



Knoxville I-40 Priority Investment Project

Pre-Submittal Meeting

Steve Borden, PE, Assistant Chief Engineer/Region 1 Director

Dexter Justis, PE, Region 1 Project Management Director

June 17, 2024



TDOT

Department of
Transportation



Agenda

- History
- Traffic
- Congestion
- Modernization
- Bottlenecks
- Challenges
- Notice of Intent



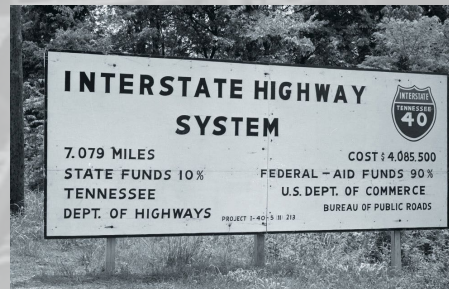
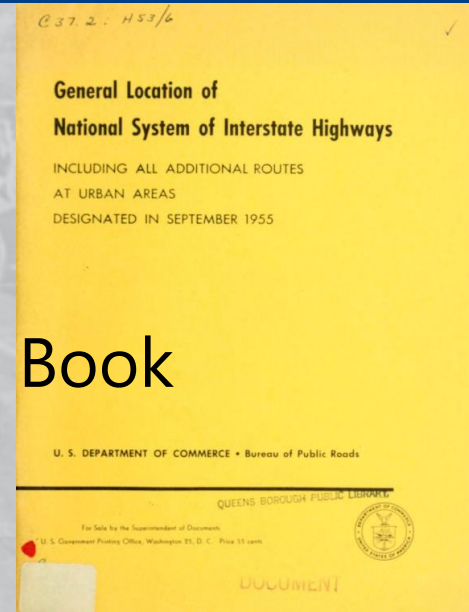


History



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

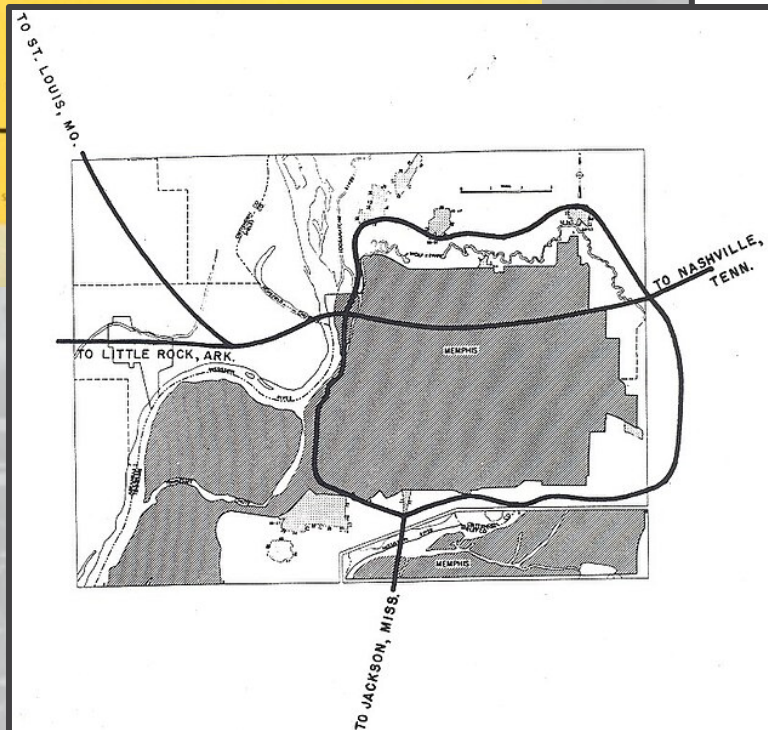
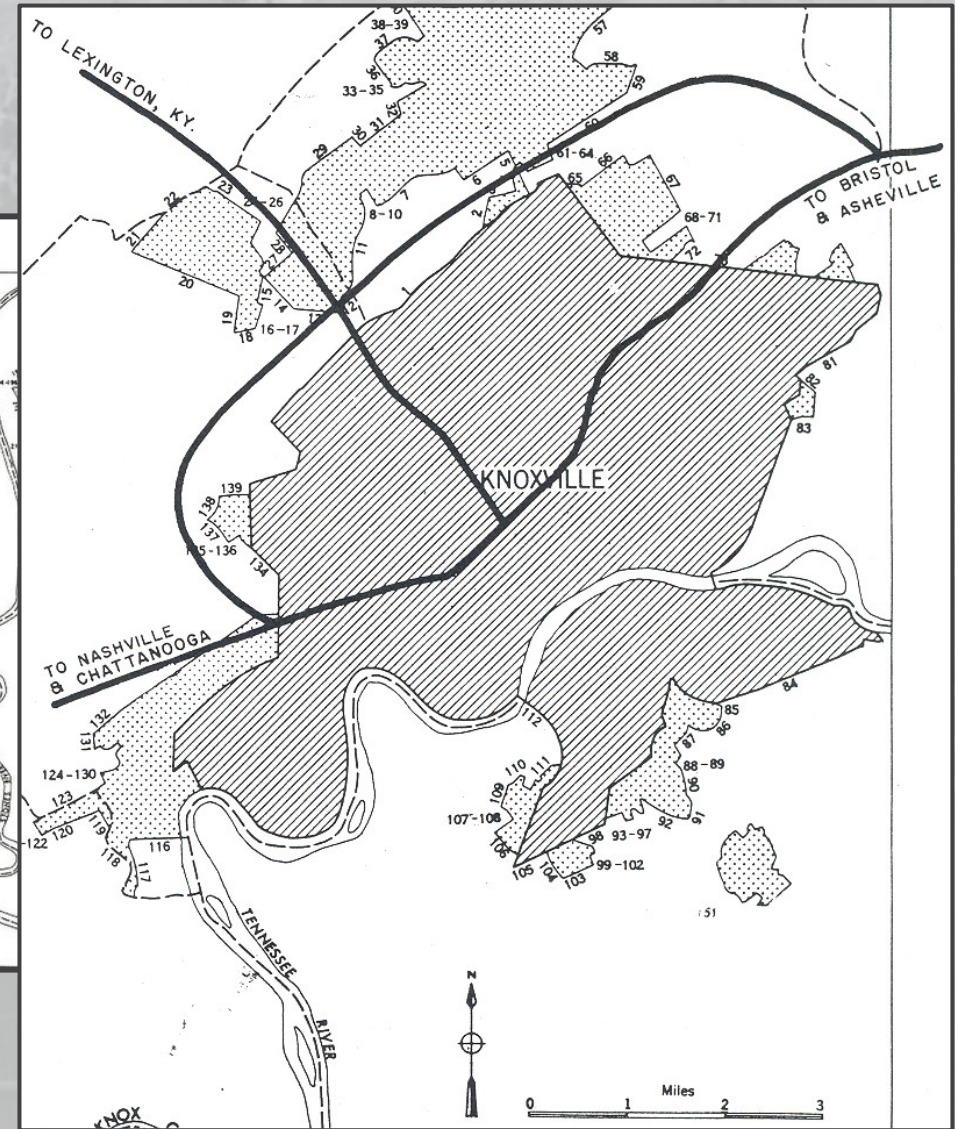
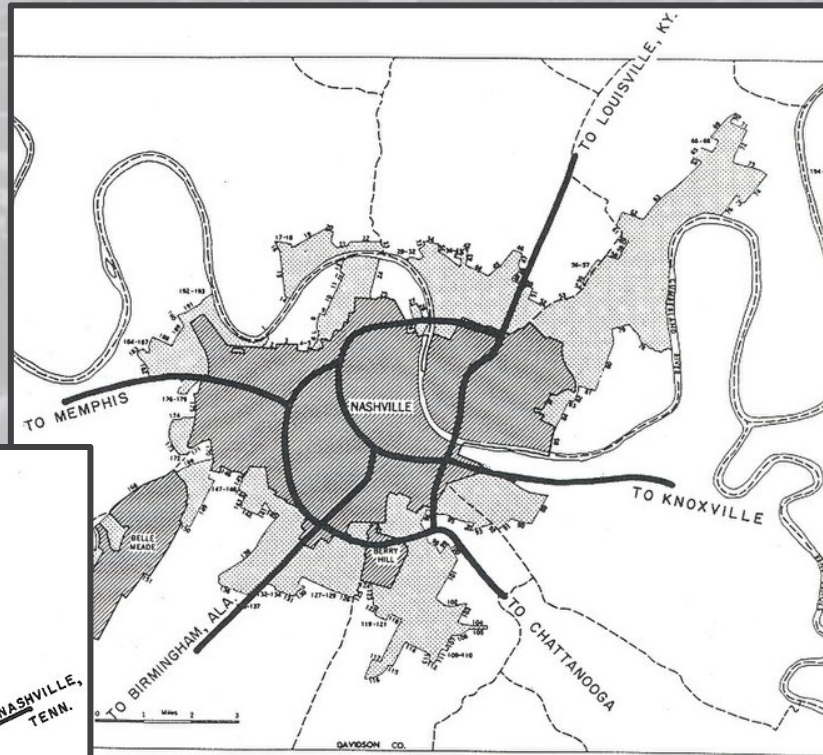


