



By email

14<sup>th</sup> February 2018.

**Re: Public Accounts Committee Meeting Monday the 5<sup>th</sup> of February 2018**

Dear Nick,

Thank you for the opportunity to give evidence to the PAC inquiry on procurement. I mentioned that I would provide further information to the committee both on the example of the Portland metro procurement ( presentation attached) and my Future Generations Framework which although developed for infrastructure programmes I think could provide a useful basis for revisions to the Procurement Policy statement and the community benefits toolkit.

I also wanted to clarify further the answer I gave to Lee Waters regarding use of my powers to ensure that there is no confusion. In the work that I am undertaking with the National Procurement Service, Value Wales and pilot local authorities I am using my powers under section 19 of the Act.

Lee, I believe was specifically referring to section 20 powers of review. It is worth noting that reviews are intended to provide insight to me and to help the public body improve the way in which they look at the long term impact of what they do and safeguard the ability of future generations to meet their needs. Use of this power. Use of this power remains open to me, for example, should it become apparent that the Government and others are not following advice I have provide under section 19.

As I mentioned at the committee I am engaged in further dialogue with the Cabinet Secretary for Finance in terms of the issues which need to be resolved from the perspective of the Future Generations Act. I met with him and his officials this week to follow up the concerns I had expressed in writing that the policy frameworks for procurement which include the Welsh Procurement Policy Statement and the Community Benefits toolkit had not been updated to reflect the requirements of the Wellbeing of Future Generations Act. As you know the Government have indicated that they are reviewing the approach to procurement and I have made it clear that this must include work to reflect the Act as a matter of urgency. I am continuing to engage with the Government on this and am also keen to assess the report from PAC when it comes as from the evidence sessions I have seen I believe that it will certainly assist in clarifying the broader range of issues which need to be addressed.

As I told the committee, I am open to using section 20 powers if progress is not made.

Yours sincerely,



## Trimet Information

Information on the Orange Line's sustainability programme:

<https://trimet.org/history/orangeline/library/sustainability.htm>

Further information on their work: <https://trimet.org/history/orangeline/library/index.htm>

Future Generations Framework:

<https://futuregenerations.wales/documents/future-generations-framework/>

# PORTLAND-MILWAUKIE LIGHT RAIL TRANSIT PROJECT

## Sustainability Overview



### Leadership

TriMet is a government-owned transit agency that is committed to providing high-quality transit services to the people of the Portland metropolitan area. TriMet is a leader in sustainability and is committed to reducing its carbon footprint and improving its environmental performance.

### Stormwater

TriMet is committed to reducing its stormwater runoff and improving its water quality. TriMet is implementing a variety of stormwater management practices, including rain gardens, permeable pavement, and green roofs.

### Resource Use

TriMet is committed to reducing its resource use and improving its efficiency. TriMet is implementing a variety of resource conservation practices, including energy-efficient lighting, water-saving fixtures, and recycling programs.

### Energy

TriMet is committed to reducing its energy consumption and improving its energy efficiency. TriMet is implementing a variety of energy conservation practices, including energy-efficient lighting, HVAC systems, and building envelopes.

### Active Transportation

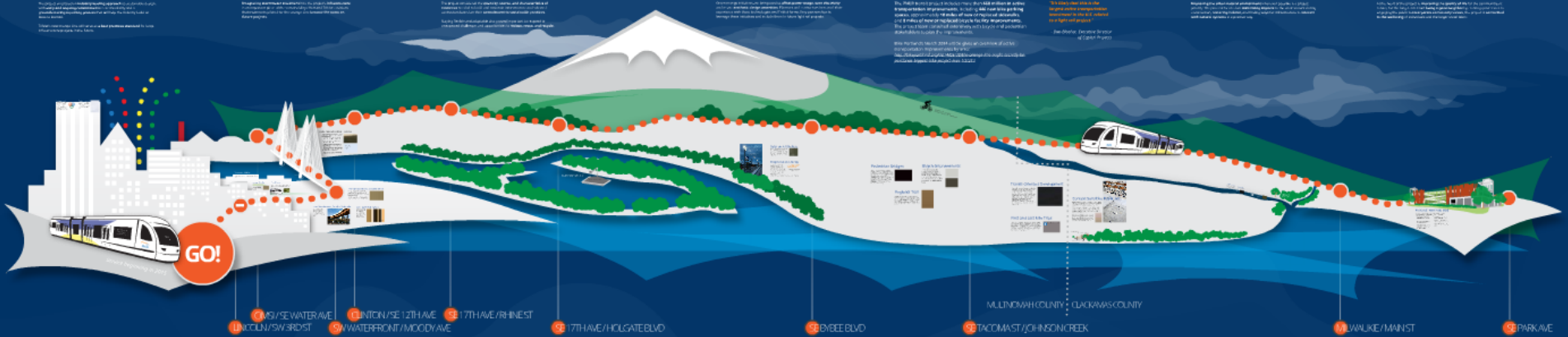
TriMet is committed to promoting active transportation and improving its safety. TriMet is implementing a variety of active transportation practices, including bike racks, bike repair stations, and pedestrian-friendly infrastructure.

### Habitat

TriMet is committed to protecting and improving its natural habitat. TriMet is implementing a variety of habitat conservation practices, including native plantings, tree preservation, and wildlife-friendly infrastructure.

### Livability

TriMet is committed to improving the quality of life for its customers and the community. TriMet is implementing a variety of livability practices, including accessible transit, customer service, and community outreach.



- 1 LINCOLN/SW 3RD ST
- 2 SW/SE WATER AVE
- 3 LINCOLN/SE 12TH AVE
- 4 SW WATERFRONT/MOODY AVE
- 5 17TH AVE/RIEDEL ST
- 6 17TH AVE/HOLGATE BLVD
- 7 SE/BEE BLVD
- 8 TACOMA ST/OH/SCION CREEK
- 9 WALKER/MANIST
- 10 PARK AVE

### Spotlights

High-Mileage Park at OHSU  
Milwaukie Corridor

### Closing

TriMet is committed to providing high-quality transit services to the people of the Portland metropolitan area. TriMet is a leader in sustainability and is committed to reducing its carbon footprint and improving its environmental performance.

**22,765** predicted weekday rides ...

Taking **thousands of cars off the road...**

and saving nearly **3,000 gallons of gasoline** each workday...

Built with **community and sustainability** at its core.



**ORANGE**

is the new

**MAX**





Ready?

Set...



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Using thousands of cars of the rail,  
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*Service beginning in 2015*

# PORTLAND-MILWAUKIE LIGHT RAIL TRANSIT PROJECT

## Sustainability Overview



### Leadership

The project is a model of leadership, demonstrating a commitment to sustainability and environmental stewardship. It is a testament to the power of public-private partnerships and the ability to lead by example.

### Stormwater

Managing stormwater is a critical component of the project's sustainability. Through innovative design and construction, the project is designed to capture and reuse stormwater, reducing runoff and improving water quality.

### Resource Use

The project is committed to reducing its carbon footprint and conserving resources. Through the use of sustainable materials and construction practices, the project is designed to be a model of resource efficiency.

### Energy

Energy efficiency is a key focus of the project's sustainability. Through the use of energy-efficient lighting, HVAC systems, and other technologies, the project is designed to reduce its energy consumption and lower its carbon footprint.

### Active Transportation

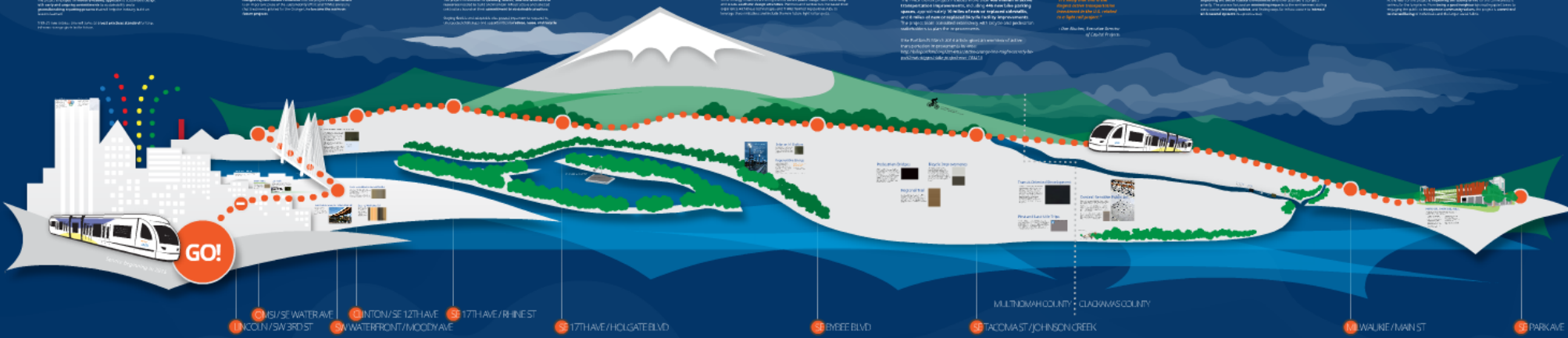
The project is designed to encourage active transportation, such as walking and biking. Through the inclusion of sidewalks, bike lanes, and other amenities, the project is designed to be a safe and convenient mode of transportation.

### Habitat

Protecting and restoring natural habitat is a key goal of the project's sustainability. Through the use of native plants and trees, and the creation of artificial wetlands and other habitats, the project is designed to support local wildlife and improve water quality.

