



NORTH CAROLINA
Department of Transportation

Driving Value Forward

February 26, 2026

Value Management

Office of Strategic Initiatives and Program Support

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Who is VMO?

Alyson Tamer, PE

State Value Management
Engineer



Josh Reeves

Value Engineering and Risk
Management



Liamcy Hogan-Rivera

CLEAR KM Program and
Quality Management



Zach McLaughlin

Constructability Reviews,
Value Engineering Proposals
and Post Construction
Assessments



Sarah Searcy

CLEAR Innovation Program
and NC-TIC



Our Supporting Partners



Jessica Kuse, PE
HNTB
Supporting CLEAR, PCAs, and
Constructability Reviews



Morgan Morefield, PE
Mott MacDonald
Supporting CLEAR Program



Julian Coles
HNTB
Supporting Value Engineering
Program and CLEAR TAG



Beth Quinn, PE
VIAS Infrastructure
Supporting Value Engineering Program
and CLEAR TAGs



Jiana Brown
HDR
Supporting CLEAR Program and NC-TIC





Value Management builds value into the department's processes, programs, projects, and services by providing opportunities for cross collaboration to generate innovative solutions one interaction at a time.



Commonly Used Acronyms

VMO- Value Management Office

CLEAR- Communicate Lessons, Exchange Advice, Record

TAG- Technical Advisory Group

PCA- Post Construction Assessment

VEP- Value Engineering Proposal

CR- Constructability Review

RAW- Risk Assessment Worksheet

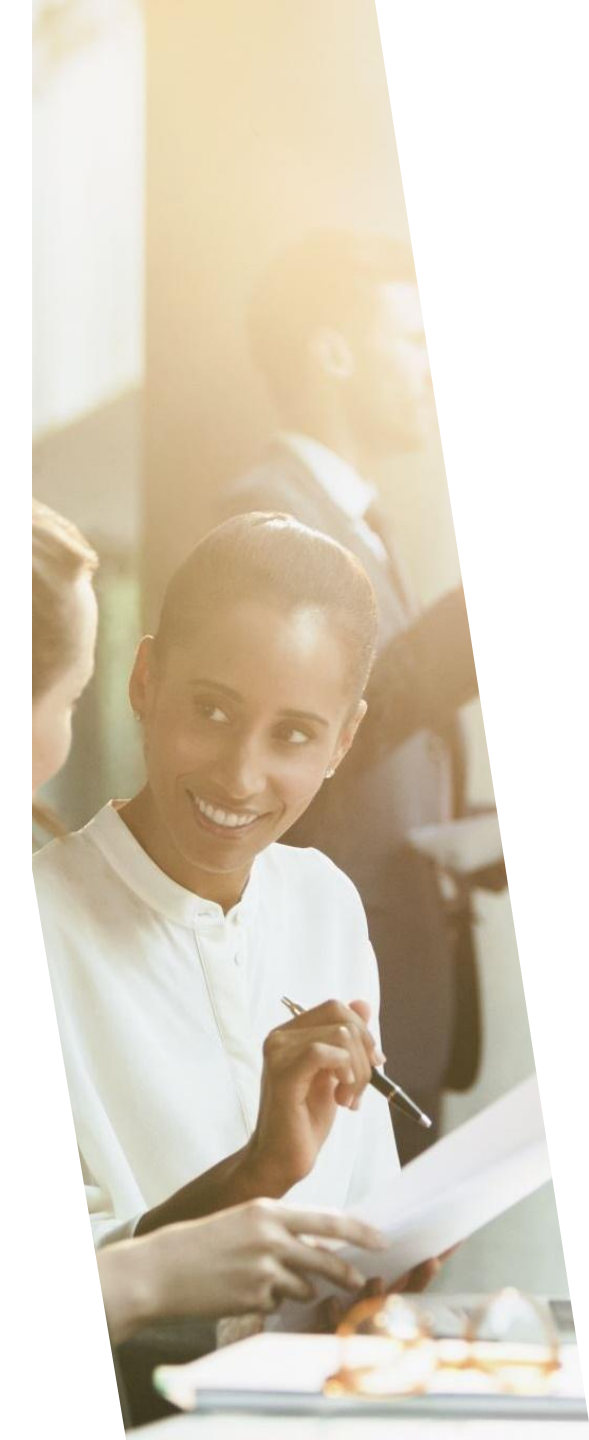
VE- Value Engineering

NC-TIC- NC Transportation Innovation Council

Value Engineering Program

What is Value Engineering?

- VE is an organized application of common sense and technical knowledge directed at finding and developing alternative ideas that can **optimize the cost and performance of a project** (add value to a project).



What does that mean?

- Third-party Study:
 - Fresh look at a project
 - Outside perspective (Consultant or NCDOT Study Team)
- Process-Based Decision Making:
 - What is the purpose of the project? – Function Analysis
 - What are the threats and opportunities? – Risk Analysis
- Looking for ways to make project better:
 - Can save money but not always
 - Makes project simpler
 - Reduce waste or unnecessary add-ons
 - Uses best practices
 - New Applications

When is a VE Study Required?

General Highway (no structures)

- On or intersecting the NHS
- TOTAL estimate >\$50M

Includes Structure

- On or intersecting the NHS
- TOTAL estimate > \$40M

Design-Bid-Build or CMGC Projects (Not Design-Build)

Definitions



What is TOTAL Cost?

Total cost =
Preliminary Engineering + ROW +
Utilities + Construction

*When two projects are LET together it may put them collectively over the threshold.



What is a Structure?

A Bridge, Large Culvert,
Large Pipes, or Groupings

Project's primary purpose is to
construct, reconstruct,
rehabilitate, resurface, restore

Unsure or Have Questions?

- Contact VMO if:
 - Your project is over \$25M at the 25% design estimate
 - You are letting multiple projects together
 - You have an Interstate Bridge or Interchange project
 - Your project has a large R/W estimate; typically, in a metro area:
 - Raleigh/Durham
 - Charlotte
 - Triad (Greensboro, Winston-Salem, High Point)
 - Wilmington
 - Greenville, etc

Risk Management

Risk Management

Agenda:

- What is risk?
- How do we track risks on our projects?
- What other risk-related resources are out there for you?





