

**SOUND TRANSIT  
STAFF REPORT**

**MOTION NO. M2009-40**

**Contract Amendment for Traction Electrification Contractor to Retrofit Systems Elements in  
Pine Street Stub Tunnel in Preparation of University Link Construction**

<b>Meeting:</b>	<b>Date:</b>	<b>Type of Action:</b>	<b>Staff Contact:</b>	<b>Phone:</b>
Finance Committee	5/7/09	Discussion/Possible Action to Recommend Board Approval Action	Ahmad Fazel, Link Executive Director	(206) 398-5389
Board	5/14/09		<b>George Hodges, Civil/Systems Integration Manager</b>	(206) 398-5437

<b>Contract/Agreement Type:</b>	<input checked="" type="checkbox"/>	<b>Requested Action:</b>	<input checked="" type="checkbox"/>
Competitive Procurement	<input checked="" type="checkbox"/>	Execute New Contract/Agreement	
Sole Source		Amend Existing Contract/Agreement	<input checked="" type="checkbox"/>
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 increase the contingency for the contract with Mass Electric Construction Co. to modify the traction power system in the Pine Street Stub Tunnel to accommodate construction of the future University Link demising wall in the amount of \$210,211, for a new total authorized contract amount not to exceed \$48,898,597.

**KEY FEATURES of PROPOSED ACTION**

Additional contingency funds are required for the following:

- The retrofit of the Pine Street Stub Tunnel (PSST) is sequenced to allow the construction of a demising wall in the PSST. The demising wall is necessary to provide a working area for the University Link U230 Contractor to commence preparation of the existing wall to accommodate the tunnel construction and tunnel boring machine (TBM) breakthrough.
- The retrofit work includes repositioning the overhead contact system (OCS) (wires and brackets), track circuits, moving the bumping posts and signal structures, and replacing and repositioning the negative return conduits and cabling.

**BUDGET IMPACT SUMMARY**

Current Project Phase: Construction  
Projected Completion Date: 2016

<b>Action Outside of Adopted Budget:</b>	<b>✓</b>	<b>Comments on Checked Items</b>
This Project		
This Phase		
This Task	✓	The proposed action requires funding from the Miscellaneous Construction budget within the construction phase of the University Link project.
Budget Amendment Required		

<b>Key Financial Indicators:</b>	<b>✓</b>	<b>Comments on Checked Items</b>
Contingency Funds Required		
Funding required from other parties (other than what is in financial plan)		

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 current total authorized contract amount for Mass Electric Construction Co. is \$48,688,386 as adopted by the Sound Transit Board in Motion No. M2008-85 on 9/11/08, which includes: \$41,797,332 for the Central Link Initial Segment project, \$6,634,000 for the Airport Link project, and \$257,054 for Link within the Sound Transit Art Program (STart). The proposed action would increase the Mass Electric Construction Co. contract by \$210,211 for the University Link project to a new total authorized contract amount not to exceed \$48,898,597.

The Adopted 2009 Lifetime Capital Budget for University Link is \$1.756 billion. Within that amount, \$4,229,000 has been set aside for Miscellaneous Construction in the construction phase. Of this amount \$2,229,000 remains unutilized. The proposed action would commit \$210,211 of this amount for PSST Retrofit work for the demising wall, and leave a remaining balance of \$2,018,789 for the Miscellaneous Construction budget line item.

The proposed action is consistent with the current adopted 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:** Mass Electric Construction Co. (Increase the contingency for the contract to construct the Link Light Rail traction electrification system to retrofit systems elements in the Pine Street Stub Tunnel (PSST) for the University Link demising wall.)

(Year of Expenditure \$000)

<b>University Link</b>	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	390,756	210	390,966	789,067
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
<b>Total Current Budget</b>	<b>1,756,007</b>	<b>818,906</b>	<b>210</b>	<b>819,116</b>	<b>936,891</b>

**Construction Phase Budget Detail**

PSST Retrofit	-	-	210	210	(210)
Miscellaneous Construction	4,229	2,000		2,000	2,229
Other Construction	1,175,804	388,756		388,756	787,048
<b>Total Phase</b>	<b>1,180,033</b>	<b>390,756</b>	<b>210</b>	<b>390,966</b>	<b>789,067</b>

<b>Contract Amount</b>	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	42,614	48,033	-	42,614	48,033
Contingency	6,074	655	210	6,284	865
<b>Total</b>	<b>48,688</b>	<b>48,688</b>	<b>210</b>	<b>48,899</b>	<b>48,899</b>
Percent Contingency	14%	1%	0%	15%	2%
Less Initial Segment	41,797	41,797	-	41,797	41,797
Less Airport Link	6,634	6,634	-	6,634	6,634
Less STart	257	257	-	257	257
<b>Total University Link</b>	<b>(0)</b>	<b>(0)</b>	<b>210</b>	<b>210</b>	<b>210</b>