### Livability

The project is designed to improve the quality of life for the community. Through the inclusion of public art, green spaces, and other amenities, the project is designed to be a vibrant and livable part of the community.



- 11 N. MI / SE WATER AVE
- 12 N. COLU / SW 3RD ST
- 13 N. INTON / SE 12TH AVE
- 14 N. WATERFRONT / MOODY AVE
- 15 SE 17TH AVE / B. LINE ST
- 16 SE 17TH AVE / HCL GATE BLVD
- 17 SE 8TH AVE BLVD
- 18 STACCOMA ST / JOHNSON CREEK
- 19 CLATSOP COUNTY
- 20 MILWAUKIE / MAIN ST
- 21 PARK AVE

### Spotlights

North America Park and Ride  
Future Doubling

### Closing



The project is a testament to the power of public-private partnerships and the ability to lead by example. It is a testament to the power of sustainability and the ability to create a better future for all.



# Leadership

The project employed an **industry-leading approach** to sustainable design, with **early and ongoing commitments** to sustainability and a **groundbreaking reporting process** that will help the industry build on lessons learned.

TriMet's new Orange Line will serve as a **best practices standard** for large infrastructure projects in the future.

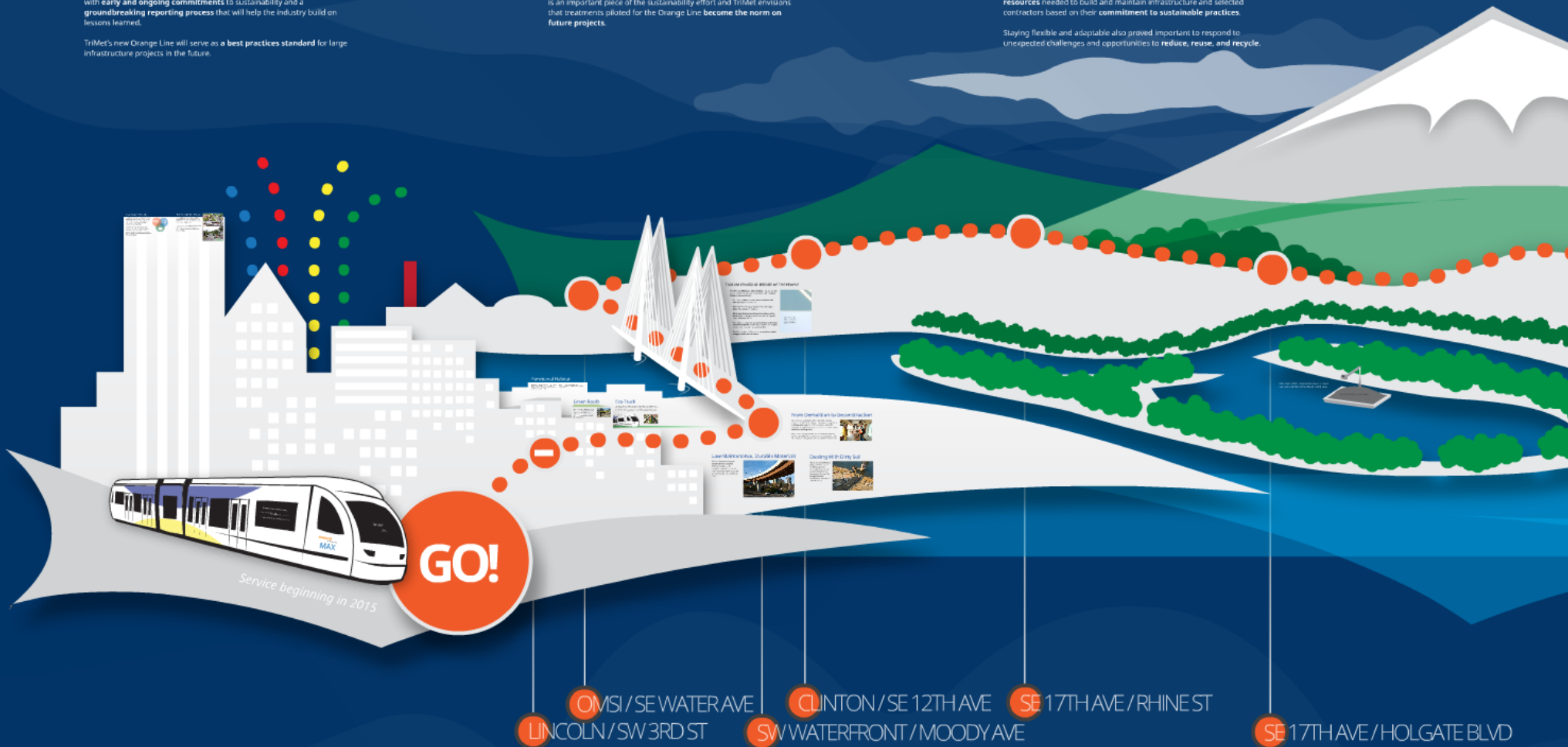
# Stormwater

**Integrating stormwater treatment** into the project's infrastructure is an important piece of the sustainability effort and TriMet envisions that treatments piloted for the Orange Line **become the norm on future projects**.

# Resource Use

The project considered the **quantity, source, and characteristics of resources** needed to build and maintain infrastructure and selected contractors based on their **commitment to sustainable practices**.

Staying flexible and adaptable also proved important to respond to unexpected challenges and opportunities to **reduce, reuse, and recycle**.



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## It all began with 28...

An early workshop deliberately incorporated **triple bottom line** principles into the project. Twenty-eight identified sustainability strategies would be tracked **throughout design, construction and operation**.

These initial strategies blossomed into a program of more than **300 sustainability initiatives**. Together, they represent a pioneering effort to integrate a light rail line into the **natural, economic and human fabric of the community**.



## The Possibilities Project

The Possibilities Project created an **urban design vision** for the alignment as a whole, for individual station areas, and for the many communities it would serve.

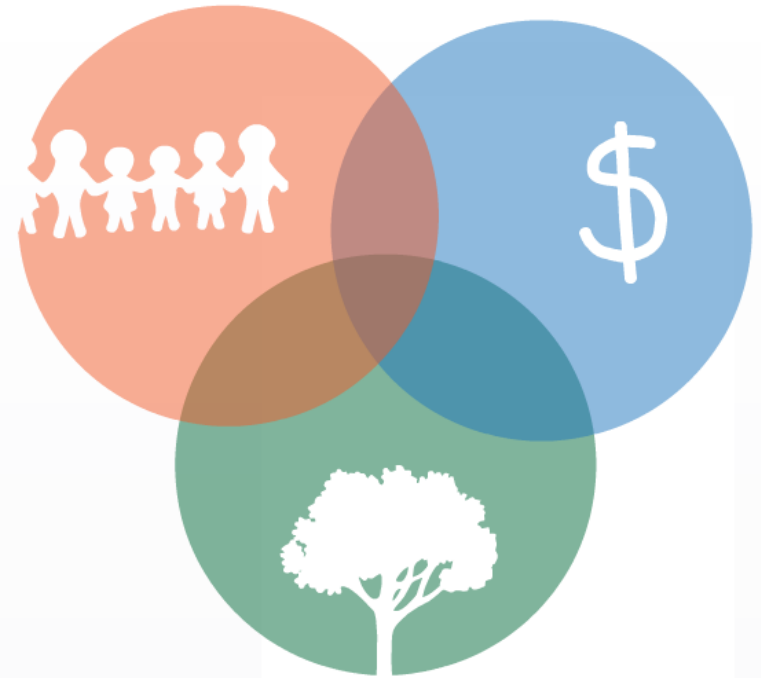
It incorporated the **needs of the community** into the light rail project – and poised communities to **leverage the new line** for their own goals.



