WSDOT

U. S. Department of Transportation
Federal Highway Administration

JANUARY 2020

ENVIRONMENTAL ASSESSMENT

Appendix E1: Cultural Resources Survey Addendum

I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (MP 21.79 to 27.06)

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Note: This document contains redactions related to the location of archaeological sites, which are exempt from public disclosure per RCW 42.56.300.

January 14, 2020

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Archaeologist/Cultural Resources Specialist
WSDOT ESO MegaProjects
I-405/SR 167 Program Office
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Bellevue, WA 98004

RE: I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project
Cultural Resources Survey Addendum, Interagency Master Agreement GCB1426 BD,
DAHP Project No.: 2019-03-01701

Dear Ms. Manetas:

At the request of Washington State Department Transportation (WSDOT), Archaeological and Historical Services (AHS), Eastern Washington University (EWU), conducted a cultural resources survey in support of WSDOT's I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project (Project) in King and Snohomish Counties, Washington. This investigation supplements the approximately 5.27-mile-long segment of the Interstate 405 (I-405) corridor surveyed for cultural resources in 2019, as documented in the Project Environmental Assessment, Appendix E, *Cultural Resources Survey*.

Undertaking/Study Area

Additional elements of the Project were added to the limits of construction (LoC) after the completion of the June and July 2019 survey, requiring additional survey and shovel testing in an expanded Zone 24, referred to in this report as Zone 24 (Supplemental) (Exhibit 1). The previous Zone 24 analysis considered the installation of a proposed fish barrier correction under I-405 for Stream 25.0L, a tributary of North Creek. The updated design covered in this addendum includes a larger area in Zone 24 both west and east of I-405 as shown in Exhibit 1. Work proposed in this expanded area includes realigning Stream 25.0L and creating an open stream channel both west and east of I-405 that will flow into an existing wetland that connects to North Creek (Exhibits 2 and 3). In addition, the southern bank of Stream 25.0L between I-405 and North Creek would be enhanced by planting native vegetation (Exhibit 4).

