ENGINEERING DESIGN REPORT

C Street Landfill

Prepared for: City of Shelton

Project No. 150074-C-02.1 • July 11, 2022 FINAL

Aspect CONSULTING

earth + water

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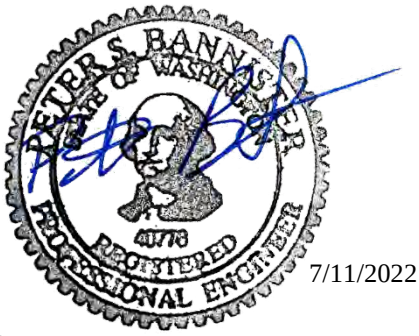

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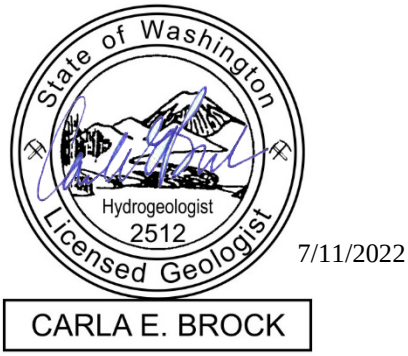

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Acronyms

Agreed Order	Agreed Order No. DE 19541
ARARs	Applicable Relevant and Appropriate Requirements
Aspect	Aspect Consulting, LLC
bgs	below ground surface
CAP	Cleanup Action Plan
City	City of Shelton
COCs	contaminants of concern
CMP	Compliance Monitoring Plan
cPAH	carcinogenic polycyclic aromatic hydrocarbons
DQO	data quality objective
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
I, M, and M	inspection, monitoring, and maintenance
µg/L	micrograms per liter
µm	micrometer
µS/cm	microsiemens per centimeter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
PAHs	polycyclic aromatic hydrocarbons
RCW	Revised Code of Washington
RI	Remedial Investigation
SEPA	State Environmental Policy Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
WWTP	wastewater treatment plant

1 Introduction

This Engineering Design Report (EDR) was prepared by Aspect Consulting, LLC (Aspect) on behalf of the City of Shelton (City) to describe the engineering concepts and design criteria for implementing the selected cleanup action for the Shelton C Street Landfill Site, a former municipal solid waste landfill located in Shelton, Washington (herein referred to as the Site; Figure 1). The cleanup action will be performed under Agreed Order No. DE 19541 (Agreed Order), between the City and the Washington State Department of Ecology (Ecology), dated December 20, 2021. This EDR is a deliverable required by the Agreed Order.

The cleanup action will be performed to meet the applicable requirements of the Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW) and the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC 173-340), and WAC 173-304, the Minimum Functional Standards for Solid Waste Handling.

1.1 Cleanup Action Elements and Goals

The cleanup activities will improve protection of human health and the environment at the Site by implementing the Cleanup Action Plan (Ecology, 2021; herein referred to as the CAP, included as Exhibit B of the Agreed Order). The elements of the cleanup action and their specific role in achieving the goal of protecting human health and the environment are as follows:

- **Low Permeability Soil Cap.** The soil cap will be installed over the full extent of the landfill (approximately 4 acres) to prevent contact with landfill waste and contaminated soil by human and terrestrial ecological receptors and will meet the landfill closure specifications in WAC 173-304-460(e). The soil cap will consist of a geotextile isolation barrier; a minimum 2-foot-thick layer of clean, imported low permeability cover materials; and a 1-foot-thick vegetative layer of topsoil seeded with grasses or other shallow-rooted vegetation.
- **Institutional Controls.** Institutional controls will include an environmental covenant, in the form of a deed restriction, to prevent future, unrestricted development or any other activities that could create exposure pathways for direct contact with the contaminated soil or landfill waste. The institutional controls are required *in perpetuity*.
- **Signage and Physical Barriers.** Signage will be installed along the main access road that connects to the terminus of West C Street, warning of the presence of landfill waste and potential risk to human health, along with a gate or other physical restriction on the access road. A fence with signage will be installed surrounding the landfill area to minimize accessibility from areas other than the access road.

- **Monitoring.** Long-term monitoring will be conducted to ensure that the remedy remains protective over time. The inspection, monitoring, and maintenance (I, M, and M) program will include the following:
    - Periodic inspection of Site conditions to ensure integrity of the soil cap, signage, and physical barriers
    - Maintenance of the remedy (e.g., removal of large or deep-rooted vegetation from the cap area[1] and filling of eroded areas), performed on an as-needed basis
    - Semiannual groundwater monitoring at the four existing monitoring wells for iron and manganese concentrations to demonstrate groundwater protection
    - Annual topographic surveys for at least the first 5 years following construction, to compare with as-built conditions and demonstrate soil cap stability
    - Periodic reporting of I, M, and M activities to Ecology, including 5-year reviews

1.2 Report Organization

This EDR has been prepared in general accordance with WAC 173-340-400 (4)(a) and consists of the following:

- Section 2 provides general information on the Site, including a description of the Site setting, a review of the project history, a summary of information in the remedial investigation (RI) and feasibility study (FS), and identification of who will own, operate, and maintain the cleanup action during and following construction.
- Section 3 provides the engineering concepts and considerations.
- Section 4 provides the engineering design criteria and specifications.
- Section 5 describes permits, approvals, and substantive requirements for exempted permits that are required for construction.
- Section 6 provides the anticipated construction schedule.

A Compliance Monitoring Plan (CMP), which describes the monitoring to be performed during construction of the cleanup action, is provided in Appendix A. The Inspection, Monitoring, and Maintenance (I, M, and M) Plan, which describes the long-term monitoring to be performed following construction, is provided in Appendix B.

[1] Trees would not be allowed to grow in the capped area, since roots of large trees could extend into the landfill waste and bring it to the surface if a tree is blown over (for example).

2 Site Description

This section provides information on the Site, including a description of the project background and landfilling history, a summary of information in the RI/FS (Aspect, 2021), and identification of the responsible parties who will own, operate, and maintain the cleanup action during and following construction.

The Site is located on an approximately sized 16.7-acre parcel owned by the City (the Property; Figure 1). The Property is at the west end of West C Street, just west of the overpass across U.S. Highway 101 in Mason County, Washington. The Property is currently vacant, undeveloped land, covered by shrub vegetation and trees (Figure 2). The surface topography indicates a bowl-like depression near the center of the Property that reflects the limits of historical aggregate mining and subsequent landfilling. Portions of a paved access road that was formerly used to access the base of the bowl-like depression remain in place. Public access to the Property is restricted by a locking gate located approximately 1,500 feet east of the Property on West C Street and signage indicating restricted access.

2.1 Site Background

The Property has been generally unused since the mid-1980s, and public access to the Property and surrounding properties is restricted for safety reasons. There is no available information that documents landfill closure activities, and it is not known whether any were completed, but the results of the RI indicate that some of the landfill waste was covered with imported soil.

In 2016, the City entered into Agreed Order No. DE 12929 with Ecology to perform an RI and FS and to submit a draft CAP (dCAP) for the Site. The RI field work was conducted between 2017 and 2020. The final RI/FS report and dCAP were provided to Ecology in 2021, fulfilling the requirements of Agreed Order No. DE 12929 (Aspect, 2021).

2.2 Landfilling History

The Property was purchased by the City in May 1928, including both the parcel and a perpetual easement for access. Landfilling activities started the same year the City acquired the property. In July 1931, the City sold the property to Rainier Pulp and Paper Company but retained the right to continue to use the land as a garbage dump. Rayonier, Incorporated, successor of Rainier Pulp and Paper Company, sold the property back to the City in July 1949.

The landfill received municipal solid waste between approximately 1928 and the mid-1980s. Early on, waste consolidation practices included open burning and on-property incineration, common for the era (Aspect, 2021). Between 1931 and 1974, the landfill received by-products, research waste, and demolition debris from nearby pulp mills. Sludge from the City's wastewater treatment plant (WWTP) was brought to the landfill between 1973 and the mid-1980s. From 1976 to 1981, fly ash from the wood-burning power plant at the Simpson Timber Company mill was mixed with the WWTP sludge

and put in the landfill. The WWTP sludge was disposed of in the northwestern part of the landfill and is estimated to be up to 5 feet thick. The cover soil and WWTP sludge overlie municipal solid waste that is approximately 20 to 25 feet thick.

2.3 Summary of RI and FS

This EDR relies on information presented in the RI and FS for the Site (Aspect, 2021), which formed the basis for development of the CAP for the Site (Ecology, 2021). The current understanding of the nature and extent of contamination at the Site is based on previous investigation work by others and the results of the RI Site investigation activities.

Prior to the RI, the only known investigation of the Site was conducted in 1986 following a national U.S. Environmental Protection Agency (EPA) study of dioxin/furan-contaminated sites. The 1986 study identified the presence of dioxin/furan-contaminated baghouse residue mixed with WWTP sludge that had been disposed of at the Site (CH2M Hill, 1987).

The RI consisted of five phases of Site investigation and characterization work, as follows:

- Geophysical survey, conducted in May 2017 to provide preliminary information regarding the lateral extent and thickness of landfill waste at the Site
- Surface soil characterization, conducted in July 2017 to characterize the presence and nature and extent of contaminants in shallow soil near the reported WWTP sludge disposal area
- Groundwater evaluation, initiated in December 2017, which consisted of four quarters of groundwater monitoring at four wells installed at the Site to evaluate hydrogeologic conditions and groundwater quality
- Landfill gas and soil gas investigation, conducted in December 2018 at five temporary gas probes installed where the geophysical investigation suggested that landfill waste is present
- Cover soil characterization, conducted in February 2020 to characterize shallow soil in areas outside of the WWTP disposal area

Results of the RI indicate that the source of contaminants at the Site is the landfill waste, including the WWTP sludge. The contaminants of concern (COCs) for the cleanup action consist of carcinogenic polycyclic aromatic hydrocarbons (cPAHs), dioxin/furans, metals in surface soil, and total and dissolved iron and manganese in groundwater.

The nature and extent of contamination that defines the Site is summarized as follows:

- **Soil.** Concentrations of dioxins/furans, cPAHs, and metals are contained in WWTP sludge that is present as surface soil in the northwest portion of the landfill, estimated to be up to 5 feet thick at its thickest, pinching out to less than 6 inches thick at the perimeter of the disposal area. Dioxin/furans, mercury, and lead are contained in cover soils overlying landfill waste in areas outside of the

WWTP sludge disposal area where cover soils were observed to range from 2 to 15 feet thick.

The detected concentrations of COCs in soil are below Ecology's default soil concentrations protective of groundwater for the vadose zone, where they are established. Combined with the empirical data for groundwater quality at the Site, this indicates that the soil leaching to groundwater pathway is incomplete.

- **Groundwater.** Iron and manganese in groundwater (both total and dissolved) are secondary contaminants in groundwater that are attributable to the subtle reducing and/or slightly acidic conditions associated with carbon dioxide in landfill gas that results in dissolution of naturally occurring constituents from native soils. Groundwater is located at depths of 83 to 105 feet below ground surface (bgs), at least 35 feet deeper than the base of the landfill waste. Groundwater levels fluctuate seasonally by up to 5 feet and the inferred groundwater flow direction is to the south-southeast.

Dioxin/furans, cPAHs, and metals are at the highest concentrations in surface soil at the northwest portion of the landfill, where WWTP sludge was disposed of on the ground surface. Based on current and potential future use scenarios, the risk at the Site is to human receptors and terrestrial ecological receptors (plants and animals) who have the potential for direct contact with landfill waste and COCs in surface and shallow subsurface soil.

To address contamination at the Site, four remedial alternatives were developed and evaluated in the FS (Aspect, 2021). The alternatives combined a range of potentially applicable technologies, consisting of landfill capping, source removal, institutional controls, and long-term monitoring. Each of the four alternatives were evaluated against the MTCA threshold criteria and other requirements, including disproportionate cost analysis procedures (WAC 173-340-360). The results of the analysis identified the following as the preferred alternative:

- **Alternative 1**, consisting of four components: install a low permeability soil cap meeting the landfill closure specifications in WAC 173-304-460(e); implement institutional controls in the form of deed restriction; install physical barriers in the form of fencing and restricted-access signage; and conduct long-term I, M, and M, including annual topographic surveys for the first 5 years, periodic inspection of Site conditions, maintenance of the remedy as needed, semiannual groundwater monitoring for iron and manganese concentrations, and periodic reporting to Ecology including 5-year reviews.

2.4 Site Responsibility

The City will own, operate, and maintain the cleanup action during and following construction.

3 Engineering Concepts and Considerations

The engineering concepts for this cleanup action are guided by established solid waste regulations, Site conditions, and the MTCA requirements for the protection of human health and the environment. The potential routes of exposure include direct contact with contaminated surface and shallow subsurface soil and municipal solid waste by human and terrestrial ecological receptors (plants and animals) and ingestion of impacted groundwater by humans. The potential exposure risks for human and terrestrial ecological receptors will be minimized through implementation of engineering controls, institutional controls, signage and physical barriers, and an I, M, and M Plan, as described below.

3.1 Engineering Controls

The primary engineering control to prevent receptor exposure to contaminated soils and solid waste through direct contact will be a low permeability soil cap to be installed over the full extent of the contaminated soil and solid waste (approximately 4 acres). This soil cap will meet the landfill closure specifications in WAC 173-304-460(e).

The soil cap will consist of a geotextile isolation barrier, overlain by a foundation layer to support final grading (where required) and then covered by a layer of clean, imported low permeability cover materials and a vegetative layer of topsoil seeded with grasses or other shallow-rooted vegetation. Soil cap construction is anticipated to be completed in under 1 year and is considered a reasonable restoration time frame.

3.2 Administrative Institutional Controls

Institutional controls will include a deed restriction to prevent future, unrestricted development or any other activities that could create exposure new pathways to contaminants or solid waste. The institutional controls are required *in perpetuity*.

A draft environmental covenant for this Site is provided as Appendix C. This environmental covenant lists general restrictions and requirements as well as specific prohibitions and requirements. Because the cleanup action includes containment of contaminated soils and solid waste, the following specific elements are addressed:

- Limitations for future land and groundwater
- Prohibiting activities that could compromise the soil cap integrity and providing notification and repair requirements should the soil cap integrity be compromised
- Requirements for any future development of the Property
- Limitations and requirements for future redevelopment activities
- Requirements for protection of groundwater monitoring wells

3.3 Physical Barriers and Signage

An existing, locking vehicular access gate at the east end of the C Street bridge prevents unauthorized vehicular access to the bridge and the Site. After the soil cap is installed,

fencing with a locking gate will be constructed surrounding the soil cap to prevent unauthorized access. Signage in English and Spanish will clearly prohibit trespassing and provide contact information for the Ecology Site Manager.

3.4 Monitoring and Reporting

The CMP (Appendix A) provides a description of performance standards during construction. Post-construction compliance monitoring will be conducted as described in the I, M, and M Plan (Appendix B). The I, M, and M Plan has been prepared in general accordance with the requirements of WAC 173-304 to describe post-closure procedures.

The monitoring and reporting program is partly based on Ecology guidance for ending post-closure care at landfills closed under WAC 173-304. The criteria for ending post-closure care include demonstrating little to no settlement, little to no leachate generation, and little to no landfill gas generation. Little to no landfill gas generation was observed during the RI (Aspect, 2021) and, therefore, additional landfill gas monitoring is not required.

The CMP provides details on surveying and groundwater sampling. Annual topographic surveys will be conducted for at least the first 5 years following construction to evaluate soil settlement and cap stability. Groundwater monitoring will be conducted semiannually for comparison with cleanup levels. The I, M, and M Plan includes details regarding inspection and maintenance of the containment infrastructure including the physical barriers, signage, and the soil cap. Annual reports documenting the integrity of the infrastructure and compliance monitoring will be submitted to the Ecology Site Manager.

4 Engineering Design Criteria and Specifications

This section outlines the engineering design criteria for cleanup action at the Site. These criteria are based on established solid waste regulations for landfills regulated under WAC 173-304, cleanup requirements regulated under MTCA, permit requirements (including those requiring substantial equivalence), and property access considerations. Specifications are provided for materials and installation.

4.1 Design Criteria

Design criteria follow the requirements provided for closure of a landfill regulated under WAC 173-304. The soil cap and fencing will remain in place in perpetuity. The construction details and specifications of the cleanup are provided on the engineered design drawings included in Appendix D. Additional details of specific design elements are provided in the following sections.

4.1.1 Solid Waste Consolidation

Preceding installation of the soil cap, clearing and grubbing will be conducted in the area shown on the Plan Set, Sheet C-01. Vegetation waste from clearing and grubbing will be disposed of at an off-site composting facility. In addition, municipal solid waste located on the south-adjoining property will be consolidated onto the Property. The extent of waste shown on Figure 2 was mapped during the May 2017 geophysical survey and has not been confirmed by exploratory or visual methods. The mapped extent of waste is located at distances up to 20 feet south of the southern Property line.

Exploratory test pits and/or trenches will be excavated along the southern Property boundary to evaluate the presence, nature, and extent of solid waste located on the south-adjoining property. Where confirmed to be present, any solid waste that is located on the south-adjoining property and up to 10 feet north of the Property boundary will be physically consolidated to existing depressions within the soil cap area. Areas excavated during solid waste consolidation will be backfilled with clean, on-property borrow soils to pre-existing grades. The 10-foot buffer zone along the southern Property boundary will provide room for construction of the soil cap and fencing, and post-construction vegetation management.

The plans and specifications for this work were prepared with the intended consolidation of all observed municipal solid waste material to within the soil cap area. As such, no export or off-site disposal of municipal solid waste material is anticipated. Excavated solid waste will be placed in existing ground surface depressions within the soil cap area and compacted by the Contractor as subgrade fill to firm and unyielding conditions at a thicknesses of no more than 2 feet.

4.1.2 Soil Cap

As described above, a soil cap will be constructed over the contaminated soil and solid waste. Where constructed, the soil cap will follow these specifications:

1. The foundation layer soils will be obtained from the on-Property borrow area. The foundation layer soils will be placed to allow grading of the final cover to maintain exterior side slopes between 2 percent and 33 percent, consistent with the limits

provided under WAC 173-304-460(3)(e)(ii). The Foundation Layer will be compacted to at least 85 percent of the material maximum dry density per ASTM International Standard Test Method D1557 (modified proctor).

2. A geotextile isolation barrier will be laid over the regraded existing surface and the foundation soils and under the low permeability import soil to prevent terrestrial receptor exposure to contaminated soil and solid waste. Geotextile installation shall conform to the material manufacturer's written instructions and the requirements of the Washington State Department of Transportation (WSDOT) Standard Specifications, Division 2-12 (WSDOT, 2021).

3. At least 2 feet of low permeability import soil that meets the WSDOT specifications and the permeability specification of WAC 173-304-460(3)(e)(i) will be placed over the foundation layer. The low permeability import soils will be placed to allow grading of the final cover to maintain exterior side slopes between 2 percent and 33 percent, consistent with the limits provided under WAC 173-304-460(3)(e)(ii). The Low Permeability Soil will be compacted to at least 90 percent of the material maximum dry density per ASTM International Standard Test Method D1557 (modified proctor). Existing monitoring wells will be protected during construction, and the stickups extended to accommodate final grade.

4. The uppermost layer of the soil cap will be at least 1 foot of native topsoil obtained from City-identified, on-Property sources or off-site sources in accordance with the requirements of WAC 173-304-460(3)(e)(iii) that meets the WSDOT Standard Specifications for topsoil (WSDOT, 2021). The topsoil layer will be placed to maintain exterior side slopes between 2 percent and 33 percent, consistent with the limits provided under WAC 173-304-460(3)(e)(ii) and not compacted.

Following installation of the soil cap, it will be hydroseeded to promote establishment of vegetation and prevent erosion of the topsoil layer. The vegetation seed mix will include grass, other shallow rooted vegetation, or other native vegetation. Specifications and estimated quantities for the soil cap are listed in Table 1.

Table 1. Soil Cap Specifications and Quantities

Element	Standard Specification[1]	Approx. Quantities
Geotextile Isolation Barrier	WSDOT 9-33.2(1) Table 3, Woven Separation	191,900 SF assumes 10% lap and scrap
Foundation Layer	On-Property Borrow Area	18,200 CY
Low Permeability Soil	WSDOT 9-03.14(3), Option Determined by Permeability (Min. $1x10^{-6}$ cm/s)	12,200 CY
Vegetative Topsoil	WSDOT 9-14.2(2) Type B, for On-Site Sources WSDOT 9-14.2(3) Type C, for Off-Site Sources	7,150 CY

Notes: SF = square feet; CY = cubic yards

[1] Washington State Department of Transportation (WSDOT), Standard Specifications for Road, Bridge, and Municipal Construction (PublicationM41-10), 2021.

4.1.3 Stormwater Drainage

The Site is located in the bottom of a bowl-like depression where stormwater infiltrates into the ground surface at the base of the bowl and the existing topography prevents any runoff to surface waters. The soil cap grade will allow radial runoff to the edge, where stormwater will infiltrate through clean soils.

4.1.4 Fencing and Signage

The new chain-link fencing surrounding the soil cap will be 6 feet tall and include two 12-foot-wide double swing/drive-through gates (Appendix D, Sheet C-06). Materials and installation specifications will be consistent with commercial/industrial standards.

Signage will be posted at the vehicular access gate and mounted at approximately 300-foot spacing along the fencing surrounding the soil cap to inform the public of cleanup activities underway and prevent trespass. The all-weather facility signs will be legible from a 10-foot distance and are constructed of materials to provide a minimum expected durability of 5 years. Signage will be posted in English and Spanish. The signage will include the following custom text:

Restricted Area – No Trespassing
City of Shelton Property
Contamination Cleanup In Progress
Contact: Andrew Smith, Dept. of Ecology
Phone: (360) 485-3987

5 Permits and Approvals

The applicable or relevant and appropriate requirements (ARARs) for the cleanup action at the Site were discussed in the CAP (Ecology, 2021), including applicable state and federal laws and regulations. Because the cleanup is occurring under the Agreed Order, the Site is exempt from certain state laws as well as laws requiring or authorizing local government permits or approvals for the cleanup but must still comply with the substantive requirements (RCW 70.105D.090; WAC 173-340-710(9)(b)).

The relevant permits and approvals for the cleanup activities are discussed below.

5.1 State Environmental Policy Act

The State Environmental Policy Act (SEPA; Chapter 197-11 WAC) and the SEPA procedures (Chapter 173-802 WAC) ensure that state and local government officials consider environmental values when making decisions. The SEPA process begins when an application for a permit is submitted to an agency, or an agency proposes to take some official action, such as implementing a Cleanup Action Plan under MTCA. Ecology is the lead agency for SEPA review of the cleanup action at the C Street Landfill.

Ecology has determined that the cleanup action will not have a probable significant adverse impact on the environment and an Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). A Determination of Nonsignificance (DNS) was issued by Ecology on August 5, 2021, and is provided in Appendix E.

5.2 National Historic Preservation Act

For projects that are grant-funded and include ground-disturbing remedial actions, Washington State Governor's Executive Order 21-02 requires consultation with the Department of Archaeology and Historic Preservation (DAHP) and affected Tribes before the cleanup action begins. Ecology is the lead agency for cultural resources consultation for the C Street Landfill.

Ecology made a preliminary determination that the project area is a moderately low risk for pre-historic artifacts or other archaeological resources and suggested an Inadvertent Discovery Plan (IDP) be required and workers be trained in its use. Following consultation with DAHP and stakeholder Tribes, Ecology received concurrence on their preliminary determination from DAHP and Squaxin Tribe.

The Ecology summary of determination and the project IDP are provided in Appendix F.

5.3 Mason County Grading Permit

Mason County requires a grading permit for a project involving excavation or fill that totals 200 or more cubic yards of graded material, unless exempted by one or more of listed examples of exempted work. The project is exempt from a Mason County Grading Permit because of the following exemption: "When approved by the official, grading in an isolated, self-contained area if there is no danger or hazard to adjacent private/public property or other improvements".

However, the substantive requirements of a Mason County Grading Permit consist of a grading plan showing the project vicinity; property limits and topography; grading dimensions, elevations or finished contours; erosion control measures, where required; and cross-sections of existing and graded areas showing contour intervals at the maximum cut and fill. The design drawings included in Appendix D provide sufficient detail to meet the substantive requirements for a Mason County Grading Permit. Mason County will provide a Grading Permit Exemption Letter following Ecology's approval of the final EDR. A copy of the exemption letter will be provided to Ecology upon receipt from Mason County and prior to construction.

5.4 Site Access

A temporary access agreement is being negotiated between the City and the owner of the south-adjoining property (Mason County tax Parcel No. 420242100000 [Figure 2]). The owner listed by the Mason County Assessor's office for this tax parcel is Miles Sand and Gravel Company. During construction, access to the south-adjacent property will be required to clear and grub vegetation, consolidate municipal solid waste, and to backfill. A permanent access agreement will not be required. Sufficient distance is being provided between the property boundary and the fence surrounding the landfill cover system to allow for vegetation management. Miles Sand and Gravel Company will provide a temporary access agreement following Ecology's approval of the final EDR. A copy of the executed temporary access agreement will be provided to Ecology upon receipt from Miles Sand and Gravel Company and prior to construction.

6 Cleanup Reporting and Schedule

6.1 Reporting

Upon completion of the cleanup construction, a draft Construction Completion Report will be prepared that describes the methods and outcome and will include as-built drawings of the soil cap and fencing and signage. The report will be prepared and submitted to Ecology for review and comment.

6.2 Estimated Cleanup Schedule

The preliminary anticipated schedule milestones for the cleanup construction at the Site are as follows:

- April – June 2022: Review and finalize the construction plans and specifications, including design details, Engineering Design Report, and Compliance Monitoring Plan.
- July 2022: City solicits competitive construction bids for the cleanup action construction.
- August 2022: City awards contract to selected Contractor.
- September and October 2022: Complete grading, construction of soil cap, and installation of fencing and signage.
- December 2022: Submit Construction Completion Report to Ecology for review.

This schedule may be adjusted based on Ecology review schedules, City bid process restrictions, conditions encountered during cleanup, or other factors.

7 References

Aspect Consulting, LLC (Aspect), 2021, Final Remedial Investigation and Feasibility Study Report, Shelton C Street Landfill, Shelton, Washington, December 16, 2021.

CH2M Hill, 1987, Simpson Timber Company, Dioxin Study, Final Report, March 1987.

Mason County (County), 2021, Code of Ordinances, Title 14, Chapter 14.44.050, December 29, 2021.

Washington State Department of Ecology (Ecology), 2021, Cleanup Action Plan, Shelton C Street Landfill, City of Shelton, August 10, 2021.

Washington State Department of Transportation (WSDOT), 2021, Standard Specifications for Road Bridge, and Municipal Construction, Publication M 41-10, August 2021.

