ELECTRIC VEHICLE CHARGING STATION CONFIGURATIONS

PRACTICAL MULTI-PORT CHARGING FOR COMMERCIAL PARKING FACILITIES

MODEL EVSE-RS SINGLE, DUAL AND QUAD

FEATURES

- Industry standard SAE-J1772 connector
- Underwriters Laboratory (UL) listed
- Outdoor rated enclosure
- Americans with Disabilities Act (ADA) compliant installation
- Auto restart in event of power outage or ground fault
- Breakaway safety cable
- Integrated cable stowage
- Optional network communication module (EVSE-RS+)

SERVICE AND INSTALLATION

- Expanding network of independent certified, trained electricians
- Convenient customer site assessments and installation
- 24-hour response time during business hours

The safe, reliable EVSE-RS Charging Station is available in single port, dual-port and quad-port configurations for higher-traffic commercial and public charging applications. While maintaining the same user friendly design of the single-port unit, the EVSE-RS Dual and Quad systems can simplify the installation and reduce costs by consolidating wiring runs and mounting locations. The attractive, weather-resistant housing provides a polished look that complements professionally maintained properties such as car dealerships, multi-dwelling units, shopping malls, corporate offices, and retail stores.

EVSE-RS multiport systems are compatible with all SAE J1772 compliant electric vehicles (EVs) and plug-in hybrids (PHEVs). Each charge port complies with all features and specifications of the single-port EVSE-RS, and an optional module for Ethernet, WiFi, Zigbee, or cellular communication is available.

SPECIFICATION	EVSE-RS
Connector	SAE J1772 compliant
Voltage	208VAC to 240VAC
Frequency	60/50Hz
Output Current	30A max
Input Current	40A max
Operating Temperature	-22°F to 122°F -30°C to 50°C
Enclosure	NEMA 3R
Regulatory Compliance	UL, cUL, CE, CTick listed

Information and specifications subject to change.

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WEST COAST
ELECTRIC
HIGHWAY

Drive cleaner. Drive smarter. Drive electric.

For more information:

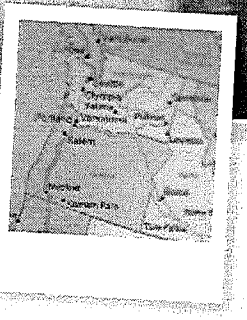
www.cleancities.energy.gov www.cwcleancities.org

Oh, the places we'll go.

Transportation Electrification for a Clean, Energy-Independent Future.

WEST COAST
ELECTRIC
HIGHWAY

Drive cleaner. Drive smarter. Drive electric.



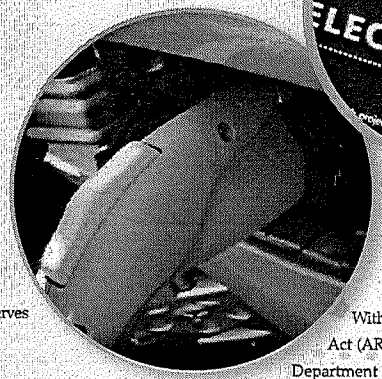
Electric Highway Map inside >

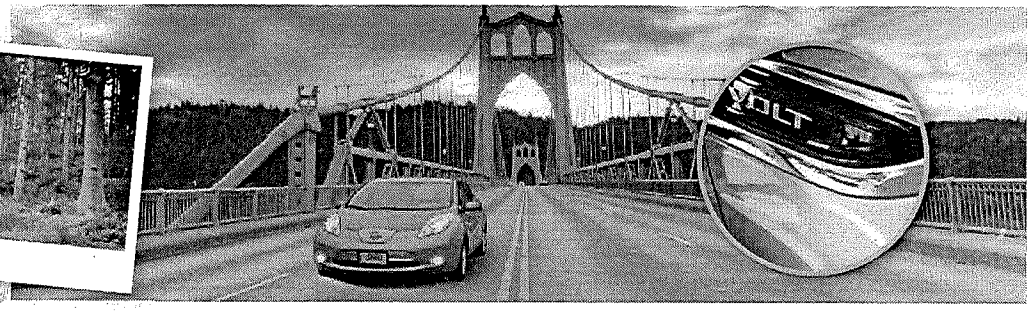
COLUMBIA - WILLAMETTE
CLEAN
CITIES

Get plugged in!

