# ArcGIS for AutoCAD: An Introduction



2018 ILGISA Annual Conference

Presented by: Erin Strickler, PE

# GIS OR CAD

Low on Accuracy



### "All models are WRONG; some are useful." George Box



## GIS AND



### Large Amount of Data

### Higher Accuracy

# = MORE USEFUL MODELS



## Ways to integrate CAD and GIS

CAD to GIS
Open directly in GIS
Export to shapefile
Export to shapefile
Export to CAD

### What about the data???



## ArcGIS for AutoCAD

- What it is
- What it can do
- What it can't do
- How to use it



## What it is

- Free plug-in for AutoCAD from ESRI
- arcgisforautocad.dll
- Load manually with NETLOAD in DWG file or
- Load with ArcGISForAutoCAD.exe



ArcGIS for AutoCAD 370

Uses Mapping Specification for CAD (MSC)



# What it can do Brings GIS functionality to AutoCAD

- AutoCAD, AutoCAD Map 3D, AutoCAD Civil 3D
- Access maps and imagery
- Navigate Drawings using location



# What it can do Brings the Data to AutoCAD

- Create and Edit Feature Classes
- Turn CAD linework into GIS data
- View and Edit Feature Services



## What it can't do (yet)

- Access enterprise servers federated with portal (late 2018)
- Access AGOL hosted services (2019)

#### Read shapefiles



## What it can't do

Understand Civil3D objects

Work with AutoCAD LT

Create domains/subtypes



Download: https://www.esri.com/en-us/arcgis/products/arcgis-for-autocad

ArcGIS Resources: <a href="https://resources.arcgis.com/en/help/arcgis-for-autocad">https://resources.arcgis.com/en/help/arcgis-for-autocad</a>

YouTube GISCADChannel:

https://www.youtube.com/channel/UCI0q3SW-F4ZZQmo9rYABgKw

**Useful Links** 

GIS CAD Interoperability Blog http://giscadblog.blogspot.com



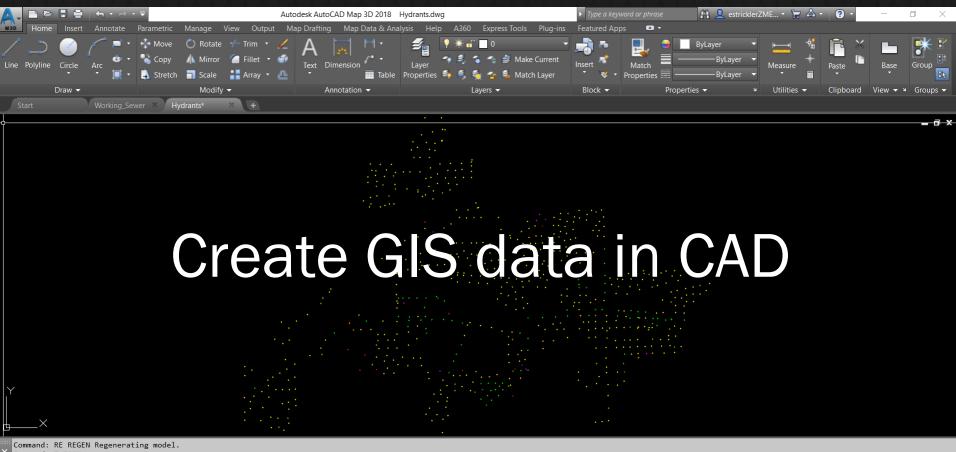
## How to use it

#### Create GIS data in CAD

#### Edit GIS Data from Service

#### • Questions?





Command: Z ZOOM

Specify corner of window, enter a scale factor (nX or nXP), or [All/Center/Dynamic/Extents/Previous/Scale/Window/Object] <real time>: e

▶\_ ▼ Type a command

<mark>∧</mark> , ■ ⊵ ■ ₩ + + + + + +	Autodesk AutoCAD Map 3D 2018 Hydra	ants.dwg	Type a keyword or phrase	👫 👤 estricklerZME 🕶 🦙 📥	• 📀 • 🚽 – 🗇 🗙
Home Insert Annotate Parametric Manage	View Output Map Drafting Map Data & Analysis	Help A360 Express Tools Plug-ins	Featured Apps 🛛 🕶 🗸		
Line Polyline Circle Arc	ate / Trim · / A         ·   4 or / Fillet · /     ·   La a Array · /     ·   ·   -   -   -   -   -   -   -	verties 📽 💈 🕵 😭 Katch Layer	Insert		Paste Base Group
Draw 👻 Mod	lify - Annotation -	Layers 👻	Block - Properties		Clipboard View 🕶 🛛 Groups 🕶
Start Hydrants* × +					
	A Choose .NET Assembly	• •		×	_ a x
	Look in: 📔 ArcGIS for J	AutoCAD 370 🗸 🔶 📮 🕻	🐧 💥 🚉 🛛 Views 🔻 Too <u>l</u> s 🔻	•	
YX	System.Re	AutoCAD.dll 11/8/2018 3 8/8/2018	9:11 PM File folder 9:11 PM F		

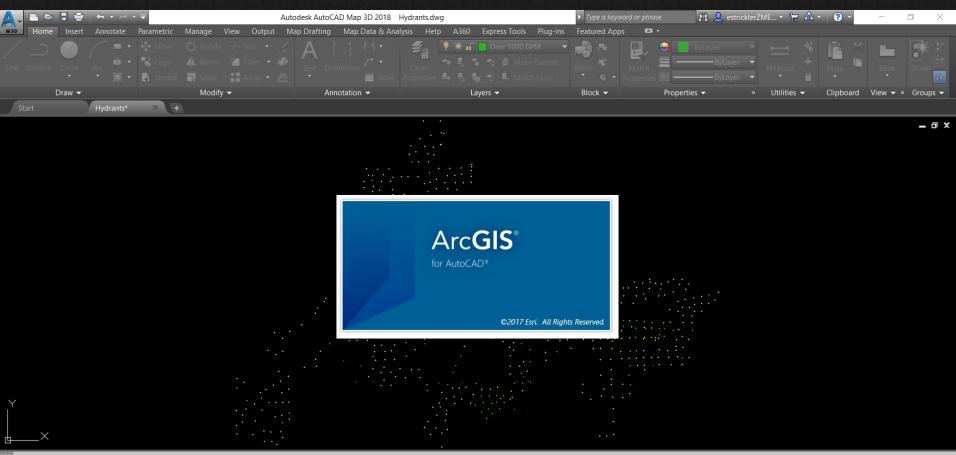
📙 🖓 🕼 🛪 🔻 🚱 <none> 🛛 🖺 1: 35567.4 🕶 🔒 MODEL 🏢 🏢 👻 🕒 🧭 🛪 🦎 🖬 🖉 🐼 🚍

Command: z ZOOM

Specify corner of window, enter a scale factor (nX or nXP), or [All/Center/Dynamic/Extents/Previous/Scale/Window/Object] <real time>: e Command: NETLOAD

