# Esri Roads and Highways

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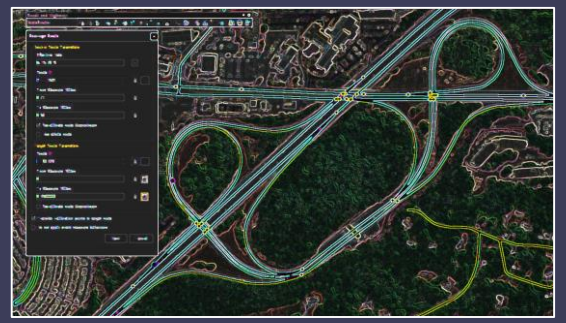
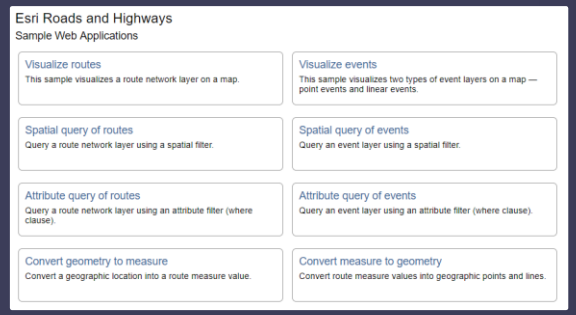
# Esri Roads and Highways Solution Overview

## Desktop



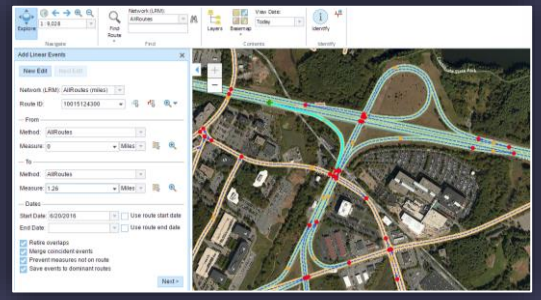
- LRS Network editing
- LRS management tools
- Geoprocessing tools
- Internationalized

## Enterprise




- LRS web services
- Developer API samples
- Portal security and identity

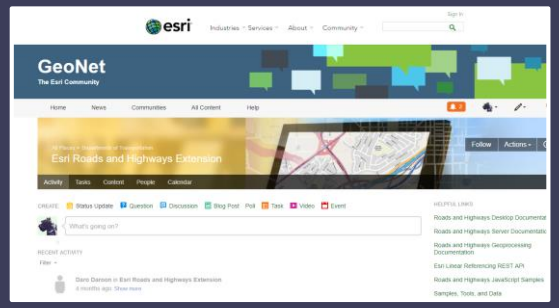
## Web Apps



- Event Editor
  - Web based Event editing
  - Address Management
- Roadway Reporter
  - Mileage reports
  - Road Log reports

- Bookmarks and saving Web Maps new in Event Editor for version 10.5.1

## Community




- GeoNet
- GitHub
- Esri Support Services
  - Full support for solution
  - Log a support ticket on MyEsri

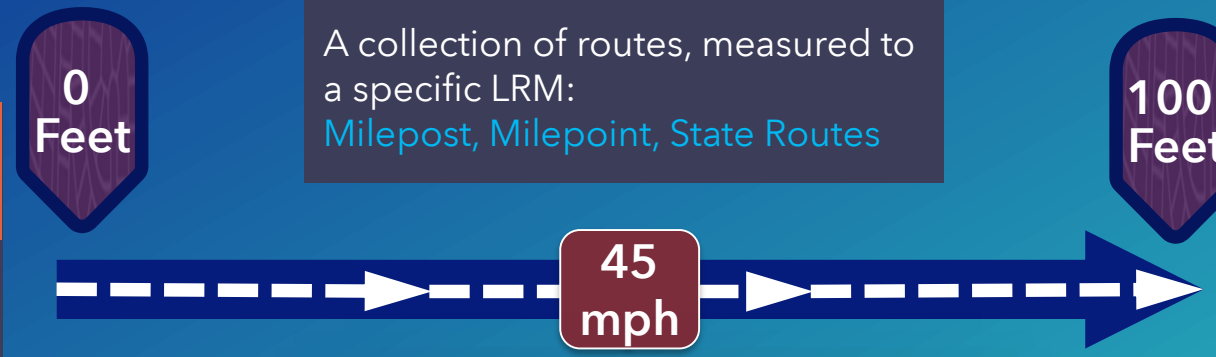
# Building Blocks of a Linear Referencing System (LRS)

## Network

A collection of routes, measured to a specific LRM:
Milepost, Milepoint, State Routes

## Centerline

Geometry and location of the routes




## Event

65

Stores characteristics, incidents, and assets:
Access Control, Speed Limit, Number of Lanes, Surface Type

