SOUTHWEST CALGARY RING ROAD (SWCRR)

PROPOSED 138 KV TRANSMISSION LINE RELOCATION

PROJECT OVERVIEW

Alberta Transportation has started planning for the construction of the SW portion of the road that will complete the Calgary Ring Road. The completion of the SWCRR requires the relocation of several utilities that are directly impacted by the road construction. The Province is working collaboratively with the impacted utility companies to help facilitate their planning and design.

The road design for the SWCRR conflicts with existing transmission infrastructure. Alberta Transportation has requested ENMAX Power (ENMAX) to relocate its transmission lines away from the road alignment and into the new Power Line Component of the newly established Transportation Utility Corridor (TUC) along the SWCRR. This land was transferred from the Tsuu T'ina Nation to the Government of Alberta to accommodate a portion of the SWCRR and TUC.

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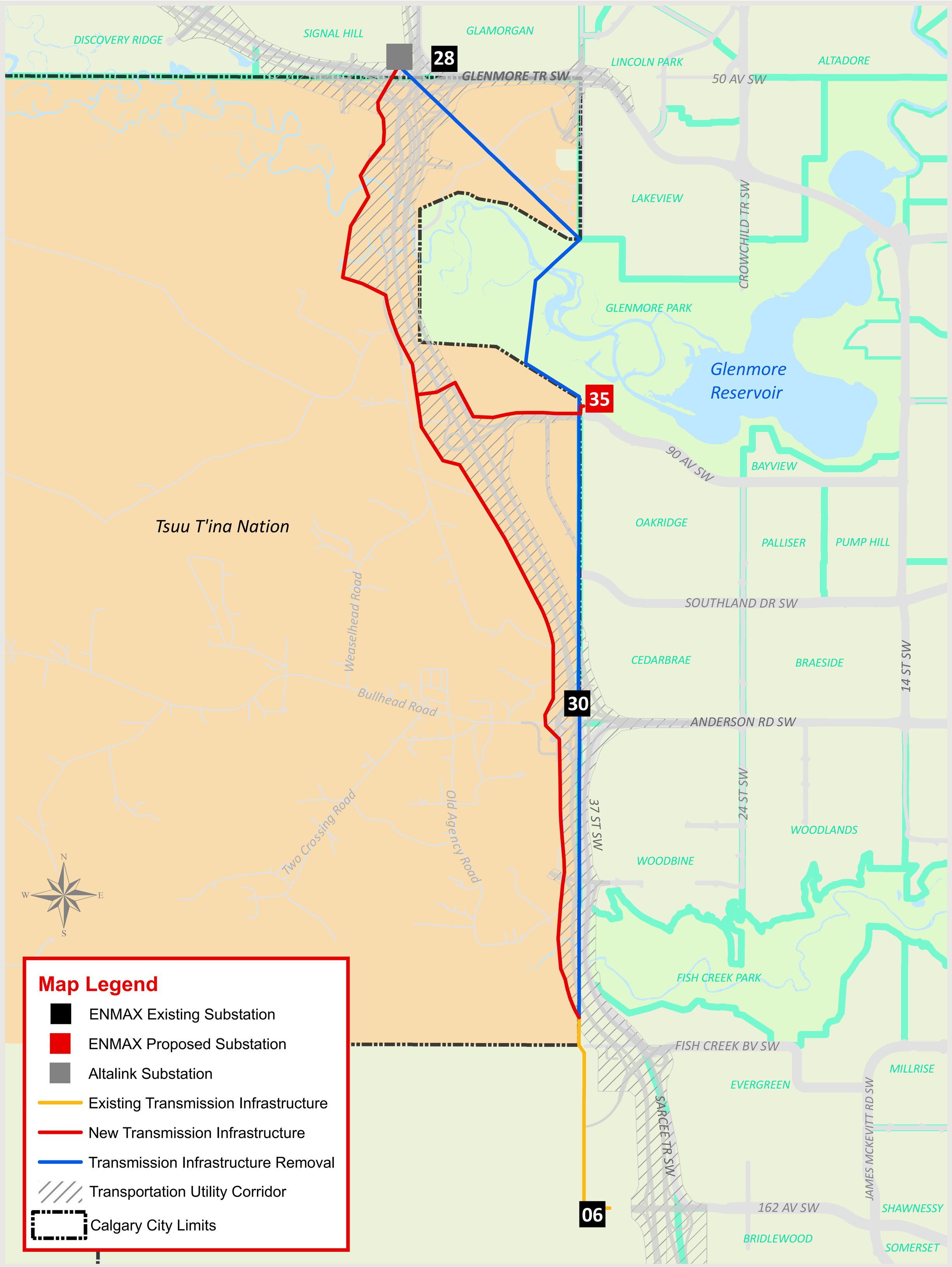