**Budget Shortfall**

<b>Task Level</b>	\$Amount (K)	Potential Resources (L)	Source (M)
Mobile Radios	210	2,229	Transfer from Miscellaneous Construction within the construction phase of the University Link project

(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**

Mass Electric Construction Co. (MEC) is the prime contractor for this contract. MEC is committed to a 9% Small Business goal with 6% M/W/DBE participation. To date, MEC has achieved 9.15% Small Business participation, with 7.28% M/W/DBE participation. Because this change is primarily to cover the cost of extended overhead due to Sound Transit civil construction delays, the M/W/DBE and small business participation will not be increased correspondingly.

**Utilization Breakdown Table**

<b>Subconsultant</b>	<b>Business Type</b>	<b>% of Work</b>	<b>Dollar Value</b>
Integrity Wire	DBE	4.41%	\$1,132,849.20
North Coast Electric	Small Business	3.94%	\$1,013,145.60
Alindeska Electrical Contractors	DBE	2.16%	\$922,594.00
Mobile Electric	WBE	.94%	\$240,357.00
Warrior Electric	DBE	.77%	\$331,603.00
Puget Sound Pipe	Small Business	.38%	\$97,290.60
Monterrey Electrical	DBE	.20%	\$84,125.00
The Fiber Guys	WBE/DBE	.14%	\$59,520.00
Port a Pro Welding	MBE	.08%	\$32,430.00
<b>Total</b>		<b>13.02%</b>	<b>\$3,913,914.40</b>

## EEO Commitment

MEC workforce demographics for this project are 0.76% women and 18.77% minorities. MEC workforce totals include all apprentice and journeyman hours worked.

## Apprentice Utilization Commitment

MEC has committed to 20% apprentice utilization. To date, MEC has achieved 17.26% apprentice utilization.

## **PROJECT DESCRIPTION and BACKGROUND for PROPOSED ACTION**

On December 31, 2003, Sound Transit issued a Request for Technical Proposal (RFTP) for the Link Light Rail Traction Electrification System for the Initial Segment of the Central Link Light Rail Project. On September 9, 2004, the Sound Transit Board authorized the chief executive officer to execute a contract with Mass Electric Construction Co. (MEC).

On July 14, 2006, the Sound Transit Board selected the Airport Link project to be constructed and operated as part of Central Link light rail. The 1.7 mile Airport Link extension will be fully integrated into the Initial Segment and is planned to be completed by the end of 2009. The original competitively bid contract documents contained provisions identifying the Airport scope in a general context and alerting all bidders to the possibility that the work would be the subject of a future amendment.

On January 11, 2007, the Sound Transit Board approved an amendment with Mass Electric Construction Co., to provide the traction electrification system for Airport Link allowing the contractor to sequence design and manufacturing of equipment and systems to provide for continuous, uninterrupted work tasks utilizing the same personnel and suppliers that are currently working on the Initial Segment.

On September 11, 2008, the Sound Transit Board approved additional contingency to mitigate reasonable costs incurred by Mass Electric Construction Co. such as extended overhead and acceleration of scope due to delayed access into every civil line segment. The Pine Street Stub Tunnel (PSST) was constructed under Pine Street between 7<sup>th</sup> and Boren Avenue for future extension of the Initial Segment and for layover and to turn around light rail vehicles during operation of the Initial Segment in the Downtown Seattle Transit Tunnel (DSTT). The PSST was designed with a breakthrough wall for the future extension of the University Link (U-Link). The intent was for U-Link's Tunnel Boring Machine (TBM) to come through this breakthrough wall to join the PSST to University Link tunnels. However, during the final design of University Link, it was discovered that demolishing the PSST breakthrough wall during the University Link construction would impede the fire-life-safety system in the DSTT. To resolve this issue, a "demising wall" needs to be constructed inside the PSST, which will temporarily separate DSTT during the demolition of the breakthrough wall by the TBM.

The proposed action will allow Sound Transit to retrofit the current systems elements in the PSST to coordinate with construction of the demising wall and avoid disruption to revenue service when U-Link tunnel construction begins. The retrofit must be started immediately so that it can be completed prior to the start of pre-revenue service.

