

2021 Rail Fixed Guideway Public Transportation System Safety Report

WSDOT, PUBLIC TRANSPORTATION DIVISION,
STATE SAFETY OVERSIGHT PROGRAM



Opening day at Northgate Station. Photo courtesy of Sound Transit

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WSDOT's State Safety Oversight Program helps ensure that rail transit agencies in Washington implement and comply with their safety programs.

As part of this effort, the State Safety Oversight Program oversees rail transit agencies' efforts to track, mitigate, and eliminate hazards in their systems.

The State Safety Oversight Program publishes this report annually to document the safety of rail transit agencies in the state. The report also fulfills reporting requirements in [RCW 81.104.115](#) and [49 CFR Part 674](#).¹

¹ WSDOT submits an online report directly to the Federal Transit Administration (FTA) by March 15 annually. *The Rail Fixed Guideway Public Transportation System Safety Report* consolidates information in the online report in a narrative report to meet the state's reporting requirement.

INTRODUCTION

In 1996, the Federal Transit Administration (FTA) authorized rail state safety oversight programs in 49 U.S.C. Section 5330. Washington established the State Safety Oversight Program in 1997 when then Governor Gary Locke designated WSDOT as the state safety oversight agency.

In 2012, as part of Moving Ahead for Progress in the 21st Century Act, Congress set higher expectations and responsibilities for safety oversight and safety performance for transit agencies, states, and FTA in 49 U.S.C. Section 5329.

In 2016, FTA published 49 CFR Part 674, a final rule based on Section 5329. The rule strengthened state safety oversight agencies' authority to investigate accidents and oversee rail properties' implementation of system safety program plans and public transportation agency safety plans.

In 2018, FTA certified the State Safety Oversight Program as compliant with 49 CFR Part 674 with a letter to Governor Jay Inslee.

To communicate its safety oversight responsibilities for rail transit agencies, the State Safety Oversight Program publishes the [Washington State Rail Safety Oversight Program Standard](#). The program standard establishes safety requirements for operators of rail fixed guideway public transportation systems.

The State Safety Oversight Program uses reviews, inspections, and investigations of the systems to ensure compliance with the program standard, as well as state and federal laws and rules.

The State Safety Oversight Program has safety oversight over the following rail transit agencies and their rail fixed guideway public transportation systems:

- **Sound Transit (agency)**
 - Link Light Rail (system)
 - Tacoma Link (system)
- **City of Seattle (agency)**
 - Seattle Streetcar (system)
 - Seattle Center Monorail (system)

FTA defines rail fixed guideway public transportation systems as any fixed guideway system that:

- Uses rail.
- Operates for public transportation.
- Is within the jurisdiction of a state.
- Is not under the jurisdiction of the Federal Railroad Administration.

Rail fixed guideway public transportation systems include rapid rail, heavy rail, light rail, monorail, trolley, inclined plane, funicular, and automated guideway. The systems exclude Amtrak passenger rail and ferry service.

RAIL FIXED GUIDEWAY PUBLIC TRANSPORTATION SYSTEMS IN WASHINGTON

SOUND TRANSIT

Link Light Rail

- Accidents and incidents in 2021: 18
- Open corrective action plans in 2021: 16

System Description

Sound Transit owns Link Light Rail and contracts with King County Metro for operations and maintenance of Link Light Rail. As the owner of the system, Sound Transit has safety, fiscal and performance oversight of the contract.

In July 2009, Sound Transit opened the initial 13.9-mile-long segment of Link Light Rail. The segment includes sections of aerial, tunnel, and at-grade track. The segment also utilizes the Downtown Seattle Transit Tunnel.

In December 2009, Sound Transit opened an aerial 1.7-mile-long extension between Tukwila International Boulevard and Seattle-Tacoma International Airport, known as the Airport Link.

In March 2016, Sound Transit opened a 3.5-mile-long northern extension known as the University Link. The extension includes twin-bored tunnel track and two new underground stations at Capitol Hill and the University of Washington.

In September 2016, Sound Transit opened an aerial 1.6-mile-long extension from the SeaTac Airport Station at the southern terminus of the Airport Link. Known as the South 200th Street Extension, it also includes the Angle Lake station.

The Link Light Rail trains are 95 feet long and weigh approximately 105,000 pounds. The vehicles are double-articulated with a three-truck (six-axle) configuration. The trains can run up to four-cars. An overhead contact wire energized at 1,500 volts of direct current powers the trains. Alternating-current motors propel the trains. Each train's capacity limit is 200 passengers, with seating for 74 passengers.



Sound Transit is planning future extensions of Link Light Rail, including:

- Northgate Link Light Rail Expansion: North to Lynnwood and Everett**
 Sound Transit opened the Northgate Link Light Rail Expansion in October 2021. The extension added three stations and over four miles to the system.
- East Link: East to Redmond**
 Sound Transit plans to open East Link in 2024. The extension will add more than two stations, 150 rail vehicles, and over three miles to the system.

- South to Kent, Des Moines, Federal Way, and the Tacoma Dome**
 By 2030, Link Light Rail will connect with Tacoma Link and continue to Tacoma Community College. The extension will add more than four stations and over 10 miles to the system.

Sound Transit expects Link Light Rail to grow to more than 62 miles of track by 2024. The annual capital budget for the system is \$2.5 billion.

Tacoma Link

- Accidents and incidents in 2021: 0
- Open corrective action plans in 2021: 4

System Description

Sound Transit owns, operates, and maintains Tacoma Link.

