

TN TDOT
Department of Transportation

Region 1 Project Updates

September 10, 2024

Business
PBPA
Community

Knoxville

R1-10, R1-7, R1-1, R1-4, R1-11, R1-2, R1-3, R1-5, SA-1, GFT-06, R1-6, R1-8, R1-9

INTERSTATE 75

3, 2, 8, 9

1

TN TDOT
Department of Transportation

Topics

- 10-Year Plan Region 1 Project Highlights
- US-25W, State Route 9, with W Beaver Creek Drive
- Interstate 75 Exit 112, Emory Rd, DDI
- Interstate 75/275/640 – Sharps Gap Interchange
- Interstate 40 – Priority Corridor

Business
PBPA
Community

Tennessee Department of Transportation
10-YEAR PROJECT PLAN
Published December 18, 2023

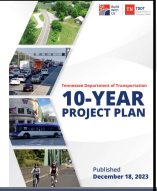
EXIT 112
131 Emory Rd Powell

INTERSTATE 75, INTERSTATE 275, INTERSTATE 640, INTERSTATE 40/75

2



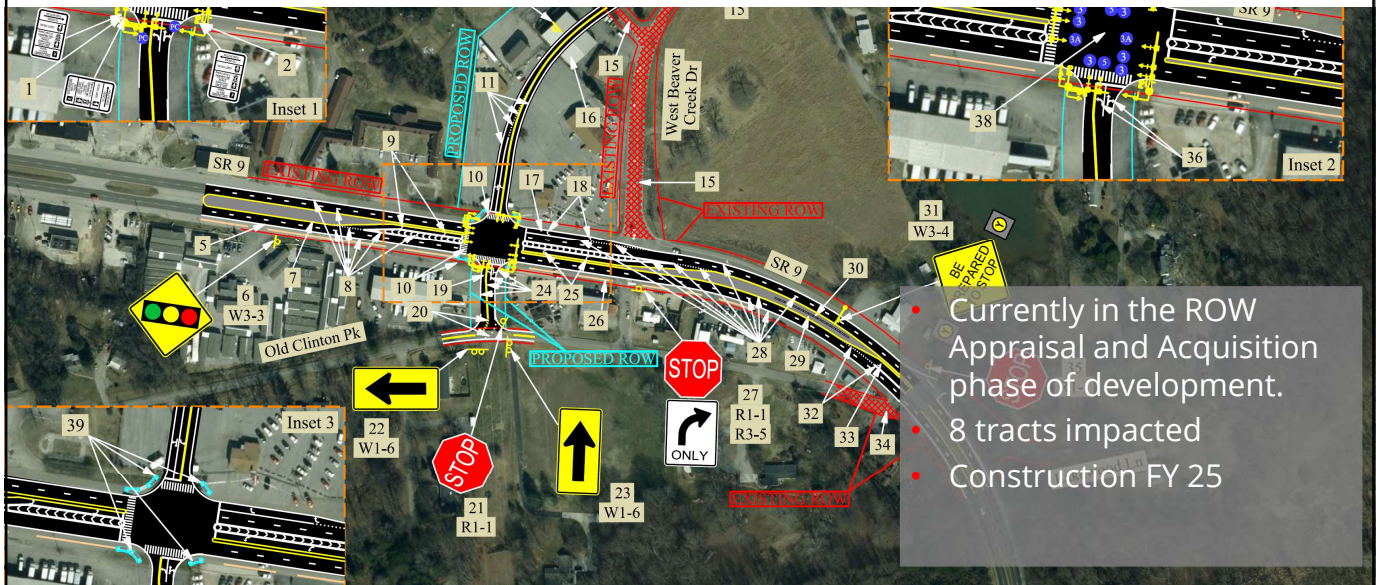
10-Year Plan Region 1 Project Highlights



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US-25W with W Beaver Creek



- Currently in the ROW Appraisal and Acquisition phase of development.
- 8 tracts impacted
- Construction FY 25

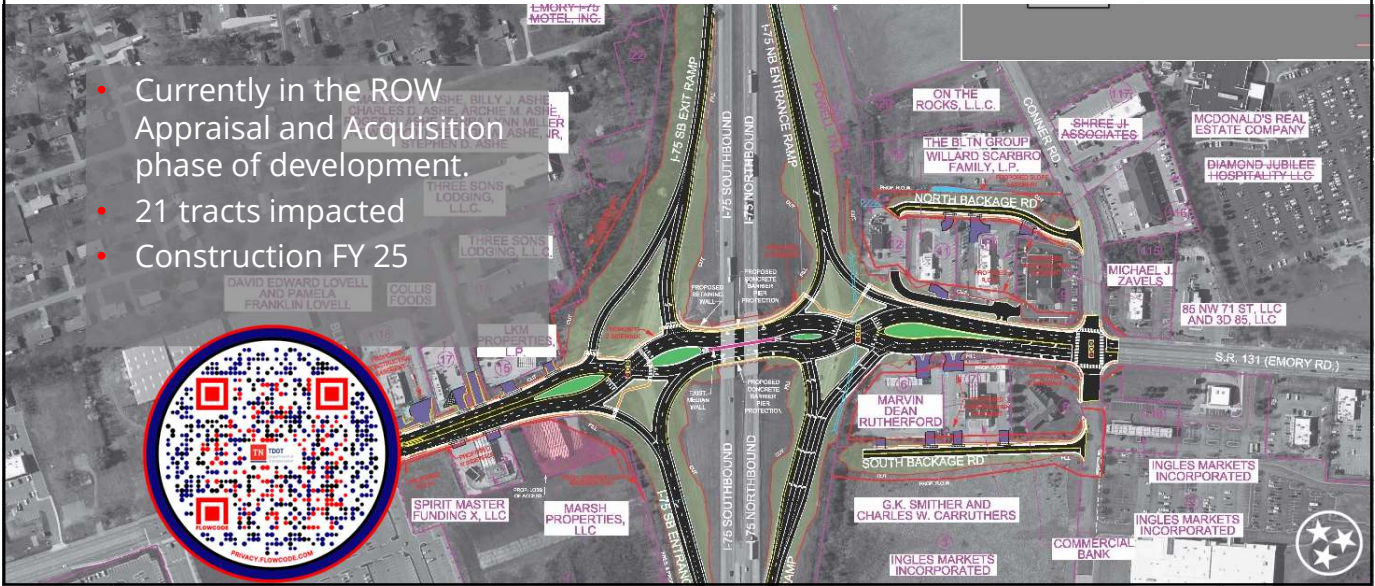
4



Knox County - I-75 @ SR- 131 (Emory Road) DDI



- Currently in the ROW Appraisal and Acquisition phase of development.
- 21 tracts impacted
- Construction FY 25



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Knox County - I-75/275/640 Sharps Gap Interchange

- Preliminary Engineering – 2027
- Right-of-Way – 2031
- Construction – 2037
- Potential Alternative Delivery
- CMGC



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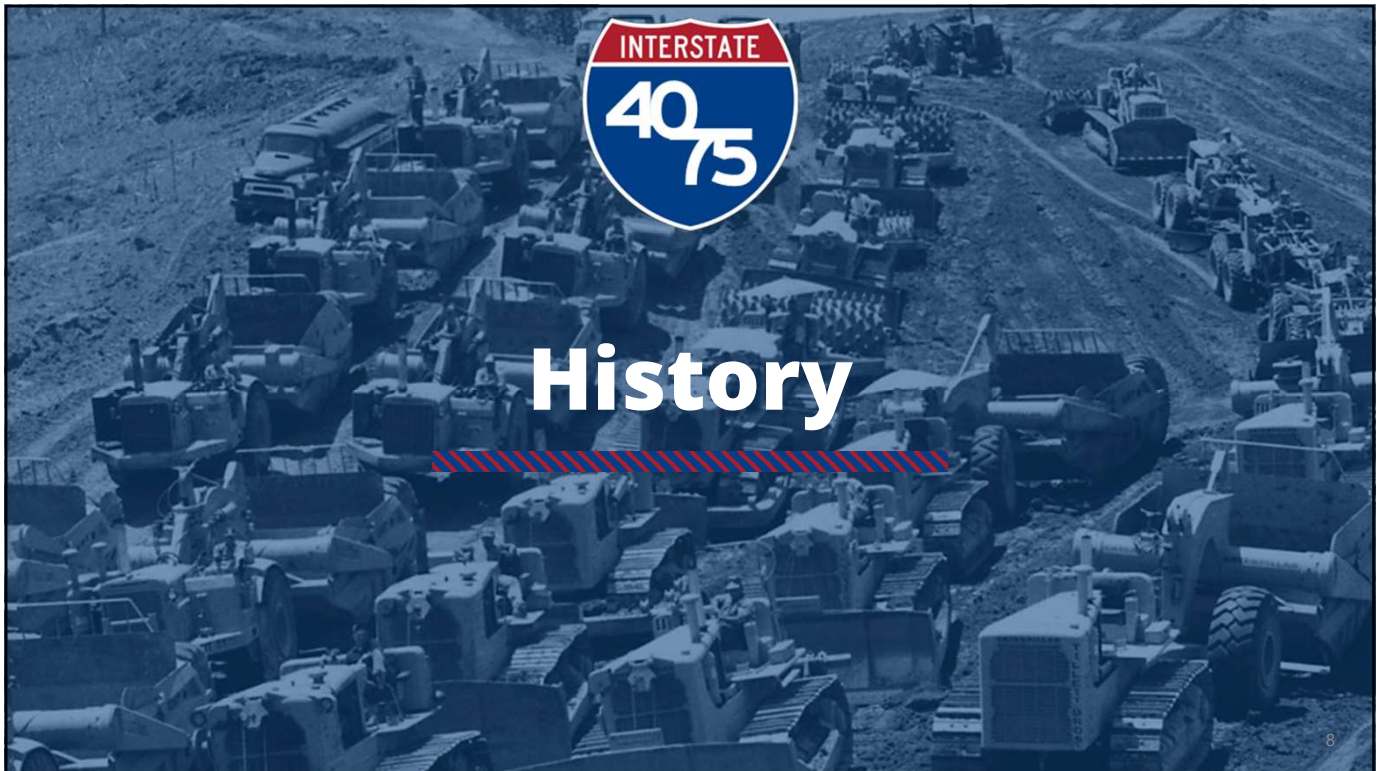
Knoxville I-40

