



EMI-SIG

Title: Next Generation Emergency Management Tools

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Next Generation Emergency Management Tools

- GIS tools
- GPS tracking
- Smartboard Utilization
- Emergency Management Daily Operations website

Vocabulary

- Glossary of terms

- **ARCIMS** - the software that controls the SRSOC.srs.gov **website**, it allows interaction but no data input. It is the backbone of the website.
- **ARCMap** - the mapping **application** software that allows interaction and posting of data such as keyhole, remote workers, BT2, and other asset management tools.
- **EGIS** - Environmental and Geographic Information Systems, SRS organization responsible for mapping data and development.
- **GIS** - Geographical Information System
- **GPS** - Global Positioning System
- **Keyhole** - interactive 2, 5 and 10 mile projections for emergency response initial assessments. The tool uses real-time wind data to project a potential plume direction.
- **BT2** - bomb threat buffer tool (creates 350 & 900 ft circles around buildings of interest). Used for creating safe zones outside of potential bomb hazard areas.

GIS tools

Geographic Information Systems

Using maps and data layers to
improve emergency response.

Next Generation Emergency Management Tools

Utilizing GIS products for Emergencies

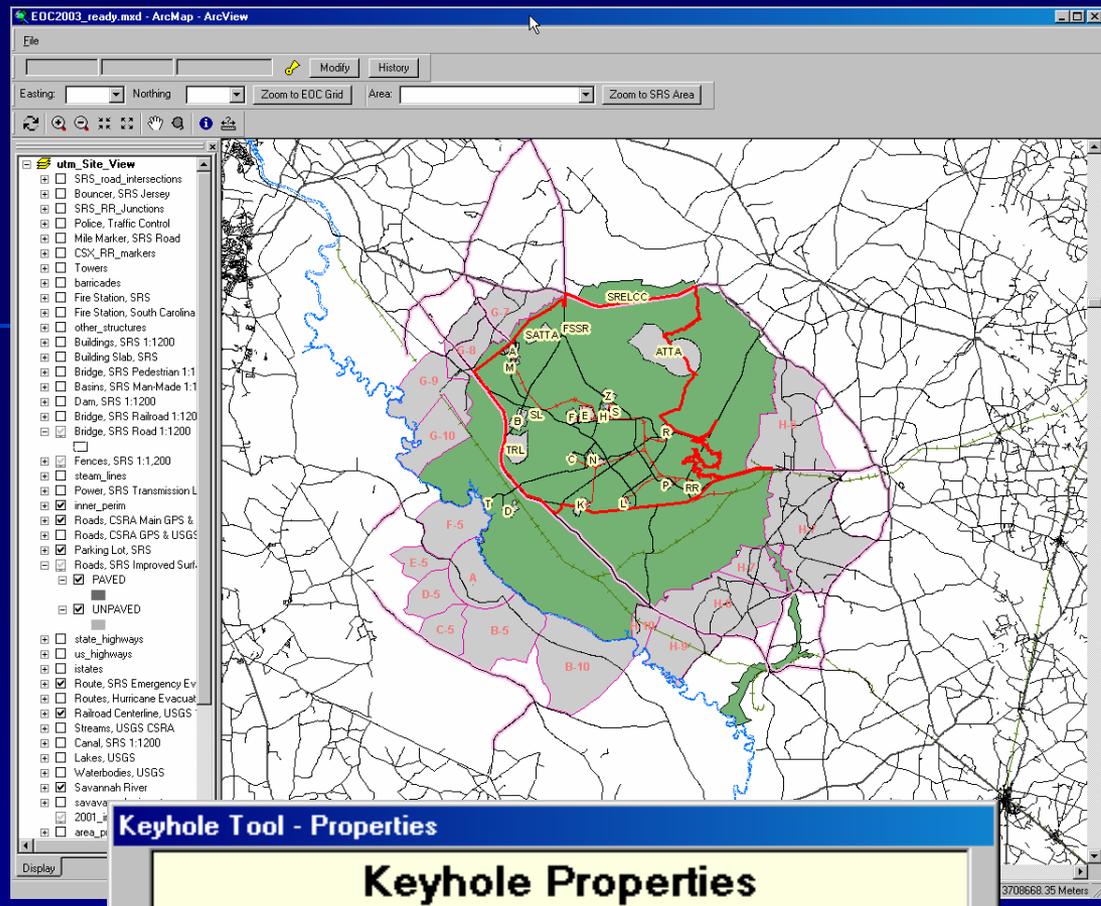
- What we use
 - ESRI ArcView 8.3 (desktop power users)
 - ESRI ArcIMS (website viewers)
- Who uses them
 - ArcView 8.3 (911 Operators, ERO positions, Tech staff, data owners)
 - ArcIMS (12,000 employees, Drill planners, Control rooms, hunters, Forestry Dept.)