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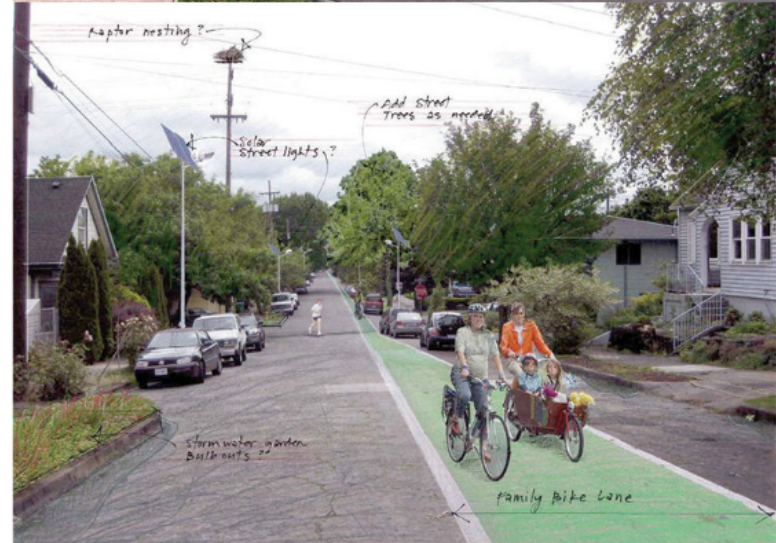
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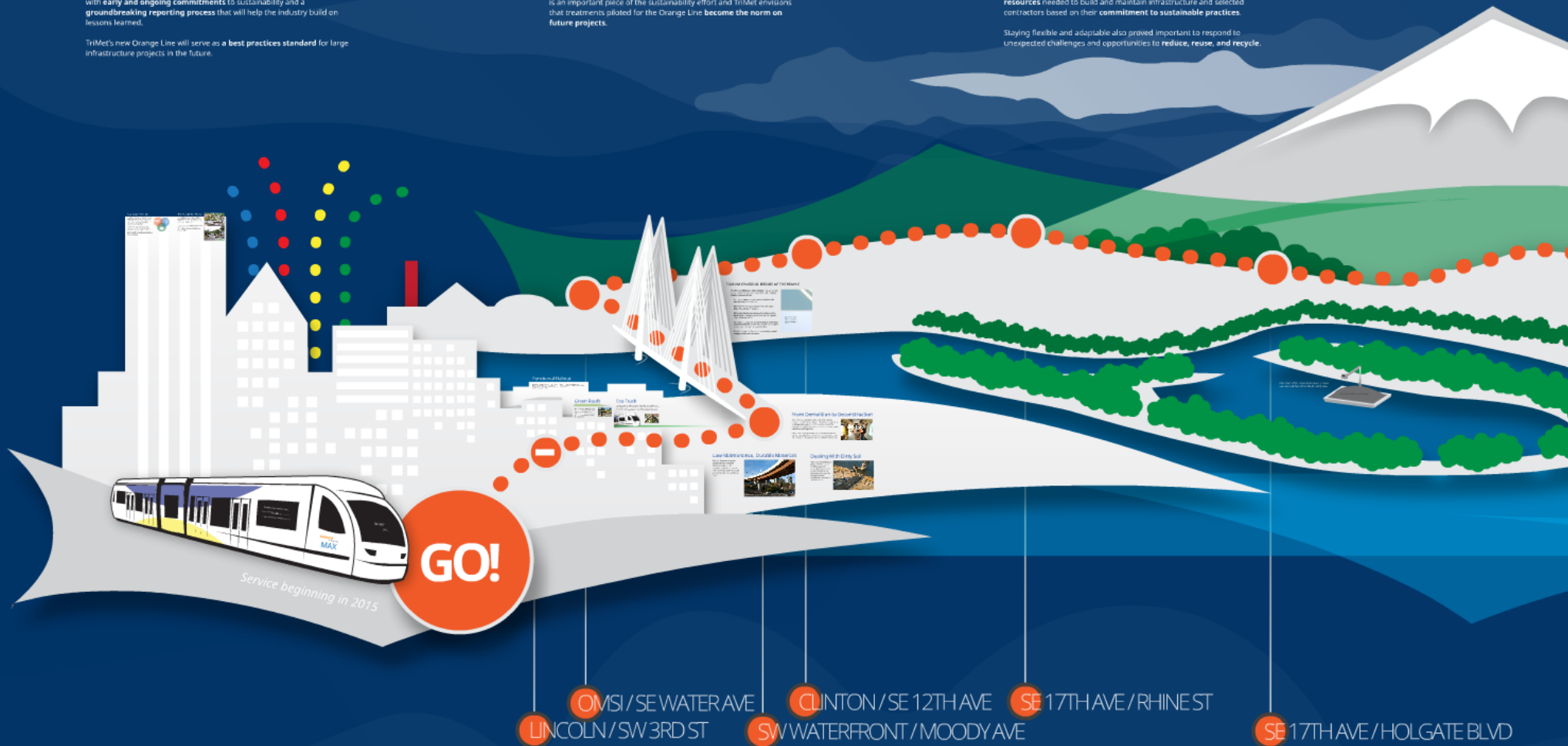
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# Functional Habitat

252 vegetated stormwater facilities treat more than 34 acres of runoff from along the line. The facilities also absorb carbon dioxide, lower urban air temperatures, and filter pollutants out of the air.

Most are planted with native species that do not require the use of pesticides, making ideal habitat for Oregon's native pollinators.

## Green Roofs

Green eco-roofs are installed on eight structures, absorbing an average of 60% of runoff in any given area. A 1,000-square-foot eco-roof can remove an estimated 40 pounds of airborne particles per year.



## Eco-Track

4,204 square feet of eco-track, a carpet of low-growing evergreen plants, has been installed at the Lincoln St./SW 3rd Ave. station. This track establishes a new type of green street to contribute to a neighborhood known for its parks and greenery. This is the only known use of this treatment in the United States.



Lincoln St./SW 3rd





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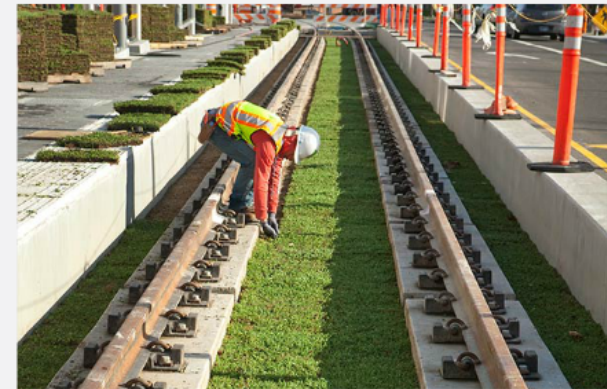
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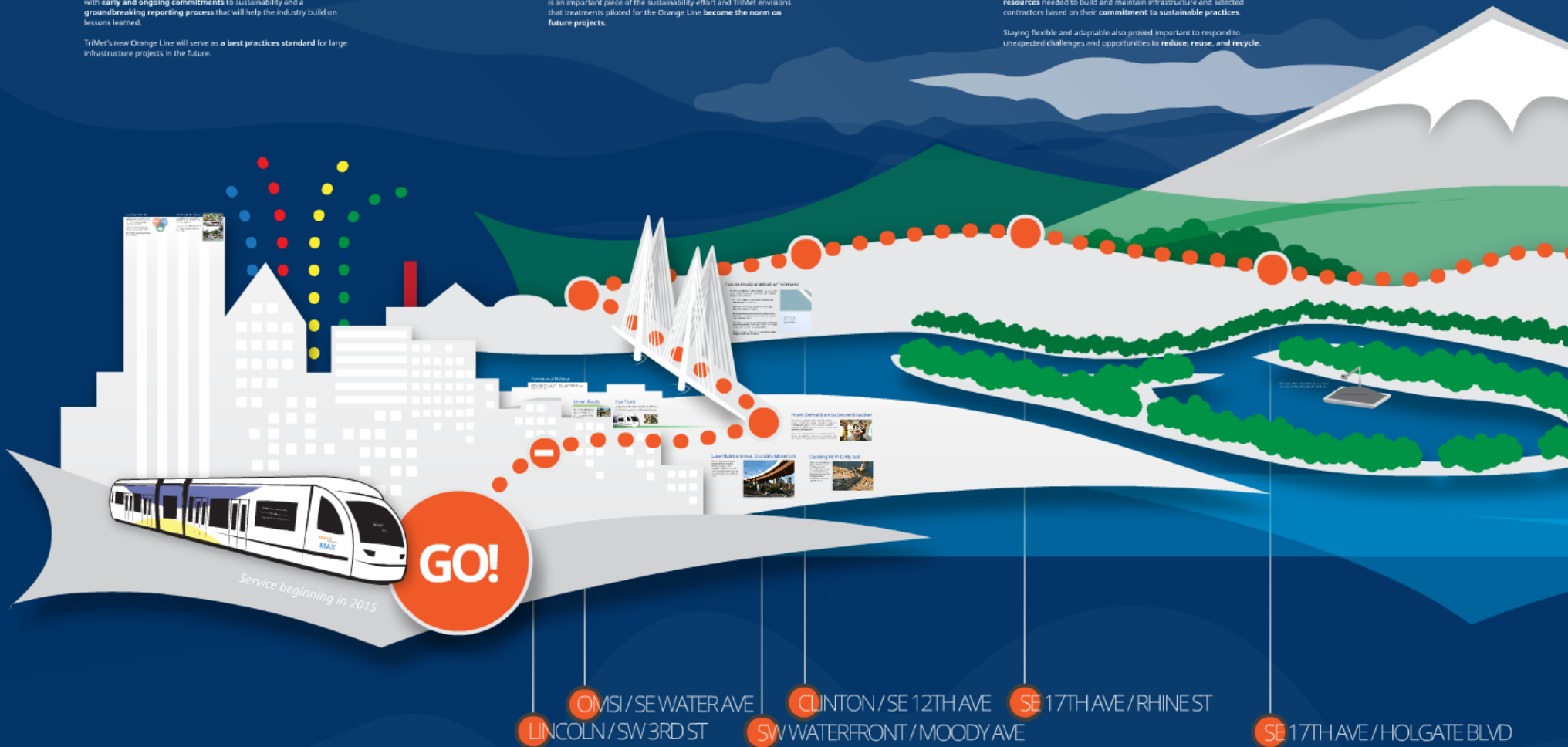
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## From Demolition to Deconstruction

More than 100 buildings required demolition during construction and TriMet adopted a deconstruction approach to **salvage and reuse** as much as possible. *Habitat for Humanity*, the *Rebuilding Center*, and *ReStore* performed **pre-demolition building skins**.

When a 19th century wooden rail car was discovered in a building scheduled for demolition, the team partnered with the *Oregon Rail Heritage Foundation* to remove and restore it.