Priority Investment Project



TDOT
Department of
Transportation

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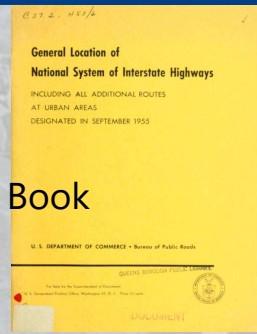


History

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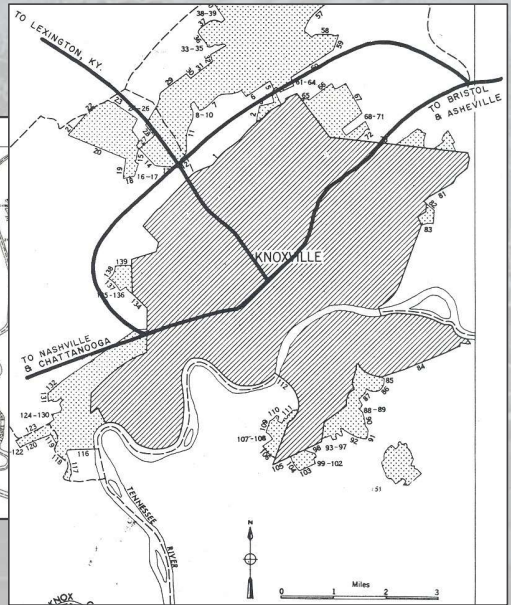
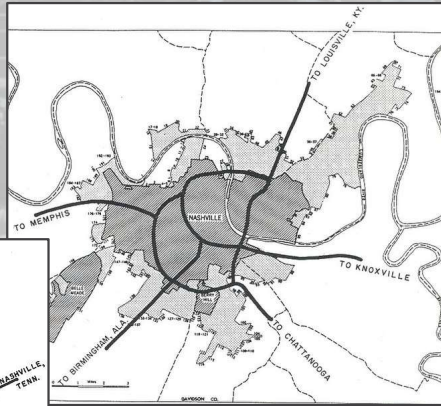
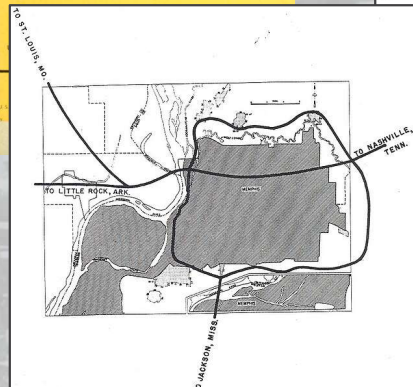
History - Interstate 40

- General route through Tennessee laid out in the 1955 Yellow Book
- Interstates got numerical identifiers in September 1957.
- Superhighway connecting Memphis to Knoxville called Interstate 40.
- May 1959, split between I-40 and I-75 west of Knoxville
- Today, hundreds of thousands of people drive through Knoxville

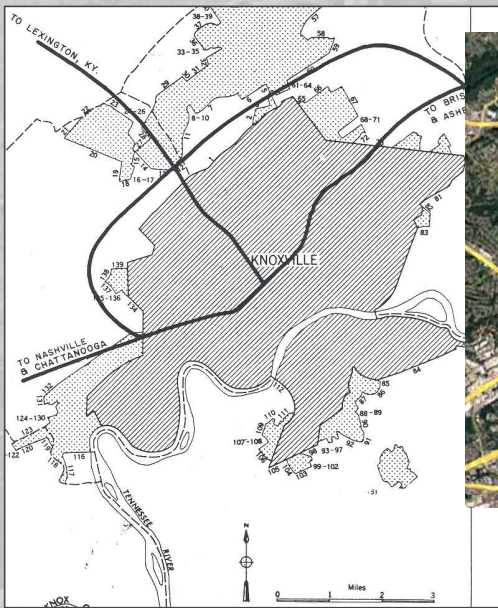


History - Interstate 40

General Location of National System of Interstate Highways
INCLUDING ALL ADDITIONAL ROUTES AT URBAN AREAS DESIGNATED IN SEPTEMBER 1955