GIS Tools

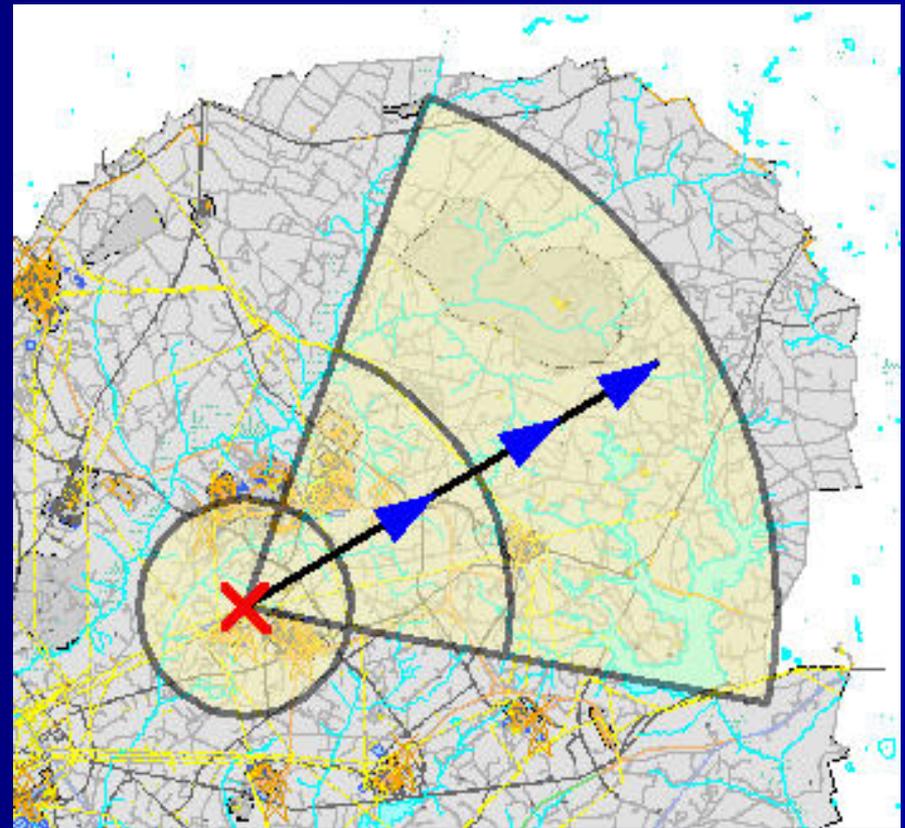
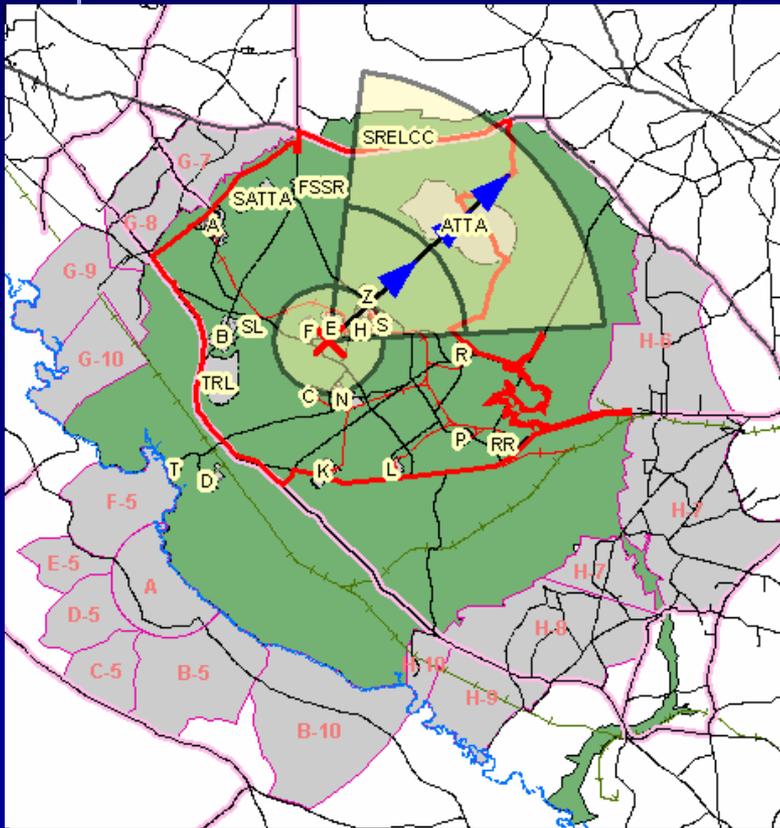
Keyhole Tool

The Keyhole tool was locally developed to project an initial plume path based on real-time weather.

- Only Three clicks
- It auto selects the closest weather tower from 9 possible choices.
- Shows 2, 5 and 10 mile ranges



Keyhole projection:

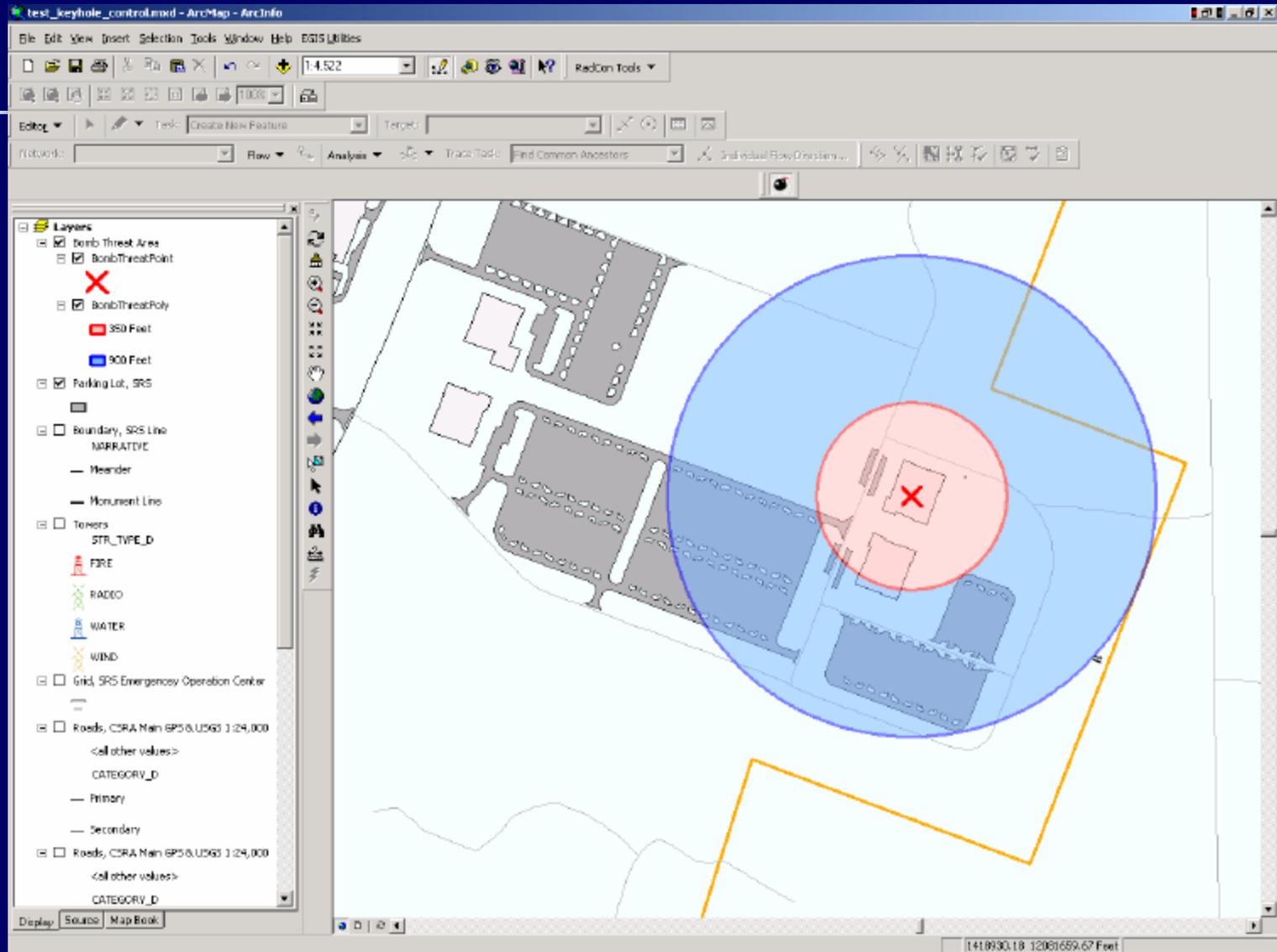


GIS Tools

Bomb Threat Buffer Tool:

- The Bomb Threat Buffer Tool was locally developed to project an protection zone around a building or point on the map.
 - Only Two clicks
 - It auto generates a circle or polygon buffer of 350 and 900 feet.
 - It has capability to query buildings inside of circles for evacuation purposes.
 - Its use can identify safe ad-hoc rally points and further prevent secondary event such as bombing a pre-established rally point.

Bomb Threat Buffer Tool:



GIS Tools

Remote Field Worker Tool:

The remote field worker tool allows us to place employees in the field anywhere on our 310 sq. mile Site and have a representation for that person on the map. This is valuable in accounting for persons during an event that are not in normal populated areas and are outside of PA announcement range.

GIS Tools

Remote Field Worker Tool:

Remote Field Worker Tool - Edit Party Information

New Field Worker Information

User ID	Contact Name	Alt. Contact #
<input type="text"/>	<input type="text"/>	<input type="text"/>

Party Member Count: Vehicle Count:

User ID	Manager's Name	Manager Contact #
<input type="text"/>	<input type="text"/>	<input type="text"/>

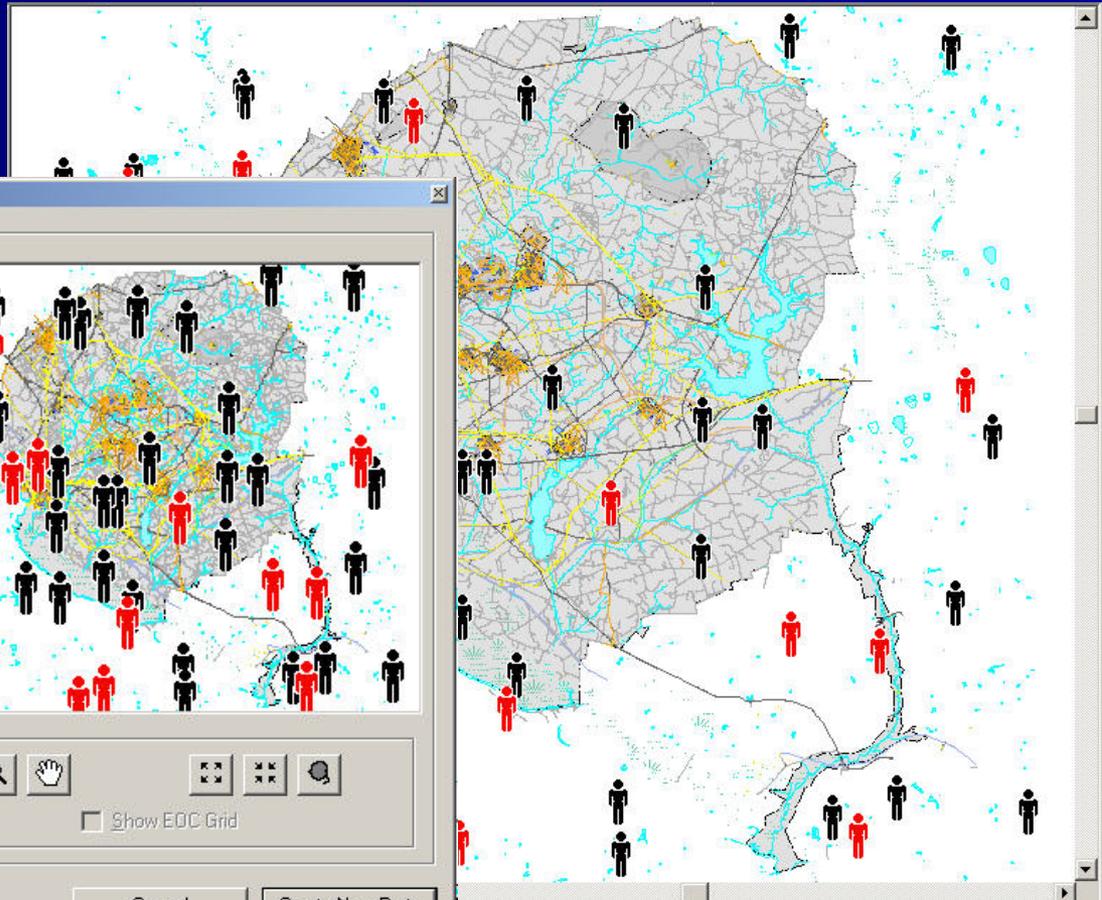
Logged Date/Time: Est. Return Date/Time:

Location Easting: Location Northing:

Navigation

SRS Area:

EOC Grid: Show EOC Grid



GPS Tracking

Procurement Initiative to Track
Delivery Vehicles

GPS Tracking

- Procurement's Asset management group is seeking a GPS based solution to replace the personal escort of shipping trucks to the warehouse at 731-N
- Currently these drivers meet procurement professionals at the New Ellenton barricade for verification and are escorted by a separate vehicle to 731-N and return to the barricade.