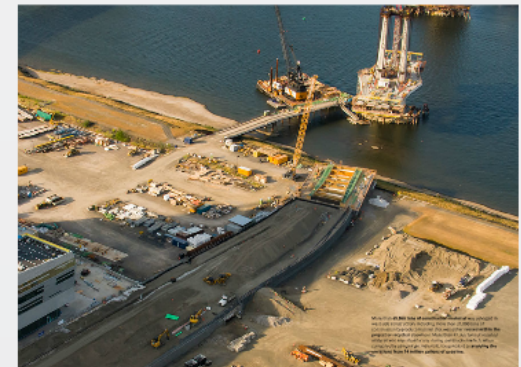
## Low-Maintenance, Durable Materials

**Robust, low-maintenance materials** were specified whenever possible. For example, unpainted concrete and weathered steel were used on new structure along Harbor Drive.



## Dealing With Dirty Soil

Historically **contaminated soils** on the west bank of the Willamette were encapsulated on-site into concrete infrastructure, **eliminating the need for energy-intensive treatment or transport** of these materials.



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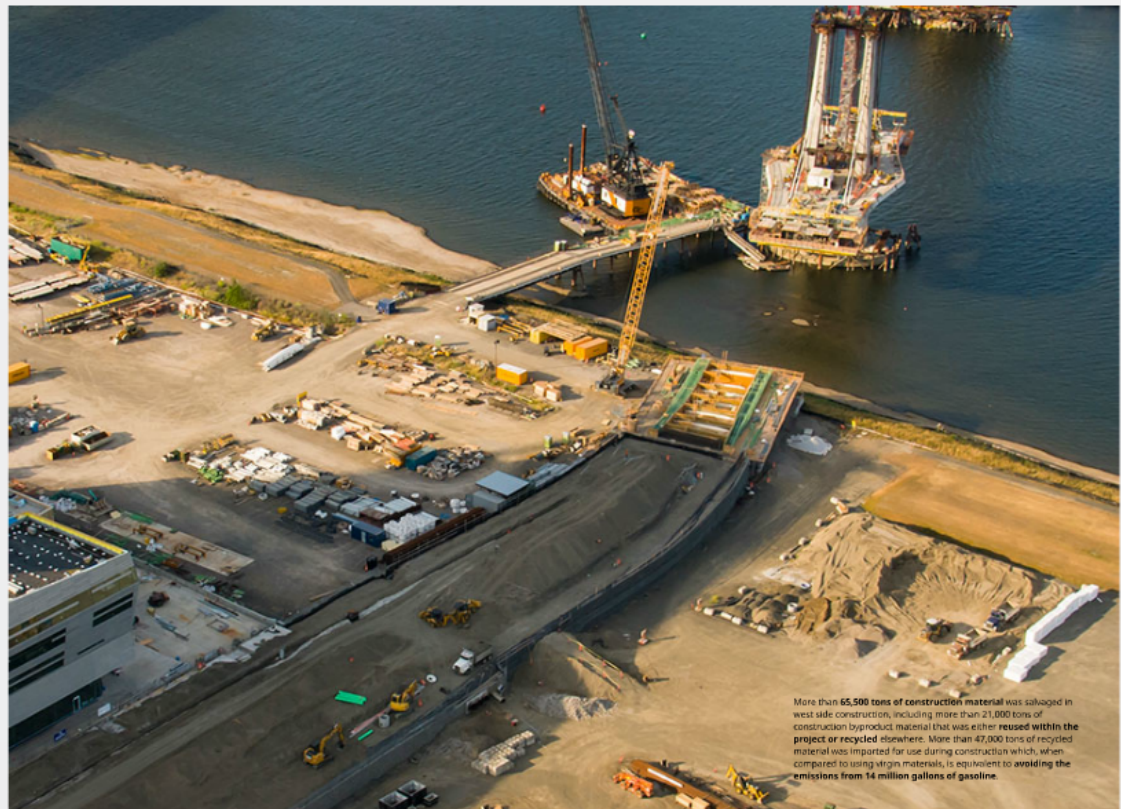
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An aerial photograph of a construction site. A large, white, U-shaped concrete structure is under construction on a sandy or dirt-covered ground. Several workers in hard hats are visible around the structure. In the background, there are large piles of sand or earth, and some construction equipment like a yellow excavator. The scene is brightly lit, suggesting a sunny day.

More than **65,500 tons of construction material** was salvaged in west side construction, including more than 21,000 tons of construction byproduct material that was either **reused within the project or recycled** elsewhere. More than 47,000 tons of recycled material was imported for use during construction which, when compared to using virgin materials, is equivalent to **avoiding the emissions from 14 million gallons of gasoline.**

More than 90% of construction materials have been sourced from within the tri-county area

*Ross Island Sand and Gravel*



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Staying **flexible and adaptable** also proved important to respond to unexpected challenges and opportunities to **reduce, reuse, and recycle**.



# Energy

Green energy initiatives are being used to offset power usage, save electricity and create aesthetic design amenities. Partners and contractors leveraged their experience with these technologies and Tribble formed key partnerships to leverage these initiatives and include them in future light rail projects.

# Active Transportation

The PMLR transit project includes more than \$80 million in active transportation improvements, including 446 new bike parking spaces, approximately 10 miles of new or replaced sidewalks, and 8 miles of new or replaced bicycle facility improvements. The project team consulted extensively with bicycle and pedestrian stakeholders to plan the improvements.

Bike Portland's March 2014 article gives an overview of active transportation improvements by area: <http://bikeportland.org/2014/03/20/the-orange-line-might-secretly-be-portlands-biggest-bike-project-ever-103213>

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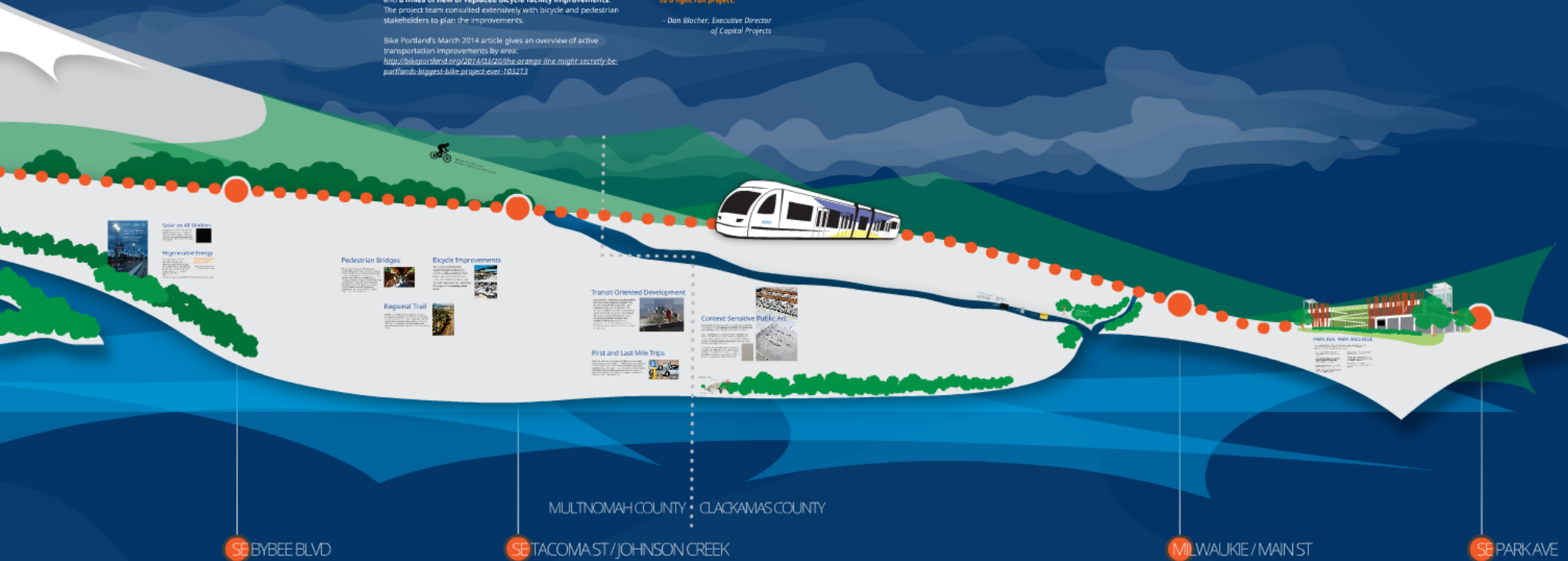
- Dan Blocher, Executive Director of Capital Projects

# Habitat

Improving the urban natural environment whenever possible is a project priority. The project focused on minimizing impacts to the environment during construction, restoring habitat, and finding ways for infrastructure to interact with natural systems in a positive way.

# Livability

At the heart of the project is improving the quality of life for the communities it serves, for the long term. From being a good neighbor by crossing quiet streets to engaging the public to incorporate community values, the project is committed to the wellbeing of individuals and the larger social fabric.



### Pedestrian Bridges



### Bicycle Improvements



### Regional Trail



### Transit-Oriented Development



### First and Last Mile Trips



### Context-Sensitive Public Art



### ML WALKIE / MAIN ST



SE BYBEE BLVD

SE TACOMA ST / JOHNSON CREEK

ML WALKIE / MAIN ST

SE PARK AVE

MULTNOMAH COUNTY | CLACKAMAS COUNTY

# Spotlights

- Park Avenue Park and Ride
- Tillikum Crossing

# Closing



Tribble's Orange Line moves beyond providing a new public transit option to the Portland metro area. The project piloted new technologies and leveraged infrastructure to incorporate sustainable practices, environmental improvements, and human-scale design.