## Calibration Point

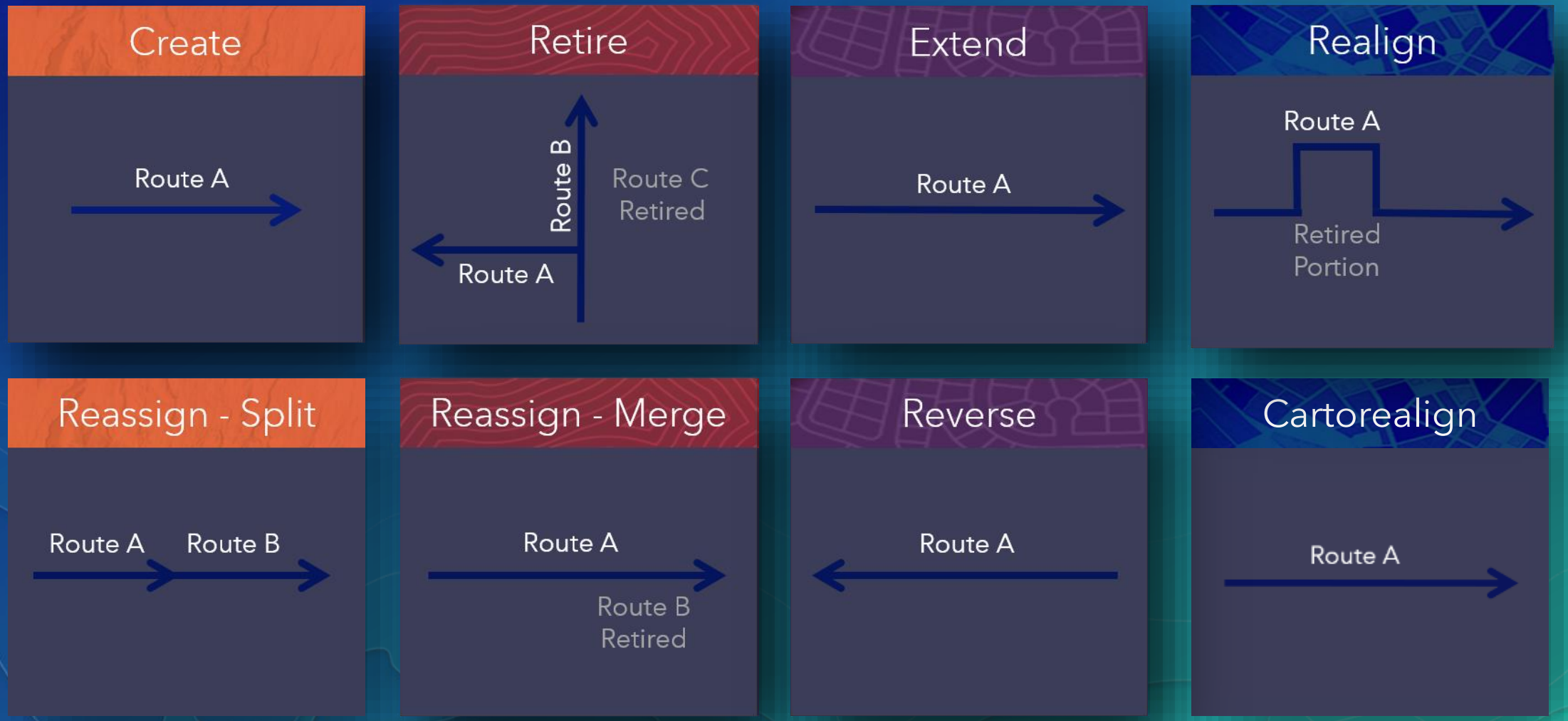
5

Defines the measure for a specific location on a route

# Roads and Highways Desktop

LRS Management and Route Editing

# LRS Route Editing Tools



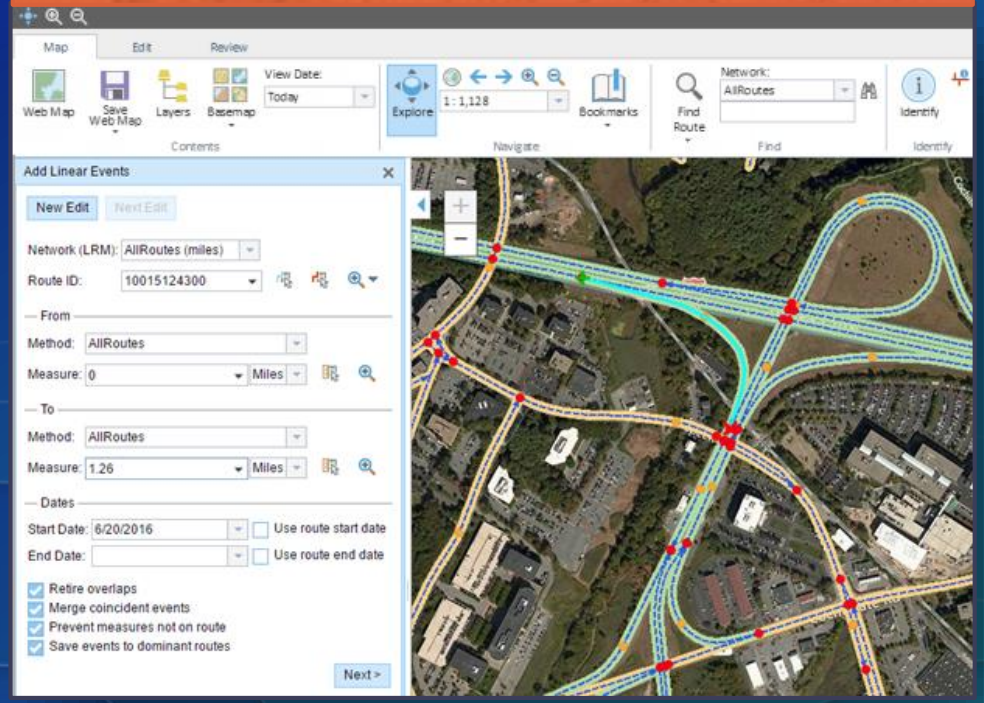
# Event Editor

Event Editing Web Application

# Event Editor

Take advantage of enterprise geodatabase versioned editing directly in your web browser

## Browser Experience




## Selection

- Select By:
  - Route
  - Attribute
  - Geometry
  - Proximity
- View Results:
  - Single Layer
  - Attribute Sets

## Editing

- Line Events
- Point Events
- Event Attributes
- Attribute Set Results

## Quality Control

- Gaps
- Overlaps
- Invalid Measures
- Data Reviewer Batch Checks

# Event Location Model

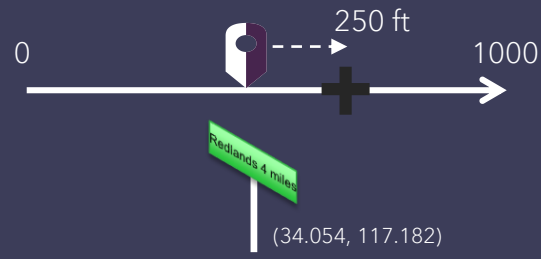
Flexibility in event location referencing

## Route and Measure

## Referent and Offset

## Stationing

## Co-ordinates and Offset



# Roads and Highways

Demo

# Event Behaviors

After route edits, measure behavior rules can be applied to events automatically

