



Kane County Fiber Optic Network

Information Technologies Department
County of Kane
719 S. Batavia Ave.
Geneva, Illinois 60134

Roger Fahnestock, Executive Director

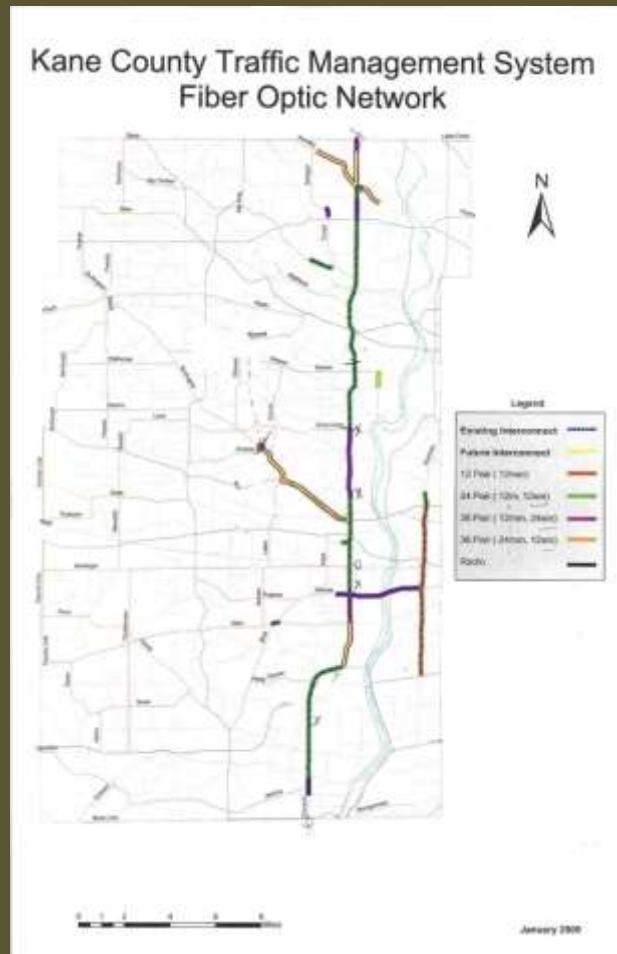
Overview

- ✓ Brief History
- ✓ Need to Connect
- ✓ Goals & Objectives
- ✓ Target Constituents & Points of Interest
- ✓ Target Service Areas
- ✓ Maps
- ✓ Kane Fiber Optic (KFO) Investments
- ✓ Next Steps

Brief History

- ✓ 2005-2006 - Concept of a network
 - Costly at over \$3 million in capital construction
- ✓ 2007-2008 – Regional Partnerships
 - Working with State and Local fiber networks
 - Working with major carriers and providers
- ✓ 2009 – 2010 – Public-Private Partnership option
 - Potential to partner with a service provider. Cost-share.
 - Return on investment and development opportunities
- ✓ 2011 – Kane Fiber Optic Network
 - Partnership with Transportation Division Traffic Management Network
 - Reduce cost of construction to under \$1.5 million
 - Funding from Public Safety Sales Tax revenue
- ✓ 2012 – Construction is substantially completed
- ✓ 2013 – Light up the network

Traffic Management System



- Existing fiber in conduit
 - Randall Rd.
 - Orchard Rd.
 - Fabyan Parkway
 - Kirk Rd.
- Increase fiber count
- Reduce costs
- Leverage investments
- Improve services



Need to Connect

- ✓ County branch offices, Aurora and Elgin
- ✓ Public safety information systems
- ✓ Interoperable communications systems
- ✓ Health information systems
- ✓ Municipalities, state, and federal government
- ✓ Schools, colleges, and universities
- ✓ Economic development opportunities
- ✓ Forest preserve, parks, and recreation



Goals & Objectives

- ✓ Improve Services
- ✓ Improve Interoperability
- ✓ Improve Communications
- ✓ Disaster Preparedness
- ✓ Shared Services Model
- ✓ Cloud Computing - Consolidation
- ✓ Reduce Costs