Tacoma Link began service in August 2003. The system runs for 1.6 miles through downtown Tacoma (Tacoma Dome Station to the Theater District/South 9th Street Station), making six stops along the route. Sound Transit added the Theater District Station in 2011. Each station has low-level boarding platforms, shelter canopies, pedestrian and street lighting, benches, and an information aide. Sound Transit plans to add 2.4 miles and six new stations by 2023 and another six-mile extension by 2039.

Tacoma Link light-rail trains run every 12 to 24 minutes depending on the time of day. Rides on the system are free thanks to funding from the Tacoma Business Improvement Area.

Tacoma Link uses three Skoda 10T electric-powered, light-rail vehicles. The vehicles travel at street level and an overhead catenary wire energized at 750 volts of direct current supplies power. Each vehicle operates as a single car. Cabs at either end allow operators to alternate the direction of travel without turning the

cars around. The vehicles have a maximum capacity of 56 passengers.

Tacoma Link's operation and maintenance facility is located just east of the Tacoma Dome Station at the southern terminus of the line. The facility provides ongoing daily maintenance, running repair, and regular inspections. The operation and maintenance facility also houses the administrative offices for Tacoma Link operations and an operator check-in and dispatch area.



CITY OF SEATTLE

Seattle Streetcar

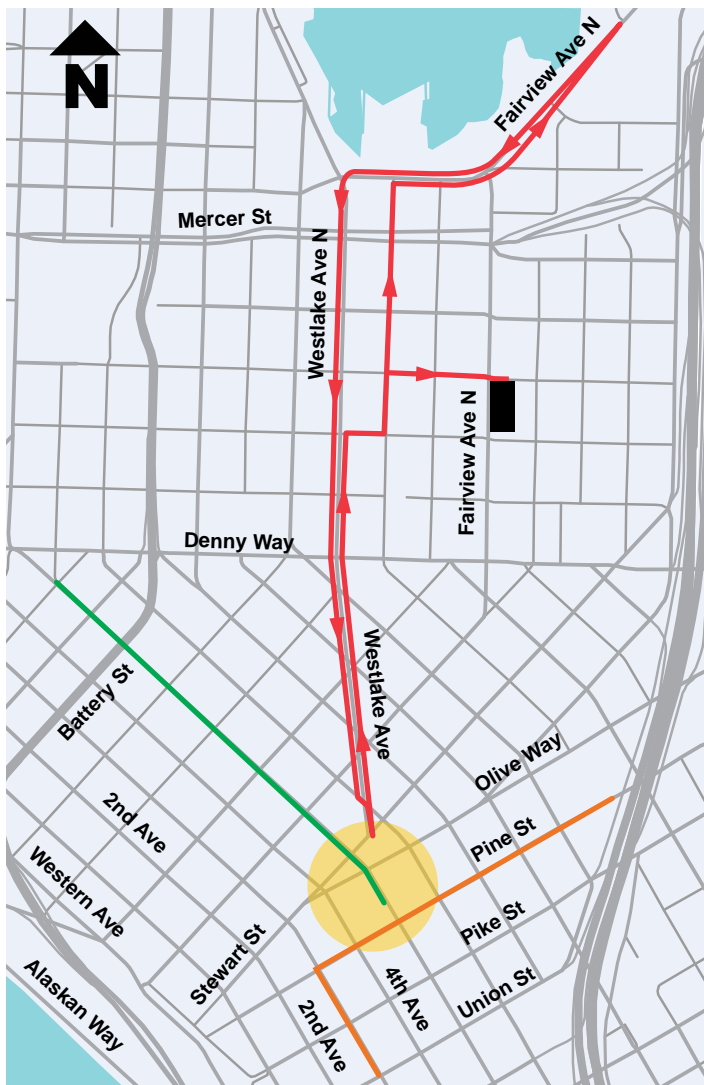
- Accidents and incidents in 2021: 1
- Open corrective action plans in 2021: 13

System Description

The Seattle Streetcar is equipped and owned by the City of Seattle and is operated and maintained by King County Metro under an interlocal agreement established in 2007.

The Seattle Streetcar consists of two lines:

- **The South Lake Union Streetcar**
A 1.3-mile-long, seven-stop line connecting the South Lake Union neighborhood to Downtown Seattle. The line opened to the public in 2007.



South Lake Union Streetcar

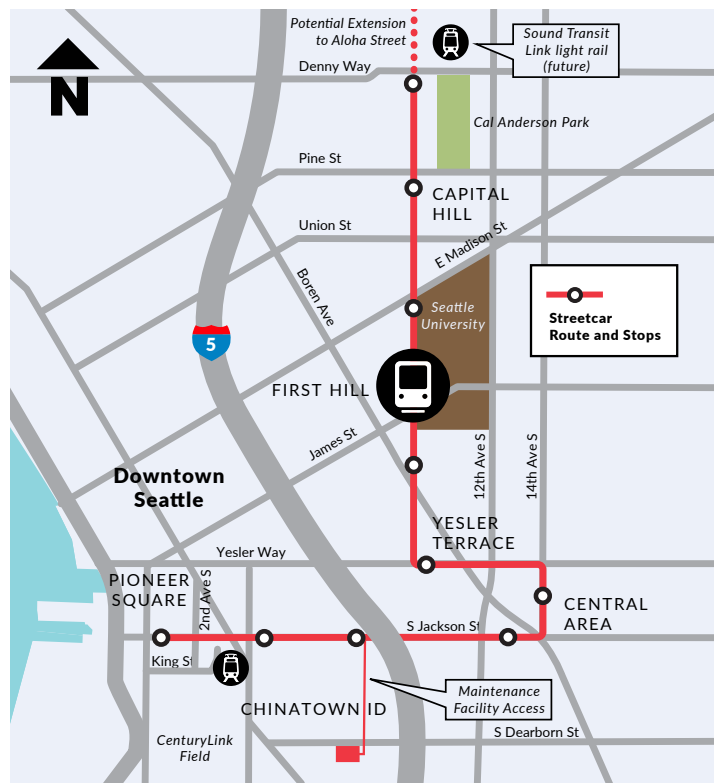
- **The First Hill Streetcar**
A 2.5-mile-long, 10-stop line connecting Pioneer Square and Capitol Hill via Chinatown, Little Saigon, Yesler Terrace, and First Hill. The line opened to the public in January 2016.