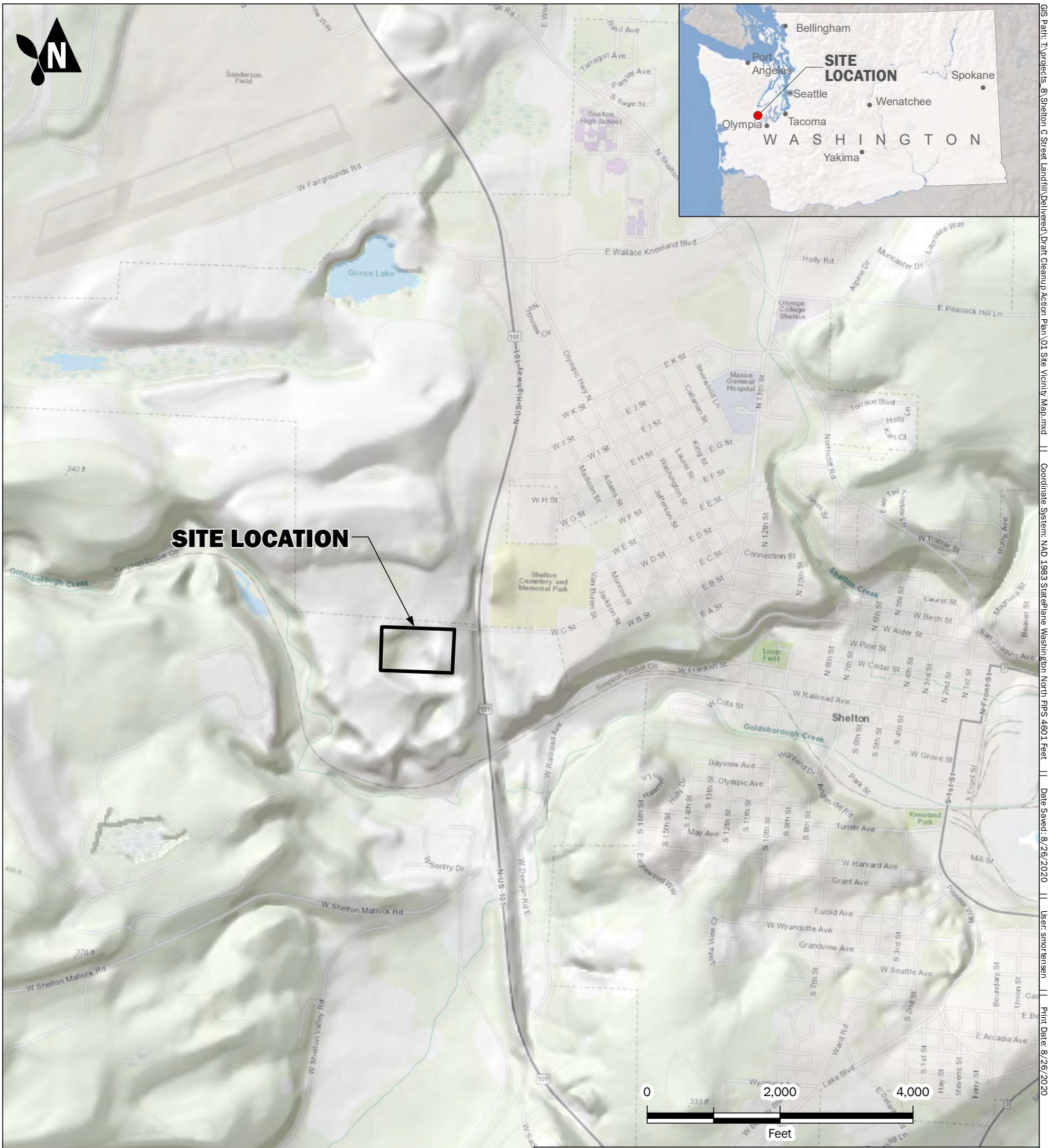
8 Limitations

Work for this project was performed for the City of Shelton (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix G titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

FIGURES



Site Vicinity Map

Engineering Design Report
Shelton C Street Landfill
Shelton, Washington

Aspect CONSULTING	AUG-2020	BY: CEB / RAP / SBM	FIGURE NO. 1
	PROJECT NO. 150074	REVISED BY: ALC / RAP	

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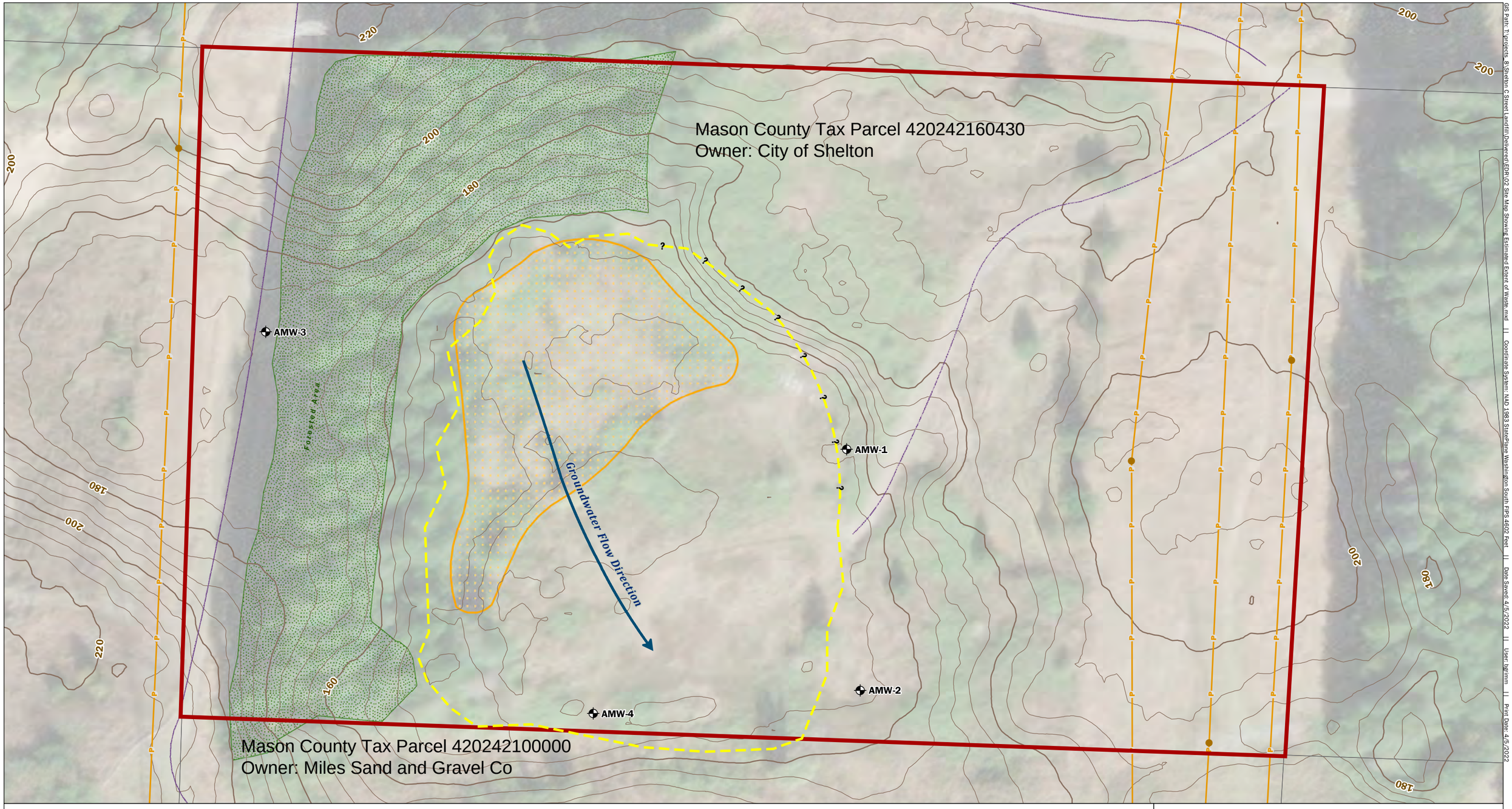


Geophysical Survey Results (HGI, 2017)

Estimated Extent of Landfill Waste

Subsurface Explorations

Monitoring Well

Subject Property

Forested Area

Access Road

Transmission Tower

1986 Sludge Disposal Area

Contour - 20 ft.

Contour - 2 ft.

Note: All site feature locations are approximate.
Topographic contours from PLS Survey October 2017.
Aerial imagery from June 2017 Digital Globe Imagery.

N

0 90 180

Feet

Site Map Showing Estimated Extent of Waste

Engineering Design Report
Shelton C Street Landfill
Shelton, Washington

Aspect Consulting	APR-2022	BY: ALC / RAP	FIGURE NO. 2
	PROJECT NO. 150074	REVISED BY: NLK / CEB / WEG	

Basemap Layer Credits || Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GIS Path: T:\projects_8\Shelton C Street Landfill\Delivered\EDR\02 Site Map Showing Estimated Extent of Waste.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 4/5/2022 || User: bgrimm || Print Date: 4/5/2022

APPENDIX A

Compliance Monitoring Plan

A. Compliance Monitoring Plan

This Compliance Monitoring Plan (CMP) was prepared by Aspect Consulting, LLC (Aspect) on behalf of the City of Shelton (City) to document monitoring and reporting requirements for the cleanup action at the Shelton C Street Landfill Site, a former municipal solid waste landfill located in Shelton, Washington (Site). The City entered into Agreed Order No. DE 19541 (Agreed Order) with Washington State Department of Ecology (Ecology) on December 20, 2021. This CMP is a deliverable required by the Agreed Order.

Compliance monitoring and reporting will be implemented in accordance with WAC 173-340-410 to ensure the protectiveness of the cleanup actions. There are three types of compliance monitoring: protection, performance, and confirmational monitoring.

A.1. Protection Monitoring

Protection monitoring will be conducted pursuant to WAC 173-340-410(1)(a) to confirm that human health and the environment are adequately protected during implementation of the cleanup action. On-Site workers conducting the cleanup construction are required to be appropriately trained in hazardous waste operations in accordance with WAC 296-843-200, and follow an applicable site-specific health and safety plan (SHSP) that they develop as required by WAC 173-340-810. Activities performed under the SHSP will comply with the applicable section of 29 Code of Federal Regulations (CFR) 1910.120.

In general, protection monitoring will include air monitoring within the exclusion zone (worker breathing zone) when disturbing contaminated soil or solid waste using a photoionization detector (PID) to measure volatile organic compound (VOC) concentrations. Visual monitoring of fugitive dust will also be conducted, with dust control best management practices (BMPs) conducted as needed to minimize visible fugitive dust emissions in accordance with Olympic Region Clean Air Agency (ORCAA) rules (Rule 8.3 of ORCAA Regulations). If visible dust is generated, either work will stop until the visible dust is eliminated, or dust levels will be measured to assure that they meet appropriate action levels protective of human health. If measured VOC or dust levels exceed action levels, measures will be implemented to reduce the emissions to below action levels. By achieving occupational health standards within the exclusion zone and dust control during the short-term cleanup action construction, the off-Site public will also be protected. Protection monitoring data collected by the Contractor during cleanup will be made available to the Engineer, other on-Site workers, and Ecology, if requested.

Nothing in this CMP precludes other on-Site contractors/consultants from choosing to conduct additional protection monitoring. All contractors, subcontractors, and other persons on-Site are solely responsible for the safety of their employees, including training and preparation and execution of their own SHSP.

A.2. Performance Monitoring

The purpose of performance monitoring is to measure and document construction quality control for the cleanup action. Performance of the cleanup construction relative to the construction plans and specifications will be monitored and recorded by the City's representative (the Engineer). The results of the performance monitoring will be reported in the Construction Completion Report.

The following aspects of the construction will be monitored for compliance with the construction plans and specifications:

- Field reports will document that construction best management practices are maintained.
- Photographic logs and field notes taken during construction will document that visually observable solid waste has been removed from the south-adjoining property and consolidated onto the Property.
- Testing of imported soils for physical properties and chemical quality will be performed prior to delivery to the Site and/or during construction to document conformance with the technical specifications.
- The construction of the soil cap, including:
    - The areal extent of the soil cap
    - The specifications of import material
    - The placement of the geotextile isolation barrier
    - The thickness, placement, and compaction of capping materials
    - The final grade and configuration of the capped area

The surveying plan (Section A.4) identifies the frequency, density, and accuracy of the topographic surveys during and after construction. Topographic surveying during construction will document that the minimum design soil layer thicknesses are achieved and that slopes are within the design grade range.

A.2.1. Physical Properties of Imported Material

All soil imported to the Site for use during the cleanup action will be tested for physical properties to ensure that it is suitable as fill. Physical testing of imported soil will be completed at a frequency described in the table below.

Table A-1. Soil Acceptance and Conformance Testing Frequencies

Name (Material Specification)	Foundation Layer Soils (WSDOT 9-03.14(3), Option 1)	Low-Permeability Soil Cover (Amended WSDOT 9-03.14(3))	Vegetative Topsoil (WSDOT 9-14.2(3), Type C)
Acceptance Testing			
ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	1 per Source	2 per Source	1 per Source
ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils	1 per Source	2 per Source	1 per Source
ASTM D1557 – Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort	1 per Source	1 per Source[3]	NA
ASTM D5084 - Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter (Remolded)	NA	1 per Source[3]	NA
Conformance Testing			
ASTM D6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods	1/1,000 CY	1/1,000 CY	NA
ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	1/1,000 CY	1/1,000 CY	1/2,000 CY
ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils	1/2,000 CY	1/1,500 CY	1/2,000 CY
ASTM D1557 – Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort	1/1,000 CY	1/5,000 CY[3]	N/A
ASTM D5084 - Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter (Remolded)	NA	1/1,500 CY[3]	NA

Notes:

1. Miscellaneous imported soil and aggregates shall be provided for testing in accordance with WSDOT Construction Manual Table 9-3.7.
2. Samples for Acceptance and Conformance Testing to be provided by the Contractor to the Engineer for approval prior to delivery to the site.
3. Test requirement applied to amended Low Permeability Soil.

A.2.2. Chemical Quality of Imported Material

All soil imported to the Site for use during the cleanup action will be tested for chemical quality to ensure that it is suitable as fill. Chemical testing of imported soil will be completed at a frequency of seven samples for the first 1,000 cubic yards of imported material, and two additional samples for each additional 1,000 cubic yards to ensure that the soil meets the import fill criteria below.

The import soil should meet the standard MTCA Method A/B soil cleanup levels for unrestricted land use, as shown in the table below.

Table A-2. Import Soil Chemical Criteria

Analyte	Analytical Method	MTCA Method A/B Soil Cleanup Level
Total Petroleum Hydrocarbons (mg/kg)		
Gasoline-range hydrocarbons	NWTPH-Gx	100
Diesel-range hydrocarbons	NWTPH-Dx	2,000
Oil-range hydrocarbons	NWTPH-Dx	2,000
Metals (mg/kg)		
Arsenic	EPA 6020B	20
Cadmium	EPA 6020B	2
Chromium	EPA 6020B	2,000
Lead	EPA 6020B	250
Mercury	EPA 7471	2
Polycyclic Aromatic Hydrocarbons (mg/kg)		
Acenaphthene	EPA 8270SIM	4,800
Anthracene	EPA 8270SIM	24,000
Fluoranthene	EPA 8270SIM	3,200
Fluorene	EPA 8270SIM	3,200
1-methylnaphthalene	EPA 8270SIM	34
2-methylnaphthalene	EPA 8270SIM	320
Naphthalene	EPA 8270SIM	5
Pyrene	EPA 8270SIM	2,400
Total cPAHs (benzo[a]pyrene TEQ)	EPA 8270SIM	0.10

Notes: mg/kg – milligrams per kilogram; PAH = Polycyclic Aromatic Hydrocarbons

Soil from sources other than commercial quarries may be subject to additional testing and will be determined in consultation with Ecology.

A.3. Confirmational Monitoring

The purpose of confirmational monitoring is to confirm the long-term effectiveness of the interim action or cleanup action once cleanup standards have been met at the points of compliance. Confirmational monitoring at the Site will include the following elements:

- Visual inspections following construction will identify any areas of erosion that require maintenance or repairs. Maintenance will include vegetation control to prevent invasive and deep-rooted plants from becoming established. Erosion repairs may include raking, tilling, or applying supplemental topsoil and reseeding.
- Topographic surveys following construction will demonstrate little-to-no settlement of the soil cap. For additional details, see the surveying plan in Section A.4.
- Groundwater sampling results during and following construction will demonstrate progress toward cleanup levels. Groundwater sampling after cleanup levels have been reached will demonstrate little-to-no leachate generation. For additional details, see the groundwater sampling and analysis plan in Section A.5.

A.4. Surveying Plan

Topographic surveying will be conducted during and following construction of the soil cap. During construction, topographic surveying will be conducted by a licensed surveyor following the placement of each successive soil cap layer, and the surveyor will attest that design slope and thickness criteria have been met.

Following construction, a minimum of eight survey markers will be established across the soil cap to monitor settlement per the guidance provided by Ecology in the Addendum to "Preparing for Termination of Post-Closure Activities at Landfills Closed under Chapter 173-304 WAC". The elevations of these survey markers will be measured annually by a licensed surveyor. After the first year, the surveyor will attest whether the criteria in the Ecology guidance have been met. The final monitoring well top of casing elevations will also be surveyed by a licensed surveyor.

A.5. Groundwater Sampling and Analysis Plan

As discussed in Section 2.3 of the Engineering Design Report (EDR), groundwater is located at depths of 83 to 105 feet below ground surface (bgs) and contains total and dissolved iron and manganese as secondary contaminants in groundwater attributable to the subtle reducing and/or slightly acidic conditions associated with carbon dioxide in landfill gas at the Site. In accordance with the preferred remedy for the Site described in the draft Cleanup Action Plan (Ecology, 2021), semiannual groundwater monitoring for iron and manganese concentrations will be conducted. This section presents the Groundwater Sampling and Analysis Plan (SAP) for the Site.

Groundwater monitoring events will consist of measurement of static groundwater levels to support evaluation of inferred flow direction and collection of groundwater samples for analysis at four groundwater monitoring wells, AMW-1 through AMW-4 (Figure A.1).

The purpose of this SAP is to ensure that field sample collection, handling, and laboratory analysis will generate data to meet project-specific data quality objectives (DQOs) in accordance with the Model Toxics Control Act (MTCA) requirements (Washington Administrative Code [WAC] 173-340-350).

A.5.1. Field Methods

This section describes the methods that will be used in the field to measure water levels and sample groundwater.

A.5.1.1. Water Level Measurements

At each monitoring well, the locking well cap will be removed, and the depth-to-groundwater will be measured from the surveyed location on the top of the north side of the monitoring well casing to the nearest 0.01 foot using an electronic water level measuring device. The depth to the bottom of the monitoring well will also be measured to evaluate siltation of the monitoring well. The water level indicator will be decontaminated between wells. Groundwater elevations will be calculated relative to the top of well casing elevation data provided by PLS, Inc. dated October 13, 2017.

A.5.1.2. Groundwater Sampling

Analytical groundwater samples will be collected from each well using low flow sampling methodology, as follows:

- Each monitoring well will be purged at a low-flow rate less than 0.5 liter per minute (Puls and Barcelona, 1996)[2] using the dedicated bladder pump or submersible and tubing used during the RI, and will be left in the monitoring wells between sampling events. The tubing intake will be placed just below the center of the saturated section of well screen. During purging, field parameters will be monitored using a YSI meter and flow-through cell, or equivalent. These field parameters (temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential) will be recorded at 2- to 4-minute intervals throughout well purging until they stabilize. Stabilization is defined as three successive readings where the parameter values vary by less than 10 percent (or 0.5 milligrams per liter [mg/L] dissolved oxygen if the readings are below 1 mg/L). However, no more than three well-casing volumes will be purged prior to groundwater sample collection. Three turbidity measurements will also be made before collecting the sample (using Hach 2100Q turbidimeter).

[2] Puls, R.W. and M.J. Barcelona, 1996, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, EPA Ground Water Issue, EPA/540/S-95/504.

- Samples with a field-measured specific electrical conductance greater than 1,000 microsiemens per centimeter (µS/cm) or turbidity greater than 25 NTU will be denoted as such on the chain-of-custody (COC) form.
- If the monitoring well is completely dewatered during purging, samples will be collected when sufficient recharge has occurred to allow filling of all sample containers.
- Once purging is complete, groundwater samples will be collected using the same low-flow rate directly into laboratory-supplied sample containers. Samples for dissolved metals analyses will be filtered using an inline 0.45-micrometer (µm) filter; at least 0.5 liter of water will be purged through the filter prior to sample collection. Each groundwater sample will be assigned a unique sample identification number that includes the well number and the six-digit date on which the sample was collected. For example, a groundwater sample collected from monitoring well MW-1 on May 30, 2017, would be identified as MW-1-053017.
- Quality control groundwater samples will consist of field duplicates. One field duplicate will be collected during each groundwater sampling event. Field duplicates will be submitted "blind" to the laboratory as discrete samples (i.e., given unique sample identifiers to keep the duplicate identity unknown to the laboratory), but will be clearly identified in the field log.

Following sampling, the well cap and monument cap will be secured. Any damaged or defective well caps or monuments will be noted and scheduled for replacement, if necessary.

While conducting field work, the field representative will document pertinent observations and events specific to each activity on field forms (e.g., boring log form, as-built well completion form, well development form, groundwater sampling form, etc.) and/or in a field notebook, and, when warranted, provide photographic documentation of specific sampling efforts. Field notes will include a description of the field activity, sample descriptions, and associated details such as the date, time, and field conditions.

A.5.1.3. Sample Handling and Analysis

Upon collection, soil and groundwater samples will be placed upright in a cooler. Ice or blue ice will be placed in each cooler to meet soil and groundwater sample preservation requirements. If the sample coolers are being shipped, not hand carried, to the laboratory, the COC form will be placed in a waterproof bag taped to the inside lid of the cooler/container for shipment.

After collection, samples will be maintained in Aspect's custody until formally transferred to the analytical laboratory. For purposes of this work, custody of the samples will be defined as follows:

- In plain view of the field representatives
- Inside a cooler that is in plain view of the field representative

- Inside any locked space such as a cooler, locker, car, or truck to which the field representative has the only immediately available key(s)

A COC record provided by the laboratory will be initiated at the time of sampling for all samples collected. The record will be signed by the field representative and others who subsequently take custody of the sample. Couriers or other professional shipping representatives are not required to sign the COC form; however, shipping receipts will be collected and maintained as a part of custody documentation in project files. A copy of the COC form with appropriate signatures will be kept by Aspect's project manager.

Upon sample receipt, the laboratory will fill out a cooler receipt form to document sample delivery conditions. A designated sample custodian will accept custody of the shipped samples and will verify that the COC form matches the samples received. The laboratory will notify the Aspect project manager, as soon as possible, of any issues noted with the sample shipment or custody.

Samples will be submitted to an accredited laboratory for analysis of total iron and total manganese using EPA Method 200.7 or equivalent. The method reporting limit will be at or below 150 μg/L for total iron and 25 μg/L for manganese, which is one-half the cleanup level.

A.5.2. Data Quality Control Procedures

Raw data received from the analytical laboratory will be reviewed, entered into a computerized database, and verified for consistency and correctness. The database will be updated based on data review and independent validation, if necessary.

The following field data will be included in the database:

- Sample location coordinates
- Sample type (i.e., groundwater or soil)
- Soil or groundwater sampling depth interval

Information regarding whether concentrations represent total phase (unfiltered samples) or dissolved phase (filtered samples) will be compiled and stored in the database.

All data will undergo a quality assurance/quality control (QA/QC) evaluation at the laboratory, which will then be reviewed by the Aspect database manager and the project data quality manager. Initial data reduction, evaluation, and reporting at the laboratory will be carried out in full compliance with the method requirement and laboratory standard operation procedures (SOPs). The laboratory internal review will include verification (for correctness and completeness) of electronic data deliverable (EDD) accompanied with each laboratory report. The Aspect database manager will verify the completeness and correctness of all laboratory deliverables (i.e., laboratory report and EDDs) before releasing the deliverables for data validation. Groundwater analytical data will undergo Level II data validation to verify that supporting QA/QC are of a level of quality necessary to support sample results.

Validated groundwater sampling results will be uploaded to Ecology's Environmental Information Management (EIM) database and summarized in an annual transmittal to the Ecology Site Manager.

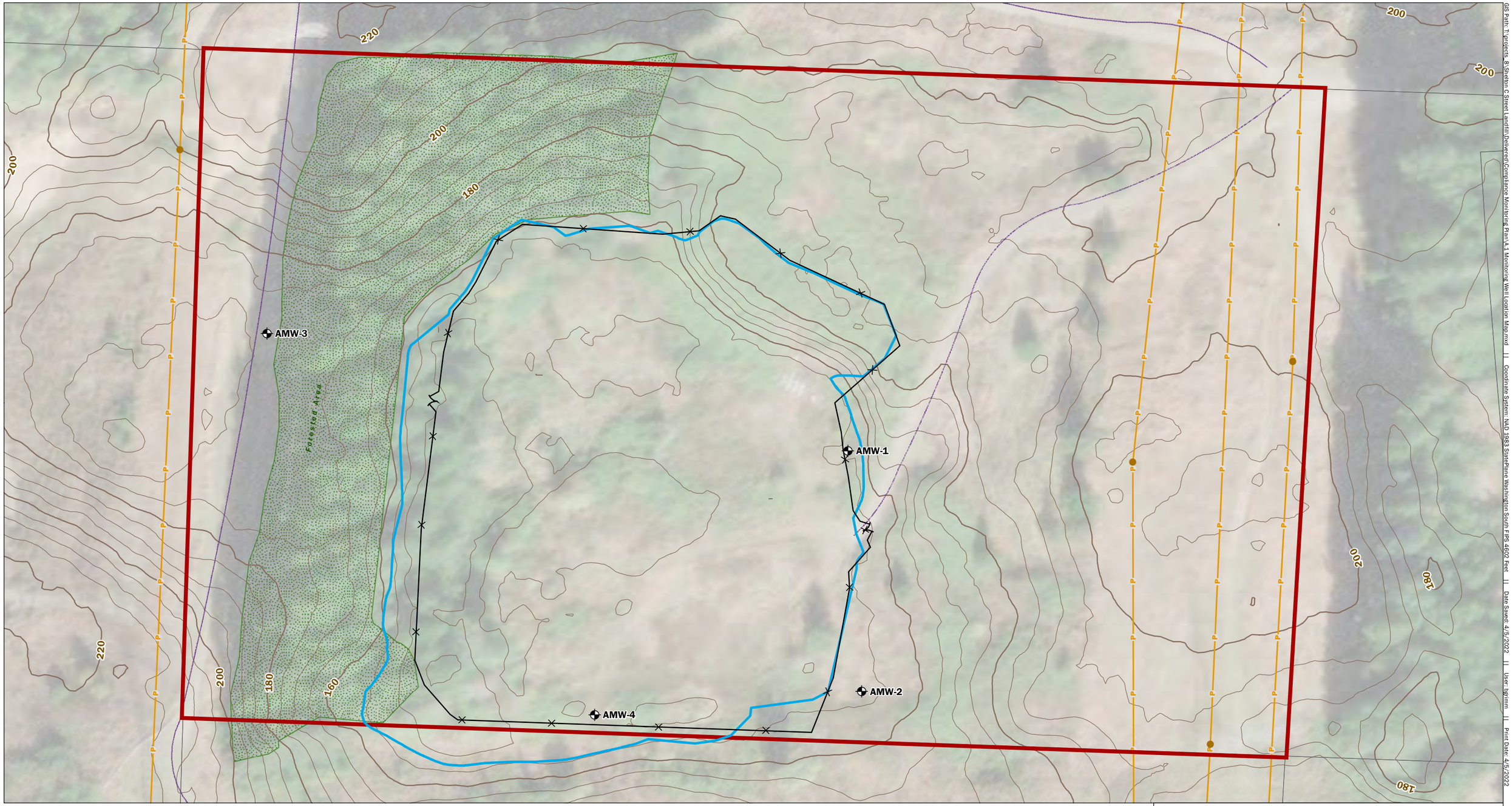
A.5.3. Data Evaluation and Reporting Components

During periodic status updates, field parameters and total iron and total manganese concentrations will be graphed as time-series charts to show changes over time.