By the time the final train runs in 2015, the Orange Line will already have created a lasting legacy - by setting a best practices standard for future large infrastructure projects in the Portland region, the Pacific Northwest and beyond.

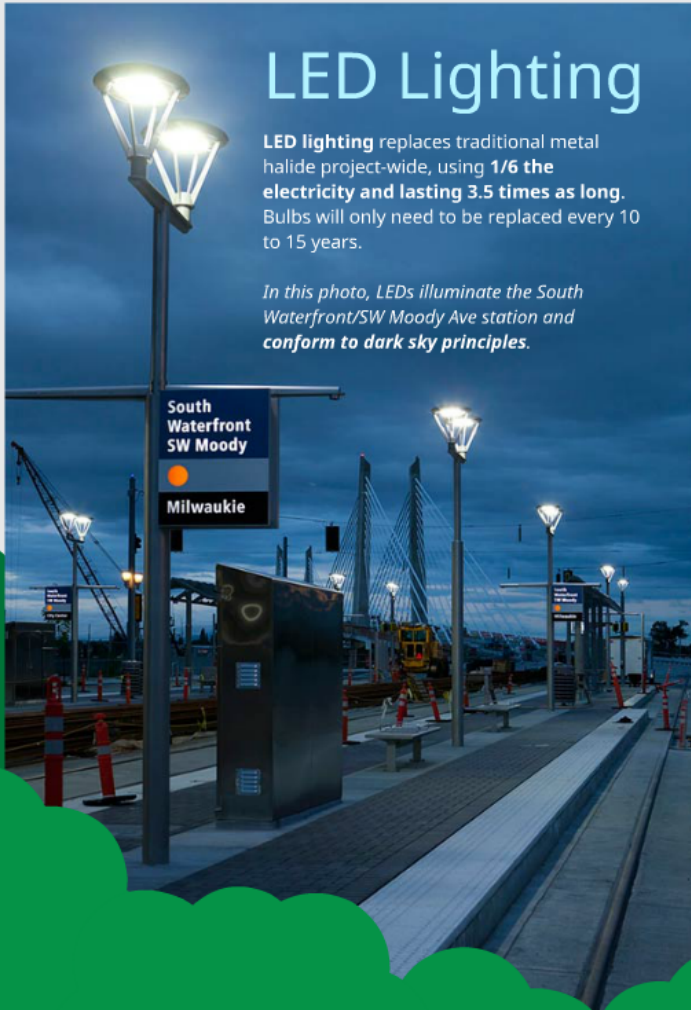
# Energy

Green energy initiatives are being used to **offset power usage, save electricity** and create **aesthetic design amenities**. Planners and contractors increased their experience with these technologies and TriMet formed key partnerships to leverage these initiatives and include them in future light rail projects.

## LED Lighting

**LED lighting** replaces traditional metal halide project-wide, using **1/6 the electricity and lasting 3.5 times as long**. Bulbs will only need to be replaced every 10 to 15 years.

*In this photo, LEDs illuminate the South Waterfront/SW Moody Ave station and conform to dark sky principles.*



## Solar on All Shelters

**Every MAX shelter includes solar panels on its roof**, which offset power usage at stations and by trains. A study of a similar project at CalPoly found that the solar panel installation at a single site would have a **complete investment return within 12 years** – much shorter than the lifetime of the panels.



## Regenerative Energy

The Orange Line will boast the **first supercapacitor in the U.S.** to use **regenerative energy for light rail**. It harnesses energy from braking trains and feeds it back to other trains for acceleration or uphill climbs. The system was championed by TriMet engineers and will create annual energy savings resulting in a **payback window of only 1.4 years**.

Find out more:

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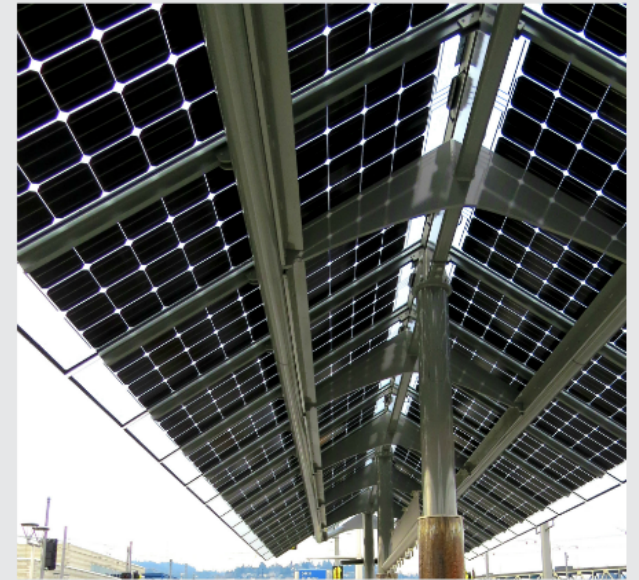
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South  
Waterfront



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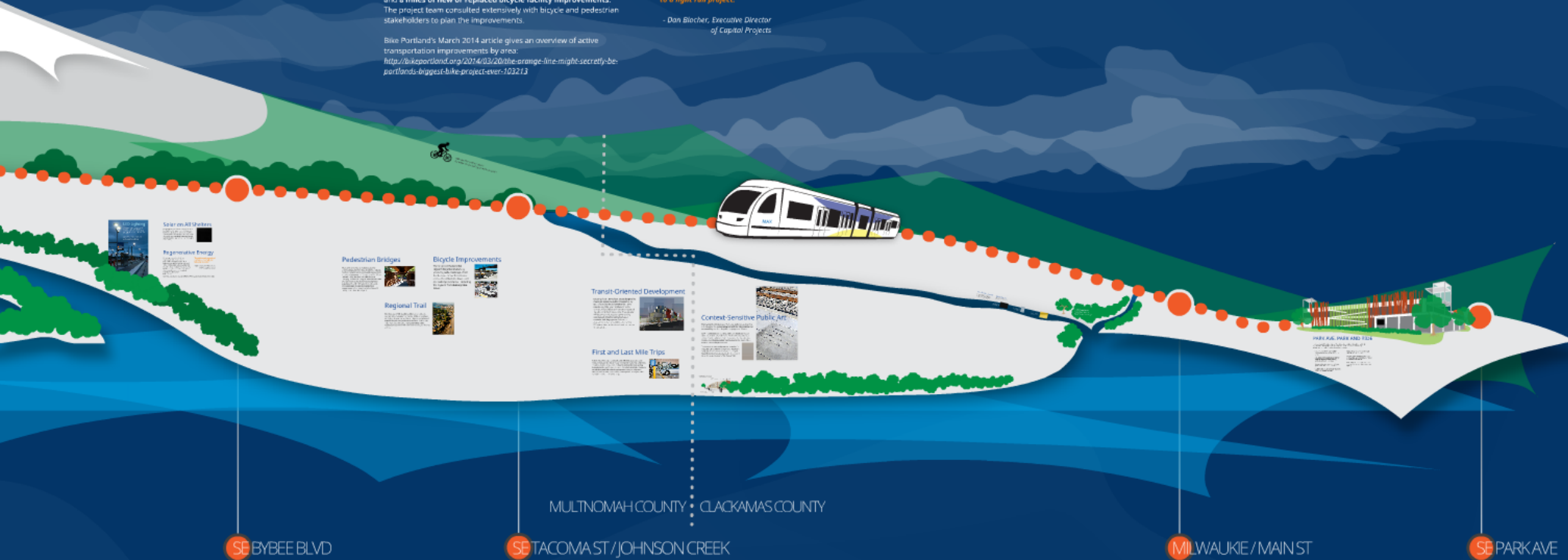
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MULTNOMAH COUNTY CLACKAMAS COUNTY

## Pedestrian Bridges

Improving pedestrian access and safety through the construction of new bridges and the repair of existing ones.



## Bicycle Improvements

Enhancing the bicycle network with new bike lanes, bike paths, and bike parking facilities.



## Regional Trail

Developing and improving regional trails to provide recreational and transportation options.



## Transit-Oriented Development

Encouraging development that is walkable, transit-accessible, and transit-supportive.



## First and Last Mile Trips

Providing convenient and safe options for the first and last mile of a transit trip.



## Context-Sensitive Public Art

Integrating public art into the transit system to enhance the visual environment and reflect local culture.



# Spotlights

- Park Avenue Park and Ride
- Tilikum Crossing

# Closing



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# Pedestrian Bridges

The team has worked to include pedestrian crossing improvements throughout the project to **resolve transportation safety and equity issues** in adjacent communities. For example, the Kellogg railroad bridge has been retrofitted with a “hanging” pedestrian bridge to **connect two sides of a community that have historically been separated**. The SE 17th Ave & Rhine St. station **addresses gaps in essential pedestrian connections** with a reconstructed multimodal bridge across the railroad yard.



# Bicycle Improvements

The project **enhances the region’s bicycle network** by providing **safe crossings** of rail tracks, new connections to and across the Willamette River, and on-road improvements – including the region’s first **advisory bike lanes**.



# Regional Trail

Working closely with local jurisdictions, the project is reconstructing a segment of Trolley Trail in conjunction with light rail construction. This is a key piece of planned **regional bicycle and pedestrian arteries** – linking two major multi-use trail systems and **providing a safe, continuous route** between Sellwood and Milwaukie town centers.