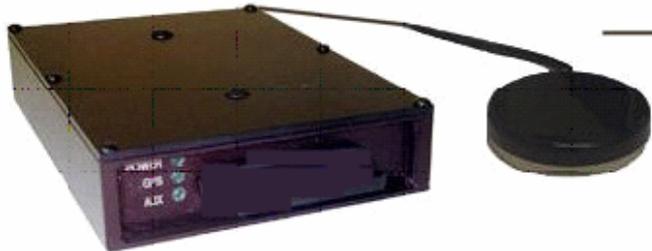
Benefits of GPS Tracking

- Integrated communications and tracking within SRSOC
- 3 FTE workload is shifted back to their work
- Eliminating time wasted waiting at gate between shipments
- Save Money, \$300,000 is estimated current expense for this process
- Maintenance and use costs for 3 vehicles, 3 radios
- Increased security by SRSOC monitoring

The Tracking Solution

GPRS unit gives location, time, speed over cellular channel

Locked in a Pelican waterproof case. Magnetic strips on the case and a cable lock attached to vehicle.



Alltel tower in C-Area

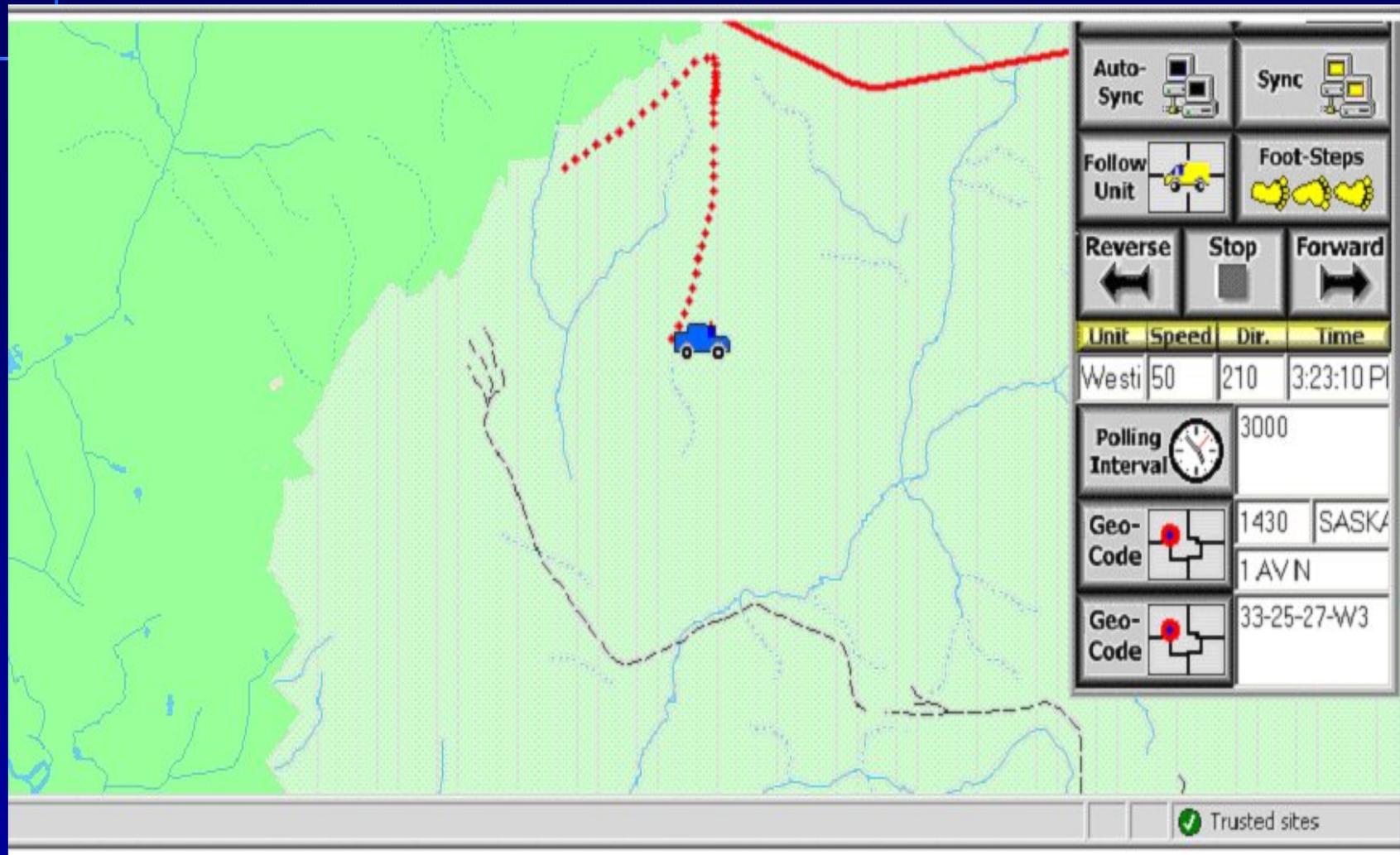


Goes to webserver and database



911 Center views via web browser over the Internet

SRSOC Operators View



The interface displays a map with a blue vehicle icon and a red dotted path. The control panel on the right includes the following elements:

- Auto-Sync** and **Sync** buttons with computer icons.
- Follow Unit** button with a vehicle icon.
- Foot-Steps** button with footprint icons.
- Reverse** button with a left arrow icon.
- Stop** button with a square icon.
- Forward** button with a right arrow icon.
- Unit** dropdown menu showing "Westi".
- Speed** field showing "50".
- Dir.** field showing "210".
- Time** field showing "3:23:10 PM".
- Polling Interval** field showing "3000" with a clock icon.
- Geo-Code** field showing "1430" and "SASKA" with a location pin icon.
- Geo-Code** field showing "1 AVN" with a location pin icon.
- Geo-Code** field showing "33-25-27-W3" with a location pin icon.

