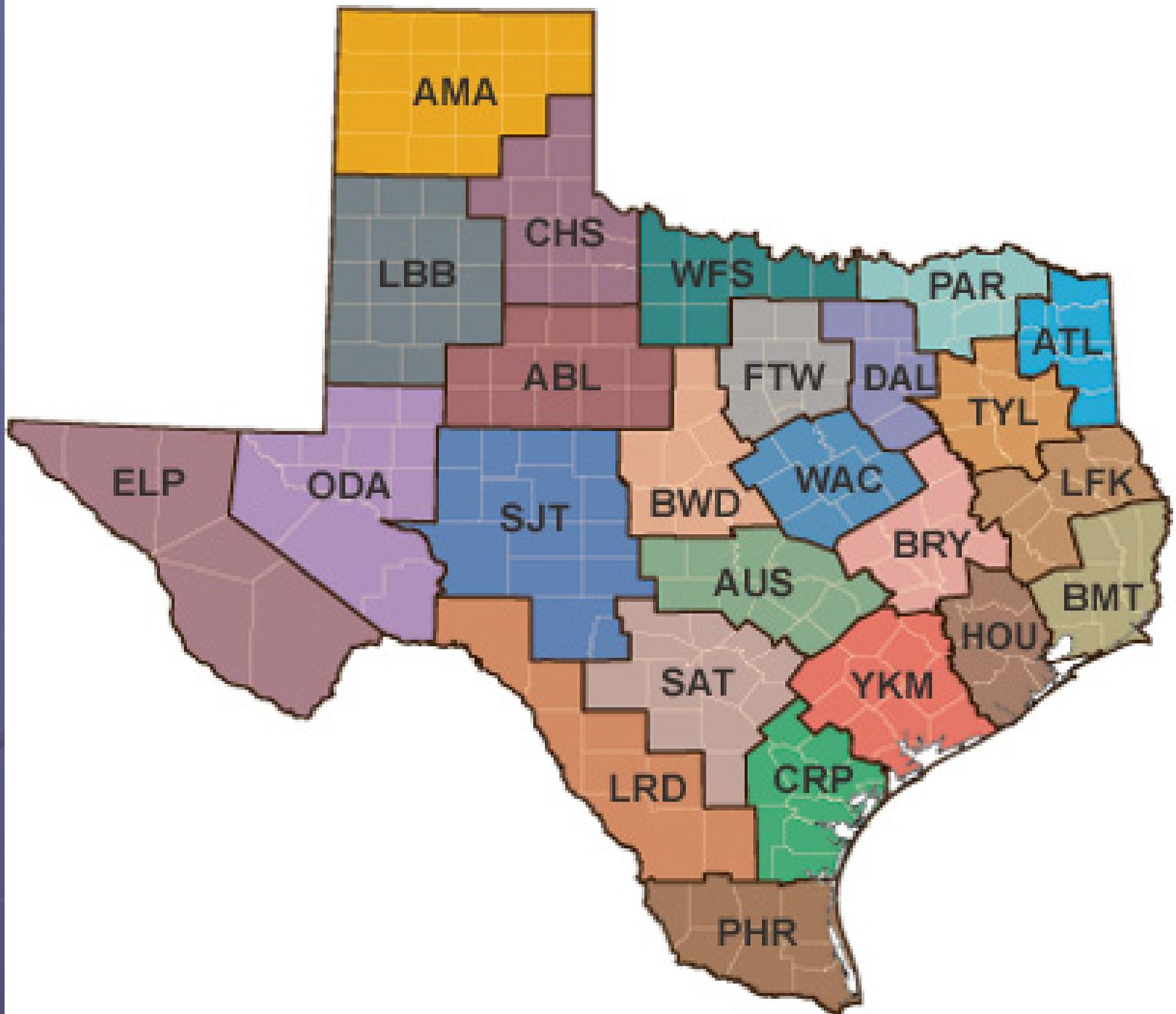


# Texas Maintenance Assessment Program (TxMAP)

# Background

- **Developed by TxDOT's Maintenance Division in 1999 to document the condition of the highway system**
- **Satisfy legislative accounting mandate (Government Accounting Standards Board Requirement #34 or GASB 34)**
- **Performance measurement tool for Legislature's Appropriations Bill**
- **Developed to provide documentation to districts on particular elements that need additional emphasis**
- **Used as budget allocation tool**