History - Interstate 40

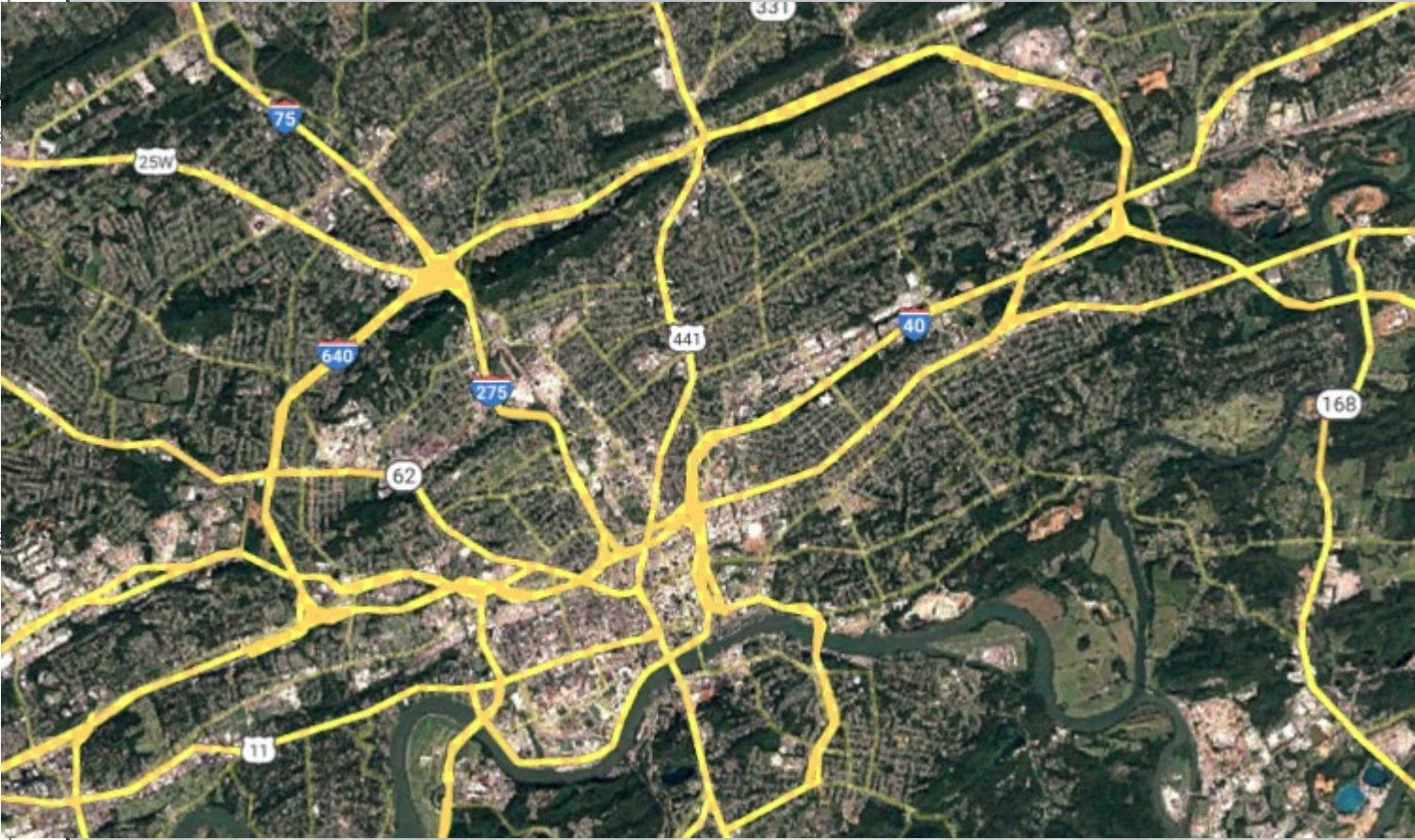
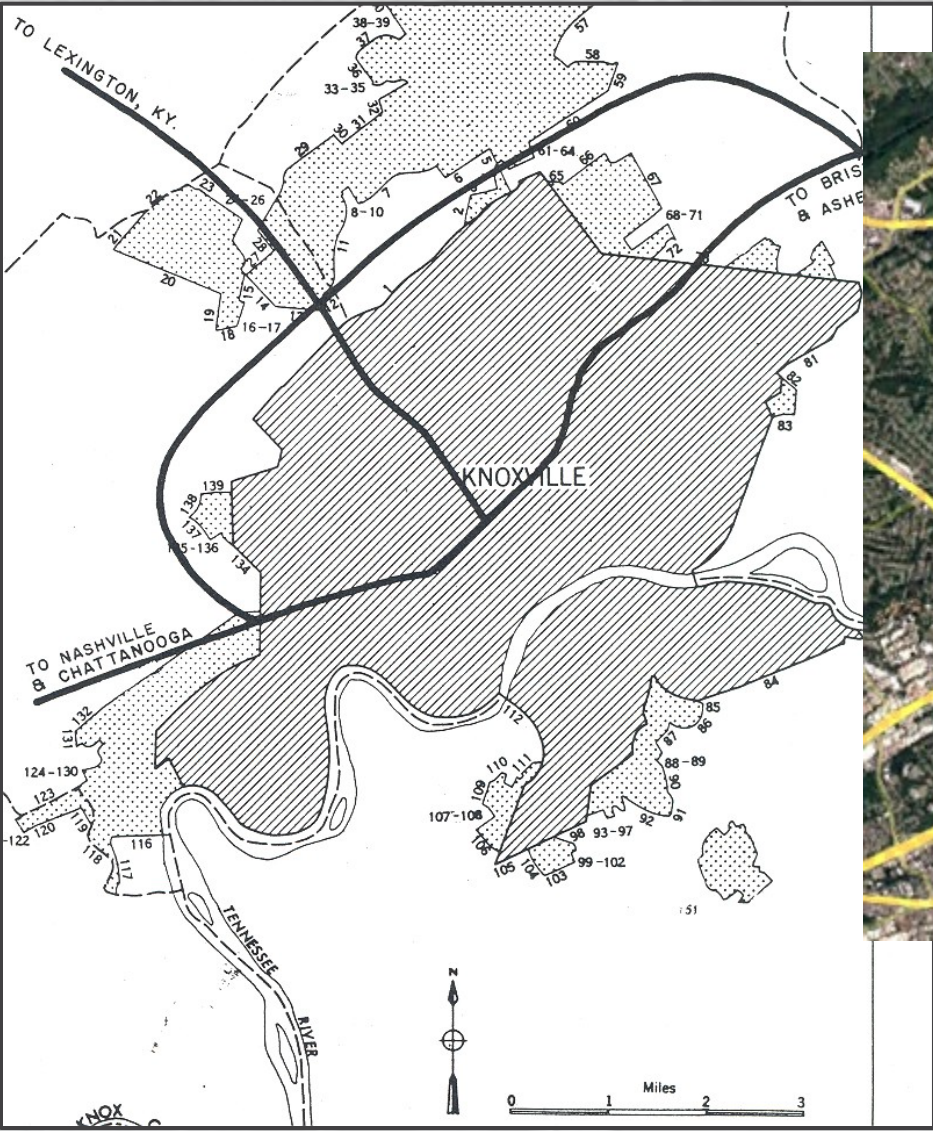
C 37.2: H53/6

