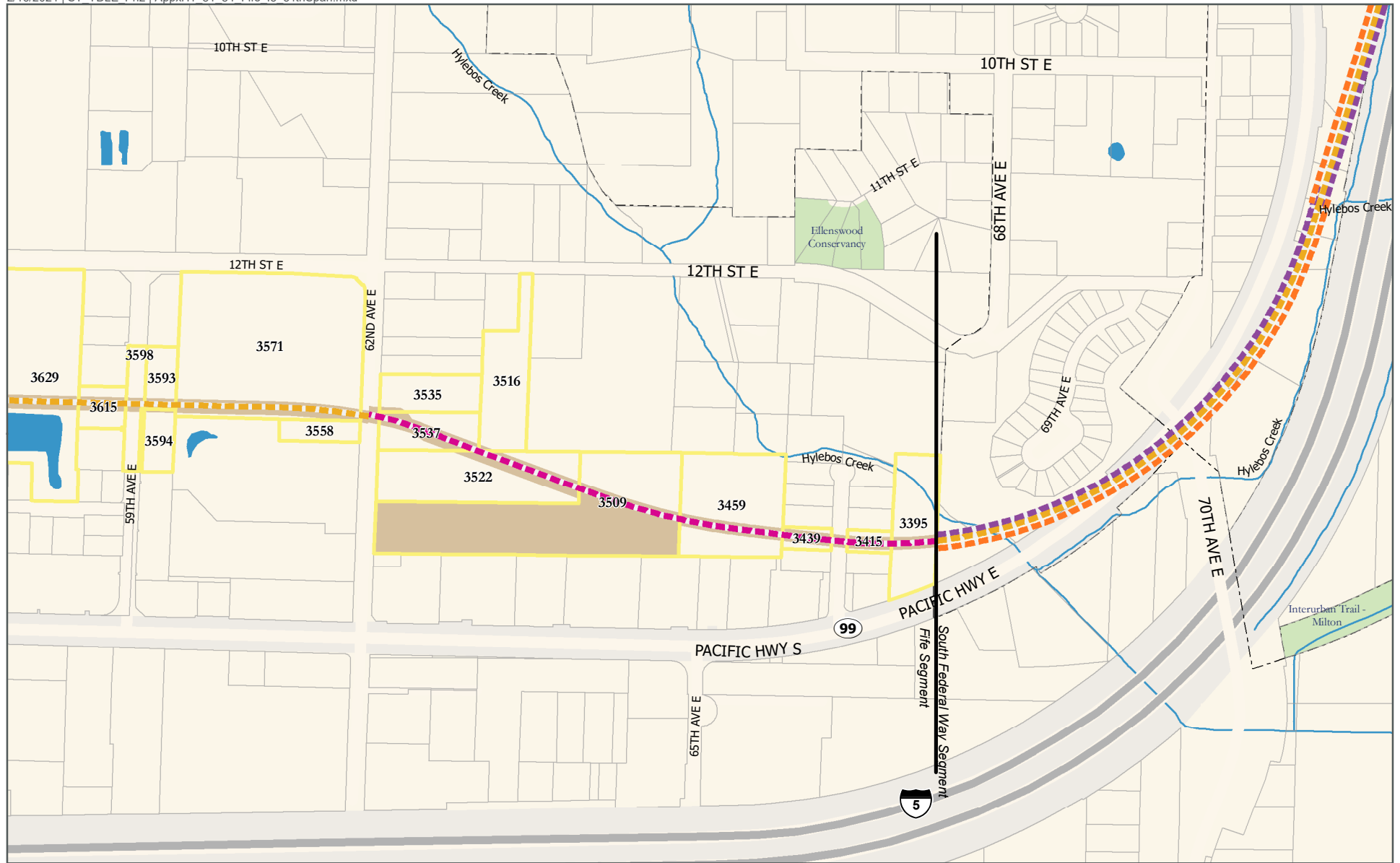
- Parcel

- Permanent Footprint

Figure H1-80
Fife I-5 with 54th Avenue Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

- Parcel

Permanent Footprint

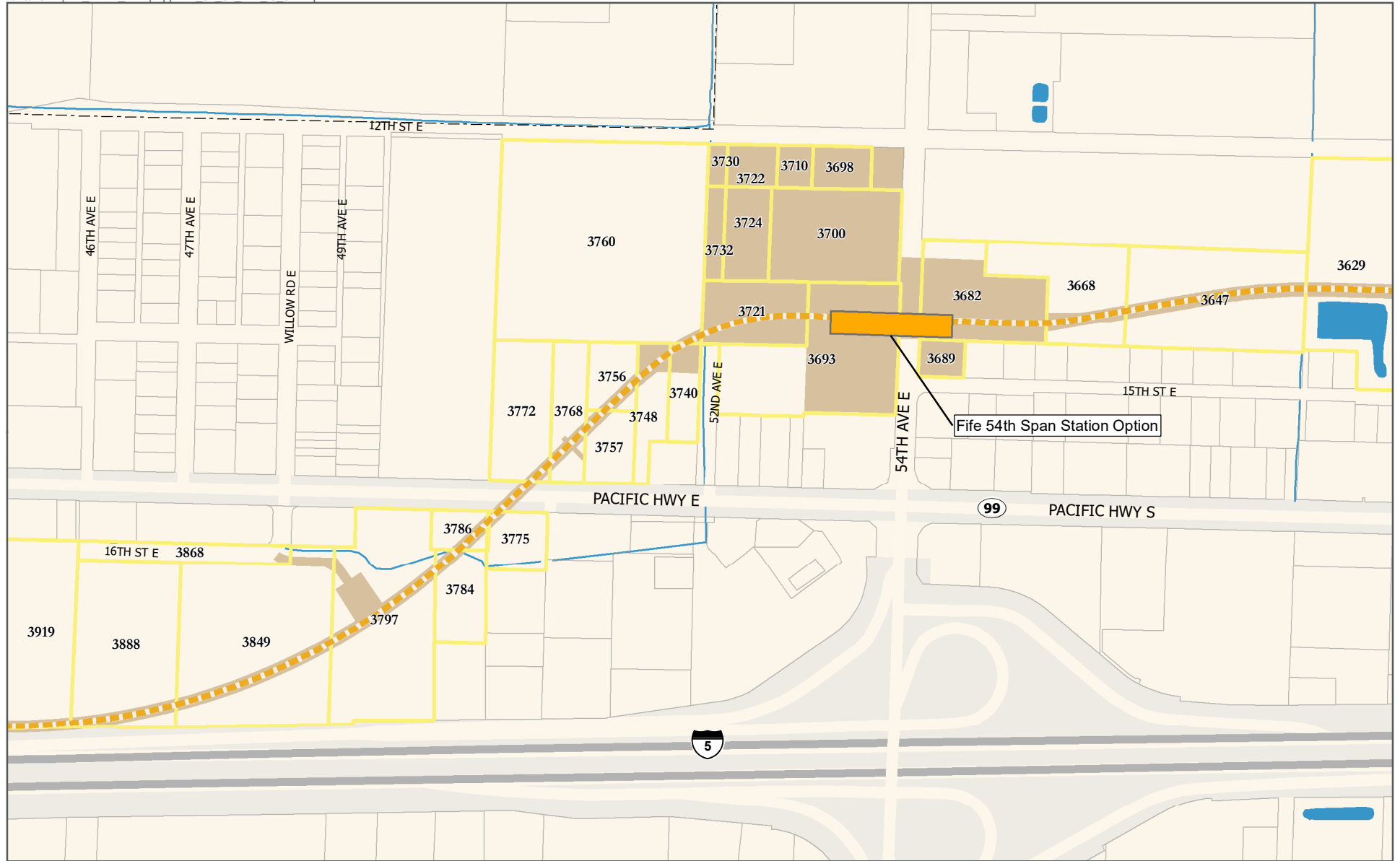
- Permanent Footprint

Figure H1-81

Fife I-5 with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

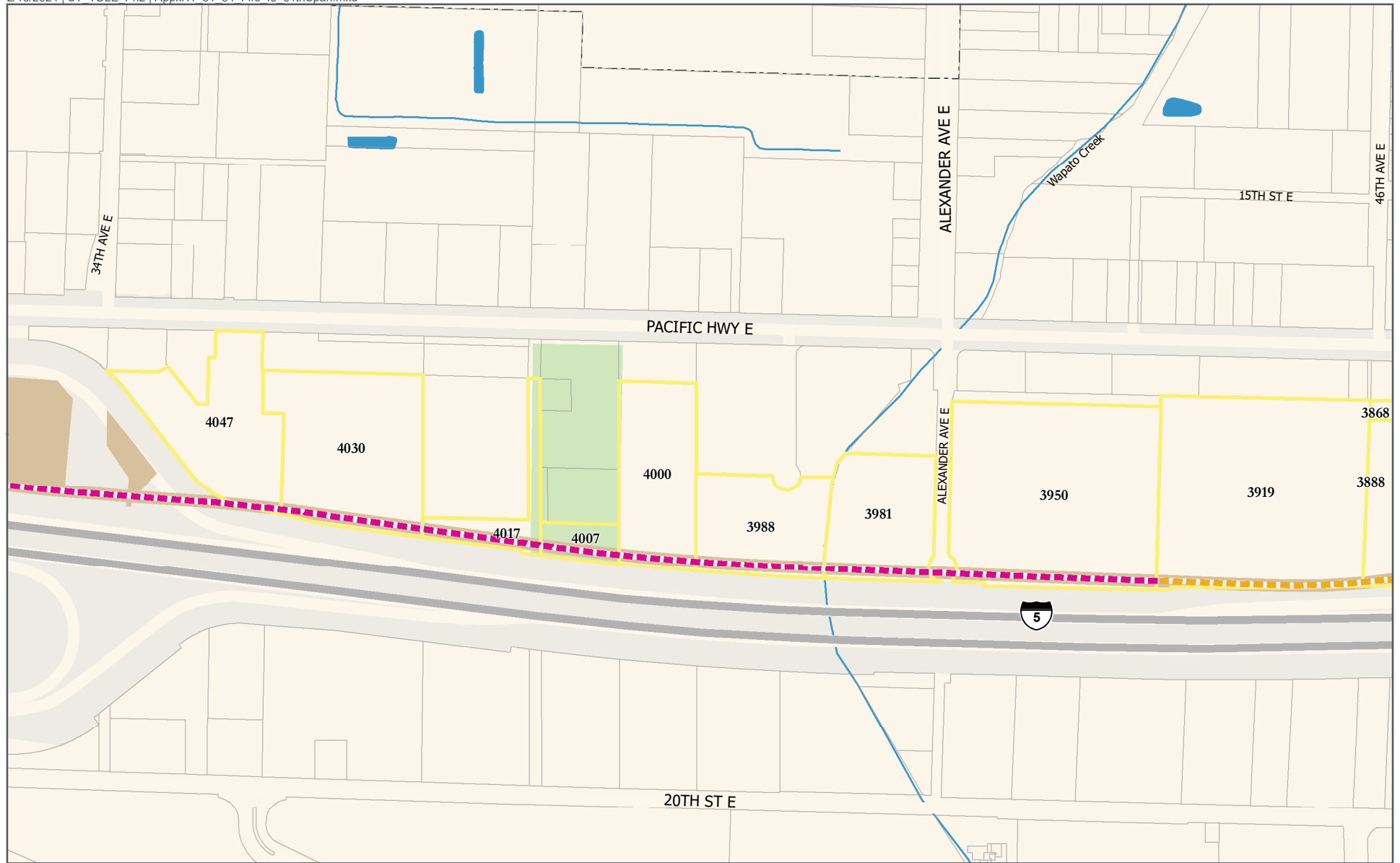
- Parcel

Permanent Footprint

Figure H1-82
Fife I-5 with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park
- Affected Parcel

Parcel

- Permanent Footprint

Figure H1-83
Fife I-5 with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- 54th Avenue Span Design
- Fife I-5

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

- Parcel

Permanent Footprint

Figure H1-84

Fife I-5 with 54th Span Design Option
Affected Parcels
Fife Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Preferred Tacoma 25th Street - West

Alternative Profile

— At-Grade
- - - Elevated

Station

— New

— Stream

— Park

— Affected Parcel

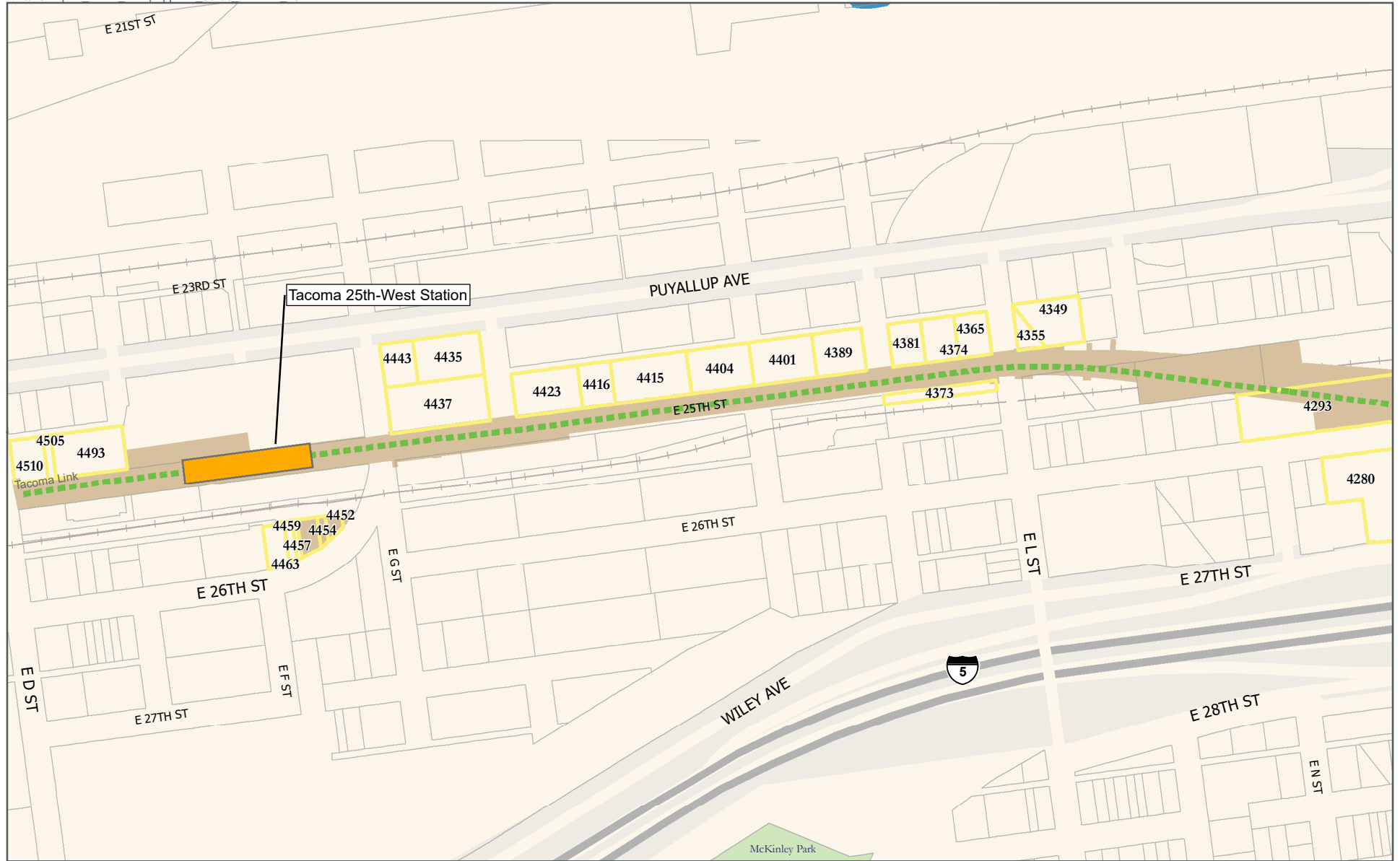
— Parcel

— Permanent Footprint

Figure H1-85
Preferred Tacoma 25th Street - West Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

- Preferred Tacoma 25th Street - West

Alternative Profile

- At-Grade
- Elevated

Station

- New

Stream

- Park

Affected Parcel

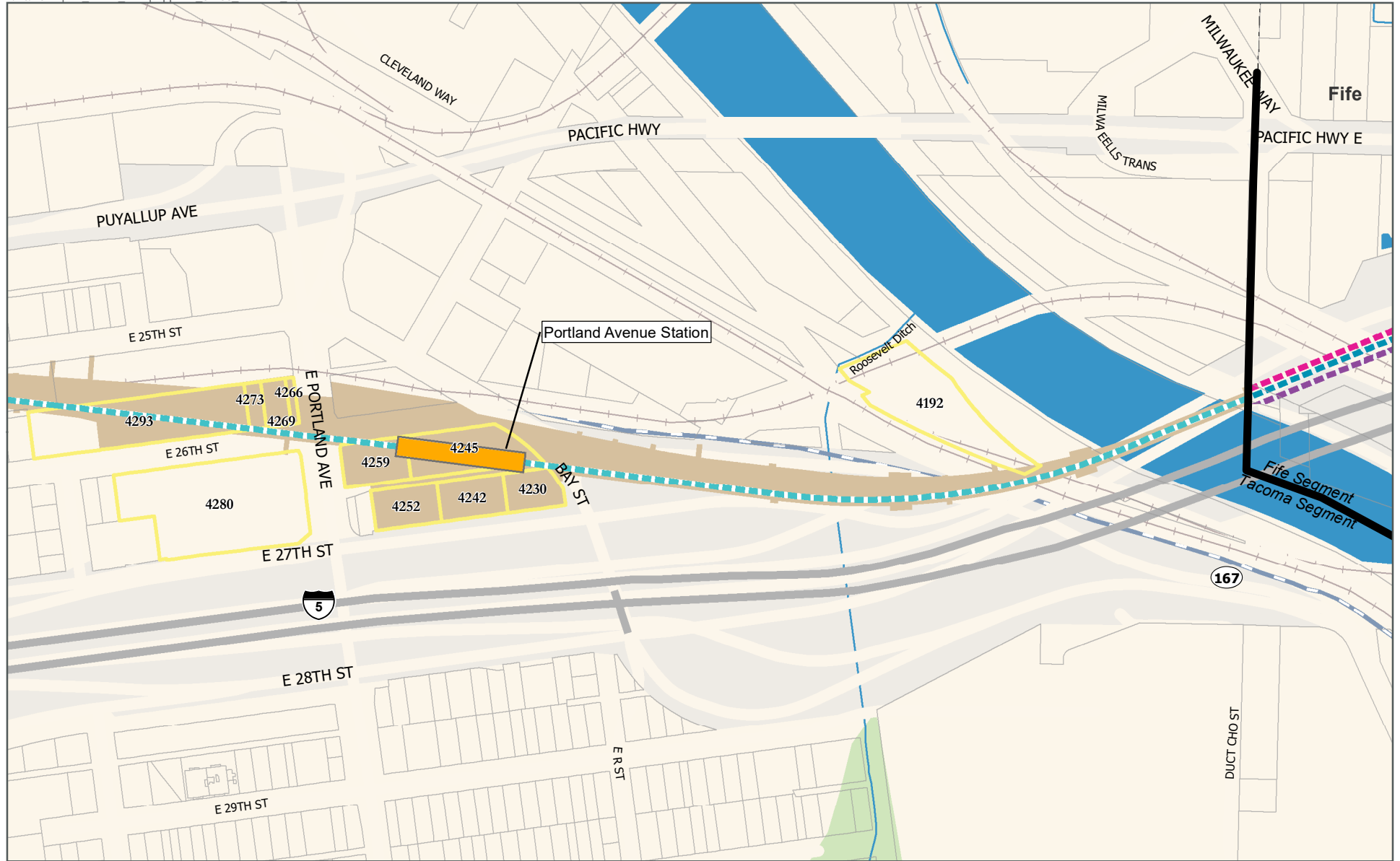
- Parcel

Permanent Footprint

Figure H1-86
Preferred Tacoma 25th Street - West Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Tacoma 25th Street - East

Alternative Profile

At-Grade
Elevated

Station

New

Stream

Park

Affected Parcel

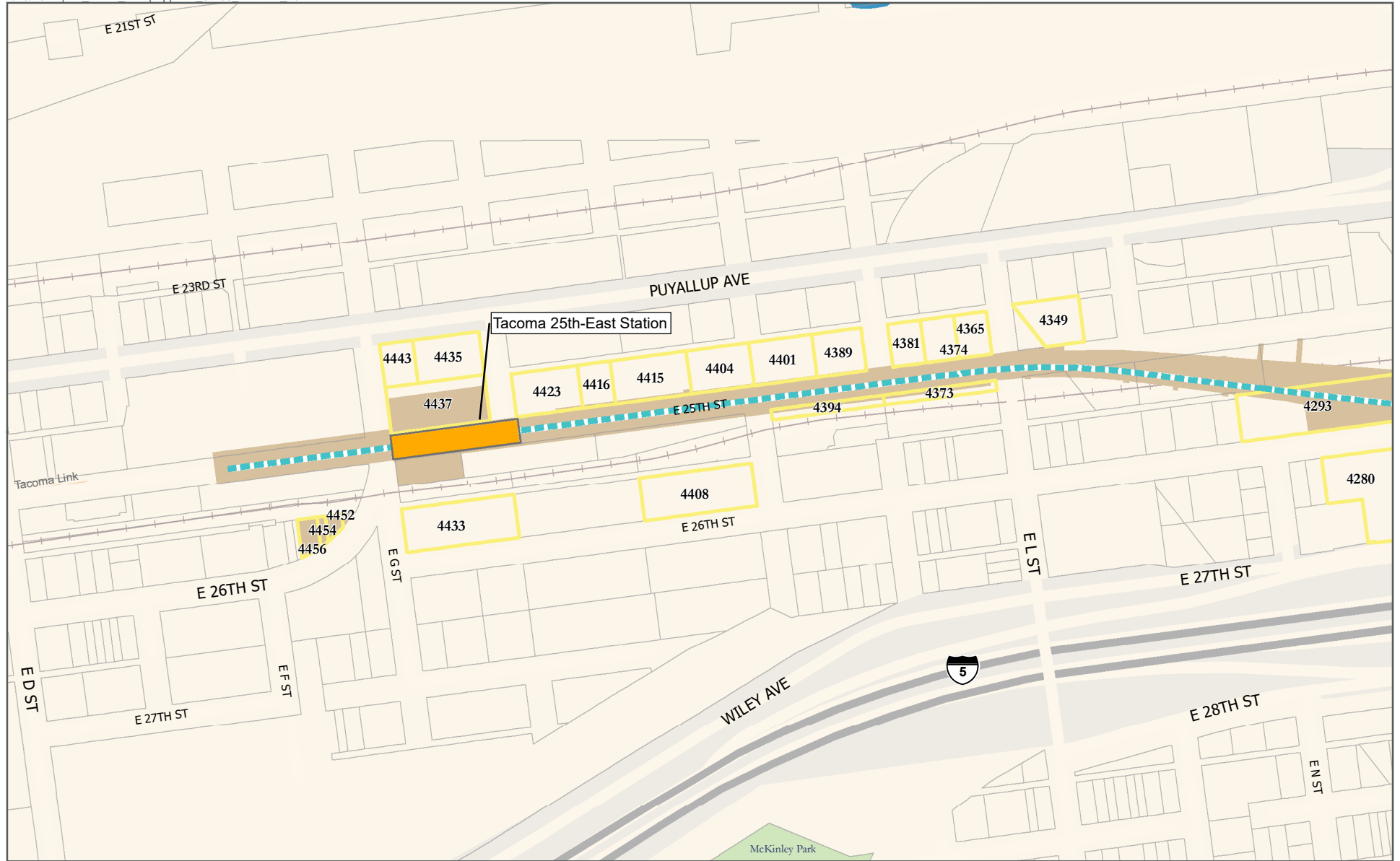
Parcel

Permanent Footprint

Figure H1-87
Tacoma 25th Street - East Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Tacoma 25th Street - East

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

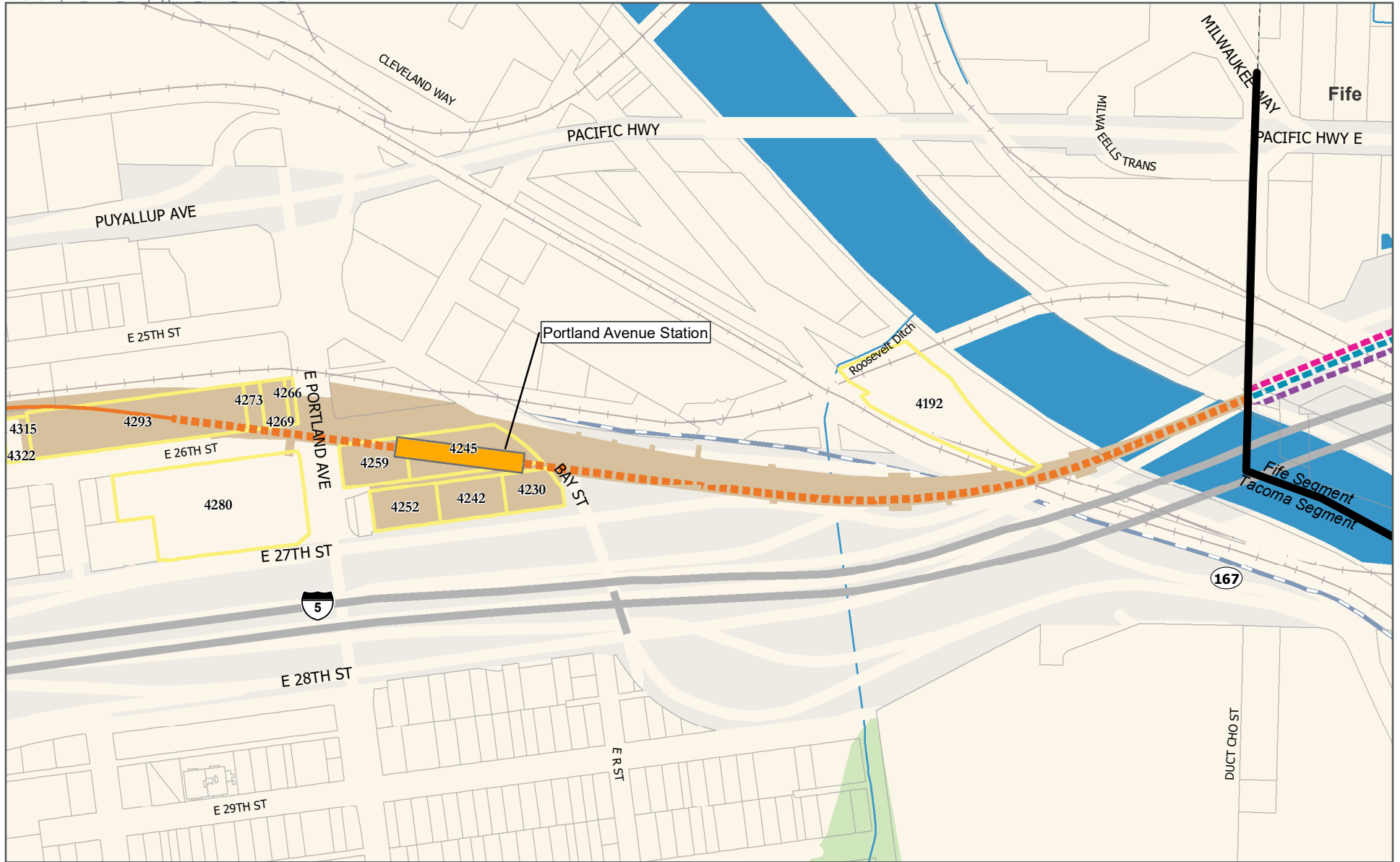
Parcel

Permanent Footprint

Figure H1-88
Tacoma 25th Street - East Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Tacoma Close to Sounder

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

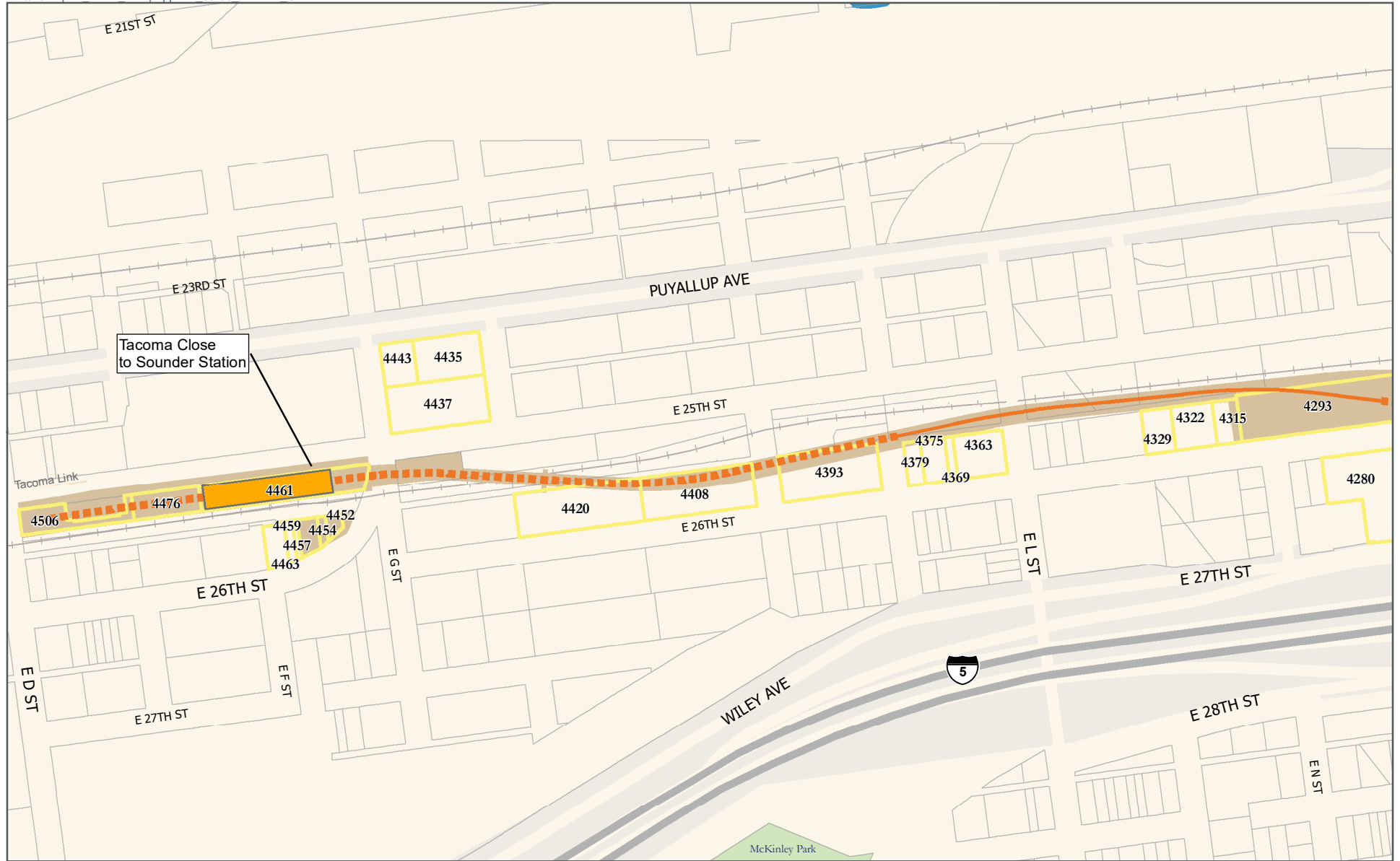
Parcel

Permanent Footprint

Figure H1-89
Tacoma Close to Sounder Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

Tacoma Close to Sounder

Alternative Profile

At-Grade

Elevated

Station

New

Stream

Park

Affected Parcel

Parcel

Permanent Footprint

Figure H1-90
Tacoma Close to Sounder Alternative
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Tacoma 26th Street

Alternative Profile

— At-Grade

- - - Elevated

Station

■ New

— Stream

■ Park

□ Affected Parcel

□ Parcel

■ Permanent Footprint

Tacoma 26th Street Alternative with Portland Avenue Design Option

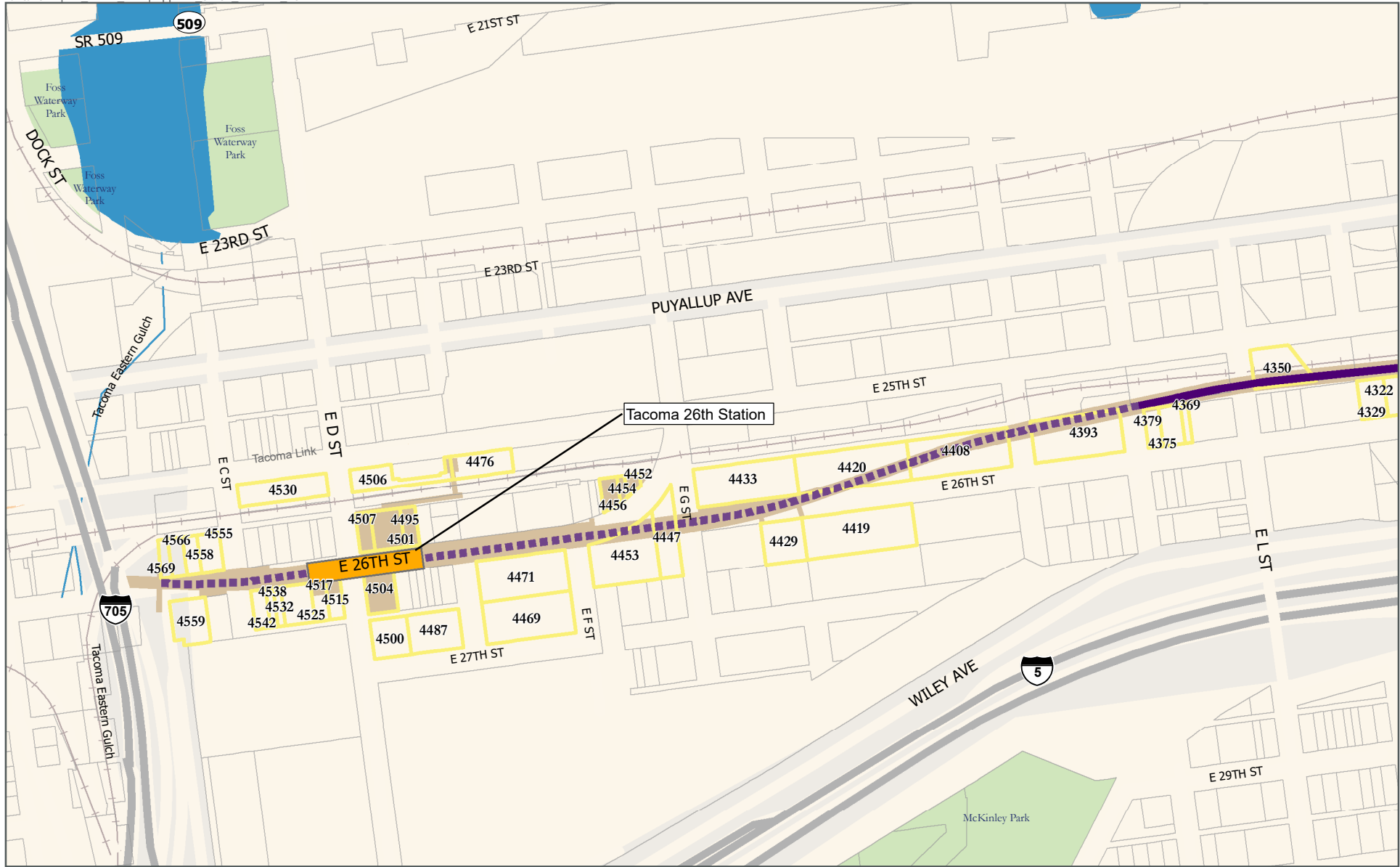
Affected Parcels

Tacoma Segment

Tacoma Dome Link Extension



Figure H1-91



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Alternatives

— Tacoma 26th Street

Alternative Profile

— At-Grade

--- Elevated

Station

— New

— Stream

— Park

— Affected Parcel

— Parcel

— Permanent Footprint

Tacoma 26th Street Alternative with Portland Avenue Design Option
Affected Parcels
Tacoma Segment

Tacoma Dome Link Extension

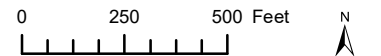


Figure H1-92

**Note: Affected parcels and footprint for the optional Portland Avenue bike and pedestrian bridge are the same for all alternatives in the Tacoma Segment.*



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

Figure H1-94
Tacoma 26th Street Alternative
with Optional Portland Avenue Bike and Pedestrian Bridge
Potentially Affected Parcels - Tacoma Segment
Tacoma Dome Link Extension

Alternatives

- Tacoma 26th Street
- At-Grade
- - - Elevated
- Station

— Stream

- Park
- Affected Parcel
- Parcel
- Permanent Footprint

- Affected Parcel -
Optional Bike and
Pedestrian Bridge*
- Optional Bike and
Pedestrian Bridge
Footprint*

*Note: Affected parcels and footprint for the optional Portland Avenue bike and pedestrian bridge are the same for all alternatives in the Tacoma Segment.



2 CONSTRUCTION IMPACTS AND RELOCATION OPPORTUNITIES FOR THE BUILD ALTERNATIVES

2.1 Temporary Construction Impacts for the Built Alternatives

Construction of TDLE would require property for construction staging, construction access, and temporary construction easements in each segment. Table H1-7 summarizes the acreage and parcels needed for construction.

Table H1-7 Construction Impacts for the Build Alternatives

Alternative	Estimated Temporary Construction Footprint (Acres)	Affected Parcels
Federal Way Segment		
Preferred FW Enchanted Parkway	47	13
Preferred FW Enchanted Parkway with Design Option	49	3
South Federal Way Segment		
SF Enchanted Parkway ¹	80	31
SF I-5	68	27
SF 99-West	87	45
SF 99-West with Porter Way Design Option	94	50
SF 99-East	91	49
SF 99-East with Porter Way Design Option	107	41
Fife Segment		
Fife Pacific Highway	62	65
Fife Pacific Highway with 54th Avenue Design Option	55	59
Fife Pacific Highway with 54th Span Design Option	55	59
Fife Median	62	65
Fife Median with 54th Avenue Design Option	55	59
Fife Median with 54th Span Design Option	55	59
Fife I-5	64	39
Fife I-5 with 54th Avenue Design Option	63	37
Fife I-5 with 54th Span Design Option	63	36
Tacoma Segment		
Preferred Tacoma 25th Street-West	45	25
Tacoma 25th Street-East	45	23
Tacoma Close to Sounder	31	18
Tacoma 26th Street	33	27

(1) The construction footprint and affected parcels are the same with the SF 352nd Span Station Option.

2.2 Estimated WSDOT and Local Jurisdiction Right-of-Way Needs

Table H1-8 summarizes the estimated amount of Washington State Department of Transportation (WSDOT) and other rights-of-way the project would require.

Table H1-8 Estimated WSDOT and Local Jurisdiction Right-of-Way Needs¹

Alternative	Estimated WSDOT Right-of-Way Occupied (Acres)	Estimated Other Right-of-Way Occupied ² (Acres)
Federal Way Segment		
Preferred FW Enchanted Parkway	5	1
Preferred FW Enchanted Parkway with Design Option	5	1
South Federal Way Segment		
SF Enchanted Parkway ³	14	3
SF I-5	18	4
SF 99-West	1	8
SF 99-West with Porter Way Design Option	1	7
SF 99-East	1	9
SF 99-East with Porter Way Design Option	1	8
Fife Segment		
Fife Pacific Highway	6	9
Fife Pacific Highway with 54th Avenue Design Option	6	9
Fife Pacific Highway with 54th Span Design Option	6	10
Fife Median	6	9
Fife Median with 54th Avenue Design Option	6	9
Fife Median with 54th Span Design Option	6	10
Fife I-5	7	1
Fife I-5 with 54th Avenue Design Option	7	1
Fife I-5 with 54th Span Design Option	7	2
Tacoma Segment		
Preferred Tacoma 25th Street-West	10	12
Tacoma 25th Street-East	10	10
Tacoma Close to Sounder	10	7
Tacoma 26th Street	10	10

Note:

- (1) Right-of-way estimates include only existing state, county, and local rights-of-way and not Tribal properties.
- (2) Estimated Other Right-of-Way Occupied includes city rights-of-way that are currently used for roads or vacant, which would be fully or partially converted for light rail use.
- (3) Right-of-way needs are the same with the SF 352nd Span Station Option.

2.3 Relocation Opportunities

To determine the relocation opportunities in the project vicinity, Sound Transit researched market conditions for available residential and commercial real estate in the project area. As shown in Tables H1-9, H1-10, and H1-11, the research considered real estate markets within the cities of Federal Way, Milton, Fife, and Tacoma. These cities offer the most likely relocation opportunities in the study area. Although property uses may change before construction of TDLE, research indicates that there would be opportunities for businesses, residents, and others displaced to be successfully relocated within the same general area. Some properties with unique characteristics, such as churches, industrial uses, homeless shelters, or hotels, could be more challenging to relocate and may require construction of new facilities.

Table H1-9 Property Available for Relocation in the Study Area¹

Type of Property	Buildings/Units	Total Square Feet	Vacancy Rate	Listings (2020)
Apartments	50,907	42,010,255	4.5%	6
Office	1,239	17,117,906	9.2%	27
Industrial	1,239	41,269,173	5.1%	22
Retail	2,530	26,201,462	2.5%	56
Hotel	72	0	0	2

Sources: CoStar 2020

Notes:

- (1) The study area or market is defined by the cities of Federal Way, Milton, Fife, and Tacoma, and includes a small area of unincorporated Pierce County. Tribal parcels are not considered available for relocation opportunities.

Table H1-10 Multi-Family Residential Property Available for Relocation in the Study Area

Type of Property	Total Residential Units	Vacancy Rate	Average Rent per Unit
Federal Way/Des Moines	15,3018	4.7%	\$1,825
North Tacoma ¹	19,638	5.8%	\$1,762

Source: CBRE 2023

Note:

- (1) Subarea includes Tacoma, Fife, Milton, and the portions of unincorporated Pierce County within the study area.

Table H1-11 Single-Family Residential Property Available for Relocation in the Study Area

Type of Property	Residential Units for Sale	Median Sale Price
Federal Way	132	\$608,000
Milton	19	\$540,000
Fife	12	\$453,000
Tacoma	533	\$470,000

Source: Redfin 2023

Sound Transit would help relocate businesses or residences displaced as part of the project. Relocation services provided by Sound Transit include compensation as well support services that consider the unique needs of those being displaced. These services are intended to reduce the inconveniences and hardships associated with being displaced. Sound Transit's relocation policies are summarized in Section 4.1 of the Draft EIS.

2.3.1 Retail

There is enough retail space for sale and for lease to relocate retailers displaced as part of the project. To be successful, retailers often have specific siting requirements, and Sound Transit would perform a case-by-case assessment of the available retail inventory to identify locations that meet the retailers' specific needs. Examples of retailers that may require special consideration are the Pick-Quick in Fife and businesses within Freighthouse Square. Outreach to retailers with unique needs, such as the vendors in Freighthouse Square who share a food court, is ongoing.

2.3.2 Industrial

Adequate industrial space is available in the market to relocate industrial building owners and tenants displaced as part of the project. Industrial users requiring specific lot sizes and utilities may be more difficult to relocate. For industrial users with specific needs, like large lots for storage or truck movement, such as Joe Hall Construction in Fife or Corliss Resources in Federal Way, Sound Transit may need to look outside the market area for a suitable site.

2.3.3 Hotels

Displaced hotel owners would have to locate properties that are for sale or locate suitable sites and develop new hotels. Existing hotels in the study area are limited to Pacific Highway in Fife and E 26th Avenue in Tacoma. All alternatives in the Fife Segment would displace the King's Motor Inn along Pacific Highway. Although hotels do come up for sale, the unique location and layout demands of the displaced hotel may make finding an existing comparable hotel property difficult. New development sites may provide the best opportunity for replacement.

2.3.4 Single-Family Residential

There is a sufficient supply of comparable single-family homes available to accommodate the residents displaced by the project. While comparable homes are available in the general area, displaced residents may have to choose a location in a different neighborhood. Mobile home residents will likely experience difficulty relocating within the same neighborhood if they are seeking to relocate to or move mobile homes to other mobile home parks. Because mobile home parks are often full and not a plentiful source of housing, these types of relocations provide challenges for affected residents as well as the agency. As with all residential displacements, Sound Transit would work to find a comparable replacement property and ensure that properties are affordable for displaced parties.

2.3.5 Multi-Family Residential

Multi-family displacements include the market rate CrossPointe Apartments in South Federal Way. An adequate supply of market rate alternate housing exists, but low-income housing opportunities are limited. Depending on market conditions at the time of displacement, the replacement properties may cost more. Sound Transit would work with residents to identify suitable replacement dwellings as described in Section 4.1 of the Draft EIS.

3 REFERENCES

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Tacoma Dome Link Extension

Draft Environmental Impact Statement

LAND USE

Appendix H2

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Appendix H2 Land Use

Appendix H2 contains supporting information for Section 4.2 of the Tacoma Dome Link Extension (TDLE) Draft Environmental Impact Statement (EIS).

1 LAND USE PLANS, GOALS, AND POLICIES

Sound Transit reviewed regional, state, and local plans to identify goals and policies applicable to TDLE. The following sections summarize applicable plans and discuss the project's consistency with them. Tables H2-1 through H2-7 at the end of this section provides a select list of goals and policies from the relevant plans and discusses TDLE's consistency with each of them. While the tables address a number of specific goals and policies, many policies are not listed because they are not applicable or relevant to TDLE (e.g., the policy addresses an area outside the TDLE study area). TDLE would also be required to comply with all permits and approvals from applicable federal, state, and local agencies prior to construction. TDLE is generally consistent with plans and policies in the study area.

1.1 State Regulations and Regional Plans

There are numerous regional and state regulations and planning documents that establish the framework for local land use and transportation plans and programs in the TDLE project area. The Washington State Growth Management Act is the major regulation governing growth management and comprehensive planning in Washington. The primary documents guiding regional planning include *VISION 2050* (PSRC 2020), *The Regional Transportation Plan* (PSRC 2022), Sound Transit's *Regional Transit Long-Range Plan* (Sound Transit, 2014a), the *King County Comprehensive Plan* (King County, 2022), and the *Pierce County Comprehensive Plan* (Pierce County, 2023). Sound Transit has also developed a *Transit-Oriented Development (TOD) Program Strategic Plan Update* (Sound Transit, 2014b). The following subsections provide an overview of each.

Washington State Growth Management Act

Plan Summary

The Washington State Growth Management Act (GMA), adopted in 1990 to mandate comprehensive planning, provides a complete framework for managing growth and coordinating land use development with the construction of transportation facilities and other infrastructure. Local, county, and regional plans in Washington are required to be consistent with the policies of the GMA. The GMA includes 13 planning goals for managing urban growth, protecting agricultural lands, reducing sprawl, and encouraging multimodal transportation systems. The overall goals of the GMA encourage development in urban areas where adequate public facilities and services exist or can be provided efficiently, and they encourage efficient multimodal transportation systems that are based on regional priorities and are coordinated with county and city comprehensive plans.

Comprehensive plans require elements that address land use, housing, capital facilities, utilities, rural development (counties only), and transportation, among others. In addition, the transportation element is required to be consistent with the land use element. Coordination of

land use and transportation is a key component of the GMA. The GMA also mandates cities and counties to establish a process in their comprehensive plans to make the provision for siting essential public facilities, including state or regional transportation and transit facilities.

Project Consistency

TDLE alternatives, including potential stations, would be located within the Cities of Federal Way, Milton, and Tacoma, all of which have adopted comprehensive plans and regulations. The TDLE alternatives are generally consistent with the provisions in the GMA in that it would connect urban centers, reduce sprawl outside urban growth boundaries, and provide transportation system and mobility improvements that support future employment and population growth.

Washington State Shoreline Management Act

The Washington State Shoreline Management Act (SMA) addresses three basic policy areas applicable to development of the state's shorelines: Shoreline use, environmental protection, and public access. The SMA requires all counties and most towns and cities with shorelines to develop and implement local land use policies and regulations to guide the use of shorelines, called Shoreline Master Programs, that are consistent with the SMA. Shoreline Master Programs for local jurisdictions are further discussed below in Section 3.3.

Puget Sound Regional Council VISION 2050

Plan Summary

VISION 2050, adopted by Puget Sound Regional Council (PSRC) in October 2020, serves as the most recent update of the Puget Sound Region's integrated long-range growth management strategy for the four-county metropolitan planning area: King, Kitsap, Pierce, and Snohomish Counties. VISION 2050 focuses on sustainability and encourages the wise use of existing resources and transit investments to strengthen economic, social, and environmental resiliency while addressing climate change and housing needs. Policies and actions in the plan are intended to increase housing choices and affordability, provide equitable opportunities, sustain a strong economy, significantly reduce greenhouse gas emissions, keep the region moving, restore the health of Puget Sound, protect open space networks, focus growth within regional centers and high-capacity transit station areas, and coordinate with and support local planning efforts.

The plan lists a series of multicounty planning policies that are further developed and supported within individual county and city comprehensive plans. VISION 2050 strategies and policies are located within nine elements: regional collaboration, regional growth strategy, environment, climate change, development patterns, housing, economy, transportation, and public services.

Project Consistency

VISION 2050 contains many goals and policies applicable to TDLE. Table H2-1 provides information on the goals and policies of VISION 2050 and how TDLE would be consistent with them.

Puget Sound Regional Council Regional Transportation Plan

Plan Summary

The PSRC Regional Transportation Plan was adopted by PSRC in May 2022. The Regional Transportation Plan is the long-range plan for transportation in the central Puget Sound Region through 2050 and is the transportation element of VISION 2050. The transportation-related plans of the cities, counties, transit agencies, and region form the basis for the plan, which identifies what improvements to highway, transit, rail, ferry, bicycle, and pedestrian systems are needed in order to meet anticipated growth in the central Puget Sound Region.

The Regional Transportation Plan includes an updated regional transit network based on the efforts of the region's transit agencies to integrate more frequent and direct connections to the high-capacity transit network, including investments approved as part of Sound Transit 3 in November 2016.

Project Consistency

TDLE is identified in the Regional Transportation Plan and is a key component in the development of a regional high-capacity system linking urban centers. In addition, the TDLE would allow jurisdictions to better implement transit- and pedestrian-oriented land use patterns where current zoning allows such development to occur.

Sound Transit Regional Transit Long-Range Plan

Plan Summary

Sound Transit's Regional Transit Long-Range Plan represents the agency's goals, policies, and strategies to guide the long-term development of a high-capacity transit (HCT) system, particularly light rail, to connect the people of Pierce, King, and Snohomish Counties. Sound Transit's adopted 2005 Regional Transit Long-Range Plan was updated in 2014. As the regional transit authority under Chapters 81.104 and 81.112 RCW, Sound Transit is responsible for regional HCT system planning in the context of the PSRC Regional Transportation Plan. Beginning with Sound Transit's 1996 Regional Transit Long-Range Vision, the long-range plans have supported the adoption of several measures to implement HCT projects, including Sound Move in 1996, Sound Transit 2 (ST2) in 2008, and Sound Transit 3 in 2016.

Project Consistency

A potential extension of light rail between Federal Way and Tacoma was introduced in Sound Transit's 2005 Regional Transit Long-Range Plan and again in the Plan's 2014 update. Funding for TDLE was included in Sound Transit 3.

Sound Transit – Transit Oriented Development Policy and Program Strategic Plan

Plan Summary

Adopted in September 2011 and updated in April 2014, Sound Transit's *Transit Oriented Development (TOD) Program Strategic Plan Update* describes Sound Transit's vision, goals, and strategy for creating TOD on and around its stations, transit centers, and park-and-ride lots. The plan defines TOD as compact public and private development that supports transit use by emphasizing pedestrian and transit access, such as clustering development and mixing land

uses and activities at and around transit facilities. The purpose of this strategy is to assist the integration of land use and transit in an environmentally responsible and equitable way.

Specifically, the plan outlines an implementation strategy for Sound Transit's TOD program, recognizing that interagency, intra-agency, and public collaboration and support are critical factors for implementing the Sound Transit Board's policies concerning property disposition (Resolution No. R2013-30) and TOD (Resolution No. R2018-10). Of particular importance is the transformation of light rail transit station areas into livable transit communities. Sound Transit's 2012 TOD policy was updated by the Sound Transit Board in 2018 through the adoption of the Equitable Transit Oriented Development Policy, which establishes a framework for Sound Transit to assess and evaluate equitable TOD outcomes early in system planning throughout all phases of transit project delivery.

Project Consistency

TDLE would act as a catalyst in the local jurisdiction station areas that have planned for and allow increased densities. Any TOD on surplus land owned by Sound Transit in station areas would follow the implementation strategy for Sound Transit's TOD program as laid out in the Sound Transit TOD Program strategic plan and Sound Transit's TOD policies.

1.2 Local Land Use Plans

King County Countywide Planning Policies

The 2021 King County Countywide Planning Policies (CPPs) create a shared and consistent framework for growth management planning for all jurisdictions in King County, including the City of Federal Way. The CPPs implement VISION 2050 and reflect new priorities addressing equity and social justice. King County is currently in the process of updating its comprehensive plan, which is anticipated to be adopted by the end of 2024. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-2 discusses the goals and policies of the King County Comprehensive Plan and how TDLE would be consistent with them.

Pierce County Comprehensive Plan and Countywide Planning Policies

The Pierce County Comprehensive Plan was originally adopted in November 1994, with the most recent amendments passed in April 2023, effective July 2023 (Pierce County 2023), and applies to unincorporated Pierce County. The plan elements related to TDLE include Land Use, Environment, Housing, and Transportation. The plan also includes CPPs to guide growth and future land use decisions in Pierce County over a 20-year period. The CPPs provide a framework from which county and city comprehensive plans are developed and adopted, ensure consistency within the county, and apply to the county as a whole, including cities such as Fife and Tacoma as well as the Puyallup Tribe of Indians. Pierce County is currently in the process of updating its comprehensive plan, which is anticipated to be adopted by the end of 2024. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-3 discusses the goals and policies of the Pierce County Comprehensive Plan and how TDLE would be consistent with them.

City of Federal Way Comprehensive Plan

The City of Federal Way Comprehensive Plan was adopted in 1990, updated and amended periodically over the years, with the most recent major update in 2015 (City of Federal Way 2015). The elements in the comprehensive plan identify the goals and policies adopted by the City of Federal Way to shape the community and meet the challenges of growth. Elements identified in the plan and related to TDLE include Land Use, Transportation, Economic Development, Natural Environment, and City Center. The City of Federal Way is currently preparing a subarea plan for the South Station Subarea, anticipated to be adopted as part of the city's 2024 Periodic Update to the Comprehensive Plan. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-4 discusses the goals and policies of City of Federal Way Comprehensive Plan and how TDLE would be consistent with them.

City of Milton Comprehensive Plan

The City of Milton Comprehensive Plan was substantially updated in 2015, and most recently amended in 2018 (City of Milton 2018). The Plan provides a roadmap for future change and growth within the City along with a legal framework to guide future land use, transportation, utility, housing, capital facility, and other City policy decisions. Elements identified in the plan and related to TDLE include Land Use and Transportation. The City of Milton is currently in the process of updating its comprehensive plan, which is anticipated to be adopted by the end of 2024. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-5 discusses the goals and policies of the City of Milton's Comprehensive Plan and how TDLE would be consistent with them.

City of Fife Comprehensive Plan

The City of Fife first adopted its Comprehensive Plan in 1996, with a major update in 2005 and annual updates to various plan elements as needed, with the most recent amendment in 2012 (City of Fife 2012a). It provides the community's decision makers with goals, policies, and implementation methods to guide the future shape, character, and form of the City over the next 20 years. Elements identified in the plan and related to TDLE include Land Use, Transportation, Housing, and Economic Development. The City of Fife is currently in the process of updating its comprehensive plan, which is anticipated to be adopted by the end of 2024. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-6 discusses the goals and policies of the City of Fife's Comprehensive Plan and how TDLE would be consistent with them.

City of Fife City Center Planned Action

The City of Fife began a visioning process in 2012 to design a downtown area that is the center of commercial, civic, cultural, and recreational activities (City of Fife 2012b). The City of Fife wanted to take advantage of the opportunity created by a number of regional transportation improvements, including TDLE, to build upon, reinforce, and refine the TOD land use principles already adopted in the City's existing land use plan documents. The City is now in the process of creating a City Center Plan to serve as a blueprint for development in Fife over the next few decades, which involved the development of a City Center Planned Action EIS. The updated plans may include proposals to rezone areas to eliminate Industrial and Community Commercial categories in the city center and allow mixed-use. The plan would also provide new street standards consistent with complete streets for TOD, higher building allowances, and minimizing residential parking requirements.

Project Consistency

The City of Fife City Center Planned Action is predicated on the construction and operation of TDLE and would support multimodal connections and TOD near the station.

City of Tacoma One Tacoma Plan

One Tacoma is the City's Comprehensive Plan, which was substantially updated in 2015 and most recently amended in 2022 (City of Tacoma 2022). The Plan guides decisions on land use, transportation, housing, capital facilities, parks, and the environment. It also sets standards for roads and other infrastructure, identifies how they will be paid for, and establishes the basis for zoning and development regulations. The plan takes a long-range perspective on topics that address the physical, social, and economic health of the City. Elements identified in the plan related to TDLE include Urban Form, Environment + Watershed Health, Housing, the Transportation Master Plan, and the South Downtown Subarea Plan (discussed separately below). The City of Tacoma is currently in the process of updating its comprehensive plan, which is anticipated to be adopted by the end of 2024. Any updates following the publication of this Draft EIS will be addressed in the Final EIS.

Project Consistency

Table H2-7 discusses the goals and policies of the One Tacoma Plan and how TDLE would be consistent with them.

City of Tacoma South Downtown Subarea Plan (adopted 2013; amended 2014)

The City Council adopted the South Downtown Subarea Plan as an element of the Comprehensive Plan in 2013. It was later amended with a minor map change in 2014 (City of Tacoma 2014). The Plan draws from two previous studies – The Brewery District Development Concept Study (2010) and The Tacoma Dome District Development Strategy Update (2008) – to be an innovative, area-wide long-range plan for South Downtown Tacoma. The goal is to promote economic development and create equitable transit communities in the South Downtown area by leveraging the Subarea's substantial transit investments. TDLE is related to policies and actions that fall within policy Strategy 1: Develop in relationship to transit and Strategy 3: Enhance and connect the public realm.

Project Consistency

Table H2-7 discusses the policies and actions of the South Downtown Subarea Plan and how TDLE would be consistent with them.

Tacoma Tideflats Subarea Plan

The City of Tacoma, in collaboration with the Puyallup Tribe of Indians, Port of Tacoma, City of Fife, and Pierce County is developing the Tideflats Subarea Plan that will establish a long-term vision for the area generally located between the Thea Foss Waterway, the Hylebos Waterway, State Route 509, and Commencement Bay. A Draft EIS for the subarea plan was published in April 2024 (City of Tacoma 2024). One of the topics covered in the Tideflats Subarea Plan is transportation, which includes transit, freight movement, and employee commuting.

Project Consistency

The Portland Avenue Station would be located in the proposed Tideflats area that is designated as an industrial/commercial buffer zone between the core of the industrial center and the adjacent neighborhoods. The addition of TDLE would be consistent with the general concepts of the Tideflats Subarea Plan addressing transit, freight movement, and employees commuting in the area included in all action alternatives in the Draft EIS for the subarea plan.

City of Tacoma, Tacoma 2025

Tacoma 2025 was adopted in 2015 as the City of Tacoma’s 10-year strategic plan to direct efforts and resources in ways that reflect the City’s evolving needs (City of Tacoma 2015). The plan identifies several community priorities and accountability measures organized under seven areas to guide the City toward its long-term goals. These community priorities were synthesized by the Tacoma 2025 Advisory Committee into five key focus areas: Livability, Economy/Workforce, Education, Civic Engagement, Equity and Accessibility. Those focus areas that are related to TDLE include Livability and Equity and Accessibility.

Project Consistency

Table H2-7 discusses the focus areas and community priorities from Tacoma 2025 that relate to TDLE.

Table H2-1 TDLE Consistency with PSRC VISION 2050

Goals and Policies	Consistency of TDLE Discussion
Puget Sound Regional Council VISION 2050	
Regional Growth Strategy	
<p>Goal: The region accommodates growth in urban areas, focused in designated centers and near transit stations, to create healthy, equitable, vibrant communities well-served by infrastructure and services.</p> <p>Policies</p> <p>MPP-RGS-4: Accommodate the region's growth first and foremost in the urban growth area. Ensure that development in rural areas is consistent with the regional vision.</p> <p>MPP-RGS-6: Encourage efficient use of urban land by optimizing the development potential of existing urban lands and increasing density in the urban growth area in locations consistent with the Regional Growth Strategy.</p>	<p>TDLE would support growth within existing urban growth areas near high-capacity transit stations, where zoning is in place to accommodate this growth, including the designated Tacoma regional growth center. The Fife Station and South Federal Way stations would be located outside regional growth centers, but would provide high-capacity transit to centers throughout the region. Sound Transit's Equitable TOD policy supports the goal of concentrating growth near high-capacity transit by considering TOD outcomes throughout project development and delivery.</p>

Table H2-1 TDLE Consistency with PSRC VISION 2050 (continued)

Goals and Policies	Consistency of TDLE Discussion
Puget Sound Regional Council VISION 2050	
<p>MPP-RGS-8: Attract 65% of the region's residential and 75% of the region's employment growth to high-capacity transit station areas to realize the multiple public benefits of compact growth around high-capacity transit investments. As jurisdictions plan for growth targets, focus development near high-capacity transit to achieve the regional goal.</p> <p>MPP-RGS-9: Focus a significant share of population and employment growth in designated regional growth centers.</p> <p>MPP-RGS-12: Avoid increasing development capacity inconsistent with the Regional Growth Strategy in regional geographies not served by high-capacity transit.</p>	
Environment	
<p>Goal: The region cares for the natural environment by protecting and restoring natural systems, conserving habitat, improving water quality, and reducing air pollutants. The health of all residents and the economy is connected to the health of the environment. Planning at all levels considers the impacts of land use, development, and transportation on the ecosystem.</p> <p>Policies</p> <p>MPP-En-3: Maintain and, where possible, improve air and water quality, soils, and natural systems to ensure the health and well-being of people, animals, and plants. Reduce the impacts of transportation on air and water quality and climate change.</p> <p>MPP-En-5: Locate development in a manner that minimizes impacts to natural features. Promote the use of innovative environmentally sensitive development practices, including design, materials, construction, and on-going maintenance.</p> <p>MPP-En-7: Reduce and mitigate noise and light pollution caused by transportation, industries, public facilities, and other sources.</p> <p>MPP-En-8: Reduce impacts to vulnerable populations and areas that have been disproportionately affected by noise, air pollution, or other environmental impacts.</p> <p>MPP-En-13: Preserve and restore native vegetation and tree canopy, especially where it protects habitat and contributes to overall ecological function.</p> <p>MPP-En-14: Identify and protect wildlife corridors both inside and outside the urban growth area.</p> <p>MPP-En-15: Provide parks, trails, and open space within walking distance of urban residents. Prioritize historically underserved communities for open space improvements and investments.</p> <p>MPP-En-16: Preserve and enhance habitat to support healthy wildlife and accelerate the recovery of salmon, orca, and other threatened and endangered species.</p> <p>MPP-En-18: Reduce stormwater impacts from transportation and development through watershed planning, redevelopment and retrofit projects, and low-impact development.</p> <p>MPP-En-21: Continue efforts to reduce pollutants from transportation activities, including through the use of cleaner fuels and vehicles and increasing alternatives to driving alone, as well as design and land use.</p> <p>MPP-En-22: Meet all federal and state air quality standards and reduce emissions of air toxics and greenhouse gases.</p>	<p>TDLE would meet all applicable local, state, and federal regulations and standards. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p> <p>Sound Transit considered the minimization of impacts to natural features in locating the TDLE alternatives.</p> <p>TDLE would include stormwater detention and treatment to address impacts related to stormwater runoff. Sound Transit's Environmental Sustainability and Management System requires that low-impact operational stormwater management techniques be investigated and considered during the project design.</p> <p>TDLE would reduce pollutants from transportation by increasing alternatives to driving alone.</p> <p>Sound Transit's noise policy is to minimize noise levels at the source. Identified noise impacts based on federal or local criteria would be mitigated through measures such as noise walls and barriers, sound insulation, and other measures, as appropriate. In addition, Sound Transit has committed to a maintenance program that includes periodic rail grinding or replacement, wheel truing or replacement, vehicle maintenance, and operator training, which would minimize light rail noise levels.</p> <p>TDLE would not provide parks or trails. Some open space would be provided at stations, and bike and pedestrian facility improvements are planned as part of the project.</p>

Table H2-1 TDLE Consistency with PSRC VISION 2050 (continued)

Goals and Policies	Consistency of TDLE Discussion
Puget Sound Regional Council VISION 2050	
Climate Change	
<p>Goal: The region substantially reduces emissions of greenhouse gases that contribute to climate change and prepares for climate change impacts.</p> <p>Policies</p> <p>MPP-CC-1: Advance the adoption and implementation of actions that substantially reduce greenhouse gas emissions in support of state, regional, and local emissions reduction goals, including targets adopted by the Puget Sound Clean Air Agency.</p> <p>MPP-CC-2: Reduce building energy use through green building and retrofit of existing buildings.</p> <p>MPP-CC-3: Reduce greenhouse gases by expanding the use of conservation and alternative energy sources, electrifying the transportation system, and reducing vehicle miles traveled by increasing alternatives to driving alone.</p> <p>MPP-CC-12: Prioritize transportation investments that support achievement of regional greenhouse gas emissions reduction goals, such as by reducing vehicle miles traveled.</p>	<p>TDLE would reduce dependence on SOV trips, with an associated reduction in greenhouse gas emissions. Such a reduction would be in support of state, regional, and local emissions reduction goals, including targets adopted by the Puget Sound Clean Air Agency.</p>
Development Patterns	
<p>Goal: The region creates walkable, compact, and equitable transit-oriented communities that maintain unique local character, while creating and preserving open space and natural areas.</p> <p>Policies</p> <p>MPP-DP-1: Develop high-quality, compact urban communities throughout the region's urban growth area that impart a sense of place, preserve local character, provide for mixed uses and choices in housing types, and encourage walking, bicycling, and transit use.</p> <p>MPP-DP-3: Enhance existing neighborhoods to provide a high degree of connectivity in the street network to accommodate walking, bicycling, and transit use, and sufficient public spaces.</p> <p>MPP-DP-4: Support the transformation of key underutilized lands, such as surplus public lands or environmentally contaminated lands, to higher-density, mixed-use areas to complement the development of centers and the enhancement of existing neighborhoods.</p> <p>MPP-DP-12: Design transportation projects and other infrastructure to achieve community development objectives and improve communities.</p> <p>MPP-DP-14: Recognize and work with linear systems that cross jurisdictional boundaries – including natural systems, continuous land use patterns, and transportation and infrastructure systems – in community planning, development, and design.</p> <p>MPP-DP-15: Design communities to provide safe and welcoming environments for walking and bicycling.</p> <p>MPP-DP-17: Promote cooperation and coordination among transportation providers, local government, and developers to ensure that joint- and mixed-use developments are designed to promote and improve physical, mental, and social health and reduce the impacts of climate change on the natural and built environments.</p> <p>MPP-DP-22: Plan for densities that maximize benefits of transit investments in high-capacity transit station areas that are expected to attract significant new population or employment growth.</p> <p>MPP-DP-23: Evaluate planning in regional growth centers and high-capacity transit station areas for their potential physical, economic, and cultural displacement of marginalized residents and businesses. Use a range of strategies to mitigate displacement impacts.</p>	<p>TDLE would encourage transit use and support transit-oriented development across jurisdictional boundaries. TDLE would also support more dense transit-oriented development near new transit stations in Federal Way, Fife, and Tacoma where zoning is in place to accommodate this growth. Currently only zoning in Tacoma would support this type of growth, but ongoing planning in Federal Way and Fife anticipate changes consistent with TDLE.</p> <p>The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation.</p> <p>Bicycle parking would be provided at each station and road improvements, including sidewalks and bike lanes, would also improve multi-modal connectivity to existing neighborhoods.</p> <p>The implementation of high-capacity transit is consistent with the community development objectives of King County, Pierce County, Federal Way, Milton, Fife, and Tacoma, as discussed for each jurisdiction below. In recognition of the project as a linear transportation system that crosses jurisdictional boundaries, Sound Transit will continue to collaborate with these communities on the development of the project.</p> <p>Any displacement of residents and businesses, including marginalized communities, would be mitigated through a range of strategies, including just compensation and targeted outreach and communication.</p>

Table H2-1 TDLE Consistency with PSRC VISION 2050 (continued)

Goals and Policies	Consistency of TDLE Discussion
Puget Sound Regional Council VISION 2050	
MPP-DP-25: Support the development of centers within all jurisdictions, including high-capacity transit station areas and countywide and local centers.	
Economy	
<p>Goal: The region has a prospering and sustainable regional economy by supporting businesses and job creation, investing in all people, sustaining environmental quality, and creating great central places, diverse communities, and high quality of life.</p> <p>Policies</p> <p>MPP-EC-6: Ensure the efficient flow of people, goods, services, and information in and through the region with infrastructure investments, particularly in and connecting designated centers, to meet the needs of the regional economy.</p> <p>MPP-EC-21: Concentrate a significant amount of economic growth in designated centers and connect them to each other in order to strengthen the region's economy and communities and to promote economic opportunity.</p>	<p>TDLE would promote the efficient flow of people and goods through the region, concentrate economic growth in regional growth centers near transit stations in Federal Way and Tacoma, and connect those areas to strengthen the region's economy.</p> <p>TDLE would provide a fast, efficient, and reliable mode of transit with connections to designated centers in the project corridor and throughout the region to meet the needs of the regional economy. TDLE uses dedicated right-of-way to ensure reliability and maximize speeds, when possible.</p>
Transportation	
<p>Goal: The region has a sustainable, equitable, affordable, safe, and efficient multimodal transportation system, with specific emphasis on an integrated regional transit network that supports the Regional Growth Strategy and promotes vitality of the economy, environment, and health.</p> <p>Policies</p> <p>MPP-T-1: Maintain and operate transportation systems to provide safe, efficient, and reliable movement of people, goods, and services.</p> <p>MPP-T-5: Develop a transportation system that minimizes negative impacts to, and promotes, human health.</p> <p>MPP-T-7: Fund, complete, and operate the highly efficient, multimodal system in the Regional Transportation Plan to support the Regional Growth Strategy. Coordinate WSDOT, regional, and local transportation agencies, in collaboration with the state legislature, to build the multimodal system.</p> <p>MPP-T-8: Strategically expand capacity and increase efficiency of the transportation system to move goods, services, and people consistent with the Regional Growth Strategy. Focus on investments that produce the greatest net benefits to people and minimize the environmental impacts of transportation.</p> <p>MPP-T-9: Implement transportation programs and projects that provide access to opportunities while preventing or mitigating negative impacts to people of color, people with low incomes, and people with special transportation needs.</p> <p>MPP-T-10: Ensure mobility choices for people with special transportation needs, including persons with disabilities, seniors, youth, and people with low incomes.</p> <p>MPP-T-11: Design, construct, and operate a safe and convenient transportation system for all users while accommodating the movement of freight and goods, using best practices and context sensitive design strategies.</p> <p>MPP-T-12: Emphasize transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within centers and along corridors connecting centers.</p> <p>MPP-T-13: Increase the proportion of trips made by transportation modes that are alternatives to driving alone, especially to and within centers and along corridors connecting centers, by ensuring availability of reliable and competitive transit options.</p>	<p>TDLE would build on and expand the utility of the existing regional light rail system that provides safe, efficient, and reliable movement of people and reduced demand for SOV trips. TDLE would provide reliable access to transportation for a wide range of communities, including people with disabilities, seniors, youth, and people with low incomes. TDLE would be located extensively within or adjacent to existing right-of-way.</p> <p>TDLE would include integration with existing and future pedestrian, bicycle, transit, and other transportation modes in the study area. Signage and wayfinding designs would be developed in cooperation with affected jurisdictions.</p> <p>Each station would include an area for riders to transfer to or from buses either on nearby streets or dedicated bus facilities within the station area. All stations would have areas for rider pick-up and drop-off as well as bicycle parking. Sound Transit would make road improvements (such as sidewalks, bike lanes, or widening to accommodate projected traffic levels) at stations.</p> <p>TDLE is a transportation investment that would encourage alternatives to SOV trips and increases travel options to and within designated centers and along corridors connecting centers.</p> <p>TDLE is intended to operate safely and conveniently for all users while accommodating the movement of freight and goods, particularly to and from the designated Manufacturing/Industrial Center in Tacoma, which includes the Port of Tacoma.</p> <p>Each TDLE station, except Portland Avenue, would include added parking, which would make it easy for people to move from one mode to another. Bike and pedestrian facilities would also be included near each station to improve local street patterns for walking, bicycling, and transit use to enhance communities, connectivity, and physical activity. Also, each station would include nearby bus facilities, allowing for easy mode splitting.</p>

Table H2-1 TDLE Consistency with PSRC VISION 2050 (continued)

Goals and Policies	Consistency of TDLE Discussion
Puget Sound Regional Council VISION 2050	
<p>MPP-T-14: Integrate transportation systems to make it easy for people and freight to move from one mode or technology to another.</p> <p>MPP-T-15: Prioritize investments in transportation facilities and services in the urban growth area that support compact, pedestrian- and transit-oriented densities and development.</p> <p>MPP-T-16: Improve local street patterns – including their design and how they are used – for walking, bicycling, and transit use to enhance communities, connectivity, and physical activity.</p> <p>MPP-T-17: Promote and incorporate bicycle and pedestrian travel as important modes of transportation by providing facilities and reliable connections.</p> <p>MPP-T-18: Promote coordination among transportation providers and local governments to ensure that joint- and mixed-use developments are designed in a way that improves overall mobility and accessibility to and within such development.</p> <p>MPP-T-19: Design transportation programs and projects to support regional growth centers and high-capacity transit station areas.</p> <p>MPP-T-23: Make transportation investments that improve economic and living conditions so that industries and skilled workers continue to be retained and attracted to the region.</p> <p>MPP-T-33: Prepare for changes in transportation technologies and mobility patterns, to support communities with a sustainable and efficient transportation system.</p>	<p>TDLE is consistent with existing mobility patterns and supports communities with a sustainable and efficient transportation system.</p>

PSRC = Puget Sound Regional Commission; SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension;
TOD = transit oriented development

Table H2-2 TDLE Consistency with King County Planning Goals and Policies

Goals and Policies	Discussion
King County Comprehensive Plan	
Regional Growth Management Planning	
<p>RP-109 King County should establish and/or participate in regional and subregional partnerships to advance the objectives of the Comprehensive Plan, such as:</p> <ul style="list-style-type: none"> a. The King County Cities Climate Collaboration (the "K4C") to confront climate change, b. The Puget Sound Regional Council's Regional Transit Oriented Development Program to advance transit-oriented development around transit stations and hubs, c. The Eastside Rail Corridor Regional Advisory Council, or successor groups, to support a vision that includes dual use (recreation trail and public transportation) and multiple objectives, consistent with its federal railbanked status, and d. The Regional Code Collaboration to collaborate on development of and updates to green building codes. <p>RP-204 King County shall continue to promote an efficient multimodal transportation system that provides residents with a range of transportation choices that respond to community needs and reduce impacts on the natural environment.</p>	<p>TDLE is a regional project that would expand and promote an existing multimodal transportation system that increases transportation choices for residents and would decrease reliance on SOVs. TDLE would be generally consistent with the GMA and Comprehensive Plan.</p>

**Table H2-2 TDLE Consistency with King County Planning Goals and Policies
(continued)**

Goals and Policies	Discussion
King County Comprehensive Plan	
Urban Communities	
Environment	
<p>E-201 King County should participate in and support appropriate local, regional and national efforts and organizations focused on reducing greenhouse gas emissions and preparing for climate change impacts.</p> <p>E-214 King County, through its Comprehensive Plan policies and development regulations, should promote healthy community designs that enable walking, bicycling, and public transit use, thereby reducing greenhouse gas emissions and regional air pollution.</p> <p>E-225 Through land use and transportation actions, King County should work to reduce air quality and climate change related health inequities and the exposure of vulnerable populations to poor air quality and extreme weather events.</p> <p>E-462 Development shall occur in a manner that supports continued ecological and hydrologic functioning of water resources and should not have a significant adverse impact on water quality or water quantity, or sediment transport, and should maintain base flows, natural water level fluctuations, unpolluted groundwater recharge in Critical Aquifer Recharge Areas and fish and wildlife habitat.</p> <p>E-474 Development adjacent to wetlands shall be sited such that wetland functions and values are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented.</p> <p>E-483 Wetland impacts should be avoided if possible, and minimized in all cases. Where impacts cannot be avoided, they should be mitigated on site if the proposed mitigation is feasible, ecologically appropriate, and likely to continue providing equivalent or better biological functions in perpetuity. Where on-site mitigation is not possible or appropriate, King County may approve off-site mitigation.</p> <p>E-484 Mitigation projects should contribute to an existing wetland system or restore an area that was historically a wetland. Mitigation should only create new wetlands after site monitoring indicates that hydrologic conditions exist to support a new wetland. Mitigation sites should be strategically located to reduce habitat fragmentation or to restore and enhance area-specific functions within a watershed.</p> <p>E-485 Land used for wetland mitigation should be preserved in perpetuity. Monitoring and maintenance in conformance with King County standards should be provided or paid for by the project proponent until the success of the site is established. Long-term stewardship should occur at mitigation sites to ensure sites continue to provide desired functions and values.</p>	<p>TDLE is a regional transportation project that will enable public transit use and reduce greenhouse gas emissions by providing a more efficient alternative to SOV trips. TDLE would improve air quality and conserve energy.</p> <p>TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts on ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p>

Table H2-2 TDLE Consistency with King County Planning Goals and Policies (continued)

Goals and Policies	Discussion
King County Comprehensive Plan	
Transportation	
<p>T-201 Multimodal transportation options such as public transportation, bicycling and walking, are most effective in densely developed urban areas. As resources allow, King County's transportation investments in urban areas should emphasize public transportation and road services and facilities that support multiple modes and facilitate connections between them.</p> <p>T-204 King County should support local and regional growth plans and policies by focusing transit services on centers and other areas of concentrated activity.</p> <p>T-205 King County should support, encourage, and implement high-capacity transit facilities and services that are consistent with, and supportive of, the Comprehensive Plan, Metro's Strategic Plan for Public Transportation, Metro's Long Range Plan for Public Transportation and the King County Ferry District 2014 Strategic Plan, or successor plans.</p> <p>T-320 Transportation improvements should be designed, built, and operated to minimize air, water and noise pollution, greenhouse gas emissions, and the disruption of natural surface water drainage in compliance with provisions and requirements of applicable federal, state and local environmental regulations. Natural and historic resource protection should also be considered. Particular care should be taken to minimize impacts where the location of such facilities could increase the pressure for development in critical areas or Rural Areas and Natural Resource Lands.</p> <p>T-502 King County should promote a multi-jurisdictional, multimodal regional corridor approach to reducing congestion and improving efficiency on highways and arterial roads.</p>	<p>TDLE would provide a fast, efficient, and reliable transportation system that would serve as an alternative to the SOVs through multiple jurisdictions, connect urban centers, and provide linkages to other travel modes, including rail, bus, and walking.</p> <p>TDLE would support growth around the stations where zoning is in place to accommodate this growth. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation.</p> <p>Sound Transit has considered historic resources in the development of the TDLE alternatives and will continue to do so throughout project development. Potential mitigation measures will be considered, as appropriate for any impacts on historic and culturally significant resources that could not be avoided.</p> <p>TDLE would operate electrically-powered vehicles that would minimize emissions. Sound Transit would minimize noise pollution through periodic rail grinding or replacement, wheel truing or replacement, vehicle maintenance, and operator training, which would minimize light rail noise levels.</p> <p>TDLE would not increase development pressure in critical areas, Rural Areas, or Natural Resource Lands.</p>
Economic Development	
<p>ED-102 The focus for significant economic growth will remain within the Urban Growth Area, while within the Rural Area and Natural Resource Lands, the focus will be on sustaining and enhancing prosperous and successful rural businesses as well as encouraging new businesses that support and are compatible with the rural economic clusters.</p> <p>ED-401 King County recognizes that adequate infrastructure is essential to support existing economic activity and to attract new industry and development. The county therefore supports and partners on programs and strategies to maintain existing infrastructure and construct new facilities (transportation, utilities, schools, information, communications, including an adequate supply of housing) necessary to accommodate current and future economic demand, in locations and at a size and scale that is consistent with other policies in the Comprehensive Plan.</p>	<p>TDLE would support increased density in urban growth areas in Tacoma and Federal Way where zoning is in place to accommodate this growth and would reduce demand in rural areas, allowing them to be preserved for their preferred values. TDLE is generally consistent with and supportive of comprehensive plans for the cities in which the project would be located.</p>

GMA = Growth Management Act; SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension; TOD = transit oriented development

Table H2-3 TDLE Consistency with Pierce County Planning Goals and Policies

Goals and Policies	Discussion
Pierce County Comprehensive Plan	
Land Use Element	
GOAL LU-14 The County shall design transportation projects and other infrastructure to achieve community development objectives of connectivity, walkability, bikeability, and transit support.	TDLE would include integration with existing and future pedestrian, bicycle, and other transportation modes in the study area. It would also provide connections to other local and regional modes of transportation.
GOAL LU-18 The County will coordinate with local transit providers to support high interval transit service that provides access to services within the entire Center/Central Place or Transit-Oriented Corridor and access to transit facilities that access regional centers of activity.	TDLE would provide frequent, high-capacity transit and would improve access to other centers of activity throughout the region.
GOAL LU-97 Private property shall not be taken for public use without just compensation having been made.	TDLE would be located within or adjacent to existing transportation corridors where possible, but TDLE would require the acquisition of some private property. Sound Transit would comply with local, state, and federal regulations when acquiring property.
Environment Element	
ENV-3.5 Recognize the relationship between reducing vehicle trips and reducing carbon emissions.	TDLE would support the concentration of high-density uses near transit stations, where zoning allows, and reduce reliance on SOVs, which would have a positive impact on air quality and reduce carbon emissions.
Transportation Element	
GOAL T-1 Collaborate in the development of a countywide multimodal transportation system that considers the mobility needs of all residents, emphasizes safety, minimizes impacts to the natural and built environments, and facilitates goods movement.	TDLE would provide frequent, high-capacity public transportation and connections to other countywide modes of transportation, including to and within the Urban Growth Area and throughout the county.
GOAL T-6 Place particular emphasis on the development of an interconnected, multimodal transportation system within designated centers and along corridors connecting centers.	TDLE would build upon an existing regional transportation system as well as provide connections to multimodal systems within designated centers and along a transportation corridor that connects centers.
GOAL T-16 Encourage and cooperate with transit agencies to provide services that meet the needs of residents. T-16.1 Coordinate with transit agencies to increase the number of routes and frequency, as funding becomes available, especially to underserved areas and designated centers within the unincorporated area. T-16.5 Encourage transit agencies to add bicycle lockers and other amenities to accommodate multimodal connections.	TDLE would provide a new public transportation option to residents throughout the Puget Sound region. Sound Transit will coordinate with Pierce County regarding the location of transit centers, park-and-ride lots, stations, and bus stops, as well as bike, pedestrian, and bus connections. Sound Transit plans to include bike lockers and other amenities at each TDLE station location.
GOAL T-18 Encourage transit oriented development and prioritize facilities that help connect people to transit, such as sidewalks, trails, crosswalks, and bicycle parking.	TDLE would support growth around the stations where zoning is in place to accommodate this growth. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation. TDLE stations and facilities would be designed to standards that minimize the potential for conflicts among buses, nonmotorized users, and vehicles.