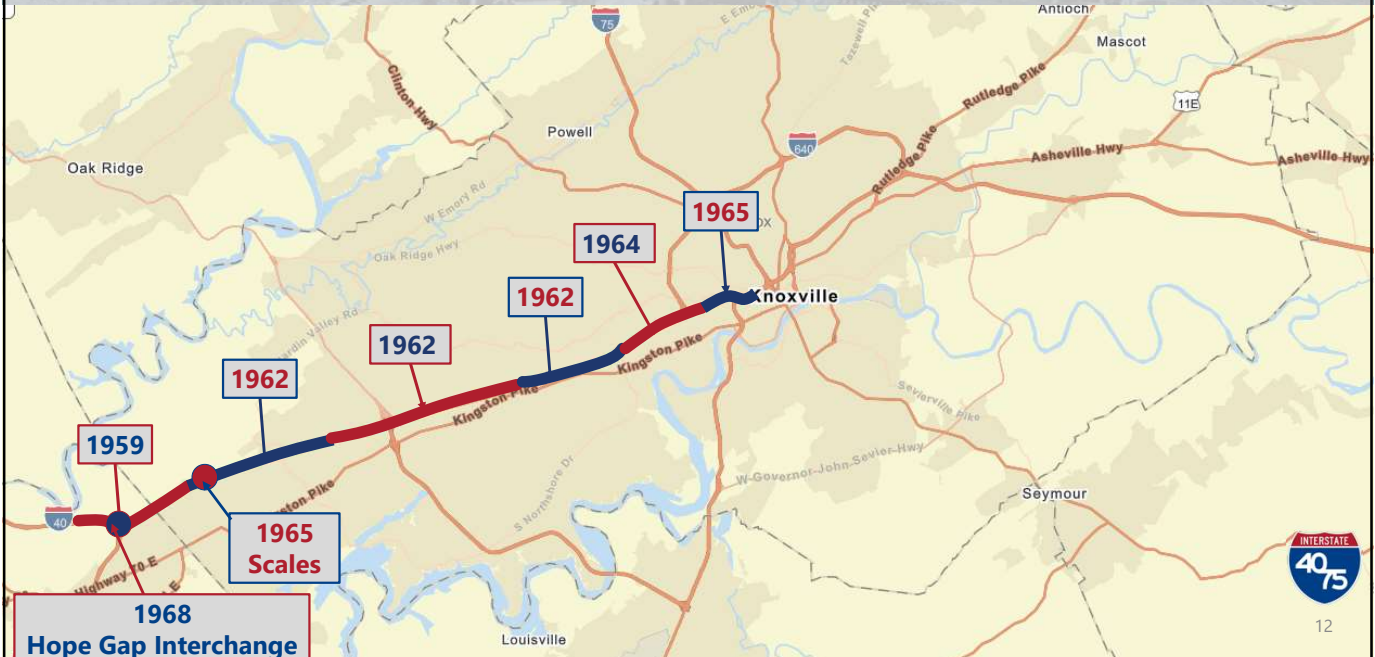


History - Interstate 40

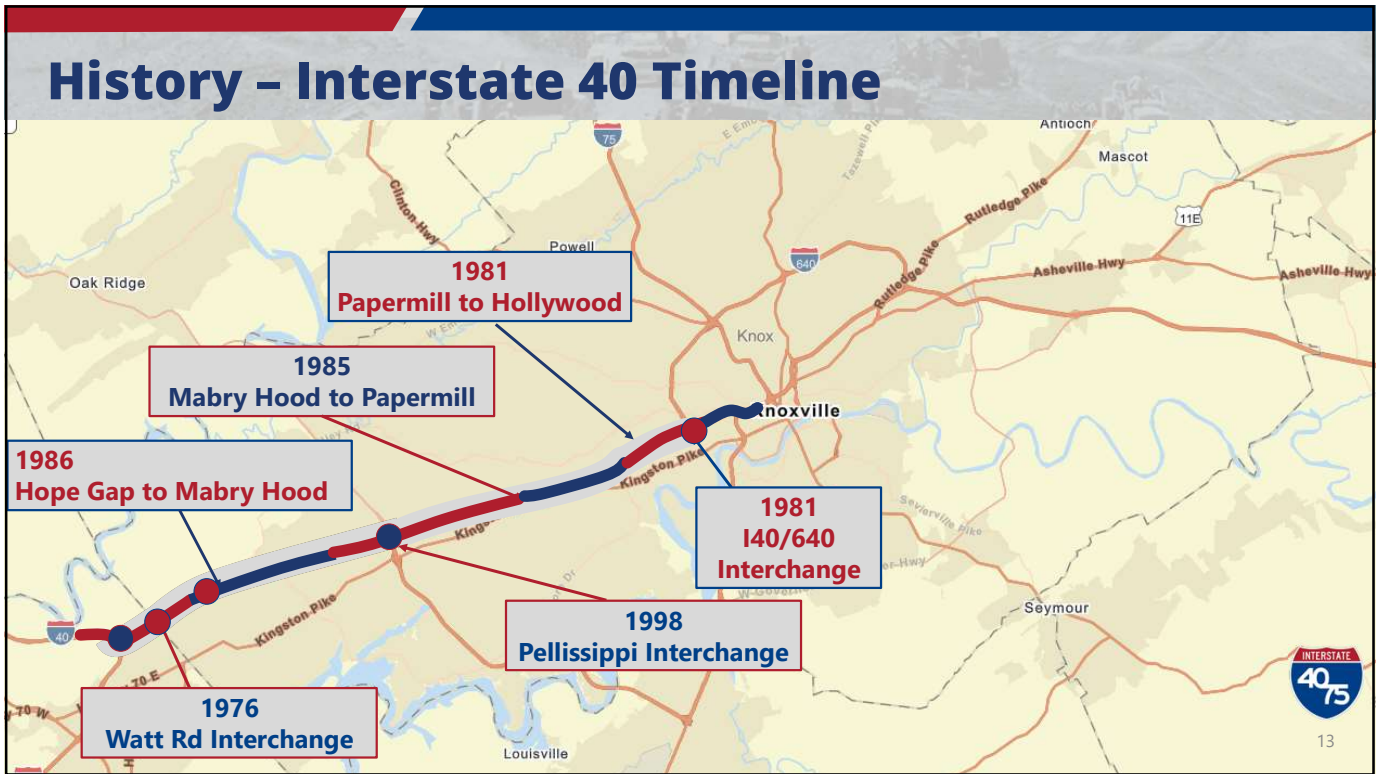


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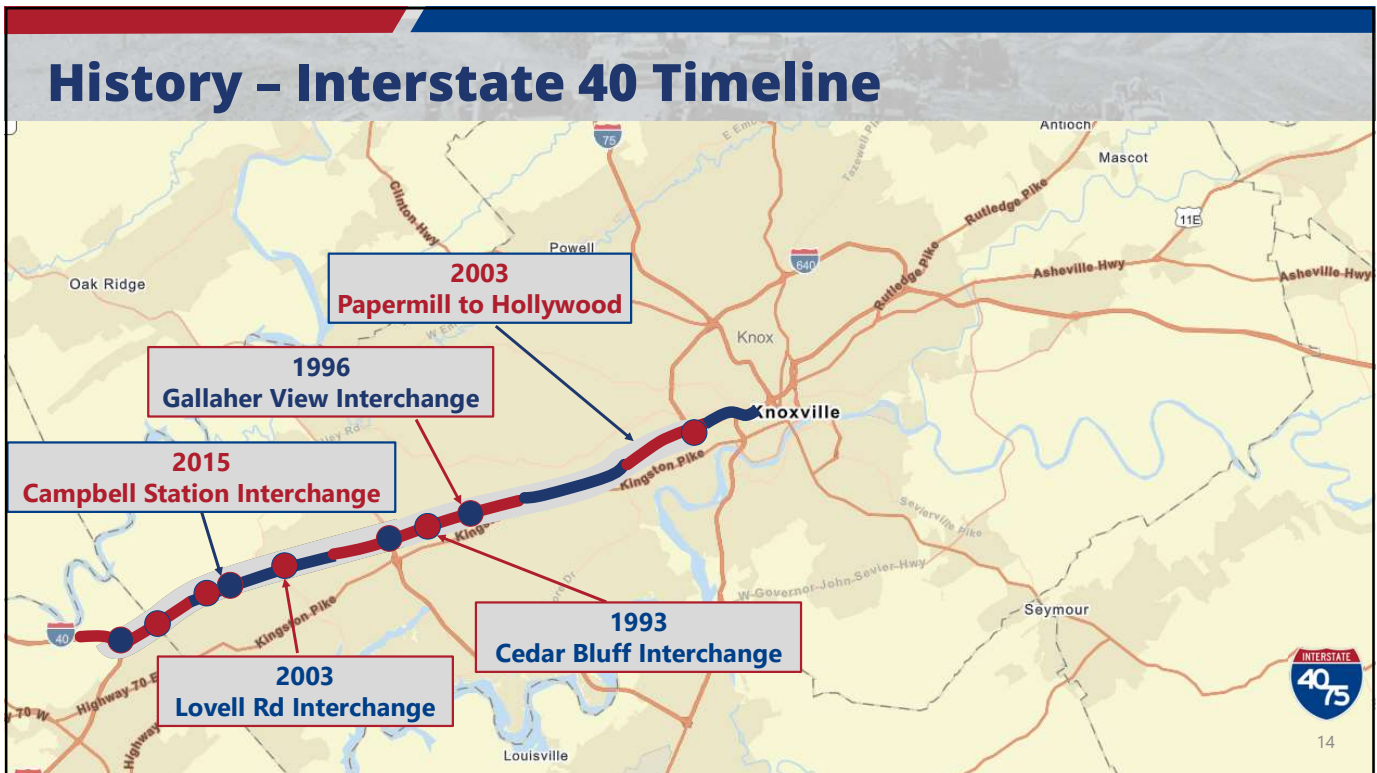
History - Interstate 40 Timeline



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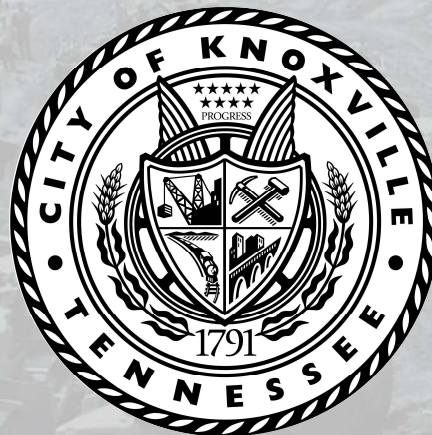
History - Knoxville, TN



- One of the fastest growing mid-size cities in the United States
- Ranked as one of the 20 fastest-growing affordable cities
- Listed as one of the cheapest places to live
- Received high marks for its quality of life, including its housing and cost of living, transportation, amenities, and environment.



