

The Role of Geospatial Technologies in Port Security



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Company

- NorthSouth GIS LLC
- Founded in 2005
- Headquarters in Los Angeles
- Geospatial Systems Integrator
- An integral member of the Ports industry
- Esri's leading partner in ports
- Esri Gold Partner since 2010



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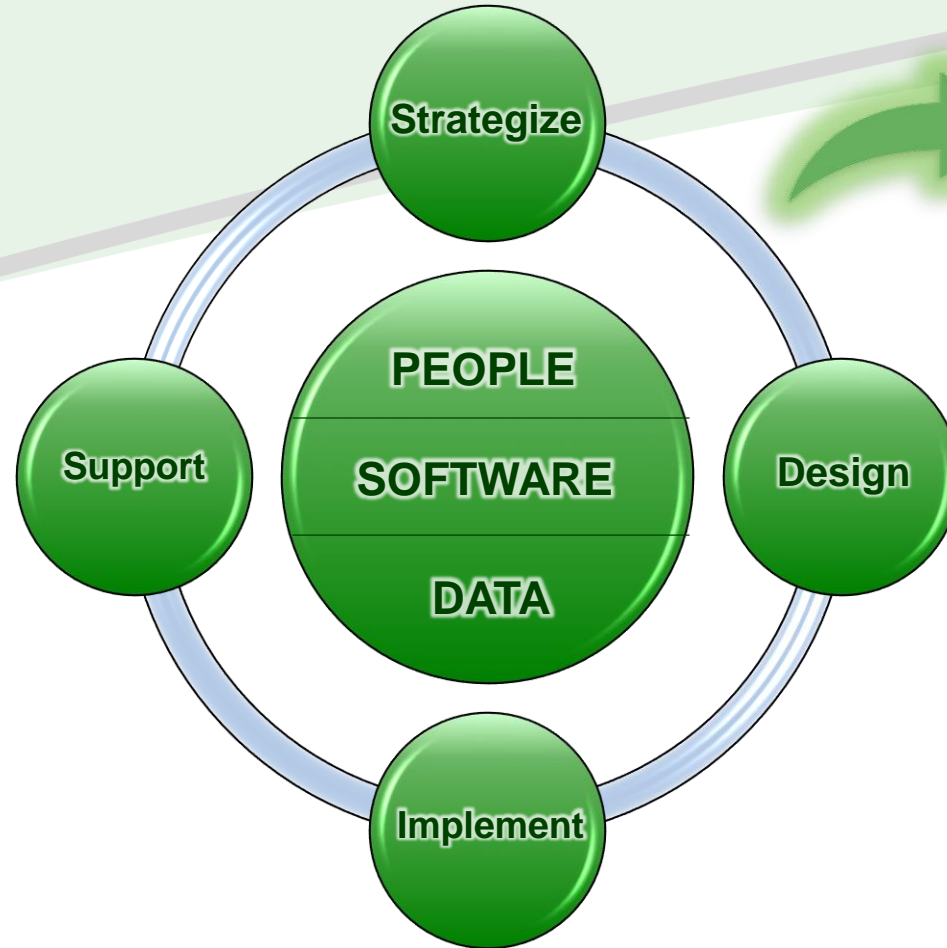
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What We Do For Ports



Needs Assessments
Strategic Plans
Grants, RFPs, Contracts
Implementation Design
System Architecture
Software Implementation
Geodatabase Design
Data Conversion
Systems Integration
COTS Systems
Custom Development
Training and Outreach
Support
Staffing

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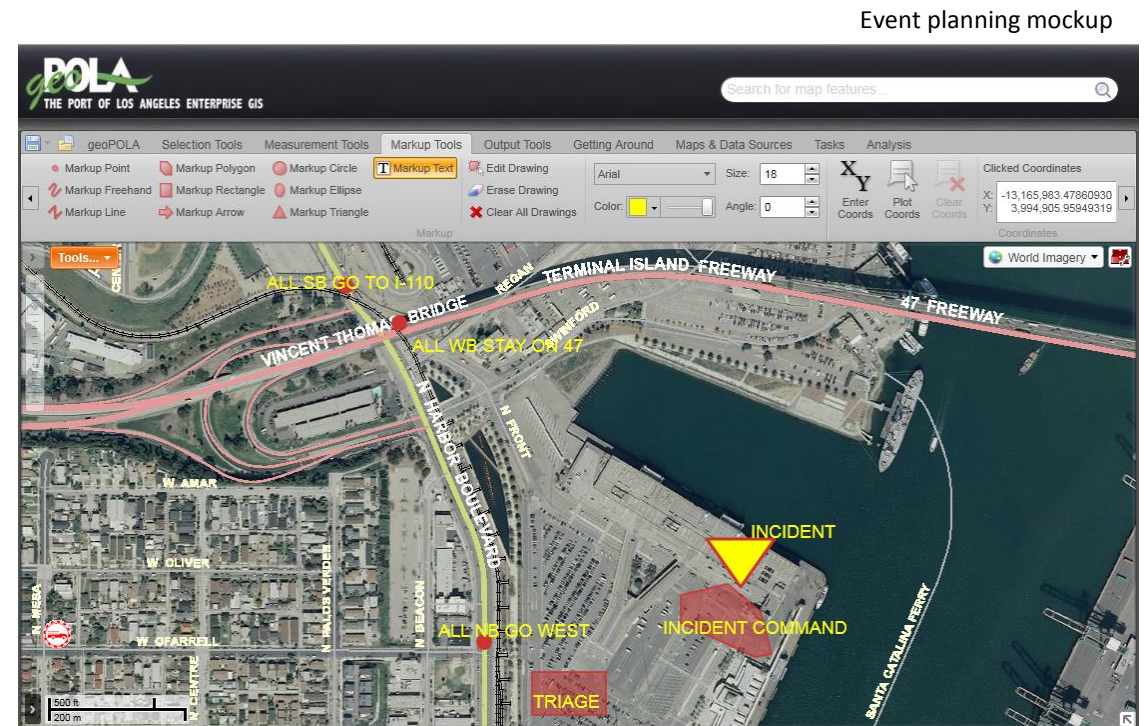
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Safety and Security