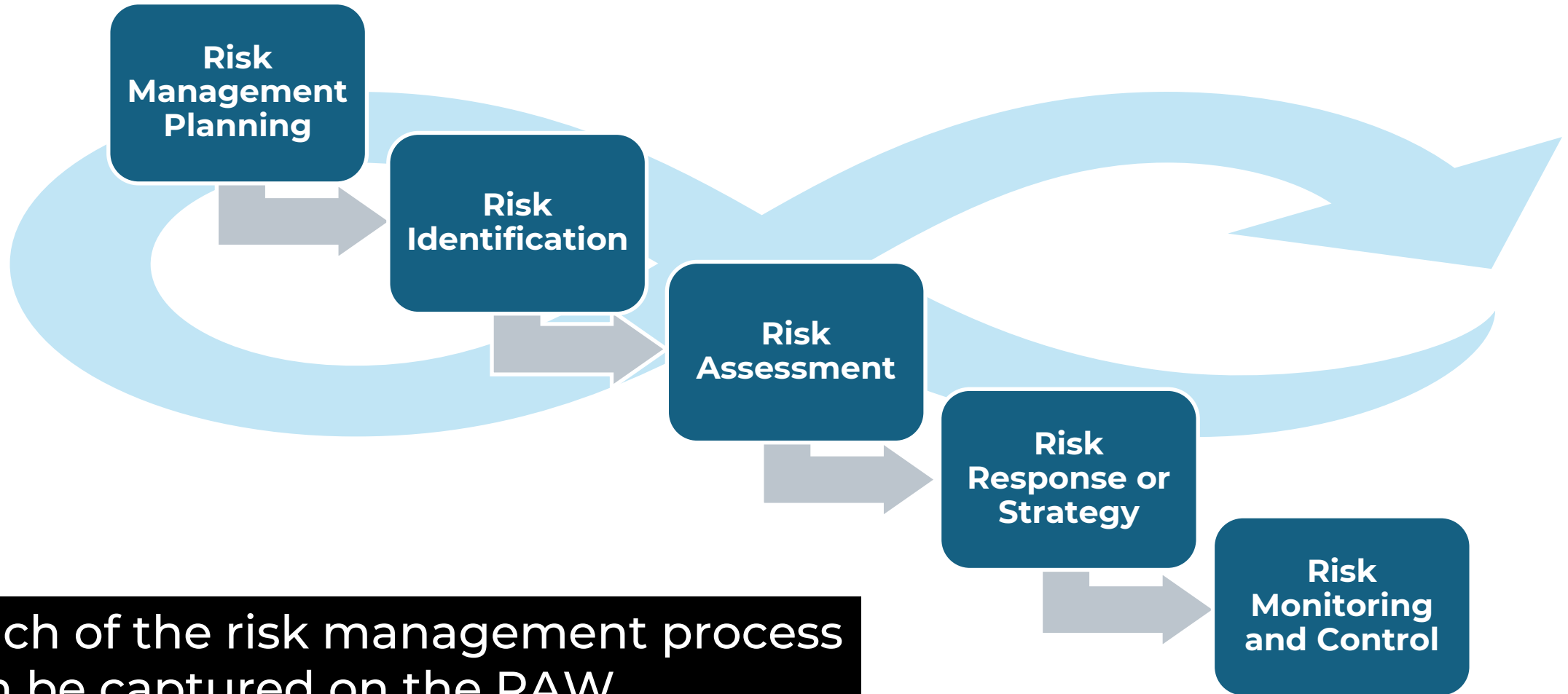
Organizing Around Risk

► Risk:

- Is an uncertainty (Something that has not happened yet)
- Can be positive or negative
- Can be known, unknown, or unknowable

Risk Management Process

How do we manage risk on our projects?



Much of the risk management process can be captured on the RAW

Risk Assessment Worksheet (RAW)

Risk Assessment Worksheet										Project # : R-2553				
Risk Identification					Risk Assessment			Response Strategy			Management & Monitoring Plan		Additional Notes	
Risk	Risk Description IF	Risk Description THEN	Threat / Opp.	Status	Probabili	Impac	Scor	Strate	Action Plan	Risk Own	Follow-up Date	Update Frequenc	Update & Comments	Notes on risk location, log of risk related decisions, etc.

- Online RAW to replace Excel-based RAW for projects



i Risk Assessment Worksheet

The Risk Management Program applies a risk management process to projects and programs to identify and mitigate potential risks. Risks are identified as uncertainties. There are two types of risks: Threats and Opportunities. Threats are potential obstacles that may have a negative impact and Opportunities are possibilities that may have a positive effect. Risk Management is a proactive process designed to minimize potential obstacles and maximize the ability to capitalize on opportunities. Use this form to identify a new risk, threat or opportunity, for a project. If you have any questions or other inquiries regarding the Risk Management Program, please contact: valuemanagementunit@ncdot.gov.

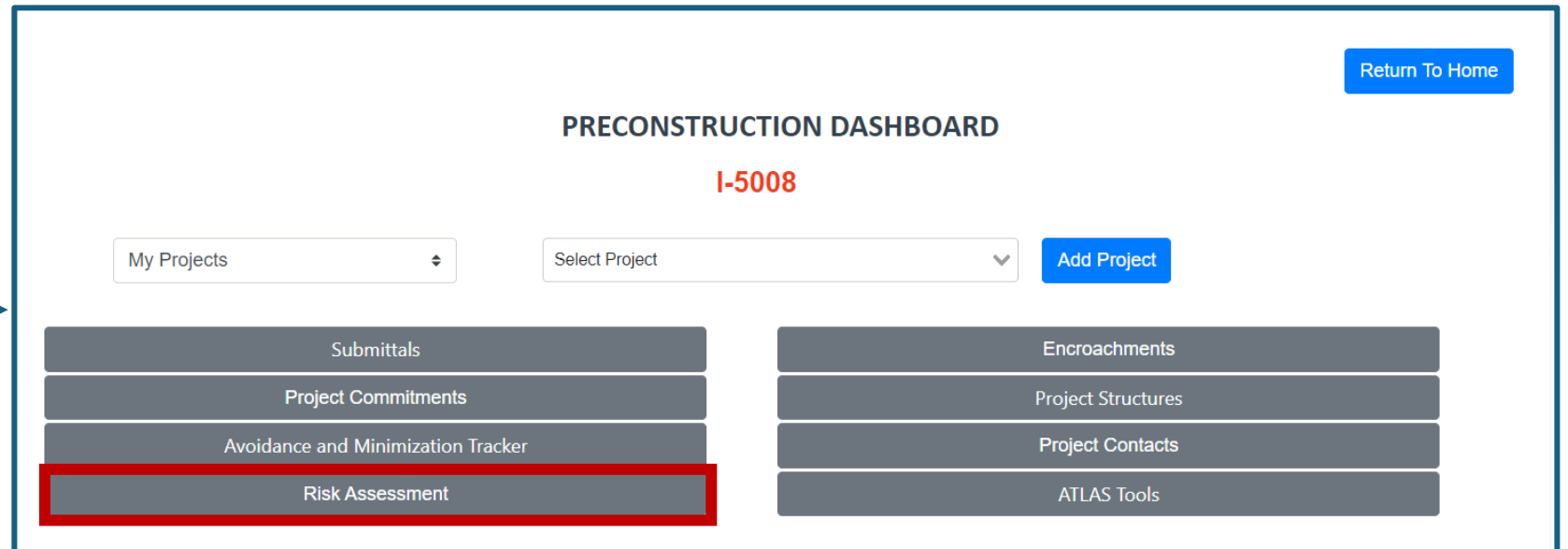
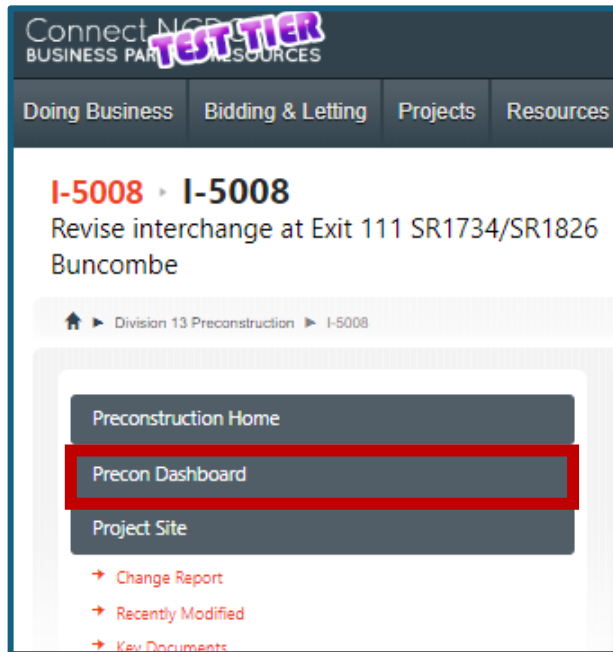
To view Risk Guidance and Resources, such as Risk Mitigation Strategies, go here: [RMP VMO page](#).