▶ **Type a command** 

Model Layout1 Layout2 +



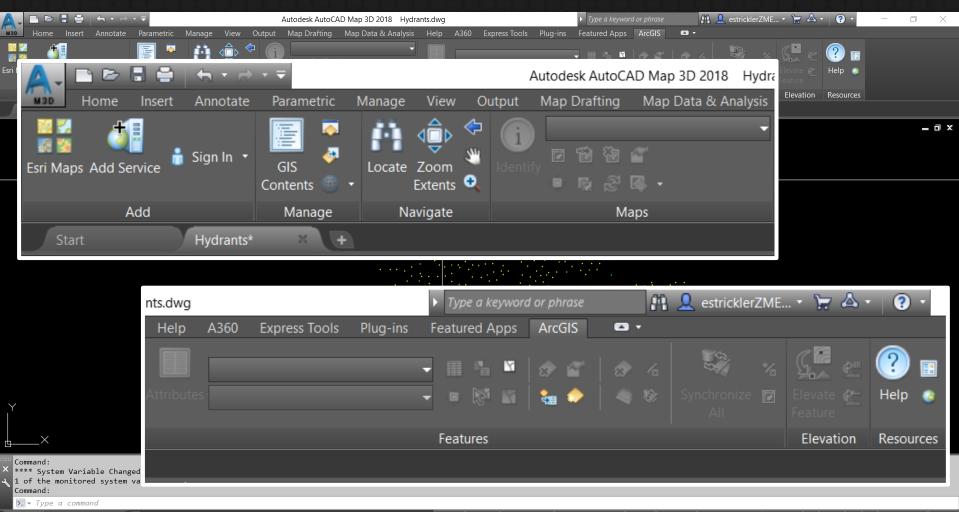
Command: z ZOOM

Specify corner of window, enter a scale factor (nX or nXP), or

[All/Center/Dynamic/Extents/Previous/Scale/Window/Object] <real time>: e

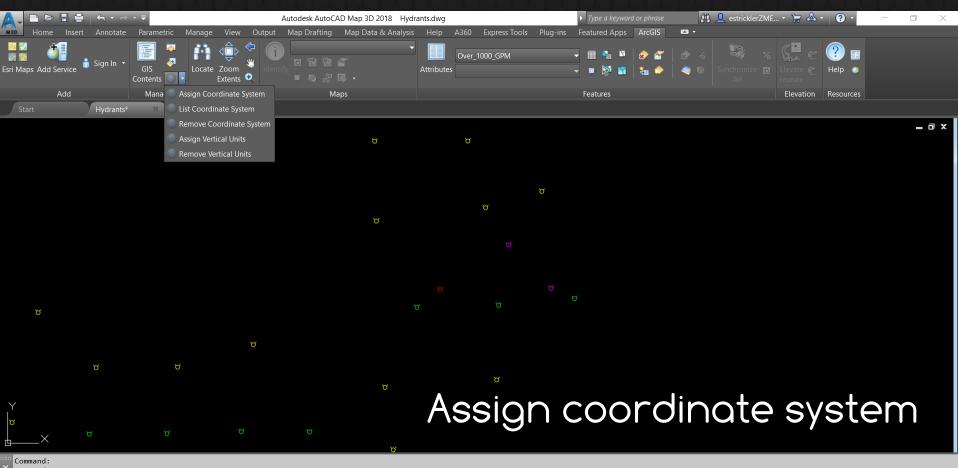
Command: NETLOAD

▶ ▼ Type a command



Model Layout1 Layout2 +

🕑 🕂 1x 🔻 🊱 <none> 🗣 🖺 1 : 35567.4 🗣 🕅 MODEL 🏢 🐘 👻 🕒 🤁 🗸 🍾 🖌 🗶 🔁 🖉 🐼 🐨 🔛 🕗 🔝 🖃 🖃

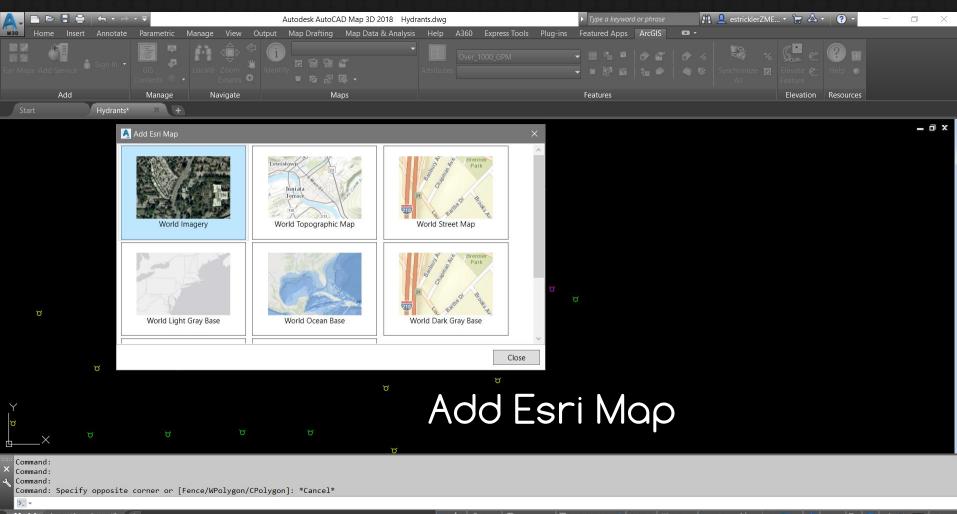


Command:

Command:

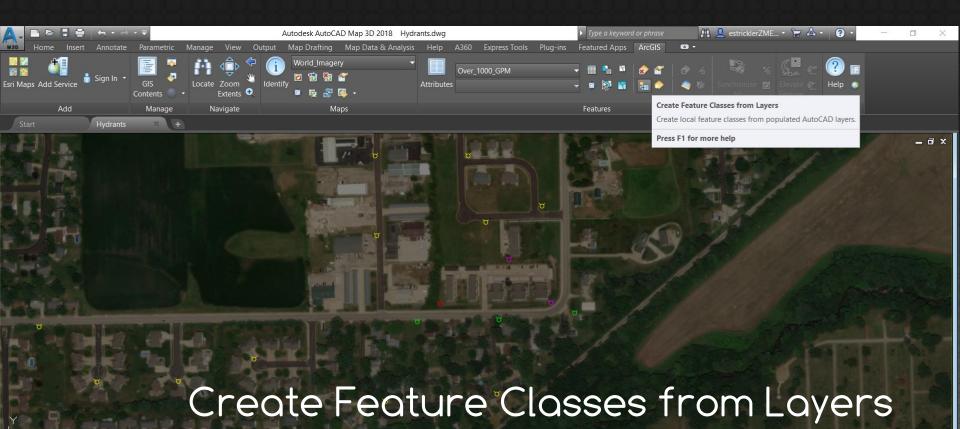
Command: Specify opposite corner or [Fence/WPolygon/CPolygon]: \*Cancel\*

▶. - Type a command



Model Layout1 Layout2 +

🟹 🛝 🛪 🐨 🚱 <none> 🔻 🖺 1 : 3617.02 🖛 🔒 MODEL 🏢 🏢 🔻 🖕 🖓 👻 🦯 🗶 🎒 🖓 🐼 🕇 🗫 🥥 🛕 🌦 🏹 💌



Ix ▼ S <none> ▼ II 1: 3617.02 ▼ MODEL III

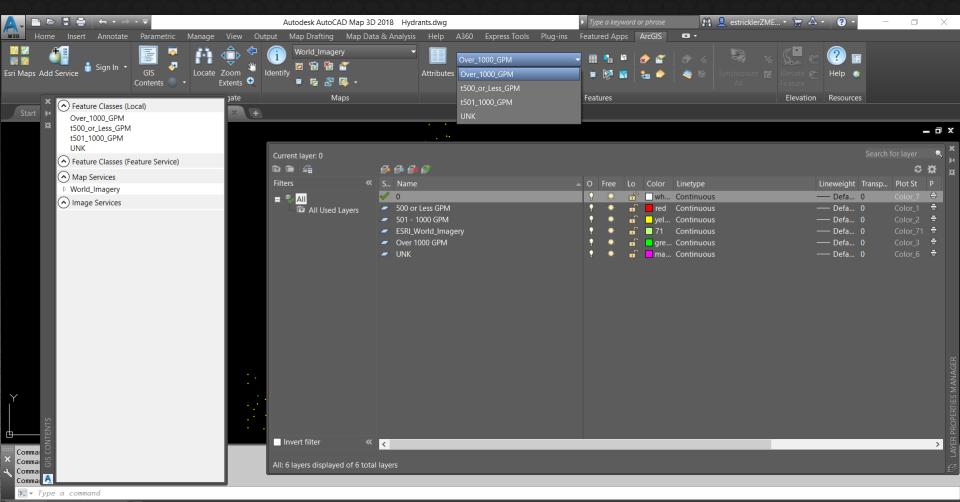
Command:

