NEW YORK STATE ASSOCIATION OF MPOs

GIS WORKING GROUP MEETING
June 6, 2018
10:30 AM – 2:30 PM
321 Main Street, Utica, NY 13501 – Conference Room

MEETING NOTES

Participating

- Burns Lauren, OCTC
- Butler Sara, ECTC
- Coleman Zachary, OCTC
- Deshaies Jason, SMTC (Co-Chair)
- Fraiser Andrew, SMTC
- Hunt Kevin, NYS ITS Supporting NYSDOT
- LaSalle Teresa, CDTC
- Mance Jack, A/GFTC
- McAllister Korey, NYSDOT
- Patel Munnesh, NYMTC (*by phone*)
- Pawlusk Matt, HOCTS
- Perry Michael, ECTC
- Quackenbush Jeff, HOCTS (Chair)
- Reichert Rick, HOCTS
- Sattinger Andrew, NYSDOT Main Office (*by phone*)
- Stass David, UCTC
- Tortora Chris, GTC
- Tuttle Dylan, DCTC
- Tylutki Erin, HOCTS

1. Introductions and sign-in/Opening Remarks

After introductions and sign-in, Quackenbush opened the Spring 2018 GIS Working Group meeting.

2. ESRI's ArcGIS Online/ArcGIS Pro Licensing

Quackenbush provided a status update on ArcGIS Online/ArcGIS Pro licensing discussions with NYSDOT. He informed the group that NYSDOT agreed to provide the MPOs 30 Level 2 and 70 Level 1 licenses through NYSDOT Organization. Each MPO would have access to two Level 2 licenses that include all extensions and advanced licensing as well as at least four Level 1 licenses, which allows for viewing/read only rights. Quackenbush and Deshaies are voluntarily serving as NYSDOT Organization administrators on behalf of NYSAMPO. Quackenbush requested the MPO staff that wants access to this NYSDOT Organization account to send him or Deshaies the following information – name, title, email address, license level (indicate lead or analyst role), and MPO so that they can create user profiles with appropriate information. Quackenbush provided a demonstration of NYSDOT Organization's ArcGIS Online account to illustrate how to add users and manage licenses, as well as highlight other key features. He also mentioned that inviting

other staff outside of the MPO to access this account is possible and all it requires is a valid email address. Quackenbush pointed out that the data/services by default are associated with individual user accounts and unless it is actively shared with the members of the group, organization, or public as the case may be, these data and/or services will not be available to the rest of the group. Further, Quackenbush highlighted features that used available credits at an accelerated rate. These include storing large datasets in web apps such as line segments, points, and so on, as well as analytics like geocoding, creating buffers amongst other *geoprocessing* processes. One thousand credits cost $100. He encouraged everyone to refer to the ESRI credit consumption log to be generally aware of how credits are 'burnt.' The process for accessing my.esri.com account as NYS user to download ArcGIS Pro were also discussed. Note the my.esri.com account which is used to download Esri software and access Esri virtual training is a separate account from the arcgis.com account.

A list of key questions and discussion items on this agenda item follow:

Q1. Why were different user levels – administrator, lead, and analyst set up instead of using out of the box roles available in ArcGIS online?
A1. NYSDOT's intention is to use MPO roles as opposed to use "out of the box" roles at this time so that additional DOT personnel are not involved when publishing data/web apps created by the MPOs for public consumption. Having MPO roles would allow the administrator (i.e. MPOs) to have more control over decision making, as well as provide for consistency. Further, the NYSDOT has been advised not to use "out of box" roles at this time.

Q2. What is the difference between lead and analyst roles? Why not use *Publisher*?
A2. Both users have the same Level 2 license. The key difference is that the lead has publishing rights while the analyst does not have ability to publish new map services.

Q3. What criteria should Quackenbush and Deshaies, as administrators, apply in determining if publishing a web app for public consumption is appropriate?
A3. There was consensus that ownership of data or having written permission to redistribute data owned by others would be critical in determining if the web app could be made available to the public.

Q4.How do you create and share content within the group?
A4. All the data/services resides in "My Contents." The respective MPO lead needs to interactively select an appropriate option to share these data/services within the group or organization or public.

Q5. Currently some of the GIS Working Group members have data on ArcGIS Online including web apps. Should these data/web apps be moved to the new ArcGIS online account?
A5. It depends of individual agency's workflow.

Q6. Can an agency purchase credits on their own?
A6. NYSDOT would like to be notified before any agency buys credits directly since it is not sure how the process would work just yet.

Q7. Were there any plans for conducting training?
A7. A training session is not currently scheduled but it would be very helpful.

3. HOCTS: E911 Address Points Management

Quackenbush discussed updates to HOCTS' E911 Address Points Management application that uses Street and Address Maintenance (SAM) database. He explained that the SAM point feature database had several errors resulting from importing inaccurate real property data, which included errors and mistakes in native datasets. HOCTS performed thorough quality control on approximately 90,000 points using three different data sources including E911, real property/parcels, and Google Streetview, and rectified the mistakes in the SAM database. The NYSDOT took this updated database and integrated it with its geocoder. This provides a consistent state, local, and E911 enterprise database. However, only a few counties in the state have done this detailed quality control. Quackenbush pointed out how the MPO could use this same database for transit planning and other transportation planning applications. Further, Quackenbush provided a demonstration of New York State's Geolynx web application that allows viewing and editing the SAM database online for those individuals that have access to editing rights through the state, which requires newyorkstate.gov ID.

