



## Seattle Light Rail Review Panel

**David Cutler**  
Planning Commission, Co-Chair

**Osama Quotah**  
Design Commission, Chair

**Bernie Alonzo**  
Design Commission

**Brodie Bain**  
Design Commission

**Lee Copeland**  
Design Commission

**Jay Deguchi**  
Public Art Advisory Committee

**Thaddeus Egging**  
Design Commission

**Jerry Garcia**  
Arts Commission

**Megan Groth**  
Design Commission

**Brad Khouri**  
Planning Commission

**Shannon Loew**  
Design Commission

**Marj Press**  
Planning Commission

**Martin Regge**  
Design Commission

**Ellen Sollod**  
Design Commission

**Ross Tilghman**  
Design Commission

**Michael Jenkins**  
Design Commission Director

**Valerie Kinast**  
Coordinator

**Nicolas Welch**  
Planner

**Joan Nieman**  
Administrative Staff

## APPROVED MINUTES OF THE MEETING

**September 4, 2014**

Convened 1:00 pm

Adjourned 3:00 pm

### **Project Reviewed**

Rainier Station TPSS Support Structures

### **Panel Members Present**

David Cutler, Chair

Lee Copeland

Thaddeus Egging

Jerry Garcia

Megan Groth

Shannon Loew

Marj Press

Martin Regge

Ross Tilghman

### **Panel Members Excused**

Osama Quotah

Bernie Alonzo

Brodie Bain

Jay Deguchi

Brad Khouri

Kevin McDonald

Ellen Sollod

### **Staff Present**

Michael Jenkins

Valerie Kinast

Nick Welch

Joan Nieman

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<b>September 4, 2014</b> <b>1:30 – 3:00 pm</b>	<b>Project:</b>	<b>Rainier Station TPSS Support Structures</b>	
	<b>Phase:</b>	Schematic Design	
	<b>Previous reviews:</b>	none	
	<b>Presenters:</b>	Cynthia Padilla	Sound Transit
		Paul Bennett	Sound Transit
		Audrey West	Nakano Associates
		Barbara Luecke	Sound Transit
	<b>Attendees:</b>	Debora Ashland	Sound Transit
		Tammy Frederick	SDOT
		Nicole Sicbel	Sound Transit
		Chris Ward	Sound Transit

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### Recusals and Disclosures

Osama Quotah was recused. David Cutler and Megan Groth disclosed that they work at GGLO, which does work for Sound Transit that does not include this station.

### Purpose of Review

The purpose of this meeting was to review the schematic design of two traction power substations (TPSS) for Rainier Station. Sound Transit (ST) originally intended to present the design of these support structures during the August 7, 2014, review of the Rainier Station schematic design, but due to limited time that day the Light Rail Review Panel (LRRP) rescheduled them for a separate review.

### Summary of Proposal

Sound Transit proposes to build two TPSS structures that provide electric power for light rail trains on the East Link alignment. The substations will convert alternating current from the regional power grid to the direct current used in the overhead catenary wire.

One of the TPSS structures (TPSS #1) is located roughly one third of a mile northwest of the Rainier Ave S station entrance at S Norman St and Poplar Pl. The other TPSS structure (TPSS #2) is located roughly 0.7-mile east of the station above Lakeside Ave S and under the west approach to the I-90 floating bridge. Both structures house a TPSS and signal house, and both are located in Washington State Department of Transportation (WSDOT) right-of-way. Both TPSS structures are 14-foot-high prefabricated units.

### Summary of Presentation

Cynthia Padilla introduced the two structures under review and identified their location on a map. She mentioned up front that Sound Transit is currently considering relocating TPSS #1.

Paul Bennett described the TPSS structures in more detail and the siting process and gave the presentation dated September 4, 2014, available on the [Design Commission website](#). He explained that the TPSS converts alternating current into direct current to power the light rail system. These support structures are located throughout all of Sound Transit's light rail network at regular intervals and close

enough to each other to provide adequate redundancy; they are generally less than 1.5 miles apart. To explore other locations for TPSS #1, Sound Transit must conduct simulations to ensure there isn't a risk of voltage loss. He stated that TPSS #2 is more fixed due to its constrained location next to Lake Washington and the I-90 tunnel.

The presentation first described TPSS #1. Mr. Bennett stated that power would reach the tracks either via the existing WSDOT sign bridge or with a separate, to-be-constructed bridge. Audrey West described the planting and screening approach around the structure.

Mr. Bennett then described the site for TPSS #2. He stated that the proposed location is as far west as possible and adjacent to an existing abutment for the bridge structure above the site. Sound Transit proposes to relocate the existing pedestrian trail—part of the Mountains to Sound Greenway—around the structure. The project team is exploring the possibility of moving the signal house to coincide with the location of a proposed floating bridge maintenance vehicle turn-around. This alternate site is located at a higher elevation to the west of the existing site; the TPSS structure would remain in its current location. Audrey West described the decorative screening and planting design and restoration proposed for this site.

Barbara Luecke described Sound Transit's consideration for art at the gate of TPSS #1 as part of *STart*, Sound Transit's art program.