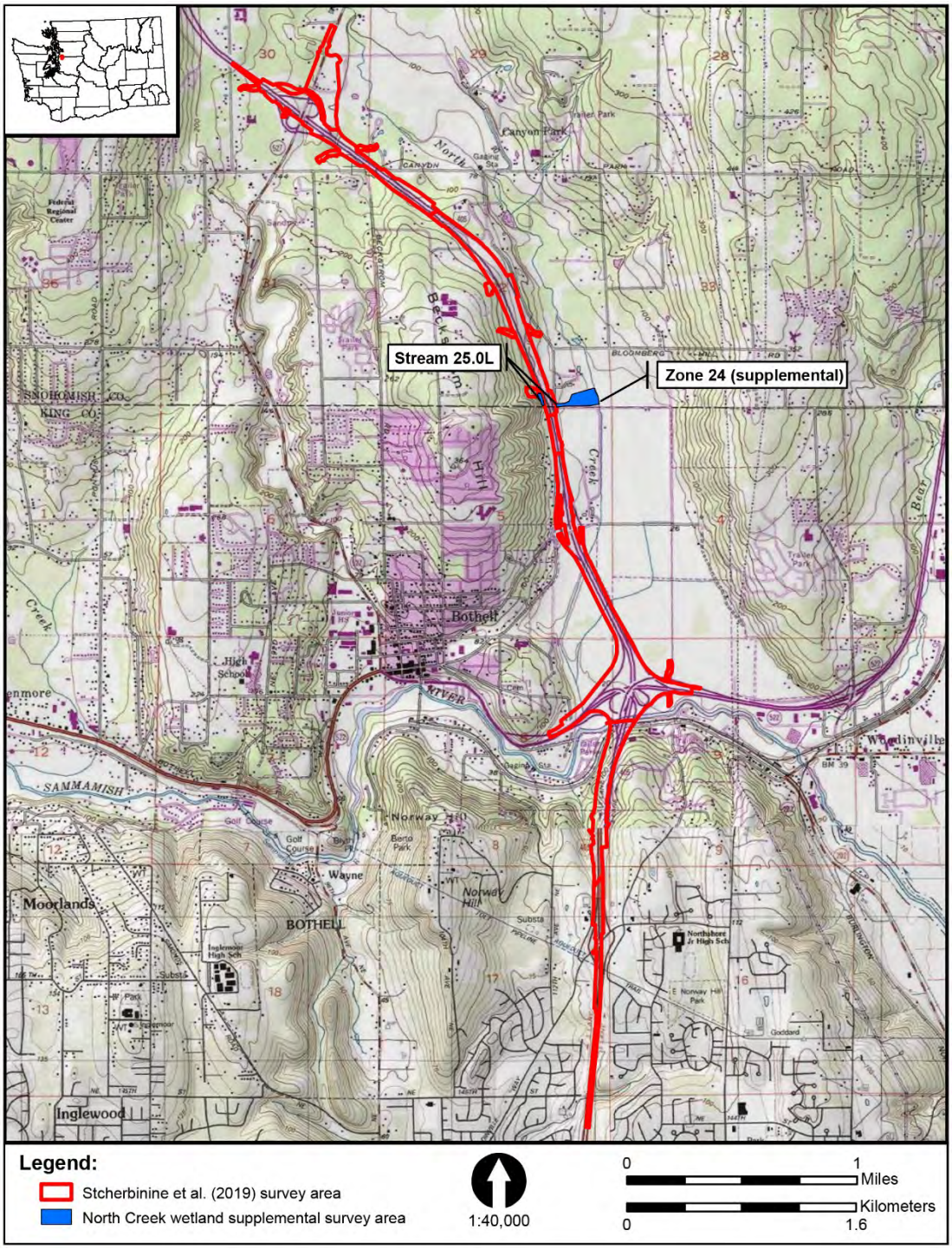


Exhibit 1. *WSDOT's I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Wetland Supplemental Study Area in King and Snohomish Counties, Washington. To view the full study area for this Project, please refer to EA Appendix E,* Cultural Resources Survey.

Exhibit 2. *Overview of the Stream 25.0L-West study area from the north end. The existing lanes of I-405 mark the eastern boundary of the study area in this view to the southeast.*

Exhibit 3. *Overview of the Stream 25.0L-East study area, looking west. The elevated lanes of I-405, barely visible in the background through the dense vegetation, mark the western boundary of the study area.*

Exhibit 4. *Overview of the Wetland study area viewed to the east, visible in the background in the marsh grasses between a stand of dead birch trees and the eastern edge of the wetland. Photo is taken from an earthen berm, which contains the wetland on its northern and southern ends.*

Cultural Background

For discussion of the cultural background associated with the study area, including the Precontact Period, Ethnographic Period, and Historic Period, please see Bundy 2009 and Section 4 of the Project EA Appendix E, *Cultural Resources Survey*.

Traditional Cultural Properties

To date, tribal consultation has not identified any Traditional Cultural Properties (TCPs) within the study area. Through the Washington State Department of Archaeology and Historic Preservation (DAHP)'s Washington Information System for Architectural and Archaeology Records Data (WISAARD) database, AHS attempted to identify any documented TCPs, but a search did not yield information that helps characterize the potential for such resources in the vicinity of the study area

The Lake Washington area experienced high density precontact use as part of the Coast Salish tradition (Bundy 2009). Several potentially significant areas with place names were recorded by ethnographer T.T. Waterman in the early 1920s (Waterman 1922). One such location (labelled No. 66 in the Waterman study) is south of the study area, along the south bank of the Sammamish River in the vicinity of the I-405 corridor. Waterman describes the location as:

> Squawk Slough, otherwise known as Sammamish River: sts!ap, "crooked," "meandering." This stream was originally crooked almost past belief. It has now been dredged out and straightened, so that mill logs can be floated through it from the lake above. The people living here were called the sts!apa'bc, "meander dwellers," anglicized as "Sammamish." This name for the people has now been applied to the lake and the river.

It is unknown if Waterman's locations represent TCPs to culturally-associated Native people, but the data may yield information regarding TCPs in or in close proximity to the study area. Waterman's 1922 work addresses place names in the broader Seattle/Puget Sound region. Bundy (2009) also includes an expanded place name discussion relative to the broader I-405 corridor program.

Initiating tribal consultation and determining the study area, in addition to this cultural resources survey, demonstrate WSDOT's efforts in complying with federal regulations. Continuing tribal consultation may help identify any National Register of Historic Places (NRHP)-eligible TCPs.

Previously Recorded Cultural Resources Within or Near the Study Area

Exhibit 5 provides a list of nine previously recorded cultural resources within one mile of the study area as identified through the WISAARD database. Dozens of additional, previously-recorded historic built environment resources are within the high density urban/suburban environment within one mile of the study area. These resources, which have not been evaluated for NRHP eligibility, were entered into WISAARD using county assessor records in 2011. These resources are not included in Exhibit 5.

There are no previously recorded cultural resources within the Zone 24 (Supplemental) study area, although a historic-era unimproved road grade was recorded as site 45SN0716 [redacted] during the 2019 survey of Zone 24 (South). Site 45SN0716 was interpreted as two discontinuous segments of an early 20th century logging road within the boundary of what is now North Creek Forest Park that has been determined not eligible for listing in the NRHP (Stcherbinine et al. 2019).

Two historic properties have been identified in the vicinity of Zone 24 (Supplemental) during the survey of adjacent Project zones. Historic built environment resources to the east of the I-405 corridor are associated with the Monte Villa Farm. The Monte Villa Dairy Farm was a large-scale dairy operation that was active beginning in the in the 1920s (Dellert et al. 2013). Between 1992 and 1994, the Monte Villa Farm property was converted from a dairy farm to a business park. Based on WISAARD data and field results,

several farm-related buildings and structures appear to have been lost to the extensive new development. Two Gothic style barns, a small silo, and the original farmhouse are the remaining Monte Villa Farm buildings and structures extant in the study area vicinity. The barns (properties 55874 and 55979) were built around 1927 and remodeled in 1992, and the farmhouse (property 55877) appears to be currently undergoing renovation. All farm-related resources are outside of the study area and the proposed Project will have no effect on these resources.