Both routes offer frequent service, with streetcars arriving every 10-15 minutes except late at night.

The system has 21 operators and normally recruits new operators from the King County Metro bus service.

The South Lake Union Streetcar fleet consists of three modern streetcars supplied by Inekon. The air-conditioned, ADA-accessible streetcars carry up to 140 passengers.

The First Hill Streetcar fleet consists of six, 66-foot-long modern streetcar vehicles. The cars draw traction power from an overhead contact system providing 750 volts of direct current and operates with power from an on-board energy-storage system. Each car seats 30 passengers and accommodates another 40 standing passengers. Two wheelchair passenger locations are in the standing area.



First Hill Streetcar

Seattle Center Monorail

- Accidents and incidents in 2021: 0
- Open corrective action plans in 2021: 8

System Description

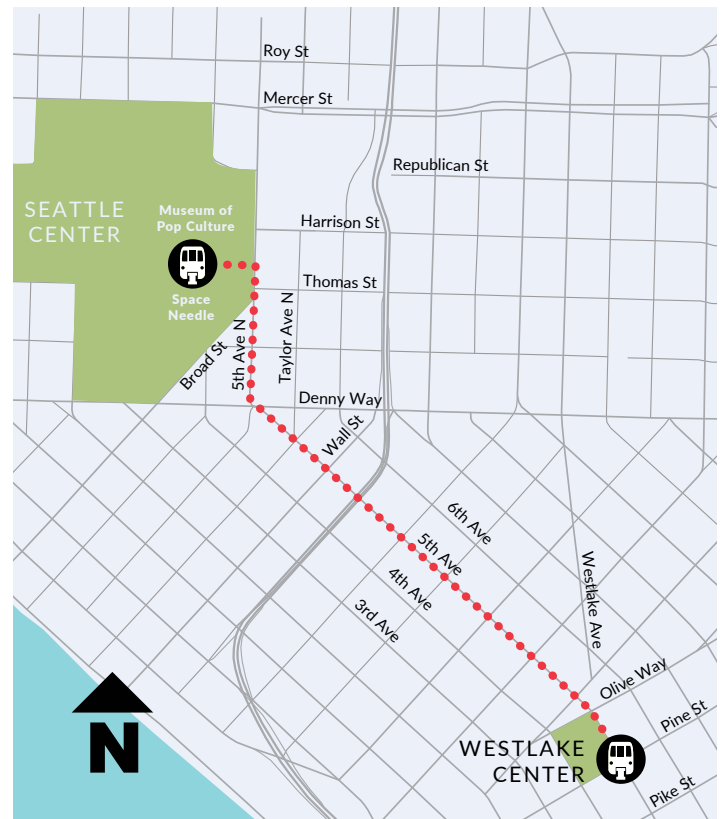
The City of Seattle owns the Seattle Center Monorail. Seattle Monorail Services has operated and maintained the monorail under contract since 1994. Seattle Monorail Services is a private corporation owned by RailSafe Inc. and is responsible for all aspects of its obligations under the concession agreement between Seattle Monorail Services and the City of Seattle.

The Monorail was built for the 1962 Seattle World's Fair to link the fairgrounds with downtown Seattle. The system is slightly less than 1 mile in length at the present day, but, when it opened in 1962, it extended beyond Westlake Center and was slightly longer than 1 mile.

More than 60 pre-stressed, 70-foot-tall concrete piers support the track the Monorail rides on. The elevated tracks allow for minimal interference with vehicle traffic. The system is composed of two trains (Blue and Red). Each train runs on a dedicated beam. ALWEG Rapid Transit Company built the trains in West Germany in 1961. The trains operate on 700 volts of direct current supplied by contact rails on each beam.

The Monorail has become an important fixture in Seattle for residents and tourists, serving as a link to the light-rail station at Westlake Center or to tourist destinations in Seattle Center.

The Monorail trains typically run in one direction at a time. The one-way trip departs every 10 minutes with a travel time of about two minutes. The trains operate at a top speed of 50 miles per hour, making the Monorail the fastest full-sized monorail system in the United States. Each train can carry up to 200 passengers per trip. With the current hours of operation Monday–Friday, 7:30 a.m.–11 p.m. and Saturday–Sunday, 8:30 a.m.–11 p.m., the trains carry approximately 5,000–8,000 passengers per day or about 2–3 million passengers per year.