Target Constituents & Points of Interest

- ✓ Government
- ✓ Public Safety Answering Points (PSAP)
- ✓ Police and Fire
- ✓ Transportation
- ✓ Health
- ✓ Education
- ✓ Dupage Technology Park
- ✓ I88 & I90 Inter-connect, NIU Net

Target Service Areas



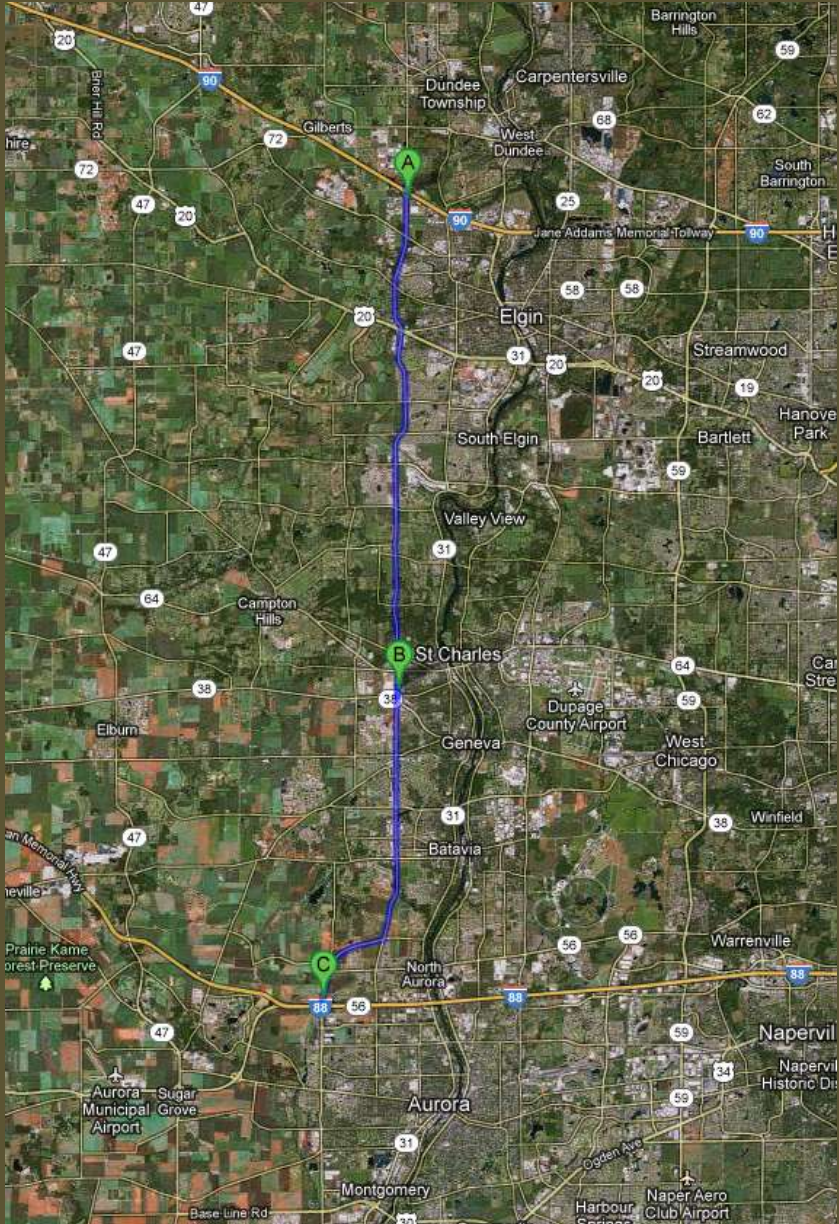
✓ North Segment

- St. Charles
- South Elgin
- Carpentersville
- Elgin

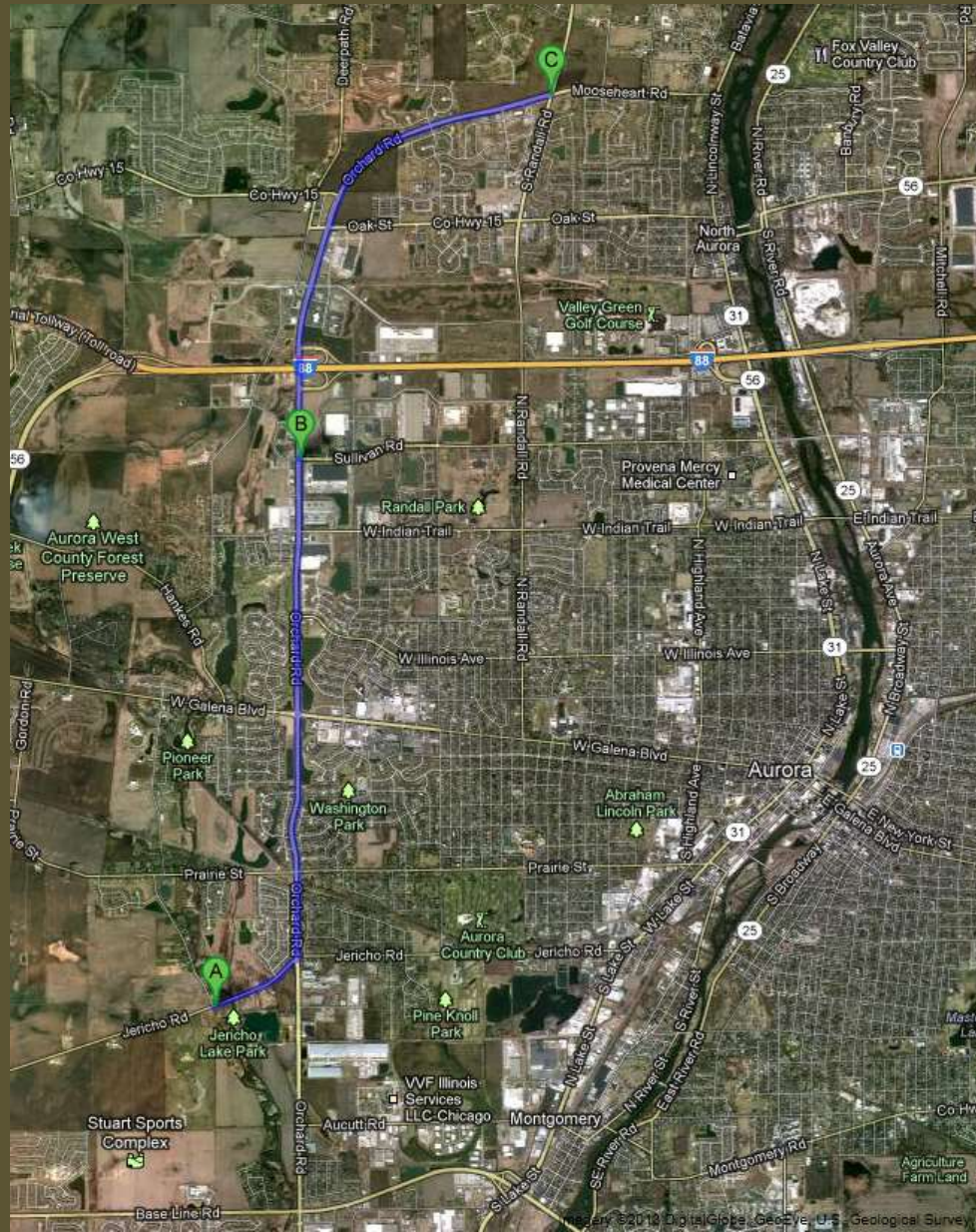
