



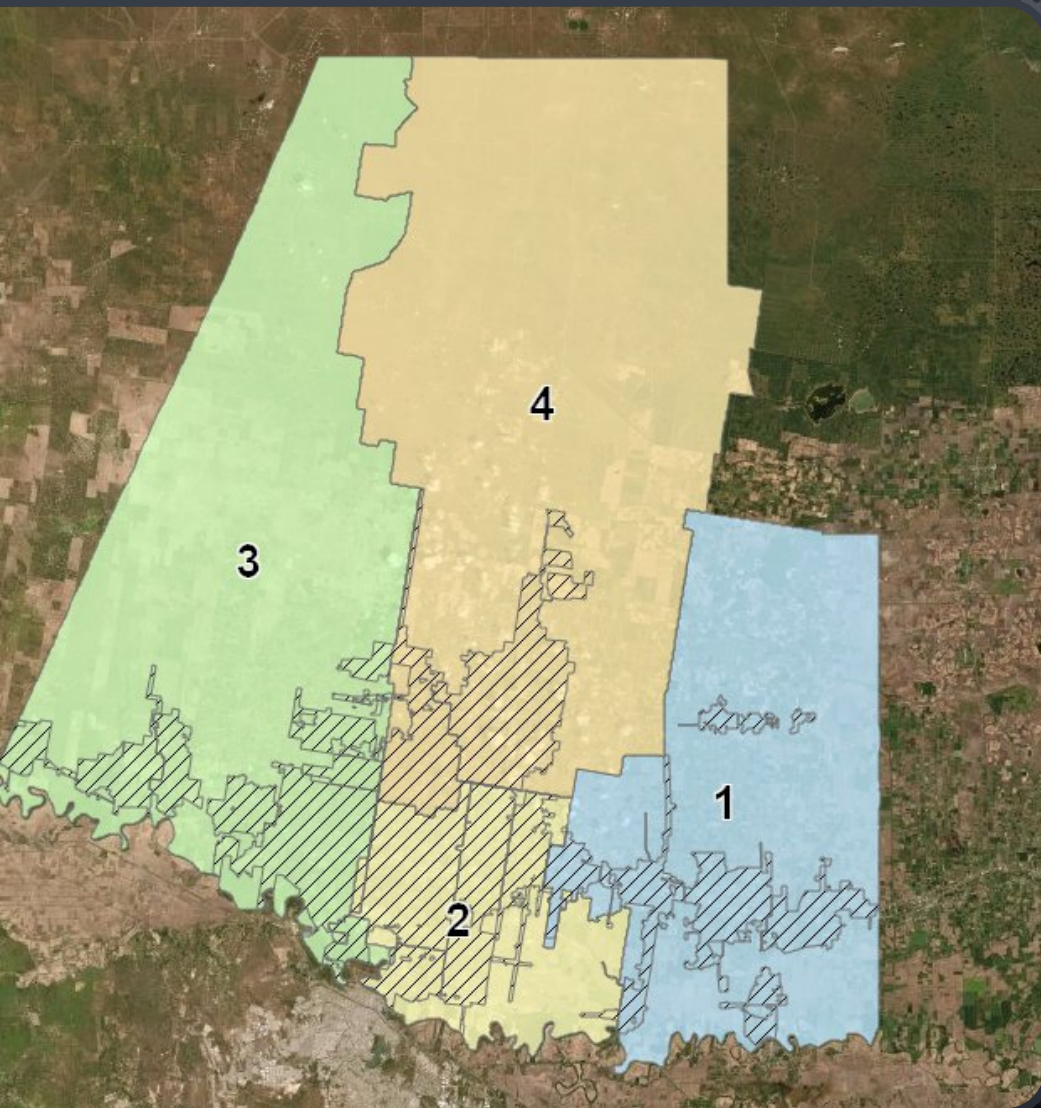
# HIDALGO COUNTY STREET INVENTORY & GASB

# PROJECT SCOPE

- STREET INVENTORY
- GASB-34 REPORT

# DELIVERABLES

- DATABASE
- GIS MAP
- PAVEMENT CONDITION INDEX (PCI)
- GASB-34 REPORT



## OVERVIEW

- APPROXIMATELY 2,000 MILES OF COUNTY ROADS.
- INVENTORY OF ALL COUNTY ROADS TO PRODUCE AN ELECTRONIC DATABASE AND GIS MAP THAT WILL ALLOW THE COUNTY TO QUICKLY ACCESS DATA ON THE CURRENT STATE OF THE TRANSPORTATION INFRASTRUCTURE TO IDENTIFY WHERE TO ALLOCATE RESOURCES.
- COLLECTION OF DATA ON ROAD DEFECTS AND ROAD ELEMENTS.
- PAVEMENT CONDITION INDEX'S (PCIs) THAT WILL HELP COUNTY AUTHORITIES ANALYZE AND STRATEGIZE THE ALLOCATION OF FUNDS INTO THEIR TRANSPORTATION INFRASTRUCTURE.
- FINAL REPORT OF ROADWAY ASSESSMENT ASSOCIATED WITH THE REQUIREMENTS OF GASB-34.

# ROAD INSPECTION BREAKDOWN

BREAKDOWN INTO A MAXIMUM OF 1-MILE SEGMENTS





# DATA COLLECTION (CONTINUED)

Street Name	Precinct	Posted Street	City	Starting Point	End Point	Subdivision N	Age of Street	Roadway Class	Street Width	Street Length	Number of Lanes	Pavement Type
Mile 17th 1/2 Rd	1		Edinburg	37.132840 -95.7	26.331936 -98.2			Local	21 ft	6.3m	2	Asphalt
Mile 17th	1	Dalinda Ramos	Edinburg					Local	21 ft	1 mile	2	Asphalt
W Russell Rd	4	W Mile 17 1/2		26.325050 -98.1	26.325584 -98.1			Collector	24		2	Asphalt
N mile 17 1/2 s	4	w mile 17 1/2 s	Edinburg		37.132840 -95.7			Collector	24	0.5	2	Asphalt
N mile 17 1/2 s	4	N mile 17 1/2 s	Edinburg	26.327394 -98.1	26.328447 -98.1			Collector	22	.5 mile	2	Asphalt
Russell Rd	4	N Mile 17 1/2 S	Edinburg	26.329513 -98.2	26.330761 -98.2			Collector	22	.48 mile	2	Asphalt
Russell Rd	4	N Mile 17 1/2 s	Edinburg	26.330844 -98.2	26.331929 -98.2	suspended by ra						

