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TRAINING GUIDE

Lucity GIS Viewer Overview

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Lucity GIS Viewer Overview

In this session, we'll introduce you to the Lucity GIS Viewer

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Data Sources

Two types of data sources can be used with the Lucity GIS Viewer: local and online.

Local

Local data can be used by the GIS Viewer in the form of packages. Packages are a set of items (maps and referenced data) that ArcGIS bundles into a single file. Packages are created using the ArcGIS Desktop software and can be easily transferred from user to user or easily provisioned onto a machine.

The GIS Viewer can consume Map, Title, and Locator packages. The following is a description of each:

Package name	File extension	Description
Map package	МРК	Map packages (.mpk) make it easy to share complete map documents with others. A map package contains a map document (.mxd) and the data referenced by the layers it contains, packaged into one convenient, portable file. Map packages can be used for easy sharing of maps between colleagues in a work group, across departments in an organization, or with any other ArcGIS users via ArcGIS Online. Map packages have other uses, too, such as the ability to create an archive of a particular map that contains a snapshot of the current state of the data used in the map.
Tile package	ТРК	Tile packages (.tpk) contain complete cached map documents in the form of a map and a tile cache of the data. Tile packages can be used for easy sharing of cached maps between colleagues in a work group, accross departments in an organization, or with any other arcGIS user via ArcGIS online. Tile packages are ideal in disconnected environments where you still need access to the data.
Geoprocessing package	GPK	A geoprocessing package (.gpk) is a convenient way to share analysis and geoprocessing workflows as a single compressed file created from the result of a successfully run geoprocessing tool.
Locator package	GCPK	Locator packages (.gcpk) make it easy to share locators with others. A locator package may contain one locator or a composite locator along with its participating locators packaged into one convenient, portable file. The file size of the locator package is smaller than the locator as it is compressed and thus makes file transfer easier. Locator packages can be used for easy sharing of locators between colleagues in a work group, across departments in an organization, or with any other ArcGIS users via ArcGIS online. Locator packages can also be used to create an archive of the locators.

Online

In addition to packages, the Lucity GIS Viewer can also consume online data sources. These are geospatial web services (such as map services and geocoding services) created and distributed by ArcGIS for Server.

Note:_____

Map Packages

Map packages (.mpk) make it easy to share complete map documents with others. A map package contains a map document (.mxd) and the data referenced by the layers it contains, packaged into one convenient, portable file. Map packages can be used for easy sharing of maps between colleagues in a work group, across departments in an organization, or with any other ArcGIS users via ArcGIS Online. Map packages have other uses too, such as the ability to create an archive of a particular map that contains a snapshot of the current state of the data used in the map.

Creating a map package

- 1. Prepare an ArcMap map document with the data and settings (symbology, scale dependent rendering, aliases, etc) you would like to deploy in the map package.
- 2. In ArcMap, click Customize > ArcMap Options on the main menu. The ArcMap Options dialog appears.
- 3. On the Sharing tab, under the Packaging Section, check the Enable ArcGIS Runtime Tools.
- 4. Click OK.



5. Click File > Share As > Map Package on the main menu. The Map Package dialog box will display.



6. In the Map Package dialog, fill out the required information. The critical item is to make sure the Support ArcGIS Runtime is checked.

	🗸 Analyze 🛛 🐺 Share 📀
Map Package	Map Package
Item Description	
Additional Files	Upload package to my ArcGIS Online account
	BaseMap
	Save package to file
	Q:\Group\edaniel\RuntimePackages\BaseMap.mpk
	Include Enterprise Geodatabase data instead or referencing the data
	Support ArcGIS Runtime
	✓ Reference all data
	About creating a map package

Note: You have the option to reference SDE data or to include it in the map package. Keep in mind if you choose to include the data, any changes to the underlying SDE data will not be visible in the Lucity GIS Viewer until the map package is recreated.

- 7. Click Analyze to validate your map for any errors or issues.
- 8. Once validated, click Share to create your map package.

For more information on creating map packages refer to ESRI's help at:

http://resources.arcgis.com/en/help/main/10.1/index.html#//006600000403000000

and

http://resources.arcgis.com/en/help/runtimewpf/concepts/index.html#/About_map_packages/017000000059000000/

Tile Packages

A tile package allows you to create a set of tiles (images) from a map, then use the set of tiles as a basemap in ArcGIS applications. The tiles are wrapped into a single file, a .tpk file, so you can share the file as you would any file. You can email it, copy it to a network locale, upload it to ArcGIS Online, and so on.

Creating a tile package

- 1. Prepare an ArcMap map document with the data and settings (symbology, scale dependent rendering, aliases, etc) you would like to deploy in the tile package.
- 2. In ArcMap, click Customize > ArcMap Options on the main menu. The ArcMap Options dialog appears.
- 3. On the Sharing tab, under the Packaging Section, check the Enable ArcGIS Runtime Tools.
- 4. Click OK.



