



Crews at the 1063 Capitol Way project began the six-week process of drilling GeoWells and GeoPiers in November.

## 1063 Capitol Way, Block Replacement Project

# Geothermal Wells

Throughout the year, almost 50% of the sun's energy is absorbed into the earth where it maintains a consistent temperature just a few feet below the ground. Designed with efficiency in mind, the 1063 Capitol Way Office Headquarters building will tap into that energy, allowing the team to take full advantage of this readily available, renewable energy source.

To draw out the geothermal energy, the team is using a GeoWell system combined with a vertical loop system. The team

started drilling 30 GeoWells in November at a depth of 300 feet, each 6 inches in diameter. Within each well, crews will install a vertical loop — a 1-inch diameter tube connected to the geothermal heating and cooling system inside the building. Vertical loops require little land space for installation and are primarily used in urban areas.

Once the GeoWells are installed, fluid leaving the building will circulate through the underground pipes of the ground loop to facilitate heat exchange to or from the

building, depending on the season. During the summer months, unwanted heat indoors will be transferred through the GeoWells to be cooled by the earth and then circulated to the building's geothermal system to provide efficient air conditioning.

In the winter, the process will be reversed, with the earth heating the cool fluid circulating through the vertical loops to provide indoor heating. It's estimated that the use of geothermal systems will save the state approximately \$21,000 in energy costs per year.