ILLINOIS TOLLWAY

Central Tri-State Tollway (95th Street to Balmoral Avenue)
Construction Forum
September 12, 2019

Agenda

- **Corridor overview**
  - General facts
  - Lessons learned
  - Design status
  - Construction
  - Diversity
- **Packaging, schedule and maintenance of traffic**
- **Forecasted materials and labor**
- **Composite pavement construction**
- **Questions**

Facts About the CTS

- **How many lane miles will be reconstructed?**
  - 237 combined throughout the corridor
- **How many miles of retaining walls to be constructed on the corridor?**
  - Approximately 20 miles (1.8 million square feet)
- **How many bridges to be reconstructed and how many bridges to be rehabilitated?**
  - 96 total = 9 new bridges, 3 bridges removed (2 Oasis structures and I-294 Ramp H over I-290), 51 bridges completely replaced, 7 bridges reconstructed (superstructure replacement), 26 bridges rehabilitated
- **How many bridges will have steel beams and how many will have precast concrete beams?**
  - Majority of bridges will be concrete
- **Where are the largest steel and concrete beams on the corridor?**
  - Mile Long Bridge has both – 90” deep PPC beams, 142” deep steel plate girder
- **How many miles of noise walls to be installed along the corridor?**
  - Approximately 23 miles (2 million square feet)

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Lessons Learned

General Comments

- Tollway has heard from industry and is building CTS differently.
- Plans being developed in timely manner to allow for right-of-way (ROW) acquisition and advancement of utility work.
- Time allowed for industry feedback and multi-year planning.
- We are working hard to take past successes and challenges and leverage those experiences to ensure the successful delivery of this corridor.

Lessons Learned

Right-of-Way

- ROW acquisitions were started much earlier on this project than in projects in the past.
- We understand the implications to schedule and budget when ROW has not been acquired.
- The team has been working hard to ensure ROW is acquired prior to notice to proceed (NTP) on a project.
- We anticipate the majority of ROW needed for the CTS project will be acquired by the end of 2019.

Lessons Learned

Utility Relocations

- The CTS team has been engaged in earlier interaction with utility agencies than in past projects.
- We are committed to and actively working on more relocations prior to Tollway construction.
- Sewer and water relocations are included in Tollway contracts, which helps our teams to best manage the projects.
- Our goal is to have utility work orders executed prior to construction advertisements to incorporate information into bid documents.

Design Status

The majority of plans are anticipated to be 95% complete by the end of 2019

Design Contracts
Value $207M

30% Concept
Value $11M

60% Preliminary
Value $161M

95% Prefinal
Value $3M

100% Final
Value $32M

Design Status as of 09/05/2019

Right-of-Way Status

Parcels Being Pursued

Acquired

Right-of-way status as of 09/05/2019

CENTRAL TRI-STATE UTILITY RELOCATION OVERVIEW

- 35 ComEd transmission towers at I-294/I-290/ I-88 interchange
- 14” Buckeye jet fuel at Mile Long Bridge
- 30” Nicor at 31st Street
- AT&T duct packages at Archer interchange and St. Charles interchange
- 61 ComEd distribution relocations
- 13 Comcast relocations
- 27 AT&T relocations
- 13 Nicor relocations
- 30 Fiber relocations

Utility status as of 09/05/2019

Utility Status

Estimated Relocations

Relocations Complete

Relocations In Progress

Permit Status

- IDOT
- Counties
- FAA
- Environmental 401/404
- IDNR-OWR
- IEPA
- MWRD, FCWRD
- Railroad ROE
- Municipalities

Construction

- 21 construction contracts awarded
- $418 million value of contracts awarded
- 3% approximate corridor construction complete

CTS Construction

As Of August 13, 2019

Roadway Contracts

- 8 contracts totaling $385.1 million

ITS/Fiber Contracts

- 4 contracts totaling $17.3 million

Building Demolition

- 1 contract totaling $4.7 million

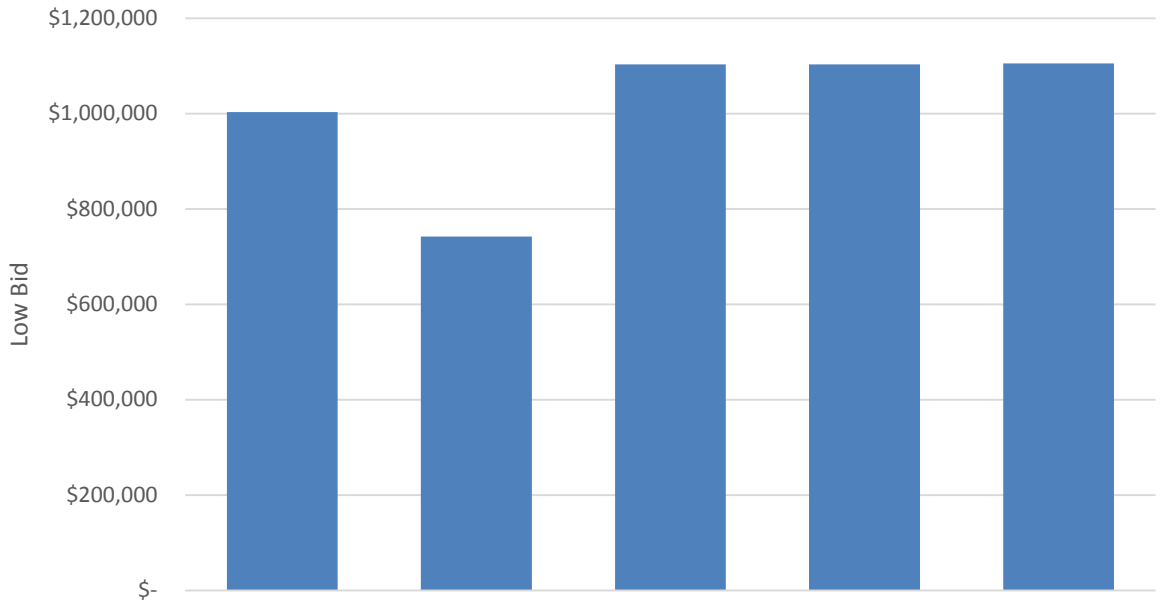
Small Business Set Aside Projects

- 5 contracts totaling $5.1million

Diversity

Project Set Aside for Small Business

As of August 13, 2019

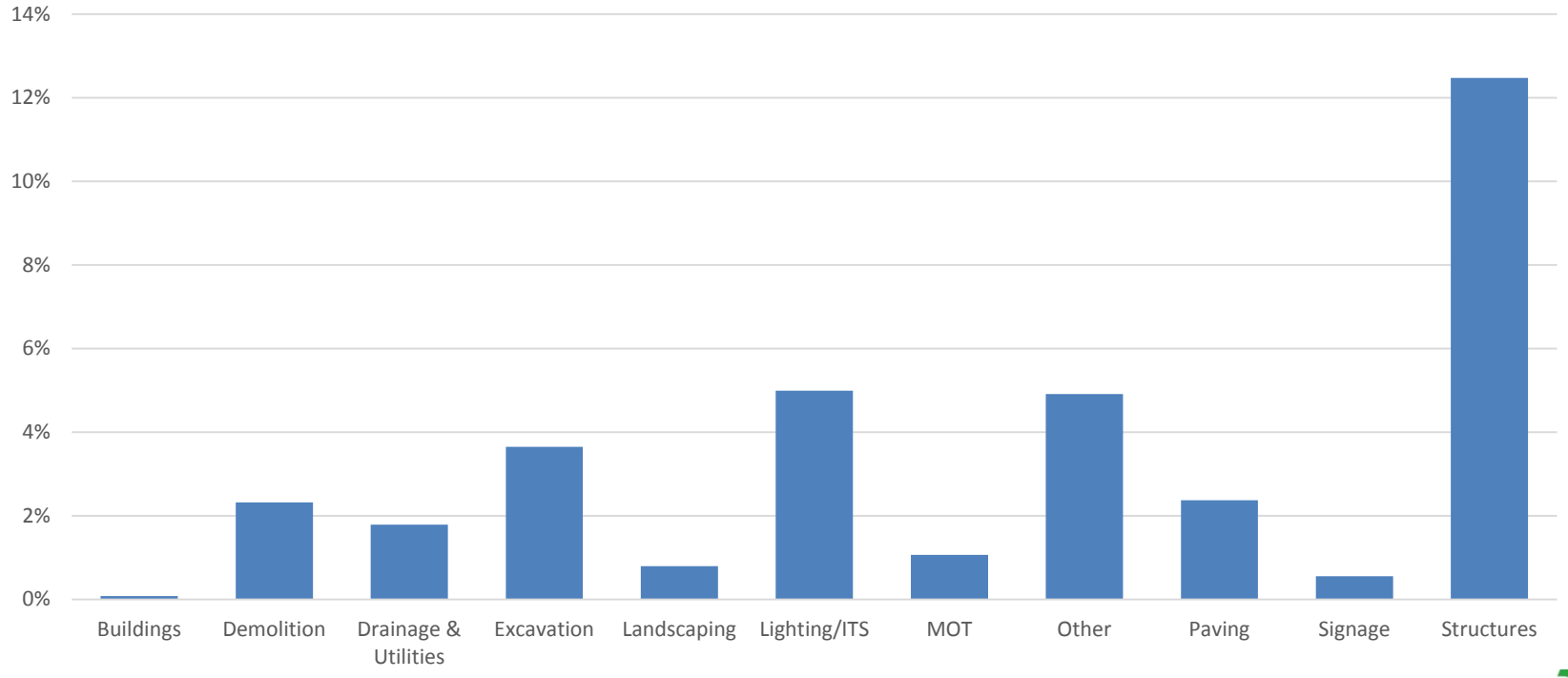


$5,057,340 Total

- 5 contracts

Anticipated CTS DBE Participation 2019-2026

As of August 21, 2019

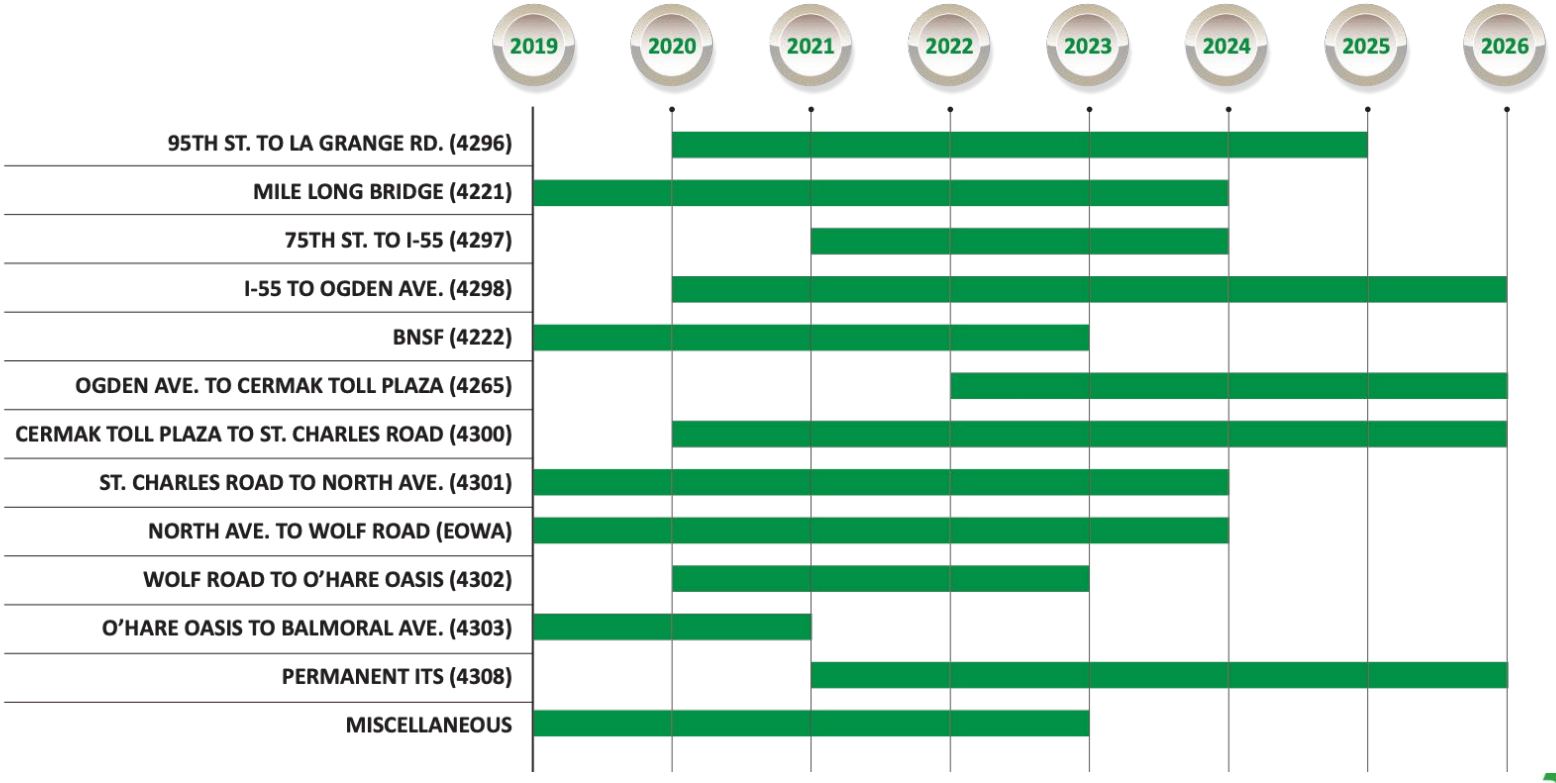


Construction Details

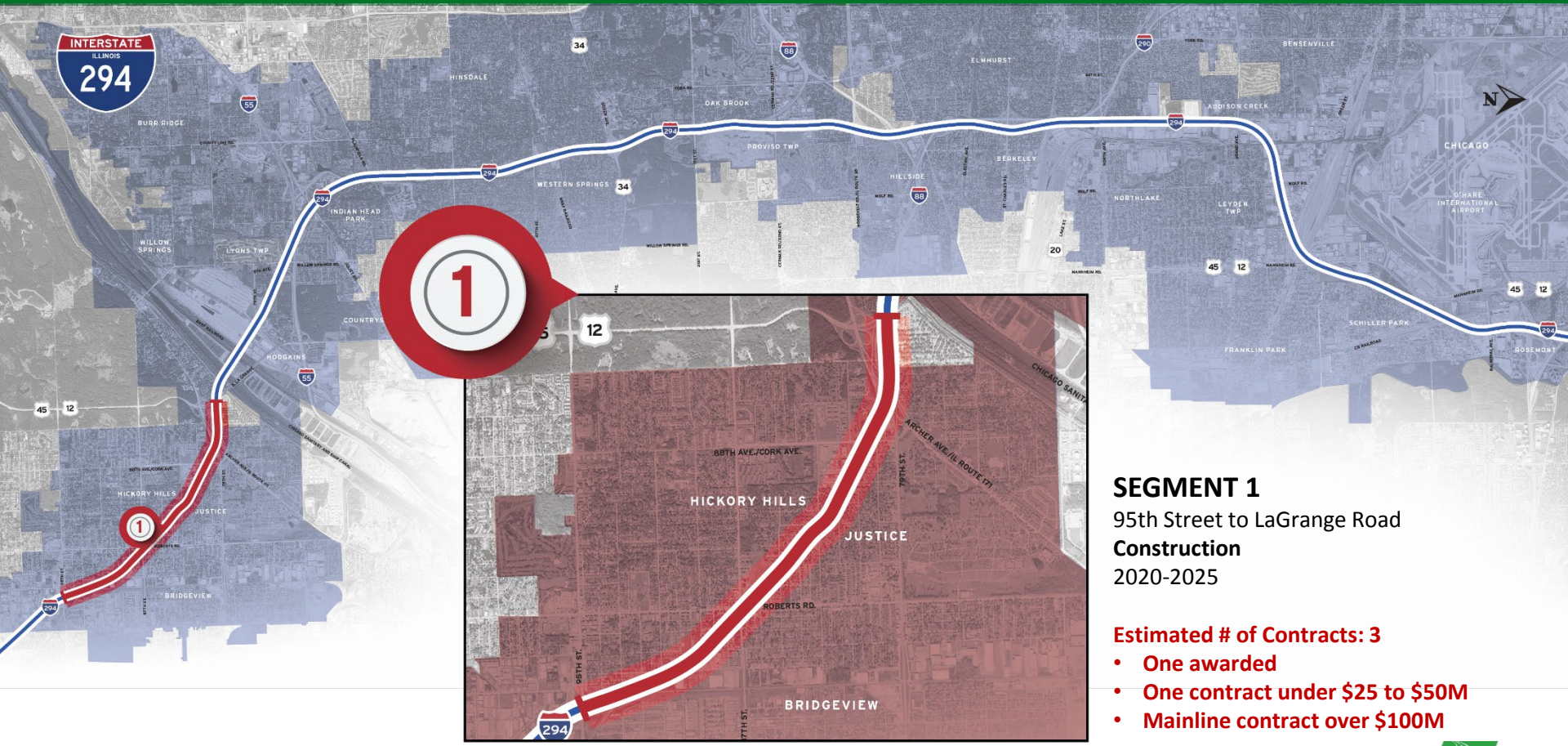
John Sadler, P.E.
CTS Owners Rep Executive
OMEGA

Packaging, Schedule and Maintenance of Traffic

- Milepost to milepost mainline construction packages
- Approximately 2-mile segments
    - Advance enabling contracts
    - 2+ Year mainline contract
    - Wrap-up contracts
    - 3 Stages per direction for 6 total stages



Schedule and budget subject to change.