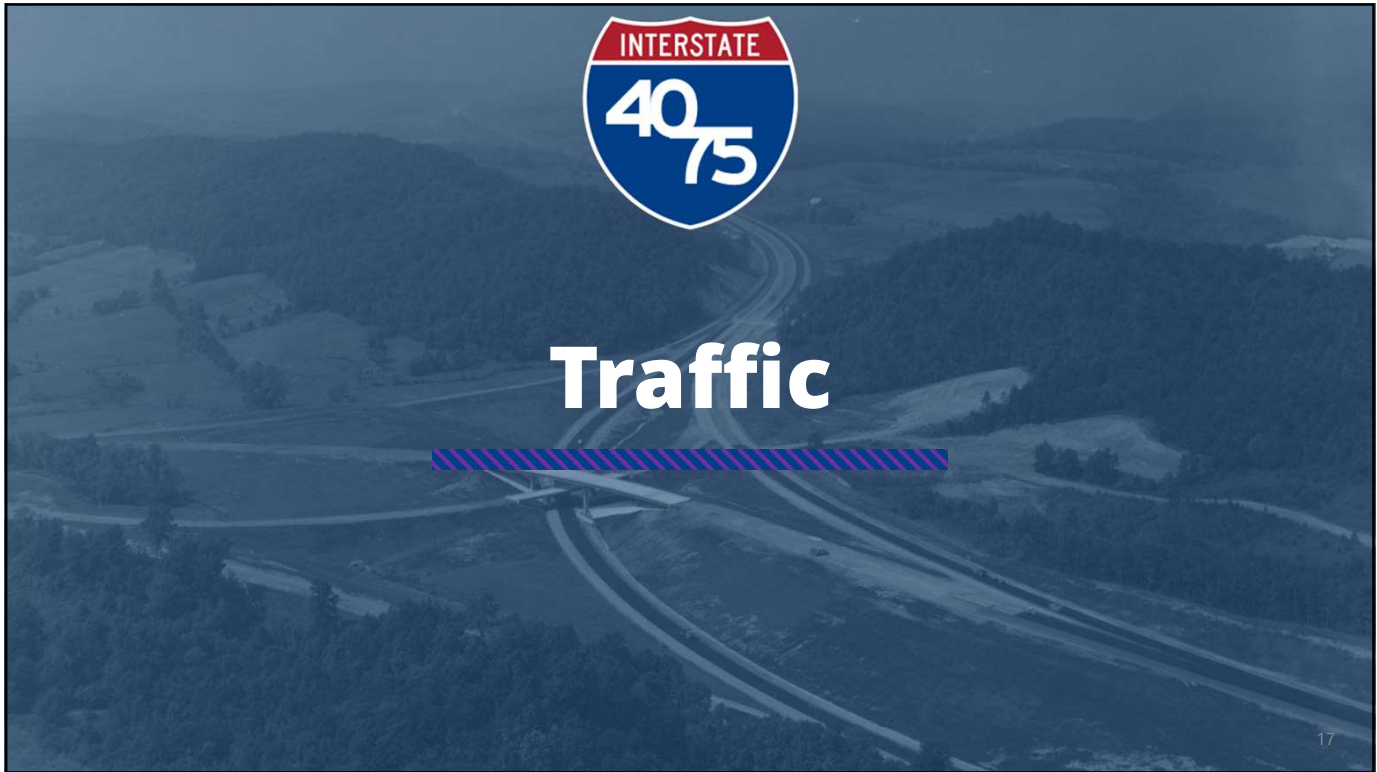
History - Recently



#17 (2023)

#7 (2023)





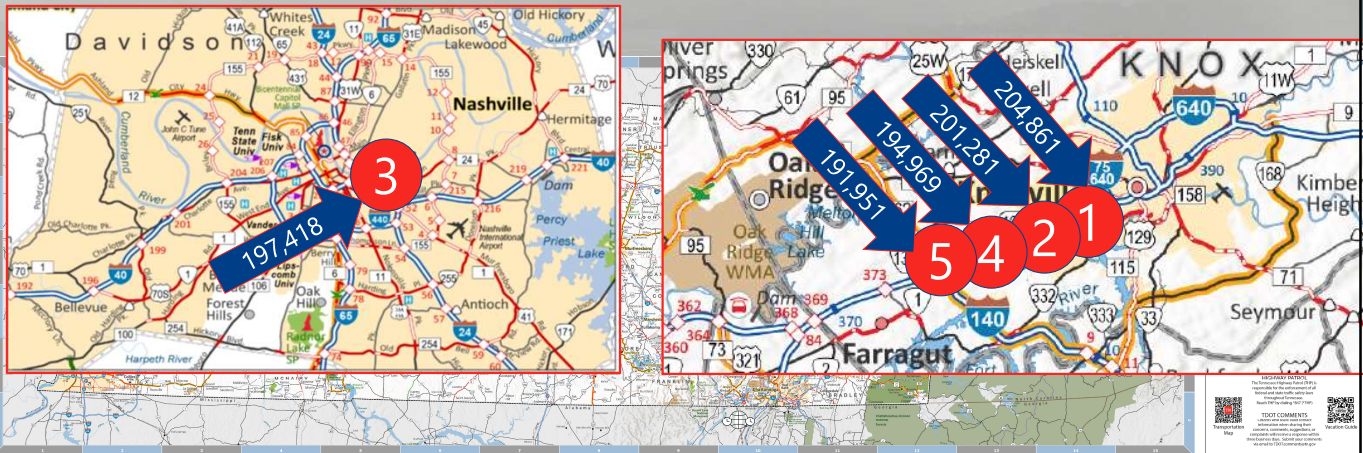
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Traffic - Statewide

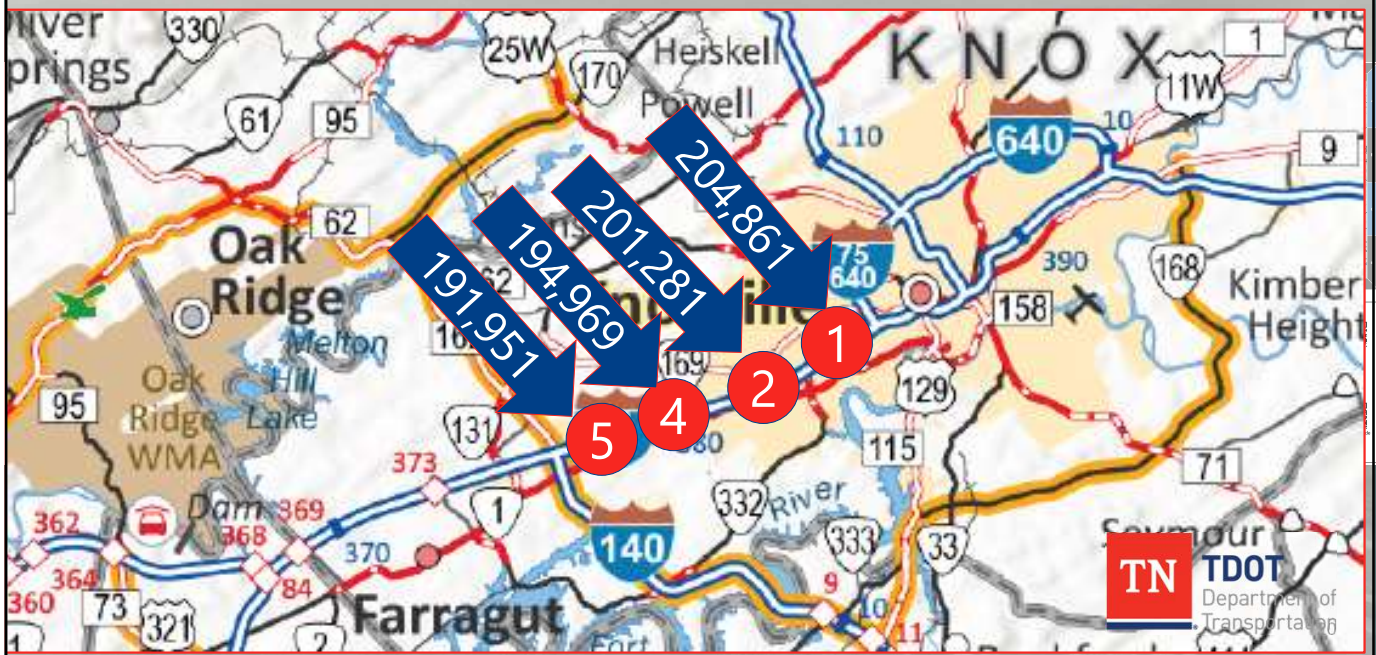
 A statewide traffic map of Tennessee. The map shows major highways in orange and red, with several routes highlighted with red circular markers containing white numbers: 86 in the west, 3, 970, and 5421 in the central and eastern parts of the state. In the top right corner, there is a small Interstate 40/75 shield logo. In the bottom left, the logo for "TN TDOT Department of Transportation" is displayed. To the right of the logo, the text "TOP 10" is written in large, blue, bold letters. In the bottom right corner, there is a small box containing QR codes and the text "Connect with us" and "TDOT COMMENTS".