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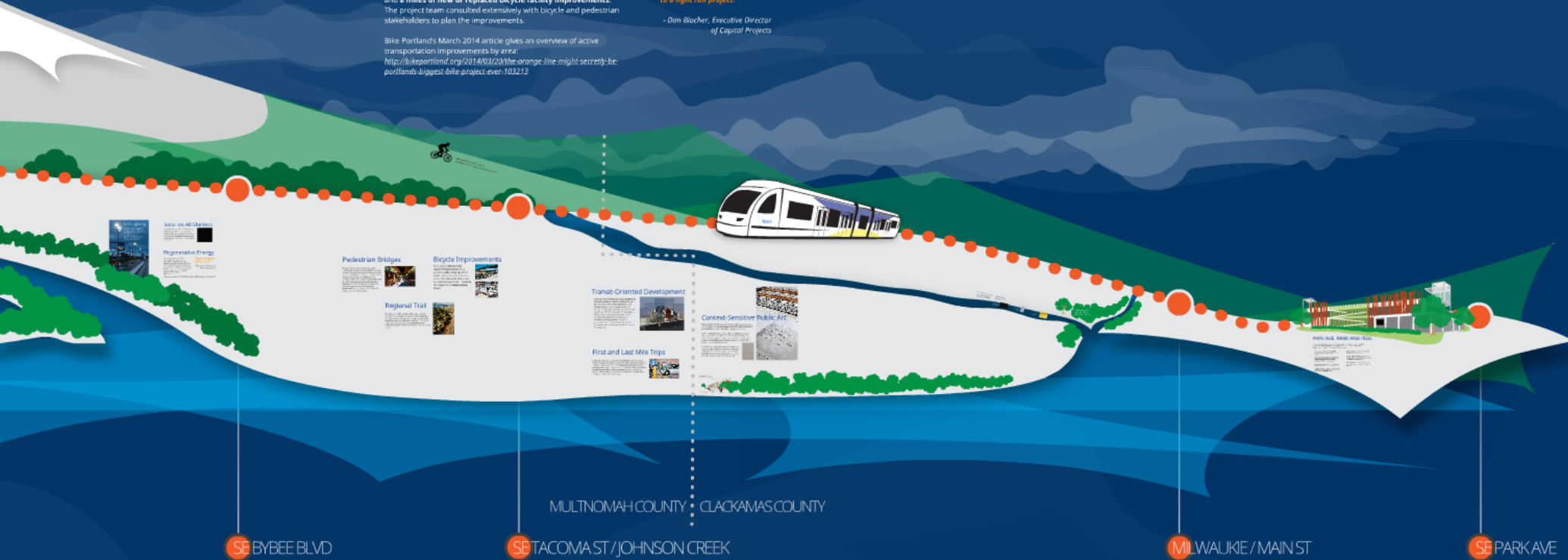
- Dan Blocher, Executive Director of Capital Projects

# Habitat

Improving the urban natural environment wherever possible is a project priority. The process focused on minimizing impacts to the environment during construction, restoring habitat, and finding ways for infrastructure to interact with natural systems in a positive way.

# Livability

At the heart of the project is improving the quality of life for the communities it serves, for the long term. From being a good neighbor by creating quiet zones to engaging the public to incorporate community values, the project is committed to the well-being of individuals and the larger social fabric.



# Spotlights

- Park Avenue Park and Ride
- Tilkum Crossing

# Closing



Tildev's Orange Line moves beyond providing a new public transit option to the Portland metro area. The project placed new technologies and leveraged infrastructure to incorporate sustainable practices, environmental improvements, and human-scale design.

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**Improving the urban natural environment** whenever possible is a project priority. The process focused on **minimizing impacts** to the environment during construction, **restoring habitat**, and finding ways for infrastructure to **interact with natural systems** in a positive way.

## New Shoreline Habitat

The project contributed \$1 million in mitigation funds to **restore shallow water habitat along the Willamette River**. The South Waterfront project cut industrial fill from the riverbank and removed about 27,000 tons of concrete, contaminated soil and debris. An **innovative retaining wall is planted with native species** and protects the area from erosion. The 25,500 square feet of new riparian habitat will help **restore native fish populations**.

## Urban Creeks

Agency and railroad partners worked with community groups to **return natural water flows and healthy habitat** to three area creeks:

At **Johnson Creek** near Tacoma Street, large pieces of woody debris acquired during Orange Line construction were placed in the water to restore salmon habitat.



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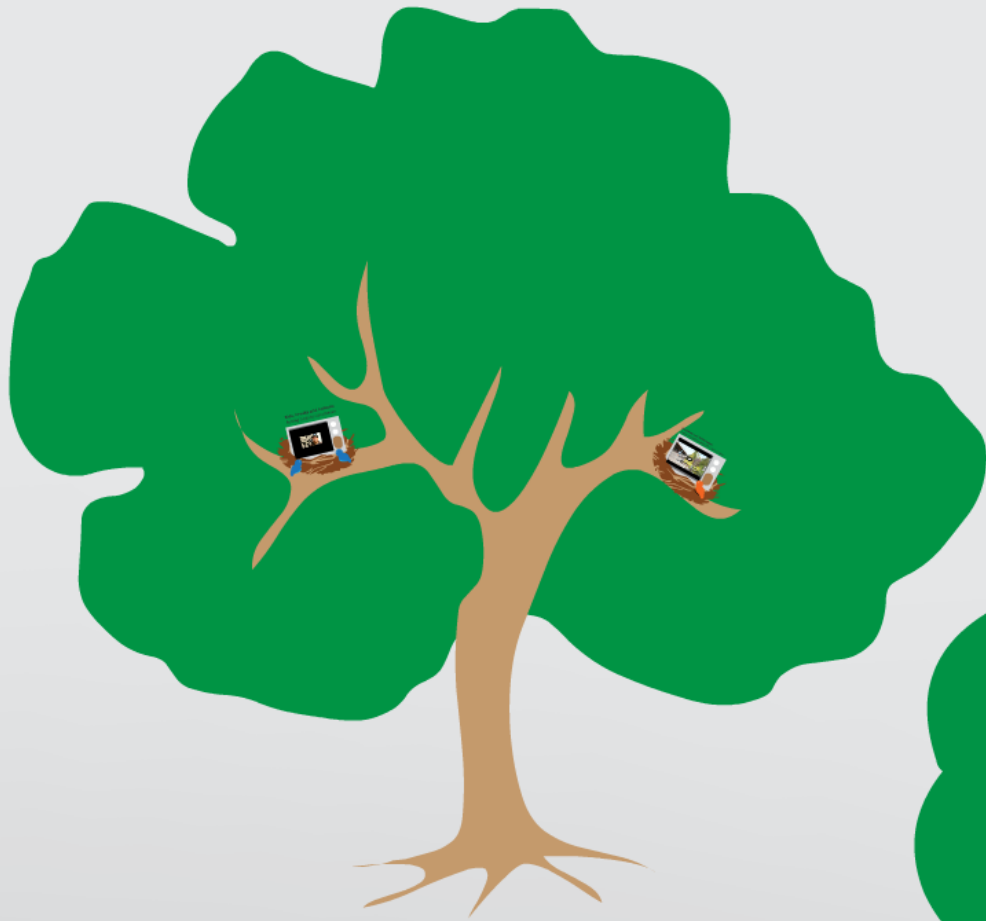
Project involvement on **Crystal Springs Creek** work allowed restoration of an entire watershed, from the mouth to the headwaters, to be completed in one coordinated effort.





The project helped local civic leaders restore 3,000 square feet of creek wetlands and mitigate impacts of the project bridge being constructed over **Kellogg Creek**.





**2,475 trees** planted -  
nearly four times as  
many as were removed

# Energy

Green energy solutions are being used to offset power usage, save electricity and create aesthetic design amenities. Partners and contractors increased their experience with these technologies and Tilted formed key partnerships to leverage these initiatives and include them in future light rail projects.

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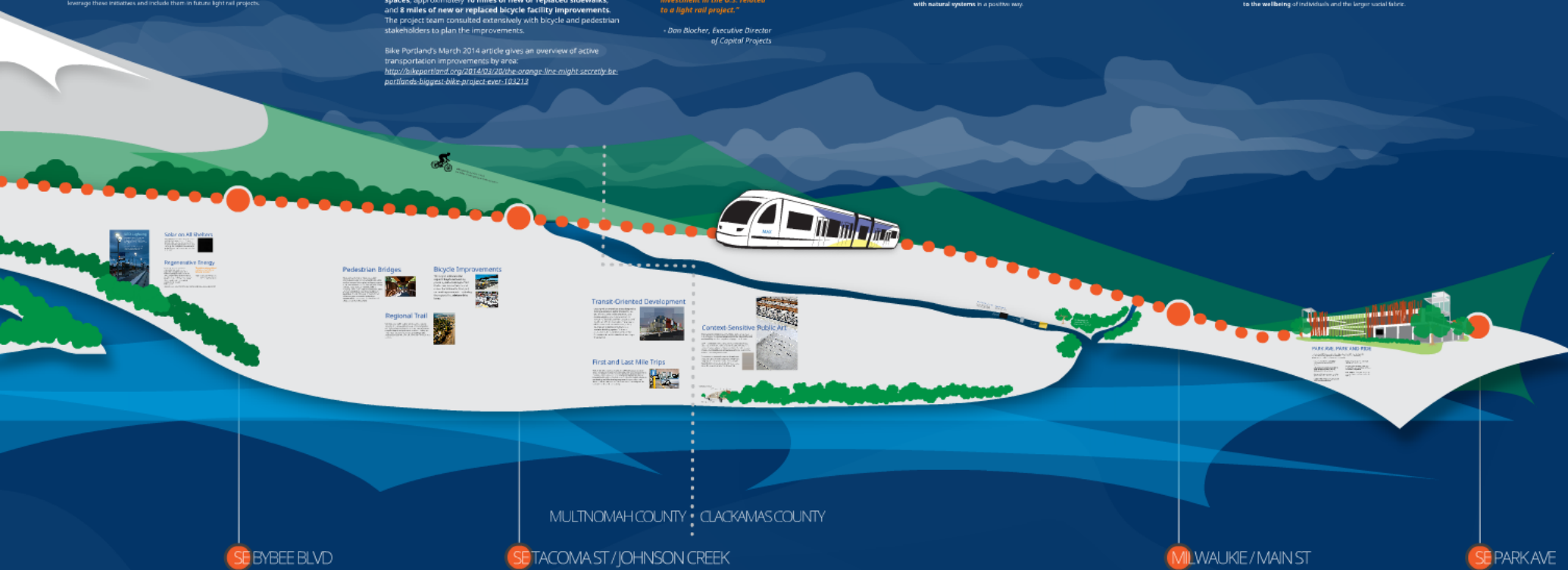
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SE BYBEE BLVD

