



Summary Minutes

Rider Experience and Operations Committee Special Meeting February 9, 2022

Call to order

The meeting was called to order at 2:31 p.m. by Chair Walker virtually on WebEx.

The meeting was streamed on:

<https://soundtransit.webex.com/soundtransit/onstage/g.php?MTID=e9b0db83a02117be30bc2b5fe5af9c1b2>

Roll call of members

Chair	Vice Chair
(P) Kristina Walker, Tacoma Councilmember	(P) Ed Prince, Renton Councilmember

Board Members	
(P) David Baker, Kenmore Councilmember	(P) Dave Upthegrove, King County Councilmember
(P) Debora Juarez, Seattle City Councilmember	(A) Peter von Reichbauer, King County Councilmember
(P) Kim Roscoe, Fife Mayor	

Josephine Gamboa, Board Relations Specialist, announced that a quorum of the Committee was present at roll call.

Report of the Chair

First Rider Experience and Operations Committee meeting of 2022

Chair Walker welcomed members to the first Rider Experience & Operations Committee of the year, and her first meeting as Committee Chair. The Committee would be involved in many important discussions and actions that would include Tacoma Link fares, the 2023 Service Plan, monthly review of operational metrics and ridership trends and the continuation of learning more about the environment that the agency operates service in to meet passenger expectations.

Monthly Contract Report

The monthly contract report was included in members meeting packets for review.

CEO Report

Chief executive officer Peter Rogoff gave the CEO Report.

Mount Baker Station Community Meetings – Following the January 27, 2022 Board of Directors meeting, several Board members and CEO Rogoff joined King Count Councilmember Zahilay in a meeting with community members near the Mount Baker Station. Sound Transit (ST) continued to work with the community and City of Seattle staff to consider possibilities for activating the station plaza and surrounding area. Due to ongoing security concerns near the station, there would be an emphasis on security presence until mid-March 2022 when ST intended to reevaluate. CEO Rogoff committed to

meeting with the community again prior to any future determinations with the community.

Concrete Strike update – The concrete strike entered its 69th day and continued to have significant impact on projects in King County. Since the strike began, ST had missed delivery of more than 26,100 cubic yards of concrete, which was equivalent to more than 2,600 truckloads. Within the following two weeks, advancing projects required more than 650 more deliveries that would be missed without resolution of the strike. A troubling aspect of the strike affected the workforce, the lack of concrete meant delays to associated work. As a result, ST contractors had to lay off 230 workers and another 160 workers were expected to be laid off in the coming weeks if the strike wasn't settled. The impact of the strike on the agency's project and workforce served to underscore the urgency of the situation.

Prior to this Committee meeting, CEO Rogoff participated at a King County media event with Board members Constantine and Harrell. At the event, the County discussed a Request for Quotes (RFQ) that it had released seeking to guarantee a supply of concrete to meet the needs of County construction projects over the next three to six years. One of the qualifications to obtain the contract was to have a collective bargaining, or some other agreement, in place to ensure labor disputes would not impact future construction. Other public entities would be able to mirror the King County proposal and use similar qualifications. CEO Rogoff noted a decision was not made to participate in the proposal. However, it was a potential tool for the public sector to come together to keep moving projects forward. It could create a pathway to allow critical work to resume taxpayer-funded projects.

State update – The leadership of the House and Senate Transportation Committees, Jake Fey and Marko Liias, released a transportation revenue proposal which was a \$16.8 billion package over 16 years. The proposal included \$60 million to benefit ST light rail projects, including two direct appropriations to Sound Transit. The proposal fell short in terms of the Board's full 2022 legislative agenda since it did not include the request to exempt rolling stock purchases from state sales tax nor the request to restore the agency's eligibility to receive state transportation grant funds. The package proposed that Sound Transit receive two direct appropriations of \$20 million each for access and multimodal investments for access to light rail at South 356th Street in Federal Way, the location of the South Federal Way light rail station, and access to light rail between Fife and Tacoma. In this portion of the Tacoma Dome extension, there would be three stations: Fife, East Tacoma, and the Tacoma Dome.