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Traffic - Statewide

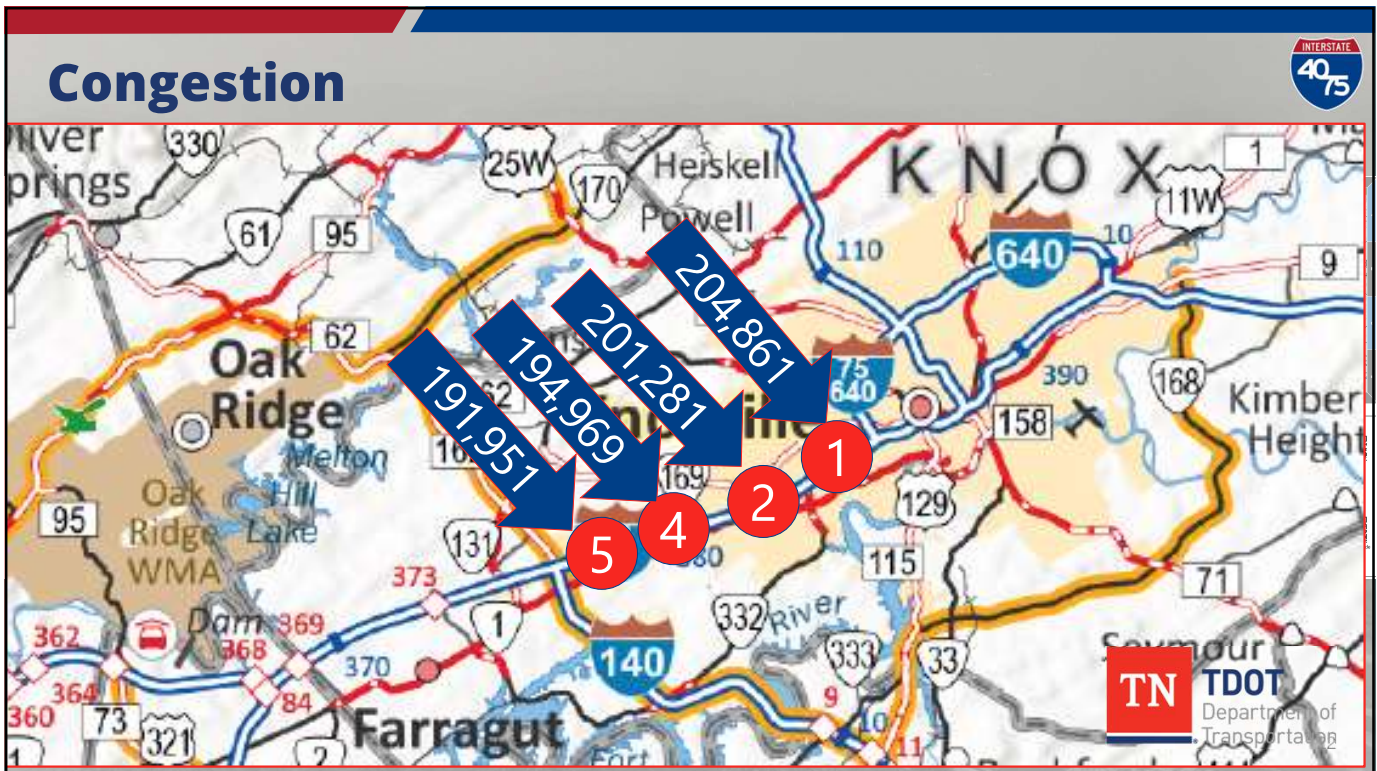


Traffic - Knoxville

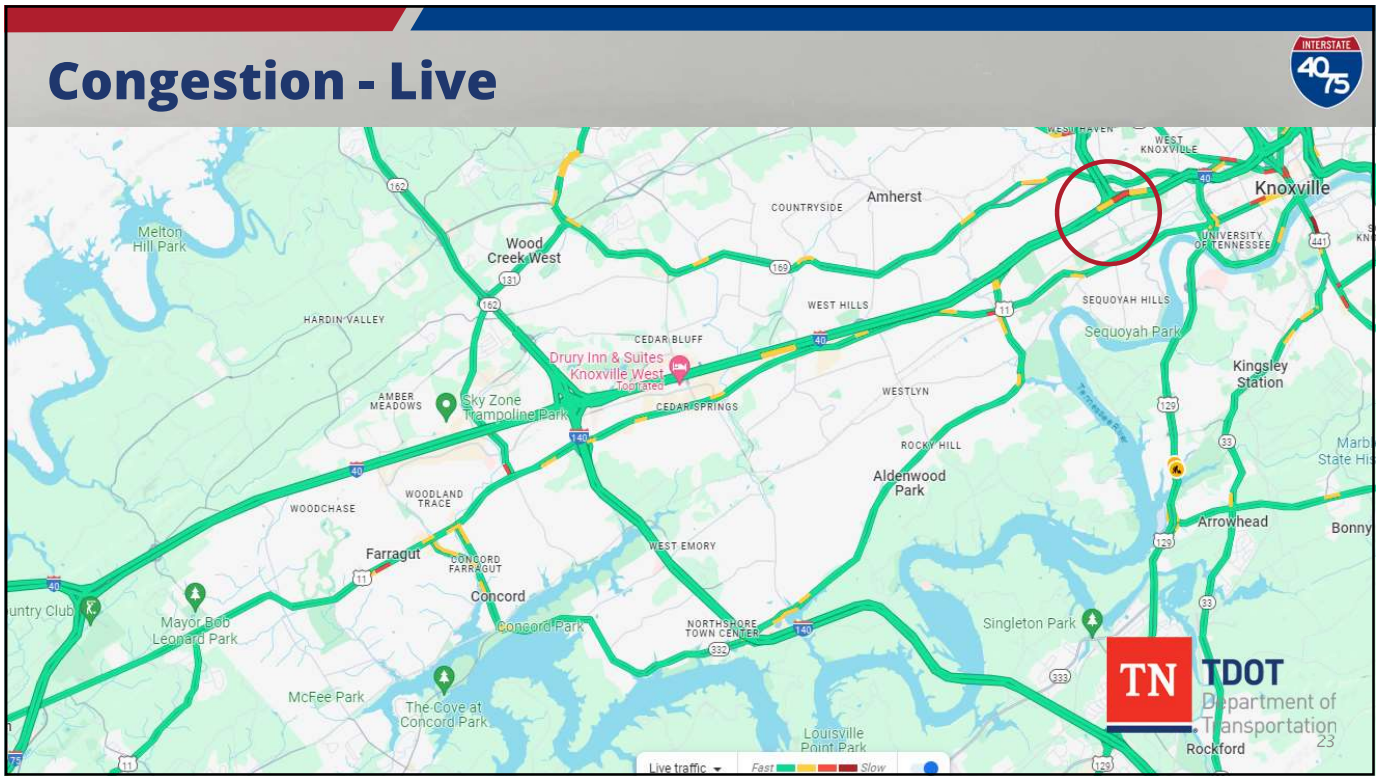




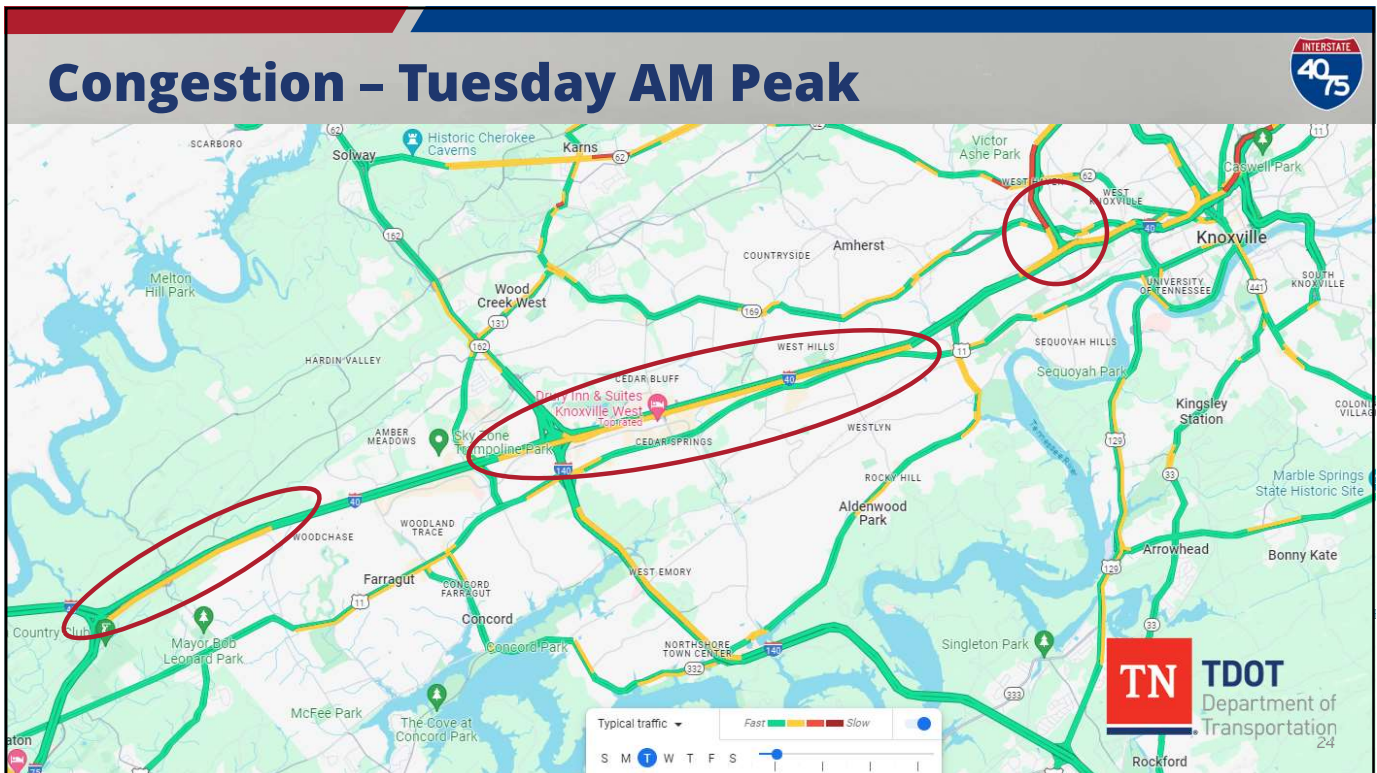
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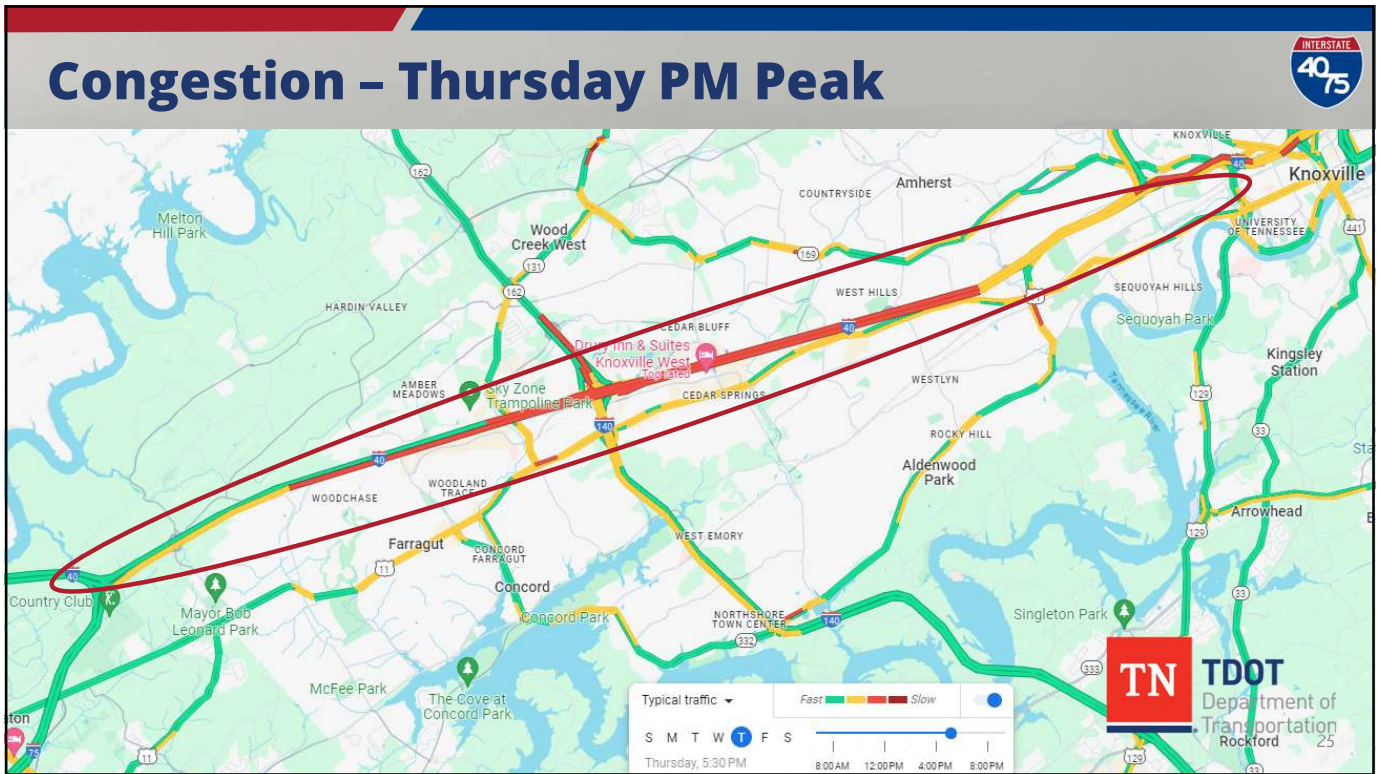
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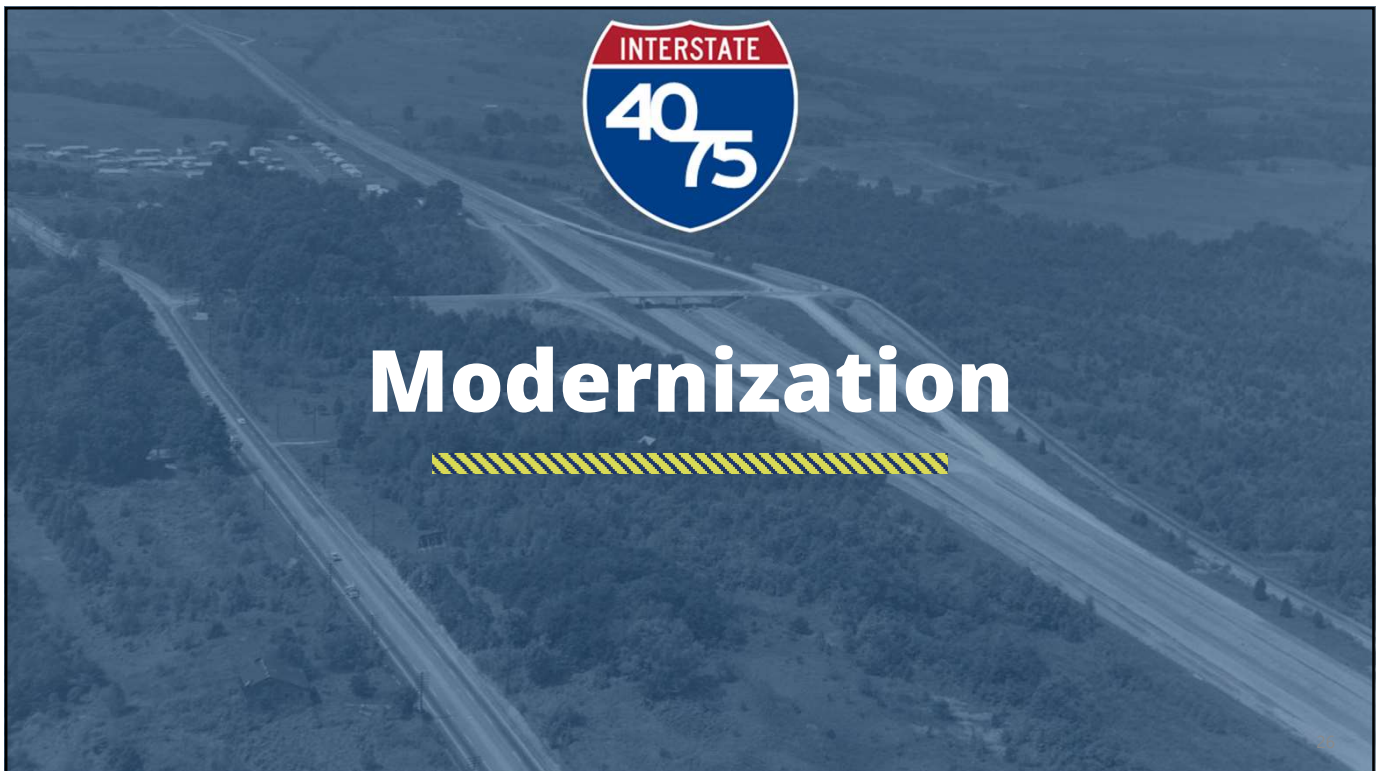
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Modernization - I-40/I-75 Interchange



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Modernization - I-40/I-75 Interchange



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Modernization - I-40 at Campbell Station



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Modernization - I-40 at Campbell Station



