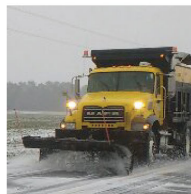
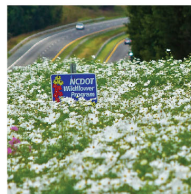
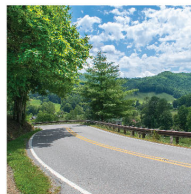
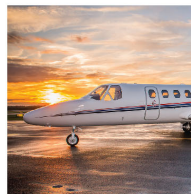


## **NORTH CAROLINA** Department of Transportation



# How does VMO bring extraordinary value to your everyday needs?

Alyson Tamer, PE, CPM

March 22-23, 2022 – Atlantic Beach AGC Workshop

# Commonly Used Acronyms

VMO- Value Management Office

CLEAR- Communicate Lessons, Exchange Advice, Record

PCA- Post Construction Assessment

VEP- Value Engineering Proposal

CR- Constructability Review

RAW- Risk Assessment Worksheet

VE- Value Engineering

# Value Engineering Proposal Program

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 of a VEP

- 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.
- Contractor and Department split savings 50/50





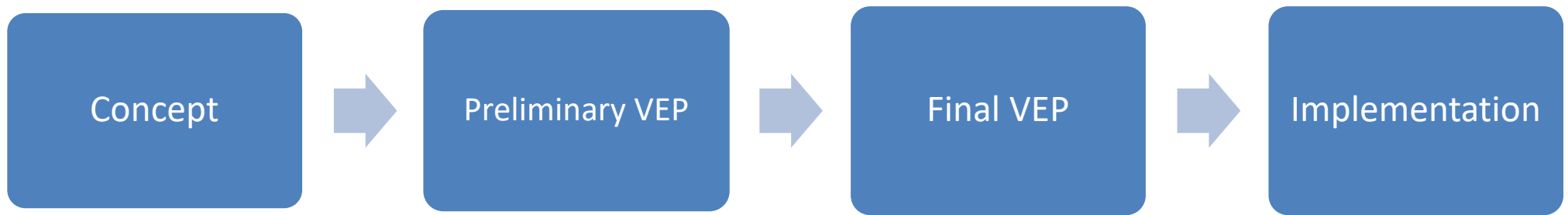
Contractor	<ul style="list-style-type: none"><li>• Develops VEP, addressing comments (as needed)</li></ul>	
Resident (RE)	<ul style="list-style-type: none"><li>• Completes preliminary review &amp; provides feedback</li><li>• Contractor's Primary Contact</li></ul>	
Value Management (VM)	<ul style="list-style-type: none"><li>• Provides Support &amp; Guidance, coordinating review</li><li>• NCDOT Primary Contact &amp; responsible for reporting</li></ul>	
Technical Unit/ Disciplines (Tech)	<ul style="list-style-type: none"><li>• Technical evaluation of VEP</li></ul>	
Design Project Management (PM)	<ul style="list-style-type: none"><li>• Provides support &amp; guidance during development</li></ul>	
Construction Unit (CU)	<ul style="list-style-type: none"><li>• Issues Decision (Approval or Rejection) Memo</li></ul>	

## Value Management (VM)

- Provides Support & Guidance, coordinating review
- NCDOT Primary Contact & responsible for reporting

- Historical knowledge and data on successful VEPs
- Ability to apply lessons learned on past VEPs to support REs and Contractors
- Takes on administrative coordination efforts
- Absorbs the burden of communicating with all necessary stakeholders
- On-going coordination with Technical Units and PMs through other groups allows for easy communication and outreach
- Completes FHWA reporting requirements for audit compliance

# VEP Review Process



## How to Submit

Submit a copy of the VEP concurrently to:

- Resident Engineer
- State Value Management Engineer at [ValueManagementUnit@ncdot.gov](mailto:ValueManagementUnit@ncdot.gov)



# Tools Available

On the Value Engineering Proposal Website there are tools available.