Making the case for a shift towards electric transportation

Energy independence. National security. Economic stability. Clean environment.





America's transportation sector, the largest consumer of oil in the world, is held hostage by heavy reliance on a commodity with reserves held primarily in foreign countries.

About one-third of Oregon's greenhouse gas emissions come from the transportation sector.

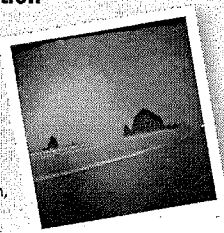
Oregonians spend $7 billion per year for petroleum, an enormous transfer of wealth from the dwindling pockets of Oregonians to the overflowing pockets of foreign dictators in increasingly unstable countries.

Environmental, political, and economical shifts have created a national imperative to move towards electric transportation, an emission-free, energy-secure, sustainable, and reliable transportation-fueling source.

With American Recovery and Reinvestment Act (ARRA) funding, the Washington State Department of Transportation (WSDOT) is installing 11 AeroVironment fast-chargers along I-5, U.S. Route 2, and I-90 in 2012. To further facilitate travel along the "Main Street" of the West Coast, the Oregon Department of Transportation (ODOT) is using ARRA funds from the Oregon Department of Energy to install 10 AeroVironment fast-chargers along I-5 in 2012. These chargers will augment ECOtality's planned installation of 1000 level 2 and 28 fast-chargers in Washington; and 800 level 2 and 27 fast-chargers in Oregon through the national ARRA-funded "EV Project."

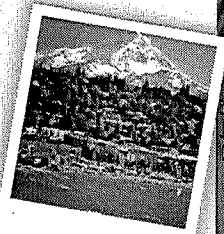
The West Coast Leading the Charge on Electric Transportation

The nation's transportation sector is poised for a sea change and the West Coast is at the helm of the ship leading the country towards electric transportation.



To advance electric transportation, Washington and Oregon have designed a border-to-border network of electric vehicle (EV) fast-charging stations along I-5, the first stage of the "West Coast Electric Highway."

In addition to the I-5 installations, ODOT will install 22 AeroVironment fast-chargers in NW Oregon along the Gorge, the Coast, Central Oregon, and the Willamette Valley. These chargers will provide multiple charging opportunities in areas that radiate out from the major population corridors.



The West Coast Electric Highway projects are an investment in sustainable transportation infrastructure that will provide long-term economic and environmental benefits, and establishes the West Coast once again as pioneers in a new frontier, blazing the electric transportation trail.

Charging 101

Level 1

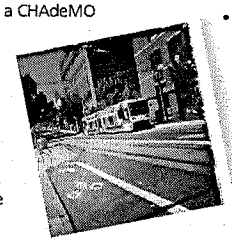
Level 1 charging stations come with your car and can be plugged into any common 110 Volt wall outlet giving you endless opportunities to charge wherever you go.

Level 2

Level 2 charging stations use the same type of 240 Volt circuits as an electric stove or dryer. This makes recharging your EV at home or in public convenient, easy, and inexpensive. The level 2 uses a J1772 connector standard that all new EVs in the market can access. This charging regimen is often called opportunity charging, because it calls for recharging during "opportune" down time such as sleep, work, or play.

DC FAST CHARGE

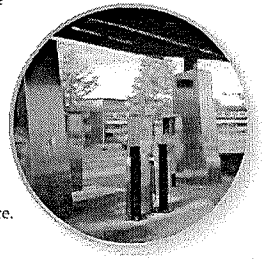
(or "DC quick-charge") DC fast-charging stations operate on 480 Volt commercial circuits, enabling you to get a quick charge and get on your way when you take longer trips. Fast-chargers use a CHAdeMO connector, which the Nissan Leaf and Mitsubishi iMiEV can utilize. DC fast-charging is ideal for public charging infrastructure like the West Coast Electric Highway.