## Road Information

Curb & Gutter	Street Signage	Street Striping	Culverts	Roadside Ditch	Deficient Dr	Speed Limits	Existing Row	Apparent ROW
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	30		40ft
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	30		40 ft
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	30		44
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	30		62
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30		68
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	30		32
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

## Road Elements

Condition	Block Crack	Bumps and S	Corrugation	Depressio	Edge Crackir	Joint Reflect	Longitudinal	Patching	Polished Ag	Potholes	Rail Road Cr	Raveling	Rutting	Shoving	Shrinkage
High	None	Low	None	None	High	None	Low	High							
Low	None	Low	Low	None	High	None	Low	High	None	Low	None	High	None	Low	None
Low	Low	None	None	Low	High	None	Medium	Low	Low	Low	None	Low	High	Low	Low
Low	None	Low	None	Low	High	None	Low	Low	Low	None	None	None	High	Low	None
None	None	None	None	None	Low	None	None	Low	Low	Low	None	Low	Medium	Low	None
None	Low	None	None	Low	Low	None	None	Low	Low	High	None	Low	None	Low	None

## Road Defects

# DEFECTS CLASSIFICATION

## ALLIGATOR OR FATIGUE CRACKING

### Description

Interconnected cracks forming a series of small polygons that propagate to the surface of the road, the pattern resembling an alligator's skin. The pieces are less than 2 feet on the longest side. Alligator cracking occurs only in areas subjected to repeated traffic loadings, such as wheel paths. Therefore, it would not occur over an entire area unless the entire area was subjected to traffic loading. (Pattern-type cracking, which occurs over an entire area that is not subject to loading, is rated as block cracking).