✓ South Segment

- St. Charles
- Geneva
- Batavia
- North Aurora
- Montgomery
- Aurora

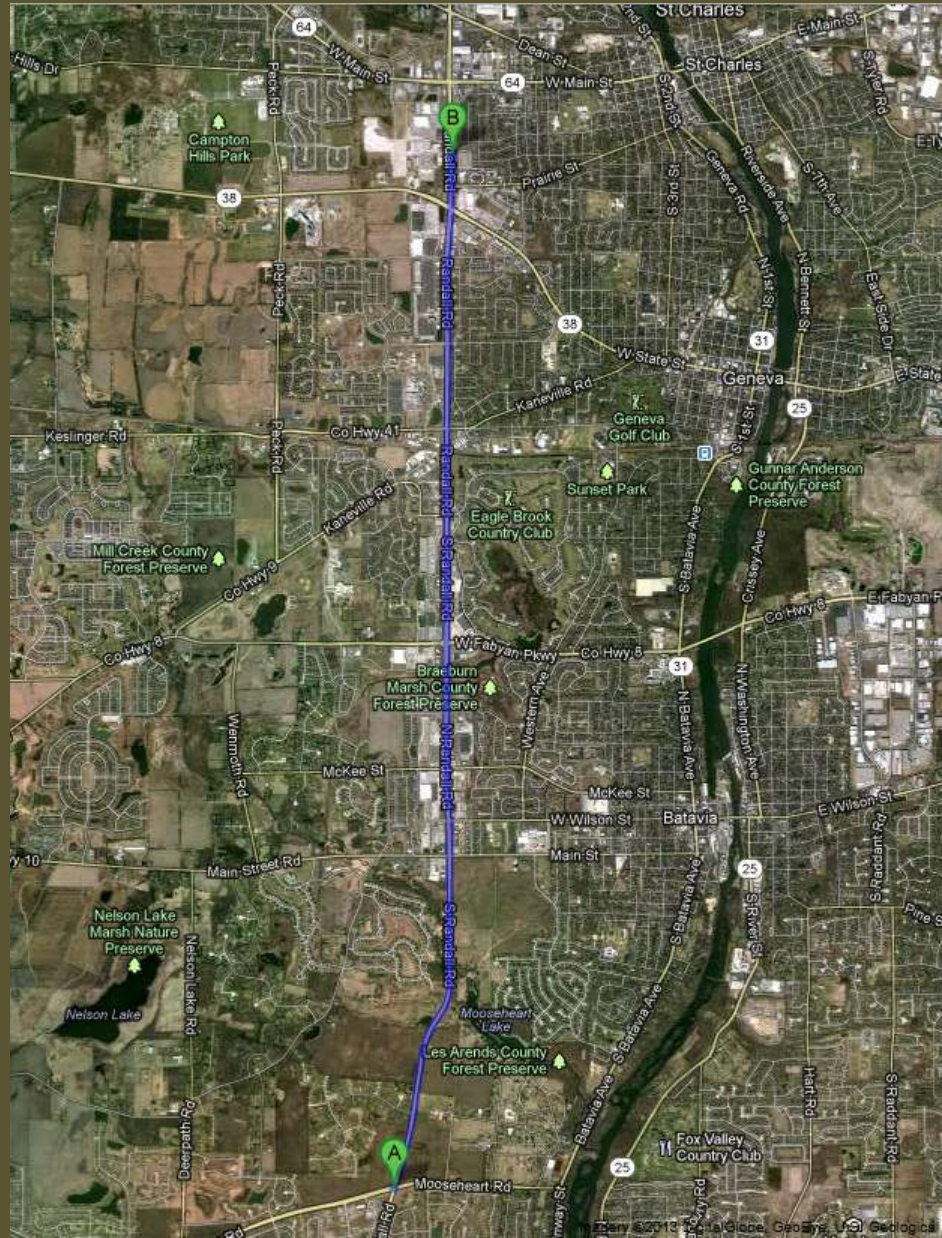
I90 to I88, NIUnet, & ICN



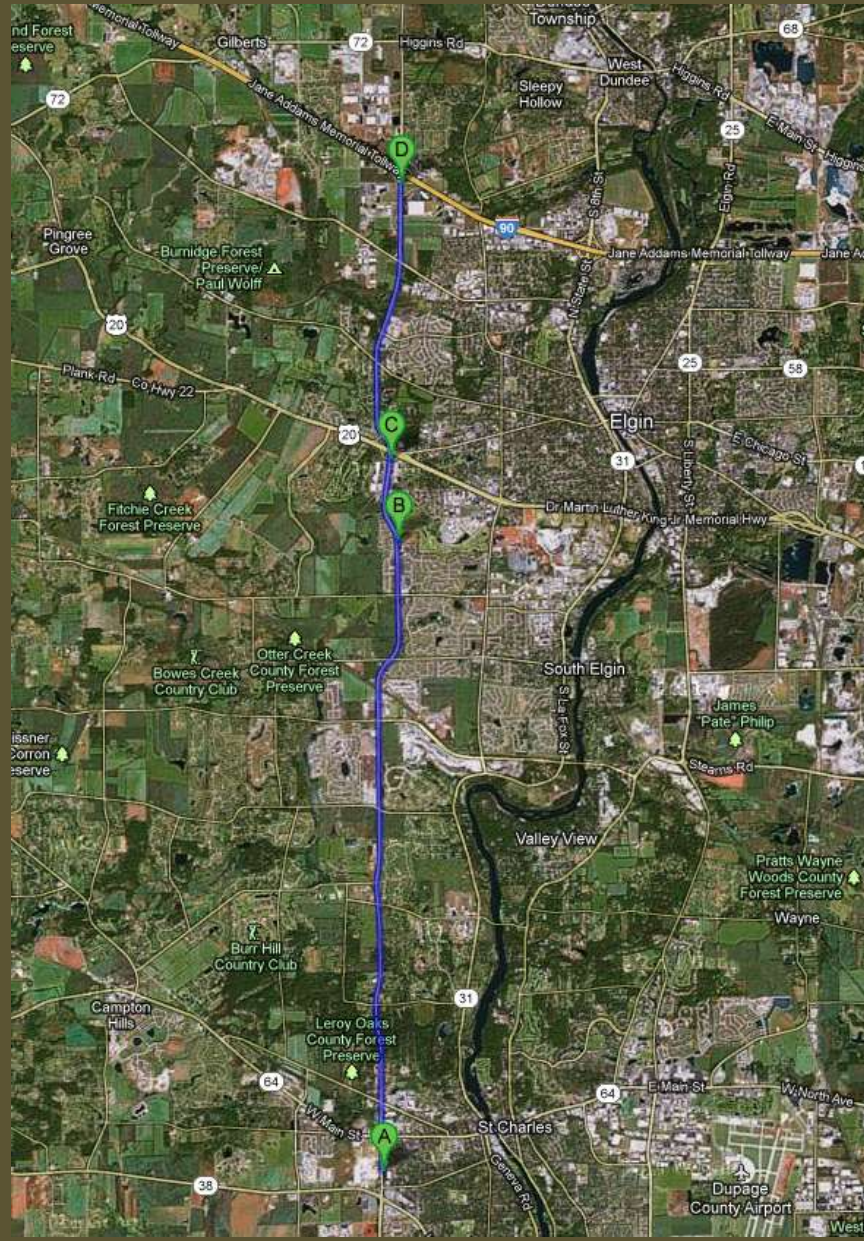
Aurora, 1888, & Montgomery



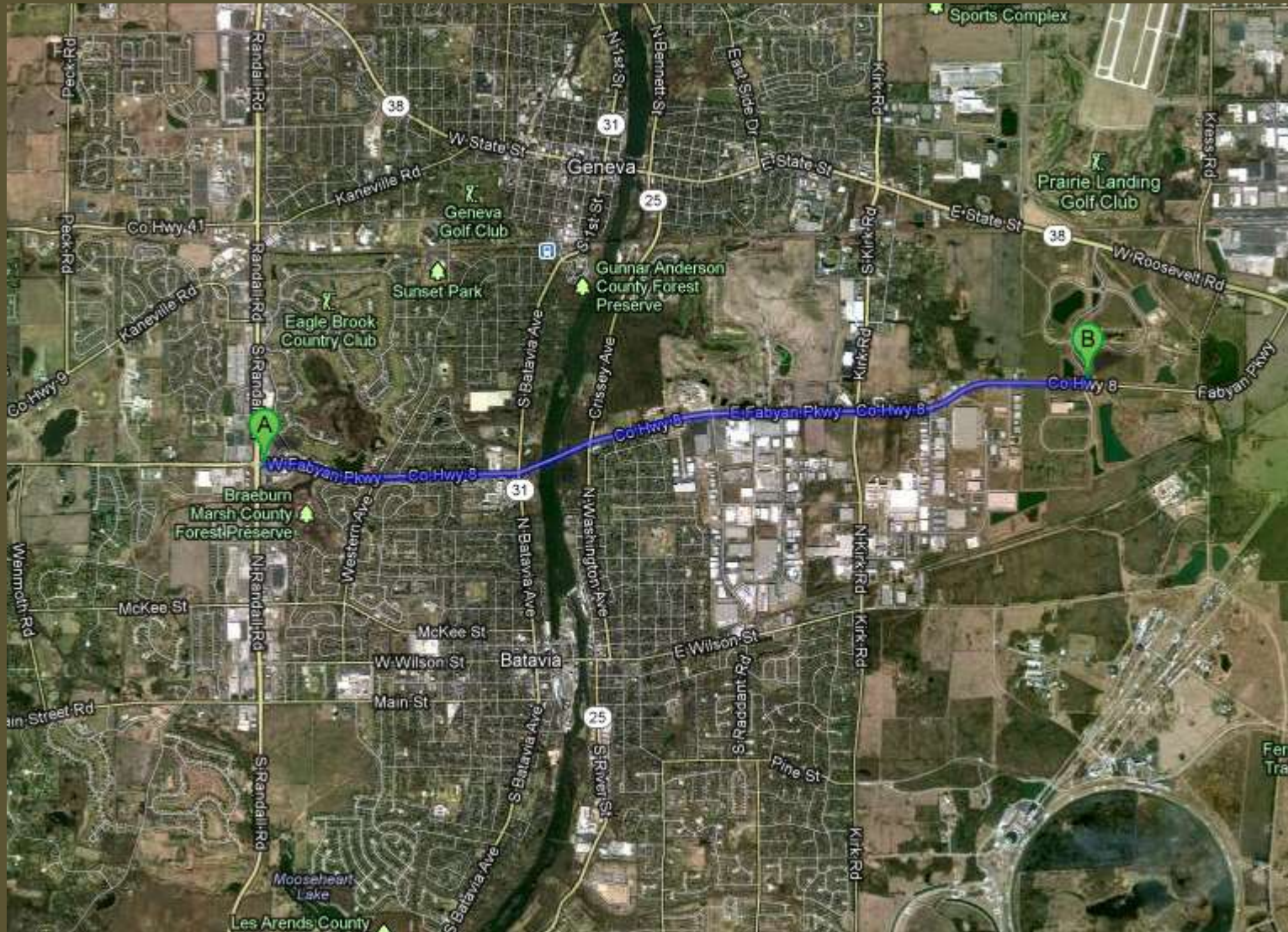
St. Charles, Geneva, & Batavia



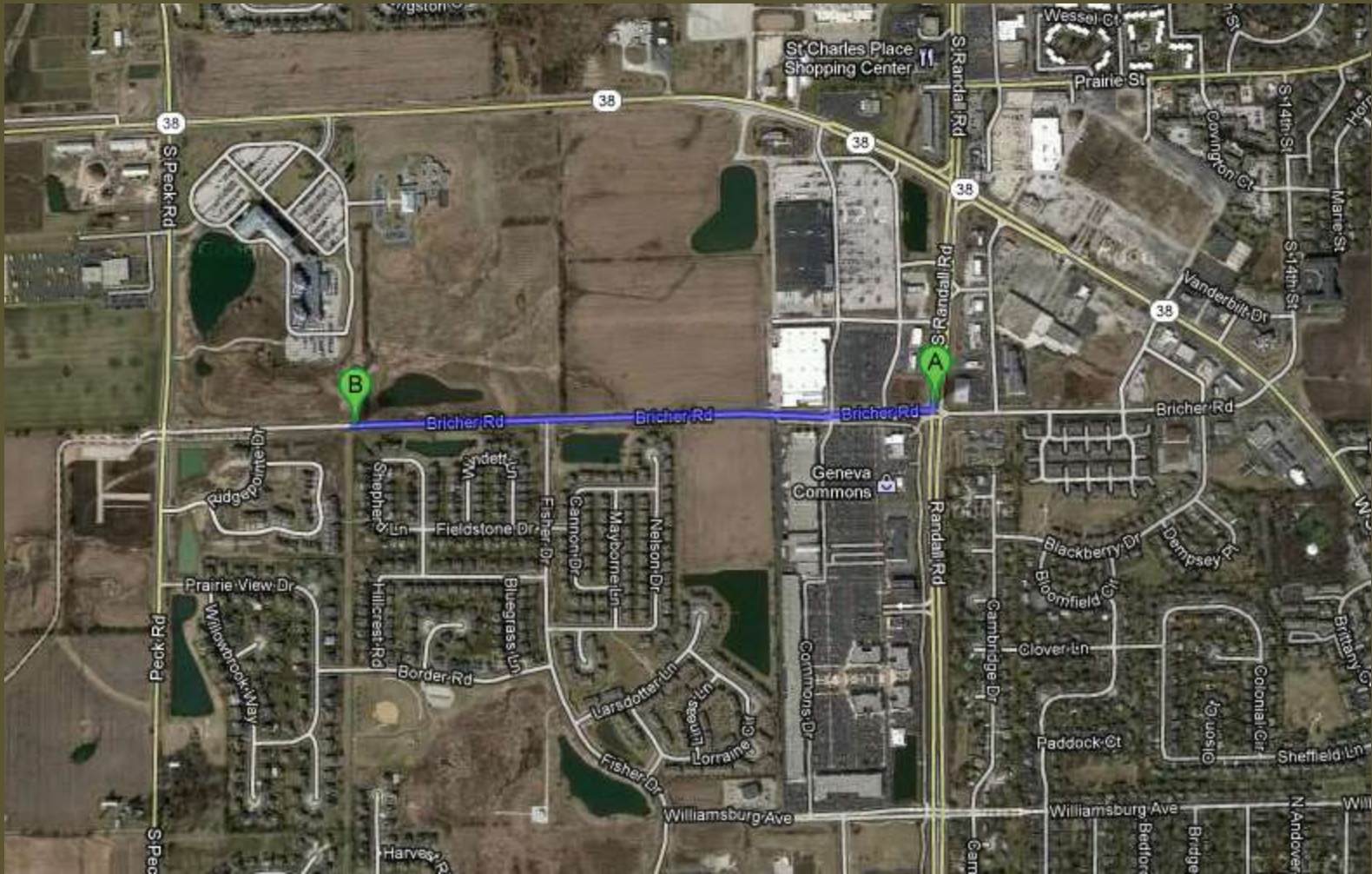
ECC, Elgin, & 190