- Pre-plans
- Incident analysis
- Field communications
- Cameras coverage
- Crime statistics
- Data exchange
- Disaster planning and resiliency
- Mass notification



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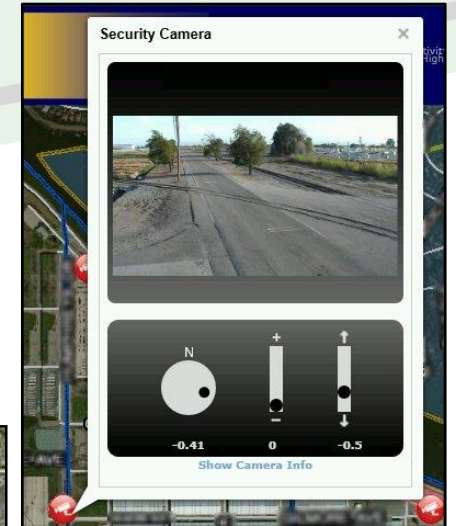
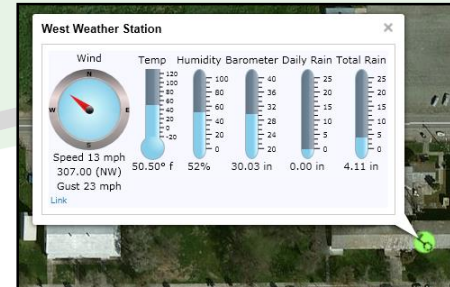
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Domain Awareness

- Situational Awareness
- Live data feeds
- Security integration
- Access from field, incident command
- ICS, escalated data sharing



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Ports

- Port of Los Angeles
- Port of Oakland
- **Port of Stockton**
- Port of Tacoma
- Port Tampa Bay
- Port of Vancouver



- **Port of Long Beach**
- **Port of San Diego**
- **Port of Hueneme**
- Port of Houston
- Port of Charleston



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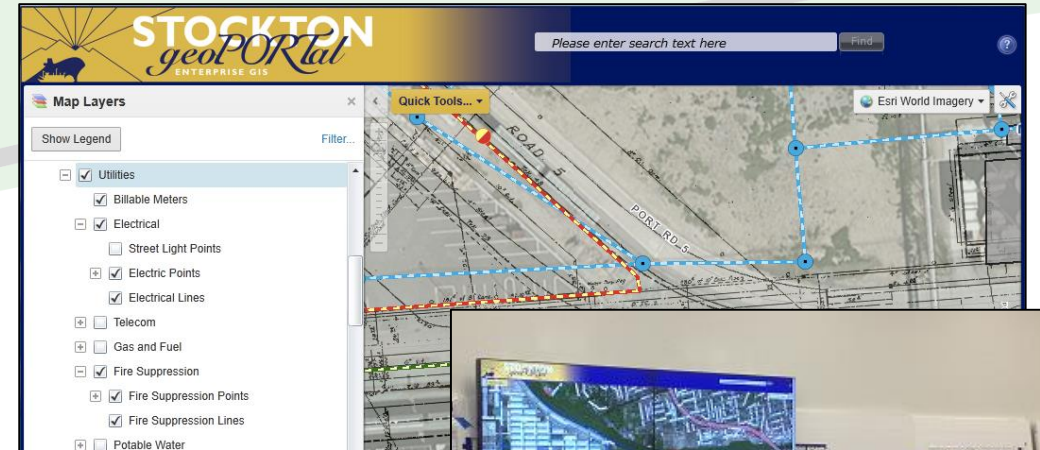
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Port of Stockton

- Risk exposure: Moderate
- Security: Large port police
- Role: Enforcer
- GIS: @ IT entire enterprise
- Funding: Grants
- Tools:
 - Situation awareness system – CommandBridge (ARES)
 - GIS map viewer – Enesgy (NSGIS)
 - Event planning, document retrieval – Enesgy (NSGIS)
 - Mass Notification System – HipLink (HipLink)



Stockton took a phased approach capable of taking advantage of grant, if and when available