### Severity Levels/quantification Criteria



**LOW**

Fine, longitudinal hairline cracks running parallel to each other with no or only a few interconnecting cracks. Cracks are not spalled.

1.5 ft < 2.0 ft



**Medium**

Further development of light alligator cracking into a pattern or network of cracks that may be a lightly spalled. Medium severity is defined by a well-defined pattern of interconnecting cracks, where all pieces (aggregate) are securely held in place.

0.5 ft < 1.5 ft



**High**

Network or pattern cracking progressed so that pieces are well-defined and spalled at the edges; some of the pieces rock under traffic and may cause FOD potential.

< 0.5 ft

## Potholes

### Description

Bowl-shaped depressions in the pavement, usually less than 30 inches in diameter. Generally, they have sharp edges and vertical sides near the top of the hole.

### Severity

Maximum Depth of Pothole	Average Diameter (in.)		
	4 to 8 inches	8 to 18 inches	18 to 30 inches
½ to 1 inch	Low	Low	Medium
1 to 2 inches	Low	Medium	High
2 inches >	Medium	Medium	High

### Levels/quantification Criteria



**Low**

Pothole is visible but does not affect ride quality.



**Medium**

Pothole is visible, it can be avoided and somehow affects ride quality.



**High**

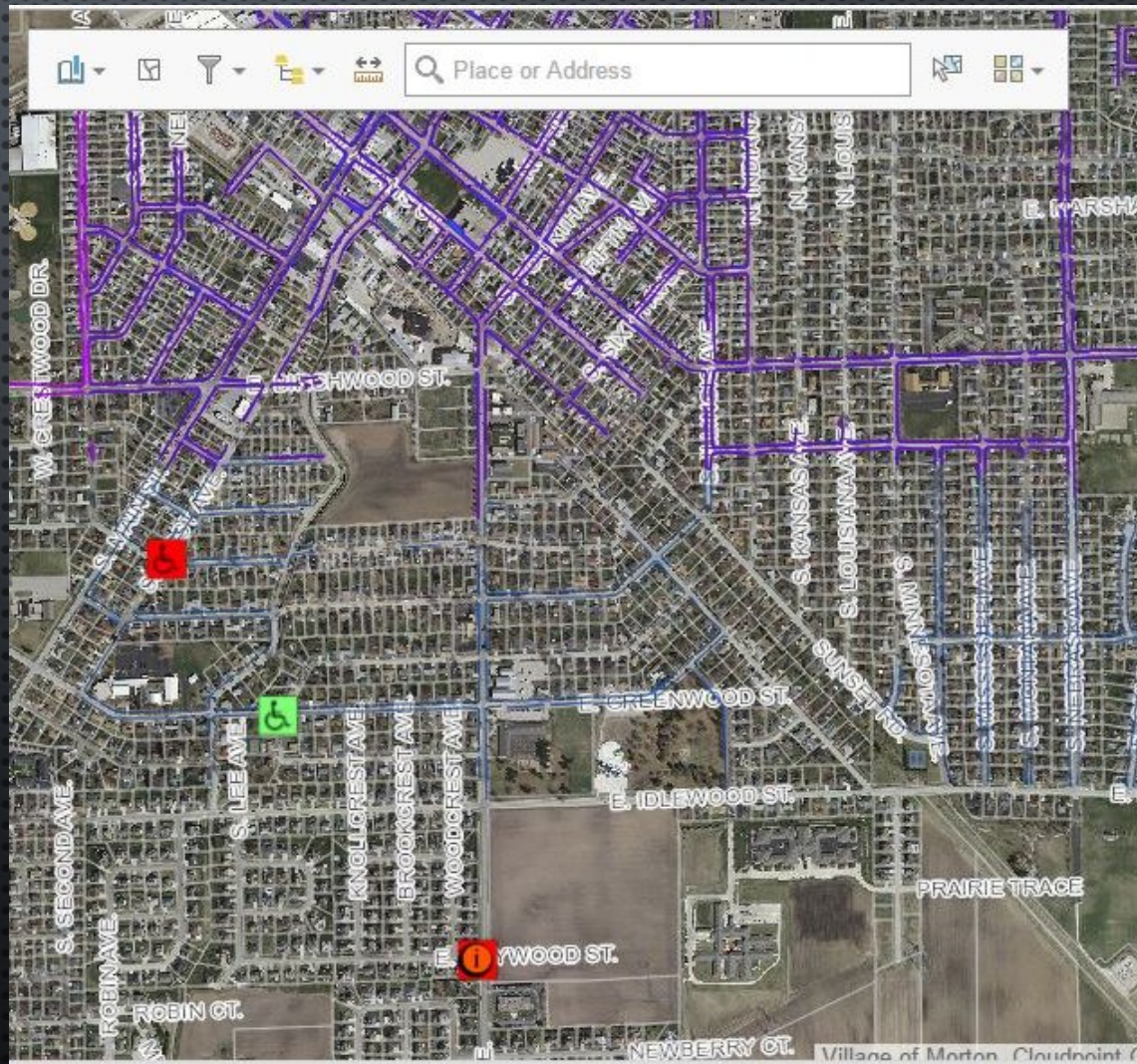
Pothole is visible, not easily avoidable and greatly affects ride quality.