SEGMENT 1

95th Street to LaGrange Road

Construction

2020-2025

Estimated # of Contracts: 3

- **One awarded**
- **One contract under $25 to $50M**
- **Mainline contract over $100M**

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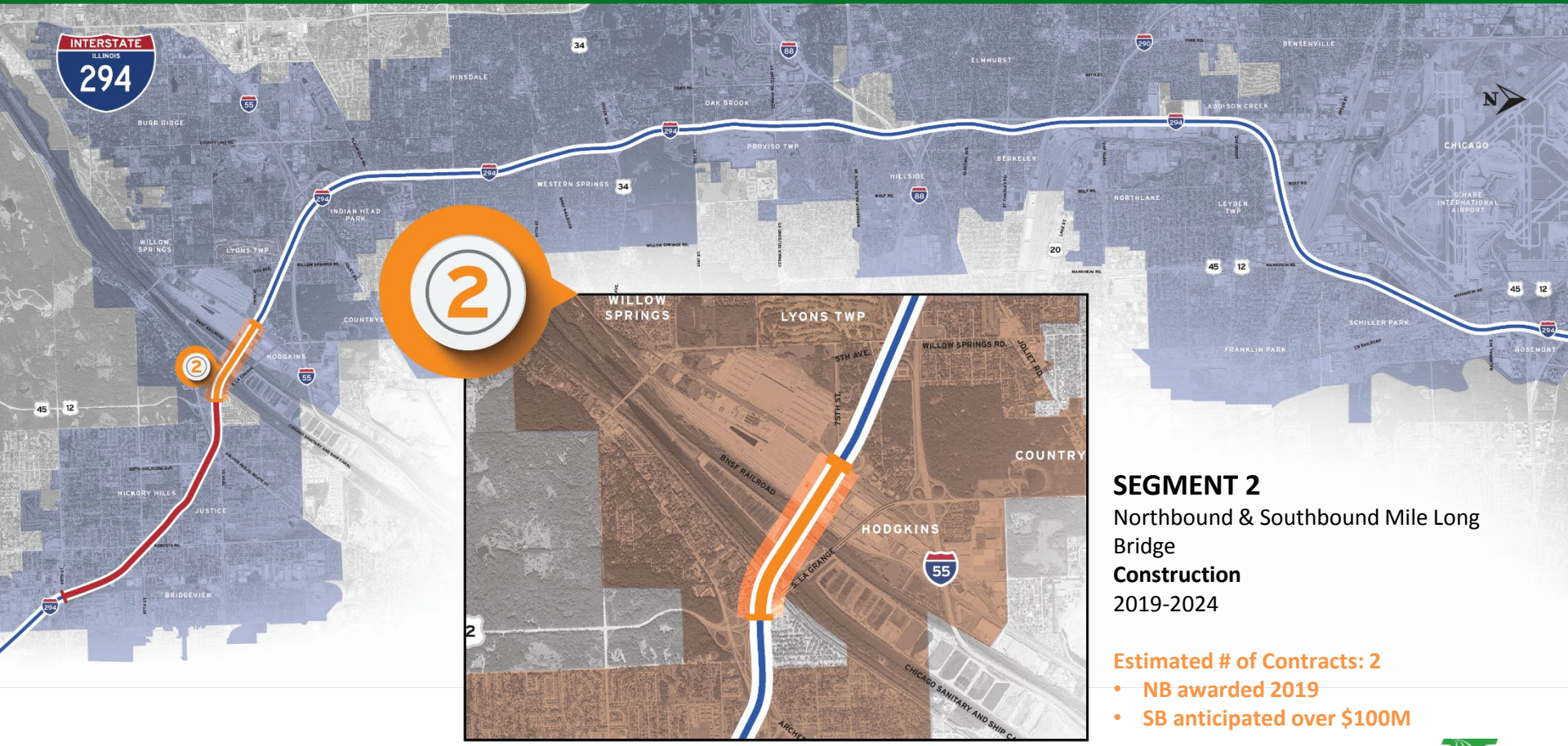


SEGMENT 2

Northbound & Southbound Mile Long Bridge

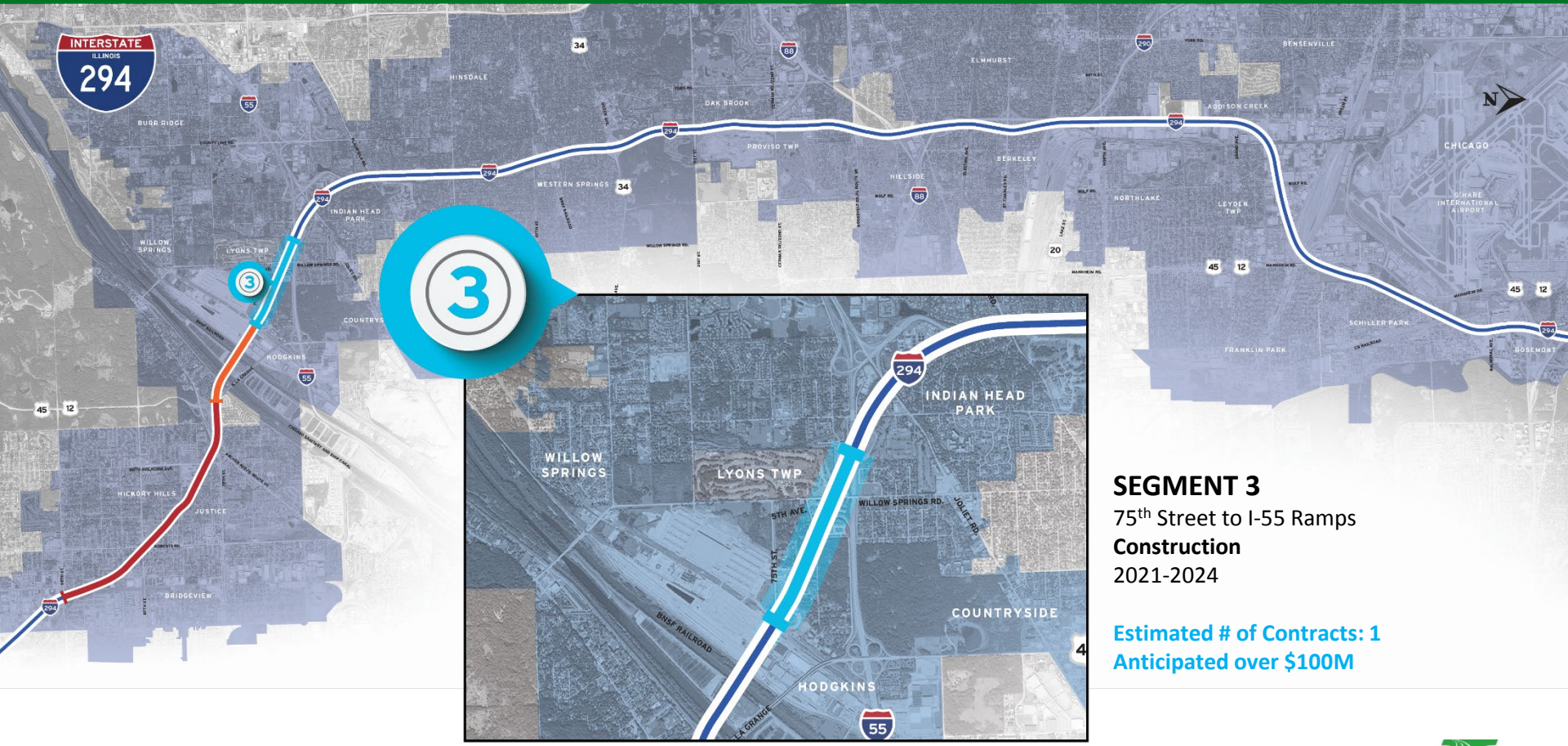
Construction

2019-2024

Estimated # of Contracts: 2

- **NB awarded 2019**
- **SB anticipated over $100M**

Illinois Tollway



SEGMENT 3

75th Street to I-55 Ramps

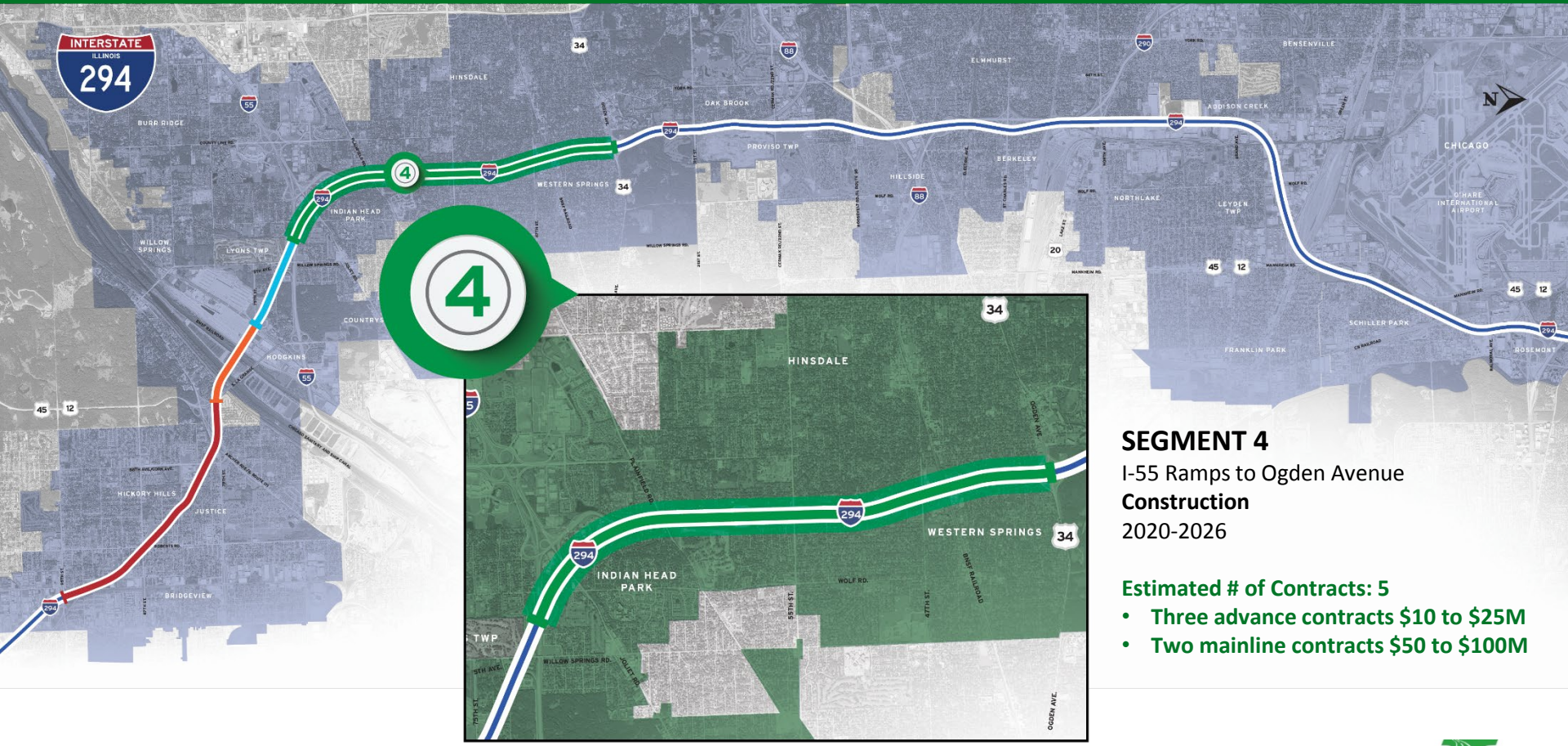
Construction

2021-2024

Estimated # of Contracts: 1

Anticipated over $100M

Illinois Tollway



SEGMENT 4

I-55 Ramps to Ogden Avenue

Construction

2020-2026

Estimated # of Contracts: 5

- **Three advance contracts $10 to $25M**
- **Two mainline contracts $50 to $100M**

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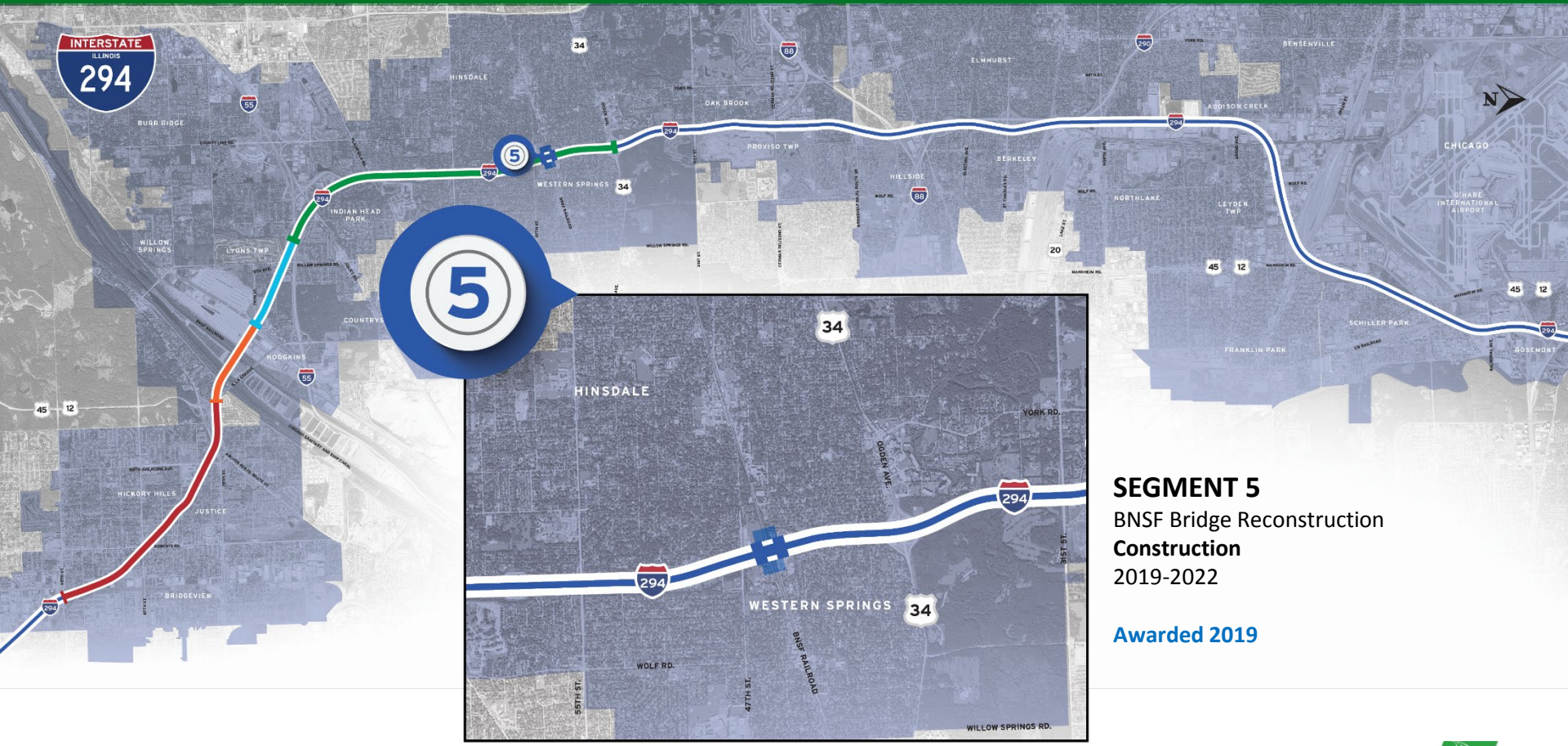