[+ New Risk](#) [Export to Excel](#)

Risk ID	Risk Owner	Risk Description (IF)	Risk Description (THEN)	Probability	Impact	Risk Score	Risk Status	Modified By	Modified
29		Test 2 3/14	Test 2 3/14	Moderate	High	12	Active	Kwame K. Askia	03/14/2023
4		Testing if	testing editing another	Moderate	Moderate	9	Active	Caitlyn S. Meyer	02/28/2023

Online Collaborative Platform for Project Risk

Where do you find the online RAW?



Value Engineering Proposal



What is a VEP?

A Value Engineering Proposal (VEP) is a post-award proposal made by the Contractor which includes changes to work that may **result in cost or time savings, without impairing essential functions and characteristics of the project.**

Purpose

- Encourage the use of the Contractor's (and their Subcontractors') **ingenuity, expertise and innovation.**
- Provide **cost and/or time saving** without impairing essential functions and characteristics of the project.



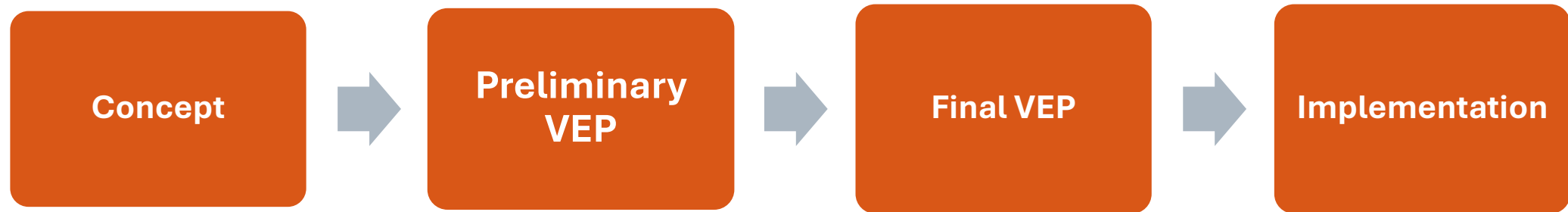
Highlights

A Value Engineering Proposal (VEP) brings an innovative idea to the Department from a Contractor.

1. Contractor Idea
2. Cost/Time Savings
3. Innovative Solution



VEP Review Process



Value Engineering Proposals Program

Connect NCDOT
BUSINESS PARTNER RESOURCES

Home Help Site Map

Doing Business Bidding & Letting **Projects** Resources Local Governments

Search...

Planning Construction Research Roadway Design Work Zone Public Engagement Bike & Pedestrian Project Management **Value Management**

Value Engineering Proposals Program

The Value Engineering Proposal Program supports Contractor time and money saving ideas through review of proposals submitted by Contractors during construction based on the Specification.

Connect NCDOT > Projects > Value Management > Value Engineering Proposals Program

Value Engineering Proposal Program



The purpose of the Value Engineering Proposal Program (VEPP) is to encourage contractors to develop Value Engineering ideas by utilizing their design and construction ingenuity, experience, and background. A Value Engineering Change Proposal (VEP) is a post-award proposal made by the construction contractor, which includes any changes to work that may potentially result in cost or time savings, without impairing essential functions and characteristics of the project, such as: service life, safety, reliability, economy of operation, ease of maintenance, desired aesthetics, design, standardized features, and environmental.

Submission & Review Info

[Value Engineering Proposal \(VEP\) Submittal Form 2025](#)

[VEP FAQs](#)

[VEP Review Process - Flowchart](#)

[VEP Training Video](#)

[Construction Manual](#)

Program Links

[VEPP Fact Sheet](#)

[2024 Standard Specification Section 104-12](#)

[VEPP Presentation](#)

[2020 VEPP Summary & Look Ahead](#)

Additional Resources

Constructability Review Program

When and Who

When

Usually, CR are held during design phase (15% to 95% completion)

Where

- 2 hour
- In-person
- Close to the site as possible

Who

- VM
- Contractors
- Designers
- DOT Engineers



About Constructability Reviews



Benefits

- Work out potential field issues while the project is still being designed
- Provide collaboration between design and construction
- Provide contractor input on design issues (coordinate with contractors)
- Identify potential cost savings and mitigation strategies to help reduce risk

Constructability Review Overview

Start the
conversation



Identification of
constructability
issues



Measure risk
and share ideas



Follow through
on tracking the
idea



Ask VMO!

Facilitation & Support



Create a better
product/project



Questions?

Contact Zach McLaughlin
zrmclaughlin@ncdot.gov



North Carolina Department of Transportation
Transportation Program Management – Value Management
Constructability Review Implementation Form



New Form

Section 1: Project Details (to be filled out by the VM Engineer)			
STIP No.		Project Description:	
County			
Let Date		Project Lead: Name: Contact:	
Total Est.			
Section 2: Recommendation Description (to be filled out by the VM Engineer)			
Recommendation Number			
Existing condition			
Recommendation Description			
Reference	Sheet x of x		
Applicable Discipline	<input type="checkbox"/> Construction <input type="checkbox"/> Roadway <input type="checkbox"/> Right of Way <input type="checkbox"/> Geotechnical <input type="checkbox"/> Utilities <input type="checkbox"/> Division <input type="checkbox"/> Hydraulics <input type="checkbox"/> Structures <input type="checkbox"/> Maintenance <input type="checkbox"/> Traffic Operations <input type="checkbox"/> Other: <input type="checkbox"/> Planning		
Section 3: Conceptual Review Coordination (to be filled out by Project Manager)			
Applicable Discipline	Name	Contact	Comments



North Carolina Department of Transportation
Transportation Program Management – Value Management
Constructability Review Implementation Form



Section 4: Summary of Recommendation Review (to be filled out by the Project Manager)			
Final Disposition	Project Manager Sign Off	Comments	
	Decision		
	<input type="checkbox"/> Implemented <input type="checkbox"/> Implemented as Modified <input type="checkbox"/> Not Implemented		
Implement	Project Manager Sign Off	Explanation (Reference Project Document)	
Close Out	Date:	VMO Signature:	

How are we Doing

- 2024 Total: 15 CR
- 2025 Total: 8 CR



Participants Evaluation

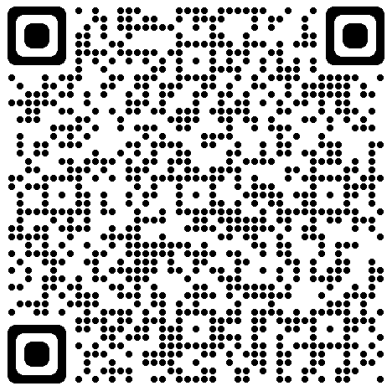
Average rating from participants from 1-5: 4.65

“Good meeting,
brought up a lot of
concerns”

“Worth my time”
(Contractor)

“Great information”
(Division Construction
Engineer)

“Great information shared by contractor” (HDR
Consultant)



Scan for CR info

A formal CR includes contractors and will need to be coordinated by VMO.

