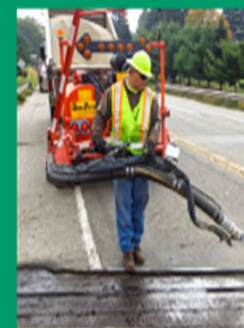


ODOT UPDATE

ABCD

2023



OHIO DEPARTMENT OF
TRANSPORTATION

Tim Keller, Administrator
Office of Structural Engineering

Agenda

1. Changes to Bridge Standards
2. Prestressed Box Beam Bridge
3. SNBI
4. Deck Reinforcing
5. Brent Spence Bridge
6. Announcements
7. Questions for Tim



Standards Update

Sean Meddles has created a power point presentations detailing all of the changes that were made in the January 2023 update.

Previous updates are also located at that locations.

Let's review how to find these.



ODOT Web Site

Doing Business



Local Technical Assistance Program (LTAP)

LTAP supports local governments in managing & maintaining Ohio's transportation system by providing training and technical assistance in safety, workforce development, infrastructure management & organizational excellence.

[READ MORE](#)

With the mission to provide safe and easy movement of people and goods from place to place, the Ohio Department of Transportation (ODOT) supports the state highway system and promotes transportation initiatives statewide. As a more than \$3 billion per year enterprise, ODOT invests the bulk of its resources in system preservation through maintenance, construction, and snow and ice operations. [Visit ODOT's Strategic Plan](#) for more details on our vision, guiding principles, the four pillars of our strategic advance, key performance metrics, and additional transportation system facts.

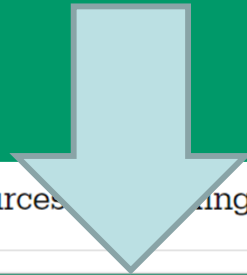
OHGO: Real-Time Traffic and Road Status Information

Know B4 U Go: Real-time traffic info & details on closures, incidents, traffic cameras, and more.



Getting to OSE Web Site

Engineering



Business Areas and Support Resources Working With ODOT



Planning

Access to planning and funding information as well as training opportunities that help to support and improve our transportation infrastructure.



Engineering

All the tools, support and resources engineering teams need to ensure timely and efficient delivery of Ohio's transportation projects.



Construction

Detailed manuals, specifications & support to guide contractors through construction, including materials management, disputes & claims, partnering, and project delivery.



Contracts

Information on and processing of ODOT construction contracts, vendor purchasing (goods and services) contracts, and construction prequalification.



Consultant Services



Publications



Permits



Data Tools & Applications



OSE Web Site

Division of Engineering Offices



CADD and Mapping Services

Providing high quality, innovative, timely, and cost effective products, services, technical assistance, and contract support in Remote Sensing, GIS, Digital Imaging, Mapping, Surveying, and CADD.



Consultant Services

All consulting opportunities, including access to Letters of Interest, Announcements, Pre-qualification, Future Consultant, Selection, Proposal & Fee Info



Geotechnical Engineering

Geotechnical engineering staff provide the subject matter expertise on transportation projects affecting the ground and what's below the ground.



Hydraulic Engineering

Hydraulic Engineering provides cost effective and environmentally sound solutions to surface roadway drainage by using innovative methods and materials and fostering working relationships with their constituents.



Pavement Engineering

Standards, policies, procedures and research to ensure smooth, quiet, cost-effective pavement for the traveling public.



Real Estate

Dedicated to the fair and equitable treatment of all parties affected by the purchase of right-of-way to further the Ohio Department of Transportation's highway projects.



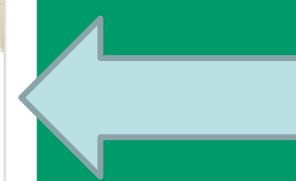
Roadway Engineering

Standards, policies, guidelines and state-of-the-art practices for Ohio's transportation system projects. Subject matter expertise to public agencies and private companies by aiding in the review, design and operation of



Structural Engineering

Standards, policy, procedures, training, design resources, data and research to continually monitor and improve the quality of Ohio's bridge inventory. Provide and support safe, cost effective, durable and



OSE Web Site

- **Announcements at the top**
- **Contact information is on right side**
- **Divided into 3 Sections:**
 - Bridge Design Resources
 - Bridge Inspection & Inventory
 - Bridge Rating & Analysis



Standards Update

Bridge Design Resources



Bridge Design Manual

The BDM establishes policy on analysis, design and rating of new and existing bridges, retaining walls, and noise walls.