TRANSMISSION STRUCTURES

The proposed single circuit transmission structures will be self-supporting expandable steel monopoles with a height of 18 to 24 metres (58 to 78 feet). The transmission line running east west to connect to Substation 35 at 90 Avenue SW will be a double circuit line ranging in height from 22 to 27 metres (72 to 89 feet). Distance between structures will be approximately 100 to 140 metres (325 to 459 feet)

Alberta Infrastructure advised ENMAX only 25 metres wide right of way is available in the TUC for current and future line use with a height restriction of 44 metres.

Single Circuit Steel Monopole

Double Circuit Steel Monopole

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PROPOSED SCHEDULE

ENMAX plans to file the Facility Application (FA) with the Alberta Utilities Commission in late November 2015. Subject to approvals being granted, ENMAX expects construction to begin in June 2016 with a proposed in-service date of September 2017.

SEPTEMBER 2015 - NOVEMBER 2015	Initial Stakeholder Engagement
NOVEMBER 2015	ENMAX submits FA to the AUC
MAY 2016	Permit and Licence from AUC granted to ENMAX Power
JUNE 2016	Construction begins
SEPTEMBER 2017	Inservice-date
NOVEMBER 2015 - SEPTEMBER 2017	Ongoing Stakeholder Engagement

ENMAX

SOUTHWEST CALGARY RING ROAD (SWCRR)

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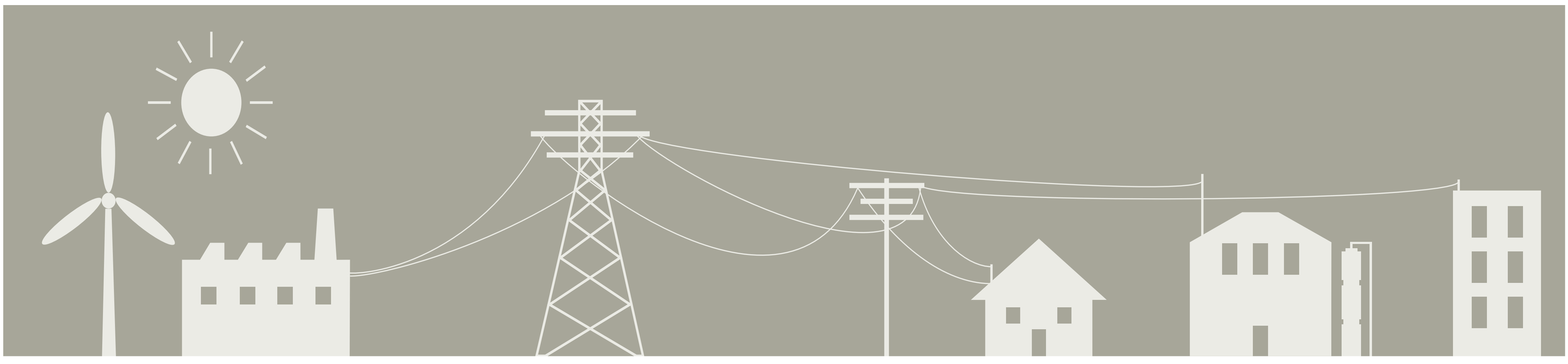
ENMAX POWER CORPORATION

For more than 100 years, ENMAX and its predecessors have provided Albertans with safe and reliable electricity to power the success of our province.