Concentrations of total iron and total manganese will be evaluated for statistically significant trends following unified guidance provided by the EPA (EPA, 2009[3]). These trends will be used to determine compliance with cleanup levels.

Compliance will be achieved when the average concentration of four consecutive sampling events is below the cleanup level or background concentration. Concentrations that are not detected at the method reporting limit will be assigned one-half the method reporting limit (MRL) for compliance analysis purposes. Groundwater monitoring and reporting will be conducted for a minimum period of 5 years after completing the construction of the remedy and for at least 2 years after groundwater cleanup levels are met.

[3] US Environmental Protection Agency (EPA), 2009, Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, January 13 2009. EPA 540-R-08-005.



Compliance Groundwater Monitoring Well
Approximate Soil Cap Extent
Proposed Fence Location
Subject Property
Forested Area
Access Road
Transmission Tower
Contour - 20 ft.
Contour - 2 ft.

Note: All site feature locations are approximate.
Topographic contours from PLS Survey October 2017.
Aerial imagery from June 2017 Digital Globe Imagery.

0 90 180
Feet

Monitoring Well Location Map

Compliance Monitoring Plan
Shelton C Street Landfill
Shelton, Washington

Aspect Consulting	APR-2022	BY: ALC / RAP	FIGURE NO. A.1
	PROJECT NO. 150074	REVISED BY: NLK / CEB / WEG	

Basemap Layer Credits || Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GIS Path: T:\projects_8\Shelton C Street Landfill\Delivered\Compliance Monitoring Plan\A1 Monitoring Well Location Map.mxd || Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet || Date Saved: 4/5/2022 || User: bglinnn || Print Date: 4/5/2022

APPENDIX B

Inspection, Monitoring, and Maintenance Plan

B. Inspection, Monitoring, and Maintenance Plan

This inspection, monitoring, and maintenance (I, M, and M) Plan was prepared by Aspect Consulting, LLC (Aspect) on behalf of the City of Shelton (City) to present post-construction containment infrastructure I, M, and M for the Shelton C Street Landfill Site, a former municipal solid waste landfill located in Shelton, Washington (herein referred to as the Site). The City entered into Agreed Order No. DE 19541 (Agreed Order) with Washington State Department of Ecology (Ecology) on December 20, 2021, for cleanup of the Site. This I, M, and M Plan is a deliverable required by the Agreed Order and will be approved by Ecology prior to commencing cleanup activities described herein.

This I, M, and M Plan presents technical guidance and regulatory requirements to assure the integrity of the containment infrastructure, including the soil cap, fencing, and signage. Details on post-construction topographic surveying and groundwater monitoring is provided in the Compliance Monitoring Plan (CMP; Appendix A). This I, M, and M Plan is intended to be updated as Site conditions change and additional information becomes available. The plan will be updated following the completion of construction to incorporate any additional details that may be relevant to the long-term inspection, monitoring, and maintenance.

B.1. Roles and Responsibilities

Post-construction I, M, and M includes the following roles and responsibilities:

- Competent persons to conduct visual inspections, document observations, and implement and document maintenance (such as vegetation control).
- A licensed surveyor to conduct and document topographic surveying as described in the CMP.
- A licensed hydrogeologist to oversee groundwater monitoring and sampling at the Site, as described in the CMP.

The names and phone numbers of the responsible individuals will be provided following completion of construction in the Construction Completion Report.

B.2. Post-Closure Containment Infrastructure

The cleanup action for this Site relies on containment of contaminated soils and municipal solid waste below a soil cap. The soil cap will be constructed to prevent direct contact by human and terrestrial ecological receptors and minimize infiltration of

precipitation. Physical barriers (perimeter fencing and restricted access gates) will prevent unauthorized access to the Site. Signage posted at the perimeter of the Site will notify the public of the presence of contaminants and provide contact information for the Ecology Site Manager.

Inspections, maintenance, and repair or replacement of the containment infrastructure will be documented annually and submitted to Ecology.

B.2.1. Physical Barriers and Signage

Annual inspection of signage and physical barriers will be conducted to preserve their intended function. The inspection will include visual observation of the following conditions:

- The vehicular gate (operation, locking mechanism, general condition)
- Fencing around the Site (general condition)
- Signage (count, legibility, general condition)

Observed conditions will be documented on a field report and with photographs to identify any maintenance needs. Maintenance, repairs and/or replacement will be completed as needed.

B.2.2. Soil Cap

Annual inspection of the soil cap will be conducted to document sustained integrity and identify maintenance needs. The inspection will include visual observation of the entire soil cap area for the following conditions:

- Appearance and condition of vegetation
- Soil erosion, cracks, or other changes in the vegetative topsoil layer
- Evidence of intrusion by humans or animals, including ruts, holes, or wildlife trails
- Any other damage or disturbance to the cap

Observed conditions will be documented on a field report and with photographs to identify any maintenance needs.

Vegetation management is anticipated to require two mowing events per year to prevent the establishment of invasive or noxious weeds or deep-rooted vegetation that could impair the soil cap integrity. Otherwise, soil cover maintenance, such as raking, tilling, and/or applying additional topsoil material, will be completed as needed to sustain the integrity and protectiveness of the cover.

APPENDIX C

Draft Environmental Covenant

DEPARTMENT OF ECOLOGY
State of Washington

Environmental Covenant for MTCA Sites: Instructions for Use and Covenant Template

Established: August 20, 2015

Revised: December 22, 2016

To: Interested Persons

From: James. J. Pendowski, Program Manager
Toxics Cleanup Program

Contact: Policy & Technical Support Unit, Headquarters

Note: This is Attachment C in Procedure 440A. For additional instructions on using this Covenant, please see Toxics Cleanup Program's **Procedure 440A: Establishing Environmental Covenants under the Model Toxics Control Act,** publication no. 15-09-054.

Instructions for Use

The following steps provide guidance on how to develop an environmental covenant using the enclosed template. While the exact sequence of steps, as well as who conducts the work (Ecology, potentially liable person (PLP) or Voluntary Cleanup Program (VCP) customer), may vary from site to site, all of the elements identified here must be addressed. When requesting a Covenant, Ecology should identify which steps are the responsibilities of the PLP or VCP customer at the site. Questions about specific provisions in the Covenant template should be directed to the Ecology Cleanup Project Manager assigned to the site. If no Cleanup Project Manager has been assigned, contact Ecology's Toxics Cleanup Program at (360) 407-7170 and ask for advice from the Toxics Cleanup Program (TCP) Policy Unit.

Step 1: Identify the Parcels Subject to the Covenant

Using the County Assessors Tax records, identify the parcels subject to the Covenant. Even though the site (or part of the site subject to the Covenant) may be owned by one entity, it may actually encompass more than one parcel of real property as shown on the County's property (and tax) records.

Step 2: Identify the Specific Activity and Use Restrictions for the Property

Create a conceptual list of specific prohibited activities (e.g., don't drill wells on the property) and prohibited uses (e.g., property can't be used for residential uses).

Work with the PLP/VCP customer, the property owner, and owners of other property interests (if different) to refine the language implementing these restrictions.

Step 3: Consult with the Local Government Land Use Planning Authority

The Uniform Environmental Covenants Act (UECA) and Model Toxics Control Act (MTCA) require Ecology to "consult" with the local government land use planning authority on the terms of the Covenant. While technically the Mayor/Executive is this authority, this guidance recommends contacting the staff that who work with land use issues. However, if the jurisdiction prefers the contact be through the local elected executive, work through the Mayor/Executive instead.

Ideally, before drafting the Covenant, Ecology staff should discuss the proposed restrictions with the local government staff by phone or email. **Once the Covenant has been drafted, the full covenant should be sent to the local government for review.** This consultation should be done by Ecology, but may be delegated to the PLP or VCP customer, upon agreement by Ecology.

The purpose of this consultation is to identify provisions in the Covenant that might conflict with current or future land use plans and development regulations for the property. For example, a provision requiring the land to remain in industrial use won't hold up in the long term if the comprehensive plans for the area call for future mixed residential and commercial use development. Similarly, a provision prohibiting infiltration of stormwater anywhere on the property may conflict with local development regulations requiring all stormwater to be retained and infiltrated on the property. If there is a conflict, see if it's possible to apply the restriction to only part of the property where the exposure pathway is of concern.

Use the following table as a guide for whom to contact:

Jurisdiction	Department
City or Town	City or Town Planning Department
Unincorporated Areas	County Planning Department
Urban Growth Areas not Annexed to City or Town[1]	Both City or Town Planning Department and County Planning Department

Note: In larger communities, planning staff who work on zoning and comprehensive plan issues are typically different than those who review development proposals. *Make sure you are talking to the right staff.*

[1] City limits and urban growth area should be identified in the City's and County's comprehensive plans. They can typically be found on the local jurisdiction's website. If not, call the jurisdiction's staff to obtain a copy.

Step 4: Confirm the Recorded Interests in the Property

To determine who owns the property and any relevant property interests that may need to be superseded by the Covenant, a title search must be conducted to identify all recorded interests in the Property. The title search should be the responsibility of the PLP (or VCP customer) and conducted by a title company. **The results of this search, typically called a title report or plat certificate, must be included with any request asking Ecology to sign a Covenant.** An uninsured title report is sufficient for this purpose.

In general, the title search should be no more than six months old to ensure it reflects the current status of the property. However, under some circumstances, Ecology may accept an older title search, such as that completed during the PLP identification process. Accepting older title searches should be done only if Ecology has been closely involved with the site during the intervening time period since the last title search, and there is no reason to suspect the owner has changed or an easement or other interest in the property has been granted. Examples of changes that would trigger the need for a new title search are:

- Establishment of a new business on the property;
- Change in the name of the business currently on the property;
- Subdivision of the property;
- Construction of new utilities or roads across the property;
- Foreclosure on the property;
- Change in the status of the persons owning the property (death, divorce or marriage); and
- Bankruptcy of the site owner or operator.

Step 5: Determine Who Needs to Sign the Covenant

Real property interests are prioritized according to the date on which they were recorded with the land record authority. Such interests include not only ownership of the property, but may also include mortgages; tax or mechanics' liens; utility easements; surface land rights; and judgments. If a senior mortgage holder forecloses on the property, for instance, it may be able to dispose of all other interests, including Ecology's Covenant. For this reason, to ensure the restrictions in a Covenant are enforceable, the Covenant must supersede these pre-existing property interests.

Grantors or signatories to a Covenant not only are granting access to Ecology and agreeing to adhere to the restrictions on future activities or uses of the property, they are also agreeing to be responsible for any "affirmative obligations" described in the Covenant, such as maintaining the remedy and monitoring.

Signing a subordination agreement means the person holding a senior property interest is agreeing that the Covenant takes precedent over their interest, including providing Ecology with access, and consenting to the restrictions on future uses and activities on the property. However, they are not necessarily agreeing to the affirmative obligations in the Covenant.

Use the following as a guide to determine who must sign the Covenant as a grantor or subordinate their interests:

a) Persons holding fee simple title to the property (i.e., landowners).

The landowner must always sign the Covenant as a Grantor.

b) Persons holding other property interests (such as easements, right-of-ways, water & mineral rights).

In general, if a person holds a title to:

a) An easement or right-of-way,

b) Water rights (if groundwater use is restricted); or

c) Mineral rights,

…that is located within the area of activity or use restrictions, and compliance with those restrictions could be overridden by the person exercising their rights, then the person holding the title should either:

a) Sign the covenant as a Grantor, or

b) Subordinate their interests by signing a subordination agreement.

However, if a current contact cannot be located, or if the holder's interest is not critical to the success of the Covenant, it is probably not necessary to expend a lot of effort to track them down and obtain a signature. For example, many properties, especially in eastern Washington State, have underlying mineral rights that are controlled by someone different than the owner. In most urban areas it is unlikely those rights would be exercised to the detriment of the remedy, and so there would be no reason to pursue a signature.

Similarly, the holder of an easement or right-of-way for overhead power lines that is unlikely to affect the performance of the remedy does not need to be pursued.

However, if a cap is part of the remedy, and the easement or right-of-way grants the holder the right to conduct activities that could compromise the integrity of the cap (such as installation and maintenance of road or an underground utility), these holders should be required to sign the Covenant as a Grantor or subordinate their interests.

c) Persons holding encumbrances on the property (such as lien and mortgage holders).

In general, persons holding a lien have merely a monetary interest (lien imposed because of lack of payment of a bill) and do not need to sign the Covenant or subordinate their interests. However, if the lien holder is claiming a right that could affect the performance of the remedy, such as control over future sale and development of the property, then they should be required to subordinate their interest.

Mortgage holders such as banks usually hold the title to the property until the property owner pays off the loan for purchase of the property. Should they foreclose on a property, they may be able to extinguish all subsequent interests, including Ecology's Covenant. As such, they should be required to sign a subordination agreement.

A Covenant or subordination agreement must be voluntarily granted. There may be circumstances where the holder of an interest or encumbrance on the property (other than the property owner) refuses to grant a Covenant or subordinate their interests, can't be located, or are not responsive. In these cases, the Ecology Cleanup Project Manager should, in consultation with the Assistant Attorney General assigned to the site, consider the success of the remedy without their signature. If it is deemed necessary to secure their signature and they refuse to sign, then a more complete cleanup will be required.

In cases where there is minimal risk to the success of the remedy and it is decided to proceed without their signature, a letter should be sent to the holder of this interest or encumbrance notifying them that, should they do anything on the property that affects the integrity of the remedial action or results in a release of a hazardous substance, they could trigger liability under MTCA. If the holder of this interest is unresponsive or cannot be located, work with the Assistant Attorney General assigned to the site on an appropriate notification procedure.

Step 6: Prepare the Covenant

Use the attached Ecology template to prepare the Covenant.

A precise legal description of the Property and any interests in the Property (such as an easement) is essential to know where the Covenant applies. A map must also be developed to provide a visual representation of where the restrictions apply on the Property.

- If the restrictions apply to the entire Property, the legal description in the Property deed and a map of the Property should be sufficient.
- If the restrictions apply to only part of the Property, a new legal description and map will need to be developed, and boundary markers or reference monuments will need to be established on the Property by a licensed surveyor.

If the Property includes more than one parcel of real property, the legal description and map should cover all of the parcels. This will enable recording of the same covenant on each parcel instead of creating and recording a different covenant for each parcel.

There are specific formatting requirements that apply to recorded Covenants. For example, there must be a three inch margin on the top of the first page and a one inch margin on the bottom and sides. See Chapter 65.04.045 RCW for additional format requirements.

Step 7: Public Involvement

In general, there is no requirement for a public notice and comment period on a Covenant, other than the requirement for local government consultation discussed above. However, because a Covenant can affect future uses of a property and potentially impact future development in the area, any public notice issued for the cleanup action plan or order or decree governing the cleanup should highlight the fact that there will be restrictions on future activities or uses of the property.

For sites with a high level of public interest or controversy, it may be appropriate to provide a separate opportunity for public comment. The Ecology Cleanup Project Manager should consult with the public involvement specialist assigned to the site regarding the appropriate level of public involvement.

Step 8: Sign the Covenant

The Ecology Cleanup Project Manager must ensure all appropriate persons sign the Covenant and that each of those signatures is notarized. This responsibility can be delegated to the PLP (or VCP applicant) but Ecology staff must verify this step has been completed.

Ecology's representative should sign the Covenant only after all other parties to the Covenant have signed.

Step 9: Record the Covenant

The Covenant must be recorded on the title of each parcel of real property subject to the Covenant. Recording is done by the County Auditor. If the area covered by the Covenant extends across a County boundary, the Covenant will have to be recorded in both Counties.

Step 10: Send the Recorded Covenant to Ecology and Others per RCW 64.70.070

a. Send the original recorded Covenant to Ecology's contact for the site. [2]

b. Send a legible copy of the recorded Covenant, with the recording number evident, to the following persons (per RCW 64.70.070):

- Each person who signed the Covenant.
- Each person holding a recorded interest in the real property subject to the Covenant (including each person who subordinated their interests to Ecology's Covenant).
- Each person in possession of the real property subject to the Covenant at the time the Covenant is executed (such as renters).
- The local government planning authority in which the real property subject to the Covenant is located.
- Any other person to whom the Covenant expressly grants the power to enforce the Covenant.
- Any other persons required by Ecology.

Note: These instructions and attached template are intended solely for the guidance of Ecology staff. They are not intended, and cannot be relied on, to create rights, substantive or procedural, enforceable by any party in litigation with the state of Washington. Ecology may act at variance with these instructions and the attached template depending on site-specific circumstances, or modify or withdraw these documents at any time.

[2] Some Counties retain the original. If that is the case, make sure Ecology receives a legible copy of the recorded Covenant with all the signatures and with recorded notation.

Environmental Covenant for MTCA Sites: Covenant Template

*See Toxics Cleanup Program's **Procedure 440A** for additional instructions on the use of this Covenant.*

Text highlighted by yellow are instructions/comments and options.
Those instructions and related footnotes should be removed from the Covenant.

After Recording Return
Original Signed Covenant to: [1]
[ECOLOGY SITE MANAGER**]**
Toxics Cleanup Program
Department of Ecology
[ECOLOGY OFFICE ADDRESS**]**

NOTE: This Covenant is not valid without Ecology's approval and signature.

Environmental Covenant

(For MTCA Sites – August 20, 2015 Version)

Grantor: **City of Shelton**
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: **TR 43 OF NE NW S 45/68**
Tax Parcel Nos.: **42024-21-60430**
Cross Reference: **Agreed Order DE 19541**

RECITALS [2]

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW, and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as **Shelton C Street Landfill Site, Facility ID # 1186.** The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Soil	Dioxins/furans, carcinogenic polycyclic aromatic hydrocarbons, metals (barium, copper, lead, mercury, selenium, silver, zinc)
Groundwater	Metals (iron, and manganese)
Surface Water/Sediment	Not applicable

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. This includes the Remedial Investigation and Feasibility Study Report

[1] Some counties keep the original Covenant, others don't. If the signed original is available, it must be sent to Ecology. If the signed original is not available, send a legible copy to Ecology.
[2] This section is primarily used to describe this document and its purpose. It should not be used for substantive binding provisions.

(Aspect, 2021); Agreed Order No. DE 19541, including the Cleanup Action Plan; and the Construction Completion Report (Aspect, pending).

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq*. The rights of Ecology as an "agency" under UECA, other than its' right as a holder, are not an interest in real property.

COVENANT

The City of Shelton, as Grantor and fee simple owner of the Property, hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the Grantor has in the Property and run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Preservation of Reference Monuments. Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Land use. The Property shall not be used for residential purposes.

b. Containment of soil/waste materials. The remedial action for the Property is based on containing contaminated soils and solid waste under a low permeability soil cap. This soil cap is located as illustrated in Exhibit B. The purpose of this soil cap is to prevent direct contact and minimize infiltration of precipitation through the contaminated soils and solid waste.

Any activity on the Property that will compromise the integrity of the cap including drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the soil cap and report within thirty (30) days of the inspection the condition of the soil cap and any changes to the soil cap that would impair its performance.

c. Stormwater facilities. There are no existing stormwater facilities on the Property. Any future development of stormwater facilities is prohibited within the landfill boundary. Any future development of stormwater facilities outside the landfill boundary but within the parcel boundary requires written approval by the Grantee.

d. Vapor/gas controls. The residual contamination on the Property includes municipal solid waste that may generate methane, a combustible gas. No methane was observed during the RI/FS (Aspect, 2021). There are no existing structures and no existing vapor or gas controls on the Property.

Any future development of structures is prohibited within the landfill boundary. Any future development of structures outside the landfill boundary but within the parcel boundary requires written approval by the Grantee.

e. Groundwater use. The groundwater beneath the Property remains contaminated and shall not be extracted for any purpose other than monitoring. No new water wells may be installed on the Property due to the set-back restriction in Chapter 173-160-171 Washington Administrative Code (WAC) of 1,000 feet from the boundary of a landfill.

g. Monitoring. Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor, and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and

those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest in any part of the Property, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.[3]

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE MASON COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Notification procedure. Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal

[3] Ecology may waive this notice provision for some units at a property where the anticipated use is a multi-tenant/owner building where some owners or tenants are unlikely to be exposed to residual contamination. For example: upper story apartments or condominiums, or commercial tenants in a strip mall, with limited rights to use the grounds under and around the building (such as for parking).

If Ecology agrees to such a waiver, the circumstances of the waiver must be detailed in paragraph 4.a.i. In addition to the specific circumstances, this provision must include the following statement: "Waiver of this advance notice to Ecology for these transactions does not constitute waiver of this notice for the entire Property nor a waiver of the requirement in Section 4.a.ii. to include this notice in any document conveying interest in the Property."

delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

[insert contact name, address, phone number and e-mail for Grantor]	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. [4] For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site: [5]

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

c. **[*Optional*]** By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant. [6]

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

[4] Example of inconsistent uses are using the Property for a use not allowed under the covenant (i.e. mixed residential and commercial use on a property restricted to industrial uses), OR drilling a water supply well when use of the groundwater for water supply is prohibited by the covenant.
[5] An example of an activity that is unlikely to be considered a permanent modification is a proposal to disturb a cap to repair an existing underground utility that passes through the site. However, installing a new underground utility within a capped area would be a permanent change.
[6] As time passes, the original grantor and other signers of the Covenant may no longer exist as viable entities. This provision is intended to allow future amendments or termination of the Covenant without Ecology having to seek court authorization, as provided by RCW 64.70.100.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

[GRANTOR'S SIGNATURE BLOCK FOR ORIGINAL COVENANTS]

Each person who signs must have a separate signature block and applicable notary acknowledgment. Repeat as many times as necessary.

Holders of other property interests must either sign the amended Covenant as a GRANTOR or sign the subordination agreement in Exhibit D.

The undersigned Grantor warrants he/she holds the title **[to the Property] OR [to an (Easement/Right of Way/etc.) on the Property]** and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 20___.

_____ [SIGNATURE] _____

by: _____ [PRINTED NAME] _____

Title: _____

Insert one of the following, as applicable after each signature. See example format on page after next:

INDIVIDUAL ACKNOWLEDGMENT
CORPORATE ACKNOWLEDGMENT
REPRESENTATIVE ACKNOWLEDGEMENT

INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of Washington [7]
Residing at _____
My appointment expires _____

CORPORATE ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

_____
Notary Public in and for the State of Washington [15]
Residing at _____
My appointment expires _____

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the _____ [TYPE OF AUTHORITY] of _____ [NAME OF PARTY BEING REPRESENTED] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

_____
Notary Public in and for the State of Washington [15]
Residing at _____
My appointment expires _____

[7] Where landowner is located out of state, replace with appropriate out-of-state title and location.

[ECOLOGY'S SIGNATURE BLOCK]

The Department of Ecology**,** hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____ [SIGNATURE] _____

by: _____ [PRINTED NAME] _____

Title: _____

Dated: _____

STATE ACKNOWLEDGMENT

STATE OF _____

COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said state agency.

_____
Notary Public in and for the State of Washington

Residing at _____

My appointment expires _____

Exhibit A

LEGAL DESCRIPTION

(Required)

Exhibit B

PROPERTY MAP

(Required)

Exhibit C

MAP ILLUSTRATING LOCATION OF RESTRICTIONS

While a map illustrating the location of the restrictions is required, the grantor has the option of creating a separate map or including this information in Exhibit B.

More than one map may be necessary to illustrate the area subject to restrictions. For example, the area encompassing a soil cap may be different than the area where vapor or groundwater contamination is a concern.

The area subject to the restrictions, if less than the entire property, should be a contiguous area with even boundaries that follow physical features on the site so the boundary can be easily discerned in the field.

Exhibit D

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That __ [HOLDER'S NAME] __, the owner and holder of that certain __[INSTRUMENT – E.G. EASEMENT/ROW/MORTGAGE/ETC.]__ bearing the date the _____ day of __[MONTH]__, __ [YEAR] __, executed by __[NAME OF PERSON THAT GRANTED THE INTEREST BEING SUBORDINATED] __, __[LEGAL STATUS OF ORIGINAL GRANTOR – E.G. LANDOWNER, CORPORATE OFFICER, ETC.]__, and recorded in the office of the County Auditor of __[COUNTY]__ County, State of Washington, on __[DATE]__, under Auditor's File Number _____, does hereby agree that said Instrument shall be subordinate to the interest of the State of Washington, Department of Ecology, under the environmental (restrictive) covenant dated __[DATE]__, executed by __[NAME OF PERSON SIGNING THIS SUBORDINATION AGREEMENT]__, and recorded in __[COUNTY]__ County, Washington under Auditor's File Number _____.

_____ [SIGNATURE] _____

by: _____ [PRINTED NAME] _____

Title: _____

Dated: _____

Insert one of the following, as applicable. See example format on next page:

INDIVIDUAL ACKNOWLEDGMENT
CORPORATE ACKNOWLEDGMENT
REPRESENTATIVE ACKNOWLEDGEMENT

INDIVIDUAL ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of Washington [8]
Residing at _____
My appointment expires _____

CORPORATE ACKNOWLEDGMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** is the _____ of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said corporation.

_____
Notary Public in and for the State of Washington [16]
Residing at _____
My appointment expires _____

REPRESENTATIVE ACKNOWLEDGEMENT

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20__, I certify that _____ personally appeared before me, acknowledged that **he/she** signed this instrument, on oath stated that **he/she** was authorized to execute this instrument, and acknowledged it as the _____ [TYPE OF AUTHORITY] of _____ [NAME OF PARTY BEING REPRESENTED] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

_____
Notary Public in and for the State of Washington [16]
Residing at _____
My appointment expires _____

[8] Where landowner is located out of state, replace with appropriate out-of-state title and location.

APPENDIX 1

EXAMPLE SITE-SPECIFIC COVENANT PROVISIONS

a. Land Use. [9]

Option 1 Industrial Land Use: The remedial action for the Property is based on a cleanup designed for industrial property. As such, the Property shall be used in perpetuity only for industrial uses, as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, growing of food crops, and non-industrial commercial uses.

Option 2 Commercial Land Use: The remedial action for the Property is based on a cleanup designed for commercial property. As such, the Property shall be used in perpetuity only for commercial land uses as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, and growing of food crops.

Option 3 Park: The remedial action for the Property is based on a cleanup designed for a public park. As such, the Property shall be used in perpetuity only for a public park. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, grazing of animals, and growing of food crops.

Option 4 [Specify other land use limitations as appropriate.]

b. Containment of Soil/Waste Materials. [10]

[Use where contaminated soil or solid or hazardous waste remains on the property.]

The remedial action for the Property is based on containing contaminated soil **[and waste materials]** under a cap consisting of **[Insert a description of the cap]** [11] and located as illustrated in **[Exhibit B/C]** [12]. The primary purpose of this cap is to **[Insert purpose of cap].** [13] As such, the following restrictions shall apply within the area illustrated in **[Exhibit B/C]** [14]:

Option 1 [Use where a cap is required.] Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

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[9] Use one of these restrictions only if the underlying zoning allows the use.
[10] Waste materials means solid wastes as defined in Chapter 70.95 RCW or hazardous wastes as defined in Chapter 70.105 RCW and the rules promulgated under these statutes.
[11] Such as: an X foot thick layer of clean soil; an engineered cap consisting of X inches of clean soil overlying a X mil thick geomembrane and/or clay layer; asphalt pavement; an X square foot building, etc.]
[12] Be very clear in describing or diagramming where the contamination is located relative to a legally defined benchmark such as a property line or survey monument; or use a legal description.
[13] Such as: minimize the potential for contact with contaminated soil; minimize leaching of contaminants to groundwater and surface water; prevent runoff from contacting contaminated soil; minimize airborne contaminants. A cap may have multiple purposes.
[14] NOTE: More than one exhibit may be necessary to illustrate the area restricted by this and other limitations.