5. Click File > Share As > Tile Package on the main menu. The Tile Package dialog box will display.



6. In the Tile Package dialog, fill out the required information.

e Package	
	Analyze 🎬 Share 🖉
Tile Package	Tile Format
Tile Format	Tiling Scheme: ArcGIS Online / Bing Maps / Google Maps 🔻
Item Description	Tile Format: PNG
	Approximate Cache Size: 6 Mb
	Choose the number of levels to create for this tile package. All levels up to and including the selected level will be generated. Highest Level of Detail: 20 of 20
	Level: 19 Scale: 1:1,128.49 Building

Note: If you use the ArcGIS Online/Bing Maps/Google Maps tiling scheme, the data frame of your source map document must use the WGS 1984 Web Mercator (Auxiliary Sphere) projected coordinate system.

- 7. Click Analyze to validate your package for any errors or issues.
- 8. Once validated, click Share to create your tile package.

For more information on creating tile packages refer to ESRI's help at:

http://resources.arcgis.com/en/help/main/10.1/index.html#//006600000457000000

and

<u>http://resources.arcgis.com/en/help/runtime-</u> wpf/concepts/index.html#/About_tile_packages/01700000004w000000/

Locator Packages

A geocode locator package (.gcpk) makes it easy to share locators with others. A locator package can contain one locator or a composite locator along with its participating locators packaged into one convenient, portable file. The file size of the locator package is smaller than the locator, as it is compressed and thus makes file transfer easier. Locator packages can be used for easy sharing of locators between colleagues in a work group, across departments in an organization, or with any other ArcGIS users via ArcGIS Online. Locator packages can also be used to create an archive of the locators.

Creating a locator package

- 1. Create a locator or composite locator in ArcCatalog.
- In ArcCatalog, right-click on a locator or composite locator and click Share As > Locator Package. The Locator Package dialog box appears.



3. In the Locator Package dialog, fill out the required information.

Lo	cator Package			×
			🖌 Analyze	🍰 Share 🔿
	Locator Package	Locator Package		
	Item Description			
	Additional Files	STNETG_AddressLocator		
		Upload package to my ArcGIS Online account		
		STNETG_AddressLocator		
		 Save package to file 		
		Q:\Group\edaniel\RuntimePackages\STNETG_AddressLocator.gcpl	2	
		Include locators in Enterprise Geodatabase instead of reference	ng them	

Note: You have the option to reference SDE data or to include it in the locator package. Keep in mind if you choose to include the data, any changes to the underlying SDE locator will not be visible in the Lucity GIS Viewer until the locator package is recreated.

- 4. Click Analyze to validate your locator for any errors or issues.
- 5. Once validated, click Share to create your locator package.

For more information on creating tile packages refer to ESRI's help at:

http://resources.arcgis.com/en/help/main/10.1/index.html#//00250000003v000000 and

http://resources.arcgis.com/en/help/runtimewpf/concepts/index.html#/About_locator_packages/01700000005s000000/

Lucity GIS Viewer Setup

The Lucity GIS Viewer is configured to use map settings setup in the Lucity Administration application. This section describes the various settings that must be configured before using the Lucity GIS Viewer.

- Lucity Administration Tool
 - Map Services
 - o Map Setup
 - o System Settings
 - o Authorizations
- ArcCatalog
 - o Geodatabase Configuration
- Lucity Desktop
 - Show in Map Configuration
- Lucity Security
 - o User Permissions
- Workstation Installations

Lucity Administration Tool

The Lucity Administration tool is used to configure the majority of the settings necessary for the GIS Viewer to run. This section will cover each component in detail

To access the Lucity Administration tool go to Start>>All Programs>>Lucity>>Lucity Administration tools or run the Lucity.Admin.exe located in the local ...\Lucity\bin directory.

Map Services

Map services indicate the data that will be loaded into Lucity GIS Viewer. This is where you would specify your local and/or online data sources.

1. In Lucity Admin click GIS>>Map Services... The GIS Map Services dialog will appear.

🔏 Lucity Administration 7.50 - Client: CLINT015 - User: EDANIEL										
System	Dashboard	Navigation	Forms	Reports	GIS	Security	Windows	Help		
					Connection Strings					
					Map Services					
						Map Setup				

Name	Url	Order	Opacity	Base Map?	Tiled?	Disable Local Caching	Disable MetaData Queries
Demo	https://demo.luci	2					
RasterTiled	http://demo.lucit	0		V	V		V
ImageService	http://demo.lucit	0		v			V
Parcels	http://demo.lucit	1					
Operational	http://demo.lucit	1					
Bing	Bing:Key=AiRrOJ	0		v			V
test	http://demo.lucit	1					

