



# ST2 Light Rail Vehicle Procurement

 **SOUNDTRANSIT**



The image shows a Siemens S70-12 light rail vehicle (LRV) on a track. The vehicle is white with blue and green accents. It has the number '212A' on the side and 'Link' branding. The destination sign above the windshield displays 'UNIVERSITY WA'. The background features a city skyline with the Space Needle, suggesting a Seattle location. The Siemens logo is in the top left, and the Sound Transit logo is in the top right of the image area.

Siemens Industry, Inc., Mobility Division

**S70-12: Powered by Passion**  
Sound Transit's New Link to the Future



*With 1.5 million more residents projected to live in the Puget Sound region by 2040, public transit is increasingly essential in addressing congestion, mobility and environmental impact. Making transit more attractive helps commuters, businesses, and the economy. With improved access and connections that passengers can depend on, attracting current and future customers.*

### Inspired by 12, bringing passion and commitment to the Sound Transit team

The S70-12 LRV has been specially designed to meet the specific needs of Sound Transit and the Puget Sound region. The new design benefits from 13 years of experience with S70 LRVs in America, including mixed fleet operation.

An American made mobility solution to fit all commuters needs, whether it's a ride to the airport, a ride from your neighborhood to downtown or perhaps a ride to the big game; the S70-12 will be a fully-accessible, bicycle-friendly transportation option for all. The S70-12 will provide the Puget Sound region's passengers with a safe, reliable, comfortable ride that gets commuters to their destination consistently on-time.

Benefiting the public and people of Sound Transit:

- Higher capacity center section with more seats and 30% wider aisle than ST1 vehicles
- Maximized driver protection, demonstrated 2G & RT-1 crash worthiness in previous projects

- Ergonomically vetted, best-in-class operator's cab and ability to customize as needed
- Optimized step design to high-floor section

### A cleaner, greener way to travel

Our solar-powered rail manufacturing plant has been in operation for more than 30 years and we are dedicated to green manufacturing practices. With recent expansions we are committed to the future of rail transportation in the U.S.

Sound Transit can count on a trusted partner in Siemens; we are a short distance away to service all of Sound Transit's needs. Siemens has already supplied electrification equipment to Sound Transit and worked with its contractors to realize the aspirational growth plans of the region. We believe in being a true team player, backed by a strong team to ensure the success of our customers – today and in the future.



The S70-12 gets you there *on time*

Siemens is committed to delivering the ST2 vehicles *on time*, to ensure passengers get to their destinations *on time*.

Improving the overall transit experience for the people in Seattle and the Puget Sound region:

- Modern design for a modern region
- Refined interior/exterior appearance
- 49% more window area than specified
- Significantly improved ADA accessibility



Optimized step design to high floor section



## The S70-12: A Sound Solution

### Features & Benefits



1. Contemporary design: FRP sculpted front mask compared to steel
2. Improved operator visibility: thinner a-pillar and large cab side windows for a panoramic view
3. Ergonomic operator's cab with wrap around console reduces driver stress and fatigue
4. Maximized driver protection: service proven 2G and RT-1 crash worthiness design
5. Discreetly mounted intelligent LED secondary lights
6. Improved CCTV system: razor sharp and high resolution video with near dark capabilities and reverse camera view
7. Siemens designed high-quality propulsion system for robust and optimized interactions between components
8. Door layout and jacking points fit perfectly within existing infrastructure
9. LED railway light, headlight, stop/tail, and turn signal assemblies for minimized energy consumption and reduced maintenance

#### ADDITIONAL FEATURES:

- Monitoring & diagnostic system with simple operator instructions to maintain system on-time performance
- Optional LED strips incorporated into passenger doors for passenger flow and increased safety.

## S70-12: Welcoming design for a comfortable ride

### Customized for Sound Transit

- Hassle-free operations and maintenance: Same vehicle length, door locations and maintenance interfaces as ST1
- Increased capacity: 74 seats with improved passenger flow and less obstructions than ST1

### Optimized Interior

- Wide-open appearance: Inviting and well-lit articulation and center section area
- Natural light and a good view for everyone: 49% larger windows than ST1 vehicles

### Reliable Service

- Exceeding expectations: Similar S70 fleet in Minneapolis/ St. Paul exceeded specified reliability targets by 70% in 2015
- Proven subsystems from qualified and experienced subcontractors
- Siemens designed and manufactured 1500V propulsion and drives for optimized system integration



## Enhanced on-board experience & full accessibility

1. Higher capacity center c-car section with 30% wider aisle than ST1 fleet
2. Open interior layout for improved passenger flow
3. Large passenger windows, for increased visibility and improved passenger safety
4. Greater accuracy: Automatic passenger counter with enhanced 3D infrared technology
5. Unobstructed doorways with standard rise high-floor transition steps for reducing trip hazards
6. Comfortable air flow: Reduced air speeds and interior noise compared to ST1 vehicles
7. Maintenance friendly floor design: Clear unobstructed concept allows easier cleaning



An ergonomic cab interior with enhanced visibility



### Designed to Fit Sound Transit's Operating Environment

Maximum Operational Speed:	65 mph (105 km/h)
Passenger Capacity:	74 seats Approx. 240 total passengers @ 6 p/m <sup>2</sup>
Maximum Operational Gradient:	7%
Length Over Couplers:	95 ft (28,942 mm)
Aisle Width in Center Section:	40 in (30% more than ST1)
Forward Door Locations:	Identical to ST1
Clear Door Opening:	48 in (1,220 mm)
Projected Vehicle Empty Weight:	Less than 102,500 lbs (46,500 kg)
Jacking Pockets for Maintenance:	Identical to ST1
Distance Center to Center of Trucks:	35 ft (10,711 mm)

A close-up, low-angle shot of a white and blue Sound Transit bus. The bus features a large, stylized wave graphic in shades of blue and teal that flows across its side. Several dark, rectangular windows are visible along the top edge of the bus. The background is a clear blue sky. A semi-transparent dark grey banner is overlaid across the middle of the image, containing the Sound Transit logo and the slogan "RIDE THE WAVE".

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RIDE THE WAVE