ENMAX Power Corporation (ENMAX Power) owns, operates and maintains the City of Calgary's electricity distribution infrastructure. Our transmission and distribution system covers 1,089 square kilometres, comprising 300 km of transmission wires and 7,800 km of underground distribution lines.

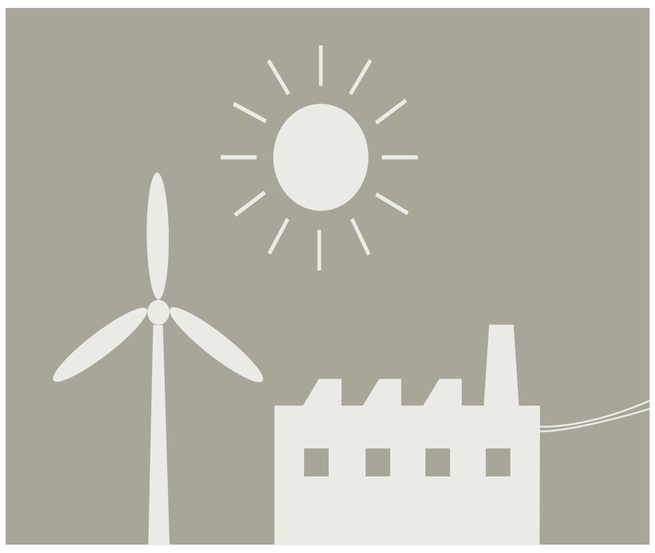
For more information about ENMAX Power, visit enmaxpower.com.

ELECTRICITY 101



GENERATION

Where it all starts



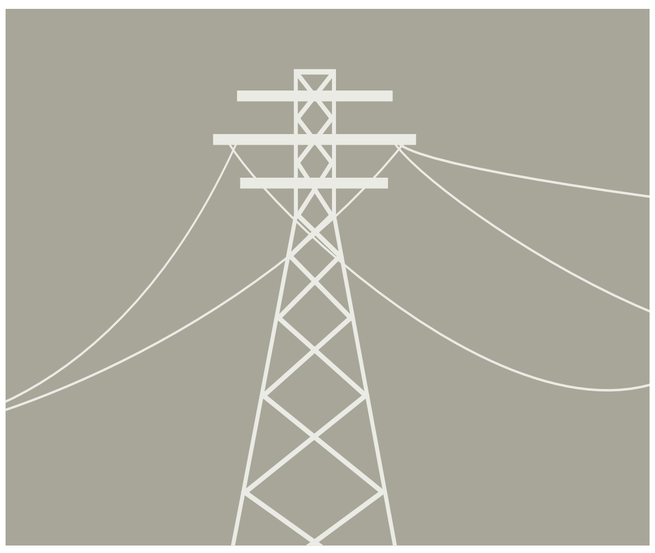
Electricity sometimes travels long distances from generation plants to your homes, schools, hospitals and businesses. Canada's entire electricity grid is crisscrossed with power lines that move the electricity to you.

When electricity comes out of the generation plant it usually has a voltage of about 20,000 volts. A volt is the measurement of how much electric force is pushing electrons around a circuit.

At the generation plant, the electricity is boosted up to 245,000 volts by a transformer. This higher voltage helps the electricity travel more efficiently long distances.