Option 2 [Use when contamination is left behind under a building.]

The Grantor shall not alter or remove the existing structures on the Property in any manner that would expose contaminated soil **[and waste materials]**, result in a release to the environment of contaminants, or create a new exposure pathway, without prior written approval of Ecology. Should the Grantor propose to remove all or a portion of the existing structures illustrated in **[Exhibit B/C]** so that access to the underlying contamination is feasible, Ecology may require treatment or removal of the underlying contaminated soil **[and waste materials]**.

Option 3: [Use when periodic inspections of a cap/building are included.]

The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the **[cap/building]** and report within thirty (30) days of the inspection the condition of the **[cap/building]** and any changes to the **[cap/building]** that would impair its performance.

c. Stormwater facilities. [Use when infiltration needs to be controlled to minimize leaching from soil or waste materials, or spreading of groundwater contamination.]

To minimize the potential for mobilization of contaminants remaining in the **[soil/waste materials/groundwater]** on the Property, no stormwater infiltration facilities or ponds shall be constructed **[on the Property] OR [within the area of the Property illustrated in Exhibit B/C]**. All stormwater catch basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction.[15]

d. Vapor/gas controls. [Use when vapors and/or methane gas are a concern. An example of when this provision would be appropriate is if a soil cap or a groundwater conditional point of compliance are being used to address volatile contaminants remaining on the property.]

The residual contamination on the Property includes **[volatile chemicals that may generate harmful vapors] and/or [biodegradable wastes/chemicals that may generate methane, a combustible gas]**. As such, the following restrictions shall apply **[on the Property]** or **[within the area of the Property illustrated in Exhibit B/C]** to minimize the potential for exposure to these vapors:

1. No building or other enclosed structure shall be constructed **[on the Property/within this area]** unless approved by Ecology.
2. If a building or other enclosed structure is approved, it shall be constructed with a sealed foundation and a **[vapor/gas]** control system that is operated and maintained to prevent the migration of **[vapors/gas]** into the building or structure, unless an alternative approach is approved by Ecology.

e. Groundwater Use. [Use when groundwater use restrictions are required.]

The groundwater beneath **[the Property] OR [within the area of the Property illustrated in Exhibit B/C]** remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted **[from the**

[15] NOTE: Most local ordinances require on-site infiltration of runoff. If redevelopment of the Property is anticipated, the cleanup plan should reserve an area for this infiltration to occur without exacerbating leaching of residual soil contamination or enhancing movement of contaminants within the groundwater.

Property/within this area] for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

f. Sediments. [Use for sediment cleanup sites.] [16]

The residual contamination on the Property includes contaminated sediments. As such, the following restrictions shall apply to minimize potential disturbance of these sediments **[on the Property] OR [within the area of the Property illustrated in Exhibit B/C]**:

Option 1 [Use where a cap is required.] Any activity **[on the Property/within this area]** that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; excavation; installation of buried utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Option 2 No docks or other structures shall be constructed **[on the Property/within this area]** without prior written approval of Ecology.

Option 3 No dredging shall be allowed **[on the Property/within this area]** without prior written approval of Ecology.

Option 4 No ships or boats shall be allowed to anchor or use side thrusters **[on the Property/within this area]**. A no wake zone shall be enforced and ships and boats shall be limited to a draft depth of **[XX]** feet **[on the Property/within this area]**.

Option 5 No digging for clams, setting of crab pots or fishing nets, anchoring of mooring buoys or channel markers, or similar activities that could disturb the surface of the sediment shall be allowed **[on the Property/within this area]** without prior written approval of Ecology.

g. Monitoring. [Use for long-term protection of monitoring devices.]

Several **[groundwater monitoring wells, vapor probes, etc.]** are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

h. Other.

[Add other property-specific use or activity restrictions and affirmative obligations that are necessary but not identified above. Examples include special remedy-specific requirements such as restrictions on structures over leachate/groundwater collection systems, or protection requirements for cut-off walls or sheet piling.]

[16] NOTE: Sediment restrictions are currently evolving. Additional guidance can be found in Ecology's Sediment Cleanup Users Manual II (SCUM II), Publication No. 12-09-057, located at: https://fortress.wa.gov/ecy/publications/SummaryPages/1209057.html

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APPENDIX D

Engineered Design Drawings

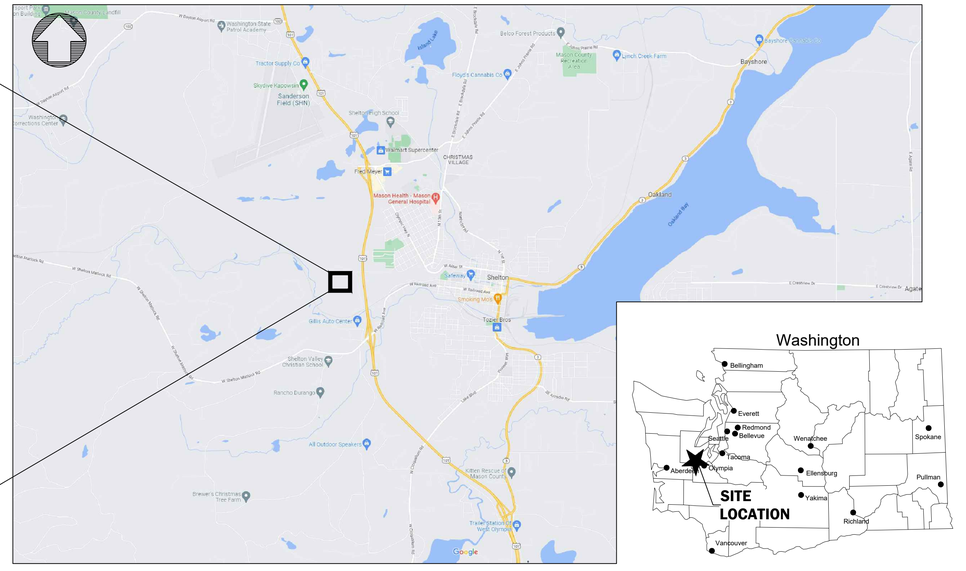
CLEANUP ACTION CONSTRUCTION PLANS

SHELTON C STREET LANDFILL

SHELTON, WASHINGTON

VICINITY MAP (BING)

0 1000 2000 Feet



LOCATION MAP (GOOGLE)

0 4000 8000 Feet

CALL 2 WORKING DAYS BEFORE YOU DIG: 811 (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

ENGINEER:
ASPECT CONSULTING, LLC
710 SECOND AVE, SUITE 550 SEATTLE, WA 98104
ATTN: SAM ADLINGTON, P.E.
206-413-5404

PROPERTY OWNER AND LEGAL DESCRIPTION

ADDRESS: 525 W COTA ST
OWNER: CITY OF SHELTON, WASHINGTON
SEC-TWN-RNG-QTR: SEC 24, TWP 20, RNG 4W (NE-NW/4)

LEGAL DESCRIPTION: *TR43 OF NE NW 45/68*

MASON COUNTY PARCEL NO.: 42024-21-60430
LOT AREA SQUARE FOOTAGE: 713,994 SQFT
BUILDING FOOTPRINT SQUARE FOOTAGE: 0 SQFT

BASIS OF SURVEY

SURVEY COMPLETED BY: PLS, INC., ISSAQUAH, WASHINGTON, 10/13/2017.

HORIZONTAL DATUM: NAD 83/2011, WASHING CCOORDINATE SYSTEM, SOUTH ZONE.

VERTICAL DATUM: NAVD 88 WSDOT BENCHMARK "SLEETH" MONUMENT I.D. 49268, PUBLISHED ELEVATION 107.04'.

SAMUEL E. ADLINGTON STATE OF WASHINGTON 53161 REGISTERED PROFESSIONAL ENGINEER

07/08/2022

REV	DESCRIPTION	DATE	APPR
1	ISSUED FOR REVIEW	7/8/2022	.
2	ECOLOGY COMMENTS	6/9/2022	.

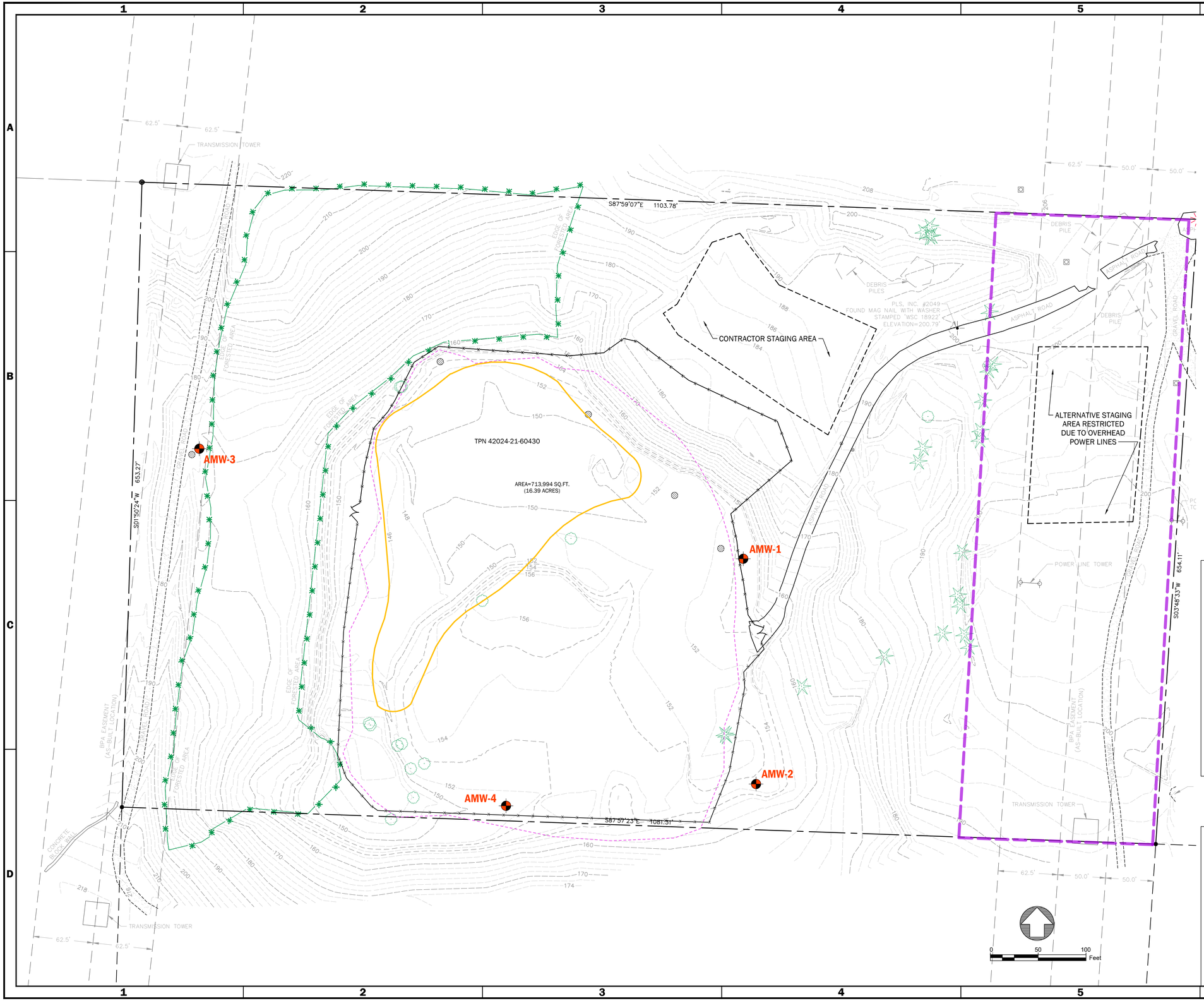
DESIGNED BY: SEA
DRAWN BY: CMV/SCC
REVISED BY: BMG

PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

Aspect CONSULTING

COVER, LOCATION MAP, AND DRAWING INDEX
CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
G-01
SHEET **1** *OF* **10**



SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53481
REGISTERED
PROFESSIONAL ENGINEER

07/08/2022

REV	DESCRIPTION	DATE	APPR.
1	ECOLOGY COMMENTS	6/9/2022	.
2	ISSUED FOR REVIEW	7/8/2022	.

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: .
DATE: 7/11/2022

Aspect CONSULTING

EXISTING SITE PLAN

CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:

G-02

SHEET **2** *OF* **10**

GENERAL INFORMATION:

1. THE WORK DESCRIBED HEREIN IS CONDUCTED UNDER THE DIRECTION OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY IN ACCORDANCE WITH THE MODEL TOXICS CONTROL ACT (MTCA; WAC 173-340).
2. THE WORK IS BEING COMPLETED TO MITIGATE RISK TO HUMAN HEALTH AND THE ENVIRONMENT ATTRIBUTABLE TO THE PRESENCE OF SOLID MUNICIPAL LANDFILL WASTE AND CONTAMINATED SOIL AND GROUNDWATER AT THE FORMER C STREET LANDFILL.
3. THE WORK WILL INCLUDE CLEARING AND GRUBBING, CONSOLIDATION OF SOLID WASTE THAT IS LOCATED BEYOND THE PROPERTY BOUNDARY, GRADING AND INSTALLATION OF A LOW-PERMEABILITY SOIL CAP, AND INSTALLATION OF FENCING AROUND THE FORMER LANDFILL.

CITY OF SHELTON WASHINGTON GENERAL NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT CITY OF SHELTON STANDARDS AND THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
2. ALL SAFETY STANDARDS AND REQUIREMENTS SHALL BE COMPLIED WITH AS SET FORTH BY OSHA, WISHA, AND THE WASHINGTON STATE DEPARTMENT OF LABOR AND INDUSTRIES.
3. ALL WORK IN THE CITY REQUIRES A CITY OF SHELTON BUSINESS LICENSE.
4. PRIOR TO WORKING WITHIN THE CITY RIGHT-OF-WAY OR ON CITY PROPERTY, THE CONTRACTOR MUST OBTAIN A CITY OF SHELTON RIGHT-OF-WAY PERMIT. ALL CONTRACTORS SHALL BE LICENSED AND BONDED IN THE STATE OF WASHINGTON. PROPONENT SHALL COMPLY WITH ALL OTHER PERMITS AND OTHER REQUIREMENTS OF THE GOVERNING AUTHORITY OR AGENCY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF THE RIGHT-OF-WAY.
5. A PRE-CONSTRUCTION MEETING WITH THE CITY OF SHELTON IS REQUIRED. THE MEETING SHALL BE SCHEDULED A MINIMUM OF TWO (2) DAYS BEFORE THE START OF CONSTRUCTION. CONTACT THE CITY ENGINEERING DEPARTMENT AT (360) 426-9731 TO SCHEDULE.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF HIS/HER SCHEDULE. INSPECTION BY CITY PERSONNEL SHALL BE DURING CITY WORK HOURS. CITY INSPECTION HOURS ARE 8:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS. THE PROPONENT MUST GIVE THE CITY A MINIMUM OF 24-HOUR NOTICE FOR INSPECTIONS. NO TRENCHING ON PUBLIC RIGHT-OF-WAY AFTER 4:00 PM UNLESS OTHERWISE APPROVED BY THE CITY. OTHER WORK SUCH AS BACKFILLING, CLEANUP, ETC., OR AS APPROVED BY THE CITY IS ACCEPTABLE IF 24 HOURS' PRIOR NOTICE IS PROVIDED TO THE CITY.
7. TEMPORARY EROSION/WATER POLLUTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH SECTION 1-07.15 OF THE WSDOT/APWA STANDARD SPECIFICATIONS THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN, AND THE SHELTON MUNICIPAL CODE.

   AT NO TIME WILL SILTS AND DEBRIS BE ALLOWED TO DRAIN INTO AN EXISTING OR NEWLY INSTALLED STORM WATER FACILITY OR ONTO ADJACENT ROADS OR PROPERTIES. THE CONTRACTOR SHALL NOT RELEASE STORM WATER TO THE SANITARY SEWER SYSTEM. ALL EROSION CONTROL AND WATER POLLUTION PREVENTION MEASURES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL EMERGENCY SERVICES (FIRE, POLICE, ETC.) IF STREETS OR OTHER ACCESSES ARE OBSTRUCTED. WITHIN THE CITY OF SHELTON, DISPATCH AT (360) 426-4441 WILL NOTIFY POLICE AND AMBULANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE SHELTON FIRE DEPARTMENT.

   THE FOLLOWING ARE TELEPHONE NUMBERS THE CONTRACTOR MAY NEED. THESE ARE PROVIDED FOR CONVENIENCE ONLY AND ARE SUBJECT TO CHANGE WITHOUT NOTICE.

CITY SHOP	(360) 432-5189
CITY ENGINEERING	(360) 426-9731
CITY TREATMENT PLANT	(360) 426-6521
CITY HALL	(360) 426-4491
FIRE DEPARTMENT	(360) 426-5533
MASON TRANSIT AUTHORITY	(360) 427-5033
SHELTON SCHOOL DISTRICT	(360) 427-8610

9. THE CONTRACTOR SHALL NOTIFY AND WORK WITH ALL AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE THE CITY WITH EMERGENCY TELEPHONE NUMBERS AT THE PRECONSTRUCTION MEETING AND SHALL PROVIDE A FOREMAN ON SITE DURING ALL WORKING HOURS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND DEPARTMENT OF LABOR AND INDUSTRIES. PRIOR TO DISRUPTION OF ANY TRAFFIC, TRAFFIC CONTROL PLANS SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
11. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 OR 811 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO ANY EXCAVATIONS.
12. WATER, SEWER OR STORM SERVICE LINES BROKEN ON PRIVATE PROPERTY SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE (UPC) OR OTHER APPROPRIATE STANDARDS AND MAY REQUIRE A PERMIT, CONTACT THE CITY BUILDING OFFICIAL.

    CITY SERVICE LINES BROKEN IN THE CITY RIGHT-OF-WAY SHALL BE REPORTED TO THE CITY AND REPAIRED IMMEDIATELY BY THE CONTRACTOR. IF NOT REPAIRED WITHIN 24 HOURS, THE CITY WILL REPAIR AND THE CONTRACTOR WILL BE BILLED FOR THE REPAIR WORK ON A TIME AND MATERIALS BASIS FOR MARKED UTILITY LINES. REPORTS SHOULD BE DIRECTED TO (360) 432-5189 DURING REGULAR BUSINESS HOURS, OR (360) 426-4441 DURING NON-BUSINESS HOURS.
13. ALL UTILITIES SHALL BE STAKED FOR GRADES AND ALIGNMENT BY A LICENSED ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
14. SIGNED, APPROVED BLUEPRINTS SHALL BE ON SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED.
15. THE CONTRACTOR SHALL RESTORE WORK AREA TO SAME OR BETTER CONDITION UNLESS OTHERWISE APPROVED OR SPECIFIED.
16. ALL DISTURBED AREAS, OTHER THAN PAVEMENT AND ROCKED SURFACES, SHALL BE SEEDED AND MULCHED, OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY AND IN ACCORDANCE WITH THE STANDARDS. FOR SITES WHERE GRASS HAS BEEN PLANTED, THE PERFORMANCE AND/OR MAINTENANCE GUARANTEES WILL NOT BE RELEASED UNTIL THE GRASS HAS BEEN THOROUGHLY ESTABLISHED, UNLESS OTHERWISE APPROVED BY THE CITY.
17. IF EXISTING NATIVE MATERIAL IS DETERMINED BY THE CITY TO BE SUITABLE FOR BACKFILL, THE CONTRACTOR MAY USE THE NATIVE MATERIAL.
18. ALL ASPHALT RESTORATION SHALL BE AS SPECIFIED IN THE STANDARD DETAIL T-18 OR TO THE DEPTH OF THE EXISTING PAVEMENT, WHICHEVER IS GREATER. EXISTING ASPHALT EDGES SHALL BE SAW CUT TO A SMOOTH STRAIGHT EDGE PRIOR TO FINAL PATCHING, UNLESS OTHERWISE APPROVED BY THE CITY.
19. ALL CONCRETE RESTORATION SHALL BE SAW CUT TO A SMOOTH, STRAIGHT EDGE PRIOR TO FINAL PATCHING, UNLESS OTHERWISE APPROVED BY THE CITY. 3,000 PSI CONCRETE SHALL BE USED, AND SHALL BE POURED TO THE SAME DEPTH AND ALIGNMENT AS THE EXISTING PAVEMENT. THE CITY WILL REQUIRE DOWELING PER STANDARD DETAIL T-18.
20. ALL PERMANENT PATCHING SHALL BE ACCOMPLISHED WITHIN SEVEN (7) CALENDAR DAYS UNLESS OTHERWISE APPROVED BY THE CITY. ANY TEMPORARY PATCH THAT REQUIRES MORE THAN SEVEN (7) CALENDAR DAYS SHALL BE HOT MIX ASPHALT CONCRETE.

    TEMPORARY PATCHING SHALL BE 2-INCH DEPTH CLASS B ASPHALT CONCRETE PAVEMENT, 2-INCH MEDIUM CURING (MC-250) LIQUID ASPHALT (COLD MIX), 2-INCH ASPHALT TREATED BASE (ATB) OR STEEL PLATES.

    THE CONTRACTOR SHALL MAINTAIN THE PATCH. IF NOT PROPERLY MAINTAINED, THE CITY WILL PERFORM ANY NECESSARY REPAIR AND BILL THE CONTRACTOR.

CONSTRUCTION NOTES:

1. THE ENGINEER MAY INSPECT THE SITE AND THE CONTRACTOR'S WORK AT ANY TIME. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE ENGINEER AS THE OWNER'S REPRESENTATIVE FOR INSPECTION OF WORK.
2. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS DESCRIBED IN THE BID DOCUMENTS, TECHNICAL SPECIFICATIONS AND SHOWN ON THESE PLANS. AT NO TIME WILL SILTS AND DEBRIS BE ALLOWED TO MIGRATE ONTO ADJACENT ROADS OR PROPERTIES. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 OR 811 A MINIMUM OF TWO (2) BUSINESS DAYS PRIOR TO ANY EXCAVATIONS.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION, THE COORDINATION OF ALL WORK, AND THE SAFETY OF ITS PERSONNEL AT THE PROJECT SITE.
5. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS PRIOR TO STARTING AND SHALL NOTIFY ENGINEER IF THERE ARE DISCREPANCIES WITH THE PLANS.
6. EXCAVATION SLOPES SHALL BE SAFE AND NOT GREATER THAN THE LIMITS SPECIFIED BY LOCAL, STATE AND NATIONAL SAFETY REGULATIONS.
7. THE REQUIREMENTS OF THIS PLAN ARE THE MINIMUM REQUIREMENTS. THEY DO NOT REPLACE, REPEAL, ABROGATE, SUPERSEDE, OR AFFECT ANY OTHER MORE STRINGENT REQUIREMENTS, RULES, REGULATIONS, STANDARDS OR RESTRICTIONS.
8. GENERAL CONSTRUCTION SEQUENCE:

THE FOLLOWING IS THE ENGINEERS ANTICIPATED CONSTRUCTION SEQUENCE FOR THE WORK SHOWN IN THESE PLANS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH AN ANTICIPATED CONSTRUCTION SCHEDULE, INCLUDING SEQUENCE OF WORK, PRIOR TO THE START OF CONSTRUCTION. DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CHANGES TO SEQUENCE OR TIMING AND COORDINATE ANY REQUIRED INSPECTIONS, MATERIAL TESTING, OR VERIFICATIONS PRIOR TO PLACEMENT OF OVERLYING LAYERS.

   A. ALL CONSTRUCTION SURVEYING SHALL PROVIDED BY THE CONTRACTOR USING A WASHINGTON STATE LICENSED SURVEYOR.
   B. PROTECT EXISTING MONITORING WELLS DURING CONSTRUCTION TO THE MAXIMUM EXTENT PRACTICABLE. IF NOT PRACTICABLE TO PROTECT A WELL, CONTRACTOR SHALL DECOMMISSION THE WELL IN ACCORDANCE WITH WAC 173-160 AND NOTIFY THE PROJECT ENGINEER.
   C. CLEAR AND GRUB AREAS AS IDENTIFIED ON THE PLANS. STOCKPILE VEGETATION DEBRIS IN LOCATION APPROVED BY OWNER.
   D. THE ENGINEER WILL IDENTIFY SOLID WASTE LOCATED ON THE SOUTH-ADJACENT PROPERTY TO BE RELOCATED BY THE CONTRACTOR ONTO THE SUBJECT PROPERTY. DURING EXCAVATION THE ENGINEER AND THE CONTRACTOR SHALL USE VISUAL METHODS TO IDENTIFY AND SEGREGATE SOLID WASTE FROM NATIVE SOIL.
   E. BACKFILL THE SOLID WASTE CONSOLIDATION EXCAVATION WITH IMPORTED FOUNDATION LAYER SOILS AND COMPACT TO AT LEAST 90 PERCENT OF THE MATERIAL MAXIMUM DRY DENSITY PER ASTM D1557 AS DETERMINED BY THE ENGINEER.
   F. PLACE A GEOTEXTILE ISOLATION BARRIER PER IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTION TO THE LIMITS SHOWN ON SHEET C-01 AND SECURE PER THE ANCHOR DETAIL PROVIDED ON SHEET C-05.
   G. IMPORT AND PLACE LOW-PERMEABILITY COVER SOILS AND COMPACT TO MEET THE REQUIREMENTS OF WAC 173-304-4609(E), OR AT LEAST 95 PERCENT OF THE MATERIAL MAXIMUM DRY DENSITY PER ASTM D1557 AS DETERMINED BY THE ENGINEER.
   H. IMPORT AND PLACE VEGETATIVE TOP SOIL. IN LOOSE LIFTS. THE CONTRACTOR SHALL EXERCISE CAUTION TO NOT OVER COMPACT PLACE SOILS AS THIS MAY PREVENT THE ESTABLISHMENT OF VEGETATION.
   I. INSTALL PERIMETER FENCE AND GATES AS SHOWN ON SHEET C-03 AND SHEET C-06.
   J. PERFORM SITE RESTORATION. INCLUDING, BUT NOT LIMITED TO: REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROLS, HYDROSEEDING, AND ANY MISCELLANEOUS REMAINING SITE WORK. SEEDING, MULCHING, AND SITE RESTORATION PERFORMED BY THE CONTRACTOR MUST BE APPROVED BY THE CITY PRIOR TO ACCEPTANCE OF THE WORK.

9. SURVEYS WILL BE PERFORMED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR VERIFICATION OF BID QUANTITIES AND FOR VERIFICATION THAT WORK CONFORMS TO PLANS AND THE REQUIREMENTS OF WAC 173-304-4609(E).

SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53161
REGISTERED PROFESSIONAL ENGINEER
07/08/2022

REV.	DESCRIPTION	DATE	APPR.
1	ECOLOGY COMMENTS	6/9/2022	
2	ISSUED FOR REVIEW	7/8/2022	

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

Aspect CONSULTING

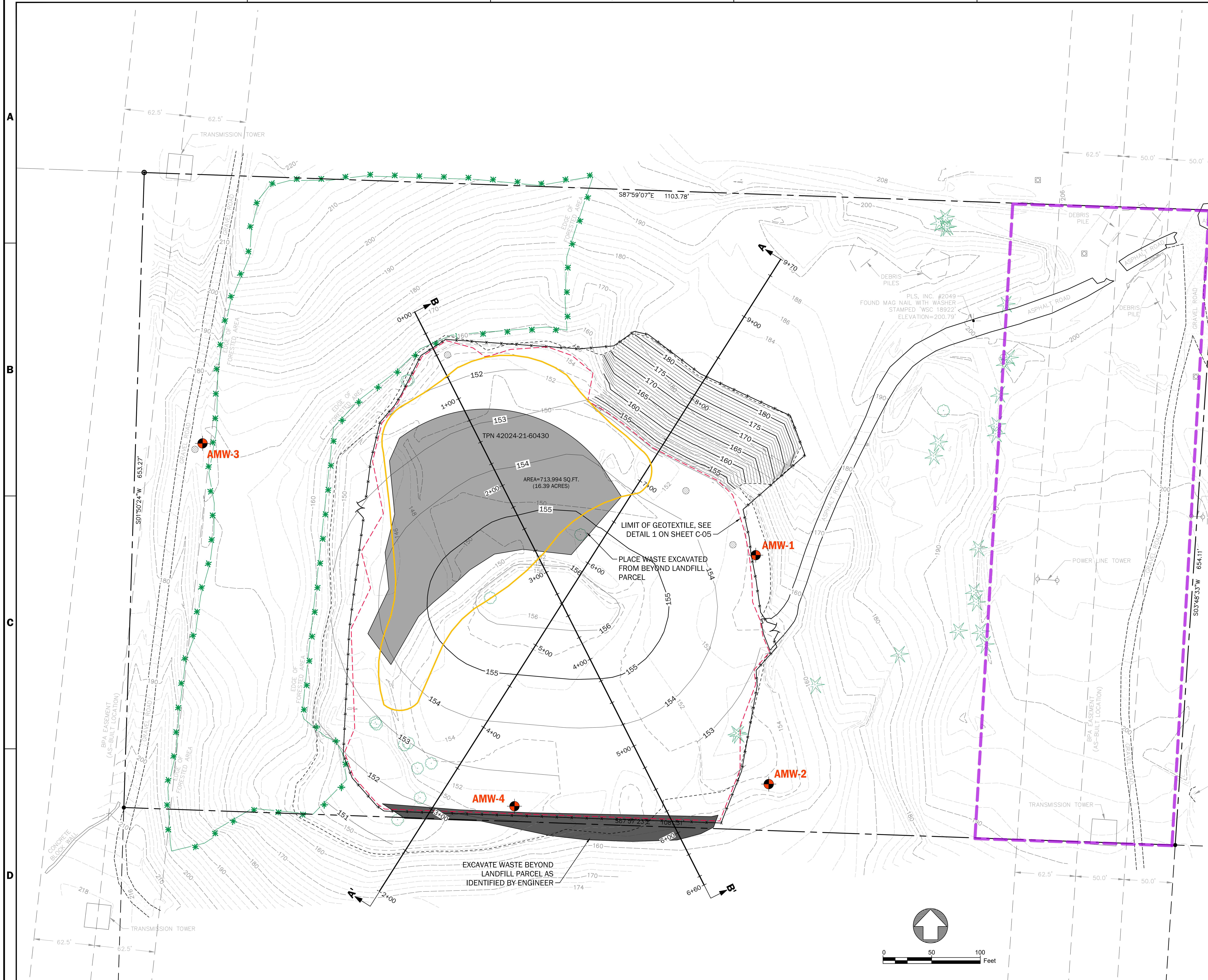
SPECIFICATIONS AND STANDARD NOTES

CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:

G-03

SHEET 3 OF 10



SURVEY LEGEND:

- FOUND MAG NAIL WITH WASHER
- FOUND IRON PIPE W/CAP STAMPED 'SLEETH'
- SET PK NAIL W/WASHER STAMPED 'KAP 49286'
- SET REBAR AND CAP STAMPED 'KAP 49286'
- TREE (CONIFEROUS) WITH TRUNK DIAMETER NOTED
- TREE (DECIDUOUS) WITH TRUNK DIAMETER NOTED
- BOLLARD
- GUY POLE
- UNDERGROUND GAS MARKER
- CONCRETE SURFACE
- GRAVEL SURFACE
- MONITORING WELL
- TPN TAX PARCEL NUMBER

LEGEND

- POINT OF COMPLIANCE GROUNDWATER MONITORING WELL
- PROPOSED GRADE CONTOURS
- LANDFILL PARCEL
- LIMIT OF GEOTEXTILE
- PROPOSED FENCE LOCATION
- LIMIT OF CLEAR, GRUB & DISTURBANCE
- 1986 SLUDGE DISPOSAL AREA
- FORESTED AREA BOUNDARY
- ELEVATION CONTOUR (2FT INTERVAL)
- TRANSMISSION LINE EASEMENT BOUNDARY
- WASTE BEYOND LANDFILL PARCEL
- EXCAVATED WASTE PLACEMENT LOCATION

SAMUEL E. ADLINGTON, STATE OF WASHINGTON, 53161, REGISTERED PROFESSIONAL ENGINEER
07/08/2022

REV.	DESCRIPTION	DATE	APPR.
2	ISSUED FOR REVIEW	7/8/2022	-
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REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

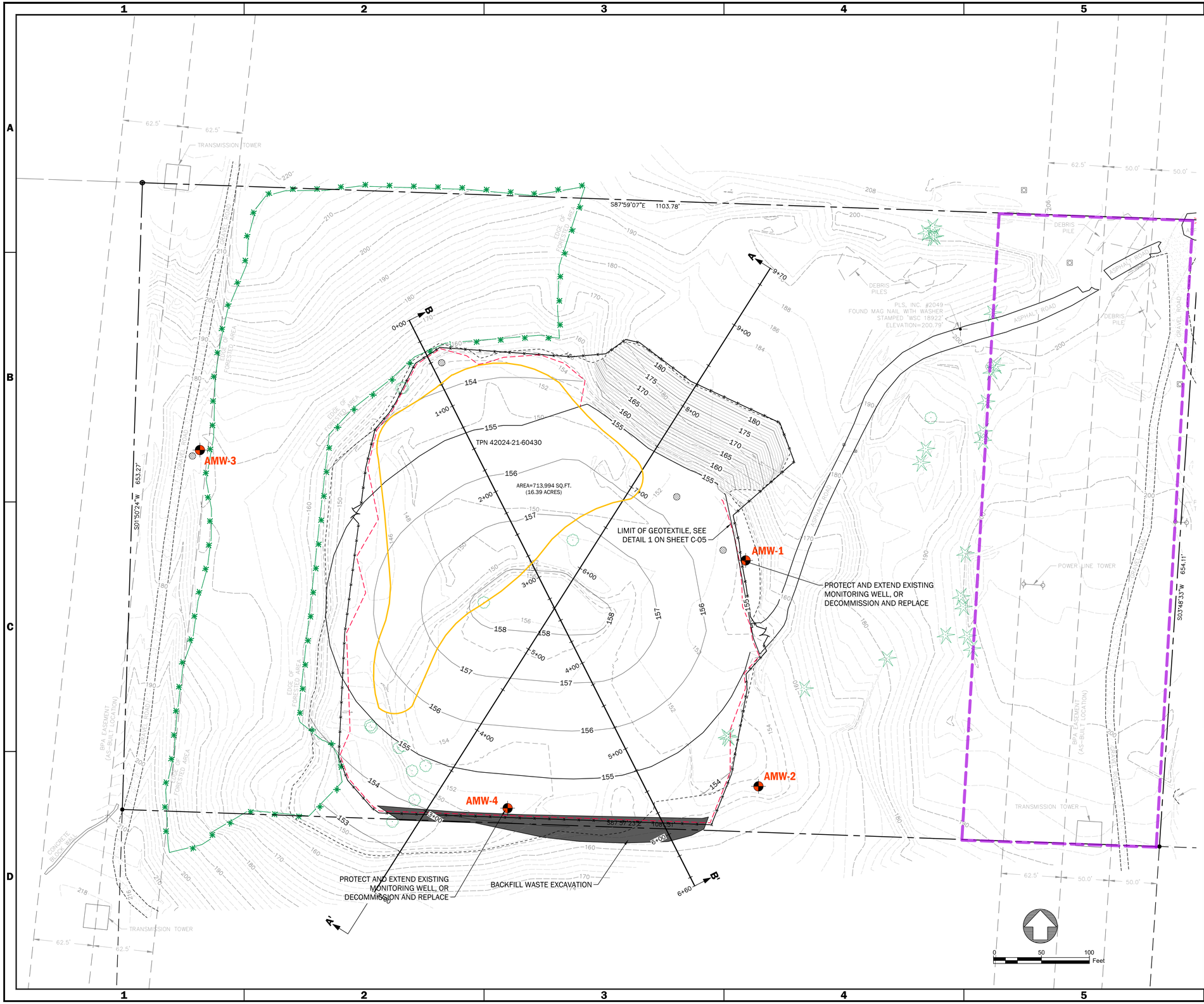
Aspect CONSULTING

FOUNDATION LAYER PLAN

CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
C-01
SHEET 4 OF 10

CAD Path: Q:\City of Shelton\150074 Shelton C Street Landfill\2022-01 Soil Cover Construction Plans\150074 Plan Set bmg REV 2.dwg : C-01 || Date Saved: 7/7/2022 2:52:30 PM || User: cvanslyke



SURVEY LEGEND:

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- SET PK NAIL W/WASHER STAMPED 'KAP 49286'
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- TREE (DECIDUOUS) WITH TRUNK DIAMETER NOTED
- BOLLARD
- GUY POLE
- UNDERGROUND GAS MARKER
- CONCRETE SURFACE
- GRAVEL SURFACE
- MONITORING WELL
- TPN TAX PARCEL NUMBER

LEGEND

- POINT OF COMPLIANCE GROUNDWATER MONITORING WELL
- 60 PROPOSED GRADE CONTOURS
- LANDFILL PARCEL
- LIMIT OF GEOTEXTILE
- PROPOSED FENCE LOCATION
- LIMIT OF CLEAR, GRUB & DISTURBANCE
- 1986 SLUDGE DISPOSAL AREA
- FORESTED AREA BOUNDARY
- ELEVATION CONTOUR (2FT INTERVAL)
- TRANSMISSION LINE EASEMENT BOUNDARY
- BACKFILL EXCAVATED WASTE AREA

SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53481
REGISTERED
PROFESSIONAL ENGINEER

07/08/2022

REV.	DESCRIPTION	DATE	APPR.
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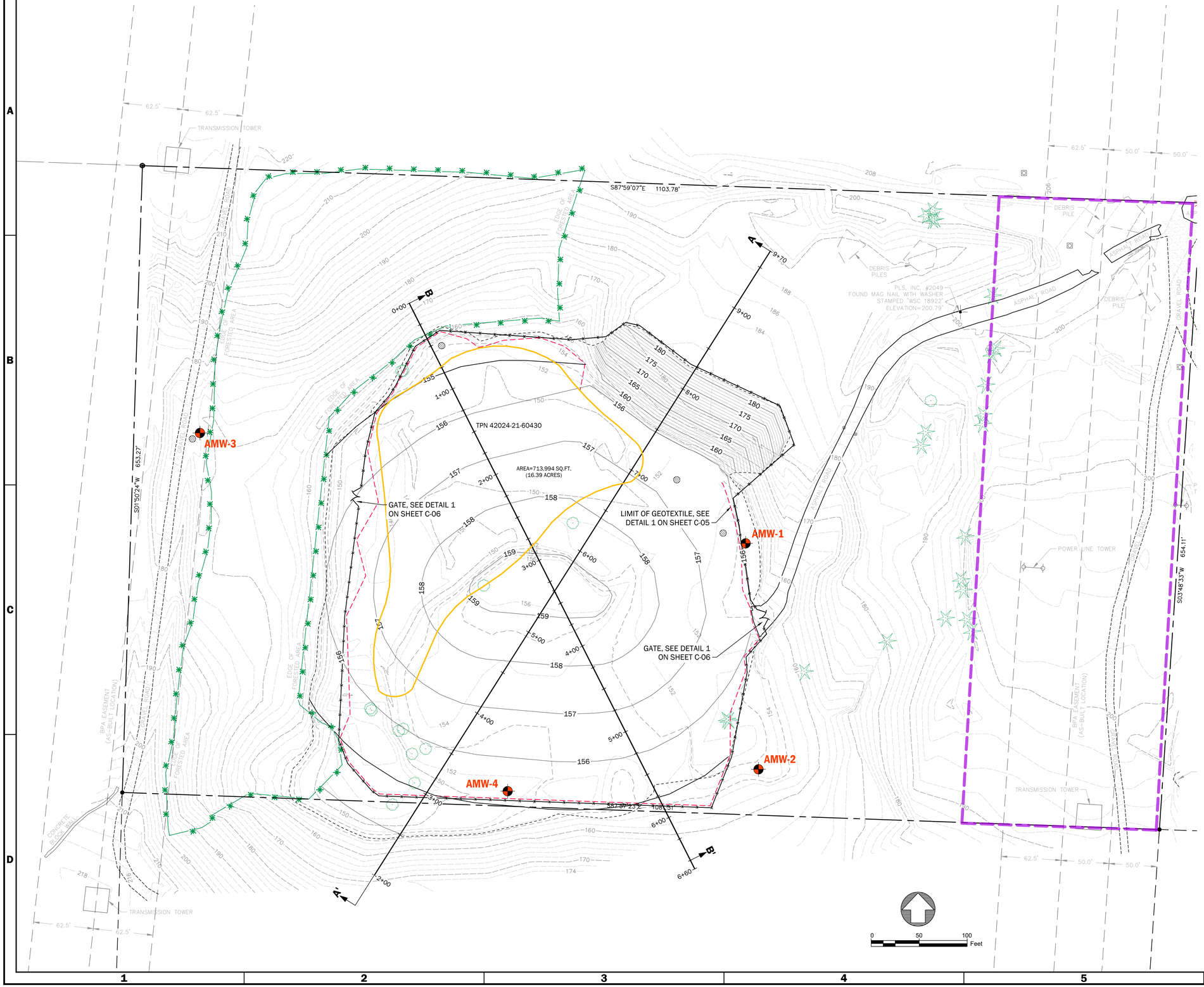
REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

Aspect CONSULTING

SOIL CAP PLAN

CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
C-02
SHEET **5** *OF* **10**



SURVEY LEGEND:

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- UNDERGROUND GAS MARKER
- CONCRETE SURFACE
- GRAVEL SURFACE
- MONITORING WELL
- TPN TAX PARCEL NUMBER

LEGEND

- POINT OF COMPLIANCE GROUNDWATER MONITORING WELL
- 60 PROPOSED GRADE CONTOURS
- LANDFILL PARCEL
- LIMIT OF GEOTEXTILE
- PROPOSED FENCE LOCATION
- LIMIT OF CLEAR, GRUB & DISTURBANCE
- 1986 SLUDGE DISPOSAL AREA
- FORESTED AREA BOUNDARY
- ELEVATION CONTOUR (2FT INTERVAL)
- TRANSMISSION LINE EASEMENT BOUNDARY

SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53481
REGISTERED
PROFESSIONAL ENGINEER

07/08/2022

REV.	DESCRIPTION	DATE	APPR.
2	ISSUED FOR REVIEW	7/8/2022	-
1	ECOLOGY COMMENTS	6/9/2022	-

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

Aspect CONSULTING

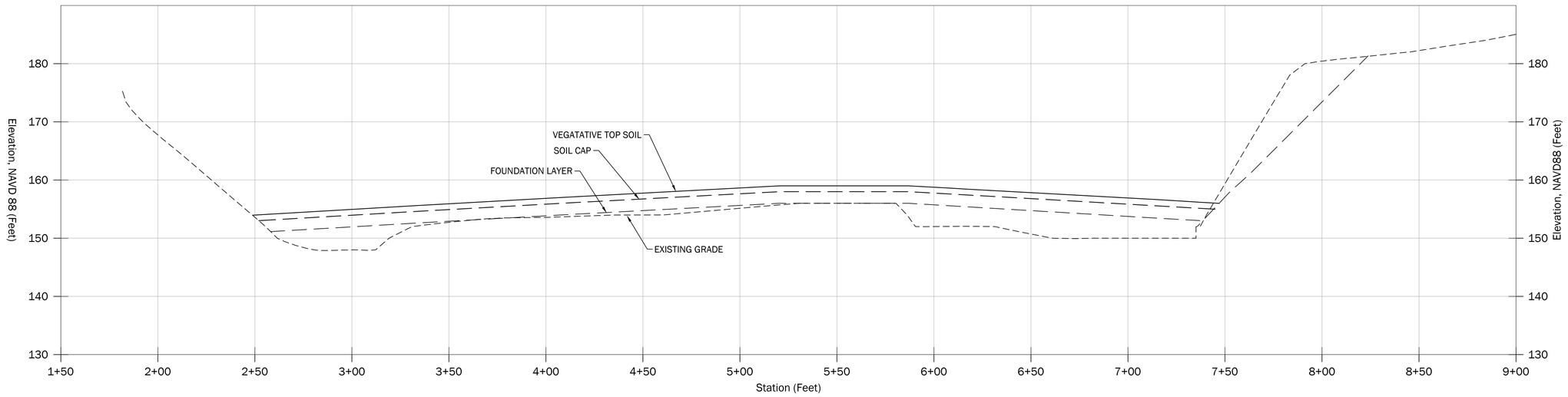
VEGETATIVE TOP SOIL PLAN

CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:

C-03

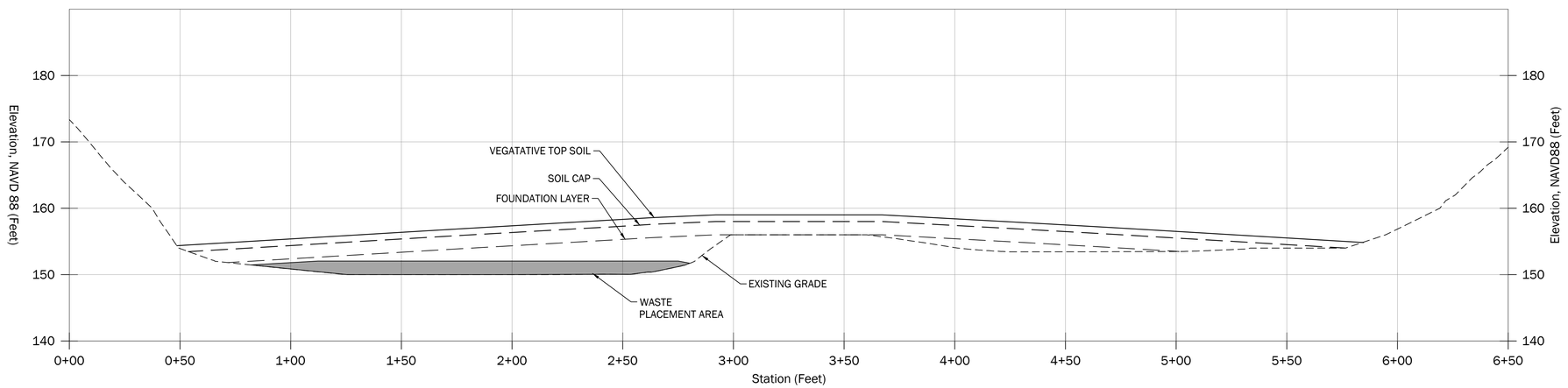
SHEET **6** *OF* **10**



CROSS SECTION A-A (1 / C-04)
SCALE: NOTED

0 30 60 Feet
0 10 20 Feet

Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 10'
Vertical Exaggeration 3x



CROSS SECTION B-B (2 / C-04)
SCALE: NOTED

0 30 60 Feet
0 10 20 Feet

Horizontal Scale: 1" = 30'
Vertical Scale: 1" = 10'
Vertical Exaggeration 3x

SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53161
PROFESSIONAL ENGINEER
07/08/2022

REV.	DESCRIPTION	DATE	APPR.
2	ISSUED FOR REVIEW	7/8/2022	-
1	ECOLOGY COMMENTS	6/9/2022	-

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

Aspect CONSULTING

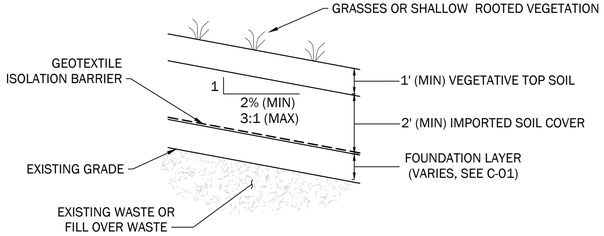
CROSS SECTIONS
CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
C-04
SHEET **7** *OF* **10**

C:\Aspect Q:\City of Shelton\150074 Shelton C Street Landfill\2022-01 Soil Cover Construction Plans\150074 Plan Set.dwg REV 2.dwg C-04 11 Date Saved: 7/7/2022 2:52:30 PM 11 User: cvanpelt

NOTE:

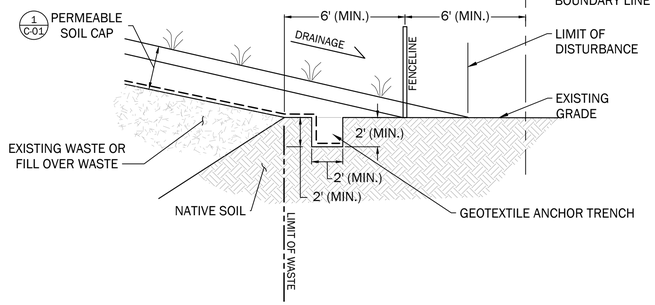
THE GRADE OF SURFACE SLOPES SHALL NOT BE LESS THAN TWO PERCENT, NOR MORE THAN THIRTY-THREE PERCENT.



PERMEABLE SOIL CAP 1 C-05
NTS

NOTE:

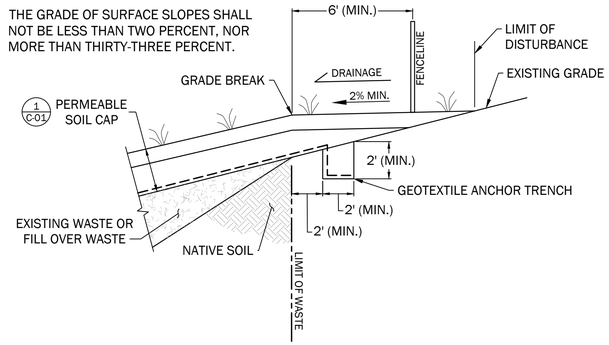
THE GRADE OF SURFACE SLOPES SHALL NOT BE LESS THAN TWO PERCENT, NOR MORE THAN THIRTY-THREE PERCENT.



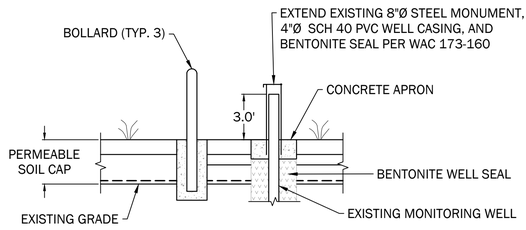
GEOTEXTILE ANCHOR TRENCH - TYPE 1 2 C-05
NTS

NOTE:

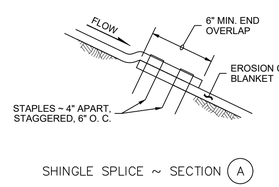
THE GRADE OF SURFACE SLOPES SHALL NOT BE LESS THAN TWO PERCENT, NOR MORE THAN THIRTY-THREE PERCENT.



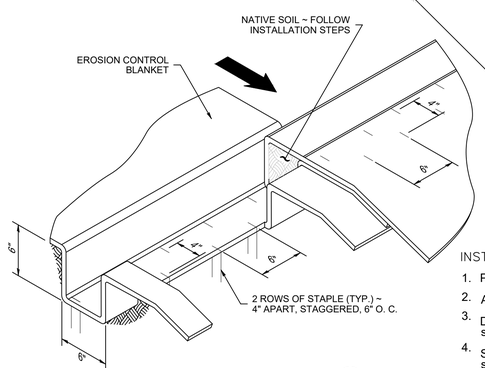
GEOTEXTILE ANCHOR TRENCH - TYPE 2 3 C-05
NTS



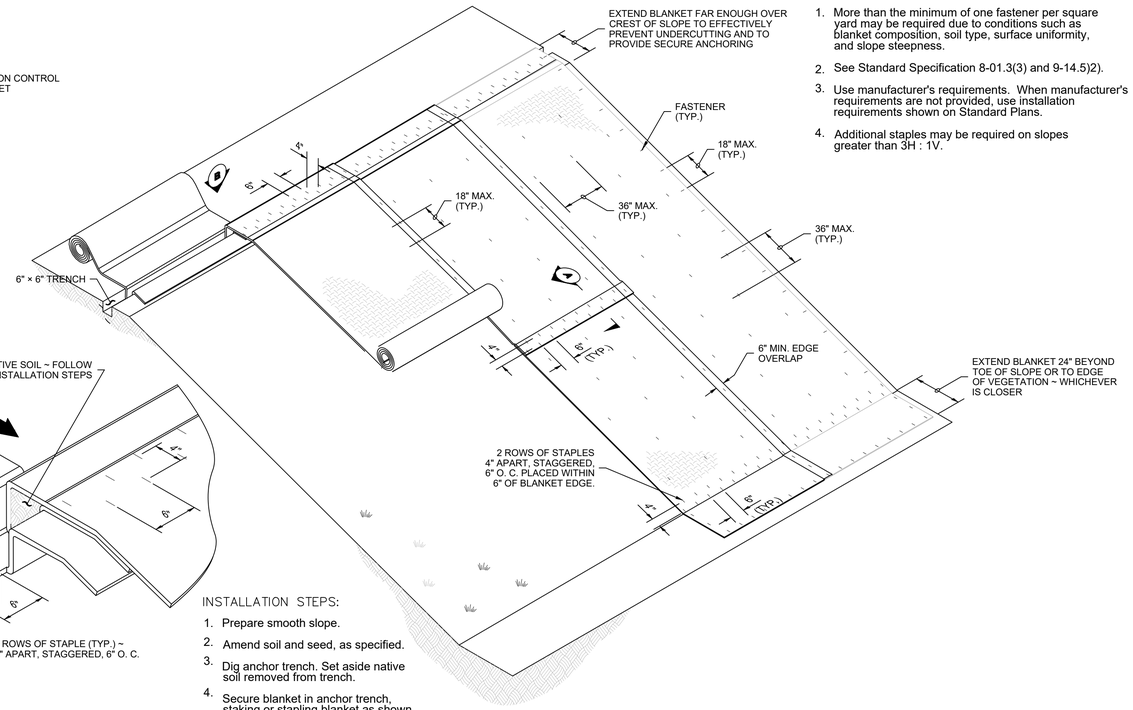
MONITORING WELL PROTECTION 4 C-05
NTS



SHINGLE SPLICE ~ SECTION A



INITIAL ANCHOR ~ DETAIL B



ISOMETRIC VIEW

NOTES

1. More than the minimum of one fastener per square yard may be required due to conditions such as blanket composition, soil type, surface uniformity, and slope steepness.
2. See Standard Specification 8-01.3(3) and 9-14.5)2).
3. Use manufacturer's requirements. When manufacturer's requirements are not provided, use installation requirements shown on Standard Plans.
4. Additional staples may be required on slopes greater than 3H : 1V.

