

Electronic Engineering Data (EED) for Construction

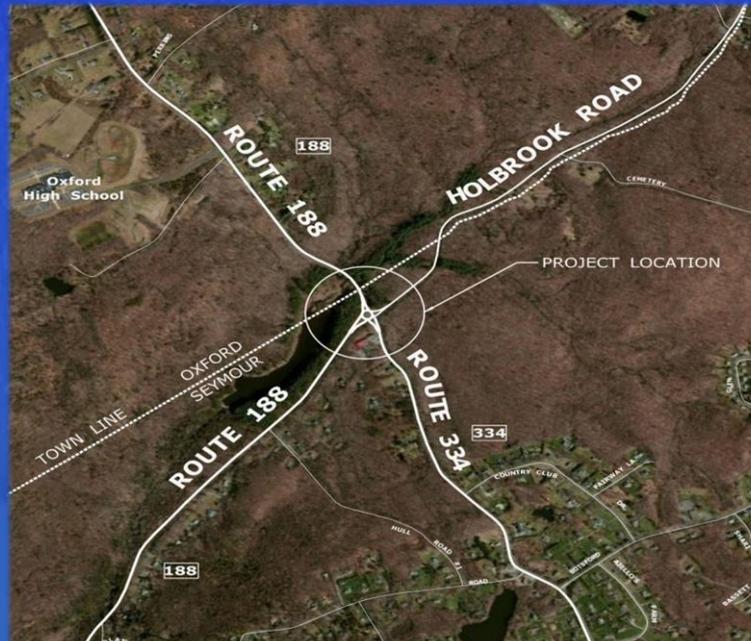
- **Introduction**
 - **Architecture, Engineering and Construction Applications (AEC)**
 - **Bill Pratt**
 - **Ron Tellier**
 - **Greg Sardinkas**
 - **Highway Design**
 - **Steve Hall**
- **Handout/AEC Webpage**
- **EED**
 - **Description**
 - **Delivery**
 - **Uses/Benefits**
- **ACORN – Base Station Network**



Seymour Roundabout

State Project No.0124-0162

- Routes 188/334/Holbrook Road
- Rotary upgrade to Roundabout
 - Full depth reconstruction, minor drainage
- ADV 07/16/2014, Construction Spring 2015



Connecticut Department of Transportation



Electronic Engineering Data

- **Initiative of FHWA's Every Day Counts (EDC) Program (see handout)**
- **Files will be delivered at advertising along with contract documents at the State Contracting Portal**
- **For pilot project, both native data and converted data will be provided in 2 separate zip files**



Electronic Engineering Data Con't

- **Native Data / *Converted Data*:**
 - **InRoads 3D Digital Terrain Models with features (.dtm/*LandXML*)**
 - Existing Surface
 - Proposed Top Surface
 - Proposed Subgrade Surface
 - **Coordinated Geometry Alignment Data (.alg/*LandXML*)**
 - **CADD MicroStation Design Files (.dgn/*dxf*)**
 - **InRoads Storm & Sanitary Drainage Data Base (.sdb)**
 - **InRoads Preference file (.xin)**
- **Contract documents still preside**



Uses/Benefits of EED

- **Bidding - more accurate bids**
- **Automated Machine Guidance (AMG)**
 - Reduced Staking Costs
 - Lower Fuel Consumption and Emissions
 - Greater Accuracy / Higher Quality Product
 - Safer Work Environment
 - Reduced Schedules
- **Intelligent Compaction**
- **CADD files available for Contractor's use**



Uses/Benefits of EED cont.