Benefits of Electric Transportation

Making the shift to electric transportation will:

- Exponentially lower the cost to refuel a vehicle with electrons instea
- Dramatically reduce vehicle maintenance costs.
- Help displace oil as the nation's dominant fuel source.
- Help insulate the nation from future oil shocks and economic meltdowns.
- Boost national security through energy independence.
- Drive economic growth with the emergence of an industry comprised of new vehicle and infrastructure technology.
- Reduce environmental impacts from the transportation sector's greenhouse gas emissions.



WEST COAST ELECTRIC HIGHWAY

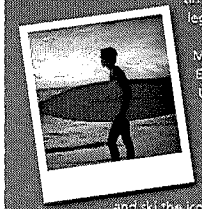
Now let's drive on and explore!

By summer 2012, a 100% electric vehicle could coast the 585 miles of I-5, the major transportation vein through Oregon and Washington, without using a single drop of gasoline.

Fasten your seatbelts and begin your gas-free journey in Bellingham, Washington. Plug in and charge your EV with the AeroVironment fast-charger at Sehome Village Shopping Center. You might want to grab a cup of coffee at Starbucks, and purchase some outdoor equipment right next door at REI for your upcoming adventures along the West Coast Electric Highway!

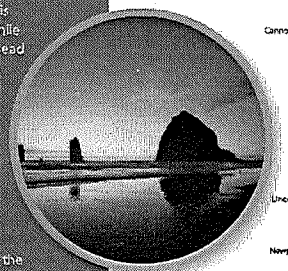
Hop onto U.S. Route 2 from I-5 and head towards Leavenworth to refuel your EV while you enjoy a ride on a horse-drawn carriage around the Bavarian Village.

Fully charged and worry-free, you can continue your emission-free trip down I-5 towards Oregon, refueling as needed at the fast-chargers located every 40-50 miles. A highway sign will notify the EV driver of an available charger off the highway. See the map's legend on the right for the symbol.



Make your first fast-charging stop in Oregon on Electric Avenue in the heart of Portland State University's campus.

Thinking about dusting off those skis you bought at REI in Bellingham while charging? From Portland you can head straight over to Government Camp and ski the iconic Mt. Hood. Just about 56 miles via U.S. Route 26, you can rest assured that you can refuel with fast-chargers on the way in 2012.



Enjoy a 21st century refueling experience at a 19th century stagecoach stop, the Wolf Creek Inn, right off I-5 in beautiful Southern Oregon.

Don't own an EV? Coming to Portland from out of town and want to take a gas-free ride? Rent an EV in Portland at the Enterprise on W. Burnside. With fast-chargers scheduled for installation along I-84 in 2012, you can take your EV rental just over 60 miles to Hood River to enjoy the infamous wind surfing on the Columbia River.

Drive west to travel the famous U.S. 101 coastline, fully charged from historic Astoria to Florence when the network is complete in 2012.

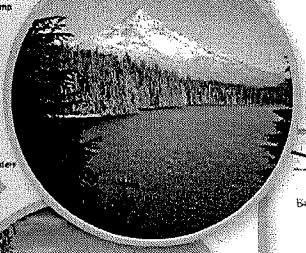
Refuel cleaner, drive longer, and save money along the West Coast Electric Highway. What a great place to explore in your electric vehicle.