# MAPPING SYSTEM

- ARCGIS COMPATIBLE WITH ACCESS DATA TO PRODUCE AN ONLINE MAPPING SYSTEM



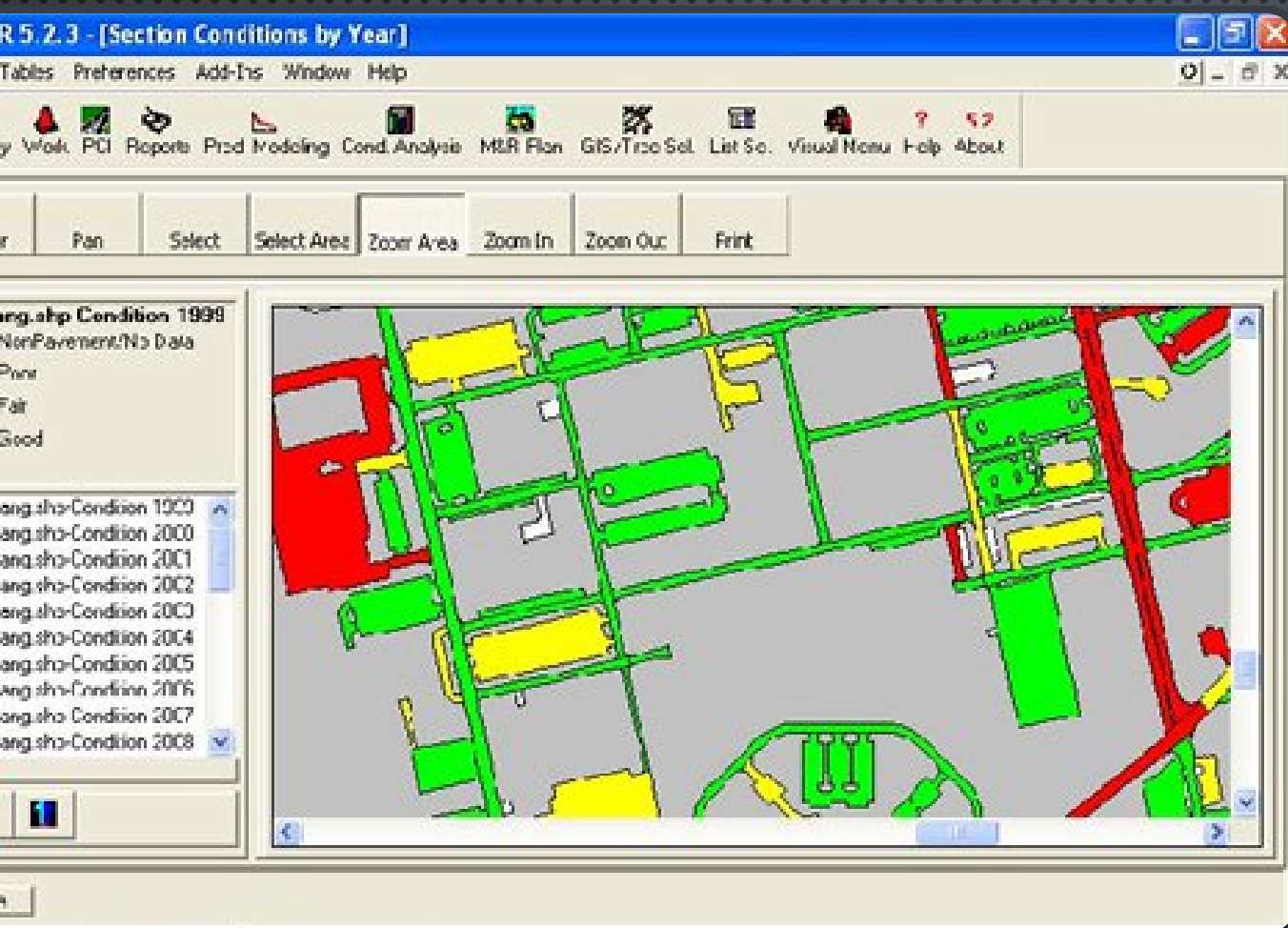
ArcGIS



# FIELD DATA CAPTURE

QUICKCAPTURE APP TO TAKE AND UPLOAD PICTURES INTO THE MAIN MAP TO PRODUCE GEOREFERENCED IMAGES OF THE DEFECTS PRESENT IN THE ROADS