A list of key questions and discussion items on this agenda item follow:

Q1. Can SAM point data be downloaded?
A1. The SAM database can be downloaded from the clearinghouse.

4. General Update: NYSDOT/ITS Activities

Hunt provided a status update on current NYSDOT activities, including milepoint network management in Road and Highway (R&H), NYSDOT Roadway Inventory System (RIS) replacement – Smart Entry Engine (SEE), NYSDOT Oracle Primavera Portfolio Manager (OPPM), and NYSDOT's System of Engagement, as well as New York's broadband availability map and ShareGIS. Attached is a copy of the PowerPoint presentation.

Highway Milepoint Network: Highway Data Services now includes all local roads except for New York City in the R&H geodatabase.

Roadway Inventory System (RIS) Replacement: All pavement condition data from RIS has been migrated to AgileAssets PMS. Hunt pointed out Highway Data Services' does not use ESRI's Event Editor tool but will instead use Smart Entry Engine (SEE) developed as part of AgileAssets for editing purposes. The RIS will be eventually replaced by the AgileAssets PMS and the NYSDOT Roads & Highways geodatabase. This will ensure consistency. However, there will be some lag between the R&H roadway inventory and Milepoint network in AgileAssests PMS. Hunt mentioned that from an event feature standpoint, large culverts would be points while bridges would be line segments.

Broadband Availability Map: Hunt discussed the purpose and background New York's broadband availability while highlighting nuances of the data.

NYSDOT System of Engagement – Hunt explained that the Department within a span of three years would release web apps and data services through a web store for sharing a variety of transportation data within NYSDOT and partners including the MPOs. In essence, the concept is to create a geospatial warehouse to provide reusable services/web apps and authoritative project data. Hunt informed the group that the Department will be setting up a new ArcGIS 10.6 architecture wherein all the data will be stored in the NYS Datacenter

with SQL Server and made available as reusable services as opposed to sharing discrete data on an ad hoc basis.

A list of key questions and discussion items on this agenda item follow:

Q1. What data will be included for local roads?
A1. Typically, roadway name, geometry, and speed limit information would be available for local roads.

Q2. Who will determine the endpoints for roadway segments and will they be same as stations?
A2. Events will be shown as stations. There will be some lag between the R&H roadway inventory and AgileAssests PMS.

5. Crash Location Engineering & Analysis Repository (CLEAR)

Sattinger discussed CLEAR – short for, Crash Location Engineering and Analysis Repository. CLEAR replace ALIS and SIMS over the next couple of years. The CLEAR application preserves all of the ALIS and SIMS functionality as well as will integrate milepoint network dataset. This new web based application will be made available to MPO staff using the same directory of services login information as ALIS. Further, methods of network screening, propose projects, workflow process, business processes and other information using CLEAR will be discussed at Safety Workshops. NYSDOT is still in the process of gathering information. NYSDOT will let the MPOs conduct network screening to identify hot spots, crash analysis, intersections, HSM analysis and so on using the tools available in the web app for non-state roads. Quackenbush commented on the improved positional accuracy of crash data compared to a few years ago.

A list of key questions and discussion items on this agenda item follow:

Q1. When will CLEAR be available?
A1. Based on the current production timeframe, the CLEAR app is approximately 1½ to 2 years from release date.

Q2. What will be the process for accessing CLEAR?
A2. The process for staff outside of NYSDOT would be the same as that for ALIS in terms of directory of services login. NYSDOT will automatically migrate current ALIS users to the new app. Andrew Sattinger will be the point of contact for CLEAR and Robert Zitowsky will serve as his back up.

Q3. Will the MPOs be able to conduct analysis for the whole system or just local roads?
A3. NYSDOT will conduct analysis for state roads while the MPOs will have the opportunity to analyze local roads. CLEAR will have 13 network screening methods and the MPOs will have the ability to customize their analyses. Analysis will be based on the same set of assumptions and methodology. This will ensure consistency in analysis results

Q3. Will the MPO be restricted from selecting state owned facilities for analysis purposes?
A3. At this time, the workflow for restricting access to certain facilities is not fully developed and NYSDOT is open to discussing MPOs ability to conduct analysis on state-owned roads. The Department understands that for conducting area-wide or

corridor-wide analysis, it would be appropriate to include state to fully understand problems and develop meaningful projects to address safety issues in a more comprehensive manner.

Q4. Not all the roads may have the detailed data required for analysis. How will CLEAR address analysis for such facilities?

A4. To accommodate lack of certain data elements such as turn lanes, CLEAR will allow users to conduct a second level of analysis to ensure that all of the facilities can be included.

Q5. How is crash data inputted?