Autodesk DWG. This file is a TrustedDWG last saved by an Autodesk application or Autodesk licensed application. Command:

Command:

∑ ▼ Type a command

Model Layout1 Layout2 +



Model Layout1 Layout2 +

📙 🖯 /î, ix 🕈 🚱 «none» 🕈 🖺 1:36744.3 🕶 🔒 MODEL 🏢 🏢 🔹 🖕 🗇 🕆 🔪 💋 🖌 🚆 🖓 🐼 🖅 🔛 🚍

	·	Autodesk AutoCAD Map 3D 2018 Hydrants.dwg	► Typ	pe a keyword or phrase	🛍 💄 estricklerZME • 🦙 🛆 • 🛛 😨 •	- 0 ×
Home Insert Annotate	Parametric Manage View Output	Map Drafting Map Data & Analysis Help	A360 Express Tools Plug-ins Featu	ured Apps ArcGIS 📼 -		
					« 👒 « 🕵 e 🕐 🖬	
	GIS Locate Zoom Iden					
Add	Manage Navigate	Maps	Feat	tures	Elevation Resources	
Start Hydrants*	· * +					
	I THE REAL PROPERTY AND INCOMENTATION.	Table				_ 0 X
		📰 🕼 👘 🖬 🖬 🖉 🔊   Feature Cla	ss: Over_1000_GPM	<ul> <li>Subtype:</li> </ul>	and the second	And the second of
		Entity ID Entity Type	t501_1000_GPM		^ <u> </u>	State of the second
		1951420668640 INSERT	Over_1000_GPM			CONSTRUCTION NO.
STA COLUMN		1951420668608 INSERT	t500_or_Less_GPM UNK		- 1000 PM	
		1951420668528 INSERT				1997 - 1997 - 11
		1951420655824 INSERT				and the second second
		1951420665680 INSERT			1	Starte Martin
		1951420665648 INSERT				A DECEMBER OF THE OWNER OWNER OF THE OWNER
		1951420665552 INSERT				A Start Barner
THE R. S.		1951420665520 INSERT				
		1951420665472 INSERT				A State of the second second
		1951420665440 INSERT			Carlos and	Martin Constant
Contraction of the local division of the loc	and the second	1951420665408 INSERT				
X	a second as a second second second second	1951420665392 INSERT				
	ALL	1951420665328 INSERT	_			The second second
		1951420665296 INSERT			A DECEMBER OF A	STATE OF THE OWNER OF THE
		1951420664880 INSERT				
I DESCRIPTION OF		1951420664848 INSERT	-			Res Store Status
The second second		1951420664784 INSERT	-		T	NEW PARA
	The Builder	1951420664768 INSERT 1951420664736 INSERT				TOTAL ALP CONTRACTOR
	COLUMN STATES OF STATES OF STATES		of 85 selected			Sale and a second
			or of science		States of the local division of the	
			21 / 1			
				NOT STREET	a management of the state	
Command: 1 found						
× Regenerating model.						
Command:						
commaria:						

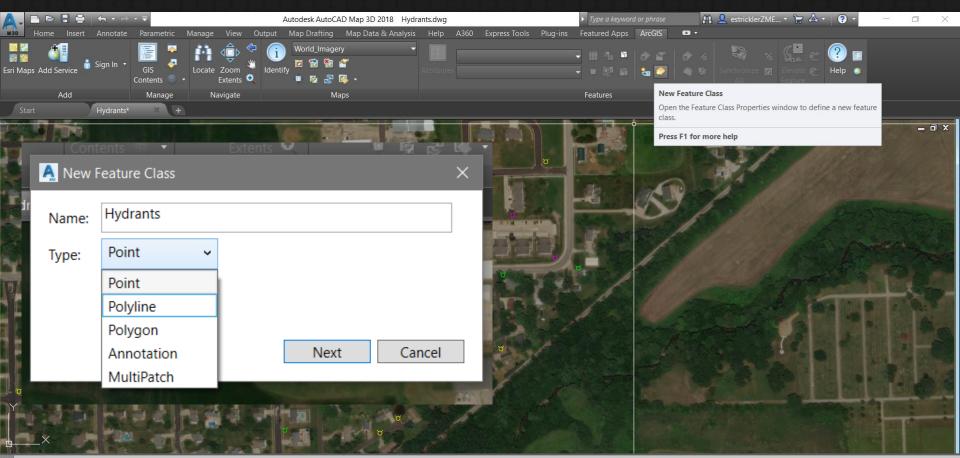
Model Layout1 Layout2 +

	- <del>-</del>	Autodesk Auto	CAD Map 3D 2018 Hydrants.dwg		▶ Type a keyword or phrase	🏥 💄 estricklerZME • 🍃 🛆	• • • - • ×
Home Insert Annotate	Parametric Manage	e View Output Map Draftin <u>c</u>	) Map Data & Analysis Help	A360 Express Tools Plug-in:	s Featured Apps ArcGIS	<b>D</b> •	
Esri Maps Add Service	GIS Locat	Coom Coon Coon Coon Coon Coon Coon Coon				Image: Constraint of the second se	
Add	🥂 Feature Class Prop	erties		×	Features	Elevation	Resources
Start Hydrants		SPM Layer Color Linetype Lineweight Va Block Name Dver 1000 GPM	~				- 7 ×
	Fields     Name     TestedBy     TestedOn		Fault Length 100 36 OK Cancel				

Command:

X Autodesk DWG. This file is a TrustedDWG last saved by an Autodesk application or Autodesk licensed application. Command:

Command:



#### Command:

Command: \_.undo Current settings: Auto = On, Control = All, Combine = Yes, Layer = Yes Enter the number of operations to undo or [Auto/Control/BEgin/End/Mark/Back] <1>: 1 Command:

🚬 🕶 Type a command

	-	Autodesk AutoCAD Map 3E	2018 Hydrants.dwg		► Type a keyword	d or phrase	👫 👤 estricklerZME 🔹 🦙 🖉	∆ · (?) ·	-
ome Insert Annotate	Parametric Manage View O Extents 🔍	utput Map Drafting Map Dai	ta & Analysis Help	A360 Express Tools					
Reature Class Pro				×			Synchronize		
Name: Hydrants	5				Features	New Feature	<b>Class</b> ure Class Properties window to d	lefine a new feature	
Type: Point						class.			
Query						Press F1 for i	nore help		
Property:	Block Name			~			A.		
Value:	fh_(Existing)			~		A.	1 _		
	Append String Va	ues				-/			
Property	Value								
Layer	*								
Block Name	fh_(Existing)				6 /				T
			Preview		15/ 8		- 6		
Fields			FIEVIEV	• •	1				
Name	Туре	Default	Lengt	n					T.
FlowRate	Text		50		A		Trees of the		
			OK Ca	ncel					
	ана стали и ста	D MAR IN THE	the second second	A DECK OF A DECK					