## Before Editing

| From Measure | To Measure |
|---|---|
| 0 | 10 |

Or

## Stay Put

Preserves the geographic location. Measures may change.

| From Measure | To Measure |
|---|---|
| 5 | 15 |

Or

## Retire

Preserves the geographic location and measures. Event gets retired.

| From Measure | To Measure |
|---|---|
| Event Retired | |

## Move

Preserves the measures. Geographic location may change.

| From Measure | To Measure |
|---|---|
| 0 | 10 |

# Roads and Highways

Demo

# Geoprocessing Tools

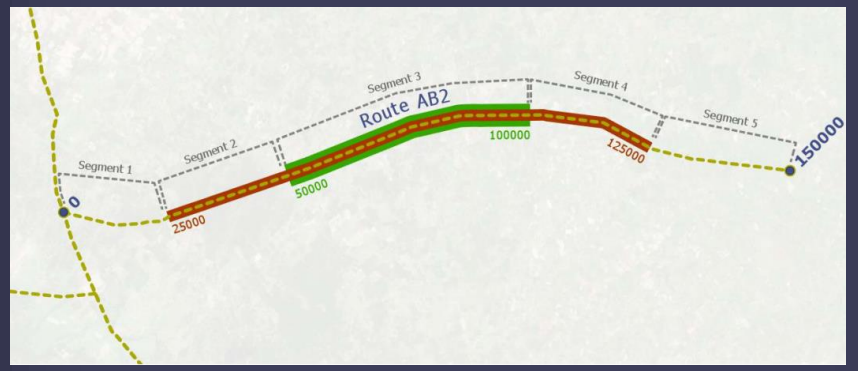
## Toolbox

- Append Events
- Calculate Route Concurrencies
- Convert M-value Units Of Measure
- Convert Table to CSV File
- Detect Gaps For Linear Events
- Detect Measures Out Of Range
- Detect Non-monotonic Routes
- Detect Overlaps For Linear Events
- Generate Events
- Generate Routes
- Overlay Route Events
- Relocate Events
- Translate Events From LRM To LRM
- Update Calibration Points
- Update Intersection Points