General Location of National System of Interstate Highways

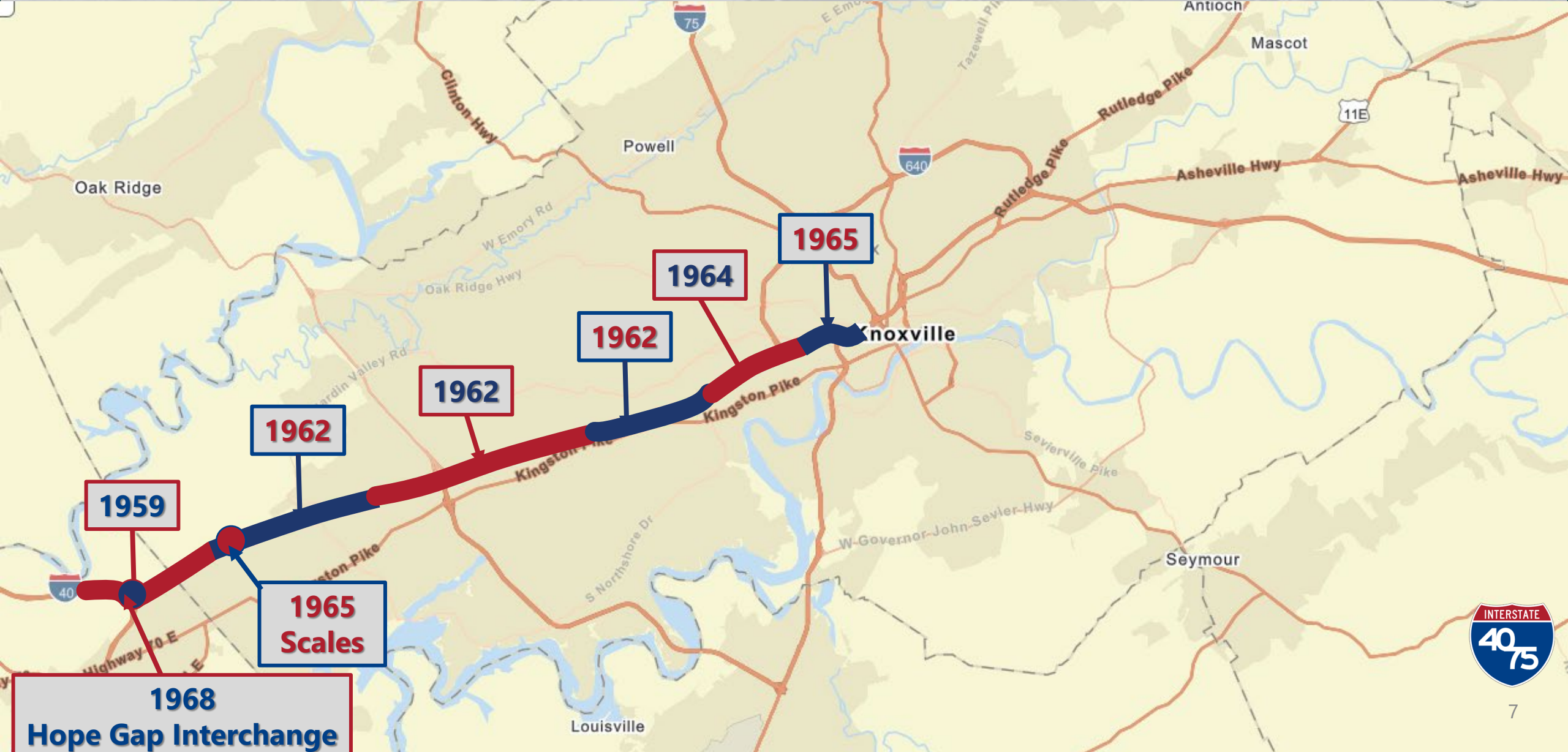
INCLUDING ALL ADDITIONAL ROUTES AT URBAN AREAS DESIGNATED IN SEPTEMBER 1955



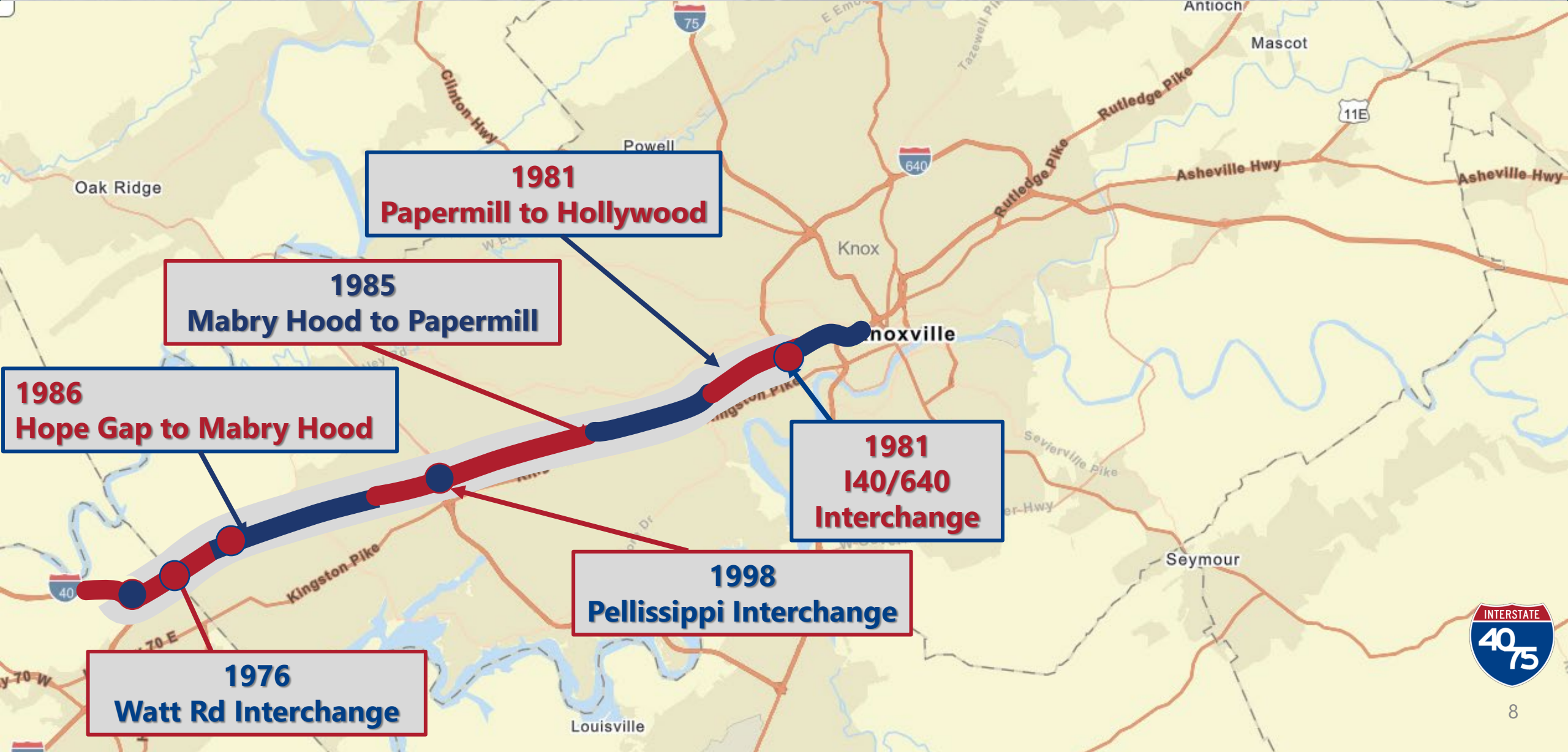
History - Interstate 40



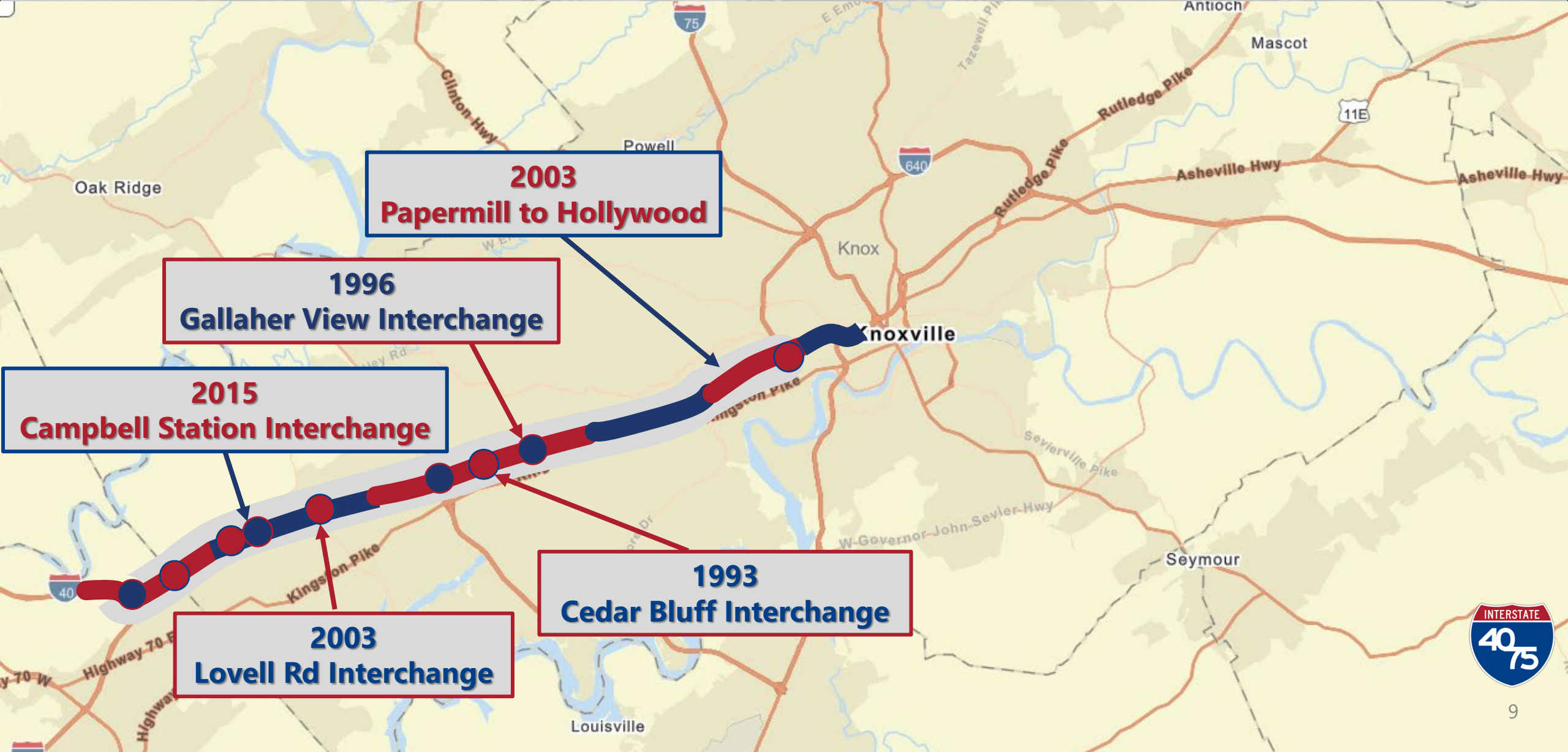
History - Interstate 40 Timeline



History - Interstate 40 Timeline



History - Interstate 40 Timeline



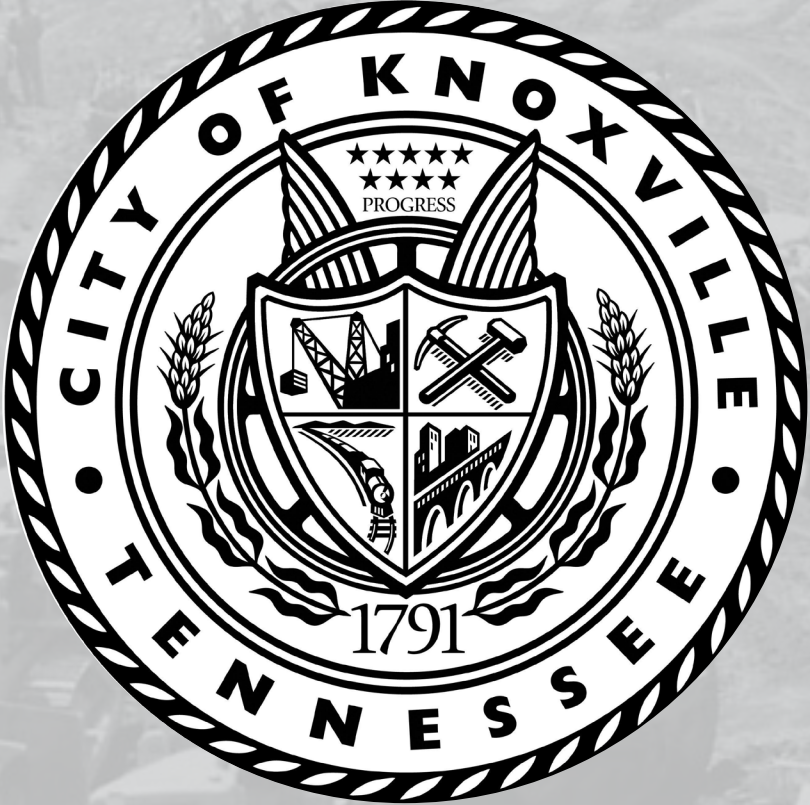
History – Knoxville, TN



- 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)

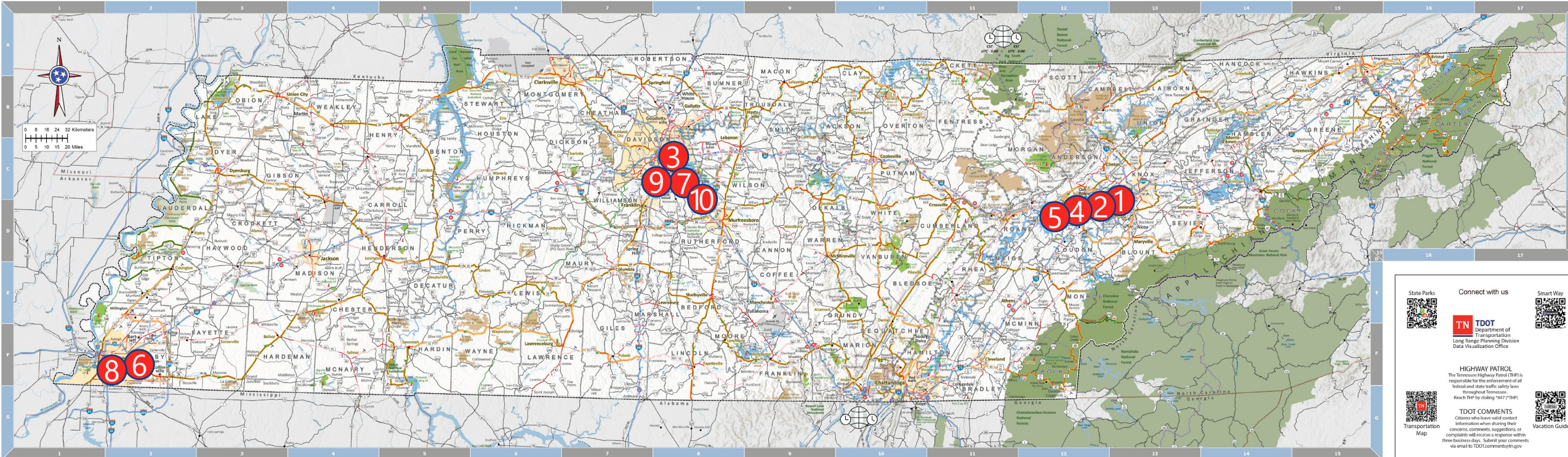




Traffic



Traffic - Statewide



State Parks

Connect with us

Smart Way

TN TDOT
Department of Transportation
Long Range Planning Division
Data Visualization Office

HIGHWAY PATROL
The Tennessee Highway Patrol (THP) is responsible for the enforcement of all federal and state traffic safety laws throughout Tennessee. Reach THP by dialing *547 (THP).

