

WELCOME

AGENDA

9:00 am – *Opening Remarks*

9:15 am – *Safety is No Accident*

10:45 am – *Break*

11:00 am – *Deepening the Future*

12:00 pm – *Lunch*

1:00 pm – *Lightning Round*

1:45 pm – *Bridging the Gap*

2:45 pm – *Closing Remarks*

3:00 pm – *Networking Reception*



OPENING REMARKS

Jody Herkloz



OPENING REMARKS

Assistant Commissioner Parth Oza



Safety is No Accident

9:15 am

Safety is No Accident

2026 DESIGN SUMMIT



Division Highway Traffic Safety

Panelists



Michael Rizol
Director, NJ Division of Highway Traffic Safety



Captain Patrick Brady
Traffic & Public Safety Office, NJSP



Frank Neary
Director, Safety Programs and Transportation Data, NJDOT

The Foundation of Target Zero:
Law, Commission, Need and Purpose

Michael Rizol, Director
NJ Division of Highway and Traffic Safety

2026 Design Summit

Why Target Zero Was Needed

Traffic fatalities and serious injuries were increasing statewide

- Pedestrians and bicyclists were disproportionately impacted
- Existing approaches were fragmented and reactive
- A coordinated, system-wide safety response was required



Legislative Foundation

Target Zero Commission Law signed in January 2025

- Established goal of zero traffic fatalities and serious injuries by 2040
- Created a permanent, multi-agency commission
- Required development of a statewide Action Plan

Purpose of the Commission

01

Review all aspects of traffic safety statewide

02

Established to unify agencies under one shared fatality-reduction goal

03

Focus on access, equity, and mobility for all road users

04

Use the Safe System Approach as the guiding framework

05

Advise the Governor, Legislature, and NJDOT

COMMISSION STRUCTURE



Comprised of 13 state and regional agencies

- Chaired by the Commissioner of Transportation
- Includes transportation, health, law enforcement, and planning partners
- Ensures cross-agency coordination and shared responsibility

TARGET ZERO WORKING GROUP

- Formed to support the development of the Action Plan
- Developed through collaboration between NJDOT, Division of Highway Traffic Safety, law enforcement, MPOs, and local governments
  - Included agencies, advocates, experts, and the public
  - Coordinated by Rutgers University
  - Met monthly from April through September 2025

Public and Stakeholder Engagement



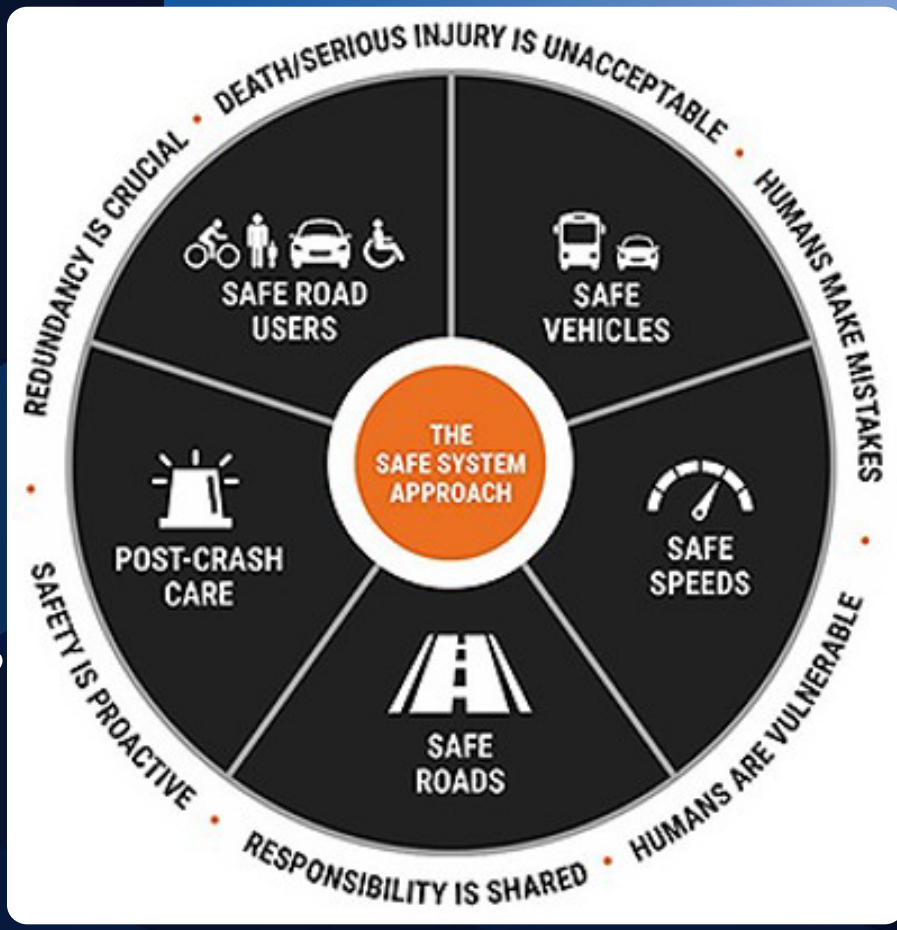
Multiple public meetings and comment periods

- Open Working Group participation
- Online input forms and surveys
- Emphasis on transparency and accessibility

ACTION PLAN METHODOLOGY

Grounded in the FHWA Safe System Approach

- Recognizes human error and shared responsibility
- Data-driven and equity-focused
- Actions reviewed, refined, and prioritized through a structured process



From Process to Action Plan

Commission reviewed working group recommendations

Public hearing held prior to adoption

Action Plan released in 2025

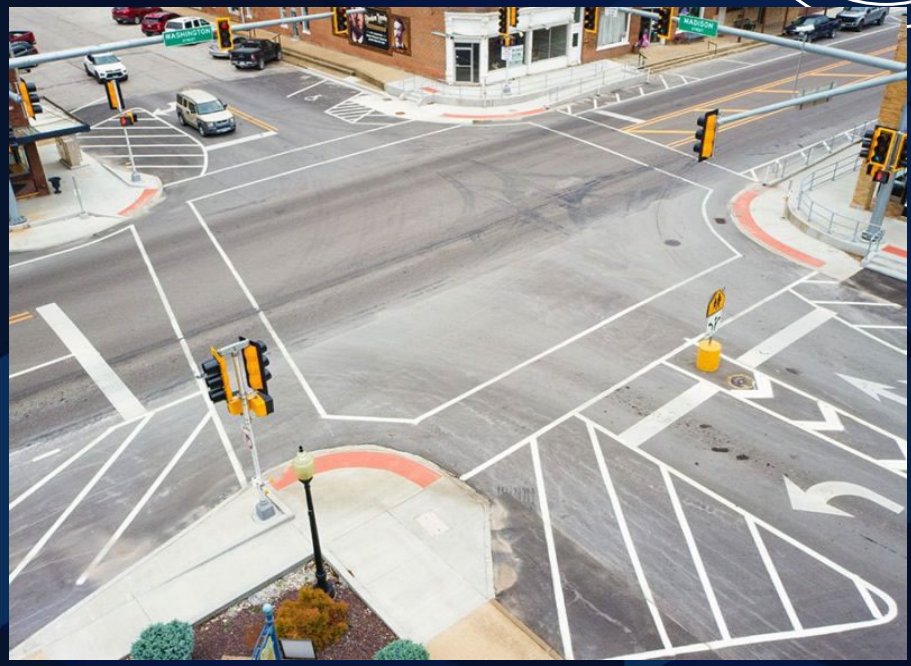
Designed as a living framework for implementation and accountability

Target Zero – Action Plan Purpose

- Eliminate traffic fatalities and serious injuries on New Jersey roadways by 2040
- Guide long-term planning, funding, and engineering priorities
- Promote interagency collaboration and accountability
- Support data-driven infrastructure and policy decisions
- Design influences behavior and survivability
- Engineers control geometry, speed context and conflict points
- Infrastructure = prevention, not reaction

What “Target Zero” Means for Design

- Zero fatalities is the only acceptable outcome
- Acknowledges human error but designs roads to minimize consequences
- Shared responsibility among engineers, planners, enforcement, policymakers, and the public
- Focus on system design, safe speeds, and safe infrastructure, not solely driver behavior



Target Zero
NJ Design-Related Action Items

- Implement Complete Streets policies in municipal and county roadway projects
- Expand road diets and lane reconfigurations on high-crash corridors
- Increase protected pedestrian crossings, refuge islands, and ADA-compliant sidewalks
- Improve lighting, signage visibility, and pavement markings
- Install traffic calming measures (roundabouts, curb extensions, speed humps)
- Deploy median barriers and shoulder widening where feasible
- Utilize NJ crash data and HSIP funding to redesign high-risk locations
- Coordinate with MPOs and counties for Safe Routes to School and bicycle infrastructure

Current Safety Reality in NJ

- Traffic fatalities rising year-over-year
- Pedestrians & cyclists disproportionately impacted
- High-Injury Networks (HINs) identify systemic risk corridors
- Traditional “fix-after-crash” model is insufficient



Engineering's Role in the Safe System Framework



Five Pillars: Safer People, Roads, Speeds, Vehicles, Post-Crash Care

- Engineers have the strongest influence on Roads and Speeds
- Design determines conflict frequency, exposure, and recovery
- Geometry, lane allocation, and visual narrowing shape behavior
- Redundancy and survivability, not perfection, drive design

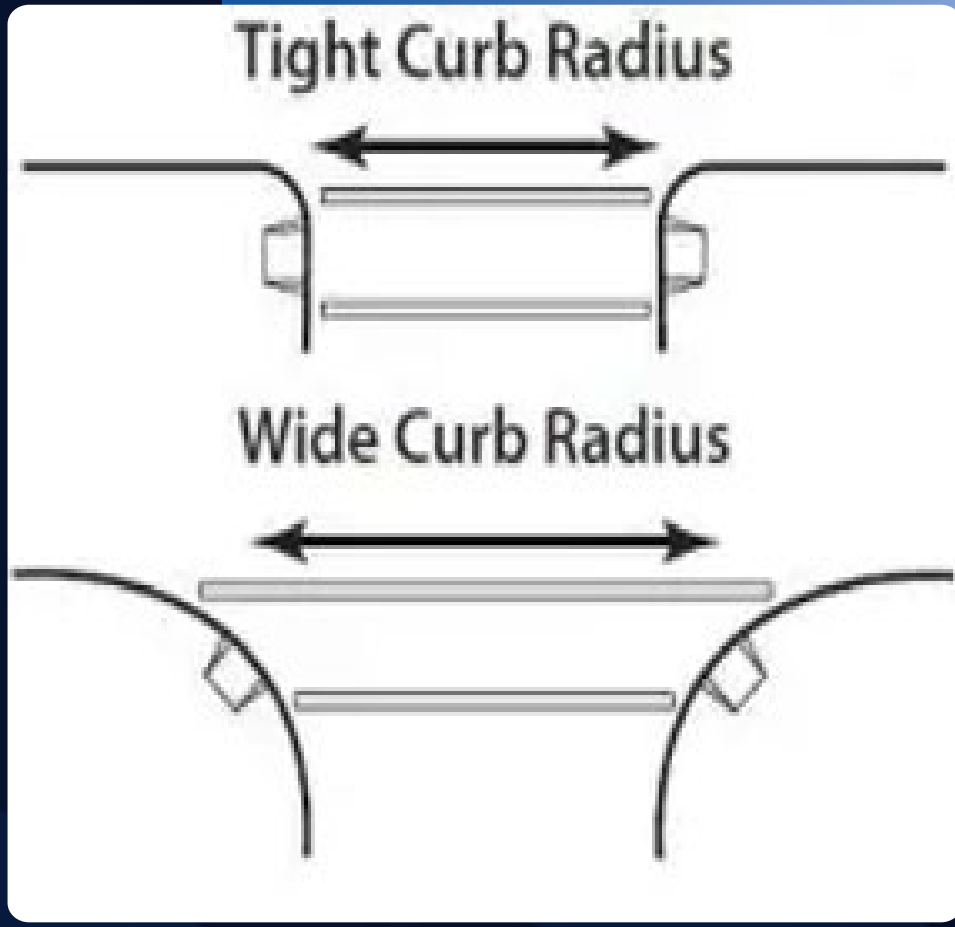
Infrastructure Strategies That Reduce Fatalities



- Protected bike lanes
- Hardened daylighting
- Curb extensions
- Pedestrian refuge islands
- Roundabouts
- Complete & Green Streets adoption

Design for Target Speed, Not Posted Speed

- Lane width reduction
- Vertical deflection
- Chicanes & curb radii adjustments
- Context-based speed setting
- Elimination of slip lanes

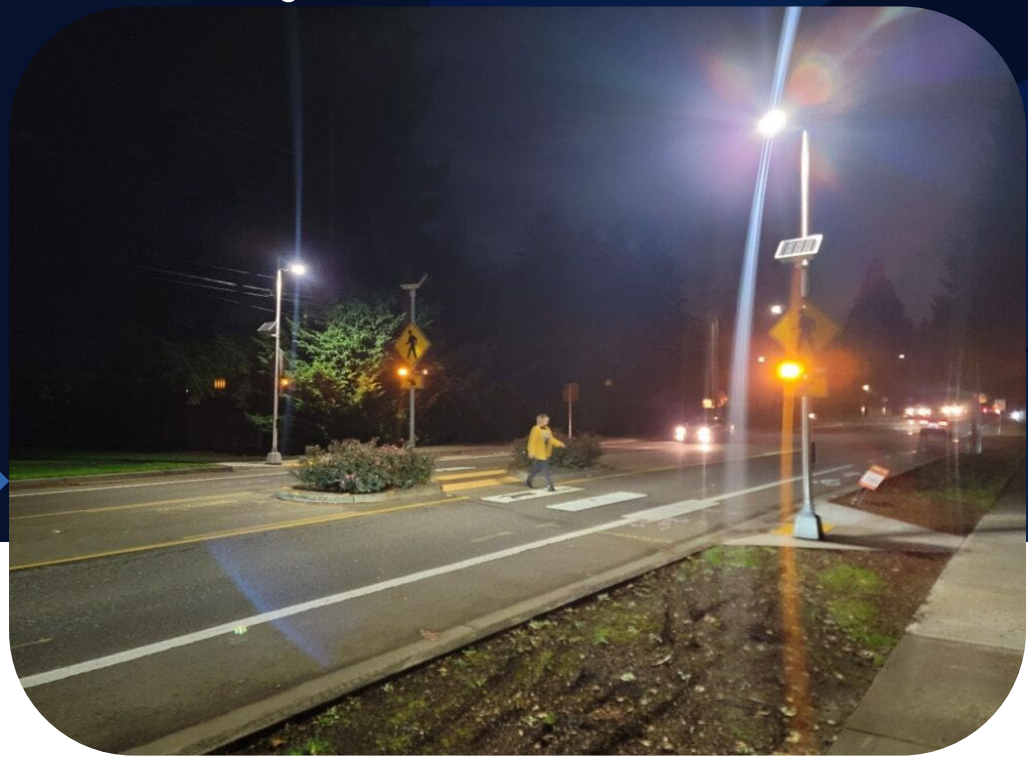


Reducing Conflict Points



- Median barriers
- Signal phasing adjustments
- Protected intersections
- Bus stop safety redesign
- ADA network expansion

Nighttime Safety



- Pedestrian lighting
- Crosswalk illumination
- Reflective pavement markings & signage

Beyond the Roadway



- Transit-oriented design
- Greenway networks
- Reduced exposure through trip shortening
- Overburdened community prioritization

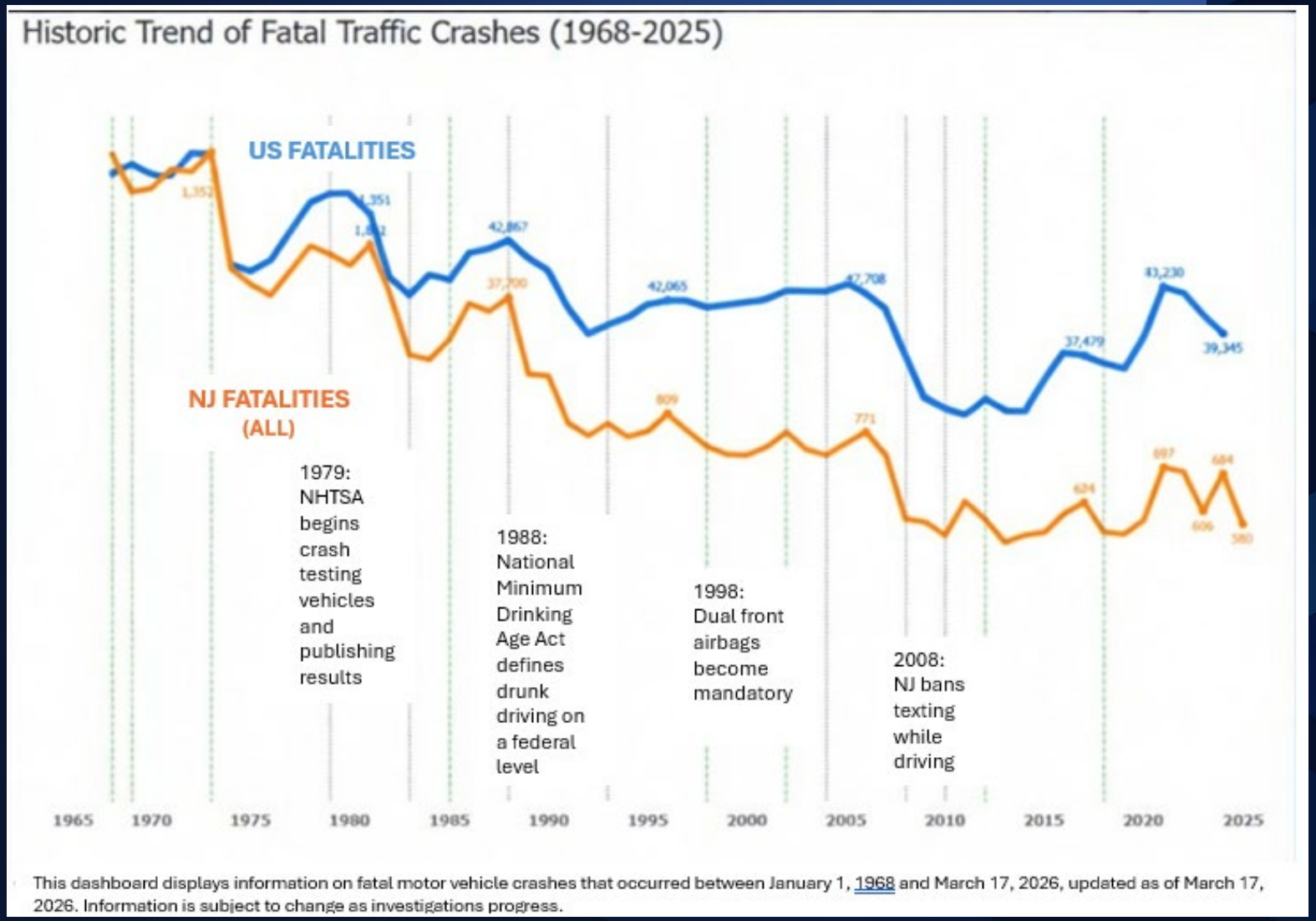
Thank You!

Michael J. Rizol Jr, Director
NJDHTS
Michael.Rizol@njoag.gov

New Jersey State Police Fatal & Serious Crash Investigations

Captain P. Brady #5951
Traffic & Public Safety Office

Why Fatal & Serious Injury Crashes Matter



This dashboard displays information on fatal motor vehicle crashes that occurred between January 1, 1968 and March 17, 2026, updated as of March 17, 2026. Information is subject to change as investigations progress.

STATE POLICE NJ

OFFICE OF THE ATTORNEY GENERAL STATE OF NEW JERSEY

DEPARTMENT OF TRANSPORTATION THE STATE OF NEW JERSEY

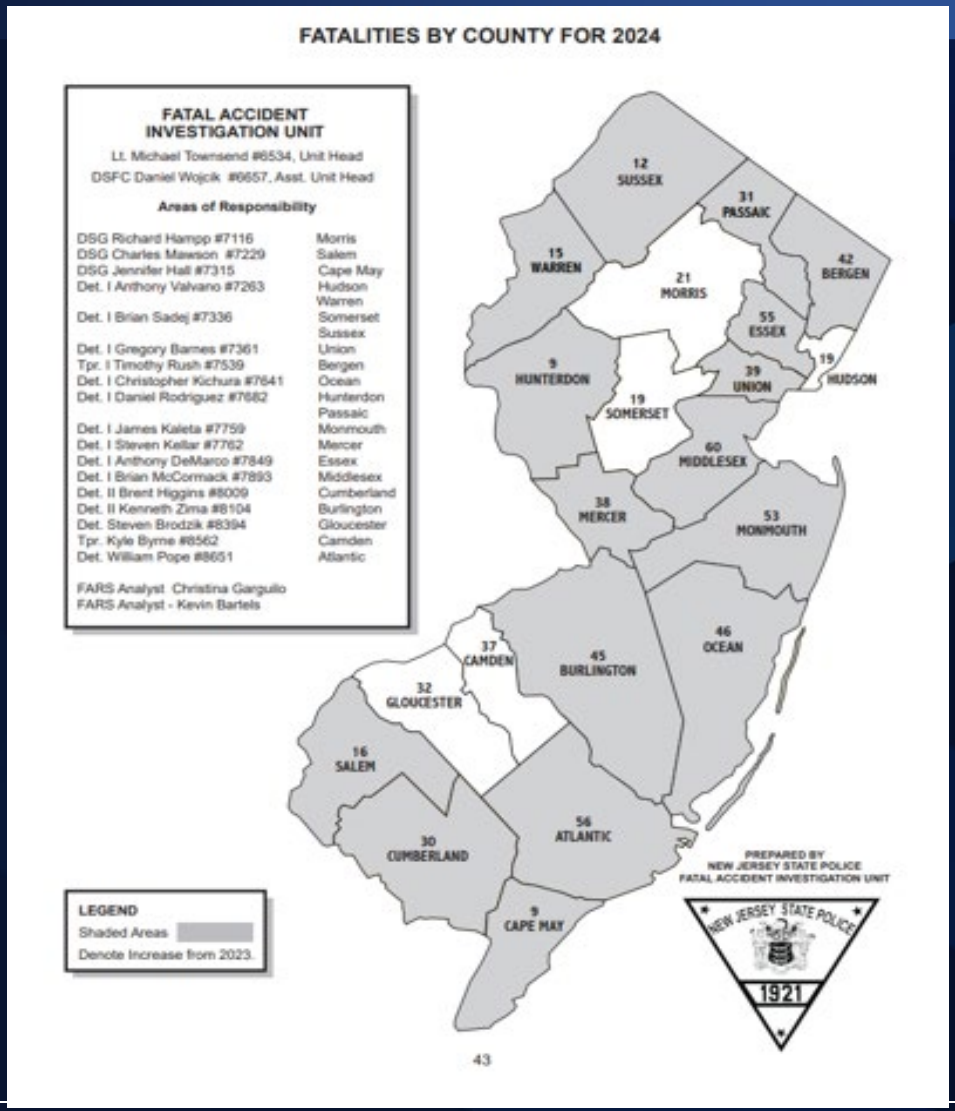
NEW JERSEY DIVISION OF HIGHWAY TRAFFIC SAFETY

NHTSA NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Fatal & Serious Crash Response



Fatal Accident Investigation Unit (FAIU)



Crash Scene Response & Investigation







Determine the:

Who - What - Where-

When- Why- How-

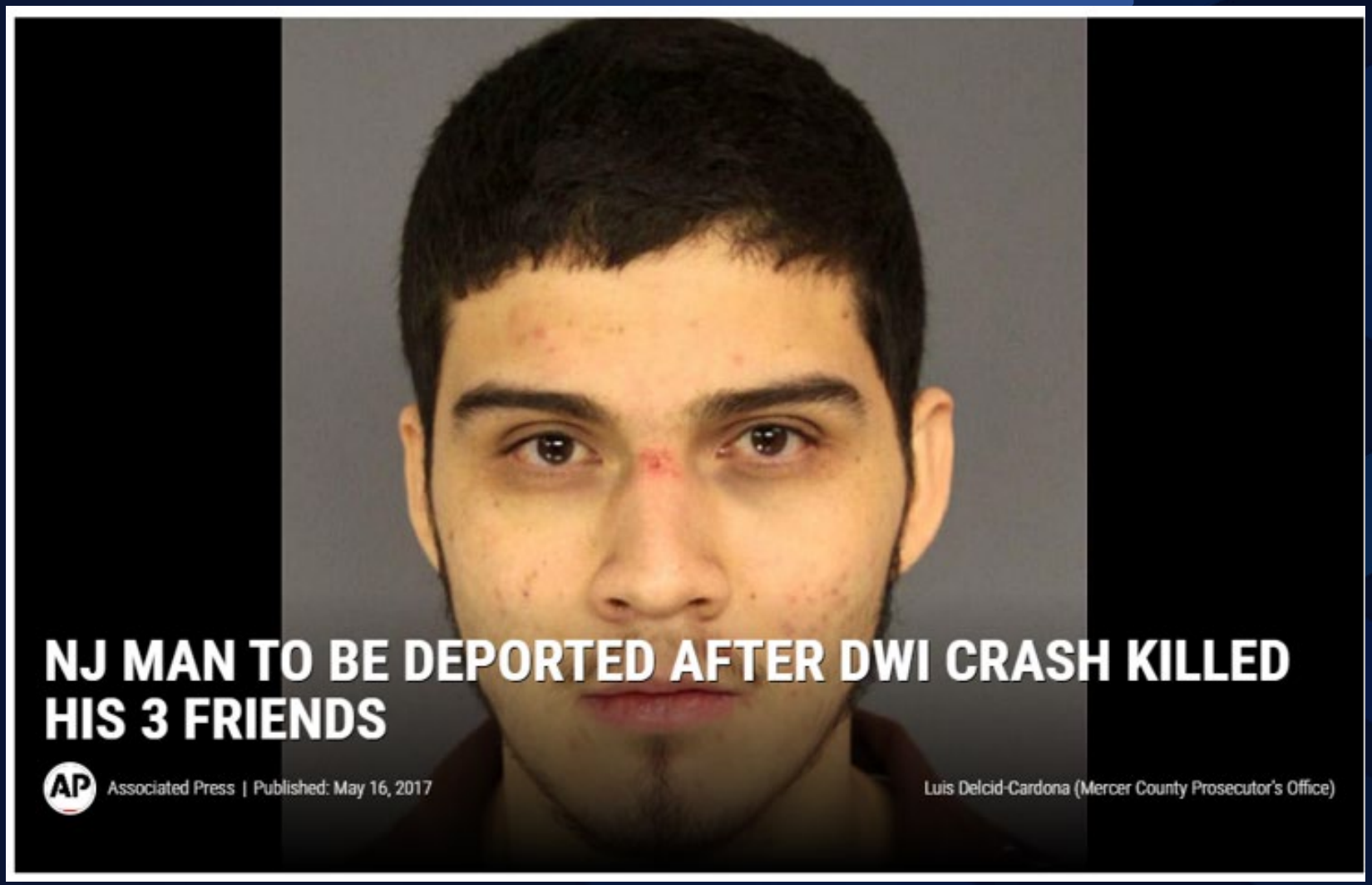
Traffic Incident Management (TIMS)





- Establish Size and Scope of Response
- Multi-Agency Command and Coordination
- Scene Integrity and Safety
- Operate Systematically and Efficiently
- Limit Time on Scene

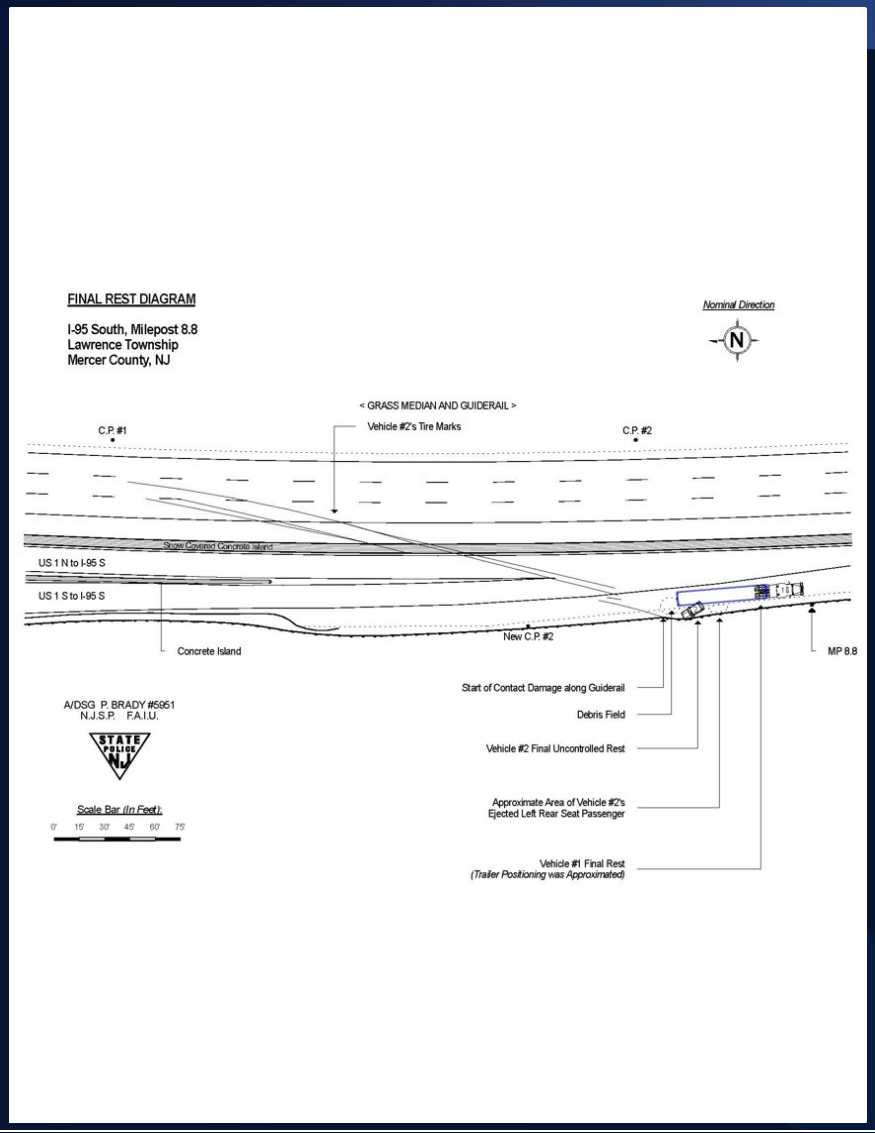
Investigation Case Study

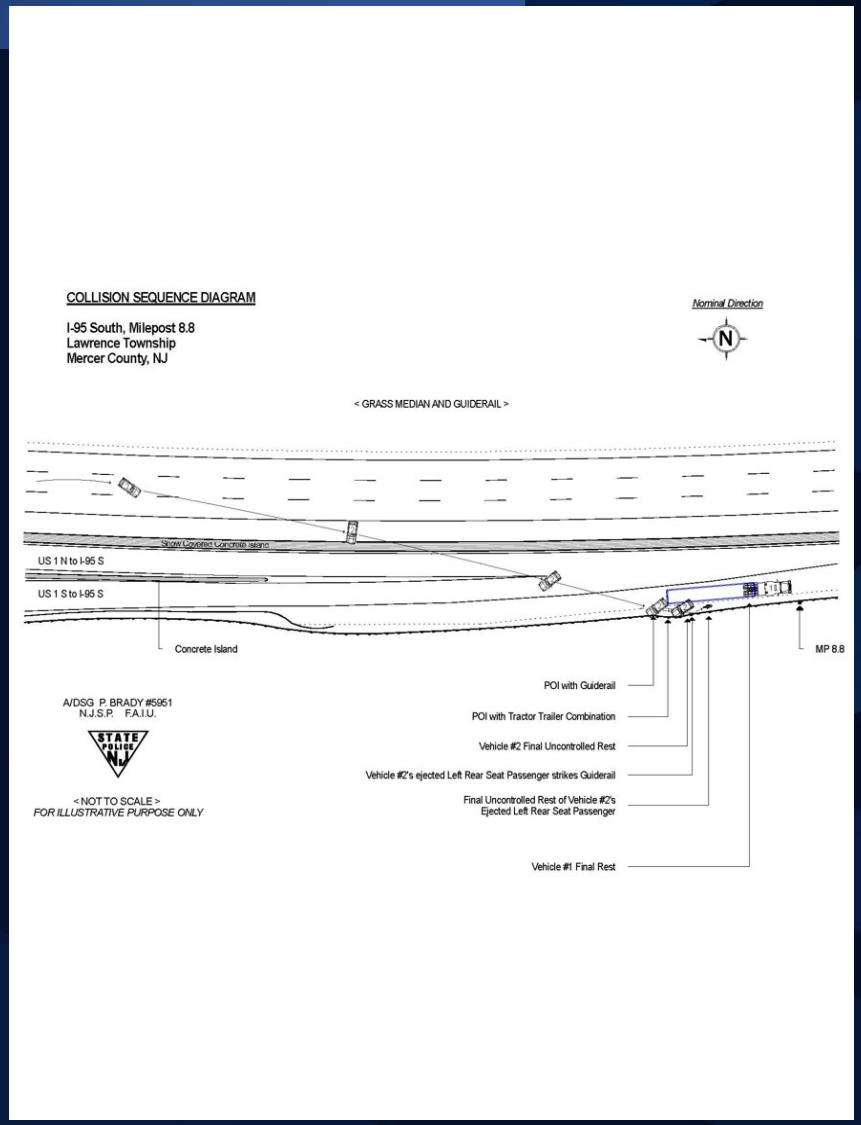


Investigation Case Study



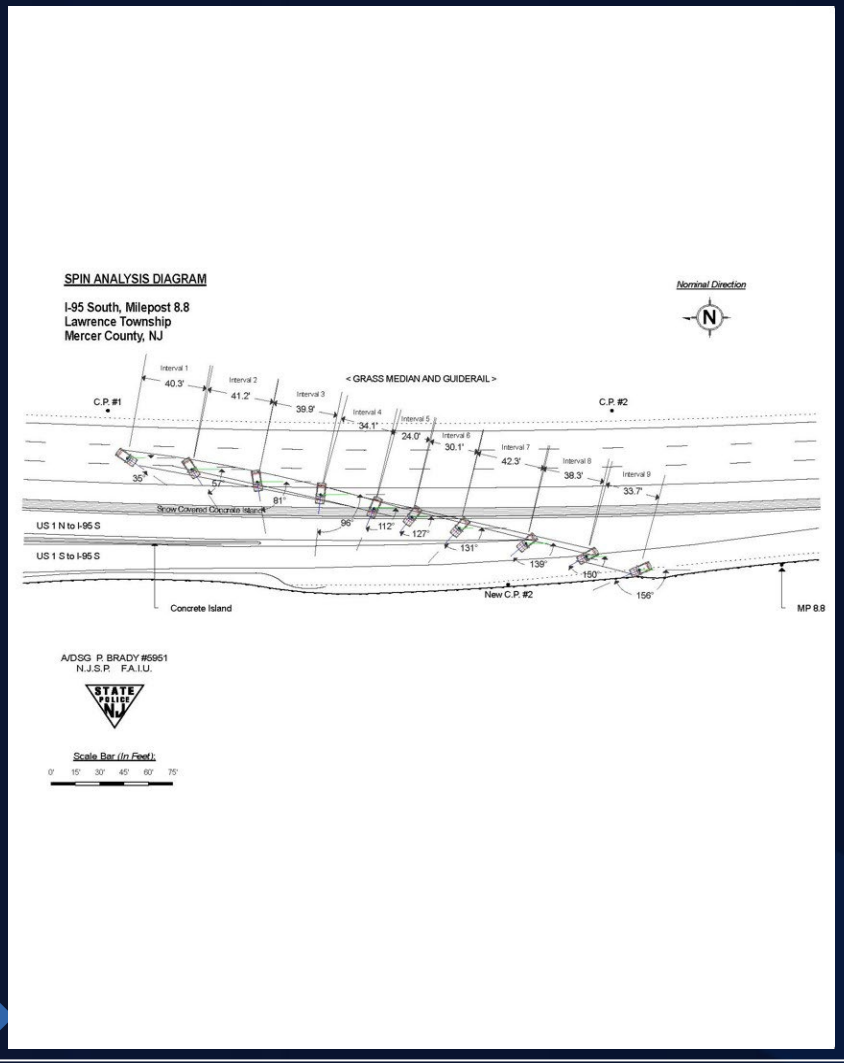
Investigation Case Study





NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Investigation Case Study



SPIN ANALYSIS DIAGRAM

I-95 South, Milepost 8.8
Lawrence Township
Mercer County, NJ

Nominal Direction

<GRASS MEDIAN AND GUIDERAIL>

C.P. #1

C.P. #2

Interval 1 40.3'
Interval 2 41.2'
Interval 3 39.9'
Interval 4 34.1'
Interval 5 24.0'
Interval 6 30.1'
Interval 7 42.3'
Interval 8 38.3'
Interval 9 33.7'

35° 57° 81° 96° 112° 127° 131° 139° 150° 156°

Snow Covered Concrete Island

US 1 N to I-95 S

US 1 S to I-95 S

Concrete Island

New C.P. #2

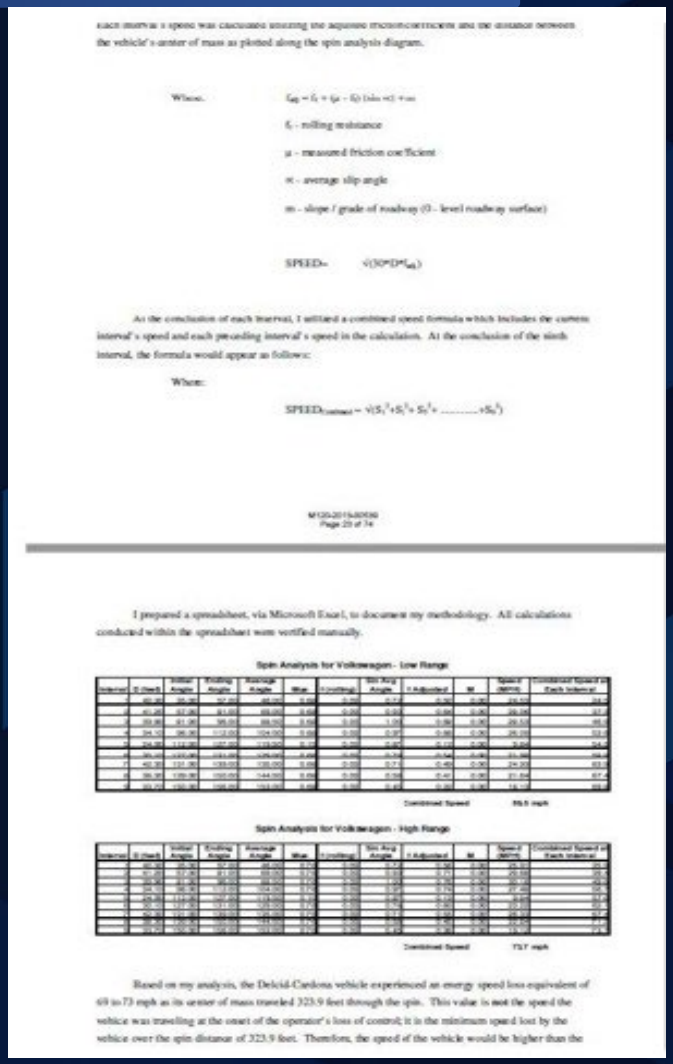
MP 8.8

A/DSG P. BRADY #5951
N.J.S.P. F.A.I.U.

STATE POLICE NJ

Scale Bar (In Feet):

0' 15' 30' 45' 60' 75'



each interval a speed was calculated utilizing the acquired friction coefficients and the distance between the vehicle's center of mass as plotted along the spin analysis diagram.

Where,

f_r - rolling resistance

μ - measured friction coefficient

α - average slip angle

m - slope / grade of roadway (0 – level roadway surface)

SPEED= $\sqrt{(30*D*f_{eq})}$

At the conclusion of each interval, I utilized a combined speed formula which includes the current interval's speed and each preceding interval's speed in the calculation. At the conclusion of the sixth interval, the formula would appear as follows:

Where:

$SPEED_{combined} = \sqrt{(S_1^2+S_2^2+S_3^2+\ldots\ldots\ldots+S_6^2)}$

I prepared a spreadsheet, via Microsoft Excel, to document my methodology. All calculations conducted within the spreadsheet were verified manually.