Table H2-3 TDLE Consistency with Pierce County Planning Goals and Policies (continued)

Goals and Policies	Discussion
Pierce County Comprehensive Plan	
<p>GOAL T-29 Impacts on health and the natural and built environments shall be important considerations when designing and implementing facilities.</p> <p>T-29.2 Locate and construct improvements to discourage adverse impacts on water quality and other environmental resources.</p> <p>T-29.3 Design facilities to fit within the context of the built or natural environment in which they are located</p> <p>T-29.8 Solicit and incorporate the concerns and comments of interested parties regarding environmental issues into the planning, design, construction, operation, and maintenance of the system.</p>	<p>TDLE stations and facilities would be designed to standards that minimize the potential for conflicts among buses, nonmotorized users, and vehicles.</p>

SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension

Table H2-4 TDLE Consistency with Federal Way Planning Goals and Policies

Goals and Policies	Discussion
City of Federal Way Comprehensive Plan	
Land Use	
LUP 16 Encourage the development of transportation routes and facilities to serve single-family neighborhoods. Special attention should be given to pedestrian circulation.	Neither TDLE station in the City of Federal Way would be located in an area to serve single-family neighborhoods.
LUP 21 Support multi-family development with transportation and capital facilities improvements.	TDLE would support multi-family development with transportation improvements through TOD near stations.
Transportation	
<p>Goal TG1 Maintain mobility through a safe, balanced, and integrated transportation system.</p> <p>Policies</p> <p>TP1.1 Reduce reliance on drive alone trips by prioritizing and implementing supportive local-level transit, high occupancy vehicle (HOV), and nonmotorized improvements.</p> <p>TP1.10 Coordinate with transit agencies to provide convenient nonmotorized access to transit facilities.</p>	<p>TDLE would build on an existing high-capacity regional transportation system. TDLE would include integration with existing and future pedestrian, bicycle, and other transportation modes in the study area. TDLE stations would include amenities and considerations for patron needs, including weather protection, pedestrian comfort, and safety designs. Signage and wayfinding designs would be developed in cooperation with affected jurisdictions.</p>
<p>Goal TG3 Enhance community health, livability, and transportation by providing a connected system of pedestrian, bicycle, and transit ways that are integrated into a coordinated regional network.</p> <p>Policies</p> <p>TP3.1 Through subarea planning, with the cooperation of transit service providers, work to make transit part of each neighborhood through appropriate design, service types, and public involvement. This system should provide convenient connections from city neighborhood activity centers to the regional transportation system.</p> <p>TP3.2 Prepare, promote, and provide for an enhanced, high-capacity, regional transit system, maintaining area residents' mobility and travel options. The regional transit system should assist in attaining air quality standards.</p> <p>TP3.5 Work with transit agencies to ensure amenities such as shelters, benches, bicycle racks, lighting, and information kiosks are incorporated in the design and improvement of appropriate transit facilities.</p> <p>TP3.7 Promote extension of fixed guideway facilities to the regional airport as an effective means of resolving congestion problems that affect City residents and businesses.</p> <p>TP3.17 Coordinate development of the nonmotorized system with surrounding jurisdictions and regional system extensions.</p>	<p>TDLE would be part of a coordinated regional transportation network that would be integrated with existing light rail and bus networks. It would expand public transportation options to Seattle-Tacoma International Airport, which would help ease travel-related congestion.</p> <p>TDLE would include integration with existing and future pedestrian, bicycle, and other transportation modes in the study area. TDLE stations would include amenities and considerations for patron needs, comfort, and safety, including shelters and weather protection, bicycle racks, lighting, and travel information. Signage and wayfinding designs would be developed in cooperation with affected jurisdictions.</p>

Table H2-4 TDLE Consistency with Federal Way Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Federal Way Comprehensive Plan	
TP3.18 Incorporate environmental factors into transportation decision-making, including attention to human health and safety.	
<p>Goal TG5 Develop and implement transportation systems management strategies and programs that contribute to the overall effectiveness of the multimodal transportation system.</p> <p>Policies TP5.1 Reduce auto dependency, especially drive-alone trips, by employing and promoting the application of programs enhance mobility and assist in achievement of the land use vision.</p> <p>TP5.8 Encourage the provision of a robust transportation alternative rich environment so that all members of the community, including those with transportation disadvantages, have viable travel options or alternatives.</p>	TDLE would promote transit use to and from Federal Way by providing frequent, accessible, and reliable high-capacity transportation to all members of the community, including those with transportation disadvantages. TDLE would reduce auto dependency, including SOV trips.
<p>Goal TG6 Be an active partner by coordinating with a broad range of groups to help meet Federal Way's transportation goals.</p> <p>Policies TP6.1 Implement federal, state, and countywide planning policies.</p> <p>TP6.2 Coordinate transportation improvement programs with appropriate state, regional, and local agencies.</p> <p>TP6.4 The City will continue to cooperate with regional and local transit providers to develop facilities that make transit a more attractive option.</p> <p>TP6.7 Support regional transportation projects that are appropriately designed and will preserve the movement of people and goods on I-5 and state routes.</p> <p>TP6.9 Coordinate with local business organizations, and provide feedback to local business organizations on international and regional transportation issues and on transport needs and opportunities related to all modes of transportation.</p>	<p>TDLE would promote transit use to and from Federal Way by providing frequent, reliable, high-capacity transportation to destinations throughout the region, consistent with federal, state, and countywide planning policies. TDLE would decrease reliance on SOV trips, contributing to the preservation of movement of people and goods on I-5 and other state routes.</p> <p>Sound Transit would coordinate with Federal Way to develop facilities that make transit a more attractive option, including convenient bus to light rail connections.</p>
Economic Development	
<p>Goal EDG2 Help attract, expand, and retain businesses, jobs, and investments that provide employment and enhance income opportunities for Federal Way residents.</p> <p>Policies EDP8 Promote the redevelopment of existing underdeveloped areas as a means to sustain the economy and provide jobs.</p>	TDLE would provide a major regional transportation improvement that would enhance mobility and access within the City, which would support goals to retain business and jobs. TDLE also supports opportunities for redevelopment of underdeveloped areas, but the extent would vary, based on the South Federal Way station site ultimately implemented, as well as underlying City zoning that may ultimately be in place.
Natural Environment	
<p>Goal NEG1 To preserve the City's natural systems in order to protect public health, safety, and welfare, and to maintain the integrity of the natural environment.</p> <p>Policies NEP4 The City will continue to work with internal departments, state and regional agencies, neighboring jurisdictions, and tribes to protect environmentally critical areas and the City's natural environment.</p>	TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.
<p>Goal NEG5 Protect, restore, and enhance the City's lakes and streams.</p> <p>Policies NEP39 Public facilities and utilities may cross lakes or streams where no other feasible alternative exists. Impacts to the resources should be the minimum necessary to complete the project and compensatory mitigation should be required for unavoidable impacts.</p>	TDLE would cross several streams and rivers, including Hylebos Creek and the Puyallup River. TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.

Table H2-4 TDLE Consistency with Federal Way Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Federal Way Comprehensive Plan	
Goal NEG7 Protect and enhance the functions and values of the City's wetlands. Policies NEP46 Impacts to wetlands should be limited. All efforts should be made to use the following mitigation sequencing approach: avoid, minimize, rectify, reduce over time, compensate, and monitor.	TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.
Goal NEG10 Preserve, protect, and enhance fish and wildlife habitat. Policies NEP70 The City should manage aquatic and riparian (stream side) habitat in a way that minimizes its alteration in order to preserve and enhance its ability to sustain fish and wildlife. NEP71 The City should preserve and enhance native vegetation in riparian habitat wherever possible.	TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.
Goal NEG12 Promote land use patterns and transportation systems that minimize air pollution and greenhouse gas emissions. Policies NEP788 Encourage transportation demand management and alternatives to the single occupancy vehicle in order to reduce energy consumption, air, and water pollution. NEP90 Encourage compact growth in the City Center and other mixed-use zones that support mass transit, encourage nonmotorized modes of travel, and reduce trip lengths.	TDLE would reduce dependence on SOV trips, with an associated reduction in pollutants and greenhouse gas emissions from transportation activities. TDLE would support the utility of the light rail system south of the Federal Way City Center, where it connects to stations being built as part of the Federal Way Link Extension. It would support growth around new stations in Federal Way where mixed-use zoning is in place to accommodate this growth. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation.
City Center	
Goal CCG18 Plan for land use patterns and transportation systems that minimize air pollution and greenhouse gas emissions. Policies CCP39 Continue to build a multimodal transportation system, as described in Chapter 3, "Transportation," so that people who live and work in Federal Way have a variety of convenient low-or no-emission transportation options.	TDLE would reduce dependence on SOV trips, with an associated reduction in pollutants and greenhouse gas emissions from transportation activities, as well increasing multimodal transportation options for people who live and work in Federal Way.

SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension

Table H2-5 TDLE Consistency with City of Milton Planning Goals and Policies

Goals and Policies	Discussion
City of Milton Comprehensive Plan	
Land Use Element	
Goal EV 1 Safeguard the natural environment for current and future generations. Policies Pol. EV 1.4 Retain and protect wetlands, river and stream banks, ravines, and any other areas that provide essential habitat for sensitive and locally important plant or wildlife species.	TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.
Goal EV 2 Manage development to protect environmentally sensitive lands. Policies Pol. EV 2.1 All development activities should minimize disturbance of and adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas, and migratory routes.	TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.

Table H2-5 TDLE Consistency with City of Milton Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Milton Comprehensive Plan	
<p>Pol. EV 2.2 Limit the unnecessary disturbance of natural vegetation and wooded areas in new developments, in accordance with the critical areas ordinance.</p> <p>Pol. EV 2.5 Identify the impacts of new development on water quality and require any appropriate mitigating measures. Impacts on fish resources should be a priority concern in such reviews.</p>	
<p>Goal EV 3 Take proactive steps to address climate change.</p> <p>Policies</p> <p>Pol. EV 3.1 Consider a multi-pronged approach to climate change mitigation, including support for energy efficiency, vehicle trip reduction, and environmental protection.</p>	TDLE would reduce reliance on SOV trips throughout the Puget Sound region by providing additional frequent high-capacity public transit.
Transportation	
<p>Goal TR 2 Coordinate with regional transportation entities to ensure maximum connectivity between regional transportation systems and the City of Milton</p>	TDLE would pass through Milton, but no stations would be located there. Sound Transit would coordinate with the City of Milton and other transit agencies regarding connectivity to TDLE stations in Federal Way and Fife.
<p>Goal TR 3 Maintain an environmentally sustainable transportation system that preserves sensitive habitat, protects natural resources and meets air quality requirements.</p> <p>Policies</p> <p>Pol. TR 3.6 Transportation facilities and services should be sited, designed, and buffered (through extensive screening and/or landscaping) to fit in harmoniously with their surroundings. When sited within or adjacent to residential areas, special attention should be given to minimizing environmental, noise, light, and glare impacts.</p>	<p>TDLE would provide a sustainable transportation system that would be located adjacent to I-5 or Pacific Highway through Milton and would travel along the boundaries of residential neighborhoods to avoid bisecting the neighborhoods. TDLE's location adjacent to an existing highway would increase the new facility's compatibility with its surroundings, discussed further in Section 4.5, Visual and Aesthetic Resources.</p> <p>TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p> <p>Sound Transit's noise policy is to minimize noise levels at the source. In addition, Sound Transit has committed to a maintenance program that includes periodic rail grinding or replacement, wheel truing or replacement, vehicle maintenance, and operator training, which would minimize light rail noise levels.</p>
<p>Goal MM 1 The City shall strive to develop, maintain, and operate a balanced, flexible, safe, and efficient multi-modal transportation system to serve all persons, special needs populations and activities in the community.</p> <p>Policies</p> <p>Pol. MM 1.2 The City shall encourage the implementation of measures that will relieve pressures on the existing transportation infrastructure, including:</p> <ol style="list-style-type: none"> multi-modal transportation alternatives; land use coordination; prioritized improvements; park-and-ride lots. <p>Pol. MM 1.3 The City shall encourage the integration, coordination, and linkage of the connections and transfer points between all modes of transportation.</p> <p>Pol. MM 1.4 The City shall work with local and regional transit agencies to provide transit service that links Milton with surrounding communities, regional rail transit, and major employment and commercial centers in the region.</p> <p>Pol. MM 1.8 The City shall coordinate the development of its nonmotorized facilities with adjacent jurisdictions to ensure an efficient, continuous, regional network.</p>	<p>TDLE would implement a new public transportation option through Milton, with multimodal connections from Milton to nearby stations in Fife and Federal Way, as well as other destinations connected by the regional light rail system.</p> <p>Sound Transit will coordinate with the City of Milton regarding local and regional transit service that would link Milton to the regional rail system and develop connecting and complementary transit service.</p>

Table H2-5 TDLE Consistency with City of Milton Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Milton Comprehensive Plan	
Pol. MM 1.11 The City shall support coordination with transit agencies such as Pierce Transit, Sound Transit, and King County Metro in developing connecting and complementary transit service.	

SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension; TOD = transit oriented development

Table H2-6 TDLE Consistency with City of Fife Planning Goals and Policies

Goals and Policies	Discussion
City of Fife Comprehensive Plan	
Land Use	
Goal 1 Maintain a reasonable and sustainable land use pattern as growth occurs while discouraging sprawl. Policies Policy 1.2 Guide growth toward the creation of compact, efficient patterns of land use. Policy 1.4 Encourage infill development of vacant or underutilized land within existing urbanized areas.	TDLE could provide TOD development opportunities near stations and within the City of Fife's City Center Vision area, which may include potential redevelopment plans and land use changes to support TOD.
Goal 14 Encourage the development of a downtown area as a center of commercial, civic, cultural and recreational activities. Policies Policy 14.1 Create a vibrant, compact downtown area that is an inviting place to work, shop, live and socialize. Policy 14.2 Encourage mixed-use development that balances residential, public, entertainment and business uses.	Fife's "Downtown District Center" is within the TDLE study area. TDLE would increase access to the area, which would support the development of a downtown area as envisioned by the city.
GOAL 15 Become a more sustainable community with regard to universal responsibility, interconnectedness, health, wellness of our people, our culture and our planet. Policies Policy 15.3 Encourage more compact development and "complete streets" to provide options for residents and businesses to reduce the City's need for fossil fuels and provide opportunities for nonmotorized modes of transportation to improve public health and safety, and provide for multiple environmental benefits.	TDLE would contribute to long-term sustainability by reducing reliance on SOV trips, with a resulting reduction in consumption of fossil fuels. It would promote nonmotorized transportation by improving pedestrian and bicycle access connections to transit stations.
Transportation	
Goal 1 Provide for a well-connected, efficient transportation system that offers choices in travel modes, seeks to reduce traffic congestion in Fife, and reduces dependence on the single occupancy vehicle. Policies Policy 1.1 Pursue opportunities to create a well-connected street and sidewalk network to give people more transportation options, reduce travel distances, encourage walking and biking, and improve traffic flow and emergency vehicle response times. Policy 1.2 Develop a transportation system responsive to all transportation modes. Policy 1.3 Work with transit providers to facilitate the extension of transit services and to maintain existing facilities.	TDLE is listed as a Recommended Transportation Improvement project in Roadway Projects to be Completed by Other Agencies (Table TR-11). It will provide a well-connected, efficient transportation system through Fife and help to reduce congestion and reliance on SOVs. TDLE would include access improvements near the station in Fife to reconnect the street grid and improve network connectivity.
Goal 3 Promote and encourage the use of Transportation Demand Management (TDM) strategies to reduce traffic in the City. Policies Policy 3.2 Encourage transit-oriented development in areas served by and planned to be served by transit.	TDLE would support transit-oriented development near stations, where zoning designations allow.

Table H2-6 TDLE Consistency with City of Fife Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Fife Comprehensive Plan	
Goal 5 Maintain an environmentally sustainable transportation system, addressing sensitive habitat corridors, and air quality requirements. Policies Policy 5.2 Protect air quality from adverse impacts.	TDLE would comply with applicable local, state and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts to ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.
Goal 6 Use transportation planning and projects to support and implement the City's Strategic Plan. Policies Policy 6.1 Review projects identified on the Six-Year Transportation Improvement Plan and long range project list for consistency with the City Strategic Plan, and give higher priority to projects that best implement and support the City's Strategic Plan.	TDLE is listed as a Recommended Transportation Improvement project in Roadway Projects to be Completed by Other Agencies (Table TR-11).
Economic Development	
Goal: Improve the local economy meeting the needs of local residents and businesses and providing for a sustainable tax base. Policies Policy 3 Improve the quality of life in the community to make the city a desirable place for businesses to invest and for their employees to live.	TDLE would increase transportation options to Fife, which may increase its desirability as a place for businesses to invest and for their employees.

SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension; TOD = transit oriented development

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
Urban Form	
Goal UF-1: Guide development, growth, and infrastructure investment to support positive outcomes for all Tacomans. Policies Policy UF-1.4: Direct the majority of growth and change to centers, corridors, and transit station areas, allowing the continuation of the general scale and characteristics of Tacoma's residential areas. Policy UF-1.5: Strive for a built environment designed to provide a safe, healthful, and attractive environment for people of all ages and abilities. Policy UF-1.6: Support energy-efficient, resource-efficient, and sustainable development and transportation patterns through land use and transportation planning. Policy UF-1.8: Recognize the importance of the city's established street grid pattern, block sizes, and intersection density in supporting multi-modal transportation, quality urban design, and 20-minute neighborhoods. Whenever practicable, the established grid pattern should be preserved and enhanced to achieve the city's goals for urban form, and design and development.	TDLE would support growth around the stations where zoning is in place to accommodate this growth. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation. TDLE would include bike and pedestrian improvements that would support a safe, healthful, and attractive environment for people of all ages and abilities, and would support energy and resource-efficient transportation patterns by providing a new transit option. TDLE would modify the existing street grid pattern and block sizes near the station alternatives, but such modification is limited to preserve the established grid, block size, and intersection density as practicable.
Goal UF-4: Catalyze the Downtown as Tacoma's and the South Puget Sound's largest center with the highest concentrations of housing and with a diversity of housing options and services. Policies Policy UF-4.1: Strive to achieve Downtown Tacoma's regional allocation of housing and employment and continue its growth as a regional center for innovation and exchange through diverse transit-oriented housing opportunities, commerce, employment, arts, culture, entertainment, tourism, education, and government.	TDLE would support Downtown Tacoma as a regional transportation hub and optimize regional access to Downtown Tacoma by providing connections between the existing Tacoma Link rail system and the larger regional light-rail system. TDLE is anticipated to catalyze housing development, particularly in areas appropriate for TOD.

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
<p>Policy UF-4.3: Enhance the Downtown as a regional transportation hub and optimize regional access to Downtown Tacoma’s destinations.</p> <p>Goal UF-9: Promote future residential and employment growth in coordination with transit infrastructure and service investments.</p> <p>Policies</p> <p>Policy UF-9.1: Encourage transit-oriented development and transit-supportive concentrations of jobs and housing, and multimodal connections, at and adjacent to high-frequency and high-capacity transit stations.</p> <p>Policy UF-9.2: Integrate transit stations into surrounding communities and enhance pedestrian and bicycle connections to provide safe access to key destinations beyond the station area.</p> <p>Policy UF-9.3: Design transit areas to improve pedestrian, bicycle, and personal safety within the station and the station area.</p> <p>Policy UF-9.4: Encourage transit stations in centers to provide high density concentrations of housing and commercial uses that maximize the ability of residents to live close to both high-quality transit and commercial services.</p> <p>Policy UF-9.5: Encourage concentrations of jobs and employment-focused land uses in and around stations in employment areas.</p> <p>Policy UF-9.6: Enhance connections between major destinations and transit facilities and strengthen the role of these stations as places of focused activity.</p> <p>Policy UF-9.7: Encourage concentrations of mixed-income residential development and supportive commercial services close to high capacity transit stations that are not located in a center.</p>	<p>TDLE would support growth around the stations where zoning is in place to accommodate this growth. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation.</p>
<p>Goal UF-10: Establish designated corridors as thriving places that support and connect Tacoma’s centers.</p> <p>Policies</p> <p>Policy UF-10.1: Enhance the design and transportation function of Centers, Corridors, Transit Station Areas, and Signature Trails.</p> <p>Policy UF-10.2: Evaluate adjacent land uses to help inform street classifications in framing, shaping and activating the public space of streets.</p> <p>Policy UF-10.3: Integrate both the placemaking and transportation functions when designing and managing streets by encouraging design, development, and operation of streets to enhance opportunities for them to serve as places for community interaction, environmental function, open space, recreation, and other community purposes.</p> <p>Policy UF-10.4: Encourage the design and alignment of corridors to respond to topography and natural features, and to maintain public views of prominent landmarks and buildings that serve as visual focal points within streets or that terminate at the end of streets.</p> <p>Policy UF-10.5: Enhance Avenues as distinctive places with transit-supportive densities of housing and employment, and high-quality transit service and pedestrian and bicycle facilities that are models of ecologically-sensitive urban design.</p> <p>Policy UF-10.6: Encourage public street and sidewalk improvements along Avenues to support the vitality of business districts, create distinctive places, provide a safe and attractive pedestrian environment, and contribute to creating quality living environments for residents.</p> <p>Policy UF-10.7: Improve Avenues as key mobility corridors of citywide importance that accommodate all modes of transportation within their right-of-way or on nearby parallel routes.</p>	<p>TDLE would connect two of Tacoma’s Mixed Use Urban Centers (Downtown and McKinney) and is located within the PSRC Downtown regional growth center. TDLE would also include bike and pedestrian improvements near stations, including a potential pedestrian bridge over I-5 near the Portland Avenue Station (while the bridge is not currently a part of the funded project, it is an option analyzed in this Draft EIS).</p> <p>TDLE may impact the street grid near the Tacoma Dome Station location.</p>

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
Environment + Watershed Health	
<p>Goal EN-1: Ensure that Tacoma's built and natural environments function in complementary ways and are resilient to climate change and natural hazards.</p> <p>Policies Policy EN-1.13: Coordinate transportation and stormwater system planning in areas with unimproved or substandard rights of way to improve water quality, prevent localized flooding, enhance pedestrian safety and neighborhood livability.</p> <p>Policy EN-1.30: Promote community resilience through the development of climate change adaptation strategies. Strategies should be used by both the public and private sectors to help minimize the potential impacts of climate change on new and existing development and operations, include programs that encourage retrofitting of existing development and infrastructure to adapt to the effects of climate change.</p>	<p>TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. TDLE would include stormwater and drainage components coordinated with new transportation infrastructure.</p>
<p>Goal EN-2: Protect people, property and the environment in areas of natural hazards.</p> <p>Policies Policy EN-2.3: Employ special building design, construction, maintenance and operational measures and critical area regulations to minimize the risk of structural damage, fire and injury to occupants, impacts to natural resources and to prevent post-seismic collapse in areas with severe seismic hazards.</p>	<p>TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts on ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p>
<p>Goal EN-3: Ensure that all Tacomans have access to clean air and water, can experience nature in their daily lives and benefit from development that is designed to lessen the impacts of natural hazards and environmental contamination and degradation, now and in the future.</p> <p>Policies Policy EN-3.2: Evaluate the potential adverse impacts of proposed development on Tacoma's environmental assets, their functions and the ecosystem services they provide.</p> <p>Policy EN-3.3: Require that developments avoid and minimize adverse impacts, to the maximum extent feasible, to existing natural resources, critical areas and shorelines through site design prior to providing mitigation to compensate for project impacts.</p> <p>Policy EN-3.4 Encourage mitigation approaches when preservation is not feasible that maximize the intended ecosystem benefits. Require on-site or use of established approved mitigation banks versus off-site mitigation; unless off-site mitigation within the same watershed will improve mitigation effectiveness.</p> <p>Policy EN-3.5 Discourage development on lands where such development would pose hazards to life, property or infrastructure, or where important ecological functions or environmental quality would be adversely affected: a. Floodways and 100-year floodplains b. Geologic hazard areas c. Wetlands d. Streams e. Fish and wildlife habitat conservation areas f. Aquifer recharge areas g. Shorelines Policy</p> <p>Policy EN-3.6 Limit impervious surfaces within open Space Corridors, shorelines and designated critical areas to reduce impacts on hydrologic function, air and water quality, habitat connectivity and tree canopy.</p>	<p>The TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts on ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p> <p>TDLE would limit impervious surfaces in shorelines and designated critical areas to reduce impacts on hydrologic function, air and water quality, habitat connectivity, and tree canopy.</p>
<p>Goal EN-4: Achieve the greatest possible gain in environmental health City-wide over the next 25 years through proactive planning, investment and stewardship.</p> <p>Policies Policy EN-4.7: Ensure that plans and investments are consistent with, and advance, efforts to improve air quality and reduce exposure to air toxics, criteria pollutants and urban heat island effects. Consider air quality related health impacts on all Tacomans.</p> <p>Policy EN-4.41: Support the reduction of Tacoma's greenhouse gas emissions consistent with the City's adopted targets.</p>	<p>TDLE would contribute to achieving gains in environmental health through proactive planning, investment, and stewardship.</p> <p>TDLE would improve air quality and reduce greenhouse gas emissions by reducing reliance on SOV trips in part by creating a safe, clean, and integrated multimodal transportation system.</p>

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
Policy EN-4.43: Reduce greenhouse gas emissions associated with single occupant vehicles and trucks hauling freight by creating a safe, clean and integrated multimodal transportation system.	
Housing	
Goal H-1 Promote access to high-quality affordable housing that accommodates Tacomans' needs, preferences, and financial capabilities in terms of different types, tenures, density, sizes, costs, and locations. Policies Policy H-1.9 Apply infill housing approaches to create additional housing opportunities for low and mid-range (Missing Middle) housing types.	TDLE would support growth around the stations, including affordable housing, where zoning is in place to accommodate this growth.
Goal H-3 Promote safe, healthy housing that provides convenient access to jobs and to goods and services that meet daily needs. This housing is connected to the rest of the city and region by safe, convenient, affordable multimodal transportation. Policies Policy H-3.2 Locate higher density housing, including units that are affordable and accessible, in and around designated centers to take advantage of the access to transportation, jobs, open spaces, schools, and various services and amenities. Policy H-3.5 Improve equitable access to active transportation, jobs, open spaces, high-quality schools, and supportive services and amenities in areas with high concentrations of under-served populations and an existing supply of affordable housing. Policy H-3.6 Locate new affordable housing in areas that are opportunity rich in terms of access to active transportation, jobs, open spaces, high-quality schools, and supportive services and amenities.	TDLE would provide convenient, affordable access from Tacoma to multiple destinations throughout the Puget Sound and would support increased growth, including housing, around stations where zoning is in place to accommodate this growth.
GOAL H-4 Support adequate supply of affordable housing units to meet the needs of residents vulnerable to increasing housing costs. Policies Policy H-4.4 Facilitate the expansion of a variety of types and sizes of affordable housing units, and do so in locations that provide low-income households with greater access to convenient transit and transportation, education and training opportunities, Downtown Tacoma, manufacturing/industrial centers, and other employment areas.	TDLE would provide households of all income levels convenient transit access to education and employment opportunities in Downtown Tacoma, the manufacturing/industrial center between Tacoma and Fife, and other locations throughout the region. TDLE would provide opportunities to build affordable housing near stations in Tacoma, providing greater access to convenient transit, education and training opportunities, and other employment areas.
Economic Development	
Goal EC-4 Foster a positive business environment within the City and proactively invest in transportation, infrastructure, and utilities to grow Tacoma's economic base in target areas. Policies Policy EC-4.9 Maintain and improve the transportation network as necessary to facilitate the efficient movement of goods and attract economic activity.	TDLE would improve the transportation network in Tacoma, which is anticipated to attract economic activity, discussed further in Section 4.3, Economics.
Transportation	
1. Intergovernmental Coordination and Citizen Participation Goal: Proactively develop partnerships to best serve all users of the regional transportation system. Policies 1.1 Intergovernmental Coordination Ensure a well-planned regional transportation system that uses resources efficiently to serve all users through active coordination with federal, state, regional, local, tribal, and other interested agencies. 1.2 Citizen Participation Include and encourage citizen participation in all transportation planning efforts through workshops, volunteer commissions, social media, and other outlets to accommodate the needs and desires of the public. Include specific outreach to traditionally underserved or vulnerable populations. Carry work done for subarea plans forward into more broad-reaching efforts.	Sound Transit has coordinated with federal, state, regional, local tribal and other interested agencies on the siting of TDLE facilities and would continue to coordinate with those agencies and citizens, including specific outreach to underserved or vulnerable populations. TDLE will be generally consistent with the planning policies of all jurisdictions and the GMA. No TOD has been specifically identified as part of TDLE. However, TDLE would support TOD, to the extent zoning would allow, by improving reliability, availability, and convenience of light rail transit.

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
<p>1.4 Partner with Transit Integrate land use and transportation planning, promote transit-oriented or transit-supportive development (TOD) and multimodal transit access, and ultimately improve the reliability, availability, and convenience of bus, streetcar, and light rail transit options for all users and modes through partnerships with public transit agencies, local and regional government, and other regional agencies to leverage resources.</p>	
<p>2. Community Preservation Goal: Protect natural, as well as neighborhood, assets to create and connect places where people can live, work, and play in a safe and healthy environment.</p> <p>Policies</p> <p>2.1 Community Coordination Assess the effect of potential transportation projects on gathering places or destinations such as schools, community centers, businesses, neighborhoods, and other community bodies by consulting with stakeholders and leaders that represent them. Mitigate these effects when possible.</p> <p>2.2 Urban Design Support the appearance and form of the City through consideration of aesthetics, beautification, and safety in designing and locating transportation facilities. The Generalized Land Use Element provides more detail on design standards.</p> <p>2.4 Promote Health Improve the health of Tacoma's residents and local ecology by implementing a transportation network that reduces auto mode share, increases the number of active travelers and transit riders of all ages and abilities, and improves safety in all neighborhoods. Work with the Tacoma-Pierce County Health Department and other agencies to promote active lifestyles through educational programs and safe and accessible routes for active travelers of all ages and abilities in all neighborhoods.</p>	<p>TDLE would increase Tacoma's connections to other commercial and residential areas throughout the region. TDLE would be constructed adjacent to existing highways or other transit facilities, to the extent possible.</p> <p>Sound Transit has adopted a community outreach plan that would facilitate the community coordination addressed by this policy. See Appendix B to the Draft EIS.</p> <p>Station design will require local approval, consistent with Policy 2.2. Potential visual impacts are discussed further in Section 4.5, Visual and Aesthetic Resources.</p>
<p>3. Multimodal System Goal: Prioritize the movement of people and goods via modes that have the least environmental impact and greatest contribution to livability in order to build a balanced transportation network that provides mobility options, accessibility, and economic vitality for all across all neighborhoods.</p> <p>Policies</p> <p>3.3 Mode Split Target Achieve the Climate Action Plan (CAP) goal of reducing GHGs from transportation sources by increasing the non-single occupant vehicle mode split by 2035, and continue gains thereafter. Mode split targets will be based on all trips in addition to commute trips, established for all modes, and set at lower single occupancy vehicle (SOV) levels for regional growth centers (RGCs) than the rest of the City. To the extent that data is available to track mode split in Tacoma's mixed use centers (MUCs), the MUC targets should also be set at higher non-SOV levels than citywide.</p> <p>3.7 Special Needs of Transportation Users Recognize and accommodate the special transportation needs of the elderly, children, and persons with disabilities in all aspects of transportation planning, programming, and implementation. Satisfy the community's desire for a high level of accommodation for persons with disabilities using local, state, or federal design standards.</p> <p>3.8 Equity in Transportation Support the transportation needs of traditionally underserved neighborhoods and vulnerable populations, as listed under Goal 2, through investment in equitable modes of transportation and equal spending throughout the City, in addition to potential catch-up investment for areas in need, as necessary.</p>	<p>TDLE would reduce reliance on SOV trips and associated greenhouse gas emissions from transportation sources. TDLE would recognize and accommodate the transportation needs of the elderly, children, and riders with disabilities by adhering to local, state, and federal design standards.</p> <p>TDLE would encourage transit ridership by improving pedestrian access to stations, conducting outreach to employers, and working with public transit agencies to identify strategies to improve the frequency and ridership of transit service, including traditionally underserved neighborhoods and vulnerable populations. The project would locate stations near new and existing transit hubs for the convenience of passenger transfers and to encourage operational efficiency. Specifically, each Tacoma Dome station alternative was paired with bus facility options for purposes of evaluation in the Draft EIS. See Chapter 2.</p>

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
<p>3.12 Transit Operational Efficiency Support efficient transit operations through street and transit stop designs on transit priority streets that comply with standards and include transit-supportive elements for bus, streetcar, and light rail transit.</p> <p>3.13 Encourage Transit Ridership Encourage transit ridership by implementing pedestrian improvements near transit stops, conducting outreach to employers, and working with public transit agencies to identify strategies to improve the frequency and ridership of transit service, including bus, streetcar, and light rail, between high density residential areas and employment centers. These strategies would include locating transit stops/stations to maximize convenience of transfers between modes and/or connecting to other routes.</p>	
<p>4. Environmental, Fiscal Stewardship and Social Accountability Goal: Design an environmentally, socially, and fiscally sustainable transportation system that serves its users through strategic planning efforts, funding, and projects.</p> <p>Policies</p> <p>4.1 Minimum Environmental Disruption Minimize the disruption of natural and desirable community amenities of our environment by employing a collaborative, interdisciplinary approach that involves all stakeholders, particularly those traditionally being underserved, to develop a transportation facility that fits its physical setting and preserves scenic, historic, and environmental resources while maintaining safety and mobility.</p> <p>4.2 Noise and Air Pollution Encourage the reduction of noise and air pollution from various modes of transportation and ensure the City of Tacoma meets ambient air quality standards by promoting active modes of transportation and the use of alternative fuels for vehicles.</p> <p>4.4 Congestion Management Decrease the use of SOVs and the environmental degradation associated with their use by encouraging and improving the appeal, convenience, and time competitiveness of travel by active modes, public transit, assistive devices, and ridesharing.</p>	<p>TDLE would comply with applicable local, state, and federal regulations. Design of the project would minimize impacts, and mitigation would be provided where impacts occur. Sound Transit's policy on ecosystem mitigation is to avoid impacts on environmentally sensitive resources and provide adequate mitigation for unavoidable impacts on ensure no net loss of ecosystem function and acreage as a result of Sound Transit projects.</p> <p>Sound transit has considered historic resources in the development of the TDLE alternatives and will continue to do so throughout project development. Potential mitigation measures will be considered, as appropriate for any impacts on historic and culturally significant resources that could not be avoided.</p>
<p>6. Land Use and Transportation Goal: Build a transportation network that reinforces Tacoma's land use vision, Vision 2040 and the GMA.</p> <p>Policies</p> <p>6.1 Land Use Considerations Ensure reasonable access for all modes to places of employment, schools, libraries, parks, transit centers, civic buildings, and other attractions in Tacoma through development, expansion, or improvement of transportation facilities that are coordinated with existing and projected land use patterns and types of development. Similarly, development patterns and designs should account for their effects on the transportation system.</p> <p>6.2 Land Use Patterns Encourage land use patterns and developments, especially in MUCs, that support non-SOV travel, access to multimodal options and intermodal connectivity, opportunities to live close to work, and short trips easily made by walking or bicycling for recreation and commuting.</p> <p>6.3 20-Minute Neighborhoods Prioritize infrastructure improvements within and between 20-minute neighborhoods based around Tacoma's centers for growth and along identified corridors that connect residential areas to schools, local retail, business, and community services so residents can safely access more of the services they need close to home by active modes, public transit, and using assistive devices.</p>	<p>TDLE would support growth around the stations where zoning is in place to accommodate this growth and supportive of the 20-minute Neighborhood. The increased density would allow more efficient use of land, allowing for an efficient provision of services and facilities as well as promoting physical activities, including walkability, and the use of nonmotorized modes of transportation.</p> <p>TDLE would be generally consistent with Tacoma's land use vision, Vision 2050, and the GMA.</p> <p>TDLE is located in MUCs and supports non-SOV travel and access to multimodal options and intermodal connectivity and would provide additional access for residents to access services they need.</p> <p>Transit stations would include context-sensitive design that considers the unique needs of each neighborhood, including those for parking and public spaces.</p> <p>Where appropriate, Sound Transit would facilitate TOD with local jurisdictions and potential development partners in accordance with Sound Transit's Equitable Transit Oriented Development Policy (Sound Transit 2018a). Additional discussion of TOD is included in Sections 4.2.3.4 and 4.3.3.4.</p>

Table H2-7 TDLE Consistency with City of Tacoma Planning Goals and Policies (continued)

Goals and Policies	Discussion
City of Tacoma – One Tacoma Plan	
<p>6.4 Support Mixed-Use Centers Serve and support the existing MUCs and aid Tacoma in attracting new investments by giving high priority to those transportation facilities that serve these centers. Increase the livability of the MUCs by providing transportation choices and integrating amenities that create a safe and inviting environment for walking, bicycling, and taking public transit. Transportation facilities should include context-sensitive design that considers the unique needs of each neighborhood, such as on-street parking and public spaces.</p> <p>6.8 Transit-Oriented Development Promote TOD or transit-supportive development and provide incentives for development that includes specific TOD features. Elements of TOD generally include:</p> <ul style="list-style-type: none"> • A compact mix of land uses, including mixed-use, residential, and commercial development; • Moderate to high density housing; • Affordable housing for all income groups; • Pedestrian orientation/connectivity; • Convenient access to transportation choices, including transit, bicycle, and pedestrian facilities; • Reduced size of surface parking facilities or minimum parking requirements; and • High quality design. 	
Tacoma South Downtown Subarea Plan	
<p>Strategy 1: Develop in relationship to transit</p> <p>Policies: Policy 1.2: Improve safety and convenience for active transportation on access to fixed-rail transit and the Tacoma Dome Station.</p> <p>Policy 1.3: Coordinate with transit agencies to prioritize future high-frequency transit service allocations that will help catalyze redevelopment and the creation of complete communities.</p> <p>Policy 1.4: Manage parking to support transit access and promote transit ridership.</p>	TDLE is identified as an action item in the Tacoma South Downtown Subarea Plan to maximize South Downtown's redevelopment potential.
Tacoma 2025	
Advisory Committee Key Focus Areas	
<p>Livability, Equity and Accessibility</p> <p>Indicators Improve access and proximity by residents to diverse income levels and race/ethnicity to community facilities, services, infrastructure, and employment.</p>	The TDLE would improve access and proximity to frequent, high-capacity transit throughout the Puget Sound region.
Tacoma 2025 Plan Focus Areas	
<p>Built and Natural Environment</p> <p>Priorities 6A Increase transportation options. Tacomans need to be mobile, with transportation choices including transit, bicycling, and walking.</p> <p>6C Grow and enhance the vitality of Tacoma's neighborhoods. Transit-oriented and infill development, as well as reuse of historic buildings and districts, provides housing, economic, and environmental benefits.</p>	TDLE would increase the transportation options available to and from Tacoma and support transit-oriented development in the areas where zoning is in place to accommodate this growth.

EIS = environmental impact statement; GMA = Growth Management Act; SOV = single-occupancy vehicle; TDLE = Tacoma Dome Link Extension; TOD = transit oriented development

1.3 Shoreline Master Programs

Each of the jurisdictions where TDLE would be located have adopted local shoreline master programs to meet the requirements of the Washington State SMA. For example, the City of Tacoma Shoreline Master Program (Tacoma SMP) was most recently amended in 2019 (City of Tacoma 2019) and provides goals, policies, and regulations for shoreline use and protection, and establishes a permit system for administering the Tacoma SMP. In general, the Tacoma SMP applies to all land and water within Tacoma that falls under the jurisdiction of the SMA, including the shorelines of portions of Puget Sound, the Puyallup River, and Wapato Lake.

The City of Milton Shoreline Master Program (Milton SMP) was adopted in 2012 (City of Milton 2012) and similarly implements the SMA related to shorelines in the City of Milton. The west bank of Hylebos Creek in the vicinity of TDLE is within Urban Conservancy shoreline zone.

TDLE alternatives may also be located within the shoreline jurisdiction for any regulated water bodies within the cities of Federal Way and Fife, and King or Pierce counties, such as areas near streams, wetlands, and rivers. Specifically, the City of Federal Way Shoreline Master Program (adopted 2011) (City of Federal Way 2011), the City of Fife Shoreline Master Program (adopted 2013) (City of Fife 2013), the King County Shoreline Master Program (adopted 2013, amended 2019) (King County 2019), and the Pierce County Shoreline Master Program (adopted 2015, amended 2018) (Pierce County 2018). TDLE would comply with all applicable shoreline master programs.

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Tacoma Dome Link Extension

Draft Environmental Impact Statement

ECONOMICS SUPPORTING INFORMATION

Appendix H3

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H3 ECONOMICS SUPPORTING INFORMATION

This appendix provides background information that supports the economic analysis in the Draft Environmental Impact Statement Section 4.3, Economics.

H3.1 Regional Demographic and Economic Trends

As of 2020, the central Puget Sound region is home to approximately 4.3 million people and 2.3 million jobs. The region has seen considerable growth over the past decade, with King County holding the most residents (2.26 million) and jobs (1.43 million). Population growth is expected to continue, reaching nearly 6 million by 2050, driven by an anticipated addition of 1.6 million people. This expansion is also marked by the transformation of smaller cities and neighborhoods into denser urban areas, with suburban cities like Tacoma and Federal Way adding thousands of residents and jobs.

Economically, the region is characterized by a diverse array of key industries that fuel its growth and global competitiveness. The aerospace sector, anchored by Boeing, employs an estimated 121,000 workers and accounts for nearly 6 percent of all jobs in the region, a concentration three times the national average. The information and communication technology sector is the largest and fastest-growing, providing over 260,000 jobs in 2020, with a 10.6 percent annual growth rate between 2015 and 2020. Major companies like Microsoft, which employs over 58,000 workers in Washington, and Amazon, with approximately 75,000 employees in the region, are key drivers of this growth. Other critical industries such as maritime and military and defense support tens of thousands of jobs; for example, Naval Base Kitsap alone contributes \$4 billion annually in economic impact and employs over 33,000 workers, including civilians and defense contractors.

Despite the region's robust economic profile, there are notable disparities in economic prosperity and access to opportunities. Median household income varies notably by county, with King County leading at \$95,000, while Kitsap and Pierce counties are below \$77,000. Income disparities are also evident across racial and ethnic lines: Asian households earn the highest at an average of \$104,000, whereas Pacific Islander, Hispanic/Latino, and Black households earn well below the regional average of \$88,000. Black households earn an average of \$58,000, \$30,000 below the regional median (PSRC 2021).

Table H3-1 shows population, household, and employment forecasts for the Puget Sound region and associated counties. The estimates from 2018 through 2050 are based on the Land Use Vision – Implemented Targets (LUV-it) developed by the Puget Sound Regional Council (PSRC) for 2023 growth planning. The LUV-it forecasts use data from 2018 as the starting point because they represent a base-year set of data, including parcel data and estimates of households, population, and employment conditions in King, Kitsap, Pierce, and Snohomish counties as of that year. The estimates are then projected forward to align with the VISION 2050 Regional Growth Strategy and countywide growth targets for 2044, which were developed to implement the Regional Growth Strategy. These projections are extended to 2050 to provide a long-term view of growth in the region.

The focus on 2018 through 2050 allows the forecasts to capture a meaningful period of development and policy impact, reflecting the anticipated changes in population, households, and jobs. The projections incorporate both current conditions and expected policy-driven changes, such as growth focusing in high-capacity transit areas and other regional growth centers. This timeframe helps planners and policymakers visualize the long-term impacts of growth policies and infrastructure investments.

Table H3-1 presents data on population, households, and jobs for the Puget Sound region, including projections from 2018 to 2050, along with the compound annual growth rates for each metric. Overall, the Puget Sound region is projected to experience steady growth from 2018 to 2050, with a population increase from approximately 4.1 million to 5.9 million, representing a rate of 1.11 percent. Households are expected to grow at a rate of 1.29 percent, reaching over 2.4 million by 2050. Employment is also forecasted to rise, with jobs increasing from approximately 2.3 million in 2018 to 3.4 million in 2050, reflecting a rate of 1.28 percent. This overall regional growth indicates strong economic and demographic expansion over the forecast period.

King County, the most populous county in the region, is expected to see its population grow from around 2.2 million in 2018 to over 3 million by 2050, with a rate of 1.03 percent. Households in King County will increase at a slightly higher rate of 1.18 percent, reaching over 1.2 million. The county's job market will also expand considerably, with jobs increasing at a rate of 1.16 percent, totaling more than 2.1 million by 2050. These figures suggest that King County will continue to be a key driver of the region's economic growth.

Kitsap County, while smaller in population, shows a healthy growth trajectory with a population rate of 1.00 percent, growing from 267,104 in 2018 to 366,688 by 2050. The number of households in Kitsap County is projected to grow at a rate of 1.22 percent, while jobs will increase at a rate of 1.54 percent, indicating strong economic potential relative to its size. This growth in employment suggests a diversifying and expanding job market in the county.

Pierce and Snohomish counties also demonstrate considerable growth. Pierce County's population is expected to rise at a rate of 1.17 percent, with the number of households and jobs increasing at 1.37 percent and 1.29 percent, respectively. Snohomish County's population growth is projected at a rate of 1.30 percent, with households growing at 1.55 percent and jobs at 1.70 percent. These growth rates indicate robust expansion in these counties, with Snohomish County, in particular, showing the highest job growth rate among all the counties, reflecting strong economic development prospects. Overall, the trends of continued growth in employment and income in the region support the forecasts of strong growth in travel demand within the region and along the Tacoma Dome Link Extension (TDLE) corridor.

Table H3-1 Population, Household, and Employment Forecasts by Region and County

Puget Sound	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Population	4,134,473	5,885,483	1.11%
Households	1,605,263	2,419,603	1.29%
Jobs	2,277,775	3,417,783	1.28%
King County	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Population	2,189,962	3,038,738	1.03%
Households	884,582	1,287,395	1.18%
Jobs	1,492,074	2,155,720	1.16%
Kitsap County	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Population	267,104	366,688	1.00%
Households	101,858	150,061	1.22%
Jobs	102,994	167,785	1.54%
Pierce County	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Population	872,450	1,264,812	1.17%
Households	323,902	500,322	1.37%
Jobs	367,906	554,819	1.29%
Snohomish County	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Population	804,957	1,215,245	1.30%
Households	294,921	481,825	1.55%
Jobs	314,801	539,459	1.70%

Source: PSRC 2023

H3.2 Demographic and Economic Trends in TDLE Segments

Demographic and economic trends in the TDLE study area were assessed by using Forecast Analysis Zone (FAZ) estimates developed by PSRC as part of their Land Use Vision (2023). Table H3-2 provides the population, household, and employment forecast trends, between 2018 and 2050, for Forecast Analysis Zones associated with each corridor segment in the Tacoma Dome Link Extension area. The four TDLE corridor segments — Federal Way, South Federal Way, Fife, and Tacoma — and the corresponding FAZs are shown in Figure H3-1. The strong growth trend seen at the regional level is reflected in each segment. Within each corridor segment, population, households, and jobs are projected to grow at positive rates between 2018 and 2050.

What is a Forecast Analysis Zone (FAZ)?

FAZs are the units of the geographic boundary system used by the PSRC to model and report its small-area forecasts of population, households, and employment. They are built up from traffic analysis zones (TAZs), with each FAZ containing between 1 to 20 TAZs. FAZ boundaries generally, with few exceptions, also line up with census tract boundaries, with each FAZ containing between 1 to 9 census tracts (PSRC 2022).

The Federal Way Segment (consisting of FAZs 3020 and 3030) is projected to experience steady growth from 2018 to 2050. The population is expected to increase from 65,464 to 92,144, with a rate of 1.07 percent. Households are forecasted to grow from 23,244 to 34,963, at a rate of 1.28 percent. The total number of jobs in this segment is projected to rise from 28,900 to 51,004, with a rate of 1.79 percent. Employment growth is expected across all sectors, with notable increases in the Education sector, which will grow from 2,022 to 4,255 jobs (rate of 2.35 percent), and the Retail sector, which will increase from 5,974 to 13,783 jobs (rate of 2.65 percent).

The South Federal Way Segment (encompassing FAZs 3010, 3020, 3030, and 1200) is projected to see growth in population, households, and employment by 2050. The population is expected to grow from 127,144 in 2018 to 170,491, with a rate of 0.92 percent. Households will increase from 45,537 to 64,371, growing at a rate of 1.09 percent annually. The total jobs in this segment are projected to nearly double, from 42,494 to 73,903, with a rate of 1.74 percent. The most substantial job growth is expected in the Retail sector, which will grow from 9,945 to 20,082 jobs (rate of 2.22 percent), and the Education sector, projected to increase from 3,722 to 6,979 jobs (rate of 1.98 percent).

The Fife Segment (FAZ 2000) is forecasted to see moderate growth from 2018 to 2050. The population is projected to increase from 11,807 to 19,026, at a rate of 1.50 percent. Households are expected to grow from 4,474 to 7,229, with a rate of 1.51 percent. Total employment in the segment is anticipated to rise from 16,168 to 21,617 jobs, reflecting a slower growth rate with a rate of 0.91 percent. Employment growth will be modest across sectors, with the Construction and Resources sector increasing from 1,338 to 1,868 jobs (rate of 1.05 percent), and the Finance, Insurance, and Real Estate sector growing from 3,794 to 5,479 jobs (rate of 1.16 percent).

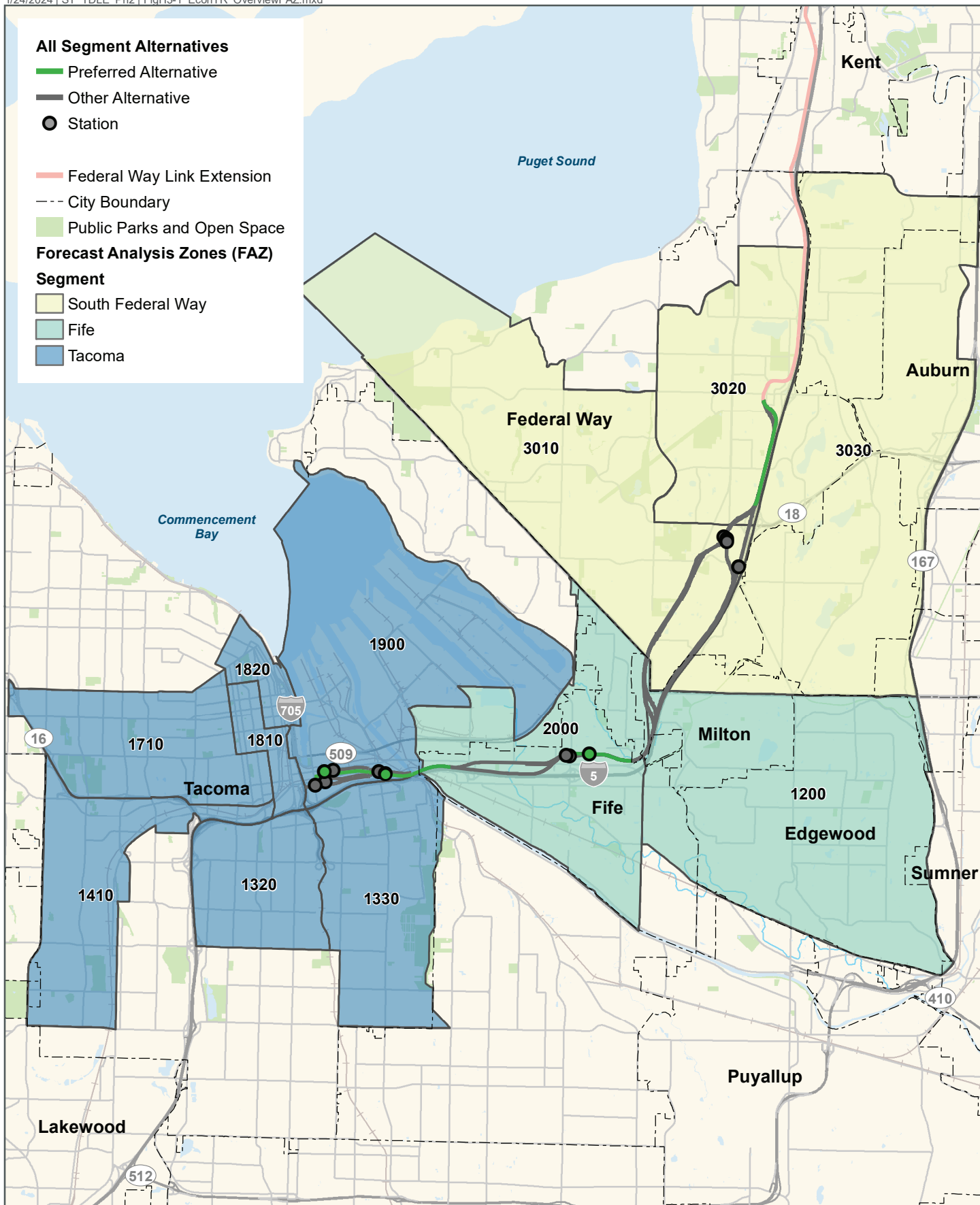
The Tacoma Segment (covering FAZs 1320, 1330, 1410, 1710, 1810, 1820, and 1900) is projected to undergo substantial growth between 2018 and 2050. The population is expected to increase substantially from 93,651 to 199,916, with a high rate of 2.40 percent. Households are projected to grow from 36,636 to 87,859, reflecting a rate of 2.77 percent. The total number of jobs is anticipated to rise from 87,254 to 157,317, with a rate of 1.86 percent. The highest employment growth is expected in the Finance, Insurance, and Real Estate sector, which is projected to grow from 47,987 to 90,723 jobs (rate of 2.01 percent), and in the Education sector, which will more than double from 5,221 to 10,715 jobs (rate of 2.27 percent).

Table H3-2 Population, Household, and Employment Forecast by Forecast Analysis Zone

Description	2018	2050	Compound Annual Growth Rate, 2018 to 2050
Federal Way Segment (FAZs: 3020 and 3030)			
Population	65,464	92,144	1.07%
Households	23,244	34,963	1.28%
Total Jobs	28,900	51,004	1.79%
Jobs by Employment Sector			
Construction and Resources	2,077	2,875	1.02%
Manufacturing, Wholesale Trade, Transportation, and Utilities	3,437	4,433	0.80%
Retail	5,974	13,783	2.65%
Finance, Insurance, and Real Estate	13,942	24,595	1.79%
Government	1,448	1,063	-0.96%
Education	2,022	4,255	2.35%
South Federal Way Segment (FAZs: 3010, 3020, 3030, and 1200)			
Population	127,144	170,491	0.92%
Households	45,537	64,371	1.09%
Total Jobs	42,494	73,903	1.74%
Jobs by Employment Sector			
Construction and Resources	3,477	5,039	1.17%
Manufacturing, Wholesale Trade, Transportation, and Utilities	4,743	6,183	0.83%
Retail	9,945	20,082	2.22%
Finance, Insurance, and Real Estate	18,752	34,042	1.88%
Government	1,855	1,578	-0.50%
Education	3,722	6,979	1.98%
Life Segment (FAZ: 2000)			
Population	11,807	19,026	1.50%
Households	4,474	7,229	1.51%
Total Jobs	16,168	21,617	0.91%
Jobs by Employment Sector			
Construction and Resources	1,338	1,868	1.05%
Manufacturing, Wholesale Trade, Transportation, and Utilities	6,375	7,603	0.55%
Retail	2,822	4,134	1.20%
Finance, Insurance, and Real Estate	3,794	5,479	1.16%
Government	1,202	1,493	0.68%
Education	637	1,040	1.54%
Tacoma Segment (FAZs: 1320, 1330, 1410, 1710, 1810, 1820, and 1900)			
Population	93,651	199,916	2.40%
Households	36,636	87,859	2.77%
Total Jobs	87,254	157,317	1.86%
Jobs by Employment Sector			
Construction and Resources	3,179	3,818	0.57%
Manufacturing, Wholesale Trade, Transportation, and Utilities	10,094	13,095	0.82%
Retail	9,180	23,946	3.04%
Finance, Insurance, and Real Estate	47,987	90,723	2.01%
Government	11,593	15,020	0.81%
Education	5,221	10,715	2.27%

Sources: PSRC 2023

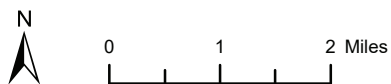
Notes: FAZ = Forecast Analysis Zone.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma, PSRC (2023).

FIGURE H3-1
FAZs by Segment Area

Tacoma Dome Link Extension



H3.3 Local Revenue Sources

Table H3-3 provides a breakdown of tax revenues by category for the cities of Federal Way, Milton, Fife, and Tacoma. Each city's revenue is categorized into property tax, sales tax, utility tax, business and occupation (B&O) tax, and other taxes, showing both the total revenue collected and the percentage contribution of each tax category to the city's overall tax revenue.

In Federal Way, the total tax revenue amounts to approximately \$145.7 million (Adopted Biennial Budget for 2023 budget year). The largest tax contributors are property tax and sales tax, making up 8.07 percent and 13.60 percent of the total revenue, respectively. Utility tax contributes 11.93 percent, while other revenue accounts for the highest share at 66.39 percent. Milton's total tax revenue is about \$5.8 million. The largest share comes from sales tax, comprising 37.54 percent of the city's total revenue. Property tax and utility tax contribute 26.95 percent and 22.34 percent, respectively, while other taxes make up 13.17 percent. Fife collects approximately \$24.7 million in total revenue, with taxes making up 70.65 percent of this amount. Meanwhile, Tacoma has the largest total tax revenue among the four cities, at about \$615.2 million (note: this is the biennial total). The city's revenue is predominantly sourced from property tax (22.03 percent) and sales tax (23.91 percent). Utility tax accounts for 19.60 percent, B&O tax makes up 17.58 percent, and other taxes contribute 16.88 percent.

Table H3-3 Percent of Total Revenues for Each City in the TDLE Project Area

Tax Category	City of Federal Way Total	Federal Way Percentage
Property	\$11,761,639	8.07%
Sales	\$19,825,000	13.60%
Utility	\$17,391,000	11.93%
Other	\$96,746,335	66.39%
Total	\$145,723,974	100%
Tax Category	City of Milton Total	Milton Percentage
Property	\$1,557,527	26.95%
Sales	\$2,169,521	37.54%
Utility	\$1,290,937	22.34%
Other	\$760,865	13.17%
Total	\$5,778,850	100%
Tax Category	City of Fife Total	Fife Percentage
Taxes	\$17,455,740	70.65%
Other	\$7,252,952	29.35%
Total	\$24,708,692	100%
Tax Category	City of Tacoma Total	Tacoma Percentage
Property	\$135,538,742	22.03%
Sales	\$147,099,836	23.91%
Utility	\$120,560,947	19.60%
B&O	\$108,130,226	17.58%
Other	\$103,845,535	16.88%
Total	\$615,175,286	100%

Sources: City of Federal Way 2023-24 Adopted Budget, City of Milton 2023 Adopted Budget, City of Fife Adopted Budget 2023, and City of Tacoma 2023-24 Adopted Biennial Operating and Capital Budget.

Notes: The City of Fife provided tax figures only as a lump sum total.

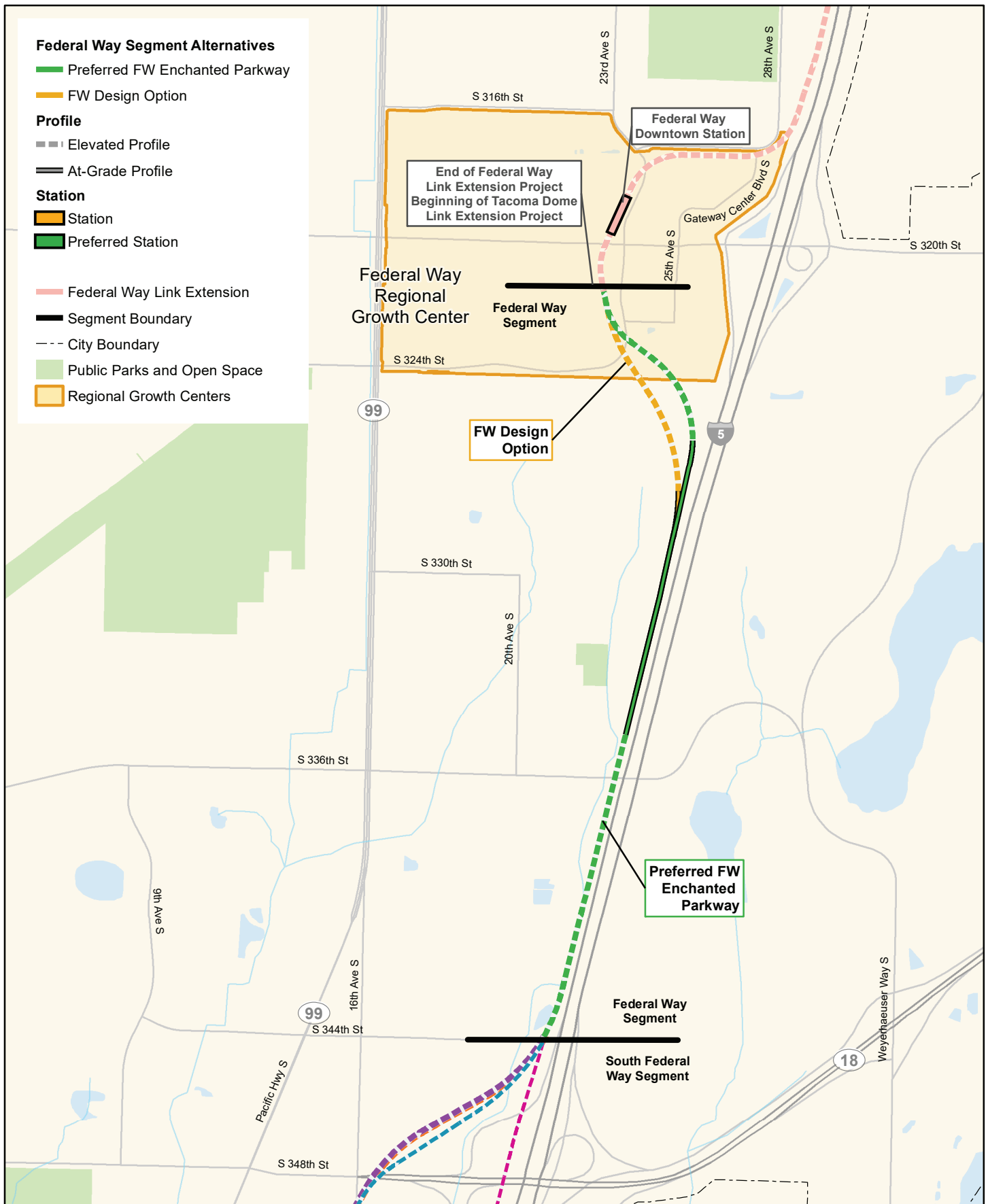
H3.4 Comprehensive Plans and Regional Growth Centers

The proposed TDLE alternatives are located within the cities of Federal Way, Milton, Fife, and Tacoma, as well as King and Pierce counties. These jurisdictions have a range of comprehensive, manufacturing and industrial, and subarea plans, policies and goals. The relevant community development and economic plans for each segment within the TDLE study area are listed for each segment. The Washington Growth Management Act (GMA) requires cities and towns in Pierce and King Counties to review and update their local comprehensive plans by December 2024. The communities discussed are currently in the process of updating and adopting revised Comprehensive Plans, most draft plans are available online for reference. The project alternatives can be considered in the context of these various plans and designations. What follows is a discussion of key comprehensive land use planning factors for each corridor segment, along with a discussion of the relevant project corridor segment alternatives.

Figure H3-2, Regional Centers, Federal Way Segment, shows the Federal Way Segment alternative and design option as well as the location of the PSRC regional growth centers and adjacent municipalities. The Federal Way Segment extends south from the Federal Way Link Extension and the Federal Way Downtown Station, located in the City of Federal Way Regional Growth Center.

Figure H3-3, Regional Centers, South Federal Way Segment, shows the South Federal Way Segment alternatives as well as the location of the PSRC regional growth centers and adjacent municipalities. The South Federal Way Segment alternatives extend from S 344th Street through Milton to the Fife city limits. The station location for all alternatives is located in the vicinity of S 352nd Street within the city of Federal Way. The City of Federal Way Comprehensive Plan (2015) supports redevelopment of existing underdeveloped areas, a range of commercial land uses, increased density at proposed station locations, and encourages the development of a sustainable transportation system integrating transit access.