- 2. Click the Add Map Service button at the bottom. This will add a new record to the table. Fill out the following information:
 - Name- This is a unique name for the map service. This can be whatever you'd like and will be used later when indicating what services should be associated with the map
 - Url- This is used by the map to display data.
 - For local data sources you would specify the path (including filename) of the map or tile package. For example, Q:\Group\edaniel\RuntimePackages\BaseMap.mxd. In addition, if the package is located on a network share, it is strongly recommended that UNC be used instead of a mapped drive to prevent issues caused by missing or incorrect mapped drives on end user machines.
 - For online data sources this is the url to the map service. For example: <u>http://services.arcgisonline.com/ArcGIS/rest/services/World_Street_Map/MapServer</u>. Note: The url must be a REST service.
 - Order- This is the order in which the map service should appear when overlaid with other map services. Lower order numbers will appear underneath map service with higher order numbers.
 - Opacity- This is the default opacity that will be used when the service is loaded in the map
 - Base Map- N/A (Setting only used for WebMap)
 - Tiled- Place a check in this field to indicate a tiled package or web service.
 - **Disable Local Caching-** Default is false. If you were to disable local caching requests to refresh the map image will go directly to ArcGIS Server rather than the browser's cache.
 - Disable MetaDataQueries- Only applies to online data sources (not packages). Having this checked for a service will prevent any of the identify/find/query tools from functioning for that service. You would typically want this checked if the service is only serving a visual purpose.
- 3. Click Save

Map Setup

Once packages and/or web services have been added to the Map Services section of the Lucity Admin tool you can use the Map Setup section to start creating the maps.

- 🔏 Lucity Administration 7.50 Client: CLINT015 User: EDANIEL System Dashboard Navigation Forms Reports Security Windows Help GIS Connection Strings... Map Services... Map Setup... - - -Ă Map Setup Available Maps Available Groups Administrator Equipment ReadOnly GIS Administrator GIS User NoAccessSecurity Noels Security Test PublicWebGroup RESTAPIGroup Dem Add Map Setup... Edit Map Setup... Delete Map Assigned Groups Assign Map to <u>G</u>roups... Un-Assign Map. <u>Cancel</u> Help Save.
- 1. In Lucity Admin click GIS>>Map Setup... The GIS Map Setup dialog will appear.

2. The left-hand side of the dialog displays all available maps. Click the Add Map Setup or Edit Map Setup buttons to open the GIS Map Edit screen.

- dio map care					C	
Name GISViewer					📃 Use as De	fault Map
Geocoding						
Default Geocoding Url:	ttp://tasks.arcgisc ierver	online.co	m/ArcGIS/rest/servic	es/Local	ors/TA_Streets_US	_10/Geocode
different than default):	\gbams-net-u2\Q	\Group \e	aaniei (LucityGISDev	_Config v	st Segment_AddressL	ocator.gcpk
Redlining						
Point feature layer Url:						
Polyline feature layer Url:	_					
Polyzon fostum lavor Lide						
r olygon realdre layer off.						
Available Web Services		Services	to Display in Map			
WaterSewerStom Parcele			Name	Order	Disable Identify	
Park		Þ	Viewer_AerialTile	1		
Markup	Add		Viewer_BaseMap	2		
		_	Viewer_Operational	3		
Available Local Services	Remove					
Available Local Services Viewer_Operational	Remove					
Available Local Services Viewer_Operational Viewer_BaseMap Viewer AerialTile	Remove					
Available Local Services Viewer_Operational Viewer_BaseMap Viewer_Aerial Tile	Remove					
Available Local Services Viewer_Operational Viewer_BaseMap Viewer_AerialTile	Remove					

- 3. Enter a unique map Name. Each map setup has to be assigned a name. If you setup more than one map then a user will be given a list of map names to choose from.
- 4. Check the **Enable Local Services** box. This enables the map for use with the Lucity GIS Viewer, and allows you to add local services. This setting must be checked!
- 5. Check the **Use as Default Map** box to make this the default map. The default map is automatically opened for all users that are not in a group assigned a map.
- 6. Set the Geocoding UrI. Enter a UrI here if the geocoding service used for this map will be different that the url in the Default Geocoding UrI box. The Default Url is set in Lucity Administration under System > Settings on the GIS tab. Note: The GIS Viewer will work with either an online geocoding service or a local locator package. To use a local package enter the file path including name of the package. For example: (Q:\Group\edaniel\RuntimePackages\STNETG_AddressLocator.gcpk).
- 7. In the **Available Web Services** grid, select all the web services that need to be added to the map and click Add. Records will appear in the Services to Display in Map grid.
- 8. In the Available Local Services grid, select all the web services that need to be added to the map and click Add. Records will appear in the Services to Display in Map grid.
- 9. In the Services to Display in Map grid check the Disable Identify box to stop the identify tool from querying that service. Disabling Identify also disables the ability to select features in that service. Note: Users can also manually control selectability in the map.
 - The order cannot be customized in this dialog; instead, set the order in the Order field under GIS > Map Services.
- 10. Click Close to return to the Map Setup screen.

System Settings

Additional settings can be configured for the Lucity GIS Viewer. These settings are set Lucity Admin tool.