 ▼ Type a command

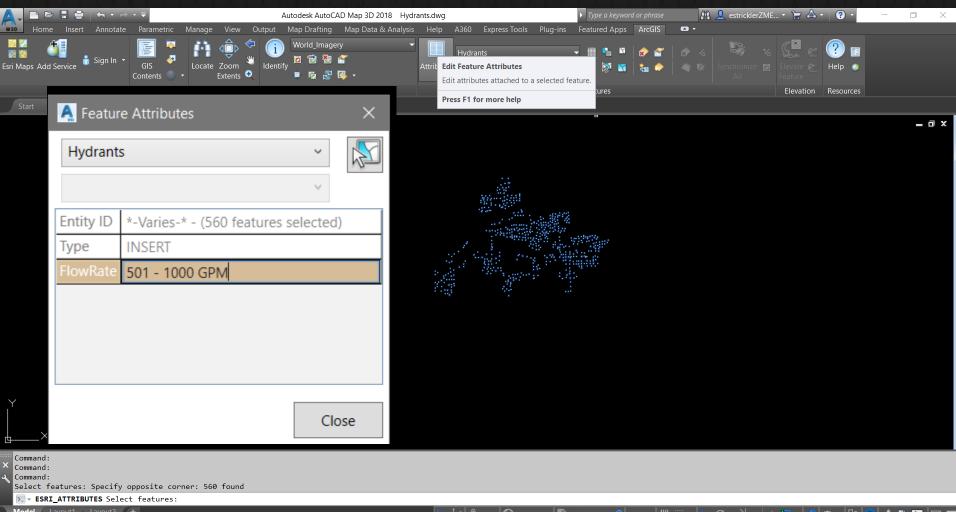
 Model
 Layout1
 Layout2

#### \_\_ 🖟 🕂 🛪 🐨 <none> 🔻 🖺 1 : 3641.17 🗣 MODEL 雛 🏢 🔻 🖕 🕑 🔹 🦎 🖕 🖉 🖉 🖃 🚍

A. DB89	>			Autodesk AutoCAD	Map 3D 2018 Hydran	ts.dwg	• Type a keyword or phrase	🟥 👤 estricklerZME 🏋 🛆 - 🛛 🥥 -	- 0 ×
Home Insert	Annotate	Parametric	Manage View Outp	out Map Drafting	Map Data & Analysis	Help A360 Express Tools Plug-ins	Featured Apps ArcGIS	0 -	
Esri Maps Add Service	Sign In 🔻	G A	Table			Hydrants		& & ■ Help •	
Add		Cont	N 4 1	Feature Clas	s: Hydrants		Open Attribute Table	ble for the current feature class. Elevation Resources	
Start	Hydrants*		Entity ID	Entity Type	FlowRate		Press F1 for more he	lp	
		•	1936774995168	INSERT					_ a ×
			1936774995152	INSERT					
			1936774995136	INSERT					
			1936774995120	INSERT					
			1936774995104	INSERT					
			1936774995088	INSERT					
			1936774995072	INSERT					
			1936774995056	INSERT					
			1936774995040	INSERT					
			1936774995024	INSERT					
			1936774995008	INSERT					
			1936774994992	INSERT					
			1936774994976	INSERT					
			1936774994960	INSERT					
Y			1936774994944	INSERT					
			1936774994928						
₫×			1936774994912						
× Enter the number Command:	of operat	ions	1936774994896			3UTES ESRI_ATTRIBUTES ESRI_ATT	RIBUTES ESRI_SELECTFEA	TUREOBJECTS	
Command: Command:			1936774994880						
- ESRI ATTRIB	ITES Soloct	fortunos		INGENT	1				

📙 🖓 🕼 🛪 🔻 🚱 <none> 🔻 🖺 1 : 157890 🗣 🔒 MODEL 🇰 🏢 👻 🖕 🕂 👻 🗶 🐮 🔽 🐼 🖉 🐼 🖾 🖾 🖾

ESRI\_ATTRIBUTES Select features:

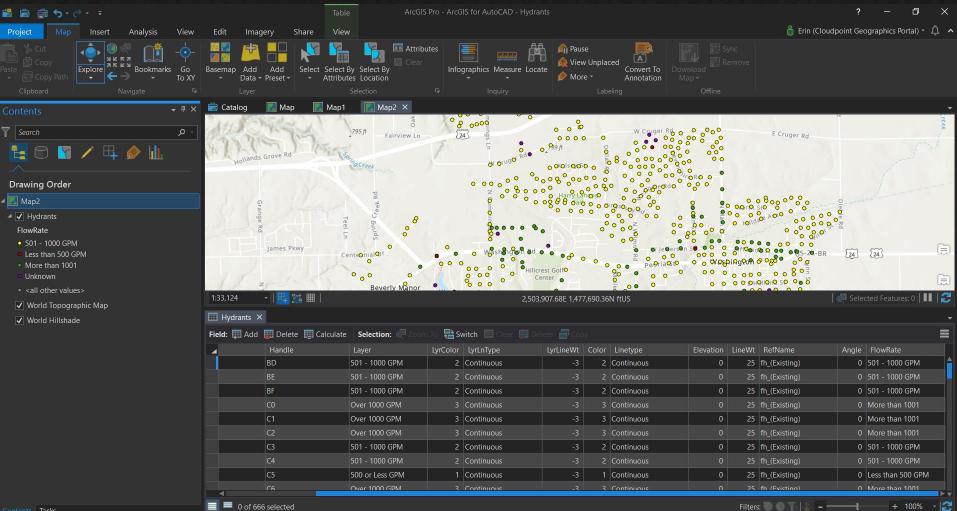


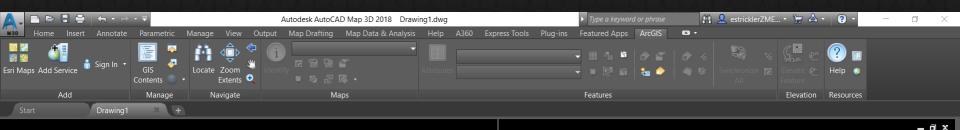
Model Layout1 Layout2 +

🔹 🗕 🗠 🕻 🗛 🛸 🗛 🖂 🖃

		<b>←</b> • <i>⇒</i> = =		Autodesk Auto	CAD Map 3D 2018 Hydra	ants.dwg	► Type	a keyword or phras	e 🗿	👤 estricklerZME	😭 🛆 -	? •	- 0	×
30 Home I	Insert	Annotate Parametric	c Manage View	Output Map Drafting	Map Data & Analysis	Help A360 Express Tools	Plug-ins Feature	d Apps ArcGIS						
sri Maps Add St	<b>A</b> T	able		-	gery 🔫	Hydrants Attrik Edit Feature Attributes	-	•n • • • • • • • • • • • • • • • • • •	ר גרייגי גרייגי	Synchronize	Elevate 🖉	🥐 🗊 Help 👩		
		M 🖓 📎	Feature Class:	Hydrants	1 🐼 🗸 Maps	Edit attributes attached to		res			Feature Elevation	Resources		
Start		Entity ID	Entity Type	FlowRate		Press F1 for more help								
r i i i i i i i i i i i i i i i i i i i	•	1936774995168	INSERT				_						- 6	a x
		1936774995152	INSERT											
		1936774995136	INSERT											
		1936774995120	INSERT			1								
		1936774995104	INSERT											
		1936774995088	INSERT											
		1936774995072	INSERT	501 - 1000 GPM										
		1936774995056	INSERT	501 - 1000 GPM		a said an								
		1936774995040	INSERT	501 - 1000 GPM		a ser aller ser								
		1936774995024		501 - 1000 GPM										
		1936774995008	INSERT	501 - 1000 GPM										
		1936774994992		501 - 1000 GPM										
		1936774994976		501 - 1000 GPM										
		1936774994960		501 - 1000 GPM										
		1936774994944		501 - 1000 GPM										
Y		1936774994928		501 - 1000 GPM										
		1936774994912		501 - 1000 GPM										
×		1936774994896		501 - 1000 GPM										
Command:		1936774994880		501 - 1000 GPM										
Command:	14-			666 selected										
Select fea	TRTBUT	ES Select features		000 sciected										