Figure H3-4, Regional Centers, Fife Segment, shows the Fife Segment alternatives and the location of the associated regional, manufacturing and industrial, and urban centers. The City of Fife Comprehensive Plan (2012a) includes an Economics element (added in 2015) and a City Center vision (2012b) encouraging compact infill development and regulations associated with transit-oriented development and increased transportation access to the downtown. All of the Fife Segment alternatives are fully located within the City of Fife, and the preferred Fife Station is within a future Fife City Center. The City of Fife has been pursuing a City Center planning effort that would accommodate a range of well-designed retail, service, civic, entertainment, recreation, and high-density residential uses to create a new focal point of community activity. Changes to reflect this planning effort have not been adopted at the time of writing.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

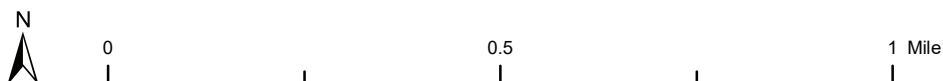


FIGURE H3-2
Regional Centers
Federal Way Segment
Tacoma Dome Link Extension

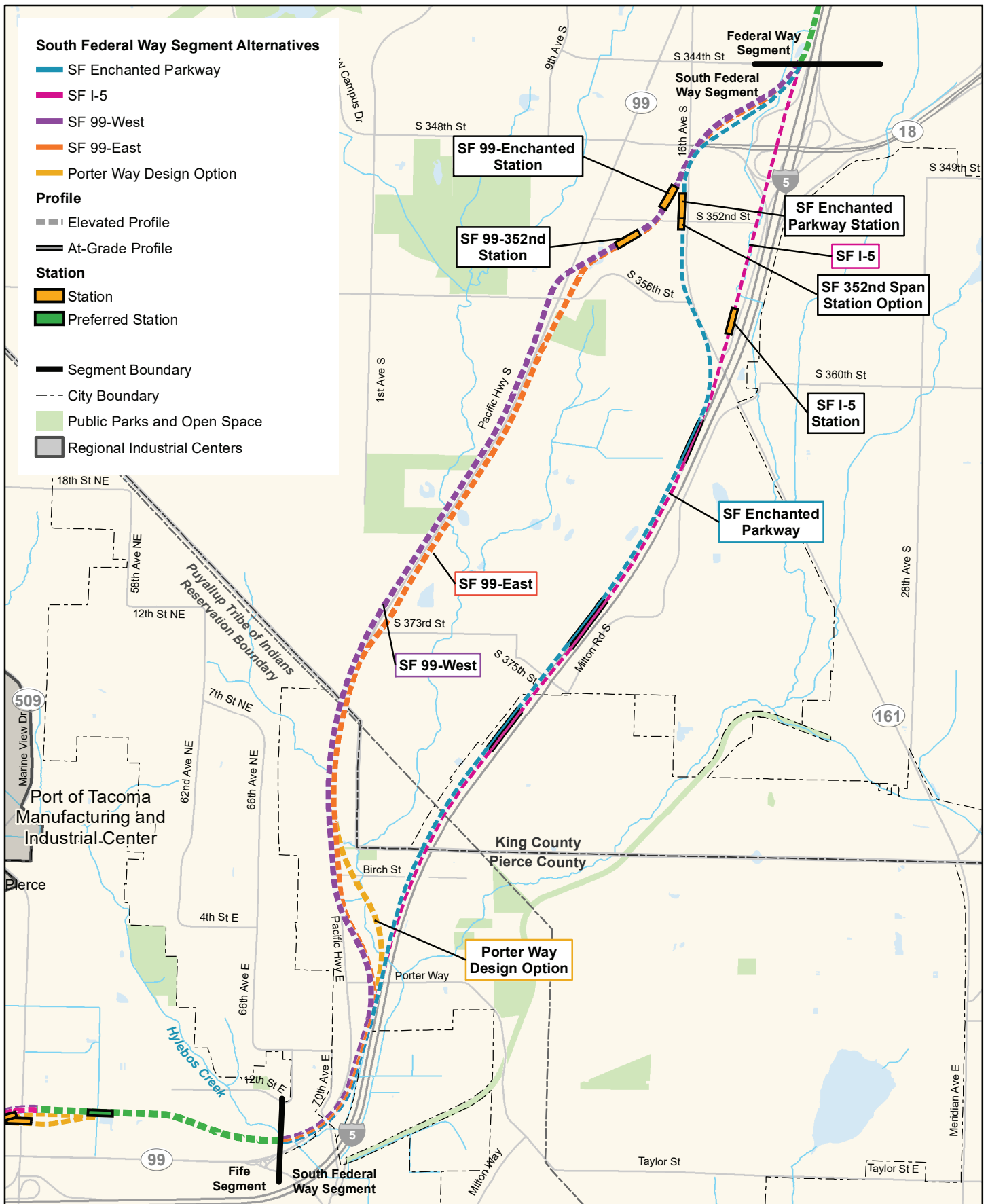
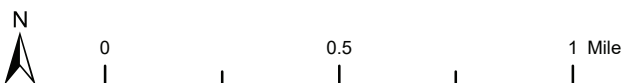
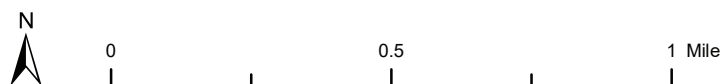


FIGURE H3-3
 Regional Centers
 South Federal Way Segment
Tacoma Dome Link Extension



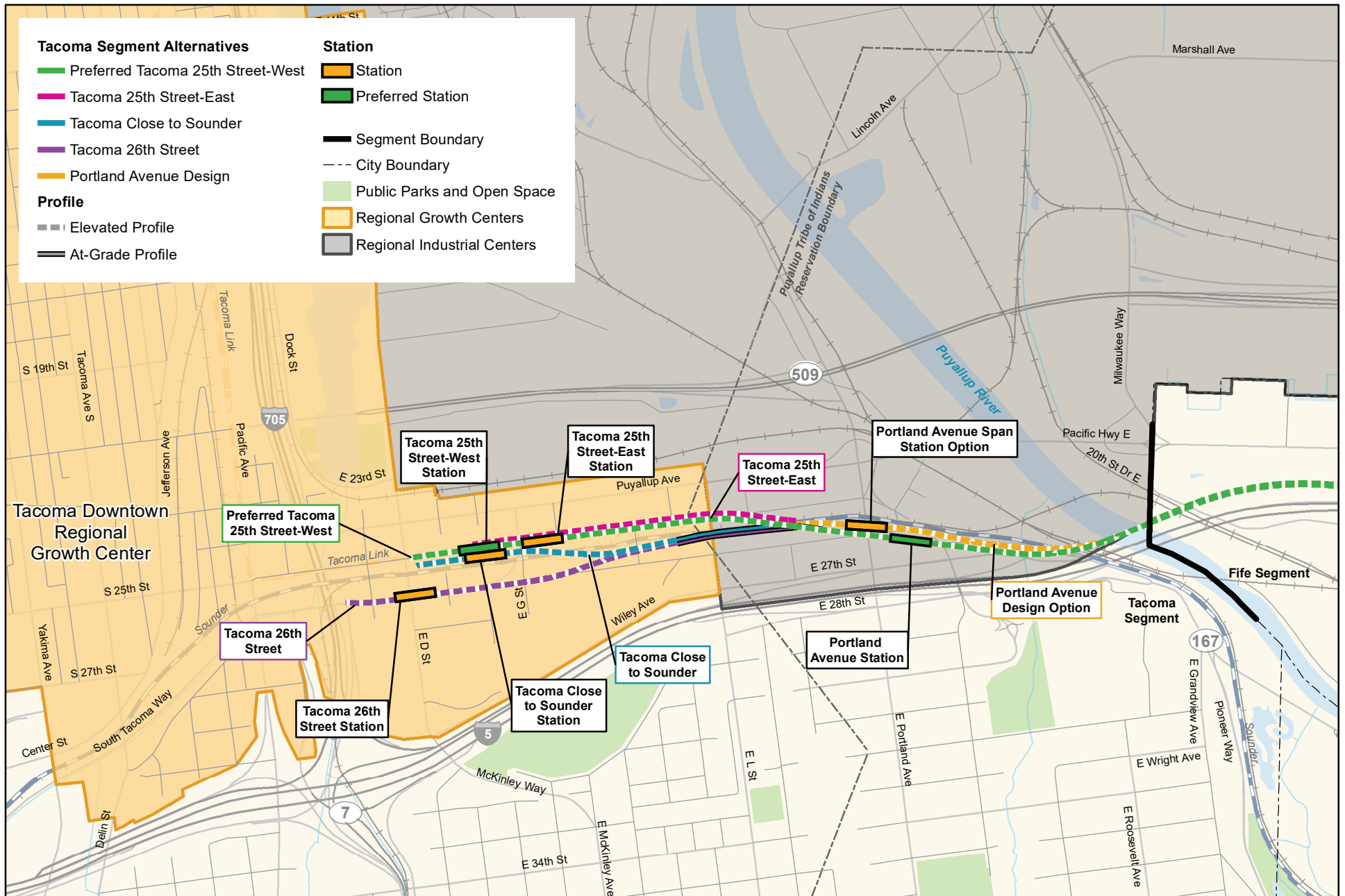


Tacoma Dome Link Extension



The Port of Tacoma Manufacturing and Industrial Center (MIC) is less than 0.5 mile north of all the Fife Segment alternatives. The Port of Tacoma MIC (PSRC 2020) encompasses extensive waterfront along Tacoma's Commencement Bay and is home to Tacoma's highest concentration of industrial and manufacturing activity (such as marine terminals, cargo facilities, intermodal rail yards) and an estimated 9,250 employees. The Port estimates the value of international trade at \$34.5 billion and the value of domestic trade at approximately \$3 billion (PSRC 2020). The proposed TDLE project alternatives would not impact industrial land uses and would support the economic activity in the Port of Tacoma MIC by increasing high-capacity transit access for employees and increasing travel efficiency along I-5, the primary truck freight corridor.

Figure H3-5, Regional Centers, Tacoma Segment, displays the location of the Tacoma Segment alternatives and the associated regional, manufacturing and industrial, and urban centers. All the Tacoma Segment alternatives and stations are located within the City of Tacoma. The preferred Portland Avenue Station and Portland Avenue Span Station are located in the Port of Tacoma MIC. All the Tacoma Dome alternatives are within the Tacoma Downtown Urban Center, the City of Tacoma South Downtown Subarea Plan, and the Dome Business District. The One Tacoma Plan (2020a) establishes the basis for zoning and development regulations and provides guidance on land use and transportation decisions and a goal to promote the economic health of the City. The City of Tacoma South Downtown Subarea Plan (2020b) provides more detailed guidance and strategies to create equitable transit communities and vibrant mixed-use areas, foster economic development, and accommodate substantial growth (population and employment), promoting sustainable development. A more detailed discussion about planning and regulations is provided in Section 4.2 and Appendix H2, Land Use.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

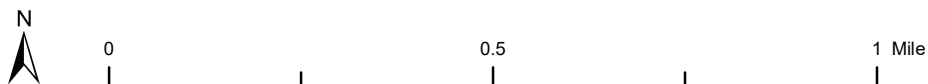


FIGURE H3-5
Regional Centers
Tacoma Segment
Tacoma Dome Link Extension

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Tacoma Dome Link Extension

Draft Environmental Impact Statement

AIR QUALITY SUPPORTING INFORMATION

Appendix H4



H4.1 Applicable Laws, Regulations, Guidance, and Policies

H4.1 Introduction to Resource and Regulatory Requirements

The Puget Sound Clean Air Agency (PSCAA), United States Environmental Protection Agency (EPA), and Washington State Department of Ecology (Ecology) work together in regulating air quality and have jurisdiction over the ambient air quality in the Tacoma Dome Link Extension (TDLE) corridor. The following federal, state, and local laws, regulations, guidance, and policies are applicable to the air quality and greenhouse gas (GHG) analysis for this project:

- Clean Air Act (42 United States Code 7401).
- Code of Federal Regulations (CFR) Title 40, Section 50 (40 CFR 50), U.S. Environmental Protection Agency, National Primary and Secondary Air Quality Standards.
- 40 CFR 86, Control of Emissions from New and In-Use Highway Vehicles and Engines.
- 40 CFR 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans.
- Washington Clean Air Act (Revised Code of Washington [RCW] 70A.15).
- Chapter 173-420 Washington Administrative Code, Conformity of Transportation Activities to Air Quality Implementation Plans.
- FHWA, Updated Interim Guidance on Mobile Source Air Toxic Analysis in National Environmental Policy Act (NEPA) Documents, 2016 (FHWA 2016).
- Federal Transit Administration (FTA), Air Quality Conformity guidance, 2016 (FTA 2016).
- FTA, Greenhouse Gas Emissions from Transit Projects. Programmatic Assessment, 2017 (FTA 2017).
- Puget Sound Clean Air Agency Regulation I, Article 9, Section 15, Fugitive Dust Control Measures.
- Puget Sound Regional Council, Regional Transportation Plan (PSRC 2022a); Appendix D, Regional Air Quality Conformity Analysis, 2018 (PSRC 2022b).
- EPA, Motor Vehicle Emission Simulator (MOVES) MOVES4 Policy Guidance, 2023 (EPA 2023).
- Washington State Department of Transportation (WSDOT) Guidance – Project Level Greenhouse Gas Evaluations under NEPA and SEPA, 2018 (WSDOT 2018).
- WSDOT, Environmental Manual, Air Quality Chapter, 2018.
- American Public Transportation Association Recommended Practice for Quantifying Greenhouse Gas Emissions from Transit, 2009 (APTA 2009).

Federal air quality standards and regulations under the Clean Air Act provide the basic approach for project-level air quality analysis under NEPA. In addition to this environmental analysis, a parallel conformity requirement under the Federal Clean Air Act also applies.

H4.1.1 Federal Clean Air Act

The Federal Clean Air Act, as amended, is the primary federal law that governs air quality. This law, and EPA's related regulations implementing the law, set standards for the concentration of pollutants in the air, known as the National Ambient Air Quality Standards (NAAQS). NAAQS have been established for six common air pollutants known as criteria pollutants carbon

monoxide; ozone; lead; nitrogen dioxide; particulate matter, which is broken down for regulatory purposes into PM₁₀ (particles of 10 micrometers and smaller) and PM_{2.5} (particles of 2.5 micrometers and smaller); and sulfur dioxide.

The NAAQS are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Washington State adopts current federal NAAQS in state regulations administered by Ecology. Applicable state and federal ambient air quality standards are shown in Table H4.1-1.

Based on monitoring information for criteria air pollutants collected over a period of years, Ecology and EPA designate regions as being attainment or nonattainment areas for the criteria pollutants. Once a nonattainment area achieves compliance with the NAAQS, the area is considered an air quality maintenance area and must demonstrate that the area will continue to maintain the standard for a total of 20 years after redesignation. Portions of the project within Pierce County are in a maintenance area for PM_{2.5} and smaller), which is shown in Figure H4.1-1. As of May 2021, Pierce County no longer has a PM₁₀ maintenance area.

Table H4.1-1 Ambient Air Quality Standards

Pollutant ¹	National		Washington State
	Primary	Secondary	
Carbon Monoxide 8-Hour Average 1-Hour Average	9 ppm 35 ppm	NS NS	9 ppm 35 ppm
Ozone 8-Hour Average	0.070 ppm	0.070 ppm	0.070 ppm
Lead Rolling 3-Month Average	0.15 µg/m ³	0.15 µg/m ³	0.15 µg/m ³
Nitrogen Dioxide Annual Arithmetic Mean 1-Hour Average ²	0.053 ppm 100 ppb	0.053 ppm NS	53 ppb 100 ppb
Particulate Matter (PM₁₀) 24-Hour Average ³	150 µg/m ³	150 µg/m ³	150 µg/m ³
Particulate Matter (PM_{2.5}) Annual Arithmetic Mean 24-Hour Average	12 µg/m ³ 35 µg/m ³	15 µg/m ³ 35 µg/m ³	12 µg/m ³ 35 µg/m ³
Sulfur Dioxide Annual Arithmetic Mean 24-Hour Average 3-Hour Average 1-Hour Average ⁴	NS NS NS 75 ppb	NS NS 0.5 ppm NS	0.02 ppm 0.14 ppm 0.5 ppm 75 ppb

Notes:

National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

NS = No standard established

µg/m³ = micrograms per cubic meter

ppm = parts per million

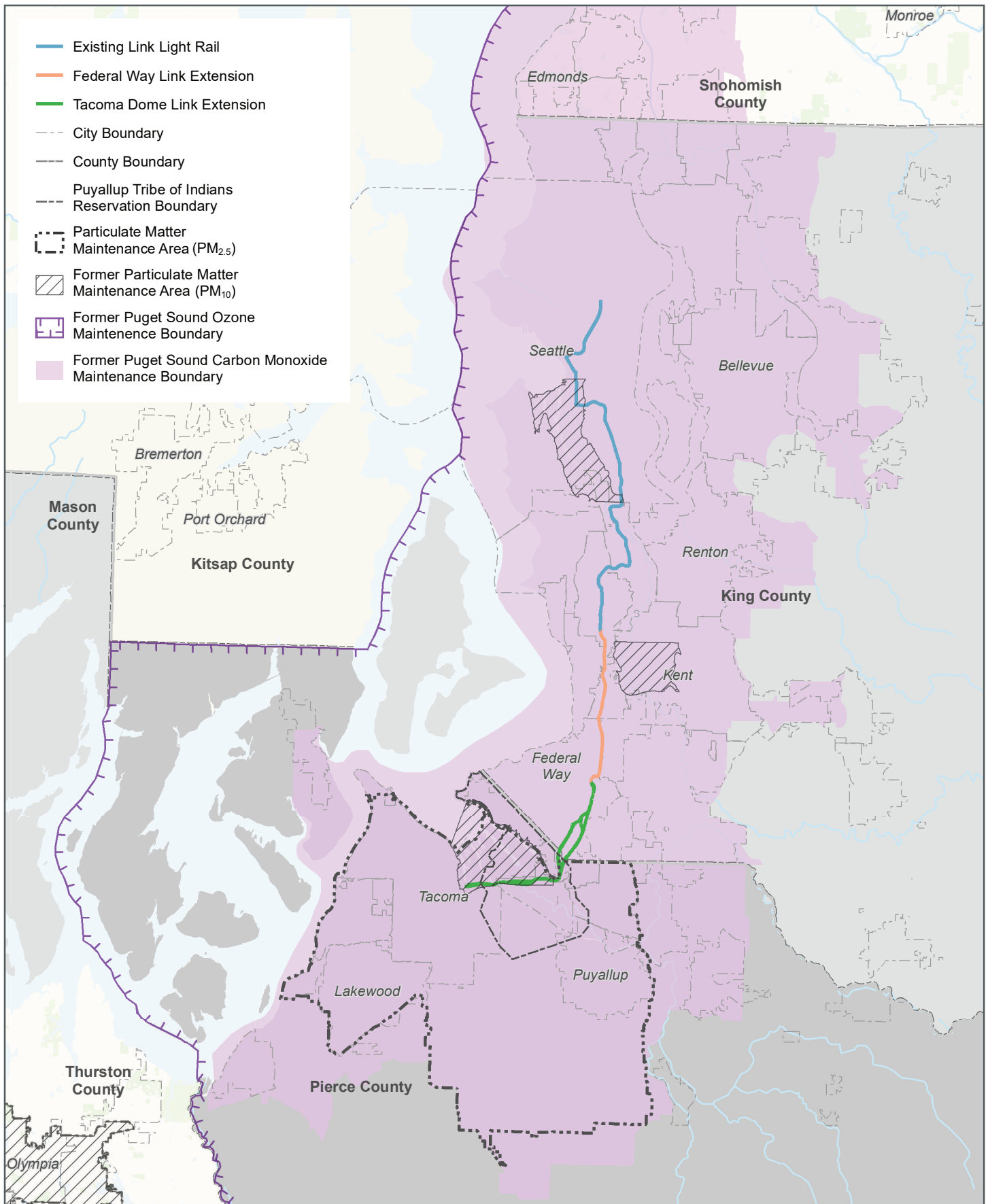
ppb = parts per billion

(1) Annual standards never to be exceeded, short-term standards not to be exceeded more than once a year unless noted.

(2) The 3-year average of the annual 98th percentile of daily maximum 1-hour averages is not to be above this level.

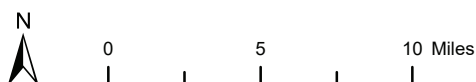
(3) Not to be above this level on more than 3 days over 3 years with daily sampling.

(4) The 3-year average of the annual 99th percentile of daily maximum 1-hour averages is not to be above this level.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H4-1
Central Puget Sound Region
Maintenance Areas
Tacoma Dome Link Extension



H4.1.2 Federal Transportation Conformity

The Clean Air Act Section 176(c) prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving transportation plans, programs, or projects that do not conform to the State Implementation Plan for attaining the NAAQS. Conformity requirements apply on two levels: the regional — or planning and programming — level and the project level. The project must conform at both levels to be approved.

Travel demand and emission models are used to determine whether projects are in conformity with State Implementation Plans for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan and/or Federal Transportation Improvement Program must be modified until conformity is attained.

Project level conformity includes verification that the project has been evaluated as part of the regional conformity analysis and may include a hot-spot analysis to evaluate the potential for future localized pollutant concentrations if the project is in a nonattainment or maintenance area for carbon monoxide or particulate matter. In general, projects must not cause any increase in the number and severity of air quality violations. If carbon monoxide or particulate matter violations already occur in the project vicinity, the project must include measures to reduce or eliminate the existing violations as well.

H4.1.3 Washington Clean Air Act

The Washington Clean Air Act, Chapter 70A.15 RCW, sets forth the state law regarding outdoor air pollution and establishes a system of regional air pollution control authorities to implement federal and state air pollution control regulations. Air pollution control regulations cover the emission of air contaminants that are injurious to health or that unreasonably interfere with the enjoyment of life and property. In general cities and towns cannot develop their own air pollution regulations. However, they can enact local nuisance provisions and performance standards so long as they are not less stringent than those of the regional authority. Many local governments and municipalities within the project area have enacted general nuisance ordinances, which typically contain provisions aimed at such problems as illegal burning, dust, and noxious odors.

H4.1.4 Climate Change and Greenhouse Gases

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels such as carbon dioxide.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing passenger vehicle travel activity (travel demand), 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency (EPA 2020a). To be most effective, all four strategies should be pursued cooperatively.

H4.1.5 Mobile Source Air Toxics

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (EPA 2020b). In addition, the EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-hazard contributors from the 2011 National Air Toxics Assessment (EPA 2011). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter.

H4.1.6 Best Management Practices for Fugitive Dust Control

Standard best management practices (BMPs) during construction that could be used to control fugitive dust emissions include:

- Spray exposed soil with a dust-control agent, such as water or other soil stabilizers, as necessary to reduce emissions of particulate matter.
- Cover all transported loads of soil and wet materials before transport or provide adequate freeboard (i.e., space from the top of the material to the top of the truck bed) to reduce particulate matter emissions during transport.
- Provide wheel washes where necessary to reduce dust and mud that would be carried offsite by vehicles and decrease particulate matter on area roadways.
- Remove dust and mud deposited by construction vehicles or other project activities on paved public roads.
- Cover, install mulch, or plant vegetation as soon as practicable to reduce windblown particulates in the area.



H4.2 Project Level Conformity and Mobile Source Air Toxics Background Information

H4.2 Project Level Conformity

The proposed TDLE project is within a maintenance area for the federal PM_{2.5} standards. Therefore, per 40 CFR Part 93, analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses (an estimation of likely future localized carbon monoxide and/or PM_{2.5} pollutant concentrations and a comparison of those concentrations to the NAAQS, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as an air quality concern. According to 40 CFR 93.123(b)(1), the following are Projects of Air Quality Concern:

- i. New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
- ii. Projects affecting intersections that are at a Level of Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- iii. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- iv. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
- v. Projects in or affecting locations, areas, or categories of sites which that are identified in the PM_{2.5} and PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

TDLE does not qualify as a Projects of Air Quality Concern because of the following reasons:

- i. The proposed project is not a new or expanded highway project. The proposed project would expand an existing light rail transit system. The Transportation Technical Report (Appendix J1 to this Draft Environmental Impact Statement) evaluated five regional screenlines to assess regional north-south and east-west travel within the three subareas of the proposed project. These screenlines provide a regional snapshot of traffic operations using the Puget Sound Regional Council regional travel demand models for passenger vehicle travel and the Sound Transit model for transit travel in the 2016 base year, including daily vehicle volumes, roadway/segment volume/capacity ratios, and vehicle mode share, which separates vehicle travel by single-occupancy vehicles, high-occupancy vehicles, and transit (PSRC 2016). The PM peak hour and daily traffic volumes and volume/capacity ratios for the five screenline locations within the study area were analyzed to understand the relative differences in travel between the No-Build and build alternatives. Screenline volumes and volume/capacity results are summarized in Table H4.2-1. In general, when light rail is extended to Tacoma, some people would change their mode of travel and use transit, thereby resulting in minor decreases in traffic volumes and congestion across all five screenlines in the TDLE corridor. In addition, the light rail vehicles are powered using an overhead catenary system. Therefore, the project would not increase the number of diesel vehicles operating in the project area.
- ii. As discussed above, the proposed project would not result in a significant increase in the number of diesel vehicles in the project area. Therefore, the proposed build alternatives would not affect intersections that are at a Level of Service D, E, or F with a significant number of diesel vehicles related to the project.

- iii. The proposed project does include the construction of four new light rail stations. However, as discussed above, the light rail vehicles are powered using an overhead catenary system, and there are no heavy-duty diesel vehicles associated with the project's operation outside of bus services. The number of buses accessing each station will vary by location but will have a peak hour maximum of six. Many of the current buses in service are hybrids. With evolving electric technology, it is anticipated that buses connecting to the new light rail stations will be fully electrically powered in the near future. King County Metro is working toward a zero-emissions fleet by 2035 (King County Metro 2022), and Pierce Transit is planning to have a fully electric fleet by 2042 (Pierce Transit 2024). While there could be diesel equipment required for maintenance, the daily volumes would be substantially lower than the 10,000-truck-trip criterion for a Project of Air Quality Concern.
- iv. The proposed project includes the construction of four new light rail stations but no expansion of existing stations. As described above, the proposed project is not likely to substantially increase the number of diesel vehicles congregating at a single location because connecting bus service will be fully electric between 2035 and 2042, the light rail vehicles are powered using an overhead catenary system, and no diesel vehicles are associated with light rail operation. While there could be diesel equipment required for maintenance, the daily volumes would be substantially lower than the 10,000-truck-trip criterion for a Project of Air Quality Concern.
- v. The proposed build alternatives are not in or affecting locations, areas, or categories of sites that are identified in the PM_{2.5} and PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Therefore, the proposed project would meet the Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed project would not create a new, or worsen an existing, PM_{2.5} or PM₁₀ violation.

Table H4.2-1 2042 PM Peak Hour/Daily Screenline Performance

Screenline	Direction	PM Peak Hour				Daily	
		No-Build Vehicle Volumes	No-Build Volume/ Capacity Ratio	Build Alternatives Vehicle Volumes	Build Alternatives Volume/ Capacity Ratio	No-Build Vehicle Volumes	Build Alternatives Vehicle Volumes
East-West South of Federal Way	Northbound	18,300	0.69	18,000	0.69	311,900	308,800
	Southbound	29,500	1.04	29,300	1.04	313,400	311,100
North-South in Fife	Eastbound	12,100	0.64	11,900	0.63	185,600	182,900
	Westbound	15,700	0.80	15,500	0.79	182,100	179,800
North-South at Puyallup River	Eastbound	9,700	0.74	9,500	0.73	164,100	161,700
	Westbound	14,400	1.11	14,200	1.10	163,900	161,600
North-South near Tacoma Dome	Eastbound	10,400	0.68	10,200	0.67	167,100	164,900
	Westbound	14,500	0.79	14,300	0.78	166,300	164,300
East-West at S 48th Street	Northbound	17,600	0.47	17,500	0.46	281,200	280,200
	Southbound	26,500	0.32	26,500	0.32	273,600	272,700

Mobile Source Air Toxics

FHWA released updated guidance in January 2023 (FHWA 2023) for determining when and how to address mobile source air toxics impacts in the NEPA process for transportation projects. FHWA identified three levels of analysis:

- No analysis for exempt projects or projects with no potential for meaningful mobile source air toxics effects;
- Qualitative analysis for projects with low potential mobile source air toxics effects; and
- Quantitative analysis to differentiate alternatives for projects with higher potential mobile source air toxics effects.

Projects with no impacts generally include those that a) qualify as a categorical exclusion under 23 CFR 771.117, b) qualify as exempt under the Federal Clean Air Act conformity rule under 40 CFR 93.126, and c) are not exempt but have no meaningful impacts on traffic volumes or vehicle mix.

Projects that have low potential mobile source air toxics effects are those that serve to improve highway, transit, or freight operations or movement without adding substantial new capacity or creating a facility that is likely to substantially increase emissions. The large majority of projects fall into this category.

Projects with high potential mobile source air toxics effects include those that:

- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location; or
- Create new or add significant capacity to urban highways, such as interstates, urban arterials, or urban collector-distributor routes, with traffic volumes where the average annual daily traffic is projected to be in the range of 140,000 to 150,000, or greater, by the design year; and
- Are proposed to be located in proximity to populated areas or in proximity to concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals) in rural areas.

The TDLE build alternatives are projected to reduce the regional vehicle miles traveled (VMT) (See H4.3 Air Quality Modeling Results). Therefore, the build alternatives would have no effect on the regional mobile source air toxics emissions. Based on the FHWA's 2023 mobile source air toxics guidance, this project is considered to have low potential mobile source air toxics effects, and a quantitative analysis of mobile source air toxics emissions is not required (FHWA 2023); however, Tables H4.3-2 through H4.3-5 show the estimates for mobile source air toxics emissions.



H4.3 Air Quality Modeling Results

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)					
			CO	NO _x	SO ₂	VOC	PM ₁₀	PM _{2.5}
Onroad	Vehicle Type ID	Weekday VMT in regional travel demand model						
Year 2020 Emission Factors with 2019 Existing VMT								
Passenger Vehicles	21/31	79,501,800	3.590631678	0.295922084	0.001887578	0.132390338	0.00555913	0.004986031
Transit Bus	42	187,100	9.019854689	2.709484364	0.006495194	0.212367372	0.034628291	0.031674386
Resuspended Road Dust								
Year 2042 No-Build								
Passenger Vehicles	21/31	85,415,900	1.00506524	0.008930946	0.001467571	0.063512845	0.001442248	0.001276683
Transit Bus	42	244,300	10.07557714	1.096931598	0.005803386	0.151119093	0.006274225	0.005634772
Resuspended Road Dust								
Year 2042 Build								
Passenger Vehicles	21/31	85,182,400	1.00506524	0.008930946	0.001467571	0.063512845	0.001442248	0.001276683
Transit Bus	42	239,100	10.07557714	1.096931598	0.005803386	0.151119093	0.006274225	0.005634772
Resuspended Road Dust								

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)							
	Vehicle Type ID	Weekday VMT in regional travel demand model	Naphthalene particle	Naphthalene gas	Ethyl Benzene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Benzene	Acrolein
Onroad										
Year 2020 Emission Factors with 2019 Existing VMT										
Passenger Vehicles	21/31	79,501,800	2.22021E-07	0.000181342	0.002111964	0.000279778	0.001351428	0.000899731	0.002918799	8.0052E-05
Transit Bus	42	187,100	2.95764E-07	0.000896992	0.001822237	0.000192366	0.020320969	0.01271387	0.004358294	0.000690444
Resuspended Road Dust										
Year 2042 No-Build										
Passenger Vehicles	21/31	85,415,900	4.71566E-08	1.96032E-05	0.001051381	0	0.000174485	8.17422E-05	0.000745285	7.80159E-06
Transit Bus	42	244,300	2.1619E-07	7.38238E-05	0.001504259	0	0.014175436	0.012149135	0.002593972	8.70787E-05
Resuspended Road Dust										
Year 2042 Build										
Passenger Vehicles	21/31	85,182,400	4.71566E-08	1.96032E-05	0.001051381	0	0.000174485	8.17422E-05	0.000745285	7.80159E-06
Transit Bus	42	239,100	2.1619E-07	7.38238E-05	0.001504259	0	0.014175436	0.012149135	0.002593972	8.70787E-05
Resuspended Road Dust										

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
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Vehicle Type ID	Activity	Percent Split
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Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)							
	Vehicle Type ID	Weekday VMT in regional travel demand model	Dibenzo(a,h)ant hracene particle	Dibenzo(a,h)ant hracene gas	Fluoranthene particle	Fluoranthene gas	Acenaphthene particle	Acenaphthene gas	Acenaphthylene particle	Acenaphthylene gas
Onroad										
Year 2020 Emission Factors with 2019 Existing VMT										
Passenger Vehicles	21/31	79,501,800	4.26009E-08	0	9.81764E-07	5.49461E-06	0	4.17183E-06	6.60681E-08	1.4105E-05
Transit Bus	42	187,100	1.43515E-07	0	1.23895E-05	2.53788E-05	5.92949E-09	2.14127E-05	8.46483E-08	4.09455E-05
Resuspended Road Dust										
Year 2042 No-Build										
Passenger Vehicles	21/31	85,415,900	7.79598E-09	0	5.14138E-08	5.28669E-07	0	3.78615E-07	1.40235E-08	1.70954E-06
Transit Bus	42	244,300	3.38423E-08	0	2.3381E-07	1.96649E-06	5.11194E-09	1.5859E-06	6.14282E-08	6.09277E-06
Resuspended Road Dust										
Year 2042 Build										
Passenger Vehicles	21/31	85,182,400	7.79598E-09	0	5.14138E-08	5.28669E-07	0	3.78615E-07	1.40235E-08	1.70954E-06
Transit Bus	42	239,100	3.38423E-08	0	2.3381E-07	1.96649E-06	5.11194E-09	1.5859E-06	6.14282E-08	6.09277E-06
Resuspended Road Dust										

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)							
			Anthracene gas	Benz(a)anthracene particle	Benz(a)anthracene gas	Benzo(a)pyrene particle	Benzo(a)pyrene gas	Benzo(b)fluoranthene particle	Benzo(b)fluoranthene gas	Benzo(g,h,i)perylene particle
Onroad	Vehicle Type ID	Weekday VMT in regional travel demand model								
Year 2020 Emission Factors with 2019 Existing VMT										
Passenger Vehicles	21/31	79,501,800	3.41373E-06	1.01098E-06	5.8254E-07	1.71907E-06	1.82937E-08	8.10298E-07	2.49304E-07	4.26938E-06
Transit Bus	42	187,100	1.66795E-05	7.00422E-06	2.96427E-06	4.33812E-06	1.33203E-08	1.67272E-06	1.81527E-07	5.53426E-06
Resuspended Road Dust										
Year 2042 No-Build										
Passenger Vehicles	21/31	85,415,900	3.16589E-07	1.33475E-07	5.1066E-08	3.34256E-07	2.77221E-09	1.6284E-07	3.77793E-08	9.04448E-07
Transit Bus	42	244,300	1.22281E-06	5.90263E-07	1.89632E-07	1.451E-06	8.90734E-09	7.06891E-07	1.21388E-07	3.92769E-06
Resuspended Road Dust										
Year 2042 Build										
Passenger Vehicles	21/31	85,182,400	3.16589E-07	1.33475E-07	5.1066E-08	3.34256E-07	2.77221E-09	1.6284E-07	3.77793E-08	9.04448E-07
Transit Bus	42	239,100	1.22281E-06	5.90263E-07	1.89632E-07	1.451E-06	8.90734E-09	7.06891E-07	1.21388E-07	3.92769E-06
Resuspended Road Dust										

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)							
Onroad	Vehicle Type ID	Weekday VMT in regional travel demand model	Benzo(g,h,i)perylene gas	Benzo(k)fluoranthene particle	Benzo(k)fluoranthene gas	Chrysene particle	Chrysene gas	Fluorene particle	Fluorene gas	Indeno(1,2,3,c,d)pyrene particle
Year 2020 Emission Factors with 2019 Existing VMT										
Passenger Vehicles	21/31	79,501,800	4.70026E-09	7.73281E-07	2.49304E-07	7.73004E-07	4.72194E-07	3.31689E-07	7.78989E-06	1.61234E-06
Transit Bus	42	187,100	5.39053E-08	1.07324E-06	1.81527E-07	4.60199E-06	1.34938E-06	5.48368E-06	3.74183E-05	2.21357E-06
Resuspended Road Dust										
Year 2042 No-Build										
Passenger Vehicles	21/31	85,415,900	0	1.6284E-07	3.77793E-08	1.12773E-07	5.70466E-08	0	7.67222E-07	3.39812E-07
Transit Bus	42	244,300	0	7.06891E-07	1.21388E-07	4.9699E-07	2.07415E-07	8.92559E-09	3.28492E-06	1.47512E-06
Resuspended Road Dust										
Year 2042 Build										
Passenger Vehicles	21/31	85,182,400	0	1.6284E-07	3.77793E-08	1.12773E-07	5.70466E-08	0	7.67222E-07	3.39812E-07
Transit Bus	42	239,100	0	7.06891E-07	1.21388E-07	4.9699E-07	2.07415E-07	8.92559E-09	3.28492E-06	1.47512E-06
Resuspended Road Dust										

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emission Factors (g/mi)					
<i>Onroad</i>	Vehicle Type ID	Weekday VMT in regional travel demand model	Indeno(1,2,3,c,d) pyrene gas	Phenanthrene particle	Phenanthrene gas	Pyrene particle	Pyrene gas	Total HAPs
Year 2020 Emission Factors with 2019 Existing VMT								
Passenger Vehicles	21/31	79,501,800	0	1.00856E-06	1.74329E-05	1.33049E-06	6.39913E-06	0.007898431
Transit Bus	42	187,100	0	1.35901E-05	6.84908E-05	1.77431E-05	3.01286E-05	0.041316544
Resuspended Road Dust								
Year 2042 No-Build								
Passenger Vehicles	21/31	85,415,900	0	5.08941E-08	2.03701E-06	5.56269E-08	6.04045E-07	0.002089204
Transit Bus	42	244,300	0	2.37617E-07	8.88082E-06	2.57945E-07	2.32558E-06	0.030620122
Resuspended Road Dust								
Year 2042 Build								
Passenger Vehicles	21/31	85,182,400	0	5.08941E-08	2.03701E-06	5.56269E-08	6.04045E-07	0.002089204
Transit Bus	42	239,100	0	2.37617E-07	8.88082E-06	2.57945E-07	2.32558E-06	0.030620122
Resuspended Road Dust								

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

**Tacoma Dome Link Extension On-road operational
displaced vehicles emissions**

			Emissions (lb / day)						
			CO	NO _x	SO ₂	VOC	PM ₁₀	PM _{2.5}	Total HAPs
Onroad	Vehicle Type ID	Weekday VMT in regional travel demand model							
Year 2020 Emission Factors with 2019 Existing VMT									
Passenger Vehicles	21/31	79,501,800	629335.79	51866.74	330.84	23204.27	974.36	873.91	1384.37
Transit Bus	42	187,100	3720.56	1117.62	2.68	87.60	14.28	13.07	17.04
Resuspended Road Dust							7998.04	1999.51	
Year 2042 No-Build									
Passenger Vehicles	21/31	85,415,900	189263.81	1681.79	276.36	11960.10	271.59	240.41	393.42
Transit Bus	42	244,300	5426.60	590.80	3.13	81.39	3.38	3.03	16.49
Resuspended Road Dust							8626.39	2156.60	
Year 2042 Build									
Passenger Vehicles	21/31	85,182,400	188746.43	1677.19	275.60	11927.41	270.85	239.76	392.34
Transit Bus	42	239,100	5311.10	578.22	3.06	79.66	3.31	2.97	16.14
Resuspended Road Dust							8599.32	2149.83	

Notes: Emission factor is weighted by activity between gasoline, diesel, CNG, E85, and electric fueled vehicles.

Emission factors are from an on-road MOVES4 run for King County, WA in July
Per FHWA Quantitative MSAT guidance, emissions process on roadways include running exhaust, crankcase running exhaust, evap permeation, and

Vehicle Type ID	Activity	Percent Split
Passenger Car (21)	110,717,124	44%
Passenger Truck (31)	139,755,331	56%
Sum	250,472,455	100%

Mobile Emissions Summary

	Emissions (lb / day)						
	CO	NO _x	SO ₂	VOC	PM ₁₀	PM _{2.5}	Total HAPs
2020 Onroad	633,056.35	52,984.36	333.52	23,291.87	8,986.68	2,886.48	1,401.41
2042 No Build Onroad	194,690.42	2,272.58	279.48	12,041.49	8,901.36	2,400.05	409.91
2042 Build Onroad	194,057.52	2,255.41	278.66	12,007.07	8,873.47	2,392.55	408.48
Net change from No Build to Build	(632.89)	(17.17)	(0.82)	(34.43)	(27.89)	(7.49)	(1.43)
Percent change from No Build to Build	-0.33%	-0.76%	-0.29%	-0.29%	-0.31%	-0.31%	-0.35%
Net change from existing to Build	(438,998.83)	(50,728.95)	(54.86)	(11,284.80)	(113.21)	(493.93)	(992.93)
Percent change from existing to Build	-69%	-96%	-16%	-48%	-1%	-17%	-71%

Regional VMT, VHT, VHD

Annualization Factor:

315

2019 Existing	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	79,501,800	25,043,067,000	2,798,800	735,700
Heavy Trucks	9,009,900	2,838,118,500	261,300	82,300
Transit	205,900	64,858,500	15,360	-
Total	88,717,600	27,946,044,000	3,075,460	818,000

2042 No Build	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	85,415,900	26,906,008,500	3,059,700	817,200
Heavy Trucks	11,270,500	3,550,207,500	329,700	106,800
Transit	391,600	123,354,000	26,990	-
Total	97,078,000	30,579,570,000	3,416,390	924,000

2042 Build	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	85,182,400	26,832,456,000	3,044,800	807,100
Heavy Trucks	11,270,500	3,550,207,500	329,700	106,800
Transit	396,900	125,023,500	26,790	-
Total	96,849,800	30,507,687,000	3,401,290	913,900
Delta from No Build		-71,883,000		

2042 Turnback	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	85,200,900	26,838,283,500	3,046,200	808,500
Heavy Trucks	11,270,500	3,550,207,500	329,700	106,800
Transit	393,900	124,078,500	26,790	-
Total	96,865,300	30,512,569,500	3,402,690	915,300
Delta from No Build		-67,000,500		

2042 SFW Interim Terminus	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	85,442,600	26,914,419,000	3,061,400	818,000
Heavy Trucks	11,270,500	3,550,207,500	329,700	106,800
Transit	386,200	121,653,000	26,690	-
Total	97,099,300	30,586,279,500	3,417,790	924,800
Delta from No Build		6,709,500		

2042 Fife Interim Terminus	Weekday VMT	Annual VMT	VHT	VHD
Passenger Cars	85,325,700	26,877,595,500	3,054,200	813,300
Heavy Trucks	11,270,500	3,550,207,500	329,700	106,800
Transit	389,500	122,692,500	26,490	-
Total	96,985,700	30,550,495,500	3,410,390	920,100
Delta from No Build		-29,074,500		

Passengers cars and heavy truck data from PSRC travel model.

Transit data from ST model, assuming 6 hour of peak operation and 12 hours of off-peak operations.

2019 Existing	VMT
Bus	187,100
Streetcar	600
Light Rail	10,600
Commuter Rail	7,600
Total	205,900

2042 No Build	VMT
Bus	244,300
Streetcar	3,200
Light Rail	128,900
Commuter Rail	15,200
Total	391,600

2042 Build	VMT
Bus	239,100
Streetcar	3,200
Light Rail	139,400
Commuter Rail	15,200
Total	396,900

2042 Turnback	VMT
Bus	239,100
Streetcar	3,200
Light Rail	136,400
Commuter Rail	15,200
Total	393,900

2042 SFW Interim Terminus	VMT
Bus	239,800
Streetcar	3,200
Light Rail	128,000
Commuter Rail	15,200
Total	386,200

2042 Fife Interim Terminus	VMT
Bus	239,100
Streetcar	3,200
Light Rail	132,000
Commuter Rail	15,200
Total	389,500

Cars per Train for VMT/VHT Calculations

Rail Service	2019	2042
Link Light Rail	2	4
Souder North	2.5	
Souder South	7	10

Resuspended Road Dust

Total Vehicle Miles Traveled (VMT) per Speed Bin										Silt Loading	AP-42 Roadway Category	sL (Winter)
SpeedBin	MOVES ID	Weight tons	Low ADT Road		7	High ADT Road		16				
			5	6		12	13					
Passenger Cars - 2020	21	2	0	0	0	79501800	0	0	High ADT Road	5000-10000 ADT	0.12	
Transit Bus - 2020	42	15	0	0	0	187100	0	0	Low ADT Road	500-5000 ADT	0.6	
Passenger Cars - 2042 NB	21	2	0	0	0	85415900	0	0	Note: Assume all high ADT roads.			
Transit Bus - 2042 NB	42	15	0	0	0	244300	0	0				
Passenger Cars - 2042 Build	21	2	0	0	0	85182400	0	0				
Transit Bus - 2042 Build	42	15	0	0	0	239100	0	0				
Vehicle Type	Pollutant	Road Type	k (g/VMT)	sL	W	P	VMT	Emissions (tons)	Year	Total Emissions		
Passenger Cars - 2020	PM _{2.5}	High ADT Road	0.25	0.12	2	180	79501800	0.9817	2020	<u>2020</u>		
Passenger Cars - 2042 NB	PM _{2.5}	High ADT Road	0.25	0.12	2	180	85415900	1.0547	2042 NB	PM _{2.5}	1.00 tons/day	
Passenger Cars - 2042 Build	PM _{2.5}	High ADT Road	0.25	0.12	2	180	85182400	1.0519	2042 Build	PM ₁₀	4.00 tons/day	
Transit Bus - 2020	PM _{2.5}	High ADT Road	0.25	0.12	15	180	187100	0.0180	2020	<u>2042 NB</u>		
Transit Bus - 2042 NB	PM _{2.5}	High ADT Road	0.25	0.12	15	180	244300	0.0236	2042 NB	PM _{2.5}	1.08 tons/day	
Transit Bus - 2042 Build	PM _{2.5}	High ADT Road	0.25	0.12	15	180	239100	0.0231	2042 Build	PM ₁₀	4.31 tons/day	
Passenger Cars - 2020	PM ₁₀	High ADT Road	1	0.12	2	180	79501800	3.9269	2020	<u>2042 Build</u>		
Passenger Cars - 2042 NB	PM ₁₀	High ADT Road	1	0.12	2	180	85415900	4.2190	2042 NB	PM _{2.5}	1.07 tons/day	
Passenger Cars - 2042 Build	PM ₁₀	High ADT Road	1	0.12	2	180	85182400	4.2074	2042 Build	PM ₁₀	4.30 tons/day	
Transit Bus - 2020	PM ₁₀	High ADT Road	1	0.12	15	180	187100	0.0722	2020			
Transit Bus - 2042 NB	PM ₁₀	High ADT Road	1	0.12	15	180	244300	0.0942	2042 NB			
Transit Bus - 2042 Build	PM ₁₀	High ADT Road	1	0.12	15	180	239100	0.0922	2042 Build			
Passenger Cars - 2020	PM _{2.5}	Low ADT Road	0.25	0.6	2	180	0	0.0000	2020			
Passenger Cars - 2042 NB	PM _{2.5}	Low ADT Road	0.25	0.6	2	180	0	0.0000	2042 NB			
Passenger Cars - 2042 Build	PM _{2.5}	Low ADT Road	0.25	0.6	2	180	0	0.0000	2042 Build			
Transit Bus - 2020	PM _{2.5}	Low ADT Road	0.25	0.6	15	180	0	0.0000	2020			
Transit Bus - 2042 NB	PM _{2.5}	Low ADT Road	0.25	0.6	15	180	0	0.0000	2042 NB			
Transit Bus - 2042 Build	PM _{2.5}	Low ADT Road	0.25	0.6	15	180	0	0.0000	2042 Build			
Passenger Cars - 2020	PM ₁₀	Low ADT Road	1	0.6	2	180	0	0.0000	2020			
Passenger Cars - 2042 NB	PM ₁₀	Low ADT Road	1	0.6	2	180	0	0.0000	2042 NB			
Passenger Cars - 2042 Build	PM ₁₀	Low ADT Road	1	0.6	2	180	0	0.0000	2042 Build			
Transit Bus - 2020	PM ₁₀	Low ADT Road	1	0.6	15	180	0	0.0000	2020			
Transit Bus - 2042 NB	PM ₁₀	Low ADT Road	1	0.6	15	180	0	0.0000	2042 NB			
Transit Bus - 2042 Build	PM ₁₀	Low ADT Road	1	0.6	15	180	0	0.0000	2042 Build			

Formula used from AP-42 Section 13.2.1 "Paved Roads"

$$E = k (sL/2)^{0.91} (W/3)^{1.02} (1-P/4N)$$

E = particulate emission factor (having units matching the units of k)

k = particle size multiplier for particle size range and units of interest, From AP-42 Table 13.2-1.1

sL = road surface silt loading (grams per square meter) (g/m²), Assume winter time condition

W = average weight (tons) of the vehicles traveling the road

Figure 13.2.1-2 estimates that days of precipitation >0.01 inch per year (P) is approximately 180; N is 365 days.

Assumed passenger cars are 2 tons. Assumed buses weigh 15 tons.



H4.4 Climate Change Background Information

H4.4 Climate Change and Global Warming Potential

GHGs vary considerably in terms of climate changes and Global Warming Potential, which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. Global Warming Potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). Global Warming Potential is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, typically a 100-year time horizon, relative to the emissions of 1 ton of carbon dioxide, which is the primary GHG emitted through human activities. Gases with a higher Global Warming Potential absorb more energy per ton emitted than gases with a lower Global Warming Potential and thus contribute more to warming Earth (EPA 2020a). GHG emissions are typically measured in terms of pounds or tons of “carbon dioxide equivalents” (CO₂e). Table H4.4-1 shows the Global Warming Potential for each type of GHG. For example, sulfur hexafluoride is 23,900 times more potent at contributing to global warming than carbon dioxide.

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiency, 2) reducing passenger vehicle travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. TDLE is expected to reduce dependency on single-occupancy vehicles, slow growth in VMT, conserve energy, and reduce GHG emissions while helping to achieve Washington State’s emissions reduction goals (RCW 70.235.020).

Table H4.4-1 Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO ₂)	50–200	1
Methane (CH ₄)	12	21
Nitrous Oxide (N ₂ O)	114	310
HFC-23	270	11,700
HFC-134a	14	1,300
HFC-152a	1.4	140
PFC: Tetrafluoromethane (CF ₄)	50,000	6,500
PFC: Hexafluoroethane (C ₂ F ₆)	10,000	9,200
Sulfur Hexafluoride (SF ₆)	3,200	23,900

Source: Intergovernmental Panel on Climate Change, 2007.



H4.5 Transportation Improvement Program Listing

Jurisdiction: Sound Transit

Project Number: RTA-98 **County:** Multicounty Project **Title:** Tacoma Dome Link Extension

Phase	Programmed Year	Oblig. Date	Funding Source	Federal Funds	State Funds	Local Funds	Phase Total
PE	2023	1/1/23	Local	\$0	\$0	\$34,981,000	\$34,981,000
PE	2023	2/28/23*	5307(Urban)	\$10,290,197	\$0	\$0	\$10,290,197
PE	2023	7/1/23	5307(Urban)	\$9,843,957	\$0	\$0	\$9,843,957
PE	2024	1/1/24	Local	\$0	\$0	\$14,587,000	\$14,587,000
PE	2025	1/1/25	Local	\$0	\$0	\$2,198,000	\$2,198,000
PE	2026	1/1/26	Local	\$0	\$0	\$82,000,000	\$82,000,000
ROW	2023	1/1/23	Local	\$0	\$0	\$86,472,000	\$86,472,000
ROW	2024	1/1/24	Local	\$0	\$0	\$53,411,000	\$53,411,000
ROW	2025	1/1/25	Local	\$0	\$0	\$2,980,000	\$2,980,000
ROW	2026	1/1/26	Local	\$0	\$0	\$28,000,000	\$28,000,000
OTH	2023	1/1/23	Local	\$0	\$0	\$8,615,000	\$8,615,000
OTH	2024	1/1/24	Local	\$0	\$0	\$7,946,000	\$7,946,000
OTH	2025	1/1/25	Local	\$0	\$0	\$668,000	\$668,000
OTH	2026	1/1/26	Local	\$0	\$0	\$22,000,000	\$22,000,000

WSDOT PIN:

Totals: \$20,134,154 \$0 \$343,858,000 \$363,992,154

Federal Aid/FTA Grant Number(s): WA-2022-086-00

Functional Class: Not applicable (transit, enhancements, Etc.)

Improvement Type: New/Relocated Transit Alignment

Location: Link LR Extension

From: Federal Way Transit Center

To: Tacoma Dome

Total Cost: \$4,987,000,000

Regionally Significant: Yes

Environmental Status: EIS

Year of Expenditure for Total Cost: 2023

Expected Year of Completion: 2034

MTP Status: Candidate

MTP Reference(s): 5685

Description:

This project extends light rail 9.7 miles from the Federal Way Transit Center to Tacoma, primarily along the I-5 corridor, and includes four new stations in south Federal Way, Fife, and two in Tacoma (one near E Portland Avenue and one near the Tacoma Dome Station). This project includes the planning of a light rail maintenance facility, OMF-South, to add storage and maintenance capacity in support of the expansion of light rail on the Federal Way to Tacoma corridor. This is a multiyear project and the funding programmed reflects the funds within the span of the TIP.

* = Asterisk by Obligation Date indicates funds for this phase obligated earlier this calendar year



H4.6 Regional Transportation Plan Listing

Sponsor: SOUND TRANSIT

Project ID: 5685

Title: Link LRT Extension from Federal Way to Tacoma

MTP Status: Candidate

Estimated Cost: \$2,490,477,588

Description:

This project extends light rail south from Federal Way Station to Tacoma Dome Station, with new stations at serving South Federal Way, Fife and East Tacoma. New parking facilities are included at South Federal Way and Fife with +/- 500 spaces at each station.

Location / Facility:

Link LRT extension

From:

Federal Way Station

To:

Tacoma Dome Station

County:

Multiple Counties
(any combination)

Completion Year:

2030

Prioritization Score:

61

Sponsor: SOUND TRANSIT

Project ID: 5686

Title: Link LRT Extension from Angle Lake to Federal Way

MTP Status: Approved

Estimated Cost: \$2,505,362,386

Description:

The Federal Way Link Extension project is a 7.8 mile extension of light rail from the city of SeaTac's Angle Lake Station to the Federal Way Transit Center with service to the cities of Des Moines and Kent. Operating in exclusive right-of-way, the project generally parallels I-5 on an elevated or at-grade alignment. Trains will serve three stations: Highline College in Kent/Des Moines; South 272nd in Federal Way; and the Federal Way Transit Center at 23rd Avenue South. The station will feature new parking facilities providing approximately 1,200 parking spaces.

Location / Facility:

Link LRT extension

From:

Angle Lake Station

To:

Federal Way Transit Center

County:

King County

Completion Year:

2024

Prioritization Score:

54



H4.7 References

H4.7 References

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Tacoma Dome Link Extension

Draft Environmental Impact Statement

WATER RESOURCES SUPPORTING INFORMATION

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Acronyms and Abbreviations

ASGWC	Areas Susceptible to Ground Water Contamination
BMP	best management practice
CSWPPP	Construction Stormwater Pollution Prevention Plan
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMC	Fife Municipal Code
FWRC	Federal Way Revised Code
HPA	Hydraulic Project Approval
I-5	Interstate 5
LOMA	Letters of Map Amendment
MMC	Milton Municipal Code
NPDES	National Pollutant Discharge Elimination System
NPGIS	non-pollution-generating surface
PCC	Pierce County Code
PGIS	pollution-generating surface
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SR	State Route
TMC	Tacoma Municipal Code
TOD	transit oriented development
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
U.S. DOT	United States Department of Transportation
WAC	Washington Administrative Code
WCHRN	Washington Coastal Hazards Resilience Network
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

The information contained in this appendix serves as a supplement to Section 4.8 Water Resources and is not intended as a stand-alone document. Where full discussion of a topic is presented in Section 4.8, no repeat or additional discussion of that topic is included in this appendix.

2 REGULATORY REQUIREMENTS AND PERMITS

2.1 Regulations and Design Guides

The federal, state, local, and Tribal regulations that govern the protection or use of water resources in the study area are listed below. Local plans, policies, or design manuals that guide the use of water resources in the study area are also included.

2.1.1 Federal

- Coastal Zone Management Act, 16 United States Code (U.S.C.) § 1451 et seq.
- Rivers and Harbors Act:
 - Section 9 (33 U.S.C. § 401) – Construction of any structure in or over any navigable water.
 - Section 10 (33 U.S.C. § 403) – Excavation and fill within navigable waters.
 - Section 408 (33 U.S.C. § 408) – Alteration of an existing Civil Works project.
- Clean Water Act:
 - Section 401 (33 U.S.C. § 1341) – Water Quality Certification (delegated authority to the Environmental Protection Agency [EPA], Tribe, and/or state).
 - Section 402 (33 U.S.C. § 1342) – National Pollutant Discharge Elimination System (NPDES).
 - Section 404 (33 U.S.C. § 1344) – Permits for Dredge or Fill.
- Safe Drinking Water Act, 42 U.S.C. § 300f et seq., Chapter 6A.
- National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973, 42 U.S.C. § 4001 et seq.
- National Environmental Policy Act, 42 U.S.C. § 4321.
- Floodplain Management Presidential Executive Order 11988 of May 24, 1977, and its subsequent updates (Executive Orders 13690 and 14030), which direct federal agencies to evaluate the impacts of their actions on FEMA-designated floodplains, consider options to minimize or avoid those impacts, and increase resiliency to future flood risk. These will guide the design for crossings of the Fife Ditch Tributary 1 and the Puyallup River floodplains.
- United States Department of Transportation (U.S. DOT) Order 5650.2 – Floodplain Management and Protection.
- Endangered Species Act Biological Opinion for the Implementation of the National Flood Insurance Program in the State of Washington (NMFS 2008).
- FTA Region 10 Standard Operating Procedures No. 22 Water Resources.

2.1.2 Tribal

- Amendment to the Clean Water Act for the Puyallup Tribe of Indians (TAS Status), 33 U.S.C. § 1377 et seq.
- Puyallup Tribal Code Chapter 10.08, Water Quality Standards for Surface Waters.
- Puyallup Tribal Code Chapter 15.12, Zoning Ordinance.
- Puyallup Tribal Code Chapter 15.16, Permit Applications Procedure Code.
- Puyallup Tribal grant or waiver of Clean Water Act, 33 U.S.C. § 1377.
- Puyallup Tribe of Indians Water Quality Antidegradation Implementation Procedural Review.

2.1.3 State

- Water Quality Standards for Surface Waters, Washington Administrative Code (WAC) 173-201A.
- Water Quality Standards for Groundwater, WAC 173-200.
- Flood Control Management Act, Revised Code of Washington (RCW) 86.
- Water Pollution Control Act, RCW 90.48.
- Shoreline Management Act, RCW 90.58, WAC 173-18 and 173-26.
- 2019 Stormwater Management Manual for Western Washington (Ecology Manual) (Ecology 2019b).
- Washington State Department of Transportation (WSDOT) Highway Runoff Manual (WSDOT 2019).
- WSDOT Hydraulics Manual (WSDOT 2023).
- Washington State Hydraulic Code, WAC 220-660.

2.1.4 Regional

- Sound Transit Design Criteria Manual, Revision 5 (Sound Transit 2021).
- Low Impact Development Technical Guidance Manual for Puget Sound (Puget Sound Partnership 2012).

2.1.5 Local

Pierce County

- Storm Drainage and Surface Water Management, Title 11 Pierce County Code (PCC).
- Construction and Infrastructure Regulations – Site Development and Stormwater Drainage, 26 Title 17A PCC.
- Development Regulations – Storm Drainage and Site Development, Title 17A PCC.
- Development Regulations – Critical Areas, Title 18E PCC.
- Development Policies and Regulations – Shorelines, Title 18S PCC.
- Pierce County Stormwater Management & Site Development Manual (Pierce County 2021).

City of Federal Way

- Shoreline Management, Federal Way Revised Code (FWRC) 15.05.
- Surface Water Management, Title 16 FWRC.
- Zoning and Development – Environmentally Critical Areas, FWRC 19.145.
- King County Surface Water Design Manual (King County 2021a).
- Federal Way Addendum to the King County Surface Water Design Manual (City of Federal Way 2017).
- King County Stormwater Pollution Prevention Manual (King County 2021b).

City of Milton

- Storm Drainage of Surface Water – Utility, Management, and Maintenance; Milton Municipal Code (MMC) 13.26.
- Flood Damage Prevention, MMC 15.20.
- Shoreline Master Program, MMC 18.12.
- Critical Areas, MMC 18.16.

City of Fife

- Drainage of Surface Water, Fife Municipal Code (FMC) 15.32.
- State Environmental Policy Act (SEPA) Guidelines, FMC 17.04.
- Critical Areas General Provisions, FMC 17.05.
- Aquifer Recharge Areas, FMC 17.07.
- Frequently Flooded Areas, FMC 17.09.
- Flood Damage Prevention, FMC 15.40.
- Shoreline Master Program, FMC 17.21.

City of Tacoma

- Wastewater and Surface Water Management – Regulation and Rates, Tacoma Municipal Code (TMC) 12.08.
- South Tacoma Groundwater Protection District, TMC 13.09.
- Critical Areas Preservation Ordinance TMC 13.11.
- Shoreline Master Program TMC 19.01.
- Stormwater Management Manual (City of Tacoma 2021).

2.2 Applicable Permits

The federal, state, local, and Tribal permits required for projects that affect water resources in the study area are listed below.

2.2.1 Federal

- Clean Water Act:
 - Section 401 (33 U.S.C. § 1341) – Water Quality Certification (approval issued by the state, Tribe, or EPA).
 - Section 402 (33 U.S.C. § 1342) – NPDES (implemented by state).
 - Section 404 (33 U.S.C. § 1344) – Permits for Dredge or Fill (approval issued by the United States Army Corps of Engineers [USACE]).
- Rivers and Harbors Act:
 - Section 9 (33 U.S.C. § 401) – Construction of any structure in or over any navigable water.
 - Section 10 (33 U.S.C. § 403) – Excavation and fill within navigable waters (approval issued by the USACE).
 - Section 408 (33 U.S.C. § 408) – Alteration of an existing civil works project (approval issued by the USACE).
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Mapping Conditional Letter of Map Revision Application.

2.2.2 Tribal

- Puyallup Tribal Code 15.12.390, Conditional Use Permit.
- Puyallup Tribal Code 15.12.060/15.12.070, Development Permit.
- Puyallup Tribal Code 15.12.090, Construction Permit.

2.2.3 Delegated authority for Section 401 Water Quality Certification State and County

- NPDES Construction Stormwater General Permit (Ecology 2021).
- NPDES Western Washington Phase I and Phase II Municipal Stormwater General Permits (Ecology 2019a).
- Section 401 Water Quality Certification – Washington State Department of Ecology (Ecology).
- Hydraulic Project Approval (HPA) – Washington Department of Fish and Wildlife (WDFW) (RCW 77.55).

2.2.4 Local Agencies

- Construction Permits – Cities of Federal Way, Milton, Fife, and Tacoma; Pierce County.
- Development Permits – Cities of Federal Way, Milton, Fife, and Tacoma; Pierce County.
- Critical Areas Approvals – Cities of Federal Way, Milton, Fife, and Tacoma; Pierce County.
- Floodplain Development Permits – Cities of Milton, Fife, and Tacoma; Pierce County.
- Shoreline Substantial Development Permit – Cities of Fife, Milton, and Tacoma; Pierce County.

2.2.5 Other

- Pipeline and Utility Crossing: Permits – Utility Providers.
- Utility Approvals: Easements and Use Agreements – Utility Providers.

3 AFFECTED ENVIRONMENT

3.1 Natural Water Bodies

The major natural water bodies and their associated tributaries located within the study area are described below, generally listed from north to south.

3.1.1 Federal Way Segment

The study area in the Federal Way Segment contains the following water bodies:

- East Fork Hylebos Creek Tributary 0016A: This stream originates west of Interstate 5 (I-5) near S 324th Street, and it flows southward through the study area, joining other tributaries to form East Fork of Hylebos Creek. The East Fork Hylebos Creek Tributary 0016A has no documented water quality impairments.
- West Fork Hylebos Creek Tributary 0014C: A small segment of West Fork Hylebos Creek Tributary 0014C near the stream's headwaters is present in the northern portion of the study area, where it is confined within an in-line stormwater facility near S 324th Street. West Fork Hylebos Creek Tributary 0014C is designated on Ecology's 303(d) list for pH, copper, lead, and zinc (Ecology 2018). The stream then flows south and eventually joins other tributaries to form the West Fork of Hylebos Creek before reaching the South Federal Way Segment.

3.1.2 South Federal Way Segment

The study area in the South Federal Way Segment contains the following water bodies:

- East Fork Hylebos Creek Tributary 0016A: From its headwaters described above, this stream continues flowing southward through the study area south of S 344th Street, joining other tributaries downstream near S 375th Street to form the East Fork of Hylebos Creek. The East Fork Hylebos Creek Tributary 0016A has no documented water quality impairments.
- North Fork Hylebos Creek: This stream originates in regional stormwater facilities immediately north of S 356th Street. A small segment of the stream near its headwaters flows through the study area, where it is confined in a straight, ditch-like channel. Stream reaches in the study area are on the 303(d) list, based on the benthic macroinvertebrate bioassessment parameter (Ecology 2023).
 - Federal Way Stream 2 (SFW-02): Originates on the west side of State Route (SR) 99, just south of S 359th Street and is assumed to join North Fork Hylebos Creek east of SR 99.
 - Federal Way Stream 4 (SFW-04): Emerges from beneath SR 99 in an approximately 18-inch-diameter culvert and is a tributary to North Fork Hylebos Creek. This stream may be the downstream continuation of SFW-02.
 - Federal Way Stream 3 (SFW-03): The channel originates west of SR 99, crosses under the highway, then flows approximately 200 feet east before spreading into a wetland. It is assumed that the stream is connected to North Fork Hylebos Creek outside of the study area.

- West Fork Hylebos Creek: The West Fork Hylebos Creek crosses the study area under Pacific Highway S, just south of S 364th Street. West Fork Hylebos Creek is a perennially flowing stream that originates in wetlands near S 348th Street in Federal Way and flows southward. The stream is joined by several tributaries before it crosses beneath I-5 in Milton and joins East Fork Hylebos Creek to form Hylebos Creek. West Fork Hylebos Creek is considered one of the highest quality streams in the watershed and the City of Federal Way has identified lower reaches of the stream as a top priority for conservation. Section 4.9, Ecosystems, of the Draft EIS contains additional details.
 - Milton Stream 3 (SMI-03): The stream enters the study area near 7th Street NE, then flows south along Pacific Highway, enters a piped stormwater system, then discharges to West Hylebos Creek.
 - Federal Way Stream 1 (SFW-01): Near the southern boundary of Federal Way is an ephemeral tributary (flowing only during and following rainfall) to West Fork Hylebos Creek. The stream originates on the east side of I-5, flows through a culvert beneath I-5, then flows due west to its confluence with West Fork Hylebos Creek. It has no documented water quality impairment.
 - Milton Stream 2 (SMI-02): Milton Stream 2 (SMI-02) crosses SR 99 south of the King/Pierce county line and then flows approximately 400 feet east to its confluence with West Fork Hylebos Creek. Stream flow is likely intermittent but has not been confirmed.
- Hylebos Creek Mainstem: East Fork Hylebos Creek continues along the east side of I-5, and it converges with West Fork Hylebos Creek to form the mainstem of Hylebos Creek near Porter Way. Hylebos Creek receives groundwater and stormwater inputs from areas of the cities of Federal Way, Milton, and Fife, where a large portion of the land is impervious. The creek has undergone extensive straightening, channeling, and underground piping of surface waters during historical growth and industrial development. The creek flows into the Hylebos Waterway in Commencement Bay. Hylebos Creek is designated on Ecology's 303(d) list for fecal coliform bacteria, temperature, and dissolved oxygen (Ecology 2018).
 - Milton Stream 1 (SMI-01): This stream is a roadside ditch running along the west side of I-5 that empties into Hylebos Creek. The narrow stream is contained by fill slopes and commercial developments with no documented water quality impairment.
 - Surprise Lake Creek: Surprise Lake Creek is a tributary to Hylebos Creek that joins near where SR 99 crosses the mainstem Hylebos. It is fed by Surprise Lake, with crossings directed in culverts, and it has no documented water quality impairment.

3.1.3 Fife Segment

The Fife Segment of the study area includes the following water bodies:

- Hylebos Creek Mainstem: Hylebos Creek briefly runs adjacent to the study area on the eastern edge of the Fife city limits. This is just downstream of the project crossing over Hylebos Creek at the southernmost end of the South Federal Way Segment, which is just east of the Fife city limits.
- Fife Ditch and Tributary 1: The Fife Ditch and its Tributary 1 are a channelized ditch system classified as streams that drain the low-lying areas in Fife predominantly north of I-5. The stream system consists of numerous smaller tributaries and ditches throughout the City of Fife that flow via a tide gate into the Hylebos Waterway in Commencement Bay. Fife Ditch is on the 303(d) list for dissolved oxygen and ammonia (Ecology 2018).

- Wapato Creek: Most of the flow into Wapato Creek originates north of the city of Puyallup, with a historical flow diversion from the upper reaches into the Puyallup River (WDFW 2020). Wapato Creek also receives urban runoff from Fife and Tacoma and flows into a series of culverts and pipes that empty into the Hylebos Waterway in Commencement Bay. The stream is on the 303(d) list for dissolved oxygen, fecal coliform, and low stream flows, which threaten aquatic life (Ecology 2018).
- Erdahl Ditch Tributary 1 and Tributary 2: The Erdahl Ditch drainage system conveys surface water runoff from the western portion of the Fife Segment to the Blair Waterway in Commencement Bay. Both Erdahl Ditch Tributary 1 and Erdahl Ditch Tributary 2 in the study area are largely contained in pipes. The surface-flowing reach of Erdahl Ditch Tributary 1 in the study area is maintained as a stormwater conveyance facility at the interchange between southbound I-5 and Port of Tacoma Road, and the surface-flowing reach of Erdahl Ditch Tributary 2 in the study area lies between I-5 and a commercial property. The two watercourses likely converge (within pipes) before being piped to an open channel and ultimately the Blair Waterway. Neither watercourse has a 303(d) listing (Ecology 2018).

3.1.4 Tacoma Segment

Surface water bodies in the Tacoma Segment include the following:

- Puyallup River: The Puyallup River Basin has been extensively historically modified through flood control projects, hydropower development, agriculture, and urbanization. The Puyallup River is of regionwide significance and has two major tributaries, the White and Carbon rivers. The Puyallup River flows into Commencement Bay, creating a saltwater wedge estuary that results in a tidal influence on the river. The nearby Foss waterway basin area of Commencement Bay is part of a 12-acre Superfund Site, for which cleanup was completed in 2006. Sediments containing phthalates, petroleum-based products, PCBs, phenols, metals, and pesticides were dredged from waterways and then capped with clean sediments (City of Tacoma 2020). Tidal influence from Commencement Bay on the Puyallup River extends from its mouth to approximately 2.2 miles upstream. The estuary has been extensively modified to accommodate industrial activity, losing as much as 99 percent of its historical estuarine wetland area; however, recently, a variety of restoration projects have been implemented in the estuary downstream of the study area. The river is on the 303(d) list for temperature, mercury, and low stream flows that threaten aquatic life (Ecology 2018).
 - First Creek: This tributary to the Puyallup River crosses the study area in a channelized section with culverts. It has no documented water quality impairments.
- Tacoma Gulch: The Tacoma Gulch is a spring-fed tributary that flows through the Tacoma stormwater system and outlets to the Foss waterway in Commencement Bay. In the study area, this stream is on the west side of, across the interstate from the Tacoma 26th Street Station. It has no documented water quality impairments.

3.2 Water Quality

This appendix is intended to provide supplemental information and background to support the primary discussion of potential impacts to water resources in the project study area that are discussed in Section 4.8, Water Resources, of the Draft Environmental Impact Statement (EIS).

Ecology designates waterbodies within the state with beneficial uses, such as drinking water, recreation, aquatic habitat, and industrial use, that are historically and currently impaired by pollutants on the Water Quality Assessment Clean Water Act Section 303(d) list (Ecology 2018). Summaries from Ecology's 303(d) list of impaired water bodies are included on the following pages for waters in the study area. Table H5-1 lists all of the EPA 303(d) list Impaired waterbodies in the study area, and Figure H5-1 displays them (Ecology 2018).

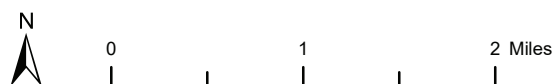
Table H5-1 Impaired Water Bodies – Ecology 303(d) Listings

Listing ID	AU ID	Medium	Parameter	Category	Waterbody Name
7503	17110019020821	Water	Dissolved Oxygen	5	Fife Ditch
8678	17110019020821	Water	Ammonia-N	5	Fife Ditch
15887	17110019000729	Water	Bacteria	5	Hylebos Creek W.F.
15888	17110019000731	Water	Bacteria	5	Hylebos Creek, E.F.
72618	17110019000729	Water	Temperature	5	Hylebos Creek, W.F.
78126	17110019000729	Water	Dissolved Oxygen	5	Hylebos Creek, W.F.
89502	17110019008044	Water	Dibenzo(a,h)anthracene	5	Unnamed Creek (Trib to West Hylebos Creek)
76389	17110019008044	Water	Lead	5	Unnamed Creek (Trib to West Hylebos Creek)
90088	17110019008044	Water	Benzo(a)pyrene	5	Unnamed Creek (Trib to West Hylebos Creek)
78259	17110019008044	Water	Copper	5	Unnamed Creek (Trib to West Hylebos Creek)
78496	17110019008044	Water	Zinc	5	Unnamed Creek (Trib to West Hylebos Creek)
7504	17110019020834	Water	Bacteria	5	Wapato Creek
82285	17110019020834	Water	Dissolved Oxygen	5	Wapato Creek
6190	17110019020834	Water	Instream Flow	4C	Wapato Creek

Source: Ecology 2018



FIGURE H5-1
Water Resources
Ecology 303(d) Water Quality Listings
Tacoma Dome Link Extension

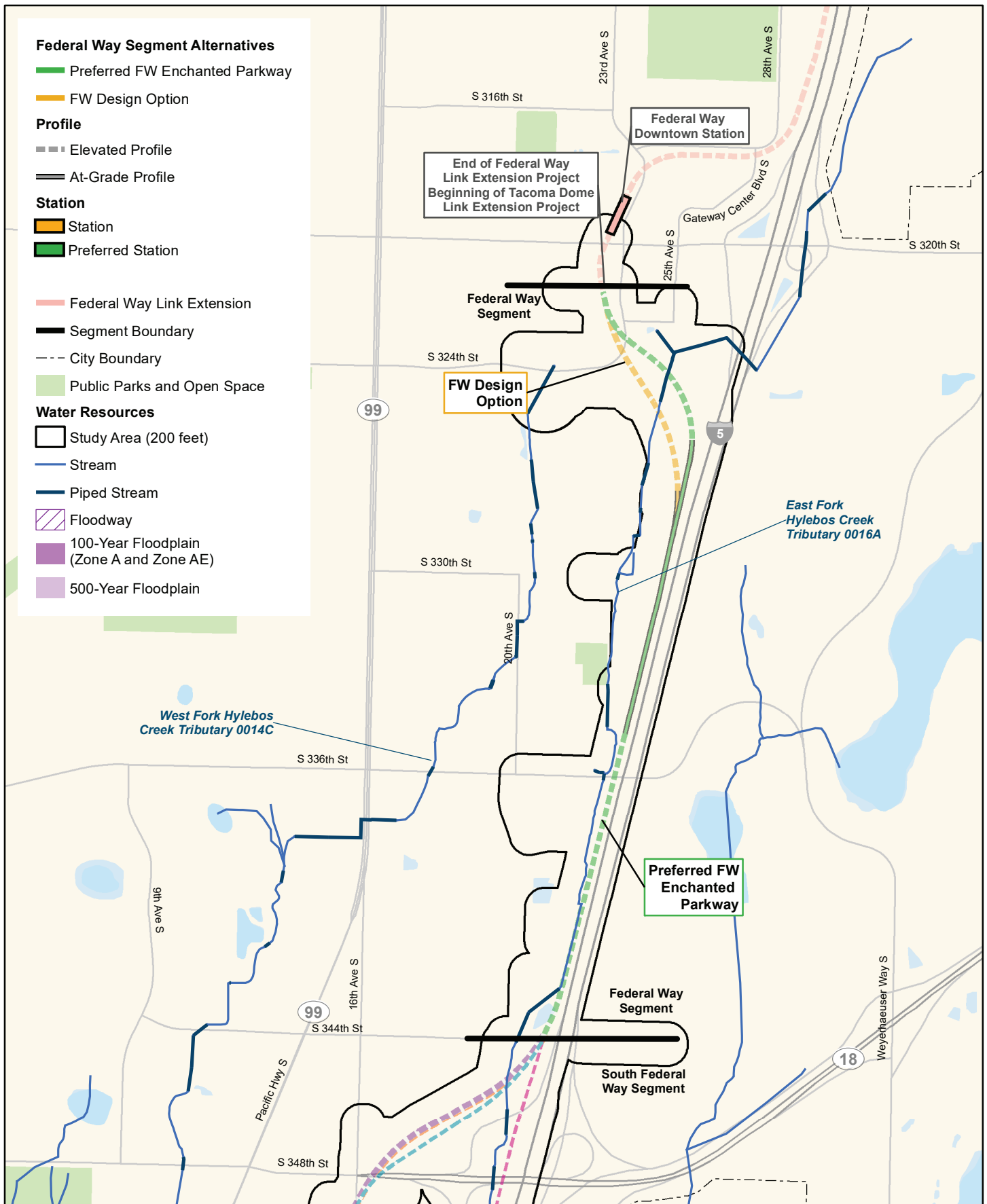


3.3 Floodplains and Floodways

Mapped floodplains designated by FEMA, county-designated flood hazard areas, and city-designated flood hazard areas within the study area are shown on Figures H5-2 through H5-5 (FEMA 2017a, 2020). FEMA has stated that the flood hazard mapping for this area will be revised as part of the future Puyallup River levee recertification under the National Flood Insurance Program. However, levee recertification processes are complex and can take many years to complete, so Sound Transit is proceeding with the project analysis without depending on the recertification. FEMA has designated the currently effective flood hazard data based on analysis completed in 1979 for the cities of Fife and Milton and in 1981 for the City of Tacoma (FEMA 2017b). This historical data does not accurately reflect subsequent development and current topographic conditions.