Post Construction Assessment (PCA)

What is a PCA?

Post Construction Assessments

- PCAs kicked off in 2021
- A tool for collecting Best Practices and Lessons Learned from projects
- Includes personnel (NCDOT and external) from all stages of the project lifecycle
- Over 250 identified Best Practices and Lessons Learned
- Email clear@ncdot.gov to get started on PCA coordination.

CLEAR Program - Knowledge Management

Overview

What is CLEAR?

How is knowledge collected?

What happens to it?

Why is it stored?

CLEAR

Communicate
Lessons, Exchange
Advice, Record



CLEAR is an internally-developed knowledge management program that gives voice to every NCDOT employee. It promotes cross-unit communication, sharing of best practices, and organizational enhancements through an easy-to-use technical platform.

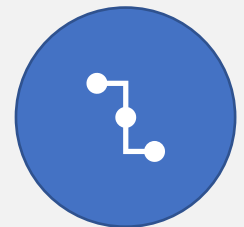
Employee Driven

Knowledge Management Program

Knowledge ***capturing*** and knowledge ***sharing***

CLEAR is a tool for NCDOT

Knowledge Management



Feedback loops created between regions and units.



Innovations shared and vetted.



Institutional knowledge stored.



Ideas on any topic related to NCDOT.



Approved submissions searched and shared.



Enhanced communication and knowledge share.

CLEAR - Knowledge Management



High-quality, reliable data from effective data governance acts as the foundation for building a robust knowledge management system.

Where do we record?

Online

Database

Searchable

Accessible



Sharepoint

Current State

The screenshot shows the CLEAR program website. At the top, there is a navigation bar with 'Connect NCDOT BUSINESS PARTNER RESOURCES' and a search bar. Below this, there are tabs for 'Doing Business', 'Bidding & Letting', 'Projects', 'Resources', and 'Municipalities'. The main content area is titled 'CLEAR - CLEAR' and includes a sidebar with navigation options like 'Accepted Lessons Learned', 'Accepted Best Practices', and 'Knowledge Transfer Best Practices'. The central section features a 'Welcome To CLEAR' banner with an illustration of people and a text box explaining the program's purpose. Below the banner, there are three columns: 'Share Lessons Learned', 'Share Best Practice/Idea', and 'Request Assistance with an Obstacle', each with a corresponding button. A 'CLEAR PROGRESS' section shows statistics for Lessons Learned (8 Under Review, 246 Accepted) and Ideas/Best Practices (8 Under Review, 316 Accepted). A 'Questions about CLEAR?' section lists various resources like 'CLEAR SOPs', 'Definitions', and 'FAQs'. At the bottom, there is a 'Communication Matrix' table.

The screenshot shows the 'CLEAR Lesson Learned' submission form. It includes a header with 'Attach Here' and 'Issue Reference Documents and Photos'. The form contains several sections: 'Name', 'Office', 'Email', and 'Phone' fields; a 'Describe the circumstances surrounding the obstacle or challenge you faced' section with a text area and a date field; a 'Describe the solution provided for obstacle or challenge you faced' section with a text area; a 'Has this impacted the cost, schedule, and/or quality of your overall work or project?' section with a radio button; an 'Is this issue related to a construction or maintenance project?' section with a radio button; a 'Select which Disciplines you think need to review this issue to provide guidance.' section with a list of disciplines and an 'Add' button; a 'Do you have an idea on what next steps the Department should take to implement this submission?' section with a radio button; and a 'Should this lesson require additional development and implementation - do you wish to be a part of this effort?' section with a radio button. A 'Submit' button is located at the bottom right.

What changes have been made

Legacy Form	New Form
3 separate forms for submission	1 form for submission
Name/Office/ Email are manual fields	Name/Office/Email fields are auto generated based on the submitter
Field named "Date Observed"	No longer applicable
"Location"	No longer applicable
"Solution to solve the problem"	No longer applicable
Is there a cost impact?/ Is there a schedule impact?	Consolidated as a multi-selection field
Project size	No longer applicable
Project schedule	No longer applicable
Project Number Available - List of Project Numbers	Project Number is manually entered in the field
Applicable Disciplines	Functional Area and Sub-groups
Examples of solution in practice	No longer applicable
Occurrence encountered	No longer applicable
No tabs	Tabs <ul style="list-style-type: none"> - Share your knowledge - Project related information - Status/History - Expert Comments
No short descriptions	Short Description <ul style="list-style-type: none"> - Available for Gatekeeper only - Used for search

New View

➤ Clear Submission Summary Page:

- The Landscape

- Columns
- Filters
- Buttons

CLEAR Submission Summary								
Clear Filter		Save Type: All	Status: All	Type: All	Create New Submission			Flowers (GeoDecisions), Lawrence E
ID	Save Type	Status	Type	Submission Title	Functional Area	Created By	Created On	
112	Submitted	Expert Review	Lesson Learned	Checking for updates	Business Administration	Flowers (GeoDecisions), Lawrence E	8/7/2025 10:33 AM	
111	Submitted	Gatekeeper Review	Lesson Learned	POWERPOINT	Business Administration	Flowers (GeoDecisions), Lawrence E	8/5/2025 12:05 PM	
110	Submitted	Gate Keeper Final Accepted	Best Practice	TEst	Business Administration	Flowers (GeoDecisions), Lawrence E	7/31/2025 2:05 PM	
109	Submitted	Gate Keeper Final Accepted	Best Practice	7.31.2025 Checking for updates	Business Administration	Flowers (GeoDecisions), Lawrence E	7/31/2025 9:18 AM	
108	Submitted	Gate Keeper Final Rejection	Best Practice	More information Test	Business Administration	Flowers (GeoDecisions), Lawrence E	7/30/2025 3:18 PM	
107	Submitted	Gate Keeper Final Accepted	Lesson Learned	Email Testing with Upender	Business Administration	Flowers (GeoDecisions), Lawrence E	7/30/2025 3:05 PM	
106	Submitted	Gate Keeper Final Rejection	Lesson Learned	More information needed test	Business Administration	Flowers (GeoDecisions), Lawrence E	7/30/2025 8:21 AM	
105	Submitted	Gate Keeper Final Accepted	Best Practice	7.30.2025	Business Administration	Flowers (GeoDecisions), Lawrence E	7/30/2025 8:13 AM	
104	Submitted	Gatekeeper Review	Lesson Learned	Test notifications	Business Administration	Attapuram (SpaceX Technology Systems), Upender R	7/29/2025 4:33 PM	
103	Submitted	Gatekeeper Review	Lesson Learned	Test 1 for Notifications	Business Administration	Flowers (GeoDecisions), Lawrence E	7/29/2025 4:11 PM	
102	Submitted	Gate Keeper Final Accepted	Best Practice	Email Notification Check	Business Administration	Flowers (GeoDecisions), Lawrence E	7/29/2025 8:28 AM	
101	Submitted	Gatekeeper Review	Best Practice	Checking for Email Updates	Business Administration	Flowers (GeoDecisions), Lawrence E	7/28/2025 10:12 AM	
100	Submitted	Gate Keeper Final Accepted	Solution Needed	Multi GK	Business Administration	Flowers (GeoDecisions), Lawrence E	7/25/2025 2:48 PM	
98	Submitted	Gatekeeper Review	Best Practice	Test1232	Aviation	Attapuram (SpaceX Technology Systems), Upender R	7/24/2025 7:08 PM	
97	Submitted	Expert Review	Solution Needed	Testing Email sent when Expert Rejects	Business Administration	Flowers (GeoDecisions), Lawrence E	7/24/2025 8:51 AM	
96	Draft	Save as Draft	Solution Needed	Testing Email sent when Expert Rejects	Business Administration	Flowers (GeoDecisions), Lawrence E	7/24/2025 8:51 AM	
95	Submitted	Gate Keeper Final Accepted	Best Practice	Testing Rejection Emails	Business	Flowers (GeoDecisions), Lawrence E	7/24/2025 8:32 AM	