Parking investments were delayed by the Board in the Board's realignment action in 2021 and were placed in Tier 4. However, the light rail extensions still had their transit integration and non-motorized access allowances, so it appeared that the state funds would augment those dollars. The Board would need to determine if and how to spend the access allowances and any state appropriated funds, if approved in a final package. The state package did not specify when the state funds would be available.

In addition, WSDOT would receive \$20 million for I-5/164th St. SW for access improvements to light rail in Lynnwood at Ash Way. There was also a \$5 million over 16 years for transit coordination grants in the Puget Sound, which Sound Transit would be eligible to receive. The Board's adoptive legislative agenda sought to make Sound Transit eligible again for state transportation grant programs. While Jake Fey and Marko Liias' proposal did not restore Sound Transit's eligibility for these programs, it did make historic and significant contributions to these grant programs.

The package included other investments in transit, which Sound Transit was not eligible to receive. Those investments included \$1.45 billion for Transit Support Grants – a grant program that agencies become eligible to receive only after they adopt a policy that all riders under the age of 18 ride free, \$600 million in additional funding for special needs grants which would effectively double the size of the program, \$400 million for new bus and bus facility grants, \$293 million for Transit projects, and \$200 million plus-up of Green Transportation Capital grants, doubled current funding.

CEO Rogoff noted the Senate Transportation Committee would hold a hearing on February 10, 2022 and Board Chair Keel would testify on the agency's behalf. The Legislature had until the end of session

to finalize the package.

Federal update – Congress was working to extend funding for the government through March 11, 2022, since the current continuing resolution would expire on February 18, 2022. The Federal Way and Lynnwood Link federal grant agreements had been allocated \$100 million each from both the House and Senate and that was expected to carry forward in any bill. President Biden's State of the Union address was scheduled for March 1, 2022. It was expected that President Biden would submit his proposal fiscal year 2023 budget shortly after his address, which would kick off the annual appropriations process. It was anticipated that Sound Transit would be included in the Biden proposal for \$100 million for each of Sound Transit's current grants for Lynnwood and Federal Way. As the fiscal year 2023 process moved forward, staff would continue to look for ways to maximize federal support for the expansion of the voter-approved system.

Public comment

Chair Walker announced that public comment would be accepted via email to emailtheboard@soundtransit.org and would also be accepted verbally.

The following people provided written public comment:

Kit Burns

No verbal public comments were received.

Business Items

For Committee final action

December 2, 2021, Rider Experience and Operations Committee meeting minutes

It was moved by Committee Vice Chair Prince, seconded by Boardmember Baker and carried by unanimous voice vote that the minutes of the December 2, 2021 Rider Experience and Operations Committee meeting be approved as presented.

Motion No. M2022-13: Authorizing the chief executive officer to execute a federally funded, piggyback contract with CDW Government LLC to provide technology software, hardware, peripherals, software and hardware maintenance and professional services through February 2025 for a total authorized contract amount not to exceed \$5,000,000, plus applicable taxes.

Jason Weiss, Chief Information Officer, provided the staff report.

It was moved by Committee Vice Chair Prince, seconded by Boardmember Baker and carried by unanimous voice vote of five Board members present that Motion No. M2022-13 be approved as presented.

Motion No. M2022-14: Authorizing the chief executive officer to execute a five-year contract with five one-year options to extend with HNTB Corporation to provide on-call operations light rail simulation modeling and strategic advisory consulting services for Link Light Rail and Tacoma Link Light Rail for a total authorized contract amount not to exceed \$5,637,500, plus applicable taxes.

Marie Olson, Executive Operations Director of Transit Expansion, provided the staff report.

Boardmember Roscoe asked what the comparison was for annual cost with PGH Wong and HNTB. Staff committed to getting those figures to her at a later time.

