

Implementation Plan for Bored Tunnel Delivery

Dimensions

- Milestones**
- Major Deliverables**
- Scope and Project Elements**
- Teams**
- Resource/Budget Needs**
- Key Assumptions**

Milestones

Key project objectives

- Bored tunnel open to traffic by 12/15**
- ROD by end of 12/10**
- Begin tunnel boring by 1/12**

Key short term milestones to support EIS development

- Preferred alternative selection: 1/09**
- Geometric Design Criteria Definition: 3/09**
- North portal interchange config: 4/09**
- South portal interchange config: 4/09**
- Bored tunnel basic configuration plan set: 6/09**
- EIS analysis launch: 7/09**

Key milestones to support tunnel RFQ/RFP process

- Contract package definition 6/09?**
- RFQ Advertisement 9/09?**
- Award Constructor Contract 4/10**

Major Deliverables

Short Term (first 6 months)

Basic Configuration Plans

- Plan, Profile, Sections***
- Bored tunnel and CC tunnel portal locations***
- North and South Interchange Plans***
- Horizontal Alignments w/Stationing***
- Draft R/W Limits Identified***
- Ventilation Approach and Validation***
- Egress Approach and Validation***
- Monitoring and Controls Approach***
- Major ITS Facilities Plan***

Detour/Maintenance of Traffic Approach

Design Approval Package

Access Determination

**Current Classification: Class 1 Managed Access
Acquiring Limited Access**

Cost and schedule implications
Typically higher design speed -55mph
Principal Arterial Standards
Transitions/interface at north and south
Jurisdictional O/M clarity

Managed Access

Existing corridor analysis
45 mph design speed – flexibility
Managed Access Standards – flexibility
Consistent with north and south ends
Local Agreement for O/M

Design Speed

Corridor Report (if needed to set design speed)

Design Matrix Selection

Deviation Identification

Phase 1 of Geotechnical Baseline Report

Assume 10 deep borings on current alignment

Permitting/Traffic Control

No analysis and reporting

Medium Term (6-12 months)

Start Geotechnical Baseline Report

Assume an additional 20 borings

Limited analysis and reporting

Begin RFQ Process

Tunneling Machine Contract

DB Contract

Engage TBM and Contracting Community

Advertise RFQ

Scope and Project Elements

Four Lane Bored Tunnel

South cut and cover w/facilities

South off-ramp and north on-ramp

North cut and cover w/facilities
Multiple tight geometry access points north of Denny
New roadway between AW and Elliott/Western
Viaduct removal – limits?
Waterfront restoration – limits?

Teams

South Portal Design
Bored Tunnel Design
North Portal Design
“Armory Way” connector
Civil Standards/Criteria
Fire and Life Safety Standards/Criteria
Major Discipline Support
 Transportation/Traffic
 Utilities
 Geotechnical
 Public Involvement
 Program Mgmt
 Environmental
 Cost Estimating
 Structural Engineering
Technical and Other Resources
 HMM Tunneling and Systems
 HMM Geotechnical
 Tolling
 Contract Packaging
 EIS Strategy/Streamlining
 CEVP
 Value Engineering
 Project Management Planning
 FHWA Coordination/Approvals

07/09 Biennium Resource/Budget Needs

Design Teams

5 FTE transitioning to 25 FTE
Range estimate – add'l \$2.0-\$2.4 million
TDY/ODC additional ???

Geotechnical Investigation

Range estimate – \$700-850 thousand
HMM Support (Task AC)

\$500-600 thousand
Other Technical Resources/Specialty Services
\$400 thousand (SWAG)
GEC Management/Overhead
\$400-600 thousand

Key Assumptions

Tunnel Preferred Alternative Decision 1/09
Construction Traffic Impacts Minimal (no long term closures of SR 99)
Viaduct remains open until bored tunnel open to traffic
EIS contains one build and one no-build only
Tunnel is Design Build Construction
Tunnel is single bore 54' diameter
Tunnel alignment is as shown on 1/09 roll plot
EIS includes only basic two lane roadway from Elliott/Western to Alaskan Way at Pike
Viaduct removal south of Pike not included in EIS
Seawall not included in EIS
North Alaskan Way not included in EIS
Streetcar not included in EIS