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Modernization - I-40 at Lovell Rd



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Modernization - I-40 at Lovell Rd



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Modernization - I-40 at Cedar Bluff



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Modernization - I-40 at Cedar Bluff



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Modernization - I-40 at Walker Springs



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Modernization - I-40 at Walker Springs



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Modernization - I-40 at Papermill Rd



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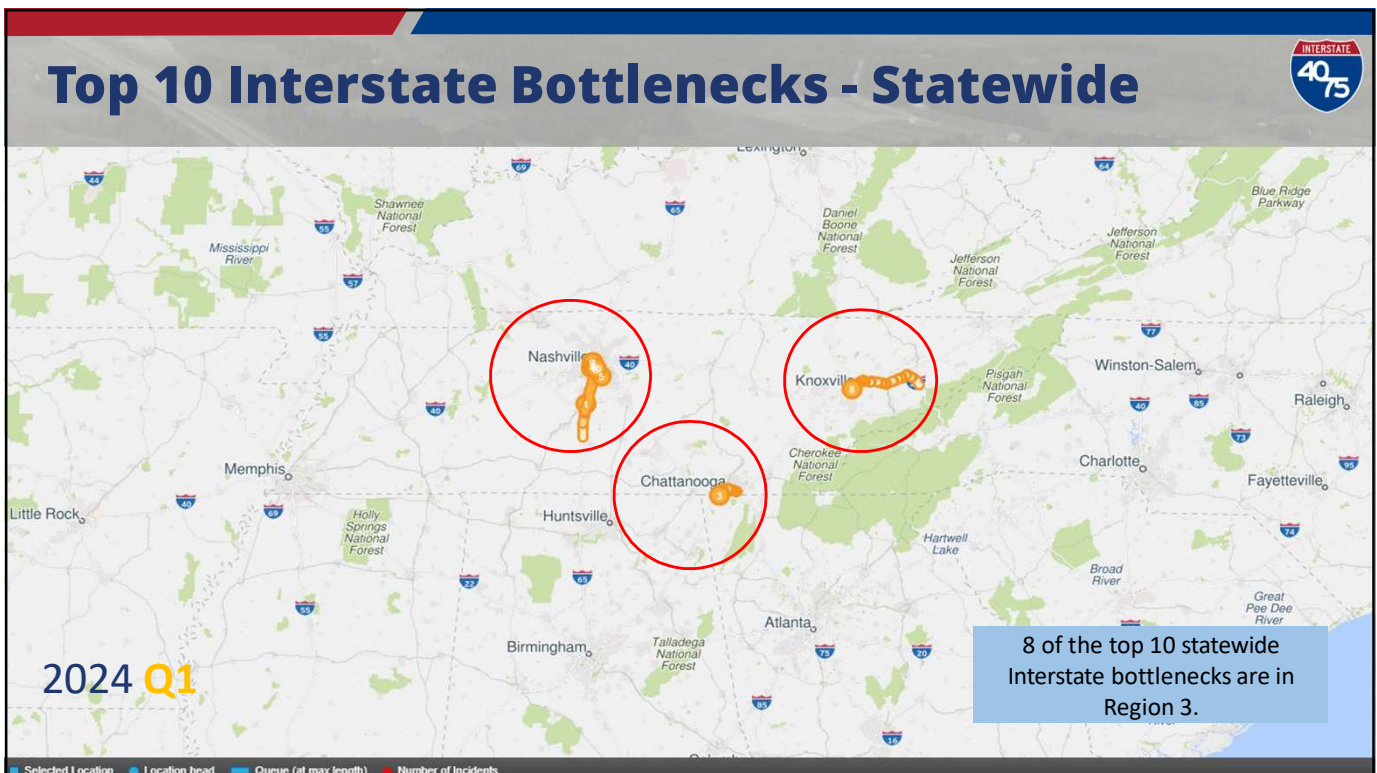
Modernization - I-40 at Papermill Rd