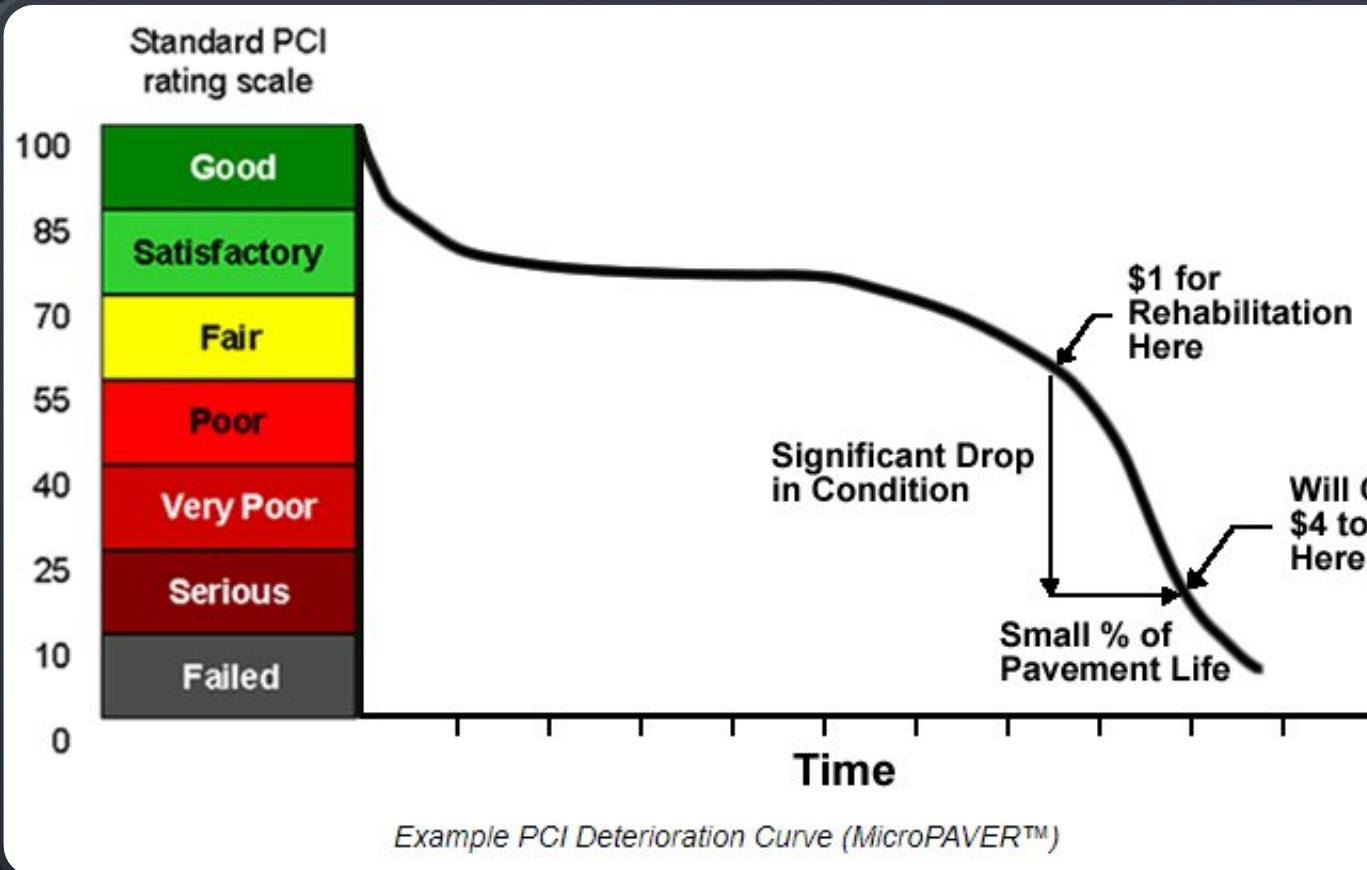


# PAVEMENT CONDITION INDEX (PCI)

# ASB-34 REPORT OVERVIEW:

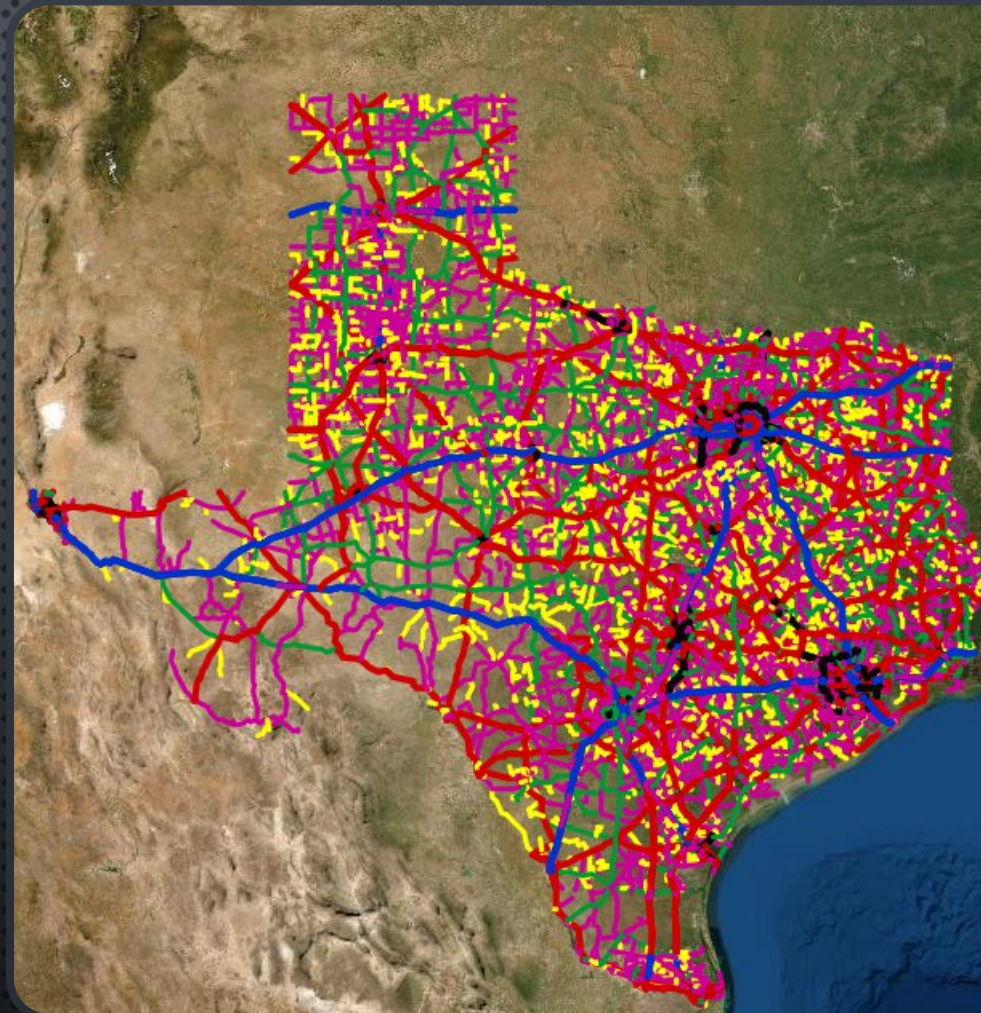
HISTORICAL VALUE OF COUNTY  
ROAD INFRASTRUCTURE

ROAD CONDITIONS IN TABULATED  
& GRAPHIC FORMATS



# ROADWAY CLASSIFICATION (DOT STANDARDS)

- INTERSTATE
- PRINCIPAL ARTERIAL
- MINOR ARTERIAL
- COLLECTORS
- LOCAL ROADS AND STREETS



TxDOT Functional Classification

## Properties

Use the selector above to switch layers in the map.

## Information

## Symbology

Show in map legend

## TxDOT Functional Classification

FC\_DESC

- Interstate
