



ArcGIS Pro Editing: Managing Feature Attributes and Related Data

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SEE
WHAT
OTHERS
CAN'T

Agenda

- Overview of managing attributes
- Attributes Pane and Attribute Table
- New capabilities for constraining data (at Pro 2.3 & 2.4)
- New attribute editing tools (at Pro 2.4)
- Working with related features

Additional Resources - Technical Workshops

WORKSHOP	DAY/TIME	LOCATION
<ul style="list-style-type: none">• ArcGIS Pro: Getting the Most out of Your Tables	<ul style="list-style-type: none">• Tuesday 2:30 PM – 3:30 PM• Wednesday 4:00 PM – 5:00 PM	<ul style="list-style-type: none">• SDCC - Room 16 A• SDCC - Room 15 B
<ul style="list-style-type: none">• Geodatabase: Leveraging Relationship Classes	<ul style="list-style-type: none">• Wednesday 2:30 PM – 3:30 PM	<ul style="list-style-type: none">• SDCC – Expo Demo Theatre 04
<ul style="list-style-type: none">• Geodatabase: Ensuring Data Quality with Attribute Rules and Contingent Values	<ul style="list-style-type: none">• Tuesday 1:00 PM – 2:00 PM• Thursday 4:00 PM – 5:00 PM	<ul style="list-style-type: none">• SDCC - Room 31 B/C• SDCC Ballroom 06 E

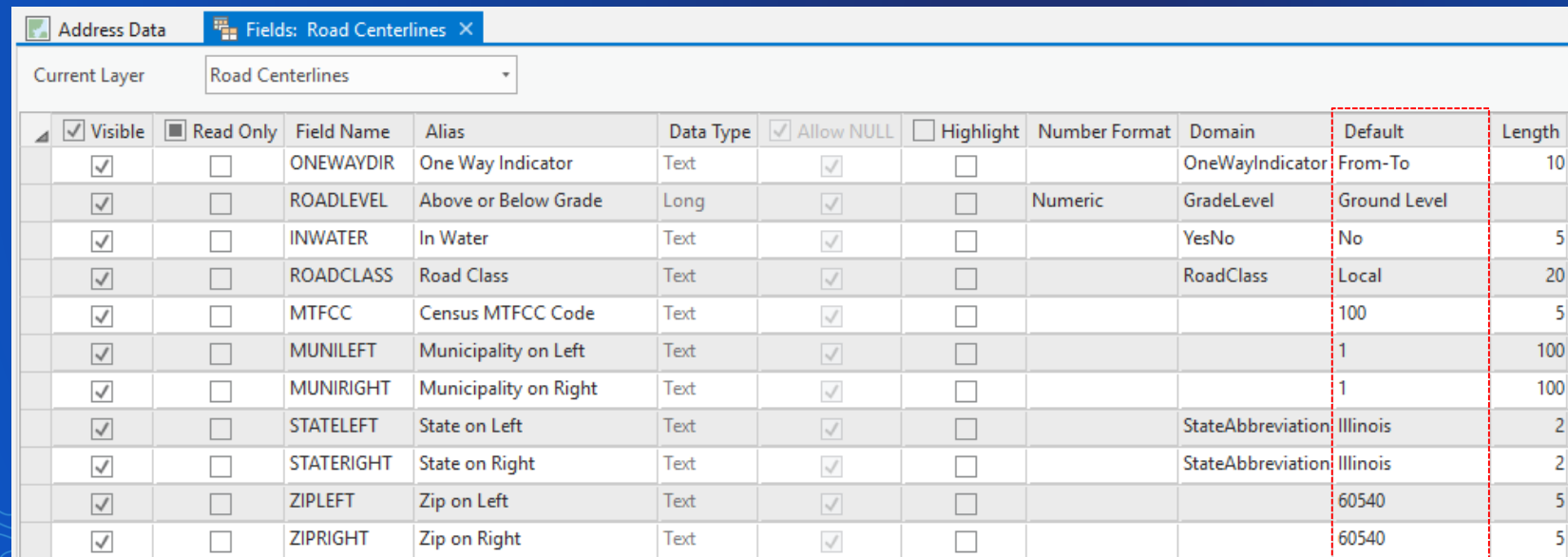


Managing Feature Attributes



Geodatabase Default Values

- Default values provides a good starting point
- Set in the Fields View's Default column



Address Data Fields: Road Centerlines X

Current Layer: Road Centerlines

	<input checked="" type="checkbox"/> Visible	<input type="checkbox"/> Read Only	Field Name	Alias	Data Type	<input checked="" type="checkbox"/> Allow NULL	<input type="checkbox"/> Highlight	Number Format	Domain	Default	Length
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ONEWAYDIR	One Way Indicator	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>		OneWayIndicator	From-To	10
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ROADLEVEL	Above or Below Grade	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric	GradeLevel	Ground Level	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	INWATER	In Water	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>		YesNo	No	5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ROADCLASS	Road Class	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>		RoadClass	Local	20
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MTFCC	Census MTFCC Code	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			100	5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MUNILEFT	Municipality on Left	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			1	100
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MUNIRIGHT	Municipality on Right	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			1	100
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	STATELEFT	State on Left	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>		StateAbbreviation	Illinois	2
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	STATERIGHT	State on Right	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>		StateAbbreviation	Illinois	2
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ZIPLEFT	Zip on Left	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			60540	5
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ZIPRIGHT	Zip on Right	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			60540	5

Tools for working with attributes

Attributes Pane

Attributes

Change the selection.

