

**SOUND TRANSIT
STAFF REPORT**

MOTION NO. M2009-38

**Contract Award for University Link Construction of
TBM Tunnels, University of Washington Station to Capitol Hill Station**

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance Committee	5/7/09	Discussion to Recommend Board Approval	Ahmad Fazel, Link Executive Director	(206) 398-5389
Board	5/14/09	Action	John Harrison, U-Link Project Director Ben Emam, U-Link Construction Manager	(206) 398-5309 (206) 398-5394

Contract/Agreement Type:	✓	Requested Action:	✓
Competitive Procurement	✓	Execute New Contract/Agreement	✓
Sole Source		Amend Existing Contract/Agreement	
Agreement with Other Jurisdiction(s)		Budget Amendment	
Real Estate		Property Acquisition	

PROJECT NAME

University Link – Pine Street Stub Tunnel (PSST) to University of Washington (UW) Station

PROPOSED ACTION

Authorizes the chief executive officer to execute a contract with Traylor Frontier-Kemper Joint Venture, to construct approximately 11,400 lineal feet of twin-bored tunnels from the University of Washington Station to Capitol Hill Station within the University Link project in the amount of \$309,175,274, with a contingency of \$30,917,527, for a total authorized contract amount not to exceed \$340,092,801, which includes \$30,000 of cost reimbursable to Sound Transit from the University of Washington for betterments.

KEY FEATURES of PROPOSED ACTION

- Sound Transit advertised the University of Washington Station Excavation and Tunnel Boring to Capitol Hill Station (U220) Contract in December 2008 as a Fixed Price Award Fee sealed bid contract and received two bids. The lowest responsive and responsible bid was received from Traylor Frontier-Kemper Joint Venture in the amount of \$309,175,274, which was 22% below the Link engineer's estimate of \$395,354,000.
- Staff recommends assignment of ***\$46,376,291, or 15% contingency** for this contract given risks associated with the complex nature of underground construction, including limited site access, inherent uncertainties of underground conditions, and potential additional traffic control measures in the vicinity of the project that may be required by third parties.
- The proposed not to exceed contract value for Traylor Frontier-Kemper Joint Venture includes betterment work requested by the University of Washington to upgrade 1,369 feet of waterline for which the University will reimburse Sound Transit the fixed amount of \$30,000. This betterment work will not be charged to the University Link project.
- This contract also includes \$3,100,000 Provisional Sum for Award Fee, which is a program set up to provide incentives for contractor's performance exceeding contract requirements in five areas:

***Reviser's Note: The Finance Committee amended the contingency from 15% to 10% at the May 7, 2009 Finance Committee meeting.**

1. Safety and Security;
 2. Environmental Compliance and Environmental Stewardship;
 3. Relationship with UW and local community;
 4. Small Business/EEO/Apprentice Utilization, and
 5. Interface management with other Sound Transit contractors.
- The U220 Contractor must complete all work within 1,277 days after Notice to Proceed (NTP). There are also four intermediate milestones requiring various items of work to be completed to conform to the University of Washington staging area use limitations.

BUDGET IMPACT SUMMARY

Current Project Phase: Construction
 Projected Completion Date: 2016

Action Outside of Adopted Budget:	✓	Comments on Checked Items
This Project		
This Phase		
This Task		
Budget Amendment Required		

Key Financial Indicators:	✓	Comments on Checked Items
Contingency Funds Required		
Funding required from other parties (other than what is in financial plan)	✓	The proposed action includes costs for betterment work that will be reimbursed to Sound Transit by the University of Washington.

Not checked = action is assumed in current Board-adopted budget. No budget action or adjustment to financial plan required.

BUDGET and FINANCIAL PLAN DISCUSSION

The Adopted 2009 Lifetime Capital Budget for University Link is \$1.756 billion. Within that amount \$492,213,000 has been set aside for Sound Transit’s share to construct the twin-bored tunnels from the UW Station to Capitol Hill Station (Contract U220) in the construction phase. Approval of the proposed action would commit \$340,062,801 for this line item, and leave a remaining budget balance of \$152,150,199.