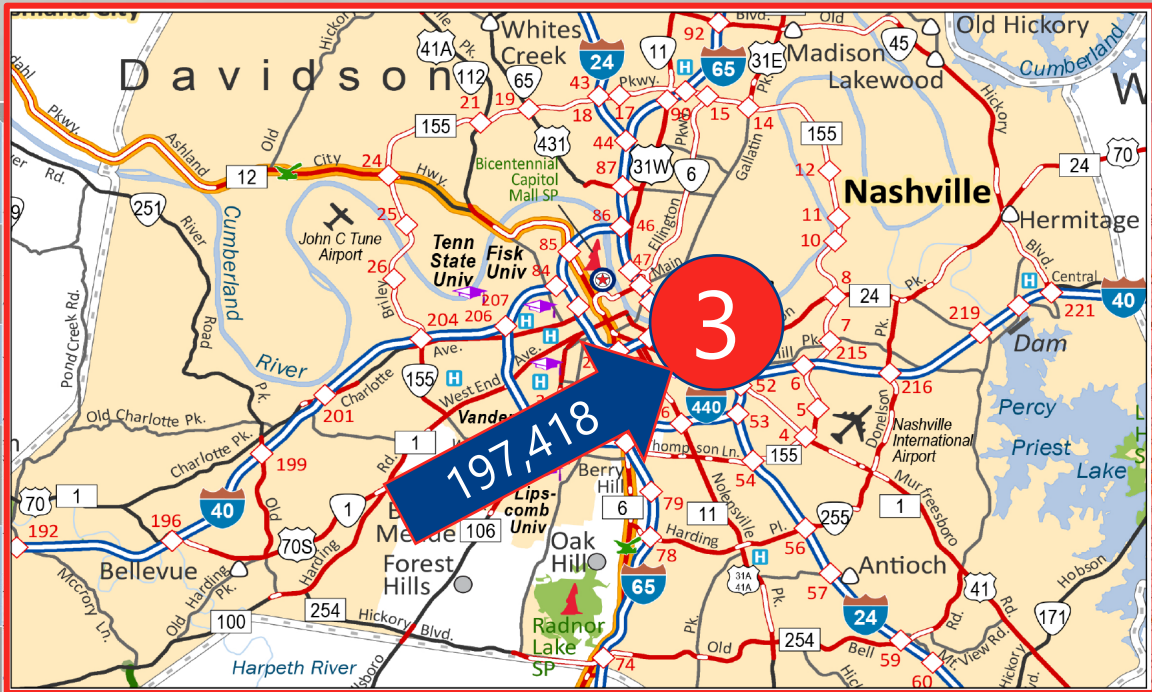
TDOT COMMENTS
Citizens who leave valid contact information when sharing their concerns, comments, suggestions, or complaints will receive a response within three business days. Submit your comments via email to TDOT.comments@tn.gov

Transportation Map Vacation Guide



TOP 10

Traffic - Statewide



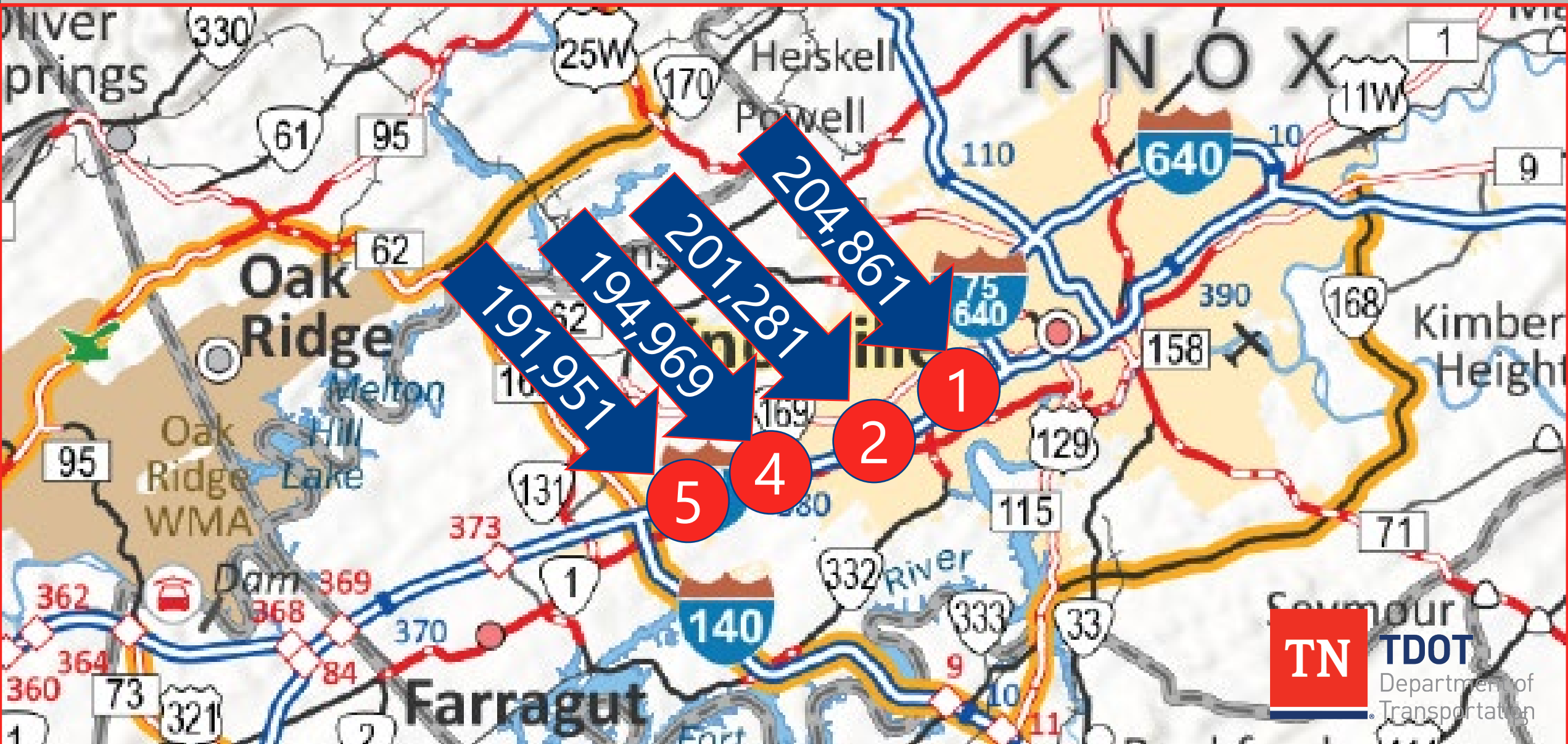
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TDOT COMMENTS
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TN TDOT
Department of Transportation