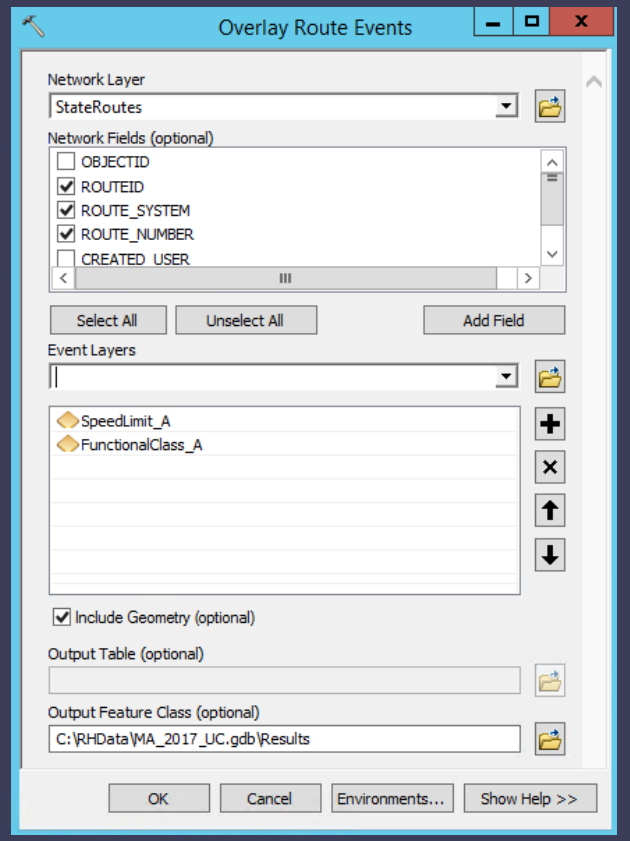
## Usage

### Input

### Output




## Tool

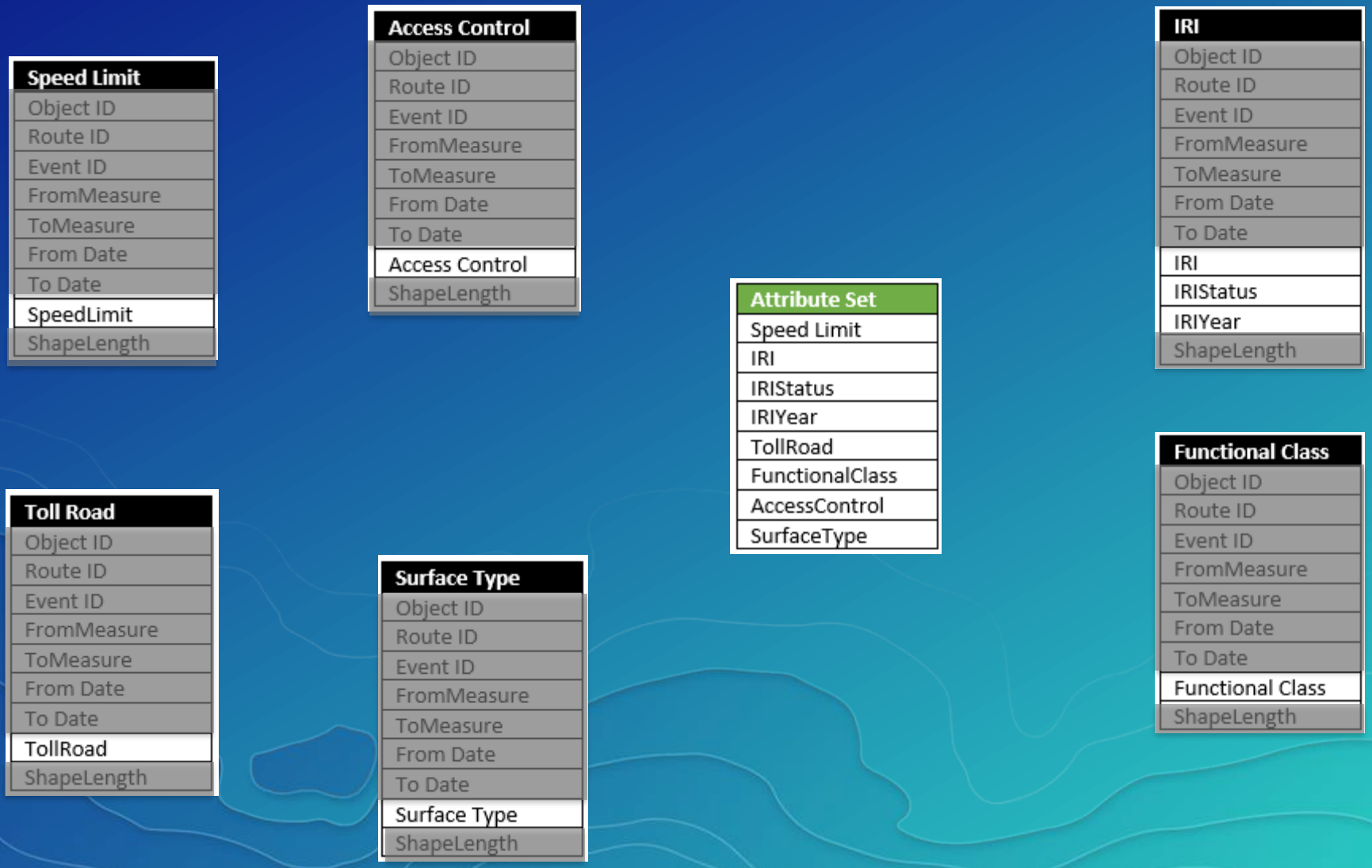


# Event Editor

Demo

# Attribute Sets

Collection of linear event attribute fields that can be edited as a logical group