SEGMENT 5

BNSF Bridge Reconstruction

Construction

2019-2022

Awarded 2019

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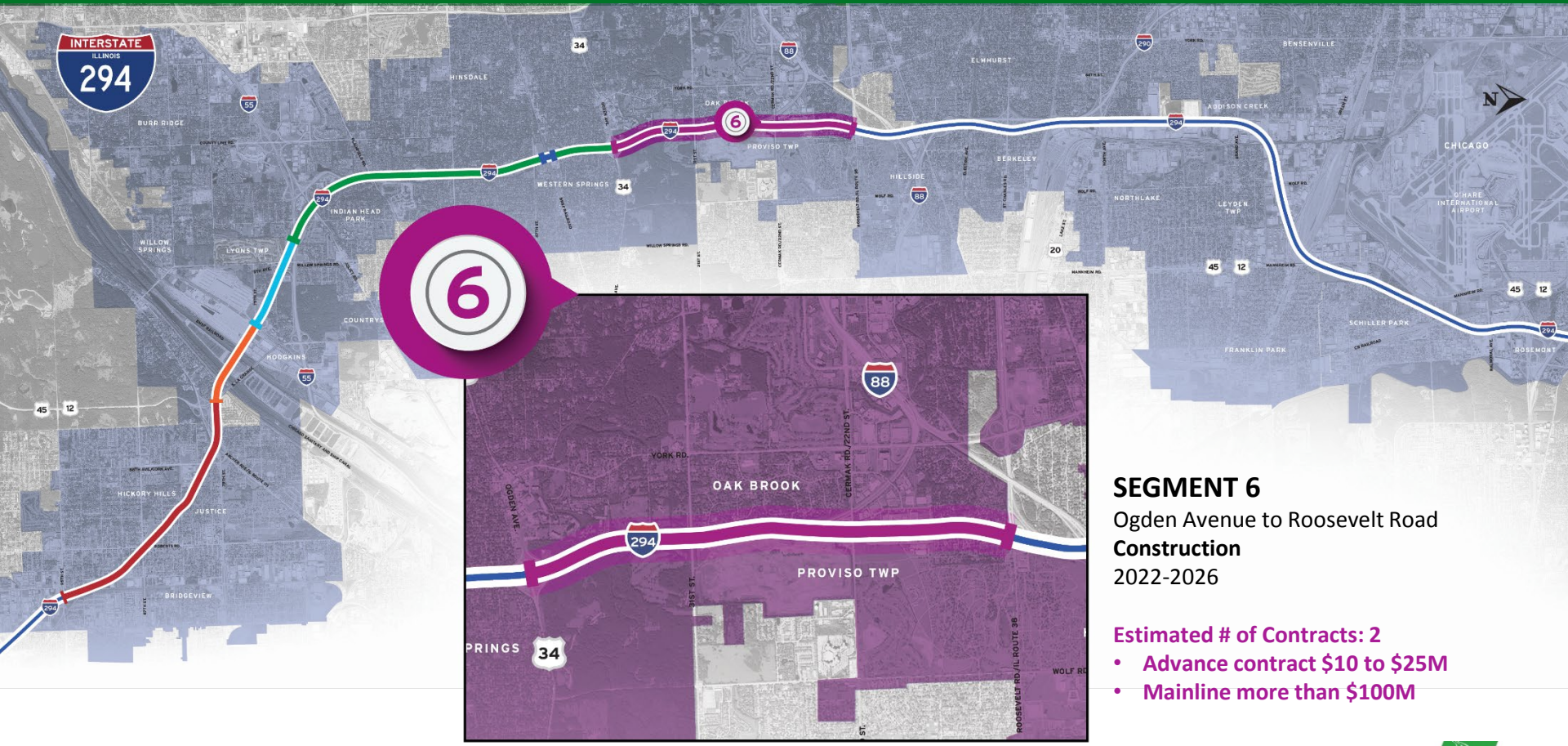

SEGMENT 6

Ogden Avenue to Roosevelt Road

Construction

2022-2026

Estimated # of Contracts: 2

- **Advance contract $10 to $25M**
- **Mainline more than $100M**

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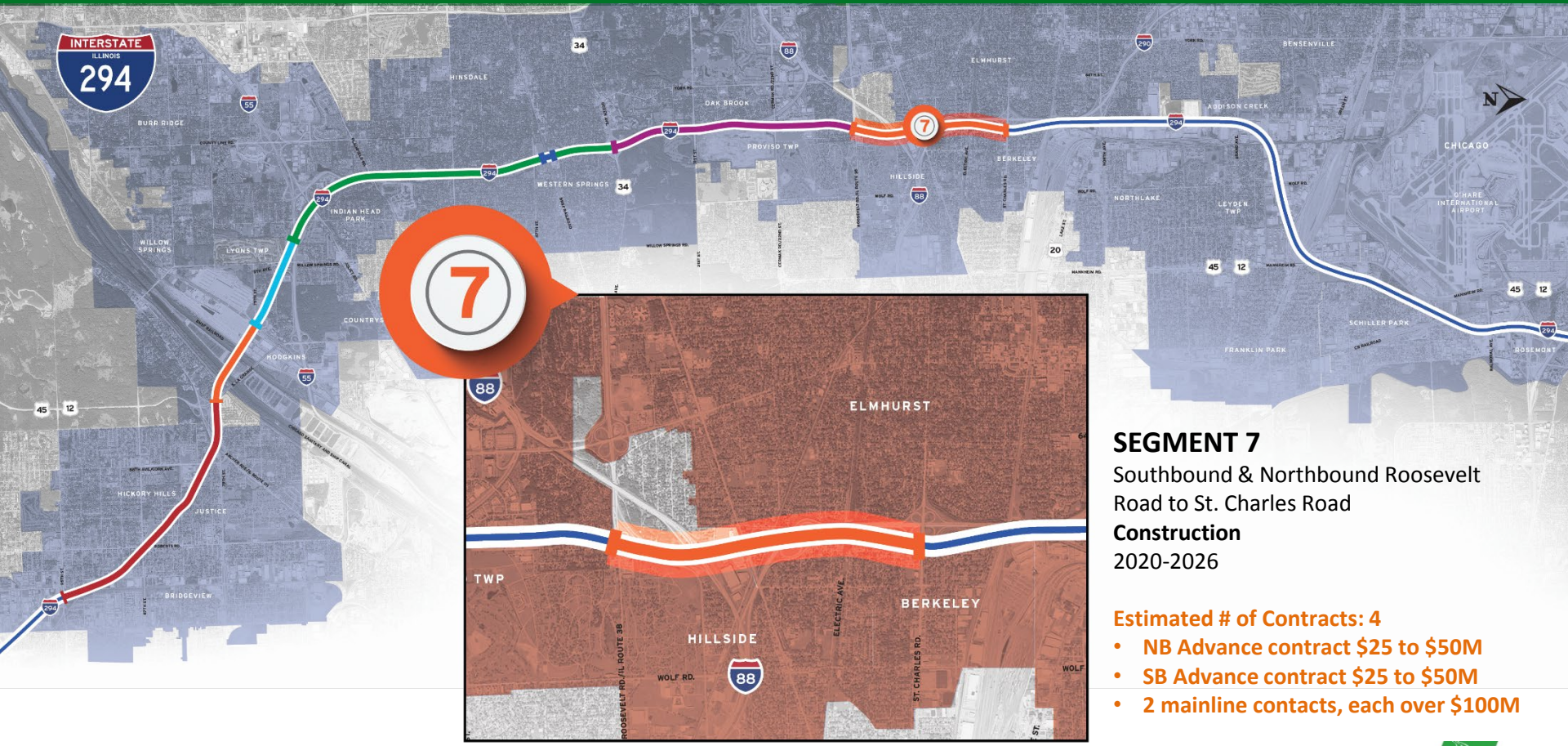


SEGMENT 7

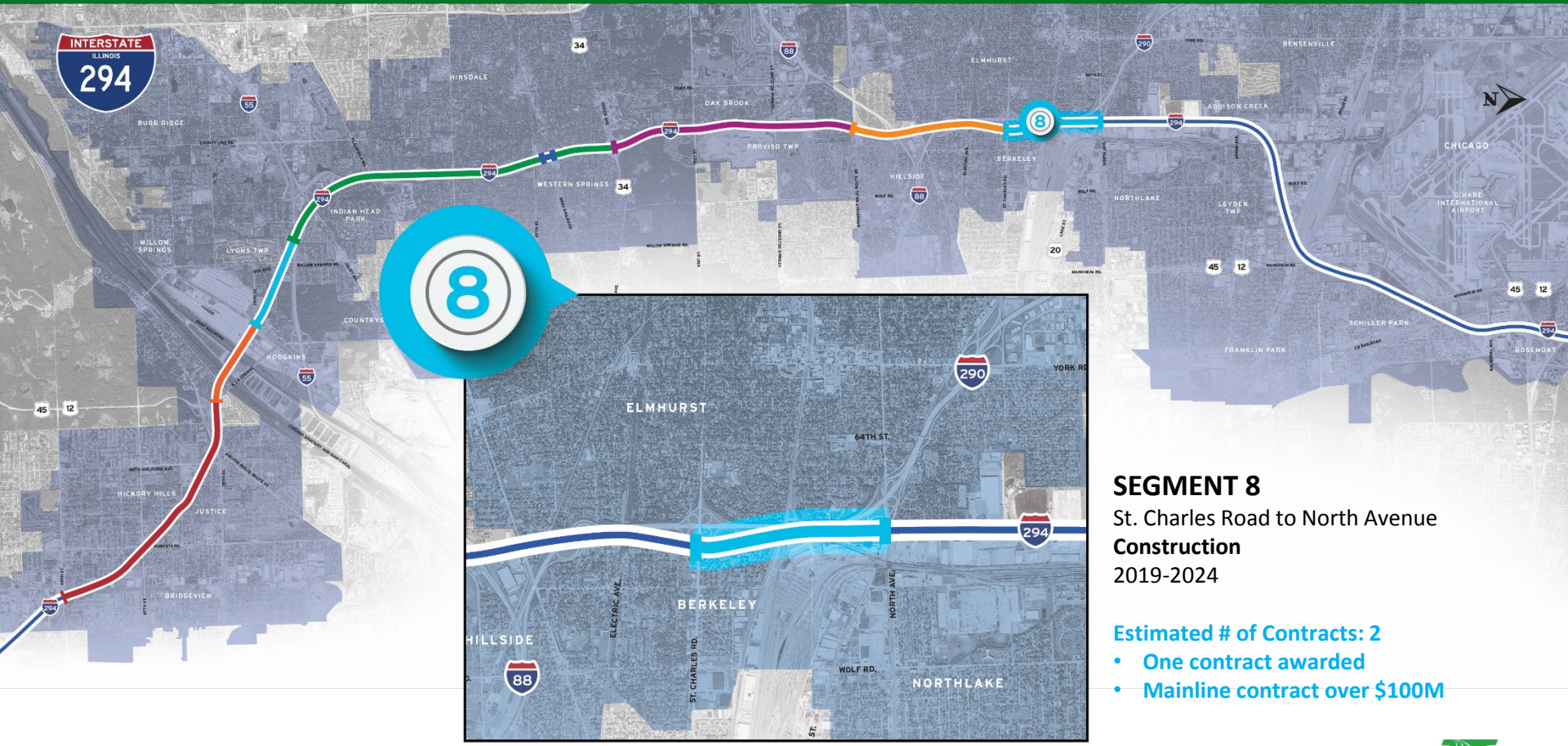
Southbound & Northbound Roosevelt Road to St. Charles Road

Construction

2020-2026

Estimated # of Contracts: 4

- **NB Advance contract $25 to $50M**
- **SB Advance contract $25 to $50M**
- **2 mainline contacts, each over $100M**