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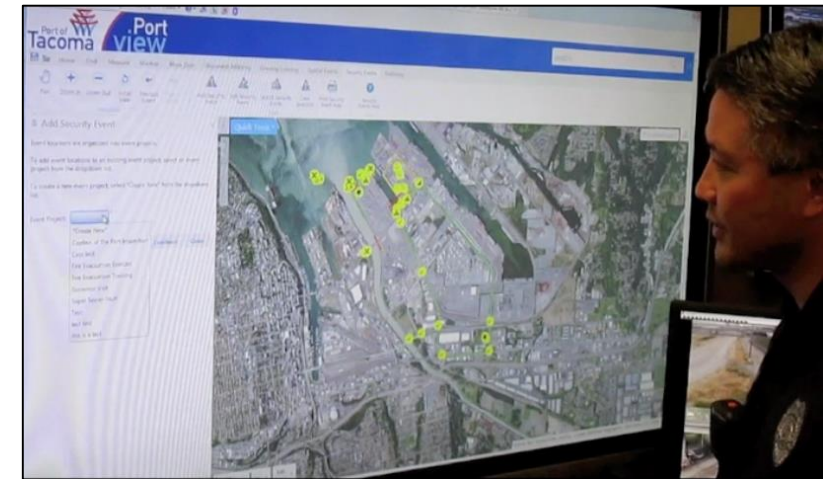
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- Risk exposure: Moderate
- Security: Port police plus security
- Role: Enforcer
- GIS: @ IT entire enterprise
- Funding: Grants and operations
- Tools:
 - GIS map viewer – Enesgy (NSGIS)
 - Event planning, document retrieval – Enesgy (NSGIS)



Tacoma integrates AIS and video into a police-only GIS viewer, available in office and in cars

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Port of Long Beach

- Risk exposure: Very high
- Security: Large security force (and PD detail)
- Role: Enforcer, “Enabler”, inter-agency aggregator
- GIS: @ IT entire enterprise, @ Security
- Funding: Grants & operations
- Tools:
 - Situation awareness system – VirtualPort (POLB/Esri)
 - GIS map viewer – ArcGIS (Esri)



Long Beach has implemented one of the most ambitious initiatives to use geospatial technologies in port security

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Port of San Diego

- Risk exposure: Very high
- Security: Large port police, regional collaboration
- Role: Direct & contract enforcement, local leader
- GIS: @ IT, mostly for security, facilities, real estate
- Funding: Operations, grants
- Tools:
 - Situation awareness system – CommandBridge (ARES)
 - GIS map viewer – ArcGIS (Esri)
 - Crime analysis – CrimeView (TriTech)
 - Incident planning, document retrieval – Enesgy (NSGIS)
 - GIS-powered CAD – Intergraph (Hexagon)



San Diego makes extensive use of geospatial technologies
in its port security and public safety operations

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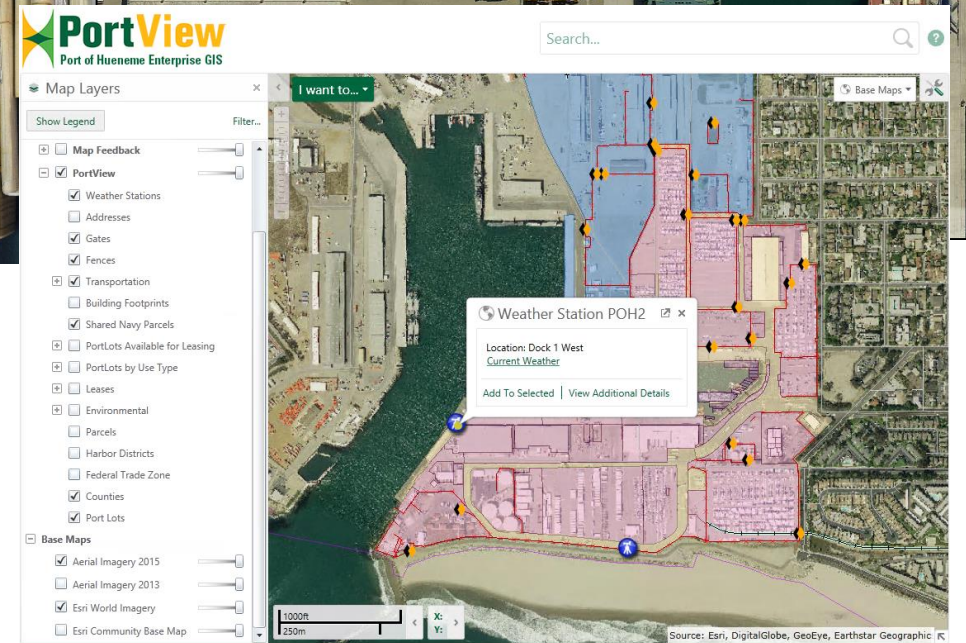
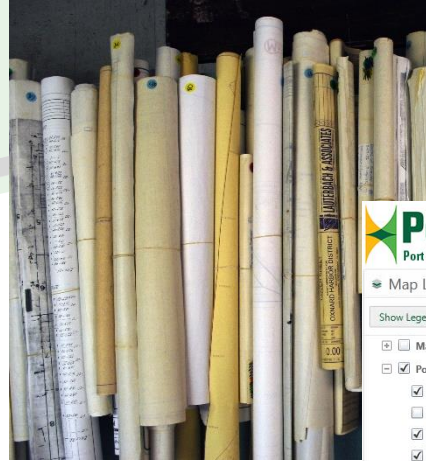
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The Port of Hueneme