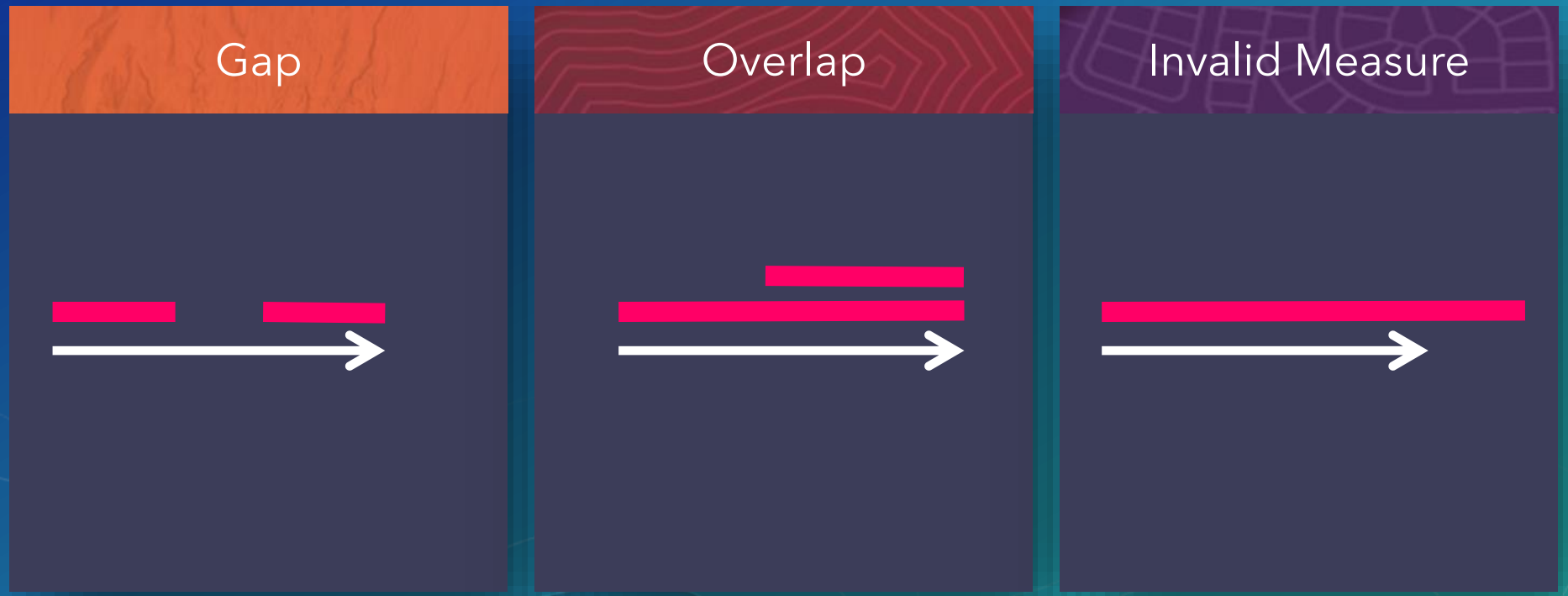


# Event Editor

Demo

# Event Quality Checks

Checks to detect gaps, overlaps, and invalid measures within Event Editor



# Event Editor

Demo

# Roads and Highways Server

## Linear Referencing capability for ArcGIS Enterprise

## ArcGIS Enterprise

- Mapping
- Query
- Geoprocessing
- Enterprise security
- Scalability
- Identity

## Roads and Highways Server Features

- Event editing
- Coordinate to measures
- Measure to coordinate
- Query attribute sets
- Measure translation
- Measure updates for external systems
- Check events for gaps, overlaps and invalid measures
- Integrated with:
  - ArcGIS Data Reviewer
  - ArcGIS Workflow Manager