SEGMENT 8

St. Charles Road to North Avenue

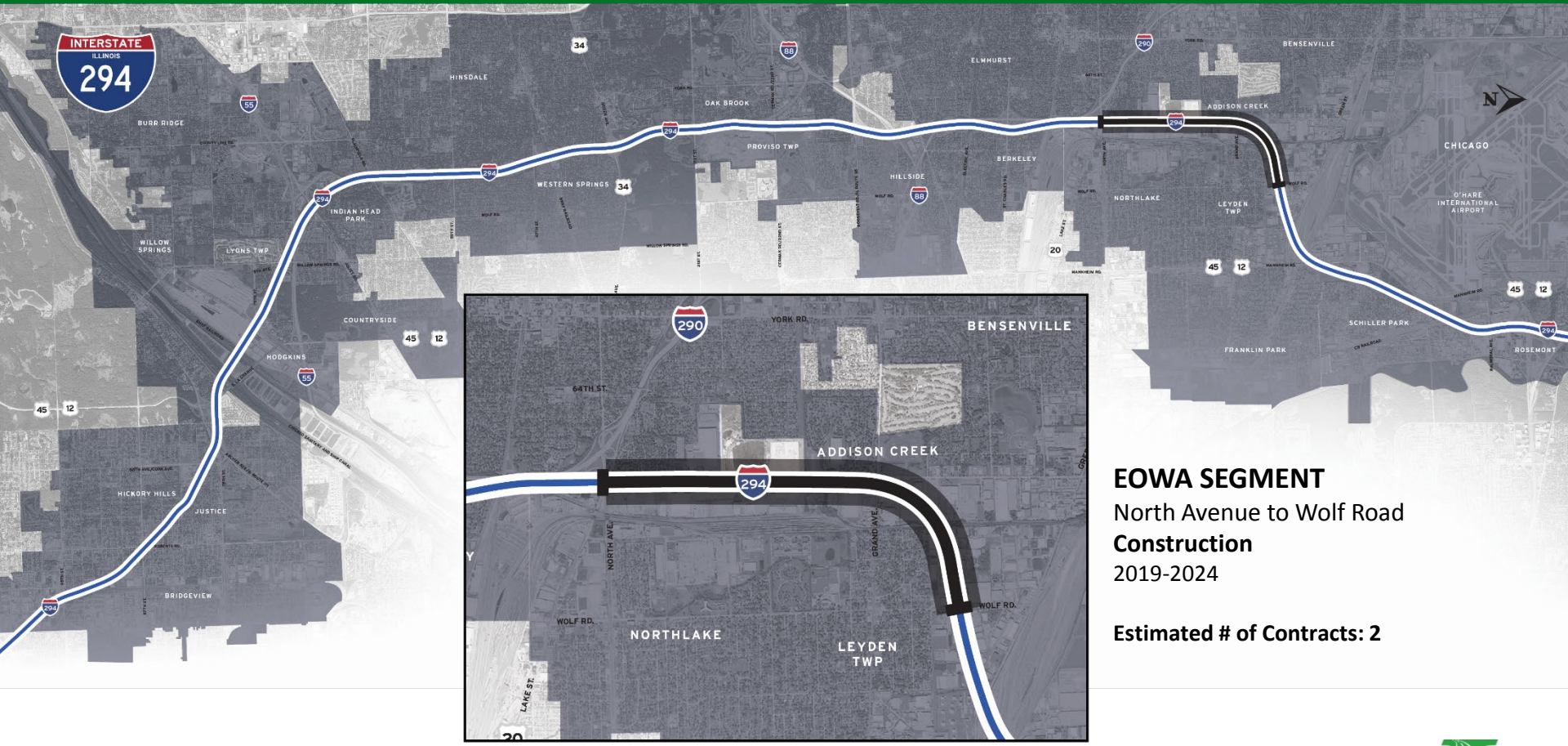
Construction

2019-2024

Estimated # of Contracts: 2

- **One contract awarded**
- **Mainline contract over $100M**

Illinois Tollway



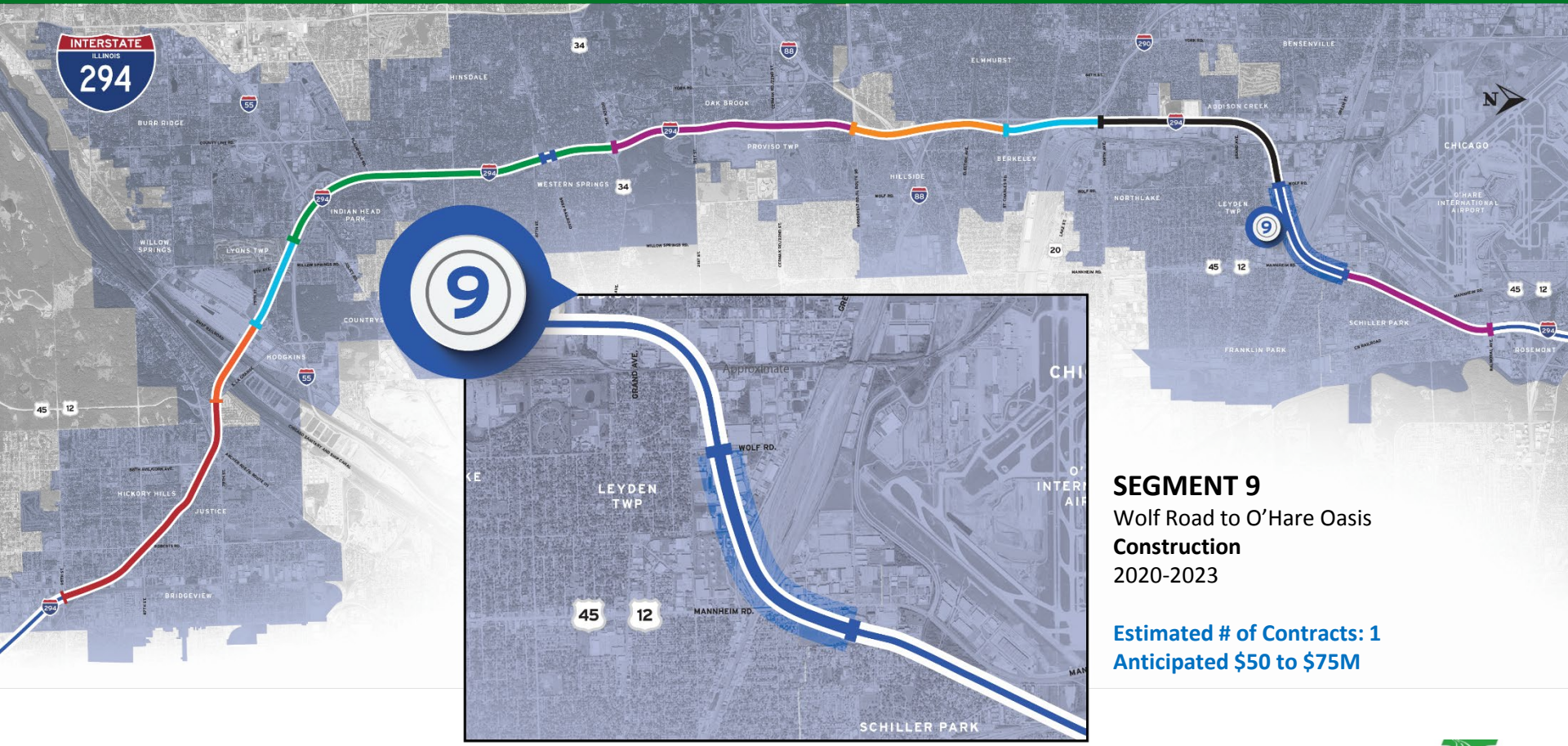
EOWA SEGMENT

North Avenue to Wolf Road

Construction

2019-2024

Estimated # of Contracts: 2



SEGMENT 9

Wolf Road to O'Hare Oasis

Construction

2020-2023

Estimated # of Contracts: 1

Anticipated $50 to $75M

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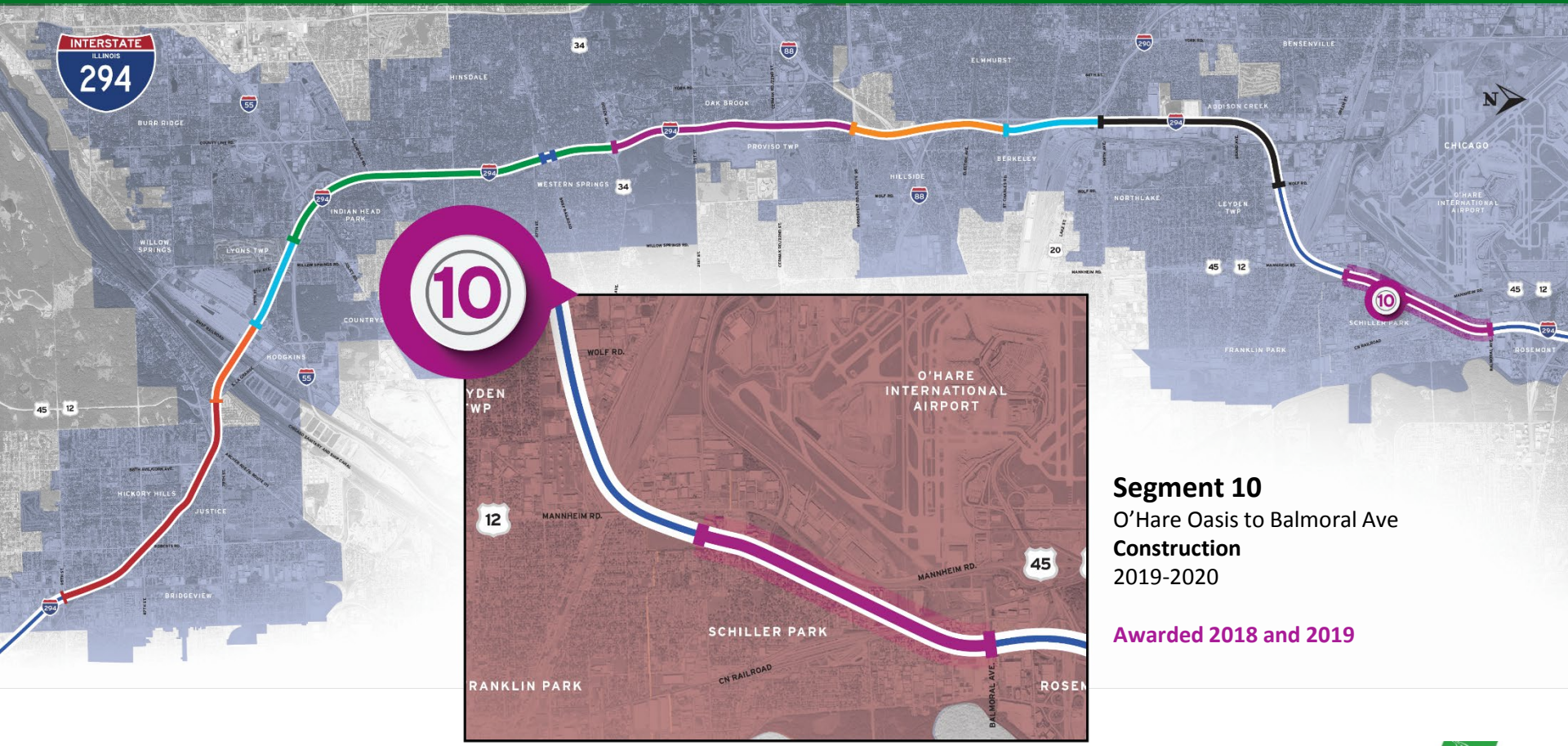

Segment 10

O'Hare Oasis to Balmoral Ave

Construction

2019-2020

Awarded 2018 and 2019

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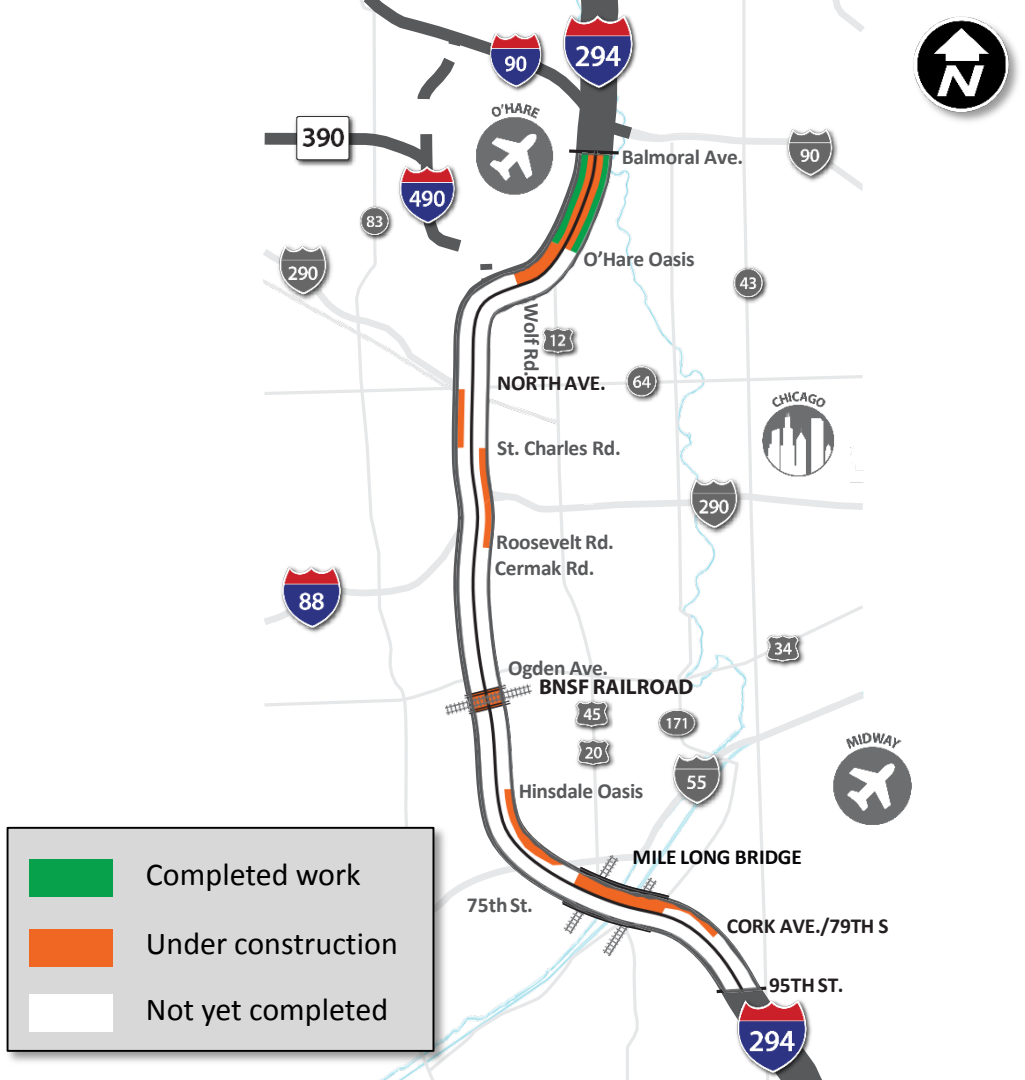
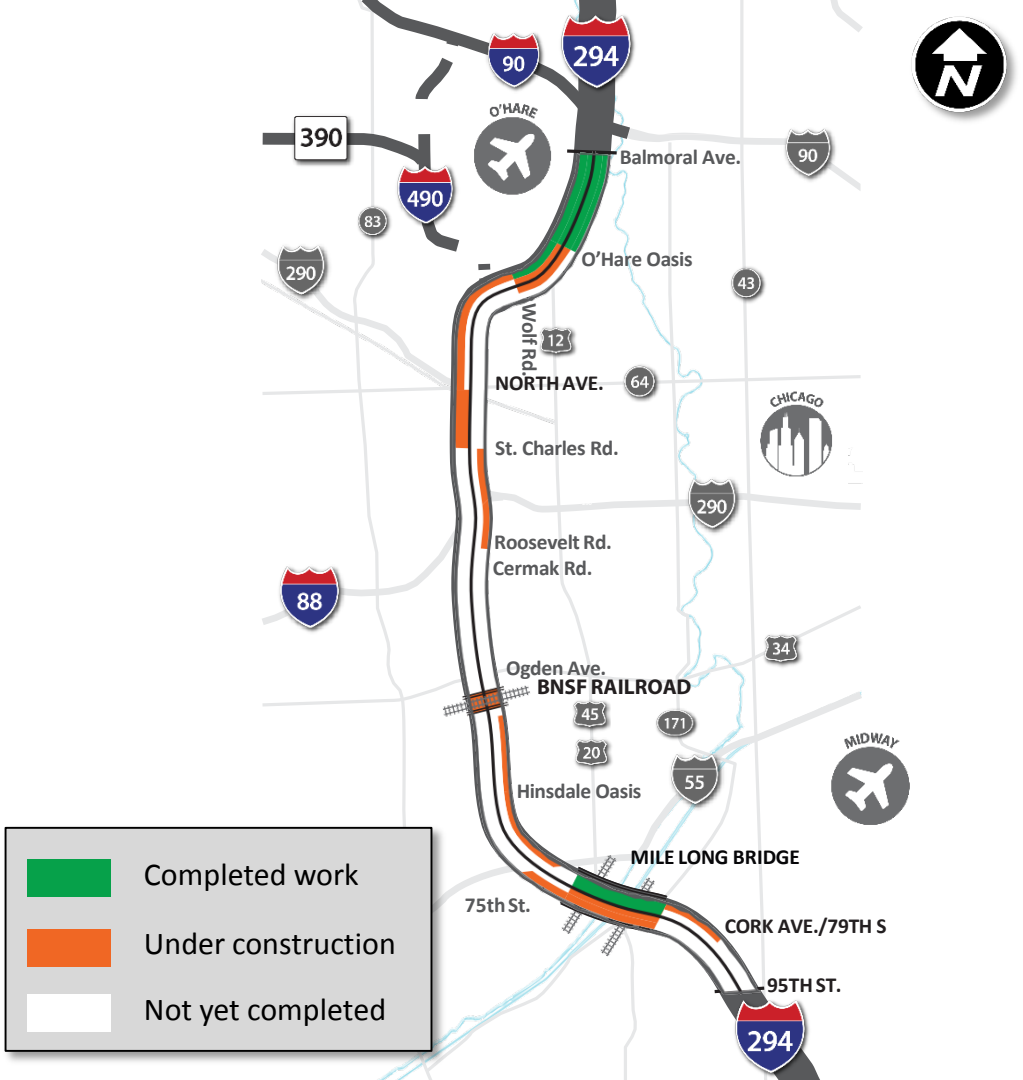
Anticipated Construction Phasing 2020



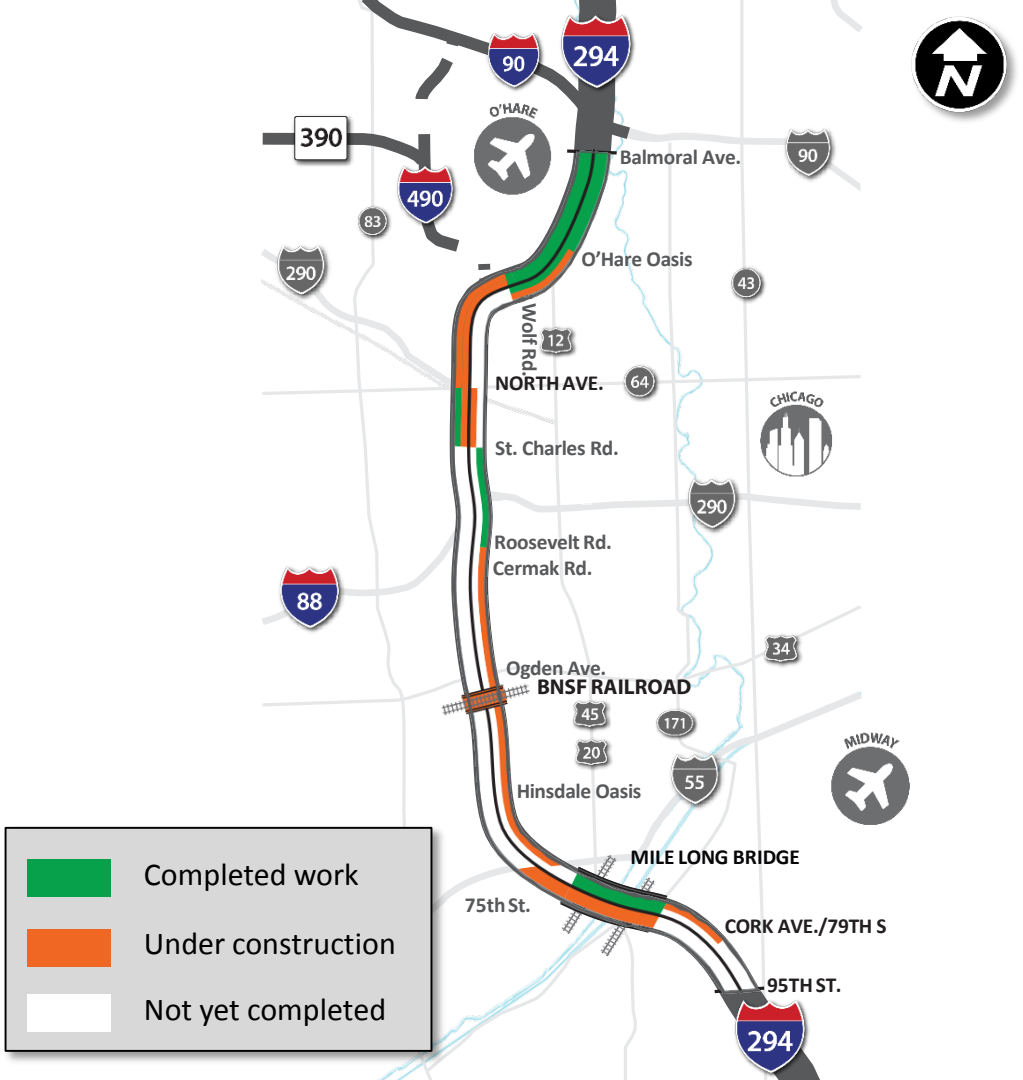
Schedule and budget subject to change.