A5. The police officer has the ability to enter point data. Since 2008, a separate geo-locator also geocodes this location based on coordinates included in the police crash reports. CLEAR will have more user-friendly tools than ALIS to edit crash events that should further improve the positional accuracy of this database.

Q6. Will the data be available for download?

A6. Yes, both the data and analysis results can be exported as shapefiles.

6. Non-State Federal Aid Roads Data Collection

Quackenbush opened the discussion explaining his understanding of NYSDOT's pavement conditions and score data collection effort, which is now sensor-based (as opposed to using human observations as was done in the past). Currently, NYSDOT has a contract with Fugro to collect pavement condition data. This data collection effort will be based on the milepoint network. The general concern was inconsistency between pavement condition reports resulting from an automated sensor based analysis on state roads and human observations on local and county roads (including non-state federal aid roads). In addition, to develop maintenance schedules and projects, different jurisdictions use the MPO pavement condition reports for a multitude of improvement projects. The MPOs would like to get more information on the methodology of this new data collection effort, including ability to access the data. A conference call or separate meeting or workshop was requested to discuss this effort as opposed to various MPOs reaching out to their respective NYSDOT regional office. Hunt mentioned that he would report to the group members or request appropriate staff from NYSDOT to speak on this subject matter in the near future.

A list of key questions and discussion items on this agenda item follow:

Q1. Do the state employees drive the vehicle or is it contractors/vendors?

A1. The original contract included a van for NYSDOT for quality control purposes.

7. Open Discussion/Wrap Up

There was general discussion regarding ArcGIS Online and ArcPro training as well as the need for an updated presentation and/or information on non-state federal aid roads data collection.

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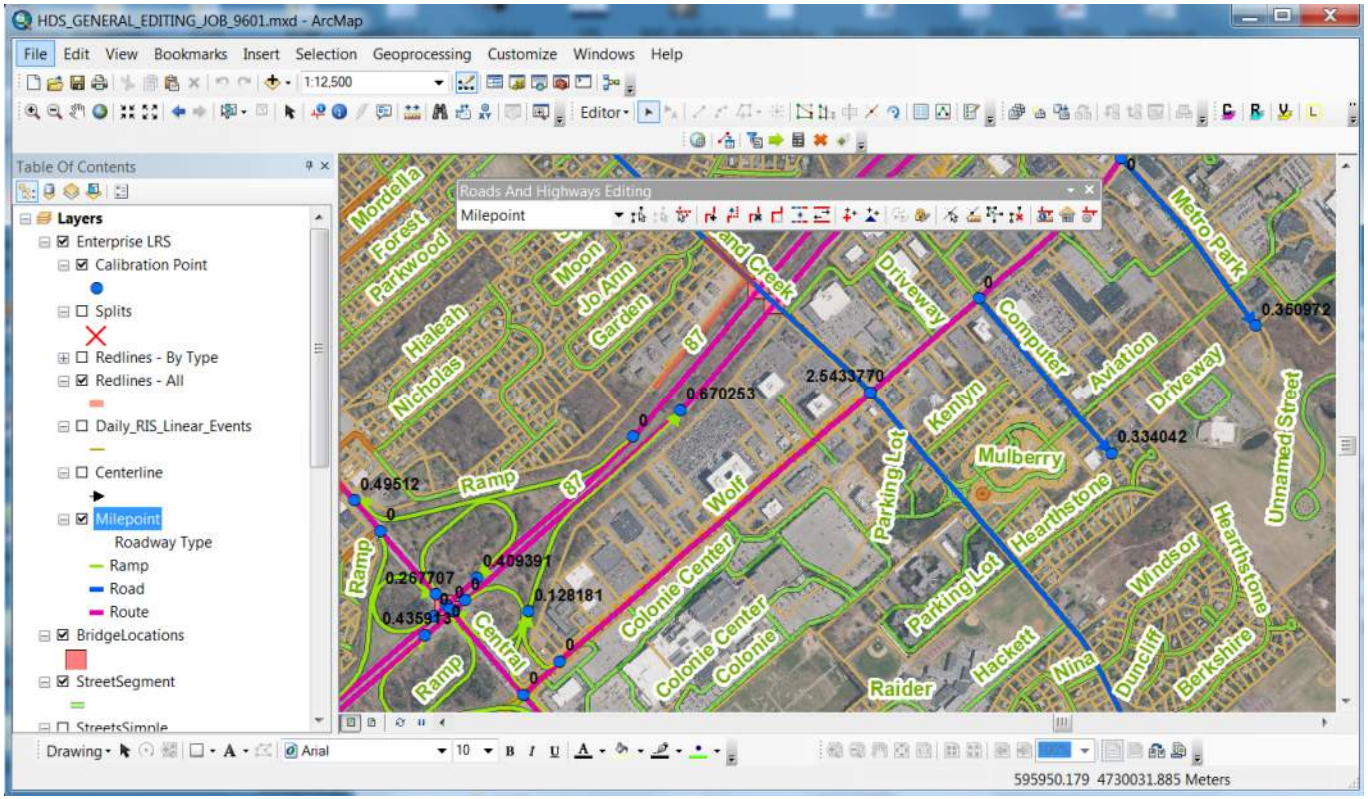
NYSDOT GIS Update

June 29, 2018

Milepoint Network Management in Roads and Highways



All local roads loaded into R&H

Milepoint LRS network updates in Esri Roads and Highways

NYSDOT Roadway Inventory System (RIS Replacement)

Pavement condition data in RIS have been moved to AgileAssets PMS.