BuildingFootprintsHomes (1)
General/Residential

Attributes Geometry

Building Height	<Null>
Number of Stories	<Null>
Facility Site Code	Building General
Last Update Date	5/13/2011 12:00:00 AM
Last Editor	VC
RuleID	General
BUILDINGCLASS	General/Residential
ST_PROV	<Null>

☒ Auto Apply Apply Cancel

Attribute Table

Naperville Reference Data FGDB - ArcGIS Pro

Facility Sites

Field: Add Delete Calculate Selection: Zoom To Switch Clear Delete Copy

OBJECTID	SHAPE	Facility Identifier	Name of Facility	Subtype Field	Feature Code	Description	Owner Type	Last Update Date
1	Polygon	FAC-1	Future Third Library	Public Attractions and	Library	<Null>	Municipal	1/19/2010
2	Polygon	FAC-2	95th Street Property	Government and Milita	Municipal Government	<Null>	Municipal	1/19/2010
3	Polygon	FAC-3	Naper Blvd Library	Public Attractions and	Library	<Null>	Municipal	1/19/2010
4	Polygon	FAC-4	Riverwalk	Government and Milita	Municipal Government	<Null>	Municipal	1/19/2010
5	Polygon	FAC-5	Von Oven Scout Camp	Public Attractions and	Campground	<Null>	Municipal	1/19/2010
6	Polygon	FAC-6	Naper Settlement	Public Attractions and	Museum	<Null>	Non Profit	1/19/2010
7	Polygon	FAC-7	Municipal Center	Government and Milita	Municipal Government	<Null>	Municipal	1/19/2010
8	Polygon	FAC-8	Wil-O-Way Commons	Public Attractions and	Park	<Null>	Municipal	1/19/2010
9	Polygon	FAC-9	South Pointe	Public Attractions and	Park	<Null>	Municipal	1/19/2010
10	Polygon	FAC-10	Commissioners Park	Public Attractions and	Park	<Null>	Municipal	1/19/2010
11	Polygon	FAC-11	High Meadow	Public Attractions and	Park	<Null>	Municipal	1/19/2010
12	Polygon	FAC-12	Riverview Farm	Public Attractions and	Park	<Null>	Municipal	1/19/2010

0 of 398 selected

Filters: 100%

Tools for working with attributes...

Feature Template Properties

Template Properties: Schools

General
Tools
Attributes

☐ Show Non-Visible Fields

Facility Identifier	FAC-138	<input checked="" type="checkbox"/>
Name of Facility	Naperville Central High School	<input checked="" type="checkbox"/>
Owner Name	Indian Prairie School District 204	<input checked="" type="checkbox"/>
Owner Type	State	<input checked="" type="checkbox"/>
Feature Code	<Null>	<input type="checkbox"/>
Full Address	<Null>	<input type="checkbox"/>
Municipality Name	Naperville	<input checked="" type="checkbox"/>
State Name	<Null>	<input type="checkbox"/>
Capture Method	Placed on Map	<input checked="" type="checkbox"/>
Location Type	Building	<input checked="" type="checkbox"/>
Description	Building	<input type="checkbox"/>
	Parcel	<input type="checkbox"/>
# of Students	<Null>	<input type="checkbox"/>
Facility Area	1	<input checked="" type="checkbox"/>
Last Update Date	<Null>	<input type="checkbox"/>
Last Editor	<Null>	<input type="checkbox"/>



Feature Templates Overrides

Create Features

Search

Templates Favorites

▼ Road Centerlines
— Road Centerlines

▼ Schools

Schools

Facility Identifier	FAC-138
Name of Facility	Naperville Central High School
Owner Name	Indian Prairie School District 204
Owner Type	State
Municipality Name	Naperville
Capture Method	Placed on Map
Location Type	Building
Facility Area	1

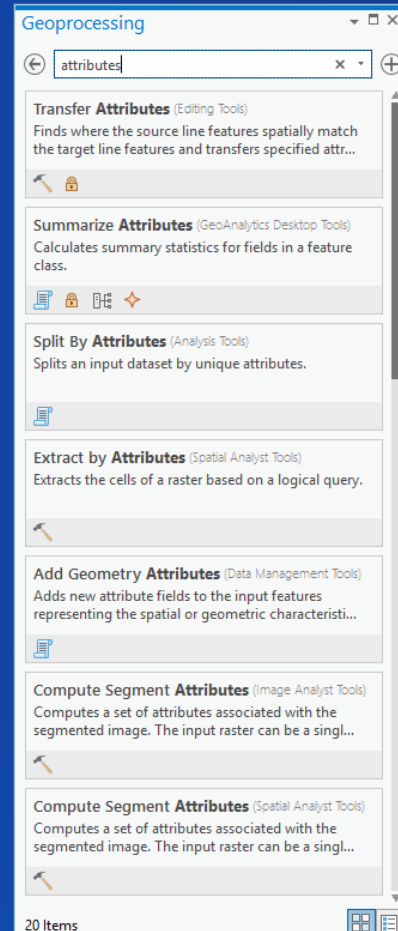
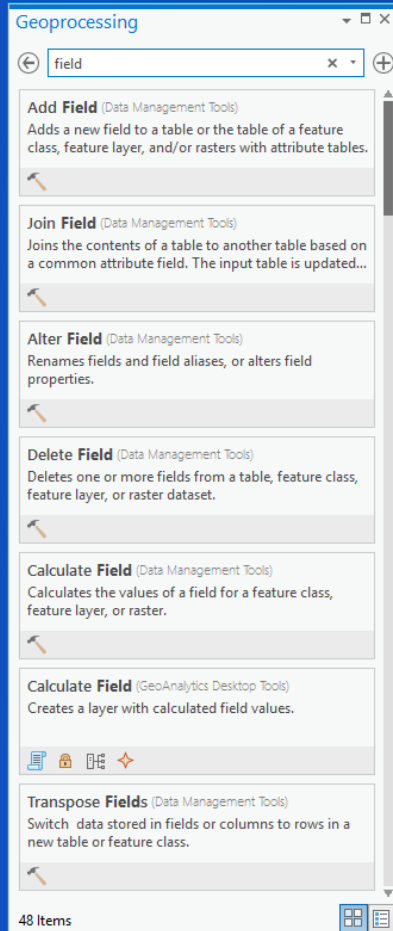
▼ Vegetation
■ Vegetation