INSTALLATION STEPS:

1. Prepare smooth slope.
2. Amend soil and seed, as specified.
3. Dig anchor trench. Set aside native soil removed from trench.
4. Secure blanket in anchor trench, staking or stapling blanket as shown.
5. Replace native soil previously removed from trench.
6. Roll blanket down the slope in a controlled manner, taking care to remove excess slack, and taking care not to stretch blanket.
7. Stake or staple blanket as shown so there are no gaps between the blanket and the soil. Staple while unrolling blanket to minimize walking on blanket.

GEOTEXTILE BLANKET PLACEMENT FOR SLOPES 5 C-05
NTS

SAMUEL E. ADLINGTON STATE OF WASHINGTON 53481 REGISTERED PROFESSIONAL ENGINEER

07/08/2022

REV	DESCRIPTION	DATE	APPR
2	ISSUED FOR REVIEW	7/8/2022	.
1	ECOLOGY COMMENTS	6/9/2022	.

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA

Aspect CONSULTING

PROJECT NUMBER: 150074
REVISION: .
DATE: 7/11/2022

DETAILS

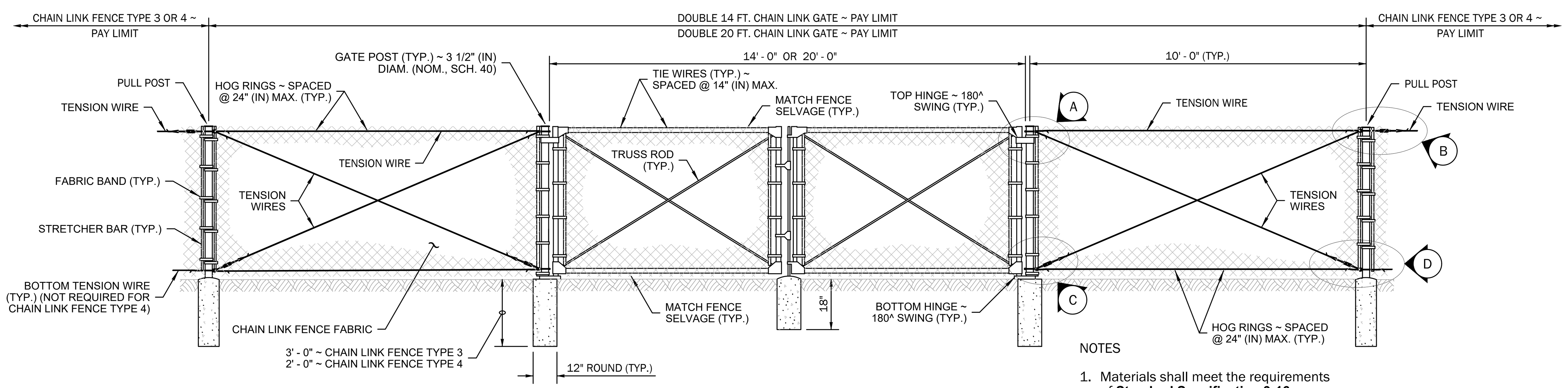
CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:

C-05

SHEET **8** *OF* **10**

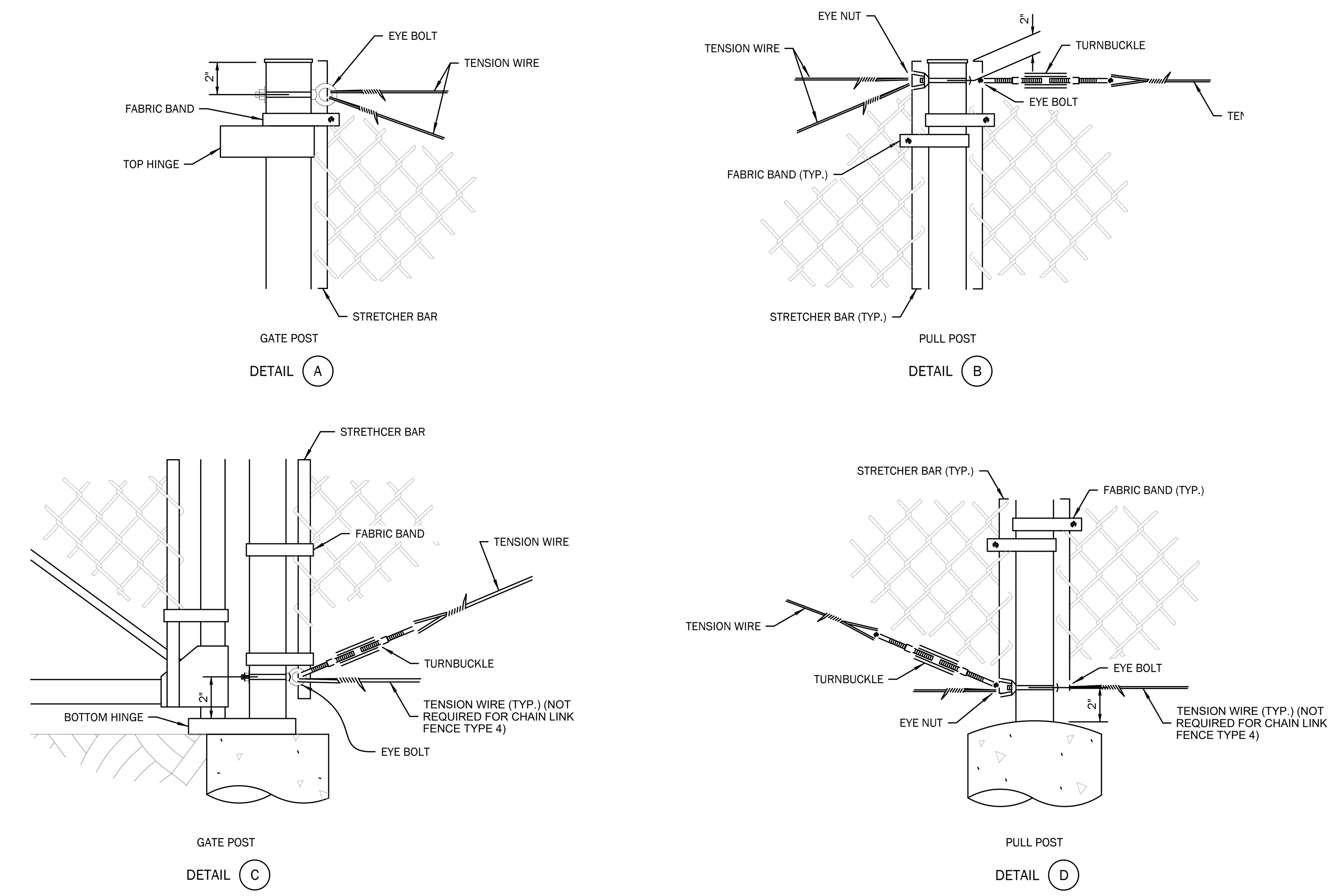
CAD Path: Q:\City of Shelton\150074 Shelton C Street Landfill\2022-01 Soil Cover Construction Plans\150074 Plan Set.dwg REV 2.dwg C-05 | | Date Saved: 7/7/2022 2:52:30 PM | | User: cvanslyke



NOTES

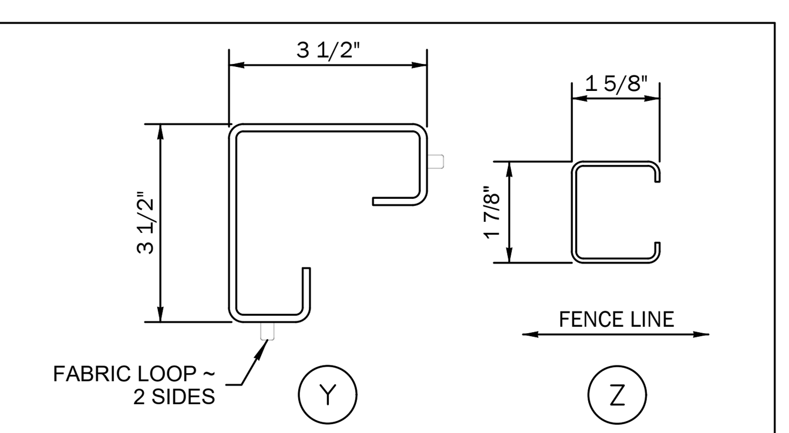
1. Materials shall meet the requirements of **Standard Specification 9-16**.

DOUBLE GATE DETAIL 1 / C-06
NTS



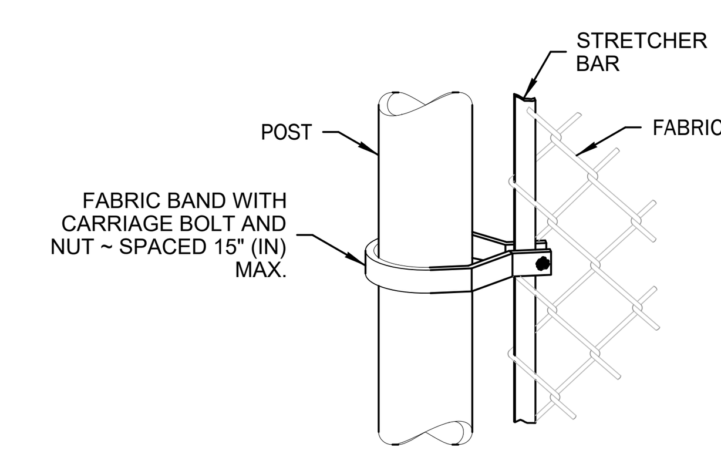
GATE POST CONNECTION DETAILS 2 / C-06
NTS

POST AND RAIL SPECIFICATIONS			
POST	PIPE	ROLL FORMED	
	NOM. SIZE (SCH. 40) I.D.	SECTION	WEIGHT (lb/ft)
END, CORNER, OR PULL POST	2 1/2" DIAM.	Y	5.10
LINE OR BRACE POST	2" DIAM.	Z	1.85

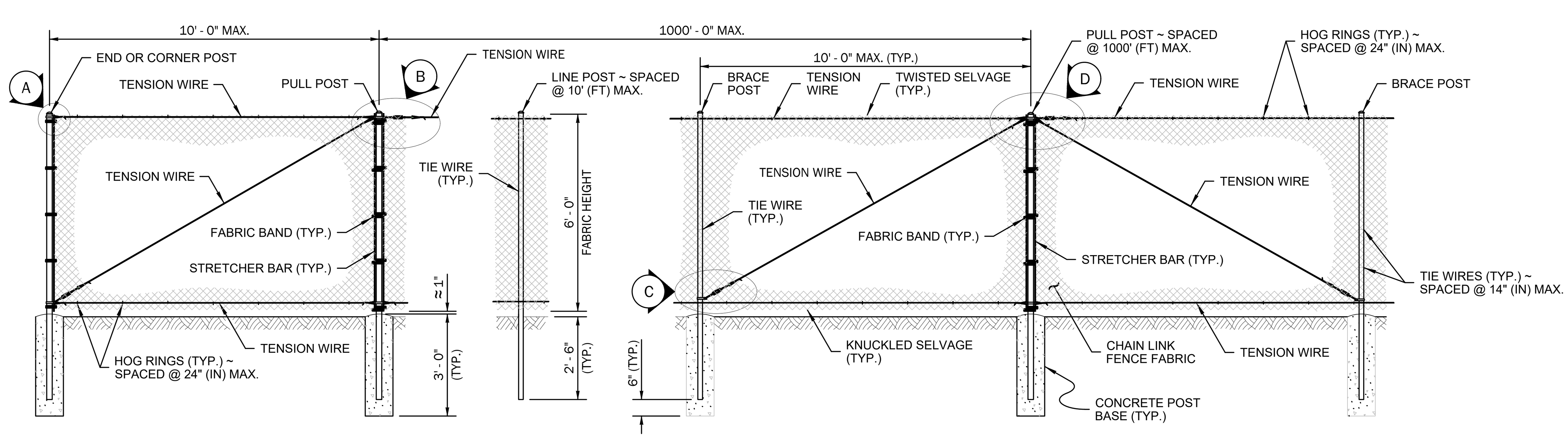


NOTES

1. All concrete post bases shall be 10" (in) minimum diameter.
2. Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
3. Details are illustrative and shall not limit hardware design or post selection of any particular fence type.
4. Fencing shall be used for security and boundary delineation only.

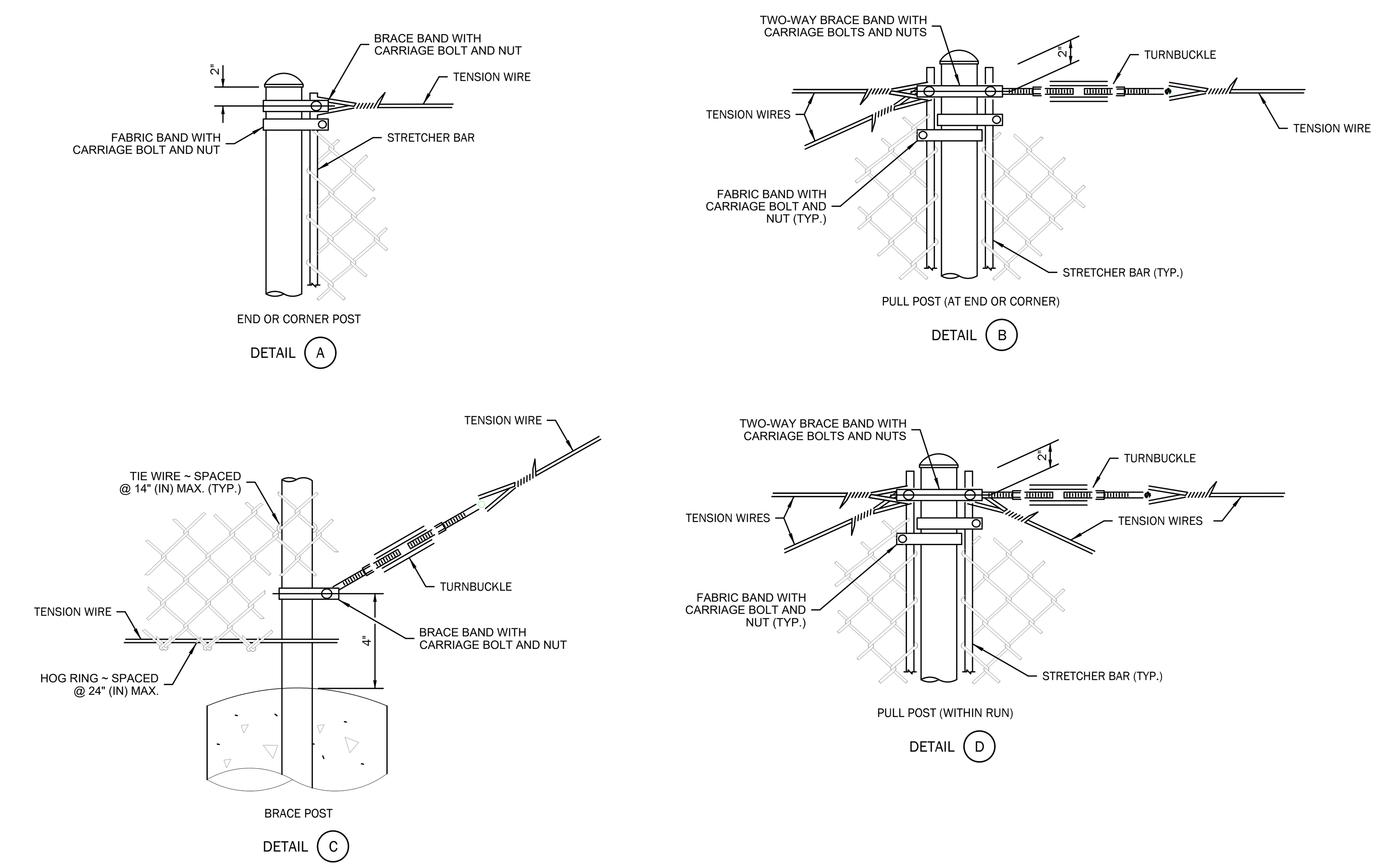


METHOD OF FASTENING STRETCHER BAR TO POST



TYPE 3

CHAIN LINK FENCE TYPE 3 3 / C-06
NTS



FENCE TYPE 3 CONNECTION DETAILS 4 / C-06
NTS

07/08/2022

REV.	DESCRIPTION	DATE	APPR.
1	ECOLOGY COMMENTS	6/9/2022	
2	ISSUED FOR REVIEW	7/8/2022	

REVISED BY: BMG
DRAWN BY: CMV/SCC
DESIGNED BY: SEA
PROJECT NUMBER: 150074
REVISION: -
DATE: 7/11/2022

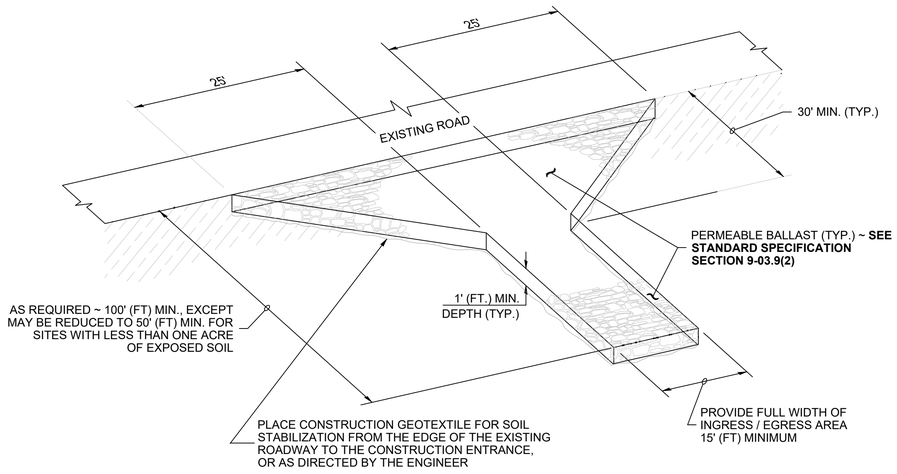
Aspect CONSULTING

FENCE AND SIGNAGE DETAILS

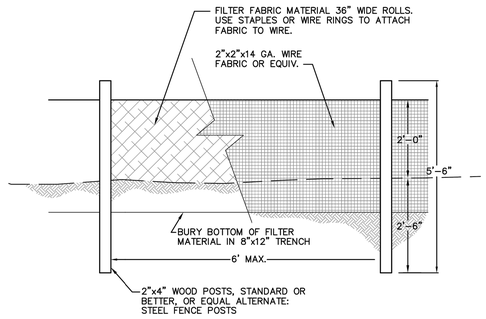
CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
C-06

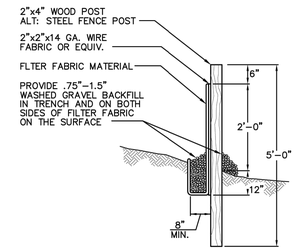
SHEET 9 OF 10

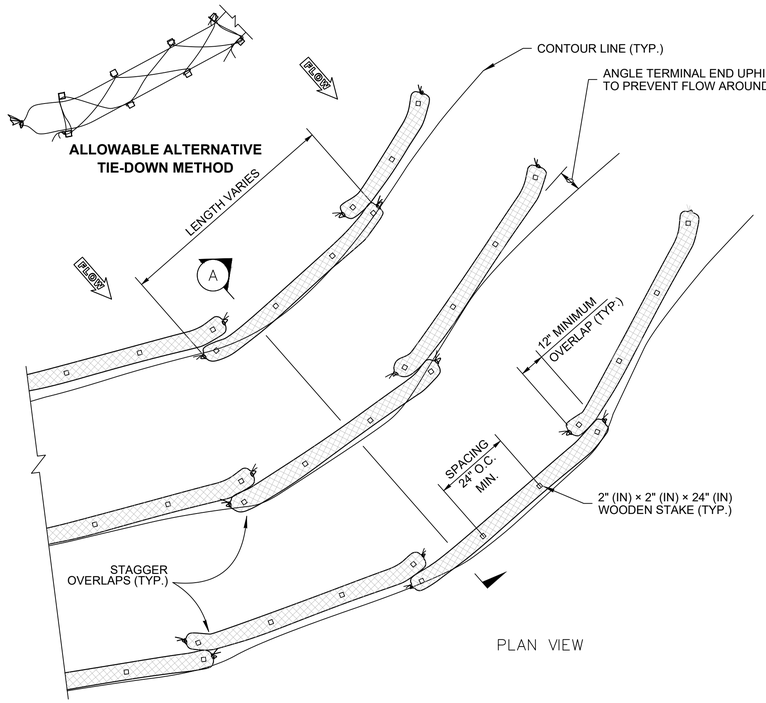


CONSTRUCTION ENTRANCE DETAIL 1 / C-07
NTS



SILT FENCE DETAIL 2 / C-07
NTS





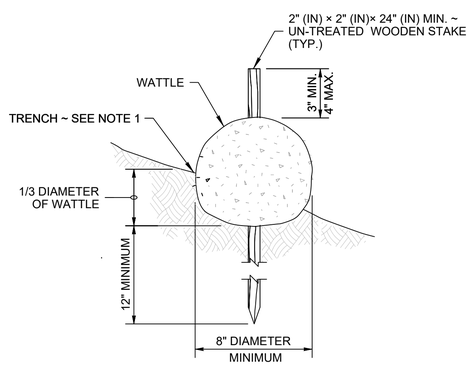
PLAN VIEW

NOTES

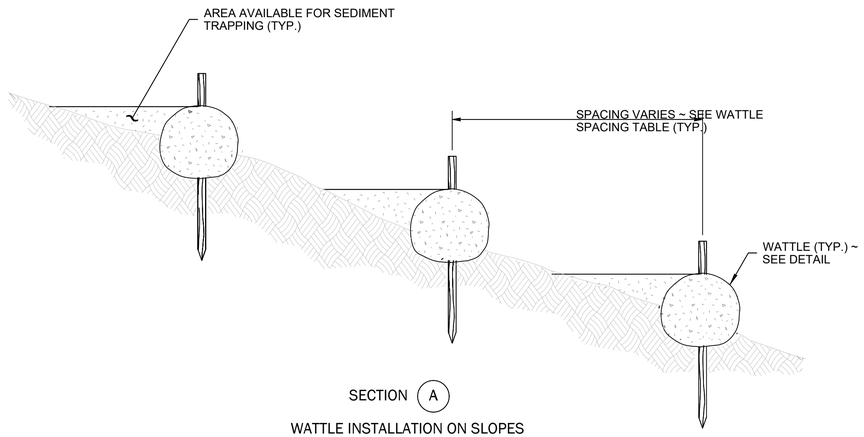
1. Wattles shall be in accordance with Standard Specification, Section 9-14.5(5). Install Wattles along contours. Installation shall be in accordance with Standard Specification, Section 8-01.3(10).
2. Securely knot each end of Wattle. Overlap adjacent Wattle ends 12" (in) behind one another and securely tie together.
3. Compact excavated soil and trenches to prevent undercutting. Additional staking may be necessary to prevent undercutting.
4. Install Wattle perpendicular to flow along contours.
5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.
6. Perform maintenance in accordance with Standard Specification, Section 8-01.3(15).
7. Refer to Standard Specification, Section 8-01.3(16) for removal.

WATTLE SPACING TABLE

TEMPORARY		PERMANENT	
8" - 10" OR 10" - 12" DIAM.		10" - 12" DIAM.	
SLOPE	MAX. SPACING	SLOPE	MAX. SPACING
1H : 1V	5' - 0"	-	-
2H : 1V	10' - 0"	2H : 1V	5' - 0"
3H : 1V	15' - 0"	3H : 1V	10' - 0"
4H : 1V	20' - 0"	4H : 1V	15' - 0"



WATTLE DETAIL



SECTION A

WATTLE INSTALLATION ON SLOPES

WATTLE INSTALLATION ON SLOPE 3 / C-07
NTS

SAMUEL E. ADLINGTON
STATE OF WASHINGTON
53161
REGISTERED
PROFESSIONAL ENGINEER
07/08/2022

REV	DESCRIPTION	DATE	APPR
1	ECOLOGY COMMENTS	6/9/2022	.
2	ISSUED FOR REVIEW	7/8/2022	.

DESIGNED BY: SEA
DRAWN BY: CMV/SCC
REVISED BY: BMG

Aspect CONSULTING

PROJECT NUMBER: 150074
REVISION: .
DATE: 7/11/2022

EROSION AND SEDIMENT CONTROL DETAILS
CLEANUP ACTION CONSTRUCTION PLANS
SHELTON C STREET LANDFILL
SHELTON, WASHINGTON

SHEET REFERENCE NUMBER:
C-07
SHEET 10 OF 10

APPENDIX E

Determination of Nonsignificance

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • 360-407-6300
Call 711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

STATE ENVIRONMENTAL POLICY ACT
DETERMINATION OF NONSIGNIFICANCE

Date of Issuance: August 5, 2021

Lead agency: Department of Ecology, Toxics Cleanup Program, Southwest Regional Office

Agency Contact: Andrew Smith, Cleanup Project Manager, andrew.smith@ecy.wa.gov; (360) 407-6316

Permit Number: Not applicable. Work is to be performed under the authority of a Model Toxics Control Act Agreed Order No. DE 12929

Description of proposal:

The project consists of the implementation of a cleanup action per MTCA, chapter 173-340 of the Washington Administrative Code (WAC). The cleanup action will be performed under the direction of the Department of Ecology (Ecology) in accordance with an Agreed Order between the City of Shelton and Ecology. The cleanup action consists of installation of a low permeability soil cap, to meet the landfill closure specifications in WAC 173-304-460(e), and implementation of institutional controls, physical barriers, and an Inspection, Monitoring and Maintenance plan (IM&M Plan).

The soil cap will be installed over the full extent of the landfill (approximately 4 acres). This area will be cleared of vegetation, and the existing landfill cover soil will be regraded to accept the cap material. The soil cap will be constructed with a geotextile isolation barrier, a minimum 2-foot thick layer of clean, imported low permeability cover material, and a 1-foot thick vegetative layer of topsoil seeded with grasses or other shallow-rooted vegetation. The estimated volume of imported low permeability fill soil is 12,907 cubic yards and the imported topsoil fill is 6,453 cubic yards. No excavation is planned for the project, but minor grading may be conducted to support filling operations.

The project lies within a bowl-like depression, approximately 40 feet deep, near the center of the property that reflects the limits of the historic aggregate mine and subsequent landfilling. As a result, erosion from this project is anticipated to be minimal.

Signage will be installed along the main access road to the landfill that connects to the terminus of West C Street, along with a gate or other physical restriction on the access road. A fence with signage will be installed surrounding the landfill area to minimize accessibility from areas other than the access road. An environmental covenant will be placed on the property to document the extent of the waste and limit impacts to the remedial action.

Location of proposal:

The work will be employed beyond the western terminus of West C Street on Mason County Tax Parcel No. 42024-21-60430 in Shelton, Washington.

Applicant/Proponent: City of Shelton

Project Representative: Carla Brock, LHG, Associate Geologist, Aspect Consulting, LLC
E-MAIL: cbrock@aspectconsulting.com
PHONE: (206) 838-6593
ADDRESS: 710 2nd Ave, Suite 550, Seattle, WA 98104

Ecology has determined that this proposal will not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). We have reviewed the attached Environmental Checklist, as well as the Remedial Investigation/ Feasibility Study, and public review draft Cleanup Action Plan. These documents are available at: https://apps.ecology.wa.gov/gsp/sitepage.aspx?csid=2295.

This determination is based on the following findings and conclusions:

- Engineering design documents will be prepared and approved by Ecology to ensure all onsite work will be performed in accordance with applicable standards and use of best management construction and erosion control practices.
- The Ecology cleanup project manager will provide oversight during project construction.
- Signage and fencing will be installed around the project to ensure protection of the remedial action.
- An Inspection, Monitoring, and Maintenance plan will be prepared and implemented to demonstrate the project will remain in compliance with MTCA.