Spin Analysis for Volkswagen - Low Range

Combined Speed 69.5 mph

Spin Analysis for Volkswagen - High Range

Combined Speed 73.7 mph

Based on my analysis, the Delcid-Cardona vehicle experienced an energy speed loss equivalent of 69 to 73 mph as its center of mass traveled 323.9 feet through the spin. This value is not the speed the vehicle was traveling at the onset of the operator's loss of control; it is the minimum speed lost by the vehicle over the spin distance of 323.9 feet. Therefore, the speed of the vehicle would be higher than the

Investigation Case Study

N.J. snow-fighting operation tracked by GPS, weather sensors



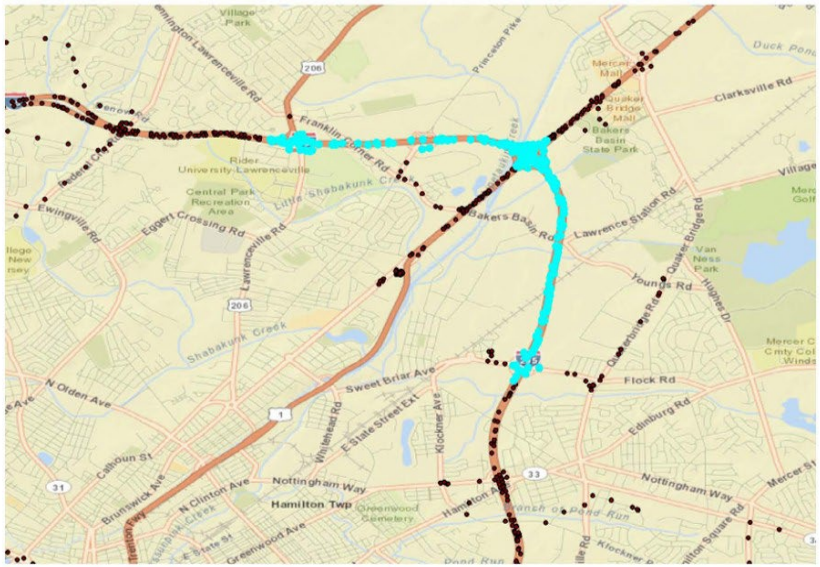
View/Post Comments

STORM COVERAGE

Dodging a monster: NJ to escape worst impacts of intense nor'easter plowing toward Canada

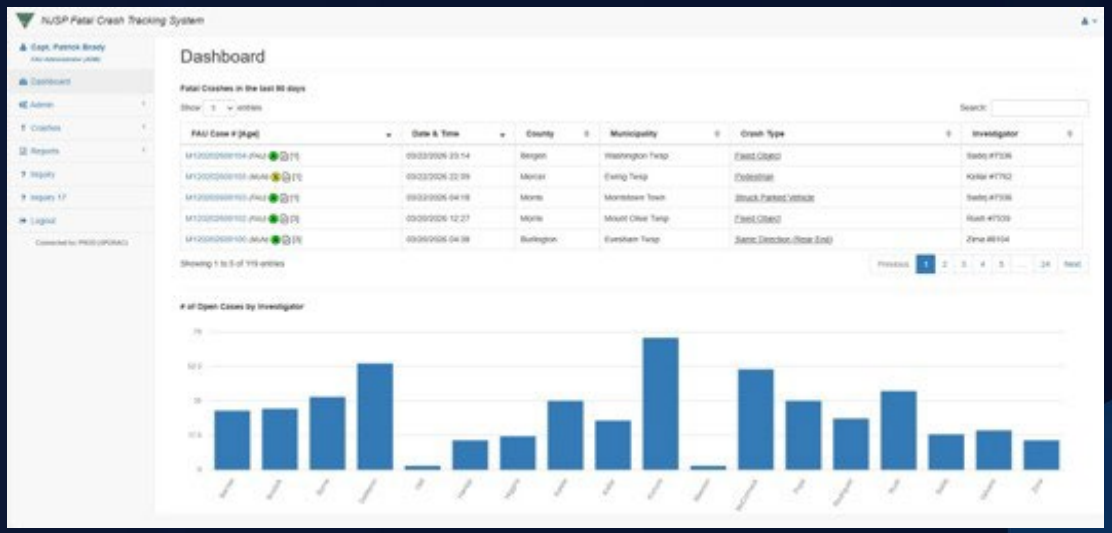
Early spring snowstorm to brush NJ, clobber New England

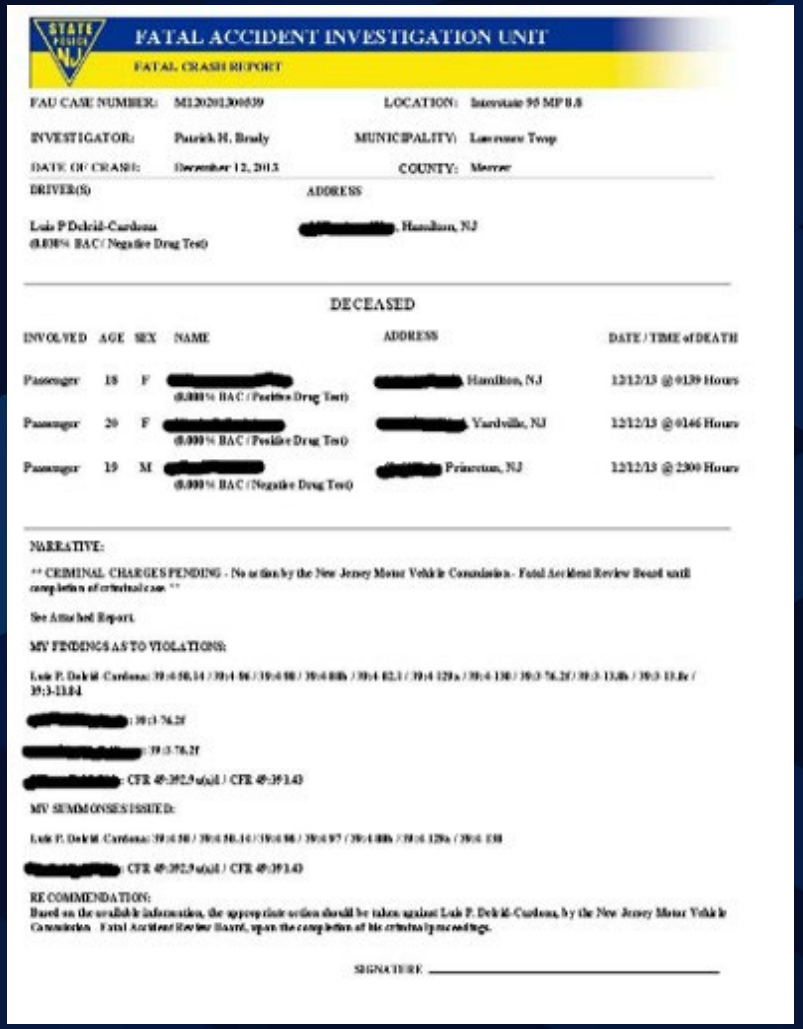
New Jersey Department of Transportation MARVLIS Report



OBJECTID	VehicleID	EndVerno	Status	FullDateTime	Latitude	Longitude	Velocity	Direction	SystemDateTime	VehicleType
1645	46610	134	0	0 2014-12-14 10:58:23.750000000	40.43903	-74.4946	43	192	2014-12-14 10:58:24.340000000	Safety Truck
1647	46480	148	0	0 2014-12-14 10:58:31.800000000	40.43787	-74.497	44	84	2014-12-14 10:58:32.340000000	Safety Truck
1648	44875	134	35	0 2014-12-14 10:58:33.110000000	40.43768	-74.4977	43	112	2014-12-14 10:58:33.340000000	Safety Truck
1649	44875	134	35	0 2014-12-14 10:58:34.270000000	40.43789	-74.4946	47	110	2014-12-14 10:58:34.870000000	Safety Truck

Fatal Crash Reporting and Data Validation





FATAL ACCIDENT INVESTIGATION UNIT

FATAL CRASH REPORT

FAU CASE NUMBER: M1202012000039 LOCATION: Interstate 95 MP 8.8

INVESTIGATOR: Patrick H. Brady MUNICIPALITY: Lawrence Twp

DATE OF CRASH: December 12, 2013 COUNTY: Mercer

DRIVER(S) ADDRESS

Luis P Dekid-Cardona [redacted], Hamilton, NJ
(0.000% BAC / Negative Drug Test)

DECEASED

INVOLVED	AGE	SEX	NAME	ADDRESS	DATE / TIME of DEATH
Passenger	18	F	[redacted] (0.000% BAC / Positive Drug Test)	[redacted] Hamilton, NJ	12/12/13 @ 0139 Hours
Passenger	20	F	[redacted] (0.000% BAC / Positive Drug Test)	[redacted] Yardville, NJ	12/12/13 @ 0146 Hours
Passenger	19	M	[redacted] (0.000% BAC / Negative Drug Test)	[redacted] Princeton, NJ	12/12/13 @ 2300 Hours

NARRATIVE:

** CRIMINAL CHARGES PENDING - No action by the New Jersey Motor Vehicle Commission - Fatal Accident Review Board until completion of criminal case. **

See Attached Report.

MV FINDINGS AS TO VIOLATIONS:

Luis P. Dekid-Cardona: 39:4-50.14 / 39:4-96 / 39:4-98 / 39:4-98b / 39:4-82.1 / 39:4-129.a / 39:4-130 / 39:3-76.2f / 39:3-13.4b / 39:3-13.4c / 39:3-13.4d

[redacted]: 39:3-76.2f

[redacted]: 39:3-76.2f

[redacted]: CFR 49:392.9 a(a) / CFR 49:393.43

MV SUMMONSES ISSUED:

Luis P. Dekid-Cardona: 39:4-50 / 39:4-50.14 / 39:4-98 / 39:4-97 / 39:4-98b / 39:4-129a / 39:4-130

[redacted]: CFR 49:392.9 a(a) / CFR 49:393.43

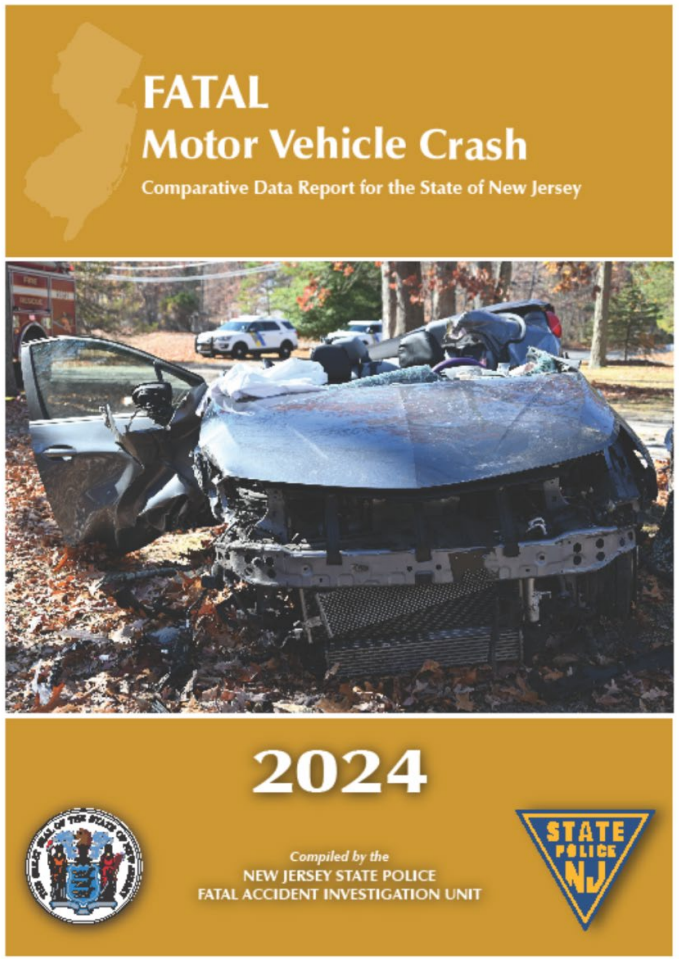
RECOMMENDATION:
Based on the available information, the appropriate action should be taken against Luis P. Dekid-Cardona, by the New Jersey Motor Vehicle Commission - Fatal Accident Review Board, upon the completion of the criminal proceedings.

SIGNATURE: _____

- NJTR1
- Investigation Report
- Toxicology
- Medical Examiner Report
- Death Certificate
- Prosecutor's Office Determination Letter

NHTSA NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Fatal Crash Statistics



FATAL ACCIDENT INVESTIGATION UNIT

YEAR TO DATE - STATEWIDE FATAL CRASH STATISTICS
FOR FEBRUARY 10, 2026

FATAL CRASHES		FATALITIES	
2026 -	43	2026 -	46
2025 -	52	2025 -	52
2024 -	55	2024 -	58

FATALITIES FROM 2025 TO 2026	-6
PERCENTAGE CHANGE 2025 TO 2026	-11.5%
FATALITIES FROM 2024 TO 2025	-6
PERCENTAGE CHANGE 2024 TO 2025	-10.3%

VICTIM CLASSIFICATION

	2024	2025	2026
DRIVER	20	29	25
PASSENGER	9	6	5
PEDALCYCLIST	2	0	0
PEDESTRIAN	27	17	16
TOTAL	**58**	**52**	**46**

2026 - AGE OF VICTIMS

AGE	DRIVER	PASSENGER	PEDALCYCLIST	PEDESTRIAN
16 AND UNDER	0	0	0	0
17	0	0	0	0
18 - 20	0	1	0	0
21 - 24	4	1	0	0
25 - 29	5	0	0	2
30 - 39	4	0	0	3
40 - 49	1	0	0	0
50 - 64	3	1	0	6
65 - 79	5	2	0	2
80 AND OVER	3	0	0	1
UNKNOWN	0	0	0	2
TOTAL	25	5	0	16

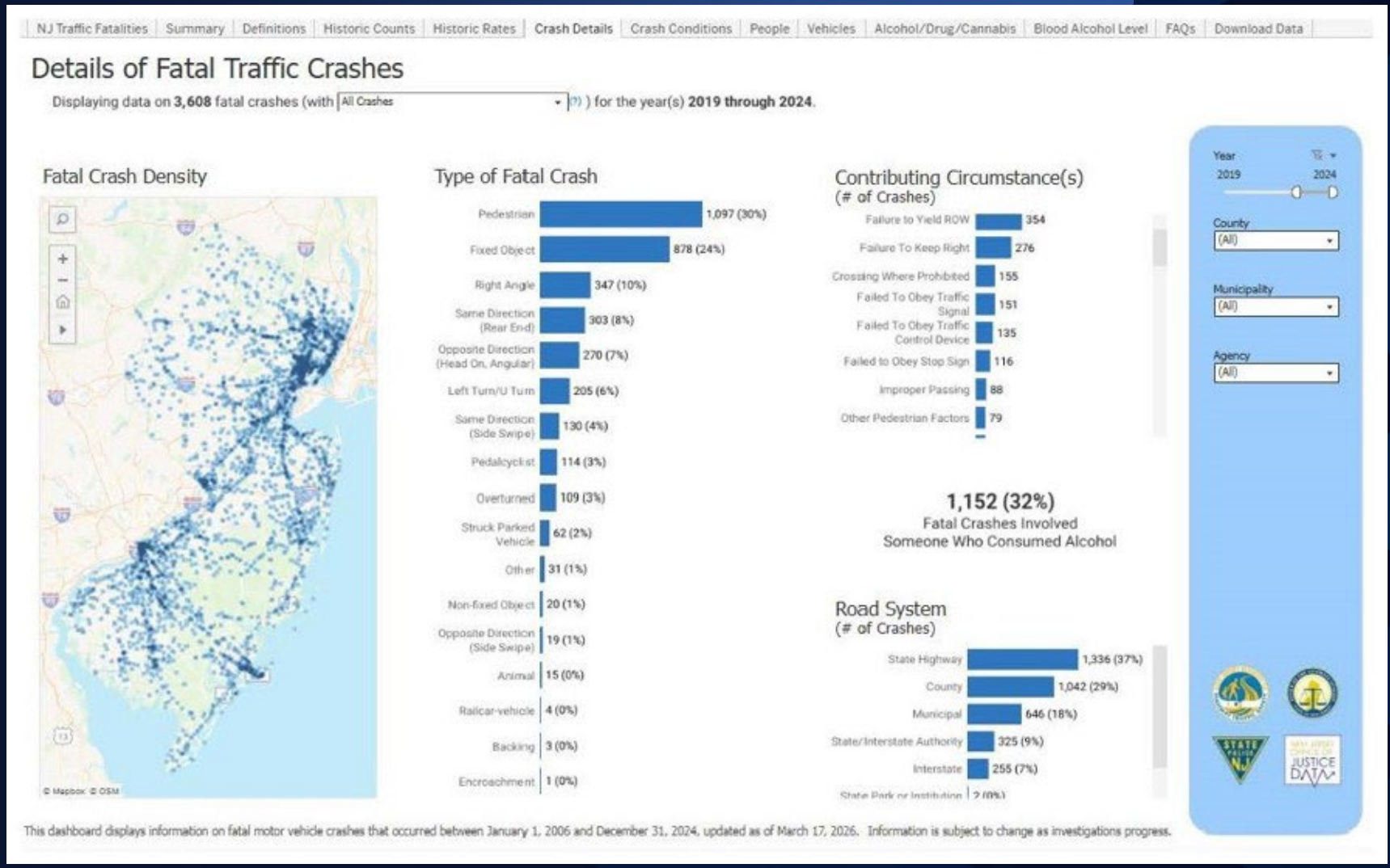
THIS REPORT CONTAINS STATISTICS OF FATAL MOTOR VEHICLE CRASHES THAT HAVE BEEN REPORTED TO THE NEW JERSEY STATE POLICE FATAL ACCIDENT INVESTIGATION UNIT.

THE STATISTICS LISTED FOR PRIOR YEARS CORRESPOND TO THE CURRENT YEAR MONTH AND DAY.

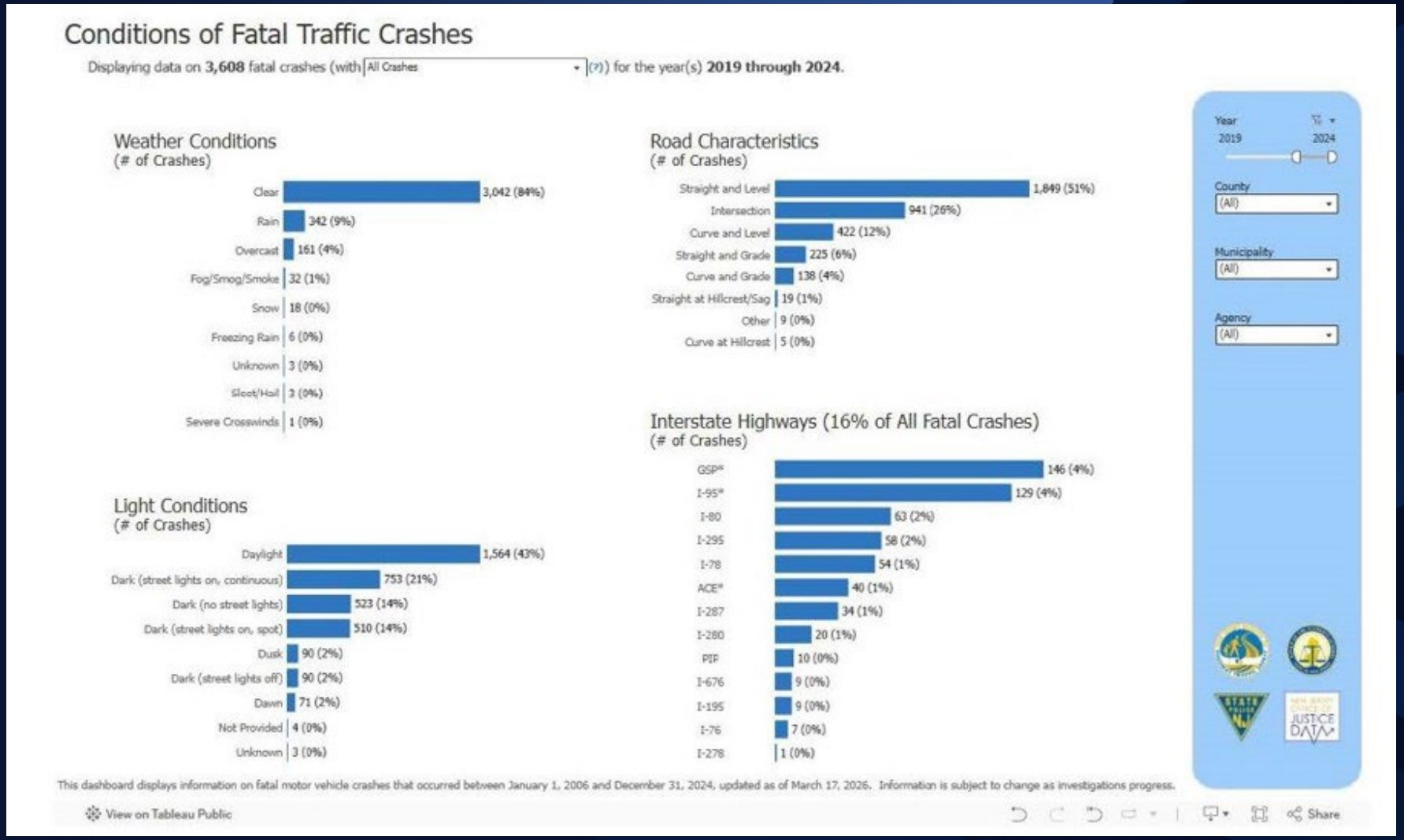
THE STATISTICS CONTAINED IN THIS REPORT ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

Report Run: 10-FEB-26 10:02 AM

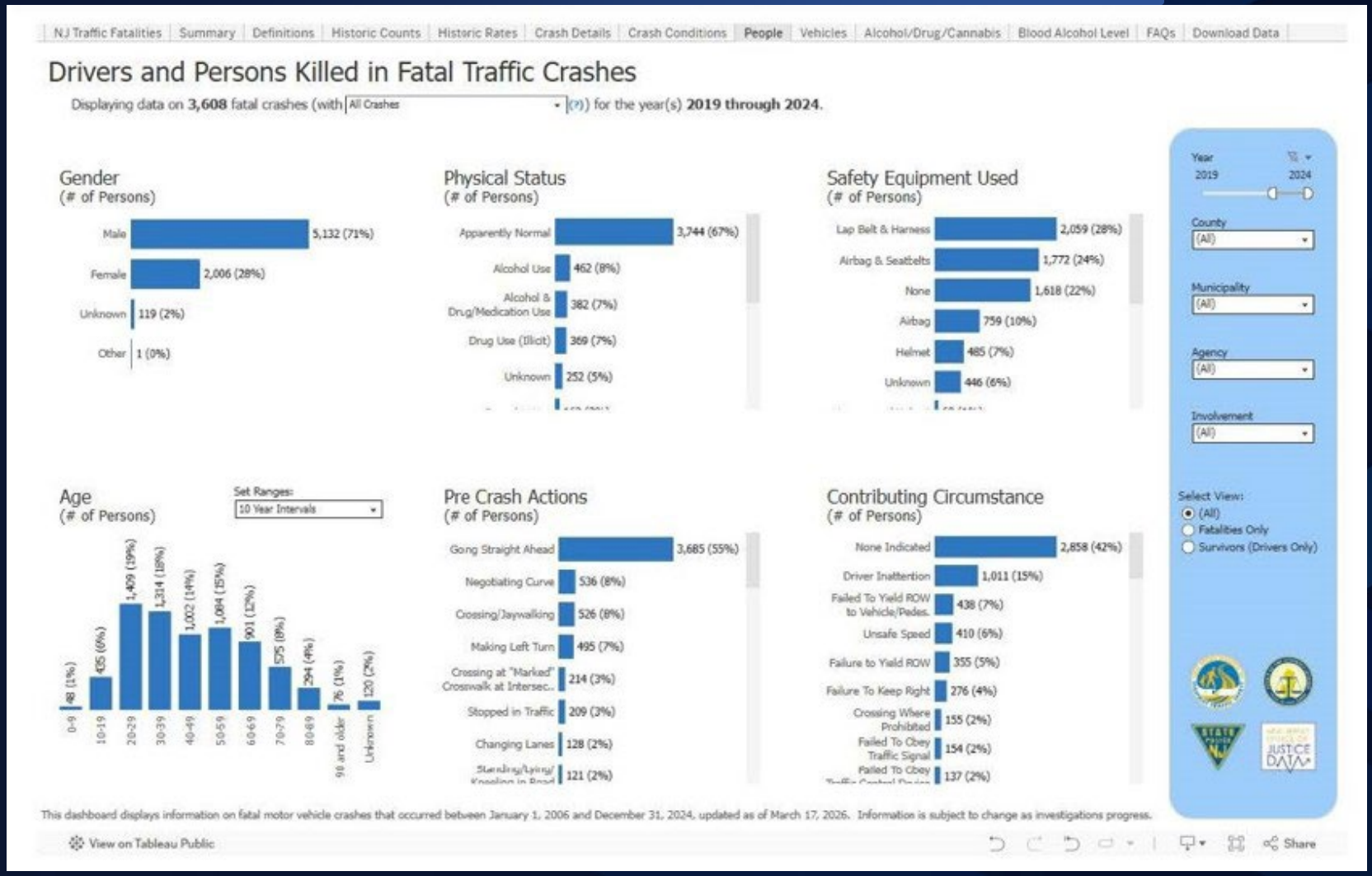
Data Analysis



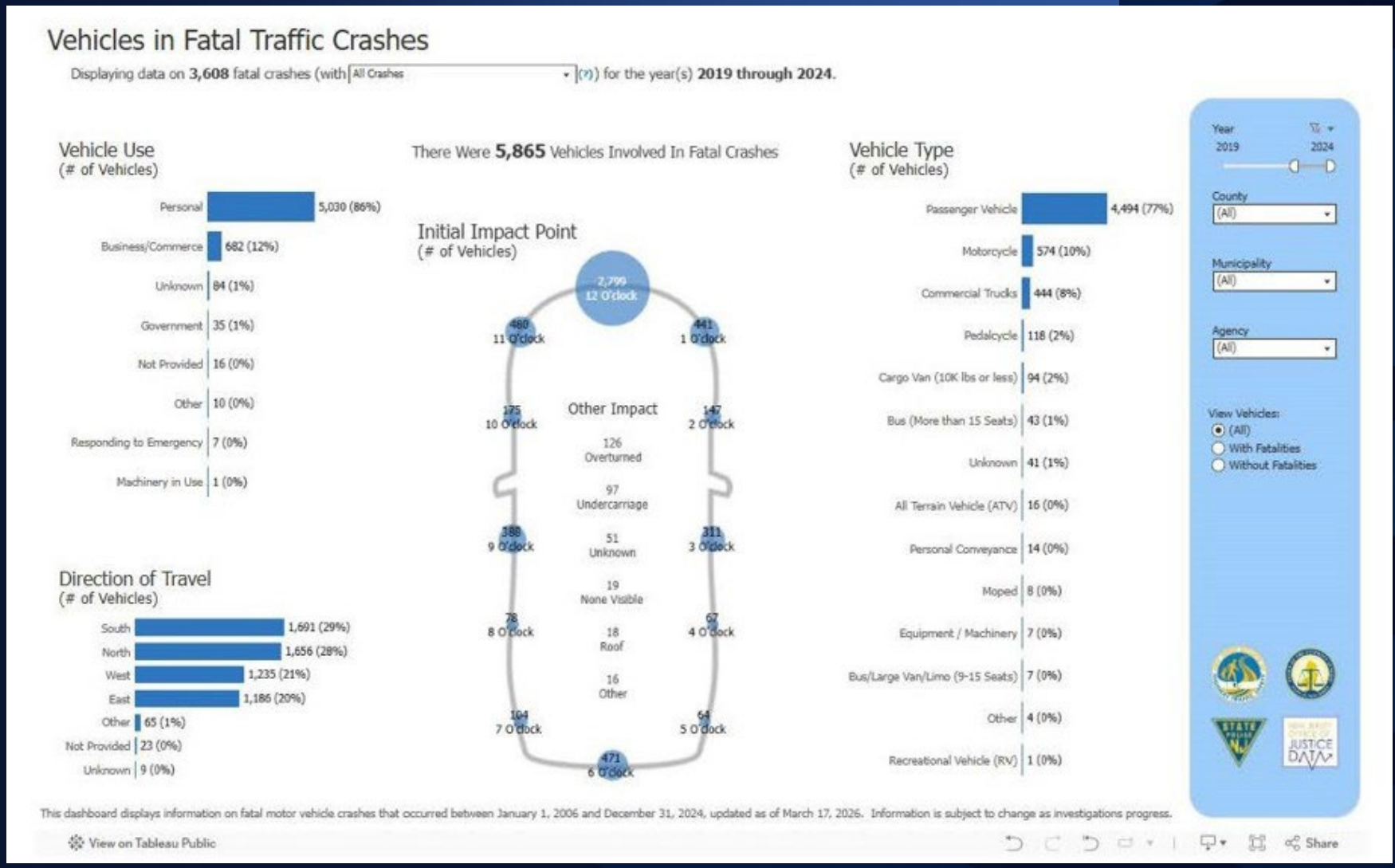
Data Analysis



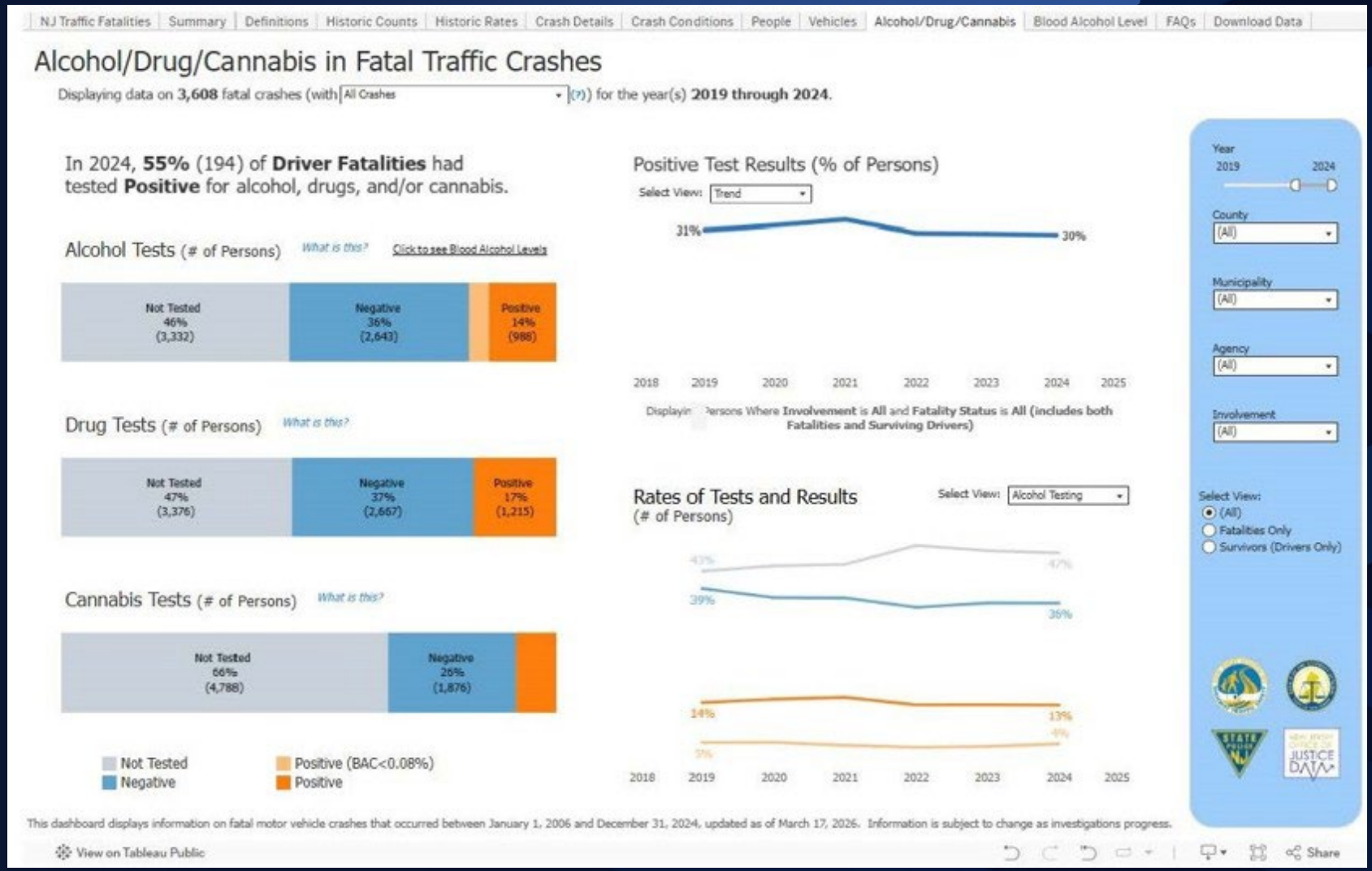
Data Analysis



Data Analysis

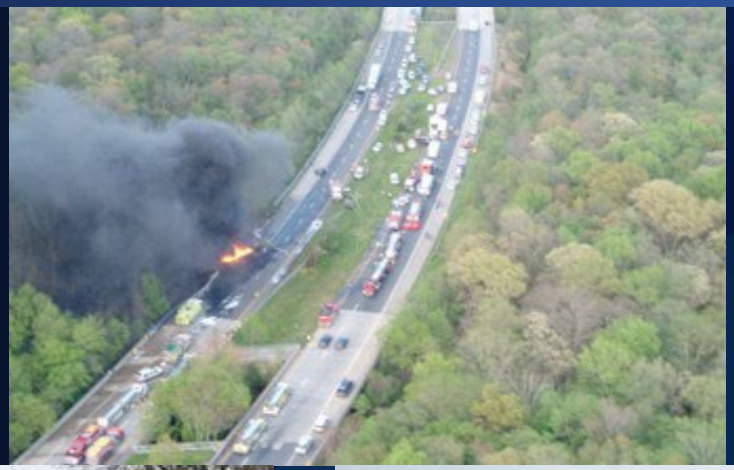


Data Analysis



Reducing Fatalities Through Collaboration

2007 to Present Day



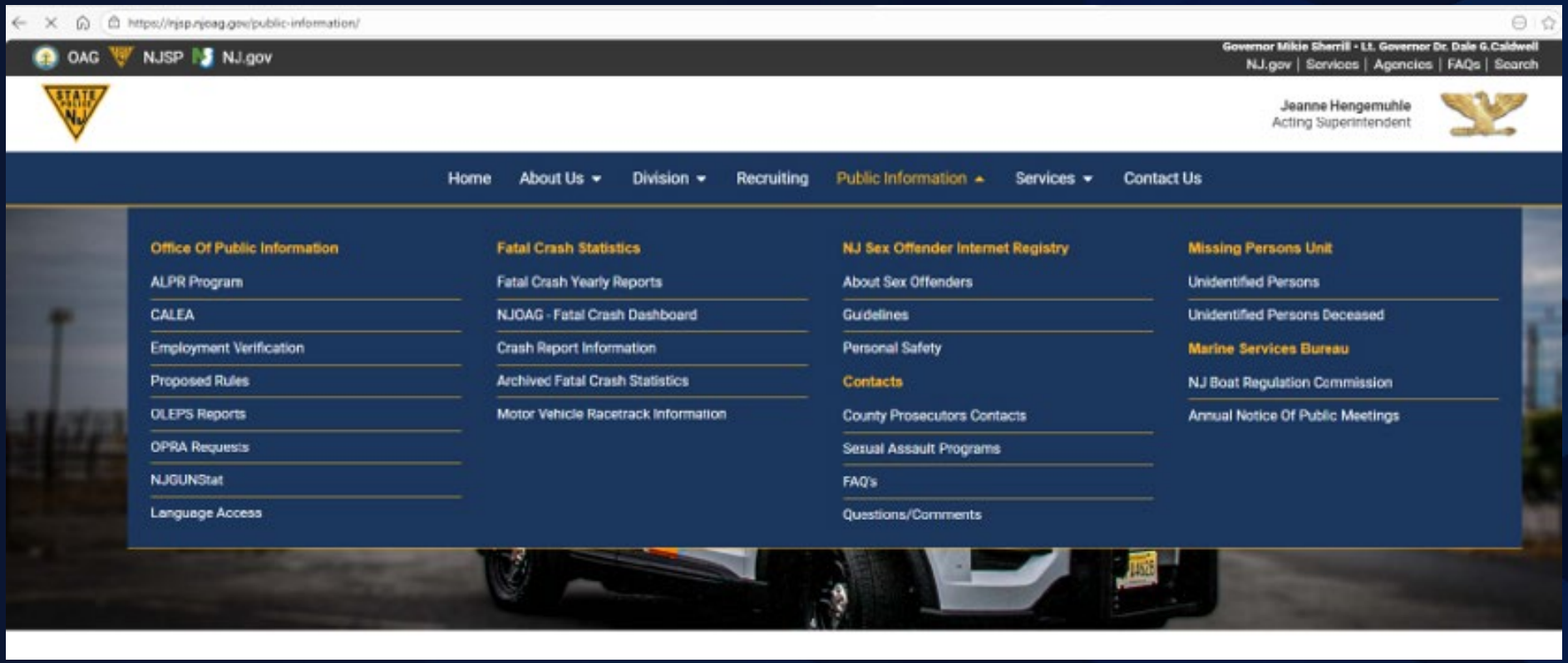




SUMMARY

- Rapid response to fatal and serious injury crashes
- Professional crash investigation and reconstruction support
- Accurate, timely fatal crash data sharing
- Strong Traffic Incident Management partnership
- Targeted, data-driven enforcement campaigns
- Continued collaboration in support of Target Zero

Resources



NJSPTrafficSafety@njsp.gov
609-882-2000 Ext. 2289

https://njsp.njoag.gov

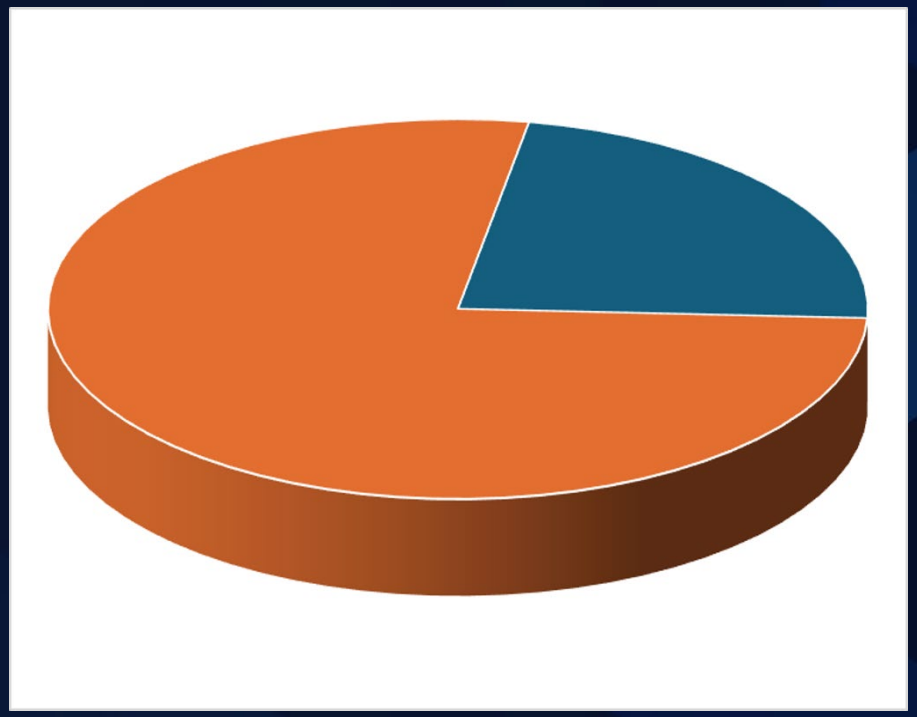
TARGET ZERO & NJDOT

Frank Neary, Director
NJDOT Division of Safety Programs and Transportation Data

2026 Design Summit

Today's Focus

- Crash Data Background
- Data Enhancements
- High-Injury Network
- Safety Project Prioritization





Crash Data Background

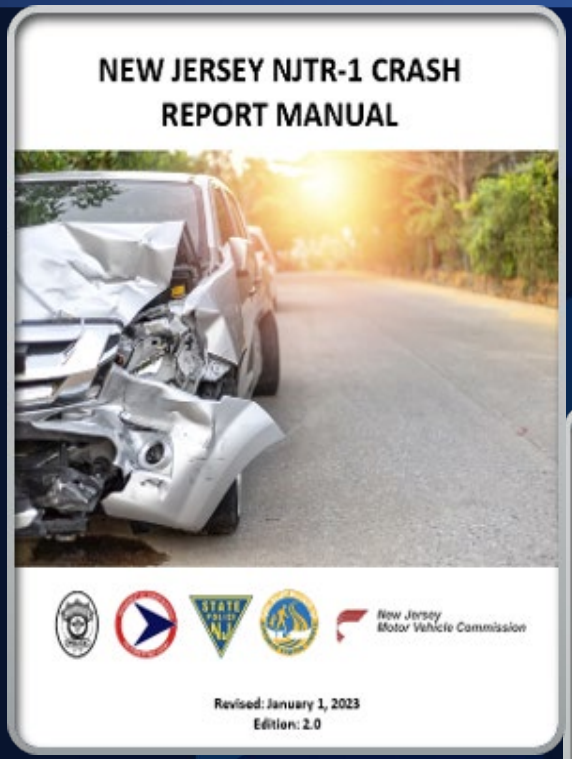
Crash Data Background

- Crash Data "Ownership"
- NJTR-1: What is it, and what isn't it?
- NJTR-1 Challenges for LE & Design

Crash Data Ownership



NJTR-1 Crash Report

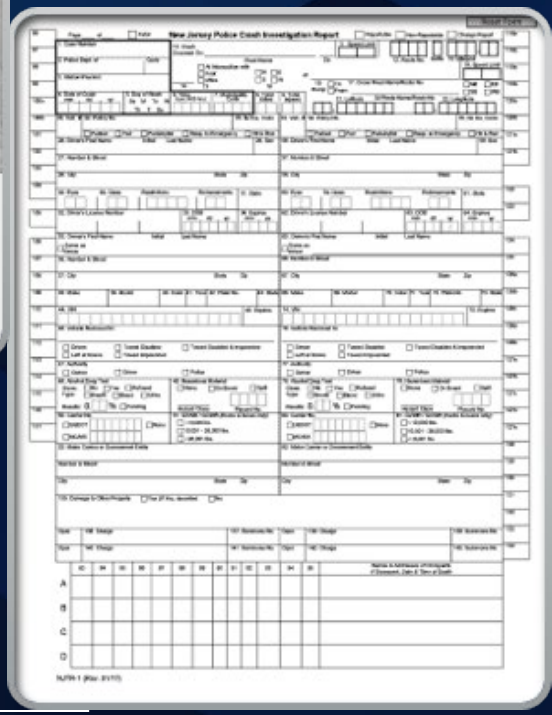


Report

- Minimum 153 data fields
- 1,000+ data attributes
- 2-10+ pages

Manual

- Manual is 130+ pages
- Currently being updated
- Not readily available in the field



The goal is to turn DATA into INFORMATION, and INFORMATION into INSIGHT.