▼ Waterbody
■ Waterbody

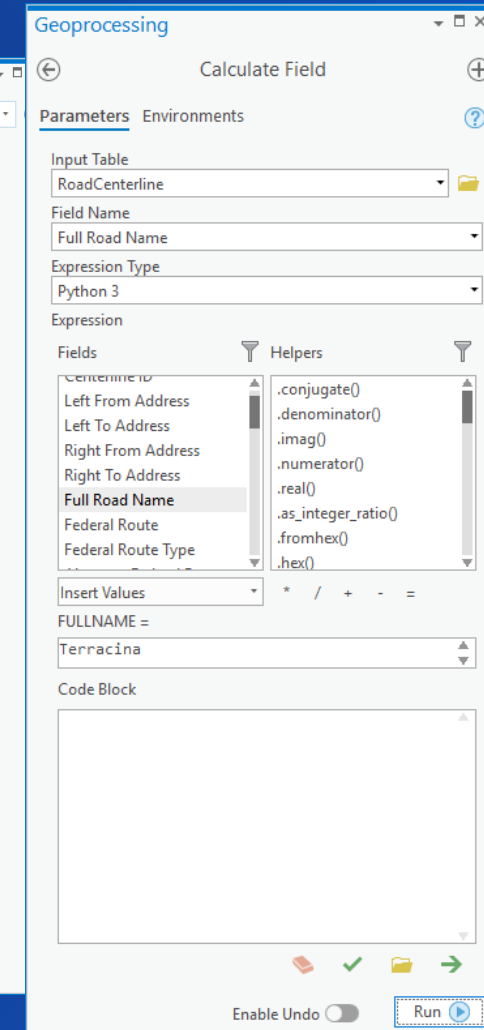
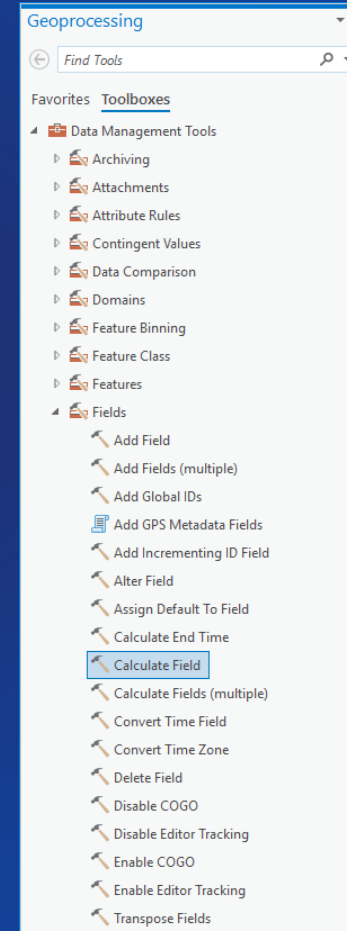
▼ Waterlines
— Waterlines

Tools for working with attributes...

Geoprocessing Tools



Calculate Field



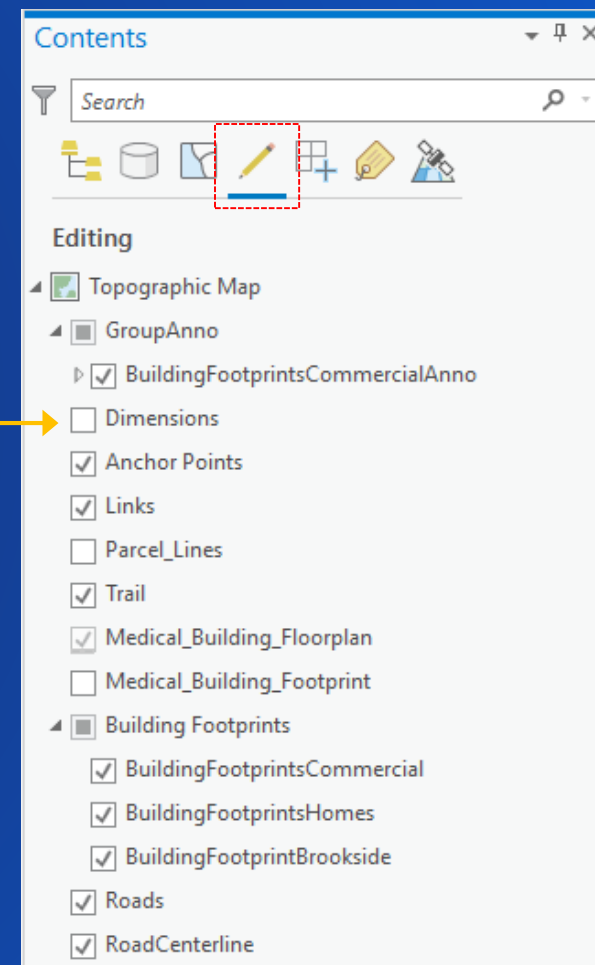
**Requires Advanced license*

Edit Session in Pro

- On-demand editing
 - Editing features or attributes starts editing
 - Save or discard stops editing
- Edit multiple workspaces simultaneously
- New options for managing edits
 - Control layer editability
 - Choose to automatically save edits

Contents List By Editing

Control layer
editability



Read-Only Fields

- Controls field editability at the layer level
- Set using the Fields View
- Fields are still displayed in Attributes pane and table, but not editable