- Risk exposure: Modest
- Security: Contract security
- Role: Awareness
- GIS: @ Engineering
- Funding: Grants
- Tools:
 - GIS map viewer – Enesgy (NSGIS)
 - Event planning, document retrieval – Enesgy (NSGIS)



Hueneme focuses on making information available as a means of increasing both safety and security

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Starting Point

- 1,000s of paper maps and CAD drawings



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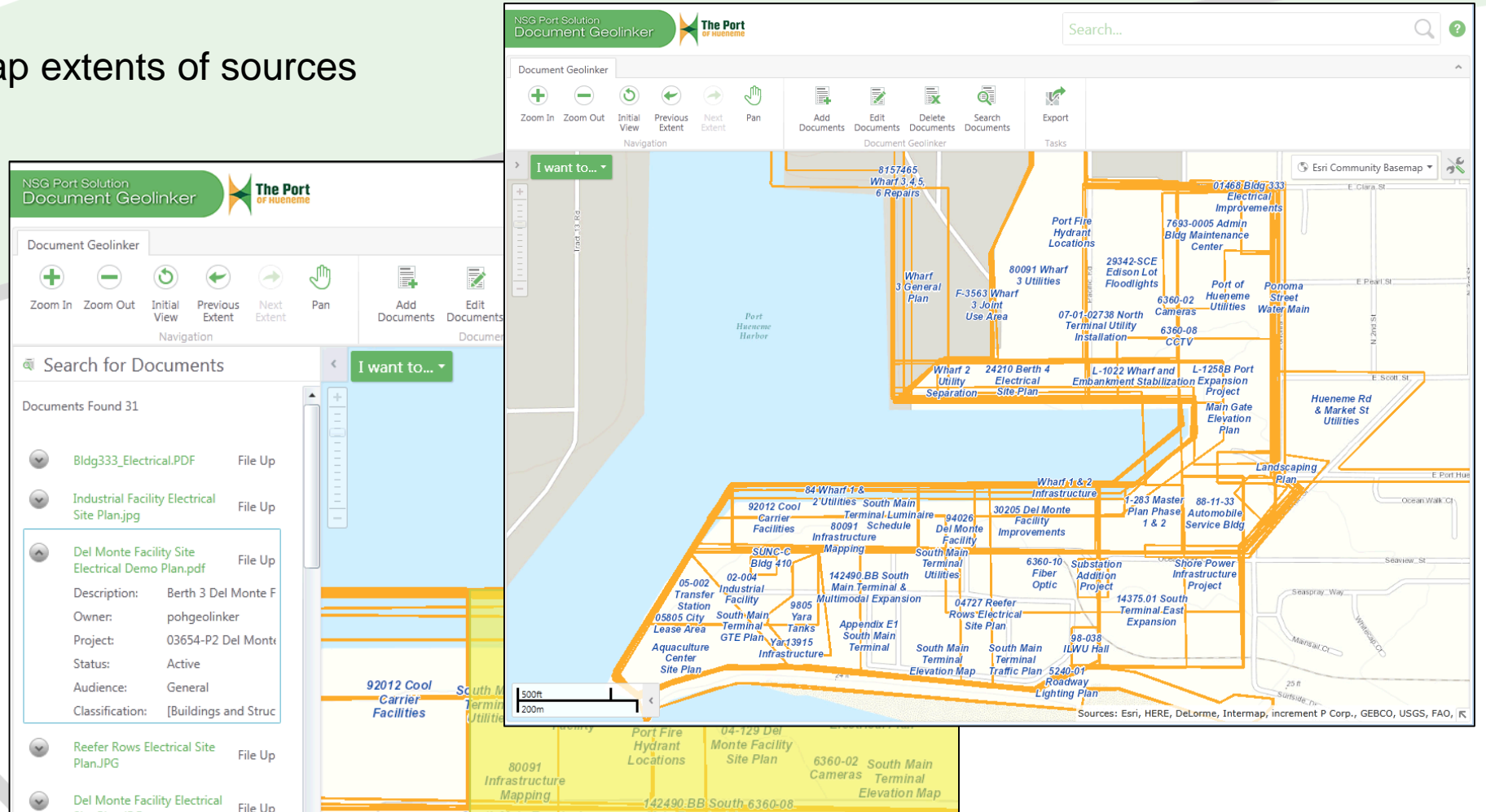
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Data Assessment

- Used GIS to map extents of sources
- Worked with port to prioritize data for conversion



The screenshot shows the NSG Port Solution Document Geolinker interface. The main map area displays the Port of Hueneme Harbor with various infrastructure projects overlaid in orange. The sidebar on the left shows a search results list for documents found, including:

- Bldg333_Electrical.PDF File Up
- Industrial Facility Electrical Site Plan.jpg File Up
- Del Monte Facility Site Electrical Demo Plan.pdf File Up**
- Reefer Rows Electrical Site Plan.JPG File Up
- Del Monte Facility Electrical File Up

The selected document, "Del Monte Facility Site Electrical Demo Plan.pdf", has the following details:

- Description: Berth 3 Del Monte F
- Owner: pohgeolinker
- Project: 03654-P2 Del Monte
- Status: Active
- Audience: General
- Classification: [Buildings and Struc

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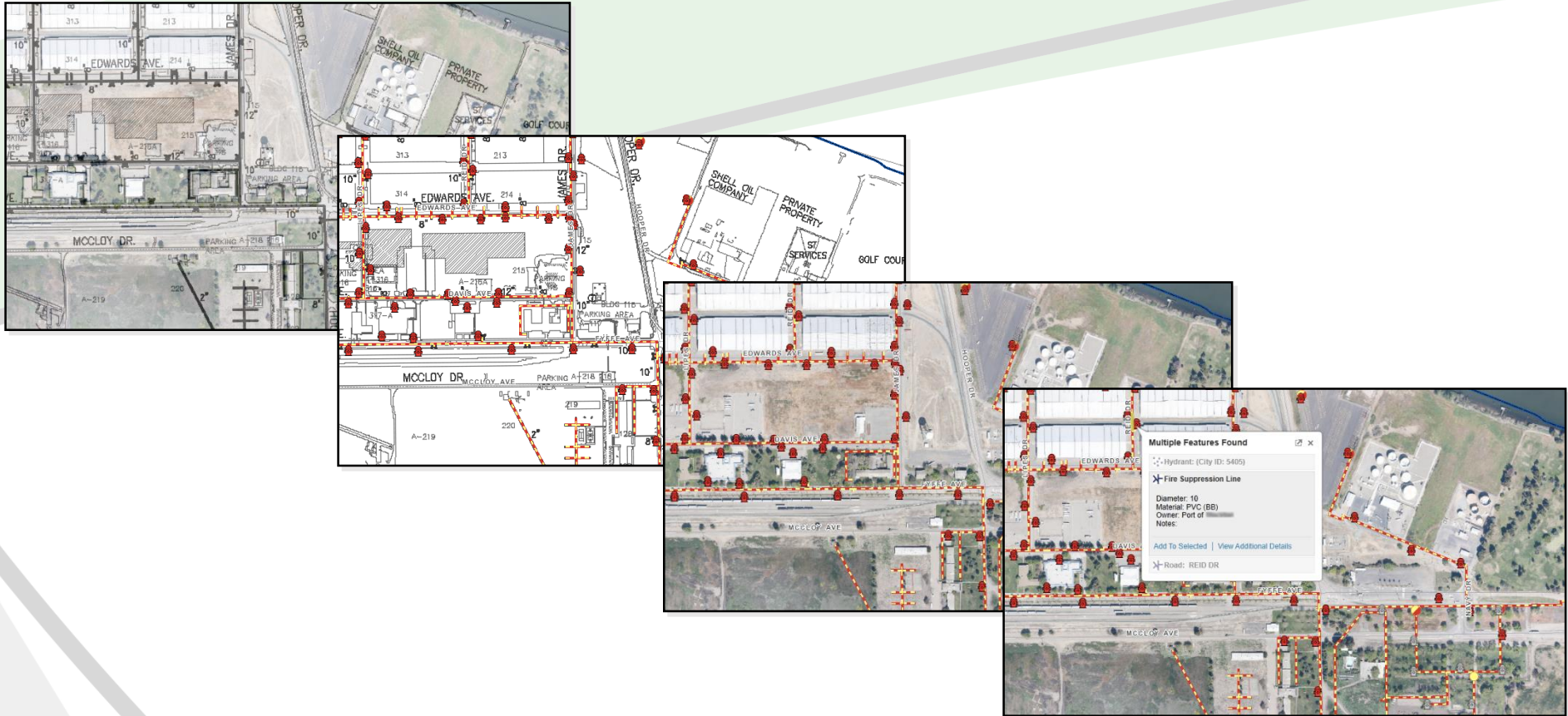
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Data Conversion