- Principal Arterial - (Other Expressways)
- Principal Arterial - Other
- Minor Arterial
- Major Collector
- Minor Collector

## Appearance

Blending

# MAINTENANCE UPDATES

WARDENMENTS GET A WORK ORDER TO REPAIR A STREET

WARDENMENTS COMPLETE THE WORK

WARDENMENTS NOTIFY *SAMES* VIA AN *INVENTORY UPDATE FORM*

*SAMES* RE-INSPECTS/RE-EVALUATES THE ROAD

SYSTEM IS UPDATED

# PROCESS FOR NEW SUBDIVISIONS

- ONGOING DEVELOPMENT PROJECTS.
- SAMES, INC WILL LOOK FOR NEWLY APPROVED SUBDIVISIONS ON A MONTHLY BASIS
- SAMES, INC WILL KEEP TRACK ON THE STATUS OF CONSTRUCTION
- ONCE SUBDIVISION IS COMPLETED AND IN OPERATION, SAMES, INC WILL CONDUCT ASSESSMENT ON THE NEW ROAD
- SAMES, INC WILL UPDATE INVENTORY MAP

# YOUR BENEFITS

VALUABLE DATA TO BE USED FOR FINANCIAL REPORTING THAT MEETS THE GASB-34 REQUIREMENTS

MAXIMIZE THE ALLOCATION OF FUNDS FOR ROAD IMPROVEMENTS/MAINTENANCE

GIS MAPPING CAPABILITIES WITH GEOREFERENCED LOCATIONS INDICATING THE CONDITIONS OF THE ROADS

DATABASE WITH LATEST STREETS AND FEATURES

BETTER ROAD CONDITIONS THROUGHOUT THE COUNTY

# EXHIBIT

<https://sensu.maps.arcgis.com/apps/webappviewer/index.html?id=e5313503ba574210838ffb729d6ff350>