Fields View

Naperville Reference Data FGDB - ArcGIS Pro

Fields: Facility Site Points X

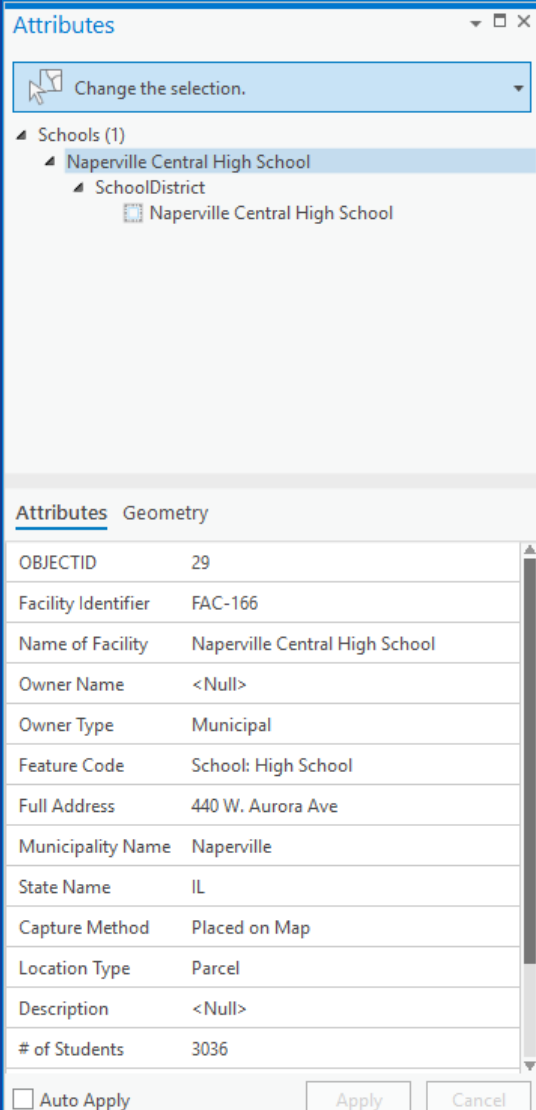
Current Layer: Facility Site Points

	Visible	Read Only	Field Name	Alias	Data Type	Allow NULL	Highlight	Number Format	Domain	Default	Length
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	OBJECTID	OBJECTID	Object ID	<input type="checkbox"/>	<input type="checkbox"/>	Numeric			
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SHAPE	SHAPE	Geometry	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FACILITYID	Facility Identifier	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				50
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NAME	Name of Facility	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				255
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OWNER	Owner Name	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				50
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OWNTYPE	Owner Type	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				50
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	*SUBTYPEFIELD	Subtype Field	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric		790	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FEATURECODE	Feature Code	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				100
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FULLADDR	Full Address	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				250
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MUNICIPALITY	Municipality Name	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				100
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	STATE	State Name	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			IL	2
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CAPTUREMETH	Capture Method	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			Manual	30
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LOCATIONTYPE	Location Type	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>			Building	30
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DESCRIPT	Description	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				254
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FACAREA	Facility Area	Double	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LASTUPDATE	Last Update Date	Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LASTEDITOR	Last Editor	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>				50

Click here to add a new field.

Attributes Pane – Key Points

- Does not require edit session
- Based on feature selections
- View and edit related features and records
- Use Auto Apply setting to control commits
- Built in data constraint behavior



Attributes

Change the selection.

- Schools (1)
 - Naperville Central High School
 - SchoolDistrict
 - Naperville Central High School

Attributes Geometry

OBJECTID	29
Facility Identifier	FAC-166
Name of Facility	Naperville Central High School
Owner Name	<Null>
Owner Type	Municipal
Feature Code	School: High School
Full Address	440 W. Aurora Ave
Municipality Name	Naperville
State Name	IL
Capture Method	Placed on Map
Location Type	Parcel
Description	<Null>
# of Students	3036

☐ Auto Apply Apply Cancel

Attributes Pane

Layer Name &
Selection Count


Attribute &
Geometry Tabs

Highlight Field

Subtype Field

Auto Apply
Toggle

Attributes

 Change the selection.

Facility Sites (1)
Naperville Central High School

Attributes

Geometry

OBJECTID	166
Facility Identifier	FAC-166
Name of Facility	Naperville Central High School
Subtype Field	Education
Feature Code	School: High School
Description	<Null>
Owner Type	Municipal
Last Update Date	1/19/2010 12:00:00 AM
Last Editor	Esri
SHAPE_Length	7415.066975
SHAPE_Area	1598660.324927