Active Bridge Drawings

Download current Standard Bridge Drawings (or Standard Construction Drawings, SCDs), Plan Insert Sheets, and Design Data Sheets.



Bridge Plan Checklist

Use these checklists while preparing and reviewing bridge construction plans.



Specification Updates

See the most recent updates to Structural Engineering specifications in these webcast presentations.



[VIEW ALL BRIDGE DESIGN RESOURCES >](#)



Look Here



Standards Update

- **Standard Bridge Drawings**
 - .DGN files were removed from web site
 - .PDF files are only format available
 - Going to place .DGN details from some Standard Drawings on OSE web page
 - Requests for details that you need in this format should be sent to:
 - Jonathan.Huffman@dot.ohio.gov



Standards Update

- **AS-1-15 changed top transverse and longitudinal bar spacing**
- **EXJ-4-87 details were updated**
- **5 other Standard Drawings had minor changes**
- **2 plan insert sheets were updated**



Standards Update - BDM

- **Multiple sections in the Geotechnical area were updated – most changes**
- **A few other sections were updated**
- **One change in Section 400 I will discuss next.**



MAR-4-11.63

- Change in BDM Section 404.4.3
- Do **NOT** try to remove a concrete deck on a composite box beam bridge



MAR-4-11.63



MAR-4-11.63



MAR-4-11.63



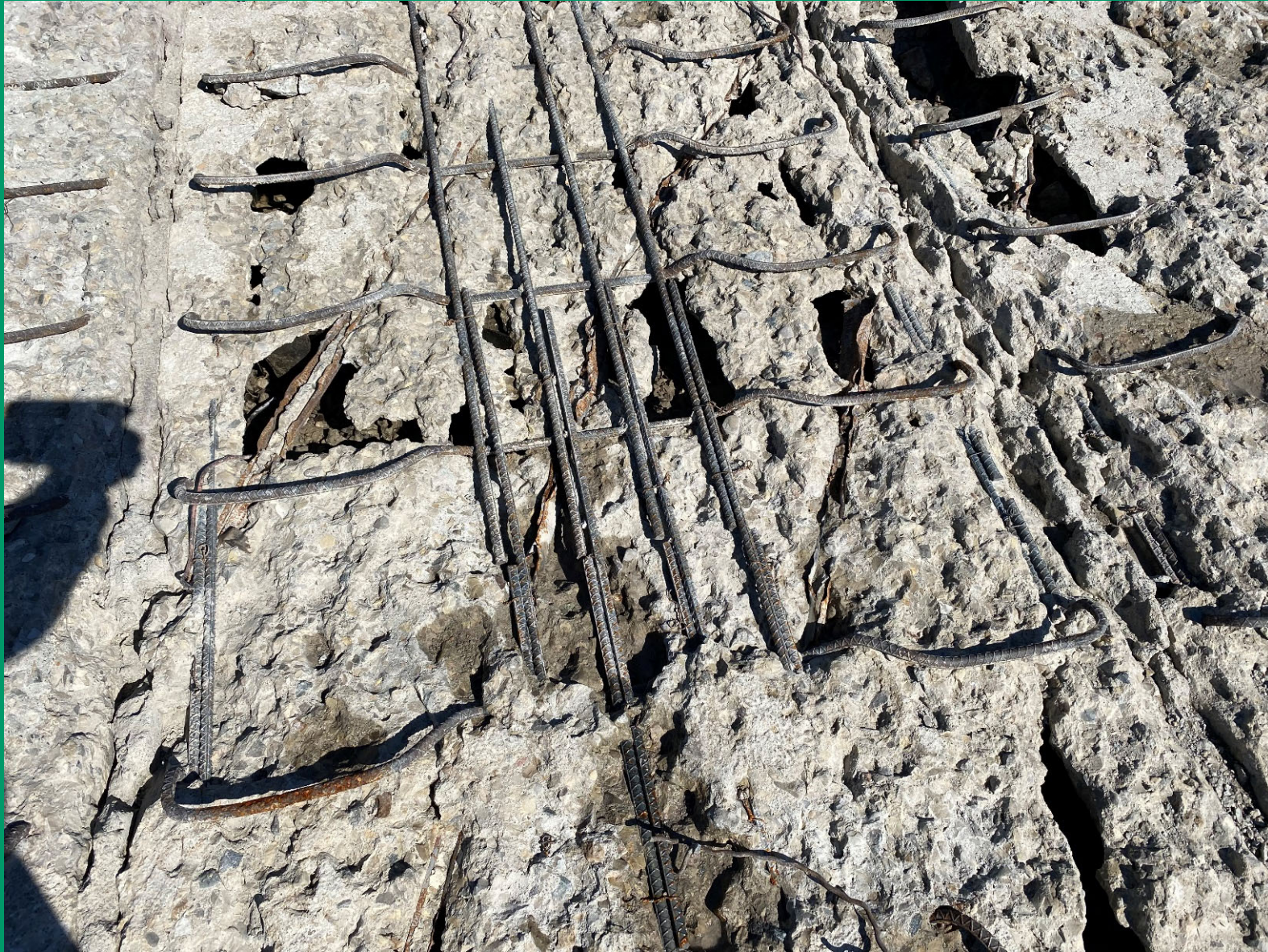
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- **Change in BDM Section 404.4.3**
 - BDM did not differentiate between a concrete deck on a prestressed box beam bridge and a concrete deck on any other bridge type
 - Solution – overlay the bridge until it's time to replace the box beams