2021 STATE SAFETY OVERSIGHT PROGRAM UPDATES

Safety certification activities

Starting in early 2021, the State Safety Oversight Program began coordinating with Sound Transit's Northgate Extension project team and the FTA's project management oversight consultants during the project's final safety compliance phases. The State Safety Oversight Program:

- Participated in safety and security committee meetings with Sound Transit, emergency service jurisdictions, and the FTA's consultants
- Observed drills and exercises to confirm all stakeholders understand their respective roles with the project
- Worked concurrently with Sound Transit's safety team to help meet state and federal requirements prior to entering revenue service

The State Safety Oversight Program also observed and documented project hazard assessments, workarounds, and final project safety conformance records. As the project enters its eighth month of revenue service, the State Safety Oversight Program continues to monitor project hazards and any corrective action plans.

Additionally, the State Safety Oversight Program also audited safety conformance records for 48 new Siemens light-rail vehicles that entered revenue service. The State Safety Oversight Program will continue to audit these safety conformance records as Sound Transit receives the remainder of vehicles through 2023.

For 2022-2023, the State Safety Oversight Program will shift focus to safety certification activities for the Hilltop Tacoma Link and East Link extensions. Both projects will enter revenue service in 2023.

Staff training activities

In 2021 WSDOT State Safety Oversight Program staff cumulatively completed 256 hours of federally mandated course work. Trainings are designed to give State Safety Oversight Program staff the knowledge and tools to effectively administer their safety oversight duties within the [Safety Management Systems](#) framework for rail transit in Washington state. Course work completed in 2021 included safety assurance, emergency management oversight, rail accident investigation, safety management systems principles and transit rail system safety.

Safety Management Systems safety philosophy was introduced to the world of rail transit in 2019. State Safety Oversight Program staff continue to complete trainings through 2022 to ensure they are up to date on the best practices and requirements for effective safety oversight.

Program investment

In 2021, the program devoted 9,948 employee hours to carry out its responsibilities. WSDOT employees involved in administering the program included:

- State Safety Oversight Program manager
- WSDOT Public Transportation Division director
- Transit safety oversight specialists
- FTA compliance officer
- WSDOT Public Transportation Division Capital Program manager
- Data analyst
- Administrative assistant

ACCIDENTS, INCIDENTS, AND CORRECTIVE ACTION PLANS

Rail transit agencies report accidents and incidents to WSDOT's State Safety Oversight Program that meet at least one of the following thresholds:

- Fatality
- Serious injuries
- Collision involving a rail transit vehicle
- Runaway train
- Evacuation for life safety reasons
- Derailment
- Property damage that disrupts operations

When an accident or incident occurs, the rail transit agency investigates on the State Safety Oversight Program's behalf using approved investigation procedures. The State Safety Oversight Program may also choose to conduct its own investigation in addition or complementary to the rail transit agency's investigation.

The State Safety Oversight Program's role in every investigation is to:

- Ensure that investigators collect and analyze all available evidence
- The program has access to all the evidence
- Ensure that investigators examine probable root causes and causal factors of the accident or incident

Once the investigation is complete, the State Safety Oversight Program must adopt a final investigation report.

For any accident or incident, the State Safety Oversight Program ensures that rail transit agencies eliminate or adequately mitigate the hazards and deficiencies that caused it. In some cases, elimination and mitigation require the development of a corrective action plan. The State Safety Oversight Program and the rail transit agency track the corrective action plan until the agency completes the plan.

Accidents and incidents

Sound Transit								City of Seattle								Total			
Link Light Rail				Tacoma Link				Seattle Streetcar				Seattle Center Monorail							
2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
10	17	7	18	1	3	0	0	6	6	0	1	0	0	0	0	17	26	7	19

Accident and incident roll-up*

Type	Sound Transit								City of Seattle								Total			
	Link Light Rail				Tacoma Link				Seattle Streetcar				Seattle Center Monorail							
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Fatality	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Serious injury	3	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	4
Collision	9	16	5	8	1	2	0	0	6	6	0	1	0	0	0	0	17	24	5	9
Runaway train†	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Evacuation	0	1	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	7
Derailment	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3
Property damage	1	14	3	6	0	2	0	0	0	0	0	1	0	0	0	0	1	16	3	7

* A single accident or incident may meet a number of thresholds. As an example, a collision may cause property damage that disrupts operations and result in an injury.

† The FTA did not require tracking of “runaway train” until certifying the State Safety Oversight Program as compliant with 49 CFR Part 674 and 673 in July 2018.

Corrective action plans‡

Sound Transit								City of Seattle								Total			
Link Light Rail				Tacoma Link				Seattle Streetcar				Seattle Center Monorail							
2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
4	17	12	16	2	3	0	4	1	23	3	13	5	17	10	8	12	60	25	8

‡ Because some corrective action plans require the mitigation and planning of multiple parties over an extended period, the State Safety Oversight Program may track corrective action plans over several reporting periods before they are resolved. Additionally, accident and incident totals may not match annual corrective action plan totals because not all accidents and incidents necessitate a corrective action.