New search page features

- Word Search Box
- All Words/Exact Phrase
- Search Help Button
- Sort By
- Submission Type filter
- Functional Area filter
- Project Type filter
- Phase filter
- Cost Range filter
- Divisions filter
- Project delivery goals filter

The screenshot shows the CLEAR Database Search interface. At the top, it says "CLEAR Database Search" and "Flowers (GFT Inc.), Lawrence E". Below that is a welcome message: "Welcome to the CLEAR Database Search page, where you can explore Lessons Learned, Best Practices, and Solutions Needed. Simply use the keywords or filters to find the knowledge and ideas that matter most to you. Let's learn, grow, and solve challenges together!".

The search interface includes a search box (1) with a "Search Help" button (3) and a "Sort By" dropdown (4) set to "Date: Newest to Oldest". There are also "All Words" (2) and "Exact phrase" radio buttons. Below the search box are several filter dropdowns: "Submission Type" (5), "Functional Area" (6), "Project Type" (7), "Phase(s)" (8), "Cost Range(s)" (9), "Division(s)" (10), and "Project delivery goals" (11). All filters are currently set to "All".

Below the filters, it says "595 Matching Results". A table displays the results with the following columns: ID, Title, Short Description, Submission Type, Functional Area, Project Type, Phase, Division, Delivery Goals, and Date Created.

ID	Title	Short Description	Submission Type	Functional Area	Project Type	Phase	Division	Delivery Goals	Date Created
CLEAR-LL-175	Testing all functionality for updates	What happened to my original short description? What happens if I do an edit?	Lesson Learned	All/Enterprise Wide: Business Administration: Communications	Aviation: Bicycle/ Pedestrian	Planning: Design		May improve quality: May delay schedule	12/17/2025 10:00 AM

CLEAR Database Search

Flowers (GFT Inc.), Lawrence E

Welcome to the CLEAR Database Search page, where you can explore Lessons Learned, Best Practices, and Solutions Needed. Simply use the keywords or filters to find the knowledge and ideas that matter most to you. Let's learn, grow, and solve challenges together!

All Words Exact Phrase
 [Search Help](#)
 Sort By: [Clear Filter](#)

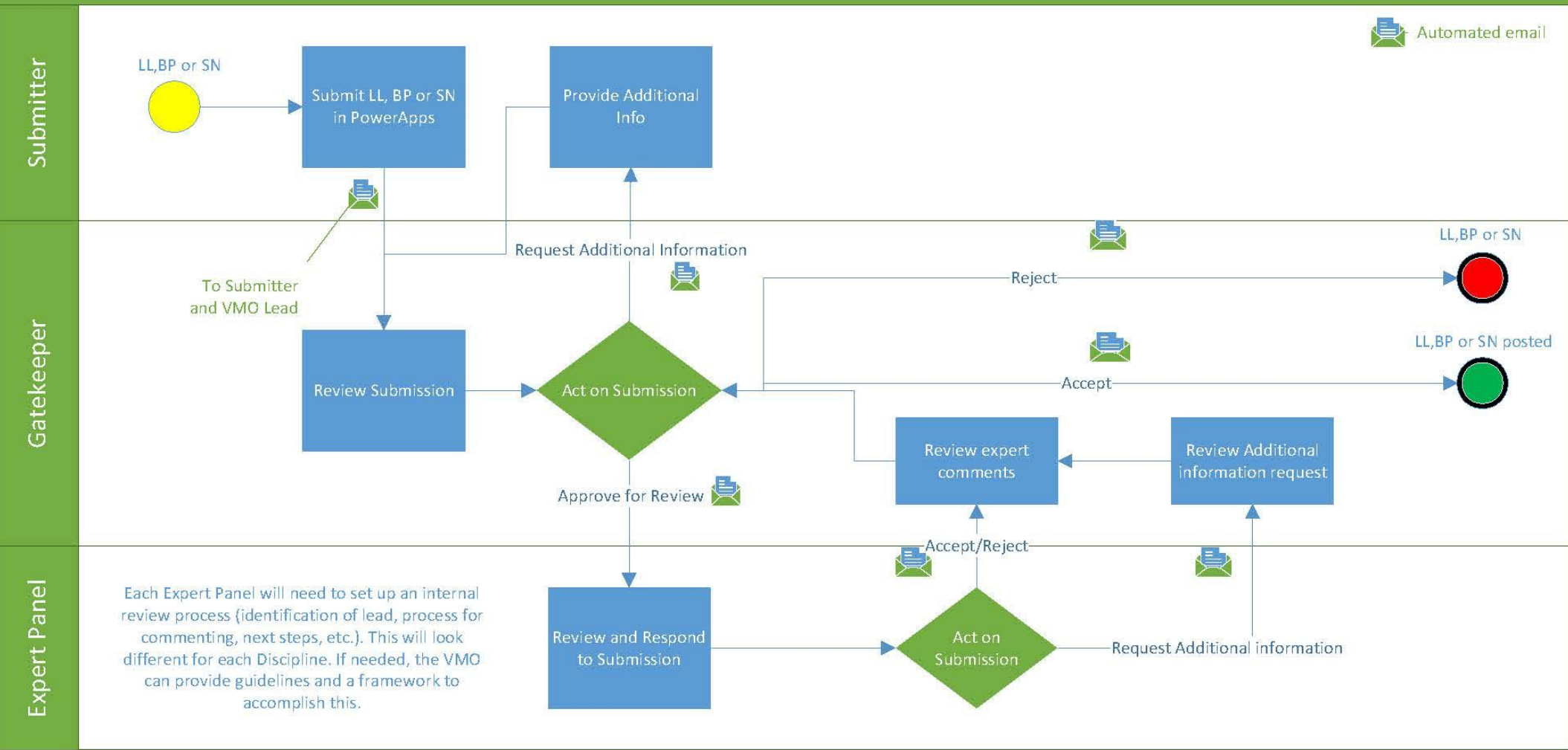
Submission Type
 Functional Area
 Project Type
 Phase(s)
 Cost Range(s)
 Division(s)
 Project Delivery Goals