Sound Transit is reviewing available floodplain data for this area, including localized mapping of flood prone areas developed for the City of Fife based on 1990 and 1996 flood events (City of Fife 2003). In 2023, the City of Fife submitted and received FEMA approval for Letters of Map Amendment (LOMAs) that removed certain parcels and structures in the study area near the Fife Ditch Tributary 1 from the designated floodplain. These LOMAs apply to the following locations:

- LOMA_23-10-0176A-530140 (January 25, 2023): Entire Parcel Number 0420063107, located at 1317 54th Avenue E.
- LOMA_23-10-0262A-530140 (March 1, 2023): Entire Parcel Number 0420063012, located at 5410 12th Street E.
- LOMA_23-10-0799A-530140 (November 29, 2023): Portion of Parcel Number 0420063110, located at 5802 12th Street E.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

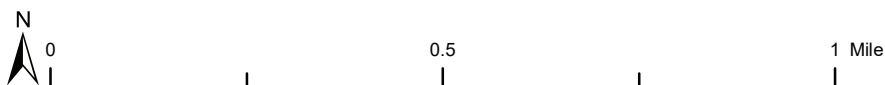
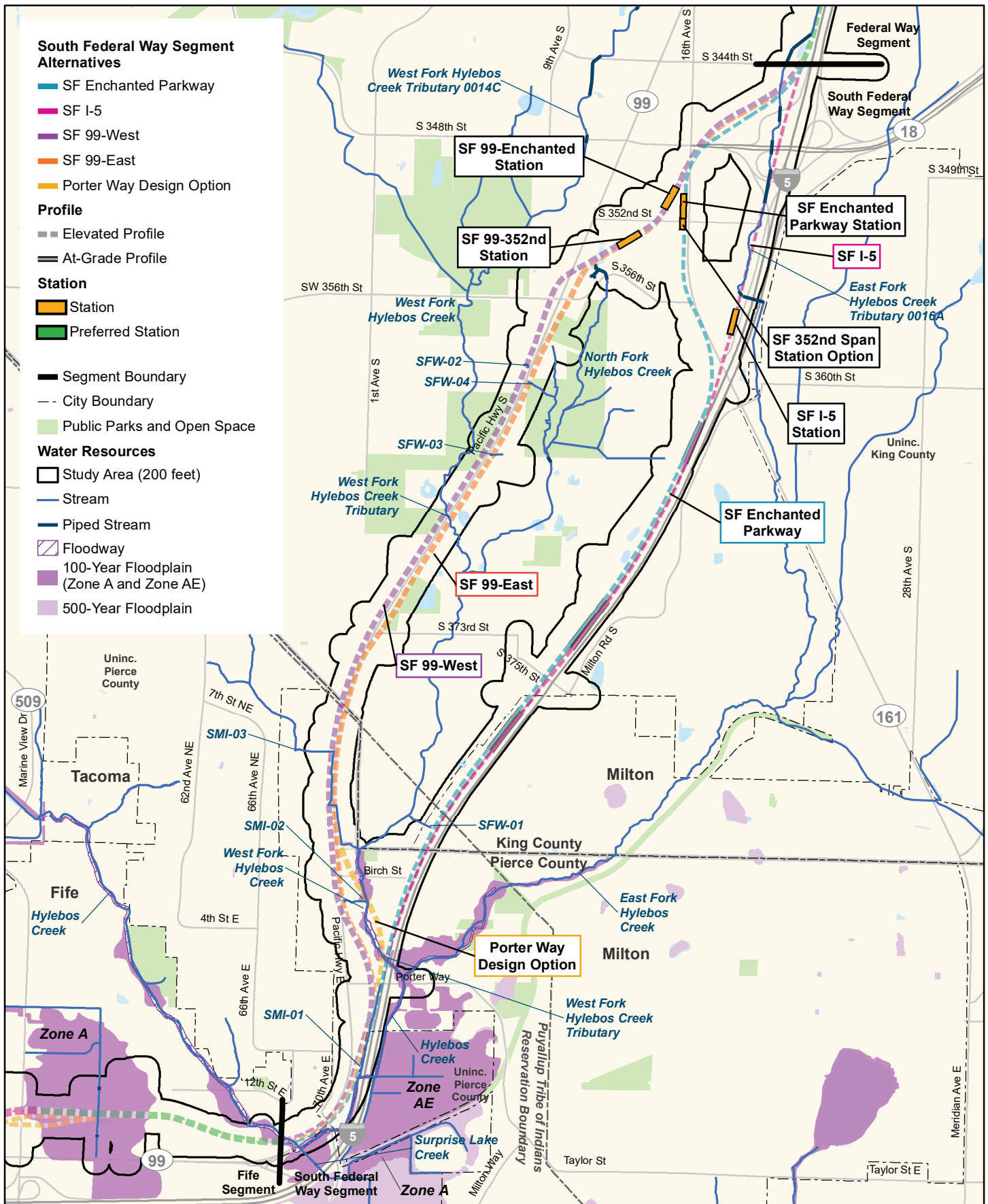


FIGURE H5-2
Water Resources
Flood Hazards: Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

Note: In 2023, the City of Fife submitted and received FEMA approval for Letters of Map Amendment that removed certain parcels and structures in the study area near the Fife Ditch Tributary 1 from the designated floodplain.

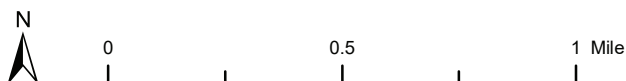


FIGURE H5-3
Water Resources
Flood Hazards: South Federal Way Segment
Tacoma Dome Link Extension

FIGURE H5-4
Water Resources
Flood Hazards: Fife Segment
Tacoma Dome Link Extension

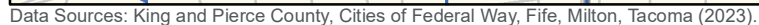


FIGURE H5-5
Water Resources
Flood Hazards: Tacoma Segment
Tacoma Dome Link Extension

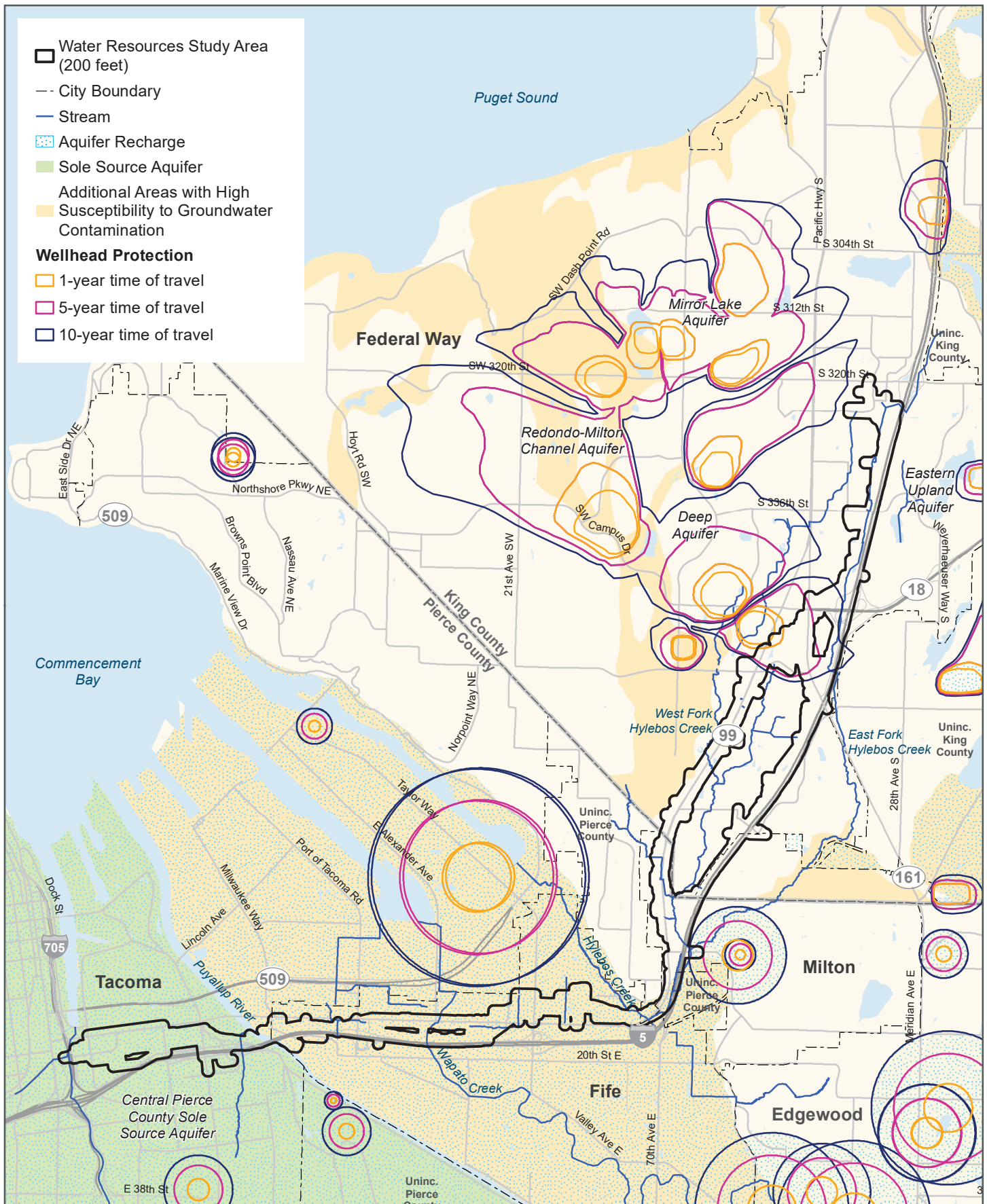
3.4 Groundwater

Groundwater resources, such as aquifer recharge and wellhead protection areas, are highly susceptible to groundwater contamination within the study area are shown on Figure H5-6. The wellhead protection areas are defined by protection categories that refer to the amount of time it would take contamination to reach the wellhead from the specified area within each boundary. Projection boundaries include the 1-, 5-, and 10-year time of travel boundaries. Required levels of protection and restrictions on certain activities increase for boundaries closer to the wellhead.

The DRASTIC Model was developed by EPA with the National Water Well Association. It provides a basis for evaluating the vulnerability to pollution of groundwater resources based on the hydrogeologic parameters of depth to groundwater, net recharge, aquifer media, soil media, topography, the vadose zone, and hydraulic conductivity. The DRASTIC rating for this area is 180 to 199, which is defined as highly susceptible to groundwater contamination, and covers most of the City of Fife (City of Fife 2016). These ratings safeguard groundwater resources and wellhead protection areas by requiring mitigation or precluding future discharges of contaminants from new land use activities.

King County developed a rating system to define areas highly susceptible to groundwater contamination and critical aquifer recharge areas using the Areas Susceptible to Ground Water Contamination (ASGWC) data set and shape files, which were created from the ASGWC95 data set by adding Vashon data that the county received from the University of Washington. The rating system considers the hydrologic parameters of surficial geology, soil types, and depth to groundwater, which are then combined in a matrix to determine final susceptibility. King County uses the ASGWC data set to map the areas highly susceptible to groundwater contamination and areas critical to aquifer recharge in order to protect the health and well-being of its residents who rely on groundwater for drinking, and to ensure enough groundwater replenishes streams, lakes, and wetlands to support fish and wildlife in the future.

The entire Fife Segment, from the crossing of the mainstem of Hylebos Creek to the Puyallup River levee, has high potential for contamination of groundwater. The alternatives in the Fife Segment would not cross any wellhead buffers or their respective 10-year time of travel areas. The wellhead buffer refers to the 10-year time of travel, which is the amount of time it would take contamination to reach the wellhead from the specified area surrounding a particular wellhead. There are no sole source aquifers located in the study area for the Fife Segment, as designated by the EPA.



Data Sources: EPA, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

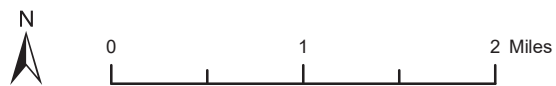


FIGURE H5-6
Water Resources
Groundwater Resources
Tacoma Dome Link Extension

3.5 Stormwater Runoff

The land and soil that stormwater runoff travels across influences the water quality and hydraulics in the natural waterbodies that it flows into. This section discusses factors influencing stormwater runoff in the study area.

3.5.1 Soil Type

Soils within the study area are categorized into hydrologic soil groups based on physical and runoff characteristics. These soil categories can be used along with land use and hydrologic condition considerations to determine an associated runoff curve number and ultimately estimate runoff and infiltration capacities for planning and management practices. Soil Types A and B have moderate to high infiltration potential, and moderate to low runoff potential, respectively, making them generally compatible with a variety of low-impact development approach stormwater facilities. Type C soils are not compatible with stormwater management facilities that rely on infiltration of surface waters, which includes many low-impact development approaches. (USDA NRCS 2007). Table H5-2 summarizes the hydrologic soil group for each soil type in the study area. Soil locations are shown on Figure H5-7. (USDA NRCS 2007, 2022a, 2022b, 2022c).

3.5.2 Land Uses

The study area for the proposed project is a mixture of residential, commercial, light industrial, and vegetated areas. The impervious surfaces in the study area are mix of pollution-generating roadway and parking areas and non-pollution-generating surfaces (NPGIS), including roofs, sidewalks, and stormwater ponds (considered impervious during rain events, when filled with water).

The study area in the Federal Way and South Federal Way segments is urbanized, with approximately 50 percent impervious surface cover under existing conditions. These study areas have a mix of residential, commercial, industrial, and recreational land use types. In the Fife Segment, the study area is approximately 60 percent impervious surface cover, with a mix of residential, commercial, industrial, and agricultural land use types. The study area in the Tacoma Segment has approximately 80 percent impervious surface cover in its existing condition, which is highly urbanized, with a mix of developed lands that include commercial, industrial, and Tribal uses.

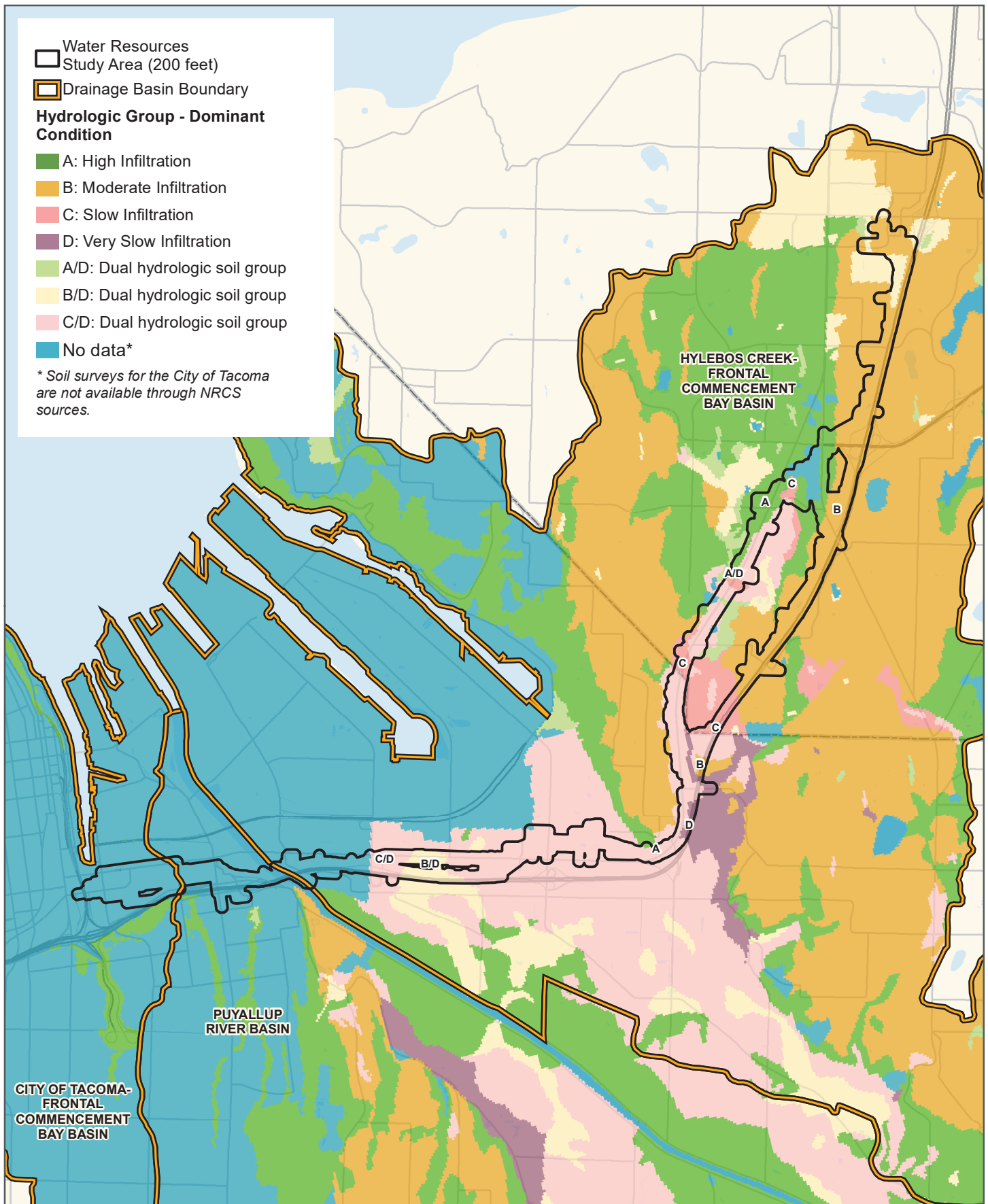
The SR 167 Completion Project Phase 1 Improvements began in early 2020 and overlaps with the study area of the TDLE project within Pierce County in the cities of Fife and Milton, as well as portions of unincorporated Pierce County and Tacoma. Improvements include an approximately 2-mile highway section from SR 509 near the Port of Tacoma to I-5 and SR 167 at the interchange near 70th Avenue (FHWA 2018). These changes could be expected to reduce agricultural land use and convert them to roadway, which could be expected to increase the amount of impervious surface in the existing condition as the TDLE project progresses.

3.5.3 Stormwater Management

In the study area, most of the surface stormwater is collected by piped municipal systems along all three segments of the corridor. The systems in the study area include features such as stormwater pipes and roadside ditches, media filter drains, regional detention ponds, and vaults. Stormwater drainage systems are discussed in Section 4.15, Utilities.

Table H5-2 Study Area Soils by Hydrologic Soil Group

Map Code	Soil Description
Hydrologic Soil Group A: High Infiltration	
31A	Puyallup Fine Sandy Loam; 0 to 3 percent slopes
AgD	Alderwood Gravelly Sandy Loam 6 to 15 percent slopes
EvC	Everett Gravelly Sandy Loam: 8 to 15 percent slopes
No	Norma Sandy Loam
Hydrologic Soil Group B: Moderate Infiltration	
1C	Alderwood Gravelly Sandy Loam: 6 to 15 percent slopes
6A	Briscot Loam; 0-2 percent slopes
AgB	Alderwood Gravelly Sandy Loam; 6 to 15 percent slopes
AgC	Alderwood Gravelly Sandy Loam; 6 to 15 percent slopes
AmB	Arrents Alderwood Material; 0 to 6 percent slopes
AmC	Arrents Alderwood; 6 to 15 percent slopes
EwC	Everett Alderwood Gravelly Sandy Loam; 6 to 15 percent slopes
Hydrologic Soil Group C: Low Infiltration	
20B	Kitsap Silt Loam; 2 to 8 percent slopes
20C	Kitsap Silt Loam; 8 to 15 percent slopes
20D	Kitsap Silt Loam; 15 to 30 percent slopes
30A	Puget Silty Clay Loam; less than 2 percent slopes
42A	Sultan Silt Loam; less than 2 percent slopes
43A	Tacoma Silt Loam; 0 to 1 percent slopes
Bh	Bellingham Silt Loam
KpB	Kitsap Silt Loam; Kitsap Silt Loam; 2 to 8 percent slopes
KpD	Kitsap Silt Loam; 15 to 30 percent slopes
Hydrologic Soil Group D: Wet Soils	
6A	Briscot Loam; 0-2 percent slopes
37A	Semiahmoo Muck; 0 to 1 percent slopes
45A	Tisch Silt; 0 to 1 percent slopes
Sm	Shalcar Muck
Other	
48A	Xerorthents, fill area, artificial or industrial in nature.
Ur	Urban Land



Data Sources: USDA, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

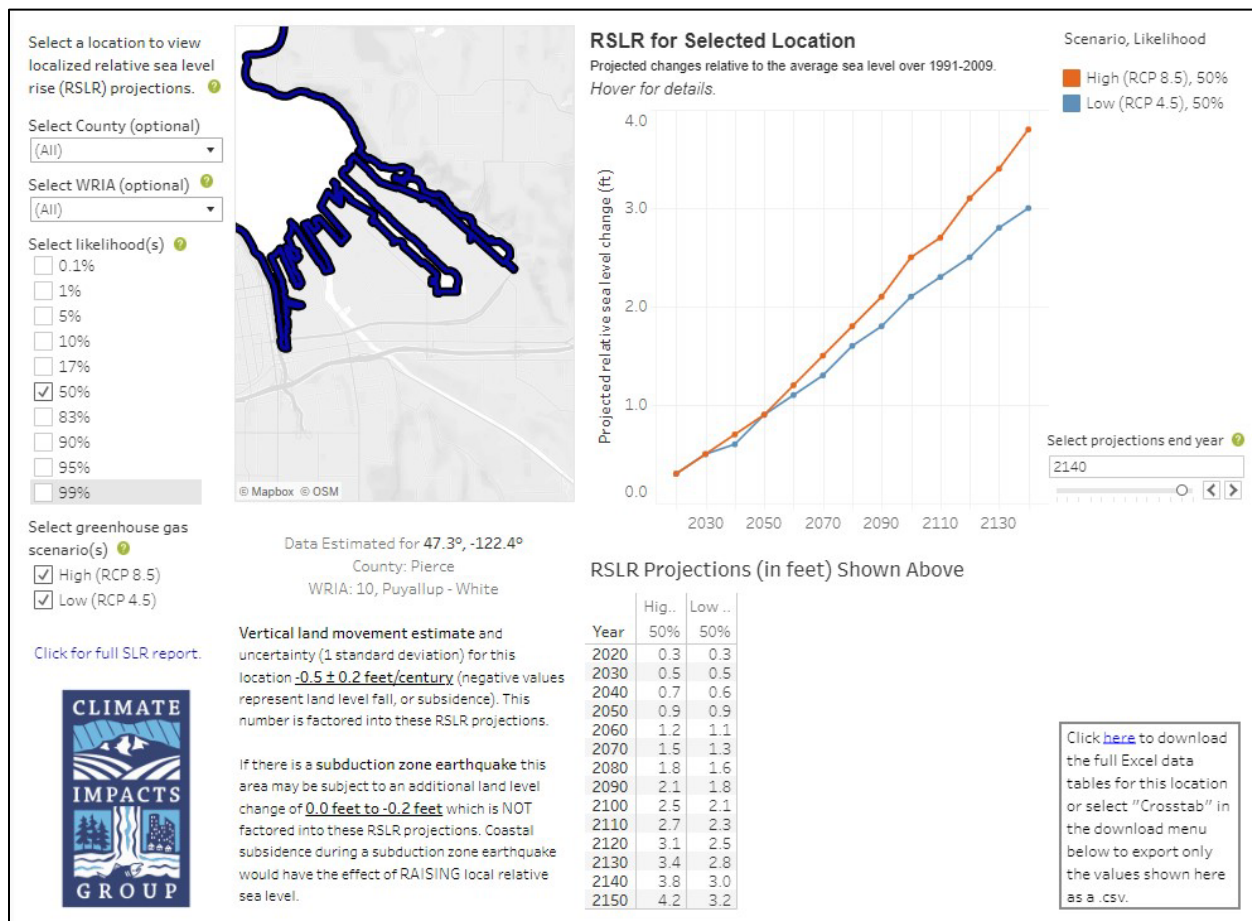


FIGURE H5-7
 Water Resources
 Hydrologic Soil Groups
 Tacoma Dome Link Extension

3.6 Sea Level Rise

Relative sea level rise elevations have been based on work from the University of Washington Climate Impacts Group in support of the Washington Coastal Hazards Resilience Network (WCHRN). The 2018 WCHRN study provides a range of relative sea level rise for the Tacoma area (WCHRN 2018). The City of Fife is also evaluating climate change and sea level rise within its jurisdiction and has plans to conduct a climate change vulnerability assessment to guide the city's update of the comprehensive plan and shoreline regulations. Sound Transit is also developing a Climate Change Vulnerability Assessment to further evaluate risks to the project from sea level rise.

Using the WCHRN tools developed as part of the 2018 work (Figure H5-8; WCHRN 2024), relative sea level in the study area is forecasted to rise by approximately 3 to 4 feet higher than current elevations, based on average estimates available at the time of preparing this Draft EIS. Based on the current project schedule and a design horizon of approximately 100 years for the major structural components, a projection year of 2140 is used. The estimate of 3 to 4 feet of relative sea level rise is based on the low to high (greenhouse gas) representative concentration pathway for the 50 percent exceedance. This information helps inform the Draft EIS, though Sound Transit will identify final data to include as part of the future design process.



Note: RSLR is relative sea level rise; RCP is representative concentration pathway (a projection of greenhouse gas emissions); WRIA is Water Resource Inventory Area. (Data source: Washington Coastal Hazards Resilience Network 2024)

Figure H5-8 Sea Level Rise Background Data

4 LONG-TERM IMPACTS ANALYSIS

This appendix is intended to provide supplemental information and background to support the primary discussion of the potential impacts to water resources in the project study area that are discussed in Section 4.8, Water Resources, of the Draft EIS.

4.1 Comparison of Alternatives

The following tables display the geographic information system analyses that were performed to serve as the basis for qualitative and quantitative reviews of alternative impacts to water resources. Tables H5-3 and H5-4 analyze the potential impacts of each segment related to the amount of at-grade versus elevated structures. Table H5-5 analyzes the potential impacts of each segment related to the project area footprint of each stream crossing. Figures H5-9 through H5-12 display the study area surface water features of each segment to aid the impacts analysis.

- Use of at-grade versus elevated structures: At-grade sections are considered to have a greater impact than elevated sections of the guideway structures because they tend to have a slightly wider footprint, result in more impervious surface, have greater potential to directly conflict with municipal stormwater management facilities, and require more alteration of surface grade areas and flow paths.
- Stream crossings: All stream and buffer crossings would be elevated, but construction in and around stream buffers would reduce buffer quality through the removal of trees and other native vegetation. The impacts have been rated in relation to the area of the permanent environmental footprint for all areas that cross into the stream buffers, which includes delineated stream buffers. A larger project footprint in the stream buffer could indicate a greater potential for stream and riparian impacts. The footprint area scale is small (0 to 1 acre), moderate (1 to 2 acres), and large (greater than 2 acres) and then indicated as smallest or largest among the segment alternatives for comparison where relevant.

Table H5-3 At-Grade vs Elevated Structure Analysis for Each Alternative

Alternative	At-Grade Mileage ¹	At-Grade ¹ %	Elevated Mileage	Elevated %	Total Mileage
Federal Way Segment					
FW Enchanted Parkway ² with or without FW Design Option	0.59	39.1%	0.92	60.9%	1.51
South Federal Way Segment					
SF Enchanted Parkway	0.53	13.3%	3.47	86.7%	4.00
SF I-5	0.39	10.0%	3.47	90.0%	3.86
SF 99-West	0.00	0.0%	4.09	100.0%	4.09
SF 99-West with Porter Way Design Option	0.00	0.0%	4.10	100.0%	4.10
SF 99-East	0.00	0.0%	4.06	100.0%	4.06
SF 99-East with Porter Way Design Option	0.00	0.0%	4.08	100.0%	4.08
Fife Segment					
Fife Pacific Highway	0.00	0.0%	2.89	100.0%	2.89
Fife Pacific Highway with 54th Avenue or 54th Span Design Option	0.00	0.0%	2.90	100.0%	2.89
Fife Median	0.00	0.0%	2.89	100.0%	2.89
Fife Median with 54th Avenue or 54th Span Design Option	0.00	0.0%	2.89	100.0%	2.89
Fife I-5	0.00	0.0%	2.94	100.0%	2.94
Fife I-5 with 54th Avenue or 54th Span Design Option	0.00	0.0%	2.94	100.0%	2.94
Tacoma Segment					
Preferred Tacoma 25th Street-West	0.00	0.0%	1.40	100.0%	1.40
Tacoma 25th Street-East	0.00	0.0%	1.30	100.0%	1.30
Tacoma Close to Sounder	0.31	22.3%	1.08	77.7%	1.39
Tacoma 26th Street	0.29	19.2%	1.24	80.8%	1.53

Notes:

- (1) At-Grade mileage includes retained cut/fill mileage. Retained cut/fill mileage was not noted separately in previous versions.
- (2) The FW Enchanted Parkway Alternative is expected to have similar levels of impact with or without the FW Design Option. The FW Design Option is less than 0.05 mile shorter than FW Enchanted Parkway Alternative. Also, the elevated mileage for FW Design Option adds approximately 0.1 mile to FW Enchanted Parkway Alternative.

Table H5-4 At-Grade vs Elevated Mileage Analysis for End-to-End Alternative Combinations¹

	SF Enchanted Parkway/Fife I-5/Tacoma 25th Street-West	SF Enchanted Parkway/Fife I-5/Tacoma 25th Street-East	SF Enchanted Parkway/Fife I-5/Tacoma Close to Sounder	SF Enchanted Parkway/Fife I-5/Tacoma 26th Street	SF I-5/Fife I-5/Tacoma 25th Street-West	SF I-5/Fife I-5/Tacoma 25th Street-East	SF I-5/Fife I-5/Tacoma Close to Sounder	SF I-5/Fife I-5/Tacoma 26th Street
At-Grade	1.12	1.12	1.43	1.41	1.12	1.12	1.43	1.42
Elevated	8.73	8.62	8.42	8.58	8.74	8.62	8.42	8.57
Total	9.85	9.74	9.85	9.99	9.86	9.74	9.85	9.99
At-Grade %	11%	12%	15%	14%	11%	12%	15%	14%
Elevated %	89%	88%	85%	86%	89%	88%	85%	86%
	SF Enchanted Parkway/Fife Pacific Highway OR Median/Tacoma 25th Street-West	SF Enchanted Parkway/Fife Pacific Highway OR Median/Tacoma 25th Street-East	SF Enchanted Parkway/Fife Pacific Highway OR Median/Tacoma Close to Sounder	SF Enchanted Parkway/Fife Pacific Highway OR Median/Tacoma 26th Street	SF I-5/Fife Pacific Highway OR Median/Tacoma 25th Street-West	SF I-5/Fife Pacific Highway OR Median/Tacoma 25th Street-East	SF I-5/Fife Pacific Highway OR Median/Tacoma Close to Sounder	SF I-5/Fife Pacific Highway OR Median/Tacoma 26th Street
At-Grade	1.12	1.12	1.43	1.42	0.98	0.98	1.29	1.27
Elevated	8.69	8.57	8.37	8.52	8.69	8.57	8.37	8.53
Total	9.81	9.69	9.80	9.94	9.67	9.55	9.66	9.80
At-Grade %	11%	12%	15%	14%	10%	10%	13%	13%
Elevated %	89%	88%	85%	86%	90%	90%	87%	87%
	SF 99-West OR East/Fife I-5/Tacoma 25th Street-West	SF 99-West OR East/Fife I-5/Tacoma 25th Street-East	SF 99-West OR East/Fife I-5/Tacoma Close to Sounder	SF 99-West OR East/Fife I-5/Tacoma 26th Street	SF 99-West OR East/Fife Pacific Highway OR Median/Tacoma 25th Street-West	SF 99-West OR East/Fife Pacific Highway OR Median/Tacoma 25th Street-East	SF 99-West OR East/Fife Pacific Highway OR Median/Tacoma Close to Sounder	SF 99-West OR East/Fife Pacific Highway OR Median/Tacoma 26th Street
At-Grade	0.59	0.59	0.90	0.89	0.59	0.59	0.90	0.89
Elevated	9.35	9.23	9.03	9.18	9.30	9.18	8.98	9.13
Total	9.94	9.82	9.93	10.07	9.89	9.77	9.88	10.02
At-Grade %	6%	6%	9%	9%	6%	6%	9%	9%
Elevated %	94%	94%	91%	91%	94%	94%	91%	91%

Notes:

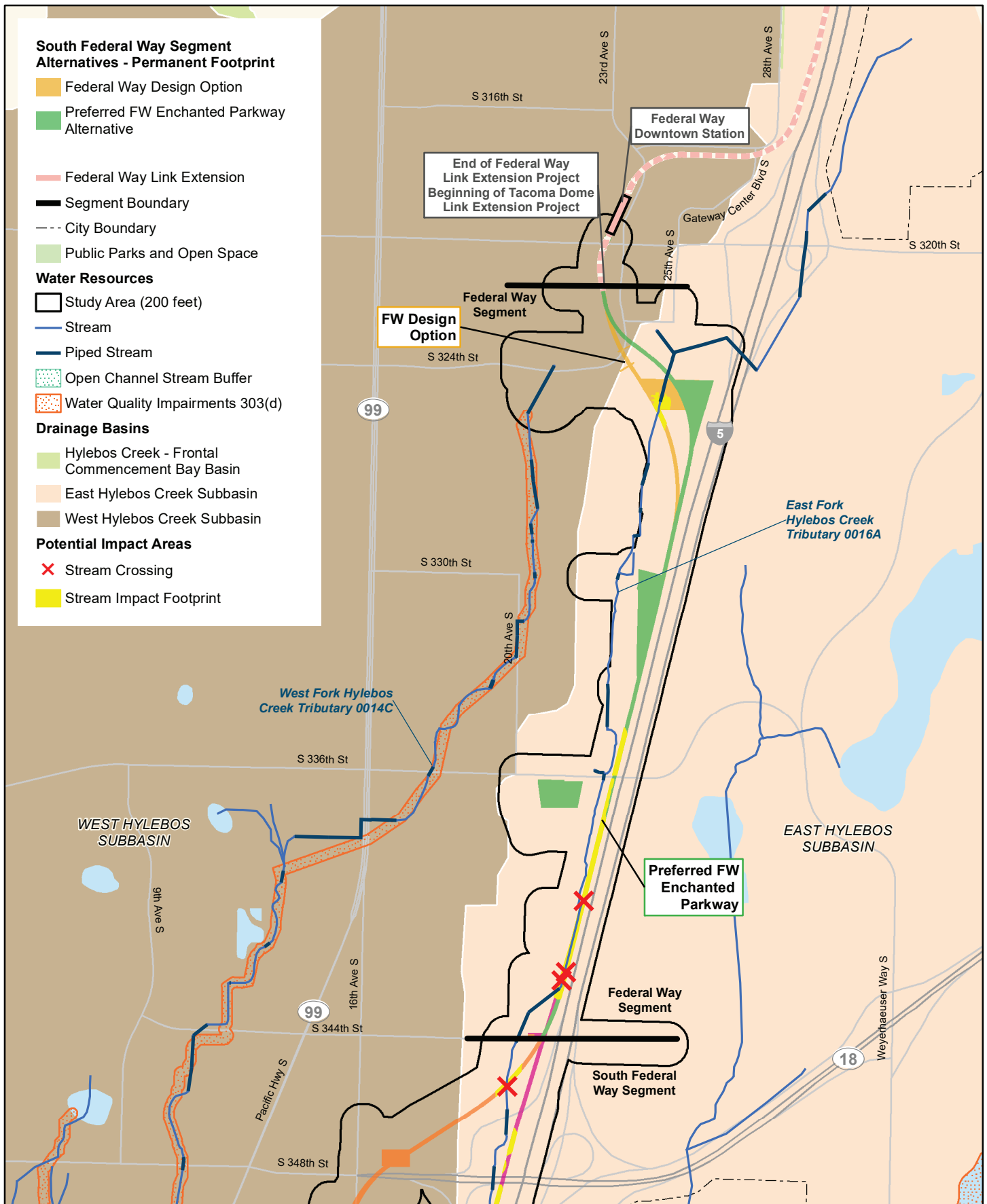
- (1) All combinations include the FW Enchanted Parkway Alternative, which is expected to have similar levels of impact with or without the FW Design Option. The FW Design Option is less than 0.05 mile shorter than FW Enchanted Parkway Alternative. Also, the elevated mileage for FW Design Option adds approximately 0.1 mile to FW Enchanted Parkway Alternative.
- (2) For the SF 99-West or SF 99-East alternatives, the mileage uses the average of both alignments and the design option. Difference in mileage between these alignments are +/- 0.015 mile.
- (3) Fife Pacific Highway or Median alternative, mileage is the average of both alignments and design options. Difference in mileage between these combinations are +/- 0.003 mile.
- (4) Fife I-5 Alternative mileage is the average of the alignment and design options. Difference in mileage between these combinations are +/- 0.01 mile.
- (5) All Tacoma Alternatives include the Portland Avenue Station in their calculations.

Table H5-5 Stream Crossing Area Analysis by Alternative¹
(Overwater Structure Area)²

Alternative	East Fork Hylebos Creek Tributary 0016A	Erdahl Ditch Tributary 1	Erdahl Ditch Tributary 2	Fife Ditch	Fife Ditch Tributary 1	Hylebos Creek	SFW-01	SFW-02	SFW-03	SFW-04	SMI-01	SMI-02	SMI-03	Wapato Creek	West Fork Hylebos Creek	Puyallup River	Total
Federal Way Segment																	
Preferred FW Enchanted Parkway	113,200 (12,600)																113,200 (12,600)
Preferred FW Enchanted Parkway with Design Option	137,700 (13,600)																137,700 (13,600)
South Federal Way Segment																	
SF Enchanted Parkway	15,900 (1,400)					20,900 (900)	2,300 (0)				69,500 (0)				24,200 (1,500)		132,800 (3,800)
SF I-5	156,900 (12,900)					20,900 (900)	2,300 (0)				69,500 (0)				24,200 (1,500)		273,800 (15,300)
SF 99-West	20,400 (1,200)					20,900 (900)		4,200 (600)	14,100 (0)		41,900 (<100)	1,000 (0)	25,000 (<100)		49,900 (700)		177,400 (3,600)
SF 99-West with Porter Way Design Option	20,400 (1,200)					20,900 (900)		4,200 (600)	14,100 (0)		45,900 (0)	14,600 (300)	25,000 (<100)		79,000 (5,500)		224,100 (8,600)
SF 99-East	20,400 (1,200)					20,900 (900)			30,000 (300)	8,400 (<100)	41,900 (<100)	6,600 (200)	23,300 (<100)		49,500 (400)		201,000 (3,300)
SE 99-East with Porter Way Design Option	20,400 (1,200)					20,900 (900)			30,000 (300)	8,400 (<100)	45,900 (0)	14,600 (300)	23,300 (<100)		79,300 (5,200)		242,800 (8,100)
Fife Segment ³																	
Fife Pacific Highway/ Median		28,900 (2,700)	11,600 (0)	5,900 (4,100)	30,900 (5,500)	3,100 (0)								3,200 (<100)		9,100 (0)	92,700 (12,400)
Fife Pacific Highway/ Median with 54th Avenue Design Option		28,900 (2,700)	11,600 (0)	33,700 (11,500)	6,600 (700)	3,100 (0)								3,200 (<100)		9,100 (0)	96,200 (15,000)
Fife Pacific Highway/Median with 54th Span Design Option		28,900 (2,700)	11,600 (0)	34,000 (11,700)	4,400 (800)	3,100 (0)								3,200 (<100)		9,100 (0)	94,300 (15,300)
Fife I-5			7,800 (0)	29,200 (4,100)	30,900 (5,500)	3,100 (0)								6,600 (3,000)		9,100 (0)	86,700 (12,600)
Fife I-5 with 54th Avenue Design Option			7,800 (0)	56,500 (11,500)	6,600 (700)	3,100 (0)								6,600 (3,000)		9,100 (0)	89,700 (15,200)
Fife I-5 with 54th Span Design Option			7,800 (0)	56,600 (11,500)	4,400 (800)	3,100 (0)								6,600 (3,000)		9,100 (0)	87,600 (15,300)
Tacoma Segment																	
Preferred Tacoma 25th Street-West																33,100 (17,100)	33,100 (17,100)
Tacoma 25th Street- East																33,100 (17,100)	33,100 (17,100)
Tacoma Close to Sounder																33,100 (17,000)	33,100 (17,000)
Tacoma 26th Street																33,100 (17,100)	33,100 (17,100)

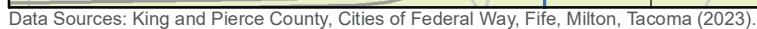
Notes:
(1) The stream crossing footprint areas are calculated using permanent footprint for each alternative, including overwater structure and extent of the defined stream buffers. All values are presented in square feet, rounded up to the nearest 100
(2) The values in parentheses indicate the portion of the stream crossing area that is overwater structure. All values are presented in square feet.
(3) The Fife Segment includes elements up to the northeast levee bank of the Puyallup River. Impacts from the Puyallup River crossing have been attributed to the Tacoma Segment.

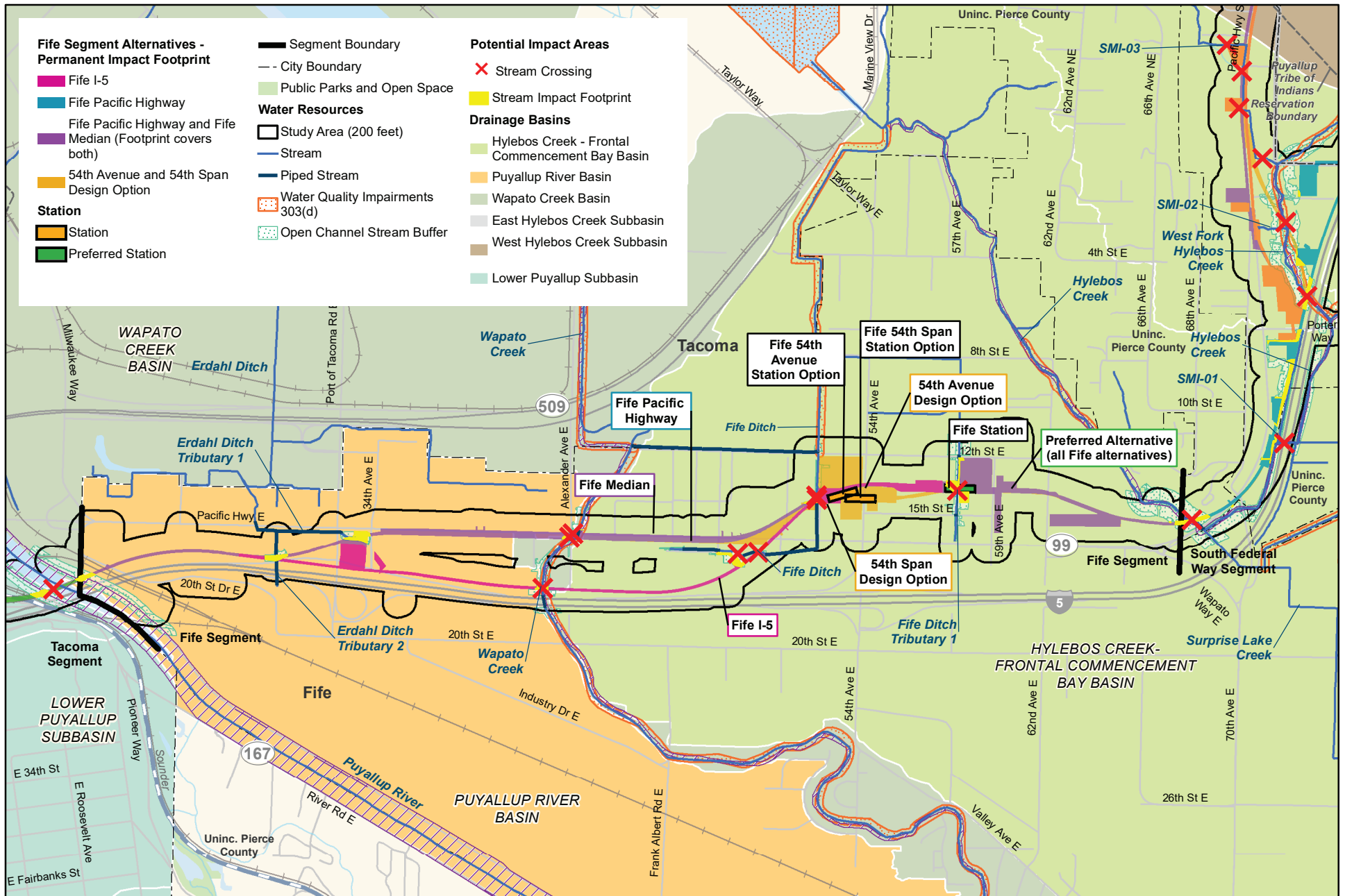
Assumptions:
- Ordinary High Water Mark (OHWM) for open channel streams and ditches were generally developed through field delineation/estimation. Where no OHWM delineation existed, the values were extrapolated from streams or ditches with similar characteristics within the relevant jurisdiction.
- Stream buffer crossing footprints exclude the areas which overlap with existing impervious surfaces.
- To evaluate the potential impacts of the alternatives on riparian areas, the stream buffer widths indicated per Federal Way Municipal Code 19.145.270 (Revised October 15, 2019), Milton Municipal Code 18.16.640(D), Tacoma Municipal Code 13.11.420, Fife Municipal Code 17.15.050, and/or Pierce County Code 18E.40.60 were assumed as designated by the applicable local jurisdictions. Per Fife Municipal Code 17.15.050, the widths of buffers on streams are to be determined by the community development director on a case-by-case basis. To evaluate the potential impacts, these buffer widths were based on the corresponding stream types in the Milton Municipal Code. The Puyallup Tribe of Indians has jurisdiction over the Puyallup River as well. (See Table J4.3-1 in the Ecosystems Technical Report for additional stream classification details).
- Pier-supported bridge option analyzed separately. Overall, the highest impacts could be expected from placement of in-water piers.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H5-9
Surface Water Impact Analysis:
Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

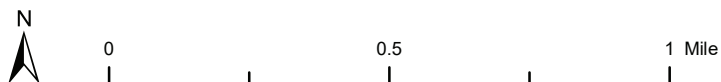
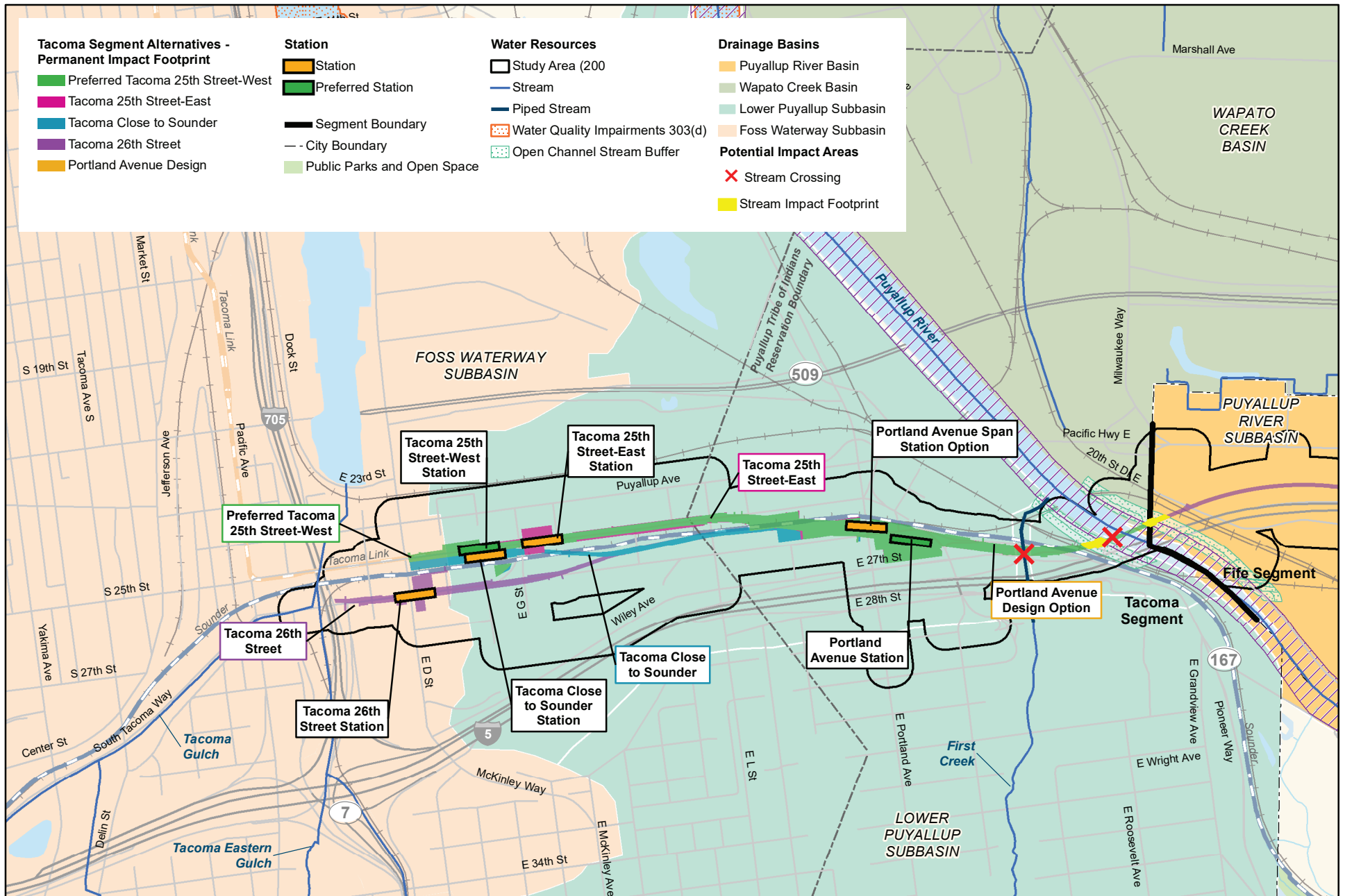


FIGURE H5-11
 Surface Water Impacts Analysis:
 Fife Segment
 Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H5-12
 Surface Water Impacts Analysis:
 Tacoma Segment
 Tacoma Dome Link Extension

4.2 Impervious Surface Changes

A quantitative estimate of proposed impervious surface was calculated within the permanent impact footprint along each alternative alignment and the proposed light rail stations (see Figures H5-13 through H5-26). Previous versions included all land cover in 200-ft study area around project elements. NPGIS as defined for this analysis includes light rail tracks, guideways,¹ stations, sidewalks, rooftops, and stormwater ponds (considered impervious during rain events, when filled with water), while pollution-generating impervious surface (PGIS) includes parking, bus areas, and roads. These surfaces are associated with an increase in runoff volumes, which may increase flooding and flow frequencies. Impervious surfaces subject to pollution-generating activities have the potential to accumulate contaminants that can be transported by stormwater runoff into receiving water bodies. The increased flow volumes and water quality impairments can contribute to stream erosion and aquatic habitat degradation. Table H5-6 compares the amount of new impervious surface created by the project for each alternative in the Federal Way, Fife, and Tacoma segments with existing conditions.

For all alternatives, an optional Portland Avenue bike and pedestrian bridge is also being considered that would connect the Portland Avenue Station or the Portland Avenue Span Station Option to the neighborhoods and Puyallup Tribe of Indians facilities on the south side of I-5 (Figures H5-27 and H5-28). It would be an impervious surface but built above existing impervious surfaces, such as roadways, sidewalks, and developed areas. It would also be non-pollution generating. Therefore, this optional bridge is not expected to result in changes in runoff and has not been included in the impervious surface calculations for the alternatives.

¹ Sound Transit and the Washington State Department of Ecology entered into a Memorandum of Understanding dated December 9, 2019, in which Sound Transit agreed to conduct a study to characterize the quality of the stormwater discharged from light rail guideway. The data and analysis from the study will be used to inform the design of light rail projects that are scheduled in the Sound Transit 3 Plan to be completed between 2030 and 2041, and, as necessary, Sound Transit will identify all known, available, and reasonable methods of prevention, control, and treatment (abbreviated as AKART) to define light-rail specific best management practices.

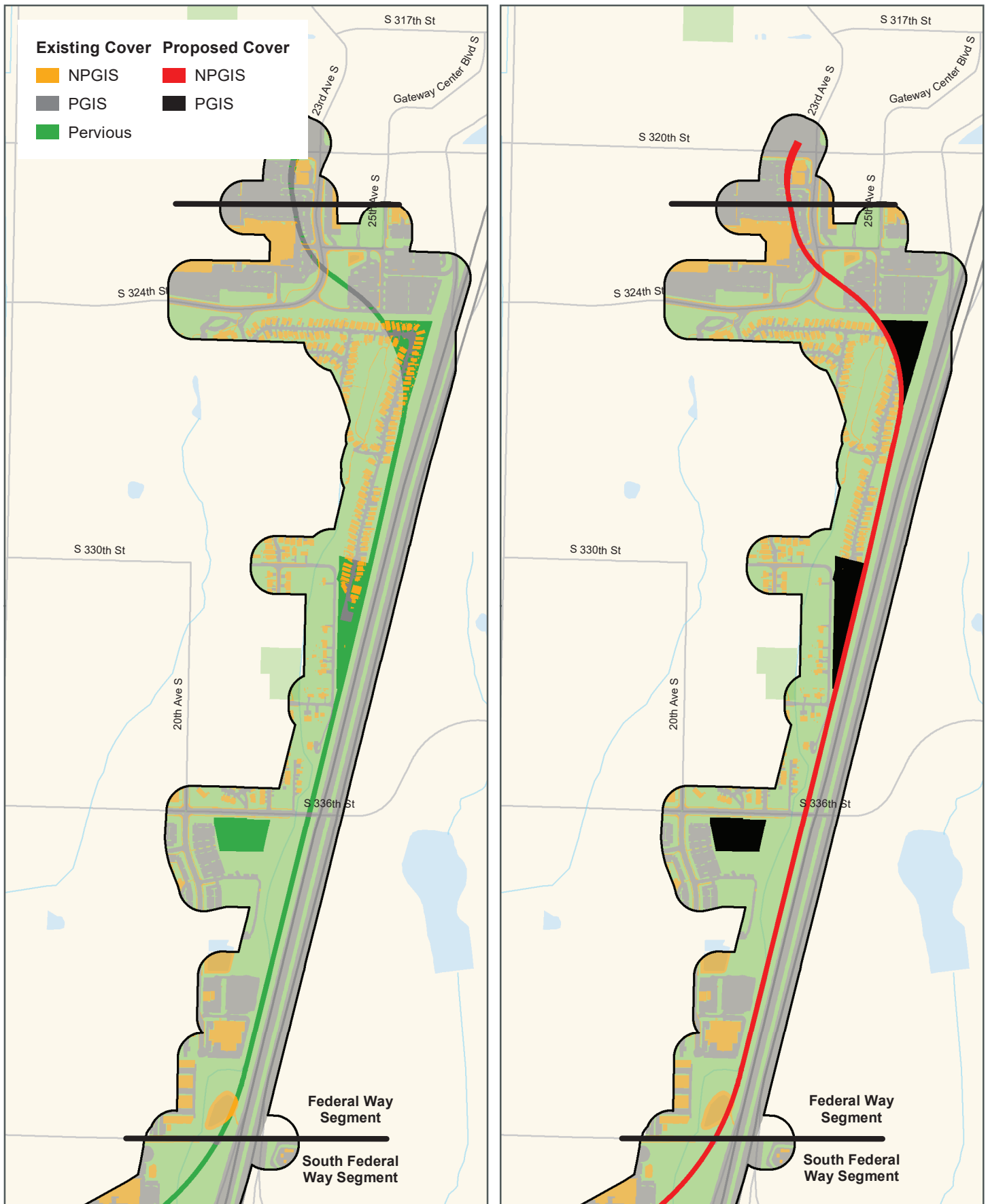
Table H5-6 Existing and Proposed Impervious Surfaces¹

Alternative	Existing Conditions (Acres)				Proposed Conditions (Acres)				Change (Acres)		
	Impervious (Non-Pollution Generating) ²	Impervious (Pollution Generating) ^{3,4}	Pervious Surfaces	Grand Total	Impervious (Non-Pollution Generating) ²	Impervious (Pollution Generating) ^{3,4}	Pervious Surfaces	Grand Total	Impervious (Non-Pollution Generating) ²	Impervious (Pollution Generating) ^{3,4}	Pervious
Federal Way Segment											
Preferred FW Enchanted Parkway	2	3	11	16	8	8	0	16	+6	+5	-11
FW Enchanted Parkway with Design Option	3	3	13	19	8	11	0	19	+5	+8	-13
South Federal Way Segment											
SF Enchanted Parkway	2	17	26	45	21	24	0	45	+19	+7	-26
SF I-5	2	14	34	50	21	29	0	50	+19	+15	-34
SF 99-West	3	18	29	50	21	29	0	50	+18	+11	-29
SF 99-West with Porter Way Design Option	1	17	27	45	21	25	0	46	+20	+8	-27
SF 99-East	3	18	33	54	21	33	0	54	+18	+15	-33
SF 99-East with Porter Way Design Option	2	16	32	50	21	30	0	51	+19	+14	-32
Fife Segment											
Fife Pacific Highway/Median	3	19	15	37	16	21	0	37	+13	+2	-15
Fife Pacific Highway/Median 54th Avenue Design Option	4	22	14	40	15	25	0	40	+11	+3	-14
Fife Pacific Highway/Median 54th Span Design Option	5	23	14	42	15	27	0	42	+10	+4	-14
Fife I-5	2	13	17	32	16	16	0	32	+14	+3	-17
Fife I-5 54th Avenue Design Option	3	14	15	32	15	17	0	32	+12	+3	-15
Fife I-5 54th Span Design Option	4	15	15	34	15	19	0	34	+11	+4	-15
Tacoma Segment											
Preferred Tacoma 25th Street-West	2	15	4	21	7	14	0	21	+5	-1	-4
Tacoma 25th Street-East	3	14	3	21	7	14	0	21	+4	0	-3
Tacoma Close to Sounder	3	11	4	18	7	12	0	19	+4	+1	-4
Tacoma 26th Street	2	13	5	20	9	12	0	21	+7	-1	-5

Sources: Existing land cover: TDLE corridor survey lines (project data, 2018); aerial imagery (project data, 2017 and 2019 where available); impervious surface raster data (King County 2015). Proposed land cover: TDLE CAD design lines (June 2020); station plans (Nov 2019).

Notes:

- (1) Previous version included all land cover in 200-ft study area around project elements; similar to OMFS analysis, analysis for this version only covers permanent impact footprint.
- (2) Non-pollution-generating impervious surface as defined for this analysis includes light rail tracks, guideways, and stations, sidewalks, and rooftops.
- (3) Pollution-generating impervious surface includes parking, bus areas, and roads. Sound Transit and the Washington State Department of Ecology entered into a Memorandum of Understanding dated December 9, 2019, in which Sound Transit agreed to conduct a study to characterize the quality of the stormwater discharged from light rail guideway. The data and analysis from the study will be used to inform the design of light rail projects that are scheduled in the Sound Transit 3 Plan to be completed between 2030 and 2041, and, as necessary, Sound Transit will identify all known, available, and reasonable methods of prevention, control, and treatment (abbreviated as AKART) to define light-rail specific best management practices.
- (4) Stormwater ponds were included in previous versions as NPGIS, but are removed from this analysis (assumed to be PGIS).



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

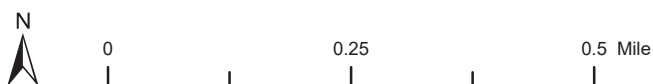
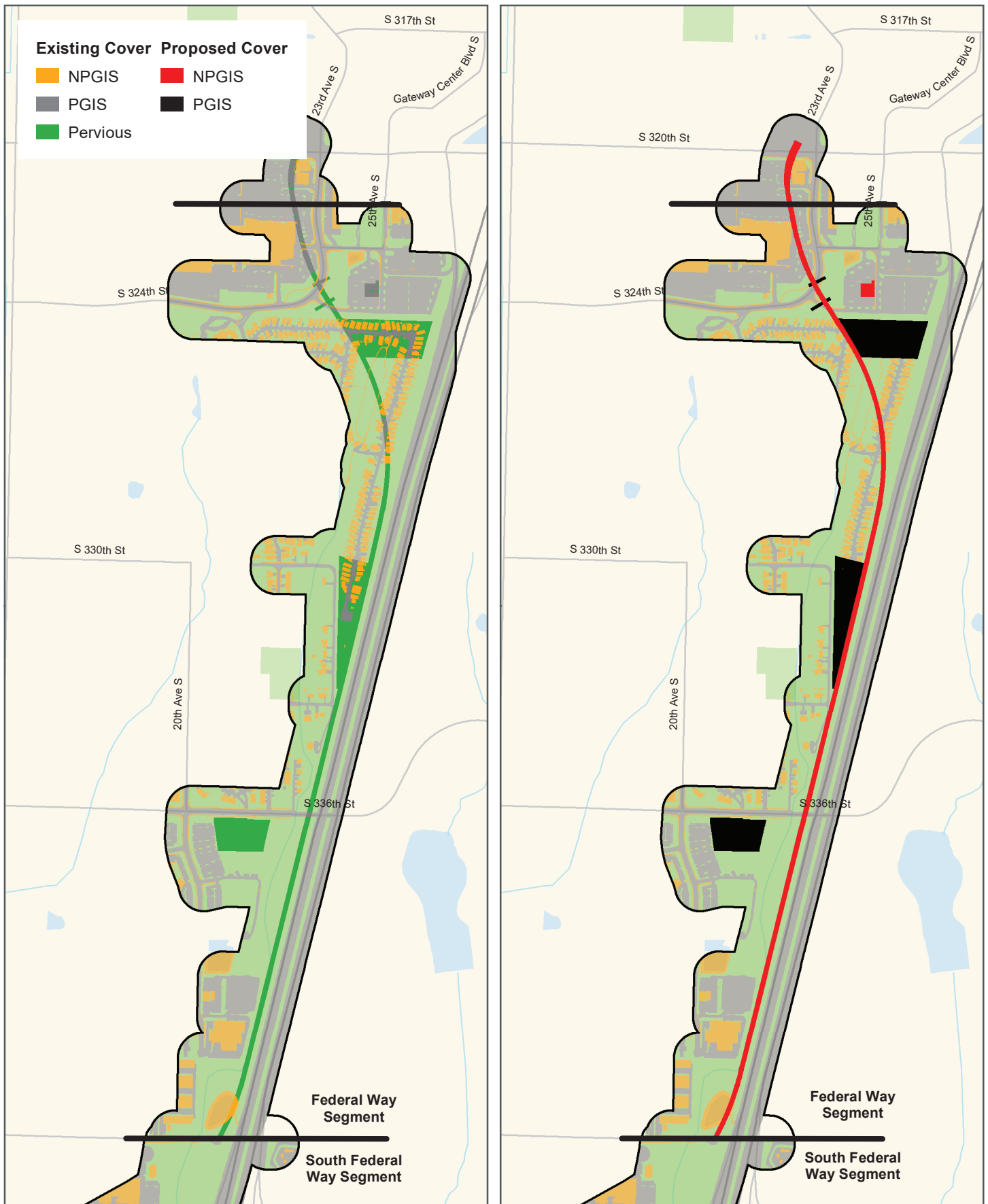


FIGURE H5-13
FW Enchanted Parkway Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

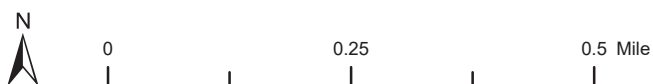
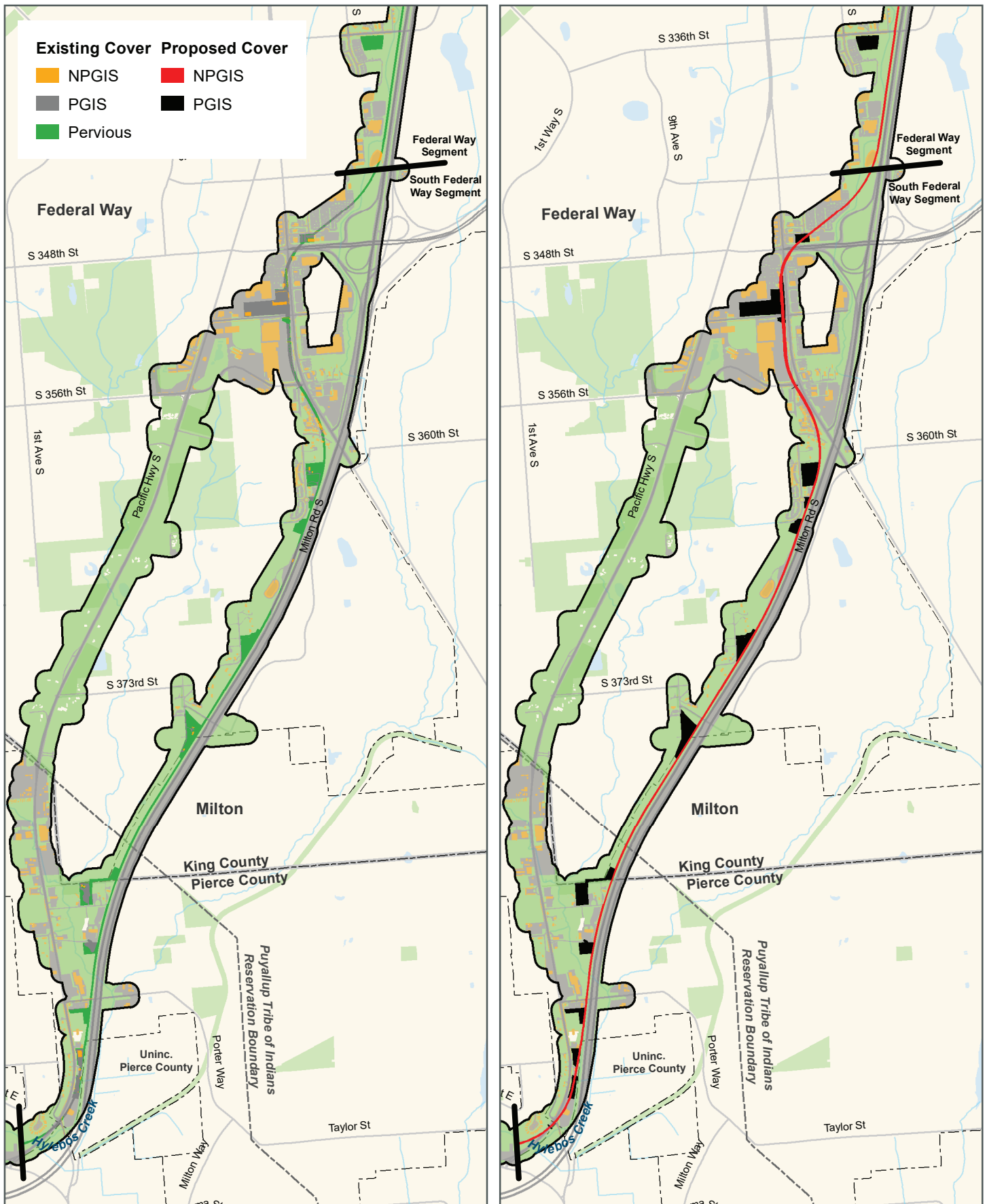


FIGURE H5-14
FW Design Option Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

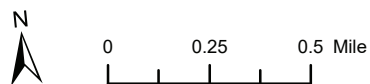
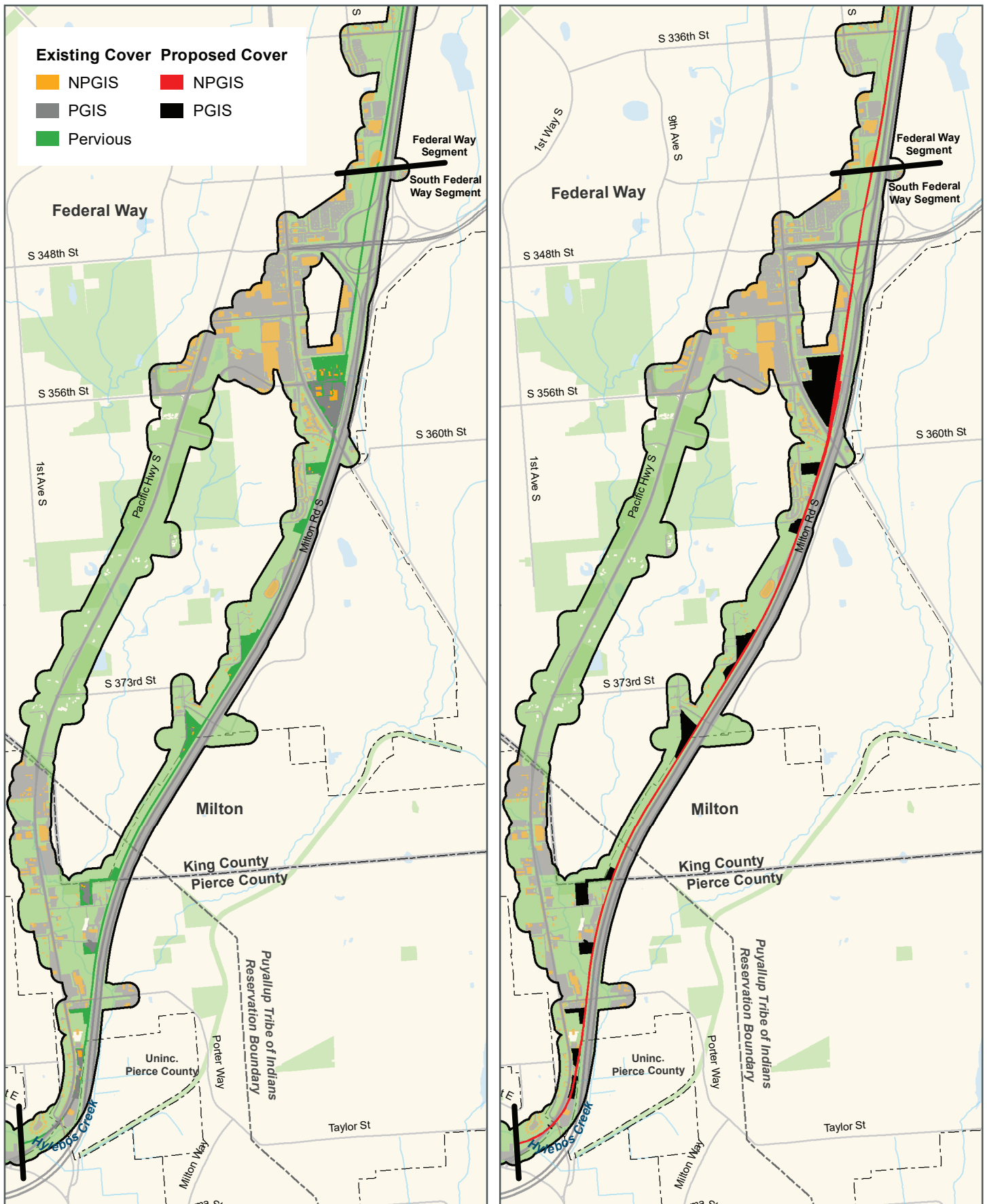


FIGURE H5-15
SF Enchanted Parkway Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

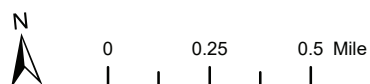
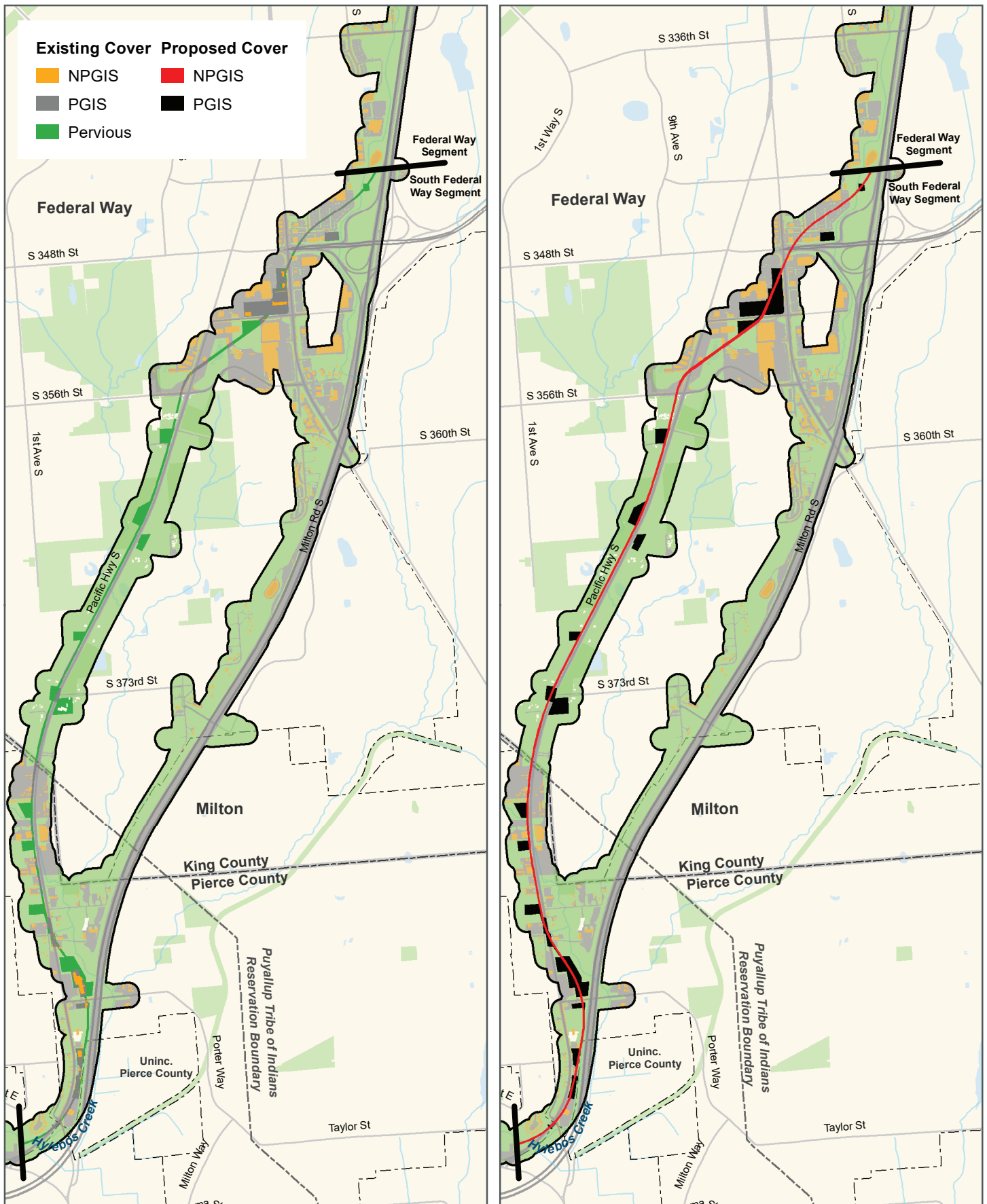