TRANSMISSION

Cross-country journey

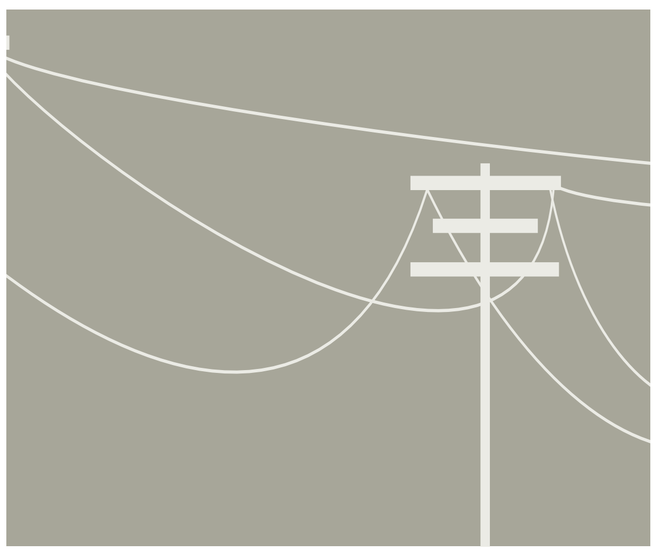


The electricity then goes into long thick cables called transmission lines. The wires are made of copper and aluminum because these metals let electricity flow through them easily. You can tell you are looking at transmission lines when you see high towers – often made of steel - with many wires attached to them going across the countryside.

When the electricity on the transmission lines gets close to where it will be used it goes into a substation. The substation contains electrical equipment such as transformers. The transformers lower the voltage of the electricity to match where it will be used. Factories, mass transit systems, streetlights, businesses and homes all need the electricity to be at a different voltage

DISTRIBUTION

Moving from the substation to your community



Electricity leaves the substation on smaller wires called distribution lines to take it to homes and businesses. In some communities, distribution lines are overhead and you can see them. Newer neighborhoods have the distribution lines underground so you may not even know they are there.

YOUR NEIGHBORHOOD

It arrives

When the distribution wires reach your neighborhood, another small transformer, mounted on a pole or in a utility box, lowers the voltage of the electricity even more so it can be used in your house. The voltage is eventually reduced to 220 volts for larger appliances, like stoves and clothes dryers, and 120 volts for lights, televisions and other smaller appliances.

When electricity enters your home, it must pass through a meter. A member of the ENMAX Power Corporation team reads the meter so we'll know how much electricity you used and can provide you with an accurate bill.

After being metered, the electricity goes through a fuse box into your home. The fuse box protects the house in case of problems. When a fuse or a circuit breaker 'blows' or 'trips', something went wrong with an appliance or something short-circuited.

ENMAX

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REGULATORY PROCESS

NEED

Alberta Electric System Operator (AESO) identifies a need to upgrade transmission system

DIRECTION

AESO directs Transmission Facility Owner (TFO), in this instance ENMAX Power, to prepare a Facility Application in accordance with the Electric Utilities Act.

STUDIES

TFO conducts necessary studies to ensure transmission routing is the safest, most economical, with the least impact on landowners and the environment

ENGAGEMENT

TFO conducts a public engagement program as identified in Alberta Utilities Commission (AUC) Rule 007 to all potentially affected landowners, occupants and residents adjacent to the project.

APPLICATION

TFO consolidates information from engagement and studies, and prepares final Facility Application and submits to the AUC.

AUC REVIEW AND APPROVAL

AUC reviews application and issues a notice in local newspapers. Interested parties are offered an opportunity to participate in the application process.

Refer to the AUC booklet for information on the regulatory process following submission of the Facilities Application.