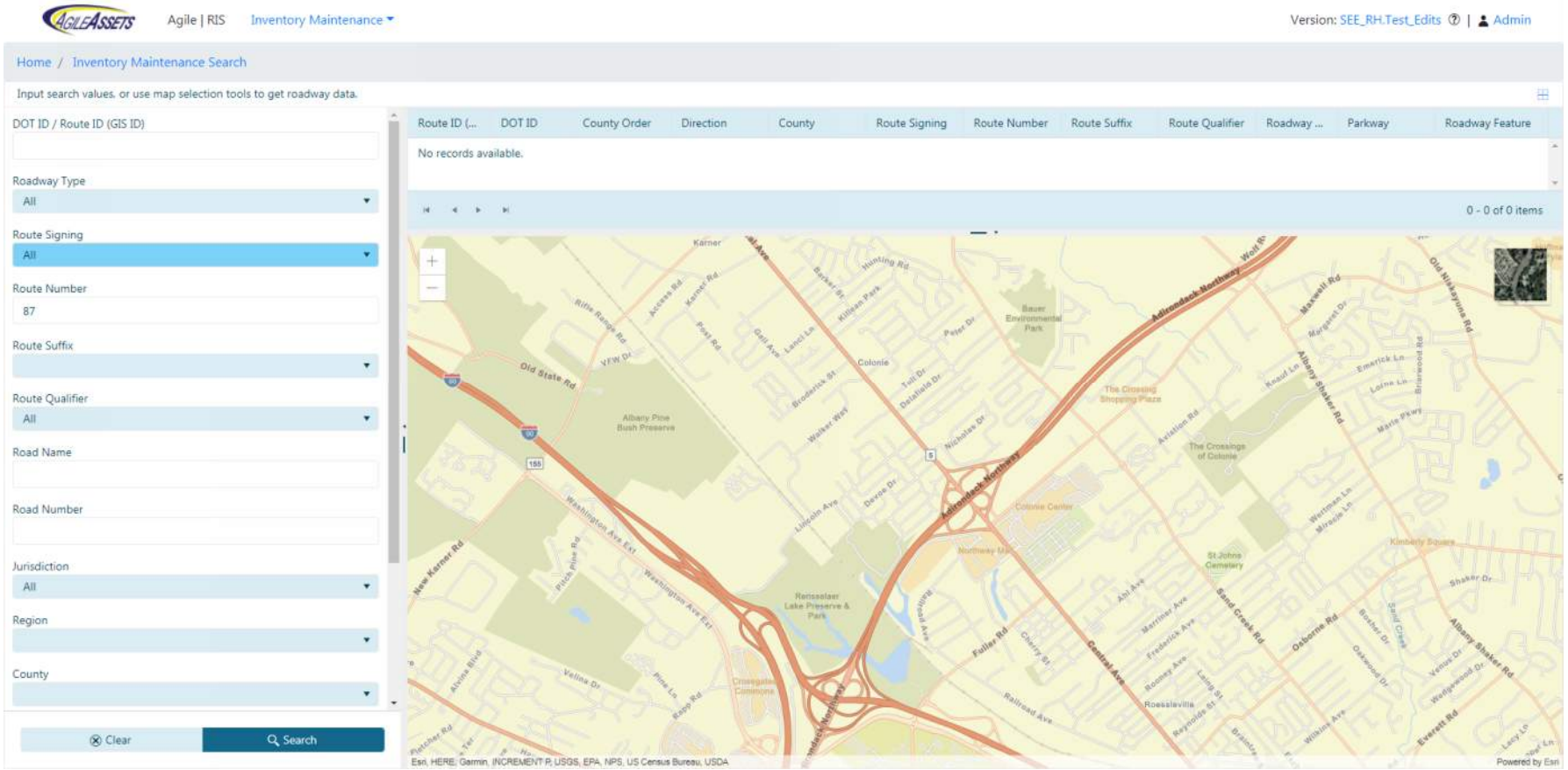
RIS attributes to be expanded to meet “Enterprise” needs.

Roadway inventory data will be moved into Road & Highways . . .