NJTR-1 Challenges for Law Enforcement			
Resource Constraints	**Investigation Challenges**	**Technical Issues**	**Human Factors**
Workload pressures	Evidence collection	Location documentation	Officer variability
Staffing limitations	Dynamic environments	Causation determination	Drivers & witnesses are unreliable

NJTR-1 Challenges for Design			
Data Quality	**Analytical Limitations**	**Contextual Gaps**	**Practical Constraints**
Underreporting	Reactive rather than proactive	Limited exposure data	Time lag
Inconsistency	Statistical challenges	Causation uncertainty	Resource intensive

Crash Data Enhancements

2026 Design Summit

Crash Data Enhancements

Timeliness

- Crash Record Backlog
- NJ Crash and EDT
- Fatal crash data

Quality

- LEO training
- Validation
- Mapping

Accessibility

- Crash Data Dashboard
- Crash Data Portal
- Crash reports

Sustainable & Consistent Improvement



WINS



PROGRESS



CHALLENGES

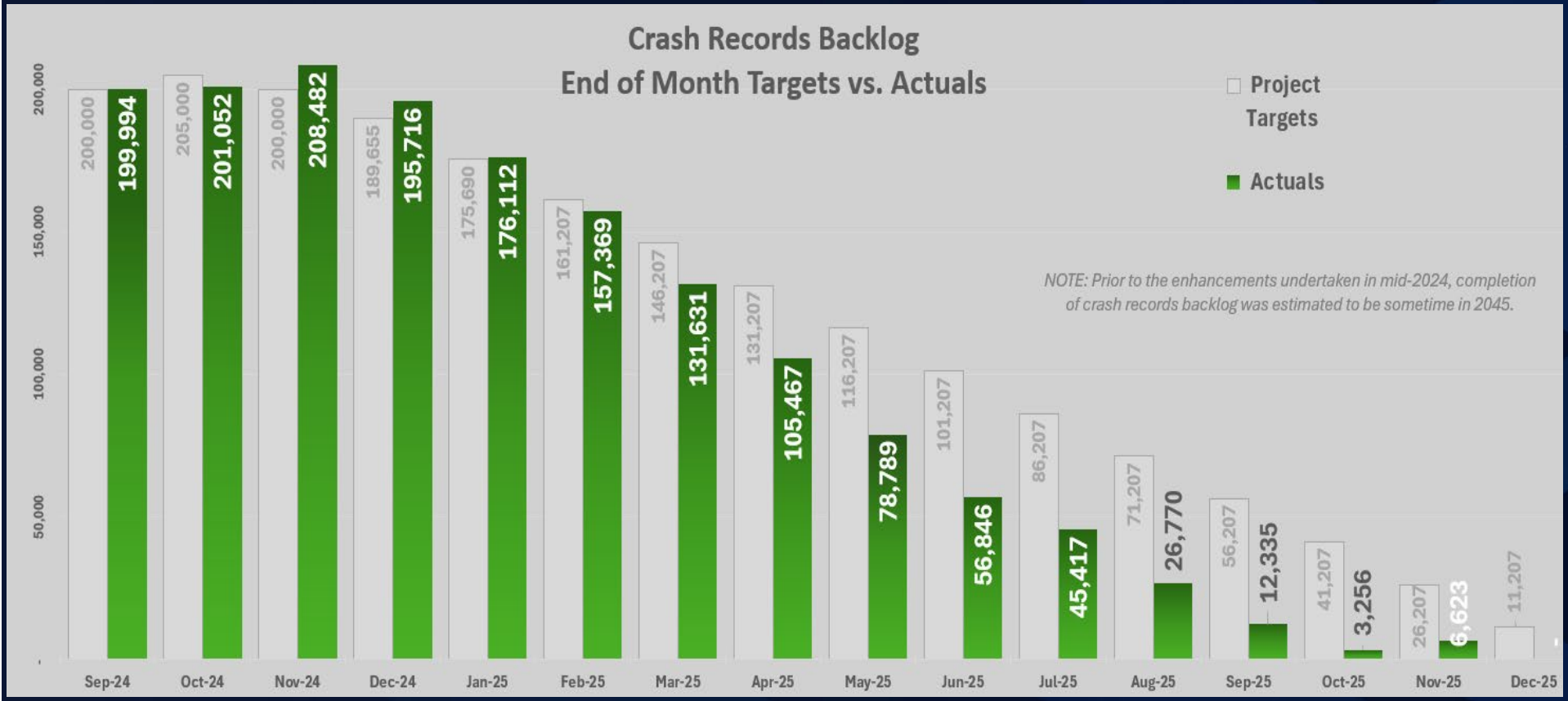
Crash Data Timeliness

WIN: CRASH RECORDS BACKLOG

PROGRESS: NJ CRASH AND EDT

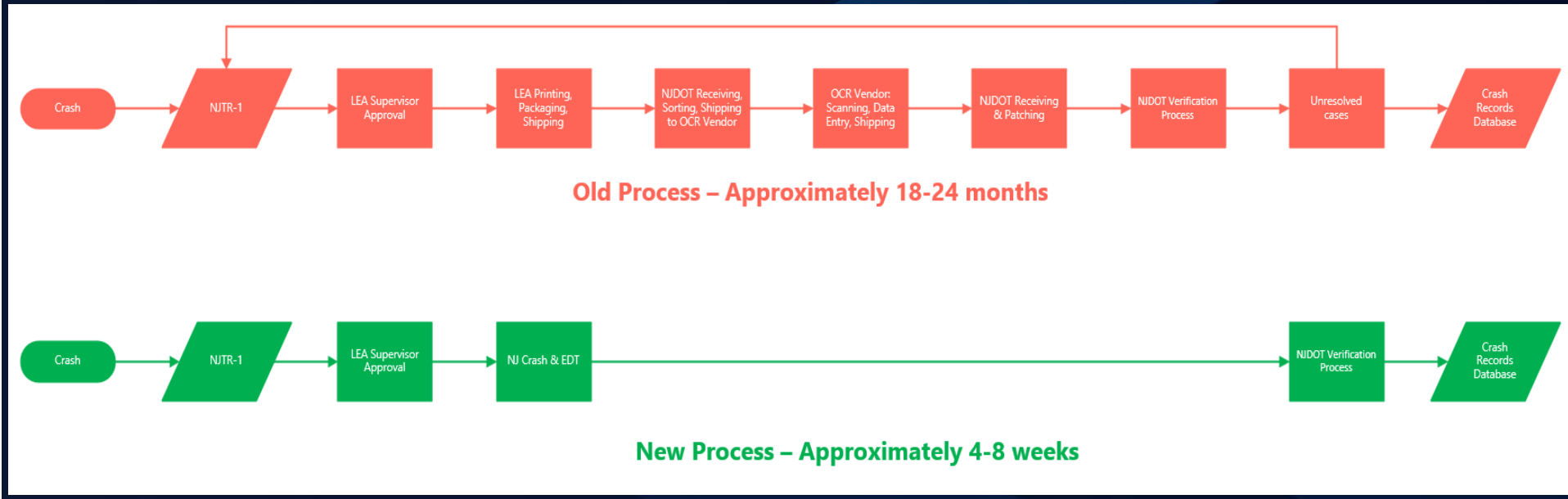
CHALLENGE: “REAL-TIME” FATAL CRASH DATA

Win: Crash Records Backlog Clearance



Progress: NJ Crash & Electronic Data Transmission

- 605 LEAs responsible for reporting
- 1 LEA still sending paper reports
- 99.7% compliance to date



Challenge: “Real-Time” Fatal Crash Data

A crash in which at least 1 person dies is considered a fatal crash until shown to be otherwise:

- Criminal act (homicide), self-inflicted (suicide), natural causes (driver has a medical emergency resulting in death, then the car crashed)

Fatal & certain serious injury crashes can take a year or more to finalize in the database due to:

- Thorough investigations
- Medical and/or toxicology reports
- Interviews and statements
- Criminal prosecutions
- Civil cases
- Appeals processes



Crash Data Quality

WIN: FRONT-END VALIDATION

PROGRESS: LEO TRAINING

CHALLENGE: CRASH MAPPING

Win: Front-End Crash Report Validation

- Old System: Unresolvable errors were returned to LEAs for correction – we could receive responses back months or years later, if ever.

- New System: Officer is alerted to critical errors immediately that must be fixed prior to submission.



Progress: Law Enforcement Training

- Common NJTR-1 errors
- Advanced crash investigation
- Specialty courses
- *Concept*: Supervisory crash review certification program



Challenge: Crash Mapping





- Different software platforms
- Different platform versions
- Misidentified crash locations
- Narrative, diagram, lat/long, and description mismatch

Crash Data Accessibility

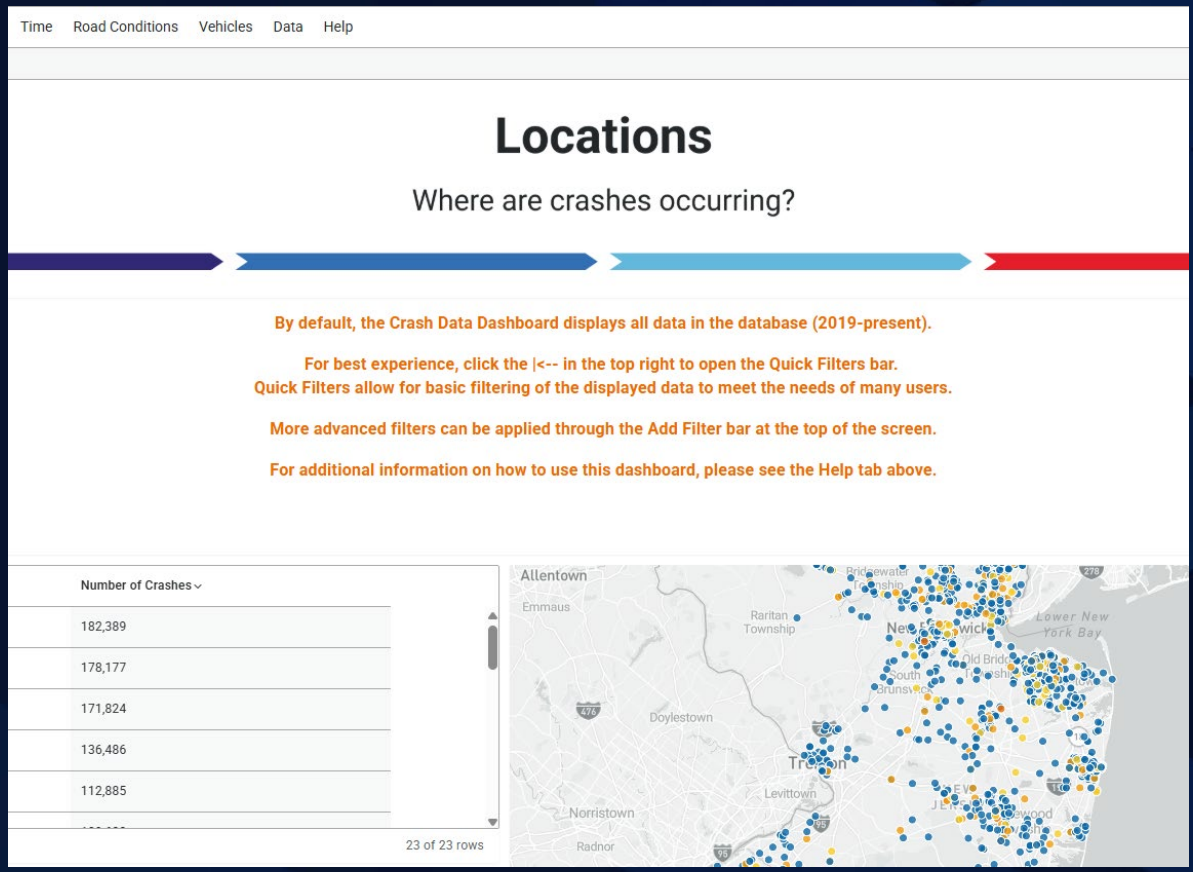
WIN: CRASH DATA DASHBOARD

PROGRESS: CRASH DATA PORTAL

CHALLENGE: CRASH REPORTS FOR DESIGN

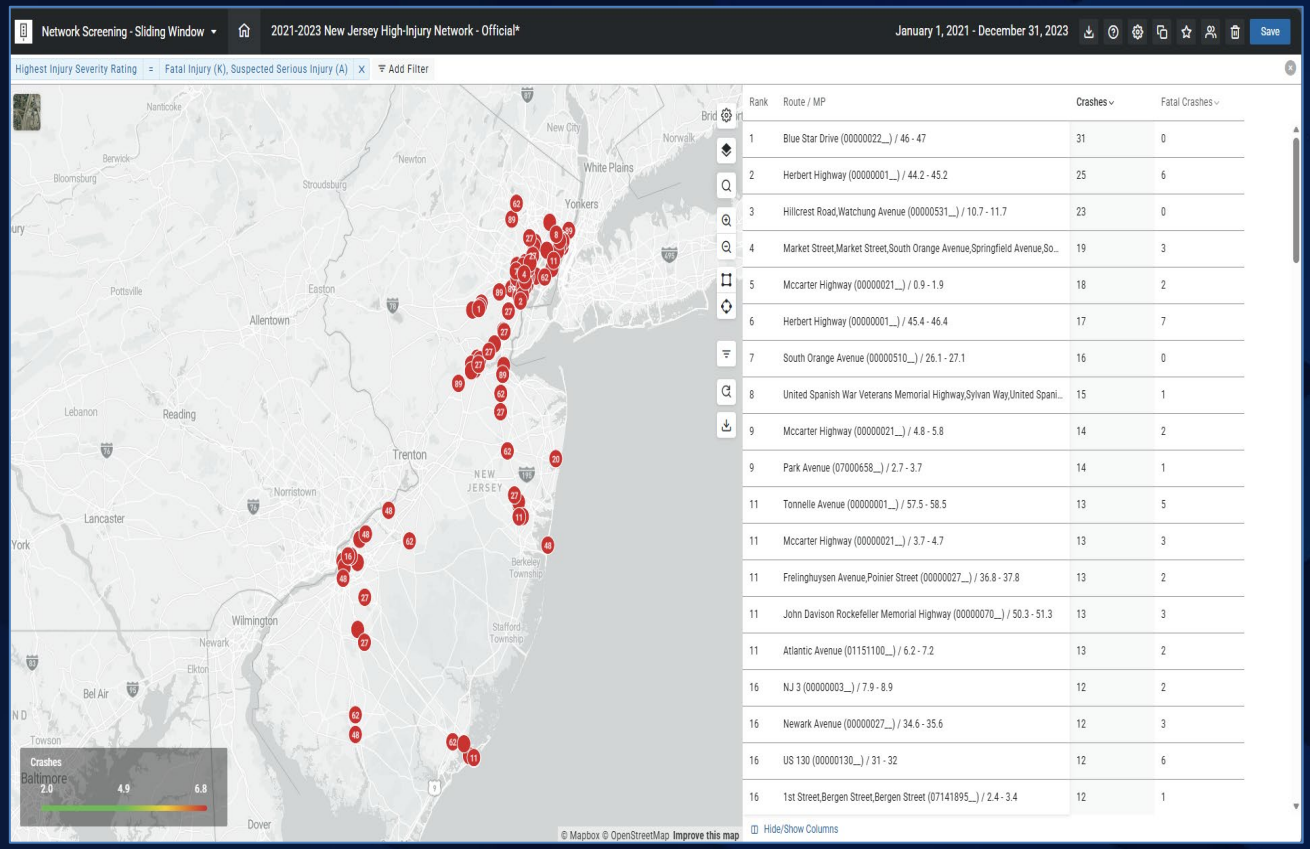
Win: NJDOT Crash Data Dashboard

- Full public transparency (media, advocacy, etc.)
- Searchable “real-time” crash data
- Aggregate data only



Progress: NJDOT Crash Data Portal

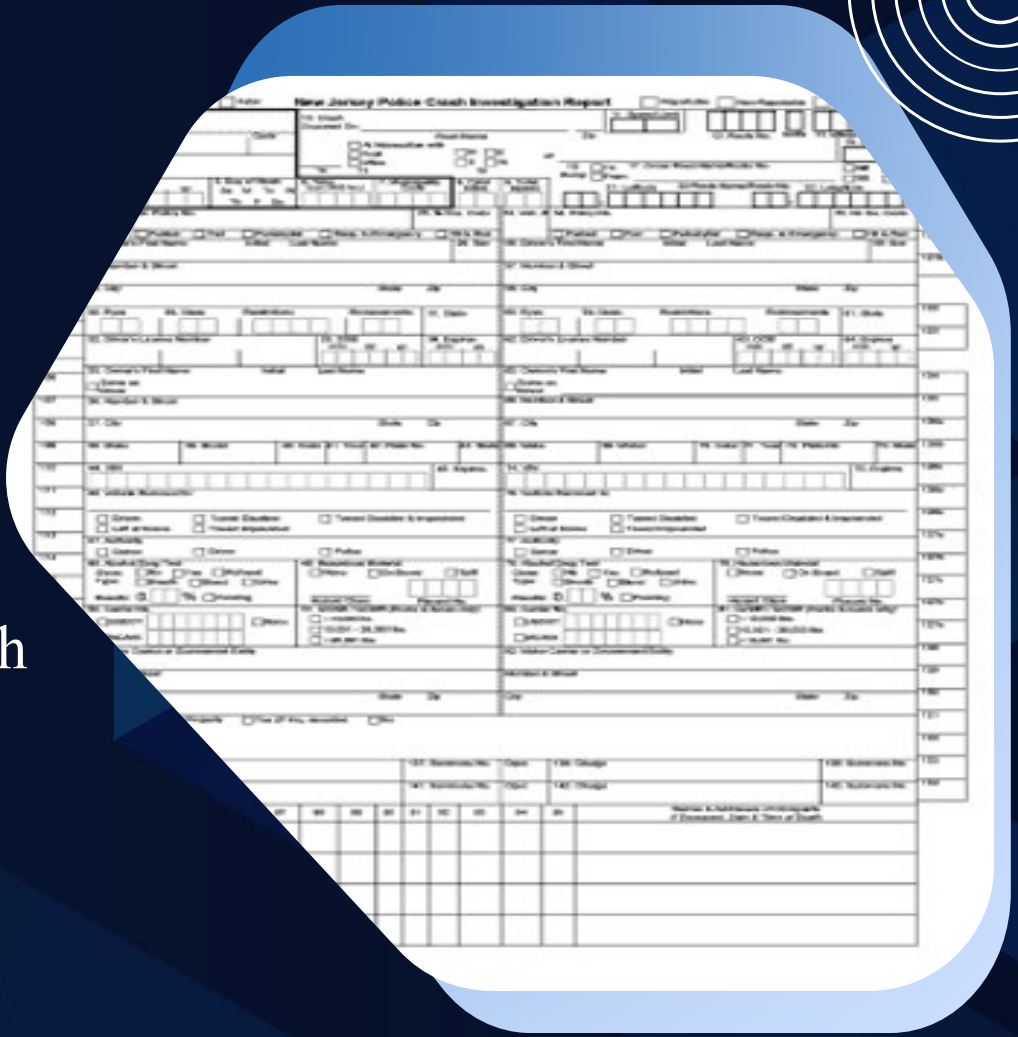
- For transportation professionals only
- Consultant users are limited to their projects
- Detailed queries and analyses
- No crash reports, narratives, or diagrams yet *(~early 2027)*



Rank	Route / MP	Crashes	Fatal Crashes
1	Blue Star Drive (00000022__) / 46 - 47	31	0
2	Herbert Highway (00000001__) / 44.2 - 45.2	25	6
3	Hillcrest Road,Watchung Avenue (00000531__) / 10.7 - 11.7	23	0
4	Market Street,Market Street,South Orange Avenue,Springfield Avenue,So...	19	3
5	Mccarter Highway (00000021__) / 0.9 - 1.9	18	2
6	Herbert Highway (00000001__) / 45.4 - 46.4	17	7
7	South Orange Avenue (00000510__) / 26.1 - 27.1	16	0
8	United Spanish War Veterans Memorial Highway,Sylvan Way,United Spani...	15	1
9	Mccarter Highway (00000021__) / 4.8 - 5.8	14	2
9	Park Avenue (07000658__) / 2.7 - 3.7	14	1
11	Tonnelle Avenue (00000001__) / 57.5 - 58.5	13	5
11	Mccarter Highway (00000021__) / 3.7 - 4.7	13	3
11	Frelinghuysen Avenue,Poinier Street (00000027__) / 36.8 - 37.8	13	2
11	John Davison Rockefeller Memorial Highway (00000070__) / 50.3 - 51.3	13	3
11	Atlantic Avenue (01151100__) / 6.2 - 7.2	13	2
16	NJ 3 (00000003__) / 7.9 - 8.9	12	2
16	Newark Avenue (00000027__) / 34.6 - 35.6	12	3
16	US 130 (00000130__) / 31 - 32	12	6
16	1st Street,Bergen Street,Bergen Street (07141895__) / 2.4 - 3.4	12	1

Challenge: Crash Reports for Design

- For crash analysis, design exceptions, collision diagrams, etc.
- Current: Still available through data request from BTDS through PMs
- Future: Self-service portal with AI-assisted PII retraction



The Statewide High-Injury Network

2026 Design Summit

NJ High-Injury Network

145 one-mile road segments	F & SI crashes
All roads, all modes	2021-2023 crash data
3-year redevelopment cycle	PUBLIC-FACING!



New Jersey Target Zero Commission High-Injury Network

(effective 12/1/2025 - 12/31/2028)

Use of the information contained herein is governed by the State of New Jersey Legal Statement and Disclaimers (https://www.nj.gov/nj/legal.shtml), the New Jersey Department of Transportation Legal Notice (https://www.nj.gov/transportation/legal/), the New Jersey Department of Transportation Privacy Notice (https://www.nj.gov/transportation/privacy/), 23 USC §407 (https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title23-section407&num=0&edition=prelim), and other applicable statutes, rules, and regulations.

Road Name(s)	State Route Identifier	Roadway Ownership	Begin Mile Post	End Mile Post	Fatal (F) Crashes	Serious Injury (SI) Crashes	Total F+SI Crashes	Municipalities	Counties	Metropolitan Planning Organization Region	Legislative District	Congressional District
Blue Star Drive	00000022__	NJDOT	46.0	47.0	0	31	31	NORTH PLAINFIELD BORO, WATCHUNG BORO	SOMERSET	NJTPA	21, 22	7, 12
Herbert Highway	00000001__	NJDOT	44.2	45.2	6	19	25	ELIZABETH CITY	UNION	NJTPA	20	8
Hillcrest Road,Watchung Avenue	00000531__	County	10.7	11.7	0	23	23	WARREN TWP, WATCHUNG BORO	SOMERSET	NJTPA	21	7
Market Street,South Orange Avenue,South Orange Avenue,Springfield Avenue	00000510__	County	28.3	29.3	3	16	19	NEWARK CITY	ESSEX	NJTPA	29	10
Mccarter Highway	00000021__	NJDOT	0.9	1.9	2	16	18	NEWARK CITY	ESSEX	NJTPA	29	8, 10

Safety Prioritization

2026 Design Summit

High-Injury Network

- Highway Safety Improvement Program, and others, alignment
- Prioritized safety improvements in new and existing projects to the extent it is feasible
- Annual report to the Governor and Legislature
- Significant public and political scrutiny for progress!



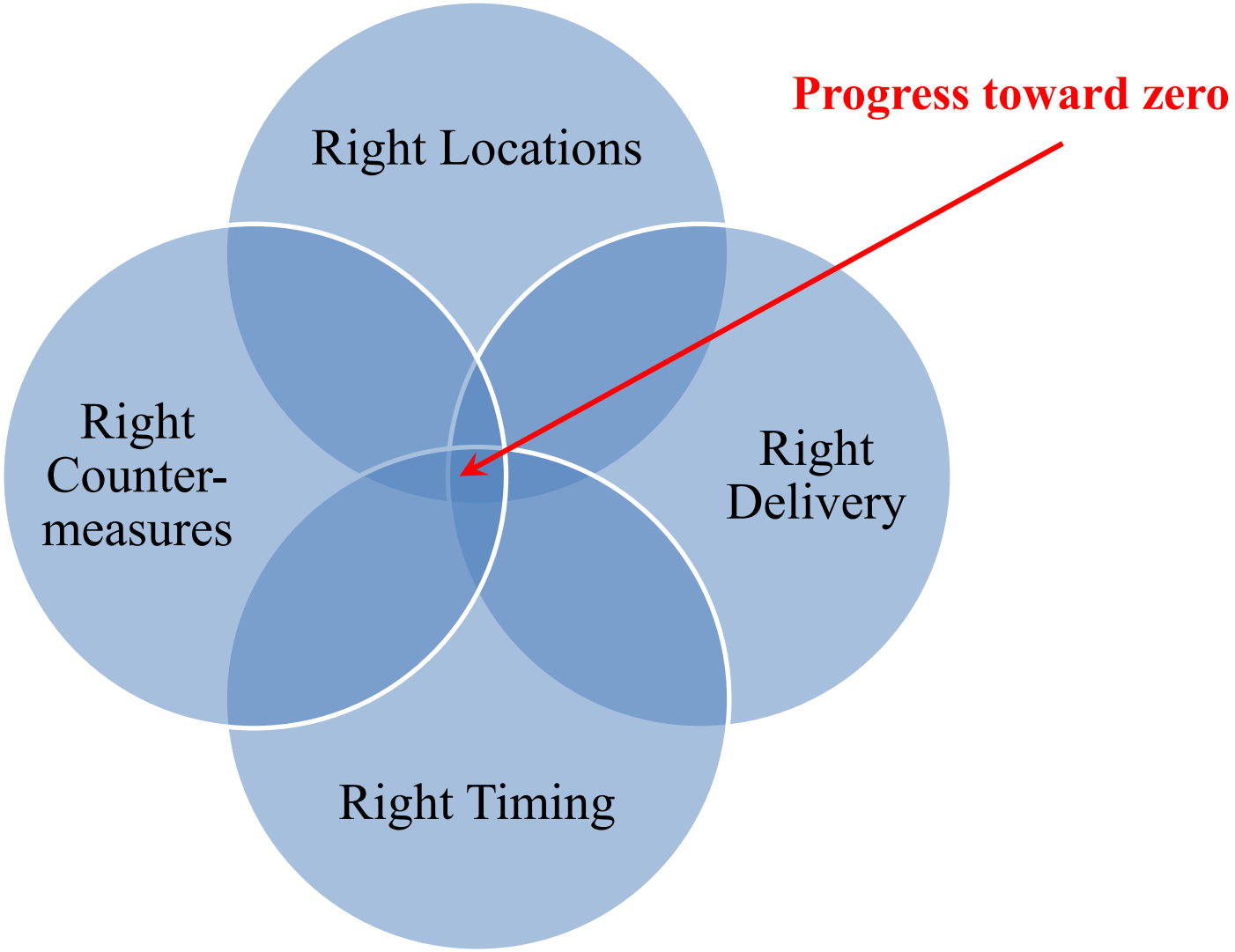
Project Prioritization & Delivery

- HIN is the focus for all future HSIP-funded projects
- DSPTD Goal: get at least some safety completed at all NJDOT locations within 3-year HIN redevelopment cycle

In Development

	Quick-Fix Project	Simple-Fix Project	Capital Project
Funding source	Transportation Trust Fund	Highway Safety Improvement Program	Multiple sources
Available funding	Very limited	Moderate	Significant
Delivery time	> 2 years	2-3 years	3-10+ years
Safety required	No	Yes	No
Project scope	Limited by funding	Limited	Virtually unlimited

Project Prioritization & Delivery



The Road to Zero



- Commitment to Safe System Approach
  → no loss of life is inevitable
- Strengthened crash data systems
  → timeliness, quality, & accessibility
- High-injury network
  → prioritization that will save the most lives
- Delivery options
  → the right projects get delivered

If not Zero,
then who are you
willing to sacrifice?



Websites

Target Zero Commission *(Action Plan and High-Injury Network)*	www.dot.nj.gov/targetzero
NJDOT Crash Data Dashboard	www.nj.gov/transportation > References > Crash Data Dashboard
NJDOT Crash Data Portal	Email for Access: BDTS-NJDOT.Numetric@dot.nj.gov

NJDOT Division of Safety Programs and Transportation Data

Safety-Focused, Data-Driven, Toward Zero

Frank Neary, Director
NJDOT Division of Safety Programs and Transportation Data
Frank.Neary@dot.nj.gov



WORK ZONES SAVE LIVES

Design Summit 2026

Panelists



Lee Steiner
Project Engineer, Traffic
Retired, NJDOT



Jignesh Patel
Supervising Engineer Construction
and Maintenance, NJDOT

Division of Traffic Engineering
Work Zone Traffic Control Unit

Jaime Oplinger, Director

(609) 963-1769

Manager TE Central

John Fam

609-963-1470

North Jersey Unit

Meriam Michael, P.E.

Rusul Rasheed and Wilmer Martinez

(609) 963-1333

South Jersey Unit

Gary Stricker, P.E.

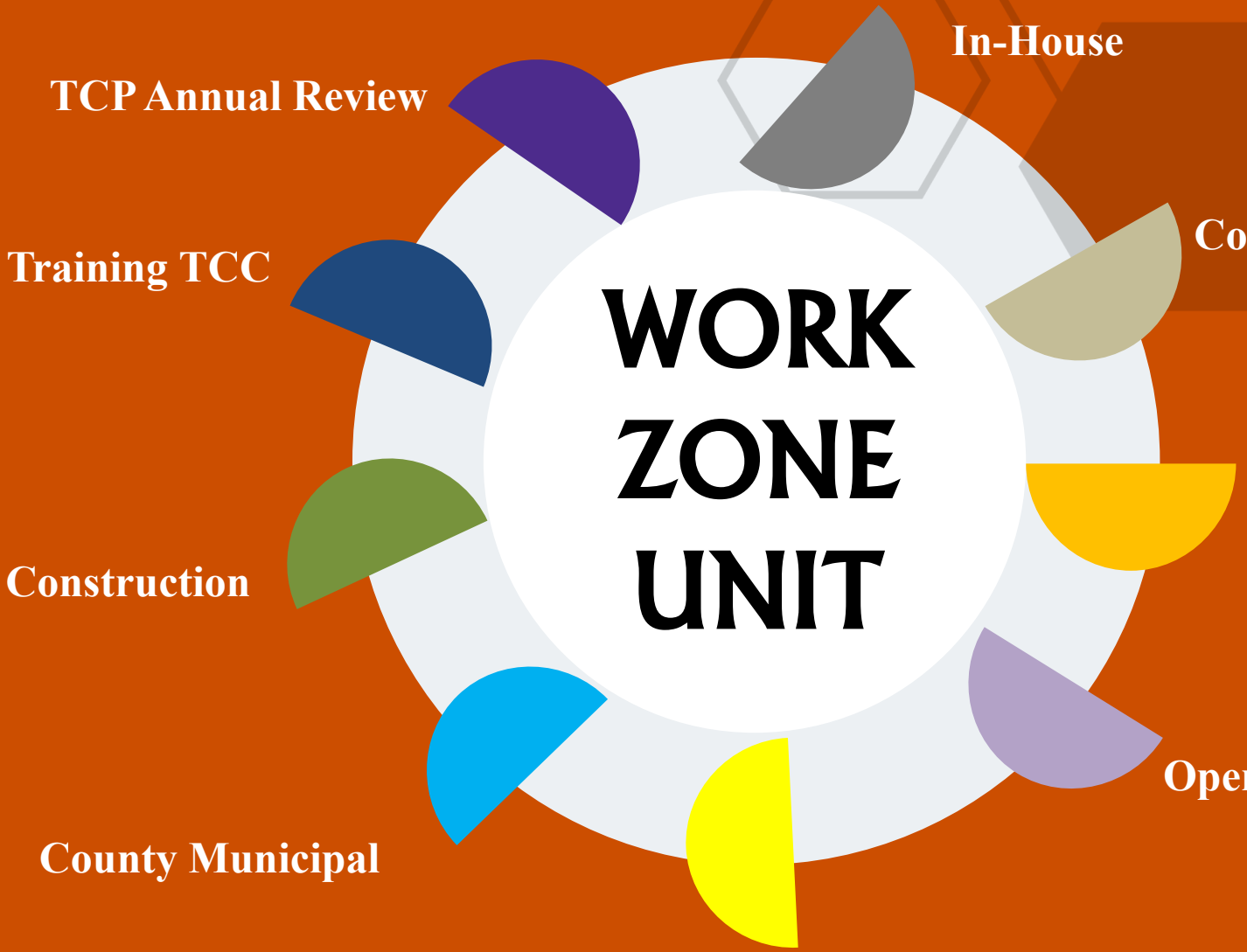
Rick Kendy Noziere,

Edward Liu and Magda Khalil

(609) 963-1796

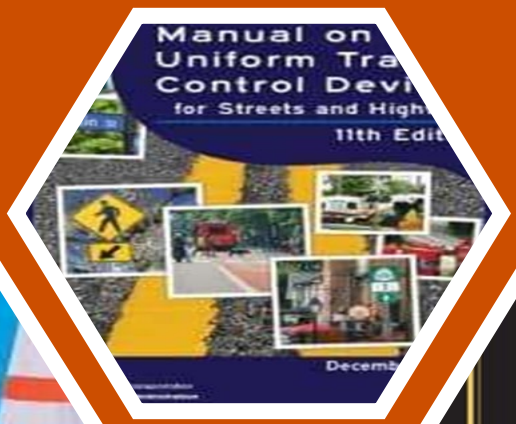


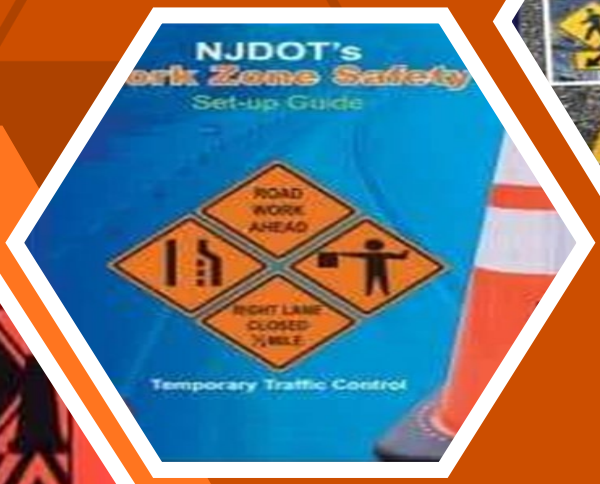
WORK ZONE TRAFFIC CONTROL UNIT TASKS

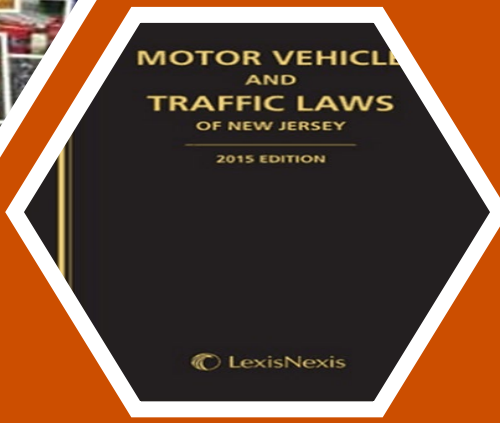


MANUALS REGULATE THE STANDARDS













WORK ZONE DEVICES

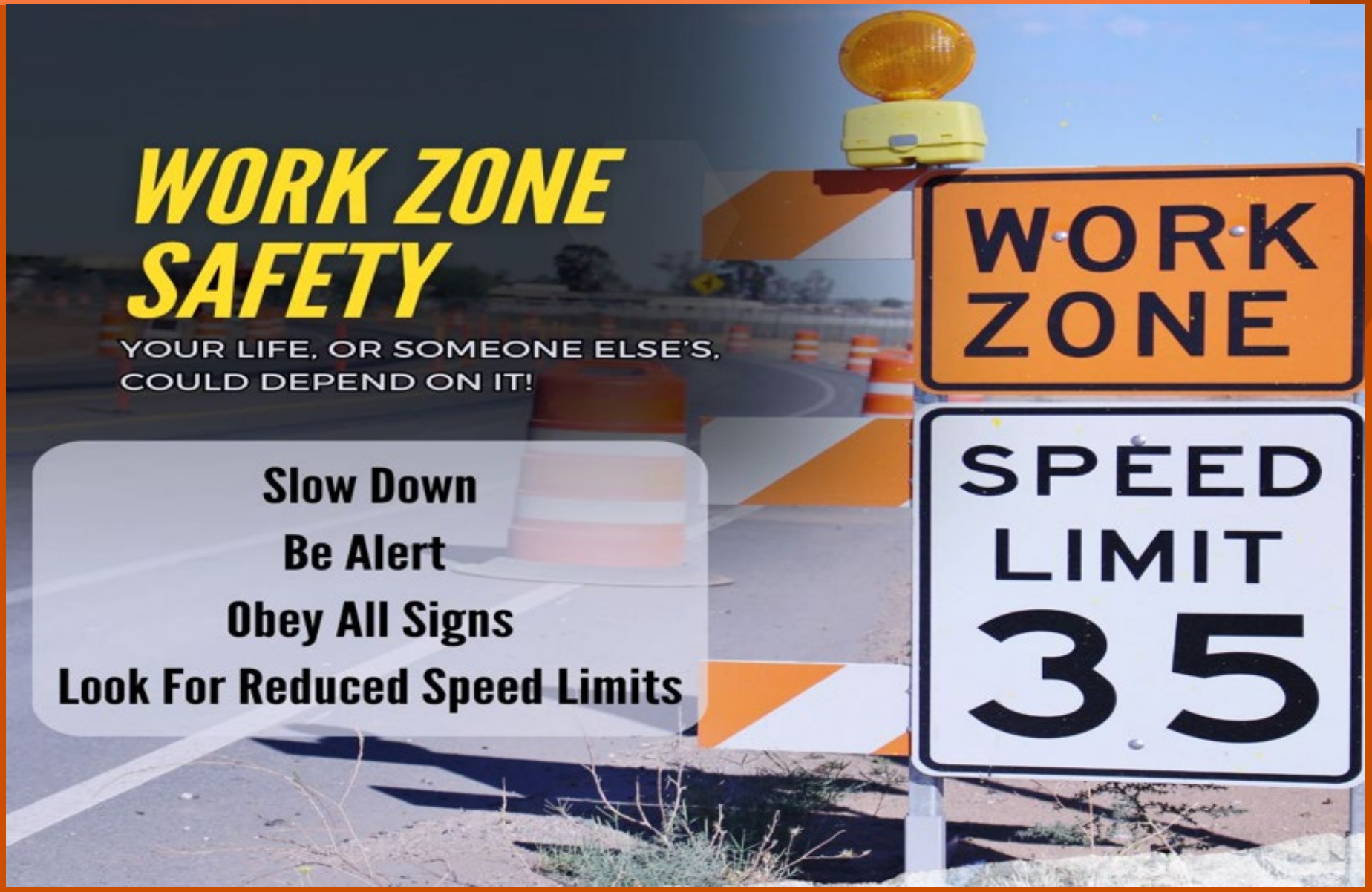




MUTCD VS SCD of NJDOT

NJDOT Flashing Arrow Board Placement
End of the TAPER Length

NJDOT Approves Speed Reduction in Work Zone







Work Zones



Driving Tips

- Slow down
- Follow the signs
- Be alert
- Remain calm
- Give trucks space

They need more room to stop and change lanes.

Orange signs of work zones

Enter with extra concentration, caution, and common sense.





REMEMBER: Speed limit applies *regardless* of the presence of workers and **fines are doubled.**

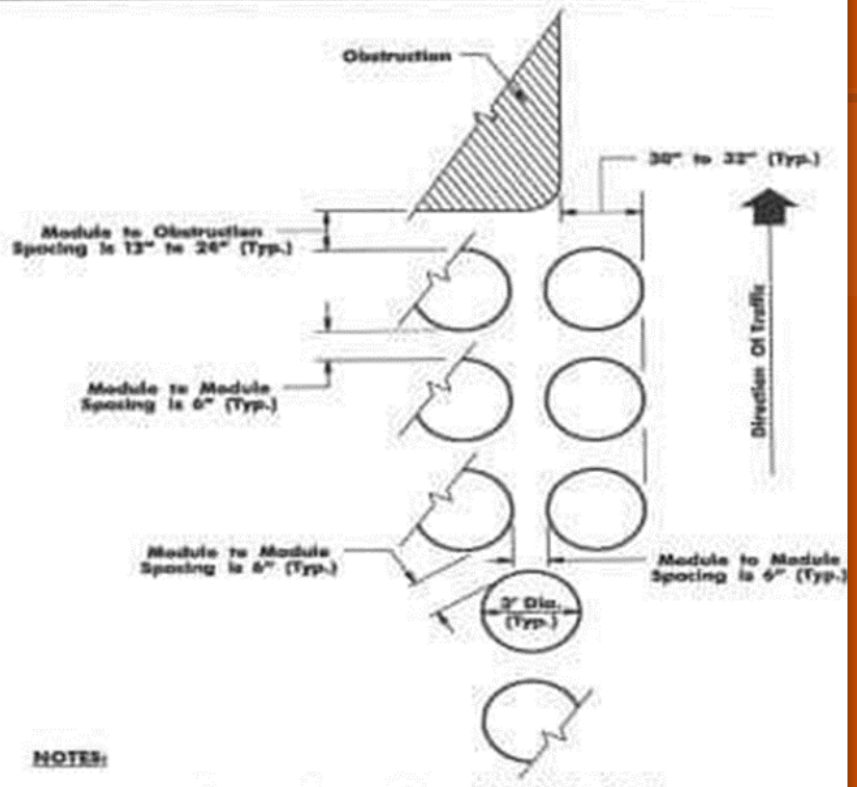


High-visibility 360 degree safety apparel

- NJDOT Flaggers required to wear “ANSI public safety vests” class 3, level 2 orange

BDC21M

FIGURE 9-C:
TYPICAL INERTIAL BARRIER LAYOUT
FOR THE LAST THREE MODULE ROWS



NOTES:

1. A minimum of two modules must be provided in the last three rows.
2. The designer shall include the following note on the construction detail for the module layout:

   "THE MODULE TO MODULE SPACING AND THE SPACING BETWEEN MODULES AND THE OBSTRUCTION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS."