Model Layout1 Layout2 +





## Edit GIS Data from Service

Command: Command:

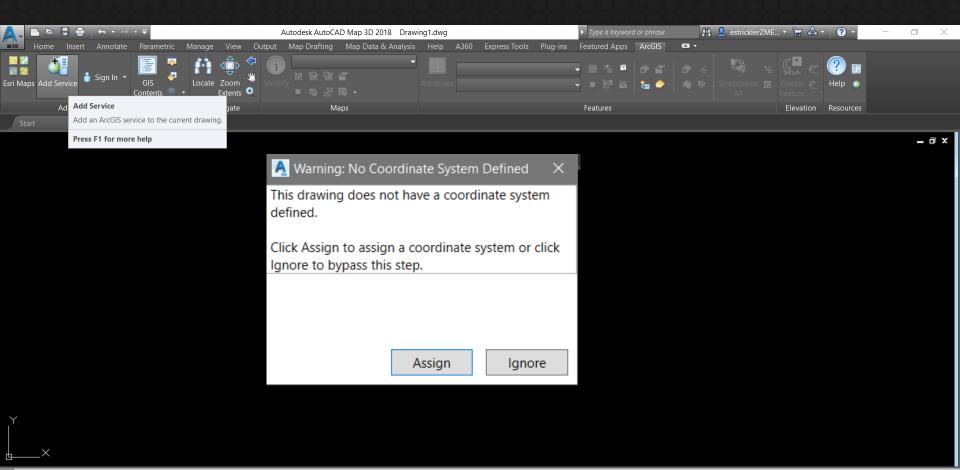
Command: \_RIBBON

Command: \_netload Assembly file name: "C:/Program Files/ArcGIS for AutoCAD 370/arcgisforautocad.dll"

🛛 🚬 🔻 Type a command

Model Layout1 Layout2 +

. 🗠 🎊 1x + 🚱 <none> + 🖺 1 : 0.935341 + 🔒 MODEL 🏢 🏢 + 🛌 🕑 + 🔨 + 🖉 🗖 + 🧏 🛱 + 🐶 🥥 🗛 💌 🚍



Command: Command: RIBBON

Command: \_netload Assembly file name: "C:/Program Files/ArcGIS for AutoCAD 370/arcgisforautocad.dll" Command:

▶ **•** Type a command

A. D & 8 #		Autodesk AutoCA	D Map 3D 2018 Drawing1.dwg		Þ	Type a keyword or phrase	👫 👤 estric	klerZME 🔹 🦙	▲ - (?) -	- 0 X
M30 Home Insert		arametric Manage View Output Map Drafting		A360 Express Tool	s Plug-ins Fe	eatured Apps ArcGIS	•	2 <b>1</b>		
	🛕 Add	GIS Service	×	<u> A</u> dd GIS Servi	ce				×	
Esri Maps Add Service Add		ect a GIS Server	• Attribute	Specify S	Server C	onnection In	formatior	า		
Start	Drav	services.arcgisonline.com/ArcGIS/services/ https://services.arcgisonline.com/arcgis/services		Server Name						- a x
				Server URL						
					Example: http:	//myServer/ArcGIS/Servio	ces			
					Account (Opt	tional)				
					User Name	2				
					Password					
		New Server Connection								
		Provide connection information for a server not listed						Next	Cancel	
		Next Cancel						INEXL	Cancer	
× ×										
× Command: _RIBBO Command: _netlo Command: Command:		le name: "C:/Program Files/ArcGIS for AutoC	AD 370/arcgisforautocad.c	111"						

Home Inser		Add GIS Service						×	stricklerZME 🔹 🦙 📥 🔹 📔 😨	• -	
		Select a GIS Service	_						», <u>, ,</u> e		
Esri Mans Add Service			<ul> <li>Export Properties</li> </ul>						hronize 📼 Elevate 🖉 Help		
List Maps Add Service		Cemeteries     EDroneFlights	Set bounding box from:	Service Ext	ent	~					
Add	Manage	Hosted	Bounding box:		Х		Y		Elevation Resou	irces	
Start	Drawing1	System Utilities		Min	-9915153.12790376	5146281	.81702954				
	-	▲		Max	-9911156.17673131	5151190	.8176246	_			_ a x
		YourCity_SewerNetwork	Add features for:	Editing		~					
		YourCity_StormNetwork	Service Information								
		YourCity StormNetwork	0	https://wol	omap.cloudpointgeo.com	/cdptgic/rost/con	icos/NourCity/				
		Figure City_WaterDistribution VourCity_WaterDistribution	UNE.		ormNetwork/FeatureServ		nces// fourcity/				
			Туре:	Feature Se							
			Server Version:	10.6							
			Service URL:		omap.cloudpointgeo.com cormNetwork/FeatureServ		vices//YourCity/				
			Service Description:	A series of have been	layers that represent the optimized for display as a and mobile devices.	stormwater netwo					
			Capabilities:	Query,Crea	te,Update,Delete,Uploads	s,Editing					
			Units:	esriMeters							
			Supported Query Formats:	JSON, AMF	:						
			Allow Geometry Updates:	True							
			Supports True Curve:	True							
			Allows True Curve Updates:	False							
			True Curve Clients Only:	True							
			Supports Apply Edits with Global Ids:	False							
			Extent:		х	Y					
				Min	9915153.1279037576	5146281.81702	295386				
$\checkmark$				Max	9911156.1767313052	5151190.81762	45969				
			WKID:	102100	551115611161515652	5151156161762					
			WRD.	102100							
<u> </u>						Add	Extract	Close			
Command:	ad Assembly file name	e: C:/Program Files/ArcGis To	or AutocaD 370/arcgistorautoca	a.a.ı							
Command:											
×											

	Add	CIC	Sam	

Add GIS Service

#### Select a GIS Service

A

lome Insert

- Storm\_Sewer\_Pipe
  Cemeteries
  ComponeFlights
  Hosted
  System
  Utilities
- - YourCity\_SewerNetwork
  - YourCity\_SewerNetwork
    YourCity\_StormNetwork
- YourCity\_StormNetwork
- Figure City\_WaterDistribution URL: VourCity\_WaterDistribution

- Export Properties
   Set bounding box from:
  - Bounding box:

  - Add features for:

Service Information

- on URL:
- on Type:
  - Server Version:
  - Service URL:
  - Service Description:
  - Capabilities:
  - Units:

- Service Extent 

  Service Extent 

  Current View
  Select corners...
  (Customized)
  Editing 

  V
- https://webmap.cloudpointgeo.com/cdptgis/rest/services//YourCity/ YourCity\_StormNetwork/FeatureServer
- Feature Server

#### 10.6

https://webmap.cloudpointgeo.com/cdptgis/rest/services//YourCity/ YourCity\_StormNetwork/FeatureServer

A series of layers that represent the stormwater network for a Utility. These layers have been optimized for display as a hosted tiled and feature service and for display on the web and mobile devices.