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Data Verification

Select Inspection to Configure ✕

Please select an action to perform

Create new inspection

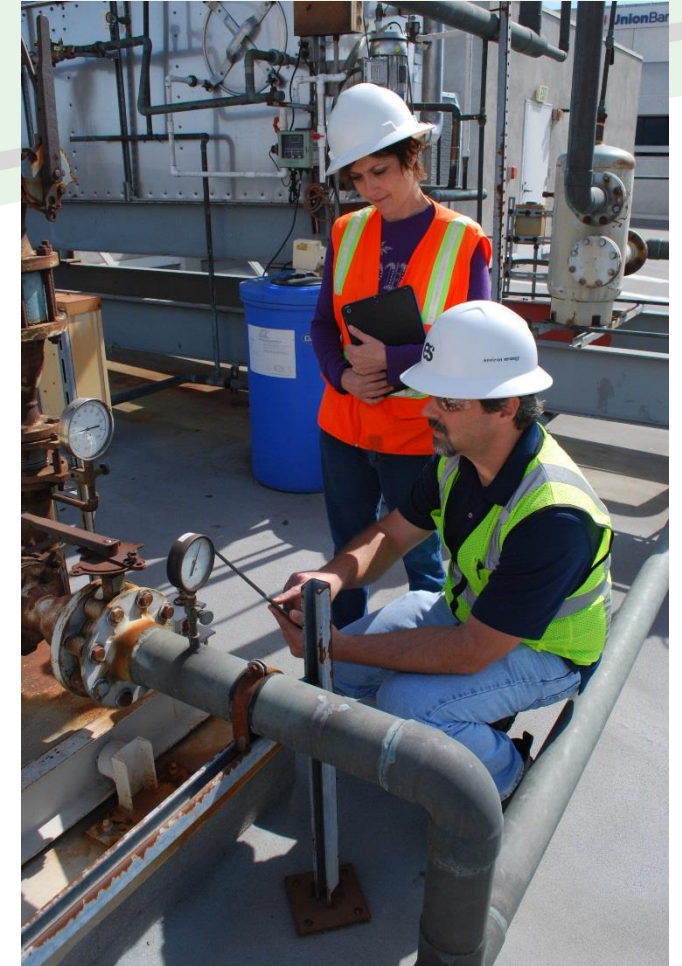

Update existing inspection

Storm Drains

Delete an existing inspection

Storm Drains

[Exit](#) [Next](#)