615 Matching Results

ID	Title	Short Description	Submission Type	Functional Area	Division	Date Created
CLEAR-LL-225	Mobile App Test: The Recipe to Jessica's Chocolate Chip Cookies.	We need the recipe to Jessica's cookies.	Lesson Learned	Business Administration		2/18/2026 11:57 AM
CLEAR-BPR-223	Change Expert Test	Change is the law of life. And those who look only to the past or present are certain to miss the future.	Best Practice	Business Administration		2/17/2026 10:58 AM
CLEAR-LL-222	App test	This is a test of the app on an android phone	Lesson Learned	Business Administration		2/17/2026 9:23 AM
CLEAR-LL-221	Testing 2 experts requesting additional information	Testing 2 experts requesting additional information	Lesson Learned	Business Administration		2/17/2026 9:12 AM
CLEAR-LL-220	Does this work Request more info	Testing with Liam	Lesson Learned	Business Administration		2/16/2026 1:20 PM
CLEAR-LL-218	Testing Double		Lesson Learned	Business Administration		2/16/2026 1:05 PM

CLEAR Workflow

CLEAR Workflow



The Three Tabs of the Submission Form

Share your knowledge



Project related information

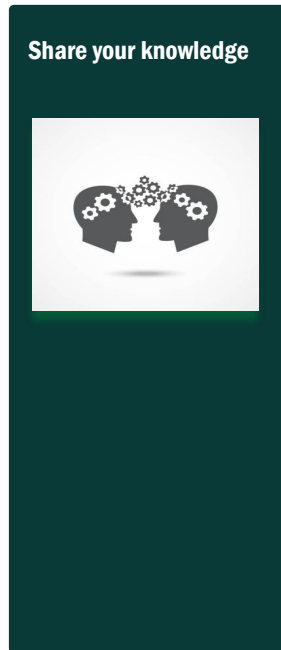


Next Steps



Share Your Knowledge Tab

- Understanding the tabs:
- Here's the information the submitter provides

A screenshot of a Power Apps form titled "CLEAR Form". The form is divided into three main sections: "Share your Knowledge", "Project related information", and "Next Steps".
- The "Share your Knowledge" section includes a "Submission Title" field and a rich text editor for describing the LL or BP or Sol. The rich text editor has a toolbar with options for bold, underline, link, unlink, and list.
- The "Project related information" section includes fields for "Name" (Flowers (GeoDecisions), Lawrence E), "Office" (Department of Transportation), "Email" (ext-leflowers@ncdot.gov), and "Phone".
- The "Next Steps" section includes a dropdown menu for "Which NCDOT functional area(s) does your submission apply to?" with a "Find items" search box.
- At the bottom, there is a "Please upload any related documentation" section with an "Attach file" button and a note: "There is nothing attached." and "Note: Document cannot be opened until saved as Draft or Submitted".
- The bottom of the form has three buttons: "Save as Draft", "Submit", and "Click to Continue >>".

CLEAR

- **Understanding the tabs:**
- Below you will find the list of tabs found on the submission form
- *Project related information*



Power Apps | CLEAR Form

CLEAR

Share your Knowledge | Project related information | Next Steps

* Is your submission related to transportation projects? Yes

Enter the TIP Number(s) of projects associated with your submission

If applicable, enter Contract Number(s) associated with submission

* Which project type(s) does your submission apply to? (Select all that apply.) ▾

* Which project phase(s) does your submission apply to? (Select all that apply.) ▾

* Which project cost range(s) does your submission apply to? (Select all that apply) ▾

* Does your submission apply to specific Division(s)? ▾

* Select the Division(s) that your submission applies to. (Select all that apply) ▾

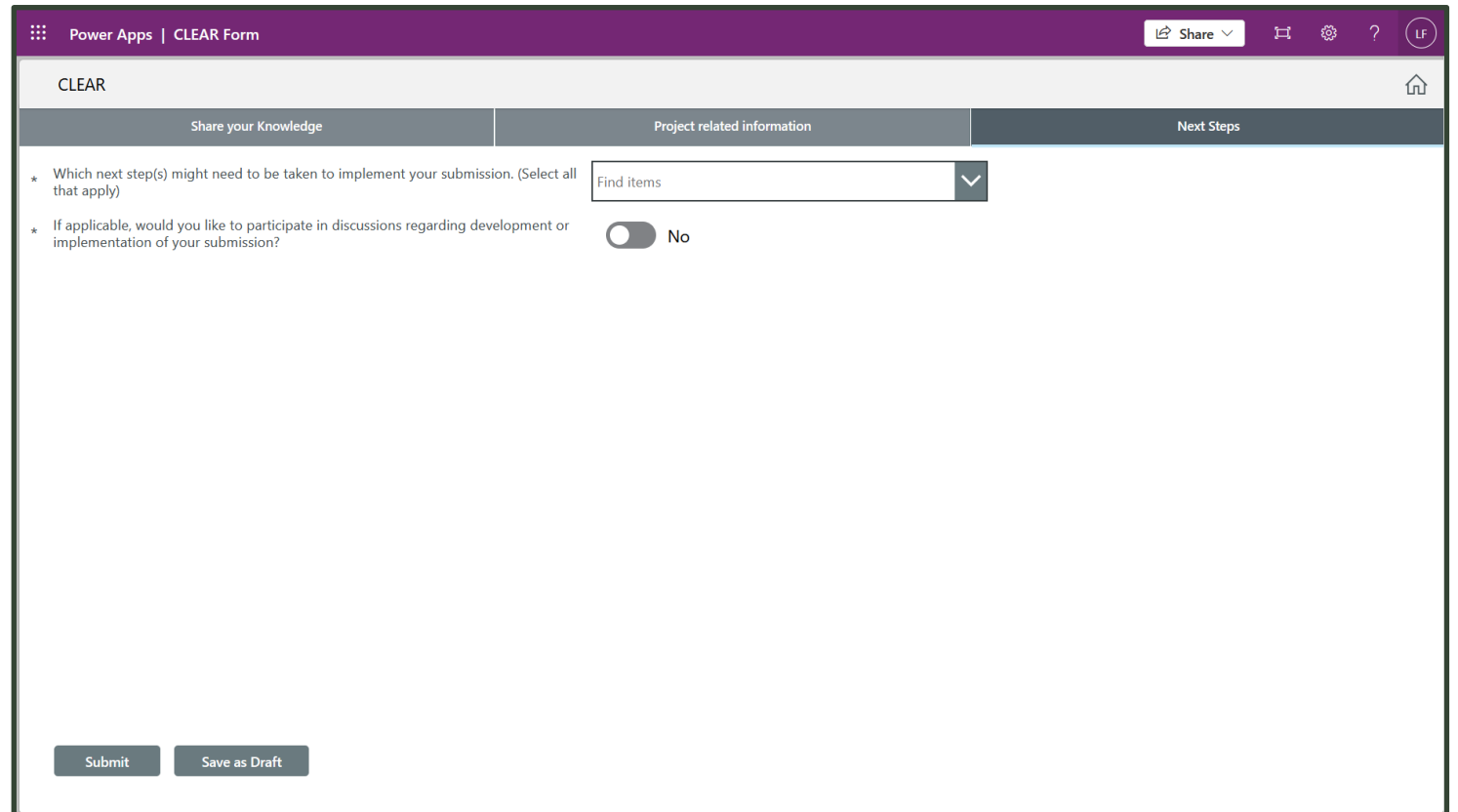
* How might your solution impact project delivery goals? (Select all that apply) ▾

Click to Continue >>

Submit Save as Draft

CLEAR

- **Understanding the tabs:**
- Below you will find the list of tabs found on the submission form
- *Next Steps*

A screenshot of the CLEAR Form submission interface in Power Apps. The interface has a purple header bar with "Power Apps | CLEAR Form" and a "Share" button. Below the header is a tabbed interface with three tabs: "Share your Knowledge", "Project related information", and "Next Steps". The "Next Steps" tab is active. The form content includes two questions: "Which next step(s) might need to be taken to implement your submission. (Select all that apply)" with a "Find items" search box, and "If applicable, would you like to participate in discussions regarding development or implementation of your submission?" with a toggle switch set to "No". At the bottom, there are "Submit" and "Save as Draft" buttons.