1. In Lucity Admin click System>>Settings... The System Settings dialog will appear.

tem Dashboard Navigation Forms Reports GIS Security Windows H				
	elp			
Settings				
Manage Web Site Caches				
Manage Public Web Site Caches				
Object Lock Manager				
Active User Manager				
Activations Manager				
Exit				
System Settings				
Appearance Designer Automation Email General GIS GIS 3rd Party Integr	ations GIS Desktop GIS Routing Mobile Object Locking REST API 4			
Description	Value			
 Comma separated criteria to use for a where clause if parcel layer is to be que 				
Default Base Map Name				
Force the GIS Web Map to always open to the default extent	TRUE			
GIS/Lucity Edit Integration - Allow unversioned geodatabase edits to enterprise	FALSE			
GIS/Lucity Edit Integration - Disable all updates to the geodatabase from Lucit	/ FALSE - FALSE - FALSE			
GIS/Lucity Edit Integration - Make fields shared with the geodatabase always				
GIS/Lucity Edit Integration - Make Lucity fields integrated with the geodataba				
GIS/Lucity Edit Integration - Prevent saving Lucity record if GIS update fails	FALSE			
GIS/Lucity Edit Integration - Use Legacy GIS Database Connection Information	n FALSE			
List of emails for notifications regarding failures to update the GIS database	nschmidt1@lucity.com			
Operational Data Spatial Reference WKID	2223			
Schema name where the LiveData geodatabase repository is loaded				
Send an email if no feature is found in GIS to update	TRUE			
Street Address Geocoding Field	Street			
URL for Geocoding Service or URL to parcel layer in map service	http://tasks.arcgisonline.com/ArcGIS/rest/services/Locators/TA Streets U.			
URL for Geometry Service	http://demo.lucity.net:6080/arcgis/rest/services/Utilities/Geometry/Geometr.			
Use an address layer for address queries instead of a geocoding service	FALSE			
Use ArcGIS Server to persist geodatabase changes from the desktop	TRUE			
Use Custom Feature Definition setup only, do not use Geodatabase definition	FALSE			
Use GIS Viewer instead of GIS Web for Show in Map	FALSE			

- 2. Make changes, as needed, to the following settings.
 - Operational Data Spatial Reference WKID- The WKID is the "Well Known Spatial ID" for the operational data layer in the webmap. This spatial reference will be used by Lucity to record xy coordinates and any other spatial data.
 - Street Address Geocoding Field- If using an online geocoding service then this is the field name the geocoder is based on.
 - URL for Geocoding Service or URL to parcel layer in map service- (Optional) The URL for the geocoding or parcel services for finding addresses. To switch between the two check the setting "Use an address layer for ..." Note: REST/ must precede the word service in the url.
 - Use GIS Viewer instead of GIS Web for Show in Map- Forces the Lucity Web show in map to launch the Lucity GIS Viewer instead of the Lucity Web Map.

Authorizations

The Lucity GIS Viewer is licensed on a per machine basis. Therefore, in order for a user to be able to run the GIS Viewer, their machine has to be activated to use the GIS Viewer.

The first time a user attempts to run the Lucity GIS Viewer the application which check if the machine has been activated, if not, they will receive a prompt confirming they want to activate the machine.

You may find the need to deactivate a machine. The Activations Manager in Lucity Admin offers the ability to view the systems current activations and allows you to deactivate licenses.

1. In Lucity Admin click System>>Activations Manager... The Activations Manager dialog will appear.

Lucity A	Administration 7.	.50 - Client: Cl	INT015	- User: EDA	NIEL	_	_	_		
System	Dashboard	Navigation	Forms	Reports	GIS	Security	Window	vs Help		
Set	tings		1							
Manage Web Site Caches Manage Public Web Site Caches Object Lock Manager										
Use	er License Manag	jer								
Act	ive User Manage	er								
Act	ivations Manage	er								
Exit										
Activ	e activation	S								
	Name	Secret	U	ser Name	La	ast Activate	d On	License		
•	ERICDANIEL-L	T nynjeKEr4	^{4e} ed	aniel		7/2012 3:5	3:29 PM		RIRuntime	
	NUnitRESTTes	t wzu7RFc	e7o Lu	city	8/	14/2012 5:	11:43 AM	WorkOre	dersAndroid	
	NUnitLogon Tes	t1 FaWtI5S2	2Ag NU	Init	8/	13/2012 9:	50:33 PM	FakeSiteF	orUnitTesting	
	NUnitLogonTes	t2 aaOuKPer	mvX NU	Init	8/	13/2012 9:	50:33 PM	FakeSiteF	orUnitTesting	
	NUnitLicenseTe	est nVugmt2	ot9 NL	JnitLicenseT	est 8/	13/2012 9:	56:03 PM	WorkOre	dersAndroid	
act_test tdtpeucLJk Lu			city	8/	14/2012 5:	11:13 AM	WorkOre	dersAndroid		
deact_test Vvle5h3wRw Luc			city	8/	14/2012 5:	11:15 AM	WorkOr	dersAndroid		
Deactivate license Mew log Send Email With Code										

- 2. The Name column lists the device (computer) name. The License column lists the product that has been activated. Note: Lucity GIS Viewer license is named "GISESRIRuntime"
- 3. To deactivate a license, simply select the device to deactivate and click the **Deactivate license** button.