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Top 10 Interstate Bottlenecks - Statewide

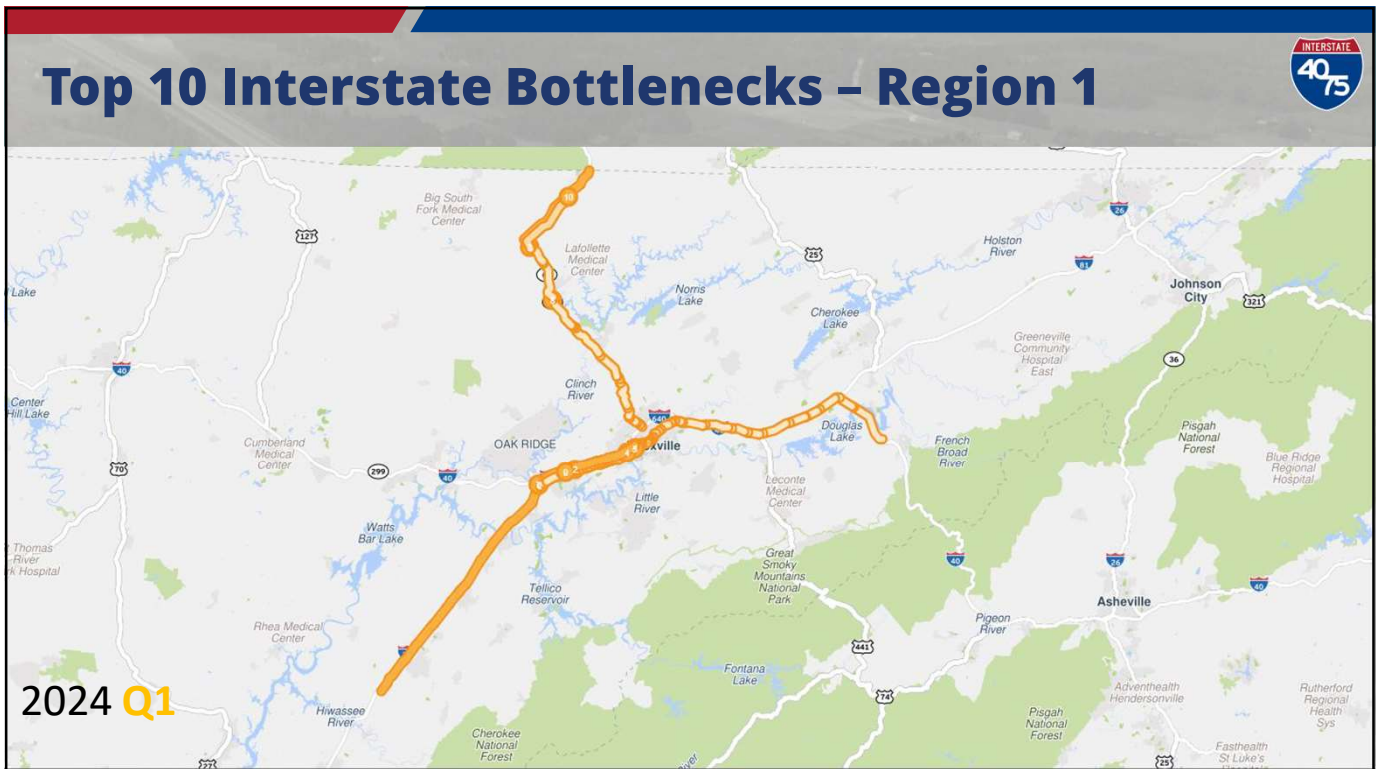


Current Rank Q1 2024	Location	Region	Total Delay	Average Daily Duration	Average Max Length (miles)	Agency & Waze Reported Events	Q4 2023 Rank	Q3 2023 Rank	Q2 2023 Rank
1	I-65 N @ TN-840/EXIT 59	3	151,175,268	5 h 24 m	7.52	212			
2	I-24 E @ I-40/EXIT 83	3	111,535,583	4 h 43 m	1.51	110	2	2	2
3	I-24 W @ TENNESSEE/GEORGIA STATE LINE	2	105,313,791	14 m	3.36	492			
4	I-65 N @ I-40/EXIT 82	3	97,879,288	2 h 36 m	2.98	1100	6	8	10
5	I-24 E @ HAYWOOD LN/EXIT 57	3	93,038,268	1 h 7 m	3.72	805	3	3	4
6	I-440 E @ I-24	3	92,968,061	2 h 29 m	2.77	474	4	7	7
7	I-24 W @ I-65/EXIT 86	3	91,899,693	5 h 43 m	1.82	119	10	9	
8	I-40 W @ I-75/I-640	1	90,747,396	3 h 40 m	3.03	1433	1	6	8
9	I-65 E @ I-65/I-24	3	82,369,452	4 h 30 m	1.43	79			
10	I-24/I-40 E @ I-24/I-40	3	78,616,239	1 h 43 m	2.69	922			

Red numbers = highest value for that metric

**Total Delay is raw speed drop weighted by VMT. It is computed by multiplying the delay by the impacted traffic volume and aggregating the one-minute delays for the entire period the bottleneck is active.

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Top 10 Interstate Bottlenecks – Region 1

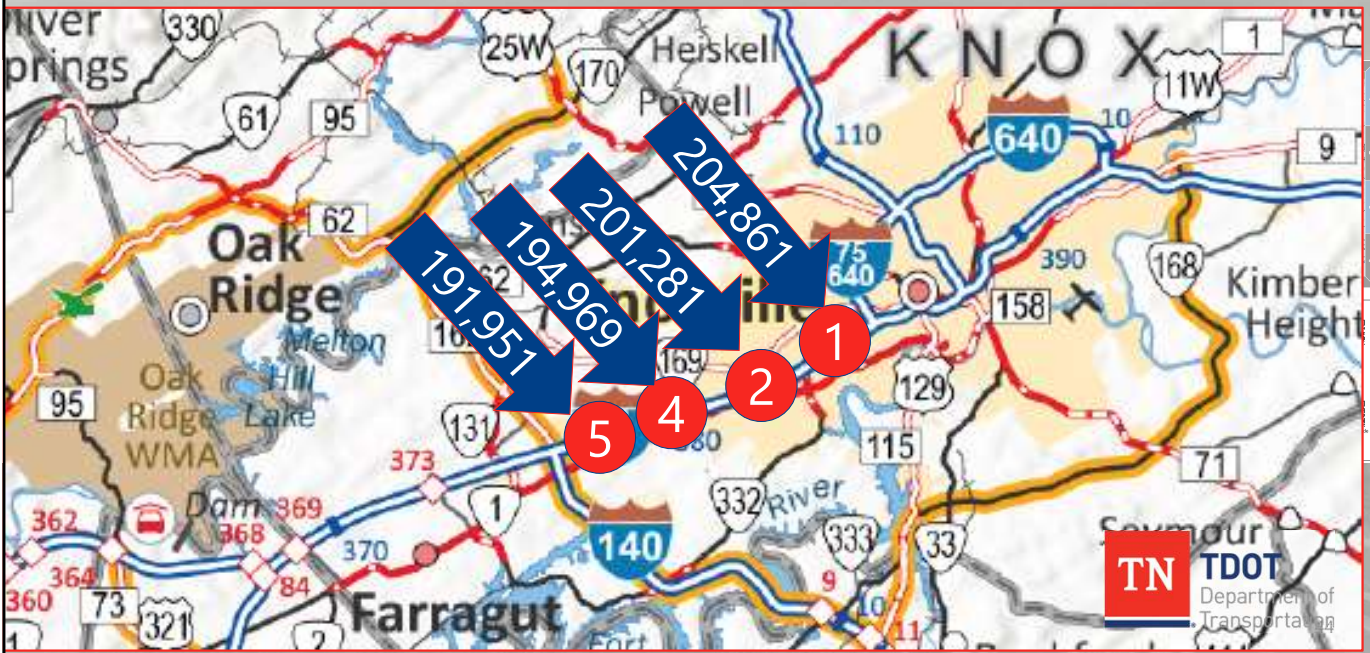
Current Rank Q1 2024	Location	Total Delay	Average Daily Duration	Average Max Length (miles)	Agency & Waze Reported Events	Q4 2023 Rank	Q3 2023 Rank	Q2 2023 Rank
1	I-40 W @ I-75/I-640	90,747,396	3 h 40 m	3.03	1430	1	1	1
2	I-40/I-75 W @ TN-131/LOVELL RD/EXIT 374	24,660,473	1 h 3 m	2.66	1000	3	3	3
3	I-75 S @ STINKING CREEK RD/EXIT 144	24,647,583	17 m	12.59	205			
4	I-40/I-75 E @ PAPERMILL DR/EXIT 383	20,496,528	18 m	5.08	1044	7	6	
5	I-40/I-75 E @ I-640	17,000,668	19 m	4.94	1193	5		4
6	I-75 N @ I-40/EXIT 84	16,880,863	50 m	5.6	298	4	9	7
7	I-40/I-75 W @ BEGIN FREEWAY	14,362,360	21 m	6.46	1230			
8	I-75 N @ US-25W/TN-63/EXIT 134	13,858,144	14 m	9.94	472			
9	I-40/I-75 W @ CAMPBELL STATION RD/EXIT 373	12,224,070	11 m	4.69	1079	2	5	5
10	I-75 N @ ROCK QUARRY RD/EXIT 156	11,688,370	13 m	14.72	643			