The proposed not-to-exceed contract value for Traylor Frontier-Kemper Joint Venture includes betterment work for which the UW will reimburse Sound Transit the fixed amount of \$30,000. This betterment work will not be charged to the University Link project.

The proposed action is consistent with the current adopted lifetime budget, and is affordable within the agency’s long-term financial plan and subarea financial capacity. The action will have no new revenue impact on Sound Transit.

BUDGET TABLE

Action Item: Traylor Frontier-Kemper Joint Venture (construct twin-bored tunnels from the University of Washington Station to Capitol Hill Station within the University Link project)

(Year of Expenditure \$000)

University Link	Adopted 2009 Budget (A)	Committed To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommitted (Shortfall) (E)
Agency Administration	115,229	36,872		36,872	78,357
Preliminary Engineering	24,388	24,329		24,329	59
Final Design	77,944	69,718		69,718	8,226
Right of Way	167,332	123,493		123,493	43,839
Construction	1,180,033	35,444	340,063	375,507	804,526
Construction Services	68,526	64,704		64,704	3,822
Third Party Agreements	18,646	9,851		9,851	8,795
Vehicles	103,909	99,185		99,185	4,724
Total Current Budget	1,756,007	463,595	340,063	803,658	952,349

Construction Phase Budget Detail

U220 UW Station Excavation & Tunnels	492,213	-	340,063	340,063	152,150
Other Construction	687,820	35,444	-	35,444	652,376
Total Phase	1,180,033	35,444	340,063	375,507	804,526

Contract Amount	Board Approvals to Date (F)	Current Approved Contract Value (G)	Proposed Action (H)	Proposed Total for Board Approval (I)	Proposed Contract Value (J)
Contract Amount	-	-	309,175	309,175	309,175
Contingency	-	-	30,918	30,918	30,918
Total	-	-	340,093	340,093	340,093
Percent Contingency	0%	0%	10%	10%	10%
Less Betterments	-	-	30	30	30
Total Sound Transit Share	-	-	340,063	340,063	340,063

(A) ADOPTED 2009 BUDGET amounts as adopted by resolution of the Sound Transit Board (R2008-14, approved 12/11/08).

(B) COMMITTED TO DATE amounts are from Agency WBS Report as of March 2009 + approved and pending board actions not recorded as of 3/31/09, or submitted after that date.

SMALL BUSINESS PARTICIPATION

Prime Contractor

Traylor Frontier-Kemper Joint Venture is the prime contractor for this contract. Traylor Frontier-Kemper Joint Venture has committed to a 7.28% Small Business participation goal, including 3.62% for Disadvantaged Business Enterprises (DBEs), which exceeds Sound Transit's 6% Small Business and 3% DBE goals for this contract.

Utilization Breakdown Table

Subconsultant/Subcontractor	Business Type	% of Work	Dollar Value
Tunnel Electric, Inc.	Small Business	3.65%	\$10,800,000
Rebar International	DBE	3.62%	\$10,700,000
Total		7.28%	\$21,500,000

Note: The above percentages are based on the proposed Contract Amount excluding Provisional Sums. The final Small Business and DBE participation percentages will be calculated based on the Total Contract Amount.

EEO Commitment

Traylor Frontier-Kemper Joint Venture workforce demographics are 14.88% women and 19.64% people of color.

Apprentice Utilization Commitment

Traylor Frontier-Kemper Joint Venture is committed to hiring apprentices for 20% of all labor hours.

PROJECT DESCRIPTION and BACKGROUND for PROPOSED ACTION

Environmental compliance for University Link pursuant to the National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) was completed with the North Link Final Supplemental Environmental Impact Statement (EIS) issued on April 7, 2006. The Federal Transit Administration (FTA) issued a Record of Decision in June 2006.

Final design for University Link project began after the Board authorized a contract execution with Northlink Transit Partners on November 9, 2006 to provide civil engineering and architectural final design services, and permission to enter final design from the FTA was received on December 11, 2006.

The final design process involved coordination with University of Washington staff and HOK S+V+E Architects (HOK), a UW consultant for the Husky Stadium Expansion project. The HOK design team has requested Sound Transit provide additional utility capacity to accommodate the master plan for the Husky Stadium. The additional utility capacity to be performed under this contract includes 1,369 feet of waterline upgrade. The University of Washington has agreed to reimburse Sound Transit the fixed amount of \$30,000 for the waterline upgrade betterment work.