- **Field preparation**
- **Estimating**
- **Real Time GPS Rovers:**
 - **Field Layout**
 - **Verification**
 - **Quantity Measurements**
 - **As-built creation**
 - **Features easily located (northing-easting-elevation or station-offset-elevation)**

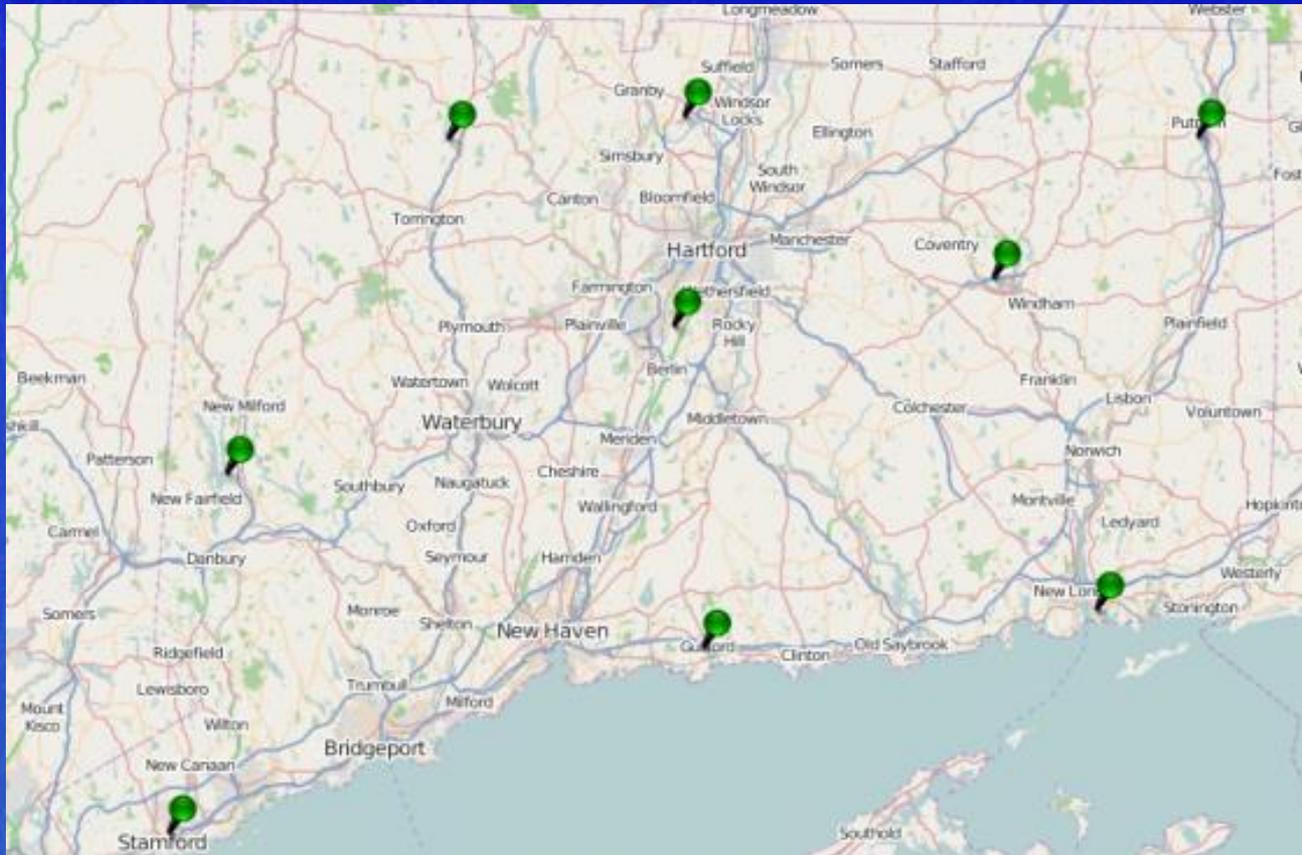


ACORN - Advanced Continuously Operating Reference Network

- **Joint venture between CTDOT & UCONN**
- **ACORN is a system of 9 base-station receivers that stream real-time observations to give centimeter-accuracy positions**
- **Available for free (2014). Register at acorn.uconn.edu**
- **Nominal fee after 2014**



ACORN BASE STATIONS



May be partnering with NY, MA & RI in the future for better coverage along state borders/shoreline



Questions?