## 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.

Home ▶ 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

### Submission & Review Info

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

[VEP FAQs](#)

[VEP Review Process - Flowchart](#)

[VEP Training Video](#)

[Construction Manual](#)

### Program Links

[VEPP Fact Sheet](#)

[NCDOT 2018 Standard Specification Section 104-12](#)

[VEPP Presentation](#)

[2020 VEPP Summary & Look Ahead](#)

Connect NCDOT  
BUSINESS PARTNER RESOURCES

Home Help Site Map

Doing Business Bidding & Letting Projects Resources Local Governments

Search...

## Connect NCDOT Home

Bringing Business and Government together with online collaboration.

### Browse All Sections

**Doing Business**  
How to work with the North Carolina Department of Transportation.

**Bidding & Letting**  
Bidding and letting information for Central, Division, Design/Build and Bridge & Culvert Lets.

**Projects**  
For businesses working on NCDOT Projects and Contracts.

**Resources**  
Data and documents needed to work with the NCDOT.

**Local Governments**  
Municipalities, local government agencies and other non-business groups working with NCDOT.

### More Site Content

**Manuals**  
Important guides and handbooks from NCDOT.

**Maps**  
County, statewide and project-specific maps.

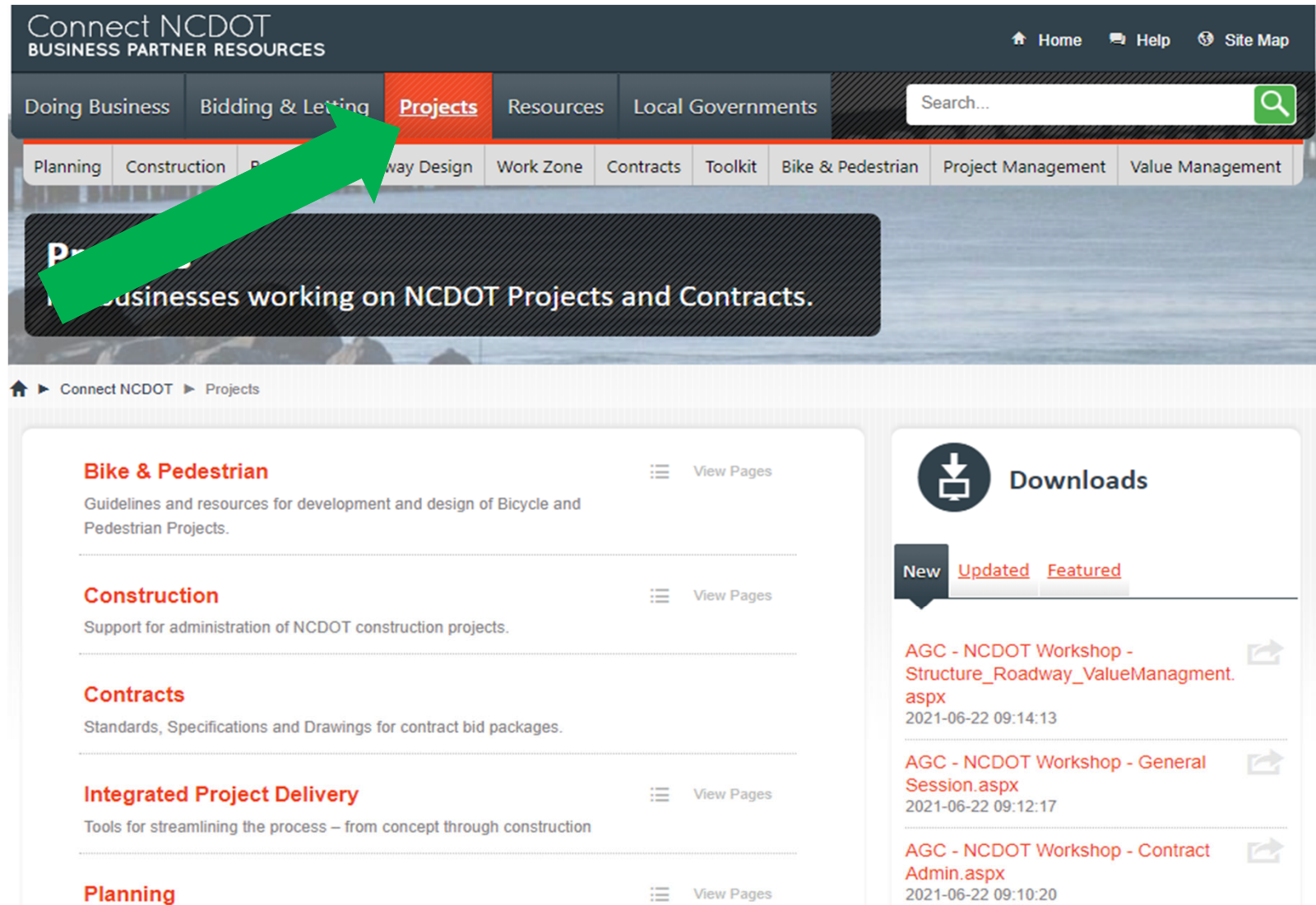
**Training**  
Certifications, course descriptions and online classes.