Other small farmsteads were also established near the study area. Virtually all these farm-related resources have been demolished, with the exception of property 644373, the Philip Fries House. In 2017, property 644373 was determined not eligible for listing in the NRHP (Costa et al. 2017).

Exhibit 5. Previously Recorded Cultural Resources within One Mile of the Study Area

Site/Property Number	DAHP Site Type	NRHP Status	Reference
45KI0072	Pre Contact Camp/ Pre Contact Lithic Material	Undetermined	Chatters 1982
45KI1130	Historic Residential Structure	Determined not eligible	Dellert et al. 2013
45KI1345	Historic Cairn/rock feature	Undetermined	Costa et al. 2017
45SN0369	Historic homestead	Potentially eligible	Naoi Goetz 2003
45SN0716	Historic Logging Properties	Determined not eligible	Appendix E, *Cultural Resources Survey*
644373	Philip Fries House	Determined not eligible	Costa et al. 2017
55877	Historic Residential Structure	Determined not eligible	
55874 and 55879	Monte Villa Farm (Barns)	Undetermined	-

Environmental Background

The Project study area has been divided into zones based on archaeological potential as defined by Bundy 2009 and Project EA Appendix E, *Cultural Resources Survey*. The additional Project elements are within Zone 24 on both the west and east sides of I-405. Zone 24 has been identified as having the potential for cultural resources due, in part, to the presence of Stream 25.0L. The additional Project elements east of I-405 were not evaluated by Bundy (2009) but are included here within the adjacent zone as it contains

the continuation of Stream 25.0L. See Exhibit 5 for an overview of previously-recorded cultural resources in the study area vicinity.

Portions of the supplemental study area are located on two distinct landforms. The proposed stream 25.0L channel alignments, both west and east of the I-405 corridor, are located on a Pleistocene-aged terrace composed of soils mapped as units of the Indianola, Kitsap, and Lynnwood series (Exhibit 6).

Exhibit 6. Soil Units Mapped within the Stream 25L (East and West) Study Areas

Soil Unit	Landform	Forms in	Age
Indianola loamy sand, 0 to 5 percent slopes	eskers; kames; terraces	sandy glacial outwash	Pleistocene
Kitsap silt loam, 0 to 8 percent slopes	terraces	glacial lake deposits with a minor amount of volcanic ash	Pleistocene
Lynnwood loamy sand, 0 to 3 percent slopes	outwash plains; terraces	glacial outwash	Pleistocene

Source: Soil Survey Staff 2019

A typical soil profile of glacial outwash-derived soils contains an organic A horizon of dark grayish brown loamy sand (0 to 15 cm below surface), a B horizon of yellowish brown sand (15 to 69 cm below surface), and a C horizon of pale brown sand (69 to 152 cm below surface). Glacial outwash-derived soils are typically sandy with strata containing similar-sized grains that have been water sorted during deposition. Sandy textures result in a non-cohesive soil structure.

Soils between the existing wetland and North Creek (Wetland) are Holocene-aged deposits of flood plain alluvium and accumulations of partially decayed organic materials (Exhibit 7).

Exhibit 7. Soil Units Mapped within the Wetland (North and South) Study Areas

Soil Unit	Landform	Forms in	Age
Mukilteo muck	depressions	Herbaceous organic material	Holocene
Seattle muck	depressions	grassy organic material	Holocene
Snohomish silt loam	flood plains	alluvium	Holocene

Source: Soil Survey Staff 2019

A typical soil profile of a floodplain soil contains an organic A horizon of dark grayish brown silt loam (0 to 33 centimeters [cm] below surface), a C horizon of gray and bluish gray silt loam (30 to 76 cm below surface), followed by poorly- to well-decomposed organic debris (76 to 152 cm below surface). Holocene alluvium-derived soils are often highly stratified with alternating bands of sand and silt, and lack pebbles or cobbles.

RESULTS

Pedestrian Survey

AHS archaeologists Ryan Ives and Jennifer Thomas conducted a pedestrian survey and shovel testing within the Zone 24 (Supplemental) study area from December 4 to 5, 2019 with overcast weather conditions. The Zone 24 (Supplemental) study area contained dense vegetation. Surface visibility was extremely poor throughout the study area. A dense thicket of Himalayan blackberry covered the ground surface in the proposed Stream 25.0L study areas to the west and east of I-405 (see Exhibits 11 and 12). The ground surface was not visible in the vicinity of the proposed wetland channels, due to a mix of marsh grasses and standing water between the wetland and North Creek (Exhibit 13). No cultural materials were observed in the Zone 24 (Supplemental) study area during the pedestrian survey.