Query, Create, Update, Delete, Uploads, Editing

esriMeters

ISON AME

Supported Query Formats:

Add

Extract

Close

Command: \_netload Assembly file name: נ:/rrogram Files/ArcGis for AutoCAU 3/0/arcgistorautocau

Command: Command:

Command:

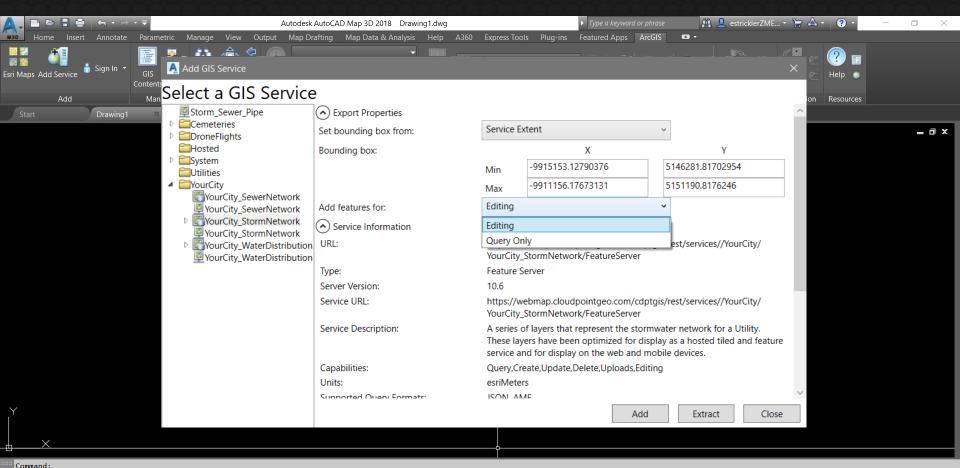
**?** -

D

\_ 0 X

estricklerZME... 🝷 🦙 📥 🔹

lesources



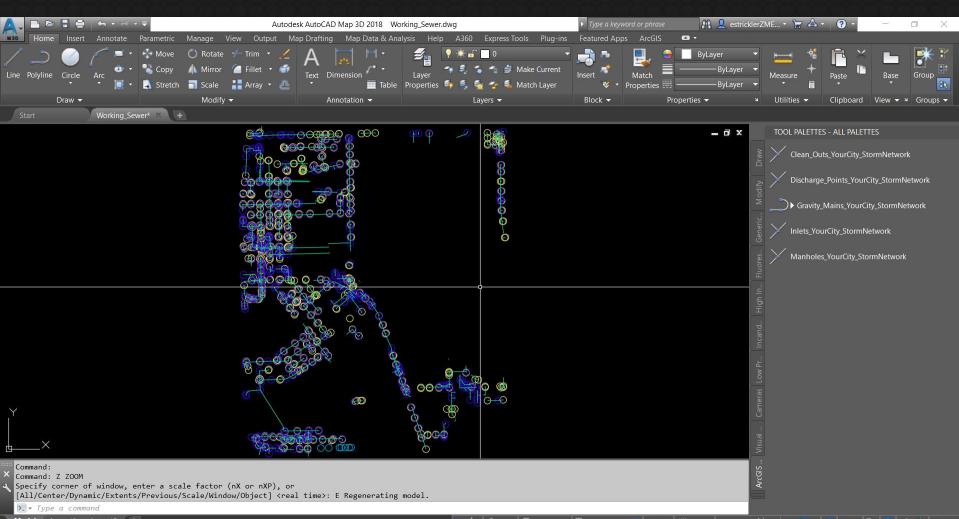
🗠 🎊 1x 🔻 🚱 <none> 🔻 🔛 1 : 0.935341 🕶 🔒 MODEL 🇱 🏢 👻 🕒 🍳 👻 🖊 🗶 🔁 🖉 🖉

#### Command:

Command: RIBBON

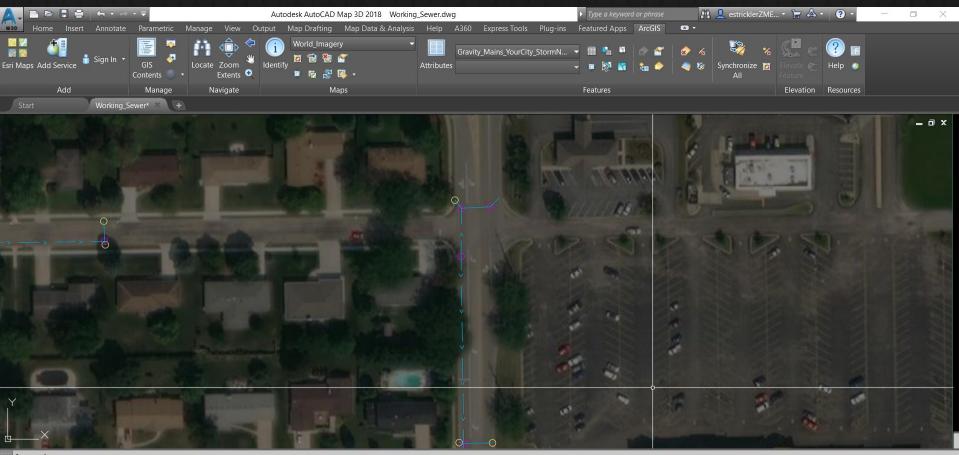
Command: \_netload Assembly file name: "C:/Program Files/ArcGIS for AutoCAD 370/arcgisforautocad.dll"