It was moved by Committee Vice Chair Prince, seconded by Boardmember Baker and carried by unanimous voice vote of five Board members present that Motion No. M2022-14 be approved as presented.

For Recommendation to the Board

Motion No. M2022-15: Approving Sound Transit's annual 2021 Public Transportation Agency Safety Plan submittal to Washington State Department of Transportation's State Safety Oversight Office.

Erin Brumbaugh, Deputy Director of Transportation Safety and Security, provided the staff presentation.

It was moved by Committee Vice Chair Prince, seconded by Boardmember Juarez and carried by unanimous voice vote of five Board members present that Motion No. M2022-15 be forwarded to the Board with a do-pass recommendation.

Reports to the Committee

(Boardmember Upthegrove arrived at this time.)

November 26th Incident Audit Findings and Response

CEO Rogoff noted several speakers would present to cover their respective departments' findings following the November 26th incident. At the last meeting, Boardmember Juarez asked about the timeline of the investigation process and CEO Rogoff replied hopeful for a 30-day timeframe. The findings were brought back more than 60 days later but CEO Rogoff noted the details and layers of the situation understandably surpassed the 30-day mark. The auditor had more work to do to understand what went wrong and how to rectify it. He thanked the committee for their patience on receiving these results and spoke to the commitment of addressing the incident.

On November 26, 2021, a northbound train lost power between UW University Station and U District Station leaving passengers stranded on a crowded, dark, and unventilated vehicle without communication on the incident at hand. After a few minutes, passengers began to self-evacuate using emergency exits and walking through the tunnel. For the safety of passengers, Link operations were immediately suspended in the tunnels across the entire system. A general rider alert was not sent until an hour and 40 minutes after the incident started. The alert was generic and stated a delay was occurring. CEO Rogoff noted the train appropriately, and immediately, stopped and powered down as designed greatly reducing the risk of electrical fires. Stopping service was the correct decision until passengers were clear of the tunnels, whether that meant by foot or via rescue vehicles that were dispatched shortly after the incident began. He reminded the Committee, that most importantly, no passengers were injured. Many people were inconvenienced, frightened, but not injured. The following audit would provide the agency with a blueprint of mistakes to reflect on, correct, and ensure they don't repeat. CEO Rogoff noted the experience was inexcusable and apologized to riders for the errors leading up to the incident and committed to doing better.

Patrick Johnson, Director of Internal Audit, provided an overview of the 1 Line's service and background which explained the agency's responsibilities during the incident. The audit was aimed to inform improvements in communications, operating practices, safety and security, and to identify gaps of unclear responsibility between ST and King County Metro, and prevent similar incidents.

Mr. Johnson thoroughly reviewed the timeline of the event, which took place at 8:19 p.m. on a Friday evening. He noted it was an evening, a weekend, and a holiday, the day after Thanksgiving, which meant it was a period of low general agency staffing combined with a high ridership event, the Apple Cup. For special events like the Apple Cup, ST would run additional trains to accommodate higher ridership. That evening, there were 46 percent more trains in service than a standard Friday evening. The incident happened aboard a new series 2 train that was introduced into service in May 2021. At 8:20 p.m., the train was 1,000 feet north of the UW Station and lost power and came to an abrupt stop. The operator had no knowledge of the cause for a power loss and immediately attempted to restart the train following necessary protocols. While attempting to restart the train, the operator continued communication with the King County control center using a secondary handheld radio that was solely used when standard communication was lost. However, no communication was passed on to the

passengers. At 8:24 p.m., passengers began to self-evacuate the train in both directions in the tunnel. Some passengers also used cross passages to go through another tunnel.