SE TACOMA ST / JOHNSON CREEK

ML WAWUKE / MAIN ST

SE PARK AVE

MULTNOMAH COUNTY CLACKAMAS COUNTY

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# Transit-Oriented Development

Creating vibrant **mixed-use areas designed to maximize access to public transport** a key goal of transit-oriented development. One creative example is taking place on a tiny remnant of land left over from construction of the Clinton/SE 12th Ave Station. The property will become a unique development, using **repurposed shipping containers as a modular building system**. It draws a connection to the industrial location of the SE Portland site and Portland's role as a major shipping hub.



# First and Last Mile Trips

Transit ridership depends on **safe and efficient access** to station areas. The project worked with community members and partners to maximize station access, include **bicycle and pedestrian facility improvements**, and designated space for **electric vehicle chargers, car sharing, and bike sharing programs** along the alignment. These amenities offer transit riders more options to complete the "last mile" (or first mile) of their trip.



# Context-Sensitive Public Art

**Expressing the uniqueness** of individual station areas, inspiring civil discourse, and **encouraging connectivity, stewardship and sustainability** are what the public art program is all about.

Early in construction, the Orange Lining art installation used construction features, such as silt fences and sidewalks, as a canvas for poetic phrases from area writers. The initiative was intended to **stimulate public involvement** in the new rail line, even as it was being constructed.

In response to community concern about losing trees along the Milwaukie alignment, PMLR's art program commissioned six local artists to **use wood from the trees to create art** to be placed along the new extension of the Trolley Trail.



6,576 jobs created...

1,787 direct professional and technical jobs



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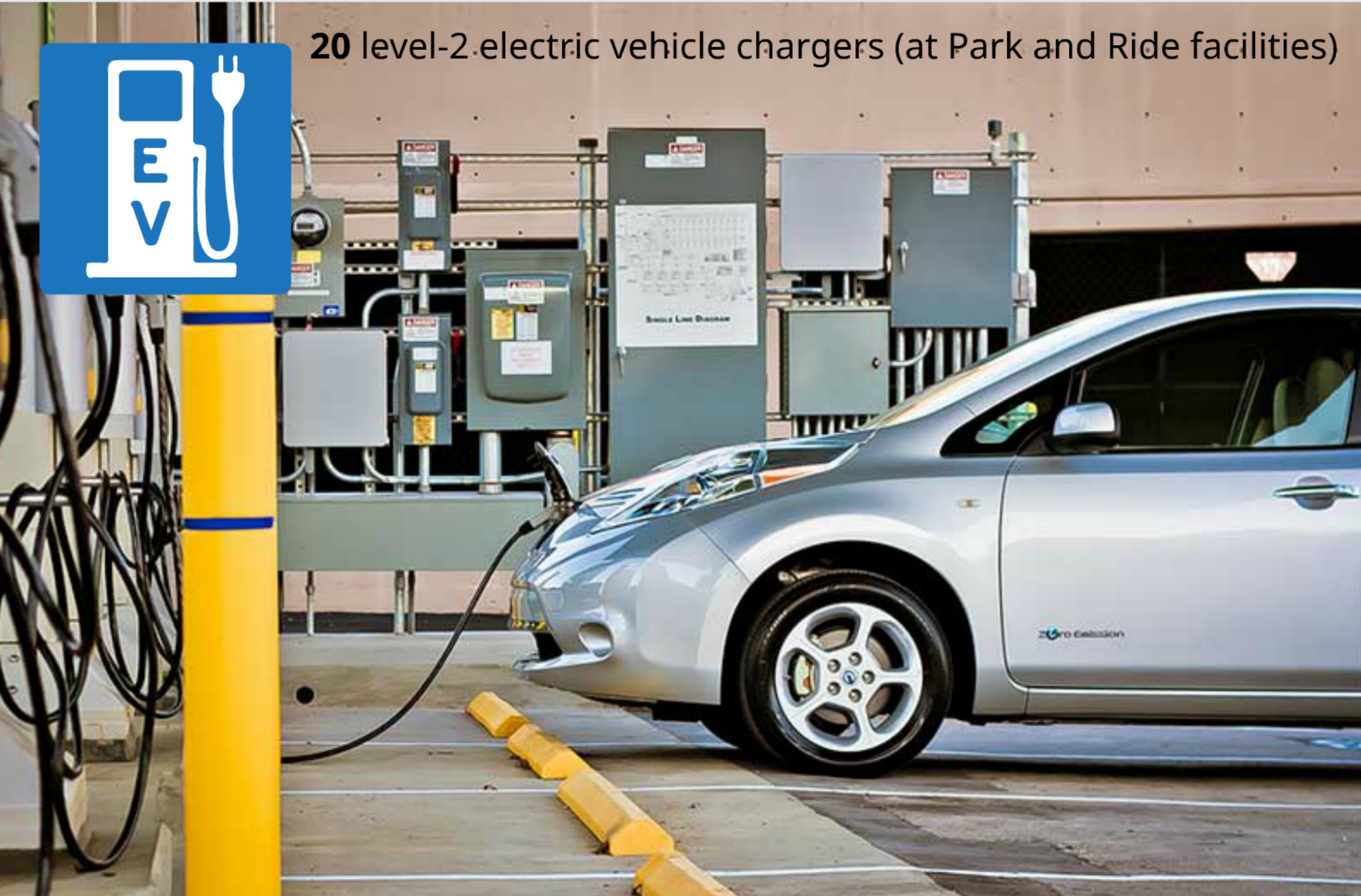


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20 level-2 electric vehicle chargers (at Park and Ride facilities)





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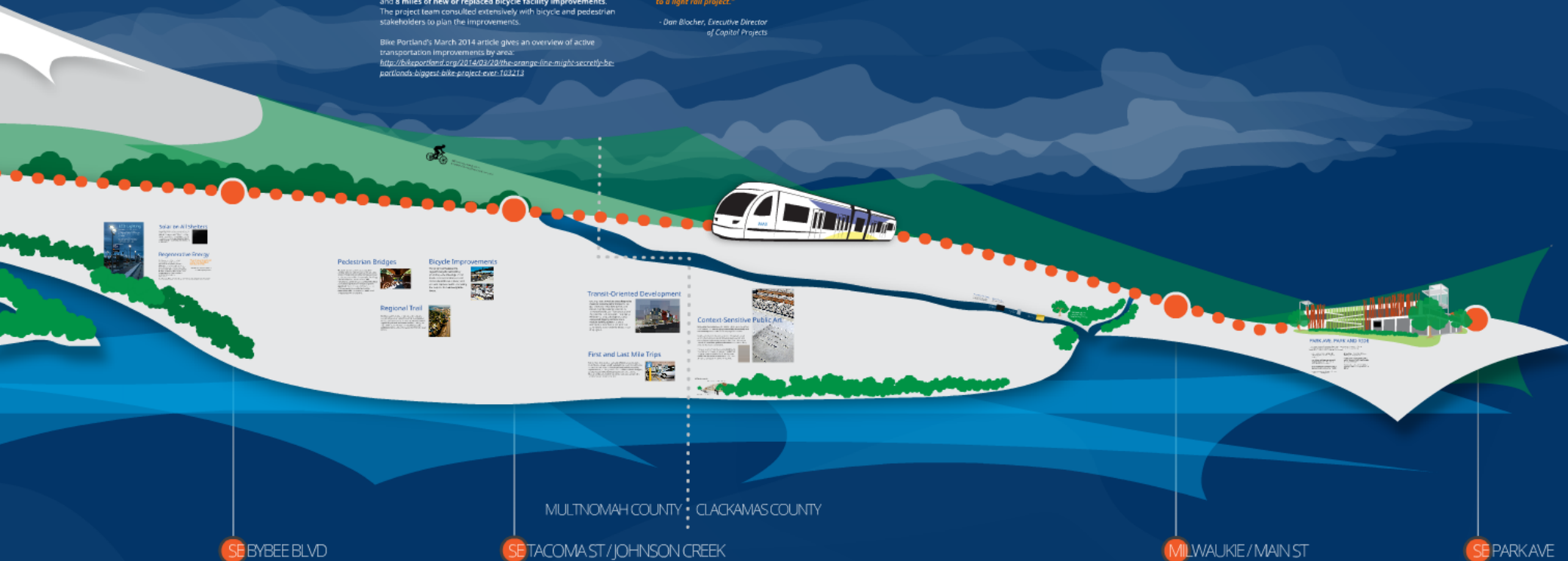
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# Spotlights