☒ Auto Apply

Select Tool

Highlighted Feature

Symbol Field

Cell Border

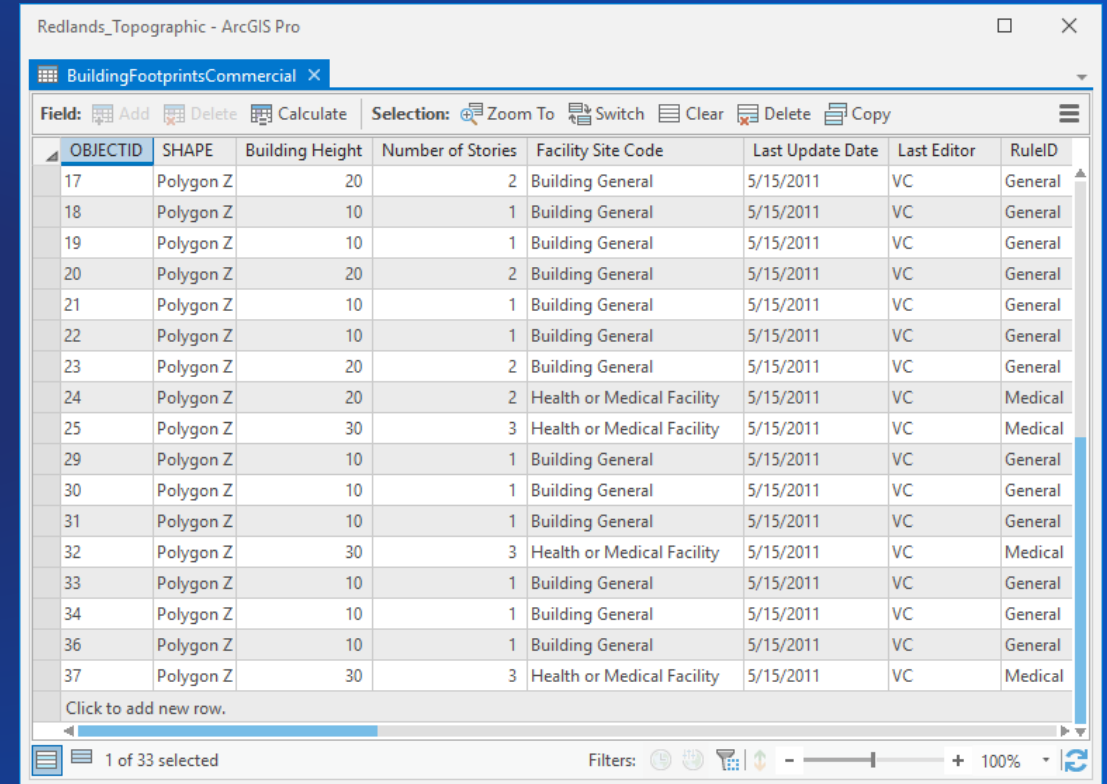
Auto Apply

- **When Auto Apply is off...**
 - Requires explicit Apply to commit attribute edits
 - Allows you to see pending edits before commit
 - Sends multiple edits in single transaction
- **When Auto Apply is on...**
 - Attribute edits are immediately committed
 - Faster method for updating attributes

Attributes Geometry	
Centerline ID	RD-1544
Left From Address	2050
Left To Address	2058
Right From Address	2053
Right To Address	2057
Full Road Name	W Ogden Ave
Federal Route	34
Federal Route Type	Other
Alternate Federal Route	<Null>
Alternate Federal Route Type	Other
State Route	<Null>
State Route Type	Other
<input checked="" type="checkbox"/> Auto Apply	

Attribute Table - Overview

- View of tabular data for an entire layer or stand alone table
- Not dependent on selections
- Supports editing cell values for features or records
- Quick access to other data management tools



Redlands_Topographic - ArcGIS Pro

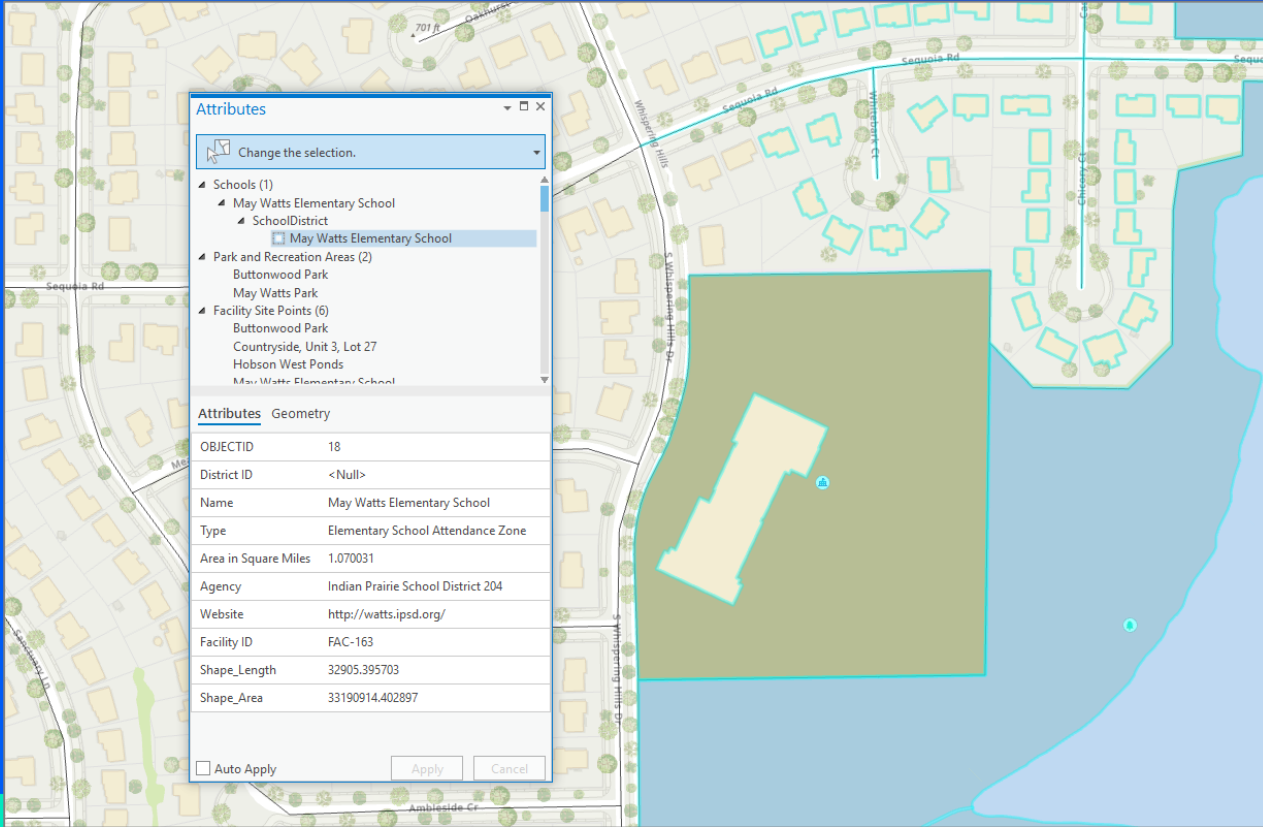
BuildingFootprintsCommercial

Field: Add Delete Calculate Selection: Zoom To Switch Clear Delete Copy

OBJECTID	SHAPE	Building Height	Number of Stories	Facility Site Code	Last Update Date	Last Editor	RuleID
17	Polygon Z	20	2	Building General	5/15/2011	VC	General
18	Polygon Z	10	1	Building General	5/15/2011	VC	General
19	Polygon Z	10	1	Building General	5/15/2011	VC	General
20	Polygon Z	20	2	Building General	5/15/2011	VC	General
21	Polygon Z	10	1	Building General	5/15/2011	VC	General
22	Polygon Z	10	1	Building General	5/15/2011	VC	General
23	Polygon Z	20	2	Building General	5/15/2011	VC	General
24	Polygon Z	20	2	Health or Medical Facility	5/15/2011	VC	Medical
25	Polygon Z	30	3	Health or Medical Facility	5/15/2011	VC	Medical
29	Polygon Z	10	1	Building General	5/15/2011	VC	General
30	Polygon Z	10	1	Building General	5/15/2011	VC	General
31	Polygon Z	10	1	Building General	5/15/2011	VC	General
32	Polygon Z	30	3	Health or Medical Facility	5/15/2011	VC	Medical
33	Polygon Z	10	1	Building General	5/15/2011	VC	General
34	Polygon Z	10	1	Building General	5/15/2011	VC	General
36	Polygon Z	10	1	Building General	5/15/2011	VC	General
37	Polygon Z	30	3	Health or Medical Facility	5/15/2011	VC	Medical

Click to add new row.