Note:_____

ArcCatalog

Lucity's Geodatabase Configuration tool in ArcCatalog can be used to validate your geodatabase configuration to ensure that it is properly setup in order for the Lucity GIS Viewer to work with your data.

Geodatabase Configuration Tool

Note: Users must have the following Lucity Security permissions to use this tool

- GIS > GIS System Configuration > Run
- GIS > GIS Admin Connection Strings > Edit
- 1. In ArcCatalog, Click on Lucity GIS Tools>>Geodatabase Configuration.



2. Right-Click on the geodatabase node and select Validate



• Immediately upon clicking this tool, a dialog similar to the one shown below will be displayed with results of the verification. Once it is complete you will be able to scroll down and view any messages resulting from verification.

닉는 Validation Results		
File -		
Validating Setup Requirement	A.	<u>^</u>
General Custom	- CMCENINIVG	
Solid Warte	- Chigeninyg	
Waming	Mission Alias Namel This is non-interfective class to be used with the Lucity Web Man. GIS Viewer, or for SOE Lindstee	
Facility Buildings	FREI DGG	
Facility Door	FEDOORG	
Missing	Otional Feature Class Parent Common ID and AutoID Link Fields	
Equipment	EFFOLIPG	
Fleet	FFFI FFTG	
Facility Floor	EFFLOORG	
Missing		
Facility Furnishing	: EFFURNG	
Missing		
Facility Roof	: EFROOFINVG	
Missing		
Facility Room	: EFROOMSG	
Missing		
Facility Site Asset	: EFSASSETG	
Missing	Uptional Feature Class Parent Common ID and AutoID Link Helds	-

- Warnings to watch for are "Missing Alias Name!". Alias names must be assigned to the feature classes that are used with the Lucity GIS Viewer.
- Refer to the HelpGuide on how to assign alias names to your feature classes; there are Lucity GIS tools in both ArcCatalog and ArcMap that assist in this process.

Lucity Desktop

There are settings in the desktop application that must be configured in order for it to open the Lucity GIS Viewer when using the show in map capabilities.

Show in Map Configuration

1. In the Lucity desktop application, click on System>>Configuration>>GIS>>Show In Map... The Show in Map Configuration dialog will appear

+ Lucity 7.5 - Master SQL Server D	evelopment						
System General Sewer Storm	Transportation	Water	Electric	Gas	Trees/Parks	Equipment	Facility
Configuration	Program O	ptions					
Change Client	ActiveX/00	CX Control	s		0.30	18 A. C.	
CIC To alluit	GIS			•	Database		
GISTOOIKIL	C. HORNE	1980	10	- A	Show In M	lap	
Exit Alt+F4	Same Co				Address Sł	now In Map	
GIS - Show In Map Configuration	×						
ArcMap Project for Display If no project is specified, the default web map for this user	will be opened.						
Show In Map	2 01015						
Parameters: /Client Number /GeoDatabase Table	Name						
/GeoDatabase ID Field Name /Asset ID							
XY Component	Classes						
Component Lucity ShowInMap.exe							
Parameters xcoord ycoord							
Work Order Component Component Lucity ShowInMan exe							
Parameters W0_ID							
Add to Work Order Component							
Componen Lucity. ShowInMap.exe							
Parameters WU_IU							
Component Lucity.ShowInMap.exe							
Parameters WO_ID							
Change to Default OK	Cancel						

- 2. Make the following changes to configure the desktop to work with the GIS Viewer:
 - ArcMap Project for Display-This must be blank, if there is a current value in this field clear it out.
 - Components- All the components should be pointing to the local \Lucity\bin\Lucity.GISViewer.exe. If not, click the ... button to specify the Lucity.GISViewer.exe.

Lucity Security

In order for users to access the Lucity GIS Viewer, they must be given the proper permission in the Lucity Security program.

In the Lucity Security program make sure all users that will be using the Lucity GIS Viewer application have been assigned the Run permission for GIS Viewer, this permission is listed under the GIS node.



Workstation Install

The Lucity GIS Viewer application is licensed on a per machine basis, thus it should only be installed on the number of machines that you own licenses for. The standard Lucity Workstation install does not install the GIS Viewer application nor does the option to install Admin Tools.

In order to install the Lucity GIS Viewer on a machine, you must select the Custom install option with the Lucity workstation installation

Lucity GIS Viewer Overview

The Lucity GIS Viewer is a standalone mapping application that allows users to interact with their asset data. It doesn't require any ESRI software to be installed on their machine and can be easily deployed to end users. The Lucity GIS Viewer is made up of a map display, two toolbars, and a navigation wheel.