**Groups & Committees**  
Private and public organizations working with NCDOT.

**Events**  
Upcoming meetings, conferences, and gatherings.

**Contenido en Espanol**  
Contenido para nuestros socios de habla hispana.





Connect NCDOT  
BUSINESS PARTNER RESOURCES

Home Help Site Map

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

Search...

Planning Construction Roadway Design Work Zone Contracts Toolkit Bike & Pedestrian Project Management Value Management

Businesses working on NCDOT Projects and Contracts.

Connect NCDOT Projects

**Bike & Pedestrian** View Pages  
Guidelines and resources for development and design of Bicycle and Pedestrian Projects.

**Construction** View Pages  
Support for administration of NCDOT construction projects.

**Contracts**  
Standards, Specifications and Drawings for contract bid packages.

**Integrated Project Delivery** View Pages  
Tools for streamlining the process – from concept through construction

**Planning** View Pages

**Downloads**

New Updated Featured

AGC - NCDOT Workshop - Structure\_Roadway\_ValueManagment.aspx  
2021-06-22 09:14:13

AGC - NCDOT Workshop - General Session.aspx  
2021-06-22 09:12:17

AGC - NCDOT Workshop - Contract Admin.aspx  
2021-06-22 09:10:20



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## Value Management Office

The Value Management Office (VMO) has five programs that are focused on enhancing project delivery at every phase of a project's life. The programs work to bring innovation to NCDOT projects and engage the Department to share ideas and knowledge.

Home > Connect NCDOT > Projects > Value Management



### CLEAR Program

The CLEAR Program collects lessons learned, innovative ideas, and best management processes to be shared throughout the Department.

[Read More](#) →

### Constructability Review Program

The Constructability Review Program reviews projects during development identify, examine, and resolve constructability challenges through a partnership with the AGC.

[Read More](#) →

### VMO Links

- [VA Worksheet](#)
- [CLEAR Submission](#)
- [VMO Programs Feedback Form](#)
- [NCID Page](#)

### VMO Guidelines

- [2020 NCDOT VE Training](#)
- [VMO External Guidelines 11.0.pdf](#)
- [VA Worksheet](#)

Find all the information for each of our programs and helpful links on each page on our website.



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[Read More](#) →

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[Read More](#) →

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Each Project Team needs to conduct a Value Assessment to consider cost containment measures to reduce the Construction and long-term Maintenance costs for a project in Development.

[Read More](#) →

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### VMO Links

[NCTIC Site](#)

[VMO PDN QA QC Documents](#)

[Constructability Review Research Survey](#)

[CLEAR Submission](#)

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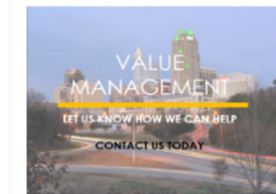
[VMO External Guidelines 11.0.pdf](#)

[VMO PDN QA QC Documents](#)

[VA Worksheet .xlsx](#)

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[Continuing Education Resources](#)



State Value Management Engineer -  
Alyson Tamer, PE, CPM

[valuemanagementunit@ncdot.gov](mailto:valuemanagementunit@ncdot.gov)