SNBI

- **Specifications for the National Bridge Inventory**
- **THIS IS A BIG DEAL !!!!**
- **Pay attention to this issue**
 - Read the emails that LTAP sends out
 - Listen to Mike Brokaw's talks (live or YouTube)
 - www.youtube.com/user/OhioLTAPCenter/videos
- **New Regulations went into effect June 2022**



TIMELINE TO CONVERT TO SNBI

2022

1. Awareness & Preparation

2023

2. Training & Initial Implementation

2024

3. Implementation Learning Curve

2025

4. Implement

2026

Full SNBI Target = 12/31/2026

2027

2028



SNBI

Impacts:

1. Qualifications
 - a. Team Leader
 - b. Bridge Inspectors
2. Inspection Intervals
3. Bridge Inventory



SNBI - Qualifications

- Nonredundant Steel Tension Member Training (NSTM)
 - NHI Nonredundant Steel Tension Member Class – required to inspect NSTM bridges
- Refresher
 - FHWA Approved, 18 hours every 60 months beginning June 6, 2024
- “Grandfather Clause” is Gone
 - Must have documentation that you took the 2 week ODOT or NHI course or 1 week PE NHI course



SNBI - Qualifications

Deadline for completion of all training is

June 6, 2024

This includes placing your documentation in
AssetWise



SNBI – Intervals

Changes:

- Underwater Intervals
- Added New Types of Inspections



INTERVALS

STARTS = JUNE 6, 2024

Code	Description
1	Initial
2	Routine
3	Underwater
4	NSTM
5	Damage
6	In-Depth
7	Special
8	Service
9	Scour Monitoring

3 Months

12 or 24 Months

24 or 60 Months

12 or 24 Months

*New Inspection
Types*



SNBI – Inventory

The new regulations mean that every bridge will need to be re-inventoried – 3 cases