1 of 33 selected Filters: 100%



Demo: Editing Attributes

Presenter(s)

Constraining Data

Section Subhead

Constraining Data

- **Domains**
- **Contingent Attribute Values**
- **Attribute Rules**



Domains

- Rules that describe the allowable values of a field type
 - Coded Value – list of values that can be chosen
 - Range – valid range of numeric values

Address Data Domains: LocalGovernment								
Domain Name	Description	Field Type	Domain Type	Split Policy	Merge Policy		Code	Description
OneWayIndicator	An indicator used to determine if traffic flows with the digitized direction of the feature	Text	Coded Value Domain	Duplicate	Default		From-To	From-To
OperationalDays	The days of operation for a facility	Text	Coded Value Domain	Default	Default		To-From	To-From
OperationalHours	The hours of operation for a facility	Text	Coded Value Domain	Default	Default		Unknown	Unknown
OperationalStatus	The operational status for a facility	Text	Coded Value Domain	Default	Default			
OwnerType	The type of owner	Text	Coded Value Domain	Duplicate	Default			
PavementMarkingColor	The color paint used for the pavement markings	Text	Coded Value Domain	Default	Default			
PavementSurfaceType	The type of pavement surface	Text	Coded Value Domain	Default	Default			
PavementSurfaceUse	The primary use of the paved surface	Text	Coded Value Domain	Default	Default			
piAlertType	The type of public infrastructure alert	Text	Coded Value Domain	Default	Default			
piServiceSchedule	The regular public works or water utility service schedule	Text	Coded Value Domain	Default	Default			
PointCollectionMethod	The collection method for a point feature	Text	Coded Value Domain	Duplicate	Default			
Public Attractions and Landmark Structures FCode	The type of public attraction or landmark	Text	Coded Value Domain	Default	Default			
RailUseType	The intended use of the railroad	Text	Coded Value Domain	Duplicate	Default			

Contingent Attribute Values

- **Extends attribute domains by applying additional constraints**
 - Fields depend on other fields for validity
- **Allows you to choose from a filtered list of valid values**
- **Can improve data entry accuracy and reducing post-editing quality assurance**

Map Contingent Values: Structure Junction X

Field Group: Poles Contingency

Subtype: Pole

Search Filter

class	Material	structureheight
Class 1	Fiberglass	30 Feet
Class 1	Fiberglass	35 Feet
Class 1	Fiberglass	40 Feet
Class 1	Fiberglass	45 Feet
Class 2	Wood	30 Feet
Class 2	Wood	35 Feet
Class 2	Wood	40 Feet
Class 2	Wood	45 Feet
Class 3	Steel	50 Feet
Class 3	Steel	55 Feet
Class 3	Steel	60 Feet
Class 3	Steel	65 Feet

[Click here to add a new contingent value.](#)

Attribute Rules

- **Complimentary to existing rules in the Geodatabase**
- **They help improve data integrity by:**
 - Automatically populating attributes
 - Restricting invalid edits
 - Performing quality assurance checks
- **Manage rule errors with the Error Inspector**

Calculation Rule
Example

Field A

+

Field B

=

Field C

Demo: Contingent Values & Attribute Rules

Presenter(s)