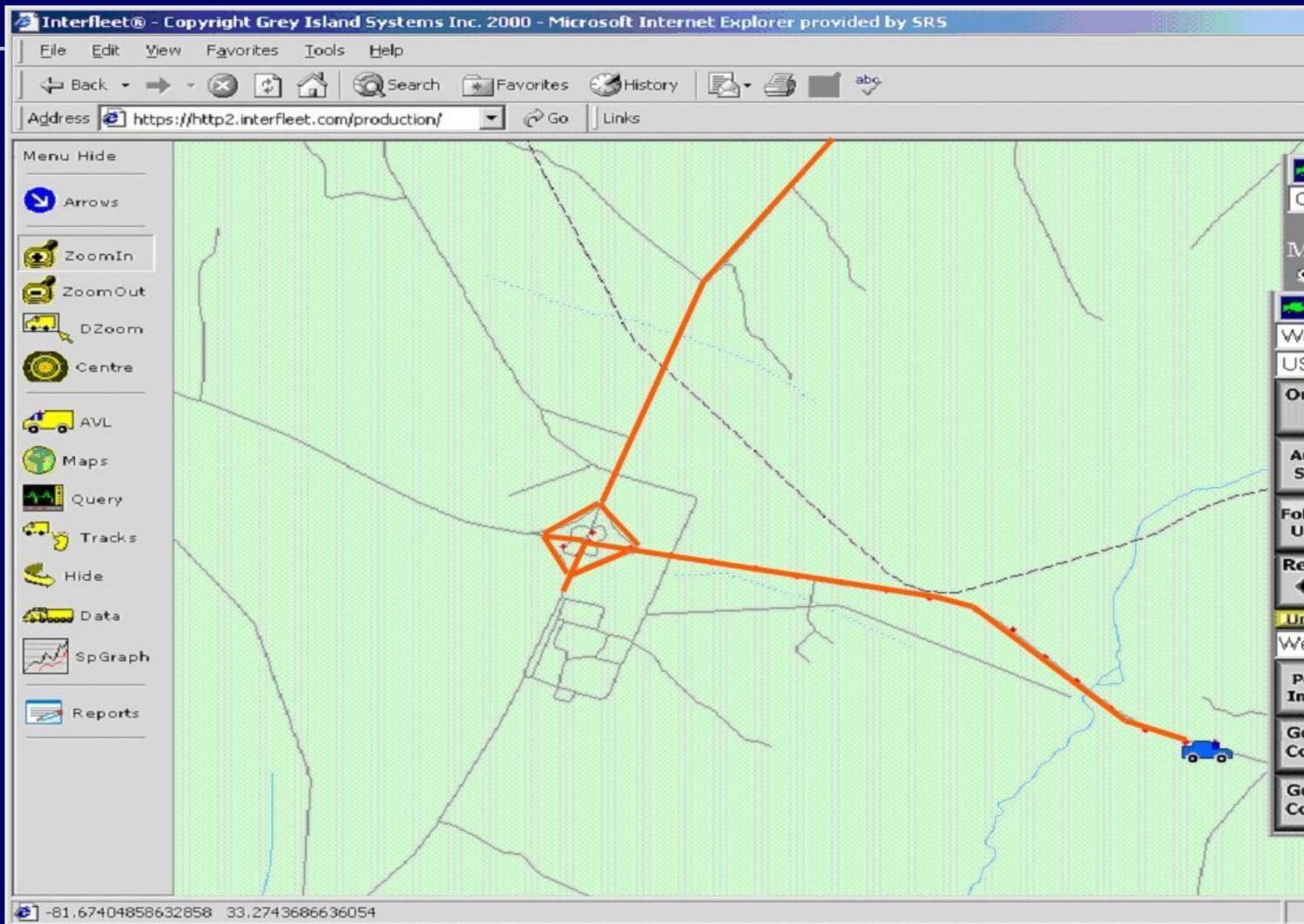
At the bottom right, there is a **Trusted sites** indicator with a green checkmark.

A geo-fence

- A geo-fence allows a protection zone to be created for the vehicle path
- If a vehicle leaves the defined path the web browser will pop-up an alarm notification box and sound alarm.
- A Law Enforcement vehicle can be dispatched.



A geo-fence for tracking units



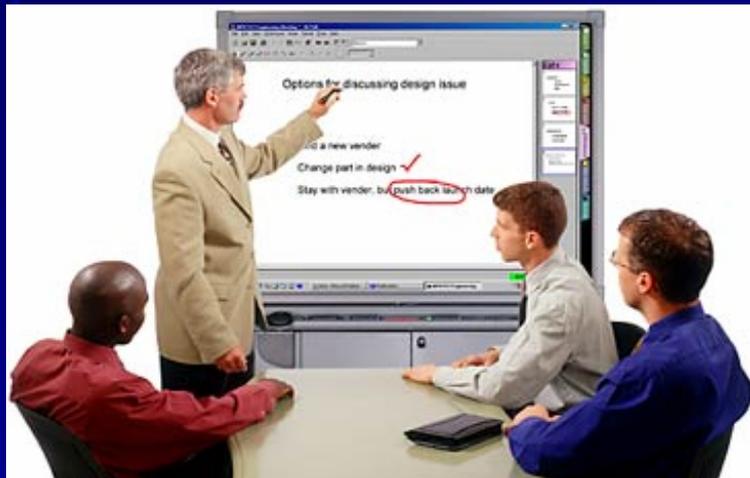
Smartboard Utilization

The Smartboard allows for writing on the screen, taking electronic notes, strategic map plans, etc.