**Prior Board/Committee Actions on this Project and Relevant Board Policies**

<b>Motion/Resolution Number and Date</b>	<b>Summary of Action</b>
M2008-85 9/11/08	Authorized the chief executive officer to increase the contingency for the contract with Mass Electric Construction Co. for construction of the traction electrification system for the Central Link Light Rail Initial Segment and Airport Link in the amount of \$3,091,000 for a new total authorized contract amount not to exceed \$48,688,386.
M2007-09 1/11/07	Authorized the Chief Executive Officer to execute a contract amendment with Mass Electric Construction Co. to provide the traction electrification system for Airport Link in the amount of \$6,200,000, with a contingency of 7% totaling \$434,000, for a new total authorized contract amount not to exceed \$45,597,386.
M2004-90 9/09/04	Executed a contract with Mass Electric Construction Co. to engineer, manufacture, furnish, install, and test the power supply system for the Central Link Light Rail Initial Segment in the amount of \$36,414,379, with a 7% contingency of \$2,549,006, for a total authorized contract amount not to exceed \$38,963,386.

**CONSEQUENCES of DELAY**

This amendment is being brought to the Board in order to complete the systems element retrofit in the Pine Street Stub Tunnel by May 2009 and avoid any impediments to pre-revenue service over the entire alignment prior to opening. Delaying Board action will delay or impede pre-revenue service, or if work is postponed until U-Link construction begins, it will impact revenue operations.

**PUBLIC INVOLVEMENT**

Not applicable to this action

**ENVIRONMENTAL COMPLIANCE**

JI 5/1/09

**LEGAL REVIEW**

LA 5/1/09

## **SOUND TRANSIT**

### **MOTION NO. M2009-40**

A motion of the Board of the Central Puget Sound Regional Transit Authority authorizing the chief executive officer to increase the contingency for the contract with Mass Electric Construction Co. to modify the traction power system in the Pine Street Stub Tunnel to accommodate construction of the future University Link demising wall in the amount of \$210,211, for a new total authorized contract amount not to exceed \$48,898,597.

#### **Background:**

On December 31, 2003, Sound Transit issued a Request for Technical Proposal (RFTP) for the Link Light Rail Traction Electrification System for the Initial Segment of the Central Link Light Rail Project. On September 9, 2004, the Sound Transit Board authorized the chief executive officer to execute a contract with Mass Electric Construction Co. (MEC).

On July 14, 2006, the Sound Transit Board selected the Airport Link project to be constructed and operated as part of Central Link light rail. The 1.7 mile Airport Link extension will be fully integrated into the Initial Segment and is planned to be completed by the end of 2009. The original competitively bid contract documents contained provisions identifying the Airport scope in a general context and alerting all bidders to the possibility that the work would be the subject of a future amendment.

On January 11, 2007, the Sound Transit Board approved an amendment with Mass Electric Construction Co., to provide the traction electrification system for Airport Link allowing the contractor to sequence design and manufacturing of equipment and systems to provide for continuous, uninterrupted work tasks utilizing the same personnel and suppliers that are currently working on the Initial Segment.

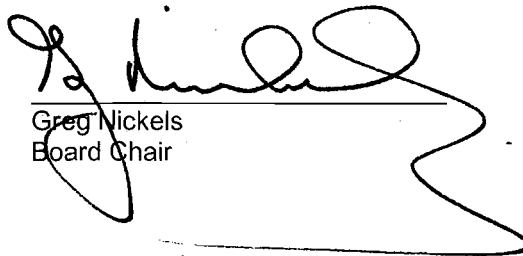
On September 11, 2008, the Sound Transit Board approved additional contingency to mitigate reasonable costs incurred by Mass Electric Construction Co. such as extended overhead and acceleration of scope due to delayed access into every civil line segment. The Pine Street Stub Tunnel (PSST) was constructed under Pine Street between 7th and Boren Avenue for future extension of the Initial Segment and for layover and to turn around light rail vehicles during operation of the Initial Segment in the Downtown Seattle Transit Tunnel (DSTT). The PSST was designed with a breakthrough wall for the future extension of the University Link (U-Link). The intent was for U-Link's Tunnel Boring Machine (TBM) to come through this breakthrough wall to join the PSST to University Link tunnels. However, during the final design of University Link, it was discovered that demolishing the PSST breakthrough wall during the University Link construction would impede the fire-life-safety system in the DSTT. To resolve this issue, a "demising wall" needs to be constructed inside the PSST, which will temporarily separate DSTT during the demolition of the breakthrough wall by the TBM.

The proposed action will allow Sound Transit to retrofit the current systems elements in the PSST to coordinate with construction of the demising wall and avoid disruption to revenue service when U-Link tunnel construction begins. The retrofit must be started immediately so that it can be completed prior to the start of pre-revenue service.

#### **Motion:**


It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that the chief executive officer is authorized to increase the contingency for the contract with Mass Electric Construction Co. to modify the traction power system in the Pine Street Stub Tunnel to accommodate construction of the future University Link demising wall in the amount of \$210,211, for a new total authorized contract amount not to exceed \$48,898,597.

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