- An environmental covenant will be placed on the property to document the extent of the waste and limit impacts to the remedial action.

The comment period for this DNS corresponds with the comment period for the Remedial Investigation/Feasibility Study, Public Review Draft Cleanup Action Plan, and associated Agreed Order. The comment period begins on November 4, 2021.

Responsible official:

Rebecca S. Lawson, P.E., LHG
Section Manager
Toxics Cleanup Program
Southwest Region
Department of Ecology
P.O. Box 47775
Olympia, WA 98504-7600
360-407-6241

Signature Rebecca S. Lawson

Date 08/19/2021

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

   Shelton C Street Landfill Remedial Action, Shelton, Washington

   Department of Ecology Agreed Order No. DE 12929

2. Name of applicant:
City of Shelton

3. Address and phone number of applicant and contact person:
c/o Aspect Consulting, LLC
Carla Brock, LHG
Associate Geologist
Office: 206.838.6593

4. Date checklist prepared:
February 22, 2021

5. Agency requesting checklist:
Washington State Department of Ecology (Ecology)

6. Proposed timing or schedule (including phasing, if applicable):
- **Winter-Spring 2021 –** Complete Draft Cleanup Action Plan (dCAP), negotiate Agreed Order (AO) for cleanup, prepare and submit a State Environmental Policy Act (SEPA) Checklist for the proposed cleanup.

- **Summer 2021 –**Begin Ecology's public participation process to set up the dCAP and SEPA documents for a 30-day public comment period. Complete the 30-day public comment period for the Remedial Investigation/Feasibility Study (RI/FS) Report, dCAP, draft AO and SEPA Checklist.

- **Fall 2021 – Winter 2022–**Prepare and submit initial draft planning documents for cleanup to Ecology, including an Engineering Design Report (EDR), construction plans and specifications, Compliance Monitoring Plan (CMP), and Inspection, Monitoring, and Maintenance plan (IM&M Plan).

- **Spring-Summer 2022 –** Perform construction to implement the selected remedy outlined in the dCAP. Begin long-term inspection, maintenance, and monitoring of the cleanup action.

- **2027 –** First 5-year Periodic Ecology Review. If conditions at this time are not protective of human health and the environment, evaluate the need for any contingency action.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Not at this time.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
Agreed Order No. DE 12929 (AO) between Ecology and the City of Shelton, executed on September 30, 2016, provides for remedial action at the Site pursuant to the Model Toxics Control Act (MTCA). Documents prepared to meet the requirements of the AO consisted of a Remedial Investigation (RI) Work Plan, RI/FS Report, and dCAP, along with supporting and interim deliverables. Prior to preparation of the RI Work Plan, a memo was prepared to

develop the chemicals of potential concern and screening levels for the RI (Aspect, 2016). The RI Work Plan and a 2018 addendum described the work for the RI and FS (Aspect, 2017 and Aspect, 2018). The RI/FS Report was prepared to collect and evaluate sufficient information to develop and evaluate cleanup action alternatives to enable selevtion of a cleanup action for the Site (Aspect, 2020). The dCAP describes the cleanup action selected by Ecology for the Site (Aspect, 2021).

Prior to the RI, the only known study of the Site was an investigation conducted following the completion of an Environmental Protection Agency study of dioxin/furan-contaminated sites. The results of the investigation are presented in the Final Dioxin Study Report (CH2M Hill, 1987), which is summarized in the RI/FS Work Plan.

References:

- Aspect Consulting, LLC, 2016, Final Chemicals of Potential Cocnern and Screenig Levels Technical Memorandum, Shelton C Street Landfill, Mason County, Washington, January 17, 2016.
- Aspect Consulting LLC, 2017, Remedial Investigation Work Plan, Shelton C Street Landfill, Shelton, Washington, April 21, 2017.
- Aspect Consulting, 2018, Memorandum RE: Shelton C Street Landfill – Remedial Investigaiton Work Plan Addendum and Feasibility Study Approach, November 9, 2018.
- Aspect Consulting, LLC, 2020, Public Review Draft Remedial Investigation and Feasibility Study Report, Shelton C Street Landfill, Shelton, Washington, May 21, 2020.
- Aspect Consulting, LLC, 2021, Draft Cleanup Action Plan, Shelton C Street Landfill, Shelton, Washington, February, 2021.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Not at this time.

10. List any government approvals or permits that will be needed for your proposal, if known.

Mason County Land Modification (Grading) Permit.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The project consists of the implementation of a cleanup action per MTCA, Chapter 173-340 of the Washington Adminnistrative Code (WAC 173-340). The cleanup action will be performed under the direction of Ecology in accordance with an Agreed Order between the City of Shelton and Ecology. The cleanup action consists of installation of a low permeability soil cap, to meet the landfill closure specifications in WAC 173-304-460(e), and implementation of institutional controls, physical barriers, and an IM&M plan. The soil cap

will be installed over the full extent of the landfill (approximately 4 acres). This area will be cleared of vegetation, and the existing landfill cover soil will be regraded. The soil cap will be constructed with a geotextile isolation barrier, a minimum 2-foot-thick layer of clean, imported low permeability cover materials, and a 1-foot-thick vegetative layer of topsoil seeded with grasses or other shallow-rooted vegetation. Signage will be installed along the main access road that connects to the terminus of West C Street, along with a gate or other physical restriction on the access road. A fence with signage will be installed surrounding the landfill area to minimize accessibility from areas other than the access road. Please refer to the RI/FS Report and Draft CAP for additional details.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project site is situated to the west of the City of Shelton, roughly 1000 feet west of the U.S. Highway 101 overpass for West C Street. The project site is shown relative to surrounding physical features on the attached Figure 1. The project site is loosely bounded to the north by West C St., to the east by U.S. Highway 101, and to the west and south by Miles Sand & Gravel Mine. The project site parcel and the general vicinity are shown on the attached Figure 2.

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

The property slopes moderately from the northeast to the southwest. There is a bowl-like depression near the center of the property that reflects the limits of historical aggregate mining and subsequent landfilling.

(circle one): Flat, rolling, **hilly**, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 30 percent at the northeast boundary.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The project site is highly disturbed, having been originally mined of native sand and gravel and then filled with landfill waste and fill soil. Native soil in the project site vicinity consist primarily of Grove gravelly sandy loam, developed from glacial drift on glacial outwash plains, with thickness up to 40 inches (USDA, NRCS, Web Soil Survey Mapper for Mason County, Washington, https://websoilsurvey.nrcs.usda.gov/app/, accessed on 2/22/2021).

The project site contains the following, all of which overly native glacial outwash deposits of poorly consolidated sand and gravel with varying amounts of silt overlying glacial till:

FILL SOIL. Generally silty sand (SM) used as landfill cover soil, with thickness ranging from approximately 2 feet (southestern quadrant) to approximately 15 feet (western and eastern edges).

WASTEWATER TREATMENT PLANT (WWTP) SLUDGE. Dark grey, fine-grained and silt-like, located in northwest quadrant of project site at ground surface, observed to pinch out towards the edges of the topographic bowl (Figure 2).

MUNICIPAL SOLID WASTE. The landfill waste is approximately 20 to 25 feet thick at its deepest locations and pinches out around the edges of the topographic bowl (Figure 2).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Filling and grading activities will be conducted over 4 acres over the municipal solid waste and WWTP sludge disposal areas. An estimated 12,907 cubic yards of low permeability fill soil, and 6,453 cubic yards of natural topsoil will be imported to construct the permeable soil cap. No excavation is planned for the project but minor grading may be conducted to support filling operations.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No. Best Management Practices (BMPs) and appropriate erosion control measures will be implemented to prevent erosion during construction. The low pemeability soil cap will be covered with topsoil and seeded with vegetation to prevent erosion. The landfill soil cap will be graded so that, following completion of construction, stormwater will flow towards its edges and naturally infiltrate into native soils at the edge of the soil cap.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

None.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Best Management Practices (BMPs) and appropriate erosion control measures will be implemented to prevent erosion during construction. The low pemeability soil cap will be covered with topsoil and seeded with vegetation to prevent erosion. The landfill soil cap will be graded so that, following completion of construction, stormwater will flow towards its edges naturally infiltrate into native soils at the edge of the soil cap.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Air pollutant emissions resulting from landfill cap construction will include dust and greenhouse gases. Sources of dust are expected to include trucking and placement and grading of imported soils. Sources of greenhouse gases are expected to include trucking and earth moving equipment used in grading. No emissions are expected after construction.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Dust controls will be implemented on an as needed basis during grading and trucking activities. Dust emissions from earthwork will be controlled by watering exposed landfill cover soils and stockpiles of import soils. Dust emissions from trucking will be managed by watering roads.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater monitoring will be conducted on a semi-annual basis following completion of cleanup activities. A network of four compliance monitoring wells will be used to assess groundwater quality. Wells will be sampled using low-flow sampling techniques, so only small volumes of water will be removed at a time. There will be no discharges to groundwater. Groundwater will not be withdrawn or used for any other purposes.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

After construction stormwater will flow off of the landfill soil cap and be allowed to naturally infiltrate into native soils around the edges of the cap.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The landfill soil cap will be graded so that, following completion of construction, stormwater will flow towards its edges naturally infiltrate into native soils at the edge of the soil cap.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
__X__evergreen tree: fir, cedar, pine, other
__X__shrubs

__X__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Moderately thick grass and shrubs will be cleared from 4 acre landfill footprint.

c. List threatened and endangered species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Landfill cap will be seeded with native grasses and shallow-rooted vegetation.

e. List all noxious weeds and invasive species known to be on or near the site.

Knotweed is a known invasive species prevalent in Mason County, and may be on or near the site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Birds: crow, geese, robin, bald eagle, pigeon, owl, and raven
Animals: tree squirrels, rabbits, raccoons, opossums, skunks, coyote, deer, bear
Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

None.

c. Is the site part of a migration route? If so, explain.

Yes. The entire Puget Sound Area is within the Pacific Flyway, which is a major north-south flyway for migratory birds in America, extending from Alaska to Patagonia. Every year, migratory birds travel some or all of this distance both in spring and in fall, following food sources, heading to breeding grounds, or traveling to overwintering sites. (US Fish and Wildlife Service, 2019, Pacific Flyway Databook, April, 11, 2019.)

d. Proposed measures to preserve or enhance wildlife, if any:

None.

e. List any invasive animal species known to be on or near the site.

None.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Not applicable. After completion of the landfill cap project there will be no energy needs on the project site.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Not applicable. After completion of the landfill cap project there will be no energy needs on the project site.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The project is being implemented to mitigate risks to human health and the environment. During construction of the cleanup action, workers may be exposed to hazardous substances present in soil and to landfill waste. All site workers will be trained and certified in accordance with appliable federal and state regulations for working around hazardous substances and all site work will be completed in accordance with applicable health and safety measures..

1) Describe any known or possible contamination at the site from present or past uses.

The project site contains a former landfill that contains municipal and industrial solid waste. Concentrations of dioxins/furans, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and metals are contained in WWTP sludge that is present as surface soil in the northwest portion of the landfill. Dioxin/furans, mercury and lead are also contained in cover soils overlying landfill waste in areas outside of the WWTP sludge disposal area.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Dioxins/furans, cPAHs, and metals contained in WWTP sludge and contaminated cover soils.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced

during the project's development or construction, or at any time during the operating life of the project.
None.

4) Describe special emergency services that might be required.
None.

5) Proposed measures to reduce or control environmental health hazards, if any:
None.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
None. The project site is secluded from significant sources of noise.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Construction and trucking related noise would occur as a result of construction activities associated with the proposed project. Trucking noise would be limited by the City of Shelton's noise ordinances, which are:

- 7:00 AM to 10:00 PM on weekdays.
- 9:00 AM to 10:00 PM on weekends

And/or, by Mason County noise ordinances, which are:

- 7:00 AM to 10:00 PM

Permissible noise levels and work schedule will be determined in completing the necessary permitting with the applicable jurisdiction.

3) Proposed measures to reduce or control noise impacts, if any:
The project will comply with provisions of the City and County noise regulations limiting trucking hours as directed. If alternate hours of trucking are necessary, the applicant will seek approval from the City of Shelton, but alternate hours are not anticipated at this time.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.
The project site is currently vacant. The adjacent property to the west and south is a sand and gravel mine. The project site is bordered to the east by a utility corridor. No current land uses on nearby or adjacent properties will be affected by the project.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?
No.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

None.

d. Will any structures be demolished? If so, what?

Not applicable.

e. What is the current zoning classification of the site?

The project site is located outside of the city limits but within the Shelton Urban Growth Area and is zoned Public Institutional, which allows government buildings, cultural facilities, churches, public utilities and parks or open space.

f. What is the current comprehensive plan designation of the site?

The project site is located within the Shelton Urban Growth Area

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

A chain-link fence will be installed surrounding the landfill area to prevent access by people to meet the MTCA requirement to protect human health. Notification will be placed on the fence to notify persons of the hazardous substances contained within the fenced area. The fence will be galvanized steel and will be 9-feet tall, or less. The specific details regarding the location, height and materials for the fence will be determined during preparation of the EDR and construction plans and specifications.

b. What views in the immediate vicinity would be altered or obstructed?

None.

b. Proposed measures to reduce or control aesthetic impacts, if any:

Landfill cap topsoil will be seeded with native grass and vegetation.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

None.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

No.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

For ground-disturbing remedial actions, projects that are funded by certain grants and loans must be reviewed by the Department of Archaeology and Historic Preservation (DAHP) and Tribes to identify any cultural resources that could be affected by the proposed remeial action, assess the effects of the remedial action, and seek ways to avoid, minimize or mitigate any adverse effects on historic properties and cultural resources. As the lead agency for the remedial action, Ecology will initiate the consultation with DAHP and the Tribes, if necessary for the project.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

The Archeological and Historical Preservation Act (16 USCA 496a-1) would be applicable if any subject materials are discovered during grading and excavation activities. A cultural resources assessment and archeological oversight of subsurface disturbing activities may be required elements of the project; however, no excavation or significant soil disturbance is planned as part of the project.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The primary travel route to and from the site is West C Street.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

None.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

None.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

None.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

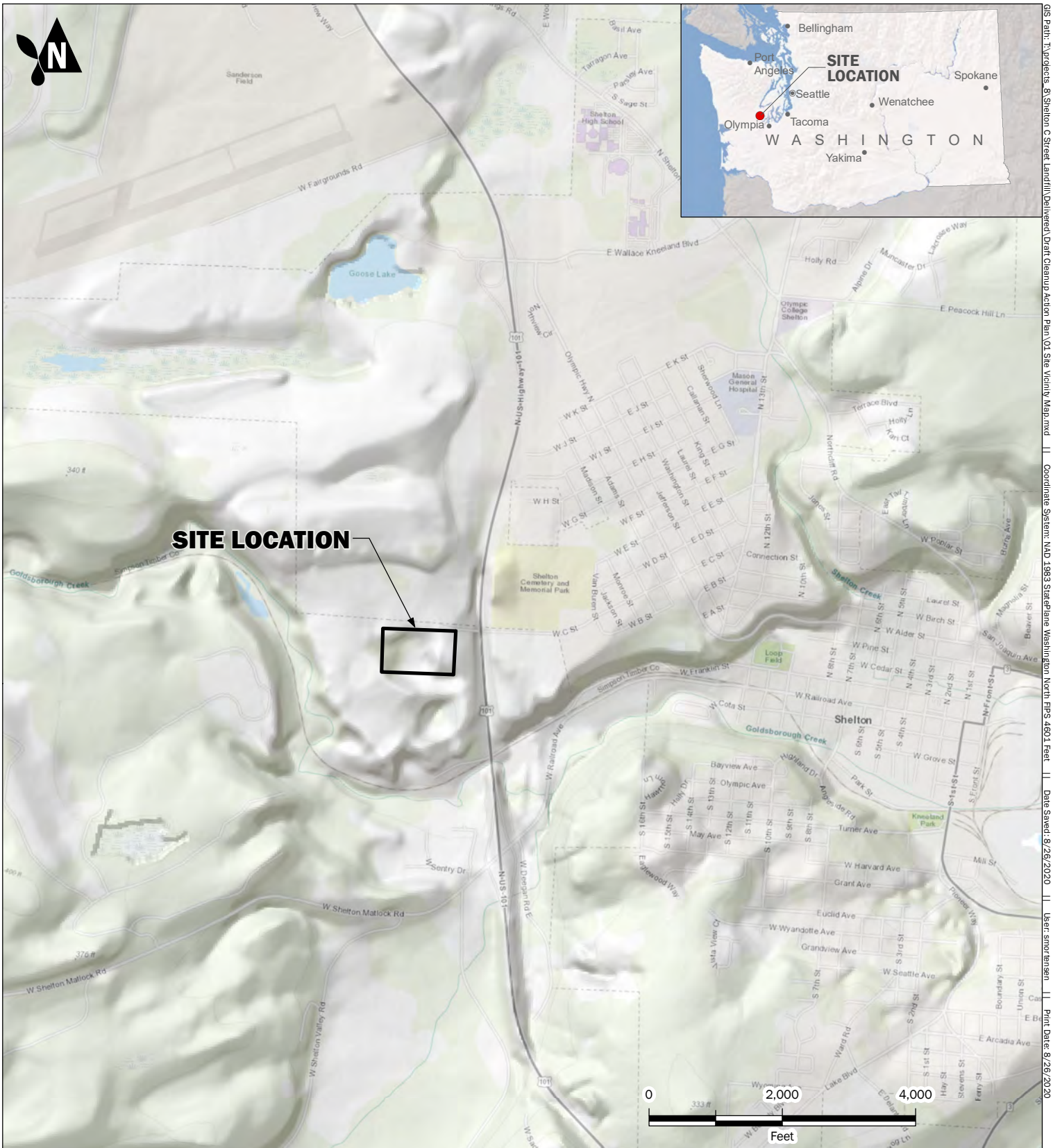
Signature: _____

Name of signee Carla E. Brock

Position and Agency/Organization Sr. Associate Geologist, Aspect Consulting LLC

Date Submitted: 5/11/2021

.



Site Vicinity Map

Shelton C Street Landfill
Shelton, Washington

Aspect CONSULTING	AUG-2020	BY: CEB / RAP / SBM	FIGURE NO. 1
	PROJECT NO. 150074	REVISED BY: ALC / RAP	

Basemap Layer Credits || Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

GIS Path: T:\projects_8\Shelton C Street Landfill\Delivered\Draft Cleanup Action Plan\01 Site Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 8/26/2020 || User: smortensen || Print Date: 8/26/2020

Vacant Forest Land

WEST C ST

N US HIGHWAY 101

Forested Area

AMW-1

AMW-2

AMW-3

AMW-4

Miles Sand & Gravel

210 200 190 180 170 160 150

0 140 280

Feet

- Monitoring Well
- Landfill Parcel
- Estimated Extent of Landfill Waste
- 1986 Sludge Disposal Area
- Forested Area
- Access Road
- Transmission Line Easement
- Transmission Tower
- Transmission Line
- Tax Parcel

Note: All site feature locations are approximate. Topographic contours from PLS Survey October 2017. Aerial imagery from June 2017 Digital Globe Imagery.

Current Site Features

Shelton C Street Landfill
Shelton, Washington

Aspect Consulting	DEC-2019	BY: CEB / RAP	FIGURE NO. 2
	PROJECT NO. 150074	REVISED BY: ALC / RAP	

Basemap Layer Credits || Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

GIS Path: T:\projects_8\Shelton C Street Landfill\Delivered\RIFS\02 Current Site Features.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 12/16/2019 || User: trulen || Print Date: 12/16/2019

APPENDIX F

Ecology Summary of Determination and Inadvertent Discovery Plan

WASHINGTON DEPARTMENT OF ECOLOGY
EXECUTIVE ORDER 05-05 / SECTION 106
CULTURAL RESOURCES REVIEW FORM

This form may only initiate consultation. For some projects, Ecology, affected tribes, DAHP, or other agencies may require additional information to complete the project review such as: plans, specifications, photographs, or other information. Turn completed form in to Ecology Project, Site Manager or Cultural Resource Contact. **Do not include any confidential information, such as coordinates of known archaeological sites.**

PROJECT SPONSOR / PRIMARY CONTACT INFORMATION

PROJECT SPONSOR ORGANIZATION: City of Shelton

ADDRESS: 525 W. Cota St.	**PRIMARY CONTACT NAME:** Jay Harris
CITY, STATE: Shelton, Washington	**PHONE #:** (360) 432 - 5125
ZIP, COUNTY: 98584, Mason	**EMAIL:** JHarris@ci.shelton.wa.us

PROJECT SITE INFORMATION

PROJECT/SITE NAME: Shelton C Street Landfill	**PROJECT ID NUMBER** (Near Term Action #, for example)**:** Cleanup Site ID 2295
PROJECT/SITE MANAGER NAME *(if different than above)*: same as above	**LANDOWNER NAME:** City of Shelton
PROJECT MGR PHONE #: ( ) -	**Is there a signed landowner agreement?** ☐ Yes ☐ No
PROJECT MGR EMAIL:	*It is required to obtain one prior to review.* ☑ N / A

Will the Project require a federal permit or other federal / state agency approval?
☐ Yes ☑ No ☐ Unsure
If you select yes, please talk to your Ecology Project Manager prior to further completing this form.

Does any part of the project area and / or Area of Potential Effect (APE) fall into the following ownership categories (check all that apply)? ☐ State ☐ Federal ☐ Tribal ☑ Municipal ☐ Private ☐ Other:

ECOLOGY GRANT, LOAN OR CONTRACT INFORMATION

ECY PROJECT TITLE: Shelton C Street Landfill

ECY GRANT, LOAN, OR CONTRACT NUMBER:

ECY GRANT, LOAN, OR CONTRACT TYPE (Centennial, Floodplains by Design, Equipment Cache, or IAA, etc.)**:** Oversight Remedial Action Grant

Do you have additional state or federal funding for your project? *Check all that apply:* ☐ State ☐ Federal
If you select Federal, please talk to your Ecology Project Manager prior to further completing this form.
If applicable, what is the name of the other funding program(s):

ECOLOGY INFORMATION (*to be completed by the Ecology Project/Site Manager*)

ECY PROJECT/SITE MANAGER: Andrew Smith	**ECY CR CONTACT:** Amy Hargrove
ECY PROJECT MGR PHONE #: (360) 407 - 6316	**ECY CR CONTACT PHONE #:** (360) 407 - 6262
ECY PROJECT MGR EMAIL: ansm461@ecy.wa.gov	**ECY CR CONTACT EMAIL:** ahar461@ecy.wa.gov
ECY FINANCIAL MANAGER: Dan Koroma	**ECY PROGRAM** (WQ, WR, SEA, OCR, TCP, etc.)**:** TCP

DAHP PROJECT NUMBER* (If applicable)**:** 2021-07-04254
**Assigned through the use of the Washington Information System for Architectural & Archaeological Records Data (WISAARD)*

To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-6000 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

INDIVIDUAL or MULTIPLE PROJECT DETAIL

Describe the type of work to be completed. Provide as much detail as possible to avoid delays in the review. This is ***not limited*** to ground disturbing activity or the project boundary. Consider indirect and direct effects, physical, visual, auditory, and vibration impacts. The APE(s) should contain length, width, and depth of project activities including staging and temporary construction.

Is this a new project or for an existing project or change in scope of work (SOW)?

New ☑ Existing ☐ Change in SOW ☐ Unknown ☐

If existing, please talk to your Ecology Project Manager prior to continuing this form.

Project Description:

The former landfill will be capped by grading, installing a geotextile isolation barrier, and topping with a 2-foot layer of soil and 1-foot layer of vegetation. The area will be fenced which may require scraping and shallow excavation.

MULTIPLE / BATCHED PROJECT REVIEW: Provide a detailed description of all project activities to establish the Areas of Potential Effect (APE) Describe the site conditions in the APEs as they exist now. For multiple locations under one review, provide a GIS shapefile or map of all the projects within the APE as an
The site is an abandoned landfill in rural Mason County, just outside the city limits of Shelton.

CULTURAL RESOURCE INFORMATION

Does your project involve demolition, maintenance, additions, upgrades, or rehabilitation of a building or structure that is 45 years or older? Yes No

If "Yes", visit the ***DAHP Historic Property Compliance Website*****.**

What are the risk levels present on your project site(s)? *Mark all that apply.* **This can be found on the DAHP WISAARD Statewide Predictive Layer.** *WISAARD does not support Internet Explorer or Safari.*

Low **X** Moderately Low **X** Moderate Moderately High High

Do you have knowledge of any previous cultural resource review within the project(s)boundaries during the past 10 years? Yes No **X** Unknown

If yes, please reference the report, survey or summarize the previous cultural resource review. Include the DAHP Project Number, if known. *Provide for each applicable project, if multiple projects covered under review*

Six cultural resource reviews were conducted near the project area in 1997, 2001, 2002, 2004, 2018, and 2020. Various cultural resources were identified including pottery fragments and glass bottles, but no archaeology sites were identified. The Shelton Memorial Park Cemetery is located across Highway 101 from the project. The nearest structure on the historic register is approximately 1.3 miles away near downtown Shelton.

Cultural Resource Report Information: US 101 Coffee Creek Fish Passage Barrier Removal Project, Results of Archaeological Monitoring; 10-23-2020; Kiers, Roger
DAHP Project Number: 1694647
Did you receive a Concurrence Letter from DAHP? Yes No Unknown X

Cultural Resource Report Information: Coffee Creek Fish Barrier Removal Cultural Resources Survey, Mason County; 9-28-2018; Steinkraus, Sarah
DAHP Project Number: 1691730
Did you receive a Concurrence Letter from DAHP? Yes No Unknown **X**

Cultural Resource Report Information: Results of Cultural Resources Surveys of the Bonneville Power Administration's Olympia to Port Angeles Fiber Optic Project Area; 6-1-2001; Wilt, Julia J.
DAHP Project Number: 1350006
Did you receive a Concurrence Letter from DAHP? Yes No Unknown **X**

Cultural Resource Report Information: Cultural Resource Investigations for the Exceptional Forester, Inc. Facilities Project; 5-12-2004; Gill, Matthew
DAHP Project Number: 1343180
Did you receive a Concurrence Letter from DAHP? Yes No Unknown **X**

Cultural Resource Report Information: Cultural Resources Survey of Cingular Wireless Tower Site WA-57; 6-12-2002; Rooke, Lara C.
DAHP Project Number: 1334119
Did you receive a Concurrence Letter from DAHP? Yes No Unknown **X**

Cultural Resource Report Information: Goldsborough Creek Dam Removal Cultural Resource Assessment; 6-1-1997; Shong, Michael V.
DAHP Project Number: 1339609
Did you receive a Concurrence Letter from DAHP: Yes No Unknown **X**

INADVERTENT DISCOVERY PLAN

Ecology requires the submittal of an Inadvertent Discovery Plan (IDP) to the Ecology Project Manager for review prior to implementing any project that will involve, or could result in, ground-disturbance. After review, upload the IDP to EAGL if required, discuss the IDP protocol with all individuals working on the project site (staff, contractors, volunteers, etc.), and ensure a copy is always kept on site (either hard copy or electronic version) and readily available at all times. It is required, without exception, in the event of a discovery of cultural resources or human remains, that work stops immediately and the IDP protocol is implemented.