TOP 5

Traffic - Knoxville

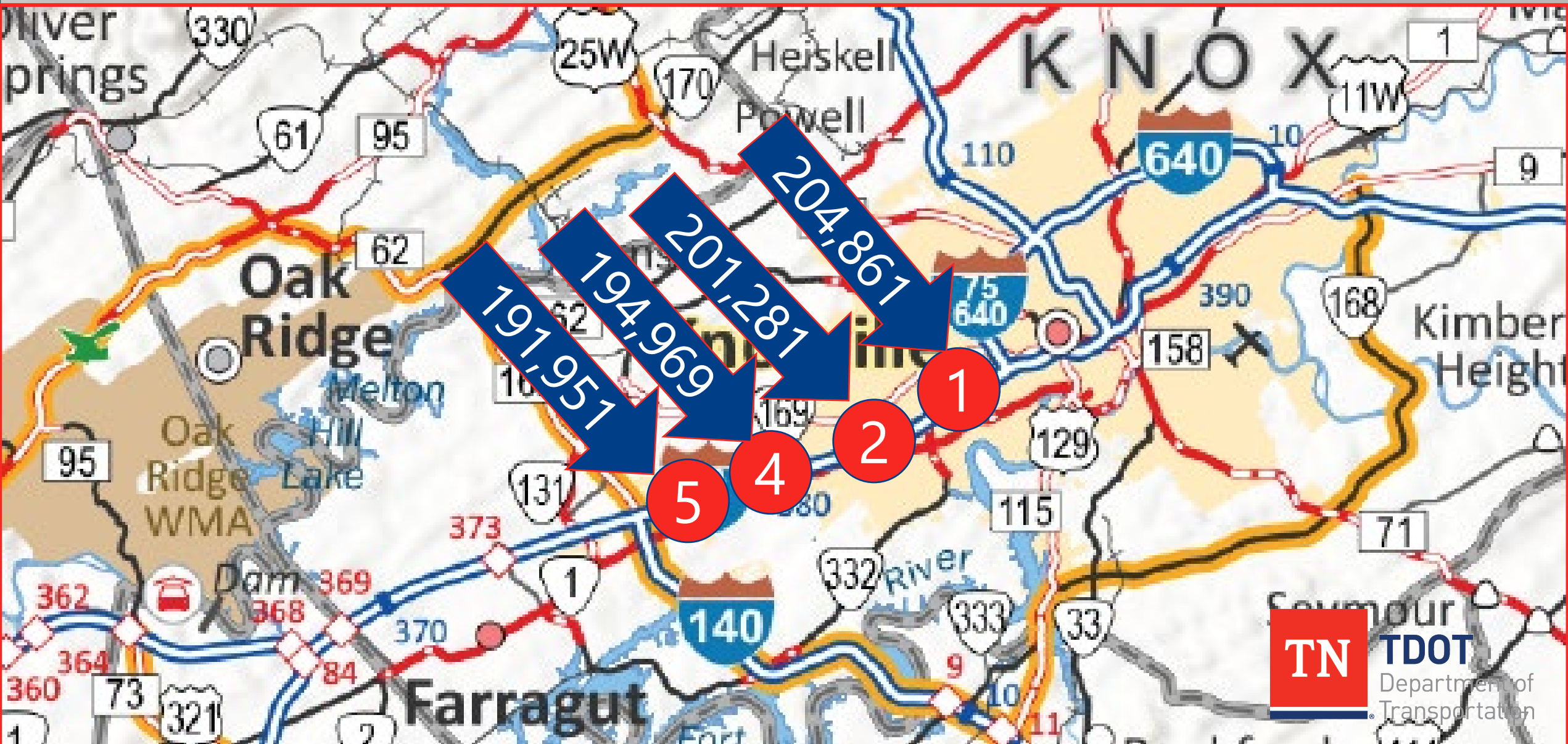




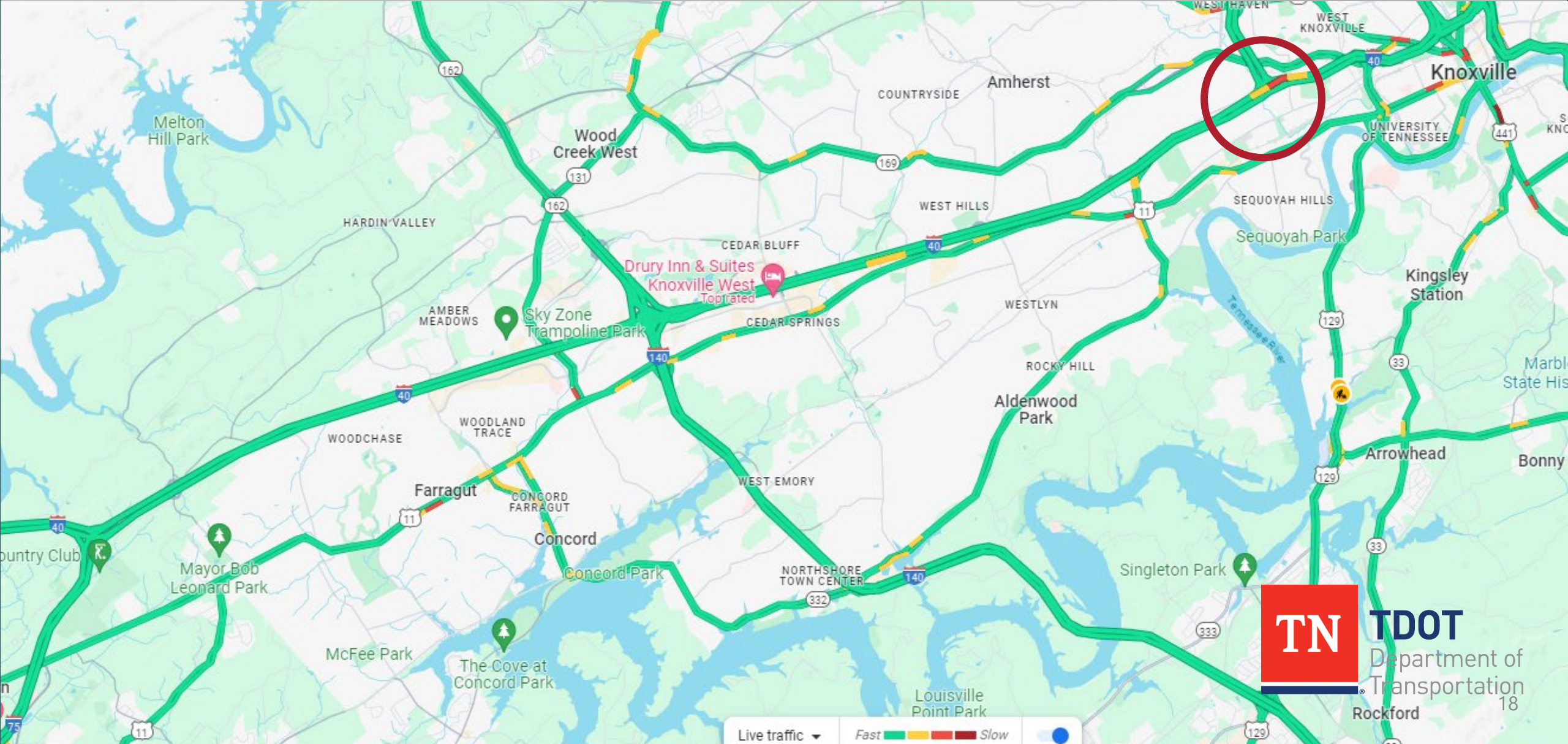
Congestion



Congestion

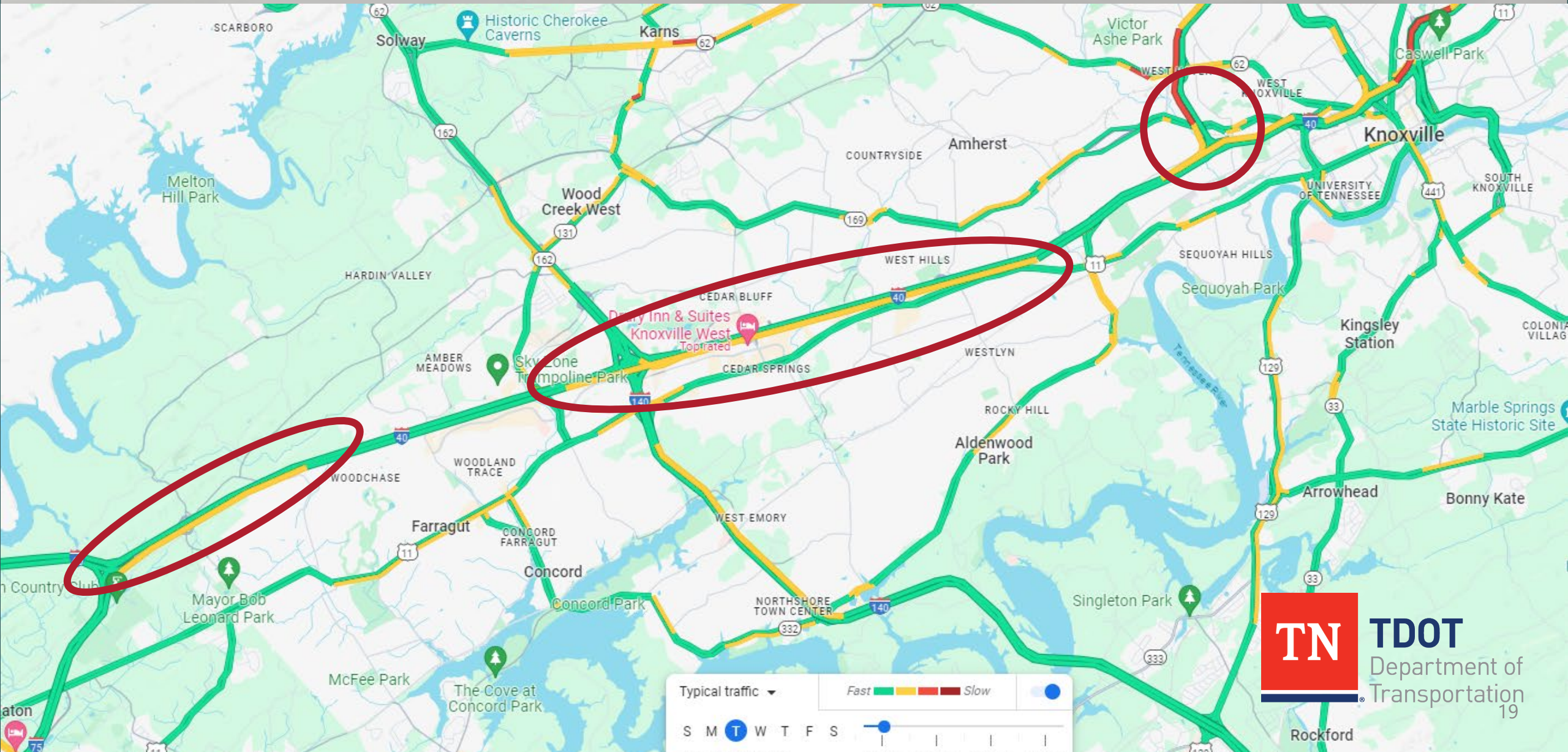


Congestion - Live



TN **TDOT**
Department of Transportation
18

Congestion - Tuesday AM Peak

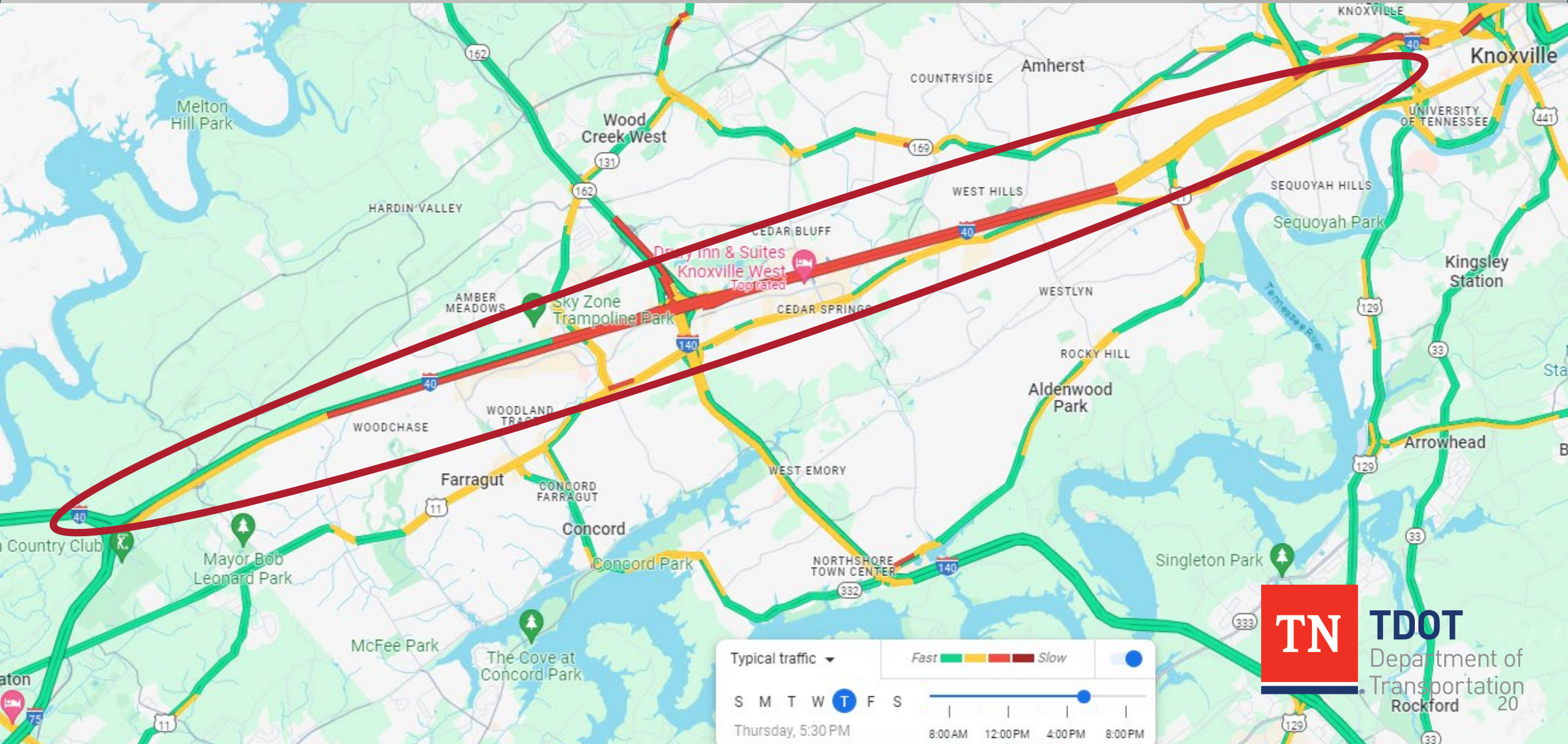


Typical traffic ▾

Fast Slow

S M **T** W T F S

Congestion - Thursday PM Peak



Typical traffic ▾

Fast Slow

S M T W **T** F S

Thursday, 5:30 PM

8:00 AM | 12:00 PM | 4:00 PM | 8:00 PM



Modernization



Modernization - I-40/I-75 Interchange



Modernization - I-40/I-75 Interchange



Modernization - I-40 at Campbell Station



Modernization - I-40 at Campbell Station



Modernization - I-40 at Lovell Rd



Modernization - I-40 at Lovell Rd



Modernization - I-40 at Cedar Bluff



Modernization - I-40 at Cedar Bluff



Modernization - I-40 at Walker Springs