Overview of Smart Board

- The Smart Board is a user interactive touch screen using 4 corner cameras to interpret a finger or touch device as a mouse. The software included with the screen interacts from a laptop wired by a serial cable. Functionality includes notebook writing, a video player, a keyboard, floating tools for drawing on the screen, and a control panel for adjusting features.

Smart Board



Emergency Management Daily Operations website

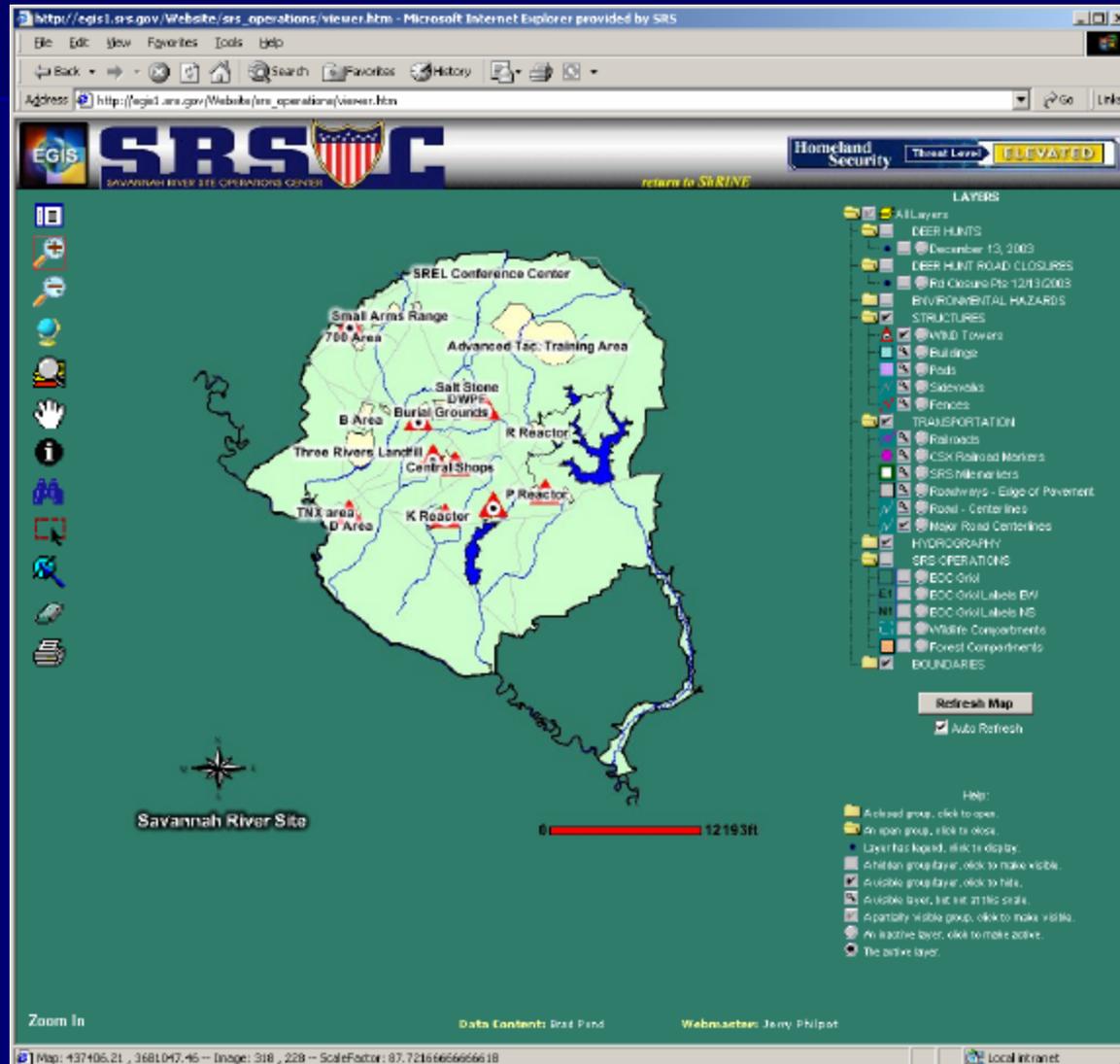
SRSOC.SRS.GOV

Emergency Management Daily Operations website

- The website which is located at <http://srsoc.srs.gov> allows users to adjust their travel routes, conduct building queries, retrieve local weather tower data, road information, and other day specific information. The system also allows zoom-in, zoom-out, and printing of the customized maps created by the user combined with the most up to date geography available. This service is listed on the top level of our intranet "ShRINE" for the employees to access quickly.

The website

- <http://srsoc.srs.gov>
- Available to all employees
- Avg. 8000 hits per month
- Customizable map layers, printable maps for field use
- Emergency Announcements



The screenshot shows a Microsoft Internet Explorer browser window displaying the SRSOC website. The address bar shows the URL: http://egis1.srs.gov/Website/srs_operations/viewer.htm. The website header includes the SRSOC logo and a "HomeLand Security" banner with a "Threat Level" indicator set to "ELEVATED".