Shovel Testing

Pursuant to the guidelines established for cultural resources assessments for I-405 corridor improvements, shovel test probes are to be excavated at 10 meter intervals in areas proposed for new or expanded water detention facilities (ponds) or wetland creation or enhancement, regardless of defined probability area (WSDOT 2008). Shovel testing of Project Zones immediately outside of Zone 24 (Supplemental) were conducted in June and July 2019, including 13 shovel tests excavated in Zone 24 (south) to the west of I-405, and three excavated in Zone 23 (fill) to the east of I-405 (see Exhibit 8 of Project EA Appendix E, *Cultural Resources Survey*). No cultural materials were identified during those previous investigations.

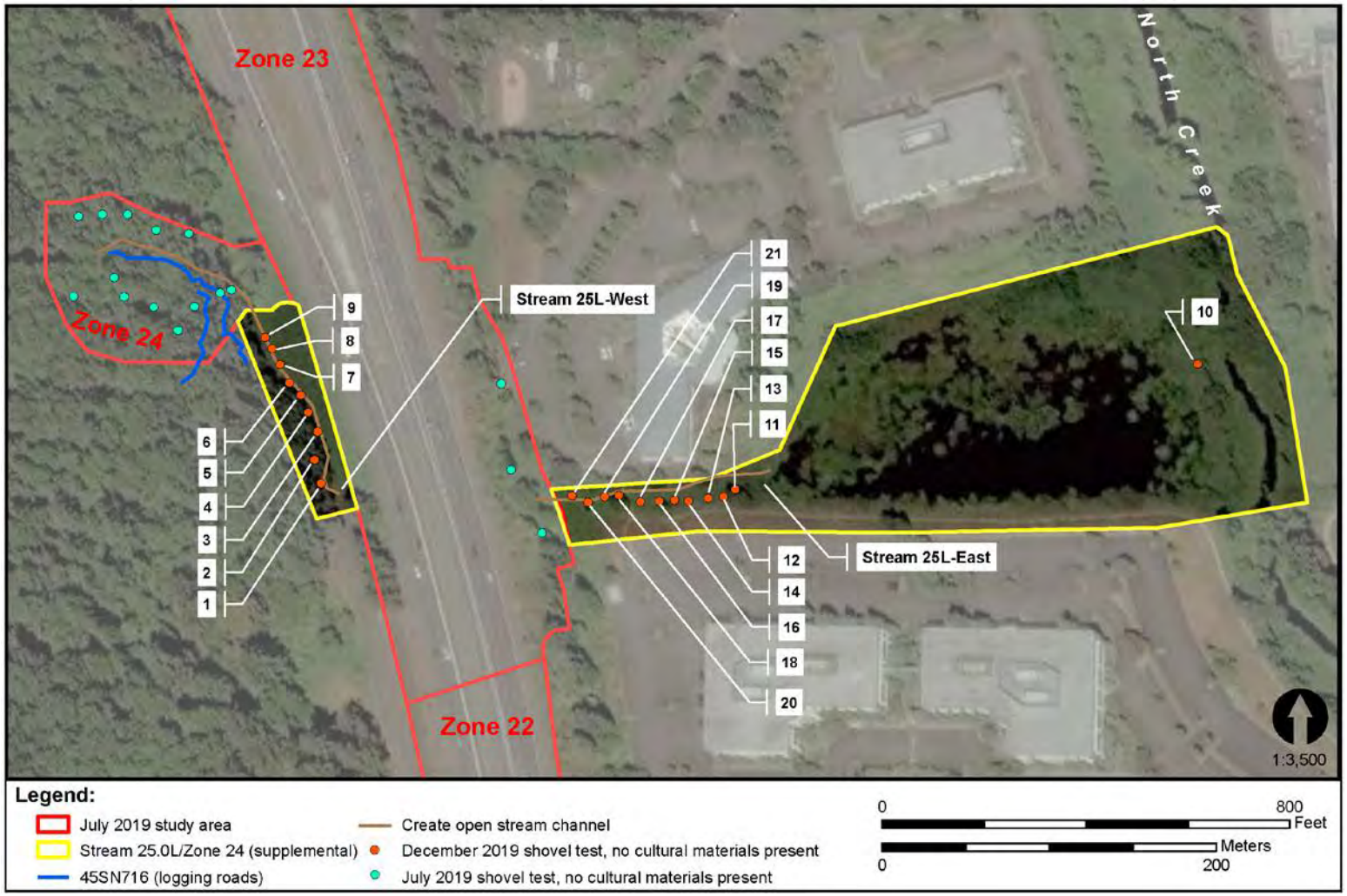


Exhibit 8. *Revised LoC adjacent to Zone 24 (south) showing additional survey areas and excavated shovel tests 1 through 21.*

Shovel tests measured approximately 40 cm in diameter and were excavated to intact Pleistocene sediments, when possible. In cases where the Pleistocene were not reached by 1.0 m below surface (the physical limits of shovel excavation) a 10-cm-diameter bucket auger was used to excavate deeper within the shovel test. Auger sampling reached approximately 1.5 m (5 feet) below surface (as field conditions allowed). All excavated sediments were screened through 0.25-inch-mesh hardware cloth. Shovel tests were numbered consecutively in the order they were excavated (ST 1, ST 2, etc.). Shovel tests were backfilled immediately upon completion of recording digital spatial and descriptive attributes of the shovel test. A total of 21 shovel tests were excavated within the expanded LoC. Metric and descriptive data of excavated shovel tests are presented in Attachment A of this memorandum, and findings are summarized in Exhibit 9.