Expert Review Panel



Expert in their Applicable Discipline



Review submissions, provide feedback, institute changes, provide guidance.



TAG Member: Technical Advisory Group Member



Applicable Disciplines

**Selected during
submission to know who
needs to provide expert
review.**

**A way of filtering, tagging,
and searching accepted
submissions.**

Example Disciplines/Experts

Example Disciplines	
Multi-modal	Information Technology (IT)
Bicycle & Pedestrian	ITS & Signals
Office of Civil Rights	Location & Surveys
Construction	Maintenance
DMV	Materials & Tests
Design	Pavement Design & Collection
Disaster Recovery	Photogrammetry
Environmental	Photogrammetry
Equipment Management	Project Management
Facilities Management	Resiliency
HR	Risk

Why the CLEAR Program Database Benefits You

Turn Experience Into Advantage

The CLEAR database gives you instant access to proven **best practices, lessons learned, and real solutions** from across NCDOT — so you don't have to start from scratch.

Work Smarter, Not Harder

- Quickly find solutions others have already tested
- Reduce rework, delays, and costly mistakes
- Save time searching through emails and files

Learn From Statewide Expertise

- Tap into knowledge from teams across divisions
- See how peers solved similar project challenges
- Apply proven approaches with confidence

Improve Project Outcomes

- Make faster, better-informed decisions
- Strengthen quality and consistency
- Support continuous improvement efforts

Have Your Voice Heard

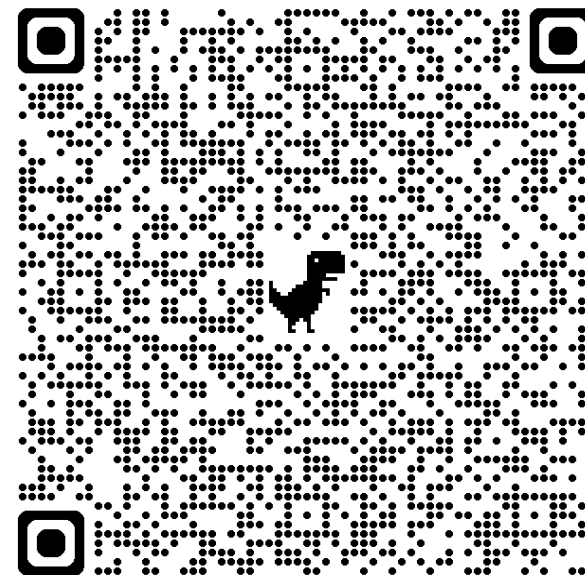
- Submit challenges and request solutions
- Share your own best practices and innovations
- Help shape future guidance and standards

New Database NOW ACCESSIBLE!

Clear Website:



Clear Database:



NC Transportation Innovation Council

NC Transportation Innovation Council (NC-TIC)

History



The purpose of the NC-TIC is to foster a collaborative culture within NCDOT for the rapid implementation of meaningful innovations to efficiently deliver to the public a modern, high quality transportation system.



2011

- Federal Highway Administration (FHWA) required each State DOT to establish a State Transportation Innovation Council (STIC) to engage stakeholders and facilitate the deployment of innovations.

2014

- First project awarded by the NC-TIC.

2017 to present

- NCDOT's Value Management Office (VMO) has supported the NC-TIC.

2019

- NC-TIC was rechartered.

2021

- NCDOT won FHWA's STIC Excellence Award.



NC-TIC Technical Coordination Committee



NC-TIC | North Carolina
Transportation Innovation Council

- ACEC of North Carolina
- Carolina Asphalt Pavement Association (CAPA)
- Carolinas Associated General Contractors (AGC)
- Carolinas Concrete Paving Association (CPA)
- Federal Highway Administration (FHWA)
- NC Association of Metropolitan Planning Organizations (NCAMPO)
- NC Association of Rural Planning Organizations (NCARPO)
- NC Local Technical Assistance Program (LTAP)
- NCDOT



STIC Incentive Program



STIC Incentive Program

Overview

- Provides technical assistance and up to \$125,000 in total funds per state to offset the costs of standardizing innovative practices.
- Funds activities such as conducting internal assessments, initiating capacity building, developing guidance, drafting standards and specifications, organizing peer exchanges, implementing system process changes, etc.
- At the local level, the **NC-TIC determines which projects/activities to fund.**

Recent Projects in North Carolina

<u>Project Name</u>	<u>Funding Year</u>	<u>Point of Contact</u>	<u>Status</u>
Pilot Debris Removal Systems	2023	Jennifer Portanova	Ongoing
Develop Data Governance for Rail Division	2023	Todd Meyer	Completed
Use of AI to Improve Vulnerable Road User Safety	2024	Daniel Carter	Completed
Project Delivery Enhancement through Integration of New Tools	2025	Derrick Weaver	Ongoing
Deployment of Drone Illumination for Worksite Safety	2025	Christopher Arnette	Ongoing



Now Accepting Applications

until April 17, 2026

The State Transportation Innovation Council (STIC) Incentive Program funds activities such as:

- Conducting internal assessments.
- Initiating capacity building.
- Developing guidance.
- Drafting standards and specifications.
- Organizing peer exchanges.
- Implementing system process changes.



Example STIC Projects in NC

Awards up to **\$125,000**

to offset the costs of standardizing innovative practices

Online Application



STIC Projects Completed in North Carolina

- Advancing Collaboration Technology Best Use Study – REKOR One Pilot
- Automated Waze Road Closures
- Highway Emergency Linked Platform (HELP) Alerts
- Knowledge Transfer Tools
- Ladders of Opportunity
- Safety Service Patrol Technology Pilot Project
- Tactical Library and Deployment Selection Tool for Bike and Pedestrian Safety Countermeasures

Innovation Culture Index

Innovation Coordinators and Newsletter

Innovation Coordinators

- Act as liaisons for the CLEAR Program in their Units, Divisions, or local offices.
- Help drive organizational change around future transportation technology and innovations.
- Disseminate information and opportunities related to innovation from the NC-TIC, industry, and across NCDOT.
- Engage staff in brainstorming ideas, implemented successes, and best practices for submission to the CLEAR Program.