At 8:32 p.m., three events occurred simultaneously: the operator made their first announcement to passengers, King County Metro (KCM) Link Control Center (LCC) implemented a full system stop, requiring all trains to hold in position, and the LCC dispatched a rescue train. An interview with the operator revealed that they assumed they lost intercom capabilities and the power went off since the display screen was off. However, it was later learned that the intercoms were working throughout the incident. Camera footage showed the operator leaving the operator cab at the north end of the train and walking towards the rear car to troubleshoot and attempt to restart the train. The attempts were unsuccessful, and it was then when the operator made their first announcement. The attempts at restarting the train were the proper procedures for trains that lose power, but those procedures did not specify how long it would take to restart and how long to continue the attempts.

At 8:36 p.m., LCC cleared rescue trains to proceed slowly southbound from the U District Station to the nearest cross passage. KCM Rail Supervisors also walked the tunnel to assist getting passengers off the disabled train. At this point in the incident, Mr. Johnson noted there was confusion among KCM staff about how to interpret regulatory safety reporting criteria. The issue was whether to treat the event as a passenger transfer or to treat it as an emergency evacuation, both involved a different set of practices that included different emergency notification protocols.

At 8:41 p.m., LCC notified an ST Operations duty officer. The duty officer then sent a Command Post message which only notified a wide distribution of ST staff of an incident in progress. Until this point, ST staff were unaware of the incident. It was through the Command Post that Passenger Experience staff were supposed to collect information for rider alerts, this would usually be when communications are brought in for notification and response. Mr. Johnson noted that at this point, no general communication had been sent out. At 8:46 p.m., KCM Rail Supervisors began to load passengers onto the rescue train. The rescue train's departure was delayed due to passengers pulling on emergency door handles on the rescue train.

By 9:15 p.m., all remaining passengers from the disabled train, including one ADA passenger in a wheelchair that the operator remained with, were aboard the rescue train and proceeded to the U District Station. By 9:19 p.m., trains continued shuttling some passengers to and from the platforms using single tracking. Bus bridge communications issues also occurred at this time. KCM arranged a bus bridge but had only sent internal messages to KCM staff, which excluded ST staff from those communications which precluded the ability to execute ST responsibility to assist and manage crowds at train platforms and street level bus stop locations. Between 9:35 and 9:37 p.m., ST Operations made three attempts to call the ST Communications Duty Officer, all being unanswered. Mr. Johnson clarified that in this case, the ST Communications Duty Officer only had responsibilities to notify and respond to media, it did not include performance of passenger communication functions. At 9:53 p.m., ST CEO Rogoff was notified. At 9:57 p.m., ST Communications staff began to hear about the incident from external sources.

At 10 p.m., ST Passenger Experience staff become aware of the incident and sent the first Rider Alert message within two minutes. The alert contained no usable rider information and instructions but committed to "updates to follow when available" message. At 10:20 p.m. the WSDOT and FTA deadline passed without required reporting occurring. State and Federal Law required notification of emergency evacuation within two hours of the incident. KCM had the responsibility to report and had treated this event as a passenger transfer, which required a lower-level notification. ST then clarified the incident as an emergency evacuation and submitted the required notification. At 10:58 p.m. KCM towed the disabled train back to the Operations and Maintenance Facility (OMF) and single tracking ceased and normal 1 Line service resumed. At 11:57 p.m. ST Communications staff sent out a blog post about the event.

Mr. Johnson noted the draft report that was sent to the Board and provided a high-level summary of findings. The draft report audit findings were separated into two categories, the causes of train damage and stoppage, and the effectiveness of communications.

The train was disabled for three reasons, 1) a northbound Series 2 train vehicle struck a protruding electromagnetic interference (EMI) rod between the rails which severed cables beneath the vehicle, 2) pre-revenue testing processes had not fully considered clearance differences between Series 1 and Series 2 vehicles under all possible operating conditions, and 3) previous rod strikes and non-disabling vehicle damage were being reported by maintenance staff but were not properly escalated.

Mr. Johnson reviewed the EMI rods that were protruding above top of rail (TOR), which violated Sound Transit's design criteria manual. He pointed out a service note that read, "top of rod will be field cut," but it did not specify how much to remove or how much clearance to ensure. A rod had been struck at an early incident and there was conduit damage to the light rail vehicle.