Anticipated Construction Phasing 2021



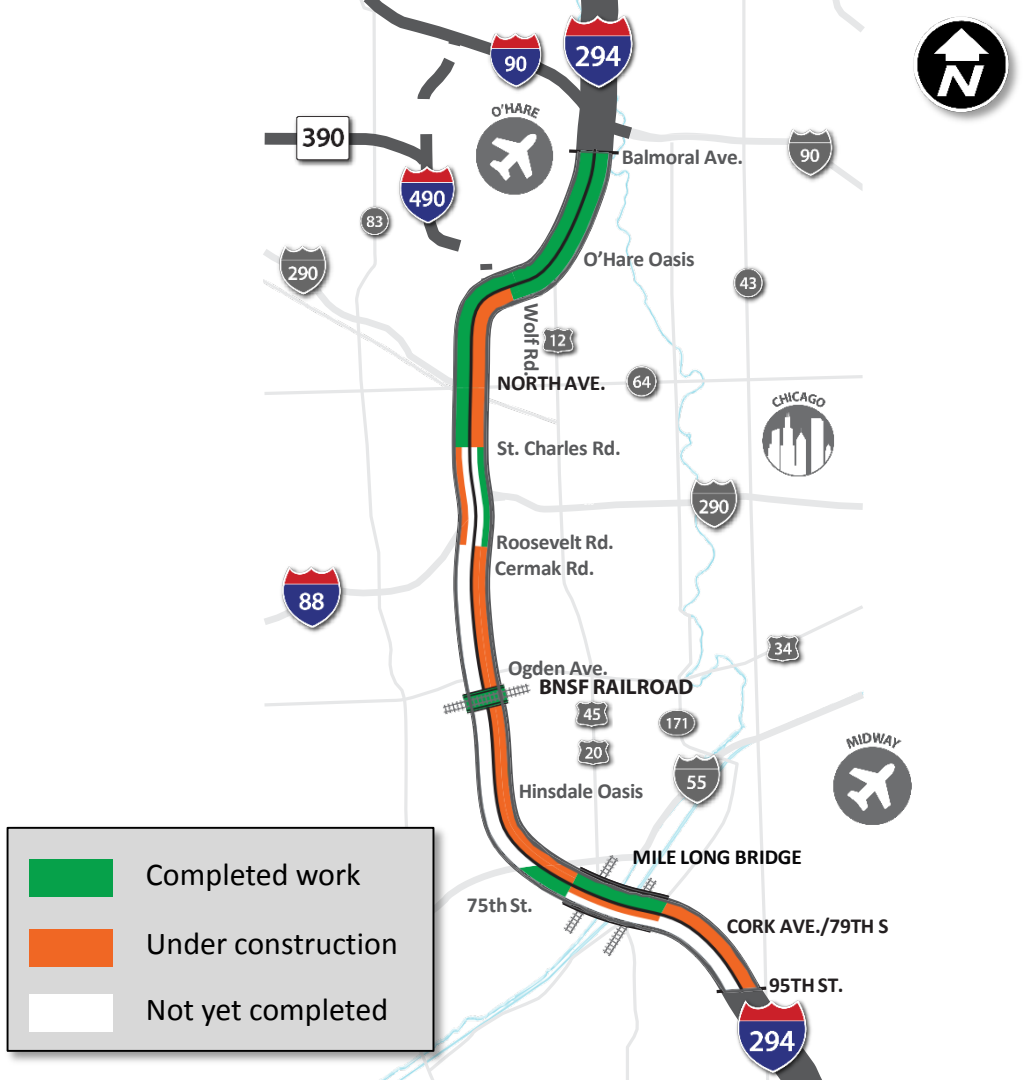
Schedule and budget subject to change.

Anticipated Construction Phasing 2022



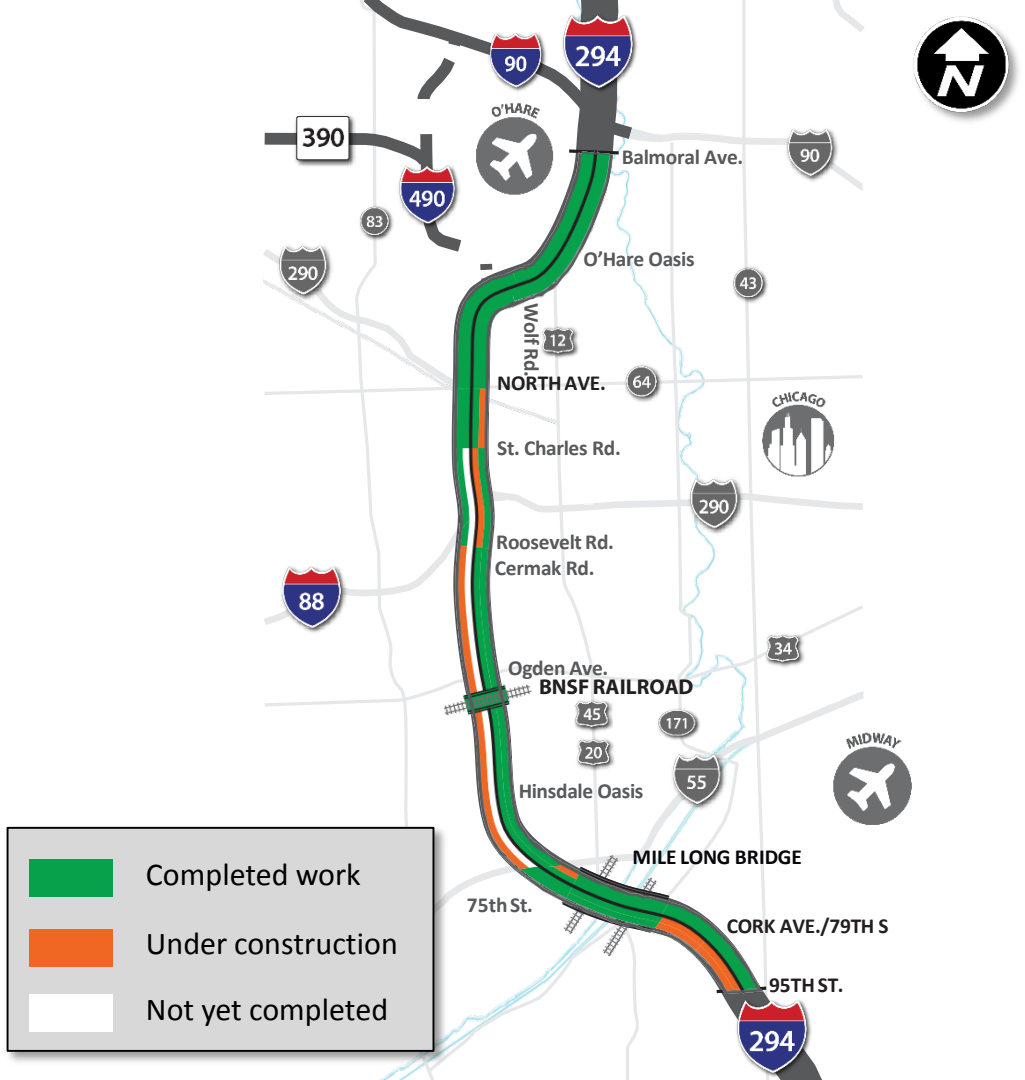
Schedule and budget subject to change.

Anticipated Construction Phasing 2023



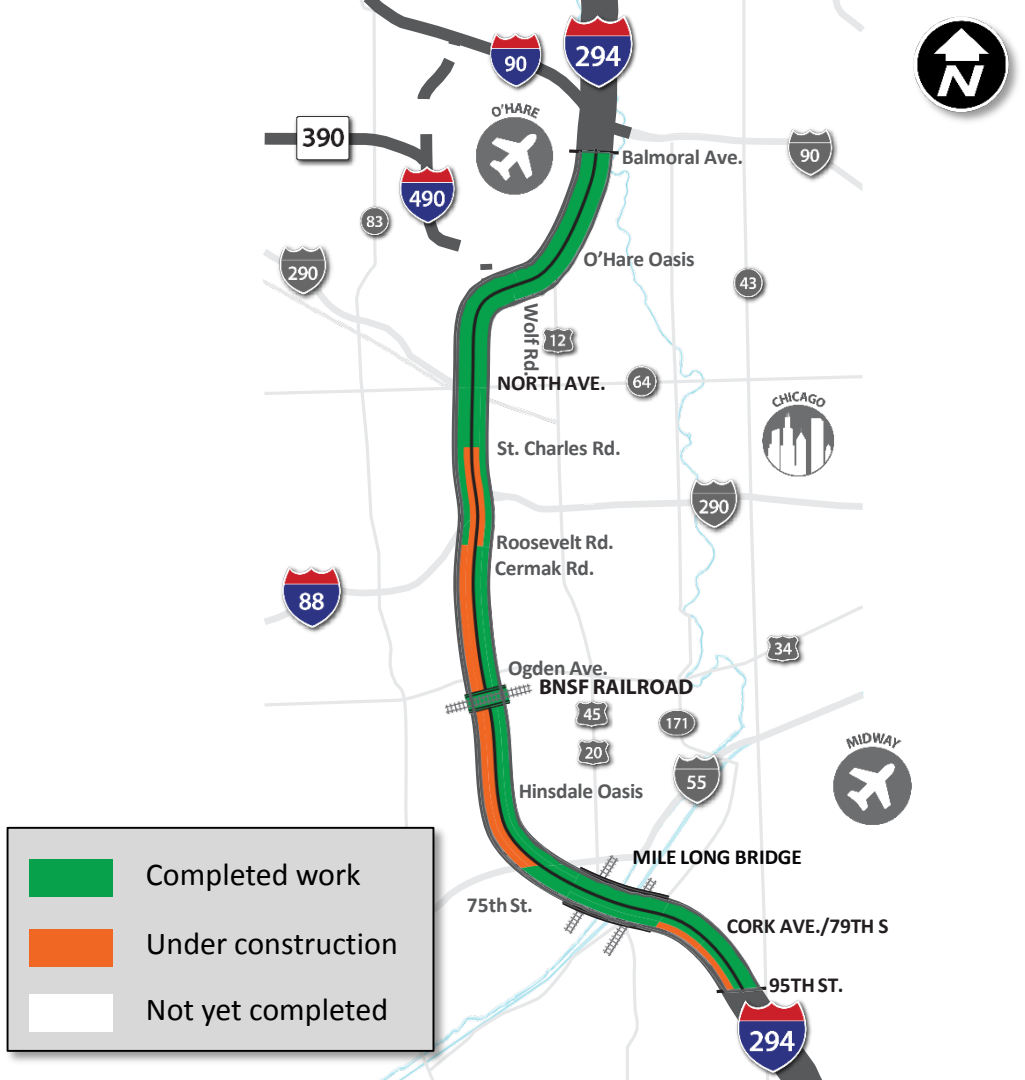
Schedule and budget subject to change.

Anticipated Construction Phasing 2024



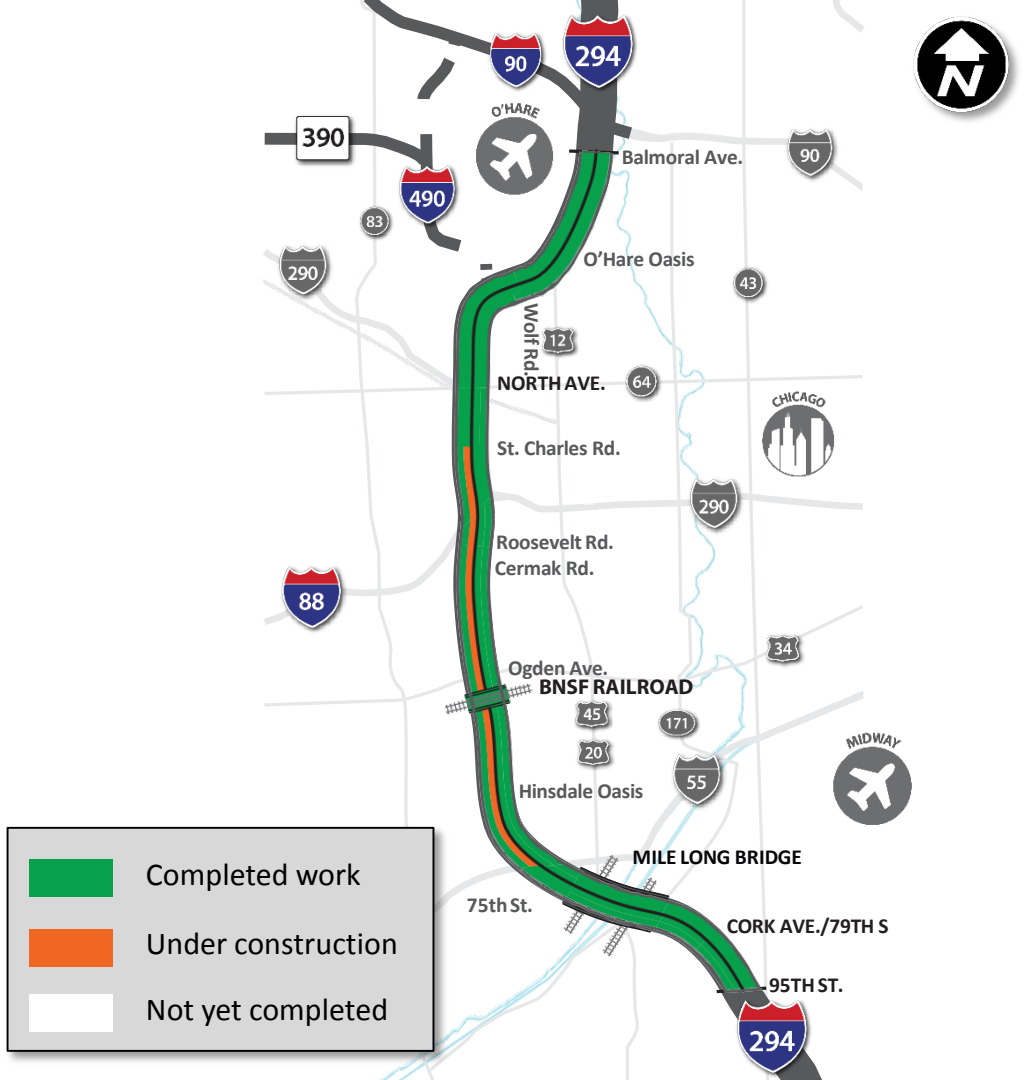
Schedule and budget subject to change.

Anticipated Construction Phasing 2025



Schedule and budget subject to change.

Anticipated Construction Phasing 2026



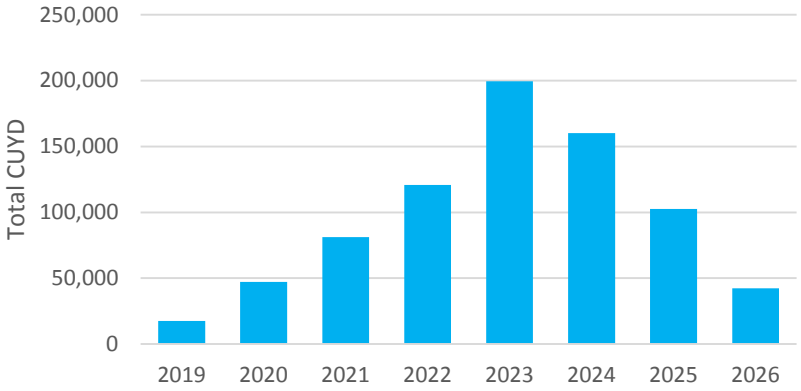
Schedule and budget subject to change.