NJDOT Roadway Design Manual
Crash Cushions



Condition of Concrete Barrier Curb

Acceptable (Min)



Not Acceptable



TRAFFIC CONTROL COORDINATOR TRAINING (TCC TRAINING)

RUTGERS–NEW BRUNSWICK
Center for Advanced Infrastructure and Transportation
School of Engineering

3-Day TCC Course (Industry)

Refresher Course Every 2 years

TTT (Police Officers)

TCC Training @ Rutgers University

2026 Dates

Jan. 06
Jan. 13-15
Jan. 20-22

Feb. 12
Feb. 17-19

Mar. 10-12
Mar. 18
Mar. 24-26

Apr. 08
Apr. 14-16

Sept. 01
Sept. 03

Oct. 06-08
Oct. 15

Nov. 17-19

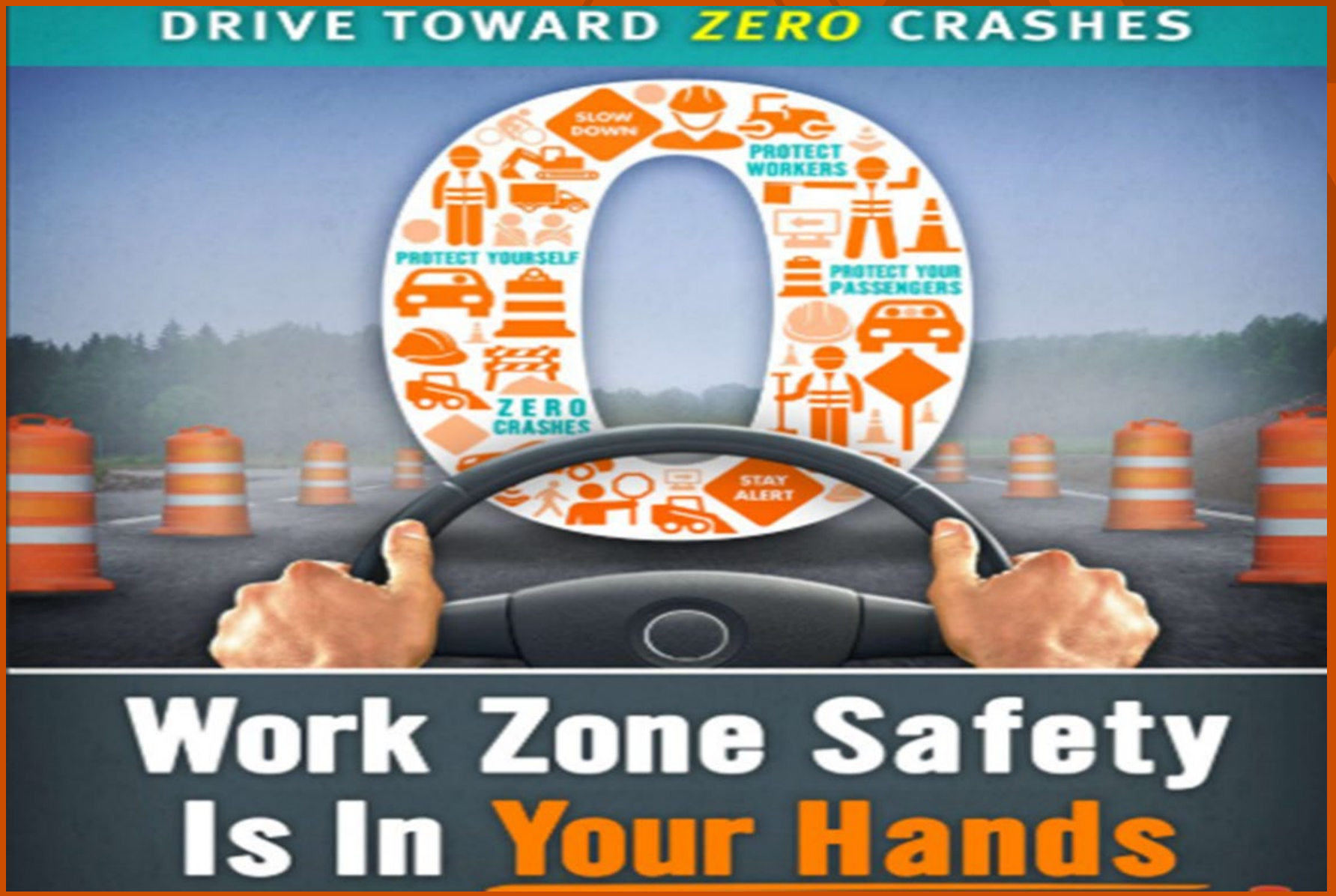
Dec. 10
Dec. 15-17



Presented By:

- Meriam Michael, PE
- Rick – Kendy Noziere

KEEP NJ ROAD WORK ZONES SAFE !





WORK ZONE SAFETY

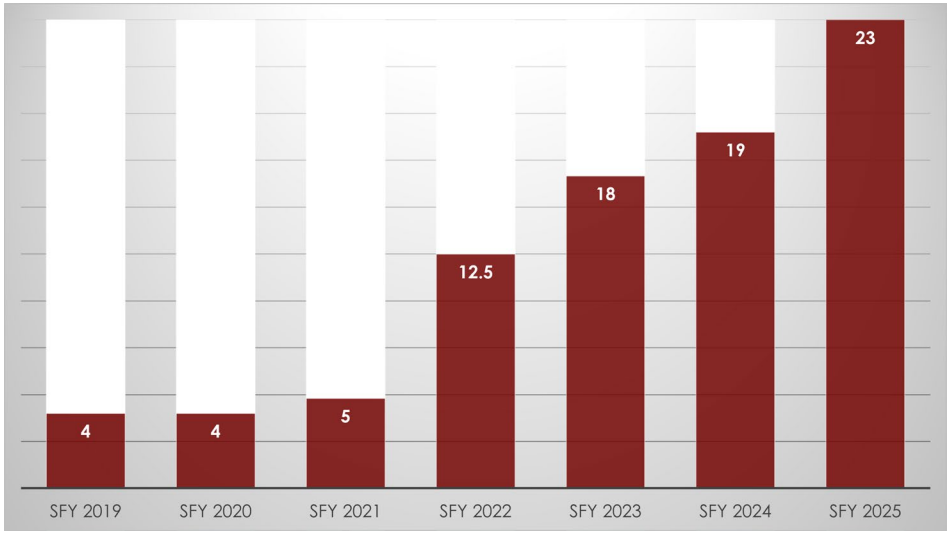
Design Summit 2026

BIG BIG

IGNORE IGNORE



WORK ZONE SAFETY SERVICES BY NJSP

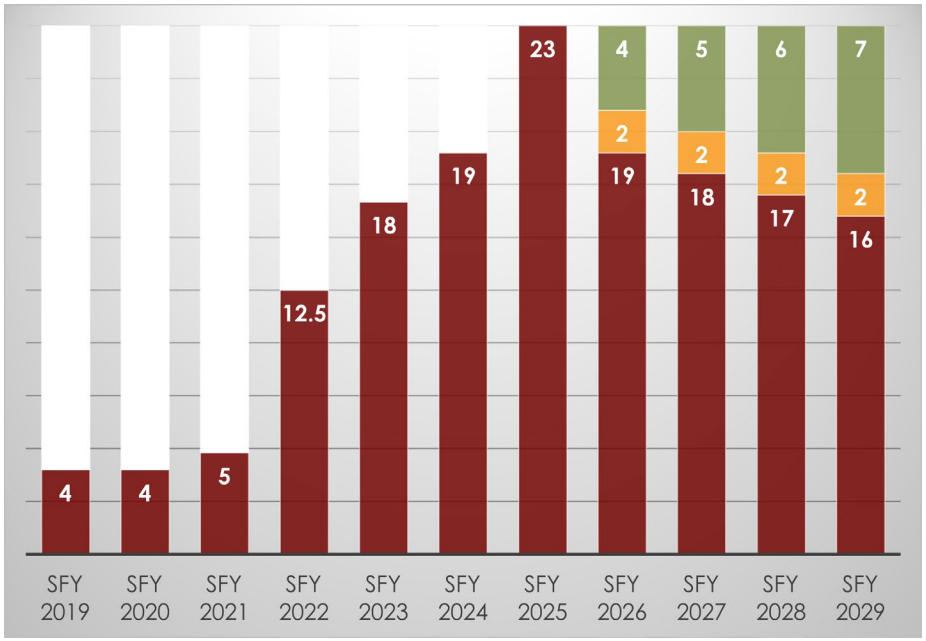




Activities Requiring State Police Services:

- Override a signal
- Closure of all lanes on state Highways or Interstates
- Enhancements

Transition to Federal Funding





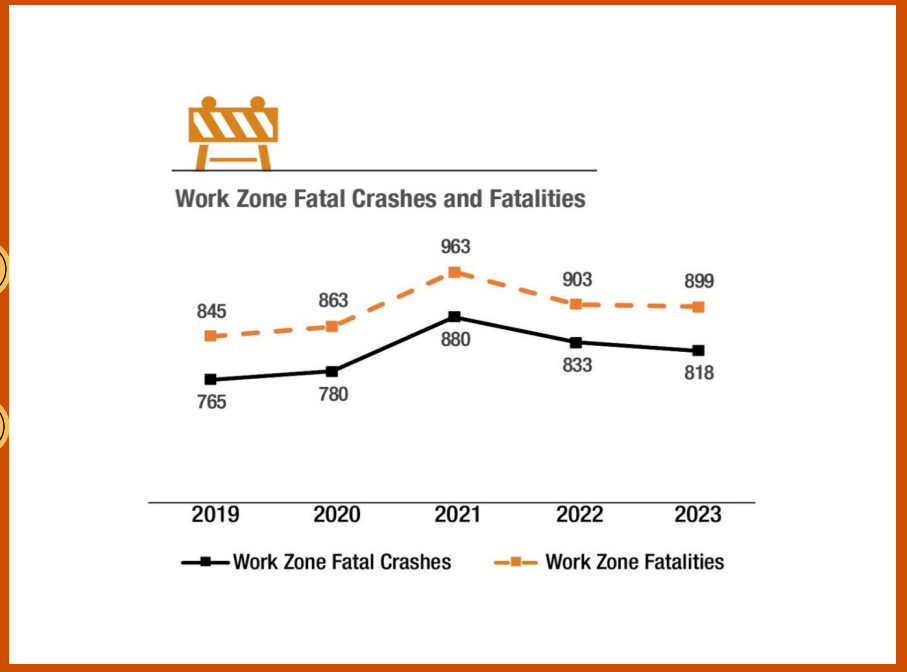
Safety

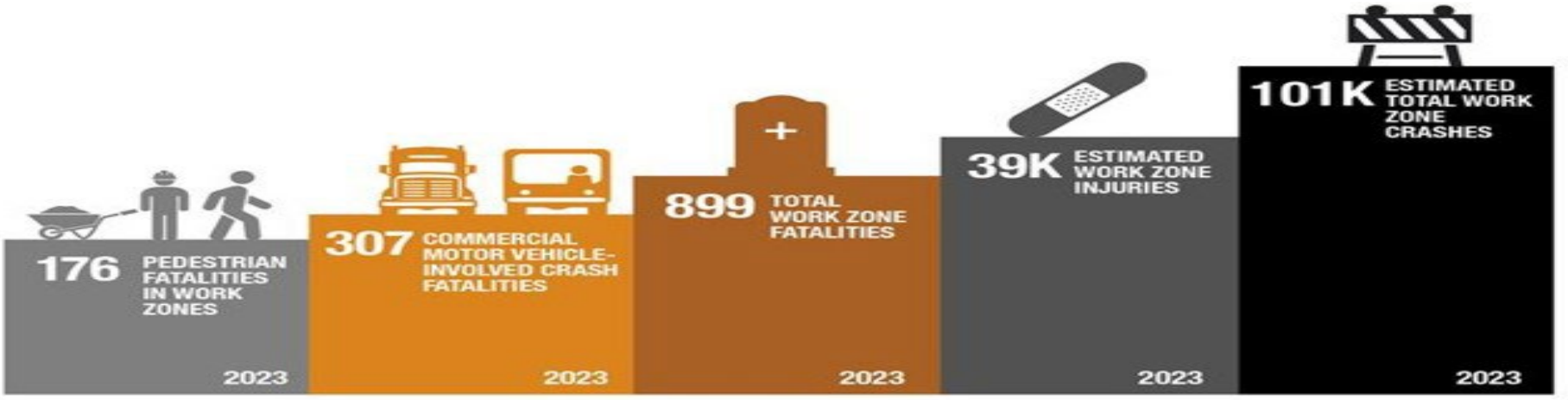
Nothing is more important to us than everyone goes home every night.

Portway, Fish House Rd Pennsylvania Ave(CR 659)	$1.5M
Re-advertisement of Route 7 Kearny Drainage, Drainage Improvements,	4.0M
Route 42 Kennedy Ave To Atlantic City Expressway	1.4M
RT 47 Grove St to RT 130, Pavement	1.2M

National Work Zone Crash Data









We Can't Do It Alone

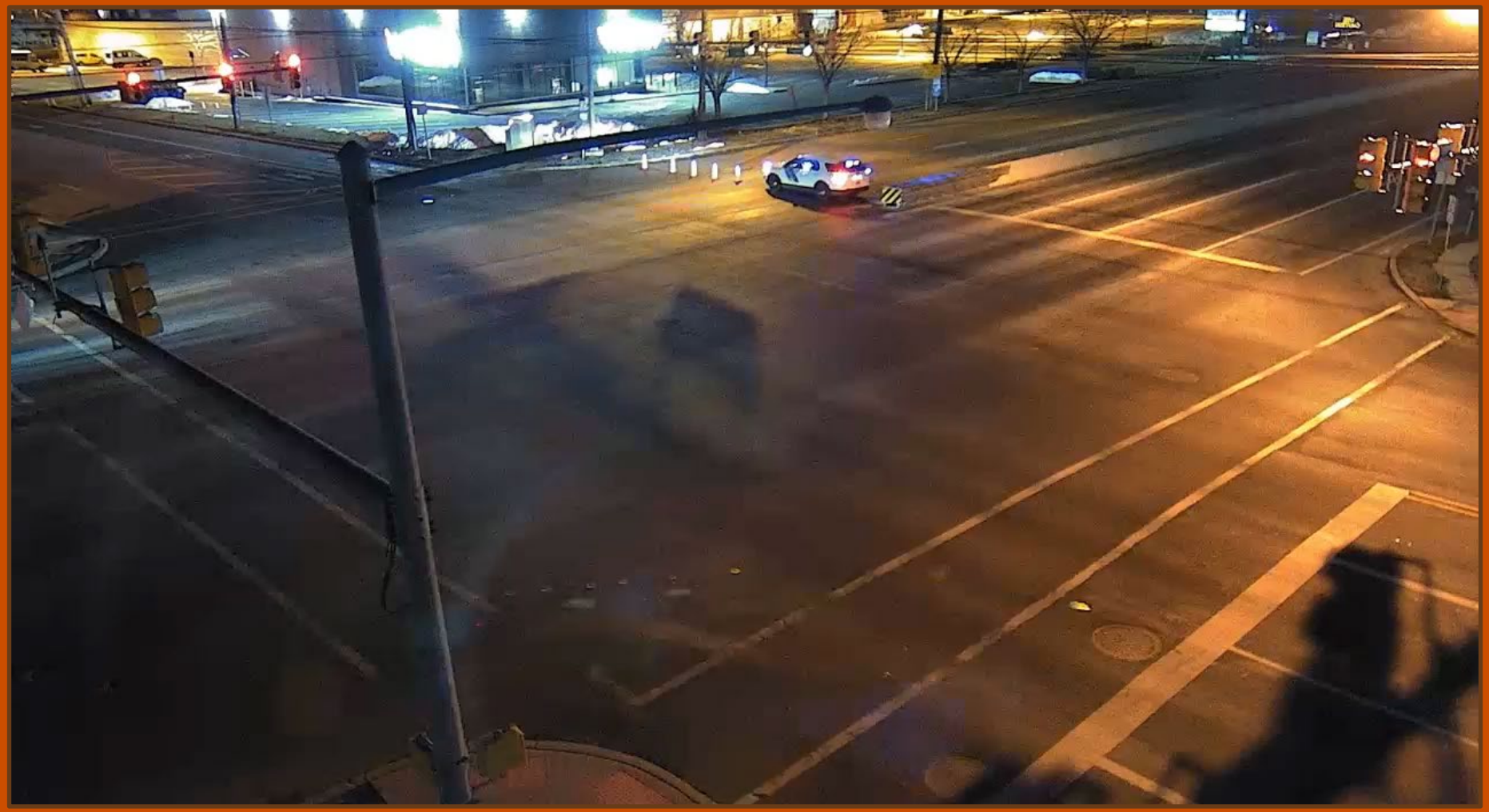
GOOD

HARM

Public Awareness Campaigns

Campaigns to educate drivers on work zone safety.

Advertisements, social media, community outreach.



Questions?



Break

10:45 am



Deepening the Future

10:45 am

Deepening our Future:

The Power of Dredging

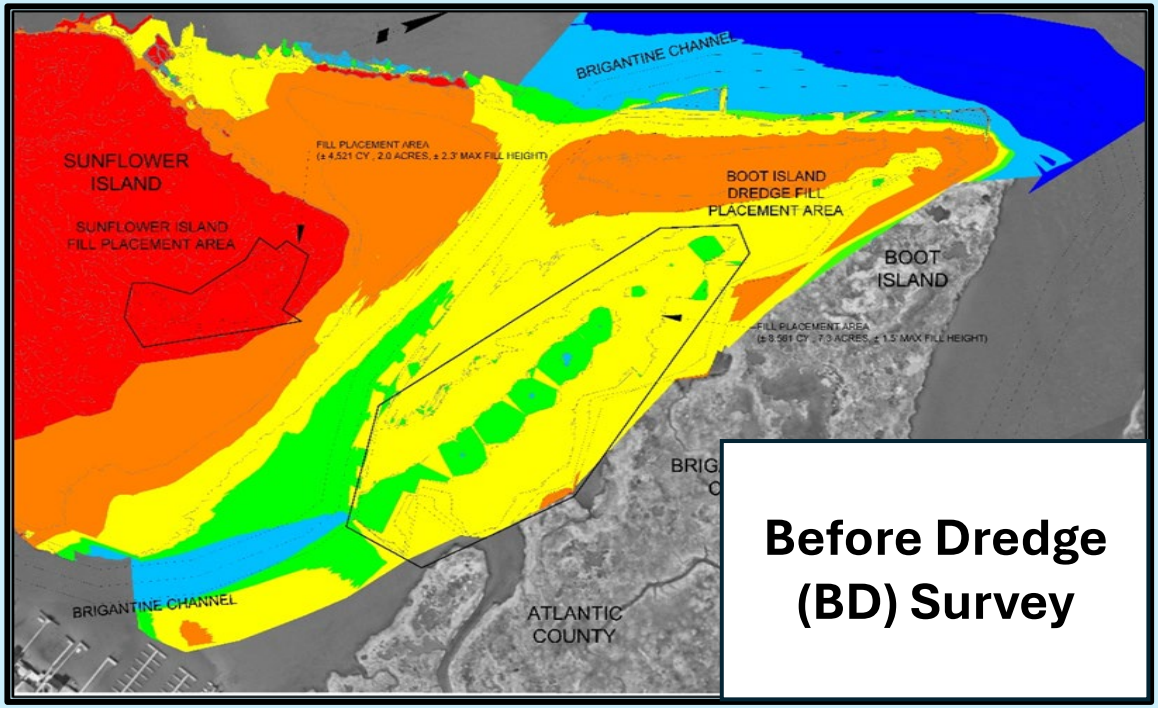


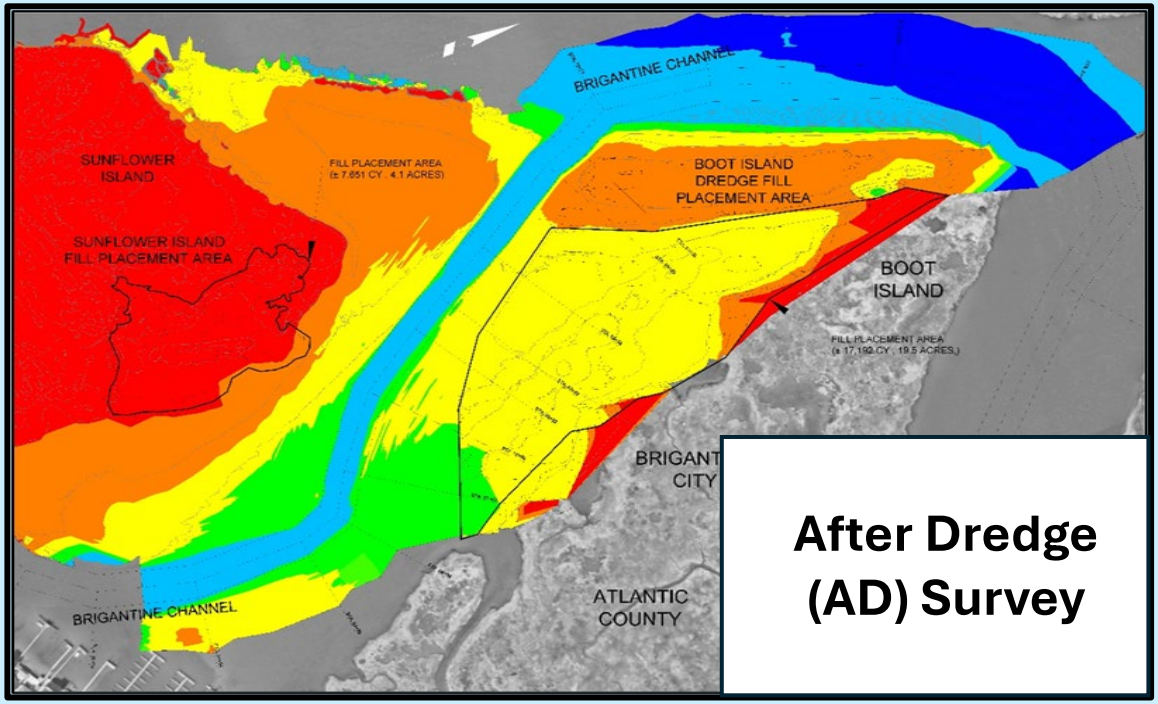
Office Of Maritime Resources (OMR)

				
Genevieve Clifton	***Bill Henderson***	***Joseph Walsh***	***Mike Marano, PE***	***Sean Flanigan***
NJDOT *Director, OMR*	*NJDOT* *PM, OMR*	*NJDOT* *Sr. Eng., OMR*	*ACECNJ*	*ACECNJ*
Ensures NJ's 200+ navigation channels remain in a state of good repair while advancing the strongest State channel dredging and coastal resilience program in the nation	Worked at NJDOT for the past 20 years. Field Manager overseeing all OMR construction projects throughout the State	Resident Engineer overseeing maritime infrastructure projects throughout New Jersey	Vice President & Senior Technical Principal at WSP USA Inc. Has over 33 years of experience designing and managing major civil engineering projects	Director of Marine Services at GBA. Over 20 years of industry experience in the field of civil/coastal engineering

Introduction

- Who?
- What?
- When?
- Where?
- Why?
- How?



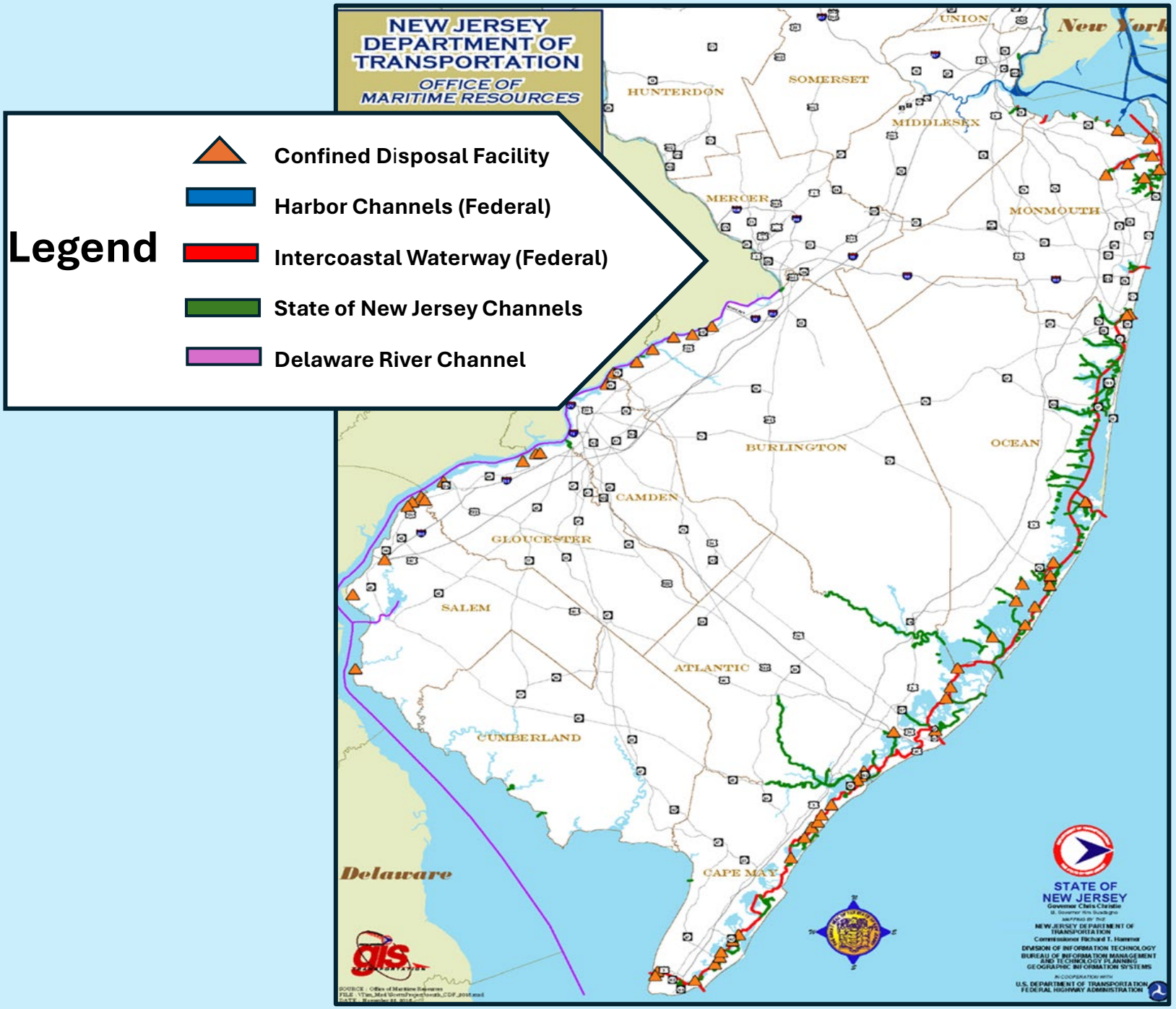


Dredging at a Glance

- **217 State Channels in NJ**
  - Jersey City to Cape May to Bordentown
  - 600+ marinas, 250+ boat ramps
  - $1 Billion commercial fishery
  - $6.6 Billion recreational boating
- **340+ miles of State & Federal channels**
  - Over 1,000,000 CY of sediment dredged annually



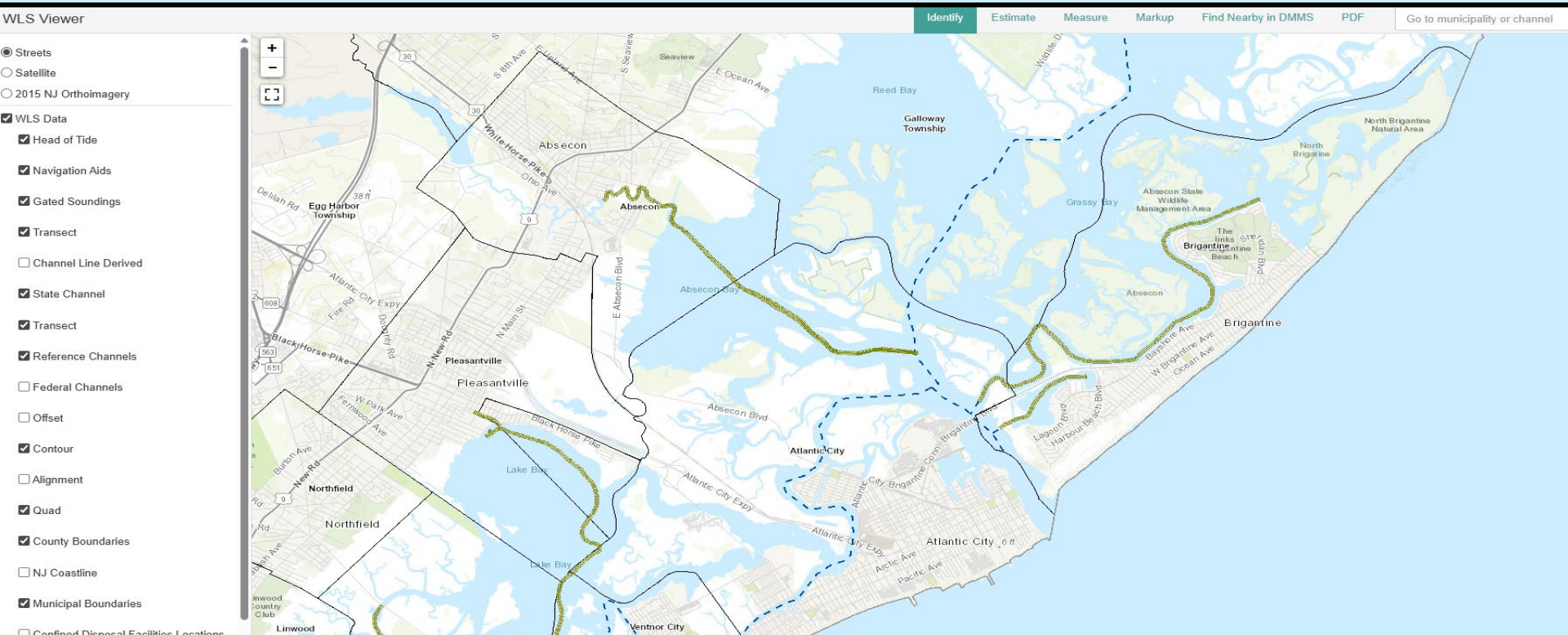



NEW JERSEY DEPARTMENT OF TRANSPORTATION
OFFICE OF MARITIME RESOURCES
Legend
Confined Disposal Facility
Harbor Channels (Federal)
Intercoastal Waterway (Federal)
State of New Jersey Channels
Delaware River Channel
UNION
SOMERSET
HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
CAMDEN
GLOUCESTER
SALEM
ATLANTIC
CUMBERLAND
CAPE MAY
Delaware
STATE OF NEW JERSEY

Maritime Asset Management Tools

Waterway Linear Segmentation (WLS)

- Analogous to the NJDOT Straight Line Diagrams
- Linked DMMS and MAMS
- The system includes a complete picture of our channel network and its current condition



Maritime Asset Management Tools

Dredged Material Management System (DMMS)

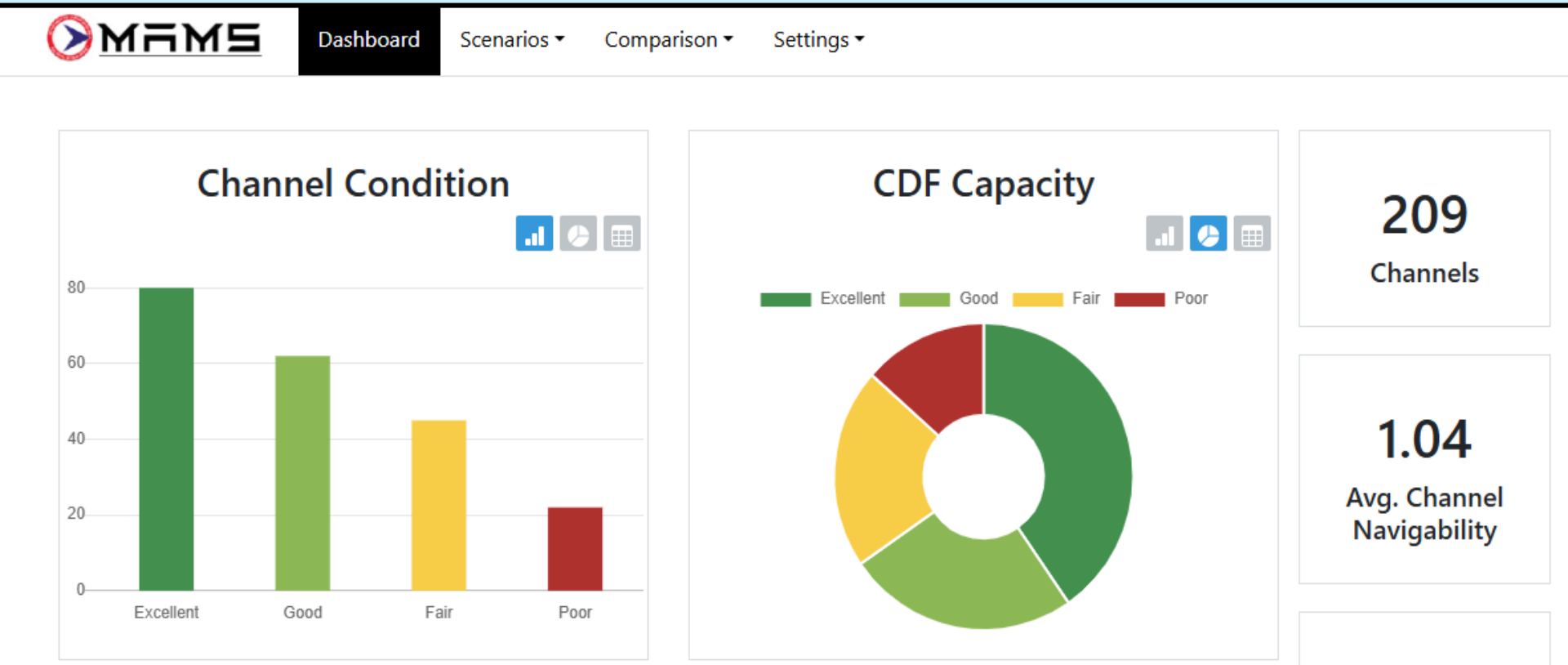
- Web-based solution for the management & use of dredged material
- Tracks planned, active, and completed dredging projects

Source	Destination	Volume	Date	
West Creek 2022	Long Point Thorofare, Cell #1689	48,100 cu yd	November 5, 2022	Details
West Creek 2021	Long Point Thorofare, Cell #1689	59,300 cu yd	December 31, 2021	Details
Tuckerton (Big Thorofare) 2022	Story Island, Cell #1681	39,280 cu yd	January 6, 2023	Details
Tuckerton (Big Thorofare) 2021	Story Island, Cell #1681	2,180 cu yd	January 7, 2022	Details
Toms River North 2020	Dredged Hole 25	24,170 cu yd		Details | Edit | Delete
Stump/Pews/Leonardo 2015	Raritan Bay Beach Fill	5,700 cu yd		Details | Edit | Delete
Stump/Pews/Leonardo 2015	Leonardo Harbor, Cell #1654	13,600 cu yd		Details | Edit | Delete
St. Georges 2022	Brigantine Beach Placement - Absecon Inlet	67,731 cu yd	August 28, 2022	Details
Shrewsbury 2017	Shrewsbury Beach Placement	13,070 cu yd		Details | Edit | Delete
Nantuxent 2021	Nantuxent Beach Placement	35,990 cu yd		Details | Edit | Delete
Metedeconk 2018	Dredged Hole 18	192,920 cu yd	January 22, 2020	Details
Manasquan 2021	Monmouth County Reclamation Center	57,500 cu yd		Details | Edit | Delete
Manasquan 2021	Manasquan Dog Beach	43,216 cu yd	August 18, 2021	Details

Maritime Asset Management Tools

Maritime Asset Management System (MAMS)

- Utilizes latest survey data
- Provides prioritized and/or constrained recommendation
- Has channel grouping and project phasing



Project Approach

- Discover & assess the issues/challenges
- Perform Hydrographic Survey
- All material is screened for beneficial use
- Placement Site Dependent
  - Critical need/priority?
  - Where can material be placed?
  - What is the cost?
  - What type of usage?

KEY TAKEAWAY

NJDOT is the National Leader in marrying navigation improvements with beneficial use

Permitting



Winter Flounder



Black-Crowned Night Heron

- All permitting completed **in-house**
  - NJDEP: 5-year
  - USACE: 10-year
- Must receive both before dredging and placement activities
- Requires sampling & testing of material
- Common NJ Permitting Restrictions:
  - *Winter flounder, herring, birds, turtles, crabs & anadromous fish species*
- Submerged Aquatic Vegetation (SAV) and wetland protections
- **Typical open dredging window:**
  - **Sept. - Dec. (4 months out of 12)**

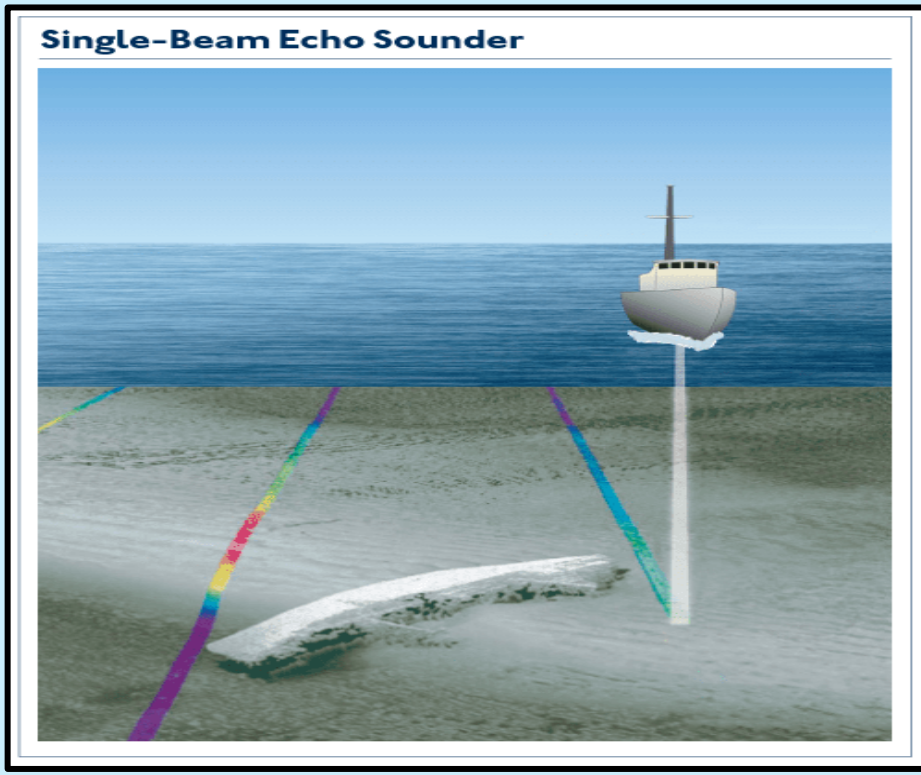


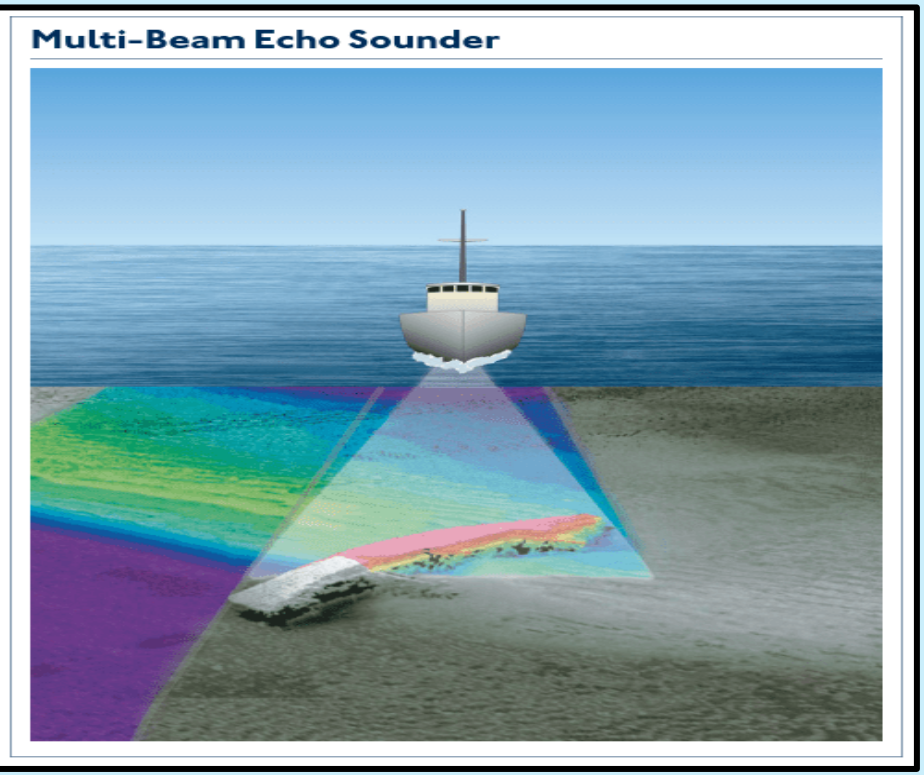
Hydrographic/Bathymetric Surveying

Technologies Utilized:

- Single & Multibeam Echosounder / Sonar
- Side-Scan Sonar
- Magnetometer
- Sub-Bottom Profiler