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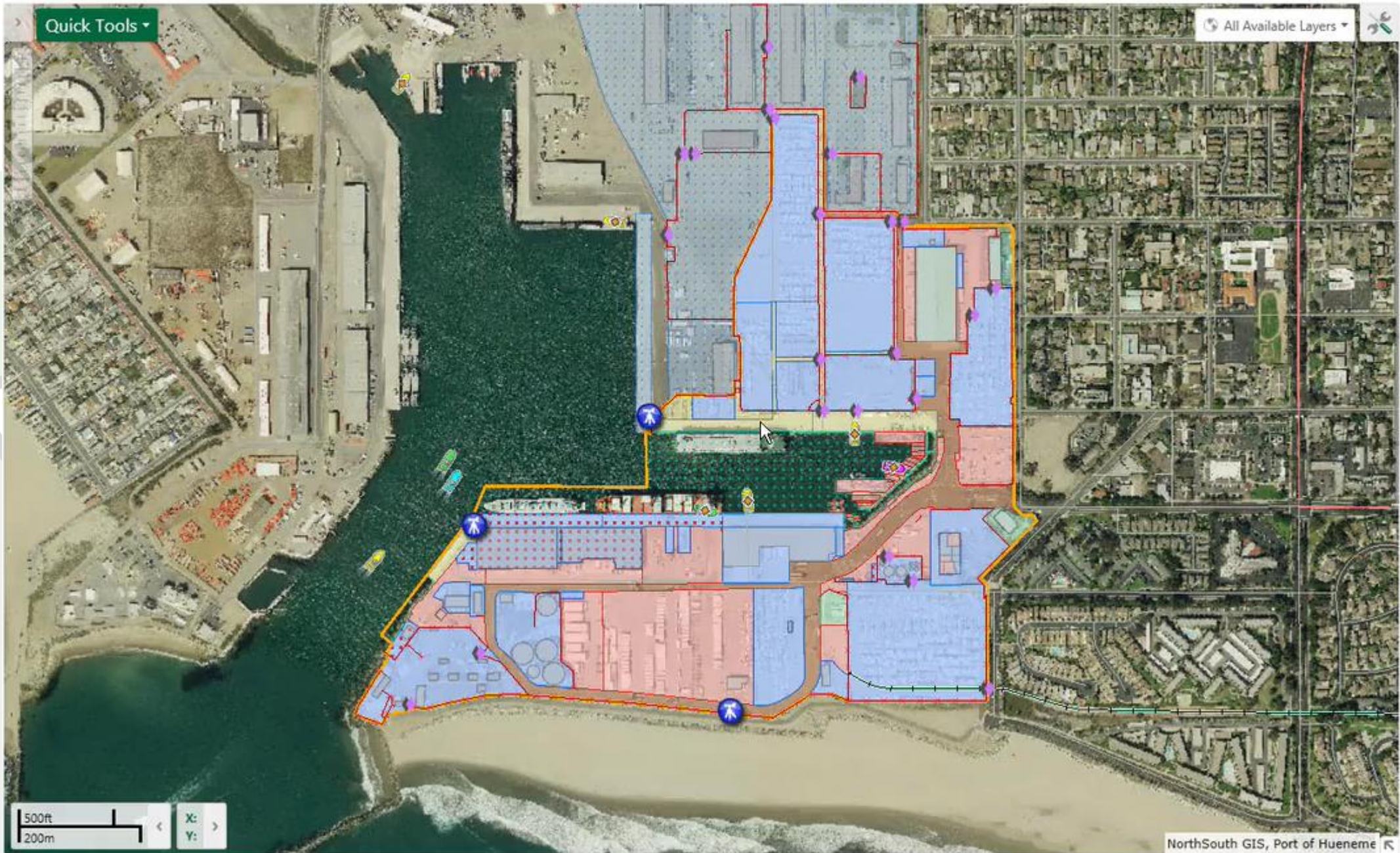
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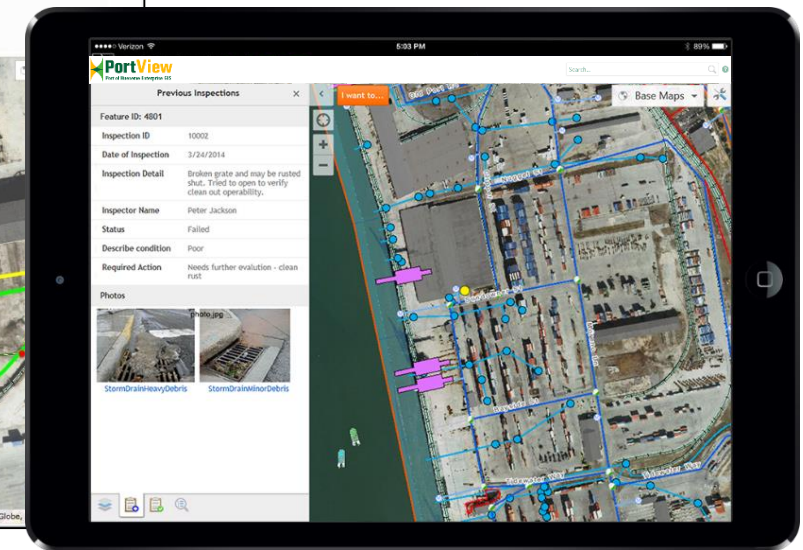
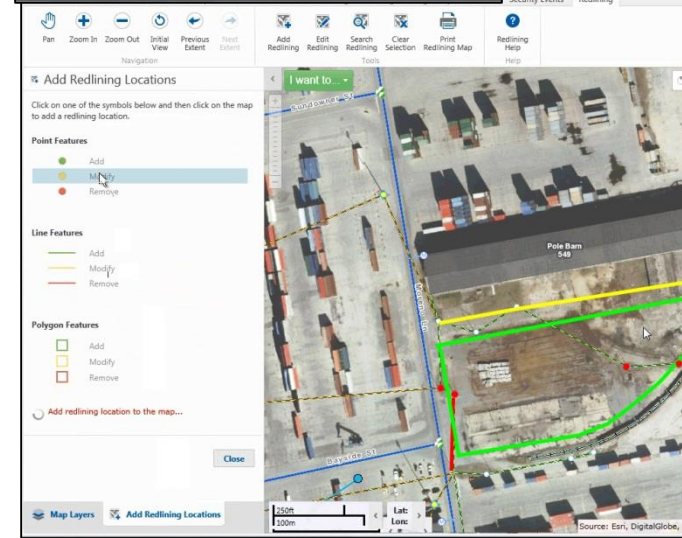
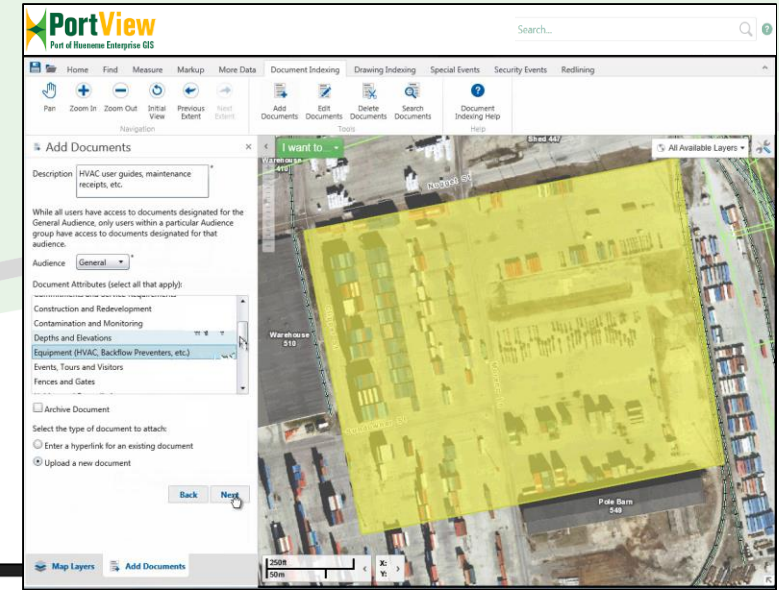
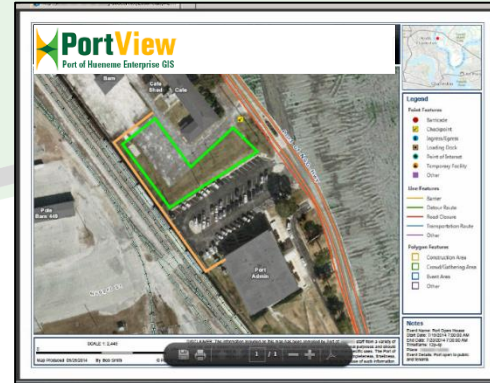
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Applications

- Platform-agnostic map viewers
- AIS vessel data
- ArcGIS Online tools: Collector, Survey 1-2-3, Story Map
- Energy Events
- Energy Documents
- Energy Map Feedback
- Energy Inspections and Incidents