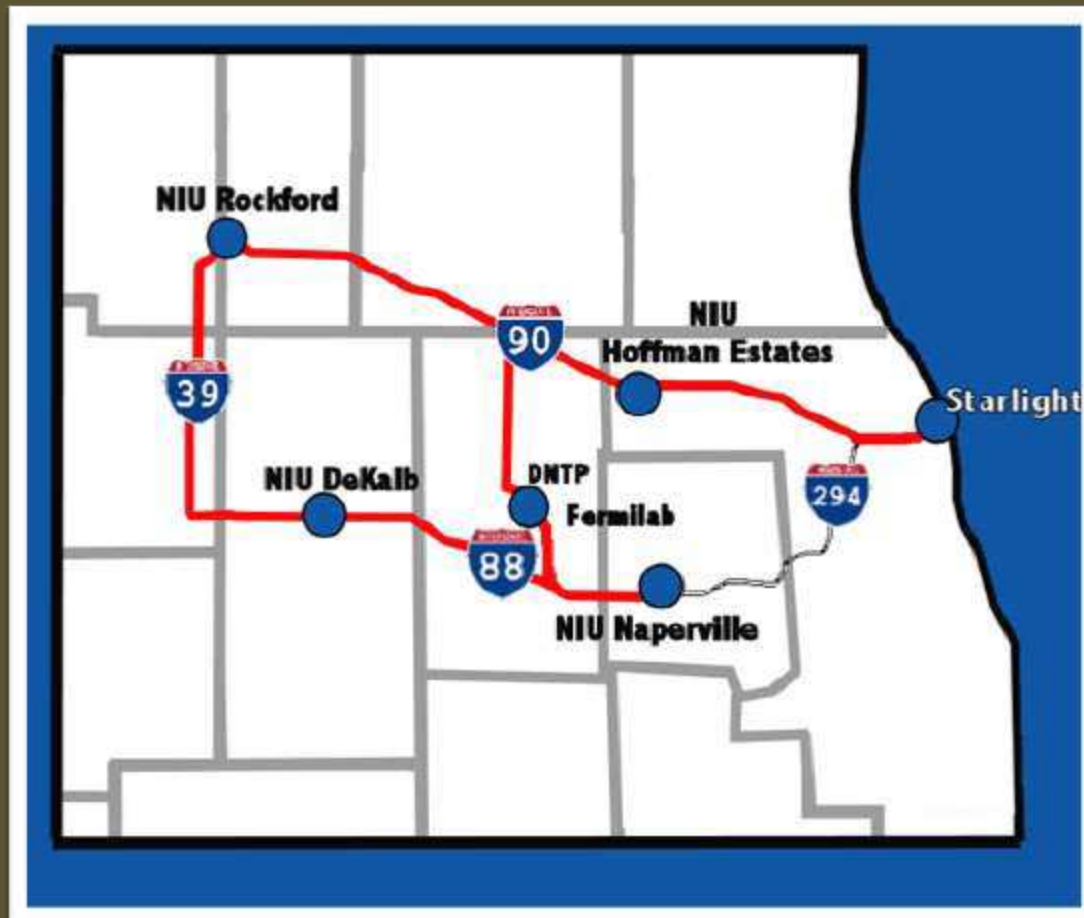
DuPage Tech Park & Kirk Rd.



Judicial Center & Bricher Rd.



Tollroad and IDOT Fiber



Kane Fiber Optic (KFO) Investment

- ✓ Capital Construction KFO - \$765,880.55 (base construction)
- ✓ 30 Miles of 144 strand Single Mode Fiber
- ✓ Life of fiber is at least 20 years or more
- ✓ Built as an overlay of Traffic Management System