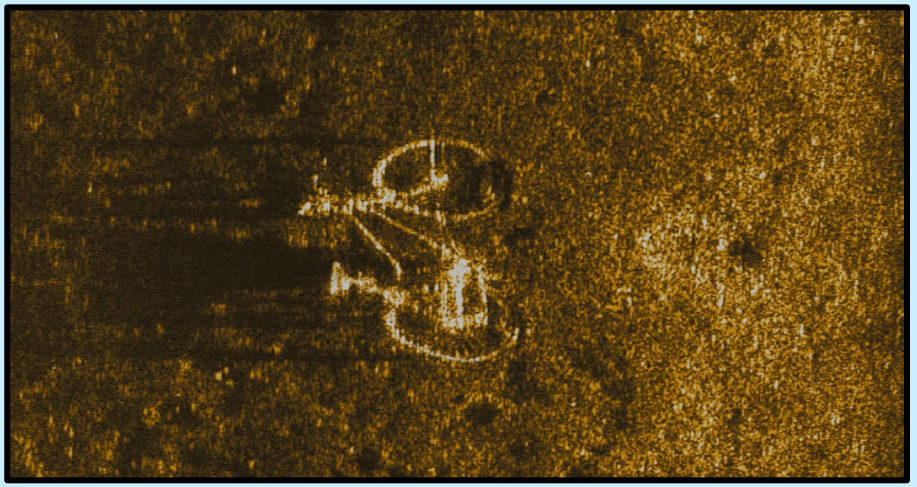


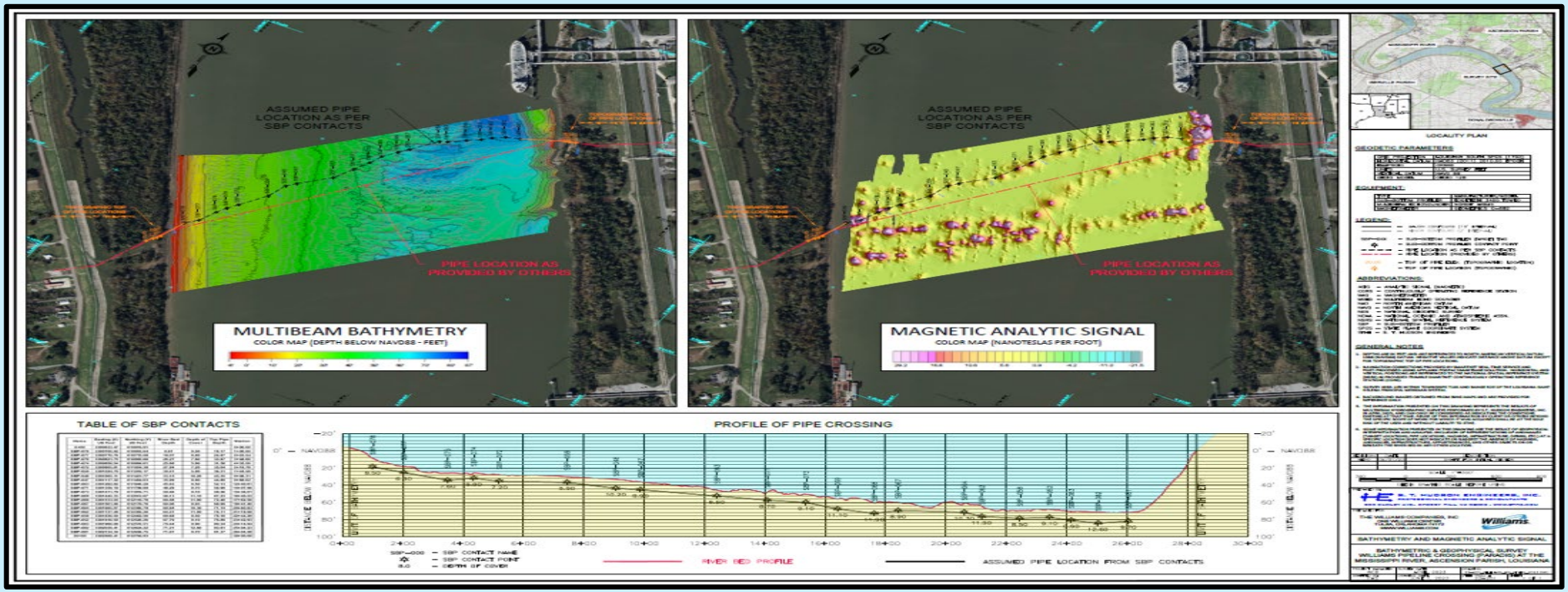




Hydrographic/Bathymetric Surveying





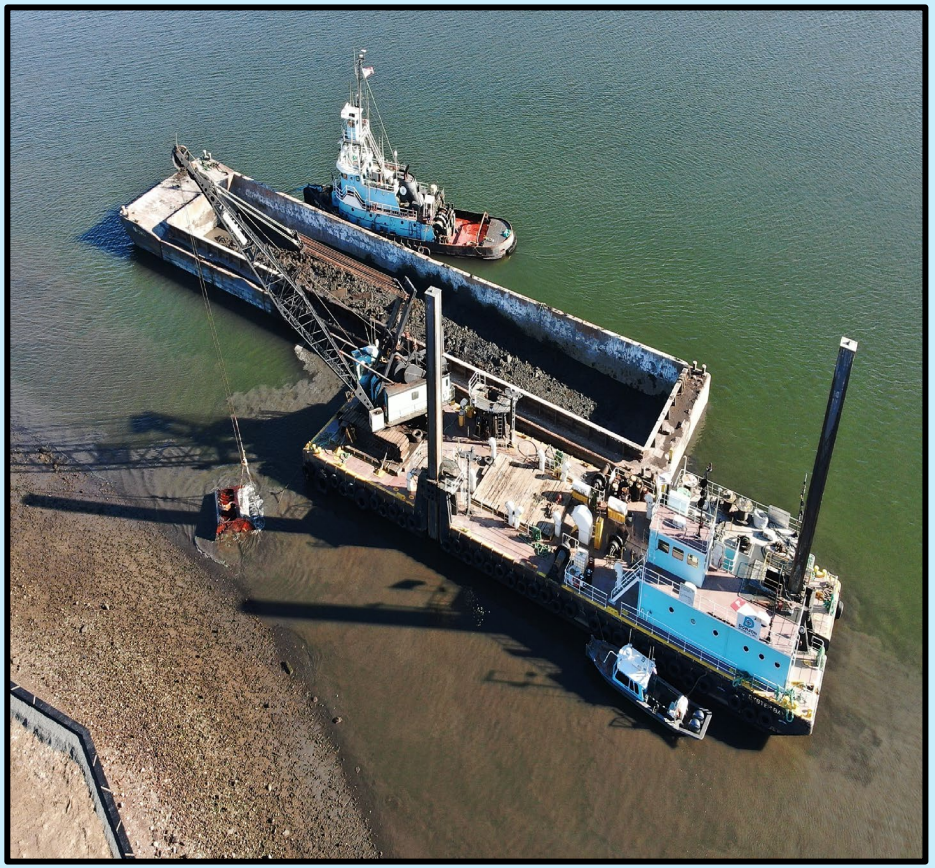


2 Basic Types of Dredging Operations

Hydraulic



Mechanical



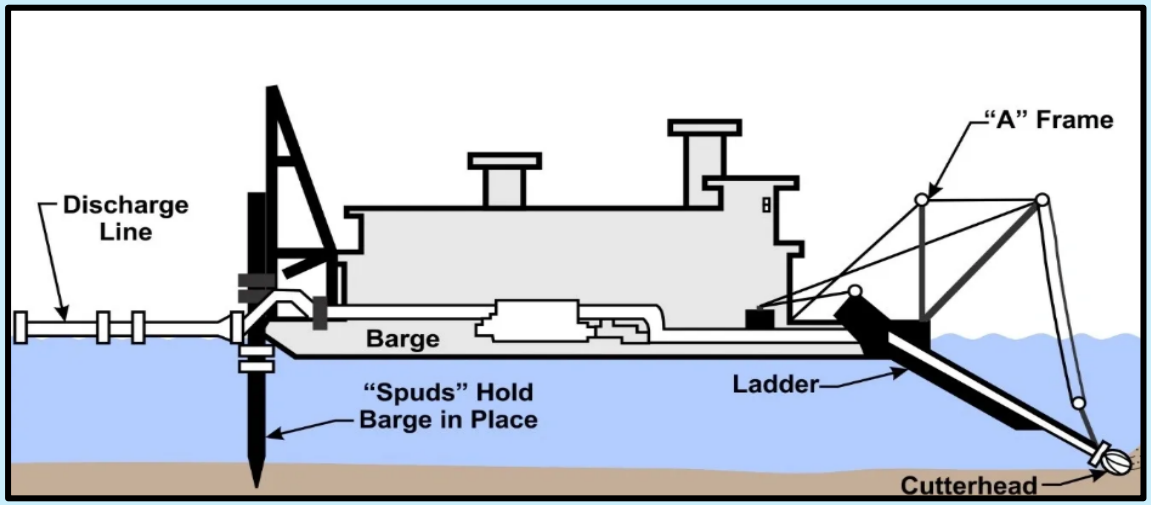
Hydraulic Dredging

Characteristics:

- On-board spuds and ancillary anchor barges, and swing cables are used for movement of the vessel
- Employs a rotating cutterhead to loosen the material
- Hydraulic suction and booster pumps enable sediment transport
- Floating or submerged steel or HDPE pipe conveys the material
- Allows for continuous, highly efficient dredging operations specifically required for large dredging volumes across prolonged areas







Mechanical Dredging



Characteristics:

- Crane mounted clamshell bucket or backhoe excavator
- Environmental buckets helps minimize sediment resuspension
- Material placed into barges/scows
- Tugboats transport barges to placement site
- Barges hydraulically or mechanically offloaded
- Ideal for hard-packed materials, confined, precise applications

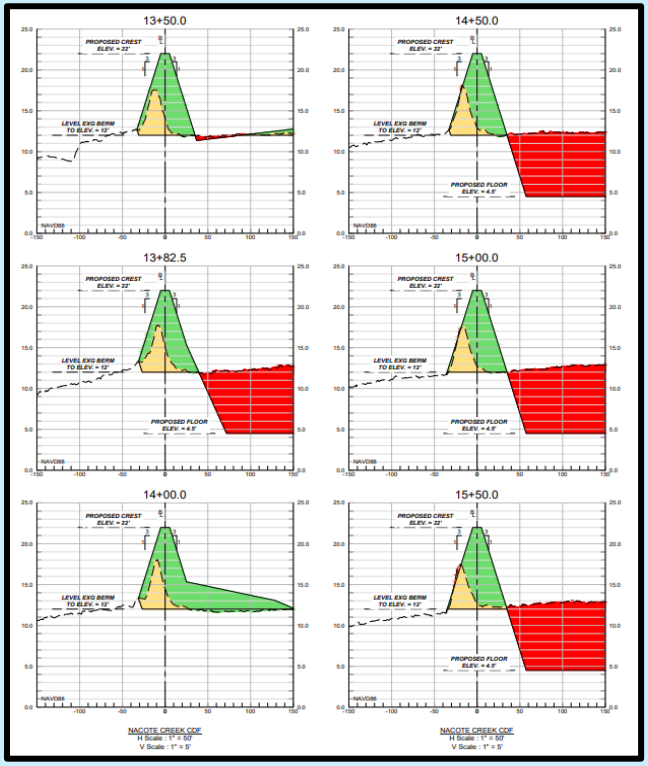
Dredged Material
Placement Techniques

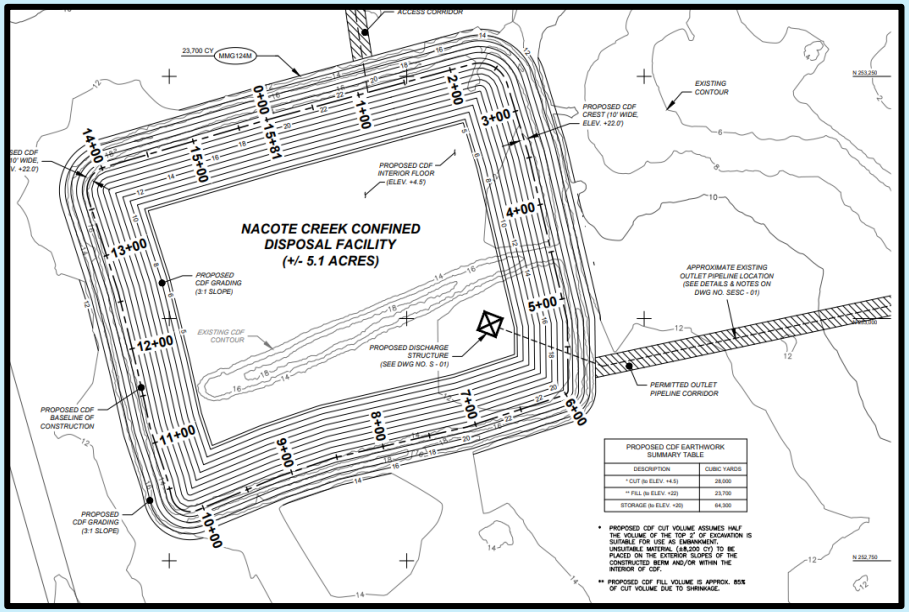
- Confined Disposal Facility
- Beach Placement
- Marsh Restoration
- Dredged Hole Restoration
- Passive Dewatering - Geotubes
- Mechanical Dewatering

Confined Disposal Facility (CDF)

CDF construction:

- Utilizes material on site
- Berms built with 3:1 slope
- Uses berms engineered higher to increase capacity
- Tried and true







Confined Disposal Facility

- Weir Box utilized to regulate outflow rate
  - Dewater material
  - Boards placed to allow material to settle
  - Outfall pipe
    - Must visually observe clear runoff















Confined Disposal Facility

- 50+ CDFs within NJ
- Utilizes the land to store and dewater dredged material
- Material can be removed & CDF can be re-used; must account for life-cycle cost
  - OMR looking into renewal of resources

Confined Disposal Facility



- *Site can be re-used for future dredging projects*
- *Cost effective placement in immediate term*
- *Sand and silt naturally separated during inflow into the site*
- *Construction techniques are generally typical*
- *Suitable placement site for fine-grained material*



- *Permanent facility siting +/- 20 acres (ideal minimum)*
- *Expensive to engineer/construct*
- *Activity can be a sensitive issue with adjacent neighbors*
- *6 – 12 months or more to dewater*
- *Requires upkeep/maintenance*
- *Available coastal land is at a premium*
- *Difficult to permit & site new facilities*
- *Slurry water retention times dictated by permit*



Beach Placement

Sandy material can be used to nourish NJ beaches

- Compatible grain size
- Hydraulic placement
- Visual appearance

Beach Placement

PRE CONSTRUCTION



POST CONSTRUCTION



Beach Placement



- *Can be used to widen and lengthen beaches*
- *Cost effective*
- *Coastal resilience*
- *Quality of life/public use*

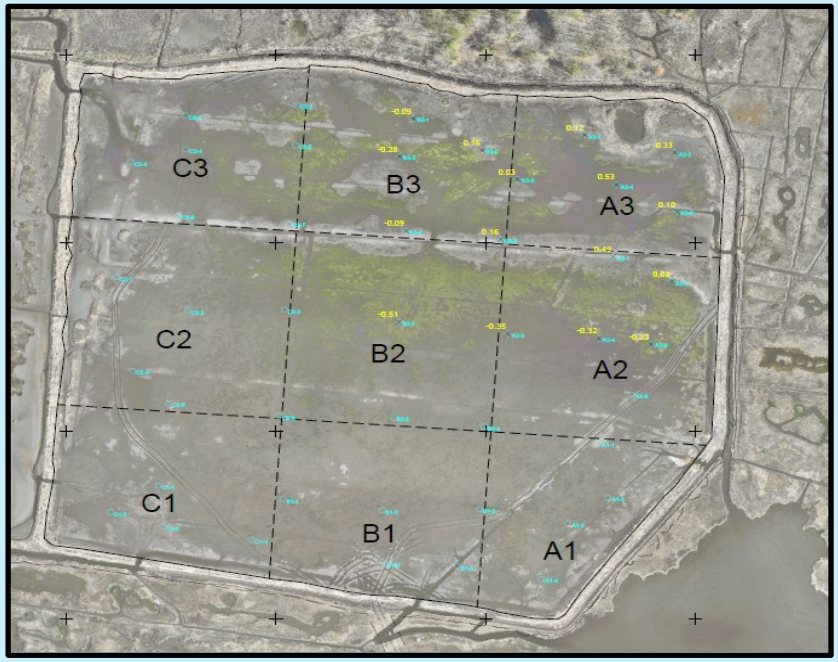


- *Only viable for sandy material*
- *Temporarily affects public access*
- *Contractor must clear any debris*
- *Public optics*
- *Outdated regulatory constraints – CAFRA*

Marsh Restoration

Dredged material placed in cells of depleted marsh to raise the elevation, combat subsidence/sea level rise, and enhance marsh growth/resilience

- *Low Marsh*
- *High Marsh*
- *Tidal Mudflat*
- *Other habitat*







Marsh Restoration

NJDOT in the forefront of this effort

- Every site is different; lessons learned with every project
- Land-owner partnership
- Design/best management practices
- Contractor collaboration
- Monitoring protocols and success criteria take time (3-5 years)

Marsh Restoration



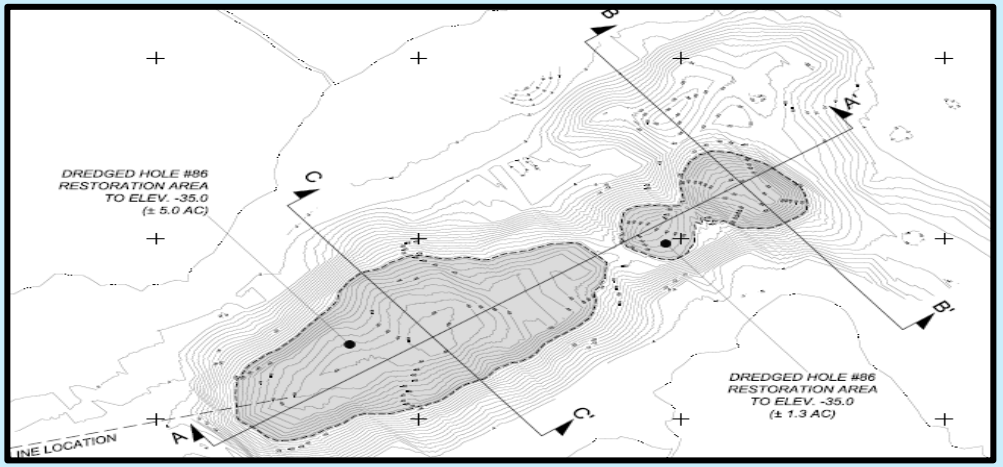
- *Habitat revitalization*
  - *Black Rail, Northern Harrier*
- *Innovative approach to increase coastal resiliency*
- *Large scale*
- *Win/Win*
- *1,000's of acres of opportunity throughout NJ*

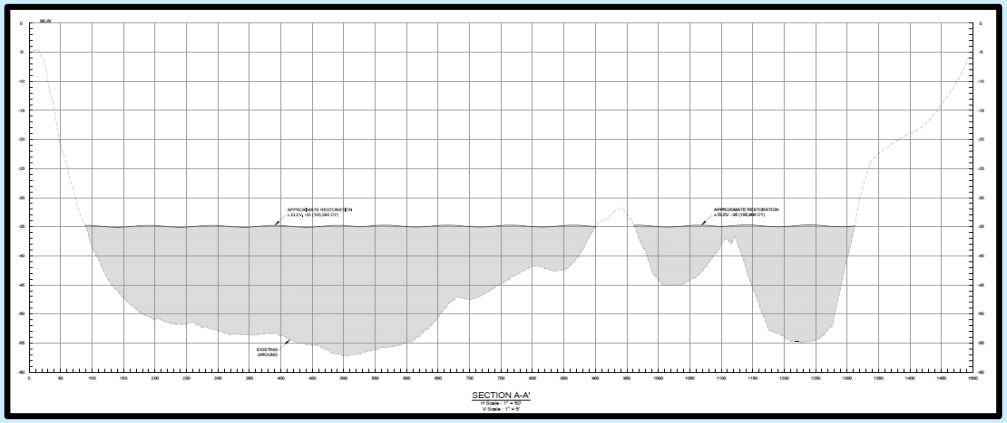


- *Increased complexity/cost*
- *High level of monitoring required*
- *Regulatory hurdles*
- *Specialty equipment necessary*
  - *(Air Boats, Marsh Buggys, etc.)*
- *Short-Term Disturbance*

Dredged Holes

- Material was originally utilized to create the barrier islands
- Anoxic conditions must exist for candidate sites
- Beneficially used material to raise the floor to adjacent shallow depths
  - Restore ecological function
  - Material is kept within the system
  - Habitat restoration – fish, sea grasses, shellfish







Dredged Holes



- *Improved ecological conditions*
- *Keeps sediment in the system*
  - *All work is in-water*
- *Cost effective*
- *Can be used to sequester material with elevated contaminant load*



- *Limited candidate sites*
  - *Finite number*
- *Significant/lengthy data collection*
  - *Regulatory justification*
- *Turbidity is a regulatory concern*
- *Once filled to target elevations, they are no longer placement candidates*
- *May require capping (typically sand)*

Passive Dewatering - Geotubes

- Customizable to placement site constraints
  - Made of high-performance geo-synthetic material
- Ideal for limited capacity sites
- Utilizes horizontal & vertical capacity
- Polymer facilitates flocculation of material for optimal dewatering.
- Openings in geosynthetics allow water to flow out while retaining larger sediment particles.
- Can be opened, fabric removed, material used
  - Single-use
  - Bags must be landfilled





Passive Dewatering - Geotubes



During Construction



Post Final Clean-up

Passive Dewatering - Geotubes



- *Small footprint*
- *Can be stacked to utilize vertical space*
- *Actively dewater*
- *Can be left as permanent protection in specific scenarios*
  - *Dune core*

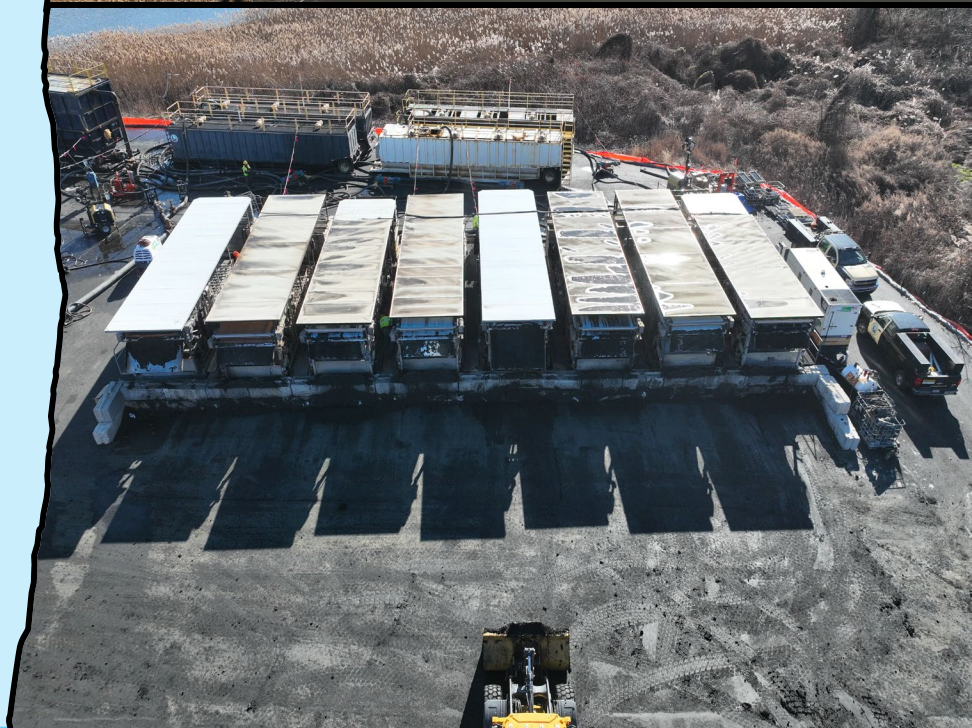


- *Single use*
- *Less cost effective*
- *Requires polymer*
- *Needs agitation and monitoring to assure proper dewatering*
- *Tubes need to be tied down to ensure they stay in place*
- *Subject to vandalism*

Mechanical Dewatering

- Land based equipment to rapidly dewater material
- Dredged slurry gets dosed with polymer
- "Squeezed" VIA belt press operation
  - ~ 50% solids
- Material can immediately be beneficially used
  - Landfill capping





Mechanical Dewatering – Navesink River Channel Dewatering Area – Post Construction





Mechanical Dewatering



- *Can be utilized in small footprint*
- *Material is usable and can be trucked right away*
- *Once project is complete demobilization happens soon after*



- *Expensive*
- *Machinery less effective in cold weather*
  - *Project schedule impacts*
- *Requires polymer dosing*
  - *Regulatory monitoring*
- *Dredge efficiency is reduced due to lower pumping rates*
- *Placement site restoration is typically required*

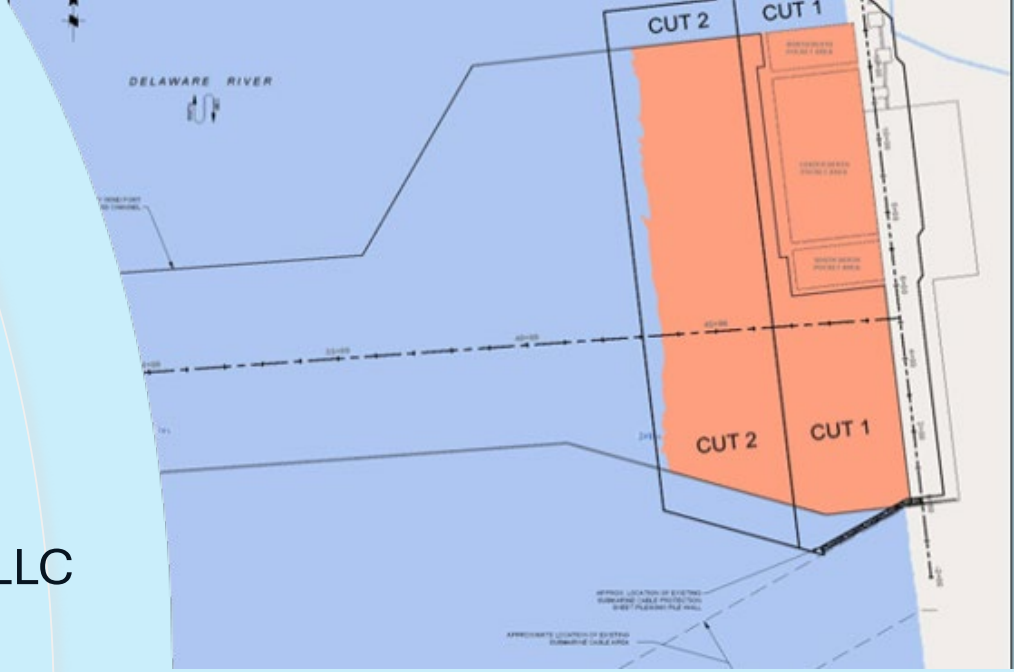
Project Cost/CY per placement Technique

Material Placement Technique	Cost/CY	Cost for average Project (50,000 CY)
Beach Placement	$40	$2,000,000
Confined Disposal Facility (Placement Only)	$45	$2,250,000
Dredged Hole	$70	$3,500,000
Geotubes	$100	$5,000,000
Mechanical Dewatering	$120	$6,000,000
Marsh Restoration	Up to $200	$8,000,000

Specialty Project - Case Studies



Case study #1 – Abbotts Meadow



Location: Salem, NJ

Prime Contractor: H&L Contracting, LLC

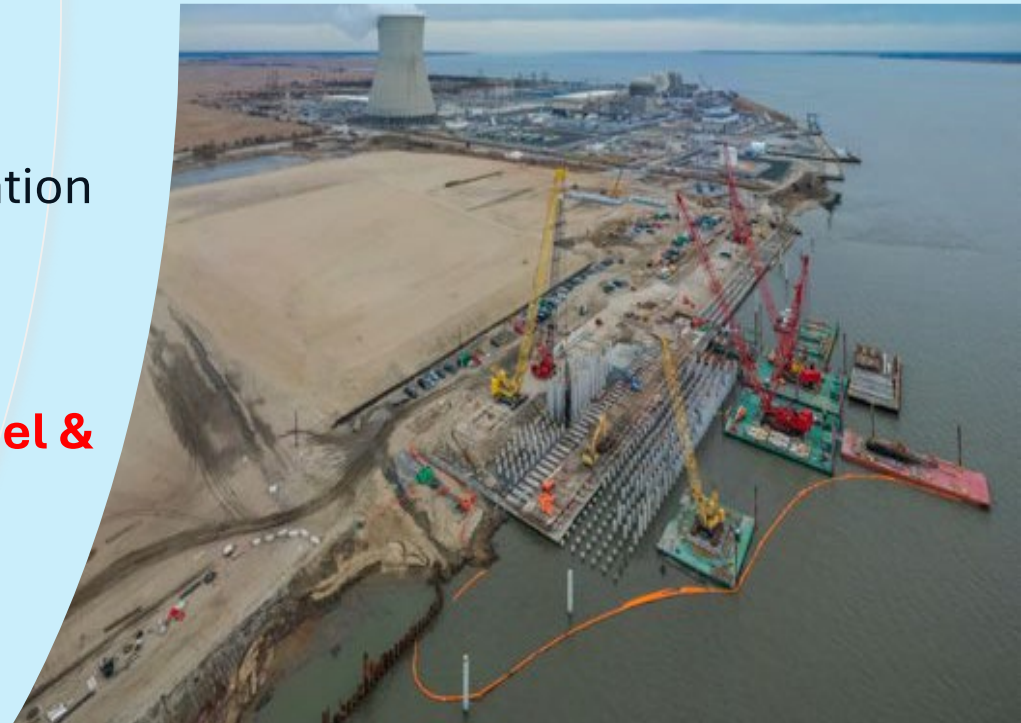
Sub-Contractor: Norfolk Dredging Co.

Project price: ~ $40,000,000

Placement technique: Marsh restoration

Cubic Yardage: 670,000 CY

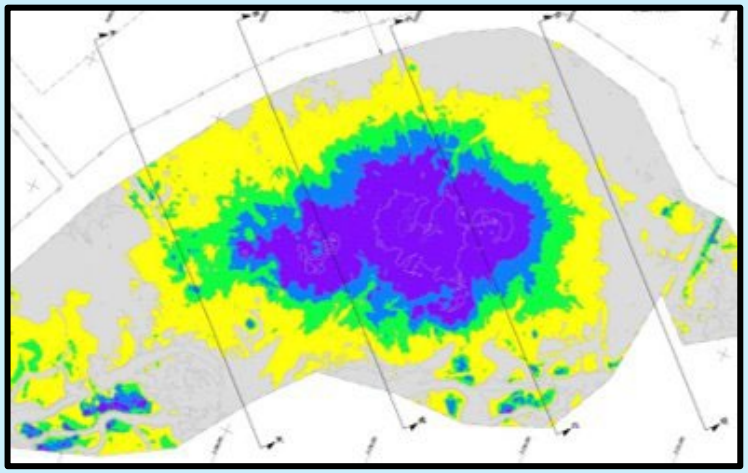
Purpose: **Dredge port access channel & berths**

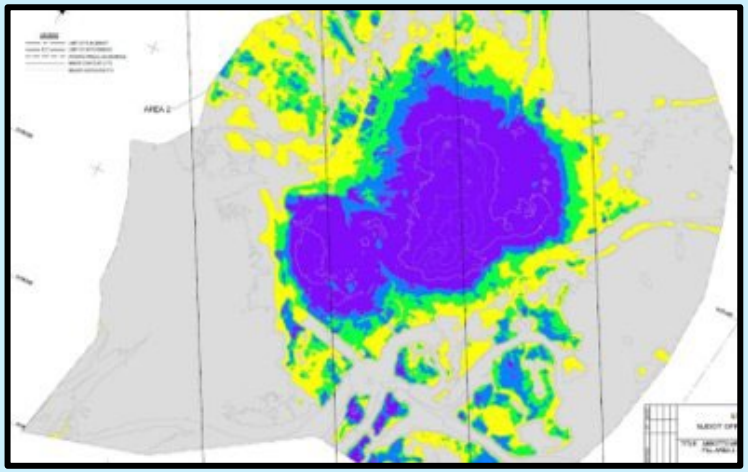


Abbotts Meadow

- 2 Placement areas:
  - Area 1: 60 Acres
  - **190,000 CY**
  - Area 2: 80 Acres
  - **175,000 CY**
- Desired range of constructed elevations: 2.5' - 6.5'
  - Low Marsh
    - Target elevations 2' - 3'
    - Construction elevations 2.5' - 3.5'
  - High Marsh
    - Target elevations 3' – 3.5'
    - Construction elevations 3.5' - 4'
  - Upland
    - Target elevations 3' – 3.5'
    - Construction elevations 3.5' - 6.5'
- Habitat for the state-endangered Black Rail and Saltmarsh Sparrow







Abbotts Meadow



Abbotts Meadow







Abbotts Meadow

- **Lessons Learned:**
  - *Sometimes less is more*
  - *Let coarse-grained material stack up at outflow points in center of fill site*
  - *Use coarse-grained (sandier) material to fill in mosquito ditches and voids*
  - *Use of vinyl sheetpiles & natural features to contain flow of material*
  - *Manipulate outflow locations often to change fill patterns*
  - *Use of Y-valves to continue to discharge material into select fill areas while performing outflow maintenance in other areas*

Case study #2 – North Wildwood Emergency Beach Nourishment

Location: North Wildwood Beach (2nd Ave. – 23rd Ave.)

Prime Contractor: H&L Contracting LLC.

Sub-Contractor: Great Lakes Dredge and Dock

Project Price: ~ $17,000,000

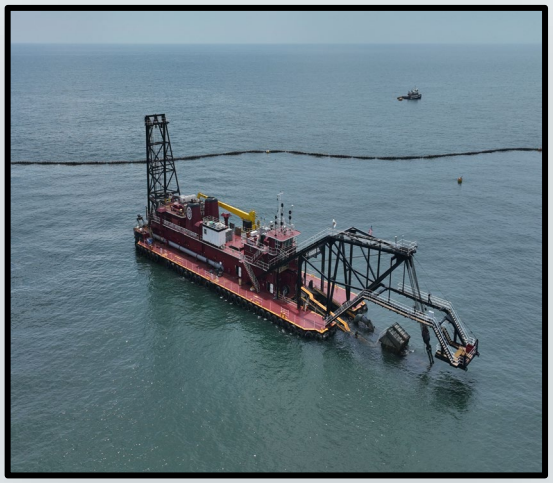
Placement Technique: Beach Placement

Cubic Yardage: 800,000 CY

Purpose: **Save the summer!**











North Wildwood Emergency Beach Nourishment

- Coordinated with DEP and Governor's Office
- Emergency response to protect transportation infrastructure ($2.7 Billion in property value)
  - 250+ local business, 77,000 summer population
  - Typically executed by USACE
- Coordinated with Town officials:
  - Daily meetings
  - Mayoral/LE involvement
  - Anything you need attitude
- **Safety was PARAMOUNT**
- Usually, OMR projects require extensive planning
  - Project was an **EMERGENCY,** needed immediate action

North Wildwood Emergency Beach Nourishment



Total CY: 800,000

- 40,000 CY/Day
- 72% Efficiency

Emergency Project to restore North Wildwood (NWW) Beach prior to July 4th, 2024

- 4/17/24 • **Governor called**
- 5/28/24 • **Mobilization began**
- 6/5/24 • **Dredging began**
- 6/26/24 • **Dredging finished**
- 7/2/24 • **Demobilization**

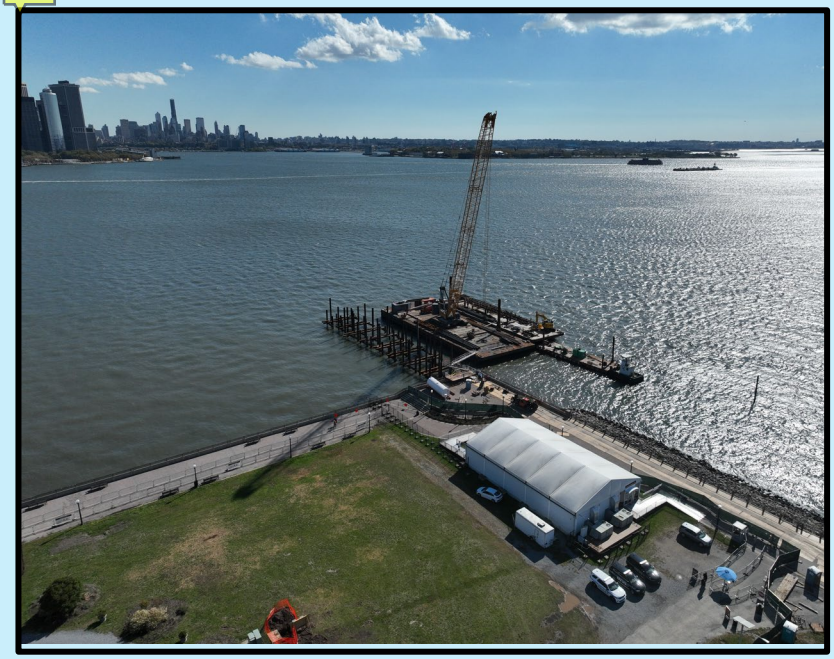
North Wildwood Emergency Beach Nourishment

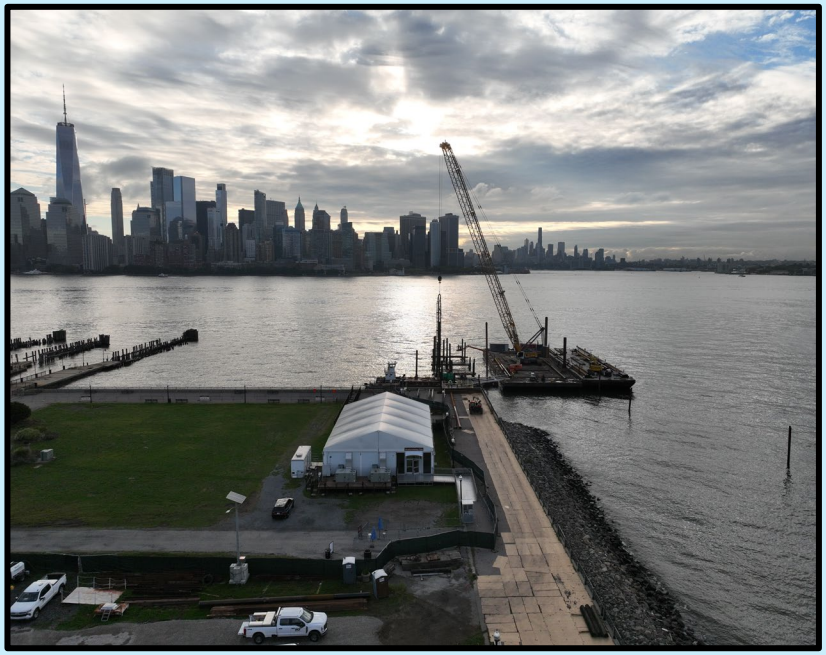


04/18/2024



07/02/2024



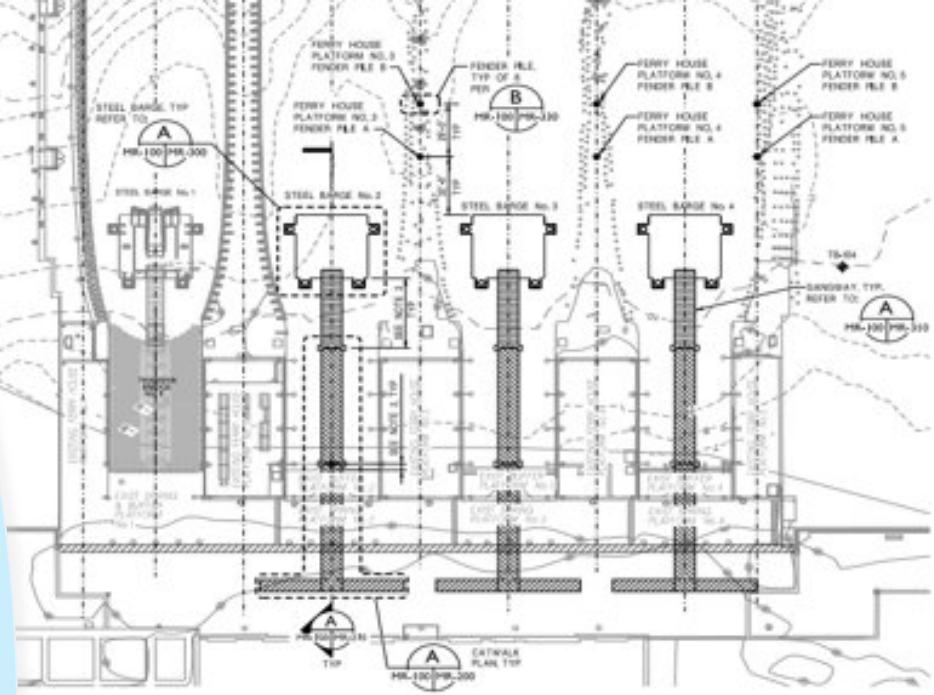


Case study #3 – Liberty State Park

- **Location**: Jersey City, NJ
- **Contractor**: PKF Mark III
- **Project Price**: ~ $50,000,000
  - Project still ongoing!
- **Purpose**: Implement ferry landings and an emergency ferry terminal

Liberty State Park

- New Construction
  - Emergency Evacuation Terminal
  - Rehabilitation of bow loading ferry slips
- Emergency preparedness and response
- Modernize water-based infrastructure
  - 4-6 Million visitors per year
- In the works for 25 years
  - Driven by 9/11
- Daily communication with LSP/NPS





Liberty State Park

- Sunken barge removal (41'x330’)
  - (9) Segments, 75 tons each
  - Artificial reef at Sea Girt Reef



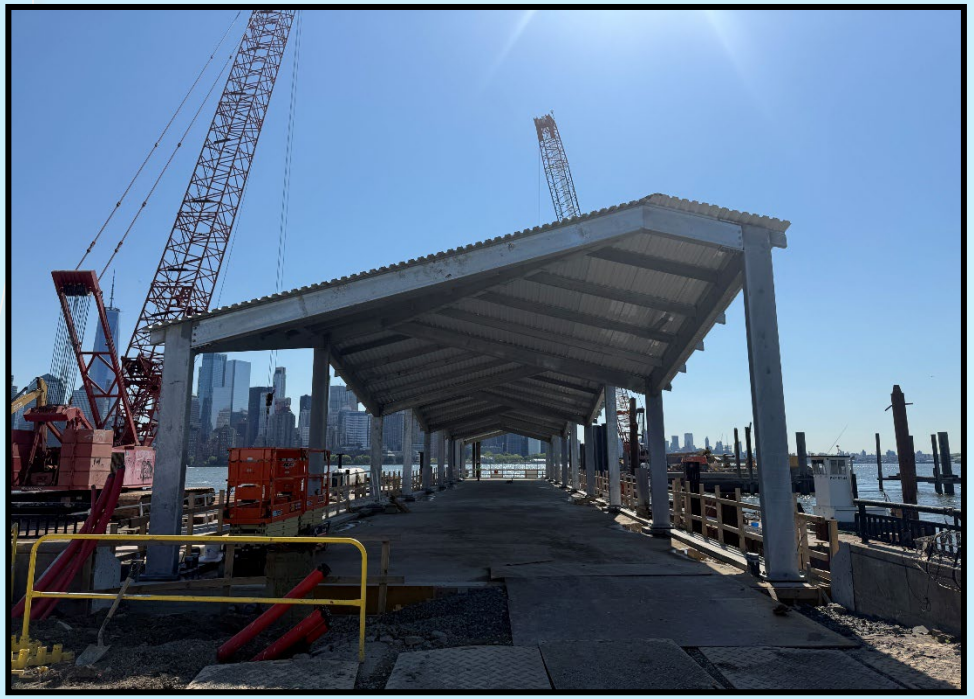




Liberty State Park

- **Emergency Evacuation Terminal construction**
- 205’ x 32’ Fixed Pier
  - (31) 18” pier piles
  - (10) 36”- 42” anchor piles
- 50' x 200' Barge
  - Fabrication in Erie, PA
    - 2 Side Loaders, 2 Bow Loaders
- 24/7 landing hub









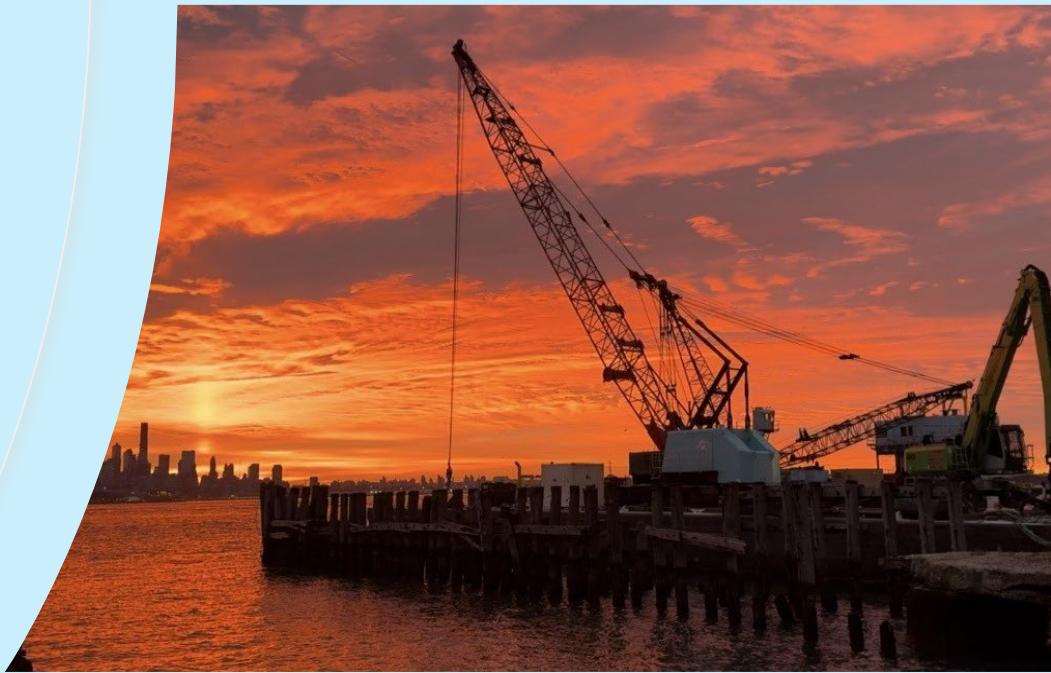
Liberty State Park

- **Reconstruction of Ferry Slips**
- Removal of timber piles
- 45' x 80' Transfer Bridge
  - Mirrors historic conditions
- (28) 20” pier piles
- (4) 35' x 35' Barges
  - Bow loading ferry slips
  - Fabricated in Staten Island
  - (16) 36” barge anchor piles

Liberty State Park

- **Lessons Learned:**
  - Planning for **ANYTHING** and **EVERYTHING**
  - Communicate daily with contractor and designers
    - Ensure everyone is on the same page
  - Daily safety discussions
    - Weekly toolbox talks
  - Marine pile driving operations are best completed at night
    - Limited waterway disturbance
    - Accuracy and precision





Conclusion / Wrap Up

OMR is challenge-ready, with the ability to successfully deliver high value, high impact, rapid response services to emergent Governor's Office/high-level requests.