2021 accidents and incidents detail: Sound Transit, Link Light Rail

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
1	3/2/2021 12:28 p.m.	Suspicious package	Revenue facility: transit station	N/A	0	0	No	No	Evacuation for life safety reasons	Suspicious package found at Tukwila International Blvd. Station near pedestrian stairs away from bus and rail services.	Law enforcement requested closure of station, as well as International Blvd. and South Center Blvd. Bomb squad cleared device and two additional unattended bags found elsewhere on site.
2	3/8/2021 7:55 a.m.	Suspicious package	In or on vehicle	N/A	0	0	No	No	Evacuation for life safety reasons	Security reported finding a suspicious device on a light rail vehicle at University of Washington Station. Light rail vehicle was evacuated.	Law enforcement inspected and determined the device to be old car radio.
3	4/1/2021 12:46 p.m.	Railroad grade crossing collision	Right-of-way: grade crossing	Privately owned vehicle	0	1	Yes	No	Action of motorist	Train traveling northbound on Martin Luther King Jr. Way approached S. Columbian Way when a northbound pickup truck made an illegal left turn into the train. Truck driver was taken to the hospital for neck pain but exhibited no other signs of injury at the scene.	Managed through corrective action 50 "Address illegal left turns along Martin Luther King Jr. Way – signs and markings" in Central Link corrective action plan.
4	4/4/2021 11:06 p.m.	Other	Non-revenue facility	N/A	0	0	No	No	Equipment failure	Fire alarm and haze were reported at the Central Link operations and maintenance facility. Facility was evacuated. Fire personnel responded and allowed re-entry. A damaged power unit was located by Sound Transit personnel and determined to be source of alarm and haze.	Ensure power cords to power distribution units are within manufacturer's parameters. Inventory, inspect and replace any bent or damaged power cord connections.
5	4/8/2021 9:23 a.m.	Railroad grade crossing collision	Right-of-way: grade crossing	Privately owned vehicle	0	0	Yes	No	Action of motorist	Train traveling northbound on Martin Luther King Jr. Way approaching S. Kenyon St. when a privately owned vehicle traveling northbound on Martin Luther King Blvd. made an illegal left turn into the train. Driver of privately owned vehicle reported minor injuries and was treated at scene. Privately owned vehicle was towed from scene.	Managed through corrective action 50 "Address illegal left turns along Martin Luther King Jr. Way – signs and markings" in Central Link corrective action plan. Previously planned mitigations at northbound Martin Luther King Jr. Way and Kenyon include railroad striping in the left turn lane and no left turn signs.
6	5/1/2021 5:26 p.m.	Derailment	Right-of-way: track way	N/A	0	0	No	Yes, mainline	Hi-rail vehicle height and direction of travel	Contractor hi-rail vehicle was traveling in reverse at approximately 3-5 mph southbound crossing over to northbound track just north of University St. Station at the Pine Street interlock when the vehicle derailed traveling across train frog.	Contractor will not operate hi-rail vehicle in reverse through the Pine Street interlock or will use the concrete embedded track. Sound Transit and King County Metro will research and document hi-rail specifications provide to Sound Transit contracts and procurement teams. King County Metro rail track access group will amend permit forms. Work conducted by Sound Transit or a Sound Transit contractor must be confirmed through the track access process, with mandatory participation by Sound Transit project managers.

2021 accidents and incidents detail: Sound Transit, Link Light Rail (continued)

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
7	6/21/2021 6:18 p.m.	Collision (non-railroad grade crossing)	Non-revenue facility	Fixed object	0	0	Yes	No	Operating rule violation/human factors	Light-rail vehicle damaged and disabled after striking the low-hanging door bridge while maneuvering to connect and tow another light-rail vehicle.	Retraining for vehicle maintenance leadership staff on requirements of King drug and alcohol program. Lessons learned communications and bulletins to vehicle maintenance staff about accident reporting, low hanging door bridges during heat waves, and tagging tracks out when checked. Additional three-day refresher training for employee to review applicable standard operating procedures and safety management plans.
8	7/2/2021 6:22 p.m.	Railroad grade crossing collision	Right-of-way: grade crossing	Person	2	0	No	No	Pedestrian actions	Light-rail vehicle involved in a collision with two pedestrians at grade crossing of Martin Luther King Jr. Way S. and S. Alaska St. Light-rail vehicle had clear lunar signal to proceed through the intersection at S. Alaska St. Two pedestrians were crossing the southwest corner of Martin Luther King Jr. Way and S. Alaska St. eastbound toward the right-of-way. As Light-rail vehicle traveled southbound and began crossing the southern end of S. Alaska St. on approach to Columbia City Station, the pedestrians continued walking into the path of the train. Neither pedestrian involved looked at the approaching train. Both pedestrians died at the scene.	Changes to the Link Light Rail Rulebook to require use of horns by rule at all grade crossings along the Martin Luther King Jr. Way corridor. Sound Transit and Seattle Department of Transportation will investigate use of higher order controls (e.g., engineering, substitution, elimination). Sound Transit and Seattle Department of Transportation will evaluate and consider ways to address rapid growth of the Martin Luther King Jr. Way corridor and how the public interacts with Link Light Rail.
9	7/27/2021 7:54 AM	Other	Right-of-way	N/A	0	1	No	No	Imprudent patron actions	Passenger fell into right-of-way of southbound track at Mount Baker Station. Seattle Fire Department arrived on scene and the passenger was transported to Harborview Medical Center for treatment of a possible head injury.	Sound Transit safety personnel reviewed the station camera footage of the event and responded to the Mount Baker Station platform to inspect the platform for tripping hazards on Aug. 18, 2021. No tripping hazards were identified.
10	7/28/2021 6:37 p.m.	Collision (non-railroad grade crossing)	Revenue facility: transit station	Person	0	1	No	No	Pedestrian actions	As light-rail vehicle entered the southbound platform of International District Station, a person on the platform jumped into the trackway in front of the train. Light-rail vehicle was travelling approximately 20 mph and was placed into maximum braking. The front of the train collided with the person in the trackway and came to rest over the person.	No corrective action. Neither rail operations nor rail facilities were determined to have contributed to the passenger's deliberate action to enter the right-of-way in front of an on-coming train. However, the light rail vehicle was exceeding speeds per for travel between International District Station and Pioneer Square Station. The vehicle also exceeded the platform on sight speed. King County Metro safety has referred the matter to rail operations staff to review the rule violations and determine retraining and discipline, as necessary.