- Park Avenue Park and Ride
- Tilikum Crossing

# Closing

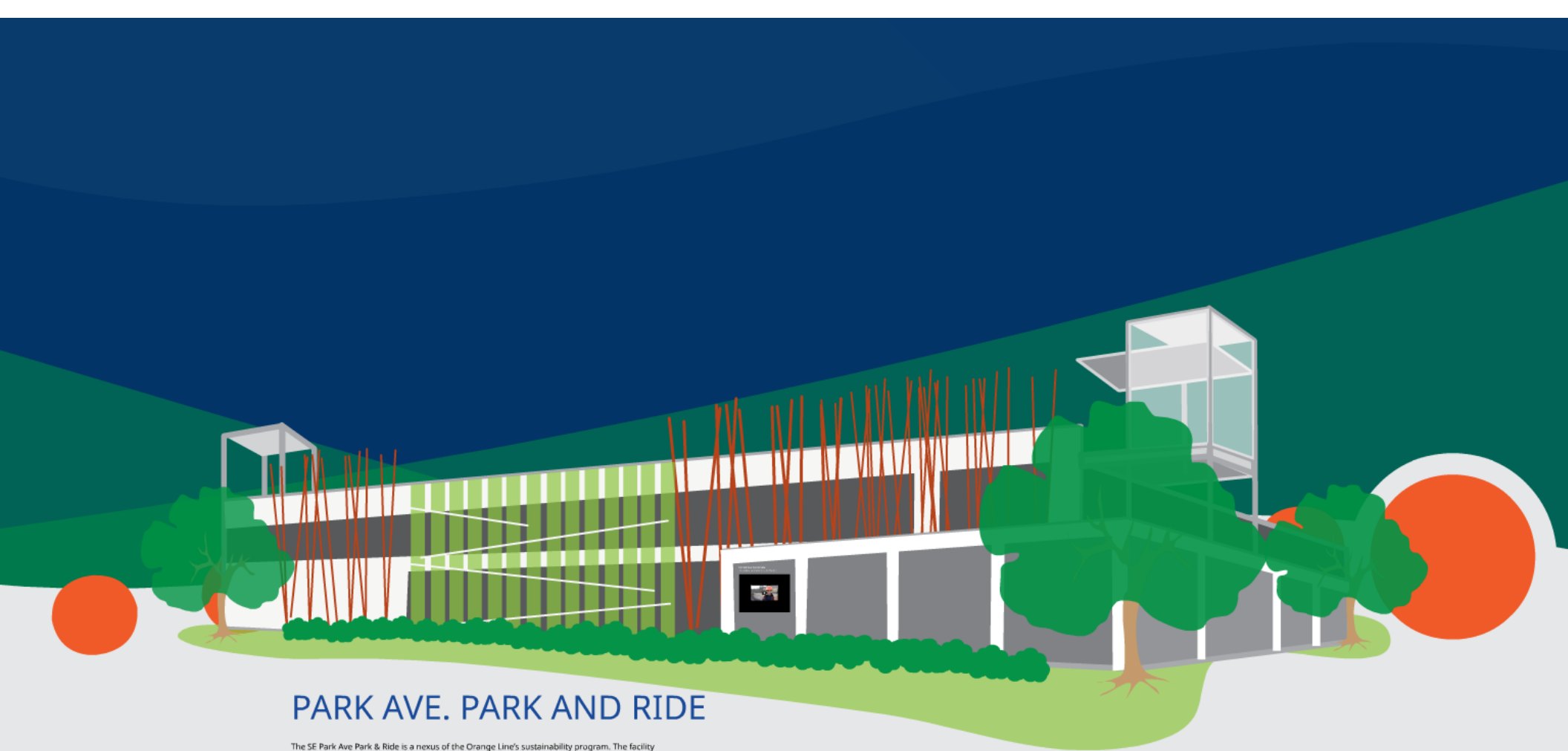


TRM's Orange Line moves beyond providing a new public transit option to the Portland metro area. The project piloted new technologies and leveraged infrastructure to incorporate sustainable practices, environmental improvements, and human scale design.

By the time the first train runs in 2015, the Orange Line will already have created a lasting legacy - by setting a benchmark standard for future large infrastructure projects in the Portland region, the Pacific Northwest and beyond.

# Spotlights

- Park Avenue Park and Ride
- Tilikum Crossing



## PARK AVE. PARK AND RIDE

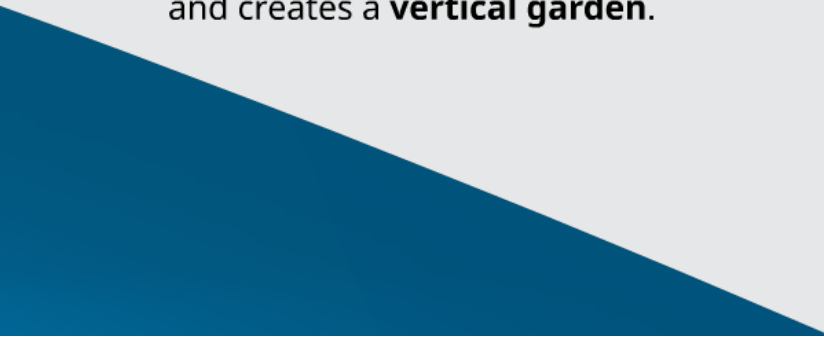
The SE Park Ave Park & Ride is a nexus of the Orange Line's sustainability program. The facility goes **beyond providing a platform for commuters** - it is designed to be a **community gateway** and an example of **sustainable practices in action**.

- A public square creates a **community gathering place** and links existing transit services.
- **68% of the site's footprint is set aside for restored habitat**, while still providing sufficient parking for commuters.
- **Invasive plants were removed** and **native species planted** to restore former habitats.
- A **green roof** provides stormwater treatment and creates a **vertical garden**.
- **Bike parking** and space for a future **car sharing** program is provided.
- **Electric vehicle charging stations** will be used by TriMet and Portland State University to research travel patterns.
- **Solar panels** will offset all of the building's operating functions, including elevators and lighting.



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# TILIKUM CROSSING: BRIDGE OF THE PEOPLE

The **first new Willamette River crossing** in more than forty years, Tilikum Crossing is exclusively dedicated to **transit, bicycles and pedestrians**.

- Connects existing routes to create a **new, four-mile bike/ped loop** across the river.
- **Bike counters** display cycling patterns and support future infrastructure investment.
- **LED bridge illumination mimics the rhythms of the water below** – changing color based the river’s speed, height and temperature.
- Rainfall on the bridge will be **transferred to stormwater treatment facilities**; runoff from other Portland bridges currently goes directly into sewer overflow.
- Provides a unique site for research on **wind-generated energy in urban environments**.



Twelve proposed wind turbines on the bridge would break ground in urban wind-generated electricity.





# Closing



TriMet's Orange Line moves beyond providing a new public transit option to the Portland metro area. The project piloted **new technologies** and leveraged infrastructure to **incorporate sustainable practices, environmental improvements, and human-scale design.**

By the time the first train runs in 2015, the Orange Line will already have created a **lasting legacy** – by serving as a **best practices** standard for future large infrastructure projects in the Portland region, the Pacific Northwest and beyond.

# PORTLAND-MILWAUKIE LIGHT RAIL TRANSIT PROJECT



## Sustainability Overview

### Leadership

The PM-LRT project is a model for sustainable transportation. It is a project that is designed to be a leader in sustainability. It is a project that is designed to be a leader in sustainability.

### Stormwater

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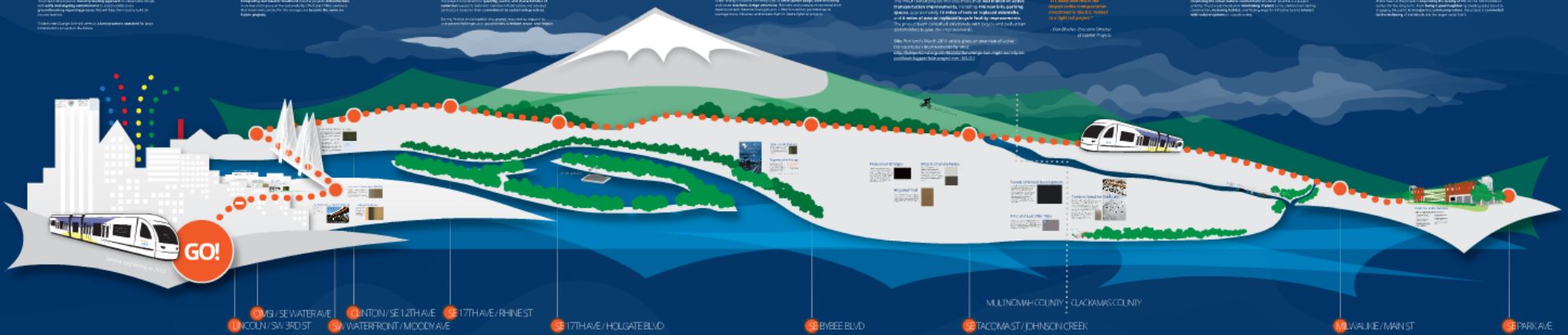
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### Spotlights

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