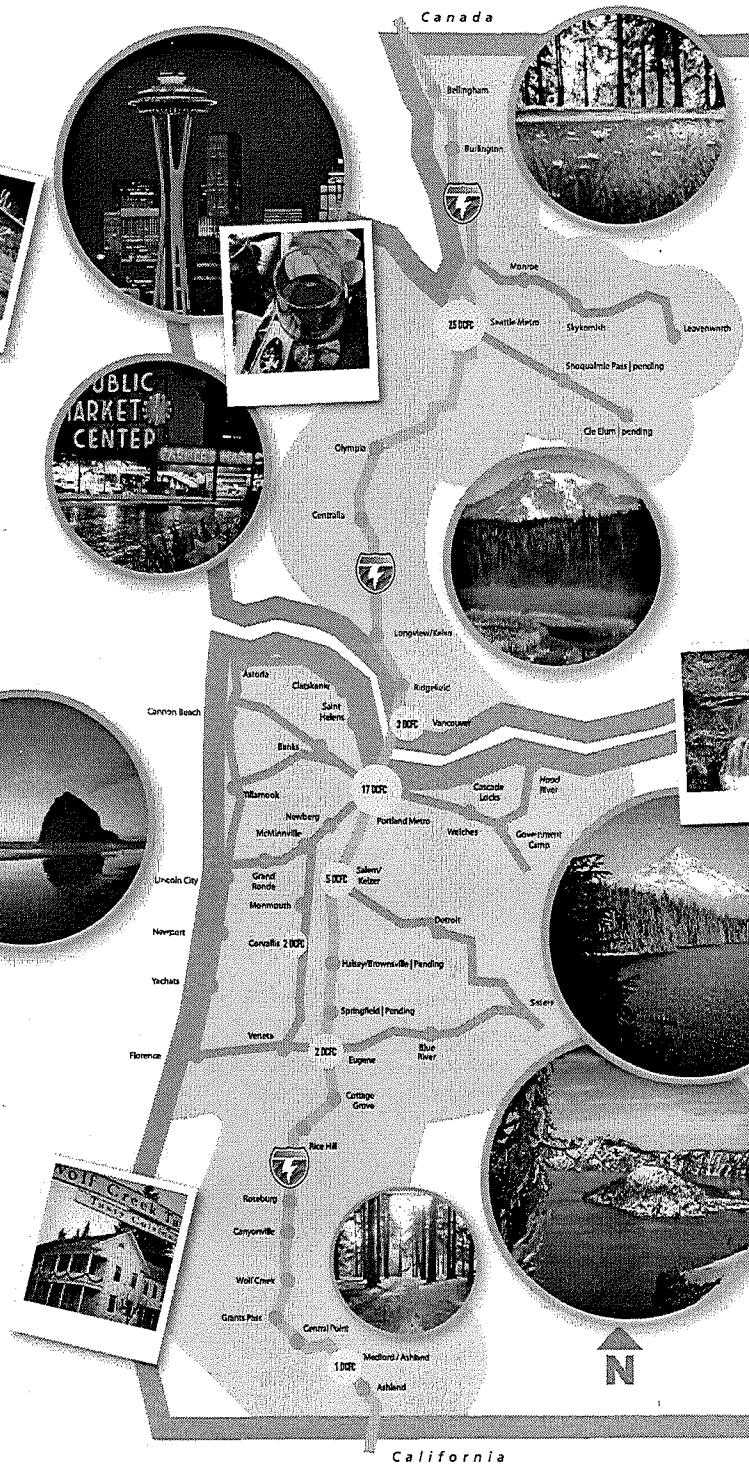
For more information on charging station locations in WA, OR, and across the country access the link:

http://www.afdc.energy.gov/afdc/fuels/electricity_locations.html

WEST COAST ELECTRIC HIGHWAY

Drive cleaner. Drive smarter. Drive electric.