▶ ▼ Type a command



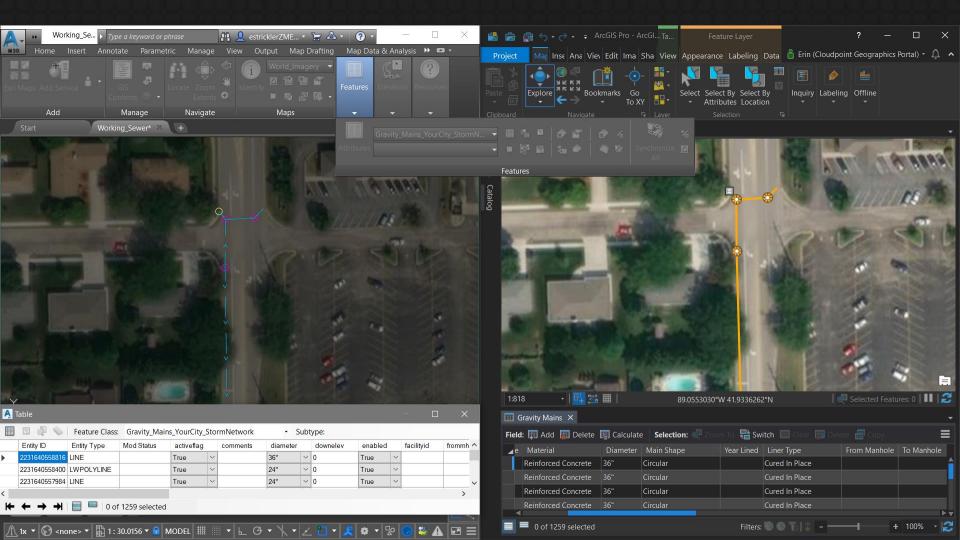
Model Layout1 Layout2 +

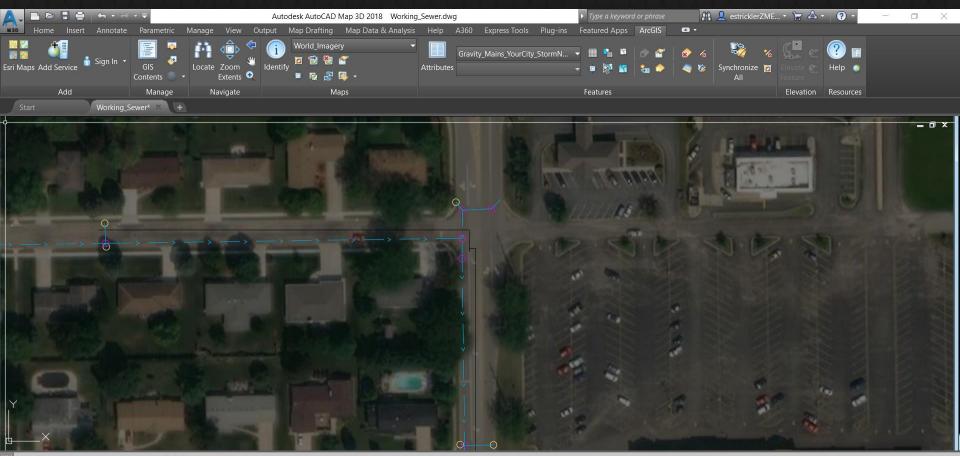
												_							0	
A-						2004 C	AD Map 3D 2018 Workin	-					Type a keywo			B 📙 estrick	lerZME.	- 🖙 🛆 -	? -	- 0 X
M3D		sert Annotate	Parametric	Manage View		Map Draftir	ng Map Data & Analysis	Help	A360 Expres	s Tools	Plug-	ins Fe	atured Apps	ArcGIS	• •					
	2 di 1			- 👬 👘	. 🗢 🕜				Clean_Outs_Yo	urCitu	StormNo		T 💁 🛯	1 🐟 🛷	1 🌧 🖌		2	C C .	2	
Ecri M	iaps Add Servic	🚬 🗂 Sign In 🔻	GIS 🧖	Locate Zoom	2 Jacob 1			Attributor	Clean_Outs_Yo		<u> </u>					Synchroni	<b>**</b>		Help	
LSITIV	aps Aud Servic			<ul> <li>Extent:</li> </ul>	s 🕀			Attributes						900 V	<b>N</b>	All	20 🔝			
	Add		Manage	Navigate			Maps		Discharge_Poi				170C					Elevation	Resources	
	Start		Sewer*						Gravity_Mains											
					<b>600</b>		20 000	Φ	Manholes_You							_ a x	i in	OOL PALETTES	ς - ΔΙΙ ΡΔΙΕΤΤ	FS
								φ	Comparinoics_roo		ionniet	WOIK								
				×																mNetwork
				LII Current laye																
				* * *	1		∌ <b>€</b>												S 🛱	y_StormNetwork
				Filters		« S I					100	10000 000 000		1.000				Description		
						<b>~</b> (				<b>?</b>	1000	100 million (100 million)	vh Continu vh Continu			Color_7 Color_7	÷ 🖓			_StormNetwork
					All Used Layers		Defpoints ESRI_Clean Outs_YourCity_9	StormNetwor	ŀ				40 Continu			Color_/ Color				work
							SRI_Discharge Points_You			Ý	0		51 Continu			Color_61				Non K
							SRI_Gravity Mains_YourCit		vork	•	• i	<b>f</b> 🗖 1	20 Continu	— De	fa 0					nNetwork
							SRI_Inlets_YourCity_Storm			1	<u>_</u>	n 🗌 🖞		— De		Color_51				
						-	SRI_Manholes_YourCity_S	tormNetwork		Y	· •		80 Continu	— De	fa 0			•		
~																				
Y																				
				OPE																
<u>12</u>	×			R PR																
		1		Invert fil		« <		_	_		_	_	_	_	_	_	_	_	>	
	urrent point pecify a poi	: modes: PDM int:	ODE=33 PDSI		displayed of 7	total layers														
2 0	ommand: U PO																~			
1000	ommand: 🗐 - Type a co	ommand																		
		ommana 1 🔥 Layout2 🚺	Ŧ						ta A.	- 6	2	- 19	4 . 000 222 -		4444: :::::		N	2 91	<b>(0   m</b> - 10	o 🙆 🗚 🛍 ன =



Command: Command: Command: \*Cancel\* Command:

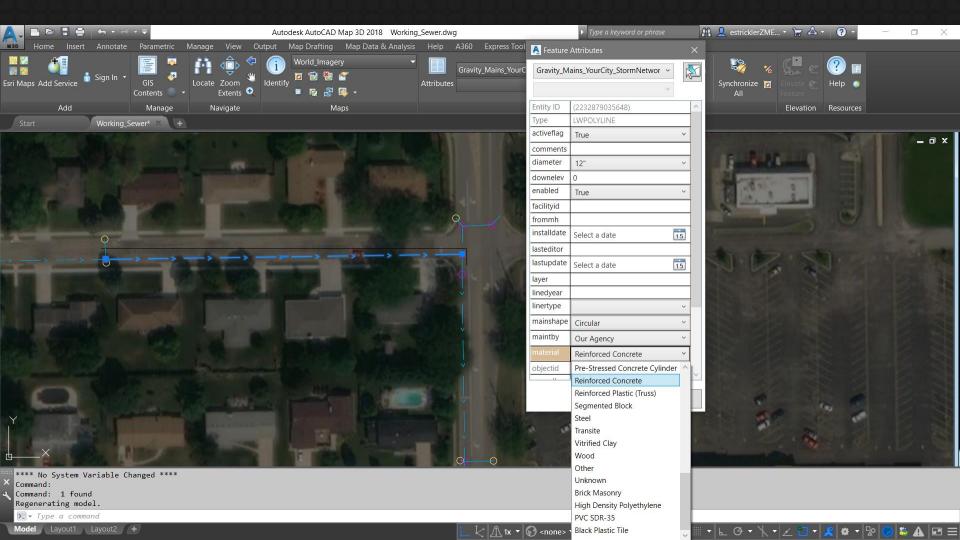
► Type a command Model Layout1 Layout2 +

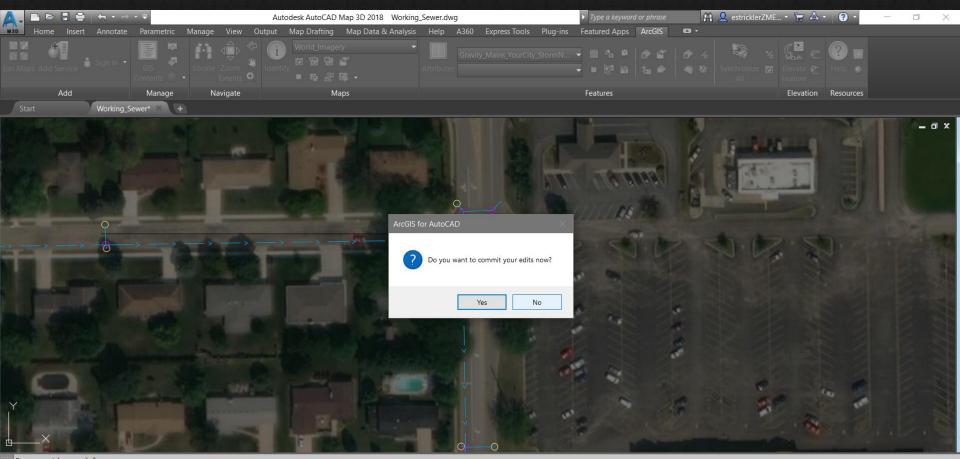




Current settings: Copy mode = Multiple Specify base point or [Displacement/mOde] <Displacement>: Specify second point or [Array] <use first point as displacement>: Specify second point or [Array/Exit/Undo] <Exit>: \*Cancel\*