Explaining reason 2, the Series 1 vehicle used an airbag system to maintain constant operating height regardless of load. The Series 2 vehicle used a spring that provided slight variance in clearance under various passenger loads. The cause of the severed cable was three-fold, 1) the conduit was hanging too low, 2) the additional weight further reduced ground clearance under the vehicle and, 3) uncut EMI rod protruded excessively above TOR.

Lastly, there was known damage occurring to all vehicles since service on the Northgate Link Extension (NGLE) began in October 2021. There was damage to the safety board during the second week of October, which was a week after opening and less than a month away from the incident. Damage was recorded into the Link's work order system, called EAMS, and began being tracked. EAMS allowed KCM track inspectors and vehicle maintenance staff to enter data into the system with a set of parameters to determine what vehicle their working on, priority of each work order, and a text box to enter details about what the work order is for and any other items to note.

The Audit team reviewed 2,800 work orders between September 2021 up to the date of the incident and found 16 related to EMI rods or related damage. Five work orders for damage to Series 1 vehicles, three work orders for damage to Series 2 vehicles, and eight work orders for rods. The earliest work order was identified in September 2021 during pre-revenue testing. That work order was dated September 16, 2021, and stated damage was done to the safety bar on a Series 1 train. The work order showed as a low-priority general repair and then closed four days later. Another work order stating any damage was not seen until October 2, 2021, which was the day NGLC opened to passengers. There were a series of damaged work orders reported from that week on both types of trains. During interviews, internal correspondence was found between KCM maintenance staff regarding the damage and investigating the cause. Through the messaging, it was understood that KCM was looking into the issue and those messages corresponded with additional work orders beginning on October 15, 2021. Days later, KCM maintenance staff found the EMI rod issue and noted that approximately 200 rods needed to be field cut down to increase clearance. Around this time, prior to the incident, only ST Engineering was informed of the damage and the rod strikes. However, neither KCM Safety, ST Operations, or ST Safety were made aware of the damage of clearance issues. No other correspondence or work orders were found after October 15, 2021.

Next, Mr. Johnson reviewed the Communications portion of the event. Passengers on the affected train did not receive prompt communications about the incident and impact to service. There were gaps within ST communications in informing the public and how ST staff were made aware of such incidents. During off hours of operations, nights, weekends, and observed holidays, the system would rely on on-call duty officers to relay information. In this instance, there were duty officers who did not adequately follow up for more critical information. There were also cellphone issues involving improper call forwarding that caused calls to go unanswered. Lastly, investigation was found that the night prior experienced some functions that were inoperable, such as tunnel cameras and station public address systems.

CEO Rogoff summarized key improvement areas to include strengthening operations procedures by emphasizing clarity around ST's overarching accountability for service and all ST and KCM operations staff must be fully aware of their respective roles and responsibilities to eliminate any ambiguity or confusion. Another improvement area included agency emergency communication processes. CEO Rogoff spoke to the agency response to date, aside from the presented draft report, was to create an action plan to address the findings, create responses to each finding, and present to the Board within the upcoming weeks. There would be an established Executive Oversight Team with KCM and staff would begin quarterly reporting to address findings on the report. Lastly, the agency would improve communications processes and procedures that would address all passenger experience communications.

Suraj Shetty, Operations Executive Director, provided three additional responses to the findings beginning with work to prevent future track clearance issues, how to communicate to passengers on disabled trains, then how to communicate with passengers at stations and across the system. The responses would include what should have happened, the actions that took place after the incident, and further next steps.