Have you completed an Ecology or other state agency approved IDP form for this site(s)? Yes No **X**
Not yet **Date of intended submission:**
If so, have you provided a copy of the completed IDP to the Ecology Project/Site Manager? Yes No

If not, you are required to submit one to Ecology prior to starting work on the site. You can submit one IDP for multiple projects if the information is the same. You can download the Ecology IDP here: ***Ecology Inadvertant Discovery Plan.*** *Ecology has created a helpful* ***IDP Video*** *for your field staff or contractors.*

ATTACH A MAP OR AERIAL IMAGE: Must show the project location, Area of Potential Effect, nearby identifying features (roads, water, and trails).
Provide additional data, information, photos, or maps for the review in a separate document as an attachment.

Project Location – *must* include identifying nearby features (roads, waterbodies with names).

REQUIRED: Township: 20N **Range:** 4W **Section:** 24
Address: **City:** Shelton **County:** Mason

Area of Potential Effect is defined as the geographic area or areas within which the project or undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The area of potential effects is influenced by the scale and nature of the project or undertaking and may be different for different kinds of effects caused by the undertaking. Ecology recommends carefully considering the geographic area you are defining for your APE – our review is based upon location and setting, not upon the type of ground disturbing activities.

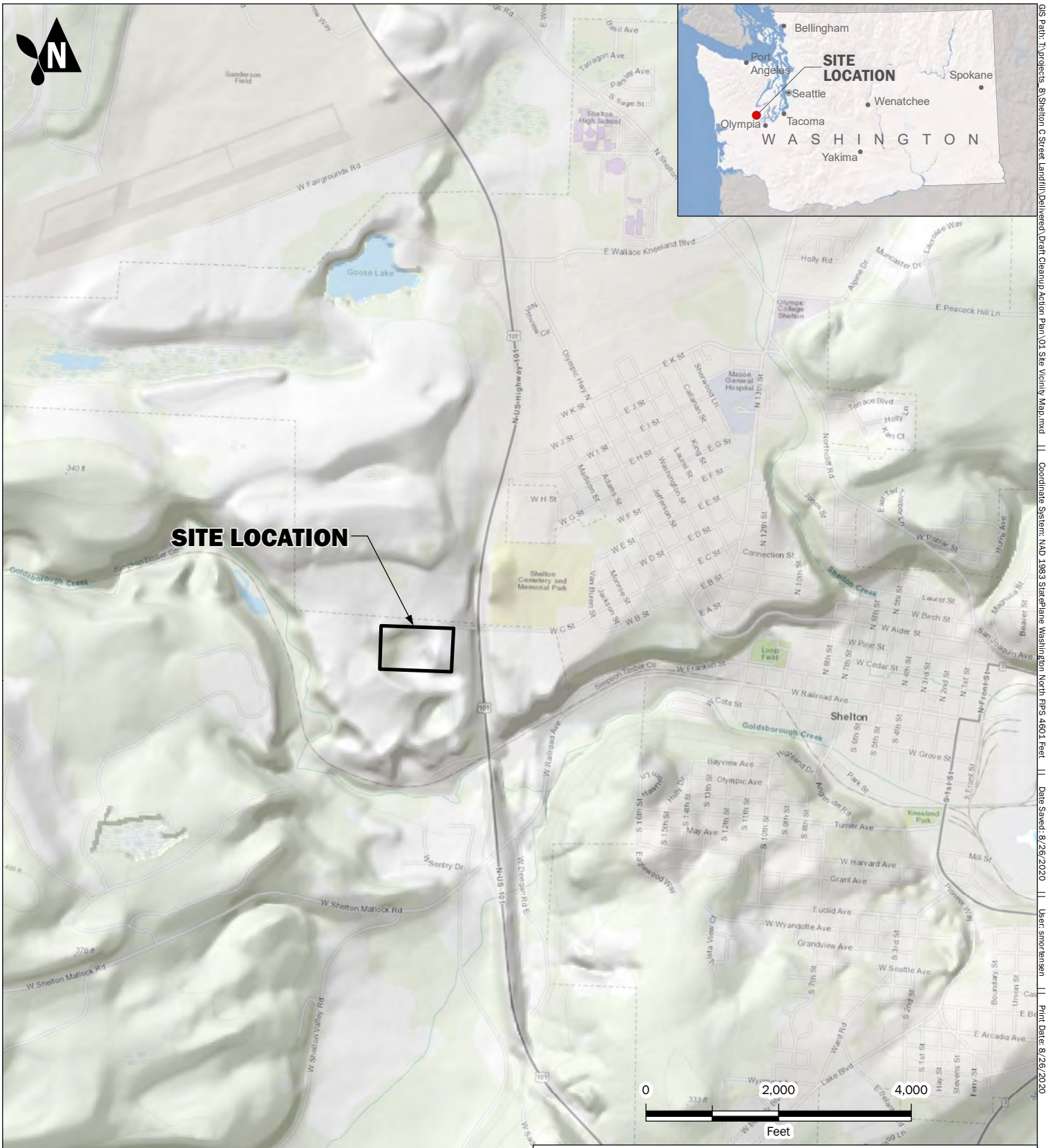


Figure source: Aspect Consulting, LLC, 2021, Draft Cleanup Action Plan, Shelton C Street Landfill, February 2021

Site Vicinity Map

Draft Cleanup Action Plan
Shelton C Street Landfill
Shelton, Washington

Aspect CONSULTING	AUG-2020	BY: CEB / RAP / SBM	FIGURE NO. 1
	PROJECT NO. 150074	REVISED BY: ALC / RAP	

Basemap Layer Credits || Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

GIS Path: T:\projects_8\Shelton C Street Landfill\Delivered\Draft Cleanup Action Plan\01 Site Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 8/26/2020 || User: smortensen || Print Date: 8/26/2020

Physical Barrier:
Perimeter Fence

Signage on C Street Gate
(beyond figure view)

WEST C ST

Area of
Potential Effect

Access Gate
and Signage

Forested Area

AMW-3

AMW-1

AMW-2

AMW-4

Permeable Soil Cap

Institutional Control boundary:
Mason County tax parcel
no. 42024-21-60430

- Point of Compliance Groundwater Monitoring Well
- Landfill Parcel
- Estimated Extent of Landfill Waste
- 1986 Sludge Disposal Area
- Forested Area
- Access Road
- Transmission Line Easement
- Transmission Tower
- Transmission Line
- Tax Parcel

Note: All site feature locations are approximate. Topographic contours from PLS Survey October 2017. Aerial imagery from June 2017 Digital Globe Imagery.

0 100 200
Feet

Figure source: Aspect Consulting, LLC, 2021, Draft Cleanup Action Plan, Shelton C Street Landfill, February 2021

Cleanup Action Layout

Draft Cleanup Action Plan
Shelton C Street Landfill
Shelton, Washington

Aspect CONSULTING	AUG-2020	BY: CEB / RAP	FIGURE NO. 3
	PROJECT NO. 150074	REVISED BY: ALC / SBM	

Basemap Layer Credits || Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

INADVERTENT DISCOVERY PLAN

PLAN AND PROCEDURES FOR THE DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

To request ADA accommodation, including materials in a format for the visually impaired, call Ecology at 360-407-6000 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with a speech disability may call TTY at 877-833-6341.

Site Name(s): Shelton C Street Landfill Location: TR43 of NE N 45/68

Project Lead/Organization: Aspect Consulting, LLC County: Mason

If this Inadvertent Discovery Plan (IDP) is for multiple (batched) projects, ensure the location information covers all project areas.

1. INTRODUCTION

The IDP outlines procedures to perform in the event of a discovery of archaeological materials or human remains, in accordance with applicable state and federal laws. An IDP is required, as part of Agency Terms and Conditions for all grants and loans, for any project that creates disturbance above or below the ground. An IDP is not a substitute for a formal cultural resource review (Executive 21-02 or Section 106).

Once completed, **the IDP should always be kept at the project site** during all project activities. All staff, contractors, and volunteers should be familiar with its contents and know where to find it.

2. CULTURAL RESOURCE DISCOVERIES

A cultural resource discovery could be prehistoric or historic. Examples include (see images for further examples):

- An accumulation of shell, burned rocks, or other food related materials.
- Bones, intact or in small pieces.
- An area of charcoal or very dark stained soil with artifacts.
- Stone tools or waste flakes (for example, an arrowhead or stone chips).
- Modified or stripped trees, often cedar or aspen, or other modified natural features, such as rock drawings.
- Agricultural or logging materials that appear older than 50 years. These could include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, and many other items.
- Clusters of tin cans or bottles, or other debris that appear older than 50 years.
- Old munitions casings. ***Always assume these are live and never touch or move***.
- Buried railroad tracks, decking, foundations, or other industrial materials.
- Remnants of homesteading. These could include bricks, nails, household items, toys, food containers, and other items associated with homes or farming sites.

The above list does not cover every possible cultural resource. When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

If any employee, contractor, or subcontractor believes that they have uncovered cultural resources or human remains at any point in the project, take the following steps to ***Stop-Protect-Notify***. **If you suspect that the discovery includes human remains, also follow Sections 5 and 6.**

STEP A: Stop Work.

All work must stop immediately in the vicinity of the discovery.

STEP B: Protect the Discovery.

Leave the discovery and the surrounding area untouched and create a clear, identifiable, and wide boundary (30 feet or larger) with temporary fencing, flagging, stakes, or other clear markings. Provide protection and ensure integrity of the discovery until cleared by the Department of Archaeological and Historical Preservation (DAHP) or a licensed, professional archaeologist.

Do not permit vehicles, equipment, or unauthorized personnel to traverse the discovery site. Do not allow work to resume within the boundary until the requirements of this IDP are met.

STEP C: Notify Project Archaeologist (if applicable).

If the project has an archaeologist, notify that person. If there is a monitoring plan in place, the archaeologist will follow the outlined procedure.

STEP D: Notify Project and Washington Department of Ecology (Ecology) contacts.

Project Lead Contacts

Primary Contact		Alternate Contact	
Name:	Carla Brock, LHG	Name:	Peter Bannister, PE
Organization:	Aspect Consulting, LLC	Organization:	Aspect Consulting, LLC
Phone:	425-269-7255	Phone:	206-276-4509
Email:	cbrock@aspectconsulting.com	Email:	pbannister@aspectconsulting.com

Ecology Contacts (completed by Ecology Project Manager)

Ecology Project Manager		Alternate or Cultural Resource Contact	
Name:	Andrew Smith, PE, LPG	Name:	Heather May
Program:	TCP SWRO	Program:	Ecology TCP SWRO
Phone:	360-407-6316	Phone:	360-890-0496
Email:	ansm461@ecy.wa.gov	Email:	hmay461@ecy.wa.gov

STEP E: Ecology will notify DAHP.

Once notified, the Ecology Cultural Resource Contact or the Ecology Project Manager will contact DAHP to report and confirm the discovery. To avoid delay, the Project Lead/Organization will contact DAHP if they are not able to reach Ecology.

DAHP will provide the steps to assist with identification. DAHP, Ecology, and Tribal representatives may coordinate a site visit following any necessary safety protocols. DAHP may also inform the Project Lead/Organization and Ecology of additional steps to further protect the site.

Do not continue work until DAHP has issued an approval for work to proceed in the area of, or near, the discovery.

DAHP Contacts:

Name: Rob Whitlam, PhD
Title: State Archaeologist
Cell: 360-890-2615
Email: Rob.Whitlam@dahp.wa.gov
Main Office: 360-586-3065

Human Remains/Bones:

Name: Guy Tasa, PhD
Title: State Anthropologist
Cell: 360-790-1633 (24/7)
Email: Guy.Tasa@dahp.wa.gov

4. TRIBAL CONTACTS

In the event cultural resources are discovered, the following tribes will be contacted. See Section 10 for Additional Resources.

Tribe:	Puyallup Tribe	Tribe:	Squaxin Tribe
Name:	Brandon Reynon	Name:	Shaun Dinubilo
Title:	Cultural Resources	Title:	Archaeologist
Phone:	253-573-7986	Phone:	360-432-3998
Email:	brandon.renyon@puyalluptribe.com	Email:	sdinubilo@squaxin.us
Tribe:	Suquamish Tribe	Tribe:	Samish Tribe
Name:	Dennis E. Lewarch	Name:	Jackie Ferry
Title:	THPO	Title:	Cultural Resources
Phone:	360-394-8529	Phone:	360-293-6404x126
Email:	dlewarch@suquamish.nsn.us	Email:	jferry@samishtribe.nsn.us

Please provide contact information for additional tribes within your project area, if needed, in Section 11.

5. FURTHER CONTACTS (if applicable)

If the discovery is confirmed by DAHP as a cultural or archaeological resource, or as human remains, and there is a partnering federal or state agency, Ecology or the Project Lead/Organization will ensure the partnering agency is immediately notified.

Federal Agency:		State Agency:	
Agency:		Agency:	
Name:		Name:	
Title:		Title:	
Phone:		Phone:	
Email:		Email:	

6. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Follow the steps under ***Stop-Protect-Notify.*** For specific instructions on how to handle a human remains discovery, see: *RCW 68.50.645: Skeletal human remains—Duty to notify—Ground disturbing activities—Coroner determination—Definitions*.

Suggestion: If you are unsure whether the discovery is human bone or not, contact Guy Tasa with DAHP, for identification and next steps. Do not pick up the discovery.

Guy Tasa, PhD State Physical Anthropologist
Guy.Tasa@dahp.wa.gov
(360) 790-1633 (Cell/Office)

For discoveries that are confirmed or suspected human remains, follow these steps:

1. Notify law enforcement and the Medical Examiner/Coroner using the contacts below. **Do not call 911** unless it is the only number available to you.

   Enter contact information below (required):
   - Local Medical Examiner or Coroner name and phone: Mason County Coroner, 360-427-9670x752
   - Local Law Enforcement main name and phone: Mason County Sheriff's Office, 360-427-9670x313
   - Local Non-Emergency phone number (911 if without a non-emergency number): 360-426-4441
2. The Medical Examiner/Coroner (with assistance of law enforcement personnel) will determine if the remains are human or if the discovery site constitutes a crime scene and will notify DAHP.
3. **DO NOT speak with the media, allow photography or disturbance of the remains, or release any information about the discovery on social media.**
4. If the remains are determined to be non-forensic, Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection and to shield them from being photographed by others or disturbed.

Further activities:

- Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains. Ecology staff will participate in consultation. Organizations may also participate in consultation.
- Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
- When consultation and documentation activities are complete, work in the discovery area may resume as described in Section 8.

If the project occurs on federal lands (such as a national forest or park or a military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) apply and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the state.

If the project occurs on non-federal lands, the Project Lead/Organization will comply with applicable state and federal laws, and the above protocol.

7. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological resources discovered during construction are protected by state law RCW 27.53 and assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

The Project Lead/Organization must ensure that proper documentation and field assessment are made of all discovered cultural resources in cooperation with all parties: the federal agencies (if any), DAHP, Ecology, affected tribes, and the archaeologist.

The archaeologist will record all prehistoric and historic cultural material discovered during project construction on a standard DAHP archaeological site or isolate inventory form. They will photograph site overviews, features, and artifacts and prepare stratigraphic profiles and soil/sediment descriptions for minimal subsurface exposures. They will document discovery locations on scaled site plans and site location maps.

Cultural features, horizons, and artifacts detected in buried sediments may require the archaeologist to conduct further evaluation using hand-dug test units. They will excavate units in a controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. They may also use a test unit or trench excavation to determine if an intact occupation surface is present. They will only use test units when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. They will conduct excavations using standard archaeological techniques to precisely document the location of cultural deposits, artifacts, and features.

The archaeologist will record spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock for each unit on a standard form. They will complete test excavation unit level forms, which will include plan maps for each excavation level and artifact counts and material types, number, and vertical provenience (depth below

surface and stratum association where applicable) for all recovered artifacts. They will draw a stratigraphic profile for at least one wall of each test excavation unit.

The archaeologist will screen sediments excavated for purposes of cultural resources investigation through 1/8-inch mesh, unless soil conditions warrant 1/4-inch mesh.

The archaeologist will analyze, catalogue, and temporarily curate all prehistoric and historic artifacts collected from the surface and from probes and excavation units. The ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, Ecology, and the affected tribe(s).

Within 90 days of concluding fieldwork, the archaeologist will provide a technical report describing any and all monitoring and resultant archaeological excavations to the Project Lead/Organization, who will forward the report to Ecology, the federal agencies (if any), DAHP, and the affected tribe(s) for review and comment.

If assessment activities expose human remains (burials, isolated teeth, or bones), the archaeologist and Project Lead/Organization will follow the process described in **Section 6**.

8. PROCEEDING WITH WORK

The Project Lead/Organization shall work with the archaeologist, DAHP, and affected tribe(s) to determine the appropriate discovery boundary and where work can continue.

Work may continue at the discovery location only after the process outlined in this plan is followed and the Project Lead/Organization, DAHP, any affected tribe(s), Ecology, and the federal agencies (if any) determine that compliance with state and federal laws is complete.

9. ORGANIZATION RESPONSIBILITY

The Project Lead/Organization is responsible for ensuring:

- This IDP has complete and accurate information.
- This IDP is immediately available to all field staff at the sites and available by request to any party.
- This IDP is implemented to address any discovery at the site.
- That all field staff, contractors, and volunteers are instructed on how to implement this IDP.

10. ADDITIONAL RESOURCES

Informative Video

Ecology recommends that all project staff, contractors, and volunteers view this informative video explaining the value of IDP protocol and what to do in the event of a discovery. The target audience is anyone working on the project who could unexpectedly find cultural resources or human remains while excavating or digging. The video is also posted on DAHP's inadvertent discovery language website.

Ecology's IDP Video (https://www.youtube.com/watch?v=ioX-4cXfbDY)

Informational Resources

DAHP (https://dahp.wa.gov)

Washington State Archeology (DAHP 2003)
(https://dahp.wa.gov/sites/default/files/Field%20Guide%20to%20WA%20Arch_0.pdf)

Association of Washington Archaeologists (https://www.archaeologyinwashington.com)

Potentially Interested Tribes

Interactive Map of Tribes by Area
(https://dahp.wa.gov/archaeology/tribal-consultation-information)

WSDOT Tribal Contact Website
(https://wsdot.wa.gov/tribal/TribalContacts.htm)

11. ADDITIONAL INFORMATION

Please add any additional contact information or other information needed within this IDP.

Site Owner Contact:
Jay Harris
City of Shelton
525 W. Cota St.
Shelton, Washington 98584
360-432-5125
jharris@ci.shelton.wa.us

Additional Final Determination Letter Contacts:
Rob Whitlam, Department of Archaeology and Historic Preservation

Jeffrey Thomas, TFW Cultural Resources, Puyallup Tribe
253-405-7478
jeffrey.thomas@puyalluptribe.com

Phonda Foster, THPO, Squaxin Tribe
360-432-3850
rfoster@squaxin.us

Implement the IDP if you see…

Chipped stone artifacts.

Examples are:

- Glass-like material.
- Angular material.
- “Unusual” material or shape for the area.
- Regularity of flaking.
- Variability of size.

Stone artifacts from Oregon.

Stone artifacts from Washington.

Biface-knife, scraper, or pre-form found in NE Washington. Thought to be a well knapped object of great antiquity. Courtesy of Methow Salmon Rec. Foundation.

Implement the IDP if you see…

Ground stone artifacts.

Examples are:

- Unusual or unnatural shapes or unusual stone.
- Striations or scratching.
- Etching, perforations, or pecking.
- Regularity in modifications.
- Variability of size, function, or complexity.

Above: Fishing Weight - credit CRITFC Treaty Fishing Rights website.

Artifacts from unknown locations (left and right images).

Implement the IDP if you see…

Bone or shell artifacts, tools, or beads.

Examples are:

- Smooth or carved materials.
- Unusual shape.
- Pointed as if used as a tool.
- Wedge shaped like a “shoehorn”.
- Variability of size.
- Beads from shell (dentalium) or tusk.

Upper Left:*Bone Awls from Oregon.*

Upper Center: *Bone Wedge from California.*

Upper Right: *Plateau dentalium choker and bracelet, from Nez Perce National Historical Park, 19th century, made using Antalis pretiosa shells Credit: Nez Perce - Nez Perce National Historical Park, NEPE 8762, Public Domain.*

Above: *Tooth Pendants. Right: Bone Pendants. Both from Oregon and Washington.*

Implement the IDP if you see…

Culturally modified trees, fiber, or wood artifacts.

Examples are:

- Trees with bark stripped or peeled, carvings, axe cuts, de-limbing, wood removal, and other human modifications.
- Fiber or wood artifacts in a wet environment.
- Variability of size, function, and complexity.

Left and Below: *Culturally modified tree and an old carving on an aspen (Courtesy of DAHP).*

Right, Top to Bottom: *Artifacts from Mud Bay, Olympia: Toy war club, two strand cedar rope, wet basketry*.

Implement the IDP if you see…

Strange, different, or interesting looking dirt, rocks, or shells.

Human activities leave traces in the ground that may or may not have artifacts associated with them. Examples are:

- "Unusual" accumulations of rock (especially fire-cracked rock).
- "Unusual" shaped accumulations of rock (such as a shape similar to a fire ring).
- Charcoal or charcoal-stained soils, burnt-looking soils, or soil that has a "layer cake" appearance.
- Accumulations of shell, bones, or artifacts. Shells may be crushed.
- Look for the "unusual" or out of place (for example, rock piles in areas with otherwise few rocks).

Shell Midden pocket in modern fill discovered in sewer trench.

Underground oven. Courtesy of DAHP.

Shell midden with fire cracked rock.

Hearth excavated near Hamilton, WA.

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Agricultural or logging equipment. May include equipment, fencing, canals, spillways, chutes, derelict sawmills, tools, etc.
- Domestic items including square or wire nails, amethyst colored glass, or painted stoneware.

Left: Top to Bottom: *Willow pattern serving bowl and slip joint pocket knife discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Right: *Collections of historic artifacts discovered during excavations in eastern Washington cities.*

Implement the IDP if you see…

Historic period artifacts (historic archaeology considered older than 50 years).

Examples are:

- Railway tokens, coins, and buttons.
- Spectacles, toys, clothing, and personal items.
- Items helping to understand a culture or identity.
- Food containers and dishware.

Main Image: *Dishes, bottles, workboot found at the North Shore Japanese bath house (ofuro) site, Courtesy Bob Muckle, Archaeologist, Capilano University, B.C. This is an example of an above ground resource.*

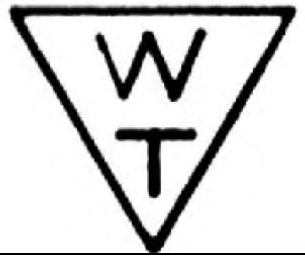
Right, from Top to Bottom: *Coins, token, spectacles and Montgomery Ward pitchfork toy discovered during Seattle Smith Cove shantytown (45-KI-1200) excavation.*

Implement the IDP if you see…

- Old munition casings – if you see ammunition of any type – ***always assume they are live and never touch or move!***
- Tin cans or glass bottles with an older manufacturer's technique – maker's mark, distinct colors such as turquoise, or an older method of opening the container.

Far Left: .303 British cartridge found by a WCC planting crew on Skagit River. Don't ever touch something like this!
Left: Maker's mark on bottom of old bottle.

Right: *Old beer can found in Oregon. ACME was owned by Olympia Brewery. Courtesy of Heather Simmons.*



Logo employed by Whithall Tatum & Co. between 1924 to 1938 (Lockhart et al. 2016).

Can opening dates, courtesy of W.M. Schroeder.

Implement the IDP if you see…

You see historic foundations or buried structures.

Examples are:

- Foundations.
- Railroad and trolley tracks.
- Remnants of structures.

Counter Clockwise, Left to Right: *Historic structure 45KI924, in WSDOT right of way for SR99 tunnel. Remnants of Smith Cove shantytown (45-KI-1200) discovered during Ecology CSO excavation, City of Spokane historic trolley tracks uncovered during stormwater project, intact foundation of historic home that survived the Great Ellensburg Fire of July 4, 1889, uncovered beneath parking lot in Ellensburg.*

Implement the IDP if you see...

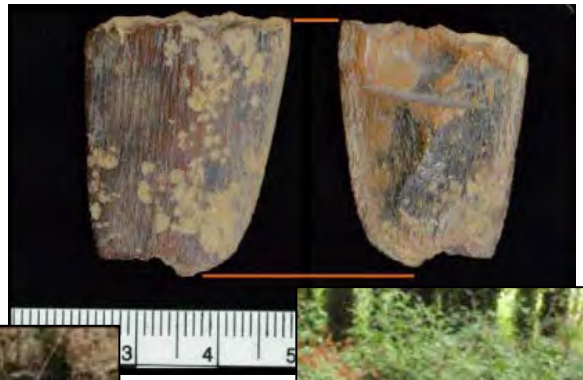
Potential human remains.

Examples are:

- Grave headstones that appear to be older than 50 years.
- Bones or bone tools--intact or in small pieces. It can be difficult to differentiate animal from human so they must be identified by an expert.
- These are all examples of animal bones and are not human.

Center: *Bone wedge tool, courtesy of Smith Cove Shantytown excavation (45KI1200).*

Other images (Top Right, Bottom Left, and Bottom) Center: Courtesy of DAHP.



Directly Above: This is a real discovery at an Ecology sewer project site.

What would you do if you found these items at a site? Who would be the first person you would call?

Hint: *Read the plan!*

DATE: 8/17/2021

TO: Andrew Smith, Cleanup Project Manager, Department of Ecology, Toxics Cleanup Program Southwest Region

FROM: Heather May, Department of Ecology,
Toxics Cleanup Program Southwest Regional Office

SUBJECT: Washington State Governor's Executive Order 21-02 (formerly EO 05-05)
Shelton C Street Landfill CSID 2295
DAHP Project number 2021-07-04254

Area of Potential Effect and Project Activities

The Washington State Department of Ecology (Ecology) is providing funding to the City of Shelton for cleanup activities at Shelton C Street Landfill. The purpose of this project is to clean up and contain contamination from a closed municipal landfill. Institutional controls, including physical barriers, will restrict access with long-term monitoring of remaining contamination to insure protection of human health and the environment.

The Area of Potential Effect (APE) is approximately 4.0-acres West of Highway 101 outside the City of Shelton, Mason County. The former landfill will be capped by grading, installing a geotextile isolation barrier, and topping with a 2-foot layer of soil and 1-foot layer of vegetation. The area will be fenced, which may require scraping and shallow excavation.

Final Determination

Ecology made a preliminary determination that the area is a *moderately low risk* for pre-historic artifacts or other archaeological resources. Ecology suggested an Inadvertent Discovery Plan (IDP) be required and workers be trained in its use. The preliminary determination and request for consultation was sent via email to the following parties on July 8, 2021:

- Rob Whitlam, Department of Archaeology and Historic Preservation
- Brandon Reynon, Puyallup Tribe
- Jeffrey Thomas, Puyallup Tribe
- Dennis E. Lewarch, Suquamish Tribe
- Jackie Ferry, Samish Tribe
- Rhonda Foster referred to Shaun Dinubilo, Squaxin Tribe

During consultation, Ecology received concurrence on our preliminary determination from DAHP and Squaxin Tribe.

Based on our review and comments received, Ecology retains the earlier determination of ***moderately low risk*** with requirements that an IDP be used onsite and sampling staff be trained on how to use the IDP. If archaeological deposits are inadvertently discovered during construction, ground-disturbing activities should be halted immediately in an area large enough to maintain integrity of the deposits. The DAHP and affected tribes must be notified.

Thank you for complying with the requirements of this cultural resources consultation,

Heather May

heather.may@ecy.wa.gov, (360)890-0496

APPENDIX G

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.