# Roads and Highways Server REST API

Developer Solutions and Demo

# Roadway Reporter

Reporting web application

# Roadway Reporter

Reporting available across the enterprise from a web application

## Mileage Report

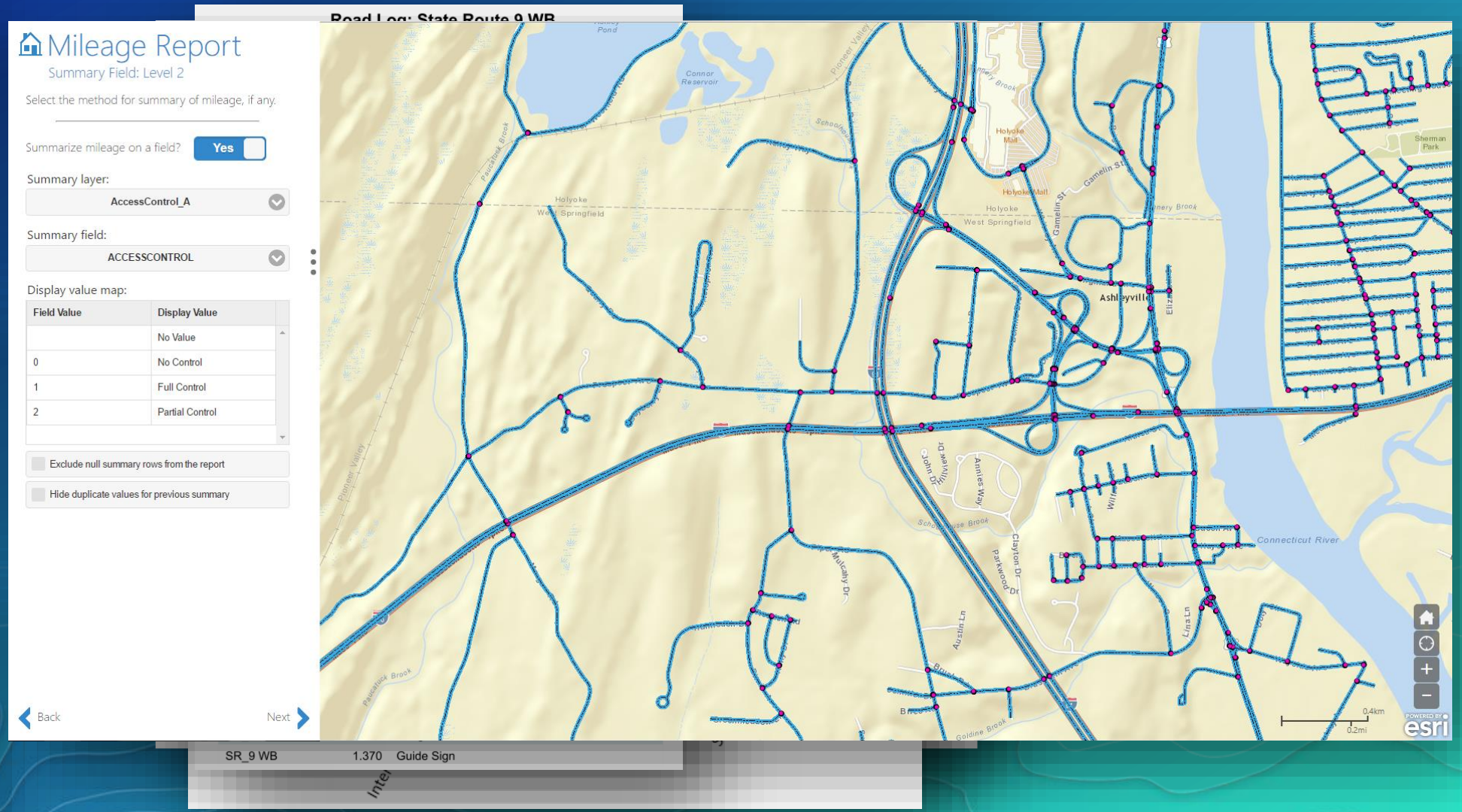
- Mileages for routes and events

## Segment Report

- Dynamically segment event layers into one record set

## Road Log Report

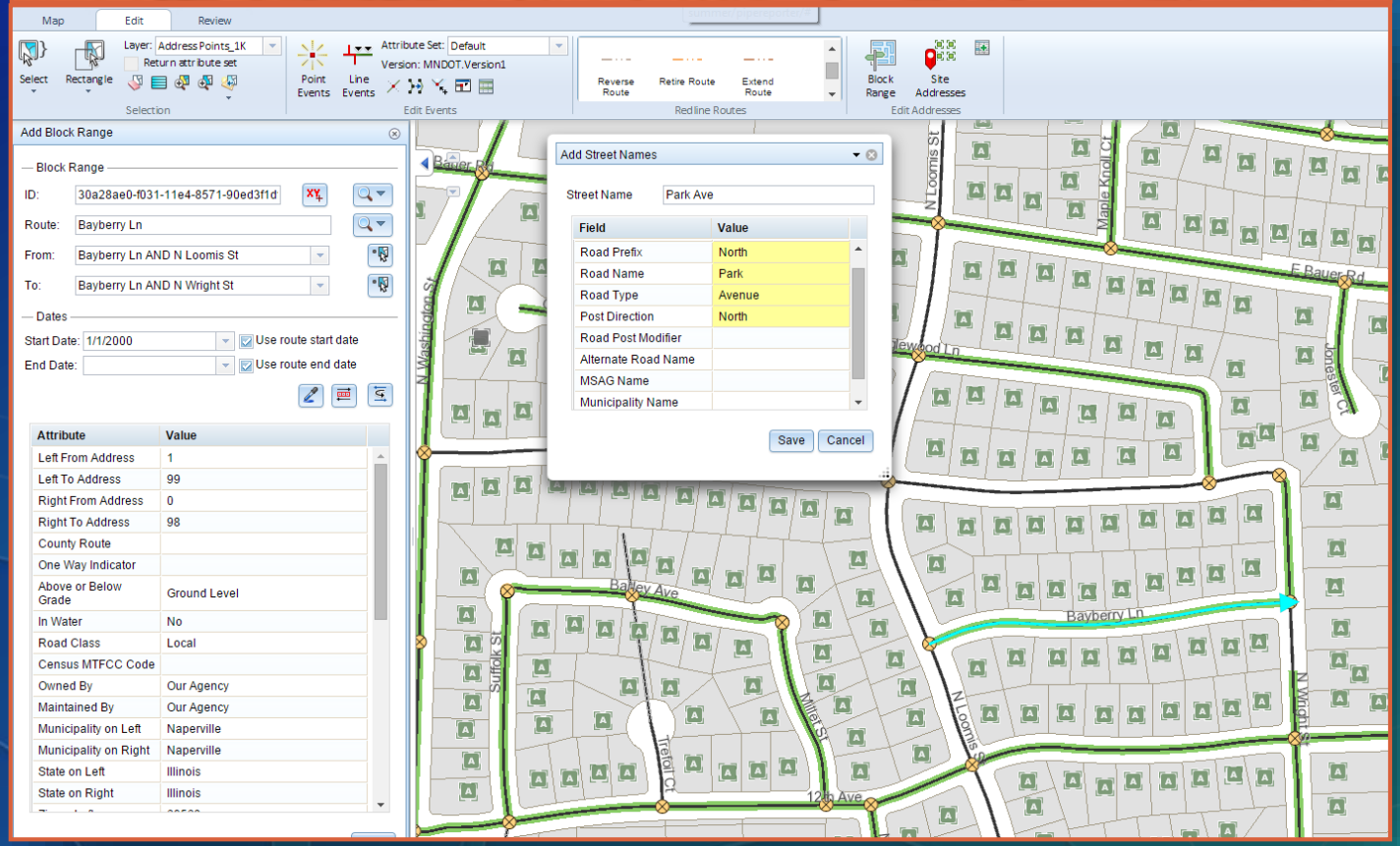
- Logging events that occur  in measure order when traversing a route