Exhibit 9. Zone 24 (Supplemental) Shovel Test Excavation Results

Number of Shovel Tests Excavated	Reason for Termination	Average Depth (cmbs)	Sediments
21	Pleistocene sediments; water table	78	Pleistocene glacial outwash; Holocene wetland muck

cmbs=centimeters below surface

Stream 25L (East and West) Study Areas

Twenty of the shovel tests were excavated to Pleistocene-age sediments within the proposed alignment of Stream 25.0L both east and west of I-405 (Exhibits 10 through 13). Sediments identified in the shovel tests were similar to the glacial outwash described for the shovel tests excavated within the adjacent Zone 24 (see Section 6.19.10 of EA Appendix E, *Cultural Resources Survey*). The DAHP WISAARD predictive model indicates that there is only a low-to-moderate probability for prehistoric cultural resources in the vicinity of the proposed alignment of Stream 25.0L. No cultural resources were identified in shovel testing for the proposed alignment of Stream 25.0L during these or in previous nearby investigations. No further archaeological study is warranted for segment of Stream 25.0L where the stream channel will be daylighted.

Exhibit 10. *The Stream 25.0L-West study area, visible in the background in this view to the south-southeast. ST 9 was excavated near the fence in this vicinity.*

Exhibit 11. *ST 1 profile, showing intact soils that form in glacial outwash deposits in the Stream 25.0L-W study area.*

Exhibit 12. *Proposed location for Stream 25.0L-E channel to the east of I-405, an undeveloped strip of land overrun by a blackberry thicket. The photograph is taken from the vicinity of ST 11, with pink pin flags marking the locations of ST 12, 13, and 14 visible in this view to the west.*

Exhibit 13. *ST 20 profile, showing intact soils that form in glacial outwash deposits in the Stream 25.0L-east study area.*

Wetland Study Area

Due to the presence of standing water during the time of survey, only a single shovel test could be excavated at the east end of the wetland (Exhibits 14 and 15) where vegetation will be removed and replanted. Holocene sediments were identified to a depth greater than 155 cm (Exhibit 16). Since field conditions did not allow for additional shovel testing, and Holocene sediments were observed to a depth greater than 5 feet below surface, any ground-disturbing Project activities to the east of the existing wetland should be monitored for cultural resources during construction (Exhibit 17).

Exhibit 14. *Standing water prevented shovel test excavation in this portion of the study area near the southern portion of an existing wetland east of I-405. The prominent building in the background is the local school district office, built within the former Monte Villa farm grounds. The view is to the west.*

Exhibit 15. *Due to standing water, only one shovel test was excavated in this portion of the study area near the northern portion of an existing wetland east of I-405. The view is to the west.*

Exhibit 16. *A bucket auger was used to excavate ST 10 down to 155 cm, exposing stratified sands and partially decayed organic materials, all interpreted as Holocene deposits.*

MANAGEMENT SUMMARY

No cultural resources were observed during this supplemental cultural resources survey. Shovel tests were excavated to Pleistocene sediments in the Stream 25.0L (East and West) study areas. As Pleistocene sediments predate any known human occupation in the region, it is unlikely that cultural resources are present within these study areas.

Pleistocene sediments were not reached in the shovel test excavated between the wetland and North Creek where vegetation removal and replanting is proposed. This area has the potential to contain buried cultural materials and is recommended for cultural resources monitoring during future ground disturbing activities (Exhibits 17 and 18).

Exhibit 17. Management Recommendations by Zone

Zone	LoC Classification	Probability for Intact Subsurface Archaeology in the LoC	Full Vertical Area of Potential Effects Tested?	Associated NRHP Eligible Resources	Recommendations
24 Stream 25L (East and West)	Restricted	Low to moderate	Yes, Pleistocene sediments were observed in all shovel tests	none	No further work warranted.
24 Wetland to North Creek	Restricted	Moderate to high	No	none	Monitoring recommended. Deep Holocene sediments were identified and standing groundwater prevented additional subsurface investigations

In the unlikely event that cultural resources are identified during construction, the new work should be halted in the immediate vicinity of the find and a professional archaeologist notified to assess the resource. This document should be submitted by WSDOT to the appropriate review agencies and interested parties for review and comment prior to the initiation of any land-altering activities.