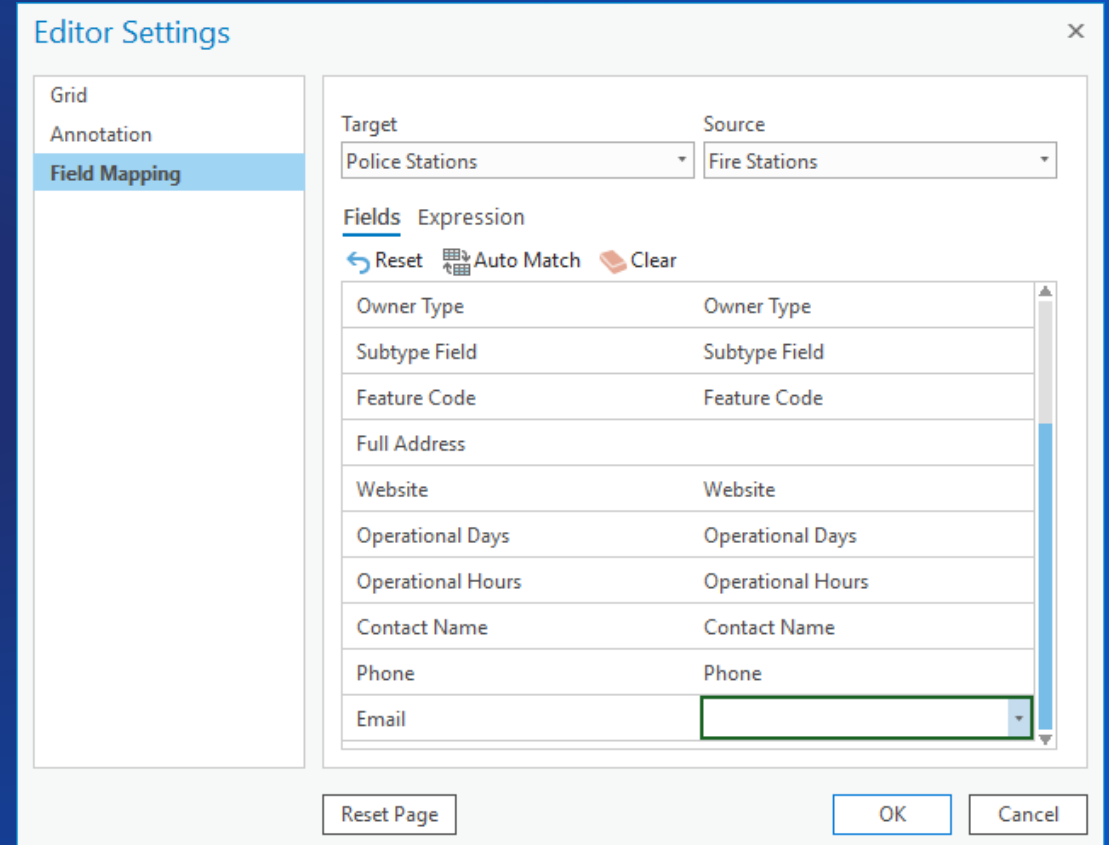
Field Mapping & Attribution

Section Subhead



Field Mapping

- Allows you to map fields between layers for transferring attributes
 - Transfer Attributes tool
 - Copy/Paste Attributes
- Auto matches fields by default
 - Can configure for each field
- Field mapping saved in project



The screenshot shows the 'Editor Settings' dialog box with the 'Field Mapping' tab selected. The 'Target' is 'Police Stations' and the 'Source' is 'Fire Stations'. The 'Fields' tab is active, showing a list of fields with their corresponding 'Owner Type' and 'Subtype Field' values. The 'Email' field is highlighted with a green border. The 'Reset Page' button is at the bottom left, and 'OK' and 'Cancel' buttons are at the bottom right.

Fields	Expression
Owner Type	Owner Type
Subtype Field	Subtype Field
Feature Code	Feature Code
Full Address	
Website	Website
Operational Days	Operational Days
Operational Hours	Operational Hours
Contact Name	Contact Name
Phone	Phone
Email	

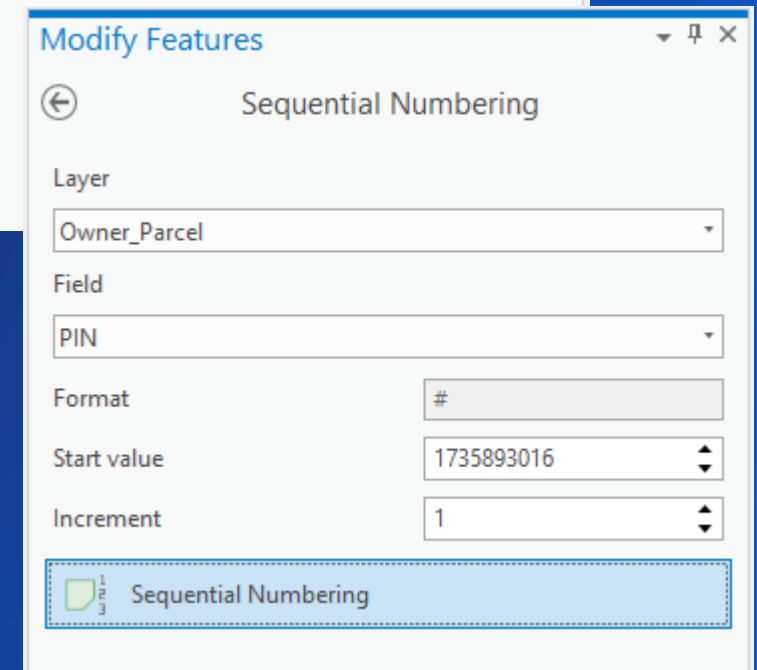
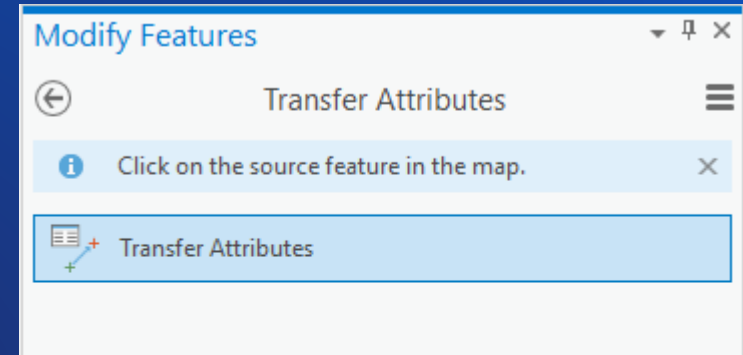
New Attribute Editing Tools at 2.4

- **Transfer Attributes**

- Transfer attributes from source feature to target feature(s)
- Based on Field Mapping

- **Sequential Numbering**

- Attributes features incrementally based on user defined starting point and format
- Works on points, lines, and polygons





Demo: Field Mapping & Attribution Tools

Presenter(s)



Setting Attributes when Creating Features

Section Subhead



Feature Templates & Attributes

- Feature templates allow you to set attributes when creating new data
- Override feature class default attribute values
- Stored in the feature template
- Option to prompt attributes in feature template

