MEMORANDUM

To:	Allison Hanson, WSDOT	**Date:**	July 6, 2009
From:	Alaskan Way Viaduct Replacement Program Permitting Team		
Re:	Preliminary Permit Strategy for Discussion Purposes Contract Unit 03 – Tunnel and Tunnel Systems Contract (Design Build)		

This memorandum identifies the permits for local, state, and federal permitting processes to deliver the Design Build Tunnel and Tunnel Systems Contract (the Project). This memorandum has been developed to aid in permit strategy discussions with environmental management and the design team. The permit strategy will be refined as the design of the project and construction practices become more defined.

For all other contracts, a separate permit strategy will be developed that will include outlining program-wide permit strategies (such as single permits that could overlap multiple contracts and other streamlining opportunities), contract-specific permit strategies, and regulatory agency coordination.

PROJECT

Based on the preliminary draft of the Alaskan Way Viaduct Replacement Program project descriptions, the Project will encompass tunnel construction, tunnel systems installation, and staging.

Contract 03a: Tunnel Construction

The construction of the tunnel will consist of the following project elements:

- Design, order, deliver and assemble Tunnel Boring Machine
- Provide settlement mitigation: building, utility, and surface monitoring instrumentation; advanced soil replacement; selective building

underpinning; utility relocation; repair and/or replacement of damage to surface streets and sidewalks
- Excavate the south portal and construct the tunnel launch facility
- Prepare the site for tunneling: betonite mixing and recovery plant (if required), crane for Tunnel Boring Machine (TBM) erection and for lowering segments into the excavation, segment receiving and storage yard, temporary ventilation structure, etc.
- Drive the tunnel and erect segments
- Remove the TBM at the north end from a retrieval pit built by others
- Remove and dispose of material
- Construct interior structures (walls, deck, stairways, escape pathways, final overlay, etc.)
- Install conduit, ducting, and piping between the tunnel and the ventilation building
- Construct "civil" components of mechanical/electrical/control systems (conduit, drainage piping, deluge mains, duct banks, vaults, and associated tunnel mechanical equipment)

Contract 03b: Tunnel Systems

Tunnel systems will consist of installing the following project elements:

- Main switchboards, transformers power distribution panels and cables
- Lighting control panels and lighting
- Fire control panel, linear detectors and smoke alarms
- Deluge valves, controls and sprinkler piping
- Closed circuit television (CCTV) cameras and emergency telephones
- Fiber optic cables for communication
- Low voltage control wiring
- Ventilation fans and fan controls
- Radio cable, antenna and equipment
- Main computer control center that ties to central operations
- Alarms and emergency lighting

Staging Areas

Staging areas and staging area activities are currently being researched and vetted. To date, the following staging areas are proposed for the Project.

Pier 48

The upland area of the property is currently used as a parking lot and will be utilized for contractor parking. No fabrication activities, staging of heavy equipment, laydown of materials, construction of project trailers, or import and export of material are planned at Pier 48. It is assumed that no modifications to Pier 48 will be undertaken by the Project.

Terminal 25

A portion of Terminal 25 may be utilized for contractor parking, fabrication of tunnel segments, staging of heavy equipment, laydown of materials, and import and export of materials and equipment. The location for barge-out and disposal of excavated material to an approved upland location may include the construction of a conveyance system within the shoreline area. It is assumed that no modifications to Terminal 25 will be undertaken by the Project.

WOSCA

Depending on timing of contracts, WOSCA will be utilized for contractor offices in an existing building and for staging of tunnel segments and construction equipment. The area will likely be utilized for storage of baker tanks associated with dewatering, temporary soil stockpiles, and spoils from tunnel excavation operations.

KEY ASSUMPTIONS

The following key assumptions have been made:

- The Project will occur in the City of Seattle, will be federally funded, and will occur all within Washington State Department of Transportation (WSDOT) limited access, with the exception of staging locations.
- The Project will follow a design-build model. Under this model, WSDOT-obtained permits will be based on a 15% design. The design-build

contractor will be responsible for the remaining permits described below through the Final Construction Plans.

- Critical areas review would occur as part of land use review for a specified development proposal (City of Seattle Municipal Code [SMC] 25.09.380). WSDOT will comply with the intent of the local jurisdictions' regulations but will not obtain permits or undergo critical areas review for work being conducted in State right-of-way. This includes, but is not limited to, clearing, grading, building, and demolition permits for WSDOT-owned structures.
- For building or demolition of structures that are not in WSDOT limited access, but are located in public right-of-way, permitting of those activities will occur through a Street Use Permit.
- The design-build contractor will assemble the TBM and will complete tunnel excavation work with either an Earth Pressure Balance or Slurry Shield TBM.
- No in-water work will occur under this contract. If a pier or terminal were used to import or export materials, no modifications to the facilities will occur and no barges will be permitted to anchor down into the sediment bed.
- Contract Unit 01 – 1st Avenue Ground Replacement Contract and Contract Unit 02 – Tunnel Boring Machine Substation will be constructed prior to the start of Contract Unit 03 and are therefore assumed to be existing conditions for the development of this permit strategy.