# For TxMAP the system generates one mile sections for rating

- Ratings are based on a 1-5 scale with 5 being the best and 1 the worst
- A zero indicates the element does not apply
- For each section observed, twenty three elements separated into three highway components are assessed
- We assess 10% of IH and 5% of all other roadways
- For FY 2007 over 4000 one mile sections were evaluated statewide from our roadway inventory of 79,897 miles of state maintained roadways

# Texas Maintenance Condition Assessment Inspection Report

REF. MARKER  
270

Wednesday, June 21, 2006 1:30:57 PM

DISTRICT/SECTION	Lubbock	/ 7	INSPECTED ON	6/12/2006 1:06:06 PM				
COUNTY	Lamb		PAVEMENT	Seal Coat				
HIGHWAY	FM0054		DIRECTION					
INSPECTOR	Carla Baze, Rickey Gates		COMMENTS					
ACCOMPANIED BY	Al Houston, Roberto Cardoza, Ja		FISCAL YEAR	2006	ASSESSMENT #	7965	INSPECTION	13033

## Element Scores

Each non-zero score is accessed a maximum of 5.

Not applicable scores =0.

Total scores are derived from dividing the accessed score by the maximum score.

Applicable scores = 1(20%); 2(40%); 3(60%);4(80%);5(100%)

## Priority Multiplier

Each element is assigned a weighted factor of priority with that component class.

The element score is multiplied by the priority multiplier to create the component score.

## Component Overall Rating

Component Overall Rating Score = Total Component Scores/ Total Priority Multipliers

## Inspection Scores

The inspection score is the sum of the Pavement Weighted Score, Traffic Operations Weighted Score, and Roadside Weighted Score.

PAVEMENT WEIGHT FACTOR = 50 %

TRAFFIC OPERATIONS WEIGHT FACTOR = 20 %

ROADSIDE WEIGHT FACTOR = 30 %

COMPONENT/ELEMENT	RATING	COMMENTS	ELEMENT SCORE	PRIORITY MULTIPLIER	COMPONENT SCORE
<b>Pavement</b>					
Main Lane - Rutting	4		80%	6.5	5.20
Main Lane - Cracking	5		100%	6.5	6.50
Main Lane - Failures	4		80%	9	7.20
Main Lane - Ride	4		80%	6	4.80
Edges	5		100%	4.5	4.50
Shoulders	5		100%	5	5.00
<b>Pavement Component Score</b>			<b>33.20 / 37.50 = 88.53%</b>		
<b>Traffic Operations</b>					
Raised Pavement Markers	0		0%	0	0.00
Signs - Large	0		0%	0	0.00
Signs - Small	5		100%	3	3.00
Striping, Pavement Graphics	5		100%	4	4.00
Attenuators	0		0%	0	0.00
Delineators	0		0%	0	0.00
<b>Traffic Operations Component Score</b>			<b>7.00 / 7.00 = 100.00%</b>		
<b>Roadside</b>					
Vegetation Management	5		100%	5.5	5.50
Litter	5		100%	2.5	2.50
Sweeping	0		0%	0	0.00
Trees and Brush	5		100%	3.5	3.50
Drainage	5		100%	5	5.00
Encroachments	5		100%	3.5	3.50
Guard Rails	0		0%	0	0.00
Mail Boxes	4		80%	3	2.40
General Public Rating	5		100%	10	10.00
<b>Roadside Component Score</b>			<b>32.40 / 33.00 = 98.18%</b>		
<b>INSPECTION OVERALL RATING</b>					<b>93.72%</b>