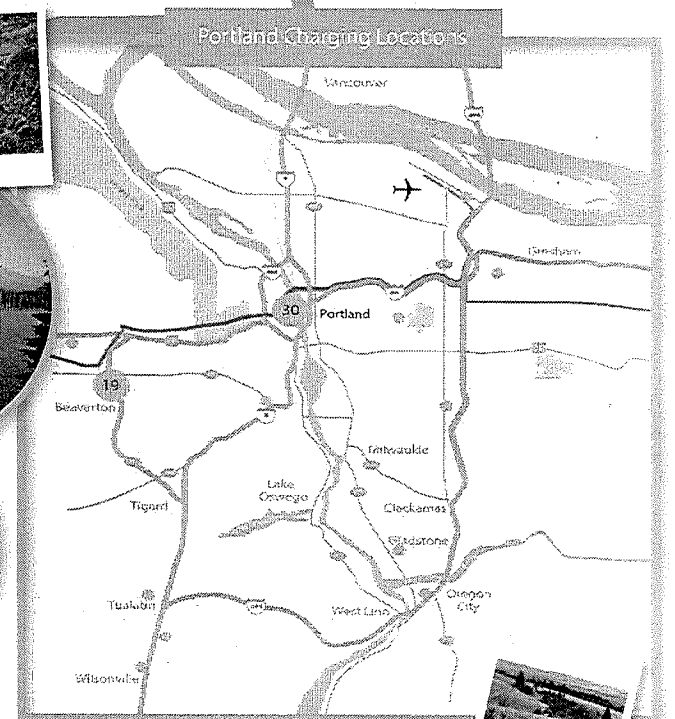
Potential Washington & Oregon Fast-Charging Communities

Legend

- EV Project Fast Charge
- Fast Charge and Level 2 available
- Range accessible to most Electric Vehicles
- Look for this symbol!

Portland Legend

- Fast Charge and Level 2 available



5 things to know before you go

1. At the end of 2012, the West Coast Electric Highway will host more than 100 publicly-accessible EV DC fast-charging stations on I-5, at key locations near major travel destinations, and along heavily-traveled highway corridors radiating out from I-5 every 40-60 miles.
2. It will take between 20-30 minutes to refuel at a fast-charger. EV drivers on the West Coast Electric Highway could refuel their vehicle at a charging station in less time than it takes to stretch their legs and refuel their own system with a large cup of coffee.
3. Sixty-five percent of present U.S. light-duty vehicles could be powered by existing off-peak generating capacity.
4. Electric motors can convert up to 85% of the chemical energy in batteries to power the wheels while internal combustion engines only convert about 20% of the energy stored in gasoline to the wheels.
5. In 2010, Oregon drivers traveled an average of 28.4 miles per day, well within the current 100-mile range on a charge that the EVs out in the marketplace today can get.

Oregon

John A. Kitzhaber, M.D., Governor

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DATE: August 22, 2011

TO: Potential Electric Vehicle Fast-Charger Host Site

FROM: Art James, Project Director and
Ashley Horvat, Project Analyst

SUBJECT: ODOT's Electric Vehicle (EV) Charging Program

On October 15, 2010, Governor Kulongoski, Senator Wyden, and Senator Merkley announced that US DOT awarded ODOT $ 2 million in Transportation Infrastructure Generating Economic Recovery ("TIGER II") grant funds to install electric vehicle charging infrastructure in at a minimum of 22 communities (see attached map showing the targeted communities).

The project will create a widespread network of DC fast-chargers that will provide electric vehicles with charging opportunities along corridors radiating out from Oregon's major population centers. By stretching even further out from the planned rich charging environment in the Willamette Valley, this project will expand travel opportunities for EV owners. It will also promote longer trips in EVs because of the reduced charge time with these DC fast-chargers.

A firm named AeroVironment won the contract and is in the process of signing up host sites for the installations with their subcontracted site acquisition firm, Cascadia PM. The project is on a tight timeframe as all host site agreements must be approved by the Oregon Transportation Commission in November 2011.

If you are receiving this letter, it is because your property was determined to meet the eligibility requirements to host one of the EV fast charge installations. By agreeing to be a host, your business will be a pioneer in the ***West Coast Electric Highway***, with media reports and websites pointing the way to your establishment. You will also become a destination for the growing number of EV drivers wanting to travel around the state without using a single drop of oil.

Perhaps more importantly, being a host site gives you the opportunity to "brand" your business as being part of the state's efforts to reduce reliance on imported petroleum and reduce green house gas emissions. This project has the full backing and support of

the Governor's office, our Congressional Delegation, US DOT, ODOT, and a diverse group of national and statewide stakeholders.