Forecasted Materials and Labor

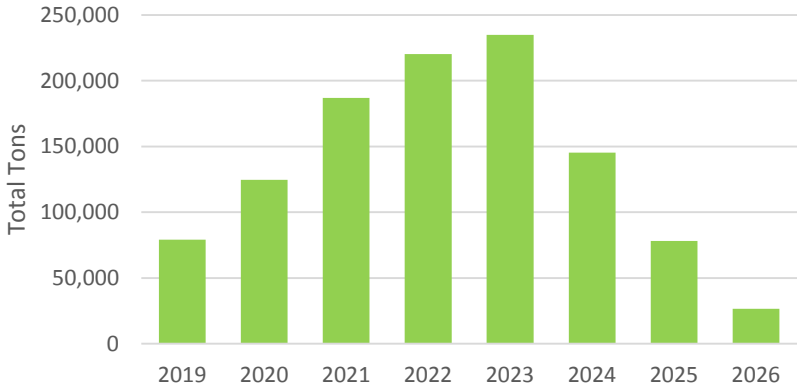
Rick Young, P.E.
CTS DCM Executive
AECOM

Anticipated Materials

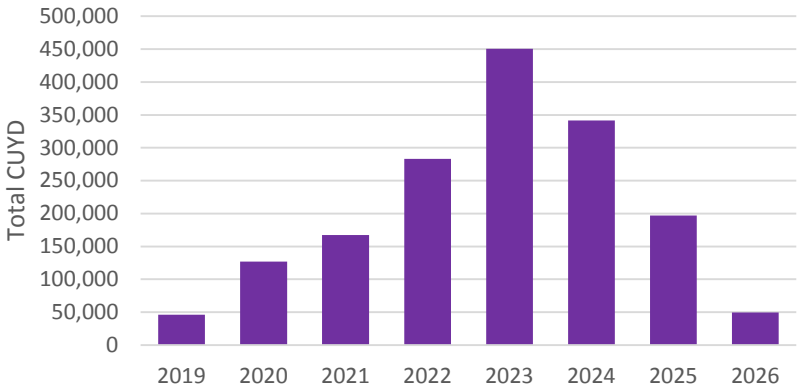
Concrete Pavement



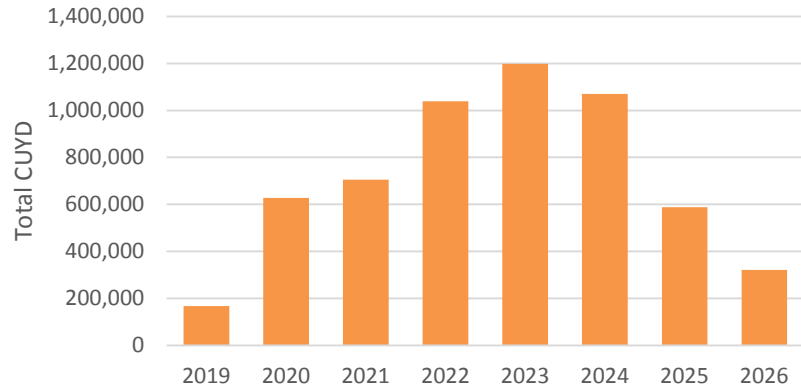
Hot Mix Asphalt Pavement



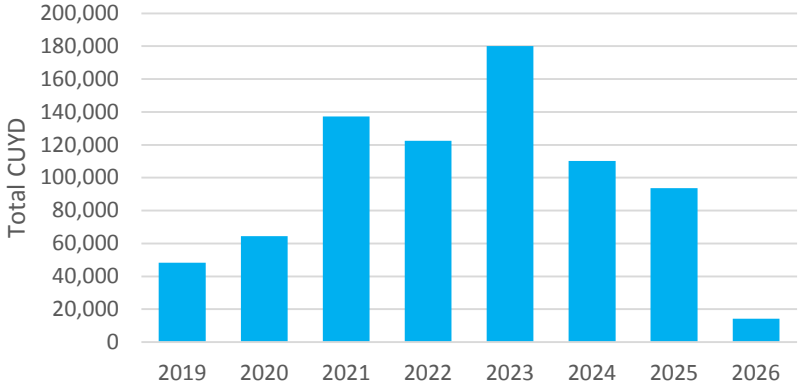
Unbound Aggregate



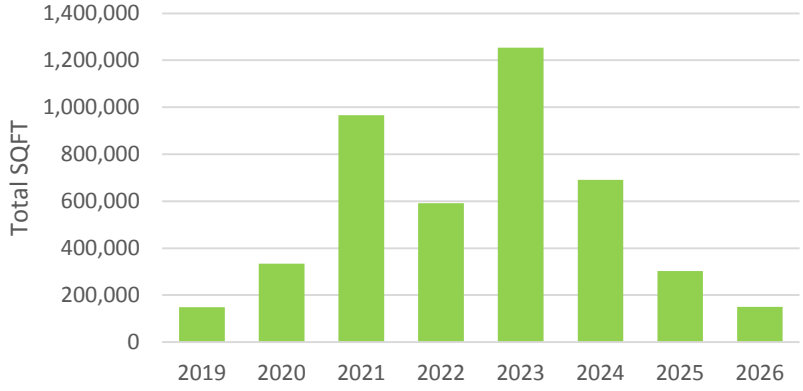
Earth Excavation (CUYD)



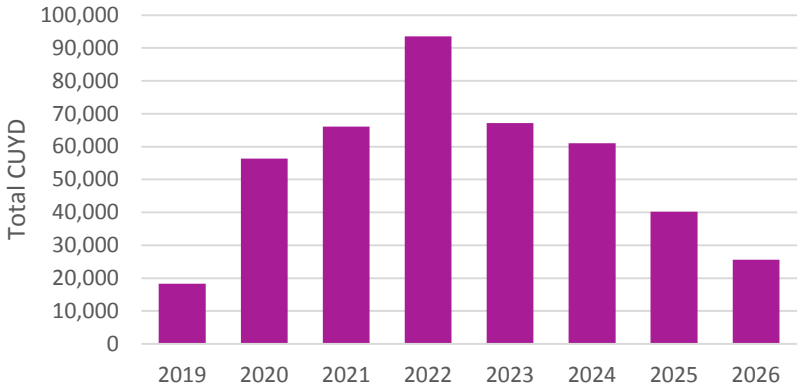
Structure Excavation (CUYD)



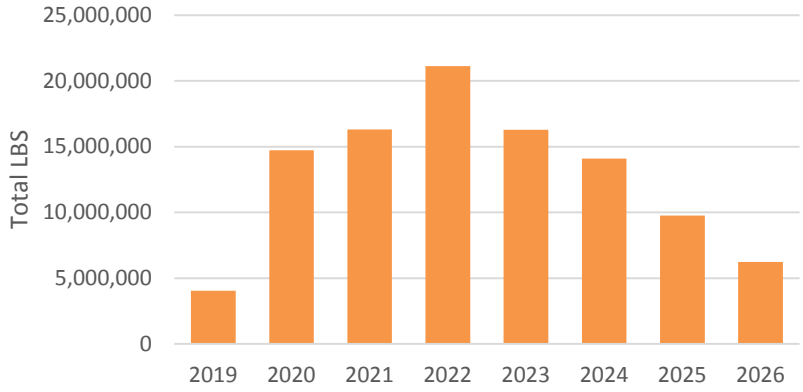
Structure Removal (SQFT)



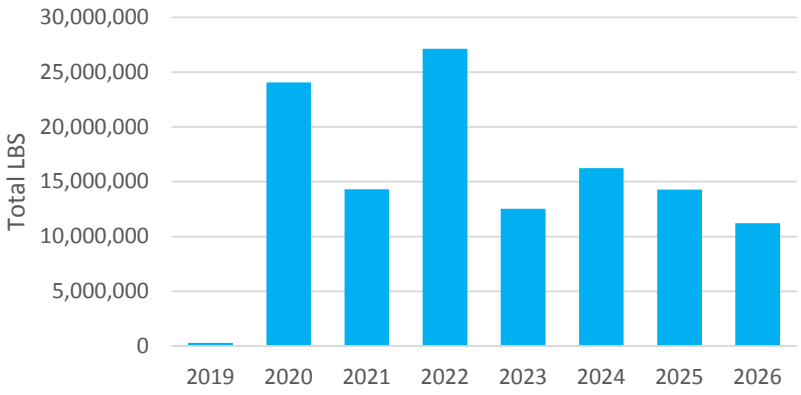
Structural Concrete (CUYD)



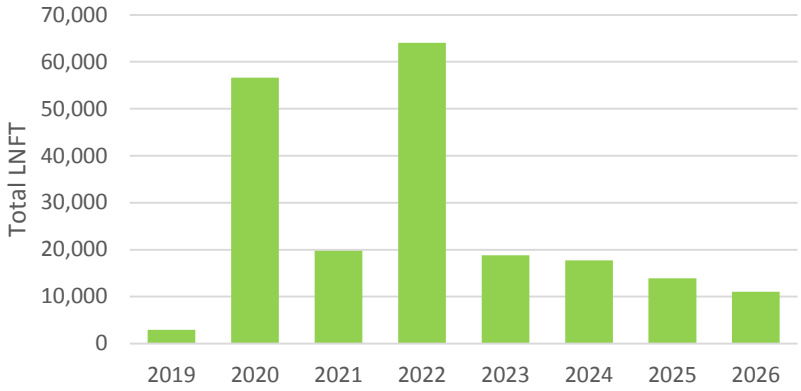
Reinforcing Steel (LBS)



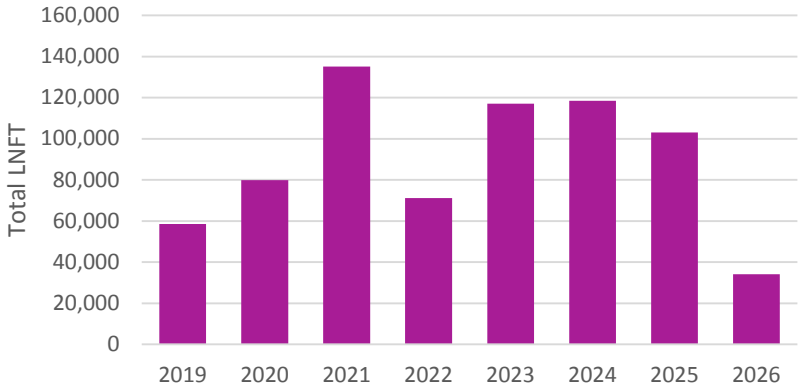
Structural Steel Girders (LBS)



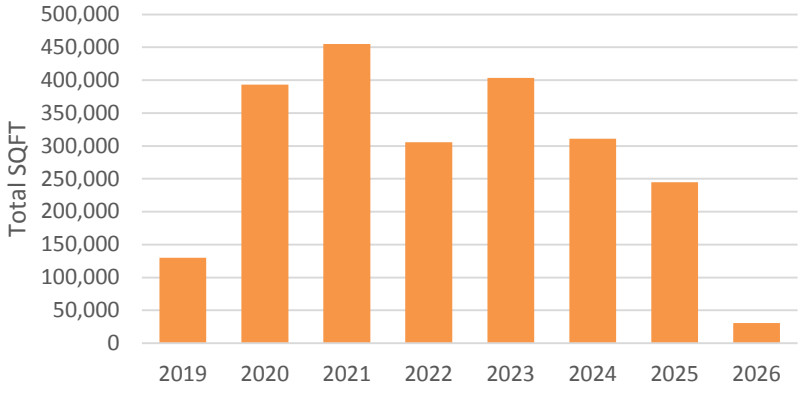
Precast Concrete Beams (LNFT)



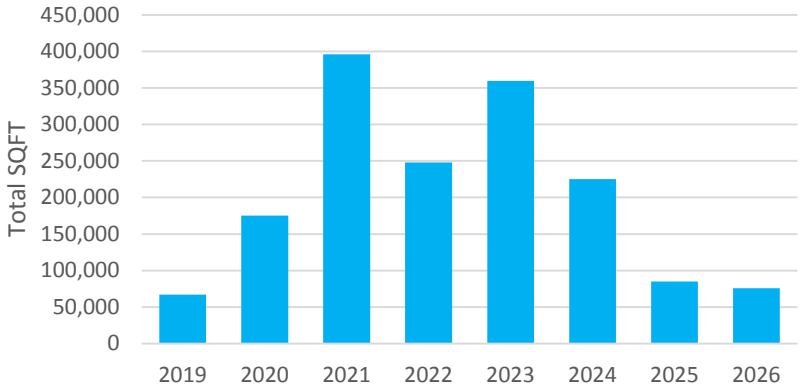
Piling (LNFT)



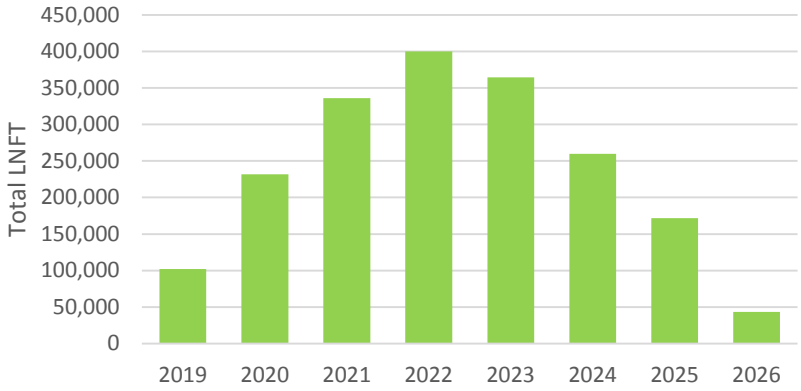
Noise Walls (SQFT)



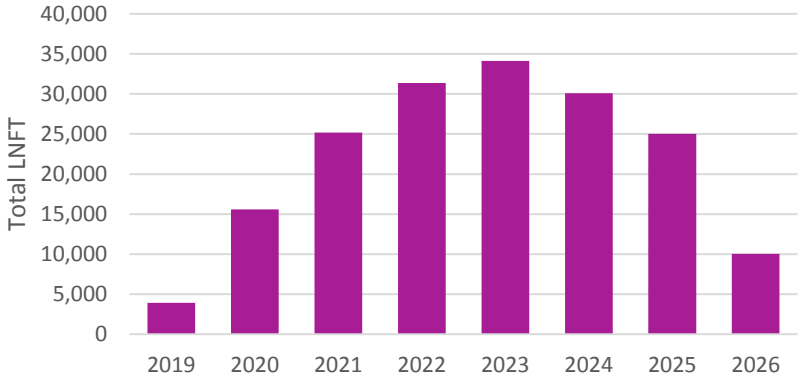
MSE Retaining Walls (SQFT)



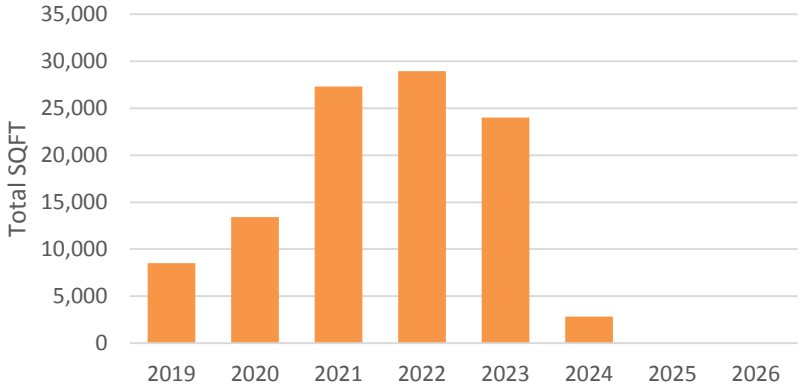
Temp Barrier Wall (LNFT)