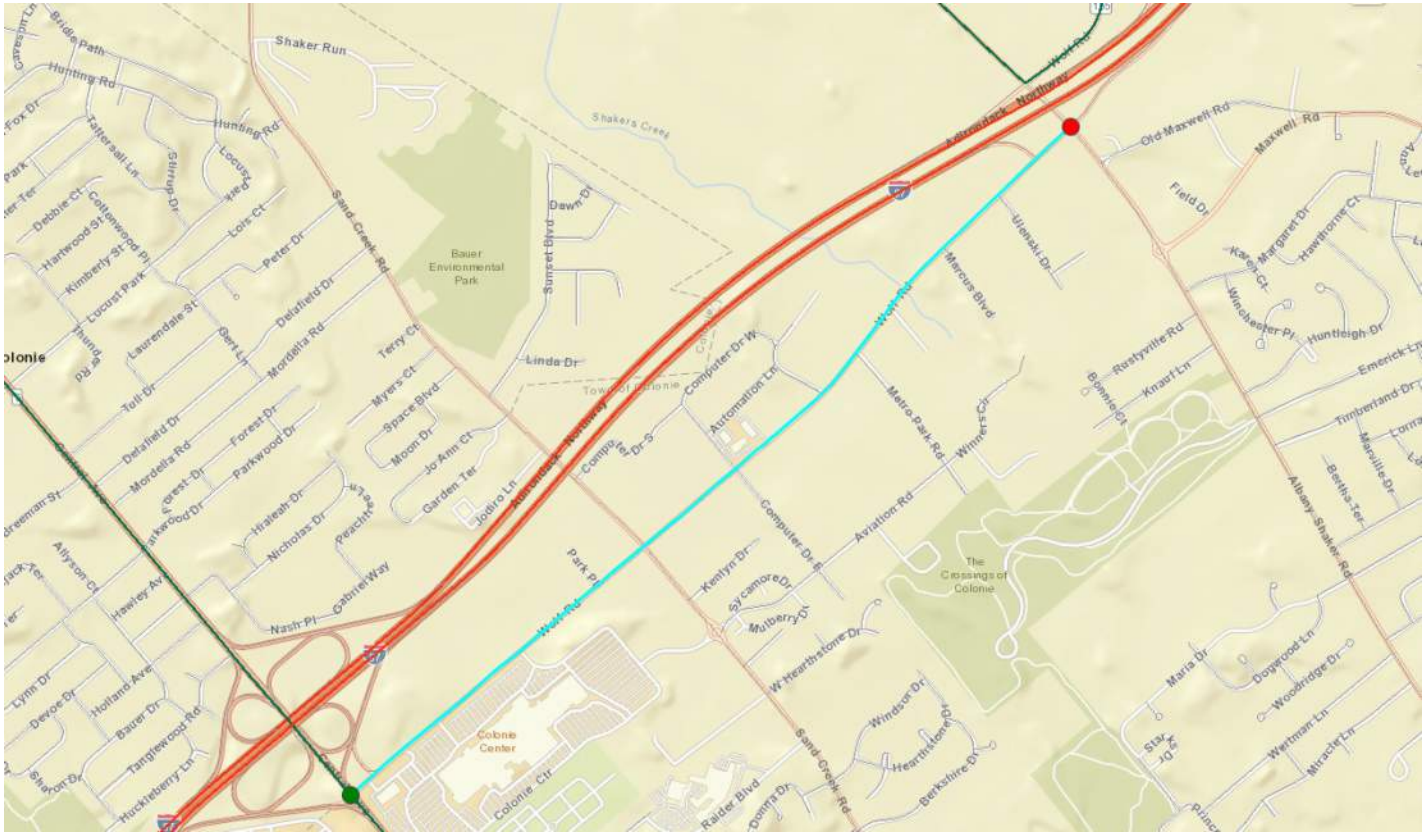
…but Highway Data Services does not want to use an interface like Event Editor.

Prefer to view and maintain roadway segments in an interface similar to RIS.

NYSDOT Roadway Inventory System 2.0 – Smart Entry Engine (SEE)



NYSDOT Roadway Inventory System 2.0 – Smart Entry Engine (SEE)



Edit roadway inventory data quickly with a familiar interface.

Connected to the R&H geodatabase through the R&H API

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NYSDOT Roadway Inventory System (RIS) Replacement

Save | Reset | Export to Excel | Criteria | Help Show Errors | Default | Length Correction | New Construction | Realignment | Cascade Lane Miles