FIGURE H5-16
SF I-5 Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

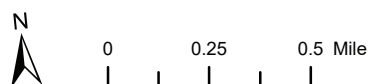
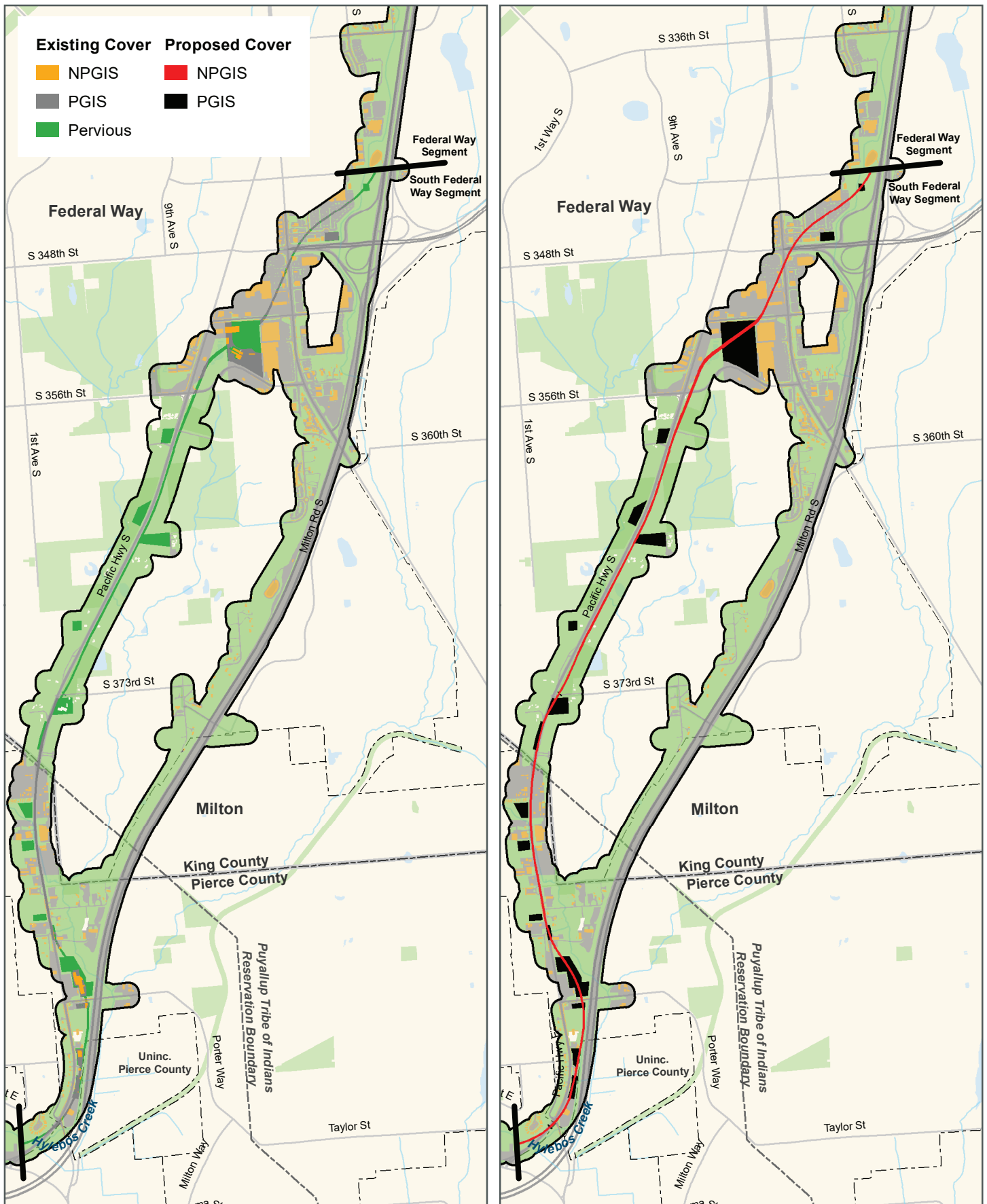


FIGURE H5-17
SF 99-West Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

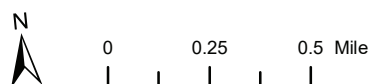
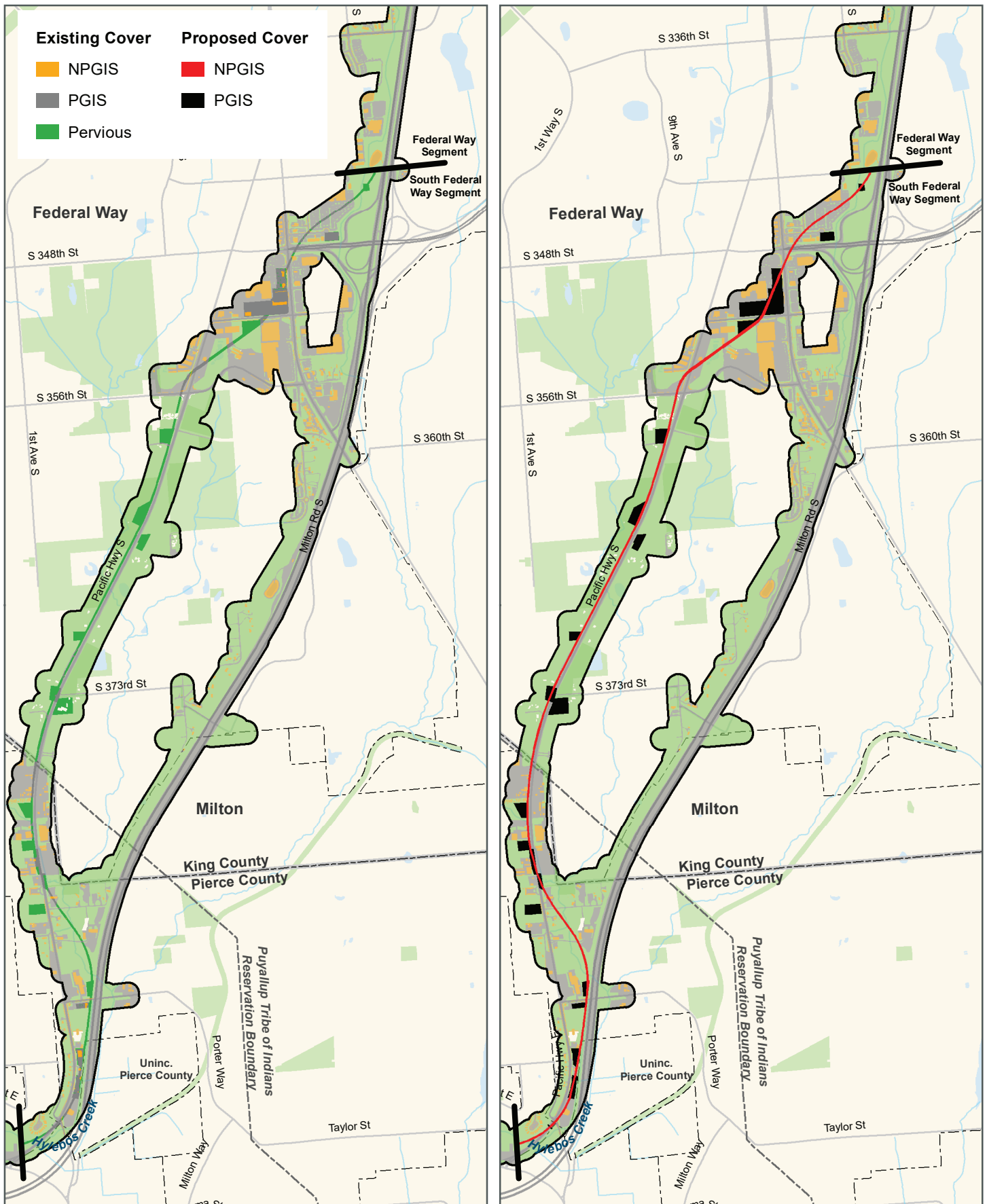


FIGURE H5-18
SF 99-East Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

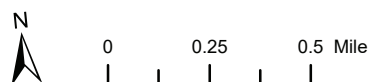
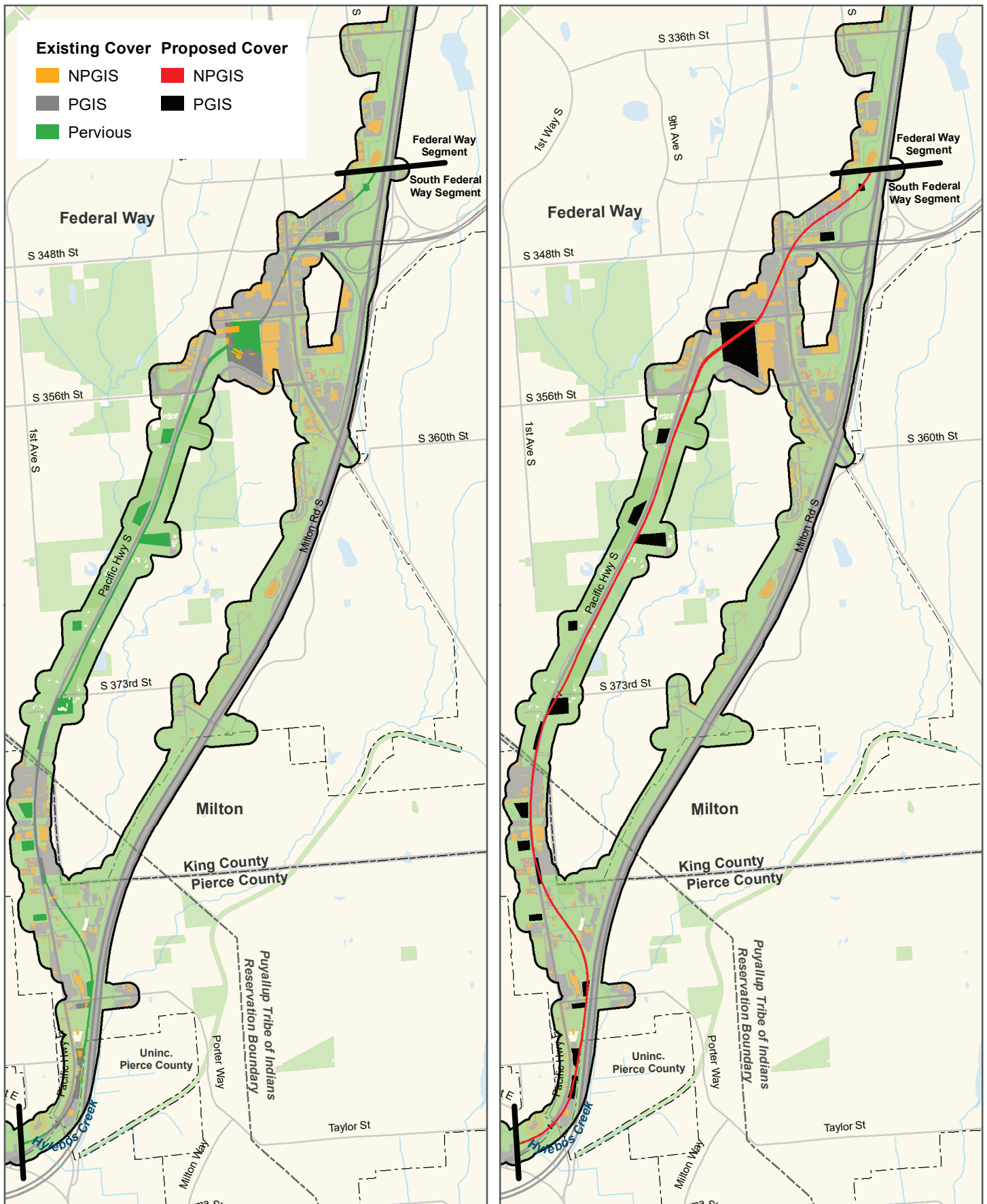


FIGURE H5-19
 SF 99-West with Porter Way Option Existing
 and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

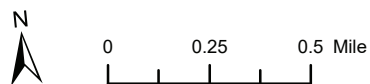
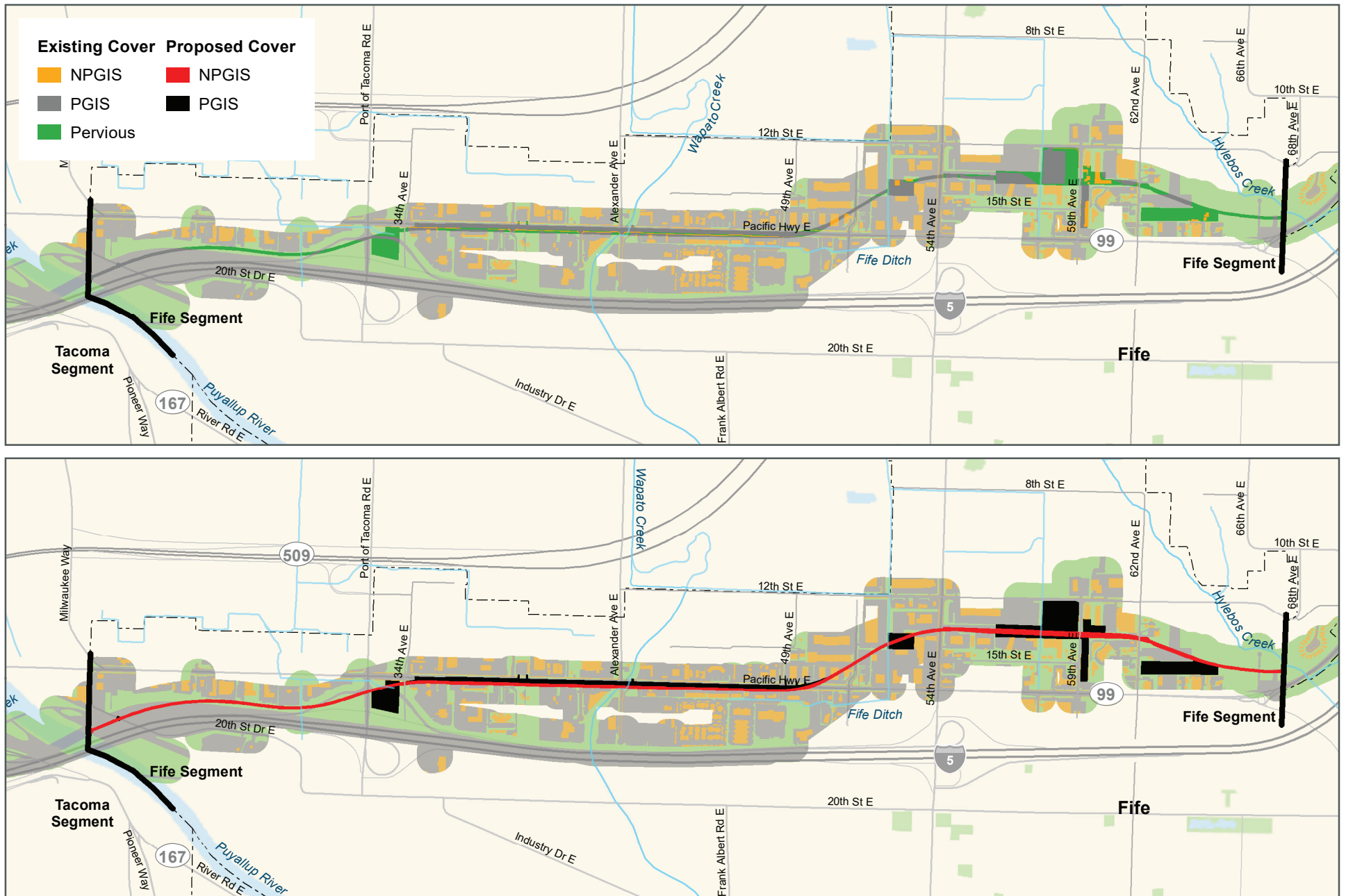


FIGURE H5-20
SF 99-East with Porter Way Option Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

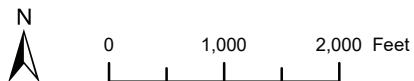
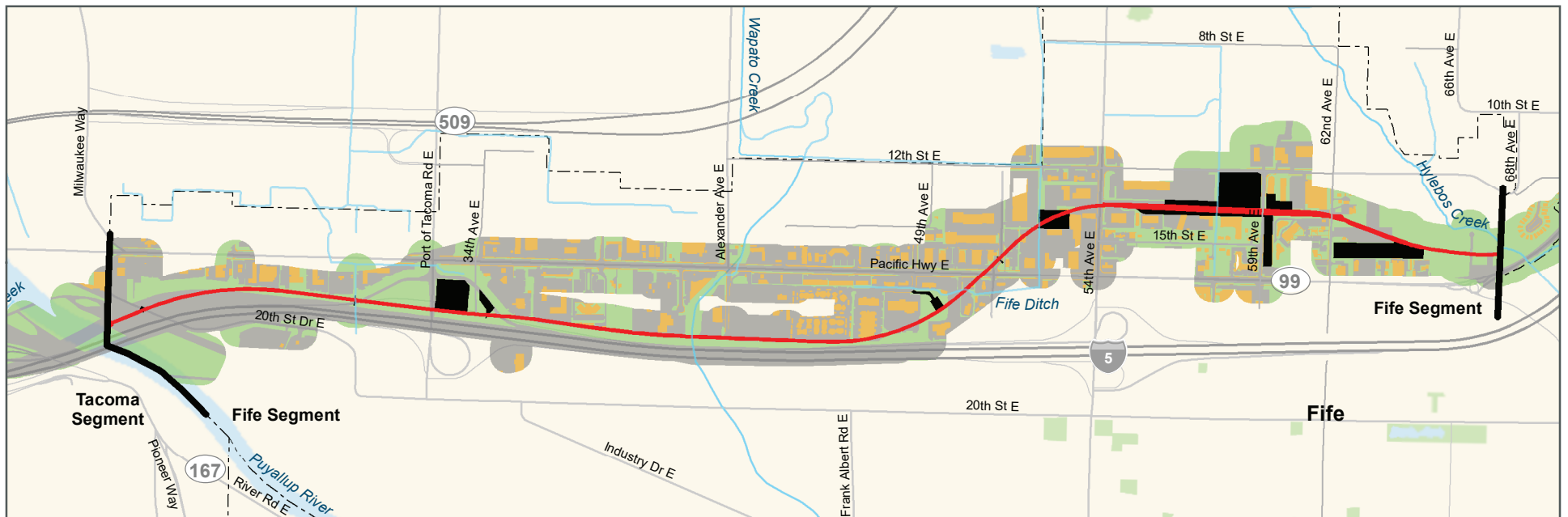
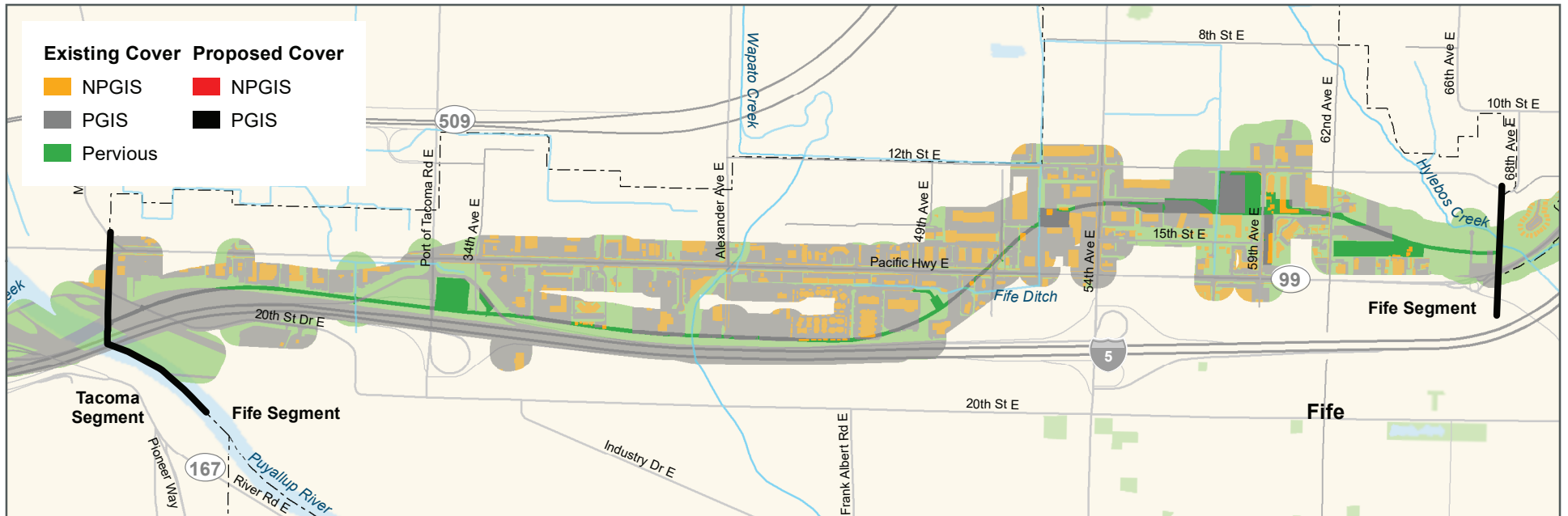


FIGURE H5-21
 Fife Pacific Highway/Fife Median Existing
 and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

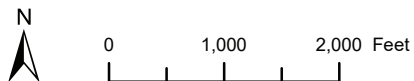


FIGURE H5-22
Fife I-5 Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

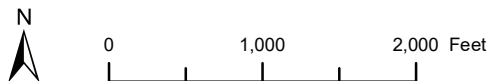
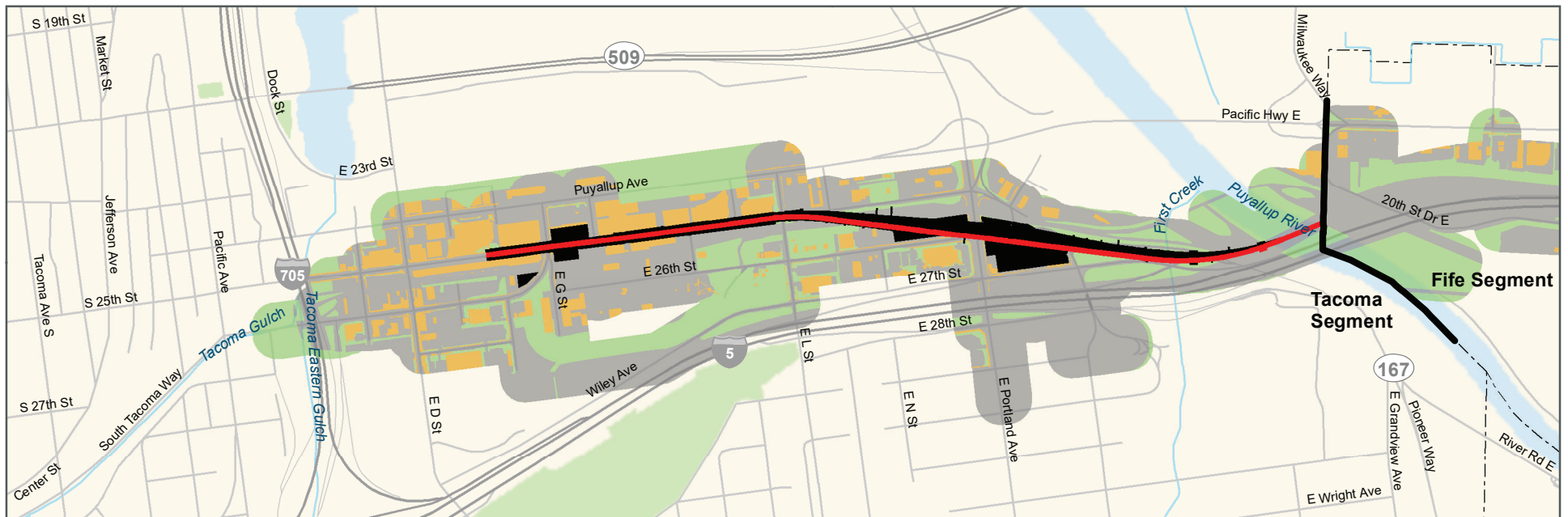
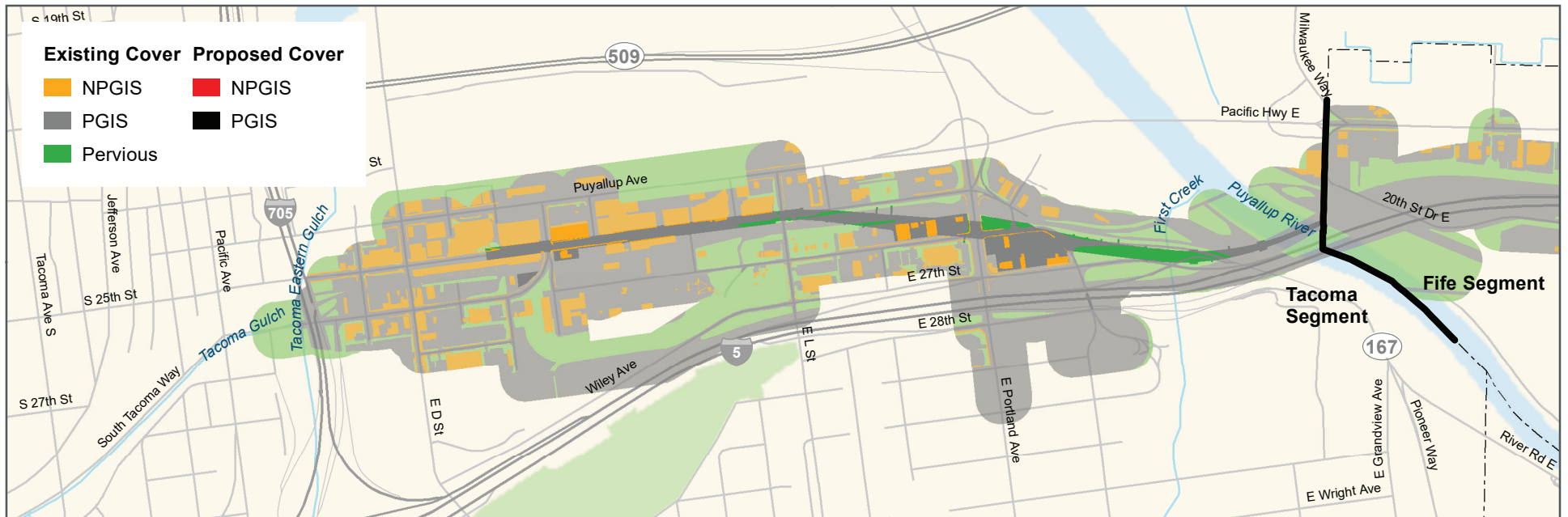


FIGURE H5-23
Tacoma 25th Street-West Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

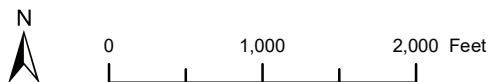


FIGURE H5-24
Tacoma 25th Street-East Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H5-25
Tacoma Close to Sounder Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

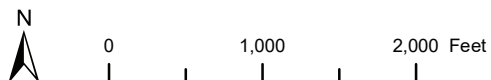
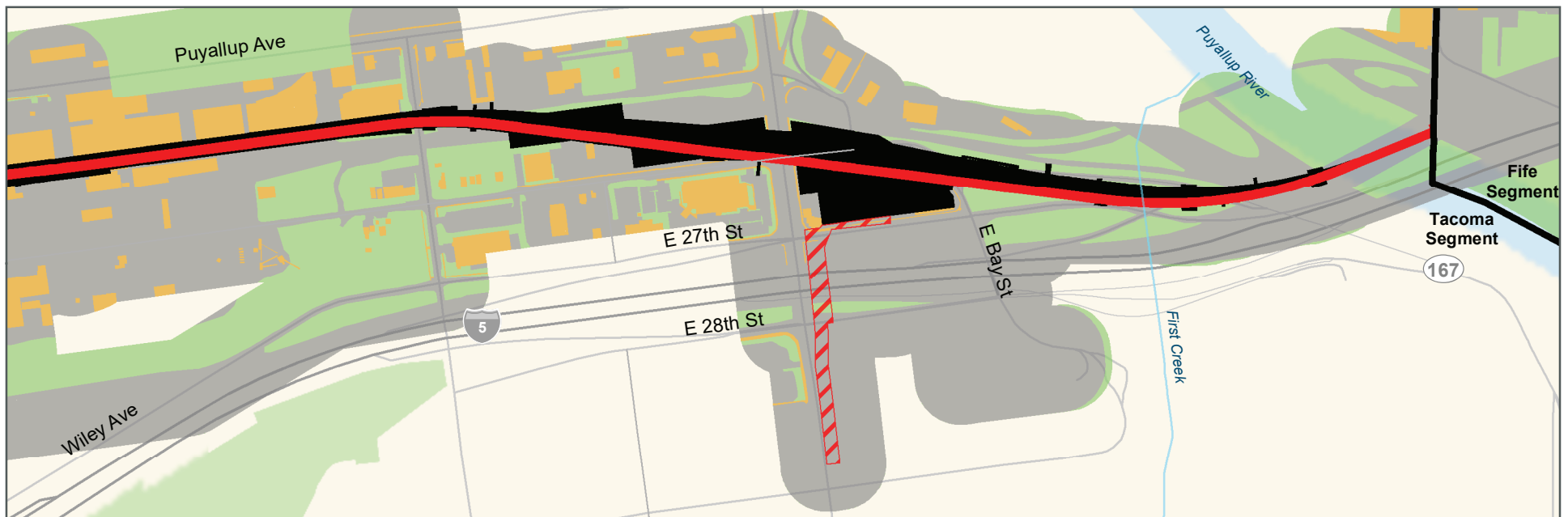
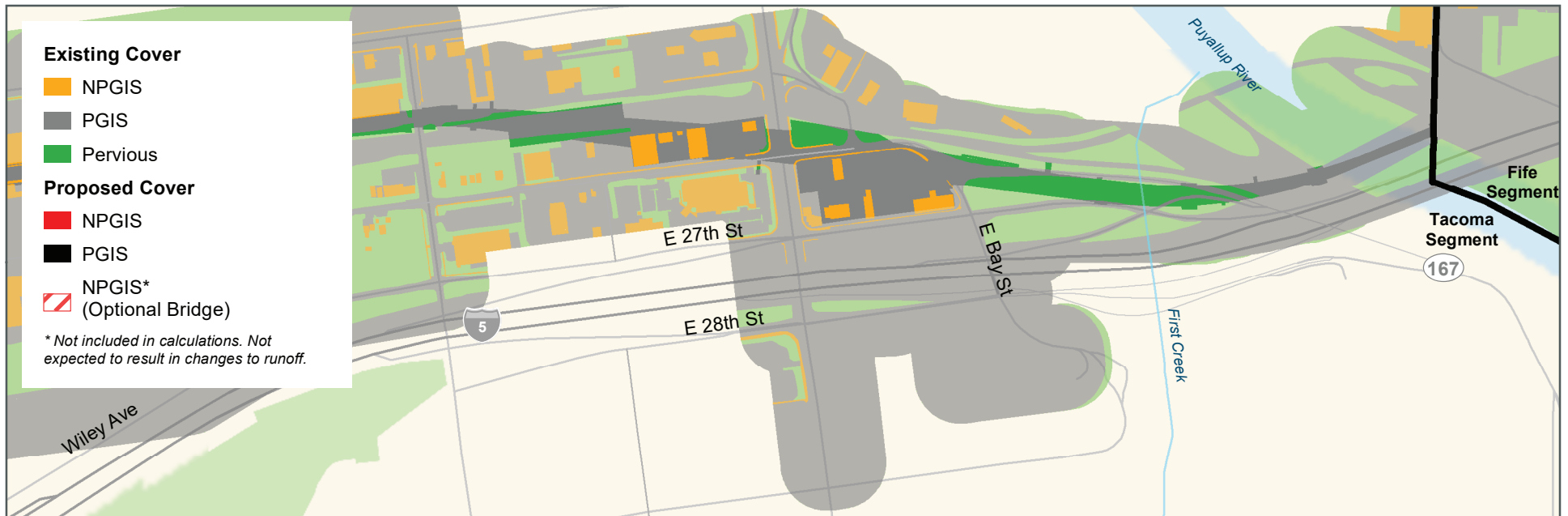


FIGURE H5-26
Tacoma 26th Street Existing
and Proposed Impervious Surfaces
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

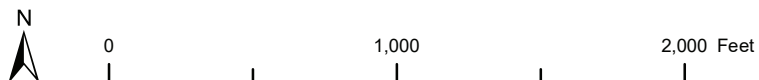
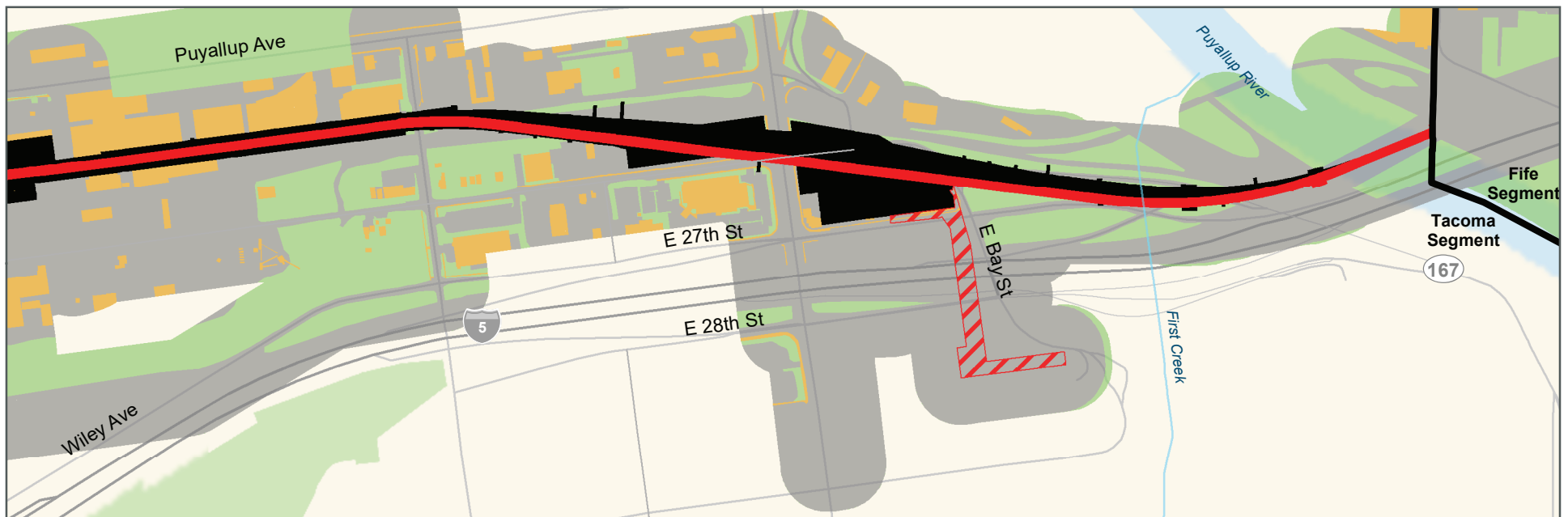
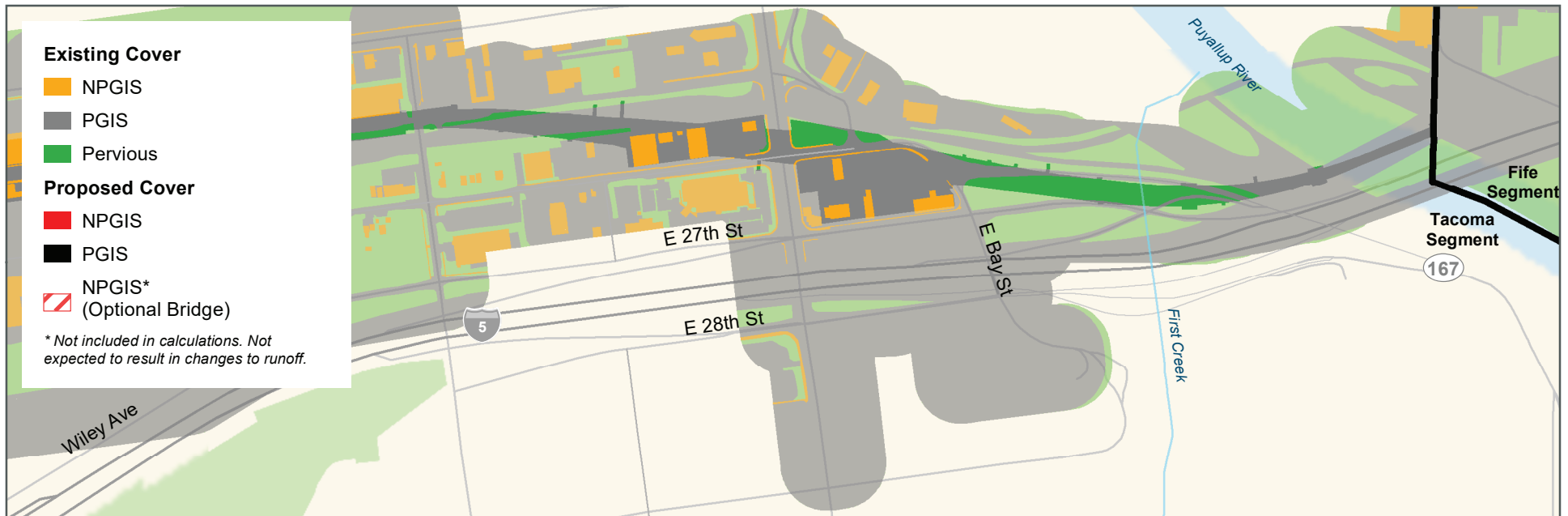


FIGURE H5-27
Existing and Proposed
Land Cover Optional Portland Avenue Bike and
Pedestrian Bridge: West Option
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

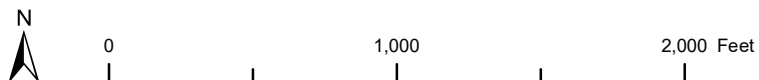


FIGURE H5-28
Existing and Proposed
Land Cover Optional Portland Avenue Bike and
Pedestrian Bridge: East Option
Tacoma Dome Link Extension

4.3 Floodplain Impacts in the Fife Segment

For discussion of floodplain impacts in other project segments, see the Draft EIS Section 4.8 Water Resources.

4.3.1 Impacts Analysis

The Fife Segment would cross FEMA Special Flood Hazard Areas (100-year floodplains) in the study area that are associated with Hylebos Creek, the Fife Ditch, the Fife Ditch Tributary 1, and Wapato Creek (Figure H5-4). The preferred Fife Station would be located within the Fife Ditch Tributary 1 regulatory 100-year floodplain boundary (FEMA 2017). The Fife 54th Avenue Station Option and the Fife 54th Span Station Option would each be located outside of and to the west of the mapped floodplain boundary. However, as previously noted, the FEMA floodplain boundary is based on 1979 historical mapping and does not reflect subsequent development and current topographic conditions. Because the elevations of the Fife 54th Avenue Station Option and the Fife 54th Span Station Option are similar to the preferred Fife Station, the future flood risk is likely similar for the preferred Fife Station and station options.

The Fife Ditch and Tributary 1 mapped 100-year floodplain is a Zone A designation, meaning a horizontal floodplain boundary has been delineated, but a vertical base flood elevation has not yet been determined through detailed measurements or hydraulic analysis. Figure H5-29 shows the general location of fill in the floodplain necessary to raise the Preferred Fife Station above flood elevation. The approximate locations of the City of Fife LOMAs are also shown. The LOMAs, which were approved by FEMA in 2023, designate portions of the land inside of the floodplain boundary as being above the base flood elevation and, therefore, outside of the mapped floodplain. Sound Transit is working with the City of Fife to determine the extent of the floodplain-excluded areas and understand both the regulatory requirements for floodplain development and flood risks. Base flood elevations, fill volumes, and potential loss of flood storage would be determined during future phases of the project as additional information is collected and the station design progresses.

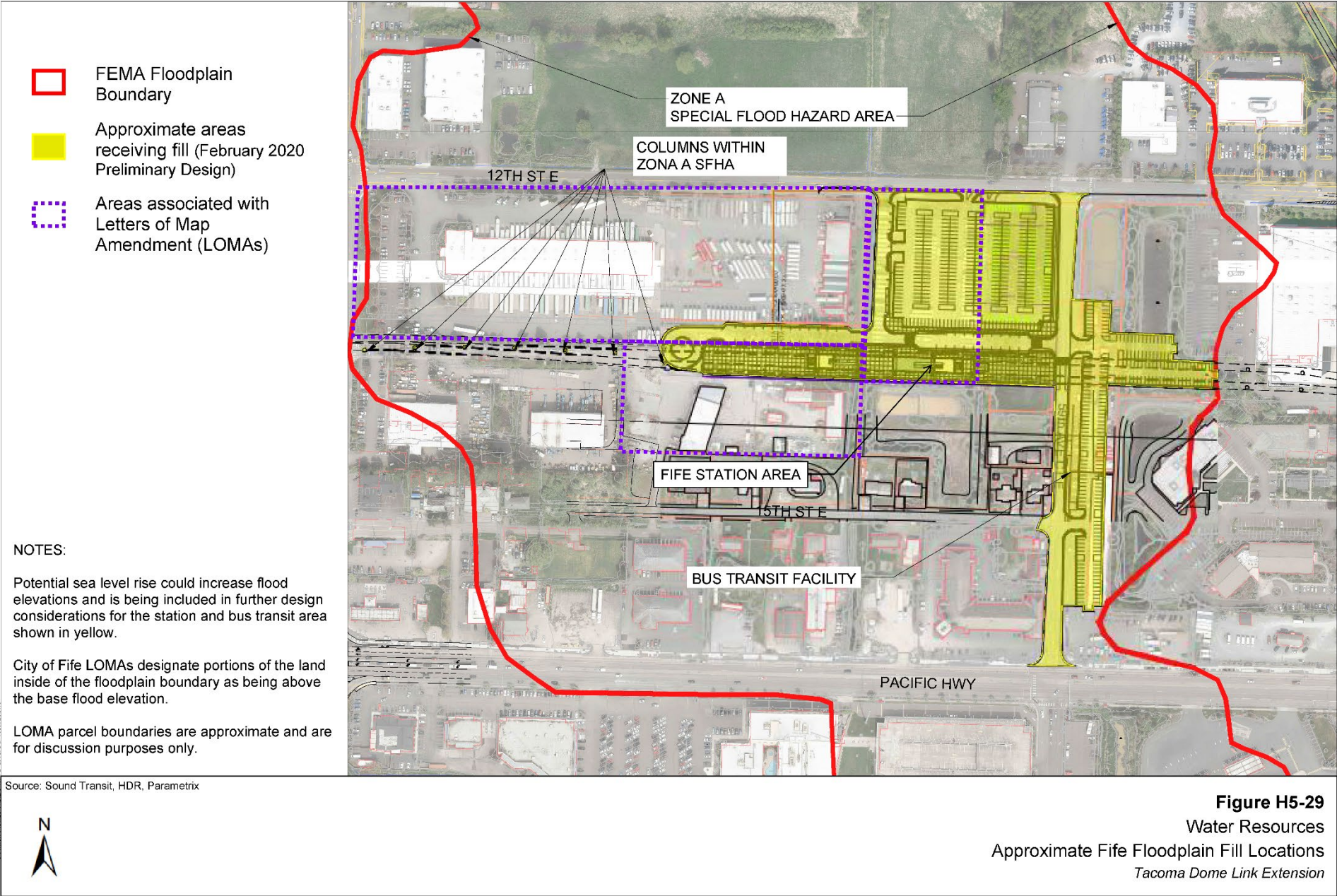


Figure H5-29
Water Resources
Approximate Fife Floodplain Fill Locations
Tacoma Dome Link Extension

4.3.2 Fife Segment Alternatives – Screening

Background

Executive Order 11988 of May 24, 1977, and its subsequent updates (Executive Orders 13690 and 14030), regulate how federal agencies may conduct, allow, or support actions in a floodplain and include climate change considerations when developing in the floodplain. If the proposed project is located within a floodplain, U.S. DOT Order 5650.2 requires a detailed analysis that discusses floodplain impacts, whether the action would result in a significant encroachment, and potential mitigation measures.

Significant Encroachment

Based on U.S. DOT Order 5650.2 and FTA Standard Operating Procedure No. 22, FTA and Sound Transit are reviewing available floodplain data to discern whether the fill associated with the preferred Fife Station alternative meets any of the criteria of a significant encroachment on the floodplain. According to U.S. DOT Order 5650.2, a floodplain encroachment is significant if it results in one or more of the following flood-related impacts:

1. A considerable probability of loss of human life;
2. Likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility; and
3. A notable adverse impact on natural and beneficial floodplain values.

In reviewing the above considerations, FTA and Sound Transit have determined that the station would be constructed based on standard best practices to support the safety of human life, and the station location would not result in a high probability of the loss of human life. Further, the station platform and guideway would be elevated above the floodplain. During major flood events, some parking areas and/or adjacent local roads could be underwater, which would limit or interrupt access to or from the station area; however, light rail services would be able to continue to travel across the floodplain without stopping at the station in Fife. Construction of the project would not cause loss of any existing vital transportation facilities. The primary natural and beneficial value of the Fife floodplain (as defined by U.S. DOT Order 5650.2) is natural moderation of floods. The project design would include compensatory flood storage to avoid notable adverse impacts. As part of this effort, Sound Transit is currently reviewing available floodplain data to estimate the base flood elevation. Based upon the information above, FTA has made a preliminary determination that the project would not result in a significant encroachment on the floodplain as defined by U.S. DOT Order 5650.2.

Only Practicable Alternative

If the proposed project involves significant encroachment on the floodplain, the Final EIS must include FTA's finding that the proposed action is the only practicable alternative. The documentation must include a discussion of reasonable alternatives, why they were not practicable, and how the project conforms with applicable local/state regulations. Sound Transit conducted an alternative evaluation process (see Appendix I, Alternatives Development Supporting Documents) as part of the standard project development.

Consideration of Other Alternatives

Station and alignment concepts were developed as part of the alternatives evaluation process, which included comments from Tribes, agencies, and the public. Concepts that were determined to be inconsistent with the project purpose and need or the Sound Transit 3 Plan that included circuitous routing, that would add travel time to the high-capacity transit service, or that were determined to be infeasible based on other environmental constraints, were not evaluated beyond this prescreening phase. Alternatives were then evaluated in the increasingly detailed Level 1 and Level 2 alternatives evaluation phases; these alternatives are presented in Table H5-7. The locations of the other alternatives previously considered are shown in Figure H5-30.

The results of the Level 1 Evaluation were reviewed by the Elected Leadership Group, Interagency Group, the Stakeholder Group, and the public in September 2018. These groups provided input on the Level 1 evaluation and findings, and the Elected Leadership Group made a recommendation to advance Fife 1, Fife 3A, Fife 3B, Fife 4A, and Fife 4B alternatives for Level 2 analysis. After Level 2 analysis and findings were presented in spring 2019, the Elected Leadership Group recommended advancing the Fife 3B alternative for environmental review to the Sound Transit Board, which was approved in July 2019. In March 2023, the Sound Transit Board identified the need to analyze additional station options in Fife and added the Fife 54th Avenue Station Option and the Fife 54th Span Station Option.

Detailed descriptions of the alternatives are included in Chapter 2, Alternatives Considered in the Draft EIS. Detailed information on the alternatives evaluation criteria and process, including the screening for the Fife station options is presented in Appendix I, Alternatives Development Supporting Documents.

Table H5-7 Fife Segment: Level 1 and Level 2 Alternatives Considered

Practicable Considerations U.S. DOT Order 5650.2(9)	No-Build Alternative	Fife 1* I-5 West to 12th Street	Fife 2A and 2B Pacific Highway West	Fife 3A* and 3B** 15th Street	Fife 4A*, 4B*, and 4C Pacific Highway East	Fife 5A, 5B, and 5C Pacific Highway South	Fife 6 I-5 West (Representative)	Fife 7 I-5 East	Fife 8 I-5 Median	Fife 9A and 9B I-5 South
Potential Environmental Impacts	N/A	Would conflict with WSDOT’s extensive Riparian Restoration and Hylebos Creek realignment project.	N/A	N/A	Would place columns in WSDOT’s proposed realigned Hylebos Creek stream buffer.	Would place columns in WSDOT’s proposed realigned Hylebos Creek stream buffer.	High impacts to Hylebos Creek.	High impacts to Hylebos Creek.	Higher potential environmental impacts due to the need for major I-5 widening/modifications.	Would result in disturbance through farmlands, wetlands, and floodplains.
Potential Social or Economic Impacts	Would not meet projected travel demand; it would not connect the Fife community and the Puyallup Tribe of Indians to regional centers and destinations on the regional high-capacity transit system; it would not expand mobility for the corridor and region’s residents, including transit-dependent, low-income, and minority populations; and it would not encourage transit (TOD).	Would not support desired travel speeds and level of service to the community. Would be located outside of the Fife City Center and away from Pacific Highway E (SR 99) and I-5; inconsistent with adopted regional plans and Sound Transit’s Regional Transit Long-Range Plan. Limited development opportunities north of station. Would cause community disruption outside of Fife City Center, including noise and visual impacts.	Would impact northern portion of St. Paul Chong Hasang Church property and could disrupt its campus, including low-income senior apartments, Rainier View Apartments. Station located outside of the planned Fife City Center area. Higher impacts to properties and potentially to property owned by the Puyallup Tribe of Indians near station. May impact Section 4(f) property.	Would impact northern portion of St. Paul Chong Hasang Church property and could disrupt its campus, including low-income senior apartments, Rainier View Apartments. Higher level of property impacts. May impact Section 4(f) property. Location in proximity to the new Fife City Center Vision, supported by the City of Fife.	High impact to low-income senior housing complex (Rainier View Apartments). High level of property impacts, including crossing property owned by the Puyallup Tribe of Indians. High potential impacts to freight movement. Potential conflicts with SR 167 Improvement Project and future WSDOT connections.	High impact to low-income senior housing complex (Rainier View Apartments). High level of property impacts, including crossing property owned by the Puyallup Tribe of Indians. Lower performing stations based on congestion, multimodal access, and TOD measures. Not preferred by City of Fife. High potential impacts to freight movement. Potential conflicts with SR 167 Improvement Project and future WSDOT connections.	High impacts to Puyallup Tribe of Indians property and the Emerald Queen Casino Fife. Station would be far from the planned Fife City Center area, lower performance for multimodal access, congestion, and TOD measures, largely as a result of the constraints to access and development posed by I-5 and the 54th Avenue East Interchange directly adjacent. Conflicts with SR 167 Improvement Project and future WSDOT connections.	High impacts to Puyallup Tribe of Indians property and the Emerald Queen Casino Fife. Station would be far from the planned Fife City Center area, lower performance for multimodal access, congestion, and TOD measures, mainly due to the constraints posed by I-5 and the 54th Avenue East Interchange directly adjacent. Conflicts with SR 167 Improvement Project and future WSDOT connections.	Would not support desired travel speeds and level of service to the community. Additional road closures and major traffic congestion impacts during work on or near I-5. Lower station accessibility and lack of multimodal access.	Would not support desired travel speeds and level of service to the community. Would have higher property impacts. The station served by this alignment was lower performing on multimodal access and TOD measures and is well outside the Fife City Center area. Would be located adjacent to park properties, which could result in a <i>de minimis</i> Section 4(f) use.
Potential Engineering, Design, or Cost Impacts	Would fail to provide high-quality, rapid, reliable, and efficient light rail transit to communities in the project corridor, inconsistent with the Sound Transit 3 Plan.	Would increase travel time, reduce ridership, and lacks opportunity for transit-oriented development. High cost.	N/A	N/A	Would have major construction conflicts due to the WSDOT SR 167 Improvement Project and future proposed WSDOT direct connections at this interchange. High cost.	Would have major construction conflicts with the WSDOT SR 167 Improvement Project and future WSDOT connections.	Major impact to future WSDOT proposed direct connections at the SR 167 interchange; the alignment would likely need to be extremely tall to leave space for future ramps, resulting in higher cost and design challenges. Requires complex coordination with SR 167 and 54th Street Interchange projects.	Major impact to future WSDOT proposed direct connections at the SR 167 interchange; the alignment would likely need to be extremely tall to leave space for future ramps, resulting in higher cost and design challenges. Requires complex coordination with SR 167 and 54th Street Interchange projects. Station access constraints due to location between I-5 and SR 99.	Requires widening and modification to I-5, resulting in construction safety issues and higher construction impacts. High utility conflicts. Restricted by Federal Highway Administration (FHWA) limitations on I-5 right-of-way use, including severe space constraints and conflicts with anticipated future WSDOT projects to maintain safe and effective operations on I-5. Not supported by FHWA or WSDOT.	Requires an additional crossing of I-5 to the north or south, which significantly increases costs. High construction impacts, including additional closures of I-5 and other major roadways and associated traffic impacts. Major construction conflicts with WSDOT SR 167 Improvement Project and future proposed WSDOT direct connections at this interchange.

Notes: The alternative names in this table follow the Level 1 Alternatives Evaluation Report and Level 2 Alternatives Evaluation Report (see Appendix I – Alternatives Development Supporting Documents).

*Alternative advanced into Level 2 Alternatives Evaluation (see Appendix I – Alternatives Development Supporting Documents).

**Alternative advanced into Level 2 Alternatives Evaluation and modified for analysis in the Draft Environmental Impact Statement.

FIGURE H5-30
Water Resources
Fife Station: Other Alternatives Considered
Tacoma Dome Link Extension

5 AVOIDANCE AND MINIMIZATION OF IMPACTS

This appendix is intended to provide supplemental information and background to support the primary discussion of practices to avoid and minimize or mitigate potential impacts to water resources in the project study area that are discussed in Section 4.8, Water Resources, of the Draft EIS.

5.1 Best Management Practices

Sound Transit seeks to prevent or minimize potential impacts on water resources by continued project design and development measures that follow local stormwater management regulations, use required best management practices (BMPs), encourage sustainable low-impact development approaches where feasible, and prepare for climate-related uncertainties where practicable. This section discusses BMPs that would be included in the project design regardless of the findings of this water resources impact analysis. Therefore, they are not considered mitigation measures and are instead part of the proposed alternatives.

Sound Transit's Design Criteria Manual (Sound Transit 2021) requires project-related stormwater management to conform to the requirements of the local jurisdictions. These measures include minimizing impervious footprints, avoiding placement of design-related structural elements in or near water resources and their associated buffers when possible, and installing or upgrading water quality treatment and flow control facilities when required. The Tacoma Dome Link Extension would comply with the WSDOT Highway Runoff Manual (WSDOT 2019), the King County Surface Water Design Manual (King County 2021a), the Federal Way Addendum to the King County Surface Water Design Manual (City of Federal Way 2017), the King County Stormwater Pollution Prevention Manual (King County 2021b), the Pierce County Stormwater Management & Site Development Manual (Pierce County 2021), the Stormwater Management Manual (City of Tacoma 2021), and the 2019 Ecology Stormwater Management Manual for Western Washington (Ecology 2019b).

In addition, based on Sound Transit directives (Sound Transit 2021) and Ecology requirements (Ecology 2019b), stormwater management facilities would be designed using sustainable low-impact development approaches where feasible. However, due to a predominant presence of till-type soils with low infiltration and high runoff potential in the study area, the use of infiltration-based low-impact development approaches may not be well suited and other stormwater management approaches may be necessary. Stormwater flow control techniques may include detention ponds, infiltration ponds, vaults, and dispersion. Water quality treatment techniques may include bioretention, ecology embankments, and media filter vaults. Treatment to remove metals, and oil and grease would be provided at parking lots and roadway areas where required.²

Initial design planning efforts recognize climate-related uncertainties, such as increased precipitation and sea-level rise, and potential impacts to water resources. Climate-related hydrologic changes could include increases in flow rates and velocities, which could result in increased flood elevations and scour. Once a Preferred Alternative has been confirmed or modified for the project, Sound Transit would include consideration of climate change data,

² Sound Transit and the Washington State Department of Ecology entered into a Memorandum of Understanding dated December 9, 2019, in which Sound Transit agreed to conduct a study to characterize the quality of the stormwater discharged from light rail guideway. The data and analysis from the study will be used to inform the design of light rail projects that are scheduled in the Sound Transit 3 Plan to be completed between 2030 and 2041, and, as necessary, Sound Transit will identify all known, available, and reasonable methods of prevention, control, and treatment (abbreviated as AKART) to define light-rail specific best management practices.

which predicts the effects of the buildup of greenhouse gases, based on current understanding of atmospheric physics and chemistry. Strategies to minimize these impacts may include:

- Estimation of anticipated sea level rise and risk of future flooding.
- Estimation of potential floodplain increases.
- Design freeboard (the distance between the waterline and the lowest point of a structure) that is above the current or projected base flood elevation.
- Channel stabilization and armoring around structural elements to resist scour.

Currently, there are streets that are impassable during major floods in the Fife area, which is where the preferred Fife Station, the Fife 54th Avenue Station Option, and the Fife 54th Span Station Option would be located. If and when flooding occurs in the future, the ground level parking and access roads to the station could be temporarily under water, along with the surrounding area. During these events light rail patrons may be unable to access the station by car or bus. However, the light rail would still operate across the floodplain without stopping at the station in Fife. Once the water recedes, normal bus and car operation could resume.

To address uncertainties associated with climate change, the following strategies would be considered as the design proceeds:

- Consideration of use of piers, pilings, or other structures to elevate the preferred Fife Station above flood risk and minimize fill footprint in floodplain.
- Increase stormwater storage volume by a certain percentage, where flow control is required to account for potential increases in rainfall depths.
- Increase treatment flow rates by a similar percentage, where water quality treatment is required to account for potential higher increases in future precipitation.

The Puyallup Tribe of Indians has also established certain areas where the Tribal government has identified resources or land that is of Tribal importance for economic, social, cultural, and ceremonial reasons, and the project would avoid those areas for placement of stormwater management BMPs or other mitigation.

5.1.1 Long-Term Operations

5.1.1.1 Surface Water

The concept design for stormwater facilities for the Draft EIS considered conservative flow control strategies and redevelopment requirements that provide enhanced treatment for all post-project PGIS. Proposed BMPs include detention ponds, detention vaults, guideway dispersion, bioretention, and infiltration facilities. Water quality would be treated to Enhanced Treatment standards (intended to provide a higher rate of removal of dissolved metals than Basic Treatment), and flows would be controlled based on a target of forested land use conditions. More detailed information will be provided in the Conceptual Stormwater Design Report as the design progresses.

Outlets from stormwater management facilities would generally connect to existing systems where such systems exist and may necessitate the addition of new discharge points where there is not an existing connection.

5.1.1.2 Groundwater

The project would consult the state and applicable local wellhead protection plans to avoid and minimize to the greatest extent feasible any impacts on any of the associated aquifer recharge or wellhead capture zones. The project design would also follow the EPA review criteria for preventing aquifer contamination to ensure compliance with regulations of the Sole Source Aquifer Program (EPA 2019). By taking guidance from Washington's Wellhead Protection Program, which emphasizes a progressive management concept, and using a combination of BMPs and local land use protection and design standards, the proposed project would not be expected to impact groundwater resources (WA DOH 2017).

Avoidance and minimization measures that could include:

- Evaluating the use of closed or open-ended steel pipe piles, which have been found to prevent or minimize migration of contaminants (Shanon & Wilson 2014).
- Avoiding the use of H-piles and driven concrete piles due to their potential to create pathways for contamination migration.
- Avoiding the use of timber piles, which can facilitate wicking and chemical leaching.
- Designing and constructing pile tips to prevent overcutting the ground around the piles as they are driven. This would decrease the chances of forming pathways for contamination along the exterior boundaries of the structural elements.
- Specifying the outside diameter of the driving mechanism tool to match or be smaller than the outside diameter of the pile itself. This would reduce the potential for gaps to form between the exterior element boundary and the surrounding soils, creating pathways.

5.1.1.3 Shorelines

To minimize impacts on water resources, the alternatives would avoid placement of piers or columns within the ordinary high water mark of rivers and streams and associated stream buffers to the greatest extent possible. To meet the standards of the statewide and city shoreline master plans, the project design would (wherever possible) include elements that preclude the need for shoreline armoring (adding large rock or other hard structure to protect the banks from scouring), flood control works, vegetation removal, and other shoreline modifications. Where modification or stabilization measures cannot be avoided, BMPs and low-impact development techniques for surface water management would be implemented to minimize adverse impacts on existing shoreline ecological functions.

5.1.2 Construction

The risk of construction-related impacts to water resources would be controlled by complying with the NPDES Construction Stormwater General Permit process and the Highway Runoff Manual, the King County Stormwater Pollution Prevention Manual, the Pierce County Stormwater Management & Site Development Manual, and Ecology Manual standards and BMPs, as appropriate. Through compliance with these requirements, an approved Construction Stormwater Pollution Prevention Plan (CSWPPP) would be developed and implemented for the proposed Project. The CSWPPP would serve as the overall construction stormwater avoidance and minimization plan by describing overall procedural and structural pollution-prevention and flow control BMPs, including location, size, maintenance requirements, and monitoring. An Ecology-certified erosion and sediment control lead would be employed to conduct the

inspections, and deficiencies would be promptly corrected. In addition, the CSWPPP would include each of the following plans:

- Temporary Erosion and Sediment Control Plan – This plan would outline the design and construction specifications for BMPs to be used to identify, reduce, eliminate, or prevent sediment and erosion problems.
- Spill Prevention, Control, and Countermeasures Plan – This plan would outline requirements for and implementation of spill prevention, inspection protocols, equipment, material containment measures, and spill response procedures.
- Concrete Containment and Disposal Plan – This plan would outline the management, containment, and disposal of concrete debris, slurry, and dust and discuss BMPs that would be used to reduce high pH.
- Dewatering Plan – This plan would outline procedures for pumping groundwater away from the construction area, and storing (as necessary), testing, treating (as necessary), and discharging or disposing of the dewatering water.
- Fugitive Dust Plan – This plan would outline measures to prevent the generation of fugitive dust from exposed soil, construction traffic, and material stockpiles.

Specific BMPs would be designed based on the manuals previously mentioned. BMPs could potentially include:

- Phasing the work to minimize the amount of disturbed area at any one time.
- Developing construction plans for sensitive areas (such as stream crossings) that minimize the need for haul roads using fill material, such as building temporary bridges or platforms with small piles (i.e., pin piles).
- Marking/fencing of construction limits.
- Minimizing the amount of cleared and cut pavement areas at any one time to the extent feasible.
- Stabilizing construction entrances and haul roads using quarry spalls (crushed basalt).
- Washing truck tires at construction entrances, as necessary.
- Cleaning construction site track-out from public roads, as necessary.
- Constructing silt fences downslope from exposed soil.
- Protecting catch basins from sediment.
- Containing and controlling concrete and hazardous materials on site.
- Installing temporary ditches or asphalt berms to route runoff around or through construction sites, with periodic check dams to slow and settle runoff.
- Providing temporary plastic or mulch to cover soil stockpiles and exposed soil.
- Using temporary erosion control blankets or mulch on exposed steep slopes to minimize erosion before vegetation is established.
- Constructing temporary sedimentation ponds or cells to remove solids from concentrated runoff and dewatering before being discharged.
- Conducting vehicle fueling and maintenance activities no closer than 100 feet from waters of the state.

- Providing secondary containment for all potential sources of leaks and spills.
- Implementing stream protection measures, as necessary, including diverting stream flow around the construction area and limiting the construction period to the required “work window,” a period of the year identified by the timeframe when potential effects to fish are minimized.

The Tribe’s Antidegradation Implementation Procedures, which apply to any discharges on the Puyallup Tribe of Indians Reservation, would include:

- Benchmark monitoring for turbidity (or transparency) and, in the event of a large amount of concrete work or engineered soils, pH monitoring as well.
- Tribal notification prior to conducting inspections at construction sites generating stormwater discharged to Tribal waters.
- Treatment of dewatering discharges to minimize the discharge of pollutants to groundwater or surface waters from stormwater that is removed from excavations, trenches, foundations, vaults, or other storage areas.
- To provide and maintain natural buffers to the maximum extent possible (and/or equivalent erosion and sediment controls) when Tribal waters are located within 100 feet of the site’s earth disturbances. Equivalent erosion and sediment controls would achieve the sediment load reduction equivalent to a 100-foot undisturbed natural buffer.
- Construction of the bridge crossing the Puyallup River and portions of the Tacoma Segment would cross lands under the jurisdiction of the Puyallup Tribe of Indians Reservation. The Puyallup Tribal Code (Section 15.12 et seq.) establishes district classifications, in substantial compliance with the Puyallup Tribe of Indians Comprehensive Land Use Plan, for all lands within the boundaries of the Puyallup Reservation. The locations and boundaries of the zoning districts can be located on the Tribe’s official zoning map, which is kept on file in the Tribe’s Land Use Office and is available for inspection by Tribal members. Certain activities on Tribal trust lands may be undertaken only after development permits and construction permits have been issued by the Tribe. These activities include the construction of buildings or structures within 200 feet of shorelines and dredging or filling of watercourses (including pile driving).

Through compliance with applicable construction permits and BMPs that the permits would incorporate, the light rail alternatives are not expected to adversely affect water resources during construction.

If discharge of treated construction or process water to a sanitary sewer is proposed, approval must be obtained from either the King County Industrial Waste Division or the Pierce County Industrial Pretreatment Program and any other applicable local jurisdiction. For construction within and over streams or other state-regulated water bodies, an HPA would be required. The HPA would be obtained from WDFW before work begins. The project would comply with the HPA’s stream protection measures, including diverting stream flow around the construction area and limiting the construction period to the required “work window,” a period of the year identified in the HPA when potential effects to fish would be minimized.

5.2 Floodplains

FMC 15.40 requires development permitted in a flood hazard area to be designed to a zero-rise standard, which Sound Transit would comply with by providing compensatory storage to offset proposed floodplain fill. Sound Transit will confirm the needed amount of compensatory flood storage, pending determination of the base flood elevation for Zone A floodplains. Additional survey work or hydraulic analysis may be required to determine appropriate volumes and locations for compensatory storage.

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Tacoma Dome Link Extension

Draft Environmental Impact Statement

GEOLOGY AND SOILS BACKGROUND INFORMATION

Appendix H6

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Table

Table H6-1	Geologic Hazards	H6-1
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Table H6-1 Geologic Hazards

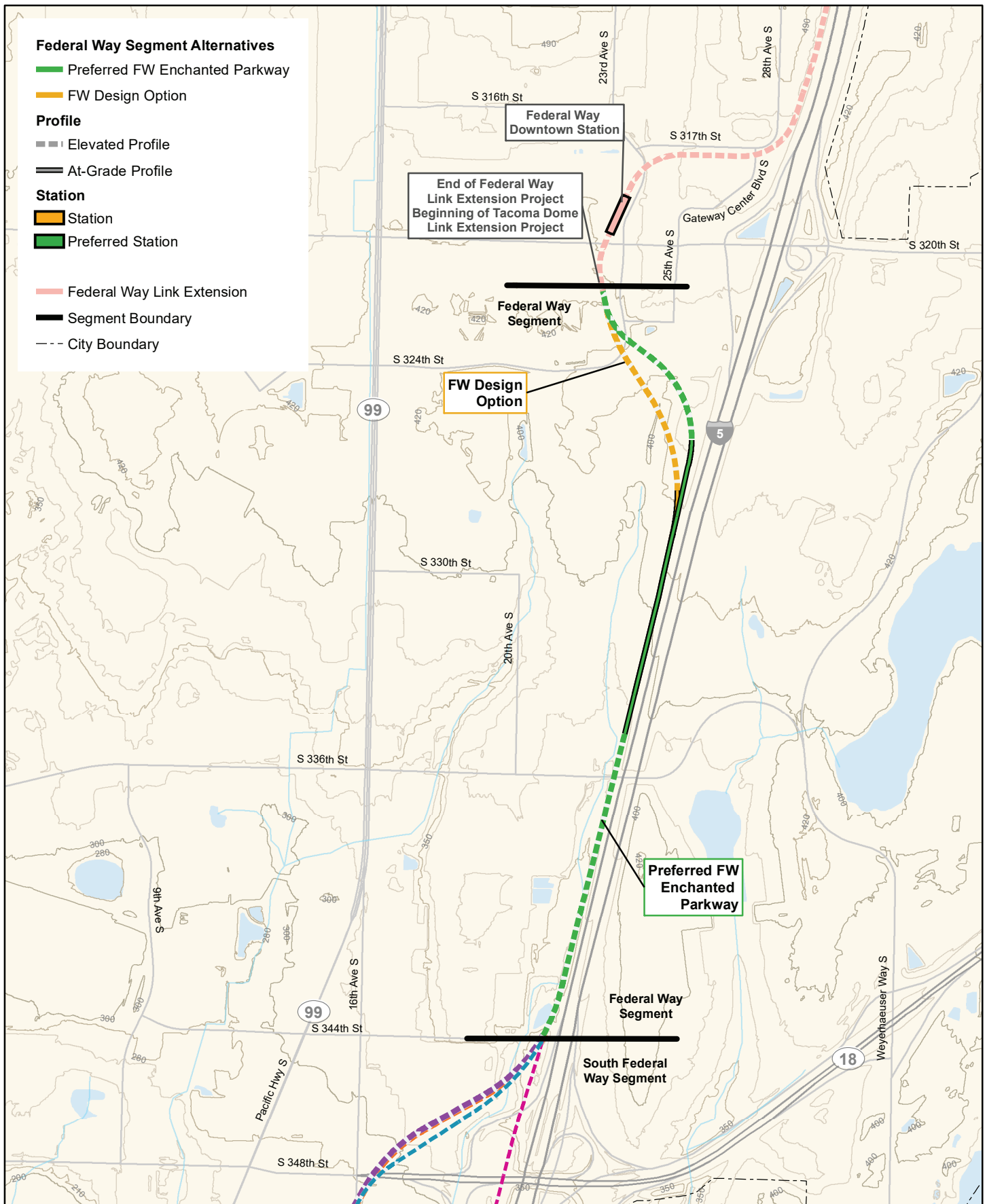
Alternative	Erosion	Steep Slope	Landslide Hazard	Seismic – Liquefaction	Seismic – Tsunami	Volcanic – Lahar	Soil – Corrosivity	Soils – Hydric
Federal Way Segment								
Preferred FW Enchanted Parkway ¹	Present	Present	None	Low	Unlikely	Present	Present	None
South Federal Way Segment								
SF Enchanted Parkway	Present	Present	None	Low	Unlikely	Present	Present	None
SF I-5	Present	Present	None	Low	Unlikely	Present	Present	None
SF 99-West ²	Present	Present	Present	Low	Unlikely	Present	Present	Present
SF 99-East ²	Present	Present	Present	Low	Unlikely	Present	Present	Present
Fife Segment								
Fife Pacific Highway ³	None	Present	Present	High	Present	Present	Present	Present
Fife Median ³	None	Present	Present	High	Present	Present	Present	Present
Fife I-5 ³	None	Present	Present	High	Present	Present	Present	Present
Tacoma Segment								
Preferred Tacoma 25th Street-West	None	Present	None	High	Present	Present	None	None
Tacoma 25th Street-East	None	Present	None	High	Present	Present	None	None
Tacoma Close to Sounder	None	Present	None	High	Present	Present	None	None
Tacoma 26th Street	None	Present	None	High	Present	Present	None	None

Notes:

1) The geologic hazards would be the same with FW Design Option.

2) The geologic hazards would be the same with the Porter Way Design Option for the SF 99-West and SF 99-East alternatives.