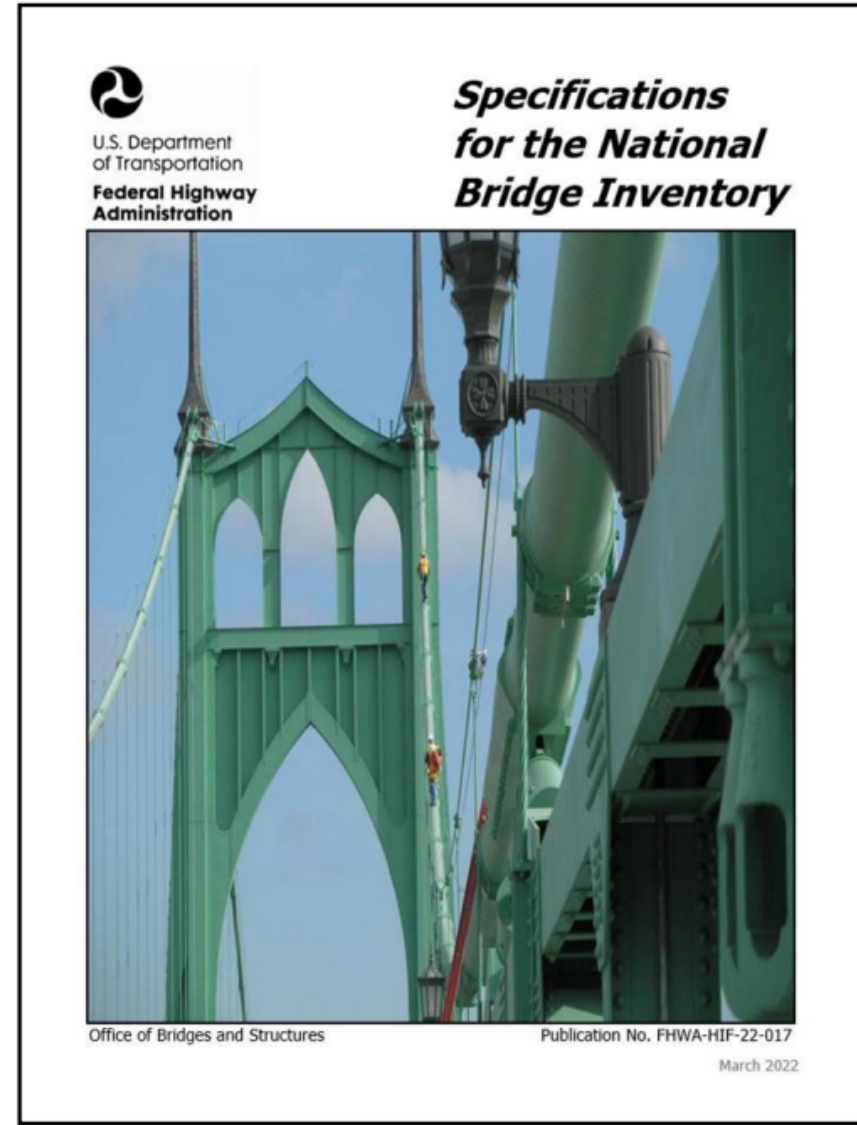
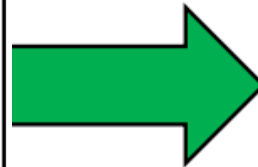
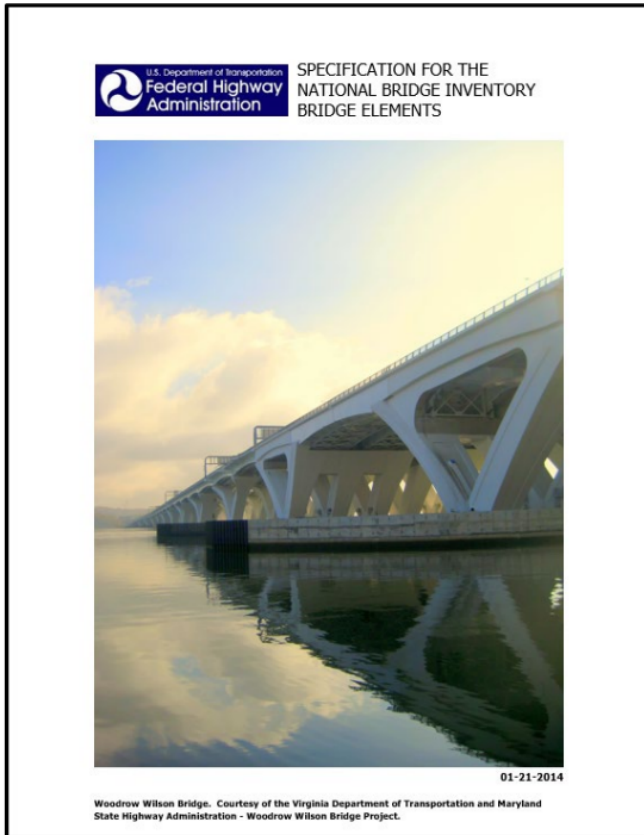
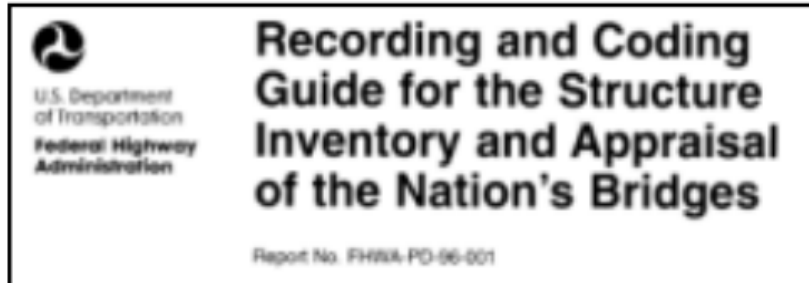
- The one to one inventory items will be transferred automatically
- New inventory items
- The one to many inventory items can not be transferred automatically