- ✓ 30 Vaults for “Meet Me” locations
- ✓ 2” Steel Conduit and Vault System in right-of-way
- ✓ KFO network is 1Gb -10Gb Service
- ✓ KFO will include 5 PSAPs and other locations
- ✓ KFO includes connections to Elgin, Aurora, Montgomery, Geneva, St. Charles, Batavia, Tech Park, I90, I88, NIUnet, and others
- ✓ KFO ROI should be realized within 5 years considering other connections and potential uses
- ✓ KFO is 144 count fiber with plenty of overhead and capacity

Next Steps

- ✓ Fiber is one of many Kane County offerings that is attractive to business and job creation.
- ✓ How do we leverage this investment?
- ✓ Do we pursue public-private partnerships?
- ✓ How do we market municipal and regional networks in attracting business and investment?
- ✓ Do we pursue more connections to more constituents improving opportunities?

Lessons Learned

- ✓ Traffic Management Systems are built in segments
- ✓ Diagrams and drawings are critical to avoid painful change orders
- ✓ Transportation Department makes road improvements at a cost
- ✓ Relocation and maintenance budget \$150,000 for 30 miles of fiber
- ✓ Lowest bidder is generally not the best partner, require testing, everything
- ✓ Partner with a vendor that specializes in fiber maintenance and repair
- ✓ JULIE – Arranged with vendor and KDOT
- ✓ Develop a GIS layer to document fiber and vaults
- ✓ Managing expectations and service level agreements
- ✓ Need for redundancy and backup plans
- ✓ Planning for IGAs and IRUs (customers and demand)
- ✓ How much do you charge? Who do you charge?