Route View DOT Id : Rte : Beg : End : Len : Co Order : **Primary Segments**

End Desc : Jump To Select a Column Column

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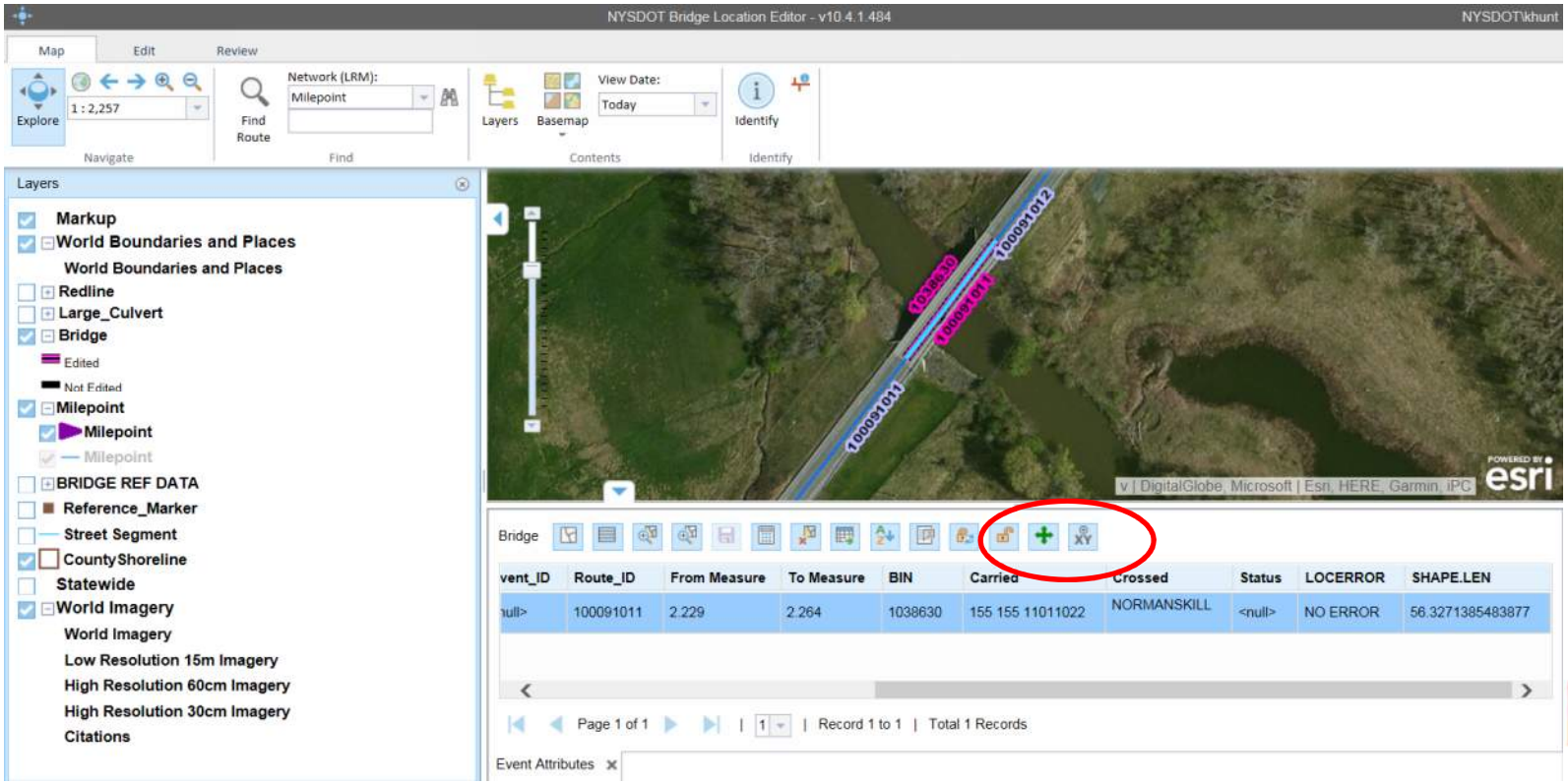
Event Editor – Structures assets

Linear bridge event locations will be verified this year. Large culverts will be point events



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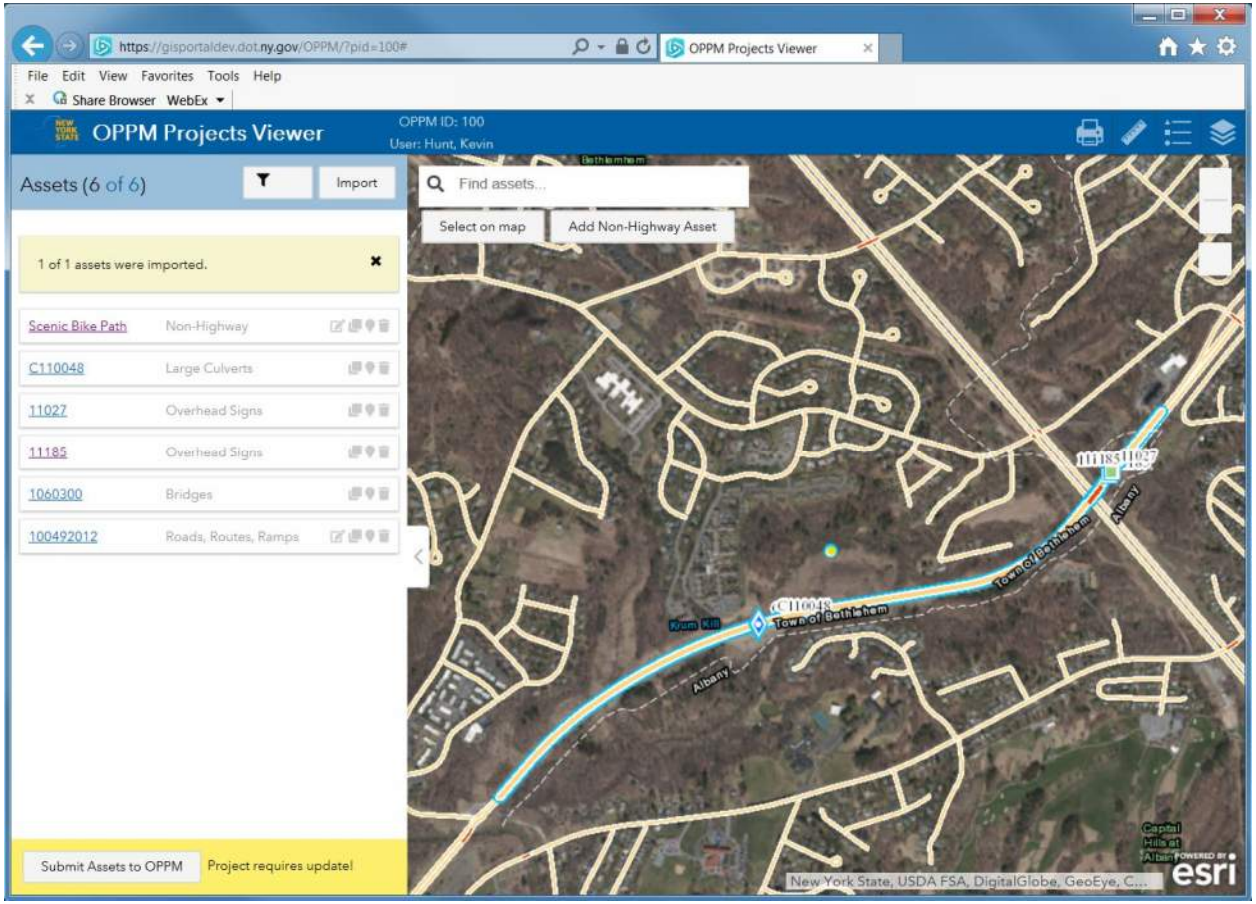
NYSDOT Oracle Primavera Portfolio Manager (OPPM)