3) For all Fife alternatives, the 54th Avenue and Fife 54th Span design options have the same geologic hazards.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

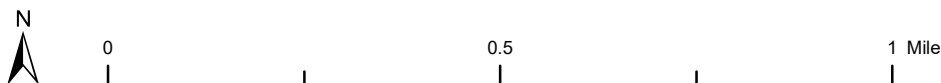
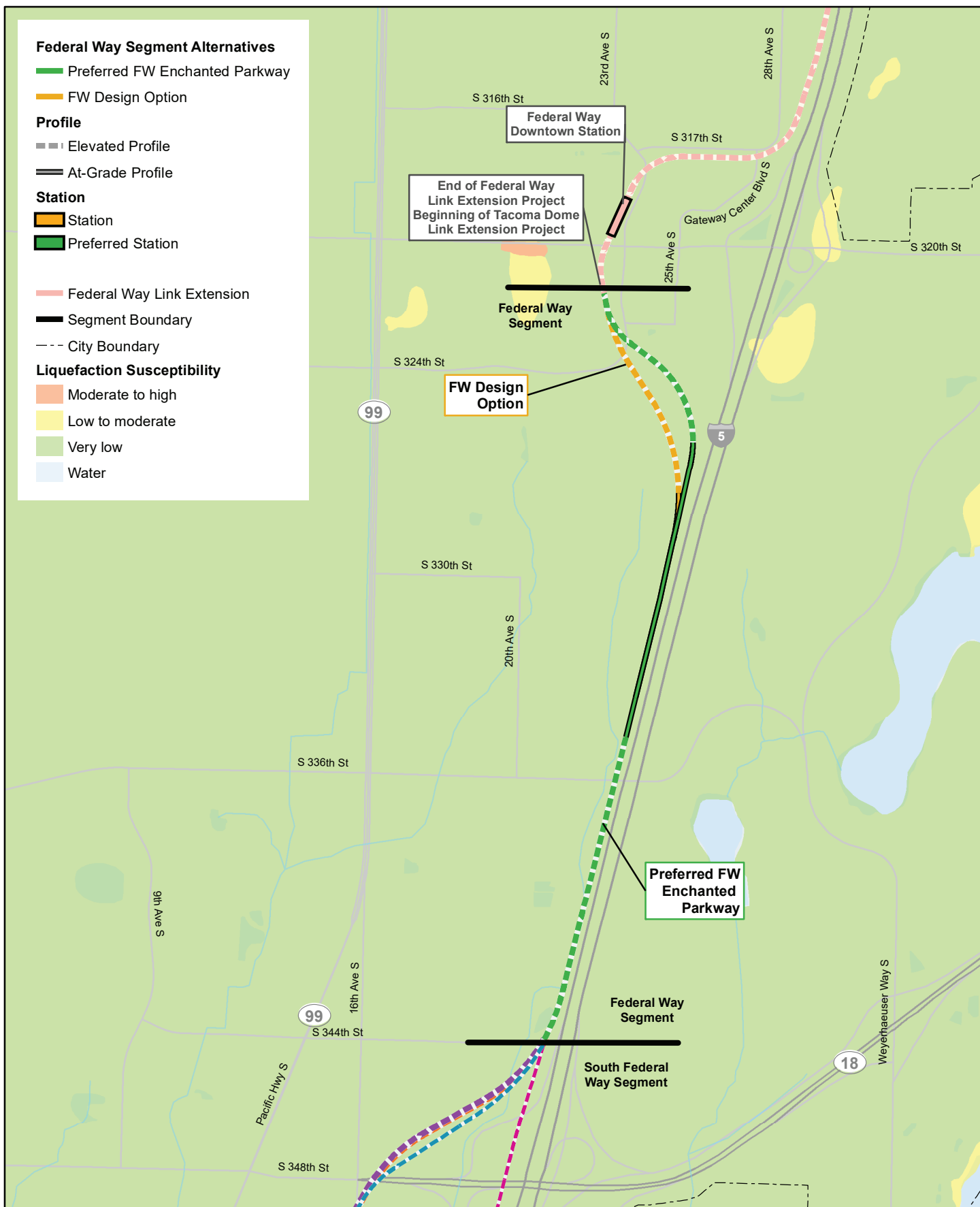


FIGURE H6-1
Topography
Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

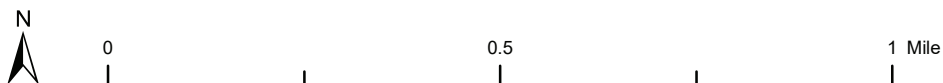


FIGURE H6-2
 Seismic Hazards
 Federal Way Segment
 Tacoma Dome Link Extension

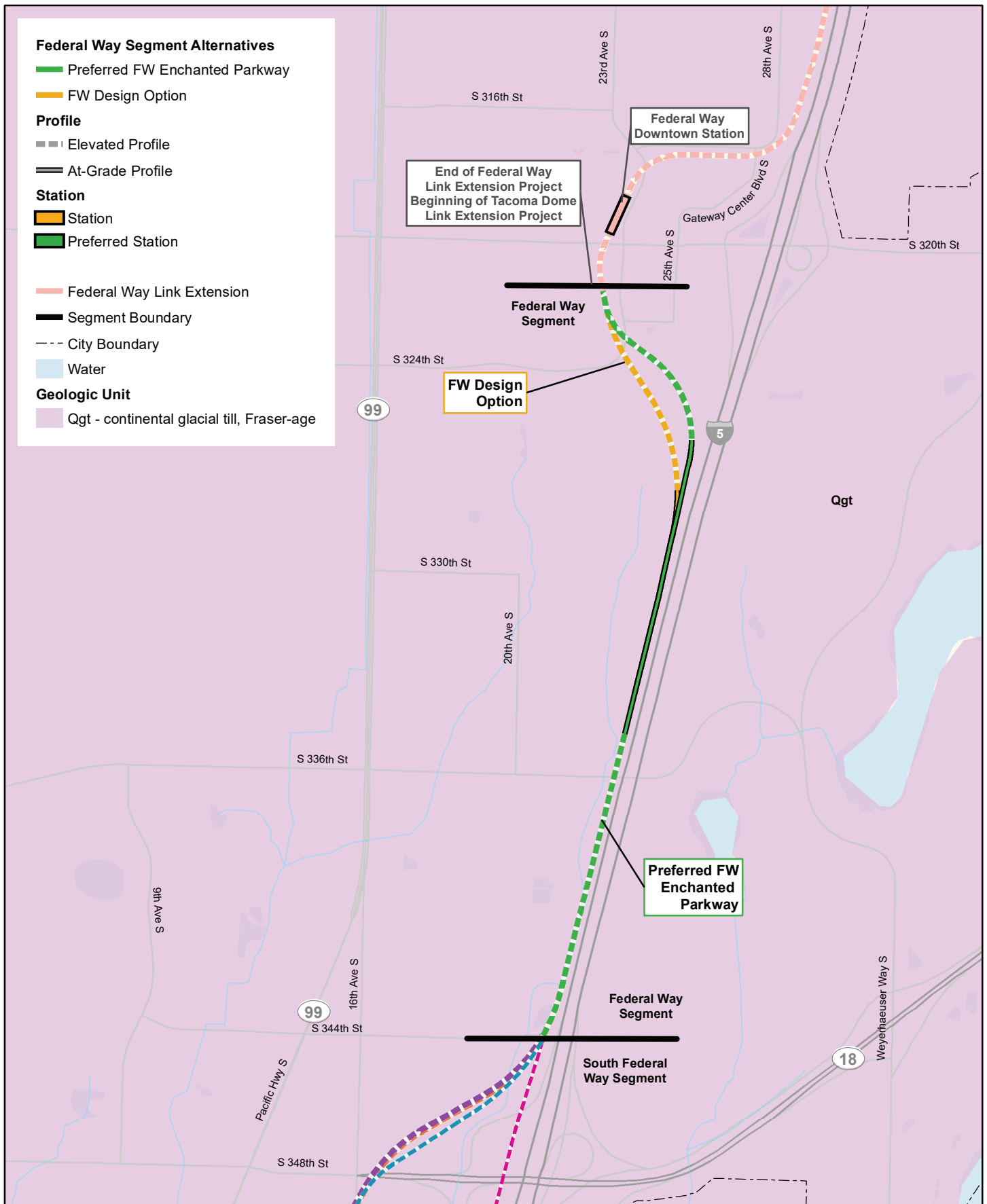
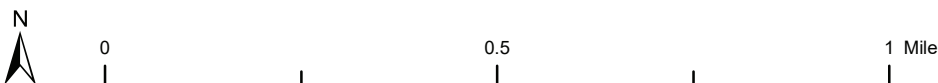
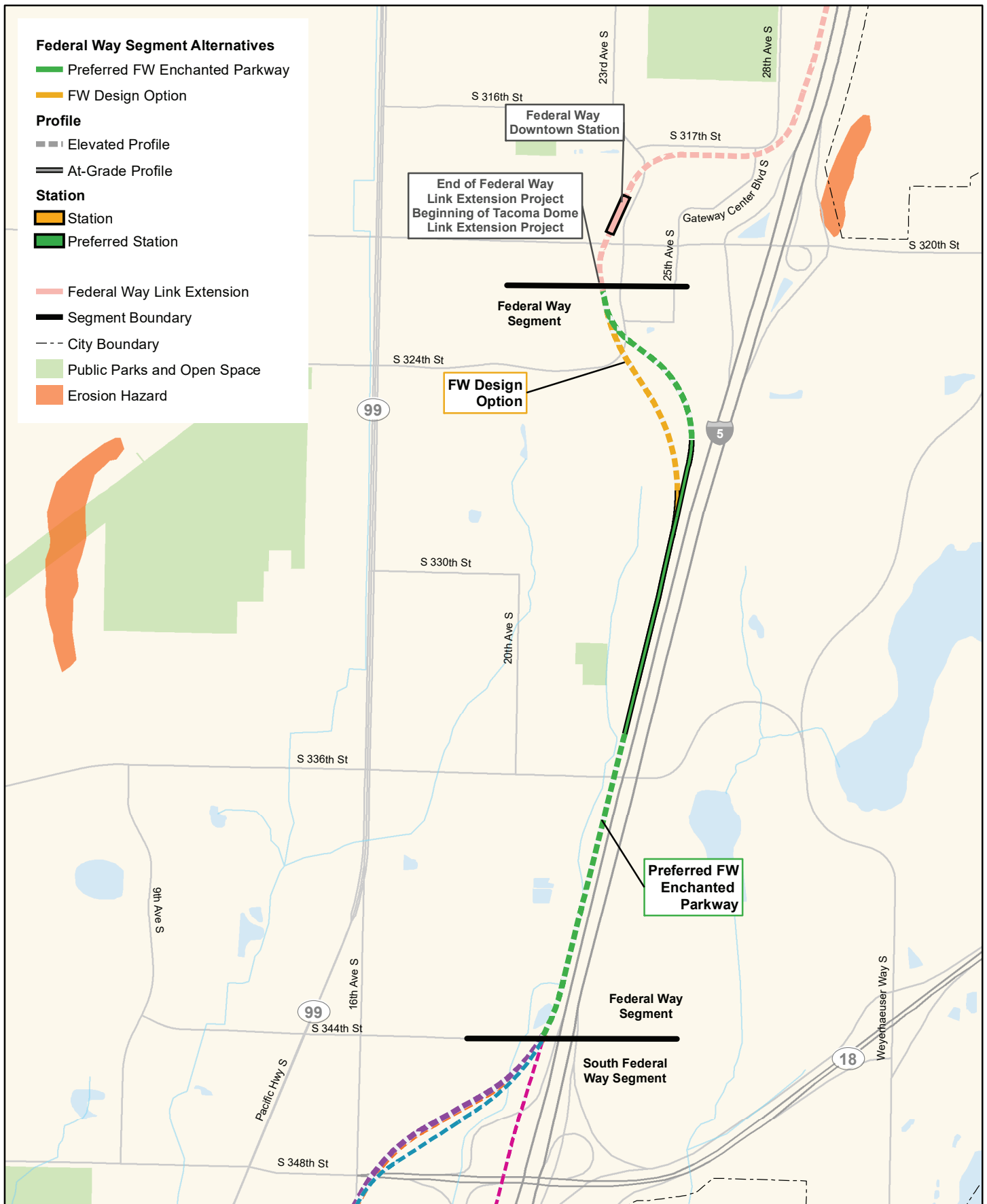


FIGURE H6-3
 Surface Geology
 Federal Way Segment
 Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

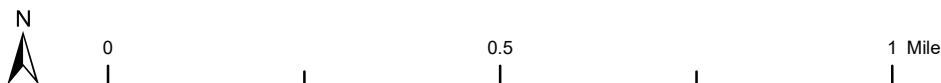
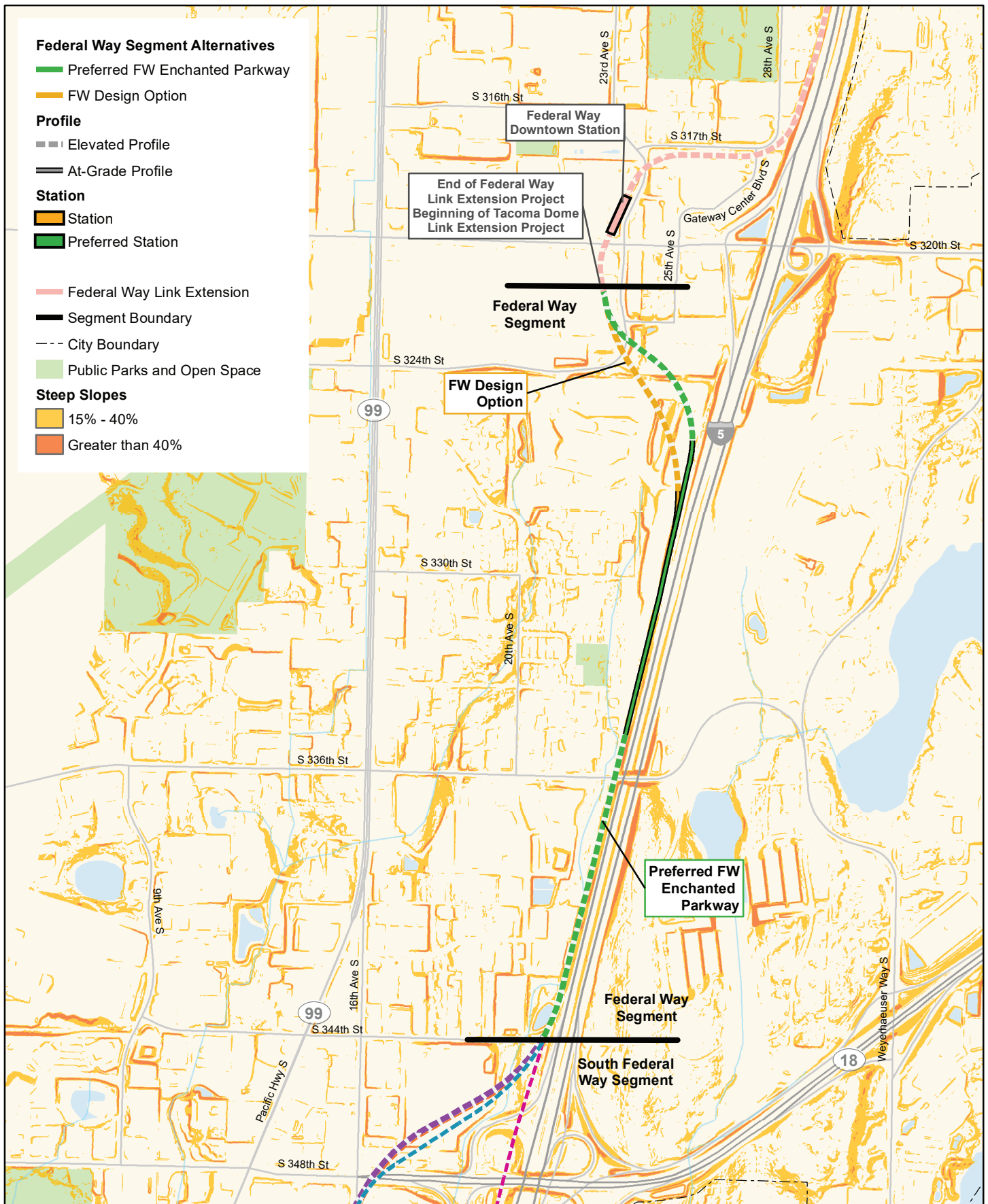


FIGURE H6-4
 Erosion Hazards
 Federal Way Segment
 Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

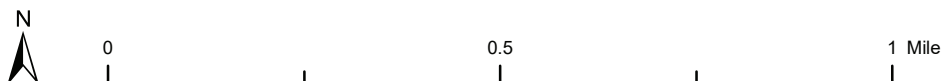
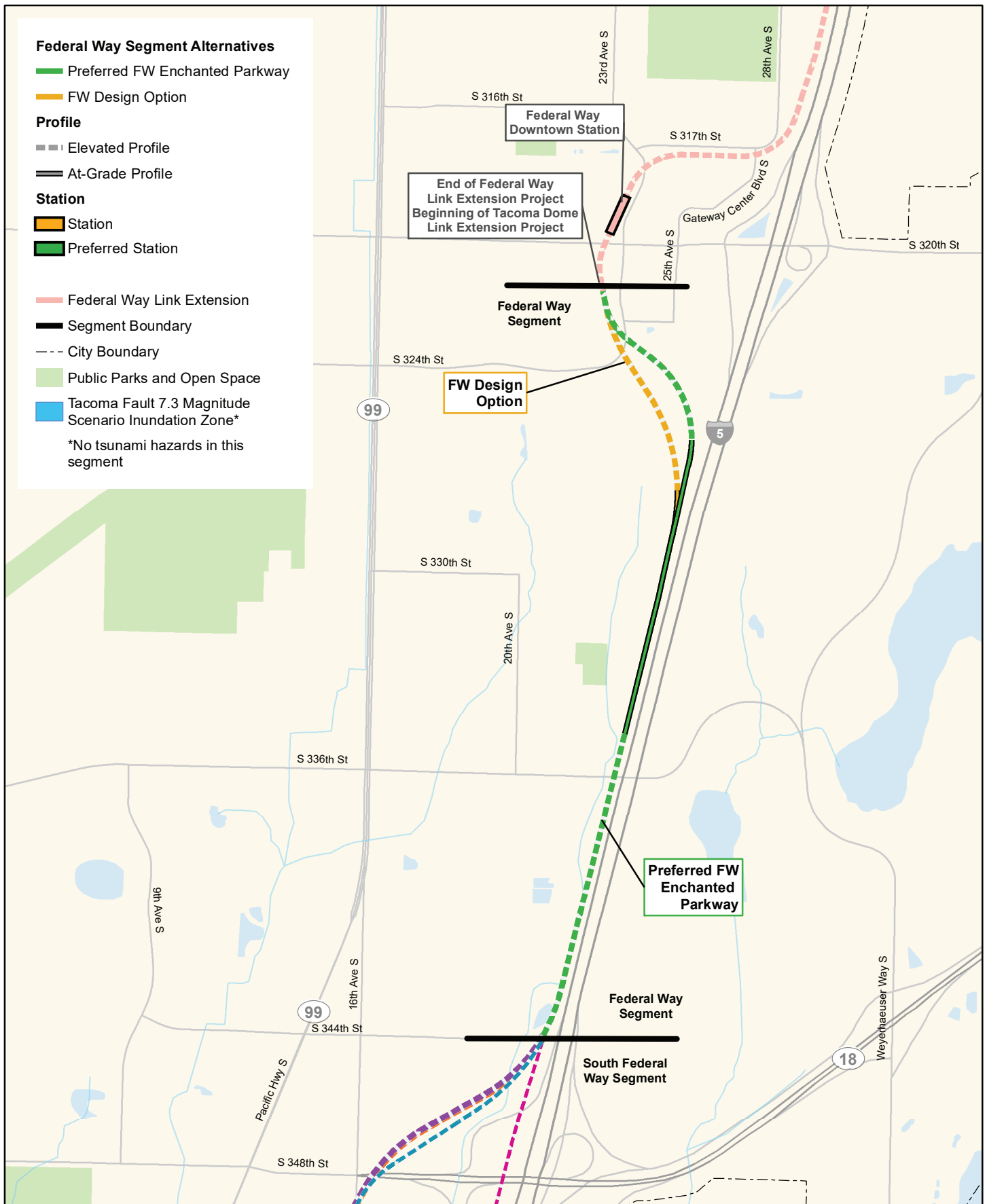


FIGURE H6-5
Steep Slopes
Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

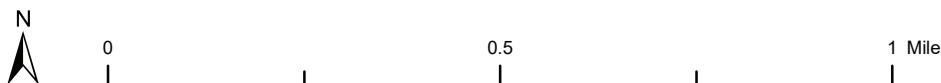
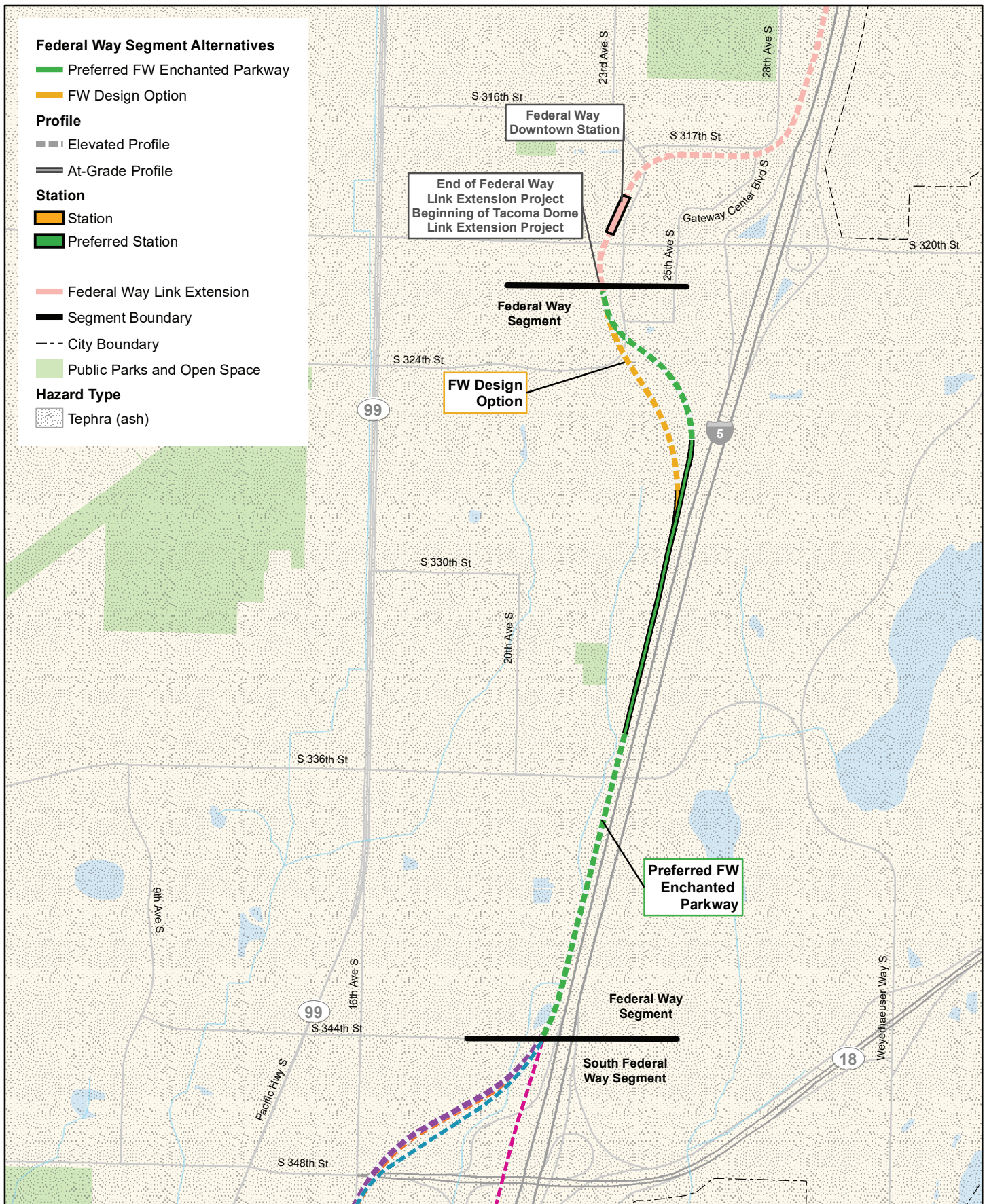


FIGURE H6-6
Tsunami Hazards
Federal Way Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

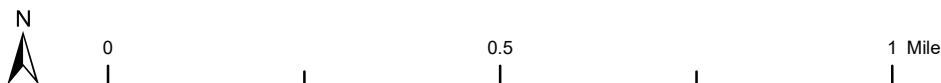


FIGURE H6-7
 Volcanic Hazards
 Federal Way Segment
 Tacoma Dome Link Extension

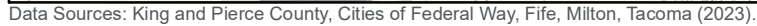
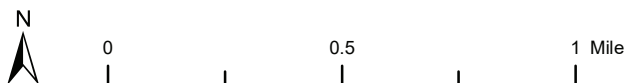
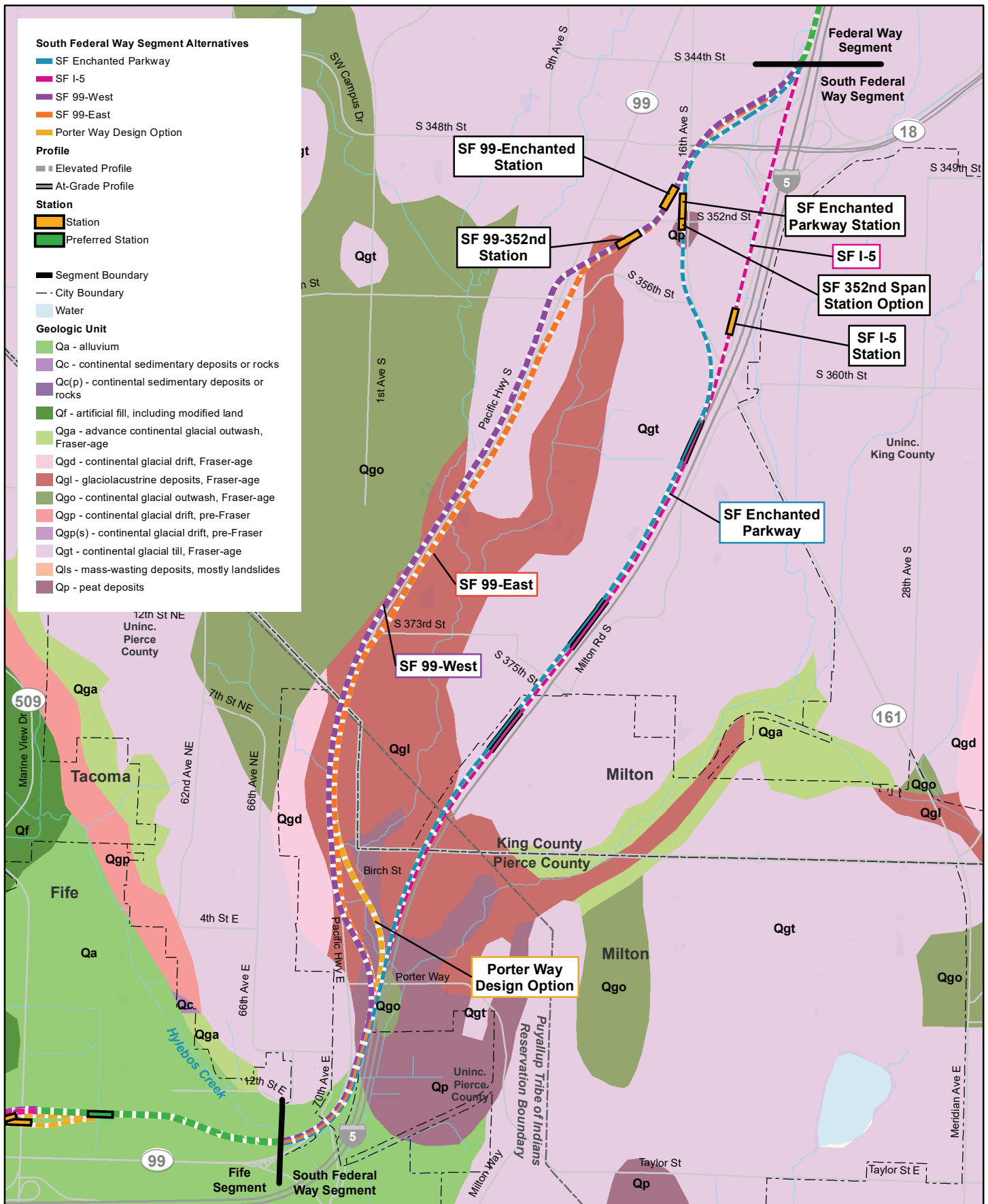


FIGURE H6-8
Topography
South Federal Way Segment
Tacoma Dome Link Extension







Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

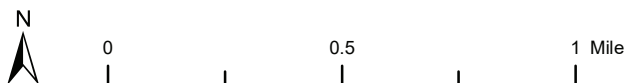
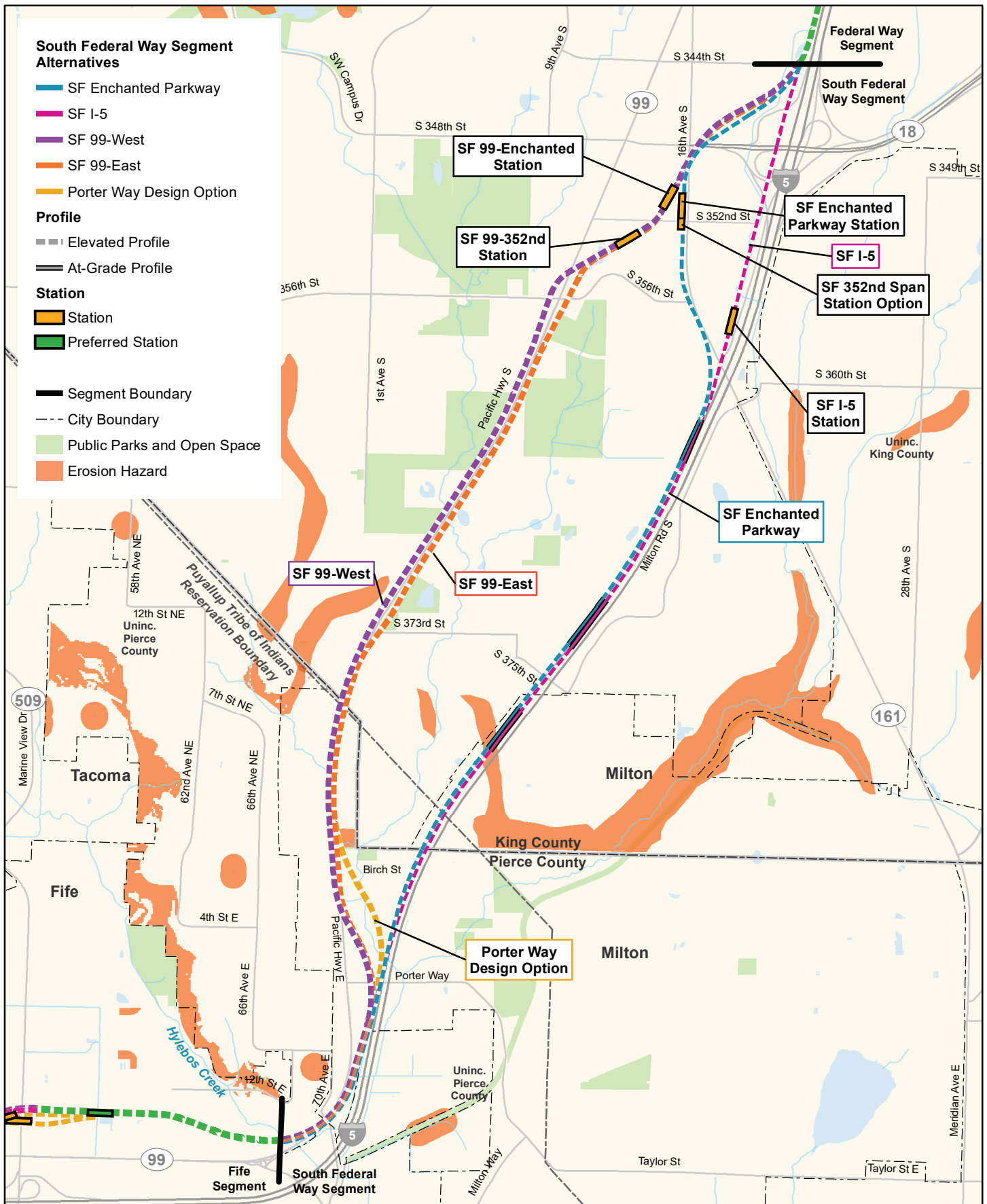


FIGURE H6-10
 Surface Geology
 South Federal Way Segment
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Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

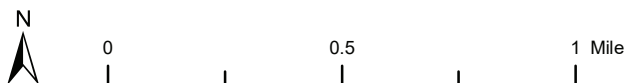
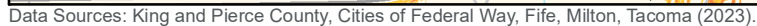


FIGURE H6-11
Erosion Hazards
South Federal Way Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

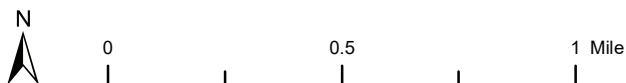
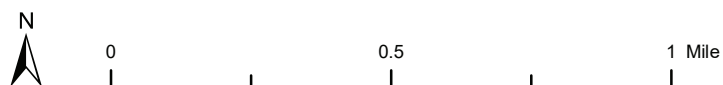


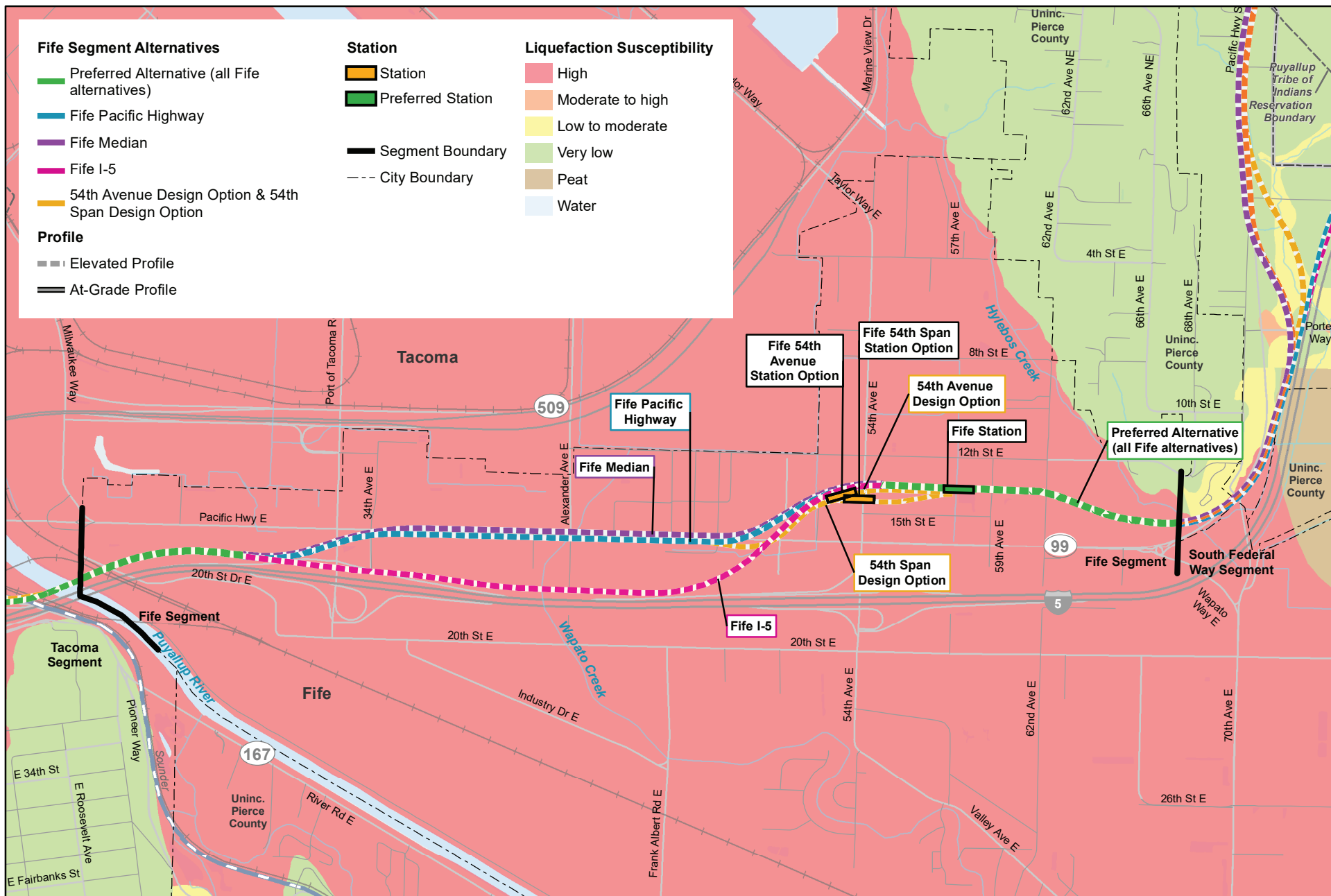
FIGURE H6-13
Tsunami Hazards
South Federal Way Segment
Tacoma Dome Link Extension





Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2019).

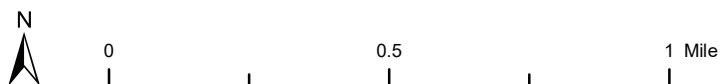
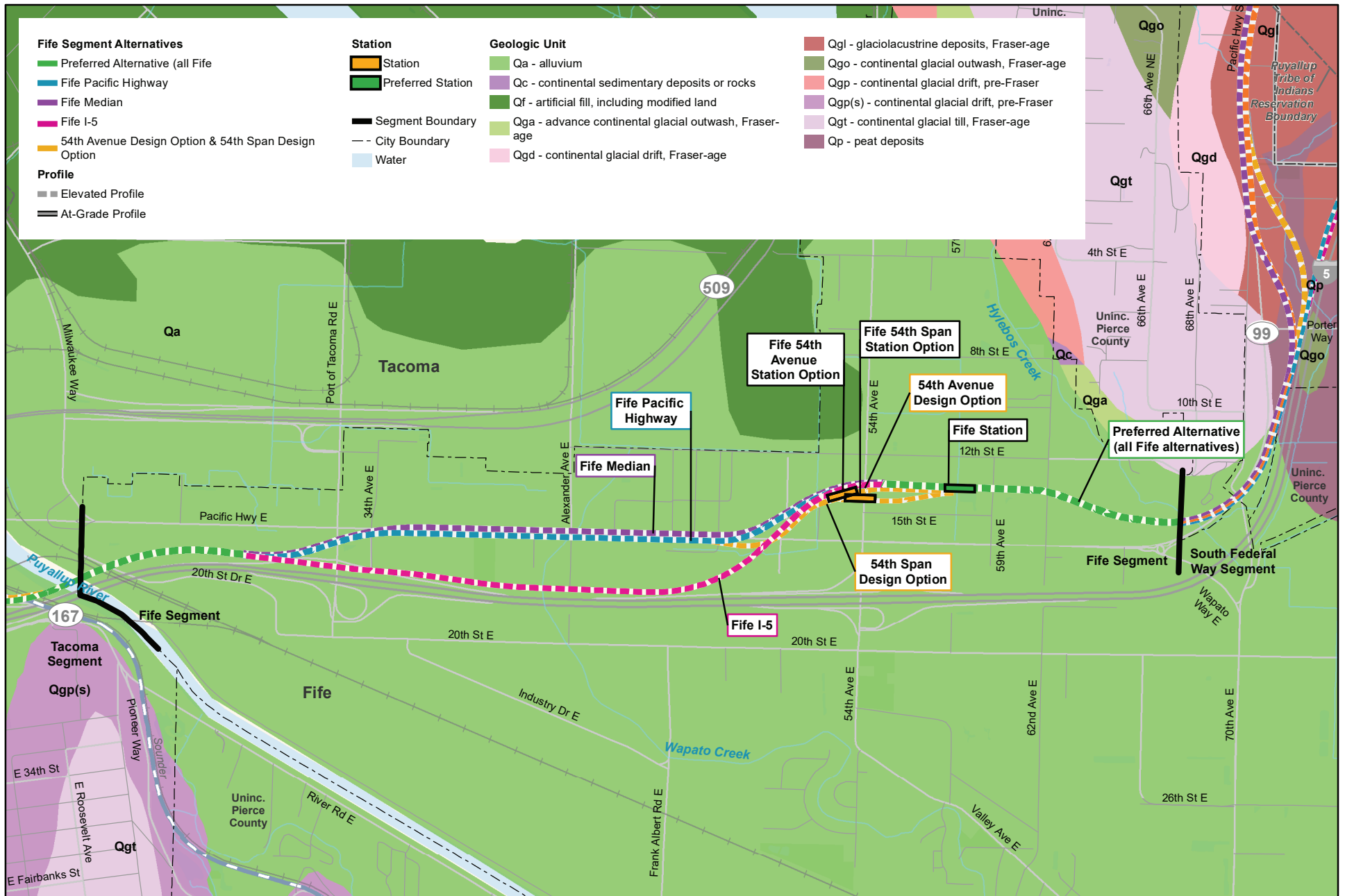


FIGURE H6-16
Seismic Hazards
Fife Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

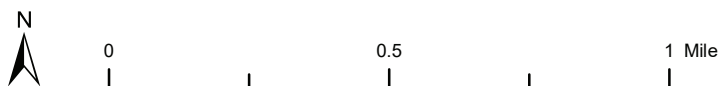
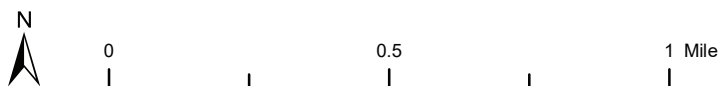


FIGURE H6-17
Surface Geology
Fife Segment
Tacoma Dome Link Extension

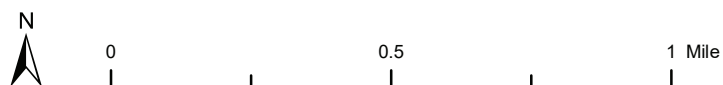


Tacoma Dome Link Extension



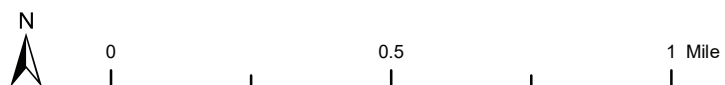


Tacoma Dome Link Extension



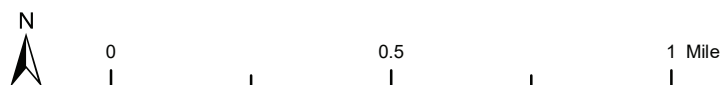


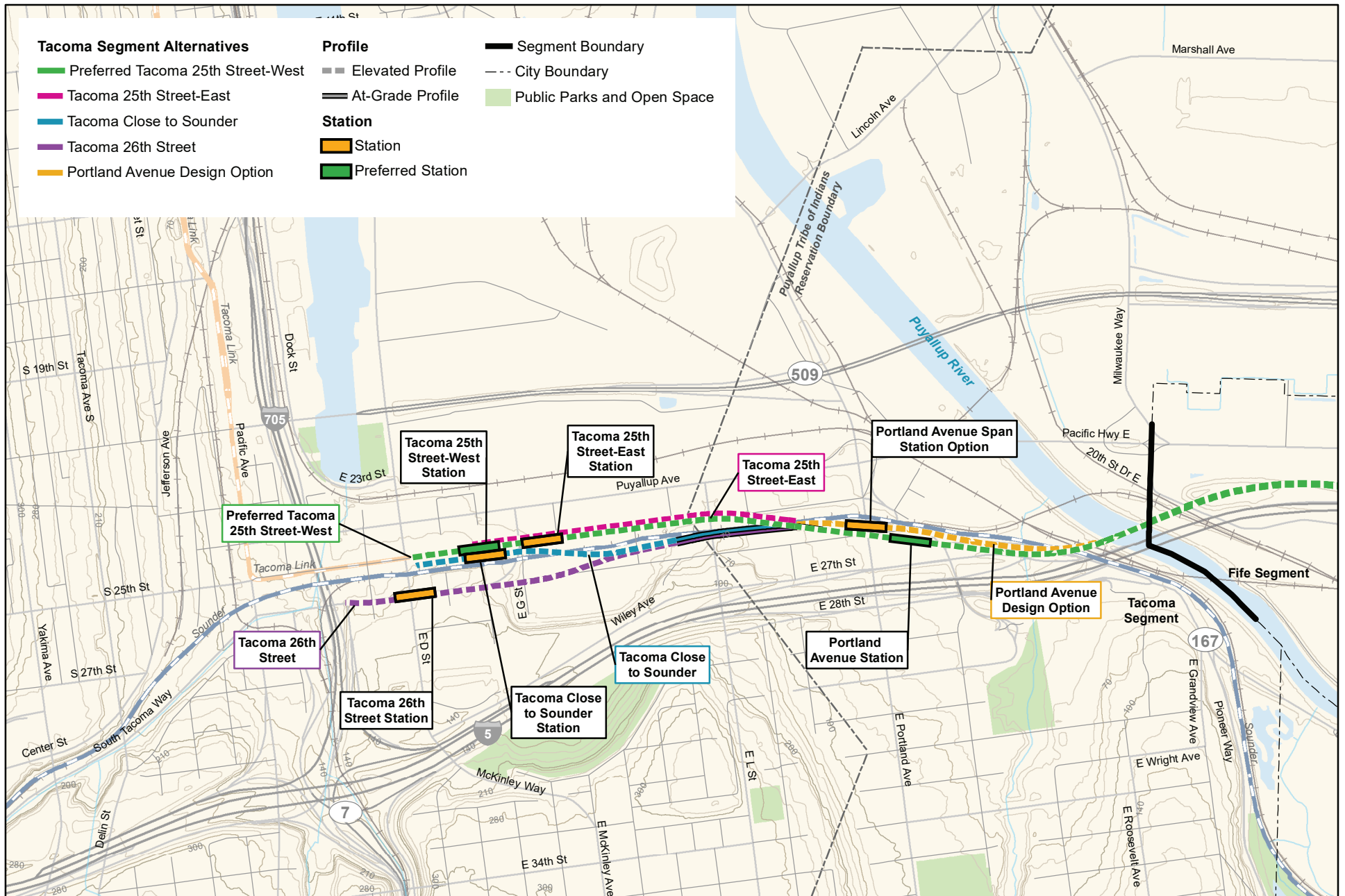
Tacoma Dome Link Extension





Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

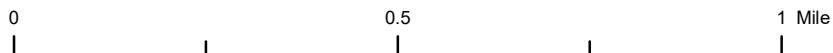


FIGURE H6-22
Topography
Tacoma Segment

Tacoma Dome Link Extension

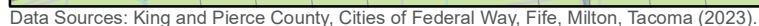
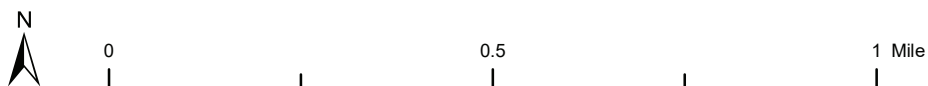
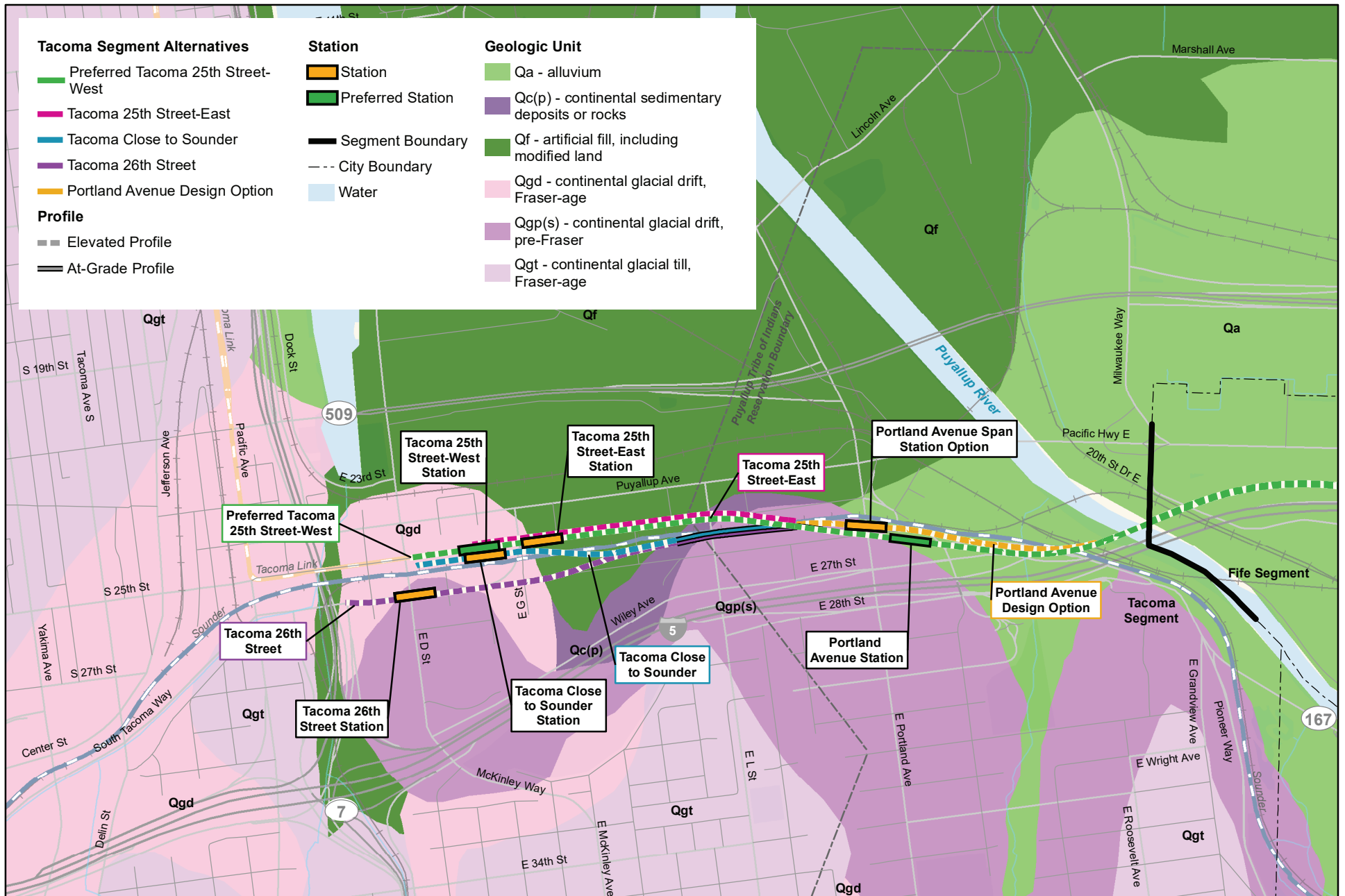


FIGURE H6-23
Seismic Hazards
Tacoma Segment
Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

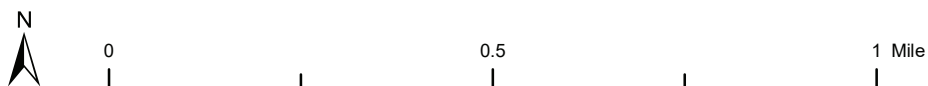
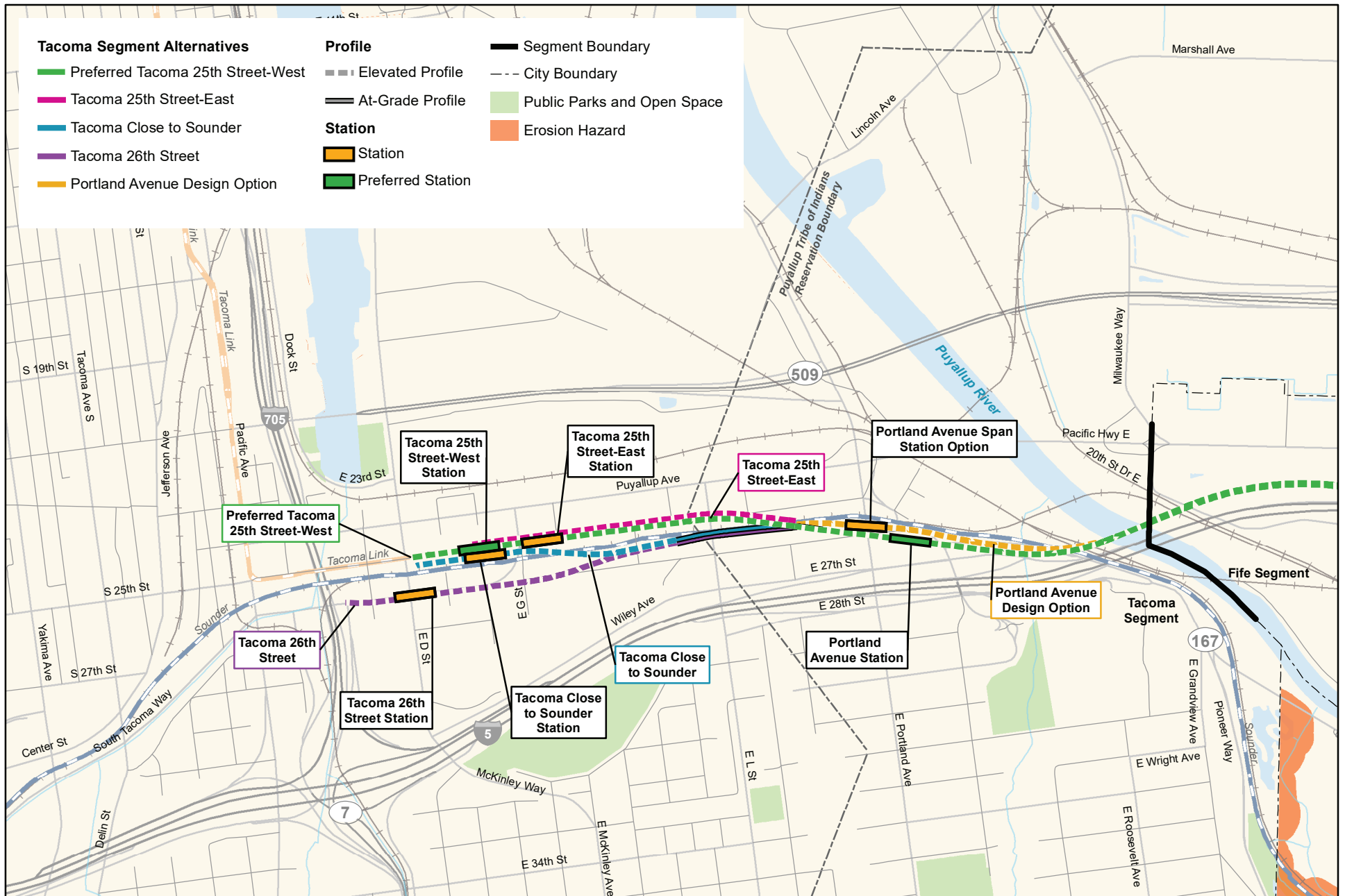


FIGURE H6-24
Surface Geology
Tacoma Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

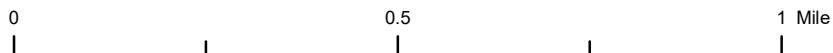


FIGURE H6-25
Erosion Hazards
Tacoma Segment
Tacoma Dome Link Extension

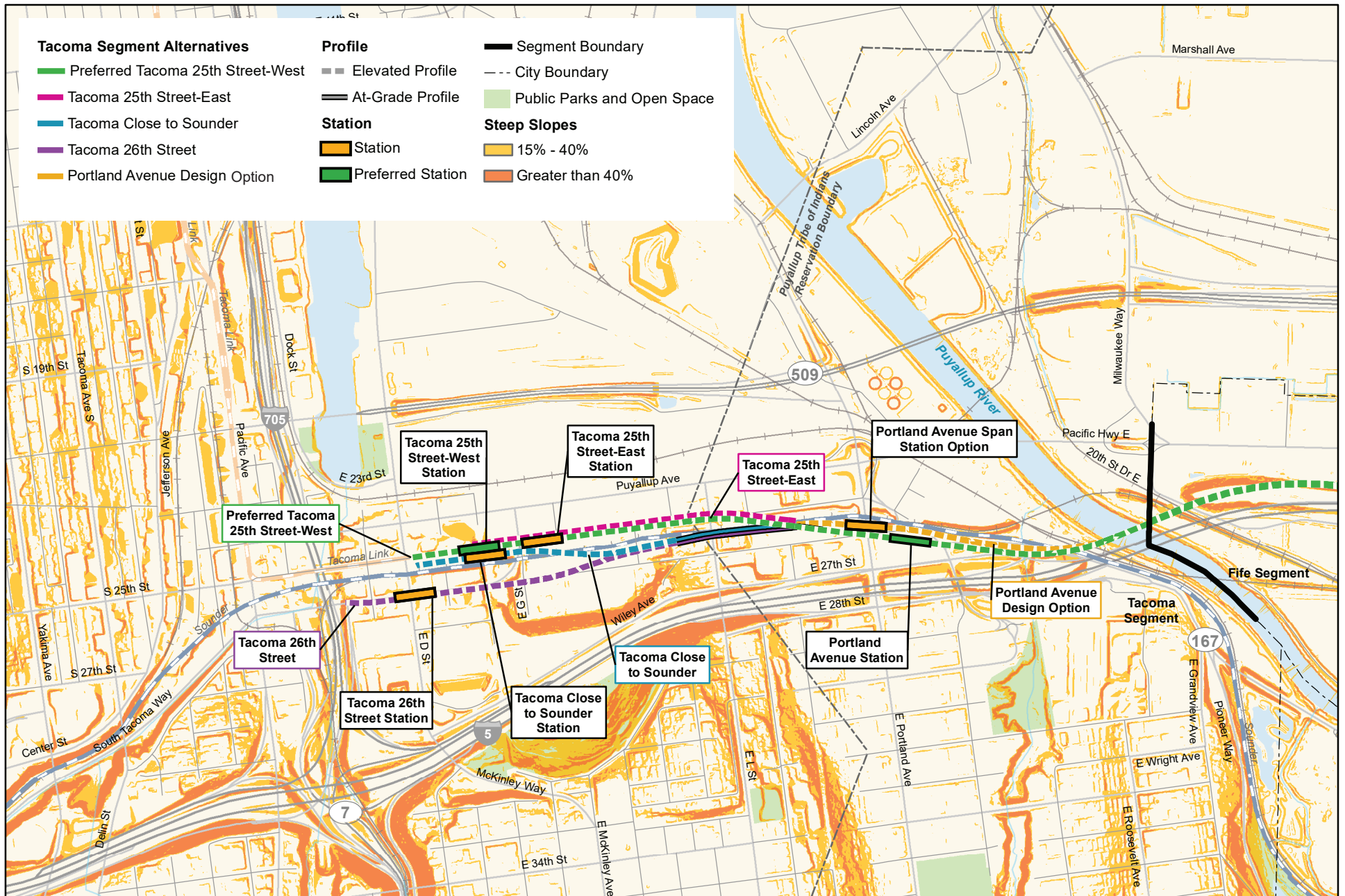
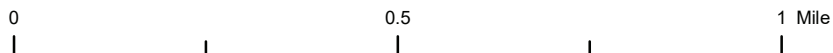
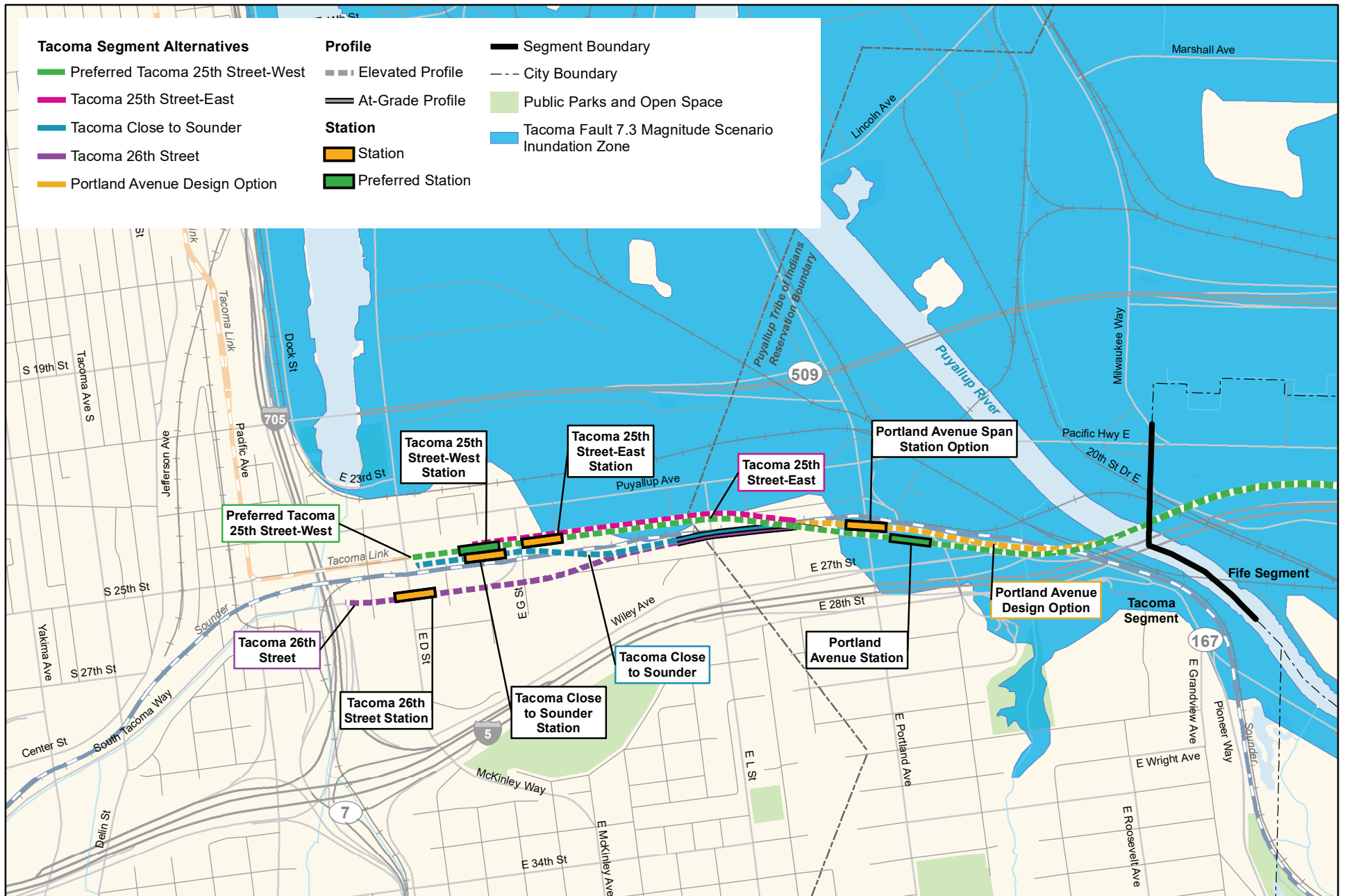


FIGURE H6-26
Steep Slopes
Tacoma Segment

Tacoma Dome Link Extension





Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

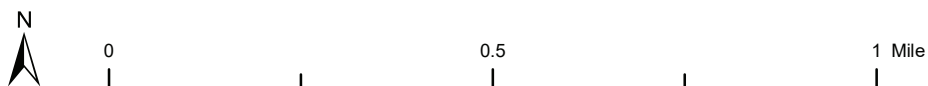
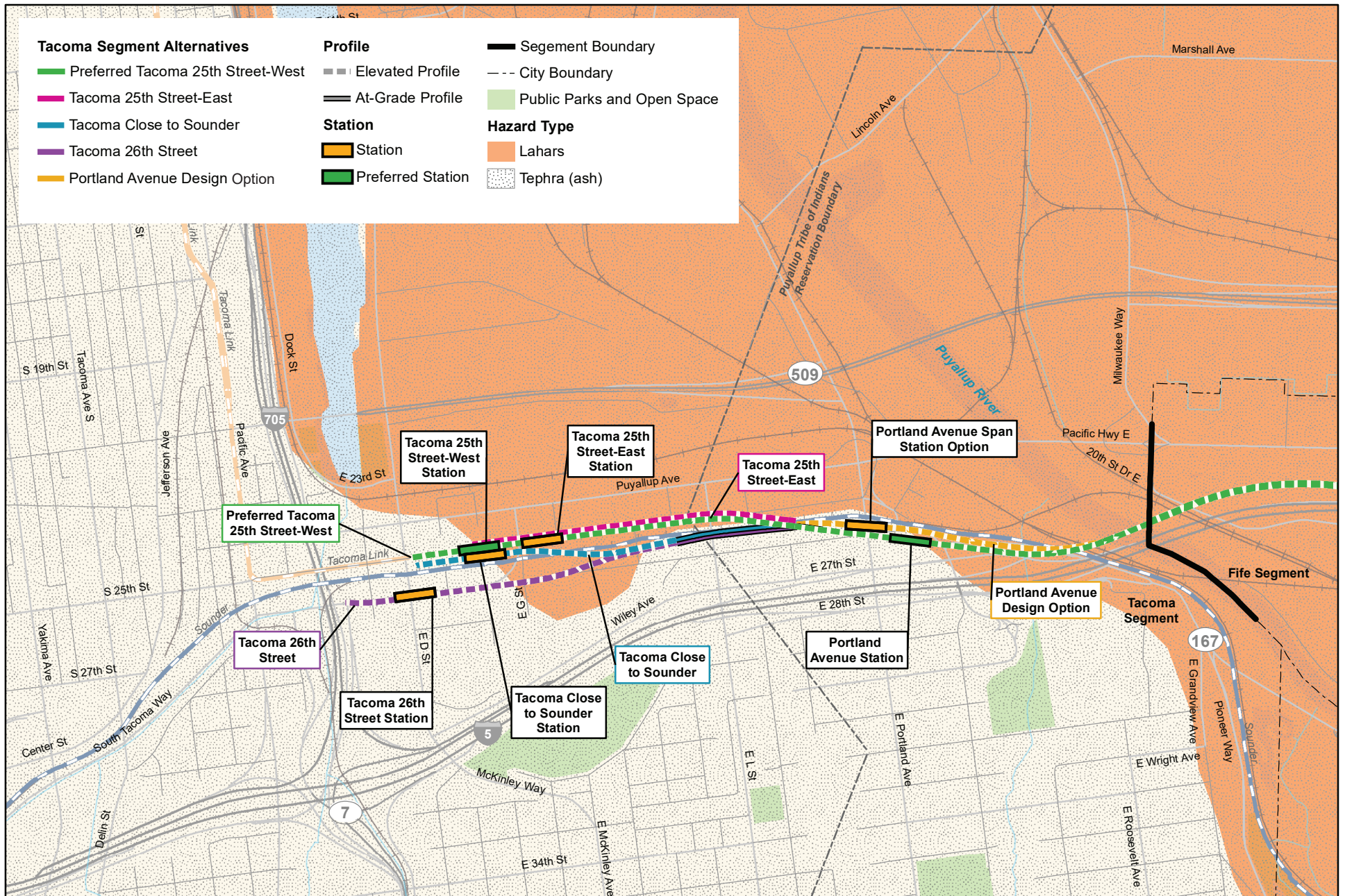


FIGURE H6-27
Tsunami Hazards
Tacoma Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H6-28
Volcanic Hazards
Tacoma Segment
Tacoma Dome Link Extension



Tacoma Dome Link Extension

Draft Environmental Impact Statement

HAZARDOUS MATERIALS SUPPORTING INFORMATION

Appendix H7

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Alternative H7-28

Attachments

(available on the project website or USB Flash Drive attached to the Draft EIS)

Attachment A	Phase I Environmental Site Assessment TD 3244, TD 3245, TD 3246, TD 3247 USG Highway 99 7110 Pacific Highway E Milton, Washington
Attachment B	Phase I Environmental Site Assessment TD 3947, TD 3933 Gull Station 4310 Pacific Highway E Tacoma, Washington
Attachment C	Phase I Environmental Site Assessment TD 4030 Fife RV Center (East Property) 3520 Pacific Highway E Fife, Washington
Attachment D	Phase I Environmental Site Assessment TD 4047 Fife RV Center (West Property) 3410 Pacific Highway E Fife, Washington
Attachment E	Phase I Environmental Site Assessment TD 4435 and TD 4443 U-Haul (North Property) 704 and 716 Puyallup Avenue Tacoma, Washington
Attachment F	Phase I Environmental Site Assessment TD 4437 U-Haul (South Property) 725 E 25th Street Tacoma, Washington
Attachment G	Phase I Environmental Site Assessment TD 4461, TD 4476, TD 4506 Freighthouse Square 2501 East D Street and 602 E 25th Street Tacoma, Washington

Acronyms and Abbreviations

ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CORRACTS	Corrective Action Sites
CSCSL	Confirmed and Suspected Contaminated Sites List
CSCSL-NFA	Confirmed and Suspected Contaminated Sites List – No Further Action
CWA	Clean Water Act
Ecology	Washington State Department of Ecology
EDR	Environmental Data Resources
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FHWA	Federal Highway Administration
LUST	leaking underground storage tank
MTCA	Model Toxics Control Act
NFA	No Further Action
NFRAP	no further remedial action planned
NPL	National Priorities List
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
SARA	Superfund Amendments and Reauthorization Act
TCE	temporary construction easements
TDLE	Tacoma Dome Link Extension
TSCA	Toxic Substances Control Act
U.S.C.	United States Code
UST	underground storage tank
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1 INTRODUCTION

This technical appendix details the specific ranking methodology of hazardous materials database sites, the databases themselves, and the complete results of the analysis. The analysis was developed to comply with the National Environmental Policy Act (NEPA) and federal, state, and local policies, standards, and regulations. This appendix does not address the methodology or results of other parts of the Tacoma Dome Link Extension (TDLE) Draft Environmental Impact Statement Hazardous Materials Analysis (historical review, including fire insurance maps, historical aerial photographs, and site reconnaissance).

1.1 Introduction to Resources and Regulatory Requirements

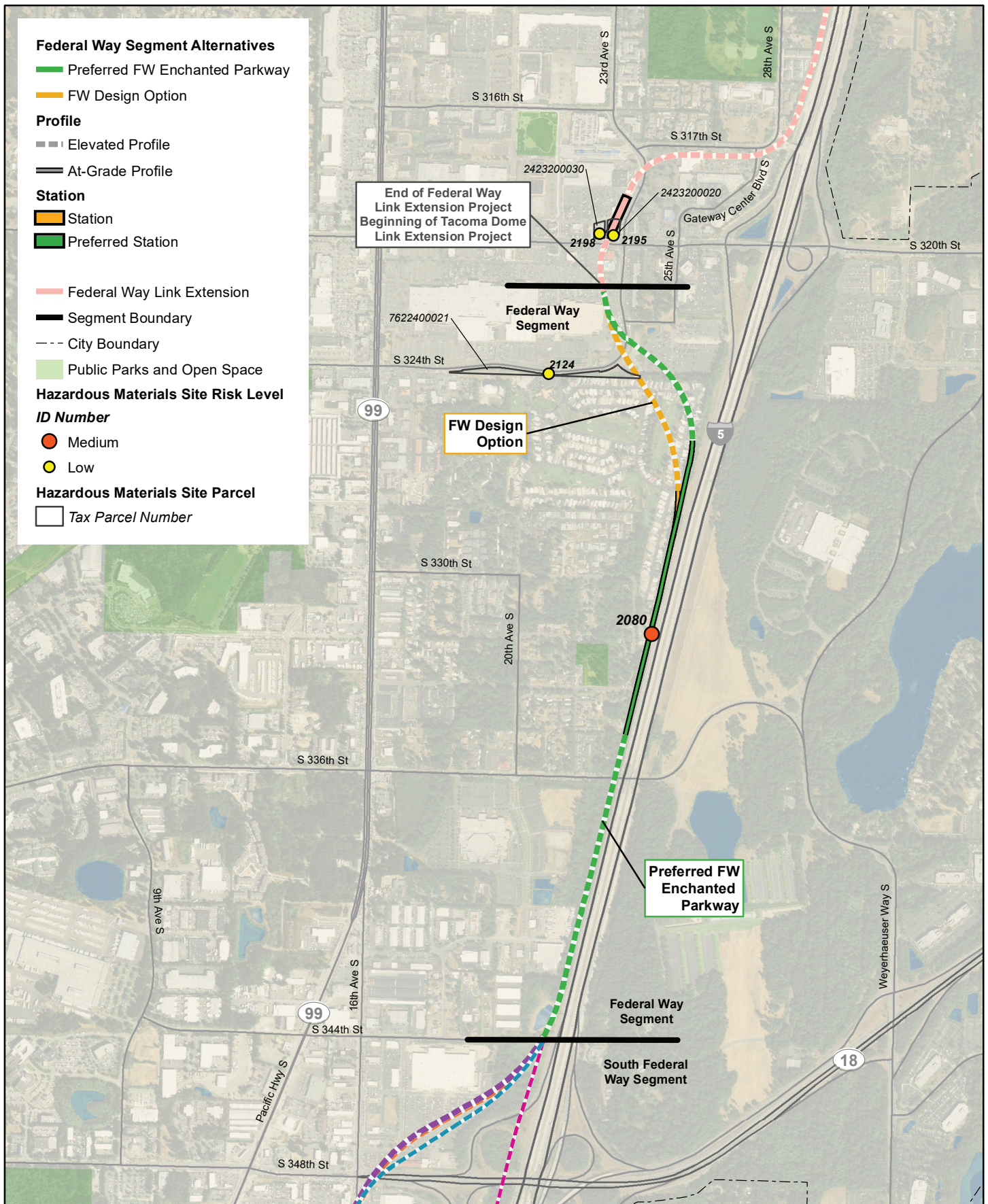
- A hazardous material is any substance that – because of its quantity, concentration, or physical or chemical properties – may pose a hazard to human health and the environment either by itself or through interaction with other factors. Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of these materials.
- Hazardous materials or substances, hazardous wastes, petroleum products and wastes, and contaminated environmental media (including soils, sediments, surface water, and groundwater) are present within the study area and could potentially result in impacts on human health and the environment during construction activities or long-term operation activities.
- The hazardous materials analysis identified properties in proximity to the Tacoma Dome Link Extension (TDLE) build alternatives that are recognized to have hazardous materials issues associated with current or historical site activities or that have a documented release to the environment. Types and locations of sites were identified to evaluate potential impacts on construction, property ownership, and general public health and safety.

1.2 Study Area

For the analysis of hazardous materials, the study area includes the area within 0.25 mile (1,320 feet) of either side of the project footprint and area used for construction, since potential impacts would likely be restricted to the immediate corridor of the build alternatives. The Environmental Data Resources Inc. (EDR) search distance was set to 1 mile of either side of the project footprint. Because of the large project footprint, only sites listed in priority databases indicating an impact on groundwater or a substantial hazardous material release were reviewed past 0.25 mile outside of the project footprint. The hazardous material sites for each TDLE alternative are shown on Figures H7-1 through H7-10. A map showing the location of the Tacoma smelter plume is shown on Figure H7-11.

1.3 Summary of Key Findings

During this analysis, 12 high-risk hazardous materials sites were identified. The impacts of these sites to the TDLE build alternatives are discussed in Section 4.12 of the TDLE Draft EIS. Table H7-1 identifies high impact sites that may be affected by each build alternative. Table H7-2 identifies the low-and medium-risk sites that may be affected by each build alternative. There are no high-risk sites in the Federal Way Segment.