- 30 years of engagement and SME
- Data driven annual capital program, marine programs and special requests
- Variety of state/Federal funding sources
- Always prepared
- Relationships are the key to the ability to say "Yes" to a project
- Team longevity is a key to strong decision making


Questions?



Lunch

12:00 pm

AGENDA

12:00 pm – *Lunch*

1:00 pm – *Lightning Round*

1:45 pm – *Bridging the Gap*

2:45 pm – *Closing Remarks*

3:00 pm – *Networking Reception*



Lightning Round

1:00 pm

Lightning Round



Parth Oza
Assistant Commissioner
Capital Program Management
NJDOT

Lightning Round



Salvatore Cowan
Senior Director of
Transportation Mobility
NJDOT

The 2026 FIFA World Cup

Preparing for the World's Largest Sporting Event



Overview

- **Tournament:** FIFA World Cup 2026 runs June 11–July 19.
- **Fan Fest:** Various locations (NJ/NY), Lemon Hill (PA)
- **Same Day Matches:** NYNJ and PA will host three matches on the same day...with two matches at the same time.
- **Celebrations:** U.S. 250th birthday. Sail4th250 in NYC harbor, POTUS attendance, MLB All-Star Game July 14th, and Bon Jovi concerts

NY/NJ Match Schedule

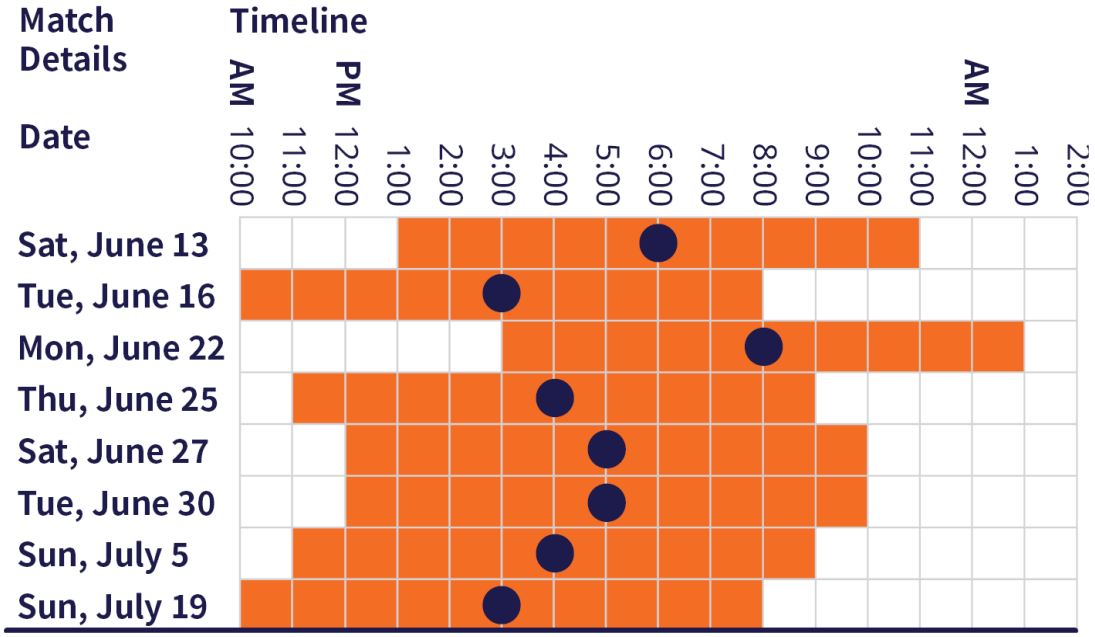
DATE	TIME	TEAMS
June 13, 2026	6:00 PM ET	Brazil v. Morocco
June 16,2026	3:00 PM ET	France v. Senegal
June 22,2026	8:00 PM ET	Norway v. Senegal
June 25, 2026	4:00 PM ET	Ecuador v. Germany
June 27, 2026	5:00 PM ET	Panama v. England
June 30, 2026	5:00 PM ET	Round of 32
July 5, 2026	4:00 PM ET	Round of 16
July 19, 2026	3:00 PM ET	FIFA WORLD CUP FINAL

HOW WILL TRAFFIC BE IMPACTED?

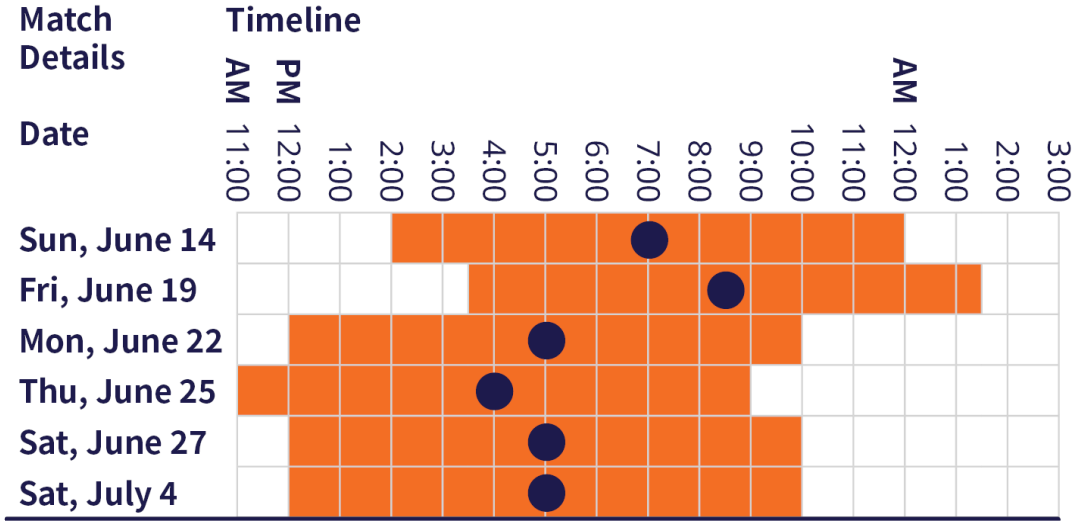
On match days, traffic will be heaviest

- 5 hours before and
- 5 hours after kickoff

NYNJ STADIUM MATCH DAYS



PHILADELPHIA STADIUM MATCH DAYS



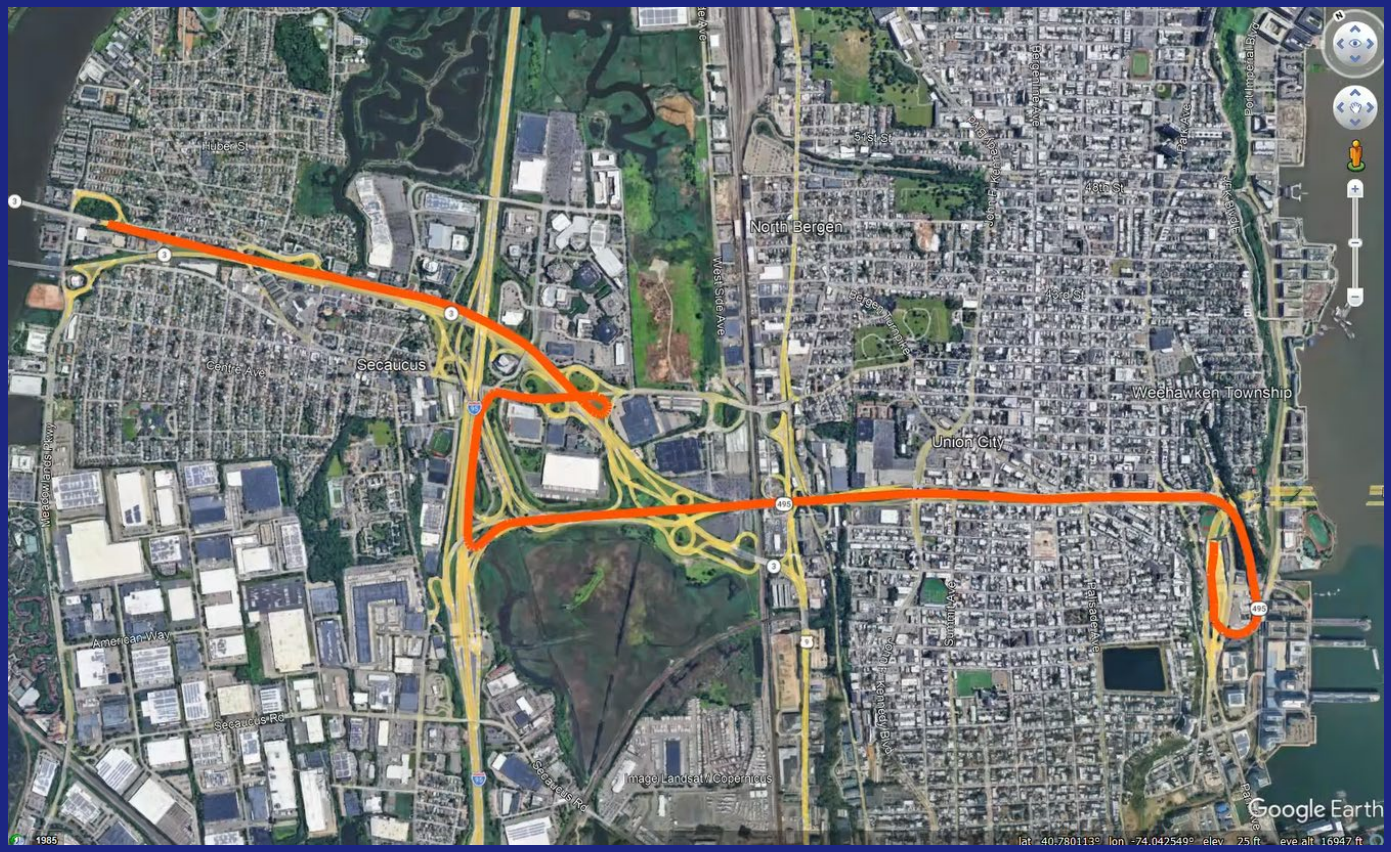
Tournament Route Network Between NYC and NYNJ Stadium

Specific Route: FIFA Fleet and other permitted vehicles from designated pickup locations in NYC to NYNJ Stadium.

Dual Purpose: Supports contingency plan for NJ Transit rail disruptions.

Design: Static and dynamic signage along Rt 495 and Rt 3

Match-Day Control: Law enforcement, effective communication, and a public engagement campaign



Construction Projects





Route Upgrades: NJDOT improving aesthetics along FWC26 routes.



ITS Improvements and upgrade

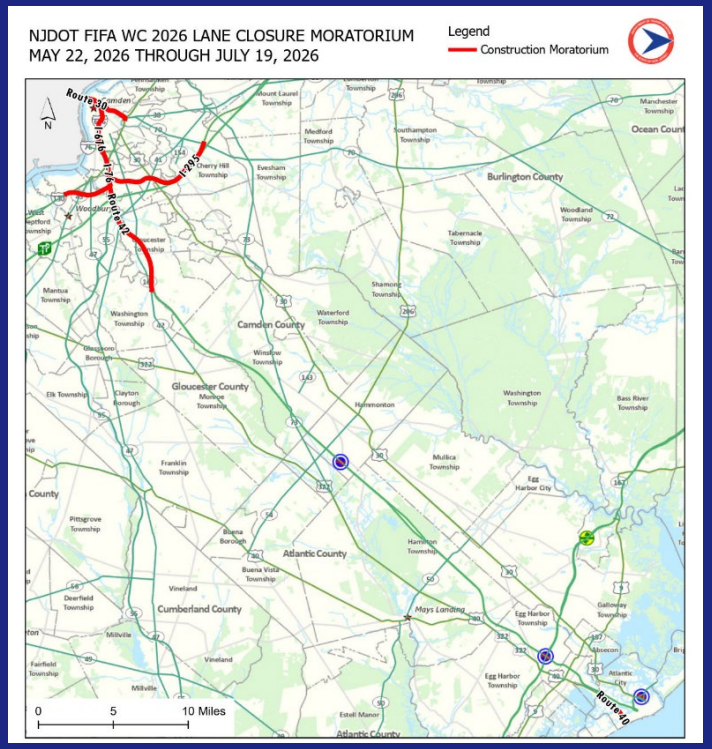


Hard Shoulder Construction to Support NJT Rapid Bus Transport

Lane Closure and Construction Moratorium

- **Effective:** May 22–July 20, 2026.
- **Construction Embargo:** a temporary construction activity embargo within its Right-of-Way (ROW) as well as not permitting any new lane closures, ramp closures, moving operation, shoulder closures, new permanent traffic patterns(**unless there is an emergency)**





HOW YOU CAN HELP

Help us reduce non-essential travel by 20% on match days



SKIP IT

Skip non-essential travel on match days

SHIFT IT

Shift travel times more than 5 hours before and after kickoff

SWITCH IT

Switch appointments/ errands to non-match days

SHARE IT

Share rides to ease congestion

TAKE OUT YOUR PHONE…

GET READY TO TAKE A PICTURE…



SHARE THESE WEBSITES!

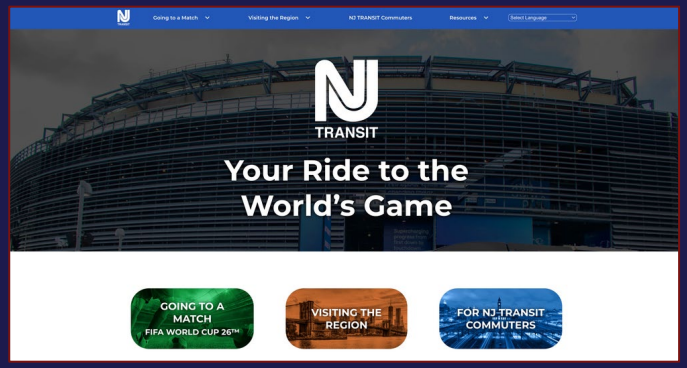
NYNJ Host Committee

nynjfwc26.com



NJ Transit

NJTWorldCup.com



NJDOT

NJDOTWorldCup.com



Lightning Round



Thomas "TJ" Mann
Director of Government Affairs
NorthStar Strategies/ACECNJ

Lightning Round



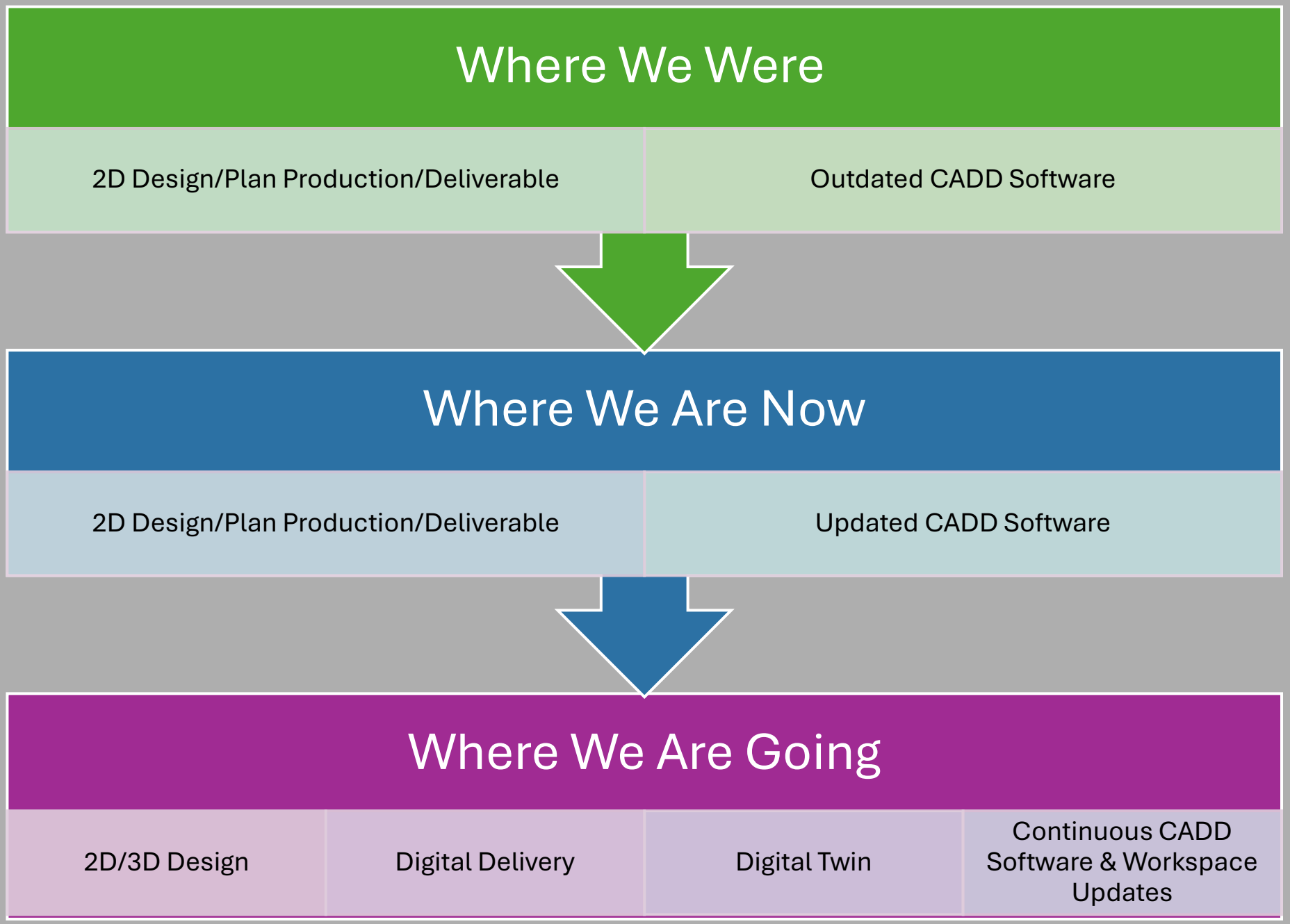
Alex Didok
Director of Division of Highway Design
NJDOT

2026 Design Summit

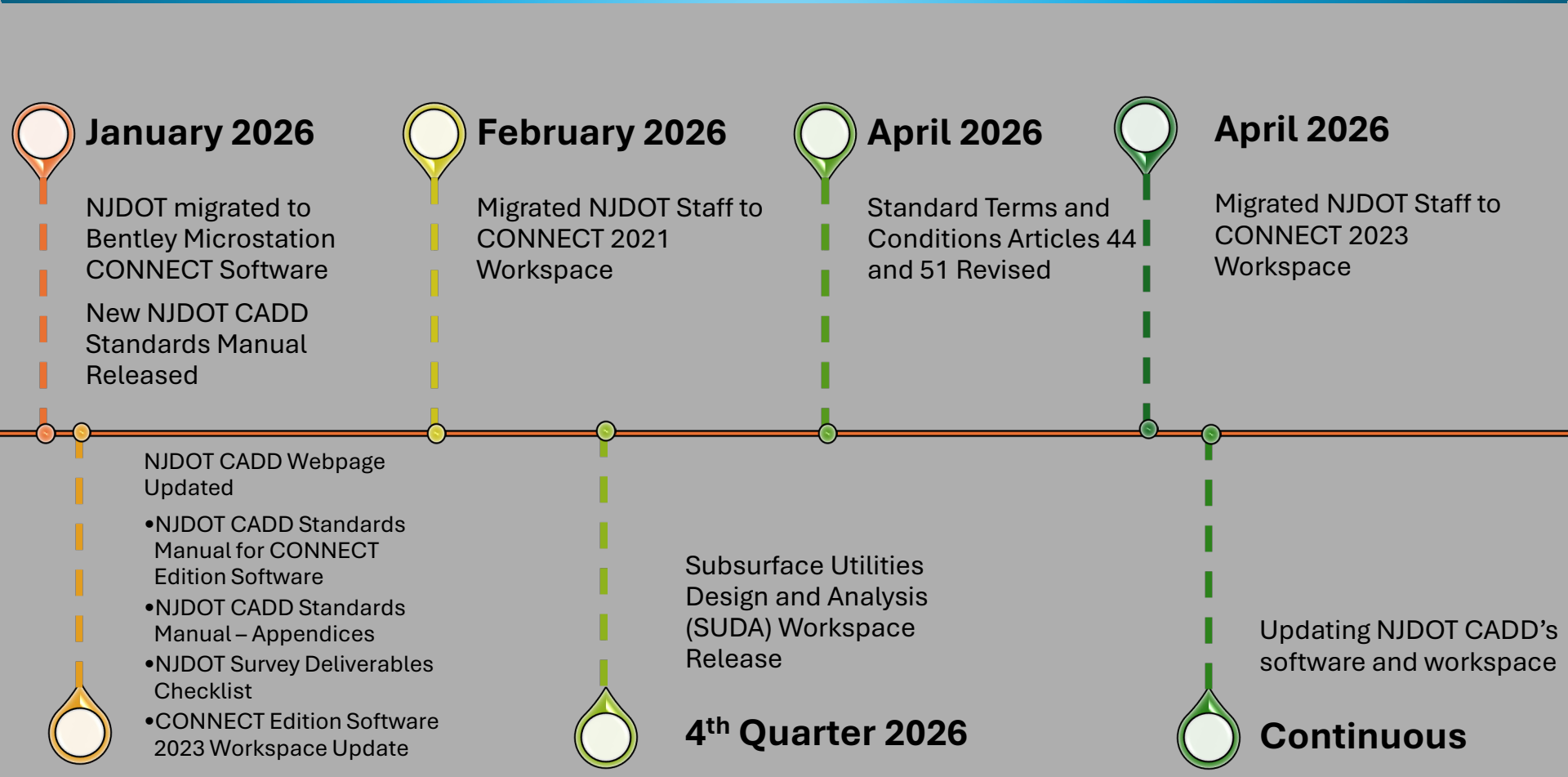
Computer Aided Design & Drafting (CADD)

Update & Status

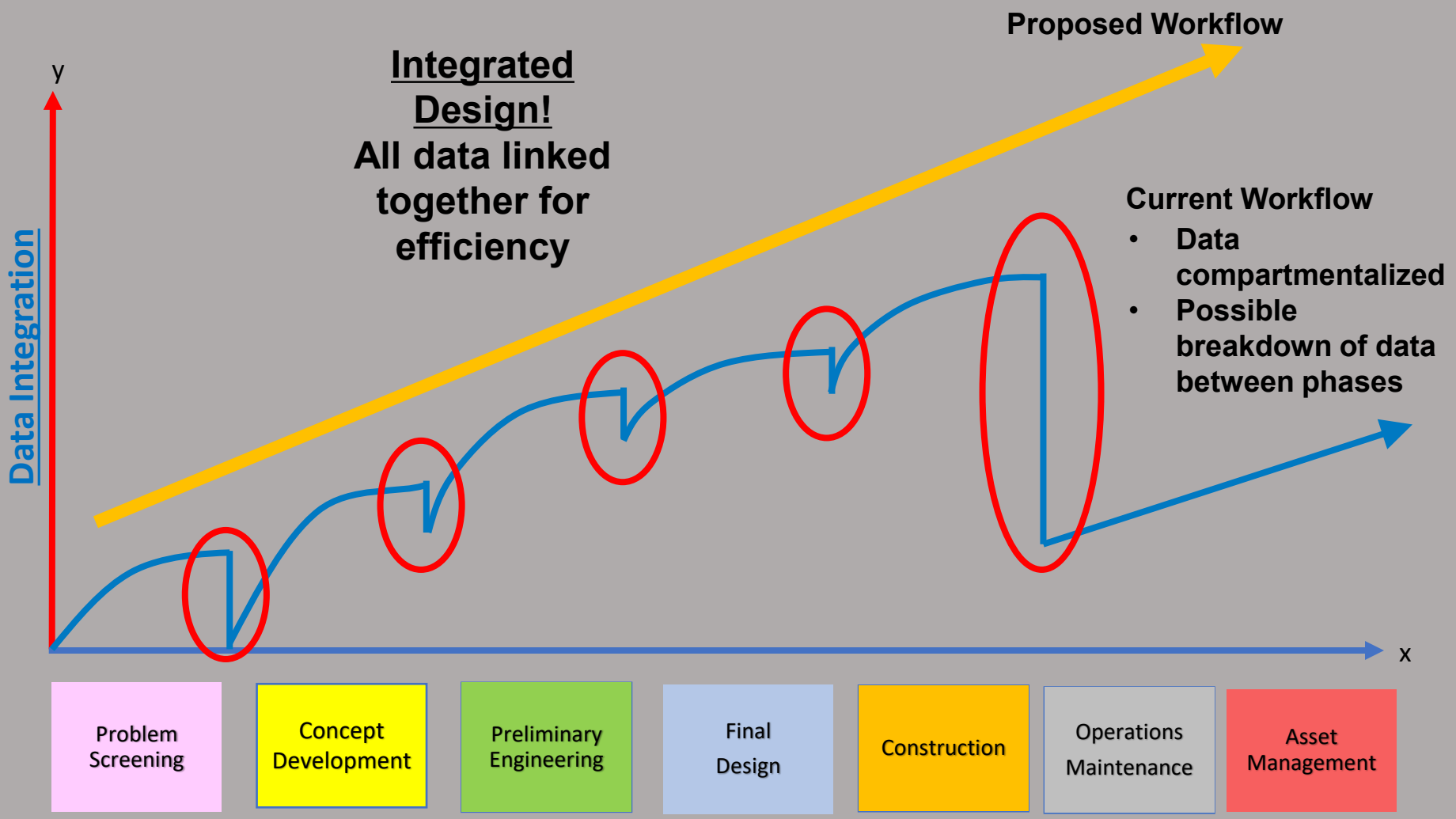



Where We Were
2D Design/Plan Production/Deliverable
Outdated CADD Software
Where We Are Now
2D Design/Plan Production/Deliverable
Updated CADD Software
Where We Are Going
2D/3D Design
Digital Delivery
Digital Twin
Continuous CADD Software & Workspace Updates

NJDOT CADD Migration Update Timeline



Why 3D Modeling?



Why 3D Modeling?

2D Design	3D Design
Limits functionality between design disciplines.	Allows for collaboration between design disciplines to provide dynamic design.
Drafting environmental is separate from the engineering environment.	Drafting and engineering environments area combined.
Plans come together at the end of the project.	2D Plans can still be created.
2D CADD software is no longer supported.	3D model can be created from the start of the project delivery process and refined throughout the project life cycle with incorporation from other disciplines.
	3D planless model can be generated for digital project delivery.
	3D model is provided to the Contractor to build the design.
	During construction, a digital twin 3D model is developed to serve as the As-Built model
	3D model provides for asset management/maintenance

NJDOT CADD Migration Update - Summary

NJDOT CADD Support Website

https://dot.nj.gov/transportation/eng/CADD/

Lightning Round



Anup Patel
Executive Manager of Bureau of Design Build
NJDOT

NJDOT DESIGN-BUILD STATUS UPDATE

Design Summit 2026

Anup Patel, P.E.
SES Manager – Bureau of Design Build
Division of Alternative Project Delivery

NEW JERSEY DB TIMELINE

At-a-glance

LEGISLATIVE AUTHORITY

The "Design-Build Construction Services Procurement Act" Authorized the use of Design-Build (P.L. 2021, c.71)

APRIL 2021

RULE-MAKING INITIATION STAKEHOLDER INPUT

The Department of Community Affairs in consultation with the Department of Education, began drafting administrative rules (N.J.A.C. 5:34-10) to implement the Act

2021 - 2022

RULES ADAPTATION

Design-Build construction contracts outlines: purpose, scope, definitions, solicitation, qualifications, proposal, stipend, evaluation, and award (N.J.A.C. 16:44B)

APRIL 2024

INDUSTRY WORKSHOP

NJDOT Hosts DB Industry Workshop
Over 300 Attendees including Contractors, Engineers, and Academia

JULY 2024



Process
Process
Process

NJDOT'S DESIGN-BUILD PROGRAM LAUNCH

- FHWA Coordination for Design Build Process Approval
  - Procurement Process
  - Network Diagram
  - Activity Descriptions
  - DB Guidelines
  - Updated CPH

NOTE: Documents posted on Department's website

PROCUREMENT & "BEST-VALUE"

- Two-Phase Process:
  - Phase 1 (RFQ): Evaluates qualifications (Legal, Financial, Experience) to establish a shortlist of Proposers
  - Phase 2 (RFP): Shortlisted firms submit Technical and Price Proposals
- Selection Standard:
  - Awards are made based on "Best-Value,"
  - Technical quality against price, rather than just the lowest bid
- "Best-Value" Scoring Requirement:
  - Proposal Price (50% Minimum of the Overall Score)
  - Quality Evaluation of Technical Approach
    - DB Organization and Process
    - DB Approach to the Project (Technical Solution)
    - Design and Construction Schedule



CURRENT DESIGN-BUILD PROJECT PORTFOLIO



Route 50 Bridge over Cedar Swamp Creek, Upper Township, Cape May County

- Replacement of the four span prestressed concrete box beam girder bridge
- Proposals received in January 2026
- Pending Best-Value Selection Award



Route 9W Bridge over I-95/1&9/46/4, Boro of Fort Lee, Bergen County

- Replacement of six span concrete encased steel girders bridge
- In Design-Build Preliminary Engineering (DBPE)
- LOI expected Spring 2026

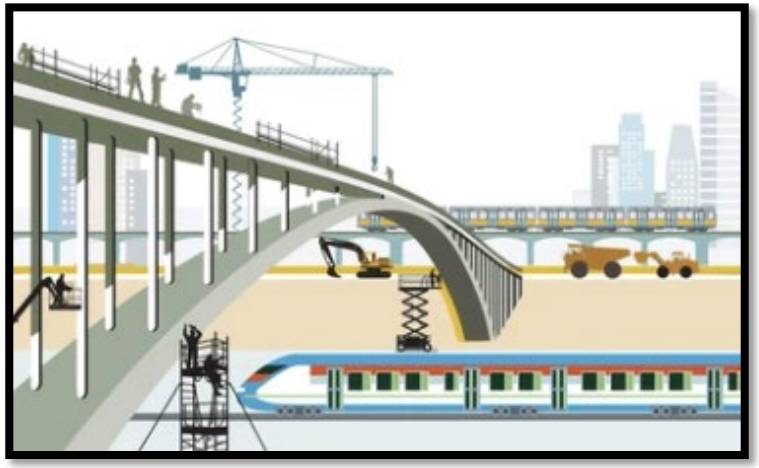


Route 295, Sloan Ave to Princeton Pike, Lawrence Township, Mercer County

- Interchange Congestion and Operational improvements
- Anticipated Solicitation for DBPE Spring 2026

WHAT'S NEXT?

- First Design-Build Project Award - Major milestone
- Additional Design-Build projects procurement underway
- NJDOT continues to refine DB project screening process, risk assessment, SME and Stakeholders coordination to strengthen the future of Alternative Project Delivery program



THANK YOU!



Kościuszko Bridge

Lightning Round



Rebecca Scanlon
Deputy Director, Division of Right-of-Way and Access Management
NJDOT

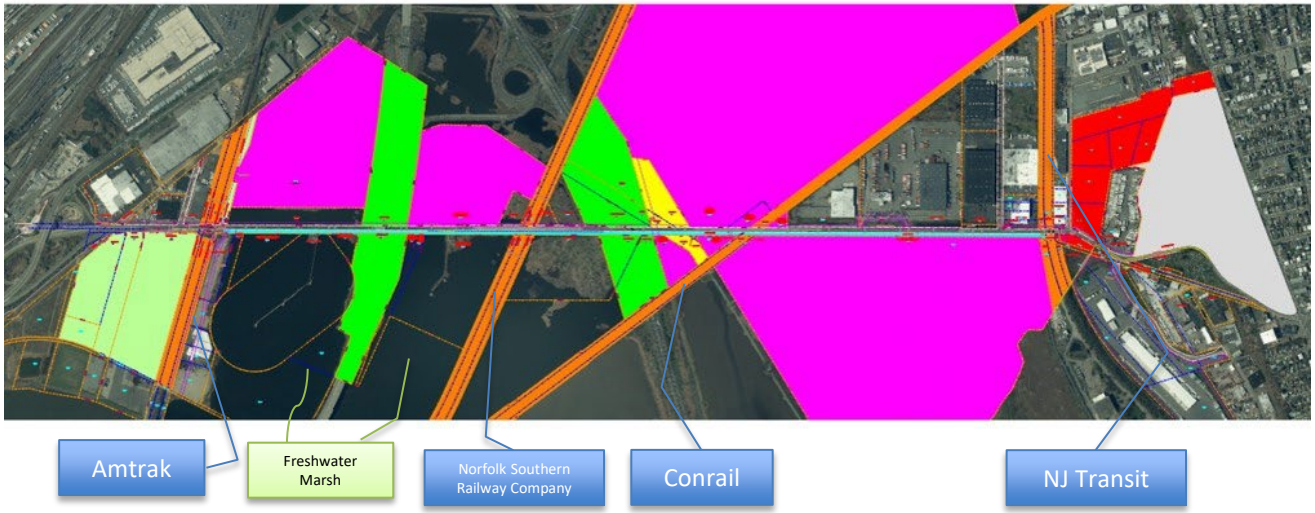


Mitigate Right of Way Challenges in Concept Development in 5 Easy Steps

An overview of strategies to reduce project risk and delays

Step 1. Start ROW Investigations Early

- Review project limits, identify properties potentially involved
- Identify high-risk parcels (environmental, railroads, Federally owned, etc.)



STAKEHOLDERS

LEGEND

- = ADJACENT PROJECTS
- = CITY OF JERSEY CITY
- = PRIVATE BUSINESSES
- = NEW JERSEY TURNPIKE AUTHORITY (NJTA)
- = NEW JERSEY SPORTS & EXPOSITION AUTHORITY (NJSEA)
- = NORTH ARLINGTON CEMETERY
- = PSE&G
- = RAILROADS

Step 2. Engage Municipalities & Stakeholders Early



Learn about redevelopment plans, land sales, or property issues

Discover deal-breakers before preferred alternative solidified



Build early support for project direction, learn of specific concerns or neighborhood needs

Step 3. Use ROW Risk Screening in Alternative Evaluation

- Count anticipated acquisitions and relocations
- Identify impacts to sensitive or high-value parcels
- Note utility conflicts contributing to ROW impacts
- Consider narrower sections or shift alignments as needed



Step 4. Flag Potential Relocation Cases Early

Relocations increase cost and schedule risk

Assess available housing or commercial space

Consider alternatives to avoid displacement

Explore early or advanced acquisition as soon as possible



Step 5.
Involve Right of Way Subject Matter Experts



Thank you!





Lightning Round



Thank You!

Questions?



Bridging the Gap

1:45 pm

Bridging the Gap
A Span-tastic Presentation



PANELISTS



Samer Rabie
Project Manager
Project Management
Team D



Harjit S. Bal
SES Manager
Structural Evaluation
& Bridge Management



Nirav Patel
SES Manager
Structural Evaluation
& Bridge Management

NJDOT EPIC^2

Enhancing Performance with Internally Cured Concrete

HIGH PERFORMANCE INTERNALLY CURED CONCRETE (HPIC)

Design Summit - May 13, 2026

Samer Rabie
Project Manager
Division of Project Management, Team D
New Jersey Department of Transportation

AGENDA



DEFINE THE PROBLEM & OBJECTIVE



INTRODUCE INTERNAL CURING



IMPLEMENTATION PLAN



NEXT STEPS & GOALS

NJ State Transportation Innovation Council (STIC)

EXECUTIVE TEAM

Manages STIC Operation
Point for reporting to Assistant Commissioner & FHWA
Coordinates with all groups

Innovation Advisory Team

Core Innovation Area	Core Innovation Area	Core Innovation Area	Core Innovation Area	Core Innovation Area
Infrastructure Preservation	**Mobility & Operations**	**Organizational Support & Improvement**	**Planning & Environment**	**Safety**

"Identify and rapidly deploy proven yet underutilized innovations…"

STATE TRANSPORTATION INNOVATION COUNCIL (STIC)

- EDC 1 (2011-2012): **Institutionalized**

  PREFABRICATED BRIDGE ELEMENTS & SYSTEMS (PBES)

- EDC 2 (2013-2014) : **Institutionalized**

  ACCELERATED BRIDGE CONSTRUCTION

- EDC 3 & 4 (2015-2018) : **Institutionalized**

  ULTRA HIGH PERFORMANCE CONCRETE (UHPC) FOR PBES

- EDC 6 (2021-2022) : **Assessment**

  UHPC FOR BRIDGE PRESERVATION & REPAIR

- **EDC 7 (2023-2024):**

  ENHANCING PERFORMANCE WITH INTERNALLY CURED CONCRETE (EPIC^2)



HPC BRIDGE DECK TRANSVERSE CRACKING



HPC Section 903.05 :

- Low w/cm ratio : 0.40
- Large amount of Pozzalonic / Supplementary Cementitious Materials (SCMs)
- Improved durability properties

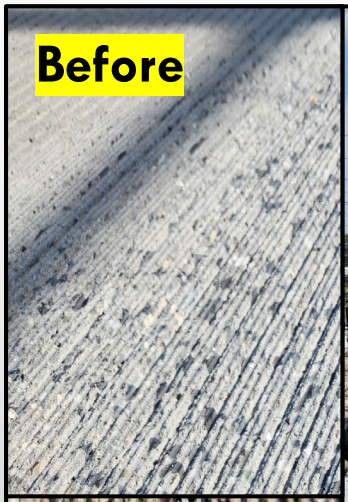
However,

- **Increased susceptibility** of Autogenous (Chemical) shrinkage cracking : Due to self-desiccation
- Undermined durability improvements

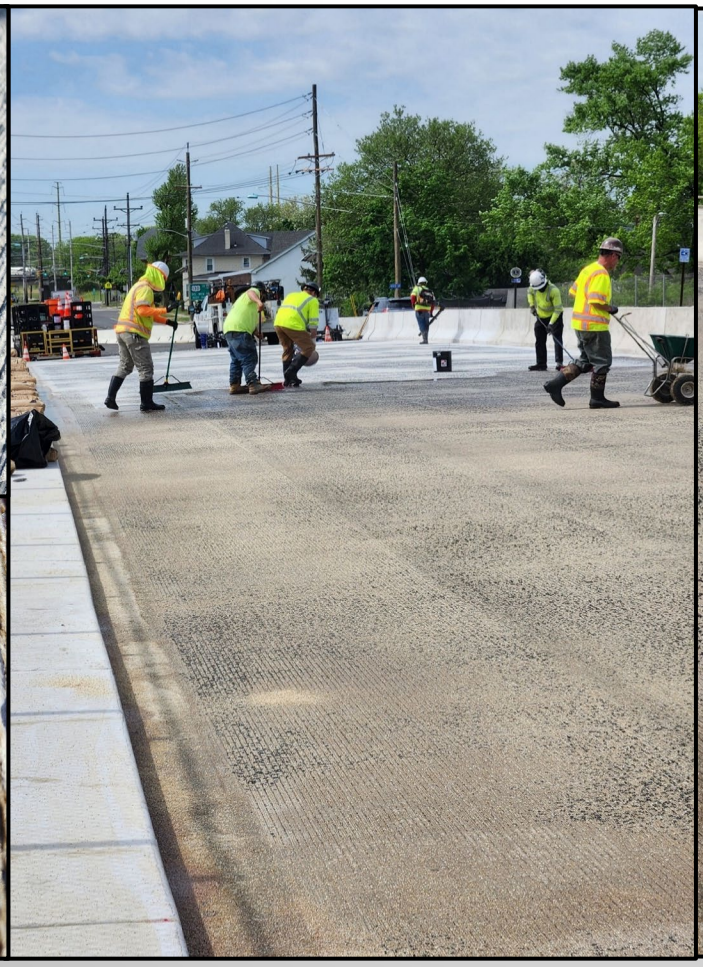
NCHRP Synthesis 500, 2017 :

Cracking is a key limiting factor in achieving acceptable long-term performance

BRIDGE DECK SEALING











EDC-7: EPIC^2

FHWA's findings show that internal curing addresses:

Durability: targets and mitigates shrinkage cracking in lower w/cm concretes, resulting in improved durability

Versatility: can be used anywhere traditional concrete is used.