▶ Type a command

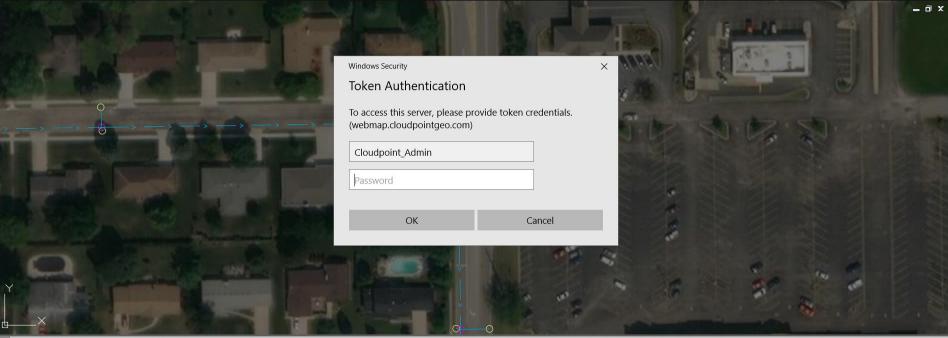




Regenerating model. Command: \*Cancel\* Command: Command:

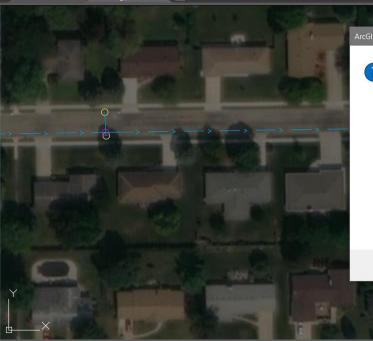
>\_\_\_QSAVE

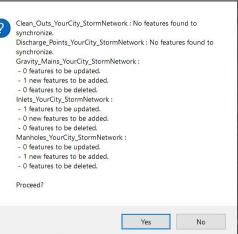
	b		Autodesk AutoCAD Map 3D 2018 Working	_Sewer.dwg	> Type a keyword or phrase	🎢 🔔 estricklerZME *	₩ 🖉 - 🌖 -	- 0	$\times$
Home Insert Annotat	Parametric Mar	nage View Outpu	it Map Drafting Map Data & Analysis	Help A360 Express Tools Plug-ins	Featured Apps ArcGIS	∽ -			
Esri Maps Add Service in Sign In •	GIS Contents	ocate Zoom Extents	World_Imagery ・ entify 回 昭 昭 留 ■ 限 名 译・		•    * 14   & 47 •    * 14   & 47		evate e		
Add	Manage	Navigate	Maps		Features		levation Resources		
Start Working	_Sewer +								



Model Layout1 Layout2 +

A. BB	÷ - <del>-</del>		Autodesk AutoCAD Map 3D 2018 Working	_Sewer.dwg	► Type a keyword or phrase	👫 🔔 estricklerZME	• 🖙 🛆 • ( 🤉 •	- 0	×
Home Insert Annotat	e Parametric M	Manage View Outp	ut Map Drafting Map Data & Analysis	Help A360 Express Tools Plug-ins	Featured Apps ArcGIS	•			
Esri Maps Add Service		Locate Zoom	World_Imagery				G e no		
Add	Manage	Navigate	Maps		Features		Elevation Resource		
Start Working	_Sewer +								



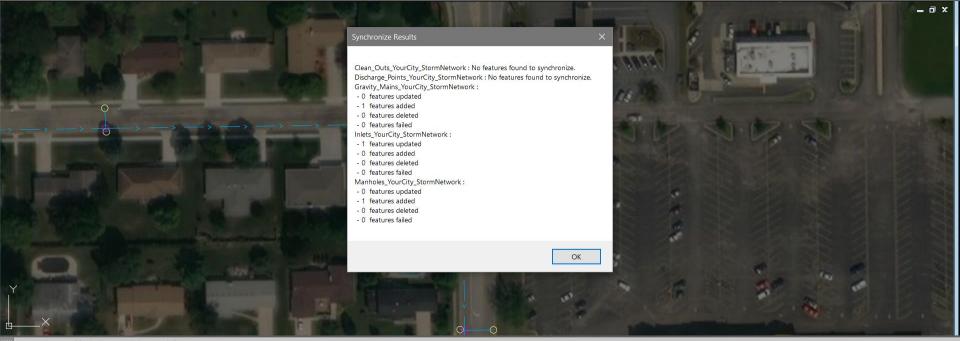


Command: \_QSAVE Regenerating model. Regenerating model. Command: Command: - 0 x

Model Layout1 Layout2 +

>\_ ~\_QSAVE

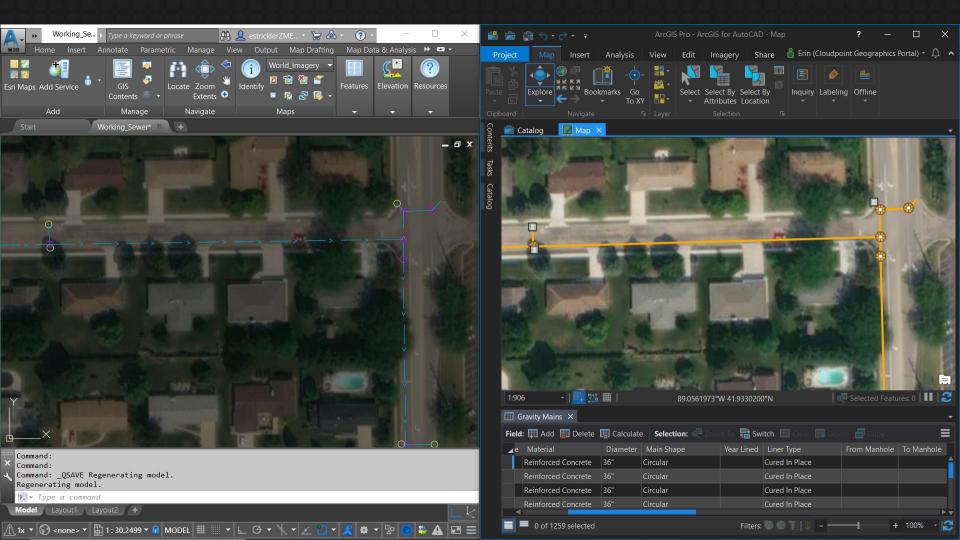
		A	utodesk AutoCAD Map 3D 2018 Working	_Sewer.dwg	▶ Type a keyword or phrase	👫 🔔 estricklerZME	· 🝃 🛆 ·	? -	- 6	1 ×
Home Insert Annotate	Parametric Mana	ige View Output	Map Drafting Map Data & Analysis	Help A360 Express Tools Plug-ins	Featured Apps ArcGIS	<b>D</b> •				
Esri Maps Add Service Sign In 🔹		ate Zoom State			· Ⅲ <sup>©</sup> № <sup>™</sup>   <i>8</i> • ■ <sup>®</sup> № <sup>™</sup>   <i>8</i>		Elevate 🖭	Pelp •		
Add	Manage	Navigate	Maps		Features		Elevation	Resources		
Start Working_S	Sewer +									



Command cancelled.Regenerating model. Regenerating model. Command: Command:

Model Layout1 Layout2 +

>\_ ~\_QSAVE



# Questions?

#### Erin Strickler estrickler@cloudpointgeo.com

<u>Twitter:</u> @cloudpointgeo

Facebook: Cloudpoint Geographics, Inc. LinkedIn:

Cloudpoint Geographics Inc.

Web: www.cloudpointgeo.com