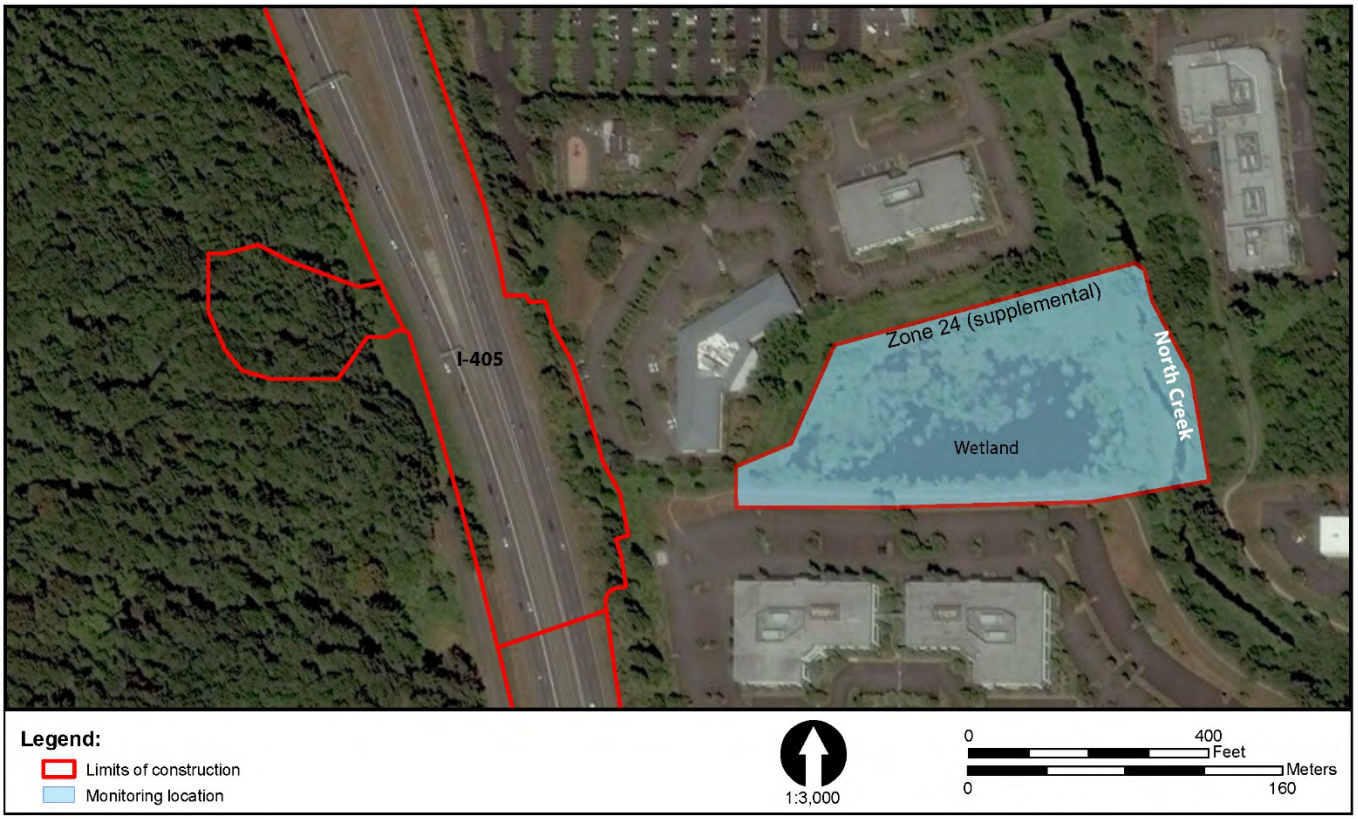


Exhibit 18. *Map depicting the area recommended for cultural resources monitoring in Zone 24 (Supplemental).*

References

Bundy, Barbara. 2009. *Interstate 405 Corridor Survey: Phase III I-405, SR 520 to I-5 Improvement Project*. On file, Department of Archaeology and Historic Preservation, Olympia. May.

Costa, Daniel B., Susie Trexler, and Jennifer M. Ferris. 2017. Cultural Resources Assessment for the North Creek Forest Project, Bothell, Washington. On file, Department of Archaeology and Historic Preservation, Olympia. October.

Dellert, Jenny, Matthew Sneddon, and Justin Butler. 2013. *Cultural Resources Inventory for the North Creek Forest Project Parcels A, B, and D, City of Bothell, King and Snohomish Counties, Washington*. On file, Department of Archaeology and Historic Preservation, Olympia. April.

Soil Survey Staff. 2019. Web Soil Survey, Natural Resources Conservation Service, United States Department of Agriculture. Retrieved on December 16, 2019, from https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

Stcherbinine, Sean, Ryan Ives, and James Jenks. 2019. Cultural Resources Survey for the Interstate 405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project in King and Snohomish Counties, Washington. Appendix E of I-405, SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project Environmental Assessment. On file, Washington State Department of Transportation, Northwest Region, Seattle.

Waterman, T.T. 1922. The Geographical Names Used by the Indians of the Pacific Coast. *Geographical Review*, Vol. 12, No. 2 (Apr. 1922), pp.175-194. American Geographical Society, New York.

WSDOT (Washington State Department of Transportation). 2008. *I-405 Corridor Program Cultural Resources Assessment Guidelines for Compliance with Washington State Department of Transportation Policy and Section 106 of the National Historic Preservation Act, July 24, 2007*. Appendix A of Programmatic Agreement Pursuant to Section 106 of the National Historic Preservation Act of 1966 Among the Federal Highway Administration, The Washington State Historic Preservation Officer, The Washington State Department of Transportation, The Muckleshoot Indian Tribe, and the Snoqualmie Indian Tribe For Improvements to Interstate 405 (I-405) Corridor, King County and Snohomish County, Washington. On file, Washington State Department of Transportation, Northwest Region, Seattle.