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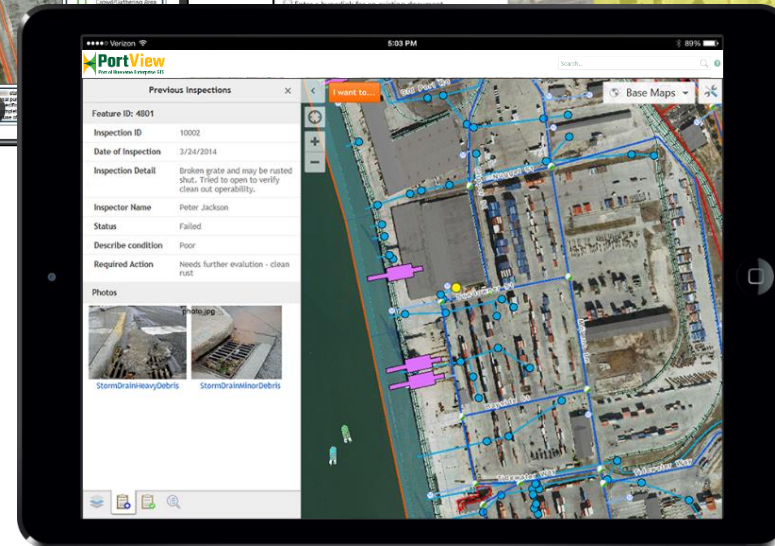
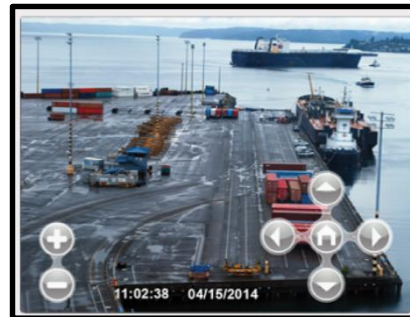
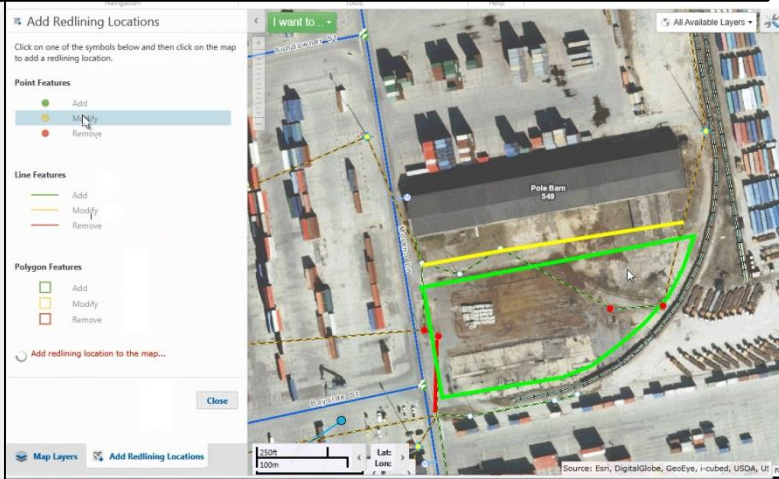
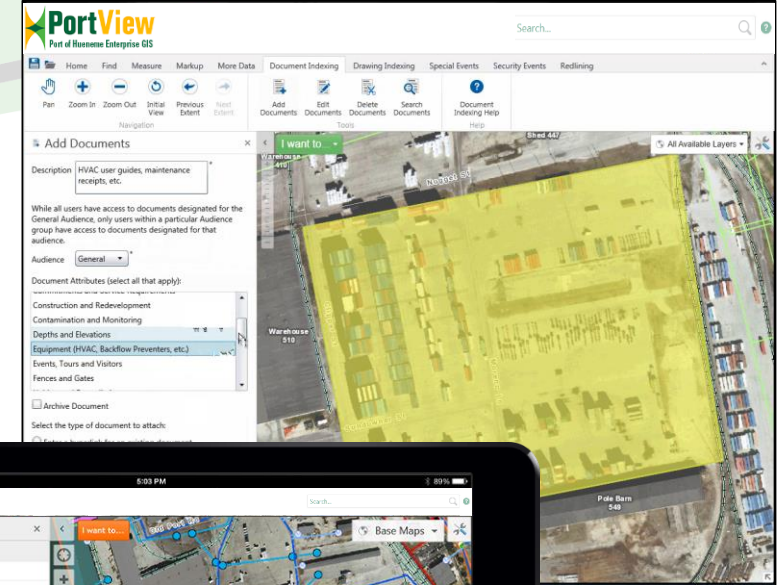
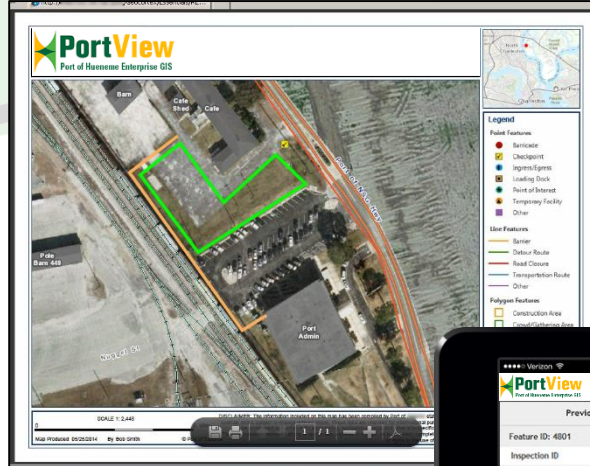
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Geospatial Solutions for Ports



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