On June 14, 2007, through Motion M2007-62, Sound Transit Board authorized the chief executive officer to execute a Master Implementation Agreement (MIA) with the University of Washington establishing terms and conditions to acquire access to and use of University of Washington property for purposes of design, construction, operation, monitoring, and maintenance of Link light rail transit system. Among other requirements, the MIA set area and time limits for Sound Transit's light rail construction activities in front of Husky Stadium to a total of six acres and 2,008 days elapsed time. These limits must be allocated among the U220 Contract and other follow-on construction contracts at the UW Station site.

On July 14, 2008, through Resolution R2008-09, the Sound Transit Board approved the revised University Link Baseline Cost Estimate (BCE) and authorized the submission of a revised Federal Full Funding Grant Agreement (FFGA) application. The FTA approved and signed the FFGA on January 15, 2009.

On December 24, 2008, Sound Transit advertised this contract as a competitive bid through local, regional and national publications and received two bids. The low bid was submitted by Traylor Frontier-Kemper Joint Venture in the amount of \$309,175,274, 22% below the Link engineer's estimate of \$395,354,000. The second bid received was for \$360,775,000.

Following extensive review of the bidder's qualifications and all other relevant information, and after meeting with bidder's management and proposed project personnel, Sound Transit Legal, Contracts, Finance, and Link departments concluded that this bidder is responsible, and that it submitted the lowest responsive bid. Sound Transit's evaluation included review of the bidder's financial and safety plans, and discussions with the bidder's references.

The scope of work in Contract U220, Tunnels, UW Station to Capitol Hill Station includes:

- a) Utility work including utility relocation and construction of permanent power supply ductbank to the station under Montlake Blvd;
- b) Construct a temporary access road from the intersection of Montlake Blvd. and Pacific Street around the southern end of the new station box to the existing E12 Parking Lot (which will remain open during construction) and temporary support of excavation to allow leveling the site prior to start of slurry wall installation;

- c) Construct four-foot thick slurry walls to a depth of up to 160 feet below grade to form the permanent perimeter walls of the entire UW Station box, and a temporary intermediate slurry wall (cutoff wall) separating the station area from the southerly crossover area;
- d) Excavate the southern 320 feet of the UW Station box (south of the cutoff wall) to a depth of about 110 feet below grade (just below the future tunnel depth);
- e) Place the base concrete invert slab in the crossover area;
- f) Procure, assemble, and launch two new Tunnel Boring Machines (TBMs) of roughly 22-foot outside diameter bore;
- g) Construct approximately 11,400 lineal feet of twin-bore tunnels between UW Station and Capitol Hill Station;
- h) Construct sixteen cross-passages connecting the two tunnels at approximately 800-foot intervals using Sequential Excavation Mining (SEM) techniques;
- i) Install tunnel invert slab and walkways, handrails, drainage piping and sump pumps, wet standpipes, imbedded conduits for systems elements, including EMI Mitigation system requirements, tunnel lighting and electrical outlets, and cathodic protection for corrosion control;
- j) Upon completion of the slurry walls, turn over the northern half of the site and coordinate with the U250 contractor to excavate and build the UW Station;
- k) Upon completion of the tunneling, turnover a larger portion of the UW Station site and continue to coordinate with the U250 Contractor; and
- l) Upon Substantial Completion, vacate the UW Station site for the U250 Contractor to complete the crossover box and roof structure, backfill, and restore the site.

Between Notice of Award and full Notice to Proceed, which will occur between December 7, 2009 and January 4, 2010 (at which time the U220 Contractor must complete all required submittals and otherwise be ready to start work on-site) the Contractor will be given a Limited NTP to order the TBMs, other equipment, and materials, line up subcontractors, and prepare all required Contract Submittals.

Sound Transit has obtained all key construction permits, and has incorporated permit and MIA conditions into this contract. An easement agreement with the University of Washington has been executed for temporary (construction) easements and permanent transportation easements for the UW Station and underground tunnels and facilities on University property.