ENMAX

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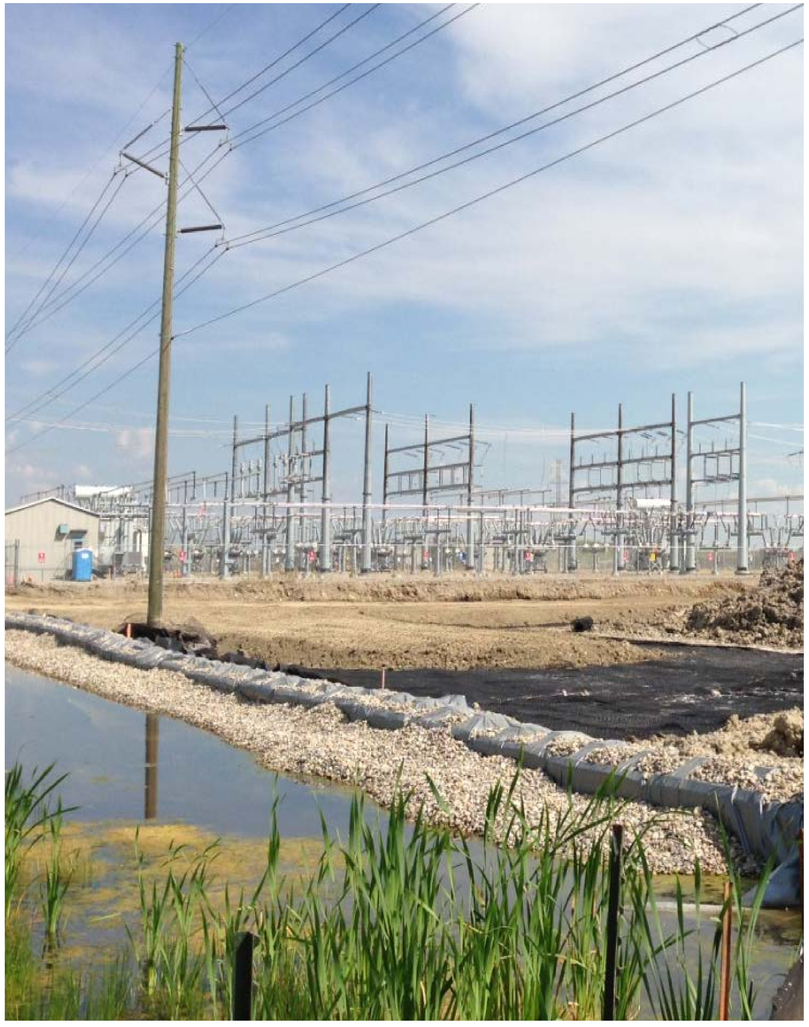
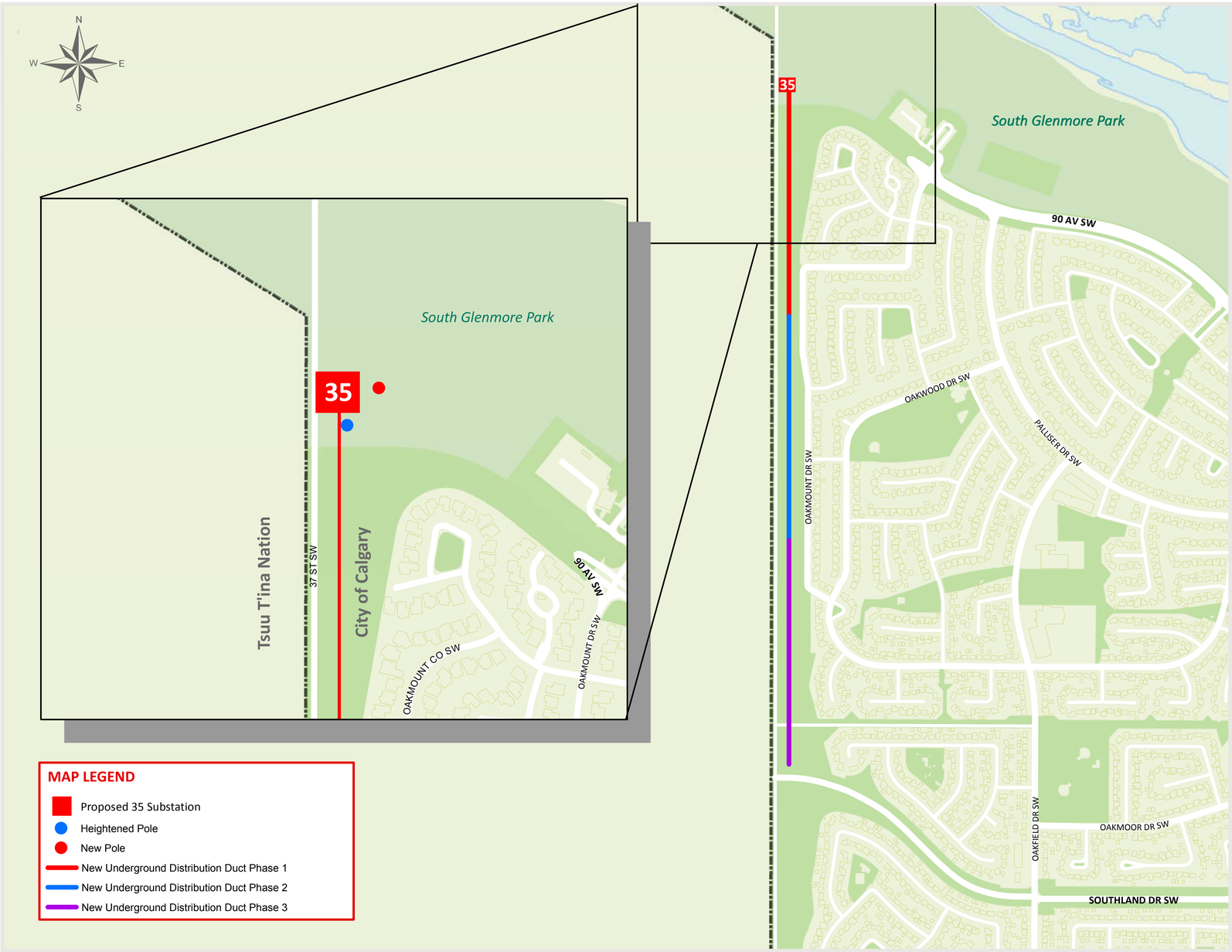
ENVIRONMENT

