

### 7.5.20 South Minneapolis Load-Serving Study

**Tracking Number.** 2007-TC-N3

**Utility.** Xcel Energy

**Inadequacy.** Loading on Xcel Energy's 12.4 kV distribution system in south Minneapolis has reached levels where numerous single contingencies can lead to overloads elsewhere in the system. Many of the distribution substations served by the south Minneapolis transmission loop have either reached their capacities or will in the near future, as Xcel Energy is forecasting 100 MW of load growth in south Minneapolis over the next ten years due to redevelopment in many areas of the city.

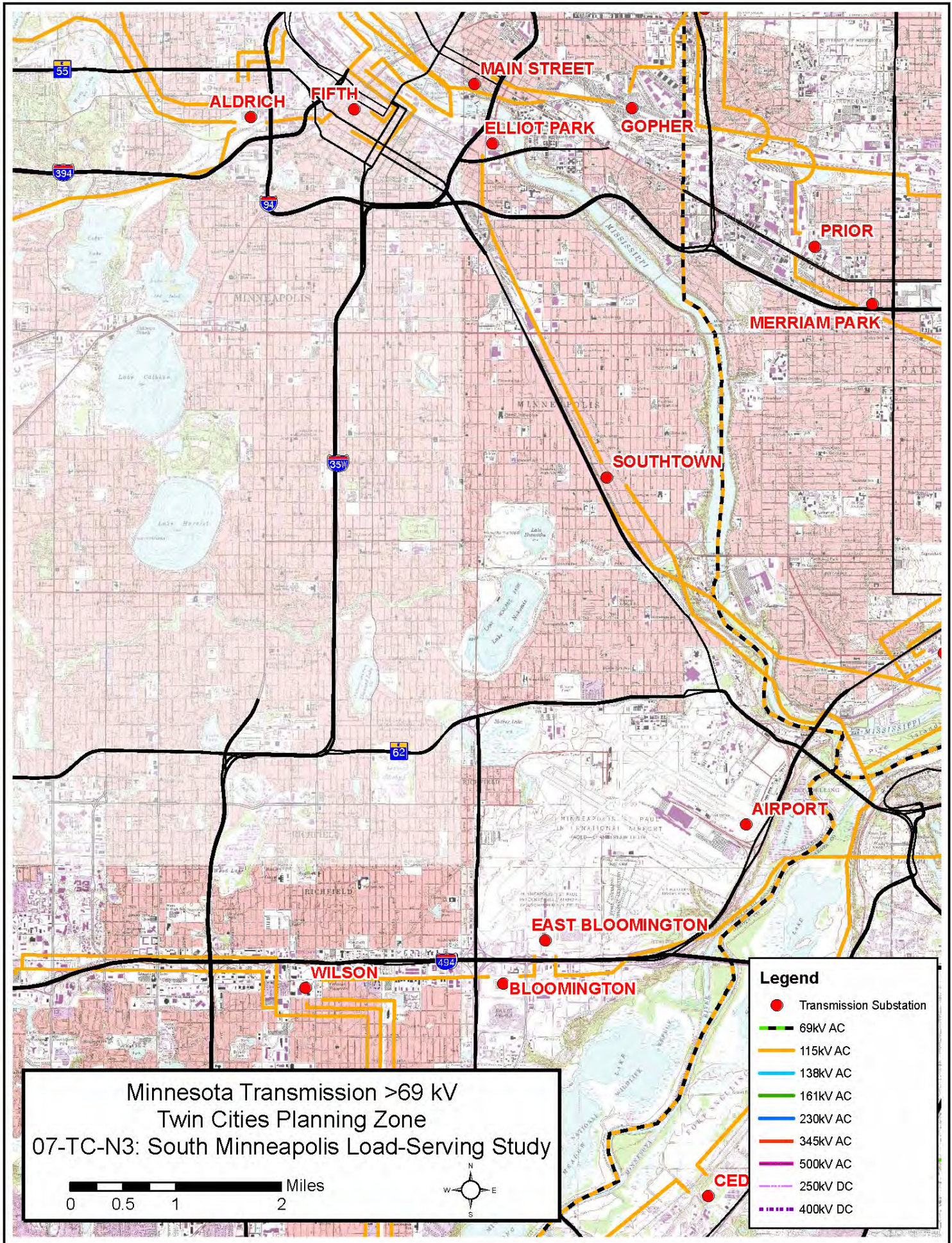
A map of the area is shown on the following page.

**Alternatives.** Initial investigation and scoping discussions have led to the development of three potential alternatives:

- (1) Construct a new 115 kV line from a new Hiawatha Substation along Highway 55 to a new Oakland Substation near Lake Street and I-35W. The line would then continue south to a new Highway 62 Substation near Highway 62 and Nicollet Avenue. The line would continue to its final termination at a new Penn Lake Substation near I-494 and Sheridan Avenue.
- (2) Similar to Option 1, but the final 115 kV line would stretch from Highway 62 Substation to the existing Wilson Substation near I-494 and Wentworth Avenue.
- (3) Construct two smaller 115 kV loops with new 115 kV lines running from Hiawatha to Oakland to Elliot Park and a second loop from Penn Lake to Highway 62 to Wilson.

**Analysis.** A load-serving study examining the alternatives is underway and is expected to be completed in early 2008.

**Schedule.** To address near-term load-serving needs, it is anticipated that the first portions of this development will need to be in service in 2010.



Minnesota Transmission >69 kV  
 Twin Cities Planning Zone  
 07-TC-N3: South Minneapolis Load-Serving Study

0 0.5 1 2 Miles



- Legend**
- Transmission Substation
  - 69kV AC
  - 115kV AC
  - 138kV AC
  - 161kV AC
  - 230kV AC
  - 345kV AC
  - 500kV AC
  - - - 250kV DC
  - ⋯ 400kV DC