Template Properties: Schools

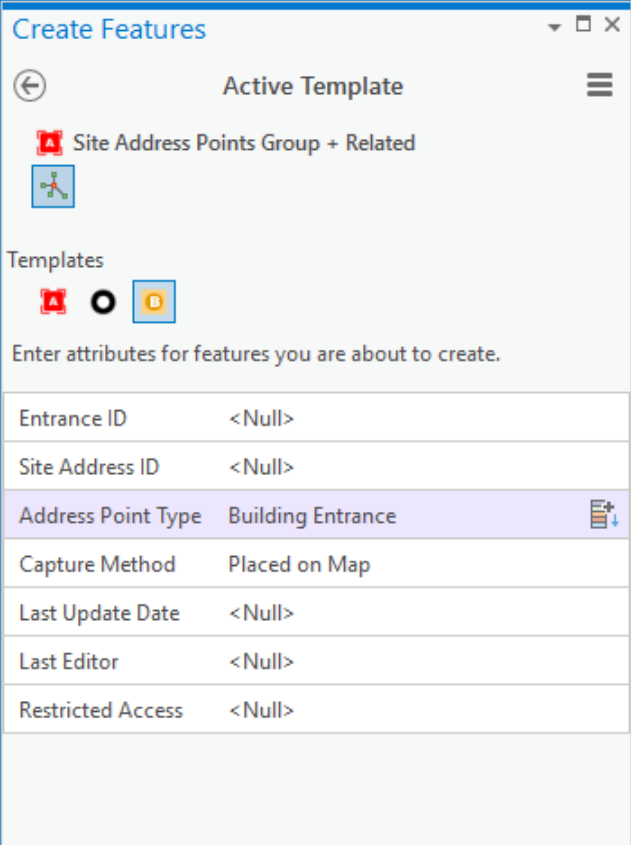
General
Tools
Attributes

☐ Show Non-Visible Fields

Facility Identifier	FAC-138	<input checked="" type="checkbox"/>
Name of Facility	Naperville Central High School	<input checked="" type="checkbox"/>
Owner Name	Indian Prairie School District 204	<input checked="" type="checkbox"/>
Owner Type	State	<input checked="" type="checkbox"/>
Feature Code	<Null>	<input type="checkbox"/>
Full Address	<Null>	<input type="checkbox"/>
Municipality Name	Naperville	<input checked="" type="checkbox"/>
State Name	<Null>	<input type="checkbox"/>
Capture Method	Placed on Map	<input checked="" type="checkbox"/>
Location Type	Building	<input checked="" type="checkbox"/>
Description	Building	<input type="checkbox"/>
# of Students	<Null>	<input type="checkbox"/>
Facility Area	1	<input checked="" type="checkbox"/>
Last Update Date	<Null>	<input type="checkbox"/>
Last Editor	<Null>	<input type="checkbox"/>

Group Templates & Related Features

- **Group templates allow the creation of multiple features with a single edit**
- **Group templates that contain related layers can streamline the data creation process**
- **Entering attribute values for key fields will establish the relationship**



Entrance ID	<Null>
Site Address ID	<Null>
Address Point Type	Building Entrance
Capture Method	Placed on Map
Last Update Date	<Null>
Last Editor	<Null>
Restricted Access	<Null>



Demo: Group Templates & Related Features

Presenter(s)



Questions

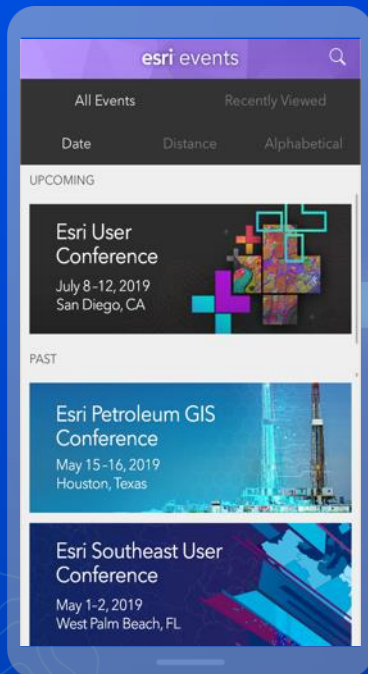


Thank you for attending!

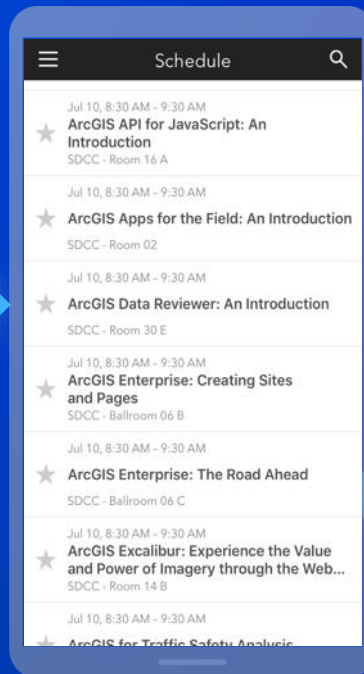


Please Share Your Feedback in the App

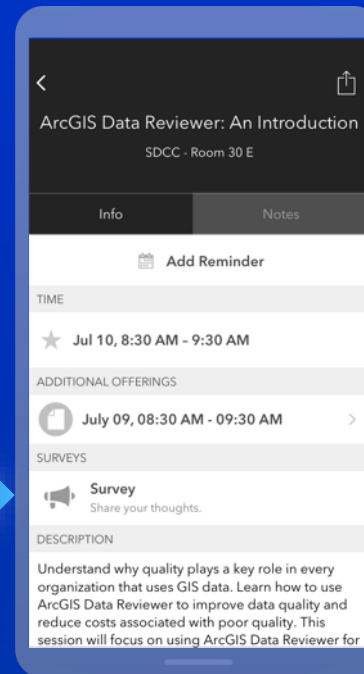
Download the Esri Events app and find your event



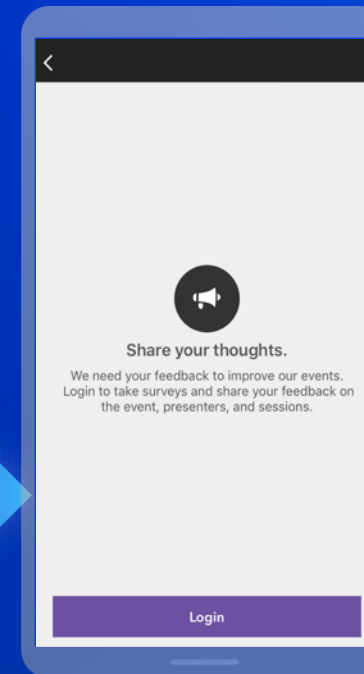
Select the session you attended



Scroll down to "Survey"



Log in to access the survey



Complete the survey and select "Submit"