WSDOT-OBTAINED PERMITS

Section 402 National Pollutant Discharge Elimination System (NPDES) (General or Individual) – Washington State Department of Ecology (Ecology)

The NPDES Construction Stormwater permit authorizes stormwater discharges to surface water and is required for any land disturbing activities such as clearing, grading, excavating, and/or demolition that: 1) disturbs one or more acres of land area, or 2) are "part of a larger common plan of development or sale" that will ultimately disturb one or more acres of land, and 3) discharges stormwater from the site into state surface water(s) or into storm drainage systems, which discharge to

state surface waters. Stormwater associated with construction support activities (e.g., off-site equipment staging yards, material storage areas, borrow areas, etc.) are also covered by this permit.

If conditions indicate that the general permit will be ineffective to protect water quality, Ecology may require a construction site to obtain an individual stormwater permit. An individual permit is written specifically for the site. The Environmental Procedure Manual (31-11.03) states: "On large WSDOT projects, a pre-application conference is advisable for an early determination of whether an Individual Permit will be needed."

Based on the unique project elements and the background research provided below, it is our recommendation to setup a pre-application meeting with the local Ecology contact (Josh Klimek) and the Program's Ecology liaison (Terry Swanson) to verify the appropriate permit type. Which TBM the contractor selects may affect whether the project would require a General or Individual NPDES Permit. For example, if the Design-builder selects the Slurry Shield TBM over the Earth Pressure Balance TBM, a betonite mixing and recovery plant may be required where treatment and disposal conditions are not covered under the Construction Stormwater General Permit. Finally, if after the pre-application meeting with Ecology it is decided that the type of TBM dictates the choice of one of the two permits, WSDOT could either dictate to the design-build contractor which TBM should be used or the design-build contractor will be required to obtain the NPDES permit.

Background and Similar Projects

An Individual NPDES Permit was issued to the Central Puget Sound Transit Authority for the Central Link light rail project. As with the Central Waterfront Project(s), the Central Link light rail project was broken into several contract units, including a 1.5-mile twin bored tunnel through Beacon Hill. However, the light rail project's Individual NPDES Permit covers the entire contract while this permit strategy only covers Contract Unit 03.

For WSDOT Interstate 405 (I-405) projects, criterion was used to confirm whether an Individual or General NPDES Permit was required. A "yes" to all three of the

following criterion required an Individual Permit, while a "no" to any required a General Permit.

1. The project will be under construction for two or more complete wet-weather seasons of construction. In Western Washington the wet-weather construction period is considered to be from October 1st to April 30th.
2. When 25 acres or more of soils are disturbed and under active excavation at any one time during any phase of the construction project, then the project has met the magnitude criteria.
3. The project site during construction will discharge construction stormwater run-off or has the significant potential to have such discharges to "sensitive waters." "Sensitive waters" include public drinking water intakes and their designated protection areas; designated public swimming areas; shellfish beds; State-designated Outstanding Resource Waters; National Marine Sanctuaries; State Aquatic Reserves; and waters determined to be critical habitat for threatened or endangered species.

In regards to total acreage of soils disturbed for I-405 projects, the March 2006 WSDOT Highway Runoff Manual M 31-16 (HRM) states that any construction activity occurring between April 1 and October 31 shall not expose more than 17 acres of erodible earth at one time, and that construction activities occurring between November 1 and March 31 shall not expose more than 5 acres of erodible earth at one time. Therefore, the requirements imposed by the HRM ensure that the magnitude criteria (25 acres) will not be exceeded. Criteria used for the I-405 projects to differentiate between an Individual and General NPDES Permit are not consistent with Ecology regulations. Therefore, this criterion will need to be vetted with the Project Ecology liaisons.

Coastal Zone Management Act (CZMA) Consistency Determination – Ecology

A CZMA Consistency Determination is required for projects requiring federal funding within any of Washington's 15 coastal counties (i.e., King County).