Nineteen properties have been purchased at the Capitol Hill Station (CHS) site, all relocations have been completed, and this site is being cleared and remediated in preparation for the U230 contractor to excavate this station site in advance of the U220 TBMs arriving and being extracted from this site.

A total of 183 tunnel easements are needed for U220 and are in various stages of acquisition. All required easements are anticipated to be acquired by the end of 2009, about seventeen months in advance of the scheduled launch of the first U220 TBM in May 2011. Likewise, a WSDOT Airspace Lease is in process for the SR 520 undercrossing and will be completed well in advance of the need.

In addition, Sound Transit is seeking a construction noise variance for the UW Station site. The City of Seattle Department of Planning and Development (DPD) is currently reviewing the variance application and is expected to schedule a public hearing on the request in late May 2009. A noise variance is expected to be issued before the U220 contractor begins work on the site, scheduled for December 2009.

Prior Board/Committee Actions

Motion/Resolution Number and Date	Summary of Action
R2008-09 7/24/08	Approved Revised University Link Baseline Cost Estimate (BCE) and Authorizing Submission of Revised Federal Full Funding Grant Agreement Application.

Motion/Resolution Number and Date	Summary of Action
M2007-62 6/17/07	Authorized the chief executive officer to execute a Master Implementation Agreement (MIA) with the University of Washington establishing terms and conditions to acquire access to and use of University of Washington property for purposes of design, construction, operation, monitoring, and maintenance of Link light rail transit system.

CONSEQUENCES of DELAY

Contract U220 is on the schedule critical path of University Link Project. Delay in awarding this contract could have a direct impact on major milestones of this contract as well as major milestones of the follow-on contracts, and could eventually impact the targeted Revenue Operation Date for University Link.

PUBLIC INVOLVEMENT

Sound Transit staff has held a number of station design workshops, project open houses, and other meetings since the beginning of environmental and preliminary engineering work; and during the final design work completed to date. Staff also meets regularly with the Montlake community, University of Washington, other interested parties and affected stakeholders throughout the project area.

Sound Transit also has an active community outreach program during construction, which includes a 24-hours/7-days-a-week construction hotline, a variety of written materials, and public meetings. For this contract, there is a budget for additional public outreach activities included in the contract amount as a provisional sum.

Sound Transit staff has been notifying potentially affected stakeholders and public about the U220 construction work. Staff will also continue to closely work with local jurisdictions to coordinate public notification efforts and other outreach activities during this construction.

ENVIRONMENTAL COMPLIANCE

JI, 04/17/09

LEGAL REVIEW

DB 5/4/09

SOUND TRANSIT

MOTION NO. M2009-38

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the chief executive officer to execute a contract with Traylor Frontier-Kemper Joint Venture, to construct approximately 11,400 lineal feet of twin-bored tunnels from the University of Washington Station to Capitol Hill Station within the University Link project in the amount of \$309,175,274, with a contingency of \$30,917,527, for a total authorized contract amount not to exceed \$340,092,801, which includes \$30,000 of cost reimbursable to Sound Transit from the University of Washington for betterments.

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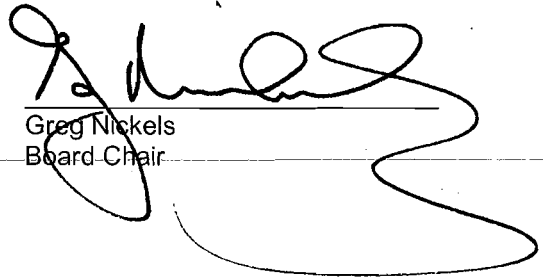
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Motion:

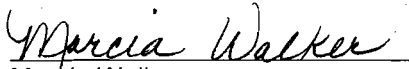
It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that the chief executive officer is authorized to execute a contract with Traylor Frontier-Kemper Joint Venture, to construct approximately 11,400 lineal feet of twin-bored tunnels from the University of Washington Station to Capitol Hill Station within the University Link project in the amount of \$309,175,274, with a contingency of \$30,917,527, for a total authorized contract amount not to exceed \$340,092,801, which includes \$30,000 of cost reimbursable to Sound Transit from the University of Washington for betterments.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on May 14, 2009.



Greg Nickels
Board Chair

ATTEST:



Marcia Walker
Board Administrator