For more information on our efforts surrounding transportation electrification, please visit our website at, http://www.oregon.gov/ODOT/HWY/OIPP/inn_ev-charging.shtml. If you have any questions or need more information about the project, do not hesitate to contact either:

Art James or **Ashley Horvat**

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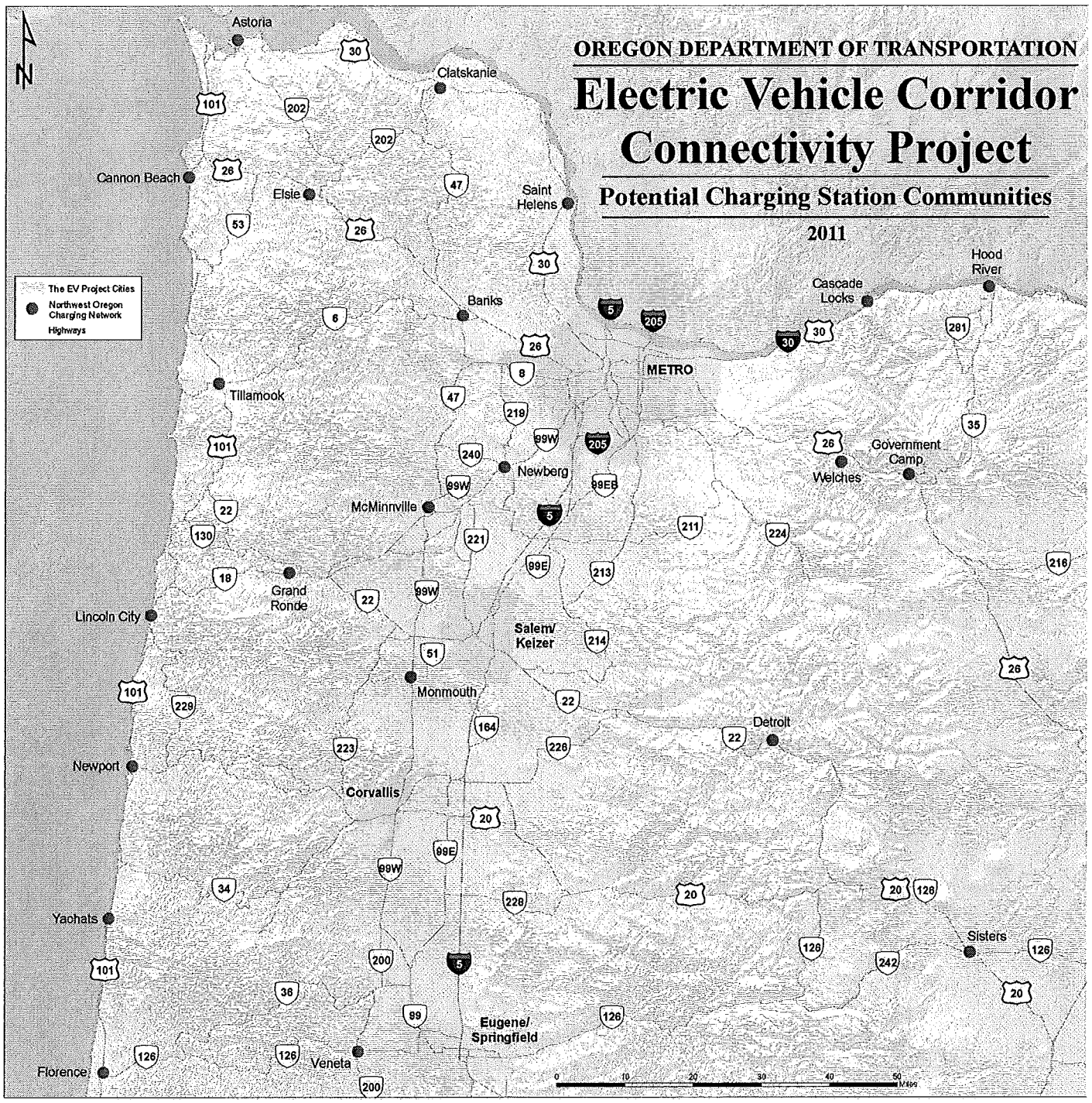