# Address Management

## Managing address information using Roads and Highways

### Address Management in your browser




## Editing

- Add/Edit Block Ranges
- Add/Edit Site Address Points
- Add Master Street Names

## Quality Control

- Fishbone Diagrams
- Data Reviewer Batch Checks

# Roads and Highways Community

# Community

## Resources

- HPMS Geoprocessing Tools
  https://goo.gl/tVkjsB
- Sample Web Application
  https://goo.gl/YGXczN
- GeoNet (transportation)
  https://goo.gl/zDoj2f

## Data and Data Models

- Sample Data
  https://goo.gl/t8Dko2
- Roadway Inventory Data Model
  https://goo.gl/Dbb8qE

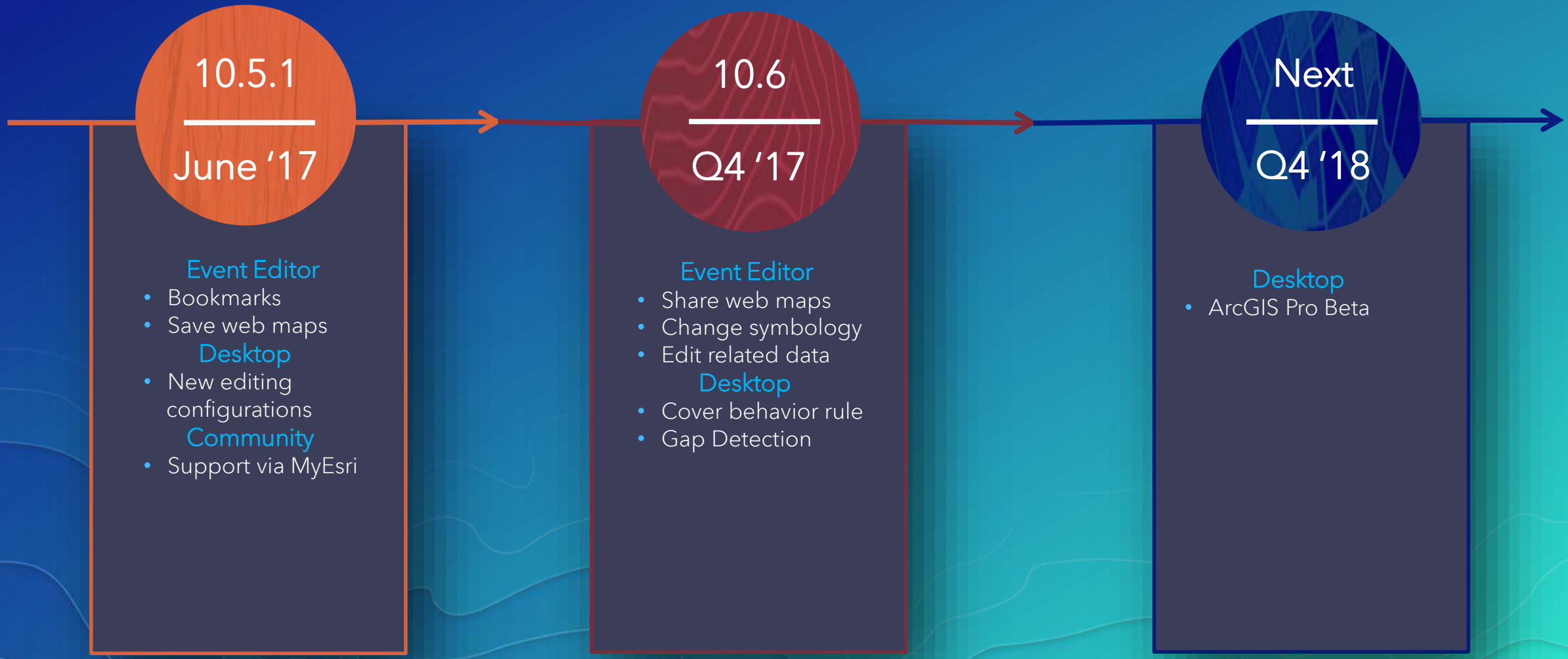
## GitHub

- Address Management
  https://goo.gl/SMFWKT
- Web App Builder sample widget
  https://goo.gl/bJrRRb