### **Summary of Discussion**

Given the uncertainty around fundamental project elements and the potential that one structure could be relocated entirely, the LRRP questioned whether the project was at the schematic design level.

For TPSS #1, some LRRP members suggested shifting the facility to the south in order to create a usable park or open space at the end of the S Norman St axis. Others doubted that a pocket park next to a utility structure would be successful. There was agreement, however, that the materials, art, and landscape of the structure should make it a deliberate termination of S Norman St, not simply a product of WSDOT right-of-way and reflection of the access point to the facility. To that end, the LRRP suggested the artist be engaged in the design of the entire structure and treat its eastern façade as one big canvas. The LRRP also asked if this structure could move closer to the station area. ST responded that the distance between the station and the next TPSS site to the west is too far.

Most of the discussion centered on TPSS #2. The LRRP was primarily concerned how the proposed design affects the experience and safety of pedestrians and cyclists that use the existing Mountains to Sound Greenway trail. By realigning the trail around the TPSS structure, the proposed configuration of screening fences would reduce sightlines for trail users. While the proposed wire fencing could mitigate some of this impact, the LRRP noted that it would also allow visibility *into* the facility, diminishing its screening function and detracting from the trail user's experience. The LRRP also worried about the durability of a wire fence.

The LRRP encouraged both large and small efforts to improve this condition, including considering other options for siting the structure itself and adjusting the design and placement of screening fences to avoid obscuring sightlines for trail users. While the project team named several constraints on alternate locations and configurations, such as the cost of retaining walls and view impacts to neighbors, the LRRP did not have adequate information to assess their merit or fully understand the surrounding context.

**Agency Comments**

none

**Public Comments**

none

**Action**

The Light Rail Review Panel (LRRP) thanked the team for the presentation of the schematic design of the traction power substations associated with Rainier Station. The LRRP appreciates Sound Transit's willingness to return for a full presentation of these support structures when there wasn't enough time at the previous Rainier Station review in August 2014. The LRRP also appreciates the complexity of the TPSS sites, particularly the constrained eastern site located under the I-90 west approach. At that site, the LRRP recognized the challenge of balancing the pedestrian and cyclist experience with the technical requirements of a very necessary structure.

With a **vote of 0 to 9**, the LRRP denied approval of the schematic design of the Rainier Station TPSS support structures. Overall, the LRRP believed there was too much uncertainty about fundamental elements of the location and design of the structures and artist selection to warrant approval. The following comments and recommendations serve as further explanation of the LRRP's decision and should guide Sound Transit as it prepares for future reviews of these structures:

**TPSS #1**

- Design the building to be a deliberate termination of the S Norman St axis. Use materials, art, and landscaping to create a feature that enhances the surrounding neighborhood and is at a pedestrian scale.
- Integrate the artist into the design team such that the artist can inform not only the design of the gate but also the articulation and materiality of the structure itself, particularly its eastern façade.
- Coordinate with the artist to provide additional landscaping to enhance the view of the structure down the S Norman St axis.

**TPSS #2**

- Provide a more thorough viewshed analysis in order to communicate more clearly the pros and cons of other potential structure locations or configurations at this site.
- The location and configuration of the structures as proposed diminishes the sightlines, sense of security, and overall pedestrian/cyclist experience along the Mountains to Sound Greenway trail. Consider alternate locations and configurations for the signal house, the TPSS, and/or the potential realignment of the trail to improve these conditions. If the structure location or configuration cannot change, look closely at the edges of the structure and fences for every opportunity to improve sightlines and safety.
- Develop the materiality and art for the screening fence without obscuring sightlines or creating security issues for trail users and with the durability of the structure in mind.

The reasons for the votes against were as follows:

Thaddeus Egging: I'm concerned with the number of moving pieces at this phase of design.

Martin Regge: I agree.

Megan Groth: I agree. The location and urban design context for the two sites does not seem right.

Jerry Garcia: I agree with what others have said.

Shannon Loew: At schematic design we expect to see art integration, particularly given the opportunity here for *STart* to demonstrate how it can improve facilities and structures that are obviously necessary. These have not be designed to be part of the urban context but absolutely must be. For TPSS #2, there is not enough information to make valuable comments or a determination about the visual impacts of that site.

David Cutler: We did not see either of these structures at concept design. Now we are at schematic design, and I want to reiterate that the number of moving parts and lack of information presents challenges for our review. That these structures may move to entirely new sites calls into question whether is fundamentally at the 60% design phase. At 60%, we expect not only to have more detail about the rationale, impacts, and resolution of the proposed siting but also to see material boards and more detail on the art for the screening.

Marj Press: I agree with prior comments. For me it's primarily the art treatment and wayfinding on the bike path.

Ross Tilghman: This simply isn't 60%. We're effectively seeing this at the concept level. There are a lot of questions yet to be answered. Given the complexity of these sites, one would expect a lot more to be in place at this phase of design.

Lee Copeland: I agree with what others have said.

The LRRP expects to review the TPSS support structures again at a future date when Sound Transit has selected the artist and resolved any uncertainty about the locations of each facility. If the project team relocates TPSS #1 entirely, the LRRP expects to review the design of the relocated project beginning at concept design.