Modernization - I-40 at Walker Springs



Modernization - I-40 at Papermill Rd



Modernization - I-40 at Papermill Rd

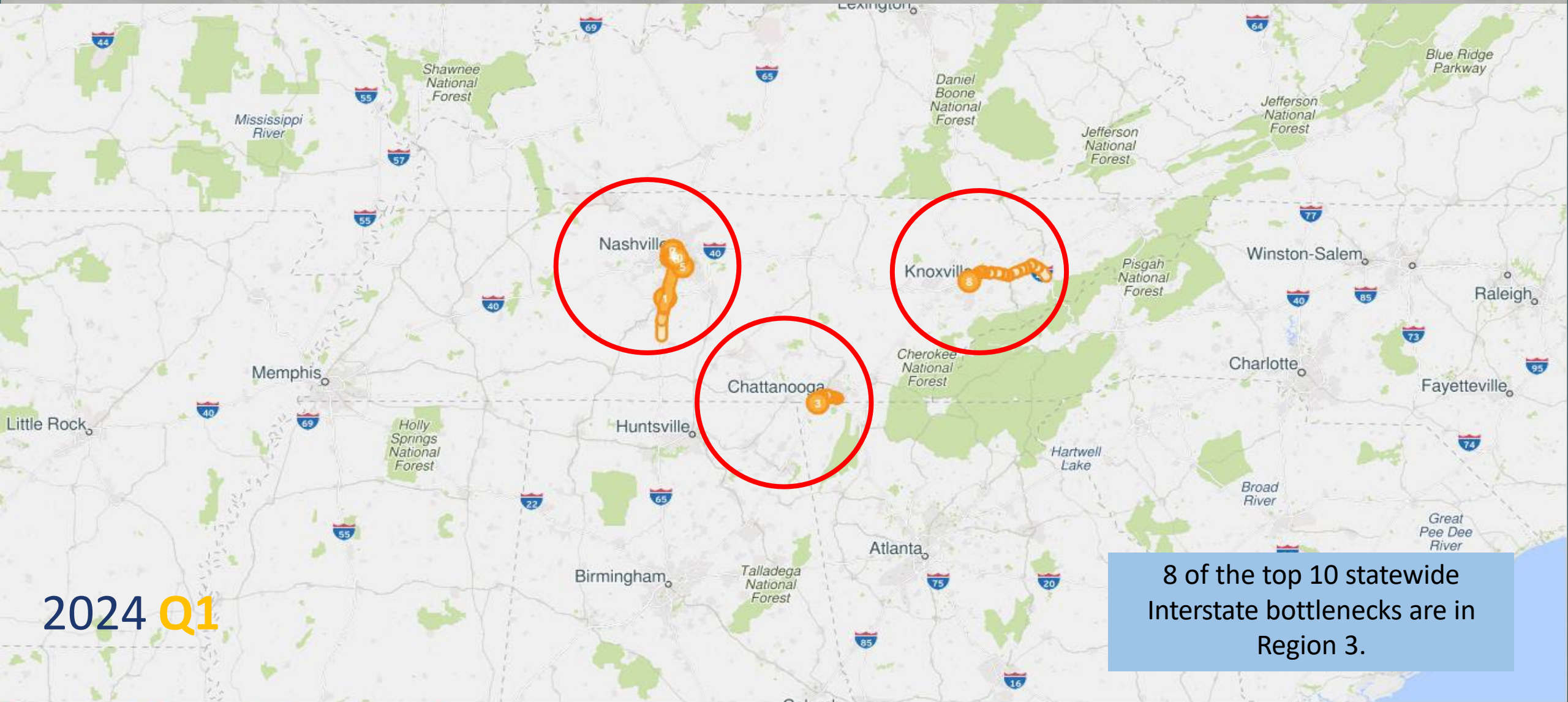




Bottlenecks



Top 10 Interstate Bottlenecks - Statewide



2024 Q1

8 of the top 10 statewide Interstate bottlenecks are in Region 3.

Top 10 Interstate Bottlenecks - Statewide

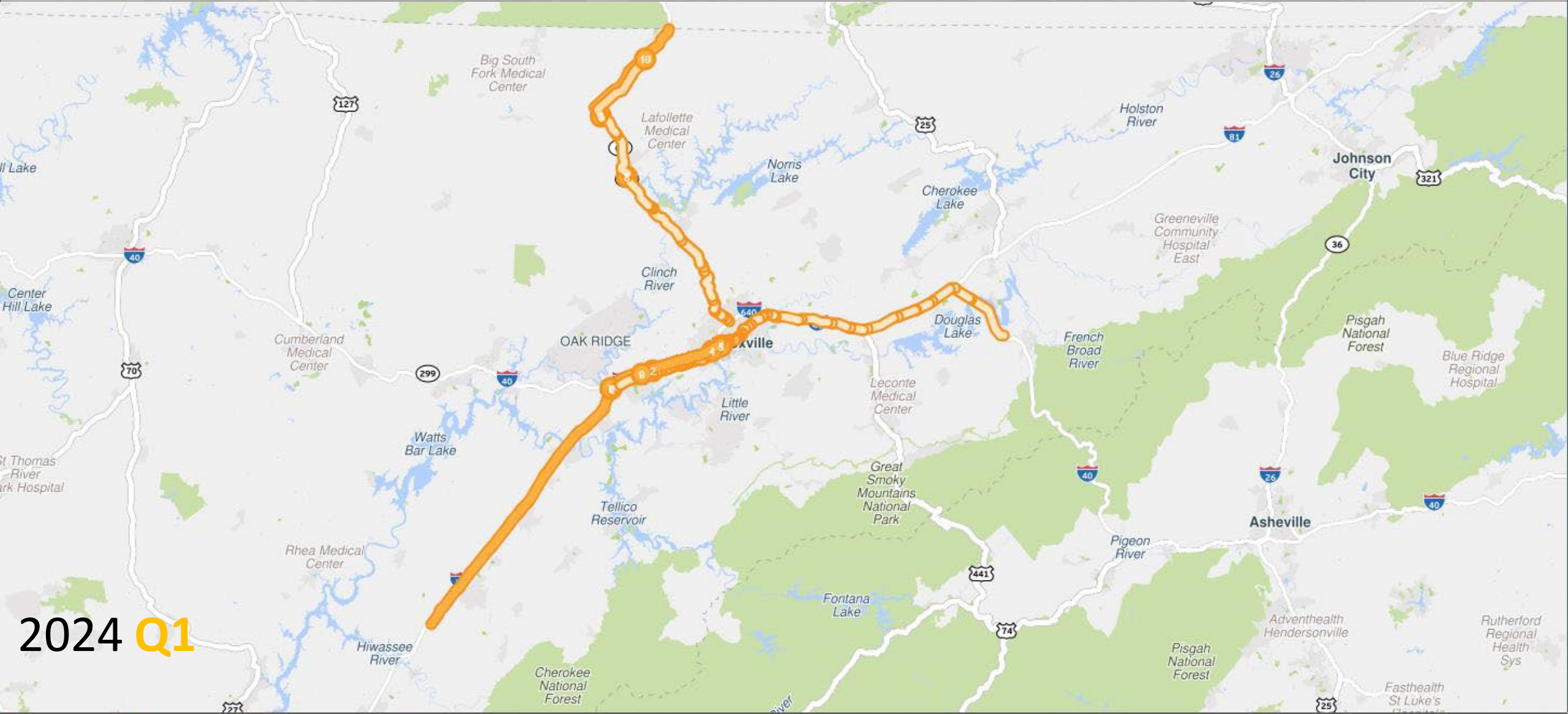


Current Rank Q1 2024	Location	Region	Total Delay	Average Daily Duration	Average Max Length (miles)	Agency & Waze Reported Events	Q4 2023 Rank	Q3 2023 Rank	Q2 2023 Rank
1	I-65 N @ TN-840/EXIT 59	3	151,175,268	5 h 24 m	7.52	212			
2	I-24 E @ I-40/EXIT 83	3	111,535,583	4 h 43 m	1.51	110	2	2	2
3	I-24 W @ 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.

Top 10 Interstate Bottlenecks - Region 1



2024 Q1

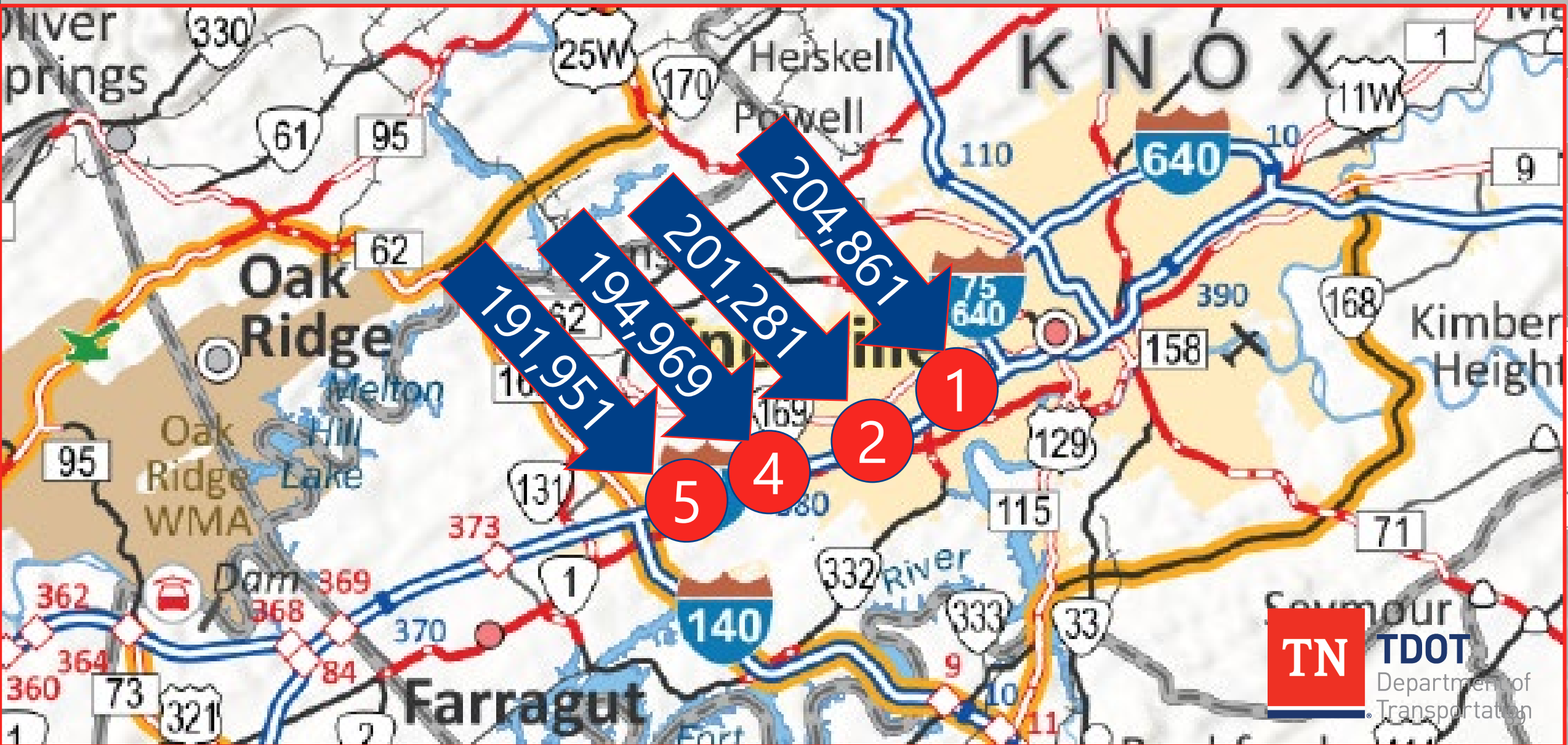
Top 10 Interstate Bottlenecks – Region 1

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.