2021 accidents and incidents detail: Sound Transit, Link Light Rail (continued)

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
11	9/3/2021 10:40 a.m.	Derailment	Right-of-way: track way	N/A	0	0	No	Yes, yard	Lack of training and clear roles and responsibilities	During lifting training with Bellevue Fire Department, light-rail vehicle was derailed.	<p>Sound Transit and King County Metro will review partnering fire department policies, procedures, and equipment prior to future lift training.</p> <p>Sound Transit, King County Metro, and partnering fire departments will update light-rail vehicle training materials and recommendations.</p> <p>Sound Transit and King County Metro will document the recommended tools and materials required for partnering fire departments lifting light-rail vehicles.</p> <p>Sound Transit, King County Metro, and partnering fire departments will document in the Sound Transit Pocket Guide and Fire Department Skill Sheets that lifting the light-rail vehicle at a non-approved lifting point and with a single jack (except the re-railing equipment) is not permitted.</p> <p>Sound Transit and King County Metro will clarify and document the training roles, responsibilities, and activities for all required personnel during fire department training activities.</p>
12	9/16/2021 7:32 a.m.	Suspicious package	Revenue facility: transit station	N/A	0	0	No	No	Evacuation for life safety reasons	Security at SeaTac/Airport Station located and reported a suspicious item on the platform.	<p>Law enforcement took control of the scene and directed the station be evacuated. Station was shut down and people were evacuated. Train service was stopped between Tukwila and Angle Lake Station during the investigation.</p> <p>Law enforcement removed the suspicious item from SeaTac Station and gave the go ahead to reopen the station. After investigation, suspicious item was determined to be garbage and not an explosive device.</p>
13	9/16/2021 8:27 a.m.	Suspicious package	In or on vehicle	N/A	0	0	No	No	Evacuation for life safety reasons	Suspicious package was located on light rail vehicle at University of Washington Station.	All passengers were evacuated from light rail vehicle. Vehicle was moved to less populated Roosevelt Station. Station was evacuated while law enforcement investigated. All service trains were stopped system wide. Suspicious package was determined to be garbage and remediated by law enforcement.

2021 accidents and incidents detail: Sound Transit, Link Light Rail (continued)

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
14	10/14/2021 12:19 a.m.	Railroad grade crossing collision	Right-of-way: grade crossing	Privately owned vehicle	0	0	Yes	No	Action of motorist	Two privately owned vehicles collided near light-rail vehicle at the intersection of southbound Martin Luther King Jr. Way and S. Orcas. One privately owned vehicle pushed the other into path of light-rail vehicle. No injuries reported. One privately owned was towed from the scene. The other fled the scene.	Sound Transit and Seattle Department of Transportation evaluate and consider ways to address rapid growth of the Martin Luther King Jr. Way corridor and how the public interacts with Link Light Rail.
15	11/15/2021 8:00 a.m.	Derailment	Right-of-way: track way	N/A	0	0	No	Yes, yard	Operating rule violation/human factors	While being moved from storage, light-rail vehicle derailed after passing through switch.	Complete the installation of specialized resistors. Include King County Metro on communications to increase awareness between agencies during transference of responsibility. Where possible, install visual switch indicators in yards.
16	11/26/2021 8:20 p.m.	Collision (non-railroad grade crossing)	Right-of-way: not a grade crossing	Fixed object	0	0	Yes	No	Equipment failure	Light rail vehicle left Northgate Station northbound in the tunnel. Vehicle was full of passengers. Vehicle lost power in the tunnel 800-1000 feet north of University of Washington station. Operator was unable to get a PA announcement out immediately to passengers. After waiting several minutes aboard vehicle, passengers used emergency exit to self-evacuate into the tunnel. Operator immediately advised control center via handheld radio that passengers were evacuating into the tunnel. Operations were stopped in both directions while train supervisors and first responders were sent into the tunnel on foot to direct the passengers to safety. Rescue light rail vehicle was deployed to transfer passengers safely off the disabled train. After further investigation, it was determined the electrical conduit below the vehicle caught on a bolt that was sticking up in the track between the rails. As the conduit caught on the bolt, it pulled out the electrical wiring for the vehicle, causing the loss of power and leading to substantial damage.	Due to the unprecedented severity of this event, the Sound Transit CEO Peter Rogoff requested that the Sound Transit audit division conduct a broad investigation to identify gaps, lessons learned, and continuous improvement opportunities that will prevent future recurrences. The internal audit, which identified the process failures that led to this event, resulted in a total of 40 findings. All finding had associated corrective actions. The findings identified the need for physical changes to the track and vehicles to address the cause of the vehicle stoppage as well as procedural changes in the pre-revenue acceptance testing, maintenance reporting, operations procedures, emergency communication, and public communication areas. Some changes have already been implemented, while some remain in progress.
17	12/3/2021 9:37 a.m.	Railroad grade crossing collision	Right-of-way: grade crossing	Privately owned vehicle	0	1	Yes	No	Action of motorist	Light rail vehicle was involved in a collision with a privately owned vehicle that made an illegal left turn at the grade crossing of Martin Luther King Jr. Way S. and S. Webster St. Second privately owned vehicle was struck in a secondary collision by the initial privately owned vehicle being pushed back into northbound traffic. Driver of vehicle second privately owned vehicle was transported to hospital but Seattle Fire Department but reported no obvious injuries.	Add Martin Luther King Jr. Way S. and S. Webster St. northbound lanes for secondary warning devices. Repaint the straight through only arrow and add railroad crossing markings to Martin Luther King Jr. Way S. and S. Webster St. northbound lanes. Continue with the prior recommendations that are captured in corrective action plans.