At ENMAX, we strive to reduce impacts to air, water, land and wildlife during construction and maitenance of infrastructure. We do this by:

- Identifying potential impacts to the environment during the planning phase of every project.
- Working with regulatory agencies including the City of Calgary, Alberta Environment and Parks, Fisheries and Oceans Canada, and Environment Canada to ensure all required approvals and permits are obtained before starting any project.
- Complying with relevant environmental legislation, regulations, guidelines, policies and operating approvals.
- Developing a site specific Environmental Management Plan for each project, which describes mitigation measures to be implemented prior to and during construction to minimize potential impacts to the environment. The plan is communicated to all ENMAX employees and Contractors working on the site.
- Conducting frequent on-site inspections to ensure workers are adhering to the Environmental Management Plan, and that all mitigation measures are effective.
- Conducting follow-up site visits to ensure impacted areas are remediated.
- Maintaining and continually improving upon our Environmental Management System, which is based on the International Standard ISO 14001 and supports our Corporate Environment Policy.



RING ROAD UPDATE - DISTRIBUTION



DISTRIBUTION

In Calgary, once the electricity is delivered to one of our 37 substations, low voltage power lines transport electricity over short distances to distribute the power to local homes and businesses.

PROJECT OVERVIEW

Several overhead distribution lines need to be relocated to make way for the ring road. A stretch of lines near 90 Avenue and Southland Drive are being buried in a trench that is currently being constructed adjacent to the bike path in the area. Construction began in August and will last until December. These ducts will be connected to the new substation being built at 90 Avenue SW in the southwest corner of Glenmore Park and are required to feed electricity to the neighbouring communities.

COMMITMENT TO COMMUNITY

ENMAX is committed to being a responsible corporate neighbour in the community. This commitment includes providing timely and meaningful engagement with stakeholders about this project.

We have developed a comprehensive public involvement program to provide opportunities for area residents, occupants and landowners to be informed about this proposal and to engage with ENMAX in dialogue from the planning phase through to construction.

We hope we've answered your questions and have your comments.

Please take a couple of minutes to fill out a comment card. Your input will be included in our consultation report which will be incorporated into our application to the AUC.

ENMAX POWER CORPORATION

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THANK YOU FOR ATTENDING OUR OPEN HOUSE