Launching the GIS Viewer

- From the Start Menu
 - Once the Lucity GIS Viewer has been installed on a machine, it can be started by the shortcut in the operating system's start menu.
- Directly from the .exe
 - Once the Lucity GIS Viewer has been installed, it will be located in the local \Lucity\bin directory. You can launch the application by double-clicking the Lucity.GISViewer.exe.
- From the Show in Map button
 - Once the web and desktop application has been configured to use the Lucity GIS Viewer, then you can launch the application by clicking the various show in map buttons within the desktop and web applications.

GIS Viewer Tools

- Map Management Tools
 - In the top left corner are the map management tools. They allow users to view information about the map, control selectability and visibility, open and close the data table, add data, and perform standard map navigation.
- Analysis Tools
 - In the top right corner are the analysis tools. The tools on this toolbar allow users to identify, select and query features, and load subsets.
- Navigation Tools
 - In the bottom left corner is the navigation wheel. It provides map navigation functionality such as zoom to full extent, rotate, zoom in/out.

Map Management Toolbar

The following are the various tools available on the map management toolbar:





Errors encountered using the various GIS Viewer tools will typically be logged. In addition, some tools may log additional information why it was unable to complete the requested task. Click on this tool to bring up a list of items that have been logged.

g	×
10:38 AM	Failed to open desktop application. Failure Code = NoFailure
	Сору
	Cancel

Each item will contain a time stamp of when it was recorded. Use the copy button to copy the contents to the clipboard. Closing out of the Lucity GIS Viewer will clear the log.



This tool allows users to toggle feature layer visibility, transparency, selectibility along with the ability to remove a layer from the map.

- Remove Map Service- click this to remove the map service and all associated feature classes. This is only for the current map session. The next time the map is loaded, the map service will be back.
- Transparency- this controls the layer transparency. Move the horizontal scroll to adjust the level of transparency.
- Selectability- this controls whether or not the layer is selectable. When disabled, the layer will not be included in results when using the identify, select, or query tools.
- Visibility- this controls whether or not the layer is visible in the map.



Note: All these settings are just for the current map session. The will be set to the default values the next time the map is loaded.

Add Data

This tool can be used to add data to the map. Map and Tile packages along with map or tile web services can be added on the fly.

Lucity GIS- Add map service or package to map
Select Data Type:
_
OK

1. Select the type of data to add from the drop down.

	-
Map Package	
Tile Package	
Web Service- Tile	
Web Service- Dynamic	

- 2. Enter the location of the data source.
 - If adding a map/tile package click the me button to find the location of a .mpk or .tpk file.
 - If adding a web service, simply enter the URL of the service in the next box
- 3. Click Ok and the data will be added to the map. You can remove or adjust the layer properties using the Map Layers tool.



The data table tool allows users to see information about and interact with features that are currently selected or plotted in the map. This table is opened automatically by the use of some of the GIS Viewer tools.

								Table Dis	play Controls	; 🔊	X
Tabs	_	Parcel * S	anitary Stru	icture Inve	entory [*] Tree [*]	Sanitary Sewer	Services*	Sanitary Pipe I	nventory [*] Parl	:s [×]	
) 🥭	🥭 🖪 🛤		Lucity To	ols			
		OBJECTID	Structure	Address	Street Direction	Street Name	Street Type	Street Suffix	Apartment No	Connection	
Colorado		185	2958	1236	S	PORTLAND	AVE	Null	Null	Riser	
Features		186	2959	2548	E	KENT	AVE	Null	Null	Riser	
		187	2960	2538	E	KENT	AVE	Null	Null	Riser	-
		۲. <u> </u>									
,		Record: <<	< 1	> >> Re	cords (1 out of 94	Selected)	ptions	Feature 0	irid Controls		

Table Display Controls

☆ This button is used to expand the table to show more records

X This button is used to close the table. This does not clear the selection

Tabs

At the top of the grid there is a row of tabs. Each tab corresponds to a feature class that has features included in the current selection. Click on a tab to switch to a table showing the selected features for that feature class.

Selected Features

Features that appear in the table are currently selected. They are displayed in the map using the main selection color (the default is yellow).

- Click on one or more rows in the grid to highlight a subset of the selection results. These features are displayed in the map using the secondary selection color (the default is red).
- The Lucity Tools work off the features that are selected in the grid.

Note:_____

Feature Grid Controls

This button can be used to move through the records in the grid. It will select/highlight the record number. It also displays the number of records in the grid

Options... This button is shows various feature grid options.

- Clear Selection- Clears the selected/highlighted features in the grid
- Switch Selection- Features currently selected are unselected and visa versa
- Select All- Selects/highlights all features in the grid
- Zoom To Selection- Zooms to the selected features in the grid.
- Remove Selected Row(s)- Removes the selected features from the grid. Note: This will also remove these features from the map selection.



• Auto Zoom to Selected- Check this box if you wish the map display to zoom to each new feature selected/highlighted in the grid.

Lucity Tools

These tools allow users to perform Lucity operations against features in the map. More information on these tools can be found further in this document under the Lucity Tools section.