The main content area features a map of the Savannah River Site. The map is titled "Savannah River Site" and includes a scale bar (0 to 12193ft) and a north arrow. The map displays various geographical features and infrastructure, including:

- SREL Conference Center
- Small Arms Range
- 700 Area
- Advanced Tac. Training Area
- Salt Stone D/WPP
- Burial Grounds
- R Reactor
- B Area
- Three Rivers Landfill
- Central Shops
- P Reactor
- TKX area
- D Area
- K Reactor

On the right side of the map, there is a "LAYERS" panel with a tree view of map layers. The layers are organized into several categories:

- All Layers**
 - DEER HUNTS
 - December 13, 2003
 - DEER HUNT ROAD CLOSURES
 - Rd Closure Pts 12/13/2003
 - ENVIRONMENTAL HAZARDS
 - STRUCTURES
 - W&D Towers
 - Buildings
 - Posts
 - Sidewalks
 - Fences
 - TRANSPORTATION
 - Railroads
 - CSX Railroad Markers
 - SRS Mile markers
 - Roadways - Edge of Pavement
 - Road - Center lines
 - Major Road Centerlines
 - HYDROGRAPHY
 - SRS OPERATIONS
 - ECC Driv
 - ECC Driv Labels BW
 - ECC Driv Labels NS
 - W&D Compartments
 - Forest Compartments
 - BOUNDARIES

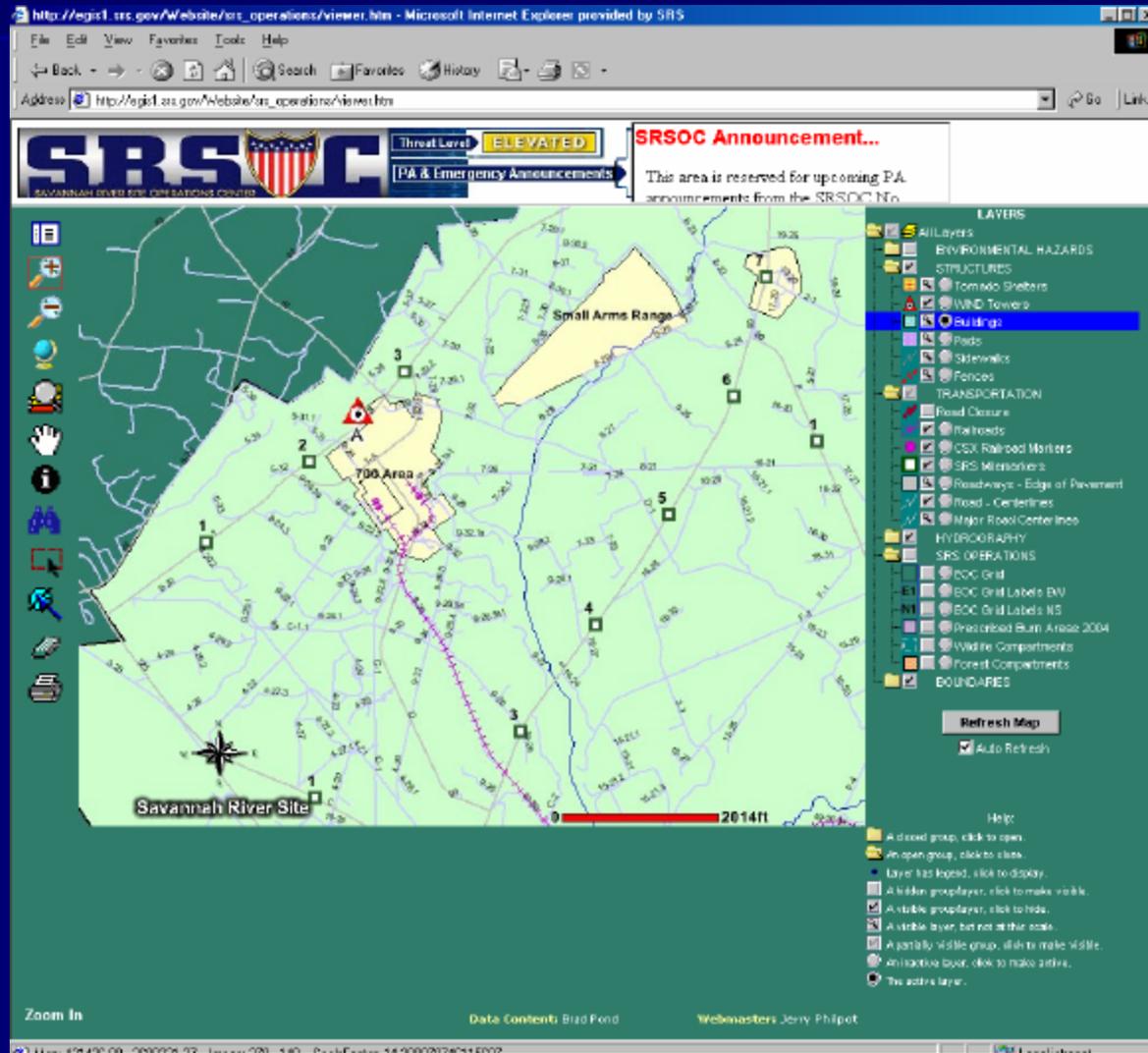
Below the layers panel, there are buttons for "Refresh Map" and "Auto Refresh". A "Help" section provides instructions for interacting with the layers:

- Active group, click to open.
- On open group, click to close.
- Layer has legend, click to display.
- Active group layer, click to make visible.
- Visible group layer, click to hide.
- Visible layer, click to hide.
- Active layer, click to make active.
- On inactive layer, click to make visible.
- On inactive layer, click to make active.
- The active layer.

At the bottom of the browser window, the status bar shows: "Map: 437405.21, 3681047.46 -- Image: 318, 228 -- ScaleFactor: 87.72166666666618".

Find site infrastructure points

- Using the website, zoom into areas.
- Turning on and off themes and using information tool.



