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The new Harvest Mile Substation, located south of Quincy Avenue and east of Gun Club Road, was completed and energized in December 2018. A 400,000 pound transformer was delivered to the substation with a 250-foot long trailer.



Transmission line construction is underway in
AURORA AND PARKER

CONSTRUCTION SCHEDULE

November/December 2018

Surveying, staking, site prep and delivery of materials

January 2019

Foundation construction starts

February 2019

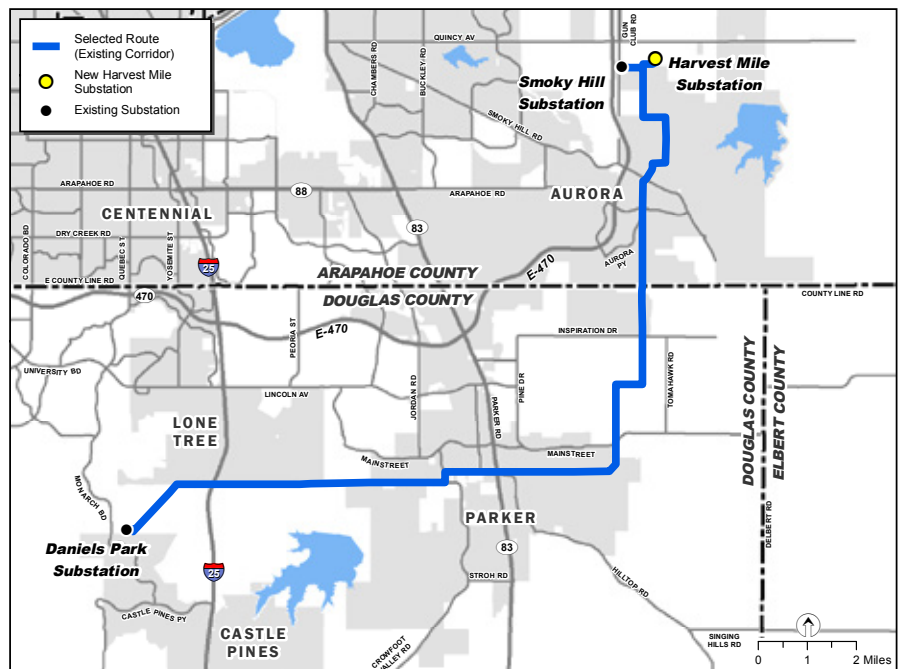
Structure erection starts

October 2019

Construction complete/the new line is energized

Xcel Energy continues construction on its \$180 million, Pawnee to Daniels Park 345-kilovolt transmission line project. The line will enable the electric grid to carry more renewable energy, improve overall system reliability and support the region's economic growth. Here is the planned schedule for early 2019.

Foundation construction will begin in January on the 20-mile segment of the transmission line from the project's east end at the new Harvest Mile Substation in Aurora and move south and west through Parker to the Daniels Park Substation south of the metro area. Also in January crews will begin moving transmission structures in to the line's right-of-way. In February, the structures will start to be erected, with installation of the electric line (also called "stringing the conductor") expected to begin in late spring. We anticipate the project to be in service by the end of October, 2019.



Pawnee-Daniels Park 345 kV Transmission Line Project – Harvest Mile to Daniels Park Segment

Here's what to expect during the construction process

1. Soil surveys and property staking

Field survey and soil information must be obtained to finalize design. Soil boring locations are identified and staked and existing underground utilities located prior to borings. Soil borings are drilled at specified locations to determine the mechanical properties of the soil. Final pole locations and right-of-way boundaries are then staked in the field.

2. Construction access and vegetation clearing

Before construction starts, crews will identify access routes to the right-of-way area. The access is typically 12 to 24 feet wide and is needed so vehicles and large equipment can reach the site. The access route and the area within the right-of-way will also be cleared of vegetation. Polymer mats may be put down in wet or soft areas to prevent soil compaction, minimize soil disturbance and improve site safety.

3. Equipment mobilization and material delivery

A crane, drill rig, boom truck, concrete trucks, trailers, structures, steel casing and rebar cages are some of the equipment and materials that will be moved into the site for construction.

4. Foundation construction

A reinforced concrete foundation is built to hold each steel structure. Construction includes drilling a six to 10-foot diameter hole to depths of 20 to 40 feet. Once drilling is complete, reinforcing steel is placed in the hole and concrete is poured. Anchor bolts are placed in the top of the foundation. Drilled pier foundations typically take one to two days to complete.



5. Erection of the structure

Steel transmission poles will be assembled at the foundation site and set in place with the use of cranes and heavy equipment. A structure can be assembled and set in place in one day.

6. Stringing conductor

Electric conductor is pulled from one structure to the next using a pulley system temporarily placed on the structures. The conductor is then attached to insulators and the pulleys removed. Trucks, heavy equipment and sometimes helicopters are also used in this process. Other equipment, including bird diverters (reduce bird collisions with the line) and aerial markers are also installed during this phase.

7. Land restoration

Following construction, the right-of-way is cleaned and restored. This work may include fence repair, rut removal, de-compaction of soil, tilling and seeding. If some property cannot be restored to its original condition, Xcel Energy will fairly compensate the landowner for damages.



Single pole structures will be mostly used except for corner structures where multiple poles will be used.

If you have a question or comment on the Pawnee-Daniels Park project please contact us at **303.318.6307** or **pawneedanielspark@xcelenergy.com**

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