2021 accidents and incidents detail: Sound Transit, Link Light Rail (continued)

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
18	12/22/2021 2:57 p.m.	Suspicious package	Revenue facility: transit station	N/A	0	0	No	No	Evacuation for life safety reasons	Security located suspicious package at Roosevelt Station. Security evacuated station and secured the area until King County Sheriff's Office deputies arrived on scene and took command to investigate.	Sound Transit and King County Metro activated bus bridge and rerouted trains away from Roosevelt Station. Sheriff reported suspicious package had been cleared. Package was full of garbage and determined to not be a threat to public safety.

2021 accidents and incidents detail: City of Seattle, Seattle Streetcar

Count	Date	Type	Location	Collision with	Fatalities	Injuries	Property damage	Derailment	Probable cause	Description	Response
1	6/20/2021 4:50 p.m.	Railroad grade crossing collision	Non-exclusive right-of-way: shared with vehicles or pedestrians	Privately owned vehicle	0	0	Yes	No	Action of motorist	Privately owned vehicle made contact with the right front bumper of streetcar entering the intersection on a green light. Passenger on the train, while seated, was knocked against the window of the train. Private vehicle was towed due to damage.	The train was briefly pulled from service, inspected and returned to service after no disabling damage was found.

ACRONYMS AND ABBREVIATIONS

Americans with Disabilities Act

ADA

Code of Federal Regulations

CFR

Federal Transit Administration

FTA

Revised Code of Washington

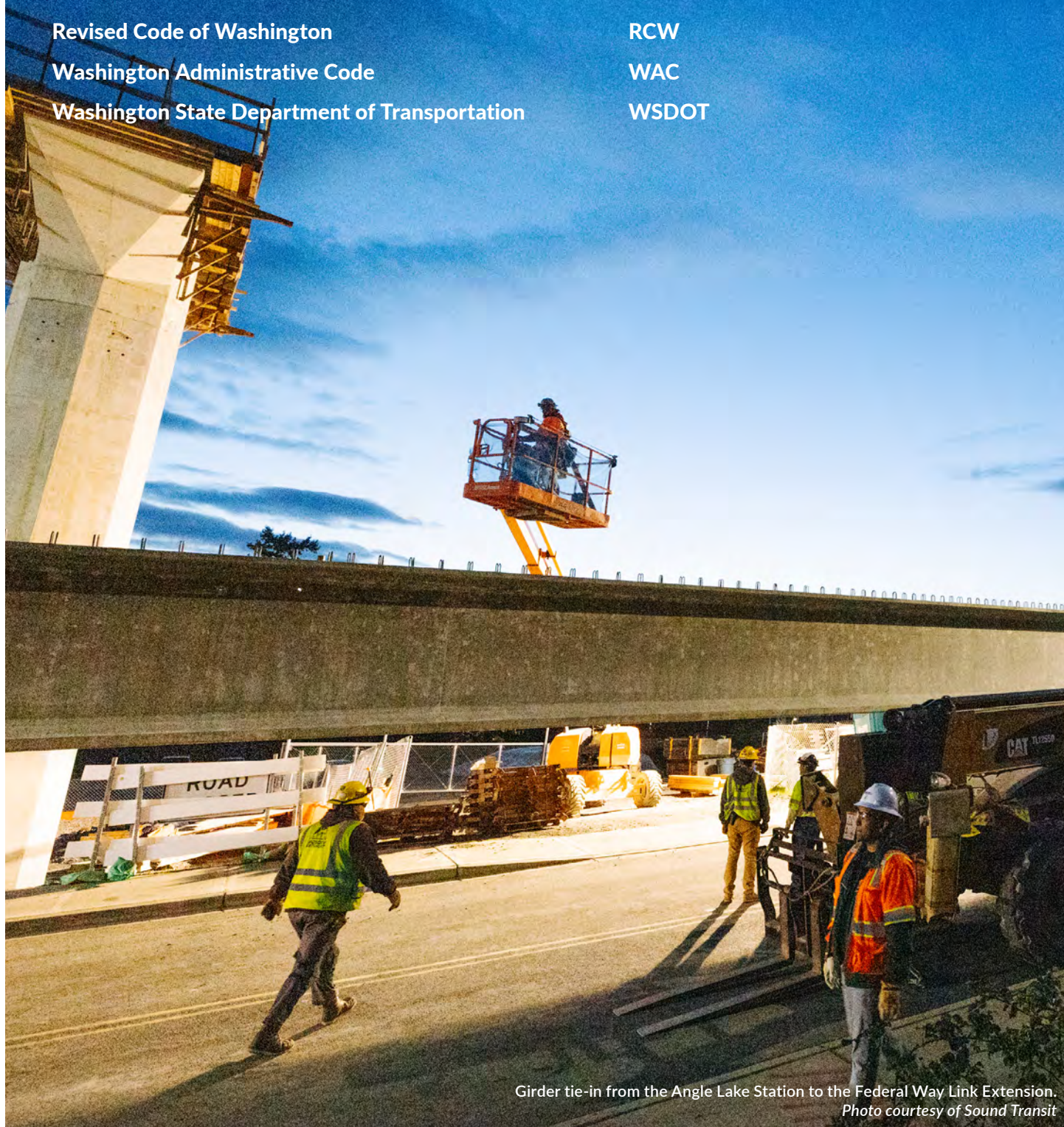
RCW

Washington Administrative Code

WAC

Washington State Department of Transportation

WSDOT



Girder tie-in from the Angle Lake Station to the Federal Way Link Extension.
Photo courtesy of Sound Transit