Draft and Final Street Use Permit(s) – City of Seattle, Department of Transportation (SDOT):

As stated in the assumptions, the Project will occur within WSDOT limited access, with the exception of staging locations. Elements requiring a street use permit may include:

- Traffic control
- Restriping the First Avenue centerline to align with the centerline of the tunnel
- Building or demolition of structures within public right-of-way
- Replacing damaged surface streets and sidewalks as a result of settlement

WSDOT will coordinate with SDOT through 15% design development and obtain draft Street Use Permit conditions for incorporation into the request for proposal. It is recommended that a clear strategy be laid out that describes the process by which the design-build contractor submits design packages to WSDOT for City of Seattle review and approval. The final Street Use Permit would then be issued to WSDOT. We recommend a strategy meeting with the SR 519 Intermodal Access Project—Phase 2 project team members responsible for obtaining the Street Use Permit, including City of Seattle Department of Transportation staff.

Major Projects Noise Variance – City of Seattle Department of Planning and Development (DPD):

WSDOT has been closely involved during the development of the amended noise ordinance and accompanying draft Director's Rule 3-2009. A public outreach strategy that addresses the requirements of the noise ordinance and draft Director's Rule 3-2009 is being developed with Northwest Region Noise and Air Quality managers in coordination with permit managers and public involvement staff at the Alaskan Way Viaduct Replacement Program and SR 520 Bridge Replacement and high occupancy vehicle (HOV) Program.

Because of the public outreach requirements and potential for appeals, it is highly recommended that WSDOT obtain the Major Projects Noise Variance.

The preferred option is for WSDOT to obtain the Major Projects Noise Variance prior to contract award. The variance application, which includes mitigation measures, can be developed to allow for a range of potential noise-generating activities and mitigation measures. WSDOT would then coordinate with DPD during construction to provide contractor means/methods and to propose amendments to the issued Major Projects Noise Variance. In early conversations with DPD, this would be a viable option. A meeting with DPD noise abatement staff would occur prior to implementation of this strategy.

The second option is for WSDOT to obtain the Major Projects Noise Variance during construction. The request for proposal would need to lay out a timeline and required information for the design-build contractor to submit to WSDOT for the variance application.

Preliminary Pioneer Square Historic District Certificate of Approval

As shown in Figure 1, the Pioneer Square Historic District boundary includes the area around the south portal of the bored tunnel. The boundaries of the Project will need to be confirmed with the design team.

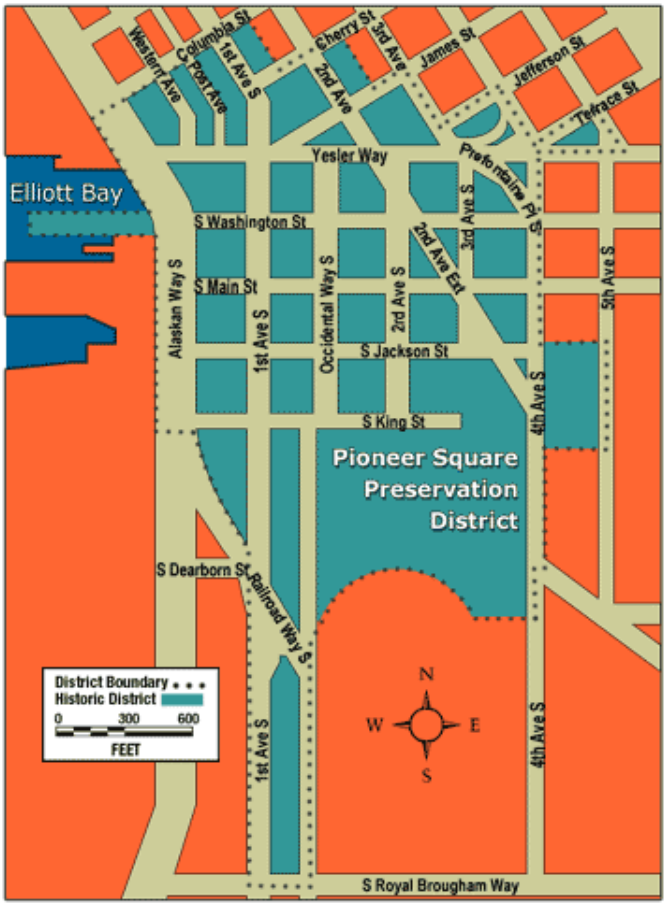

Figure 1

Certificates of Approval are official notices of approval issued by the Pioneer Square Preservation Board and the Director of the Department of Neighborhoods. They are required before the City of Seattle will issue permits for work that results in any change to the exterior appearance of any Pioneer Square District structure, including facade alterations, new construction, demolition, or remodeling. Work must occur exactly according to approved plans. Any revisions, omissions, or additions to plans must be reviewed by the Board prior to execution.