Attachment A

Shovel Test Data

Exhibit A-1. Wetland Survey Shovel Test Excavation Results

Test No.	Zone	Easting	Northing	Depth (cmbs)[a]	Sediment Description	Interpretation	Reason for Termination	Artifacts
1	24	560541	5291767	0-25	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				25-45	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				45-75	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
2	24	560538	5291777	0-30	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				30-35	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				35-65	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
3	24	560539	5291788	0-45	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				45-80	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				80-95	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
4	24	560535	5291796	0-35	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				35-60	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				60-85	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none

Exhibit A-1. Wetland Survey Shovel Test Excavation Results

Test No.	Zone	Easting	Northing	Depth (cmbs)[a]	Sediment Description	Interpretation	Reason for Termination	Artifacts
5	24	560532	5291803	0-30	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				30-60	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				60-80	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
6	24	560528	5291808	0-33	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				33-56	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				56-70	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
7	24	560524	5291815	0-28	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				28-45	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				45-95	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
8	24	560521	5291821	0-52	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				52-61	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				61-80	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none

Exhibit A-1. Wetland Survey Shovel Test Excavation Results

Test No.	Zone	Easting	Northing	Depth (cmbs)[a]	Sediment Description	Interpretation	Reason for Termination	Artifacts
9	24	560518	5291826	0-38	dark brown loamy sand with 20% unsorted subrounded pebbles	intact Holocene sediments	Pleistocene glacial outwash	none
				38-77	reddish brown loamy sand with 20% unsorted rounded pebbles	intact Pleistocene sediments		none
				77-90	yellowish brown loamy sand with 50% unsorted rounded pebbles	intact Pleistocene sediments		none
10	24	560893	5291819	0-55	pale brown clay loam	intact Holocene sediments	Mechanical limits	none
				55-120	stratified medium and fine sands	intact Holocene sediments		none
				120-155	partially decomposed organic muck (peat)	intact Holocene sediments		none
11	24	560708	5291767	0-55	dark brown silt loam	intact Holocene sediments	Pleistocene glacial outwash	none
				55-75	yellowish brown loamy sand	intact Pleistocene sediments		none
12	24	560703	5291764	0-45	dark brown silt loam	intact Holocene sediments	Pleistocene glacial outwash	none
				45-75	yellowish brown loamy sand	intact Pleistocene sediments		none
13	24	560697	5291763	0-35	dark brown silt loam	intact Holocene sediments	Pleistocene glacial outwash	none
				35-80	yellowish brown loamy sand	intact Pleistocene sediments		none

Exhibit A-1. Wetland Survey Shovel Test Excavation Results

Test No.	Zone	Easting	Northing	Depth (cmbs)[a]	Sediment Description	Interpretation	Reason for Termination	Artifacts
14	24	560689	5291762	0-42	dark brown silt loam	intact Holocene sediments	Pleistocene glacial outwash	none
				42-66	yellowish brown loamy sand	intact Pleistocene sediments		none
15	24	560683	5291762	0-20	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				20-55	yellowish brown loamy sand	intact Pleistocene sediments		none
16	24	560677	5291762	0-50	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				50-75	yellowish brown loamy sand	intact Pleistocene sediments		none
17	24	560670	5291761	0-35	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				35-75	yellowish brown loamy sand	intact Pleistocene sediments		none
18	24	560661	5291764	0-35	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				35-55	yellowish brown loamy sand	intact Pleistocene sediments		none
19	24	560655	5291763	0-55	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				55-65	yellowish brown loamy sand	intact Pleistocene sediments		none