WEBSITES FEATURED

RCW 81.104.115: app.leg.wa.gov/RCW/default.aspx?cite=81.104.115

49 CFR Part 674: www.gpo.gov/fdsys/granule/CFR-2016-title49-vol7/CFR-2016-title49-vol7-part674

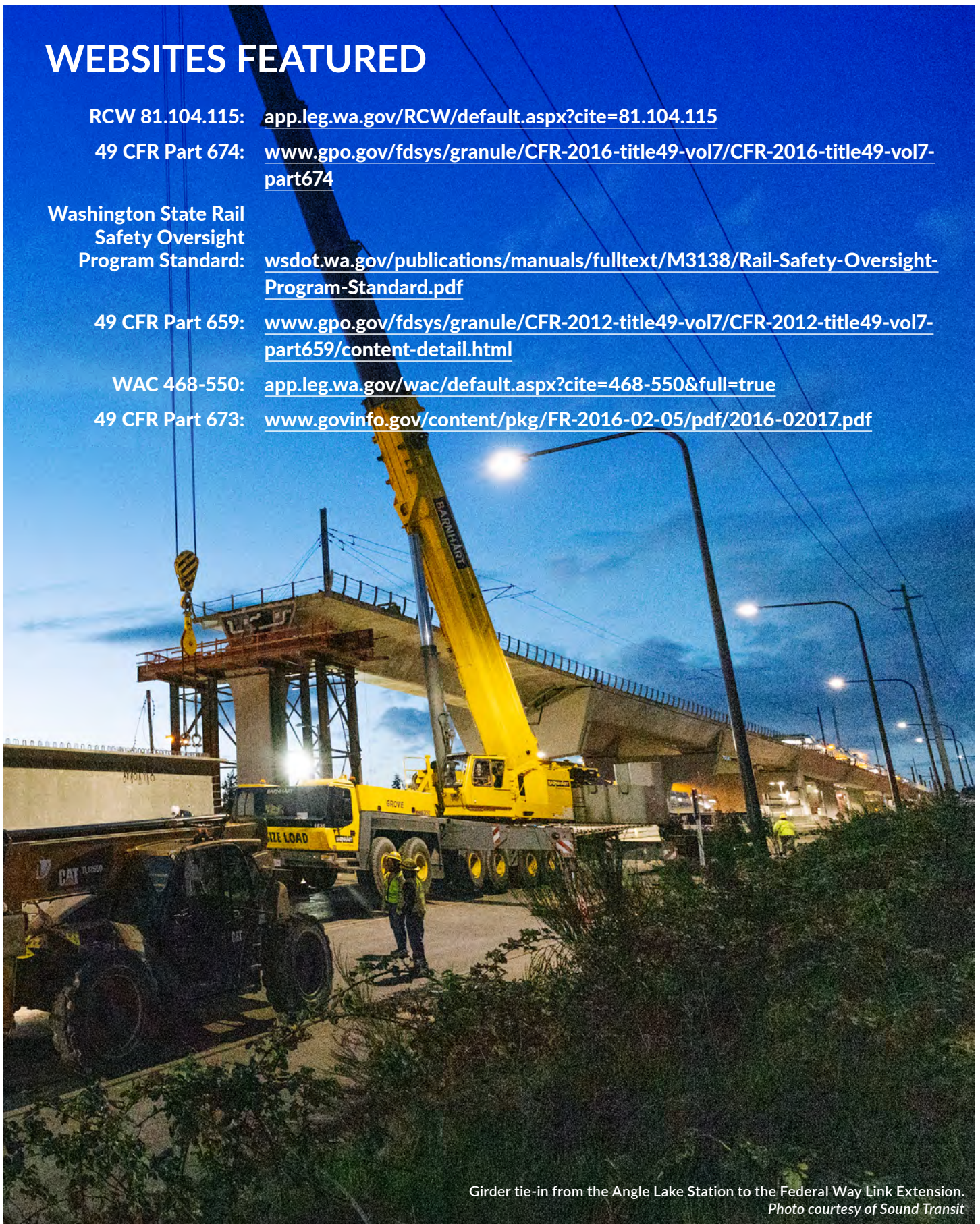
Washington State Rail
Safety Oversight
Program Standard:

wsdot.wa.gov/publications/manuals/fulltext/M3138/Rail-Safety-Oversight-Program-Standard.pdf

49 CFR Part 659: www.gpo.gov/fdsys/granule/CFR-2012-title49-vol7/CFR-2012-title49-vol7-part659/content-detail.html

WAC 468-550: app.leg.wa.gov/wac/default.aspx?cite=468-550&full=true

49 CFR Part 673: www.govinfo.gov/content/pkg/FR-2016-02-05/pdf/2016-02017.pdf



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MORE INFORMATION

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