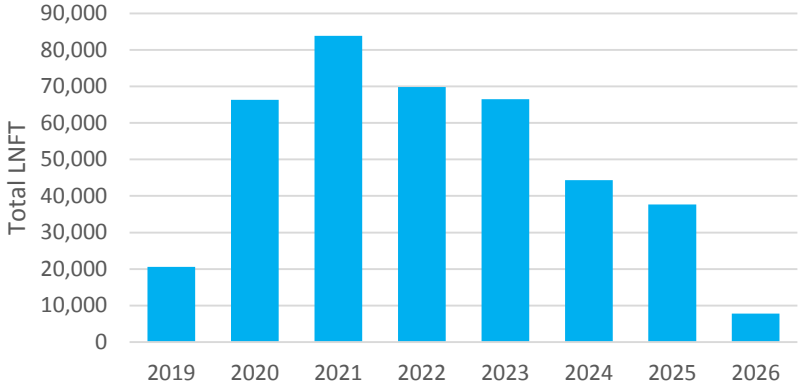
Concrete Median Barrier (LNFT)



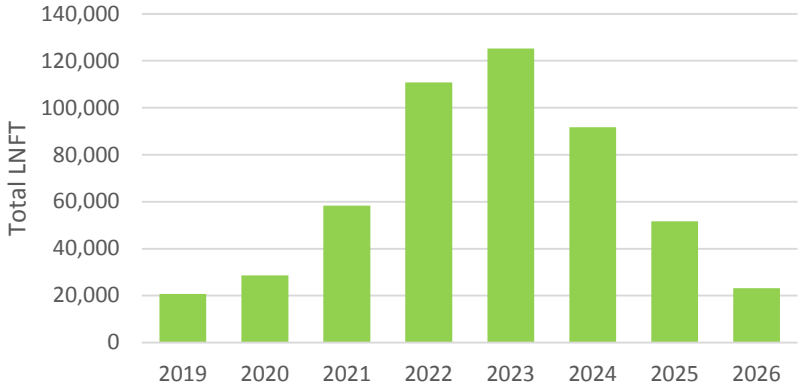
Precast Bldg Wall Panels (SQFT)



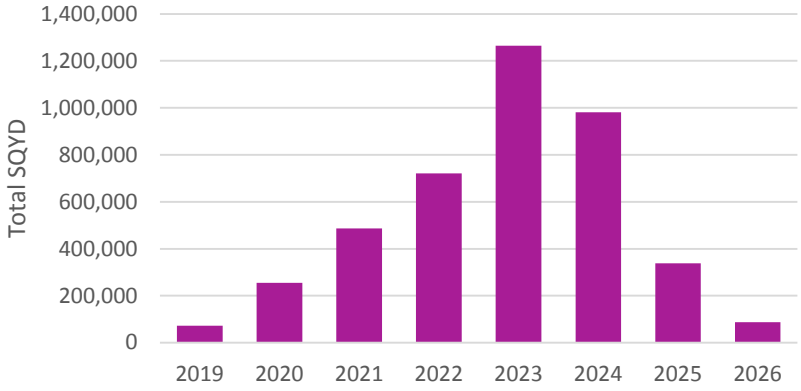
Storm Sewers (LNFT)



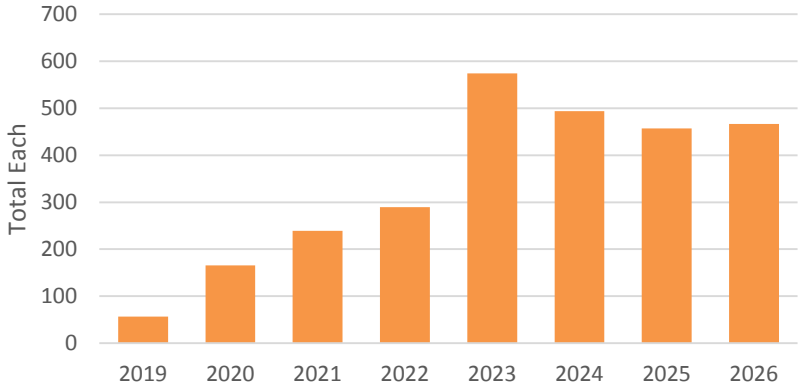
Underdrain Pipe (LNFT)

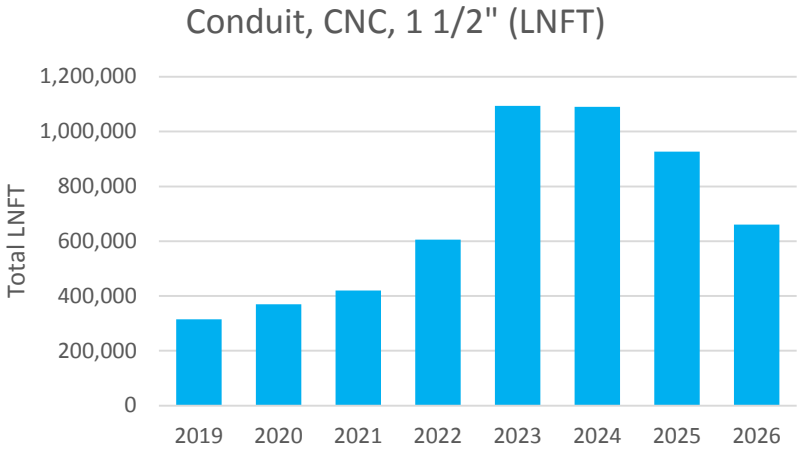


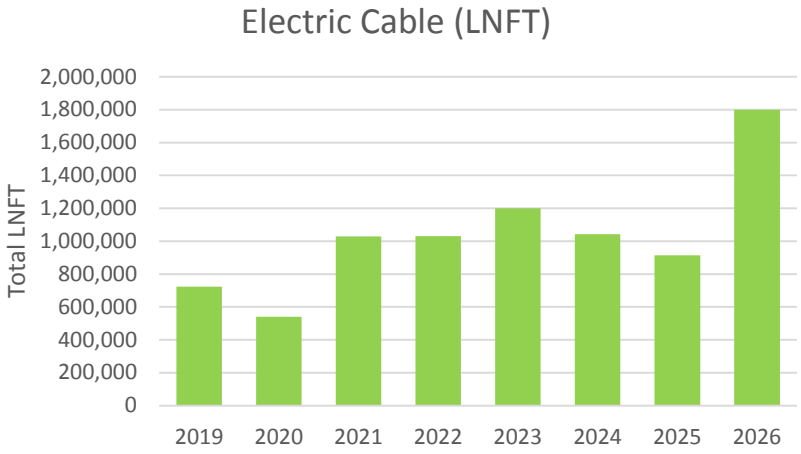
Soil Stabilization (SQYD)



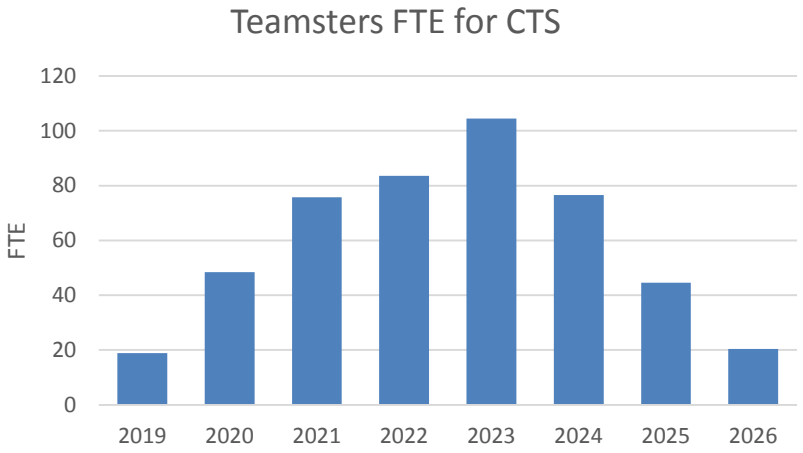
Light Poles (EACH)

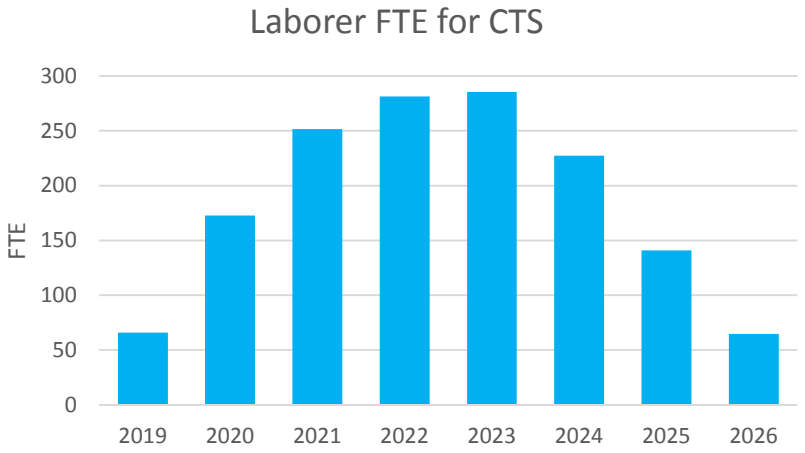



Conduit, CNC, 1 1/2" (LNFT)
Total LNFT
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2019
2020
2021
2022
2023
2024
2025
2026

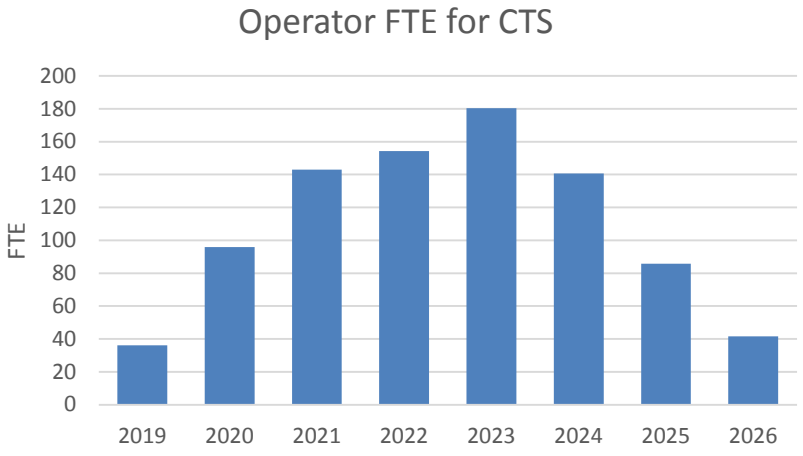

Electric Cable (LNFT)
Total LNFT
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2019
2020
2021
2022
2023
2024
2025
2026

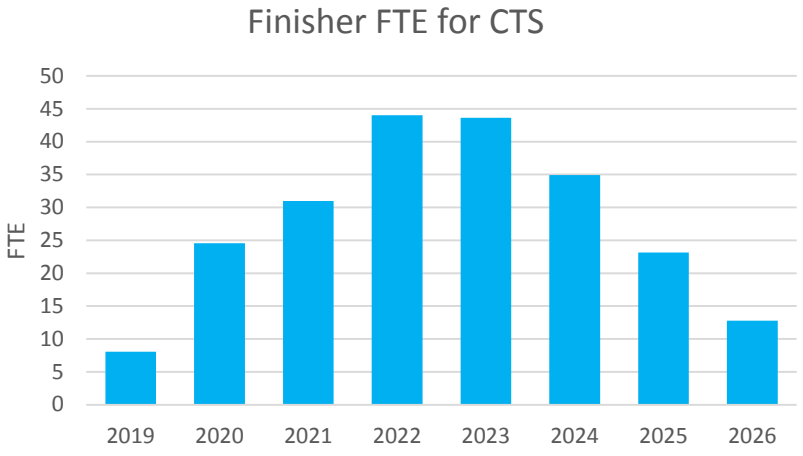
Anticipated Labor





The manpower estimates are based on historical data from dozens of like projects and an evaluation of actual tradesperson hours worked for any single unit of work performed. The values utilized are based on typical regular time hours worked under normal conditions. The manpower per unit hours do not take into consideration accelerated schedules or adverse working conditions be it weather, restricted access, or incomplete working documents. An FTE as shown in the graphs is assumed to work 40 hour weeks for a total of 2080 hours per year. The contractors shall make their own assessment on the impacts of extended hours, accelerated schedules or other detrimental conditions in determining the actual manpower that will be needed for these projects.





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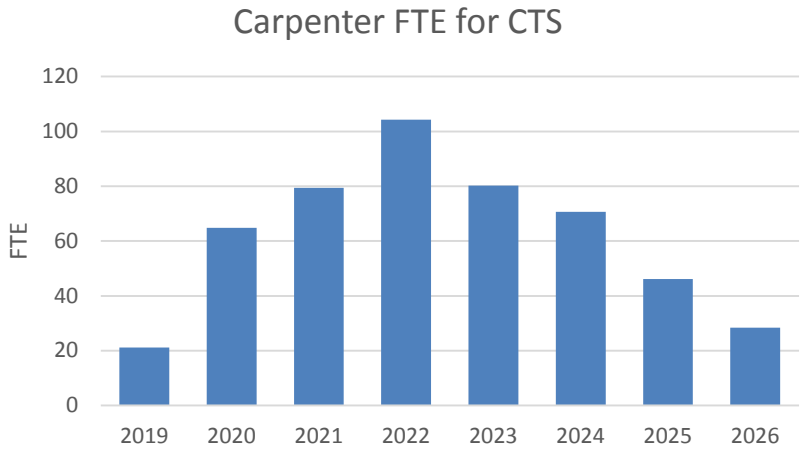

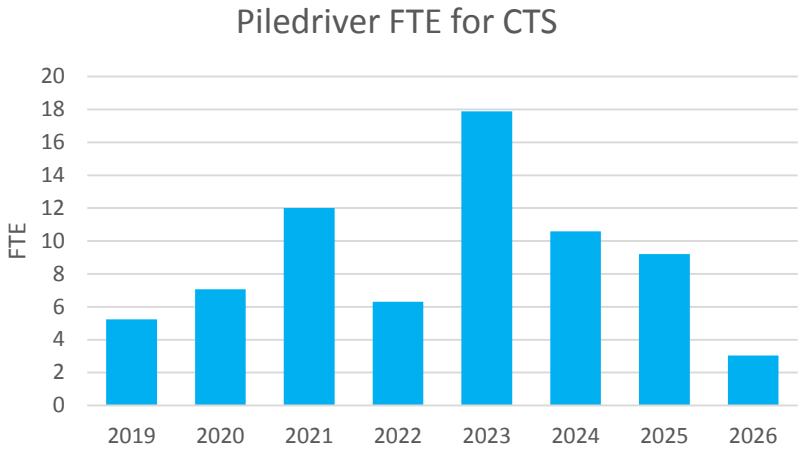

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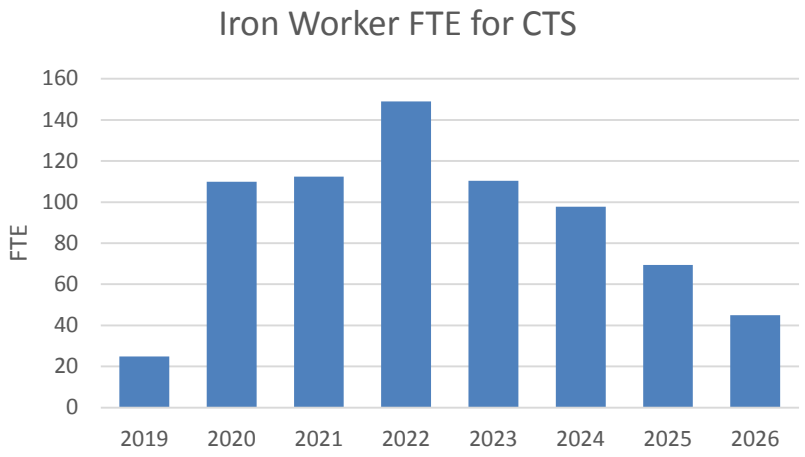