Exhibit A-1. Wetland Survey Shovel Test Excavation Results

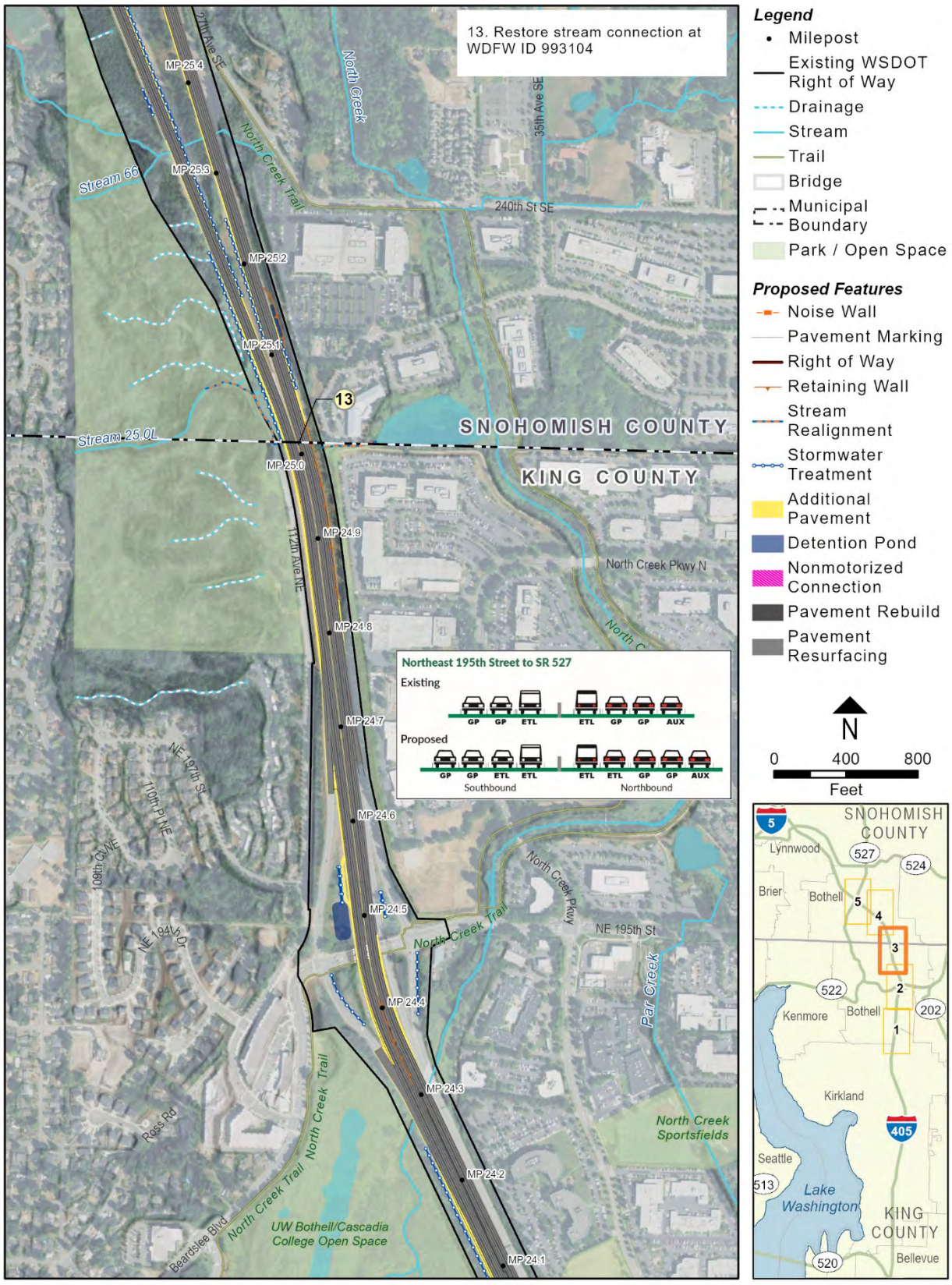
Test No.	Zone	Easting	Northing	Depth (cmbs)[a]	Sediment Description	Interpretation	Reason for Termination	Artifacts
20	24	560649	5291761	0-20	dark brown silt loam	intact Holocene sediments	Pleistocene glacial outwash	none
				20-60	yellowish brown loamy sand	intact Pleistocene sediments		none
21	24	560642	5291764	0-55	disturbed sediments, mottled clay loam and outwash pebbles	disturbed sediments	Pleistocene glacial outwash	none
				55-70	yellowish brown loamy sand	intact Pleistocene sediments		none

Notes:

[a] centimeters below surface

Attachment B

Project Elements Map


13. Restore stream connection at WDFW ID 993104
MP 25.4
MP 25.3
MP 25.2
MP 25.1
MP 25.0
MP 24.9
MP 24.8
MP 24.7
MP 24.6
MP 24.5
MP 24.4
MP 24.3
MP 24.2
MP 24.1
27th Ave SE
North Creek
35th Ave SE
North Creek Trail
Stream 66
240th St SE
Stream 25.0L
SNOHOMISH COUNTY
KING COUNTY
112th Ave NE
North Creek Pkwy N
Northeast 195th Street to SR 527
Existing
GP GP ETL ETL GP GP AUX
Proposed
GP GP ETL ETL ETL ETL GP GP AUX
Southbound
Northbound
NE 197th St
110th Pl NE
109th Ct NE
NE 194th Dr
North Creek Pkwy
NE 195th St
Par Creek
Ross Rd
Beardslee Blvd
UW Bothell/Cascadia College Open Space
North Creek Sportsfields
Legend
Milepost
Existing WSDOT Right of Way
Drainage
Stream
Trail
Bridge
Municipal Boundary
Park / Open Space
Proposed Features
Noise Wall
Pavement Marking
Right of Way
Retaining Wall
Stream Realignment
Stormwater Treatment
Additional Pavement
Detention Pond
Nonmotorized Connection
Pavement Rebuild
Pavement Resurfacing
N
0 400 800
Feet
SNOHOMISH COUNTY
Lynnwood
527
524
Brier
Bothell
5
4
3
2
1
522
202
Kenmore
Kirkland
405
Seattle
513
Lake Washington
KING COUNTY
520
Bellevue