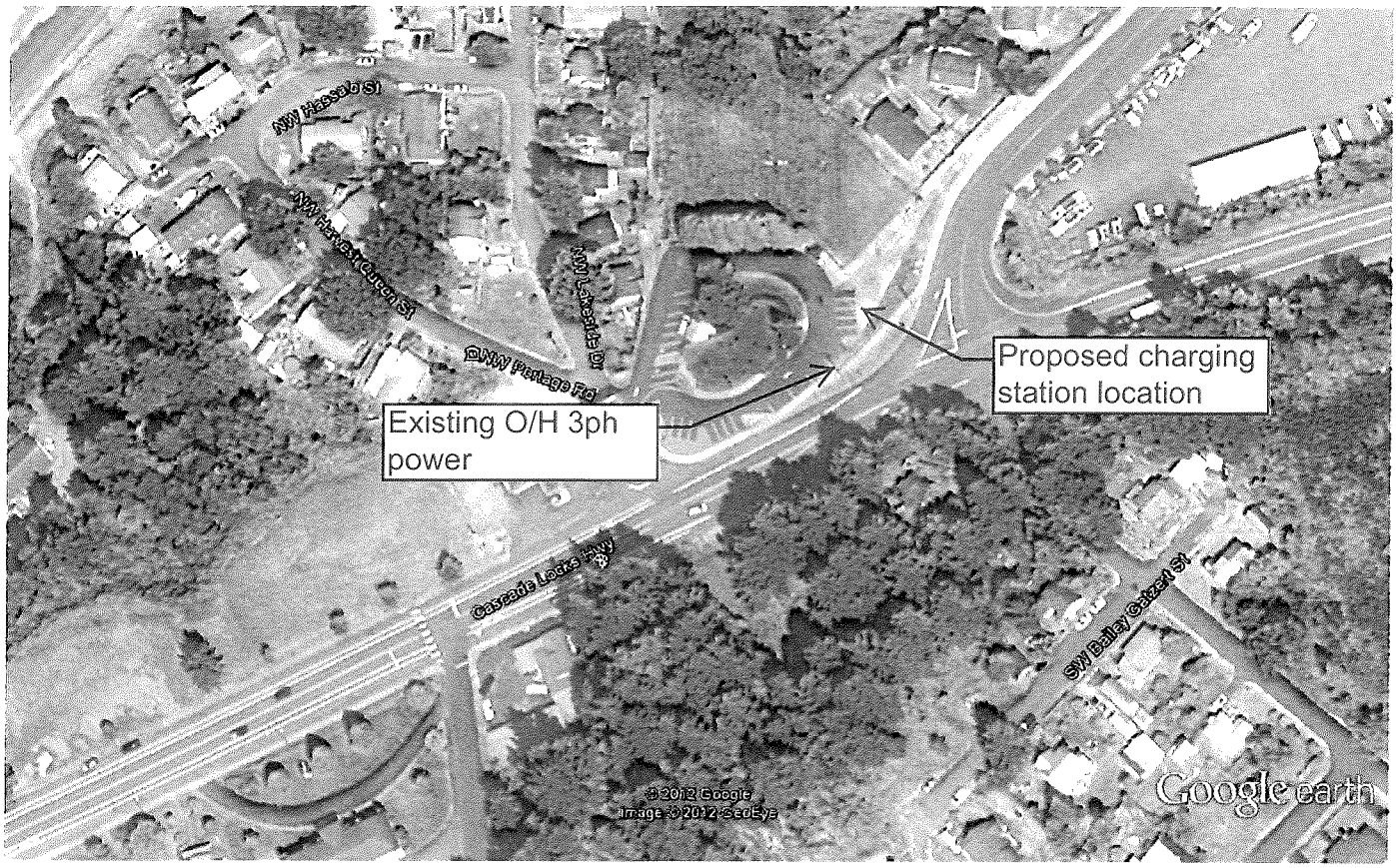

Google earth

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meters 100

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