New Capital Program Management solution

A GIS interface is under construction by Esri to allow OPPM users to assign roads, bridges, large culverts, overhead signs to projects.

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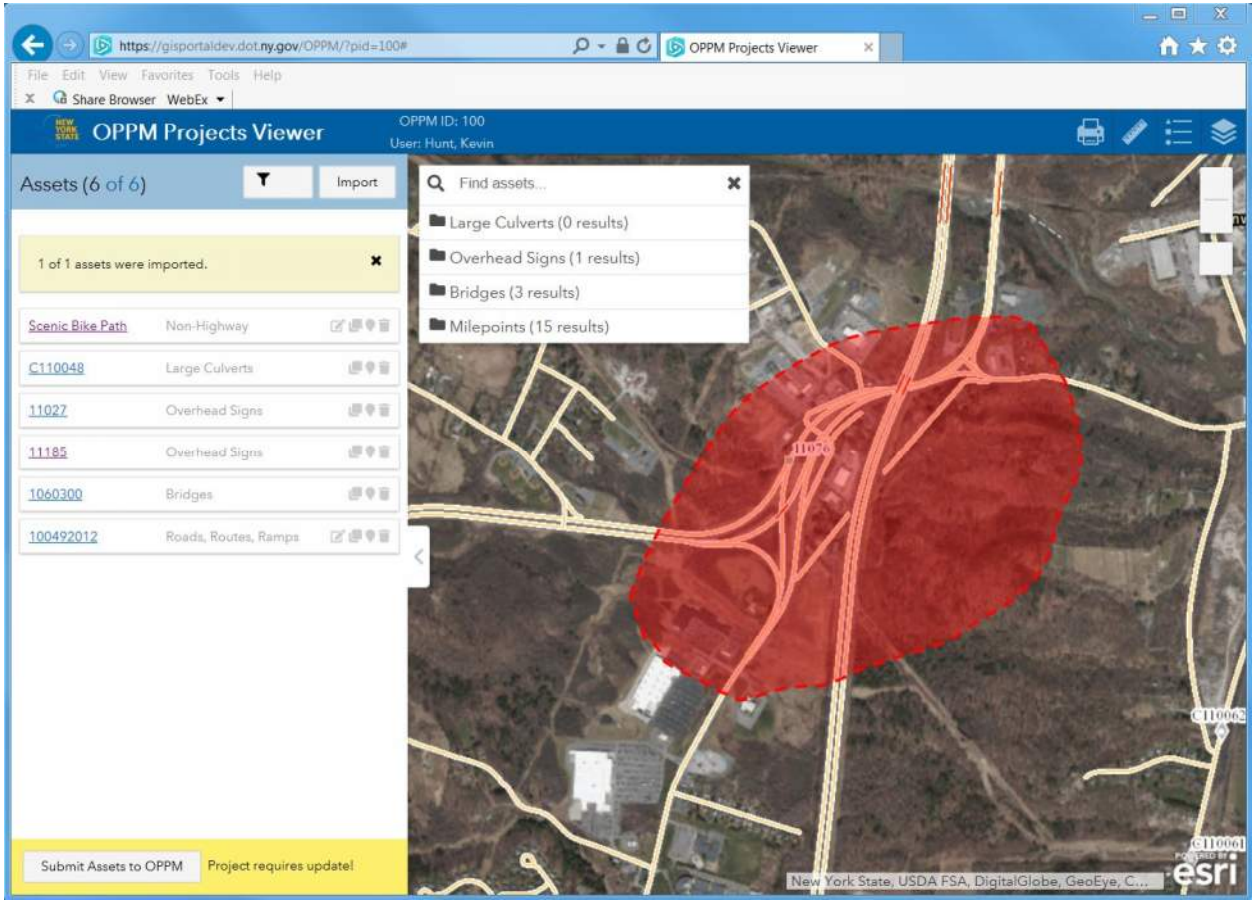
NYSDOT Oracle Primavera Portfolio Manager (OPPM)