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

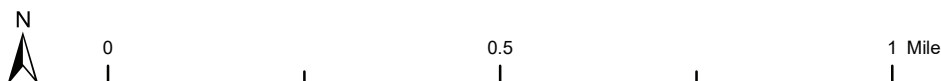


FIGURE H7-1
 Hazardous Material Sites
 Preferred FW Enchanted Parkway
 Tacoma Dome Link Extension





Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

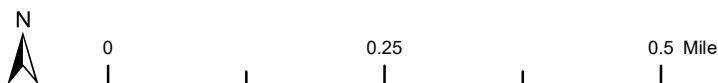
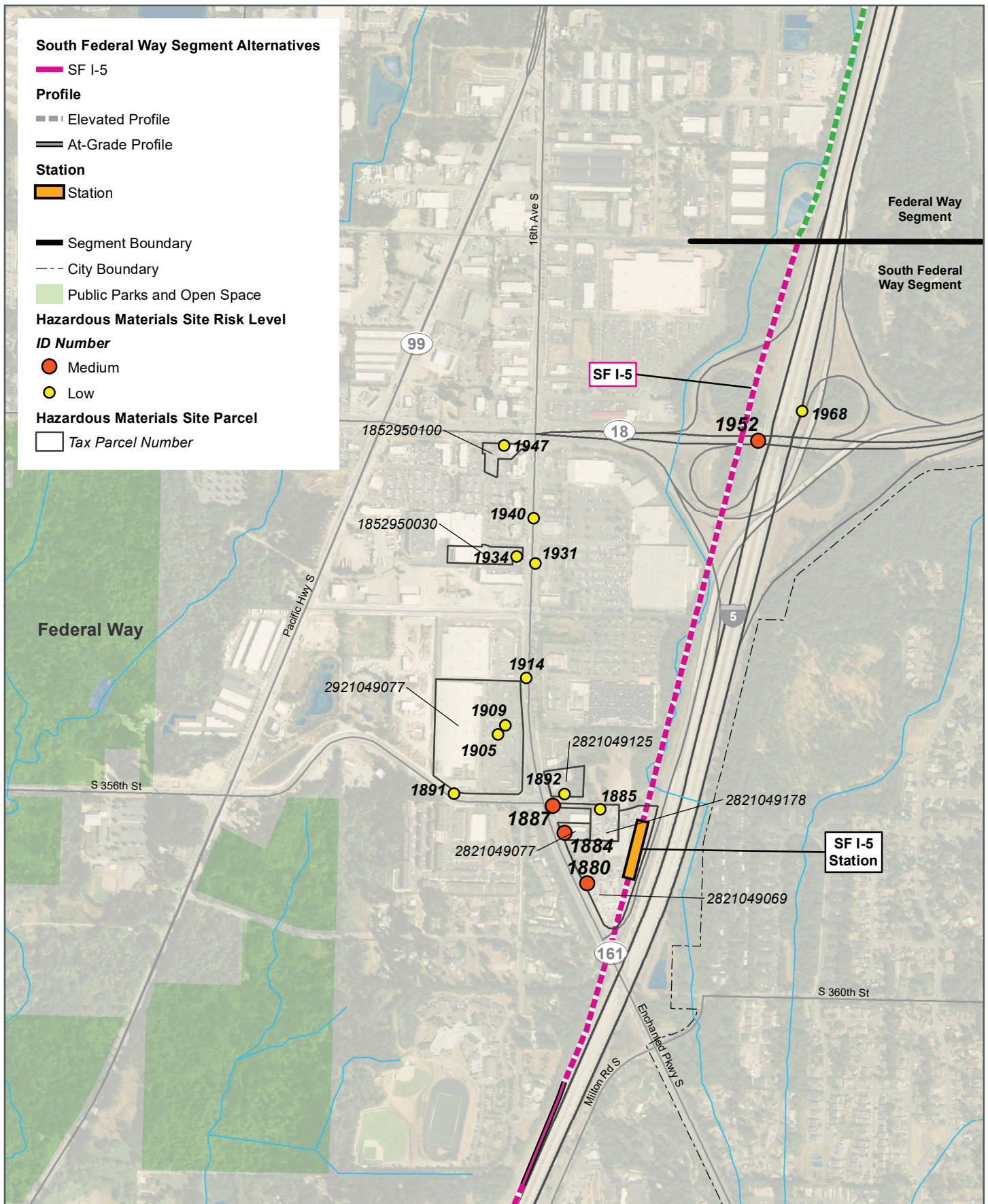


FIGURE H7-2B
Hazardous Materials Sites
SF Enchanted Parkway Alternative
Tacoma Dome Link Extension





Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

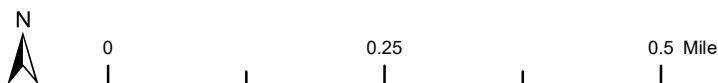
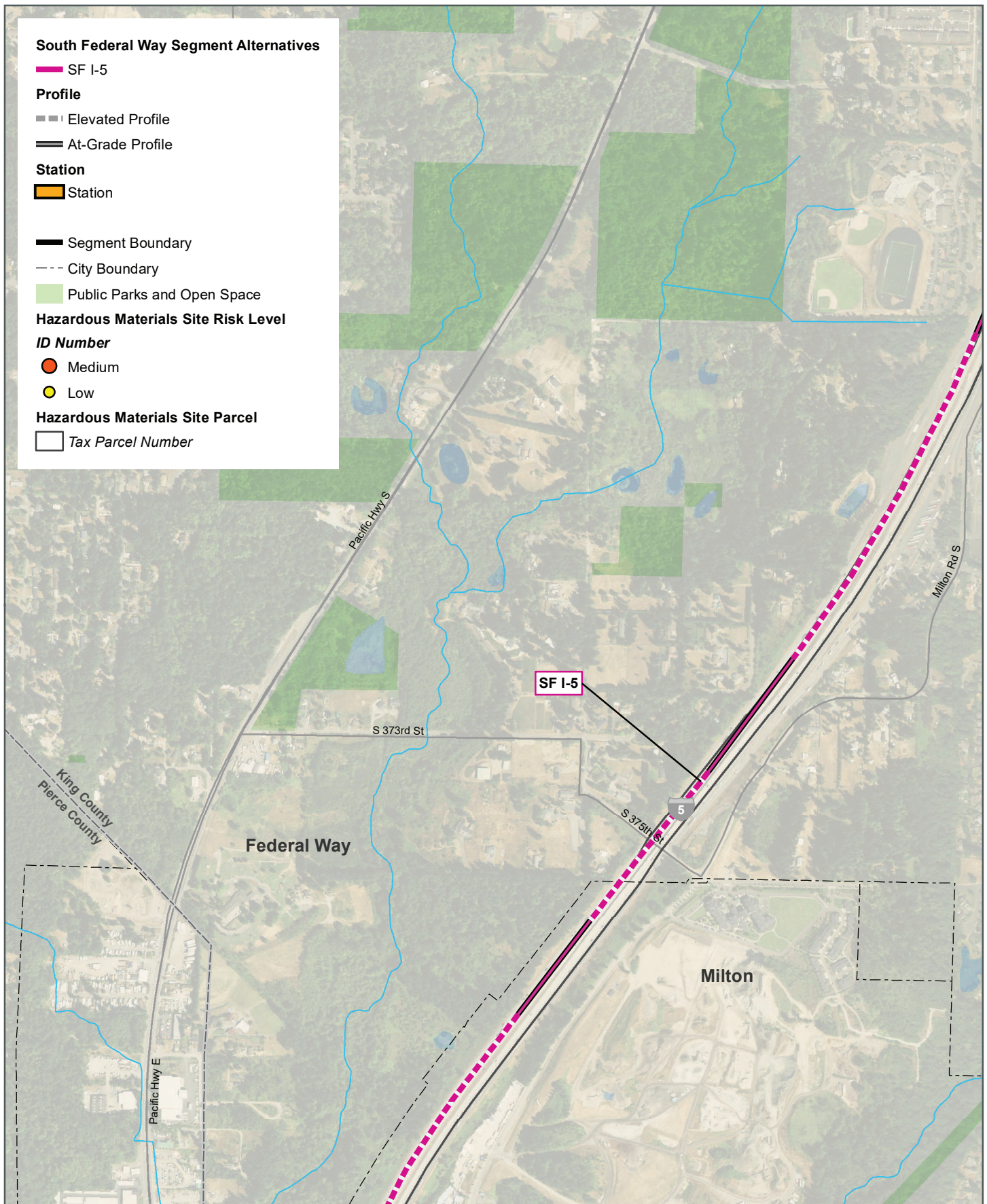
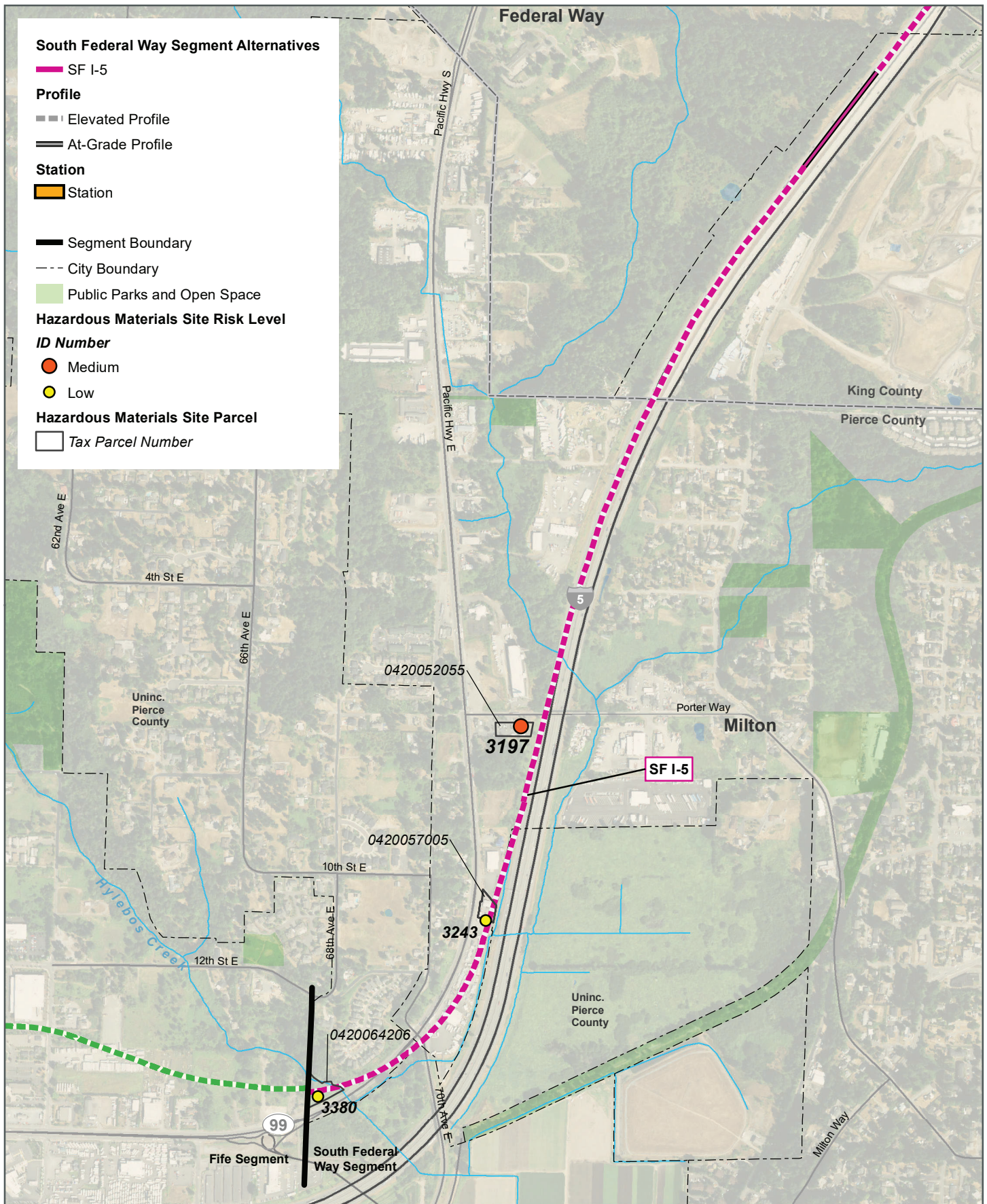


FIGURE H7-3A
Hazardous Materials Sites
SF I-5 Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H7-3B
Hazardous Materials Sites
SF I-5 Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

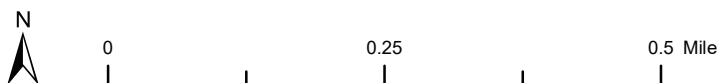
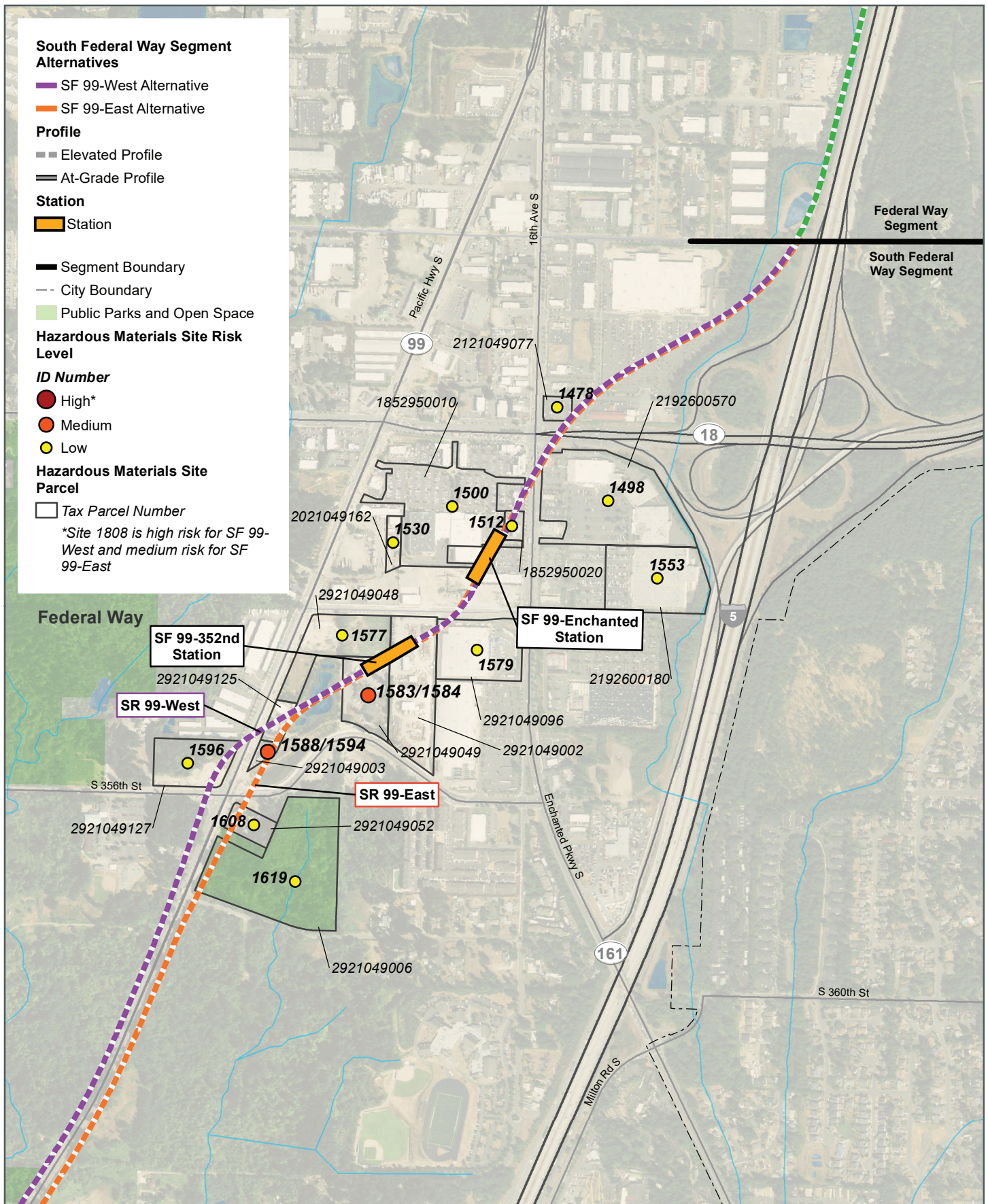


FIGURE H7-3C
Hazardous Materials Sites
SF I-5 Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

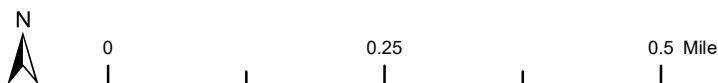
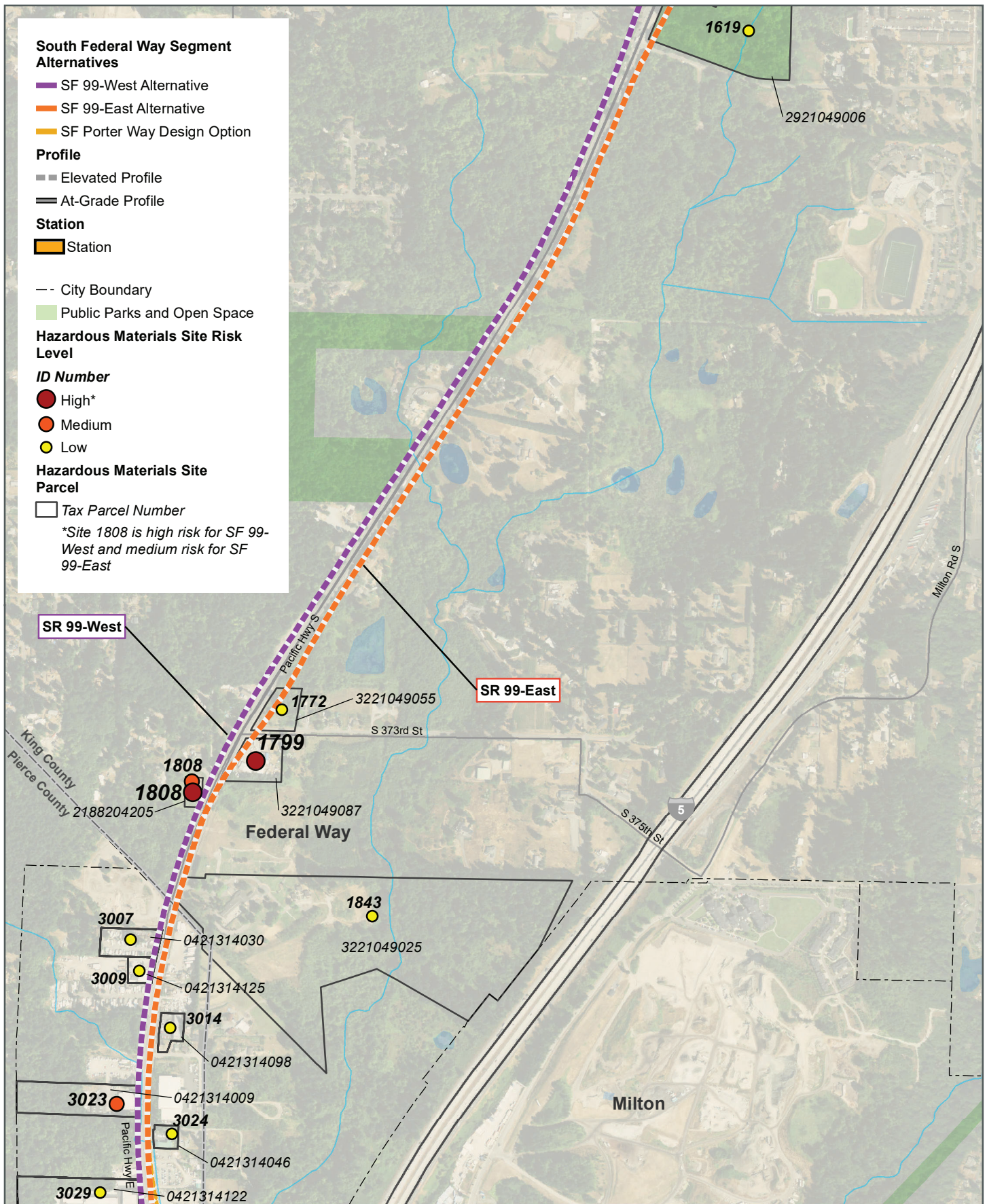


FIGURE H7-4A
Hazardous Materials Sites
SR 99 Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

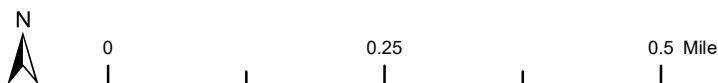
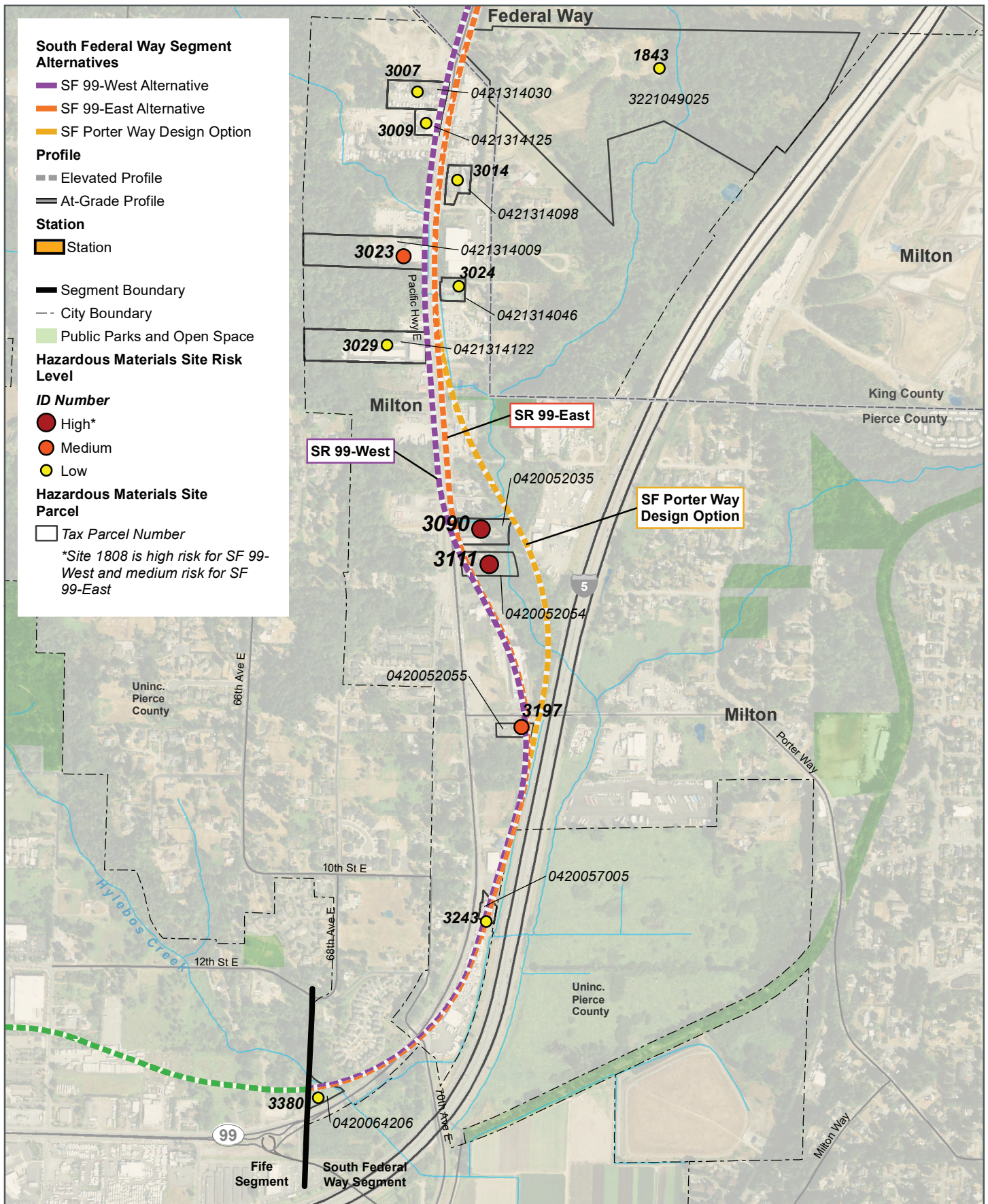


FIGURE H7-4B
Hazardous Materials Sites
SR 99 Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

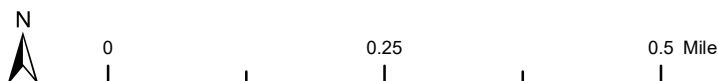
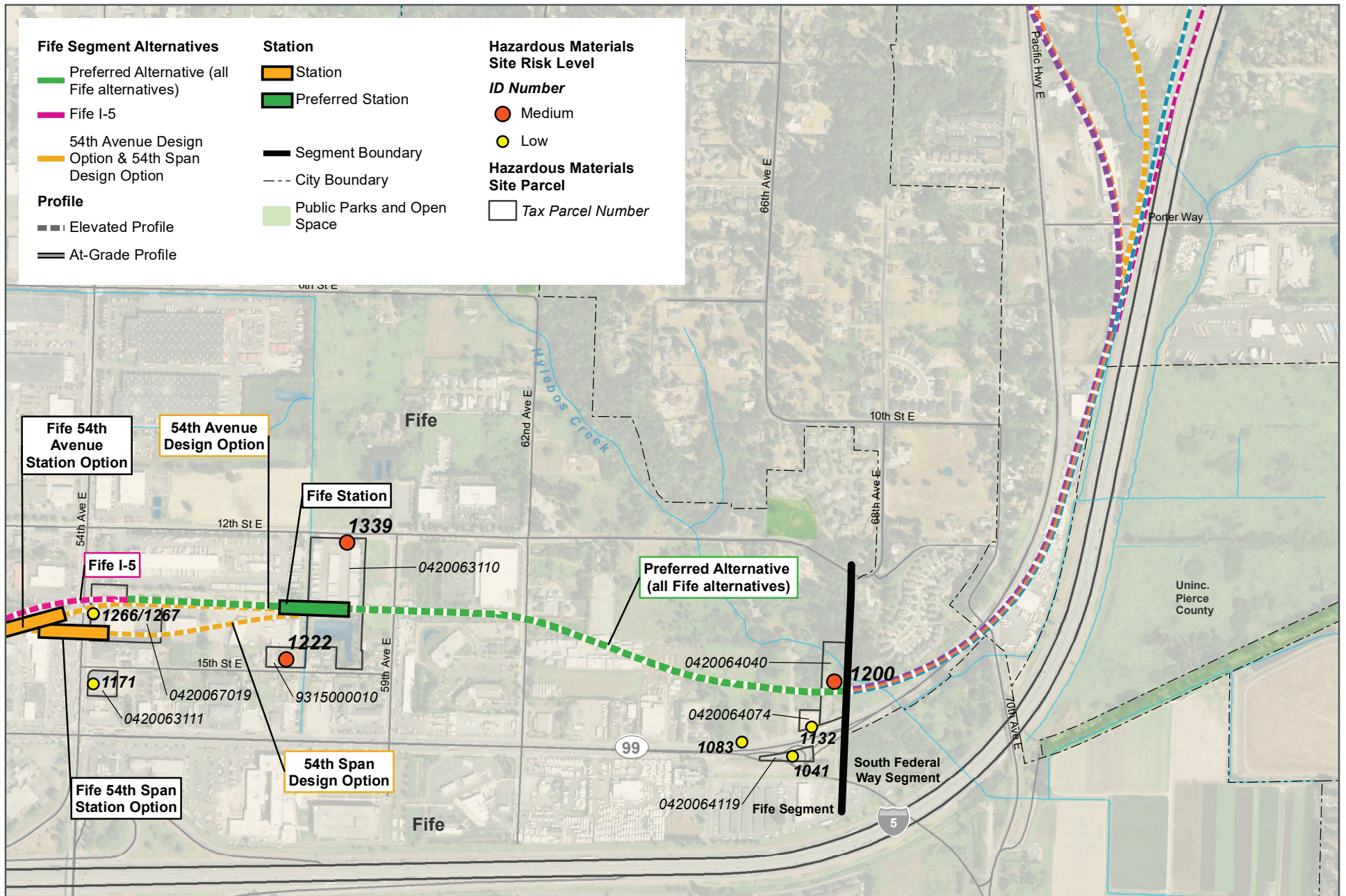


FIGURE H7-4C
Hazardous Materials Sites
SR 99 Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

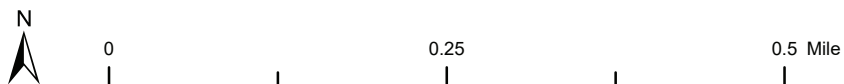
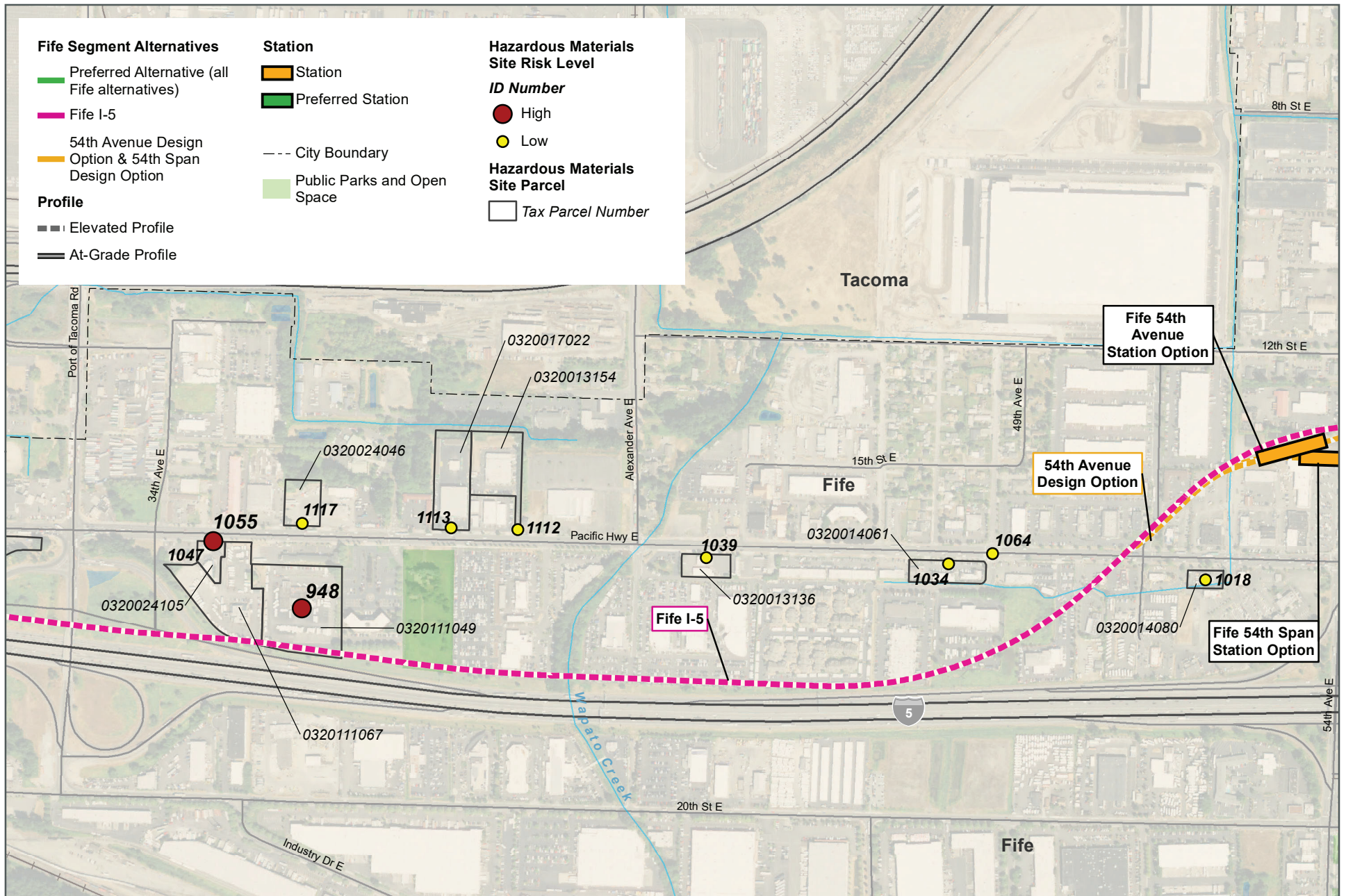
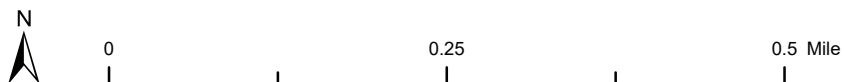


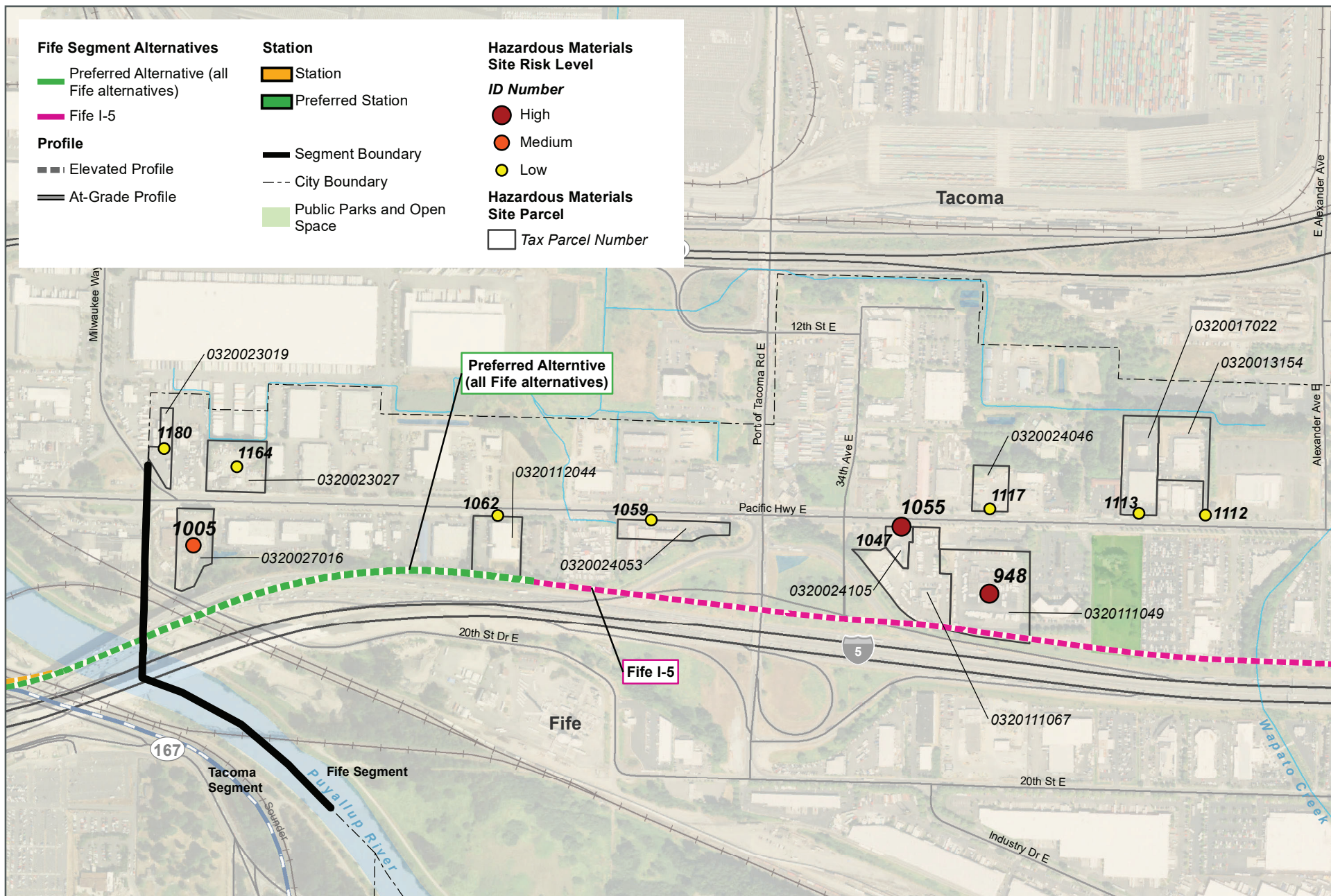
FIGURE H7-5A
Hazardous Materials Sites
Fife I-5 Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H7-5B
Hazardous Materials Sites
Fife I-5 Alternative
Tacoma Dome Link Extension





Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

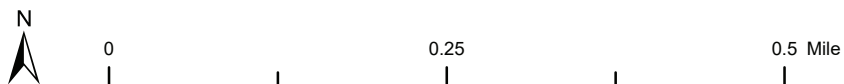
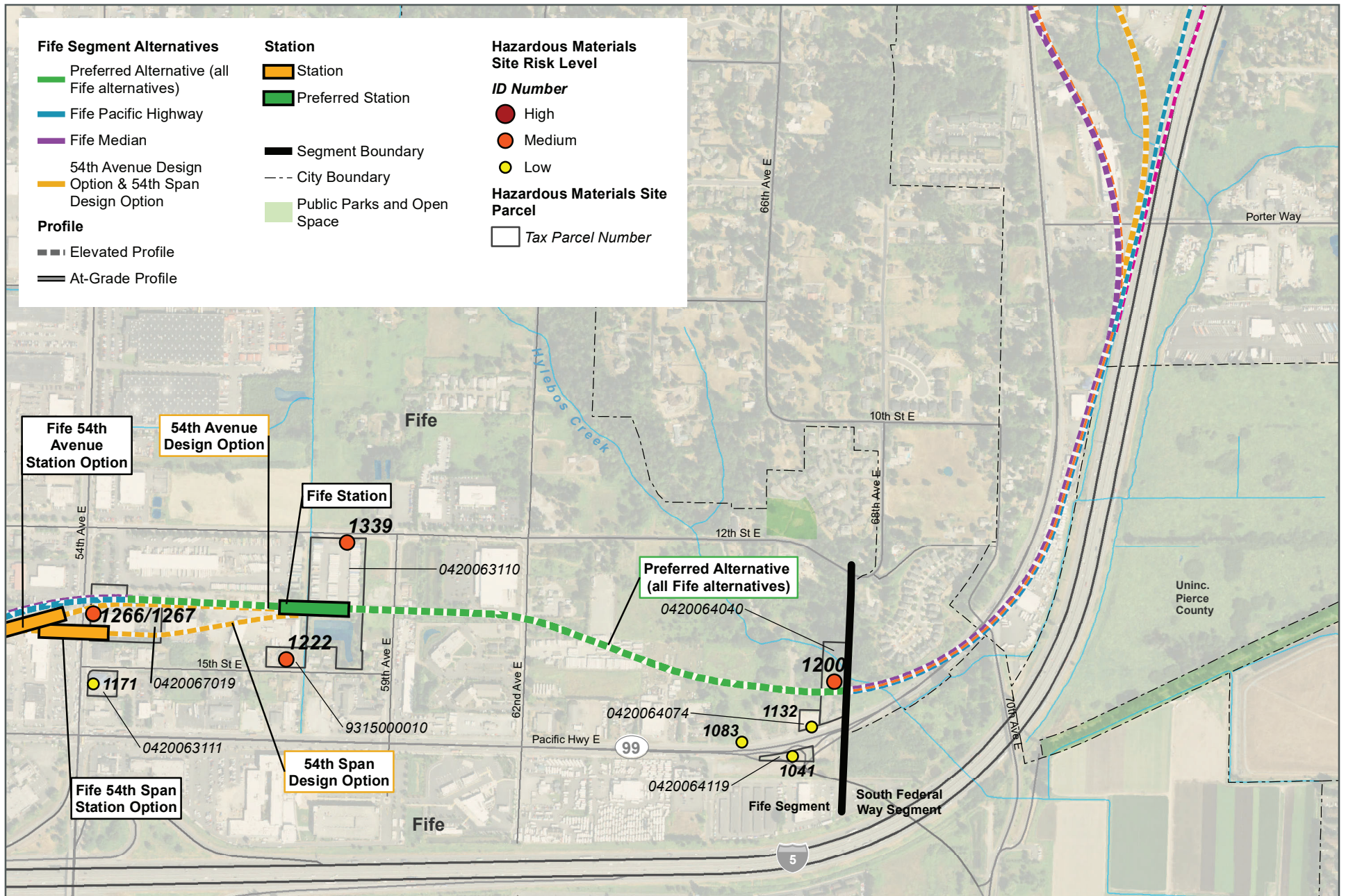


FIGURE H7-5C
Hazardous Materials Sites
Fife I-5 Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

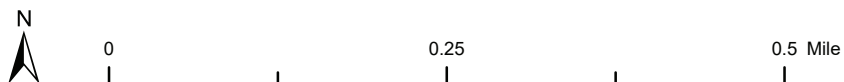
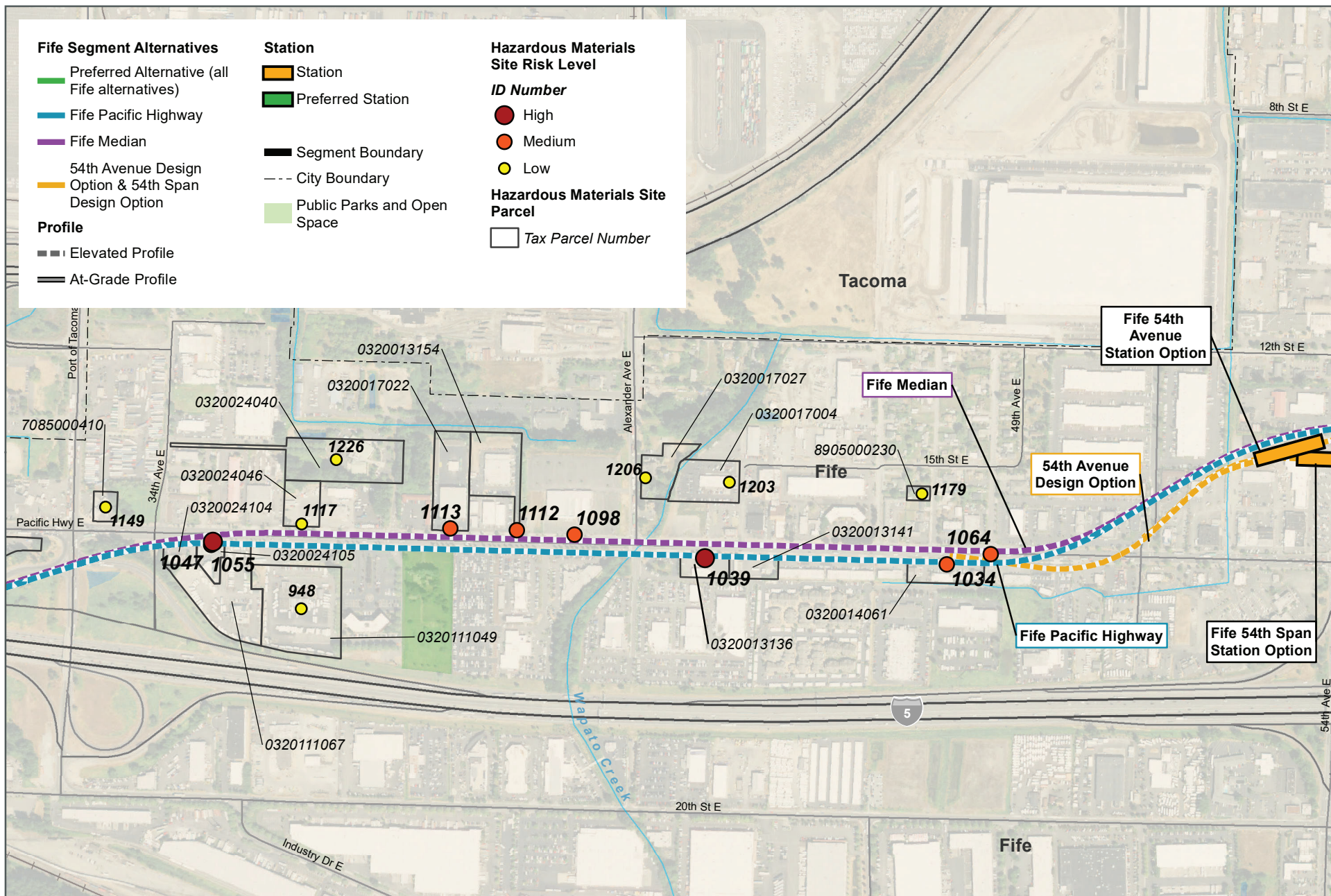


FIGURE H7-6A
Hazardous Materials Sites
Fife Pacific Highway and Pacific Highway Median Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

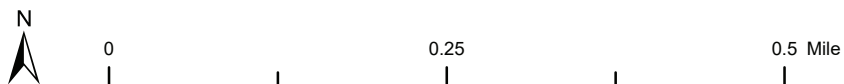
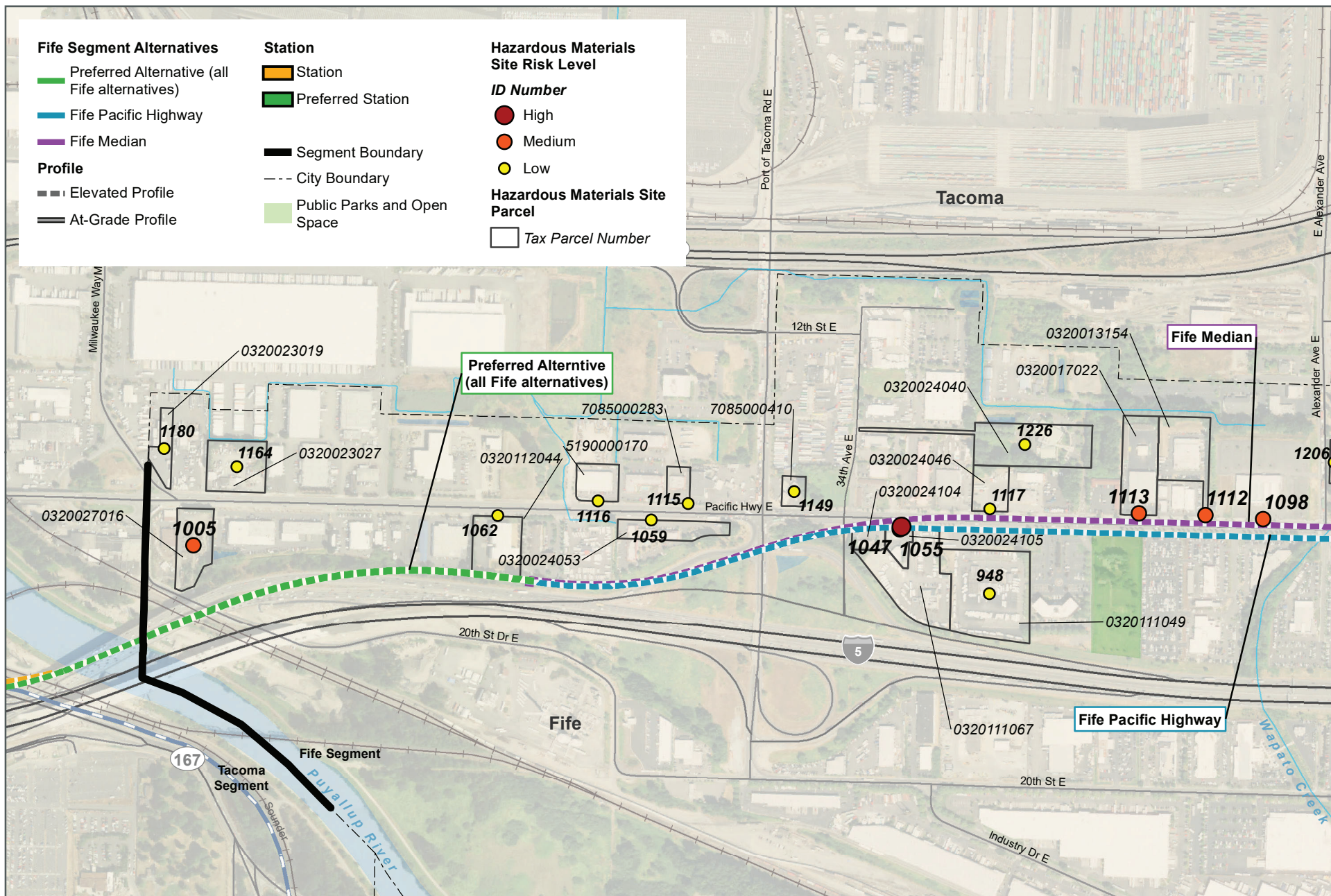


FIGURE H7-6B
Hazardous Materials Sites
Fife Pacific Highway and Pacific Highway Median Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

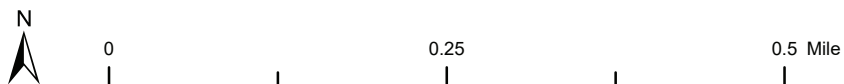
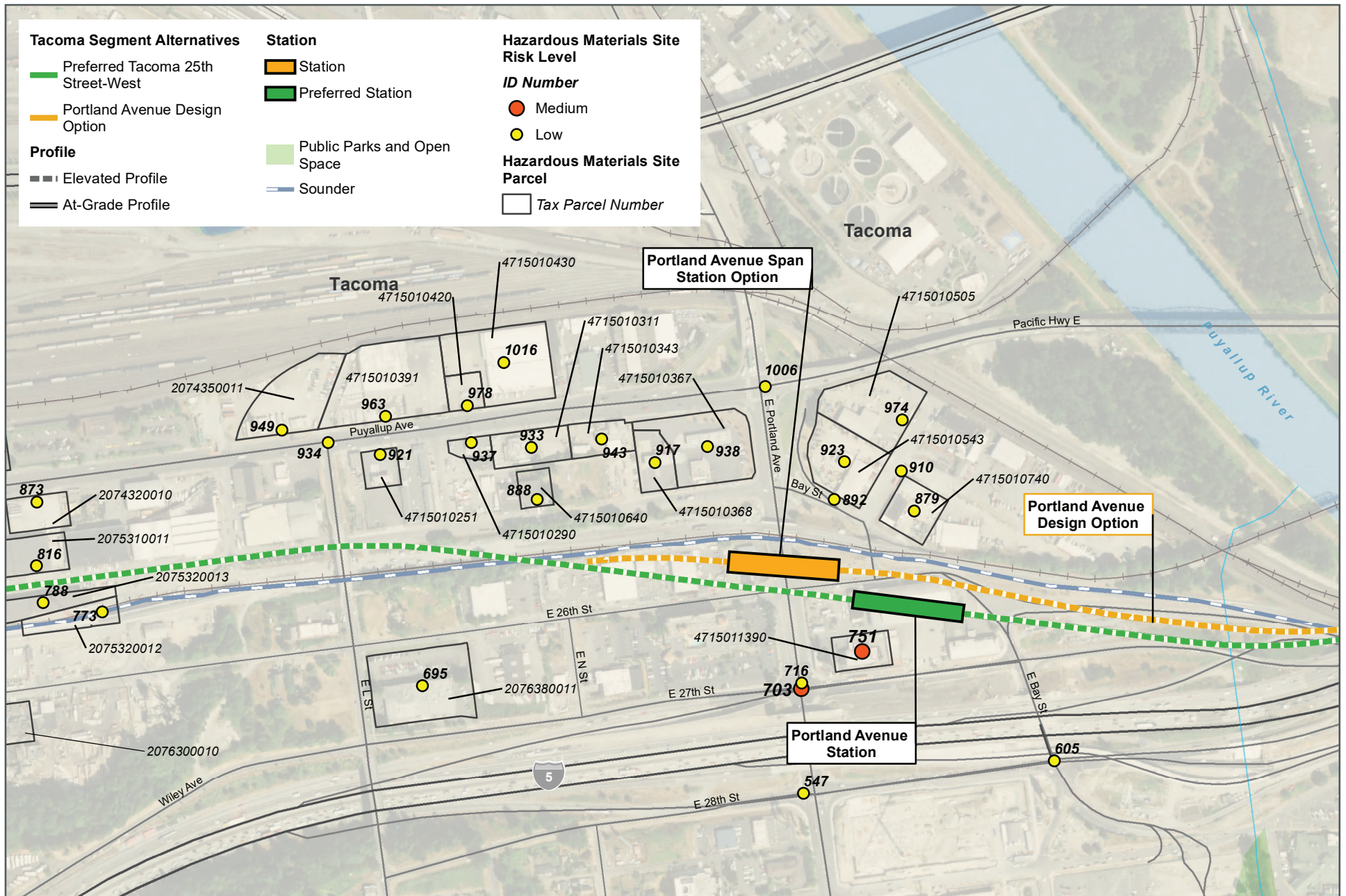


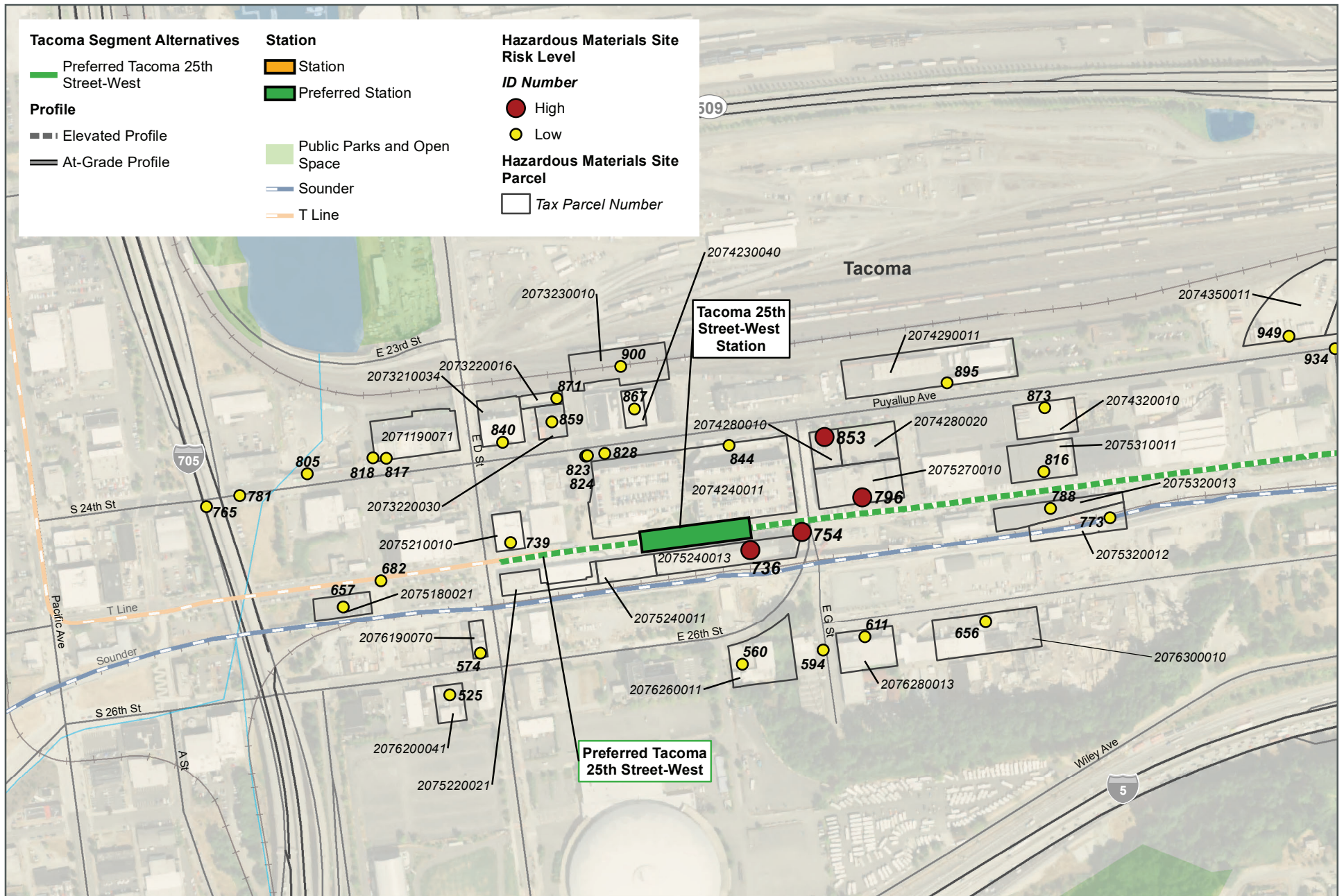
FIGURE H7-6C
Hazardous Materials Sites
Fife Pacific Highway and Pacific Highway Median Alternatives
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE H7-7A
Hazardous Materials Sites
Preferred Tacoma 25th Street-West Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE H7-7B
Hazardous Materials Sites
Preferred Tacoma 25th Street-West Alternative
Tacoma Dome Link Extension

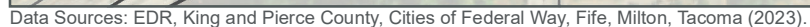
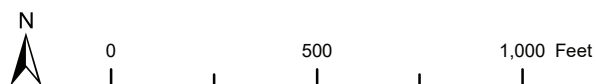
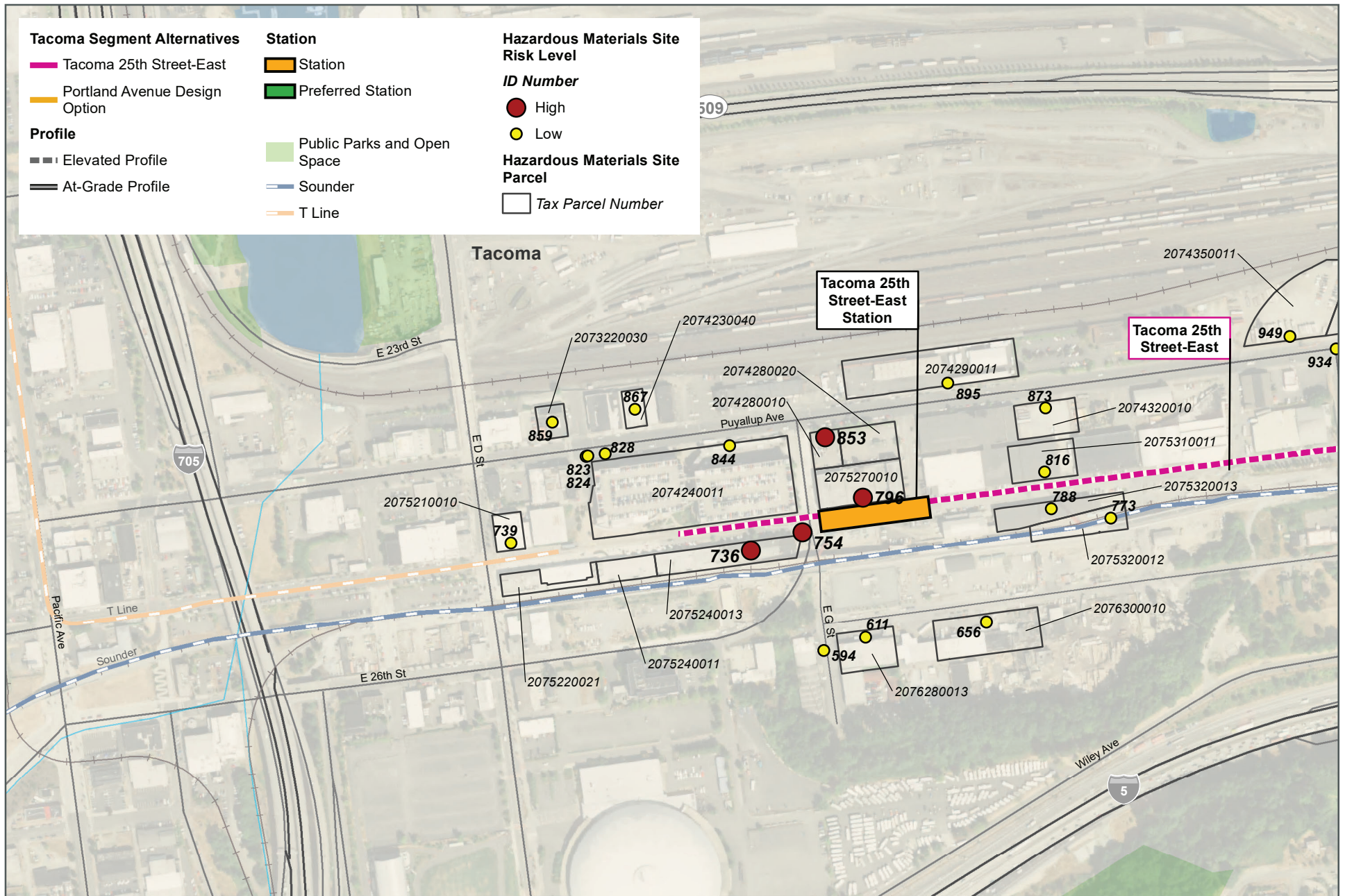


FIGURE H7-8A
Hazardous Materials Sites
Tacoma 25th Street-East Alternative
Tacoma Dome Link Extension

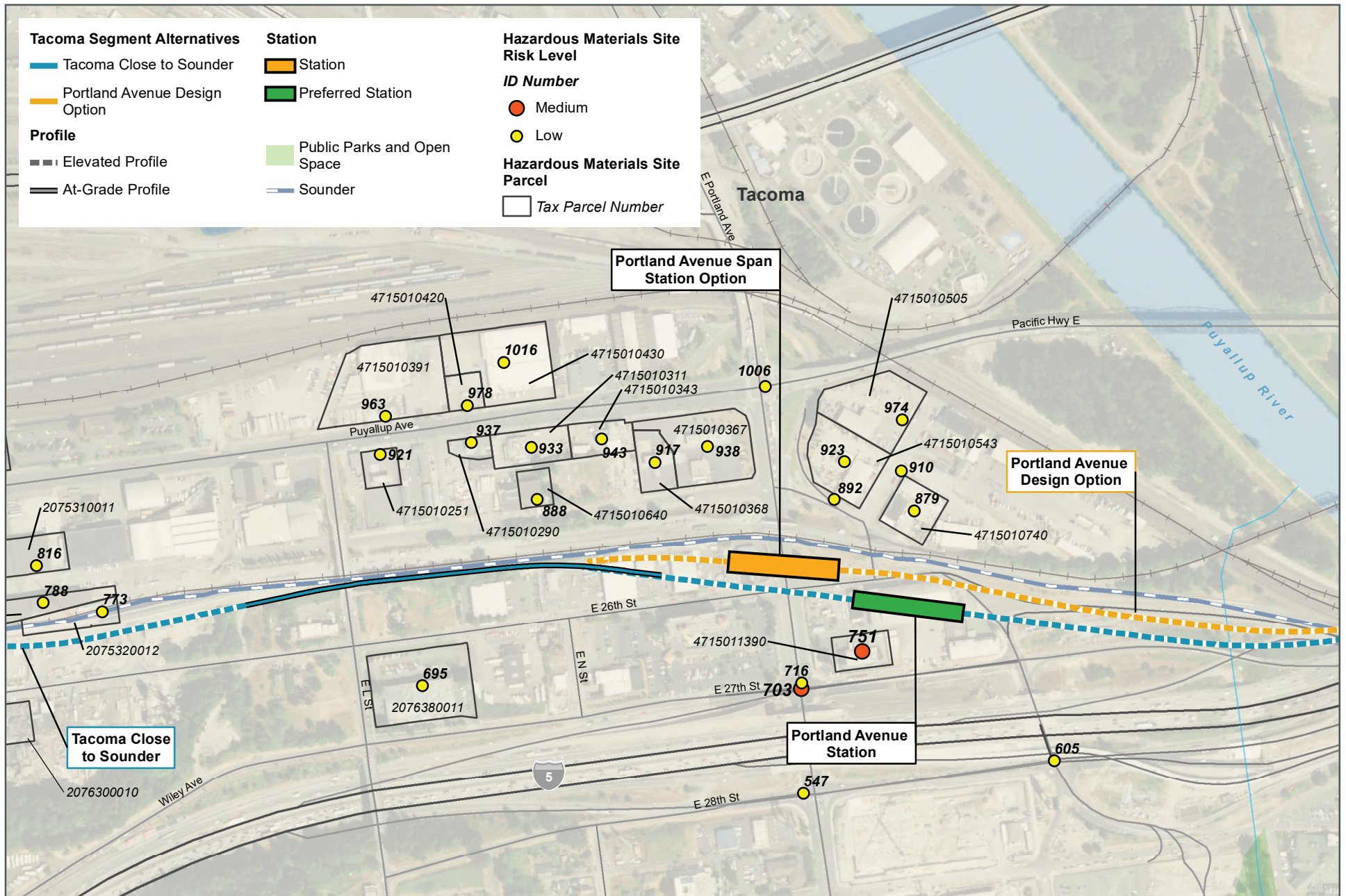




Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE H7-8B
 Hazardous Materials Sites
 Tacoma 25th Street-East Alternative
 Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

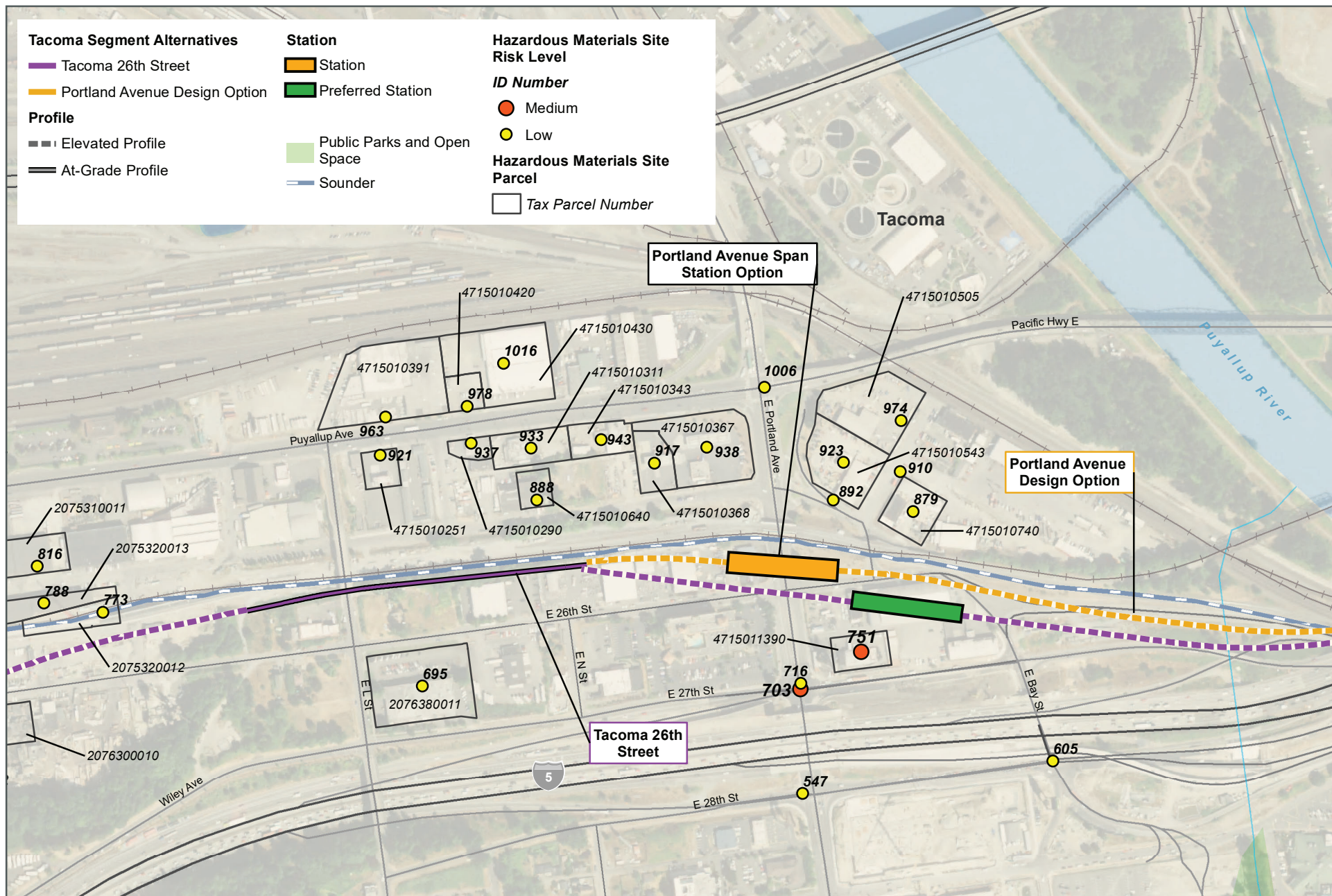


FIGURE H7-9A
Hazardous Materials Sites
Tacoma Close to Sounder Alternative
Tacoma Dome Link Extension



FIGURE H7-9B
Hazardous Materials Sites
Tacoma Close to Sounder Alternative
Tacoma Dome Link Extension

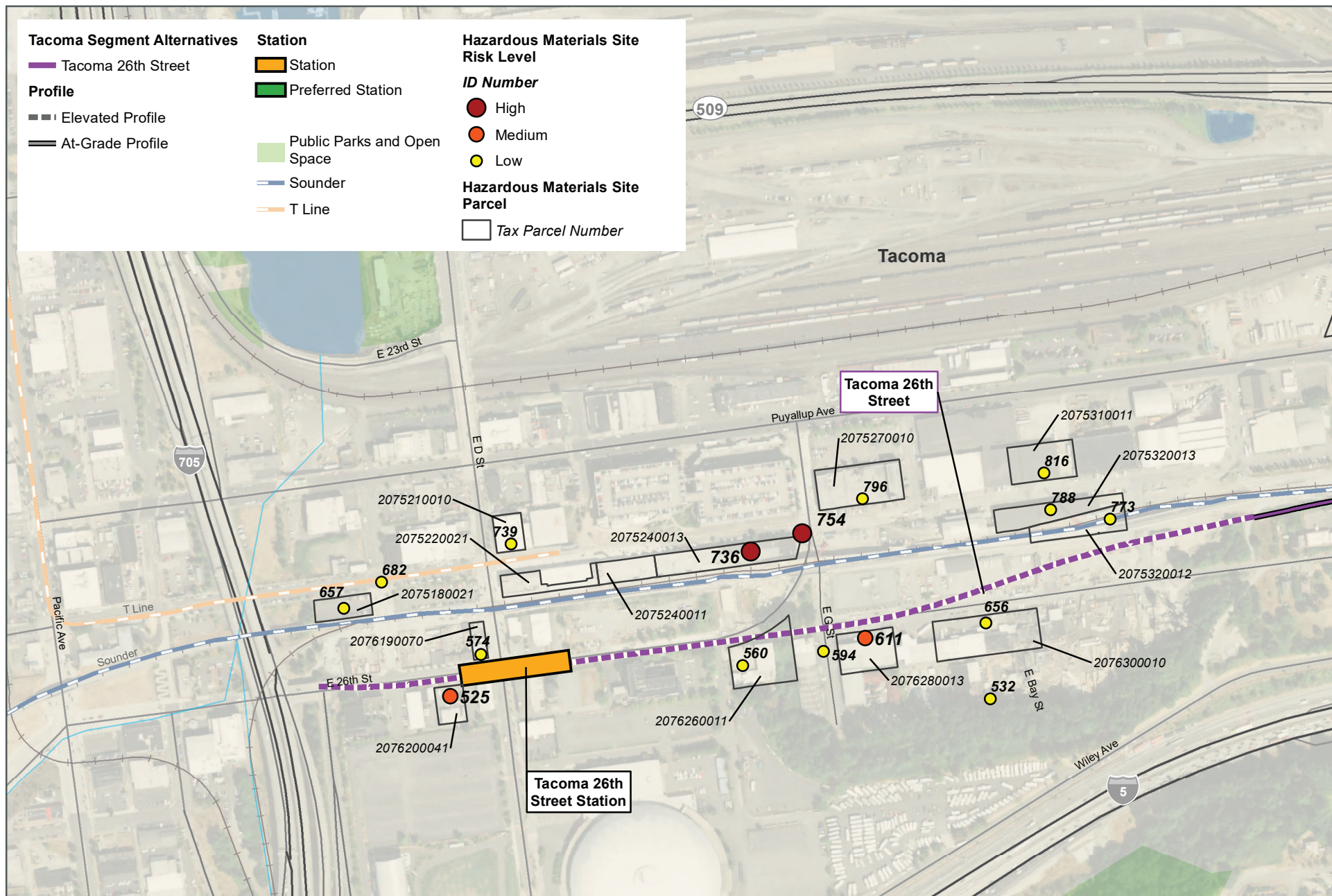




Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



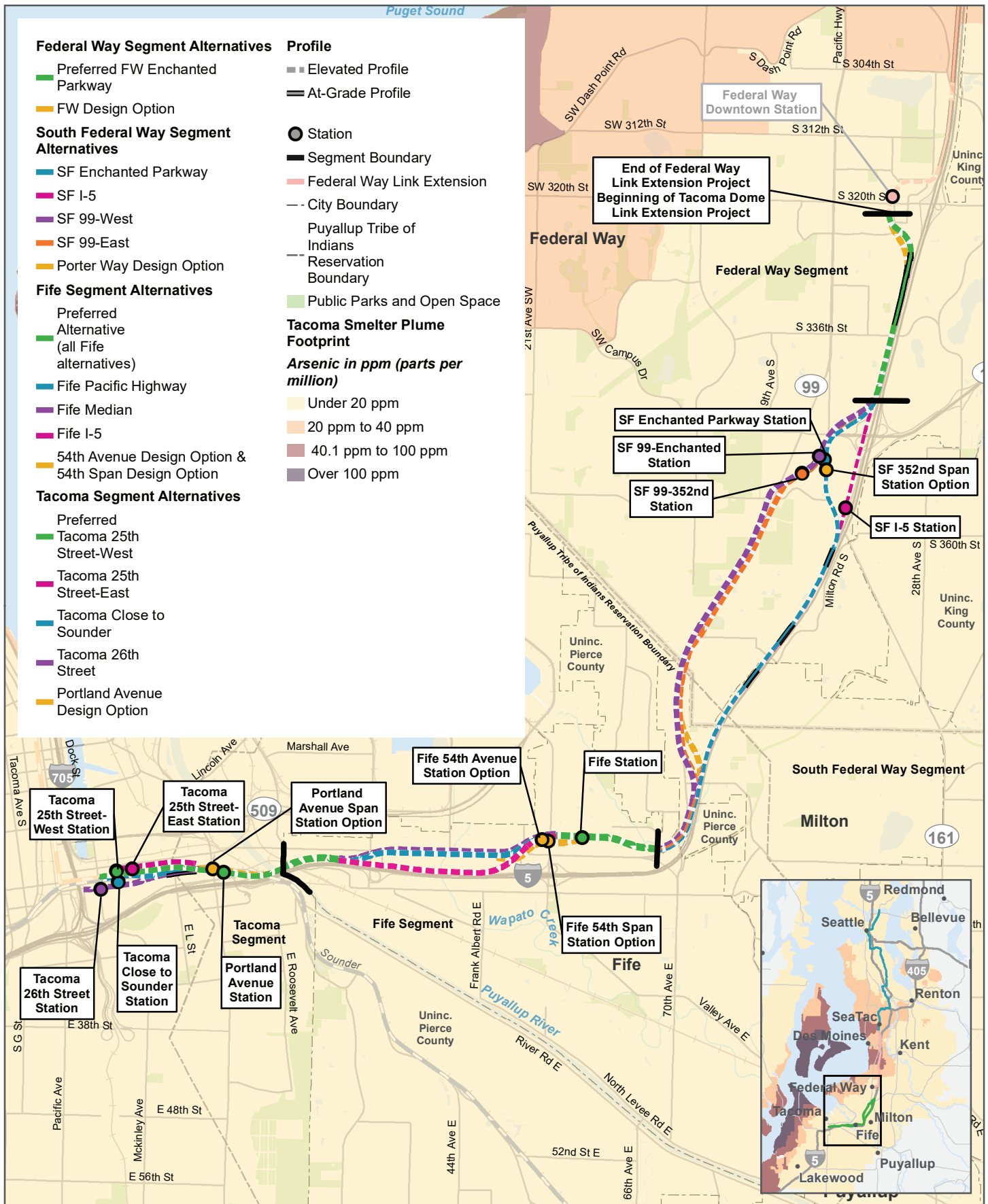
FIGURE H7-10A
Hazardous Materials Sites
Tacoma 26th Street Alternative
Tacoma Dome Link Extension



Data Sources: EDR, King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).



FIGURE H7-10B
Hazardous Materials Sites
Tacoma 26th Street Alternative
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

FIGURE H7-11
Tacoma Smelter Plume
Alternatives
Tacoma Dome Link Extension

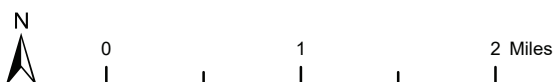


Table H7-1. Potential Impacts of High-Risk Hazardous Materials Sites by Alternative¹

Map ID	Site Name and Address	Tax Lot	EDR Map ID/ Focus Map	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median ²	Fife I-5 ²	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma 26th Street	Tacoma Close to Sounder
South Federal Way Segment													
1799	Clarks Payless Oil 215 S 373rd Street Federal Way, WA	3221049087	D48/8			Affected	Affected						
1808	Power Masters 37405 Pacific Highway S Federal Way, WA	2188204205	N49/7			Affected							
3090	Ovals Motorsport Milton 7708 Pacific Highway E Milton, WA	0420052035	K41/7			Affected	Affected						
3111	Global Paving 7608 Pacific Highway E Milton, WA	0420052054	60/7			Affected	Affected						
1433	USG Highway 99 7110 Pacific Highway E, Milton, WA 98354	0420057006, 0420057007, 0420057008, and 0420053075	MY2071/ 2072	Affected	Affected	Affected	Affected						
Fife Segment													
948	HomeTel Inn 3520 Pacific Highway E, Fife, WA 98424	0320111049	VB3162 – VB3164/ 16						Affected				
1039	Pacific Xpress 4310 Pacific Highway E, Fife, WA 98424	0320013141 and 0320013136	TP2969 – TP2972 / 17					Affected					
1055 1047	Fife RV Center (La Casa Real Drum) 3410 Pacific Highway E, Fife, WA 98424	0320024105, 0320024104, and 0320111067	TK2934 / 16					Affected	Affected				
Tacoma Segment													
754	Freighthouse Square Amtrak Relocation 602 E 25th Street, Tacoma, WA 98421	2075240013, 2075240011, and 2075220021	XU3592 / 21							Affected	Affected	Affected	Affected
736	Freighthouse Square 25th Street and East G Street, Tacoma, WA 98421	2075240013, 2075240011, and 2075220021	3561 / 21							Affected	Affected	Affected	Affected
796	Spring Air Northwest 725 E 25th Street, Tacoma, WA 98421	2075270010	XH3481 – XH3488/ 21							Affected	Affected		Affected
853	Former Texaco Service Station 704 Puyallup Avenue, Tacoma, WA 98421	2074280010 and 2074280020	WF3367 / 21							Affected	Affected		Affected

Note:
(1) There are no high-risk sites in the Federal Way Segment.
(2) Potential impacts are the same for the alternative with or without 54th Avenue or 54th Span Design Option.