Bottlenecks - Top Traffic Counts Statewide



Bottlenecks - 7 of TOP 10 Locations



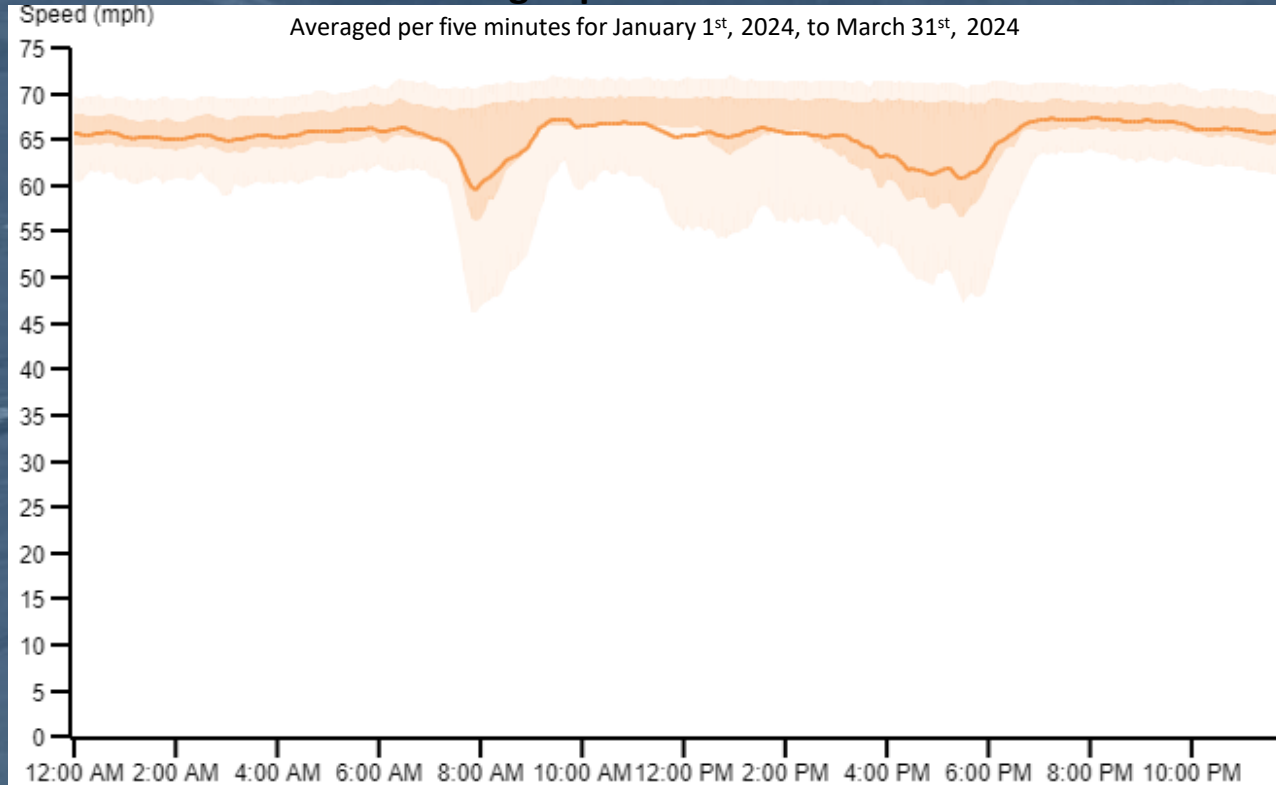
I-40 WB @ I-75/I-640

1

2024 Q1 #1 Interstate Bottleneck in Region 1

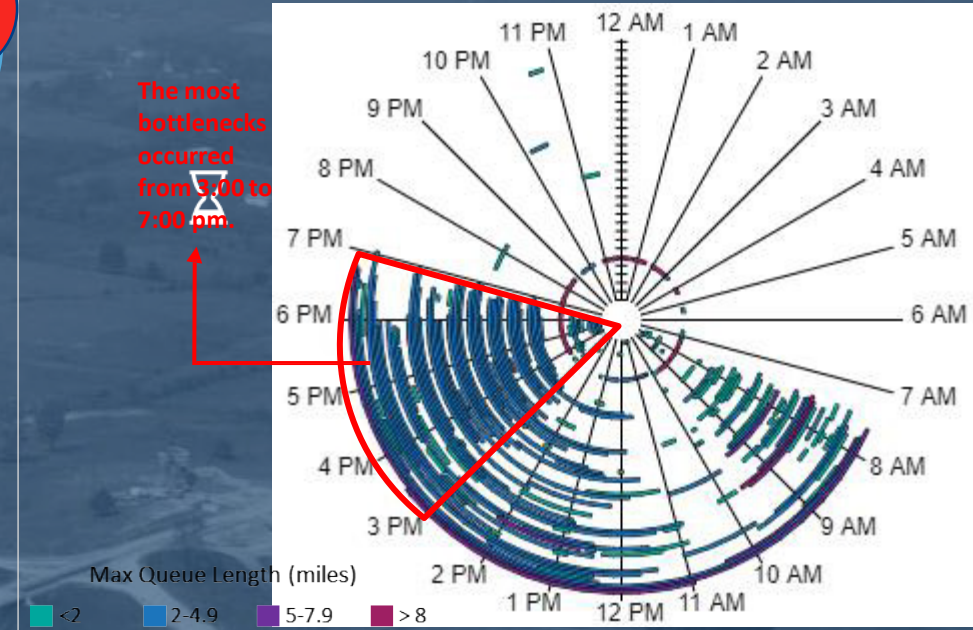
Average Speed Over Time

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

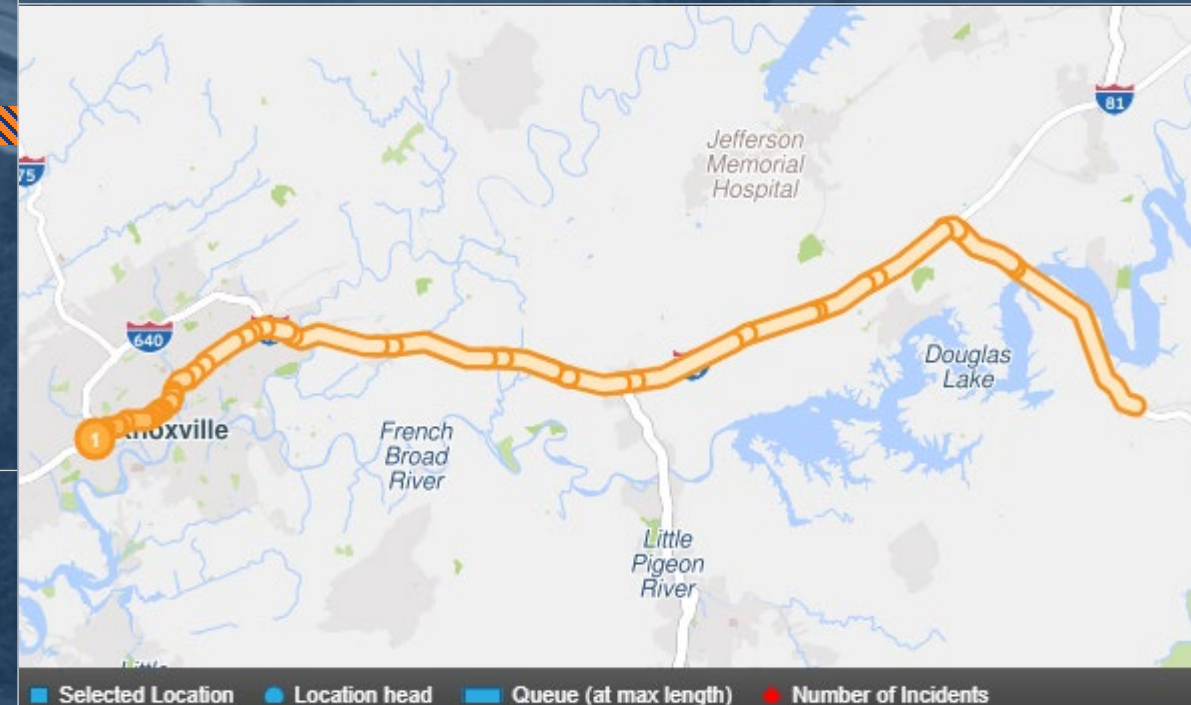


- Jan 01, 2024 through Mar 31, 2024 - INRIX
- Jan 01, 2024 through Mar 31, 2024 25th and 75th percentile - INRIX
- Jan 01, 2024 through Mar 31, 2024 5th and 95th percentile - INRIX

- 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 **73,121** vehicle hours of delay on this segment of the interstate in 2024 Quarter 1.



The center represents the beginning of January 1, 2024, and the outer edge represents the end of March 31, 2024.