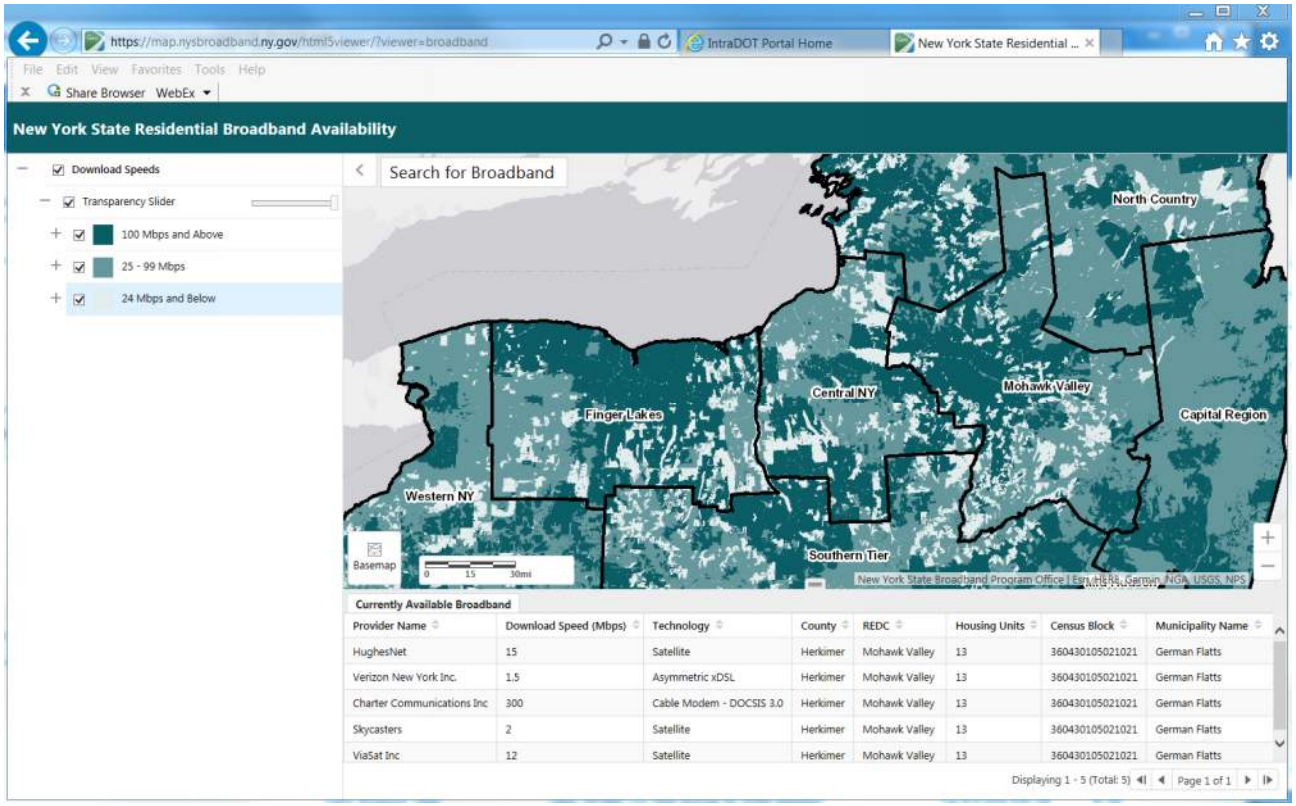


Includes functionality to select roadway segments and assets within a user defined polygon.

Once all the project location elements are selected, the ‘Submit’ button passes locations to the OPPM API.

The GIS server also summarizes project data by civil and legislative districts for the project data mart.

https://nysbroadband.ny.gov/



Click on Resources…Broadband Availability Map

NYSDOT System of Engagement – Year 1 apps

1. Winter Ops – 511NY, Snow Plow locations, Facility status, Weather radar and forecast
2. Projects Viewer – query project data from NYSDOT PSS and Site Manager systems
3. Pavement Viewer – view and interrogate roadway inventory and condition as well as recently completed and planned maintenance and projects,
4. STIP Viewer – Statewide Transportation Improvement Program
5. Structure Data Viewer – addressing common structure inventory and project questions
6. Flood Prone Bridges – to identify, manage and monitor vulnerable bridge locations
7. Surface Waters Prescreening – environmental surface water (stormwater, wetlands, etc) screening tool

NYSDOT System of Engagement

New ArcGIS 10.6 architecture – On-Prem ArcGIS Portal

Apps are created from reusable services (examples):

- NYSDOT Projects (planned, under construction, completed)
- NYSDOT Maintenance Work (recently completed and planned)
- Structure inventory and Condition

ShareGIS https://gisservices.its.ny.gov/arcgis/rest/services