WSDOT can make a written request to submit an application for a Certificate of Approval for a preliminary design if the applicant waives in writing the deadline for a Board decision on the final design and any deadlines for decision on related permit applications under review by the DPD; however, the final design will need to be submitted by the Design-builder following the Final Construction Plans.

Prior to initiating the application process for a draft Certificate of Approval, the permit team will require direction from WSDOT management and legal staff of the jurisdictional boundaries. Per previous guidance, WSDOT-owned structures are not subject to Pioneer Square Historic Preservation Board approval.

DESIGN-BUILD CONTRACTOR-OBTAINED PERMITS

Section 402 NPDES (General or Individual) – Ecology

If the type of TBM dictates the choice of one of the two permits, WSDOT could either dictate to the design-build contractor which TBM should be used or the design-build contractor will be required to obtain the NPDES permit.

Building and Demolition Permits (as necessary) – Seattle DPD

Building and/or demolition permits may be required as a result of any surface street settlement mitigation during construction that occurs on private property.

Industrial Wastewater Discharge Permit or Authorization – King County Industrial Waste Program (Ecology oversight)

An Industrial Wastewater Discharge Permit or Authorization would be required for dewatering activities associated with tunnel boring. It is assumed that groundwater will be encountered primarily at the south and north portals. Outside of the portal areas, the depth of the tunnel is assumed to be below the groundwater table.

In general, the threshold requirement for an Industrial Wastewater Discharge Permit is if the discharge is greater than 25,000 gallons per day. Otherwise, an authorization would be required. A permit includes a more substantial application process and package, as well as a public review period. Because dewatering needs will not be addressed prior to 15% design, the design-build contractor will be required to obtain the permit or authorization.

Underground Injection Control (UIC) – Ecology

UIC wells are built structures used to discharge fluids into the subsurface. The majority of UIC wells in Washington are used to manage stormwater (i.e., drywells) and sanitary waste (large on-site systems), return water to the ground, and help clean

up contaminated sites. The contractor will be required to register the UIC wells with Ecology.

Notice of Intent for Demolition Activities – Puget Sound Clean Air Agency Regulations (PSCAA)

Demolition and renovation projects must comply with certain asbestos requirements before they begin. Regardless of whether any asbestos is identified, an Asbestos/Demolition Notification and filing fee must be submitted to PSCAA before any friable asbestos removal or demolition begins. This applies to all structures, including mobile homes, with greater than 120 square feet of roof area.

Administrative Order for Chemical Treatment (if necessary) – Ecology:

The use of chemical treatment Best Management Practices (BMPs), including enhanced sand filtration, requires an Administrative Order for Chemical Treatment from Ecology.

Pioneer Square Historic District Certificate of Approval – City of Seattle, Department of Neighborhoods:

If it is determined that a Certificate of Approval is required, the final design will need to be submitted by the design-build contractor using the Final Construction Plans.

Shoreline Substantial Development Permit (SSDP) – City of Seattle DPD:

Seattle's shoreline regulations are mandated by the State Shoreline Management Act (SMA) of 1971, as amended in RCW Chapter 90.58. Shorelines, by definition, are composed of areas extending 200 feet landward, as measured on a horizontal plane from ordinary high water. "Substantial development" means any development of which the total cost or fair market value exceeds Two Thousand Five Hundred Dollars ($2,500) or any development which materially interferes with the normal public use of the water or shorelines of the City of Seattle (SMC 23.60.020).

Depending on the method for disposing of excavated materials, the design-build contractor may elect to develop a conveyance system at the staging areas identified in this memorandum as a means for loading the material onto barges. This is an outright permitted use within the urban industrial shoreline zoning designation (SMC

23.60.840), but would require the design-build contractor to apply for and obtain an SSDP.

Electrical and Water/Sewage Permits (as necessary) – City of Seattle DPD

PERMITS NOT ANTICIPATED AS PART OF THE CONTRACT

U.S. Army Corps of Engineers (USACE) Section 404 Permit – USACE

A 404 permit is required if discharging dredged or fill material into the waters of the United States, including special aquatic sites such as wetlands. In-water work is not proposed under this contract unit and thus will not require a Section 404 permit.

Section 401 Water Quality Certification – Ecology

A Section 401 permit is required if discharging dredged of dredge or fill material into water or non-isolated wetlands or excavation in water or non-isolated wetlands. In-water work is not proposed under this contract unit and thus will not require a Section 401 permit.

Hydraulic Project Approval (HPA) – Washington Department of Fish and Wildlife (WDFW)

An HPA is required if proposed work activities uses, diverts, obstructs, or changes the natural flow or bed of any of the salt or fresh waters of state. In-water work is not proposed under this contract unit and thus will not require an HPA.