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
Federal Way Segment														
2029	Lloyd Enterprises Lloyd Enterprises Inc Lloyd's Compost Facility	Low												ALLSITES, RGA LF, UST
2080	Southbound Interstate 5 At Highway 18	Medium	Medium											ALLSITES, CSCSL NFA
2124	Belmor Mobile Home Park	Low	Low											ALLSITES, ASBESTOS, CSCSL NFA, FINDS, LUST, RGA LUST, UST
2195	Sound Transit Federal Way Lnk Y Pay Mor Cleaners Suo K Chang Y Pay Mor Drycleaner	Low	Low											ALLSITES, CSCSL NFA, ECHO, EDR HIST CLEANER, FINDS, INACTIVE DRYCLEANERS, INST CONTROL, RCRA-VSQQ
2198	Arco #5241 Arco 5241 Arco 83305 Arco Facility #05241/Timeless Inc Arco Facility #05241/Zion, Inc. C Arco C&C Arco	Low	Low											ALLSITES, CSCSL, ECHO, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, ICR, LUST, MANIFEST, RCRA NONGEN / NLR, RGA HWS, RGA LUST, UST, VCP
South Federal Way Segment														
1118	US Gypsum Co Hylebos Cr Dump Site			Low	Low	Low	Low							SEMS
1139	6924 Pacific Hwy E			Low	Low	Low	Low							ALLSITES, CSCSL, FINDS, RGA HWS
1478	American Concrete					Low	Low							UST, ALLSITES, Financial Assurance
1498	West Campus Square Suhrco Mgmt Inc, Eagle Cleaners, Regency Cleaners,West Campus Square C/O Suhrco Mgmt Inc					Low	Low							MANIFEST, ALLSITES, EDR Hist Cleaner, RCRA NonGen / NLR, Inactive Drycleaners
1500	Brents Alignment & Repair Inc., Jims Auto Refinishing & Collision Center, 1st Stop Muffler & Brake, FWR Distributing Inc DBA Federal Way RAD					Low	Low							MANIFEST, ALLSITES, FINDS, RCRA NonGen / NLR, ECHO, EDR Hist Auto, ALLSITES, RCRA NonGen / NLR,SPILLS
1512	Scanco Inc					Low	Low							UST, ALLSITES, SPILLS
1530	Truck Stop Evergreen Industrial Park					Low	Low							CSCSL, ALLSITES, SWF/LF
1553	COSTCO Wholesale 61					Low	Low							FINDS, ICIS, ECHO, MANIFEST, ALLSITES
1577	Federal Way Premiere Storage					Low	Low							ALLSITES, FINDS
1579	S 352nd Street Extension					Low	Low							ALLSITES
1584	Donald B Murphy Construction Inc, Murphy Construction, Dmb Contractors					Medium	Medium							CSCSL NFA, LUST, SPILLS, UST, ALLSITES, VCP, ICR, ALLSITES, FINDS, RCRA NonGen / NLR, ECHO, MANIFEST, ALLSITES, UST
1594	LR Federal Way Premiere Storage)					Medium	Medium							LUST, UST, ICR, CSCSL NFA, ALLSITES, NPDES
1596	ARCO Station					Low	Low							SPILLS, ALLSITES
1596	Triple B PAC HWY Inc					Low	Low							UST
1608	7-Eleven Convenience Store With Gas,7-Eleven #41827H					Low	Low							ALLSITES, ASBESTOS, UST
1619	FNW Federal Way					Low	Low							FINDS, ECHO, ALLSITES
1621	Black Corvette					Low	Low							UST
1634	Former Milton Tavern Milton Tavern			Low	Low	Low	Low							ALLSITES, CSCSL, FINDS, SPILLS, UST, VCP

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
1666	William Hopper Dump			Low	Low	Low	Low							SWF/LF
1772	Spring Valley UST Site, Spring Valley Restoration, Spring Valley Site					Low	Low							LUST, SPILLS, UST, CSCSL, ALLSITES, US BROWNFIELDS, US BROWNFIELDS, SPILLS
1808	Power Masters INC.					High	Medium							SEMS-ARCHIVE, RCRA NonGen / NLR, CSCSL NFA, CSCSL, SPILLS, ALLSITES, ICR, MANIFEST
1843	Gethsemane Cemetery					Low	Low							UST, ALLSITES, FINDS, ECHO, FINDS
1880	Jet Chevrolet Jet Chevrolet Geo			Medium	Medium									ALLSITES, ECHO, ERNS, FINDS, MANIFEST, RCRA NONGEN / NLR, SPILLS, UST
1884	Blackstones Collision Inc			Low	Medium									ALLSITES, CSCSL NFA, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR
1885	Select Ventures			Low	Low									ALLSITES, FINDS, UST
1887	Cruickshank Property			Low	Medium									ICR
1891	Honda Auto Care			Low	Low	Low	Low							ALLSITES, FINDS, UST
1892	Enchanted Parkway Chevron Enchanted Parkway Chevron & Car Wash			Low	Low									ALLSITES, FINDS, UST
1905	K & W Transportation Yellow Freight System Inc Federal Wy			Low	Low	Low	Low							ALLSITES, FINDS, UST
1909	C & H Transportation Co			Low	Low	Low	Low							ALLSITES, UST
1914	Carlile Transportation Carlile Transportation Systems Inc K & W Transportation Federal Way			Medium	Low	Low	Low							ALLSITES, ECHO, ERNS, FINDS, RCRA NONGEN / NLR, SPILLS
1930	Truck Stop Evergreen Ind Park Truck Stop/Evergreen Ind. Park			Low		Low	Low							ALLSITES, CSCSL, FINDS, RGA HWS, SPILLS
1931	Costco Wholesale #61 Costco Wholesale 61 L.A. Force Trucking			Low	Low	Low	Low							ALLSITES, ECHO, FINANCIAL ASSURANCE, FINDS, MANIFEST, RCRA-SQG, SPILLS, UST
1934	American Concrete			Low	Low	Low	Low							ALLSITES, FINDS, UST
1936	Barkshire Panel Systems			Low		Low	Low							ALLSITES, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR, UST
1940	Scanco Inc			Low	Low	Low	Low							ALLSITES, FINDS, UST
1947	Broadway Truck Stop Service Broadway Truck Stop/Chevron #9 1176 Broadway/Flying J Truck Village Inc			Low	Low	Low	Low							ALLSITES, CSCSL, EDR HIST AUTO, ERNS, FINDS, ICR, LUST, RGA HWS, RGA LUST, SPILLS, UST, VCP
1952	I-5 Northbound, Exit 142B				Medium									ERNS
1960	J & W Texaco Jacksons 636 Shell 120698 Shell Branded Wholesale Facility Texaco #1453 (Two Reports) Texaco C Store Texaco Star Mart #3728 Texaco Star Mart #63-232-1453			Low		Low	Low							ALLSITES, CSCSL, ECHO, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, ICR, LUST, MANIFEST, NPDES, RCRA NONGEN / NLR, RGA HWS, RGA LUST, UIC, UST, VCP
1968	Skyline Mail Carriers Spill I5 & SR 18				Low									ALLSITES, CSCSL NFA

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
1971	Taylor Rental Taylor Rental Center			Low		Low	Low							ALLSITES, CSCSL NFA, ECHO, FINDS, ICR, LUST, RCRA NONGEN / NLR, RGA LUST, UST
1972	Performance Preparation			Low		Low	Low							ALLSITES, ECHO, FINDS, RCRA NONGEN / NLR, UST
1979	Pep Boys 1474 Federal Way Pyramid Tire Pyramid Tire Fed Way Pyramid Tire Inc			Low		Low	Low							ALLSITES, CSCSL, ECHO, FINDS, ICR, LUST, MANIFEST, RCRA-VSQG, RGA LUST, UST
1982	Wal Mart Store 3794			Low		Low	Low							ALLSITES, ECHO, ERNS, FINDS, MANIFEST, RCRA-SQG, SPILLS
3007	Custom Deluxe Auto Service Inc, Custom Deluxe Auto Svc					Low	Low							EDR Hist Auto, CSCSL NFA, SPILLS, ALLSITES, FINDS
3009	Evergreen Auto & Rv Repair, Att Mobility Milton Junior, Wrecking Yard (Behind Evergreen Auto)					Low	Low							MANIFEST, ALLSITES, SPILLS
3014	Southend Auto Repair					Low	Low							ALLSITES
3023	American Reinforced Plastics Inc, Skyline Mail Carriers, Ashland Chemical Co American Reinfor					Medium	Medium							VCP, RCRA NonGen / NLR, CSCSL NFA, AIRS, UST, ALLSITES, FINDS, ECHO
3024	Federal Way Automotive And Radiator, Federal Way Automotive & Radiator, Federal Way Automotive					Low	Low							FINDS, ECHO, MANIFEST, ALLSITES, RCRA NonGen / NLR, EDR Hist Auto
3029	Federal Way Foreign Auto Service, Federal Way Foreign Auto, Federal Way Foreign Auto Svc					Low	Low							ECHO, EDR Hist Auto, RCRA NonGen / NLR, ALLSITES, HIST CDL
3197	Former Milton Tavern, Milton Tavern					Medium	Medium							UST, CSCSL NFA, VCP, ALLSITES, RCRA NonGen / NLR
3243	Franks Freeway Auto Sales LLC					Low	Low							SPILLS, UIC, ALLSITES
3380	WSDOT I-5 Flood Mitigation Pont					Low	Low							CSCSL NFA, ALLSITES, FINDS
Fife Segment														
948	HomeTel Inn							Low	High					VCP, CSCSL, FINDS, ALLSITES
1005	Bruce & Boys Enterprises Inc Floyd Equipment Rental Interwest Metals Inc.							Medium	Medium					ALLSITES, ASBESTOS, CSCSL NFA, ECHO, FINDS, MANIFEST, NPDES, RCRA NONGEN / NLR, RGA HWS, VCP
1018	Bobs Chevron Service Cac Inc Chevron #97376 Chevron Service Station 9-7376, Former Taco Bell Chevron 97376 Taco Bell Former Chevron 97376								Low					ALLSITES, CSCSL, ECHO, EDR HIST AUTO, FINDS, ICR, LUST, RCRA NONGEN / NLR, RGA HWS, RGA LUST, UIC, UST, VCP
1032	Wa Dot Property WSDOT Property							Low	Low					ALLSITES, CSCSL, FINDS, RGA HWS, SPILLS
1034	Arco #5658 (Two Reports) Arco 5658 Psi 5328 Atlantic Richfield Company							Medium	Low					ALLSITES, CSCSL NFA, ECHO, FINDS, ICR, LUST, RCRA NONGEN / NLR, UST, VCP

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
1039	Express Stop Pacific Xpress Petrocard Inc							High	Low					ALLSITES, CSCSL, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, SPILLS, UST
1041	Richard A Johnson							Low	Low					ALLSITES, FINDS, UST
1047	Olympic Brake Supply Sacs Mart Inc Sohni Food Mart Tahoma Express 4 Tribal 1 Stop At Pacific Hwy Unocal #7343 Unocal 7343 Unocal Service Station 7343							Medium	Low					ALLSITES, CSCSL NFA, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, ICR, LUST, SPILLS, UST
1059	Sams Tire Service Inc							Low	Low					ALLSITES, FINDS, UST
1062	Boitano Site							Low	Low					ALLSITES, CSCSL NFA, ECHO, FINDS, RCRA NONGEN / NLR
1064	Petarcik (Occidental Chemical) Petarcik Occidental Chemical Petarcik Site							Medium	Low					ALLSITES, CSCSL, FINDS, RGA HWS, SEMS
1083	Liberty Distributing Inc							Low	Low					ALLSITES, ECHO, FINDS, RCRA NONGEN / NLR, UST
1098	Gcr Tire Center 4247 Gcr Tire Centers							Medium						ALLSITES, ASBESTOS, FINDS, RGA LF
1112	Pm Testing Lab Inc Pacific Hwy							Medium	Low					ALLSITES, CSCSL NFA, ECHO, FINDS, MANIFEST, RCRA-LQG, VCP
1113	Jet Auto Wrecking							Medium	Low					ALLSITES, CSCSL NFA, FINDS
1115	Goodyear Service Center Wingfoot Commercial Tire Systems LLC							Low						ALLSITES, CSCSL, ECHO, FINANCIAL ASSURANCE, FINDS, LUST, RCRA-LQG, UST
1116	Dauphin Site Occidental Chemical Dauphin Occidental Chemical- Site Iv Occidental Chemical/Dauphin							Low						ALLSITES, CSCSL, FINDS, RGA HWS, SEMS, SWF/LF
1117	Cummins Nw Inc							Low	Low					ALLSITES, CSCSL NFA, ECHO, FINDS, LUST, RCRA NONGEN / NLR, UST, VCP
1132	Public Roadway Western Superior Structurals Wsdot Sr 167 Tacoma To Edgewood							Low	Low					ALLSITES, ASBESTOS, CSCSL, ECHO, FINDS, SPILLS
1149	Fiedler Lowell J Jacksons #640 Jacksons 640 Port Of Tacoma Shell Food Mart Ronaco Inc Shell Branded Wholeslae Facility, Texaco Station 121109 Texaco #63 232 0143 (Two Reports) Texaco 63-232-0143 Texaco Station #63-232-0143 Texaco Station							Low						ALLSITES, CSCSL, ECHO, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, ICR, LUST, MANIFEST, RCRA NONGEN / NLR, RGA HWS, RGA LUST, SPILLS, UIC, UST, VCP
1164	Bob & Tom Erker Texaco Service Bob's Texaco Erker & Son Texaco Erkers Auto& Truck							Low	Low					ALLSITES, CSCSL, EDR HIST AUTO, FINDS, HSL, LUST, RGA HWS, RGA LUST, UST
1171	Carlson Wagonlit Travel							Low	Low					ALLSITES, CSCSL, FINDS, RGA HWS, VCP
1179	Davis Property							Low						ALLSITES, CSCSL NFA, FINDS, RGA HWS, VCP

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
1180	Veneer Chip Transport							Low	Low					ALLSITES, CSCSL, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR, RGA HWS, SPILLS, UST
1200	Wa Dot I5 Flood Mitigation Pond Wsdot I-5 Flood Mitigation Pond							Medium	Medium					ALLSITES, CSCSL NFA, FINDS
1203	BJ's Bingo Pernelle R Turnipseed Pernelle Turnipseed (Aka BJ's Bingo)							Low						FINDS, INDIAN UST
1206	Susan Kaelin Property							Low						ALLSITES, CSCSL NFA, FINDS, VCP
1222	Scorpion Investments Llc Property							Medium	Medium					ALLSITES, CSCSL, FINDS, RGA HWS
1226	Fife City Of Fife City Streetwaste Decant Facility Fife Vehicle Div & Dept Of Public Works							Low						ALLSITES, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR, RGA LF, SWF/LF
1266	New West Gypsum New West Gypsum Usa Inc							Medium	Low					ALLSITES, ECHO, FINDS, RGA LF, SWF/LF
1267	Joe Hall Construction							Medium	Low					ALLSITES, CSCSL NFA, ECHO, FINANCIAL ASSURANCE, FINDS, LUST, RCRA NONGEN / NLR, RGA LUST, UST
1339	Schuler Industrial Park							Medium	Medium					ALLSITES, CSCSL NFA, FINDS
Tacoma Segment														
525	Dressel Property Edge Technologies Tod Dressel Private Home									Low		Low	Medium	ALLSITES, CSCSL NFA, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR, RGA HWS, VCP
532	Smurfit Stone Container Corp Tacoma Paperboard East 26th Street												Low	ALLSITES, CSCSL, HMIRS, HSL, NPDES, RGA HWS, VCP
547	Tahoma Express #2, Shell Station Tribal 1 Stop At Portland Ave									Low	Low	Low	Low	EDR HIST AUTO, ERNS, FINDS, INDIAN UST, SPILLS
560	Don Engle Distributing Inc Tacoma Power									Low		Low	Low	ALLSITES, ERNS, FINDS, SPILLS, UST
574	Gary W Johnson Melody Meats									Low		Low	Low	ALLSITES, FINDS, UST
594	Aim Aerospace Tacoma Operations Precision Pattern Inc									Low	Low	Low	Low	ALLSITES, CSCSL NFA, ECHO, FINDS, MANIFEST, RCRA NONGEN / NLR, RGA HWS, SPILLS, VCP
605	28th and Bay Street									Low	Low	Low	Low	ERNS
611	Western Beer Western Beer Distributors Western Beer Distributors, Inc.									Low	Low	Low	Medium	ALLSITES, CSCSL NFA, FINDS, LUST, RGA LUST, UST
656	Caraustar Caraustar Mill Group Inc Tacoma Paperboard Caraustar Tacoma Paperboard									Low	Low	Low	Low	ALLSITES, ECHO, ERNS, FINDS, MANIFEST, RCRA-VSQQ, SWF/LF, TRIS, US AIRS
657	Frontier Transportation Company Golden Line Recycling Corp									Low		Low	Low	ALLSITES, FINDS, UST
682	Stone Property Transit Site									Low		Low	Low	ALLSITES, CSCSL, FINDS, HSL, RGA HWS, VCP

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
695	Air Spares Inc Air Spares Inc Former Sterling Reference Laboratories									Low	Low	Low	Low	ALLSITES, CSCSL NFA, ECHO, FINDS, INST CONTROL, LUST, MANIFEST, RCRA-SQG, UST, VCP
703	Gordon Trucking Inc Scarcella Bros Construction									Medium	Medium	Medium	Medium	ERNS, SPILLS
716	Chets Serv Gas Sta Northern Battery									Low	Low	Low	Low	ALLSITES, EDR HIST AUTO, FINDS, UST
739	F & E Investments									Low	Low	Low	Low	ALLSITES, FINDS, UST
751	Joy Motor Freight Joy Motor Freight Inc									Medium	Medium	Medium	Medium	ALLSITES, CSCSL NFA, ECHO, FINDS, LUST, RCRA NONGEN / NLR, RGA LUST, UST
765	Kiewit Pacific Co Tacoma									Low		Low		ALLSITES, ECHO, FINDS, RCRA NONGEN / NLR, UST
773	Sound Transit Tacoma Trestle Project									Low	Low	Low	Low	ALLSITES, CSCSL
781	Tacoma Spur									Low		Low		FINDS, SEMS
788	Tacoma Trestle Track & Signal Project									Low	Low	Low	Low	ALLSITES, ASBESTOS, CSCSL, FINDS
796	For Kids Only Spring Air Northwest Spring Air Nw Div Carman Mfg Co Spring Air Nw-Div Carman Mfg Co									High	High	High	Low	ALLSITES, CSCSL, ECHO, FINDS, LUST, RCRA NONGEN / NLR, RGA HWS, RGA LUST, UST, VCP
805	City Of Tacoma - Dock Street Eductor Decant Facility									Low		Low		SWF/LF
816	Plytac									Low	Low	Low	Low	ALLSITES, ERNS, FINDS
817	Art The Studio Gonzales Motors Gonzalez Motors Motorcycle Sls & Repr									Low		Low		ALLSITES, CSCSL NFA, EDR HIST AUTO, FINDS, ICR, LUST, RGA LUST, UST
818	South End City Water Way - 2300 East D Street Twin 96-inch sewer pipe									Low		Low		ERNS
823	Tacoma Dome Station									Low	Low	Low		ALLSITES, CSCSL NFA, FINDS, RGA HWS
824	Discovery									Low	Low	Low		ALLSITES, FINDS, UST
828	Manna Pro Co Manna Pro Corp Manna Pro Corp.									Low	Low	Low		ALLSITES, CSCSL NFA, FINDS, ICR, LUST, RGA LUST, UST
840	Salvation Army Arc									Low				ALLSITES, ASBESTOS, ECHO, FINDS, RCRA NONGEN / NLR, SWRCY, UST
844	605 Puyallup Avenue 605 Puyallup Avenue (Bnsf Taco Bnrr Tacoma Yard Pond Burlington Northern Railroad									Low	Low	Low		ALLSITES, CSCSL NFA, ERNS, FTTS, HIST FTTS, HMIRS, SPILLS
853	Former Texaco Service Station									High	High	High	Low	VCP, CSCSL, ALLSITES
859	Amanozio T Lndy Clevinger Truck Service Clevingers Truck Service Gas Sta Industrial Tire Service Its									Low	Low			ALLSITES, CSCSL, EDR HIST AUTO, EDR HIST CLEANER, FINDS, HSL, LUST, RGA HWS, RGA LUST, UST, VCP
867	South Sound Radiator									Low	Low			ALLSITES, CSCSL, FINDS, HSL, RGA HWS
871	Pacific Charter School									Low				ALLSITES, CSCSL NFA, FINDS, LUST, UST

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
873	Mendez Property Tacoma Super Serv No 1 Gas Sta									Low	Low			ALLSITES, CSCSL, EDR HIST AUTO, FINDS, ICR, LUST, RGA HWS, RGA LUST, UST, VCP
879	Coast Crane Company Tacoma Seattle Transfer									Low	Low	Low	Low	ALLSITES, CSCSL, FINDS, RGA HWS
888	Lilyblad Petroleum Inc Epa 25t Nu Tread									Low	Low	Low	Low	ALLSITES, ECHO, FINDS, RCRA NONGEN / NLR, RGA LF, SWF/LF
892	2000 E Bay Street									Low	Low	Low	Low	ERNS
895	Nelson Petroleum Superior Cartage Of Washington Inc									Low	Low	Low		ALLSITES, FINDS, SPILLS, UST
900	Bnsf Tacoma Fueling Facility									Low				ALLSITES, CSCSL, HSL, RGA HWS
910	Complete Truck And Trailer Repair Penhall Co Tacoma Sunnen Crane Co Inc Sunnen Crane Service									Low	Low	Low	Low	ALLSITES, CSCSL, ECHO, FINDS, HSL, ICR, LUST, RCRA-LQG, RGA HWS, RGA LUST, UST
917	Brownies Texaco Serv Cardlock Fuels System Pyramid Gold li, Llc									Low	Low	Low	Low	ALLSITES, CSCSL NFA, ECHO, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, LUST, RCRA NONGEN / NLR, RGA HWS, RGA LUST, SPILLS, UST, VCP
921	Associated Petroleum Associated Petroleum Products, Inc.									Low	Low	Low	Low	ALLSITES, CSCSL, FINANCIAL ASSURANCE, FINDS, UST
923	Courtwright Diesel & Machine Inc									Low	Low	Low	Low	ALLSITES, ECHO, FINDS, RCRA NONGEN / NLR, UST
933	(Previously: Pegasus Restaurant & Lounge) Bette McBrier									Low	Low	Low	Low	ALLSITES, ASBESTOS, CSCSL, FINDS, UST
934	East L Street and Puyallup Avenue									Low	Low			ERNS
937	Jard Petroleum Gas Sta Major B.P. Major Petroleum Major Petroleum B P Major Petroleum B.P. Major Petroleum Bp Union 76 Station Unocal 76 Major Petroleum									Low	Low	Low	Low	ALLSITES, CSCSL, EDR HIST AUTO, FINANCIAL ASSURANCE, FINDS, HSL, LUST, RGA HWS, RGA LUST, SPILLS, UST, VCP
938	Arco 5727 Pyramid Gold Inc									Low	Low	Low	Low	ALLSITES, CSCSL, ECHO, EDR HIST AUTO, ERNS, FINANCIAL ASSURANCE, FINDS, INST CONTROL, RCRA NONGEN / NLR, RGA HWS, UST, VCP
943	Aabergs Tool & Equip Rental & Sales Aabergs Tool & Equipment Rental & Sales									Low	Low	Low	Low	ALLSITES, ASBESTOS, FINDS, UST
949	Wp Fuller Property Wp Fuller Property Former									Low	Low			ALLSITES, CSCSL NFA, FINDS, VCP
963	Architectural Woods Inc Puyallup Ave Former Puyallup Avenue Gas Station Hague Leo G Garage Puyallup Ave Gas Station Puyallup Ave Gas Station Former Taft Properties Llc									Low	Low	Low	Low	ALLSITES, CSCSL, ECHO, EDR HIST AUTO, FINDS, LUST, MANIFEST, RCRA-SQG, UIC, UST, VCP

Table H7-2. Potential Impacts of Low- and Medium-Risk Hazardous Materials Sites by Alternative (continued)

Map ID	Facility List	Preferred FW Enchanted Parkway	FW Design Option (55 mph)	SF Enchanted Parkway	SF I-5	SF 99-West	SF 99-East	Fife Pacific Highway and Fife Median	Fife I-5	Tacoma 25th Street-West	Tacoma 25th Street-East	Tacoma Close to Sounder	Tacoma 26th Street	Database List
974	Rental Service Corp Rental Service Corporation Rental Service Corporation 561 United Rental Facility									Low	Low	Low	Low	ALLSITES, CSCSL, ECHO, ERNS, FINDS, LUST, MANIFEST, RCRA NONGEN / NLR, SPILLS, UST, VCP
978	Avenue Arco Gas Sta Taft & Company Taft & Company 1239 Puyallup Ave									Low	Low	Low	Low	ALLSITES, CSCSL NFA, EDR HIST AUTO, FINDS, ICR, LUST, UST, VCP
1006	E Portland Avenue and Ellis Street									Low	Low	Low	Low	ERNS
1016	Taft & Company Washington Textile Company									Low	Low	Low	Low	ALLSITES, CSCSL NFA, FINDS, ICR, LUST, RGA LUST, UST, VCP

2 METHODOLOGY

The study area for the hazardous materials analysis includes the build alternative and the area within a 0.25-mile radius of each build alternative footprint. The footprint includes the construction limits, parcels proposed for full or partial acquisitions, and temporary construction easements (TCEs). Because of the large project footprint, only sites listed in priority databases indicating an impact on groundwater or a substantial hazardous material release were reviewed past 0.25 mile of either side of the project footprint.

2.1 Guiding Regulations, Plans, and Policies

Applicable laws and regulations regarding hazardous materials include the following:

Federal

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 United States Code [U.S.C.] § 103).
- Clean Water Act (CWA) (33 U.S.C. §§ 1251 et seq.).
- Federal Resource Conservation and Recovery Act (RCRA) (42 U.S.C. §§ 6901 et seq.).
- Federal Highway Administration (FHWA) Technical Advisory T6640.8A, 1987 (FHWA 1987).
- Superfund Amendments and Reauthorization Act (SARA).
- Toxic Substances Control Act (TSCA) (15 USC §§ 2601–2629).
- Department of Transportation Hazardous Materials Regulations (49 Code of Federal Regulations [CFR] 100–185).
- Spill Prevention Control and Countermeasure Plans (40 CFR 112.7).

State

- Dangerous Waste Regulations (Washington Administrative Code [WAC] 173–303).
- Model Toxics Control Act (MTCA) and its implementing regulations (Revised Code of Washington [RCW] 70A.305 and WAC 173-340).
- Underground Storage Tank Statute and its implementing regulations (RCW 70A.355 and WAC 173-360A).
- Sediment Management Standards (WAC 173–204).

2.2 Regulatory Database Evaluation

The hazardous materials analysis was developed primarily from conducting an environmental database search via the EDR Radius Map™ Report with GeoCheck® EDR database. The database search report meets the government records search requirements of American Society for Testing and Materials (ASTM) standard E1527-13, Standard Practice for Environmental Site Assessments (ESAs). The EDR reports summarize database information for the areas located within a 0.25-mile radius of each build alternative. This information – along with the Washington State Department of Ecology (Ecology) Cleanup Site Search database – was used to evaluate the alignment alternatives. The current status of regulatory and cleanup actions was also considered. The evaluation reflects the nature and extent of contamination and the media contaminated and then applies professional judgment to assess the level of concern that contamination may pose for a potential acquisition property, including the level of cost and difficulty in cleanup or remediation (addressed in Phase I ESAs of high-risk sites, Attachments A through G). The potential that contamination may have migrated or could still migrate to other properties, such as through groundwater, was also evaluated.

The regulatory database records search included, but was not limited to, reviewing the following federal, state, and local databases:

- Federal National Priorities List (NPL).
- Federal Proposed NPL.
- Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).
- Federal CERCLIS No Further Remedial Action Planned (NFRAP).
- Federal Corrective Action Sites (CORRACTS).
- Federal Emergency Response Notification System (ERNS).
- Ecology Leaking Underground Storage Tank (LUST) Incident Report.
- Ecology Underground Storage Tank (UST) Database.
- Ecology ALLSITES Database.
- Ecology Confirmed and Suspected Contaminated Sites List (CSCSL).
- Ecology Confirmed and Suspected Contaminated Sites – No Further Action (CSCSL-NFA).
- Ecology Voluntary Cleanup Program (VCP).

2.3 Historical Land Use

The objective of the historical use information review was to develop a history of the previous uses of properties within the study area and surrounding area that helped to identify the likelihood of past uses having led to environmental conditions that could potentially affect the environment or the project's construction. The historical land use of the study area and adjacent properties was researched to determine whether activities at the sites may have involved the use or handling of hazardous materials or petroleum products. Historical records reviewed included aerial photographs, Sanborn Fire Insurance maps, and local street directories.

2.4 Windshield Survey

A visual windshield survey of properties within the study area and the surrounding area was conducted to identify properties where hazardous materials may be present. The site examination consisted of observing the areas immediately surrounding the project construction locations, visiting representative areas of the projects, and visually assessing the areas within the study area for evidence of hazardous materials. The survey identified visual evidence of past or current practices that could lead to soil impacts, groundwater contamination, or both. The site reconnaissance was conducted by driving and walking throughout the project study area and visually identifying evidence of chemical containers or drums, large spills and leaks, distressed vegetation, and USTs or other hazardous material storage containers, as appropriate. All observations were conducted from public areas or rights-of-way.



Tacoma Dome Link Extension

Draft Environmental Impact Statement

UTILITIES SUPPORTING MATERIALS

Appendix H8

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Appendix H8 Utilities Background Materials

1 INTRODUCTION

This background material supports the analysis of the short-term construction and long-term operations impacts of Tacoma Dome Link Extension (TDLE) on utility providers and systems that currently serve, or are planned to serve, the project area.

2 METHODOLOGY

The study area for utilities is 100 feet around the project alternatives footprint, construction areas, and stations. Information on relocated or protected utility lines was compiled from several sources, including Sound Transit geographic information system (GIS) data, GIS data available on City of Federal Way, City of Milton, City of Fife, and City of Tacoma websites, utility maps, and in some cases, as-built drawings obtained from private and public utility companies, along with civil engineering plans depicting alternative alignments. Sound Transit identified major utility conflicts for each alternative by determining where underground or overhead utilities were within the project limits of each alternative. The goals of identifying the conflicts are as follows:

- Plan for relocating the utilities during construction and, therefore, remove conflicts with construction.
- Keep the project elements (i.e., buildings, tall structures) clear of the minimum required distance of overhead utilities.
- Account for relocation costs.

Major utilities are defined as utilities of larger size, such as:

- Water mains of 16-inch diameter or greater.
- Stormwater drains and sanitary sewers of 36-inch diameter or greater.
- Sanitary sewer force mains of 24-inch diameter or greater.
- 115-kilovolt (kV) and greater electrical transmission lines.
- High-pressure gas mains of any diameter.
- Intermediate-pressure gas lines with an 8-inch diameter or greater.
- Telephone and fiber-optic duct banks with three or more conduits.
- Petroleum product pipelines.

3 EXISTING UTILITY PROVIDERS

Table H8-1, Summary of Existing Utility Providers, summarizes the utility providers in each jurisdiction.

Table H8-1 Summary of Existing Utility Providers

Utility	Federal Way	Milton	Unincorporated Pierce County	Fife	Tacoma
Natural Gas	PSE	PSE	PSE	PSE	PSE
Electricity	PSE Bonneville Power Administration	City of Milton Public Works	City of Milton Public Works ¹ Tacoma Public Utilities – Power ²	Tacoma Public Utilities – Power	Tacoma Public Utilities – Power
Water	Lakehaven Water and Sewer District	City of Milton Public Works	City of Milton Public Works	City of Fife Public Works	Tacoma Public Utilities – Water
Sanitary Sewer	Lakehaven Water and Sewer District	Pierce County Public Works	Pierce County Public Works	City of Fife Public Works	City of Tacoma Environmental Services – Sewer Division
Stormwater	WSDOT City of Federal Way Public Works	WSDOT City of Milton Public Works	WSDOT City of Milton Public Works ³ City of Fife Public Works ⁴	WSDOT City of Fife Public Works	WSDOT City of Tacoma Public Works
Communications	Lumen, Comcast, Zayo	Lumen, Comcast, Zayo	Lumen, Comcast, Zayo	Lumen, Comcast, Zayo	AT&T, Lumen, Click! Network, Comcast, Lightcurve, Zayo
Petroleum	None	None	None	McChord Pipeline Co.	British Petroleum

Notes:

PSE: Puget Sound Energy

(1) City of Milton provides power for area east of I-5.

(2) Tacoma Public Utilities – Power provides power for area west of I-5.

(3) City of Milton provides stormwater collection for area east of I-5.

(4) City of Fife provides stormwater collection for area west of I-5.

4 SUMMARY OF MAJOR UTILITY CONFLICTS

Table H8-2 summarizes the major utility conflicts, expected length of relocation, and number of crossings where the length has not yet been determined. Actual relocation lengths of crossings would be determined during final design. Many underground intersecting utilities would require only a split casing. Utility Impact Figures (Figures H8-1, H8-2, H8-3, and H8-4) in each corresponding segment section below provide a basic visual representation of the key impacts and their locations within the project¹ The Draft EIS Appendix F, Conceptual Design Drawings, provides further information and more focused views of the conflicts to utilities and their surrounding area.

¹ Utility relocations that will be completed by outside parties or contractors are noted as “(by Others)” on Figures H8-1, H8-2, H8-3, and H8-4.

Table H8-2 Summary of Major Utility Conflicts
(Approximate Length of Relocations and Number of Crossings)

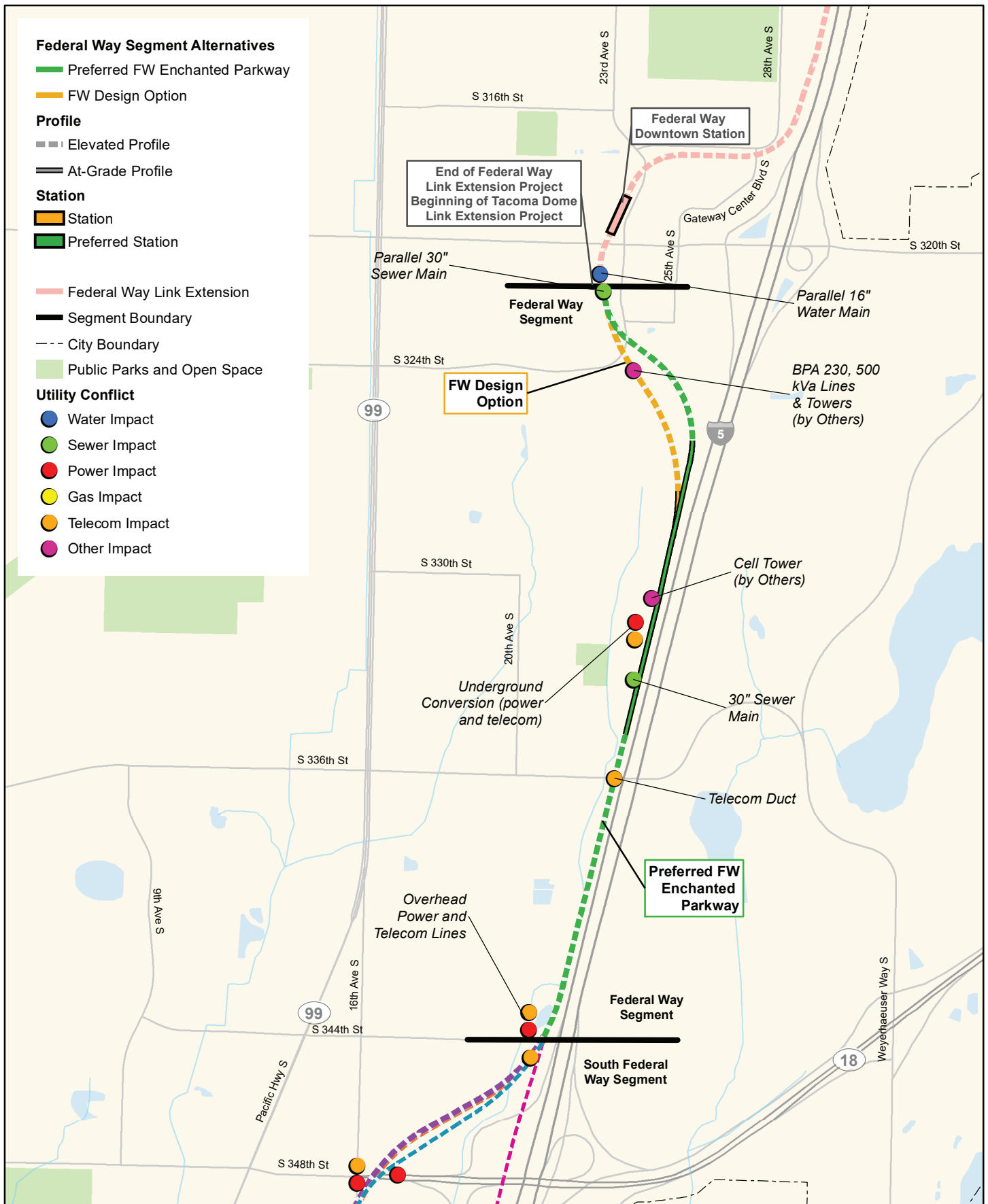
Alternative	Power Line	Water Line	Sanitary Sewer Line	Natural Gas/Petroleum Line	Stormwater Drainage Line	Telecom Systems
Federal Way Segment						
Preferred FW Enchanted Parkway Alternative	1,100 feet 3 crossings	100 feet	400 feet 1 crossing	Not Applicable	350 feet 1 crossing	1,100 feet 3 crossings
Preferred FW Enchanted Parkway Alternative with Design Option	1,100 feet 3 crossings	100 feet	300 feet 1 crossing	Not Applicable	350 feet 1 crossing	1,100 feet 3 crossings
South Federal Way Segment						
SF Enchanted Parkway Alternative ¹	1,750 feet 6 crossings	Not Applicable	100 feet 1 crossing	Not Applicable	200 feet	4,800 feet 2 crossings
SF I-5 Alternative	2,300 feet 6 crossings	100 feet	1 crossing	Not Applicable	Not Applicable	3,600 feet 2 crossings
SF 99-West ²	4,050 feet relocated 1,700 feet raised 14 crossings	500 feet	300 feet	Not Applicable	Not Applicable	6,050 feet 12 crossings
SF 99-East ²	12,550 feet relocated 700 feet raised 14 crossings	500 feet	550 feet gravity main 400 feet force main	Not Applicable	Not Applicable	14,550 feet 12 crossings
Fife Segment						
Fife Segment (portion common to all alternatives)	500 feet 3 crossings	Not Applicable	Not Applicable	Not Applicable	Not Applicable	500 feet 2 crossings
Fife Pacific Highway Alternative ³	5 crossings	Not Applicable	Not Applicable	1 petroleum line crossing	100 feet 1 crossing	800 feet 4 crossings
Fife Median Alternative ³	5 crossings	Not Applicable	Not Applicable	1 petroleum line crossing	100 feet	400 feet 4 crossings
Fife I-5 Alternative ³	5 crossings	Not Applicable	Not Applicable	1 petroleum line crossing	200 feet	4 crossings

Table H8-2 Summary of Major Utility Conflicts (continued)
 (Approximate Length of Relocations and Number of Crossings)

Alternative	Power Line	Water Line	Sanitary Sewer Line	Natural Gas/Petroleum Line	Stormwater Drainage Line	Telecom Systems
Tacoma Segment						
Preferred Tacoma 25th Street-West Alternative	6,400 feet 2 crossings	Not Applicable	Not Applicable	3,200 feet 2 natural gas line crossings 1 petroleum line crossing	1 crossing	6,400 feet 1 crossing
Tacoma 25th Street-East Alternative	5,000 feet 2 crossings	Not Applicable	Not Applicable	2,500 feet 2 natural gas line crossings 1 petroleum line crossing	200 feet	5,000 feet 1 crossing
Tacoma Close to Sounder Alternative	1 crossing	Not Applicable	Not Applicable	1 natural gas line crossing 1 petroleum line crossing	Not Applicable	1,200 feet 1 crossing
Tacoma 26th Street Alternative	2,800 feet 2 crossings	1,500 feet	Not Applicable	1 natural gas line crossings 1 petroleum line crossing	50 feet	1,400 feet 2 crossings

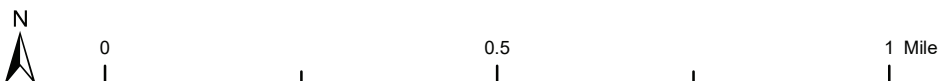
Notes:

- (1) Major conflicts would be the same with SF 352nd Station Option
- (2) Major conflicts would be the same with Porter Way Design Option
- (3) Major conflicts would be the same for the alternatives with either the 54th Avenue Design Option or 54th Span Design Option

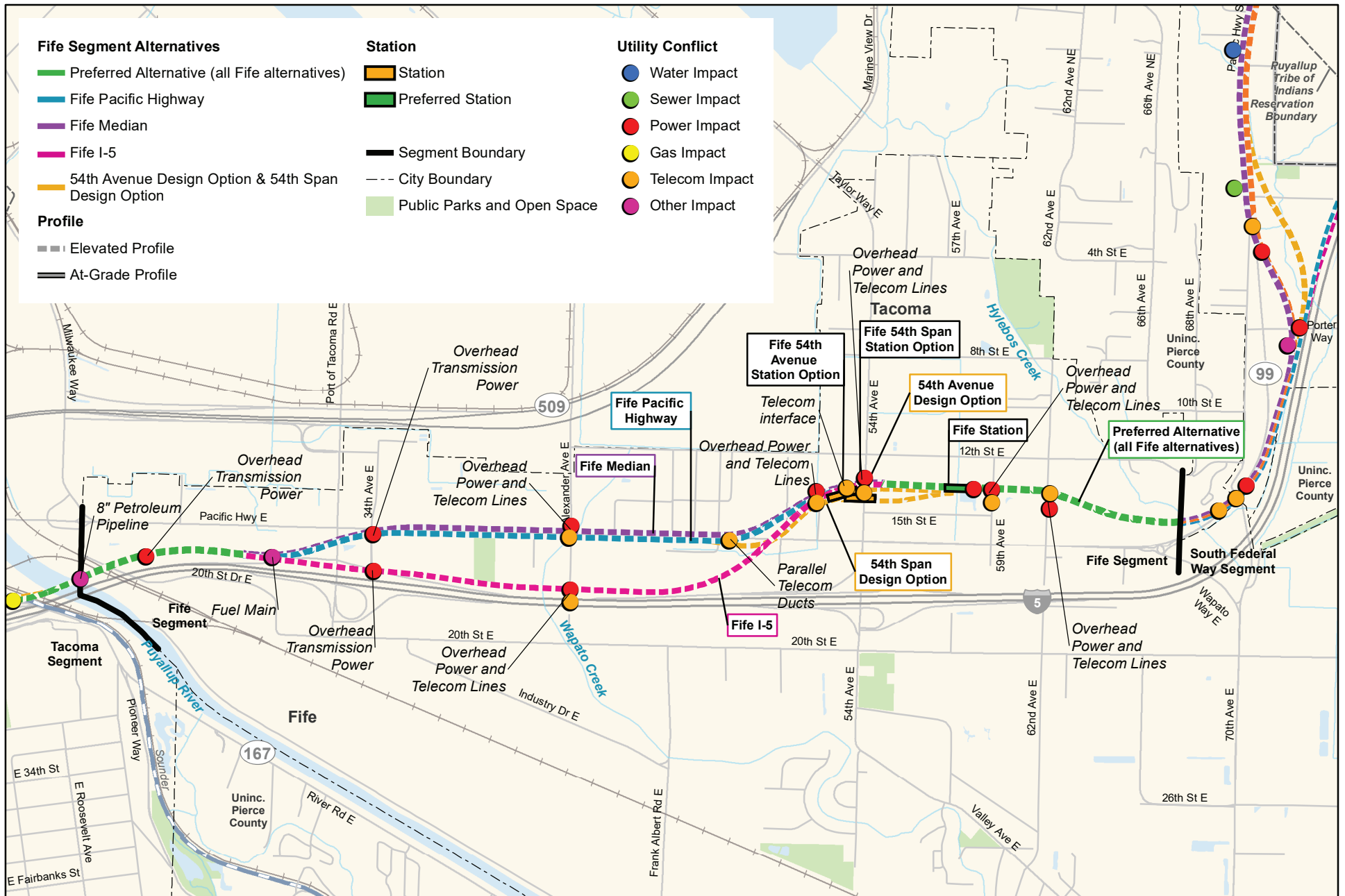


Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).
 Note: "By Others" means that the impacted utility will be relocated by outside parties or contractors.

FIGURE H8-1
 Utility Conflicts
 Federal Way Segment
 Tacoma Dome Link Extension







Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

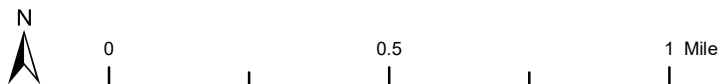
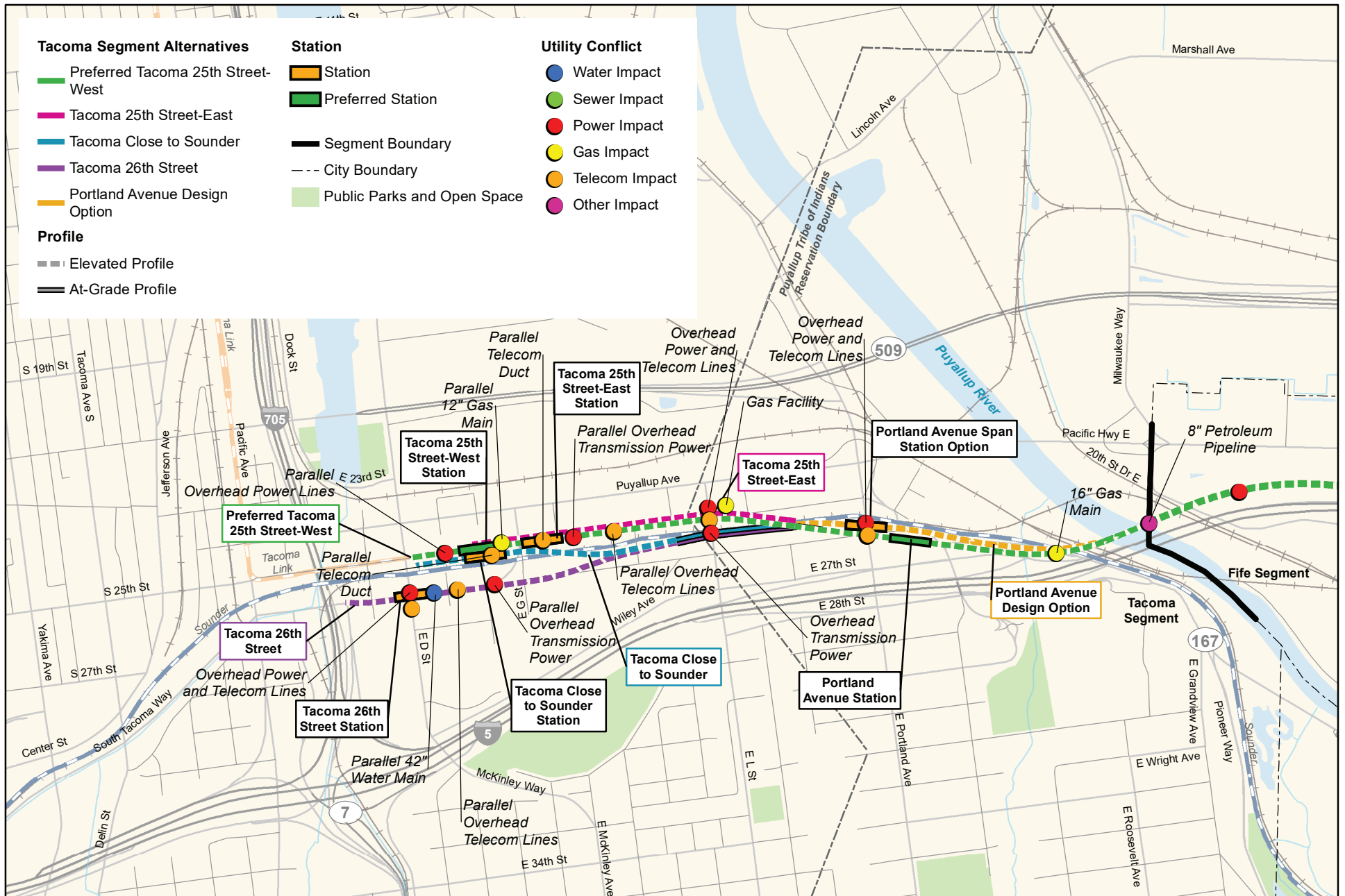


FIGURE H8-3
Utility Conflicts
Fife Segment
Tacoma Dome Link Extension



Data Sources: King and Pierce County, Cities of Federal Way, Fife, Milton, Tacoma (2023).

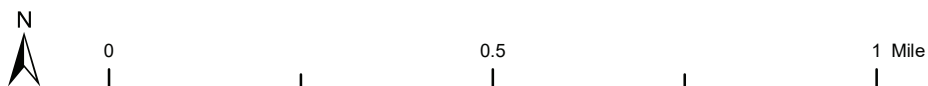


FIGURE H8-4
Utility Conflicts
Tacoma Segment
Tacoma Dome Link Extension

4.1 Long-term Impacts Common to All Build Alternatives

Operating TDLE would increase electricity usage in the study area through:

- Operation of trains with up to four cars using direct-current power taken from 12.5 kV electric distribution facilities, including traction power substations and signal bungalows.
- Increased demand at station locations due to station operational requirements (such as functional circulation, HVAC systems, mechanical piping, intelligent transportation systems, and visual message boards), including supplemental parking features.
- General safety lighting along the alignments, in parking areas (garage or surface), and at stations and other light rail facilities.

Long-term impacts are similar for all build alternatives as described in the TDLE Draft EIS Section 4.15.3.

4.2 Federal Way Segment

4.2.1 Preferred FW Enchanted Parkway Alternative and FW Design Option

The Preferred Federal Way (FW) Enchanted Parkway Alternative with or without the FW Design Option would impact both underground and overhead utilities located throughout the corridor. Project components such as column foundations, guideway, stations, and associated facilities would conflict with multiple underground and overhead utilities.

Just south of the Federal Way Transit Center, a 16-inch water main and nearby 30-inch sewer main at the east end of The Commons mall in Federal Way would be impacted by the Preferred FW Enchanted Parkway Alternative. Sound Transit would coordinate with Lakehaven Water and Sewer District to relocate the existing water main, maintaining system integrity and level of service for the area, and resolve any issues with the sewer main. For the Preferred FW Enchanted Parkway Alternative with the FW Design Option, major utilities near The Commons mall would be impacted and addressed in the same way, just at slightly different locations.

Near S 324th Street, BPA determined that new towers would have to be built to raise the transmission lines to allow space for the aerial guideway to cross underneath. BPA would replace the old towers with new ones prior to construction of the TDLE project, and the new tower locations would be adjacent to their existing location (BPA 2020). The BPA transmission lines would have to be raised for the Preferred FW Enchanted Parkway Alternative with or without the FW Design Option. Depending on the Operations and Maintenance Facility (OMF) South location selected, the BPA lines would potentially be raised as part of that project prior to TDLE.

For the FW Enchanted Parkway Alternative with or without the FW Design Option, the aerial guideway would be located close to the existing cell tower near I-5 and Oakland Hills Boulevard and could block or interfere with cell tower transmission waves. The tower would likely be relocated to available open property in the vicinity rather than adjacent to the interstate. The relocated tower may be located in private views. Access would be needed for periodic maintenance or improvement work, which could cause temporary noise impacts.

Along I-5 near 24th Avenue S, the at-grade track alignment would prompt the realignment of the existing roadway to make room for the TDLE guideway. This realignment of the road would cause the existing overhead electrical distribution and telecom lines, along with their support

poles, to be relocated. Due to the length of this relocation, the overhead lines would likely require a conversion to an underground system in accordance with Federal Way's municipal code requirements. The act of relocation combined with possible underground conversion would be a large impact during construction. There is also an existing Lumen four-line duct in the street that may be in conflict and constitute an additional large impact to a major utility. Sound Transit would coordinate with both PSE and the private franchise telecom providers to relocate these facilities and maintain level of service. A split casing would also likely be installed on an existing 30-inch sewer main that crosses I-5 near the sound end of 24th Avenue S. The split casing implementation would minimize impacts caused by TDLE.

At S 336th Street, a column foundation would impact an existing four-duct Lumen system; the infrastructure would be relocated to the south to be clear of construction for the TDLE column. Near the east end of S 344th Street, the aerial guideway and columns would cause a conflict with the existing overhead distribution electrical and telecom lines at this location. In coordination with PSE and Comcast, the lines would have to be relocated or raised to accommodate TDLE. Additionally, there is a large nine-line Lumen duct crossing I-5 at the end of S 344th Street that would need to be protected in place (if possible) during construction. The subsurface impacts could potentially be reduced to preserve the large duct by coordinating closely with Lumen.

4.3 South Federal Way Segment

The construction impacts caused by the TDLE aerial guideway would be the same for the SF Enchanted Parkway, SF 99-West, and SF 99-East alternatives between S 344th Street and the respective station area and would be the same for all alternatives from Porter Way through the corner of the City of Milton to the Fife city limit near 70th Avenue E.

Common to SF Enchanted Parkway, SF 99-West, and SF 99-East Alternatives

As TDLE travels south from the segment boundary toward Enchanted Parkway, the aerial design crosses both the 115 kV overhead transmission lines along with distribution electrical and telecom lines at the intersection of SR 18 and Enchanted Parkway. This would create a vertical conflict with the transmission electrical lines. The overhead transmission lines would have to be raised for clearance and the distribution and telecom lines would likely require underground conversion at this location based upon impact length. Sound Transit would review these conflicts with PSE and Comcast.

Common to All Alternatives

The TDLE guideway would come into close range with an existing cell tower near Porter Way. The guideway could block or interfere with cell tower transmission waves. The cell tower owner would likely be required to remove the tower or relocate it to available open property in the vicinity rather than adjacent to the interstate. The relocated tower may be located in private views. Access would be needed for periodic maintenance or improvement work.

At Porter Way, the aerial guideway would conflict with existing overhead distribution electrical and telecom lines spanning I-5 and would require Sound Transit to coordinate resolution of that conflict with the City of Milton for electrical needs, along with Comcast for telecom, which owns these lines.

As it reaches 70th Avenue E and crosses Pacific Highway, the guideway would generate several conflicts with utilities near this intersection, including with Tacoma Power overhead

distribution electrical lines, which would need to be relocated. Similar to impacts in Federal Way, the length of conflict for this impact would likely trigger a Fife city code, which could require an underground conversion. In addition to the power conflict, TDLE would also impact existing Lumen infrastructure located at the intersection; both aerial lines and a large 13- to 18-line duct would conflict with the project. Due to the multiple impacts, combined with the possible underground conversion at this location, construction work here would have a large effect on the project and should be noted. Sound Transit would coordinate with Tacoma Power, Lumen, and any other private franchise telecom providers that may also be attached to the poles to relocate these facilities and maintain level of service.

Utility conflicts created by construction of TDLE that are dependent on the selected alternative alignment are described in further detail in the following sections.

4.3.1 SF Enchanted Parkway Alternative

Near the SF Enchanted Parkway Station, there is also a potential impact to an existing five-line Lumen duct that would require relocation due to column foundations that would otherwise strike the telecom system. Similar to the impacts near the station, the construction of column foundations to support the aerial guideway through the South Federal Way Segment would also conflict with a nine-line Lumen duct at the 16th Avenue S and S 356th Street intersection. Compared with the SF Enchanted Parkway Station, the SF 352nd Span Station Option would be shifted slightly to the south and would have the same conflict with an existing five-line Lumen duct near the station location, as well as a nine-line Lumen duct at the 16th Avenue S and S 356th Street intersection. Both potential conflicts would require relocation and communication between Sound Transit and Lumen to resolve the issues.

Directly southeast of this location, the aerial guideway would also conflict with overhead distribution electrical lines at both S 359th and S 360th Street, with an additional vertical telecom conflict at the second location, which would require the lines to be relocated to gain the required vertical separation. As this change covers a short horizontal distance, underground conversion would likely not be required. Sound Transit, PSE, and Comcast would partner to complete this work.

A 24-inch sewer main crosses I-5 near the Todd Beamer High School roundabout in 16th Avenue S. The manhole access points to this main conflict with the alignment of the SF Enchanted Parkway Alternative. In addition, record drawings indicate the main crosses under I-5 at an approximate depth of 35 feet below ground and is inside a 51-inch steel casing, which would make it challenging to uncover the main and modify the existing alignment to provide continued access through a relocated manhole. Sound Transit would work with Lakehaven Water and Sewer District to develop a strategy for doing this work.

Approaching the corner of 12th Avenue S and S 372nd Way, the aerial guideway would impact overhead distribution power lines and three aerial telecom lines owned by Lumen. The overhead lines and poles would be moved to be clear of the project by Sound Transit working with PSE and Lumen to complete the relocation. The elevation of the guideway alongside I-5 at S 375th Street would conflict with the existing overhead distribution electrical lines spanning the freeway at this location. The lines would need to be relocated and raised in this location, in coordination with PSE.

In the South Federal Way Segment, the SF Enchanted Parkway Alternative and the SF I-5 Alternative would have the same utility impacts at S 372nd Way and S 375th Street. Sewer

impacts near Todd Beamer High School would be greater with the SF Enchanted Parkway Alternative than the protect-in-place measures that would be required for the SF I-5 Alternative.

4.3.2 SF I-5 Alternative

The SF I-5 Alternative south of S 344th Street would cause some different impacts on major utilities for the project than the other alternatives. After leaving the SF I-5 Station, the aerial guideway would cross over Enchanted Parkway S. At this location, the existing 115 kV overhead transmission electrical lines that span over I-5 on the existing bridge would have to be raised, with the additional challenge of re-spanning I-5. Sound Transit would coordinate with PSE to address this vertical conflict. Since this alternative is closer to I-5, it eliminates some of the distribution vertical conflicts caused by the other alternatives along Enchanted Parkway and SR 99.

The SF I-5 Alternative would place column foundations very close to the 24-inch sewer that crosses I-5 near the Todd Beamer High School roundabout on 16th Avenue S but does not directly conflict with it. As the guideway is aerial, this does not restrict access to existing manholes, so both the existing sewer main and the casing should be able to be protected in place during construction by Sound Transit working with Lakehaven Water and Sewer District. Due to the close proximity of the main and foundation, both parties would have to monitor progress very closely to ensure that no conflict arises that could cause a service interruption.

South of Todd Beamer High School, the SF I-5 Alternative would have the same impacts as the SF Enchanted Parkway Alternative, including the overhead distribution power and telecom lines as at S 372nd and S 375th Streets.

4.3.3 SF 99-West Alternative

The SF 99-West Alternative has the same construction impacts at the beginning of the segment as the SF Enchanted Parkway Alternative from S 344th Street to the station area. After the aerial guideway leaves the station and continues southwest toward Pacific Highway E, it approaches the intersection with S 356th Street and crosses over to the west side of the highway. This crossing creates a vertical impact to the PSE 115kV overhead transmission electrical lines at this intersection, and they would have to be raised. Additionally, depending on exact column placement and refined alignment, PSE's overhead electrical distribution lines in this area may also be in conflict along with some shorter runs of Lakehaven water and sewer mains. As the guideway continues south along the west side of Pacific Highway E toward the county line, it would impact several overhead electrical power services to properties on the west side of the highway. Those conflicts are not major in designation, but due to the high volume of them and their ability to create service interruptions for property owners, they should be noted as critical.

Beginning near the King/Pierce County Line and continuing south until the alignment crosses east back over Pacific Highway E to reach I-5 near Porter Way, the placement of supporting column foundations for the SF 99-West Alternative would impact City of Milton water mains and Pierce County sewer mains, and Sound Transit would have to work with those agencies to relocate those lines out of conflict. The TDLE guideway crossing east toward I-5, from the SF 99-West Alternative just past Birch Street, would again create a vertical intersection with the existing overhead electrical distribution and telecom lines. The electrical lines are owned by the City of Milton at this location, and the telecom lines are owned by Comcast. Sound Transit would coordinate with those impacted providers to resolve the clash with the TDLE alignment. This section of the alternative also creates several conflicts with overhead electrical service lines to properties along the west side of Pacific Highway E that would also require resolution.

4.3.4 SF 99-East Alternative

The SF 99-East Alternative has the same construction impacts at the beginning of the segment as the SF Enchanted Parkway and SF 99-West Alternatives from S 344th Street to the station area. After the aerial guideway leaves the station and continues southwest toward Pacific Highway E, it nears the intersection with S 356th Street and crosses S 356th Street to stay on the east side of the highway. As the SF 99-East Alternative does not cross Pacific Highway E, it avoids impacting the PSE 115kV overhead transmission electrical lines that occurs with the SF 99-West Alternative. The column placements for this alternative would likely have underground conflicts with the Lakehaven water and sewer mains in this area similarly to the SF 99-West Alternative, which would require Sound Transit to work with the District on relocation solutions.

South of the S 356th Street intersection, as the alignment continues tracking the east side of Pacific Highway E, the TDLE guideway comes into direct vertical conflict with the existing overhead electrical distribution and telecom lines that follow the same route south along the highway. As this impact is continuous from S 356th Street down to the alignment, directing back east toward I-5, past Birch Street, it would trigger the City of Federal Way's municipal code requirements, and both overhead systems would be required to be converted to underground. The act of relocation combined with possible underground conversion would be substantial, especially given that this underground conversion would have to be done for approximately 2 miles in length. Sound Transit would coordinate with PSE, Comcast, Lumen, and any other private franchise telecom providers that may also be attached to the poles to underground these facilities and maintain level of service. As described in the SF 99-West Alternative, this conflict and/or undergrounding would also create several impacts to the overhead electrical service lines to properties along the west side of Pacific Highway E; these service lines would also require resolution.

The SF 99-East Alternative avoids the City of Milton water main and Pierce County sewer main impacts created by the SF 99-West Alternative near the King/Pierce County line and down through Milton.

4.4 Fife Segment

In the Fife Segment, all alternatives would be on an aerial guideway. All impacts in this segment are related to conflicts with support column foundations or vertical conflicts at overhead intersection locations. All the alternatives in the Fife Segment have the same alignment from the east City of Fife jurisdictional boundary line to the preferred Fife Station.

Coming into the City of Fife, the TDLE alignment would be on an aerial guideway as it moves past the new roundabout at Pacific Highway E and Wapato Way E. Construction impacts and/or relocations to the existing overhead Tacoma Power electrical lines and overhead telecom lines, as well as conflicts with the large, underground Lumen duct that begins at the end of the South Federal Way Segment, may continue into the beginning of the Fife Segment area and would be coordinated with Tacoma Power, Lumen, and other utility providers, as necessary.

Approaching the Fife Station area, the aerial guideway would intersect with existing overhead distribution electrical and telecom lines at 62nd Avenue E and 59th Avenue Court E, requiring the relocation of those wires to eliminate the vertical conflict. TDLE would also cross existing 115 kV overhead transmission electrical lines just west of 59th Avenue Court E at the Fife Station; the lines would have to be raised to accommodate not only the project guideway but also the

proposed station. Tacoma Power would be doing the relocation work for the three conflicts by the station, working closely with Sound Transit.

West of the Fife Station, all alternative conflicts with overhead electrical distribution and telecom lines as it crosses 54th Avenue E and at 52nd Avenue E. Both sets of lines would need to be raised in order to meet vertical separation requirements. Sound Transit would work with Tacoma Power and the private franchise telecom providers on this construction work.

On the west side of 54th Avenue E, a column foundation would impact a Lumen serving area interface station that would need to be relocated. A serving area interface station is a connecting hub for several fiber optic and copper wire connections that, unlike typical vaults, also connects directly back to and interfaces with the primary data center/switch/main frame in the area. For this reason, relocation of a serving area interface is more difficult and costly than a typical vault connection and would require coordination between Sound Transit and Lumen.

The 54th Avenue and 54th Span Design Options would have similar utility impacts to the Fife Segment alternatives with the preferred Fife Station, but at slightly different locations due to the variance in both guideway alignment and station location for each option.

Impacts to major utilities between Wapato Way E and the intersection of 52nd Avenue E and Pacific Highway would be the same for all of the alternatives in the Fife Segment. Near Pacific Highway, the alternatives would diverge and create separate utility impacts. More utilities (major and minor impacts) are located within Pacific Highway than along I-5, so the Fife Pacific Highway and Fife Median alternatives would generate more utility conflicts. Overall, the quantity impacts to major utilities would largely be the same for all three of the alternatives in the Fife Segment, since the same utilities cross all alignments but at different geographical locations.

4.4.1 Fife Pacific Highway Alternative

As the Fife Pacific Highway Alternative crosses Pacific Highway between Willow Road E and 51st Avenue E, two column foundations conflict with an existing seven-line Lumen duct bank. The duct would need to be relocated to maintain level of service for the area, which would be done in collaboration with Lumen and Sound Transit. Continuing west, the Fife Pacific Highway Alternative would have a vertical impact with overhead distribution electrical and telecom lines at the Pacific Highway and Alexander Avenue E intersection. Again, both sets of lines would be relocated to taller poles in order to remove the conflict with the guideway, by working with the appropriate utility owners. Next, there is a vertical conflict that occurs just east of the Pacific Highway and Port of Tacoma Road intersection. The guideway conflicts with the vertical location of Tacoma Power's 115 kV overhead transmission electrical lines. Tacoma Power would need to raise the lines in order to provide the required separation from TDLE. These impacts along Pacific Highway would not occur with the Fife I-5 Alternative.

An existing petroleum pipeline crosses the alignment at the end of the I-5 southbound on-ramp from Port of Tacoma Road. This pipeline supplies jet fuel to Joint Base Lewis-McChord located south of the project and would be protected in place by TDLE construction. Due to the challenging nature of fuel pipelines and the critical importance to service of the base, it is likely the project would not be allowed to impact this pipeline. Additional information about the pipeline and its hazards can be found in the Puyallup Tribe All Hazard Mitigation Plan, Pipeline Hazards Report located online as referenced. Sound Transit would work to design TDLE to avoid impacts on the pipeline as a result of TDLE column foundations and would work closely with Joint Base Lewis-McChord during construction to ensure the pipeline is protected and not disturbed.

The aerial guideway would have a vertical conflict with existing 115 kV overhead transmission electrical lines, as the alignment intersects with the lines just west of the Port of Tacoma I-5 interchange on/off-ramps. This would require the wires to be raised onto taller poles in order to gain the vertical clearance required by the project. Tacoma Power would be the party responsible for relocating the lines, in collaboration with Sound Transit. Both the jet fuel pipeline and 115kV Port of Tacoma lines would impact all three of the alternatives in the Fife Segment at the same location.

4.4.2 Fife Median Alternative

All large impacts on utilities for the Fife Median Alternative would be the same as the conflicts discussed for the Fife Pacific Highway Alternative. The actual impact position to the utilities would be approximately 70 feet north of the Fife Pacific Highway Alternative.

4.4.3 Fife I-5 Alternative

Once the Fife I-5 Alternative crosses Pacific Highway, it continues in a southwest trajectory until it reaches I-5, where it turns west to parallel the freeway. Running alongside I-5, the guideway would conflict with overhead distribution electrical and telecom lines as it intersects with Alexander Avenue E. Both sets of lines would be relocated to taller poles in order to remove the conflict with the guideway by working with the appropriate utility owners. Next a vertical conflict would occur just east of the I-5 and Port of Tacoma Road interchange. The guideway would conflict with the vertical location of Tacoma Power's 115 kV overhead transmission electrical lines. Tacoma Power would have to raise the lines in order to provide the required separation from TDLE.

The Fife I-5 Alternative would cross the same petroleum pipeline and 115 kV transmission power lines as the Fife Pacific Highway and Fife Median alternatives, with the same intent to avoid impacts.

4.5 Tacoma Segment

All alternatives for the Tacoma Segment would have three key impacts on existing major utility infrastructure. First is the impact to the existing British Petroleum (BP) Olympic pipeline located near the east bank of the Puyallup River. Based on BP system records, the 8-inch petroleum pipeline runs a few feet offset from the northern side of N Levee Road E in the location where TDLE would cross the pipeline. Sound Transit would avoid the pipeline if possible. Relocating this pipeline would be hazardous and a large effort for the project. Additional information about the pipeline and its hazards can be found in the Puyallup Tribe All Hazard Mitigation Plan, Pipeline Hazards Report located online as referenced. If relocation is necessary, Sound Transit would work closely with BP to find a strategy that would make the work as safe and efficient as possible.

The second conflict common to all alternatives is the impact to an existing 16-inch high-pressure gas main in E Bay Street. Column foundations to support the aerial guideway are anticipated to impact the existing main, which would require it to be relocated around the columns. Survey information for this main would be gathered in later phases of design to determine an exact location of the line. Once a location is confirmed, the engineering team would try to adjust the location of the columns to avoid the main, if possible. If the impacts on the existing main are unavoidable, Sound Transit would work with PSE to relocate the main, as required.

The last impact common to all alternatives in the Tacoma Segment would be a vertical conflict between the aerial guideway and overhead distribution electrical and telecom lines at the

Portland Avenue E and E 26th Street intersection. Sound Transit would work with Tacoma Power and Telecom providers to raise all the existing wires to resolve this issue.

All utilities associated with the TDLE guideway and the overhead catenary system are located outside the flight path to Joint Base Lewis McChord (FAA 2020).

4.5.1 Preferred Tacoma 25th Street-West Alternative

Entering the Dome District, the Preferred Tacoma 25th Street-West Alternative turns to align with E 25th Street and the future station area at the East L Street intersection. Aligning the guideway with E 25th Street creates several impacts on existing utilities located throughout the roadway corridor. This alternative would create the most impacts to utilities within the Tacoma Segment. The remaining impacts discussed in this section are unique to the Preferred Tacoma 25th Street-West.

At the East L Street intersection, the guideway would conflict with both the 115 kV overhead transmission electrical lines and the overhead distribution electrical and telecom lines. The 115 kV transmission lines that run parallel to E 25th Street would have to be relocated to another parallel street that is a few blocks north or south of the project. There would not be enough physical space to support the poles and wires of the transmission line in E 25th Street with the addition of TDLE. The 115 kV lines that run perpendicular to the project in East L Street would be raised to eliminate the conflict with the project.

The distribution power and telecom system also impacted on the transmission poles would likely be addressed by conversion to underground infrastructure due to city codes dictated by conflict length and remain in the roadway, provided there is enough space to accommodate it. Before advancing down the alignment, the guideway would have a final impact to an existing PSE gas facility on the northeast corner of the E 25th Street and East L Street intersection due to column placement. This column foundation would impact a looped gas main facility and would need to be relocated to maintain the system integrity for PSE in this area. Sound Transit would have to work directly with PSE to determine the exact impacts of this conflict and how best to mitigate them.

Continuing west along the alignment toward the Tacoma 25th Street-West Station, the project column placement would create a conflict with an existing 12-inch high-pressure gas main that would need to be relocated during construction. This existing gas main connects to the PSE facility previously identified, so any relocation work would have to be located to avoid both conflicts. As the project approaches the proposed Tacoma 25th Street-West Station, the column foundations are planned to be farther away from the gas main, which could allow for some of the existing main to be protected in place.

Lastly, three existing telecom ducts, owned by Lumen, Zayo, and AT&T, are present in the street and would be in conflict with column foundation construction. The ducts are all larger in size: two run along the south side of the road, and one along the north. The ducts would have to be consolidated and relocated into the center of the road to avoid both TDLE and Tacoma Link infrastructure if possible. Sound Transit would coordinate with all the identified private franchise telecom owners to plan this relocation work.

4.5.2 Tacoma 25th Street-East Alternative

Impacts to major utilities for this alternative are the same impacts identified for the Preferred Tacoma 25th Street-West Alternative. The difference is a shorter impact length, as the alignment does not extend as far to the west.

One variation for a bus layover space on E 26th Street and East G Street that is paired with the Tacoma 25th Street-East Alternative has the potential to impact the existing Tacoma Power substation. This configuration is not preferred and is one of the six bus transit options under consideration for TDLE.

4.5.3 Tacoma Close to Sounder Alternative

Entering the Dome District, the Tacoma Close to Sounder Alternative would turn to align with the existing Sounder tracks just west of Portland Avenue. This alternative would have few utility impacts adjacent to the Sounder tracks and the overall alternative creates minimal utility impacts due to the corridor being largely clear of existing utilities because of property ownership and prior relocations to accommodate Sounder. The Close to Sounder Alternative produces the fewest number of impacts to utilities within the Tacoma Segment and the following identified impacts are unique to this alignment based on its specific geographical location.

Once this alternative reaches the intersection of E 25th Street and East G Street, the column foundations that support the aerial guideway would begin to conflict with the two large telecom ducts along the south side of road, similar to what was described for the Preferred Tacoma 25th Street-West Alternative. Sound Transit would work with both Lumen and Zayo to relocate the ducts and resolve the impact to their systems.

The Close to Sounder Alternative route also runs close to an existing Tacoma Power substation that is located on the northeast leg of the E 26th Street and East G Street intersection. While columns for the alignment would be close to the substation, no impacts are anticipated to be caused by the project; the substation is referenced so it can be protected in place during construction activities in the area.

4.5.4 Tacoma 26th Street Alternative

Similar to the Tacoma Close to Sounder Alternative, the Tacoma 26th Street Alternative would also have fewer impacts than either the Preferred Tacoma 25th Street-West or Tacoma 25th Street-East alternatives because it would run adjacent to the Sounder tracks. However, the Tacoma 26th Street Alternative would generate more impacts than the Tacoma Close to Sounder Alternative due to the impacts it would have on E 26th Street.

When the alignment straightens onto E 26th Street just east of the intersection with East G Street, the Tacoma 26th Street Alternative would also avoid the Tacoma Power substation, which would be protected in place during construction. Beginning at this intersection, the column foundations would also create subsurface impacts on an existing 42-inch water main that is located in E 26th Street. This large transmission water main would be a lengthy and intensive relocation due to its size, combined with it continuing onto E 26th Street and traveling through the remaining length of the project. Sound Transit would coordinate with Tacoma Public Utilities Water Division to address this impact.

As the alignment approaches E 26th Street at the East F Street intersection, the aerial guideway would conflict with the 115 kV overhead transmission electrical lines and telecom wires also located on the transmission poles. As is the case for the 115 kV relocation on E 25th Street, this parallel run of transmission lines would be relocated to a completely different street in the nearby area. There would not be enough physical space to support the poles and wires of the transmission line in this street with the addition of TDLE. The existing overhead telecom lines would likely be converted to an underground system to meet City of Tacoma codes. Sound Transit would work with both Tacoma Power and the private franchise telecom owners to solve this construction conflict.

Finally, near the end of the project at the E 26th Street and East D Street intersection, both overhead distribution electrical and telecom lines would have to be raised to remedy a vertical impact caused by construction of TDLE. The majority of utility impacts associated with the Tacoma 26th Street Alternative are unique to that alternative and would not occur with the other alternatives in the Tacoma Segment.

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