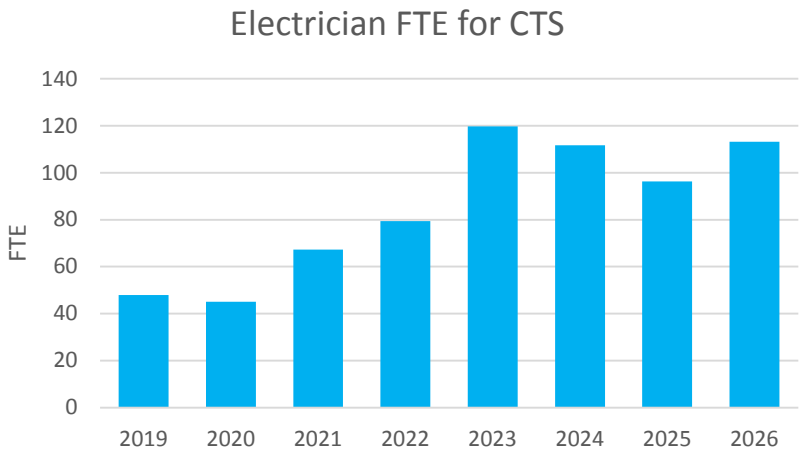

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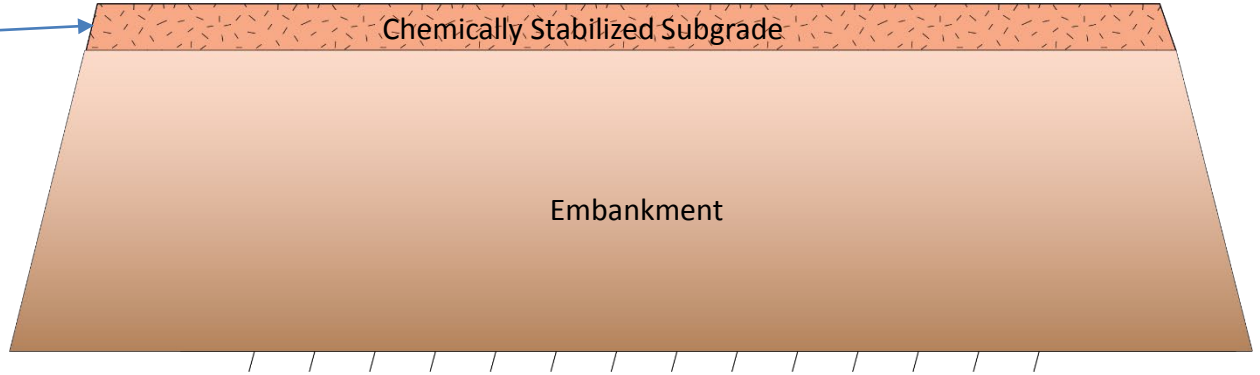
Composite Pavement Construction

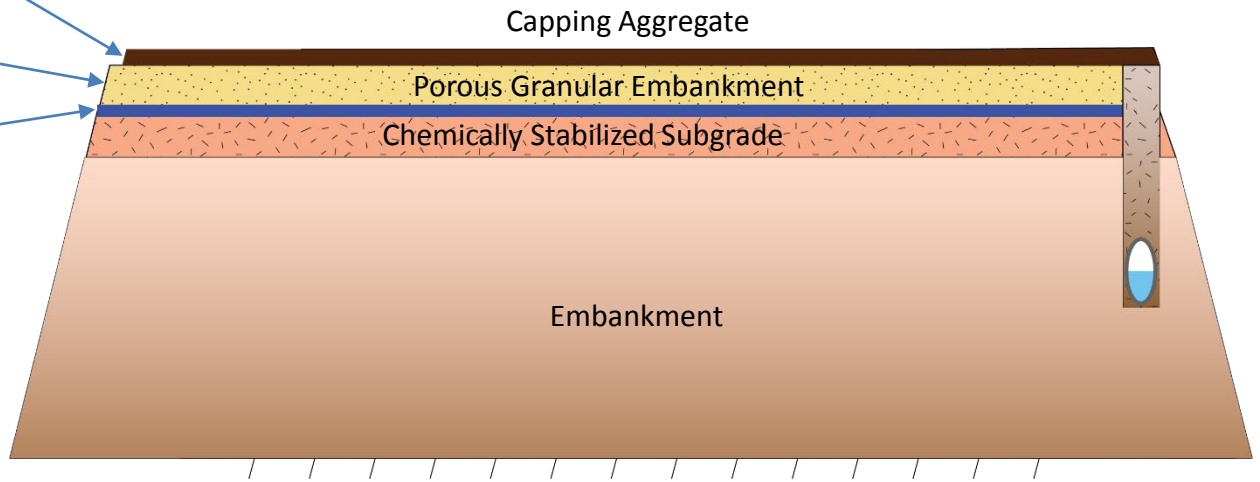
Alicia Pitlik, P.E.
Materials Engineer
Illinois Tollway

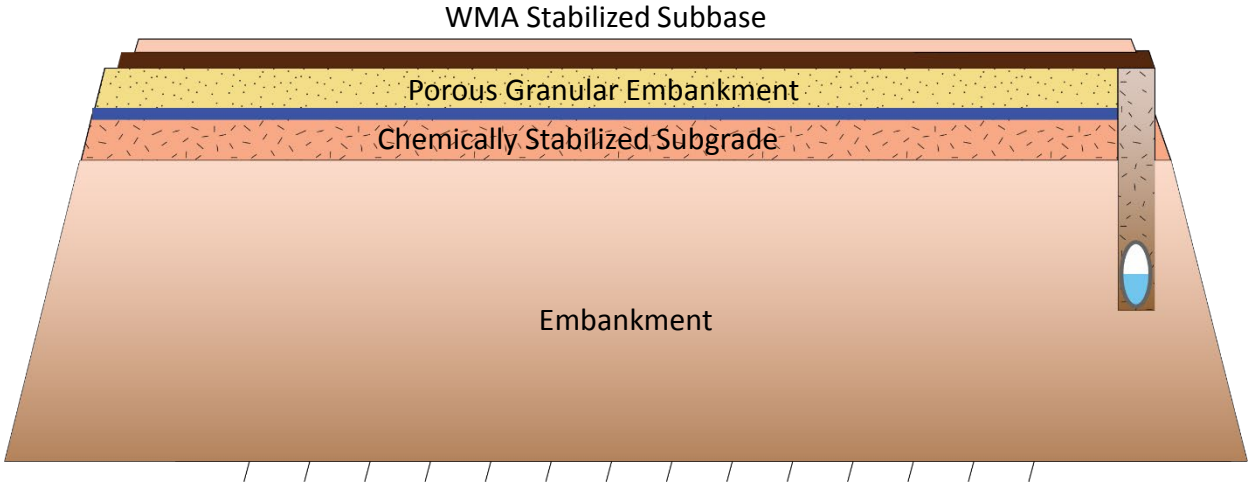
9" of Subgrade (Chemically Stabilized Subgrade, 9”)

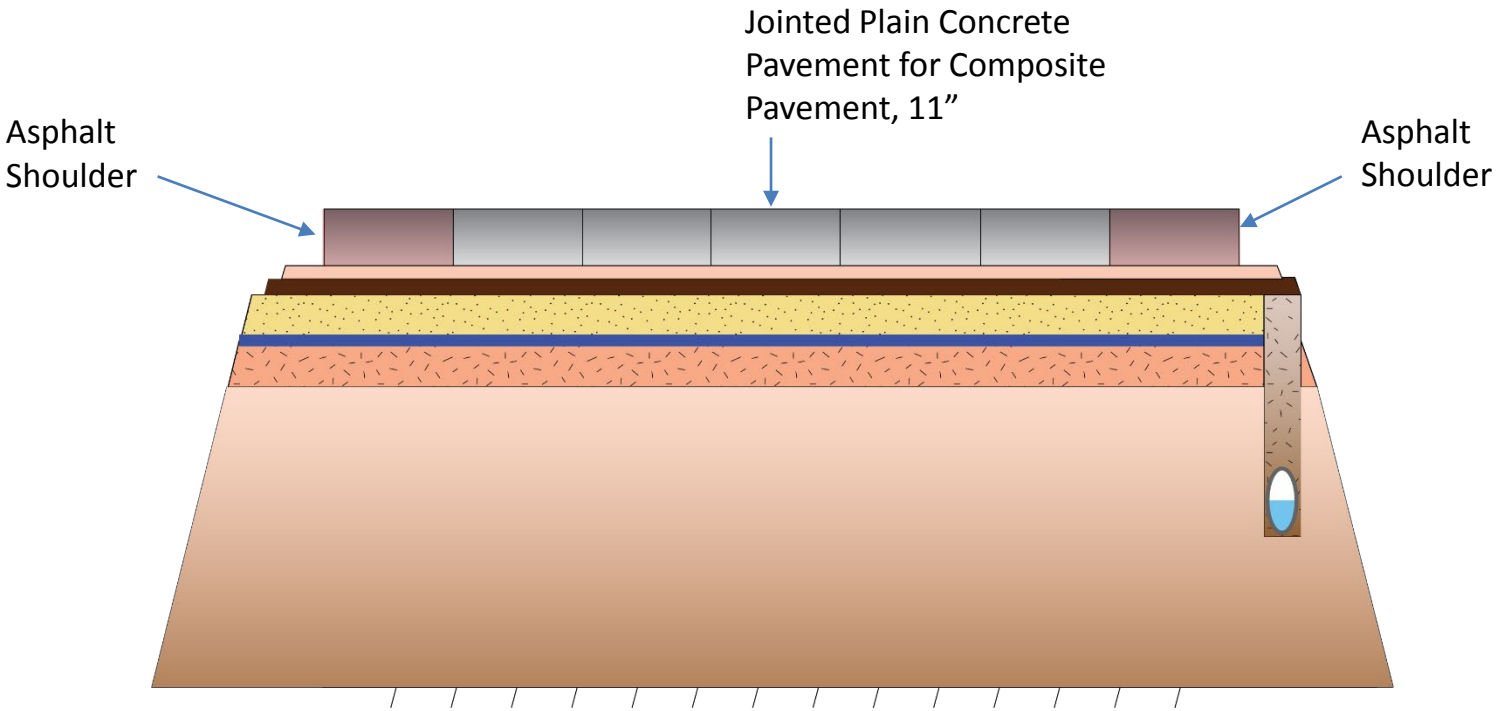


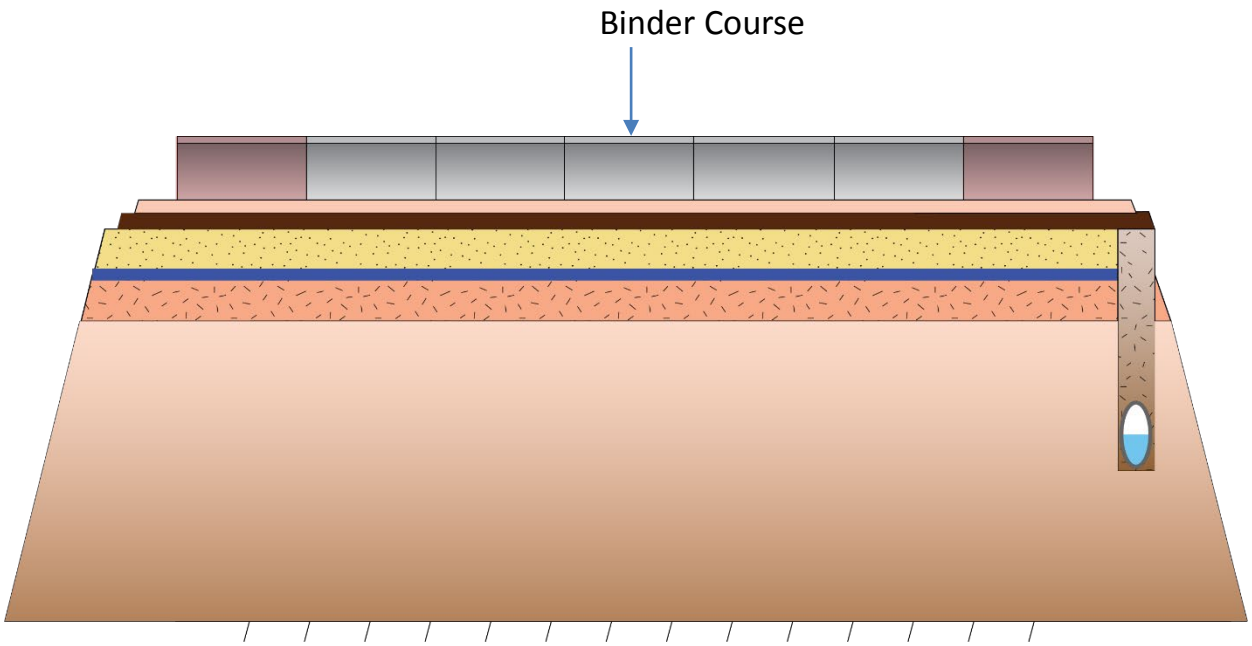
Subgrade Aggregate includes:
3” Capping Aggregate
9” PGE

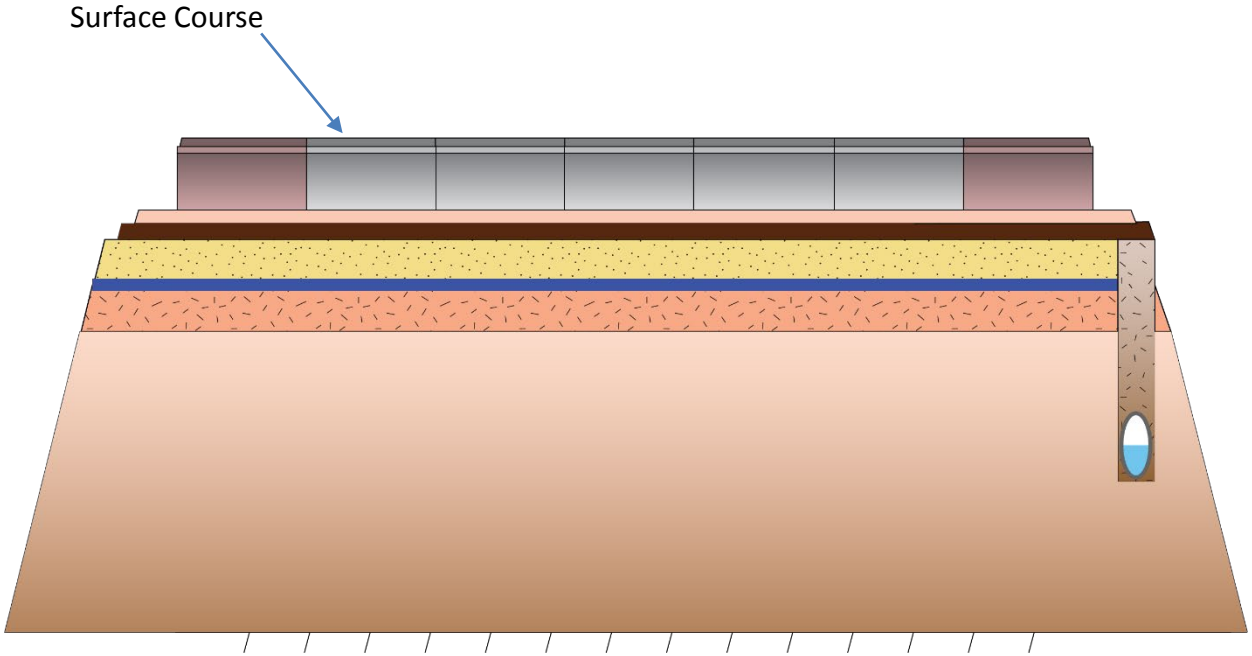
Filter Fabric




WMA Stabilized Subbase
Porous Granular Embankment
Chemically Stabilized Subgrade
Embankment


Jointed Plain Concrete Pavement for Composite Pavement, 11”
Asphalt Shoulder
Asphalt Shoulder


Binder Course


Surface Course

Jointed Plain Concrete PAVEMENT for Composite Pavement

PAVEMENT

NOT BASE COURSE

Base Layers

What’s new?

- Geotextile Fabric
- 12" of Subgrade Aggregate
  - 3" capping aggregate
  - 9" PGE

What's been around?

- Chemical Stabilization
- PGE Sizing
- Gradation Testing
- Overall quality

Jointed Plain Concrete PAVEMENT for Composite Pavement

What's new?

- Surface smoothness
  - 16 ft. straightedge instead of IRI
- No white wax curing compound
- No joint sealing
- No protective coat (unless exposed for winter)

What been around?

- Class TL mix
- Joint spacing and details
- Dowel alignment testing
  - Test section
  - 100% testing
- Tolerance in thickness
- Overall quality

Warm Mix Asphalt for Composite Pavement

What's new?

- Consolidated special provisions
  - Mixture Design
  - Construction
  - RAM
- Warm Mix for all
- Joint Details need to be coordinated with special provision

What been around?

- Quality testing and expectations
- Recycled material usage
- Plenty of contractor options

Composite Pavement-- Parting Thoughts

Experiences

- JPCP on I-90 and IL 390, I-88
- Paving equipment investments
- Asphalt overlays on I-355, I-94, I-88
- Utilizing/leveraging materials of all types
- Recycled materials
- Concrete and asphalt

Qualifications

- Quality standards are up to date
- Non-destructive testing methods
- Leveraging all data available

Question & Answer

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THANK YOU