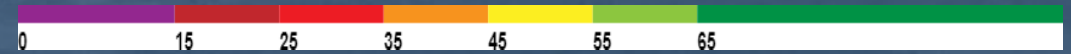


I-40 WB @ I-75/I-640

2024 Q1 #1 Interstate Bottleneck in Region 1

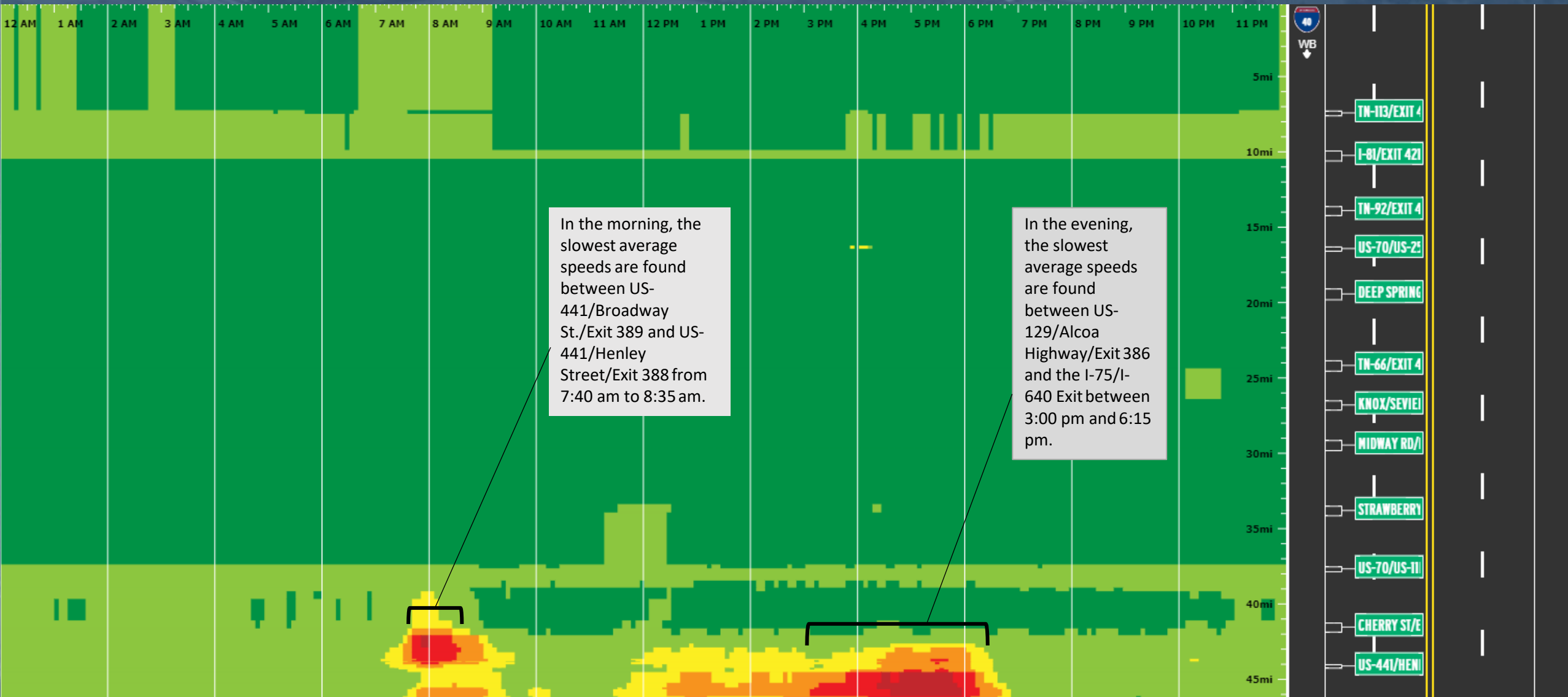
1

Speed



Average Speed Over Time

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





Challenges



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





Notice of Intent



Notice of Intent



Current Consultant Advertisements x +

tn.gov/tdot/business-redirect/consultantinfo/currentads.html

Road Item List Work Zone Traffic C... TDOT_2015_Spec_B... PF Data Server-PFD... PF Map: Contiguous... Project Developmen... Tennessee Road Buil... Federal GSA Per Die... Amazon.com: Alesis... District Maps - TN... Standard Traffic Op...

Traveler how do I... Business how do I... Government how do I... Find Local Information Sitemap Index of Services

Consultant Information

Prospective Vendor Information

Prequalification Procedures

Form DOT-CS-100

Form DT-0330 Part I

Form DT-0330 Part II

Consultant Orientation Information

Current Advertisements

Current Selection Results

Invoice Templates

Consultant Advertisements

Revised: June 3, 2024

Note: You may need Adobe Acrobat Reader to view some files on this page. To download Adobe Acrobat Reader, [click here](#).

- [Click here](#) to view a Roadway Design Division example Letter of Interest. (MS Word)
- [Click here](#) to view a Construction Division example Letter of Interest. (MS Word)
- [Click here](#) to view a Long Range Planning Division example Letter of Interest. (MS Word)
- [Click here](#) to view a Strategic Transportation Investments Division example Letter of Interest. (MS Word)
- [Click here](#) to view an Aeronautics Division example Letter of Interest. (MS Word)
- [Click here](#) to view a Traffic Operations Division example Letter of Interest. (MS Word)

[Click here](#) to view a Right of Way Division Appraisal sample Letter of Interest (Adobe PDF)

Notice of Intent to Advertise: [Knoxville I-40 Corridor Priority Investment Project](#) (PDF)

Current Advertisements

06-03-2024 [Notice to Consultant Engineers Regarding a Request for Letters of Interest](#) (pdf)
(Bureau of Engineering)

Notice of Intent



Notice of Intent to Advertise

To Provide
Preliminary Design & Environmental Services for the
Knoxville Interstate 40 (I-40) Corridor Priority Investment
Project

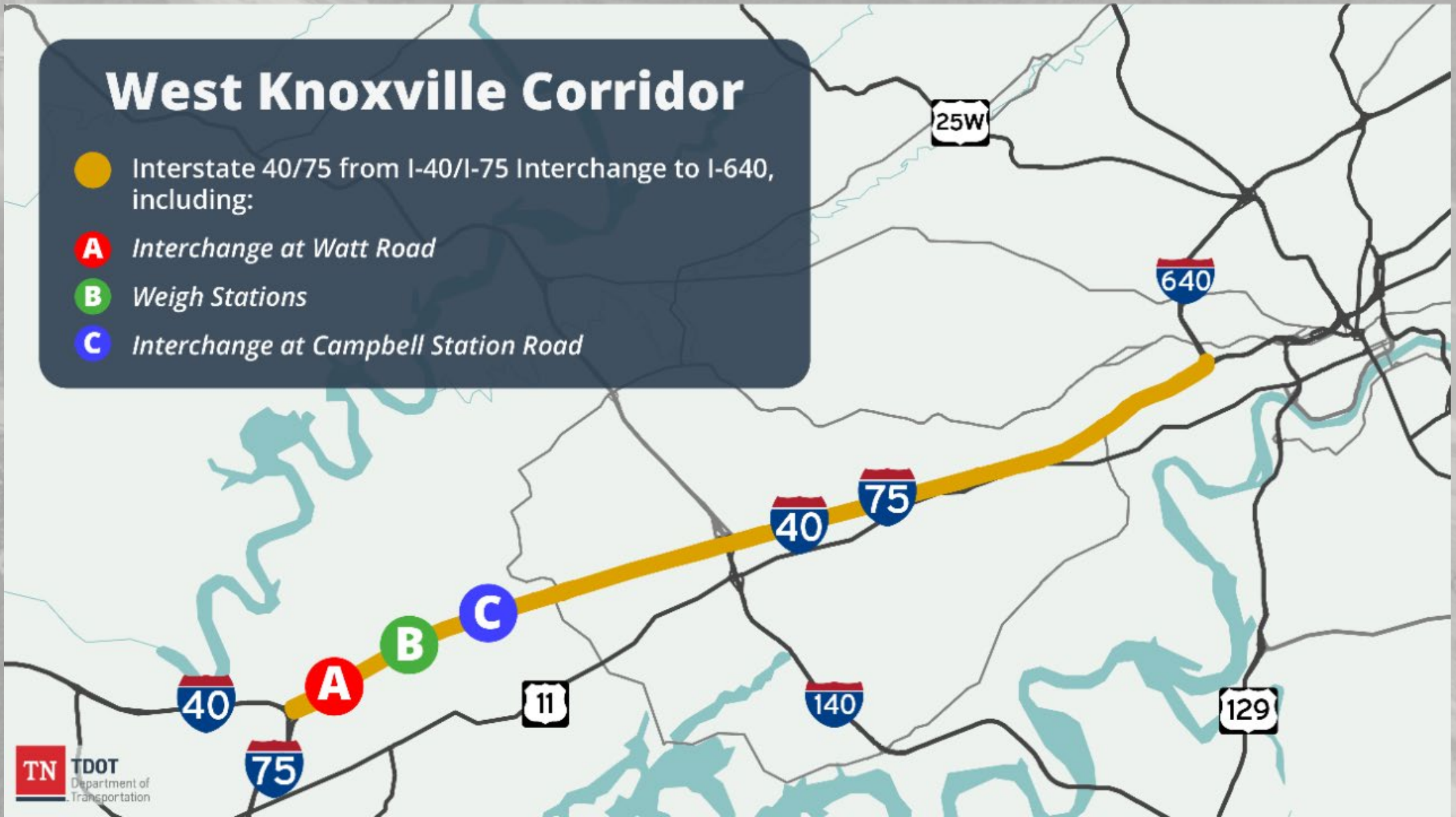
P.I.N. 135384.00
Knoxville, TN



Notice of Intent - Location

West Knoxville Corridor

- Interstate 40/75 from I-40/I-75 Interchange to I-640, including:
 - A** Interchange at Watt Road
 - B** Weigh Stations
 - C** Interchange at Campbell Station Road



Notice of Intent – Development Process

Phase 1

- Review of existing and previous plans for the corridor
- Surveyed inventory of assets and conditions
- Identification of right-of-way and utilities along the corridor
- Assessment of existing and future corridor traffic and regional traffic patterns
- Safety issues along the corridor
- Identification and evaluation of needs and solutions including but not limited to choice lanes



Notice of Intent – Development Process

Phase 1 Continued

- Development of design options
- Environmental screening of design options (Probable PEL)
- Constructability assessment
- Estimated project costs for each design recommendation
- Recommendations on funding, financing, and construction delivery options
- Public involvement consistent with TDOT's Project Delivery Network (PDN)

Notice of Intent – Development Process

Phase 2

- Based on the results of Phase 1, develop design package(s) for recommended concepts
- Conduct any additional traffic studies and modeling
- Develop the NEPA and design deliverables
- Project support and other engineering services to ensure project recommendations advance consistent with the PDN

Notice of Intent – Scope

- Planning
- Environmental
- Geotechnology
- Surveying
- Engineering design
- Traffic design
- Utilities
- Structures
- Constructability

Notice of Intent – Proposals

- Deadline before 4:00 p.m. (Central Time) Tuesday, July 9, 2024.
- Package must not exceed 30 pages
- Covers and Section H will not count towards the 30-page limit
- All information shall be on letter size in the pdf.
- Charts, exhibits, and other illustrative and graphical information will be counted as one (1) sheet and must be limited to five (5) sheets.
- All text, except for the front cover of the Proposal package and resumes, shall be single spaced, Times New Roman, 12-point font.

Notice of Intent – Selection Process

- All firms must be pre-qualified or have a completed prequalification form
- Statement of Qualifications shall specifically identify any sub-consultant(s)
- The sub-consultant(s) shall be prequalified by TDOT to perform the specific tasks required.
- Prequalification procedures can be found at the following link: <https://www.tn.gov/tdot/business-redirect/consultantinfo.html>
- Interested firms also may obtain this information by contacting TDOT.PSPrequals@tn.gov.



Notice of Intent – Evaluation Process

- Phase I Evaluation – Eliminated for this advertisement
- Phase II Evaluation

Criteria and Relative Weights		
i.	Team experience including staff qualifications and credentials	20%
ii.	Technical approach	25%
iii.	Workload capacity of the prime, including amount of work under contract with TDOT, if applicable.	5%
iv.	Oral Interview (See Note a. next slide)	50%



Notice of Intent – Oral Interview

- Week of July 15, 2024
- Mandatory part of the selection process
- Primary members of the prime and subconsultant teams present
- Structure of Interview
 1. Presentation (30 Minutes)
 2. Q&A Session (15 Minutes)
- Interview will account for 50% of the total score



Notice of Intent – Evaluation Process

- Phase III Evaluation
 - Consultant Evaluation Committee determines qualified items
 - Commissioner will rank the firms in order of preference
- Post Selection



Notice of Intent – Tentative Schedule

EVENTS

NOIA

May 10, 2024

Advertise Project

June 3, 2024

Pre-Submittal Meeting

June 17, 2024

Phase II proposal

July 9, 2024

Interviews Scheduled

Week of July 15, 2024

Consultant Contract Executed

September 2024



What questions do you have?

Pre-Submittal Meeting

Steve Borden, PE, Assistant Chief Engineer/Region 1 Director

Dexter Justis, PE, Region 1 Project Management Director

June 17, 2024



TDOT
Department of
Transportation