The first issue involved track clearance, errors leading up to the incident included checkpoints in design, construction and testing for NGLE which should have ensured proper clearance on the new alignment. Checkpoints in testing and acceptance for the Series 2 vehicles should have ensured proper clearance at the highest passenger load limits. Checkpoints in the activation process should have ensured the rods were cut to complete Safety Certification. Lastly, once in Operations, the known incidents of protruding EMI rods should have been escalated via Safety Incident Reporting Tool. The corrective actions that took place since the incident included field cutting of all protruding rods per approved design, raised the trainline cables on Series 2 vehicles, adjusted vehicle clearance requirements in design verification testing, applying these requirements to East Link testing, and refined special event procedures to ensure adequate staffing and passenger communications. Additional next steps included improving quality assurance processes prior to live power testing on the new alignment, improving verification processes prior to testing and operations, and reviewing high-risk and non-standard design elements throughout the operating system.

The second issue involved onboard communications. Passengers should have received prompt communications of the mechanical problem and instructions to remain onboard for a rescue train. Passenger communication should have occurred simultaneously with the attempts to troubleshoot or restart the disabled train. Since the incident, the agency had revised protocols and training for train operator communications with passengers of disabled trains and reinforced existing protocols for expedited staff dispatch and prompt staging of rescue trains. Additional next steps included reviewing and reinforcing protocols for no train deployment, if the intercom system is disabled, analyzing potential technical solutions to show the operator whether the intercom is working and independent of main panel, and add train signage promoting rider alerts via website and text or email subscriptions.

Russ Arnold, Chief Passenger Experience and Innovation Officer, addressed the final issue of station and system communications. Passengers should have received prompt communication of system stoppage on all station platforms, including notification of alternate bus bridge. It should have been confirmed that staff was trained and prepared to use individual station intercoms. There should have been sufficient detailed rider alerts issued within minutes of the start of the incident. Last, there should have been contingency plans in place for staff absences in LCC during evenings, weekends, and holidays. Since the incident, the agency has ensured that LCC staff had working remote access station intercoms and conducted extra testing prior to large events to ensure they are working properly. Staff was trained to use on-site intercom, bus bridge implantation protocols were clarified, and there were temporary dedicated staffing commitments at LCC during high-ridership events. Additional next steps included co-locating ST passenger experience communications staff and KCM Rail staff in a new LLC, which would begin in 2023, and include a new Passenger Information Management System (PIMS) and

increased control center staffing would enable more rapid intercom and electronic signage communications.

David Wright, Chief Safety Officer, provided ongoing Safety oversight and covered additional next steps. The Safety Department would track each corrective action and finding to closure, there would be improvement and expansion to tabletop exercises to better incorporate passenger communications elements, and there would be procurement of technology and development to protocols for rapid, reliable staff notifications and positive verification that staff were responding.

Chair Walker asked for the timeline on finalizing the audit report. CEO Rogoff advised that a comprehensive staff response to the report, which would be available in the coming weeks.

Chair Walker asked whether the LCC co-location and PIMS work were in response to this incident or if they were previously planned. If they were a response, how would that affect the budget? CEO Rogoff advised that the PIMS project was underway for many years and was budgeted for. Mr. Shetty advised that agency staff co-location was planned for prior to this event in preparation for the expansion of East Link.

Chair Walker asked when a follow-up report would be brought to the Committee. CEO Rogoff advised that quarterly executive leadership meetings would take place with KCM leadership, so a quarterly report to the Committee would be prudent.

Boardmember Upthegrove requested that the Committee record his affirmative votes for the actions that took place earlier in the meeting.

Chair Walker called for a voice vote.

It was moved by Chair Walker, seconded by Boardmember Juarez and carried by unanimous vote of all members present that Boardmember Upthegrove's affirmative votes be recorded for actions listed on the February 9, 2022 Rider Experience and Operations Special Committee meeting agenda.

Executive session

None.

Other business

None.

Next meeting

Thursday, March 3, 2022
1:00 to 3:00 p.m.
Virtual meeting held via WebEx

Adjourn

The meeting adjourned at 3:58 p.m.

Kristina Walker
Rider Experience and Operations Committee Chair

APPROVED on _____, JG.

ATTEST:

Kathryn Flores
Board Administrator