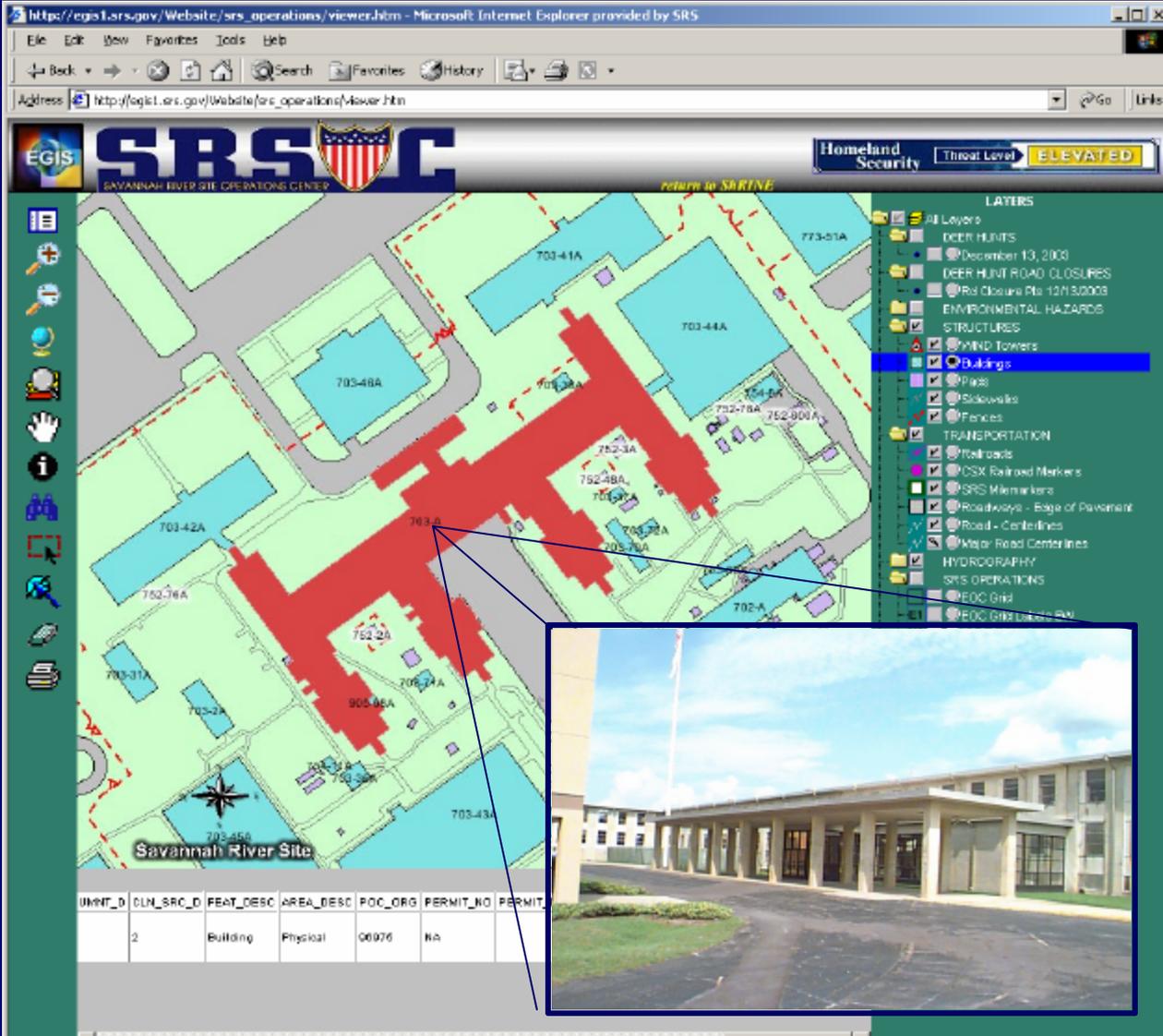
The screenshot shows a web browser window displaying the SRSOC website. The address bar shows the URL: http://regist.srs.gov/Website/srs_operations/viewer.htm. The page features the SRSOC logo and a "Threat Level" indicator set to "ELEVATED". A "PA & Emergency Announcements" button is visible, along with a "SRSOC Announcement..." box stating: "This area is reserved for upcoming PA announcements from the SRSOC No...".

The main content is a map of the Savannah River Site. The map shows various infrastructure points, including buildings, roads, and railroads. A legend on the right side of the map lists the following layers:

- AllLayers
- ENVIRONMENTAL HAZARDS
- STRUCTURES
- Tomlin Shelters
- WIND Towers
- Buildings
- Pads
- Stairwells
- Fences
- TRANSPORTATION
- Road Closure
- Railroads
- CSX Railroad Markers
- SRS Milestones
- Roadways - Edge of Pavement
- Road - Centerlines
- Major Road Centerlines
- HYDROGRAPHY
- SRS OPERATIONS
- BOC Grid
- BOC Grid Labels BW
- BOC Grid Labels NS
- Proscribed Burn Area 2004
- Wildlife Compartments
- Forest Compartments
- BOUNDARIES

At the bottom of the map, there is a "Zoom In" button and a scale bar showing 0 to 201411. The footer of the page includes "Data Content: Brad Ford" and "Webmasters: Jerry Philpot".

Do basic queries (buildings)



http://egis1.srs.gov/Website/srs_operations/viewer.htm - Microsoft Internet Explorer provided by SRS

Address: http://egis1.srs.gov/Website/srs_operations/Viewer.htm

EGIS SRS SC SAVANNAH RIVER SITE OPERATIONS CENTER

Homeland Security Threat Level **ELEVATED**

return to SR SITE

LAYERS

- All Layers
- DEER HUNTS
 - December 13, 2003
 - DEER HUNT ROAD CLOSURES
 - Rd Closure Pls 12/13/2003
- ENVIRONMENTAL HAZARDS
- STRUCTURES
 - WIND Towers
 - Buildings
 - Piles
 - Sidewalks
 - Fences
- TRANSPORTATION
 - Railroads
 - OSK Railroad Markers
 - SRS Milemarkers
 - Roadways - Edge of Pavement
 - Road - Centerlines
 - Major Road Centerlines
- HYDROGRAPHY
- SRS OPERATIONS
 - EOC Grid
 - EOC Grid Labels - PLAN

Savannah River Site

UNNT_D	CLN_SRC_D	FEAT_DESC	AREA_DESC	POC_ORG	PERMIT_NO	PERMIT
2		Building	Physical	06076	NA	

- Find a building quickly.
- Pictures of buildings, Fire Dept. Preplans.
- Print event details for distribution

Integration

- How the website and Smartboard fit together
 - The Smart Board allows the user to operate the website in Internet Explorer with a finger, find data related to an event with quick use, and annotate data on the screen.

Wrap-up

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