Pan

This tool allows users to pan around in the map. This tool is selected by default when the map is first loaded.

These tools allow the user to zoom in/out. Click the tool then draw a box to the extent you would like to see displayed.

Note: If you have a mouse wheel, it can also be used to zoom in/out of the map display.

Return to Previous/Next Extent

These tools allow you to cycle through previous map extents.

Navigation Wheel

The following are the various navigation tools:



- A. **Pan** Click the four arrows on the wheel to move the map North, South, East, West.
- B. Rotate Click and drag the other areas of the compass to rotate the map in any direction.
- C. **Zoom to Full Extent** Click the globe icon on the lower right of the compass to zoom to the full extent.
- D. Reset North Click the arrow icon on the lower left of the compass to reset the map to North.
- E. **Zoom In/Out** Click the + and buttons on the left side of the compass to zoom in and out of the map.

Analysis Toolbar

The following are the various tools available on the analysis toolbar:



Identify

The Identify tool allows users to select a feature in the map and display its attributes. Note: Only layers marked as selectable in Map Properties will be displayed in the results.

1. Using the identify tool click a feature in the map. The identify results window will appear.

	X				
126857 (Sanitary Structure Inventory)					
OBJECTID	305				
Structure	126857				
Subtype	Null				
Structure Type	Standard				
Structure Depth (ft)	1258.12				
Rim Elevation	1272.64				
Status	N/A				
Component Type	Standard				
GPS Flag	Null				
Unique Number	29982				
In Lucity Database?	1				
Last Modified By	GBA				
Last Modified date	7/24/2006 2:00:58 PM				
Last Synchronized Date	12/9/2011				
SHAPE	Point				

2. If more than one feature was at the location of the mouse-click, you can use the drop down to select the desired feature.



The Find tool searches for addresses and assets based upon the criteria the user enters. Note: Only layers marked as selectable in Map Properties will be displayed in the results.

Find Address

- 1. To locate an address in the map enter and Address and Street.
- 2. Enter optional cross street or zip code
- 3. Click Find
- 4. A point will be put in the map at the address location.

Address Asset Attribute Query Customer	X
Address	-
(Optional) Cross Street	
(Optional) Zip Code	
Clear	

Find Asset

- 1. To locate an asset in the map select a Feature Type. This list is populated with the feature classes linked to Lucity in the map.
- 2. Type in an asset number. This is the feature's common identifier.
- 3. Click Find.
- 4. The asset(s) will be selected in the map.

Address	Asset	Attribute Query	Customer	
Feature Ty	pe			
				•
supports	% for pa	artial match		
			Find	

Attribute Query

- 1. To select features in the map based upon an attribute query, select a Layer. This list is populated with all selectable layers in the map.
- 2. Select a Field. This list is populated with all the fields from the layer.
- 3. Enter a Value. This is the value you want to search for in the field.
- 4. Click Find.
- 5. The asset(s) that meet the search criteria will be selected in the map.

Address	Asset	Attribute Q	uery	Customer	
Layer					
					•
Field					
					•
Value					
	0/ 6				
supports	76 for p	artial match			
				Find	



This tool creates a point in the map. This tool can be used to add x/y locations to a work request, work order, and pm/work template records.

- 1. Using the Create Point tool click a location in the map.
- 2. A red point will appear in the map and the Data Table will be opened with a tab for X/Y Points.



This tool allows users to select features. Note: Only layers that are marked as selectable will be included in the selection results.



This tool clears the map selection. All selected features in the map will be cleared and any address or x/y points added to the map will also be removed.



Load Subsets

The Load Subsets tool allows users to load a subset in the map. This tool can either select the features that are included in the subset, or create a temporary subset layer that contains these features.

1. Click the Load Subset tool, the following dialog will appear:

tity GIS- Load a subset	
Select Type of Subset:	Ret
Parks	
Salart Subrati	
Parks	
· 20 · · · 2	
Load as a Subset Layer instead of a selection	

- 2. Choose an asset type from the Select Type of Subset list. This list only includes asset types for which there is a feature class in the map.
- 3. By default, the tool will select features in the layers in the map linked to the asset type selected. Check the Load as Subset Layer box if you prefer to have a new layer added in the map with the subset features.
- 4. Click OK
- 5. The assets will be selected in the map and appear in the Data Table or a layer will be added to the map and you can modify its properties using the Map Layers tool.

Note:_____

Lucity Tools

The following are the various Lucity tools available in the Data Table





Relationships

The Relationships tool shows all Lucity modules and records related to the highlighted record(s). Users can then view the related record(s) in either the Lucity desktop or web application.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. Select the Relationships tool. The following results window will appear:

💌 🐨 (×
Pipe Inventory	2
TV Inspection	0
Line Lamping	0
Smoke Testing	0
Rehab Pipe Analysis Details	0
Service Laterals	5
PACP Inspections	0
Sewer Construction	0
Pipe Air Testing	0
Pipe Mandrel Testing	0
Sewer Building Inspection	0
Work Orders	0
PM/Work Template	0
Work Requests	0

- 3. Each line in the window is a Lucity module. To the right of the module name is a count of how many records in that module are related to the selected record(s) in the data grid.
- 4. Select a module to view, then click on one of the following buttons to open that module.