Red numbers = highest value for that metric

**Total Delay is raw speed drop weighted by VMT. It is computed by multiplying the delay by the impacted traffic volume and aggregating the one-minute delays for the entire period the bottleneck is active.

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Bottlenecks – Top Traffic Counts Statewide



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Bottlenecks – 7 of TOP 10 Locations



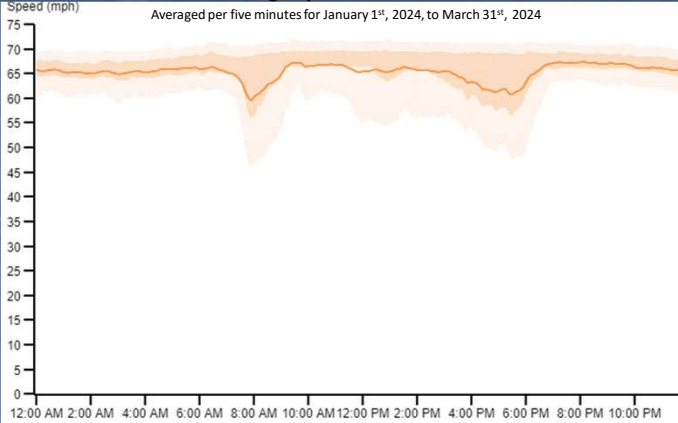
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I-40 WB @ I-75/I-640 2024 Q1 #1 Interstate Bottleneck in Region 1

1

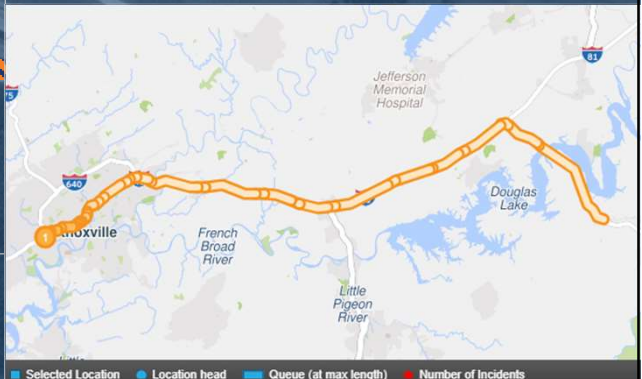
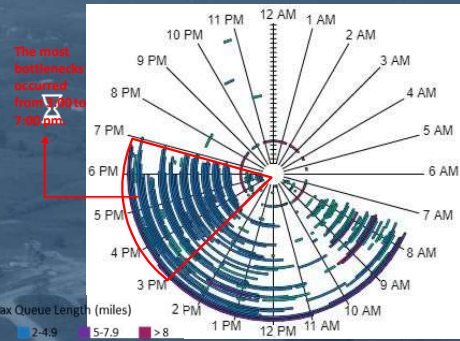
Average Speed Over Time

Averaged per five minutes for January 1st, 2024, to March 31st, 2024

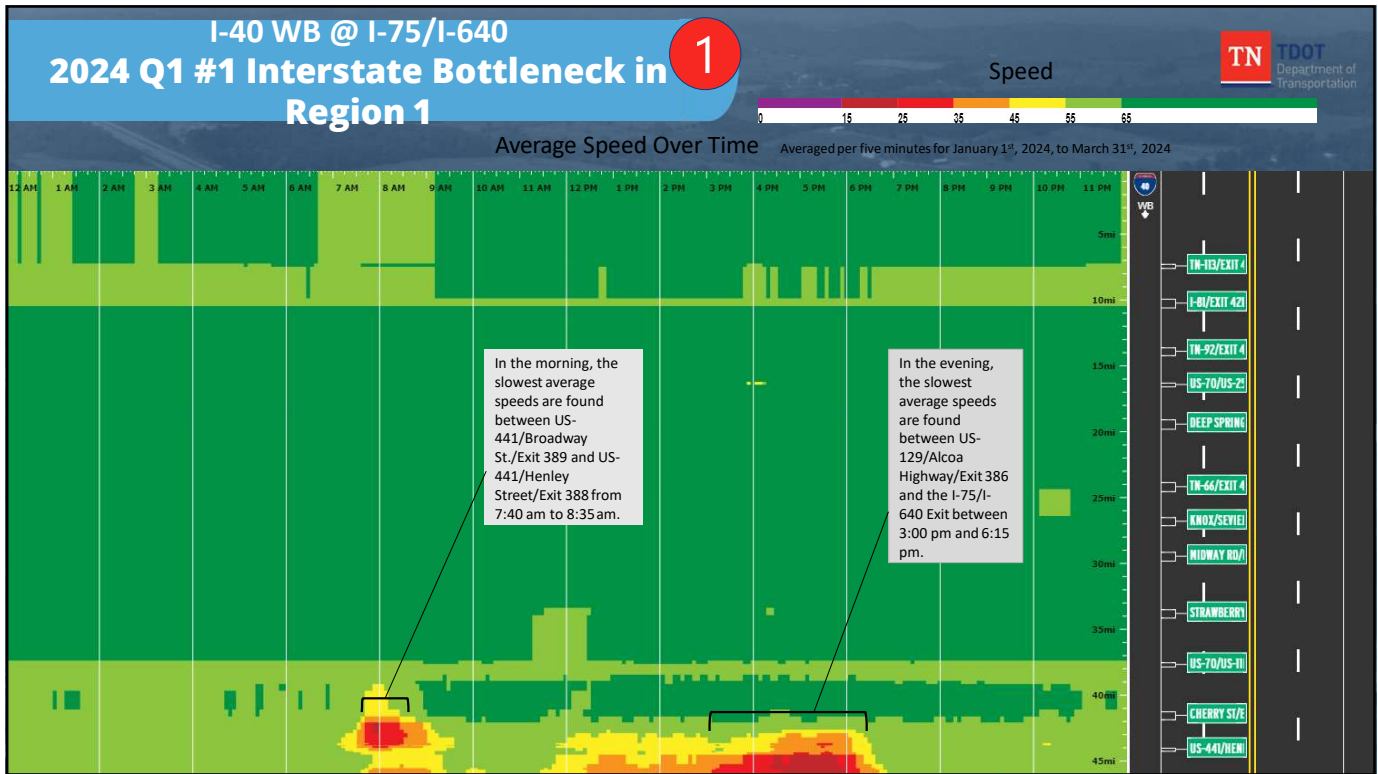


- Jan 01, 2024 through Mar 31, 2024 - INRIX
- Jan 01, 2024 through Mar 31, 2024 25th and 75th percentile - INRIX
- Jan 01, 2024 through Mar 31, 2024 5th and 95th percentile - INRIX

- The average speed at the A.M. peak is 59.6 mph at 7:55 am, **11%** slower than free flow. The average speed at the P.M. peak is 60.8 mph at 5:30 pm, **10%** slower than free flow.
- There were over **75,121** vehicle hours of delay on this segment of the interstate in 2024 Quarter 1.



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Challenges

- Traffic Volumes – 4 of TOP 5 in Tennessee
- Bottlenecks – 7 of TOP 10 in the Region
- Weigh Stations – Top 3 in the US for Truck Volumes
- Percentage Trucks – 1 of the Highest on Tennessee Interstates
- Topography – Rolling with considerable grades
- Population Growth – Knoxville top 10 and 20 in the US



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Questions?

Thank you!

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