SNBI – Inventory

- Currently ODOT has implemented a few inventory items that can be uploaded into the new Bentley system.
- Waiting on remaining inventory items until Bentley provides the updated AssetWise system that is compatible with new regulations.
- At this time we do not have a time line from Bentley

DATA CONVERSION



ESTIMATES TO CONVERT TO SNBI

Extra SNBI Time	County	Muni	State	Other
1-2 hrs per bridge	22,597	1,968	6,467	570
2-3 hrs per bridge	3,490	560	5,906	470
3-4 hrs per bridge	222	82	2,024	289
4-5 hrs per bridge	44	30	256	15
5-6 hrs per bridge	10	12	92	6
6-7 hrs per bridge	7	7	47	5
7-8 hrs per bridge	3	4	31	1
8 hours or more per bridge	12	10	88	14
Grand Total	26,385	2,673	14,911	1,370

Total estimate = 45,400 hrs.



SNBI – Inventory

What you need to do now:

- Mike Brokaw is doing monthly trainings
 - Trainings are topic specific
 - Recorded and available on ODOT's YouTube channel



SNBI – Inventory

What OSE is doing now:

- Hiring a consultant to help us write a new bridge inspection & inventory manual
 - Will now be one manual
- Awareness talks – like this one
- Asking FHWA for clarifications – answers slow in coming
- Putting a resource plan together to address changes



Deck Reinforcing

CMS has 6 types of Rebar (2023 CMS is available)

- 1. Epoxy Coated - 709.00**
- 2. Uncoated (black) – 709.01**
- 3. GFRP – 705.28**
- 4. Galvanized – 709.16**
- 5. Chromium – 709.17**
- 6. Stainless steel – 709.18**



Deck Reinforcing

- **Districts are determining which type of rebar to use in the deck - Scope**
- **There is not a one-to-one replacement between all types of rebar**
- **Currently there is no guidance on where to use each type of rebar**
- **Future – create guidance**

Brent Spence Bridge



Brent Spence Bridge

High points of the project:

- It's a BIG project
- Approximately 7.8 miles in length
- I-71/I-75 over Ohio River connecting Ohio and Kentucky
- Existing truss bridge will serve local traffic
- New Companion bridge will carry I-71 & I-75 over the Ohio River
- ODOT is leading the effort