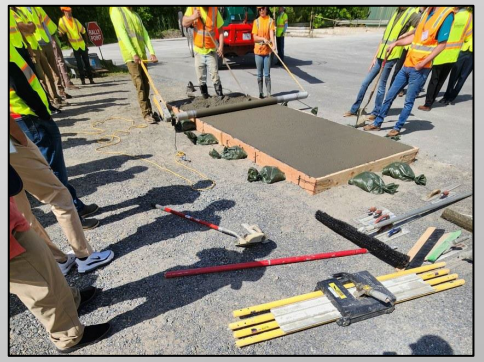
Cost Savings: higher-durability reduces the need to rehabilitate elements resulting in life-cycle cost savings

Waste Reduction: increased utilization of natural, waste, or recycled SCMs without reduced performance

Deployment: institutionalized by more than 15 States or transportation agencies for Bridges and Pavements







PROBLEM

Early-age Cracking (within 60 days) in HPC Bridge Decks and the resulting Reduction in Service Life

OBJECTIVE

Reduce Autogenous Shrinkage and the resulting Transverse Cracking in new HPC Bridge Decks

APPROACH

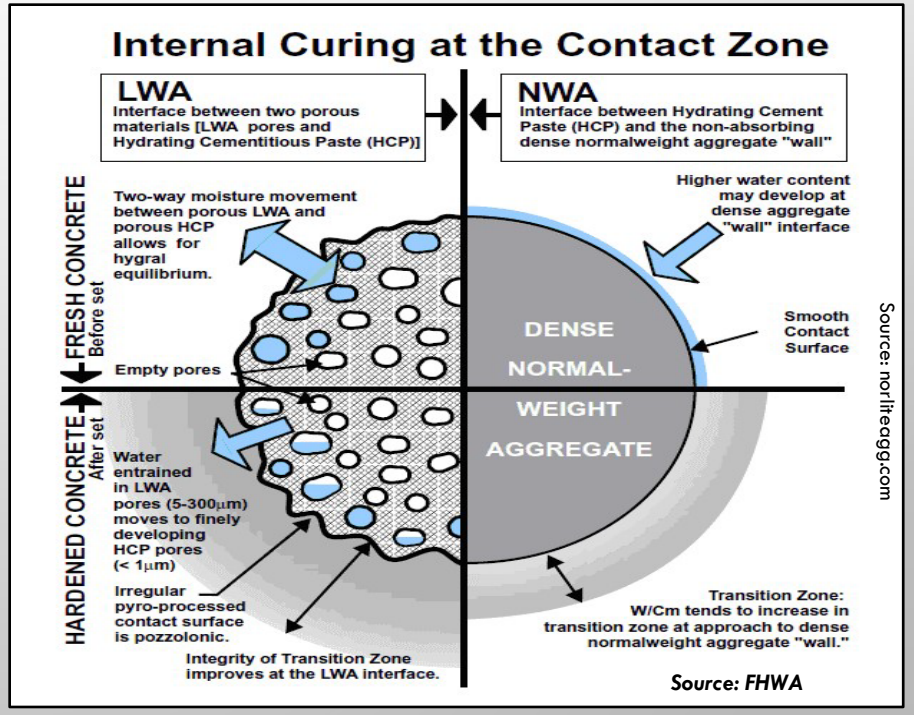
Minimize self desiccation and rate of hydration (lower cement content) and INTERNAL CURING

INTERNAL CURING

- Is simply curing where the water is provided from inside.
- Main difference between HPC and HPIC :

  Replacing some conventional fine aggregate/sand with pre-wetted lightweight fine aggregate (LWFA).
- At the time of set, capillary stresses draw the water out of the LFWA and cures the concrete section.

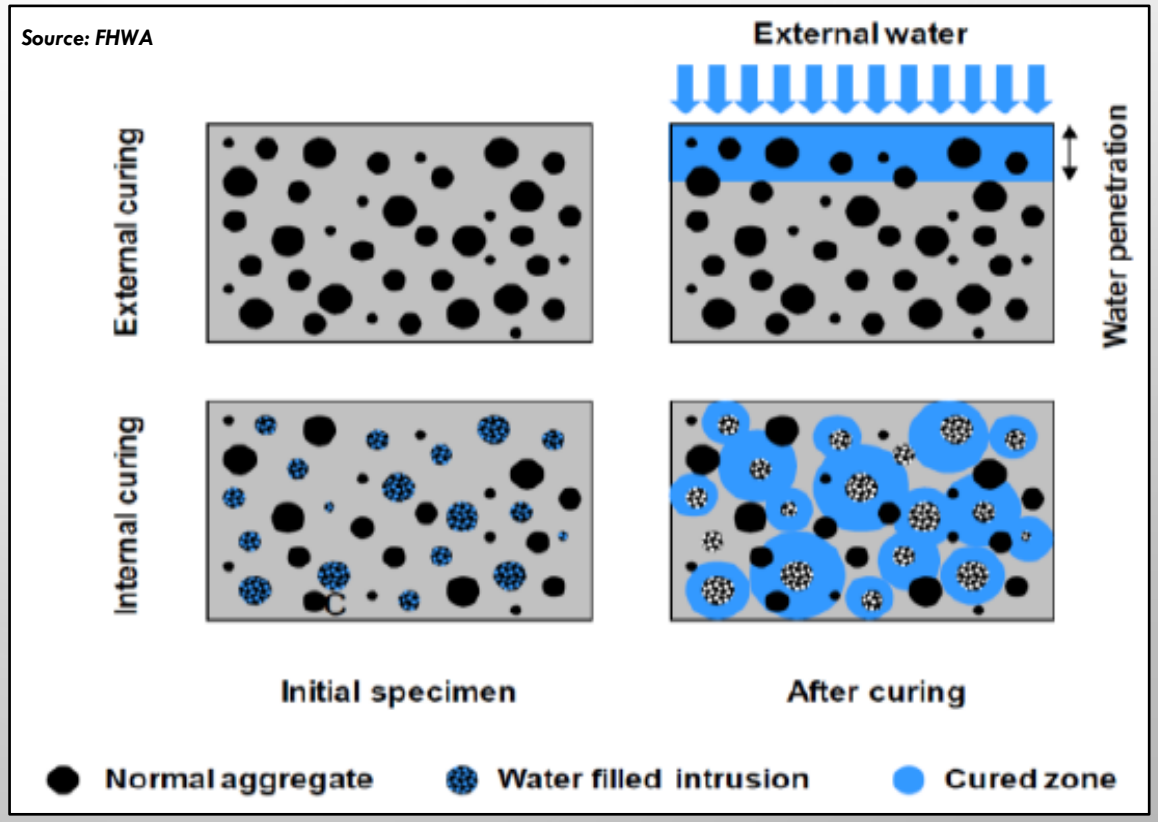




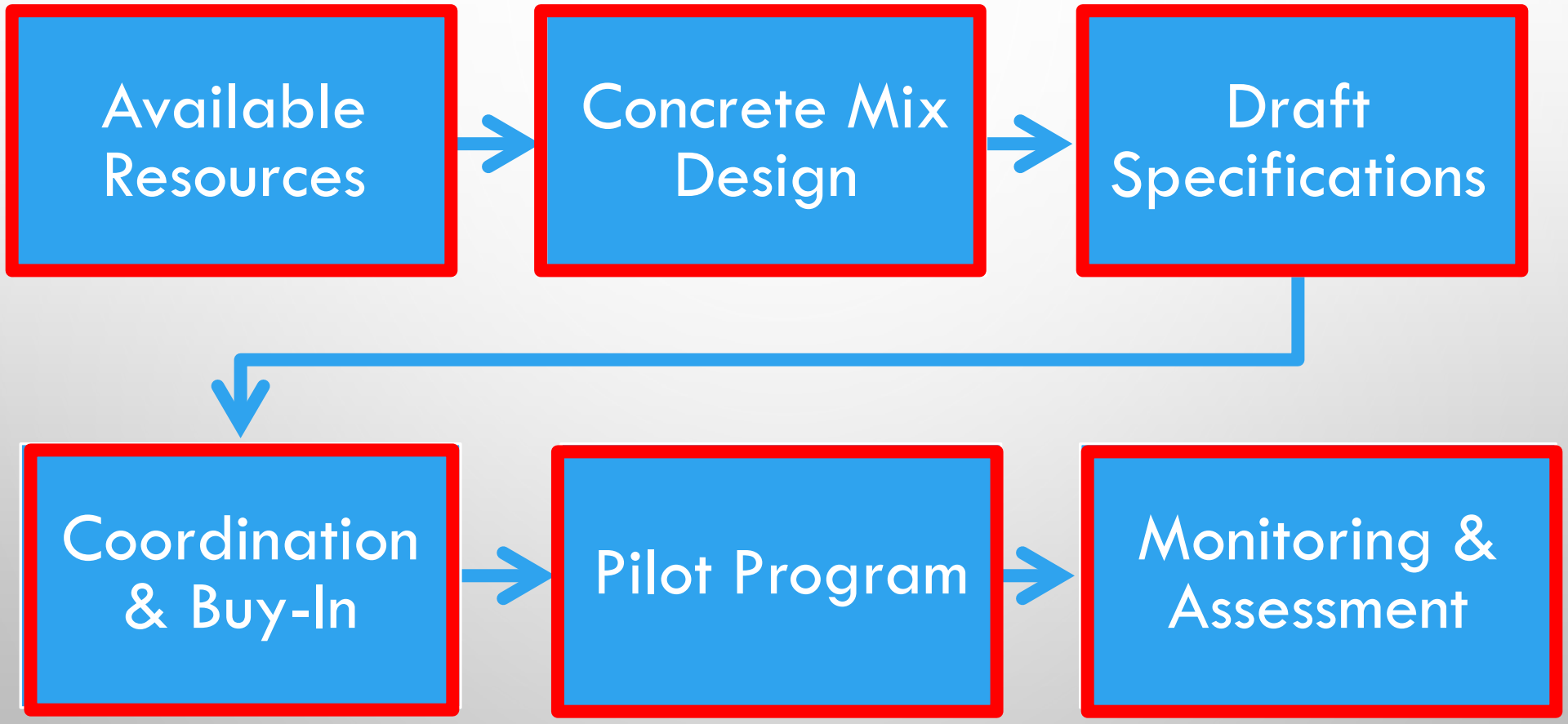
INTERNAL CURING

- Supplemental to, not replacement for, external curing.
- Increases the hydration of the cement and reaction of SCMs.
- Results in better dispersion of curing water throughout the concrete depth.
- Water absorbed :
  - Does not contribute to the w/cm ratio.
  - Remains in the LWFA during until set.

HPIC is <u>not</u> lightweight concrete!



NJDOT IMPLEMENTATION PLAN

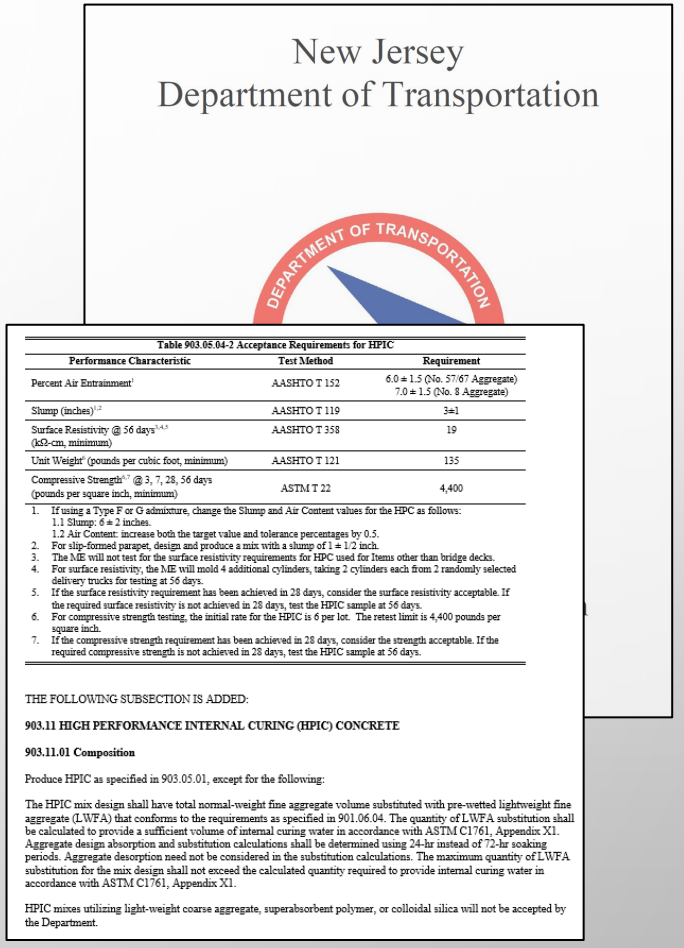


PROJECT IMPLEMENTATION

- Special Provisions
- Contract Pay Items
- Concrete Supplier Coordination
- Design
- Contract Plans

SPECIAL PROVISIONS

- **Section 900 (Materials)**
  - Performance Specifications
  - Two Mixture Designs:
    - Conversion Mixture
    - Constrained Cementitious Mixture
  - Material & Verification Testing
- **Section 500 (Construction)**
  - Test Slab
  - Pay Items



New Jersey
Department of Transportation

DEPARTMENT OF TRANSPORTATION

Table 903.05.04-2 Acceptance Requirements for HPIC

Performance Characteristic	Test Method	Requirement
Percent Air Entrainment[1]	AASHTO T 152	6.0 ± 1.5 (No. 57/67 Aggregate) 7.0 ± 1.5 (No. 8 Aggregate)
Slump (inches)[1,2]	AASHTO T 119	3±1
Surface Resistivity @ 56 days[3,4,5] (kΩ-cm, minimum)	AASHTO T 358	19
Unit Weight[6] (pounds per cubic foot, minimum)	AASHTO T 121	135
Compressive Strength[6,7] @ 3, 7, 28, 56 days (pounds per square inch, minimum)	ASTM T 22	4,400

1. If using a Type F or G admixture, change the Slump and Air Content values for the HPC as follows:
   1.1 Slump: 6 ± 2 inches.
   1.2 Air Content: increase both the target value and tolerance percentages by 0.5.
2. For slip-formed parapet, design and produce a mix with a slump of 1 ± 1/2 inch.
3. The ME will not test for the surface resistivity requirements for HPC used for Items other than bridge decks.
4. For surface resistivity, the ME will mold 4 additional cylinders, taking 2 cylinders each from 2 randomly selected delivery trucks for testing at 56 days.
5. If the surface resistivity requirement has been achieved in 28 days, consider the surface resistivity acceptable. If the required surface resistivity is not achieved in 28 days, test the HPIC sample at 56 days.
6. For compressive strength testing, the initial rate for the HPIC is 6 per lot. The retest limit is 4,400 pounds per square inch.
7. If the compressive strength requirement has been achieved in 28 days, consider the strength acceptable. If the required compressive strength is not achieved in 28 days, test the HPIC sample at 56 days.

THE FOLLOWING SUBSECTION IS ADDED:

903.11 HIGH PERFORMANCE INTERNAL CURING (HPIC) CONCRETE

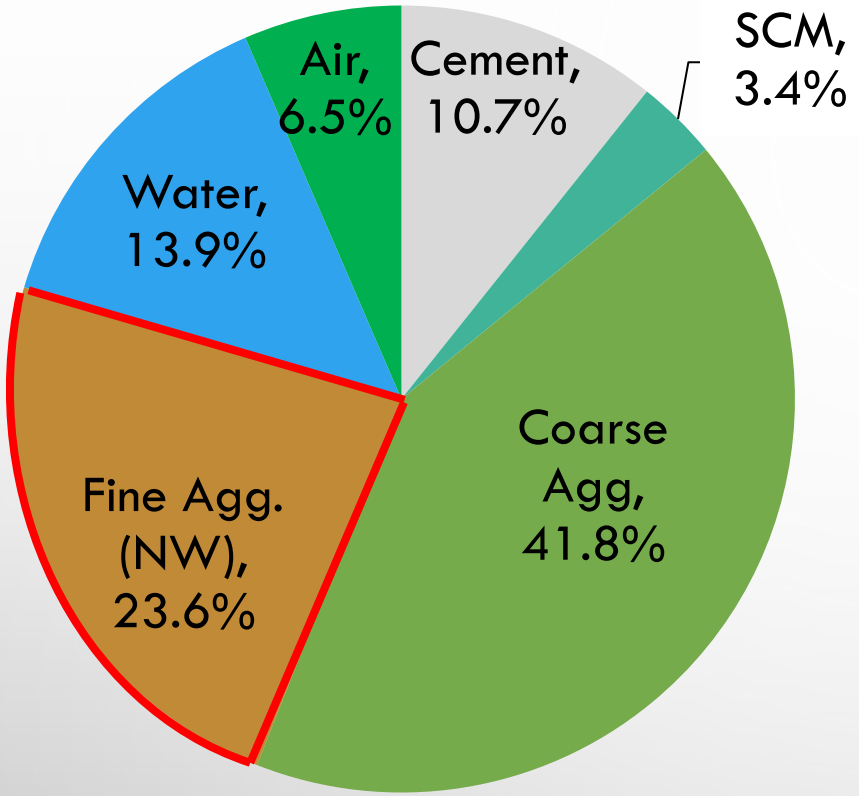
903.11.01 Composition

Produce HPIC as specified in 903.05.01, except for the following:

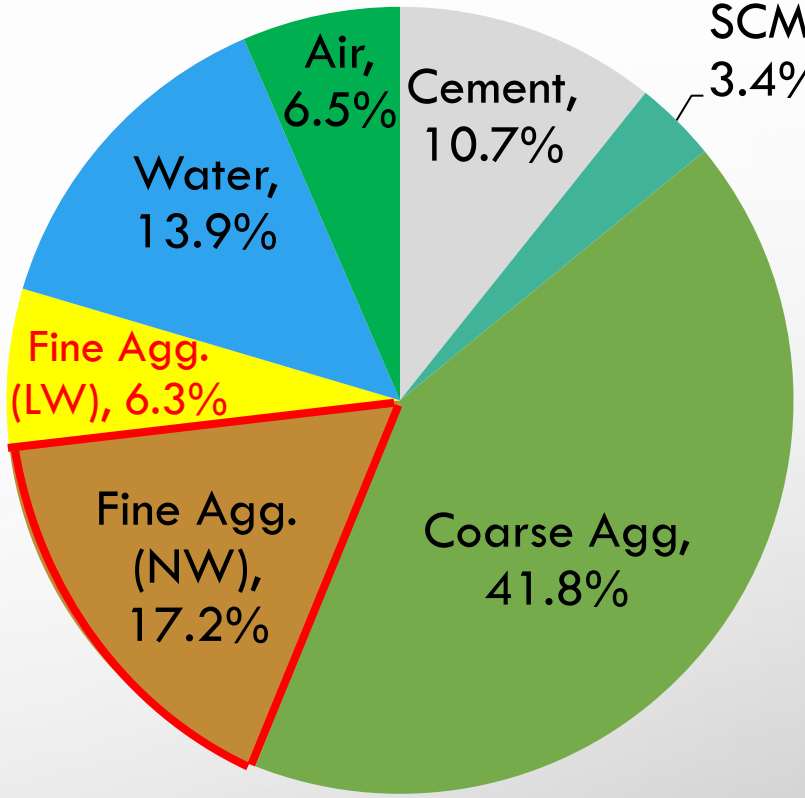
The HPIC mix design shall have total normal-weight fine aggregate volume substituted with pre-wetted lightweight fine aggregate (LWFA) that conforms to the requirements as specified in 901.06.04. The quantity of LWFA substitution shall be calculated to provide a sufficient volume of internal curing water in accordance with ASTM C1761, Appendix X1. Aggregate design absorption and substitution calculations shall be determined using 24-hr instead of 72-hr soaking periods. Aggregate desorption need not be considered in the substitution calculations. The maximum quantity of LWFA substitution for the mix design shall not exceed the calculated quantity required to provide internal curing water in accordance with ASTM C1761, Appendix X1.

HPIC mixes utilizing light-weight coarse aggregate, superabsorbent polymer, or colloidal silica will not be accepted by the Department.

HPIC MIX VOLUMETRIC DISTRIBUTION



HPC



HPIC (27% LWFA with 23% Abs.)

- Provide absorbed LWFA moisture to offset chemical shrinkage (~7% volume of cementitious materials)
- LWFA substitution volume depends on :
  Aggregate Absorption/Desorption Properties & Cementitious Content

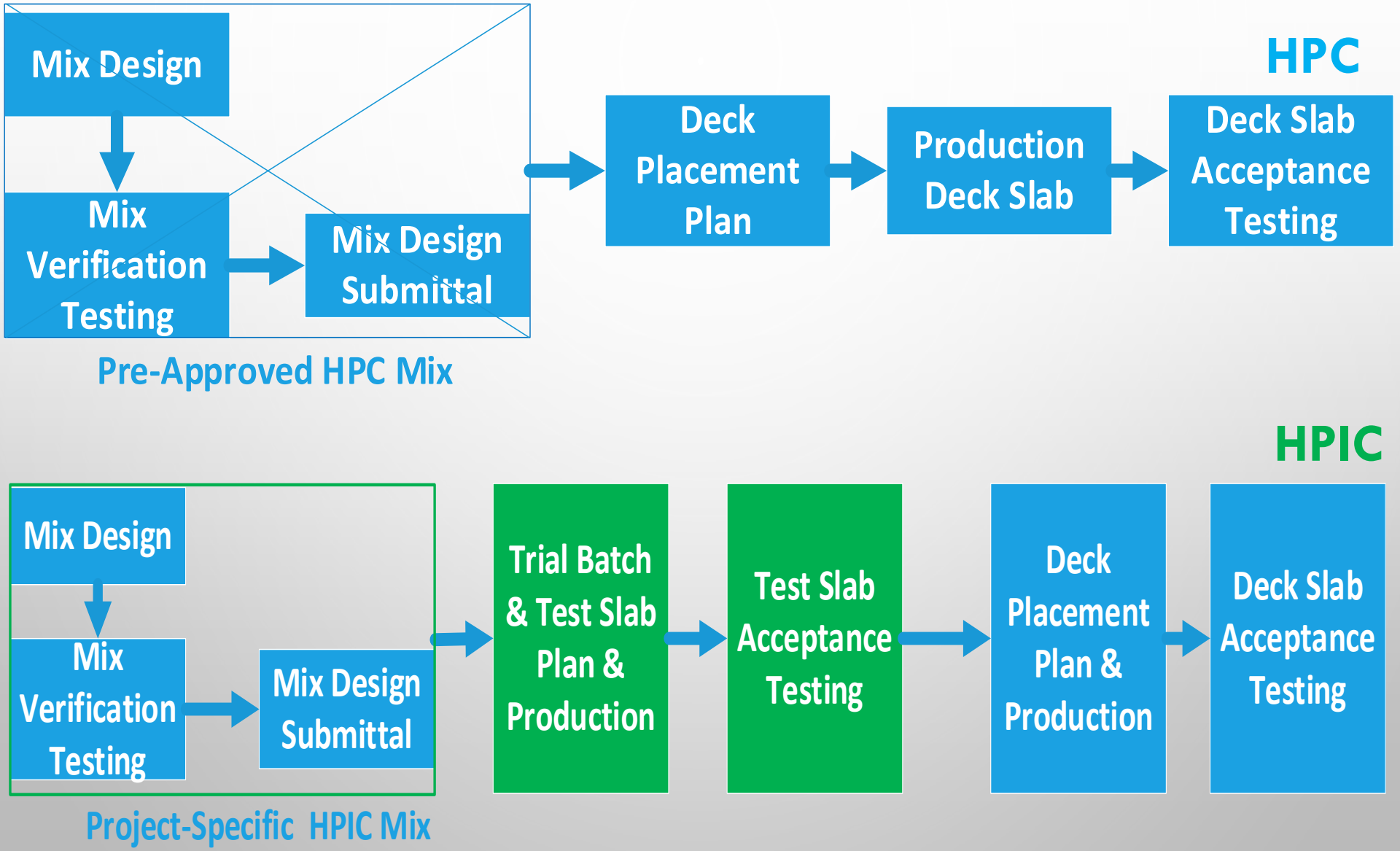
PRODUCTION & CONSTRUCTABILITY

- **Batching:**
  - LWFA Stockpile Management
  - Verification Testing
- **Trial Batch & Test Slab**
  - Demonstrate Contractor capabilities and provide experience to the Contractor & the Department.
  - Acceptance Testing
  - Separate contract pay item
- **Same Placement, Finishing & External Curing Methods as HPC**





CONSTRUCTION PROCESS FLOW-CHART



PROJECT CONSIDERATIONS

- **Design Phase:**
- Confirm Concrete Design Properties :
  - Minor Unit Weight & Modulus Reduction
  - Consider Deck Weight/Camber/Stiffness
- Incorporate Guide Specifications
- Coordinate with Concrete Plants

- **Construction Phase:**
- Additional HPIC construction costs:
  - Mix Design & Verification (~$20k)
  - Trial Batch & Test Slab (~$20k)
  - Unit Cost (Per CY) (<20% Increase)
  - Schedule Duration: Verification Testing, Trial Batch, Test Slab (~6 Months)

Bid Results Item : 506012P CONCRETE BRIDGE DECK, HPIC			
Unit Price /CY	**Quantity**	**Contract**	**Award**
$2,500	550	North Munn Ave, Bridge Over Rt. 280	9/18/2024
$1,400	195	Maple Avenue Bridge over Rt. 208	8/29/2025
$1,000	451	Hanover Ave Bridge over I-287	11/17/2025

CANDIDATE BRIDGES/PROJECTS

Project Name	County	Region	Current Phase	Award
North Munn Ave, Bridge o/ Rt 280	Essex	North	Con.	**2024**
CR 507 (Maple Ave), Bridge o/ Rt 208	Bergen	North	Con.	**2025**
Hanover Ave (CR650), Bridge o/ I-287	Morris	North	Con.	**2025**
Prince Rodgers Ave, Bridges o/ Rt 287	Somerset	Central	FD	**2026**
Rt 202 Bridge o/ N Branch of Raritan River	Somerset	Central	FD	**2026**
Rt 45 Bridge o/ Woodbury Creek	Gloucester	South	FD	**2027**
Rt 23 SB Bridge o/ NYS&W Railroad	Passaic	North	FD	**2027**
Rt 124 Bridges o/ Passaic River	Morris	North	FD	**2028**
Change Bridge Rd (CR 621), Bridge o/ Rt 80	Morris	North	CD	**2028**
Blue Heron Rd Bridge o/ Rt 15	Sussex	North	CD	**2029**

MONITORING AND ASSESSMENT

Comparative Studies : Twin Bridges HPC vs HPIC





HPIC Assessment

- Map and survey crack patterns in HPC and HPIC decks (~20 decks)
- Quantify performance improvements over traditional concrete
- Develop data-driven justification for institutionalization

NEXT STEPS...

- CONSTRUCTION SUPPORT
- ASSESS PILOT PROJECTS
- MONITOR PERFORMANCE
- CONTINUE INDUSTRY OUTREACH
- UPDATE SPECIFICATIONS
- SCOPE ADDITIONAL PROJECTS



TEAM EFFORT



DESIGN LIFE VS SERVICE LIFE

AASHTO LRFD Bridge Design Specifications, 9th Edition

Design Life – Period of time on which the statistical derivation of transient loads is based, which is **75 years** for these Specifications.

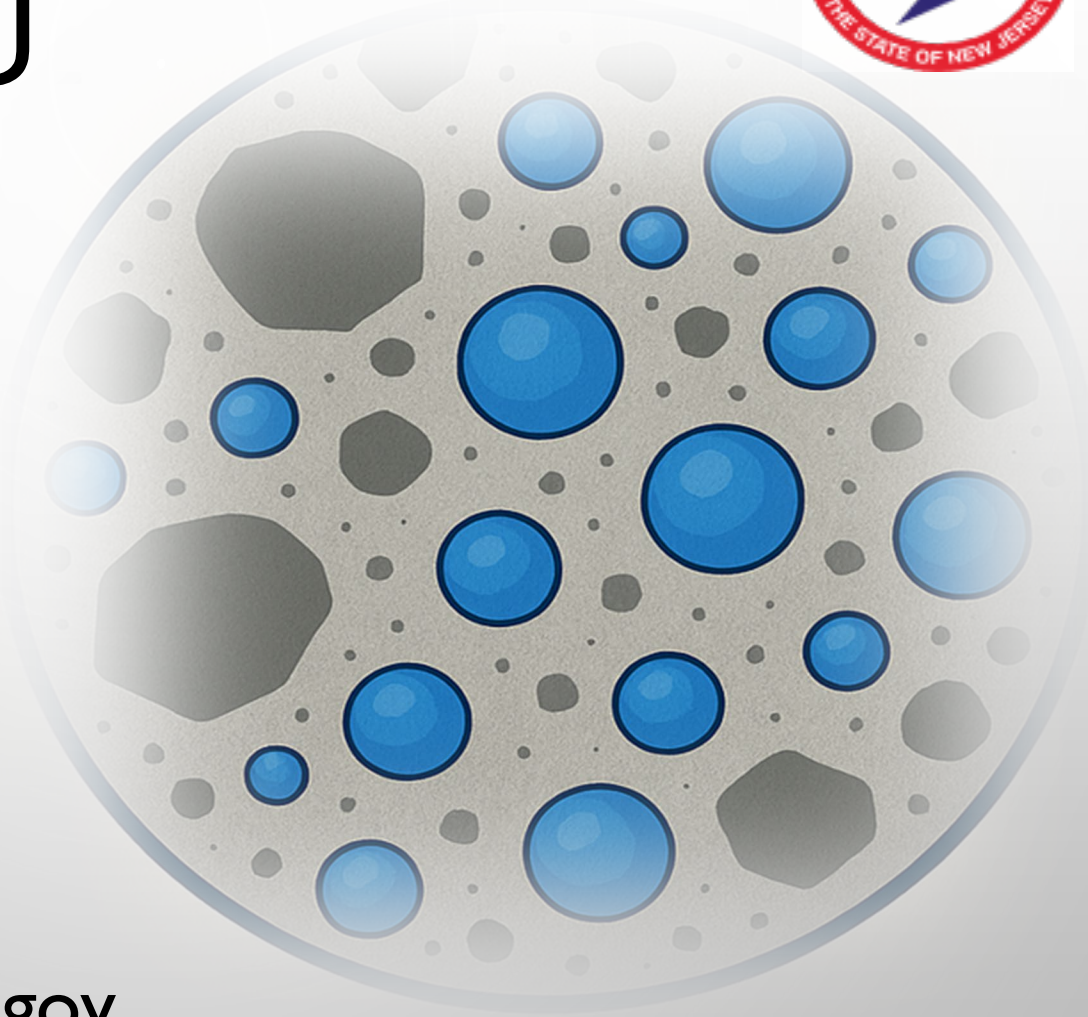
2.5.2.3 – Maintainability
…Where the environment is such that a **bridge deck may need to be replaced before the required service life**, provisions shall be shown on the contract documents for… **a future deck replacement…**

From the start, we are making bridges that require more than one bridge deck because decks typically last only 25-40 years due to harsh conditions.

With the internal curing technology, we can now produce higher-performance concrete that makes 75-year bridge decks achievable.

THANK YOU





Samer.Rabie@dot.nj.gov

NEW JERSEY DEPARTMENT OF TRANSPORTATION

New Jersey Roadmap to SNBI

May 13, 2026

By

Harjit S. Bal, P.E.

Bureau of Bridge Management

Division of Bridge Engineering and Infrastructure Management

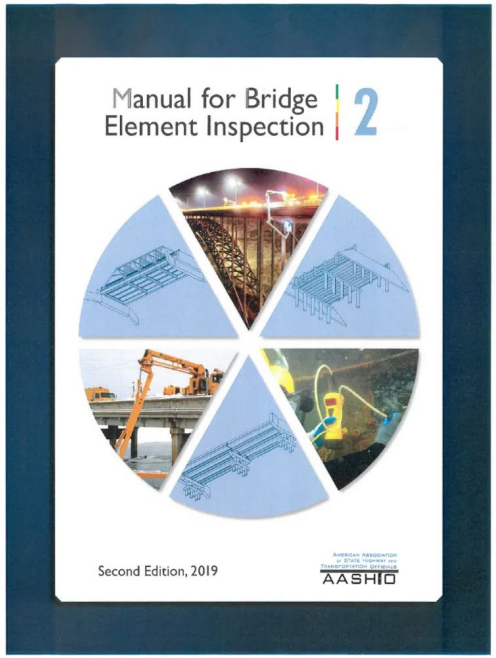
Agenda

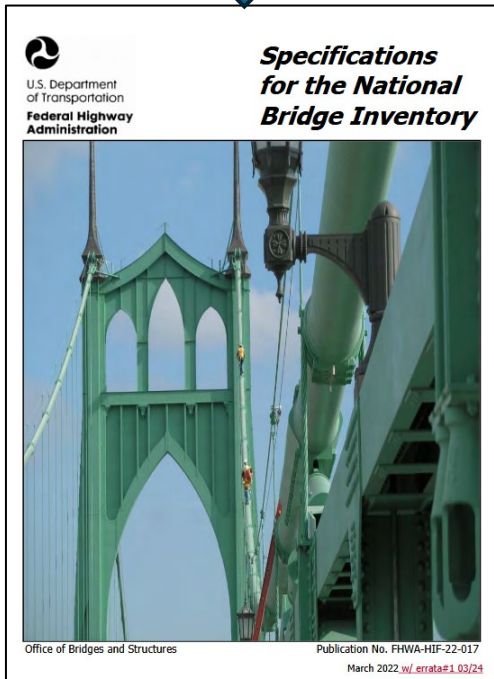


- What is SNBI?
- Why?
- New Jersey Facts
- NJDOT – SNBI Data, Collection, Tools
- New Jersey Challenges
- NJDOT Challenges in Implementing SNBI
- Timeline of Major Milestones
- NJDOT Success and Lesson Learned

What is SNBI?

- New 2022 **Specifications for the National Bridge Inventory**
- Updated 2022 National Bridge Inspection Standards (NBIS)
  - 23 CFR part 650 Subpart C, May 2022
- SNBI **supersedes**
  - Old *Recording and Coding Guide for the Structure and Appraisal*, Dec 1995
  - *Specifications for the National Inventory Bridge Elements* published in 2019.





Data Collected under SNBI

- Bridge **Identification**
  - *Name, Location, Owner, Load Rating*
- Bridge **Material and Type**
  - *Span Sets, Substructure Sets*
- Bridge **Geometry**
  - *Length, Width, Deck Area, etc.*
- Bridge **Features**
  - *Carried, Above, Under, Routes*
  - *Highway, Railroad, Waterway*
- Load Posting, Load Evaluation
- Inspection Events, Conditions, Elements, Works



Section 1: Bridge Identification
- Subsection 1.1: Identification
- Subsection 1.2: Location
- Subsection 1.3: Classification

Section 2: Bridge Material and Type
- Subsection 2.1: Span Material and Type
- Subsection 2.2: Substructure Material an
- Subsection 2.3: Roadside Hardware

Section 3: Bridge Geometry

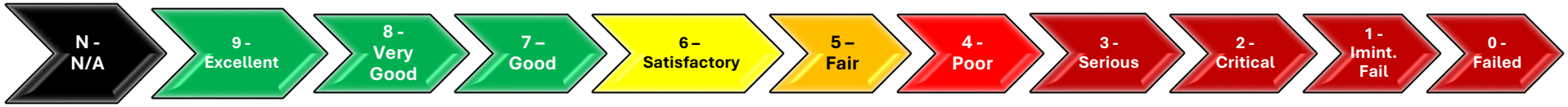
Section 4: Features
- Subsection 4.1: Feature Identification
- Subsection 4.2: Routes
- Subsection 4.3: Highways
- Subsection 4.4: Railroads
- Subsection 4.5: Navigable Waterways

Section 5: Loads, Load Rating, and Posting
- Subsection 5.1: Loads and Load Rating
- Subsection 5.2: Load Posting Status
- Subsection 5.3: Load Evaluation and Pos

Section 6: Inspections

Why SNBI?