## Esri Support Services

- Fully supported solution and extension – Desktop, Enterprise Server, and Web Apps - Domestic and Premium Support

# Esri Roads and Highways Solution Roadmap*




Product releases, dates, and availability are estimates and subject to change

प्रश्न
प्रश्न

# Thank you for attending

Questions?
¿Preguntas?
الأسئلة؟
有问题吗？
Vragen?
Des questions?
Fragen?
प्रश्न?
Le domande?
質問ですか？
Pytania?
Questões?
Вопросов?
Frågor?
คำถาม?
Sorular?
سوالات؟

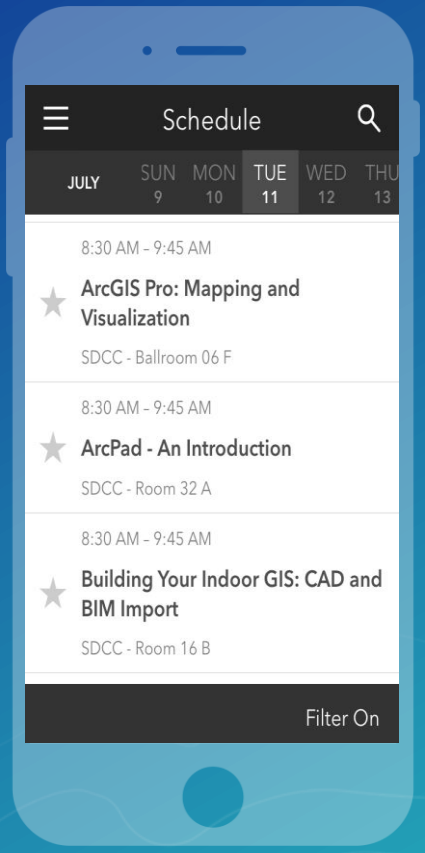
# Please Take Our Survey on the **Esri Events App!**

Esri Roads and Highways: An Introduction
SDCC - Room 31 B

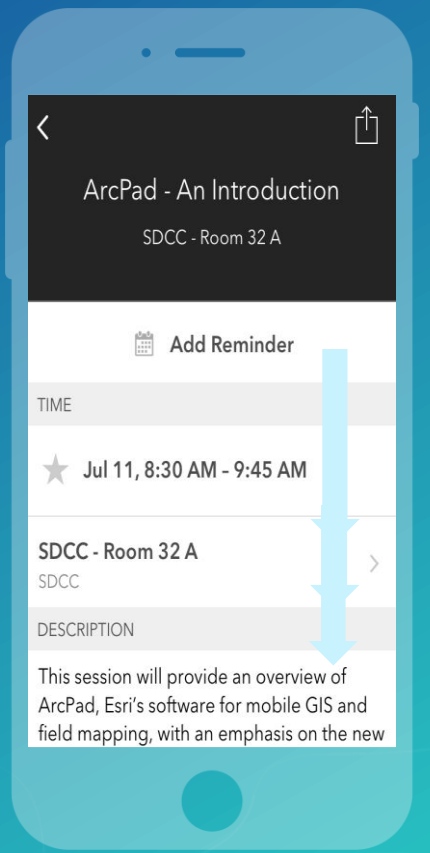
RR Rahul Rakshit  MZ Matthew Ziebarth

## Download the Esri Events app and find your event

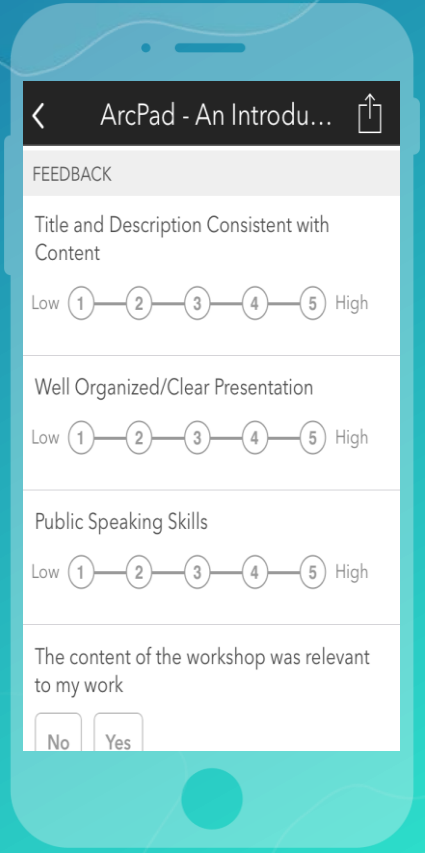
## Select the session you attended




## Scroll down to find the survey




## Complete Answers and Select "Submit"



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