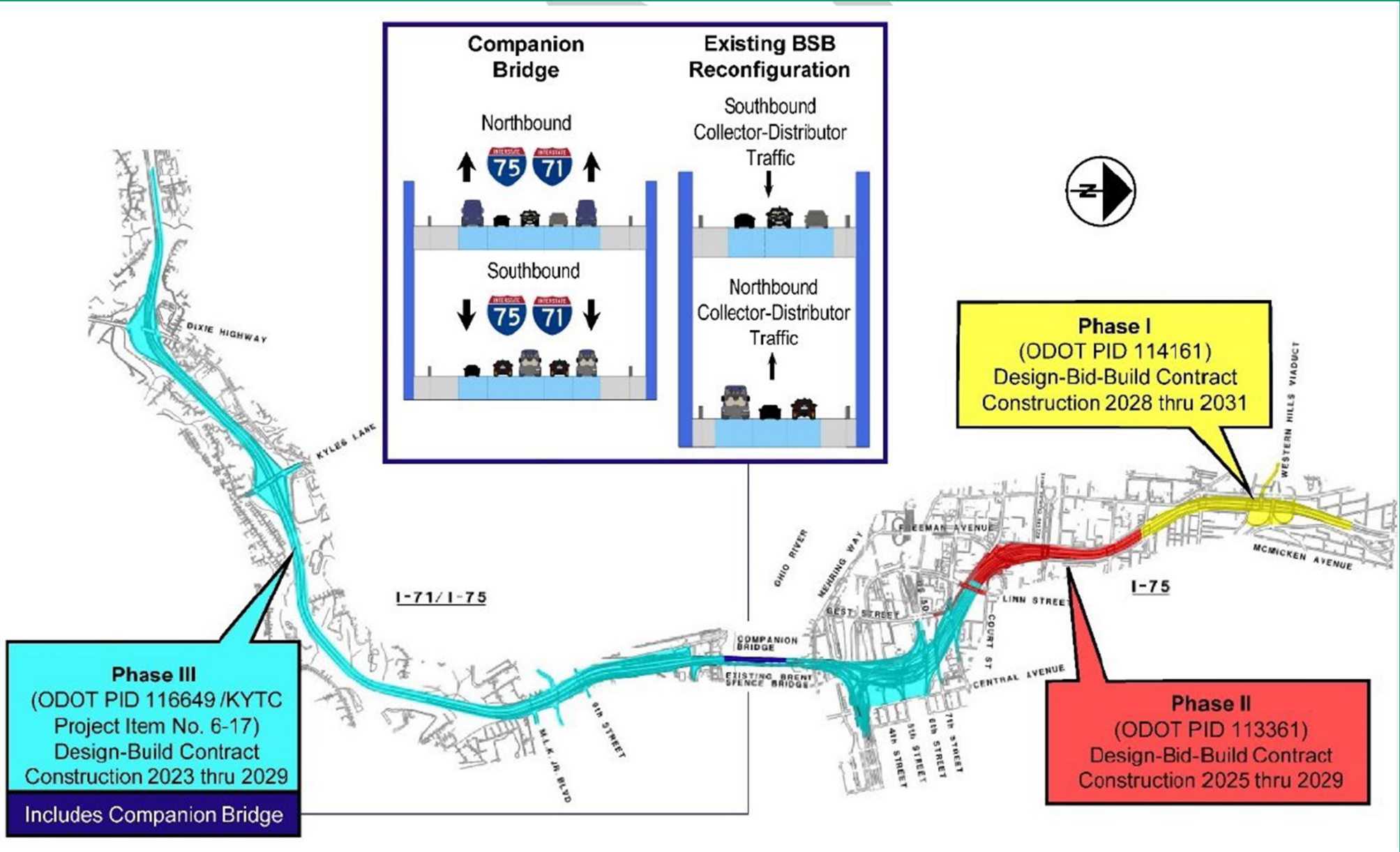
Brent Spence Bridge

Construction is in 3 Phases

- **2 Northern Sections in Ohio are traditional Design-bid-build**
 - Total Cost approximately \$500 million
- **Progressive Design Build Contract**
 - Companion Bridge
 - Ohio includes I-71/I-75 interchange immediately north of the Companion Bridge
 - Kentucky includes 5 miles of roadway plus interchanges
 - Total Cost approximately \$3.1 Billion



Brent Spence Bridge



Brent Spence Bridge

Bridges in PDB Project:

Preliminary Design:

Ohio side – 43 bridges

Companion Bridge – double deck

Cable Stayed

Arch

Kentucky side – 16 bridges

Many bridges – now how to build it all



Brent Spence Bridge

Progressive Design Build project delivery

- First time for both ODOT or KYTC
- Select the DBT based on qualifications
 - Ohio Law requires a cost component as part of selection
- The DBT and the Owners will “progress” with the design together
 - DBT will be paid for their design effort
- DBT will provide pricing when design effort has reached a point where we know what will be built and how
- Independent Cost Estimator will review DBT pricing
- If all get to agreement on price – DBT go build it
- If can not agree on price – ODOT will own design



Brent Spence Bridge

Advantages to Progressive Design Build project delivery

- Collaborative Project Development
- Risks
 - Identify
 - Quantify
 - Assignment



Brent Spence Bridge

Funding

- \$1.635 Billion in Federal Grants
- Working on a financial plan
- Kentucky will fund south of the River and Ohio will fund north of the River
- Ohio will use a combination of capital funds and bonding



Announcement

This will be my last ABCD update as I plan on retiring May 1, 2023

Thank you all for helping to make my 21 years with ODOT a great experience !!





Questions for Tim