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NCDOT INNOVATION

EMPLOYEE SPOTLIGHT



DANIEL ROSS
Assistant Resident Engineer
Division 14
2024 Innovation Challenge
Theme Creator



MIKEL KIBEL
Safety Consultant
Division 13
Safety Training Program



TOLMY BUTLER
Administrative Specialist
NCDMV Elizabethtown
Disaster Response Website

2024 and 2025 Innovation Challenges

IDEA SHARING



INNOVATION CHALLENGE

The Value Management Unit (VMU) launched the annual Innovation Challenge in 2020 as a means to capture best practices and innovative ideas to enhance NCDOT's efficiency. Each year, all NCDOT employees and consultants have an opportunity to submit their ideas to the themed competition for review by a panel of judges representing various divisions and units. All submissions are scored based on their alignment with NCDOT's values, feasibility of implementation, value added to NCDOT, and level of innovation. The top two winners or winning teams are celebrated for their submissions and supported over a year by VMU's Communicate Lessons, Exchange Advice, Record (CLEAR) team to implement their ideas.

CLEAR

Communicate Lessons, Exchange Advice, Record

The 2024 Innovation Challenge was held in an unprecedented year. Hurricane Helene caused historic rainfall and severe damage in western North Carolina in September 2024, becoming the most destructive storm in the State's history. It led to over 9,000 damage sites and more than 1,400 road closures. NCDOT crews mobilized

quickly after the storm hit and continue to support the recovery effort with contractors and partners. Despite all odds, there was a spirit of dedication to innovation and commitment to improving at NCDOT that never wavered.



Unlike past years, the 2024 Innovation Challenge had an open call for its theme. Daniel Ross, Division 14 Assistant Resident Engineer, developed the Challenge's focus on improving departmental training for new employees.

Two ideas tied for first place due to the value added for NCDOT and their overall innovation. Mikel Kibel, Division 13 Safety Consultant, and Tolmy Butler, NCDMV Administrative Specialist in Elizabethtown, have taken great initiative in beginning implementation of their winning ideas. Mikel has focused on improving safety training and refining the training process to increase awareness and understanding for all new employees. His work has been supported and tested in Division 13. Mikel aims for statewide reach to standardize safety related training. Tolmy witnessed firsthand the importance of having a centralized, public location for all disaster-related responses and communication as she worked the DMV call center during Hurricane Helene. She is currently developing a website that would centralize all information for those responsible for disaster communications and for the public facing the aftermath.

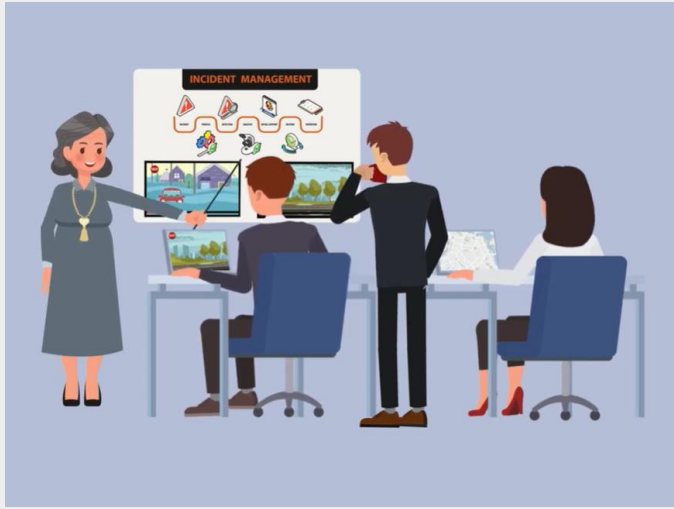
Currently, the 2025 Innovation Challenge is breaking barriers with project delivery by identifying process improvements from concept through maintenance that support efficient project delivery, cost-effective solutions, and value-driven outcomes. The judging panel has identified the top two submissions, with a team of three from Division 5 winning first place. The first-place winning team is comprised of Chris Coughlin, Tracey Jackson, and Tom Linsenmeyer. Their innovation focuses on a new cost estimate intake tool and approval workflow that provides notification functionality to improve the process for Right of Way (ROW). The second-place winner, Division 14's Spencer McDonald, highlighted precast concrete blocks as efficient and cost-effective solutions that benefited the bridge maintenance during the Hurricane Helene storm response, allowing for rapid stabilization and repair efforts.



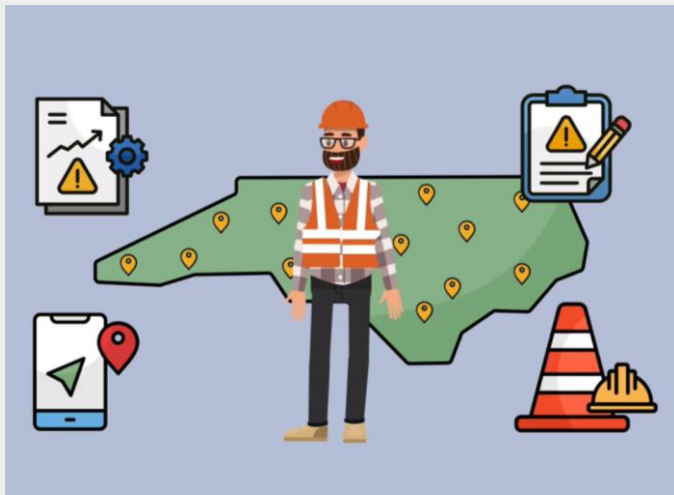
Quarterly Newsletter – Innovation Around NCDOT
Identifying innovation outside of the annual Innovation Challenge...
First Edition – Coming Soon!

Innovation Challenge

Tolmy Butler (2024)



Theme: *New Employee Training*



Mikel Kibel (2024)

Innovation Challenge

NCDOT launches the **annual Innovation Challenge** to encourage all NCDOT employees to submit their ideas and/or best practices that help NCDOT operate more efficiently.

- 💡 A new **theme** is created and/or chosen by the CLEAR team every year.
- 💡 The period for **submissions** is open for a month.
- 💡 A panel of **judges** review all responses based on scoring criteria.
- 💡 The top two **winners** are notified and receive a certificate with NCDOT merch.
- 💡 A yearly **video** features the winners and allows them to explain their innovative idea.

CLEAR
Communicate Lessons, Exchange Advice, Record

Questions? Reach out to us at CLEAR@ncdot.gov for more information.



Tracey Jackson
Tom Linsenmeyer
Chris Coughlin (2025)

Theme: *Breaking Barriers with Project Delivery*



Spencer McDonald (2025)

**IDEA
SHARING**



NCDOT 2026 Innovation Challenge



Every Dollar Counts

Whether in the field or the office, help us identify operational savings ideas that could improve efficiency, reduce waste, and leverage existing NCDOT resources!

Submissions: February 23rd – April 27th

Winners will be featured in a video and receive a certificate & NCDOT swag!

For more information, visit **CLEAR's Innovation Challenge connect page** or email CLEAR@ncdot.gov!



Build a Better Mousetrap

Build a Better MOUSETRAP

National Recognition Program
for Transportation Innovation



The **Build a Better Mousetrap (BABM)** national recognition program **highlights locally relevant, innovative solutions and provides a platform to share innovations to everyday challenges** that local and tribal transportation professionals encounter on local roads.

BABM is open to any government agency (town, borough, city, township, county, parish, state and Tribal) in the United States. Applicants must apply to their nearest LTAP/TTAP Center to qualify for the national recognition.



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