Open in Lucity Web

Note:____

Lucity GIS Viewer Overview (v7.6)



The Create Subset tool allows users to create a new subset from selected features. Subsets allow users to save a fixed group of records for later use.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Create Subset tool. A dialog similar to the following will appear:

Lucity GIS- Create a new subset	x
Enter a subset name	
Sanitary Pipe Inventory 8/15/2012 3:54:36 PM	
OK	Cancel

- 3. Enter a name for the subset. By default the dialog creates a name based on the asset type, date, and time.
- 4. Click OK.
- 5. Once complete a dialog will appear indicating if it was successful.

ucity GIS	×
Subset successfully created!	
ОК	



The Add to Subset tool allows users to add assets to an existing subset.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Add to Subset tool. A dialog similar to the following will appear.

Select Type of Subs	et:	Ref
Sanitary Pipe Inven	tory	
Coloret Culturate		
select subset:		
Sanitary Pipe Inven	tory 8/15/2012 3:53:50 PM	
Sanitary Pipe Inven Sanitary Pipe Inven	tory 8/15/2012 3:53:50 PM tory 8/15/2012 3:54:36 PM	

- 3. The type of subset will be automatically filled out based upon the asset type of the feature class you are working with. Select an existing subset in the list provided.
- 4. Click OK
- 5. Once complete a dialog will appear indicating if it was successful



The Create Request tool allows users to create a request from the map based on an asset or x/y location.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Create Request tool.
- 3. If the highlighted asset does not have a default work category, the following popup will appear. Only valid categories will appear in the list. Select a category and click OK.



4. Once complete a dialog will appear indicating if you would like to edit the request in the web or desktop application.





The Create Work Order tool allows users to create a work order from the map based on asset(s) or x/y location(s).

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Create Work Order tool.
- 3. If the highlighted asset does not have a default work category, the following popup will appear. Only valid categories will appear in the list. Select a category and click OK.



4. Once complete a dialog will appear indicating if you would like to edit the work order in the web or desktop application.

Lucity GIS	×
Request created successfully.	Nould you like to edit the request in the web or desktop application?
Web	Desktop

Note:_____



The Add to Work Order tool allows users to add asset(s) or x/y location(s) to an existing work order from the map.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Add to Work Order tool. The following dialog will appear:

Lucity GIS	×
Enter the existing work order number.	
ОК	Cancel

- 3. Enter the existing work order number and click OK.
- 4. If the highlighted asset does not have a default work category, the following popup will appear. Only valid categories will appear in the list. Select a category and click OK.

Selec	t a category for Sanitary Pipe Inventory	×
	 20000 Sewer Department TST.SP SEWER PIPE TST.SP2 SEWER PIPE2 	
	TST.SP-C SEWER PIPE For Cost	
	ОК	Cancel

5. Once complete a dialog will appear indicating if you would like to edit the work order in the web or desktop application.



Create PM/Work Template

The Create PM/Work Template tool allows users to create a pm/work template record from the map based on asset(s) or x/y location(s).

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Create PM/Work Template tool. The following dialog will appear:

ucity GIS	×
Enter a new Routine/PM Work Template of	code and description:
ОК	Cancel

- 3. Enter a unique code and description for the pm/work template. Click OK.
- 4. If the highlighted asset does not have a default work category, the following popup will appear. Only valid categories will appear in the list. Select a category and click OK.

Sele	ct a category for Sanitary Pipe Inventory	×
	▷ 20000 Sewer Department	
	TST.SP SEWER PIPE	
	TST.SP2 SEWER PIPE2	
	TST.SP-C SEWER PIPE For Cost	
	L	
	OK	el

5. Once complete a dialog will appear indicating if you would like to edit the pm/work template record in the web or desktop application.



Add to PM/Work Template

The Add to PM/Work Template tool allows users to add asset(s) or x/y location(s) to an existing pm/work template record from the map.

- 1. After making a selection in the map, select the desired record(s) in the data grid.
- 2. In the Data Table, click the Add to PM/Work Template tool. The following dialog will appear:

ucity GIS	×
Enter the existing PM/Work Template number.	
ОК	Cancel

- 3. Enter the existing pm/work template number and click OK.
- 4. If the highlighted asset does not have a default work category, the following popup will appear. Only valid categories will appear in the list. Select a category and click OK.

Sele	t a category for Sanitary Pipe Inventory	×
	 20000 Sewer Department TST.SP SEWER PIPE TST.SP2 SEWER PIPE2 TST.SP-C SEWER PIPE For Cost 	
	OK	Cancel

5. Once complete a dialog will appear indicating if you would like to edit the pm/work template in the web or desktop application.