# Components/Elements

**Pavement = 50% of total score**

- **Rutting**
- **Cracking**
- **Failures**
- **Ride**
- **Edges**
- **Shoulders**



# Components/Elements

**Traffic Operations =  
25% of total score**

- **Raised Pavement Markers**
- **Large Roadside Signs**
- **Small Roadside Signs**
- **Striping, Pavement Graphics**
- **Attenuators**
- **Delineators**
- **Shoulder Texturing**



# Components/Elements



**Roadside= 25% of total score**

- **Vegetation Management**
- **Litter**
- **Sweeping**
- **Trees and Brush**
- **Drainage**
- **Encroachments**
- **Guard Rail**
- **Guard Rail End Treatment**
- **Mail Boxes**
- **General Public Rating**

## 2008 Overall Assessment District Level of Service Summary

100.00  
90.00  
80.00  
70.00  
60.00  
50.00  
40.00%  
30.00%  
20.00%  
10.00%  
0.00%

0.00%

	06-Odessa	19-Atlanta	08-Abilene
<span style="color: blue;">■</span> Pavement	82.38%	80.75%	81.70%
<span style="color: red;">■</span> Traffic	82.54%	83.64%	81.02%
<span style="color: green;">■</span> Roadside	88.57%	87.67%	86.87%
<span style="color: yellow;">■</span> OVERALL	83.97%	83.21%	82.82%

Statewide

78.51%

79.65%

82.26%

79.74%

	06-Odessa	19-Atlanta	08-Abilene	07-San Angelo	24-El Paso	03-Walton Hills	04-Amarillo	17-Bryan	20-Beaumont	05-Lubbock	10-Tyler	21-Pearr	22-Laredo	09-Waco	23-Brownwood	25-Childress	13-Yorkum	16-San Antonio	14-Austin	11-Lubbock	02-Fort Worth	01-Paris	12-Houston	15-Corpus Christi	18-Dallas	Statewide
<span style="color: blue;">■</span> Pavement	82.38%	80.75%	81.70%	82.49%	81.94%	82.10%	78.65%	78.30%	79.65%	80.18%	77.33%	80.63%	78.62%	78.10%	79.53%	79.00%	78.88%	79.31%	78.53%	78.17%	78.90%	73.07%	77.68%	73.82%	73.16%	78.51%
<span style="color: red;">■</span> Traffic	82.54%	83.64%	81.02%	82.23%	78.51%	83.21%	81.46%	84.22%	79.71%	79.67%	85.79%	77.45%	80.84%	81.49%	78.32%	84.54%	81.70%	77.65%	80.32%	81.13%	77.11%	80.69%	73.37%	76.65%	76.81%	79.65%
<span style="color: green;">■</span> Roadside	88.57%	87.67%	86.67%	83.87%	85.57%	79.94%	85.37%	83.07%	84.87%	81.58%	80.71%	81.95%	85.85%	81.59%	81.77%	80.22%	82.74%	80.35%	82.55%	80.54%	78.69%	80.39%	75.53%	78.71%	79.12%	82.26%
<span style="color: yellow;">■</span> OVERALL	83.97%	83.21%	82.82%	82.77%	81.99%	81.84%	81.03%	80.97%	80.97%	80.40%	80.29%	80.26%	79.98%	79.82%	79.79%	79.71%	79.45%	79.15%	78.98%	78.50%	77.40%	78.80%	76.06%	75.75%	75.96%	79.74%

# Raters

- Three former maintenance supervisors with combined years of service of over 75 years in highway maintenance
- Utilize district personnel to assist with assessments
- District personnel are not allowed to assist with assessments in their own district
- With three raters we do our inspections at a cost of around \$200,000 a year

- While performing our inspections we take pictures of poor maintenance to show the districts, these pictures are sent along with the report. We also show some of these at our annual Maintenance Conference
- We also take pictures of good maintenance so we can share with the neighboring sections and districts
- Last year we drove around 37,500 miles while collecting our data for TxMAP, this is just below half of our roadways
- Along with meeting our government mandates we use this as a continuous improvement tool

# Questions

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