- Enables state- and national-level NBIS bridge analyses and **uniformity** in data across the nation
- Report Congress – *Number*, *Condition*, *Performance*
  - Federal **funding** programs
  - Bridge management and maintenance planning
  - Provides a safe highway transportation system
- Better assessment of condition
  - Component-level (*General Condition Ratings **9** through **0***)



  - Element-level (*Condition State **1** to Condition State **4***)



NJ Facts - Structural Assets

Bridge Program	CY2024
State maintained NBIS (> 20 ft)	2,596
County/Municipality owned	2,712
Toll agencies	1,333
New Jersey Transit Orphans	104
Other Agencies and Private	49
Federally owned NBIS bridges	31
Total	**6,825**

Minor Bridge Program	CY2021
State owned Minor (5 ft to 20 ft)	953
County/Municipality Minor	5,200
Total	**6,153**

Tunnel Program	CY2021
State owned NTIS Tunnel	1
Toll agency Tunnels	4
Total	**5**

Ancillary Structures	CY2021
State Overhead Sign	1,892
State High Mast Light	244
Total	**2,136**

Other Programs	CY2021
State owned Pedestrian	72
State owned Dams	28
Total	**100**

NJDOT – SNBI Data, Collection, Tools

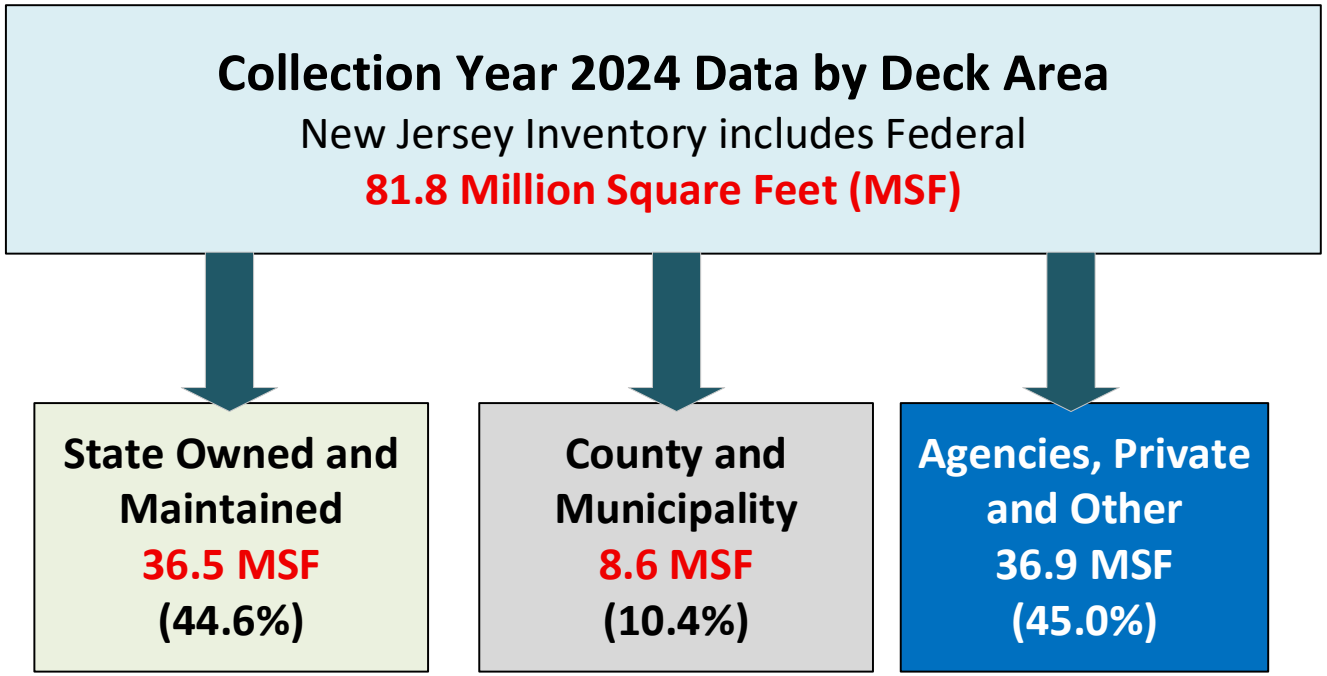
- Bentley's *AssetWise Inspections*
  - Combined Inspection System (**CombIS)**
  - Front-end data collection software



- AASHTOWare's *Bridge Management*
  - **BrM** Version 7.1.5
  - Data analytics, federal submission, deterioration modeling, lifecycle planning
  - Transportation Asset Management Plan
  - Factsheets, Key Performance Indicators
  - Transportation Problem Statements

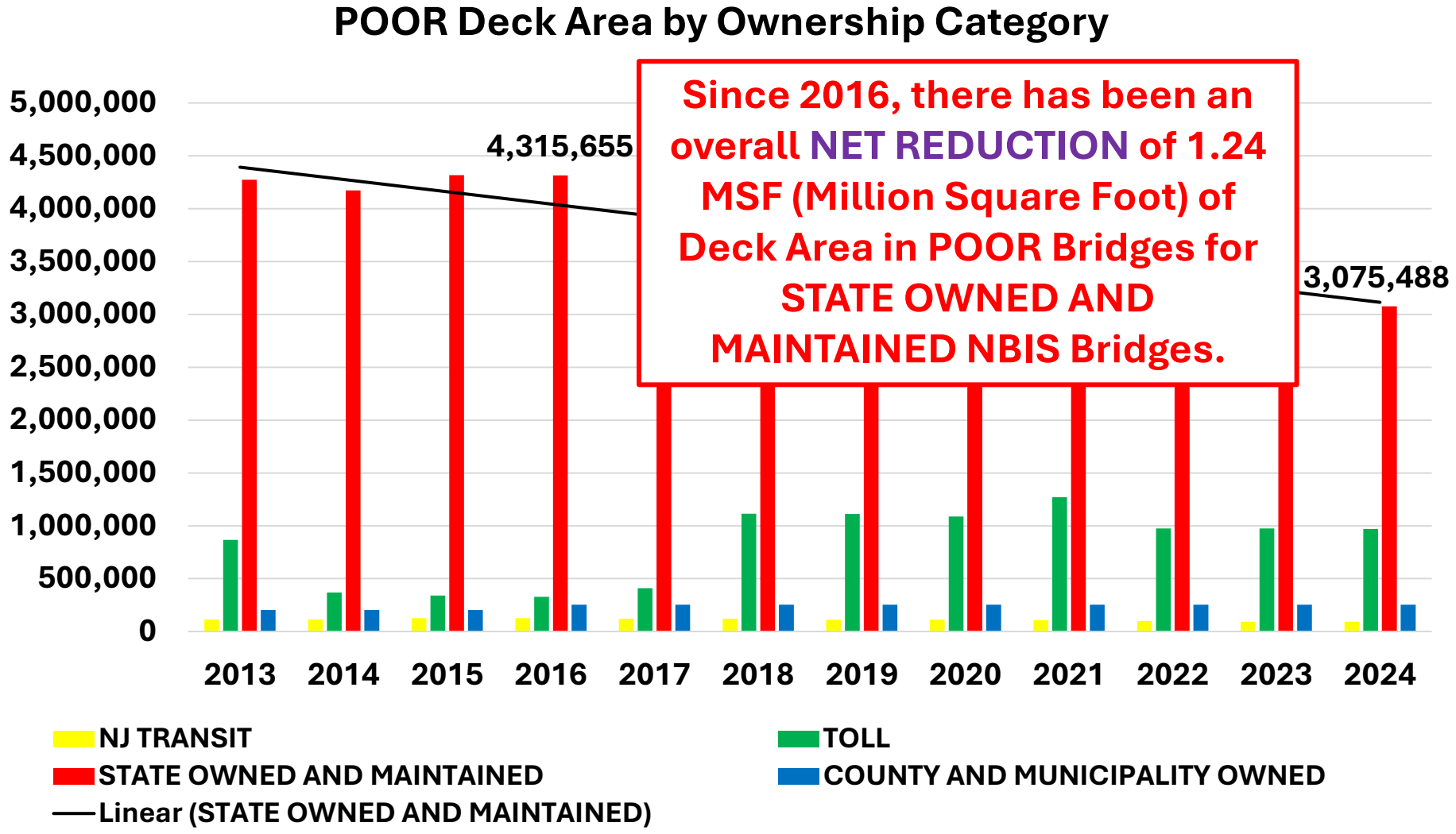


NJ Challenge - Ownership

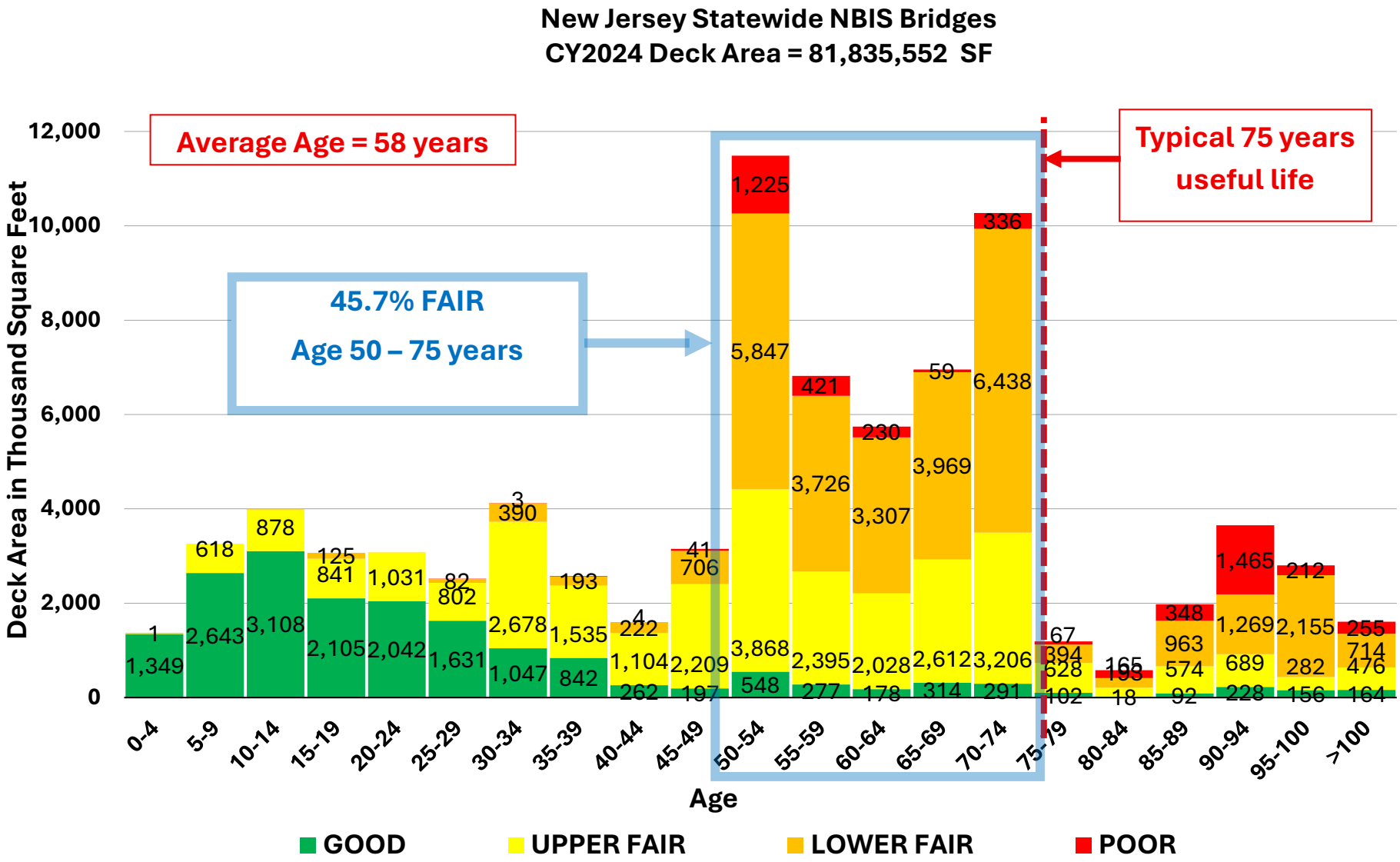


There are **96 DISCRETE BRIDGE OWNERS in New Jersey**, which poses a challenge to manage data and validate performance.

NJ Challenge - Poor Bridges



NJ Challenge – Aging Bridges

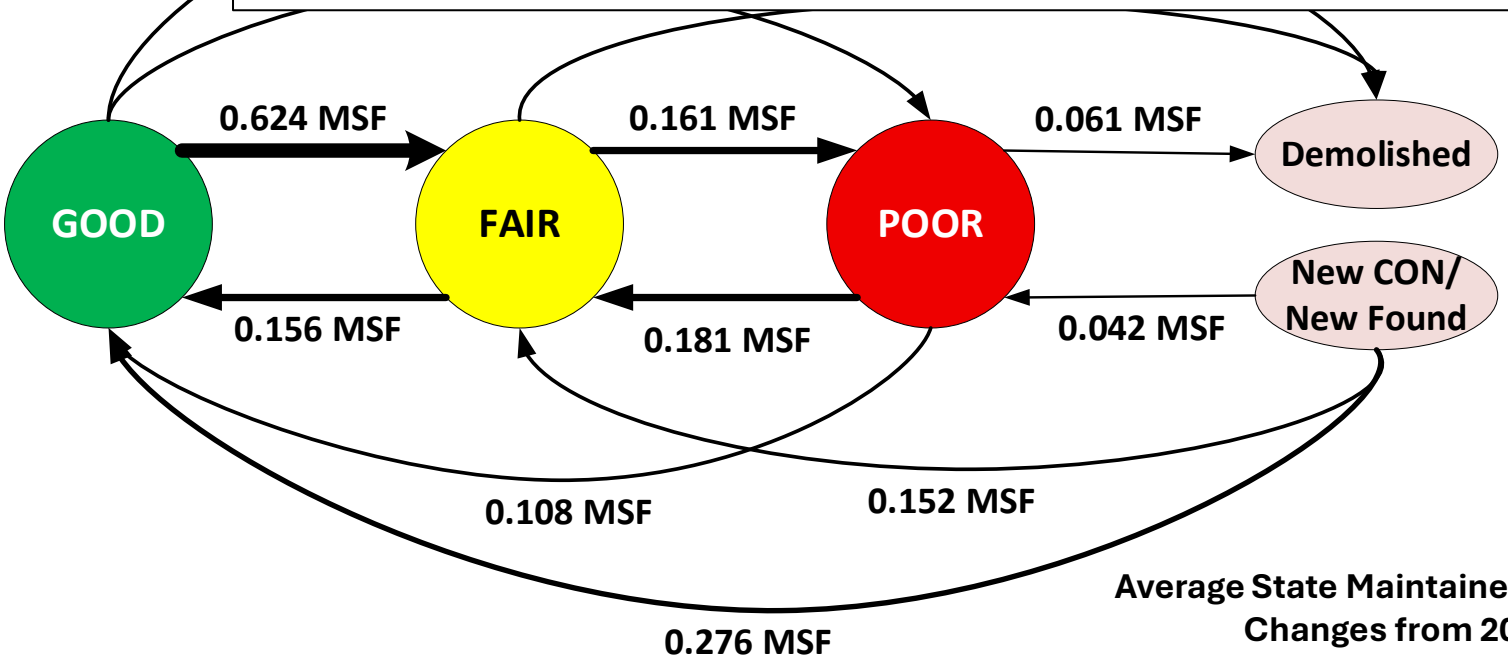


NJ Challenge - Spider

- GOOD bridges become FAIR and POOR
- POOR bridges are either Rehabilitated, Demolished, or Replaced

The bridge population is in a constant state of flux.

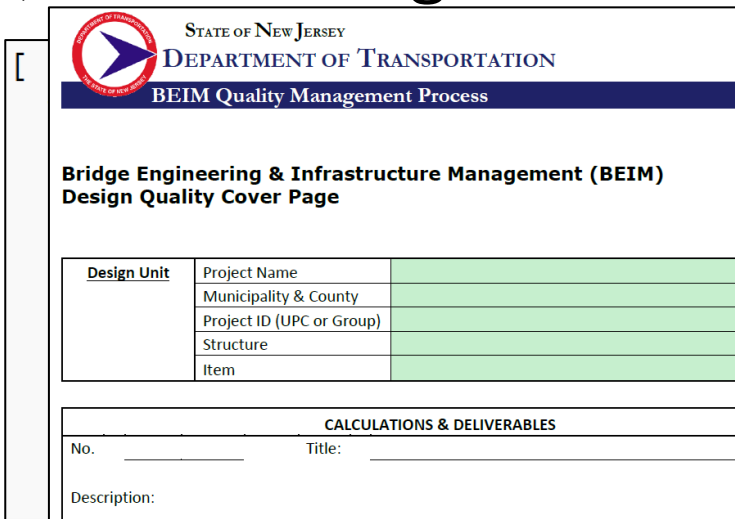
This is a battle between Rates of Change!



Average State Maintained Bridge Condition Changes from 2011 to 2024

Challenges in Implementing SNBI

- **Major shift** in how NJDOT collects SNBI bridge data
  - Complete **overhaul** of systems
    - Total 154 SNBI Items
    - 54 New Items, 100 Continued Items, 20 Discontinued Items
  - Revised Inspection Report Formats
  - Data transfer between systems
- **Coordination** agencies, private, border bridges
- Risk-based methodology
- Revised Federal Compliance
  - Submittal is a JSON file dataset
- Quality Management Plan


STATE OF NEW JERSEY
DEPARTMENT OF TRANSPORTATION
BEIM Quality Management Process

Bridge Engineering & Infrastructure Management (BEIM)
Design Quality Cover Page

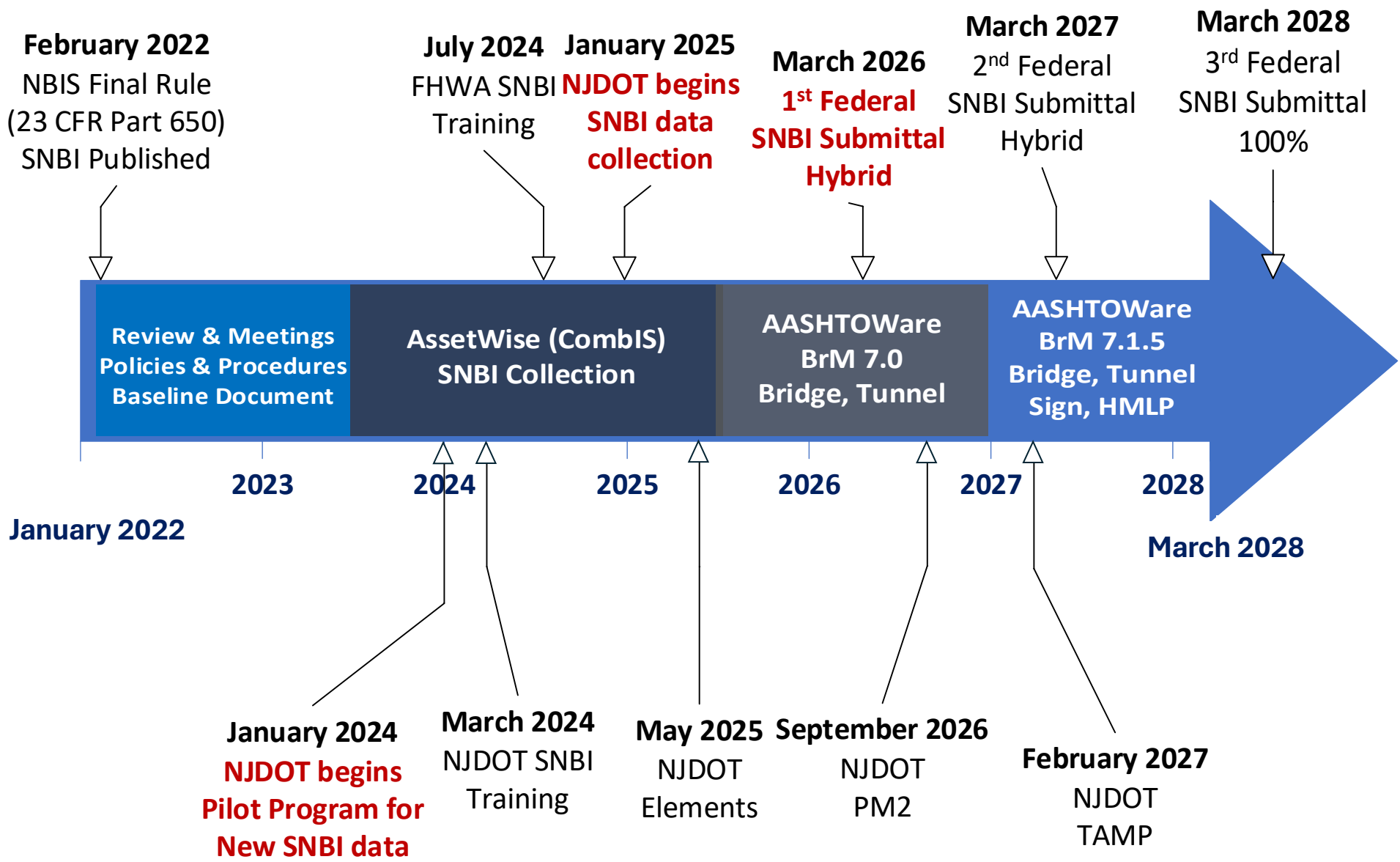
Design Unit	Project Name	
	Municipality & County	
	Project ID (UPC or Group)	
	Structure	
	Item	

CALCULATIONS & DELIVERABLES

No. Title:

Description:

Timeline of Major Milestones



NJDOT Success and Takeaways

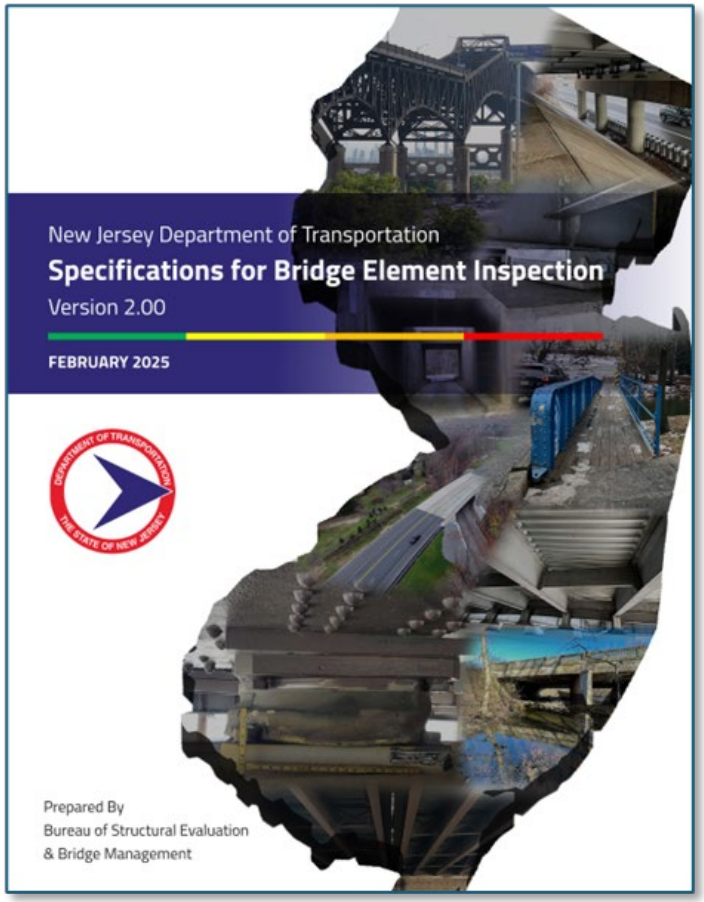
- **Modernize**
  - Bridge Inspection framework
  - Transitioning to new platform – six years plan
  - FHWA approved Plan of Action (POA)
- **Staff Augmentation**
  - Supports implement SNBI
  - Technical specialist
  - Collaboration efforts
  - Development needs
- **Training**, Compliance

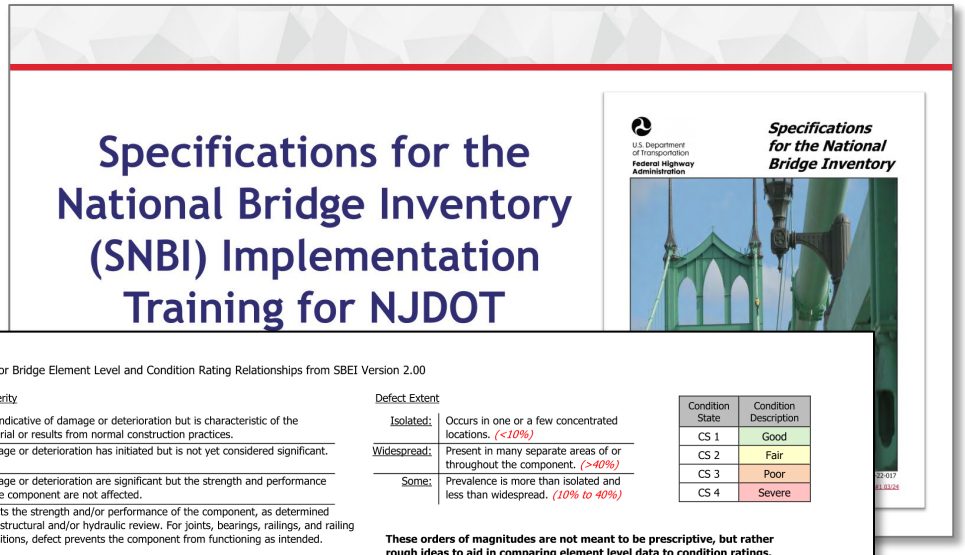


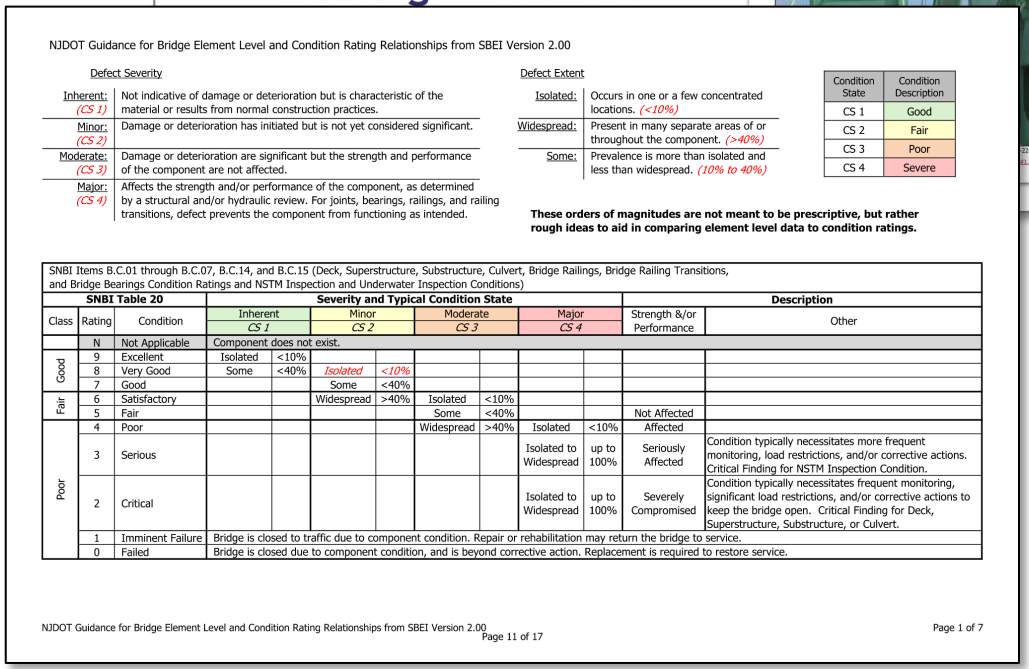


Resources:

- https://www.fhwa.dot.gov/bridge/nbi.cfm
- https://dot.nj.gov/transportation/eng/structeval/index.shtml







NJDOT Guidance for Bridge Element Level and Condition Rating Relationships from SBEI Version 2.00

Defect Severity

Inherent: *(CS 1)*	Not indicative of damage or deterioration but is characteristic of the material or results from normal construction practices.
Minor: *(CS 2)*	Damage or deterioration has initiated but is not yet considered significant.
Moderate: *(CS 3)*	Damage or deterioration are significant but the strength and performance of the component are not affected.
Major: *(CS 4)*	Affects the strength and/or performance of the component, as determined by a structural and/or hydraulic review. For joints, bearings, railings, and railing transitions, defect prevents the component from functioning as intended.

Defect Extent

Isolated:	Occurs in one or a few concentrated locations. *(<10%)*
Widespread:	Present in many separate areas of or throughout the component. *(>40%)*
Some:	Prevalence is more than isolated and less than widespread. *(10% to 40%)*

Condition State	Condition Description
CS 1	Good
CS 2	Fair
CS 3	Poor
CS 4	Severe

These orders of magnitudes are not meant to be prescriptive, but rather rough ideas to aid in comparing element level data to condition ratings.

SNBI Items B.C.01 through B.C.07, B.C.14, and B.C.15 (Deck, Superstructure, Substructure, Culvert, Bridge Railings, Bridge Railing Transitions, and Bridge Bearings Condition Ratings and NSTM Inspection and Underwater Inspection Conditions)

SNBI Table 20			Severity and Typical Condition State								Description	
			Inherent		Minor		Moderate		Major			
Class	Rating	Condition	*CS 1*		*CS 2*		*CS 3*		*CS 4*		Strength &/or Performance	Other
	N	Not Applicable	Component does not exist.									
Good	9	Excellent	Isolated	<10%								
	8	Very Good	Some	<40%	*Isolated*	*<10%*						
	7	Good			Some	<40%						
Fair	6	Satisfactory			Widespread	>40%	Isolated	<10%				
	5	Fair					Some	<40%			Not Affected	
Poor	4	Poor					Widespread	>40%	Isolated	<10%	Affected	
	3	Serious							Isolated to Widespread	up to 100%	Seriously Affected	Condition typically necessitates more frequent monitoring, load restrictions, and/or corrective actions. Critical Finding for NSTM Inspection Condition.
	2	Critical							Isolated to Widespread	up to 100%	Severely Compromised	Condition typically necessitates frequent monitoring, significant load restrictions, and/or corrective actions to keep the bridge open. Critical Finding for Deck, Superstructure, Substructure, or Culvert.
	1	Imminent Failure	Bridge is closed to traffic due to component condition. Repair or rehabilitation may return the bridge to service.									
	0	Failed	Bridge is closed due to component condition, and is beyond corrective action. Replacement is required to restore service.									

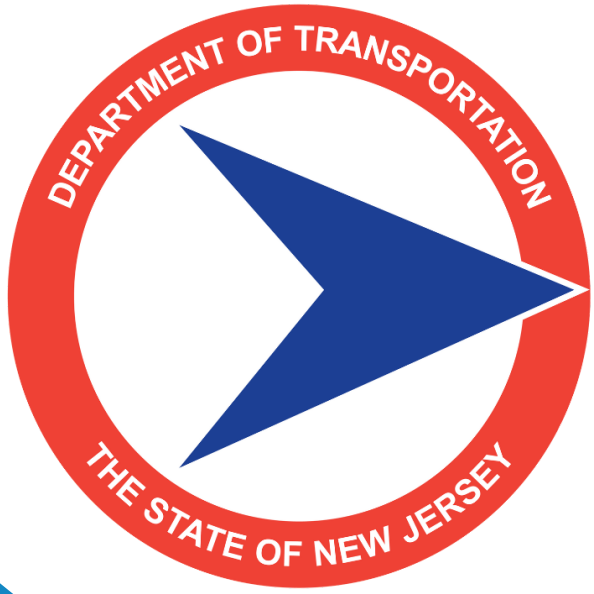
Thank you



harjit.bal@dot.nj.gov

Emergency Response for Bridges and State-Owned Assets

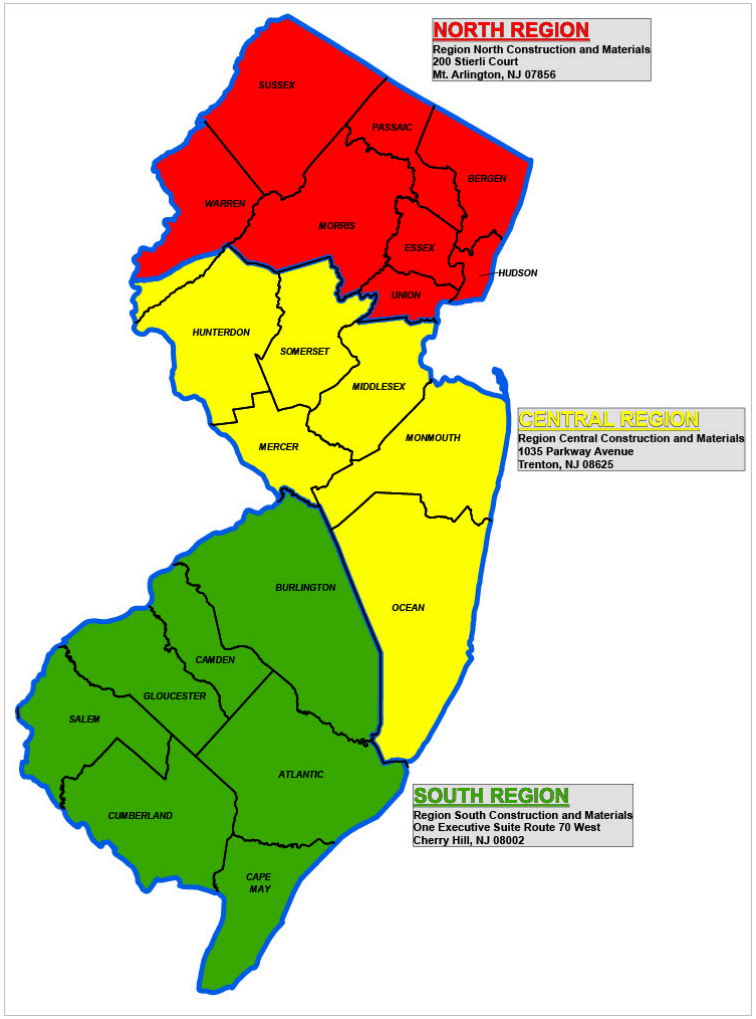
Bureau of Structural Evaluation & Bridge Management



Presented by: Nirav Patel

Agenda

- Overview of Emergency Coordination
- Stakeholders
- Emergency Reporting Process
- Response Actions
- Case Studies



Overview of Emergency Coordination

- Ensure public safety and structural stability
- Rapid structural assessment
- Support operational decisions
- Coordinate multi-agency response



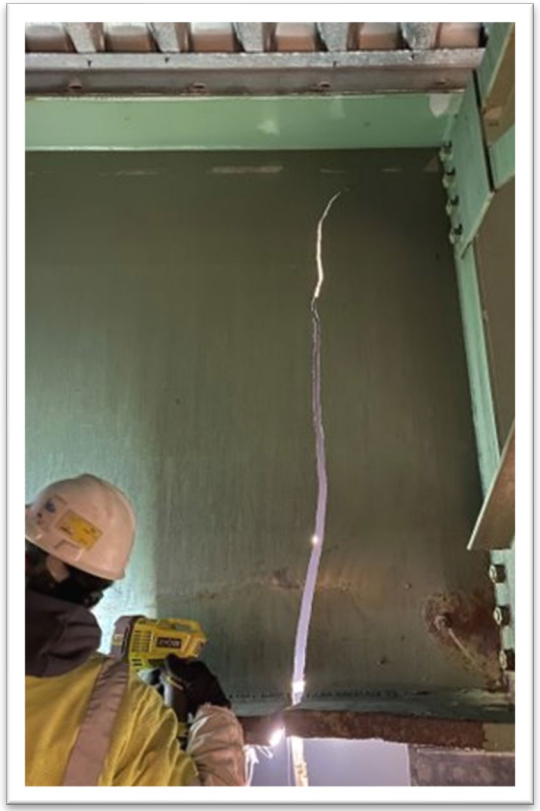
Who Is Involved

- Structural Evaluation and Bridge Management
  - Overweight/Oversize Permit Team
- Nationally Certified Bridge/Tunnel Inspector
- Structural Engineering and Design
- Federal Highway Administration
- Operations
- Consultants
- Bridge Owners



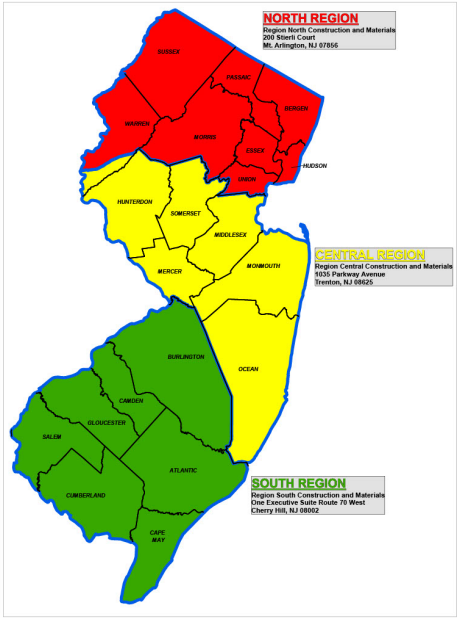
How Emergencies Are Reported

- In-house inspection team reports from field
- Consultant inspection team reports from field
- Operations informed by police/public and contacts leadership
- NJDOT Central Dispatch Unit
- NJDOT Emergency Incident Response Procedures



Emergency Incident Response

- Initial Response Actions
  - Photos provided by the reporting source help to identify the level of response necessary and allow upper management to decide on urgency of sending a team
  - Notify operations and inspection team to mobilize
  - Start email communication chain
- Notify FHWA
  - Bridge on National Highway System route
  - Non-redundant Steel Tension Member condition coded 3 or less
  - Bridge closure to traffic required





Case Studies

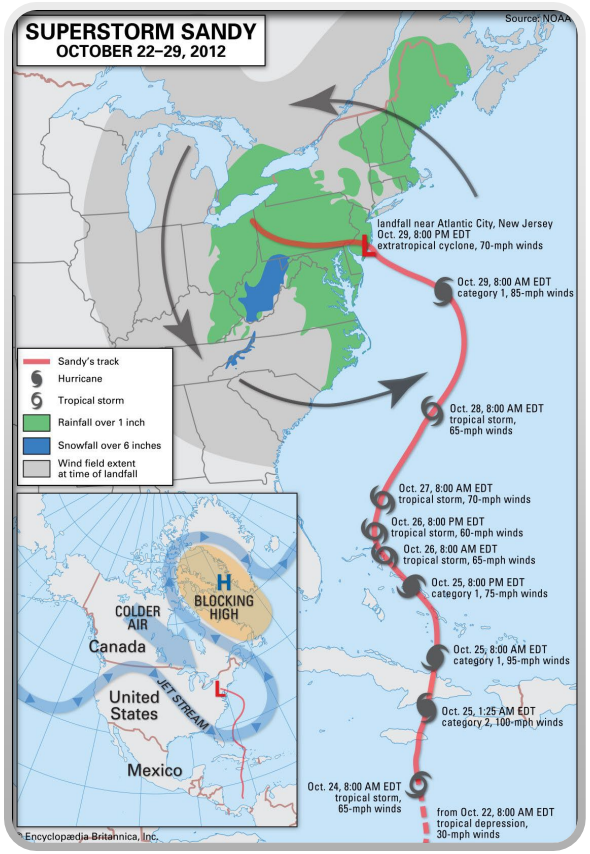
- Hurricane Sandy
- 2024 Earthquake
- Bridges, Sign Structures, and other assets hits





Hurricane Sandy

- Contracted consulting firms 2 days before Hurricane Sandy's landfall
- Dispatched teams to shore areas within 24 hours of storm passage despite state office closures
- Mobilized teams to assess all regions
- Documented widespread storm damage and issued prioritized work orders for repairs



346,000 homes damaged or destroyed



38 lives lost



2 million lost power



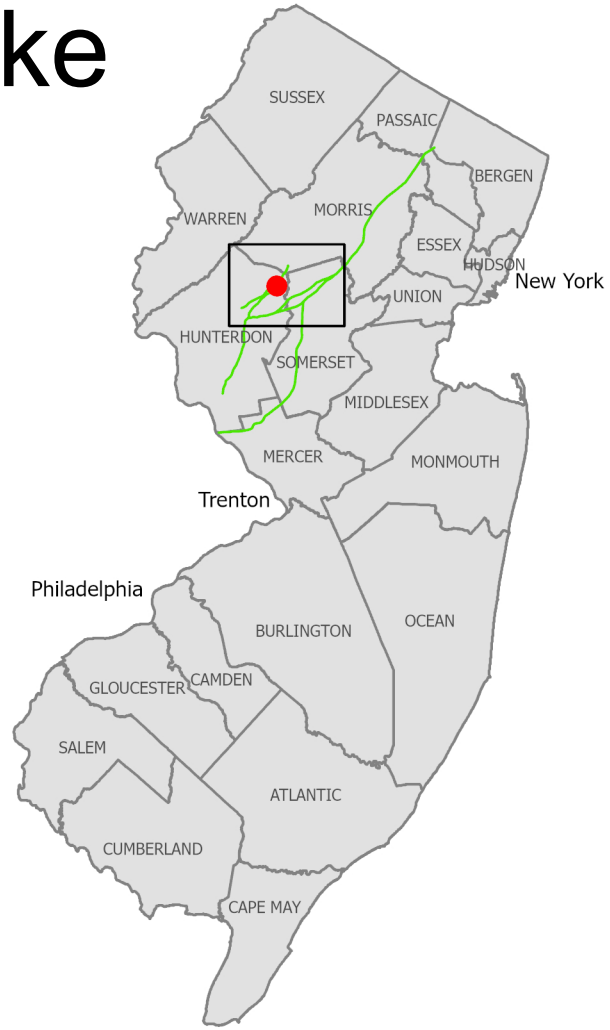
$30 billion in economic damage



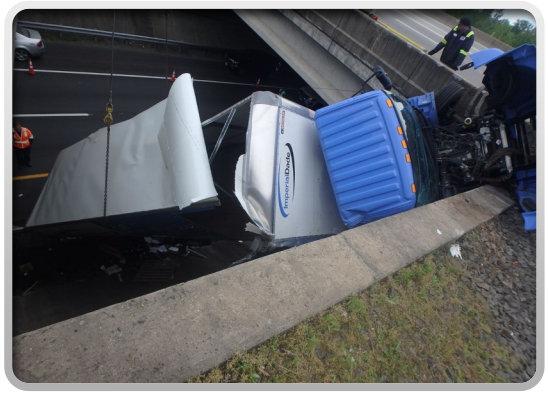

Barnegat Bay Marina Gas Dock
Mantoloking Bridge

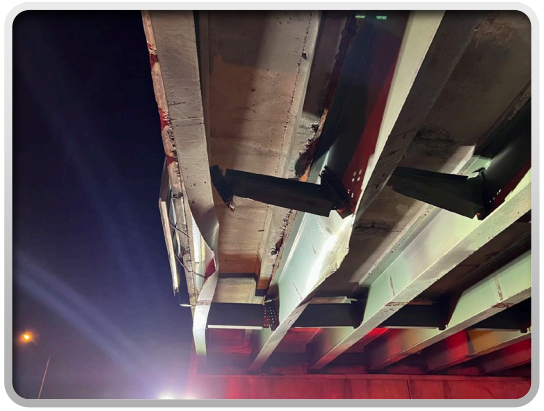
2024 Earthquake

- 4.8 magnitude earthquake on April 5th 2024 in Tewksbury Township, Hunterdon County
- Mobilized teams, prioritized moveable bridges, and notified FHWA and NJDOT leadership
- Coordinated with county/municipal officials on protocols and findings
- Deployed teams to inspect critical bridges for seismic damage and structural failures working radially outward from the epicenter



Bridge Hits and Emergencies







Other State-Owned Assets

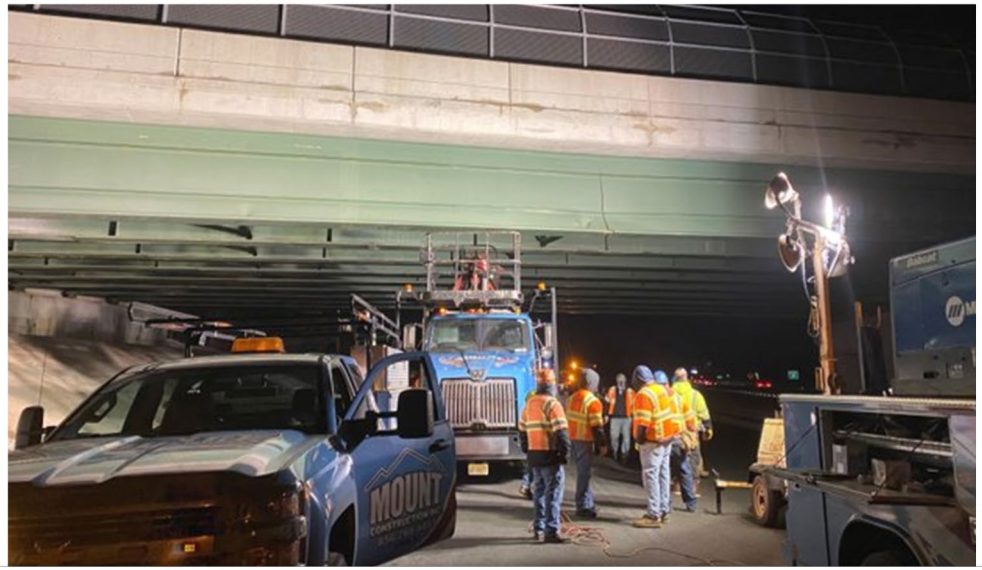




ImperialDade

Weldon Road over NJ 15
Morris County

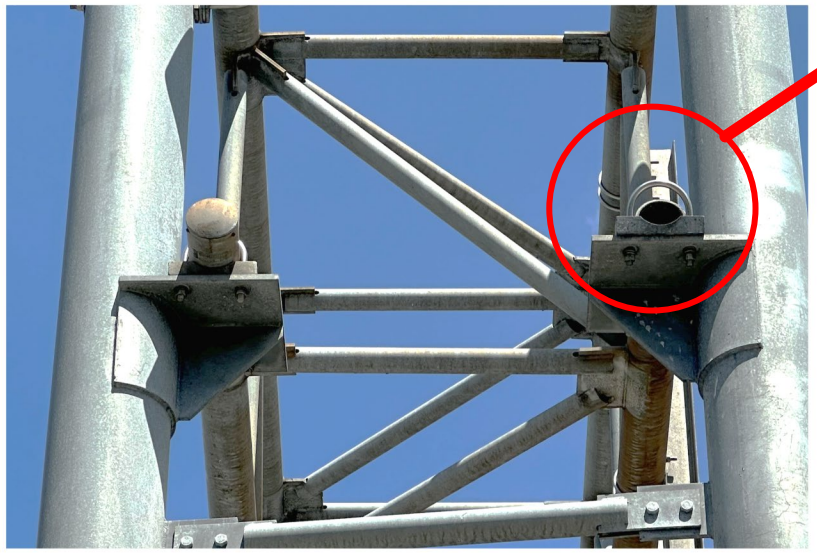







ENRIGHT & SONS

NJ17 Sign Structure
Bergen County








Ramsey Ave

Key Takeaways

- Clear communication is critical
- Rapid response protects public safety
- Coordination between owners
- Proper documentation of findings

Thank you



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Any Questions?



CLOSING REMARKS



NETWORK RECEPTION