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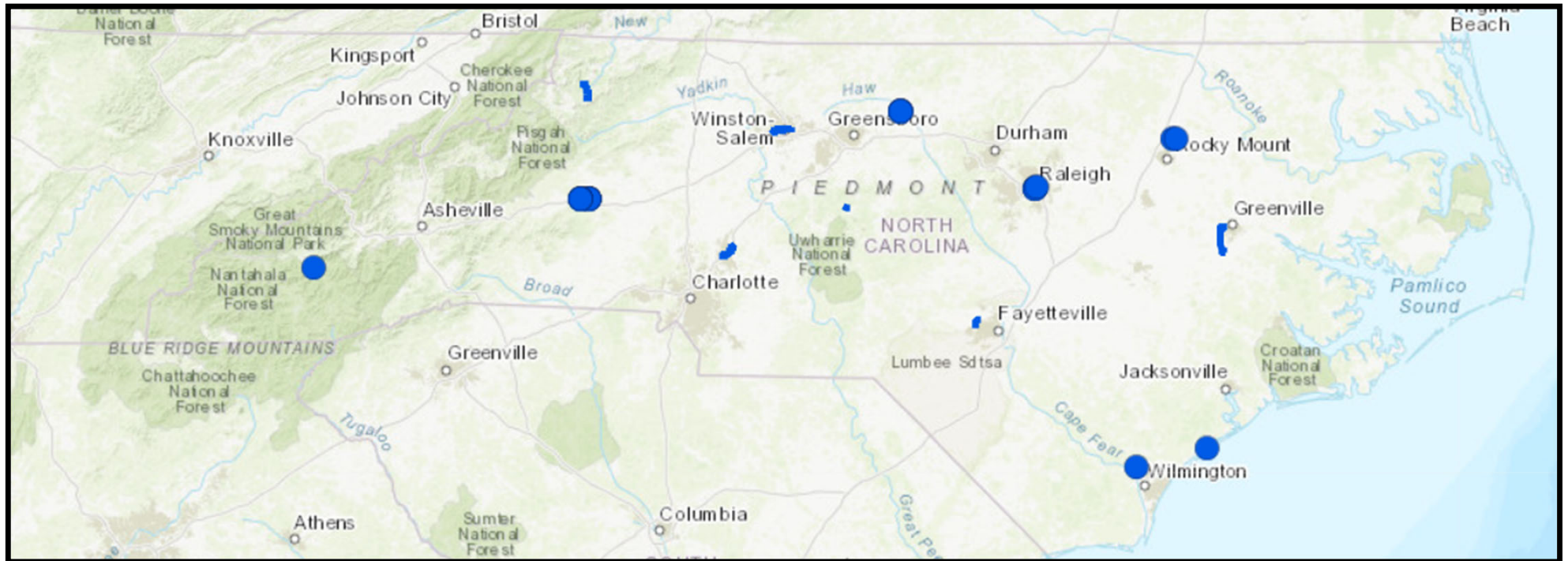
# CLEAR Program

The Departments  
Knowledge Management  
Program that works to  
share lessons learned and  
best practices through  
various initiatives and a  
submission platform.

**What does CLEAR stand for?**  
**Communicate**  
**Lessons,**  
**Exchange**  
**Advice,**  
**Record**



# Post Construction Assessments



We had 16 PCAs last year spread across the state.

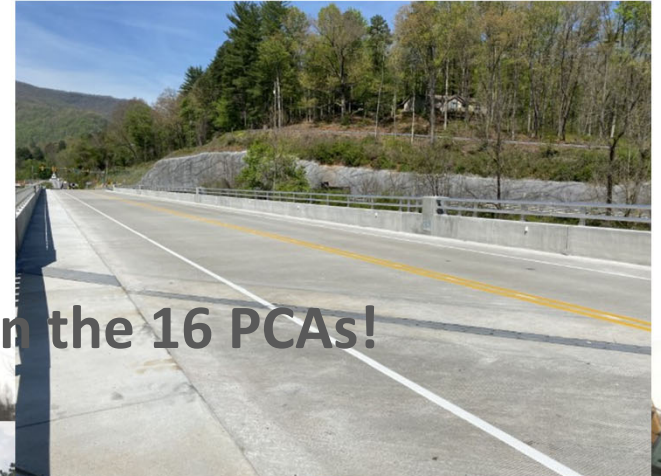


# What did we learn?





# What did we learn?



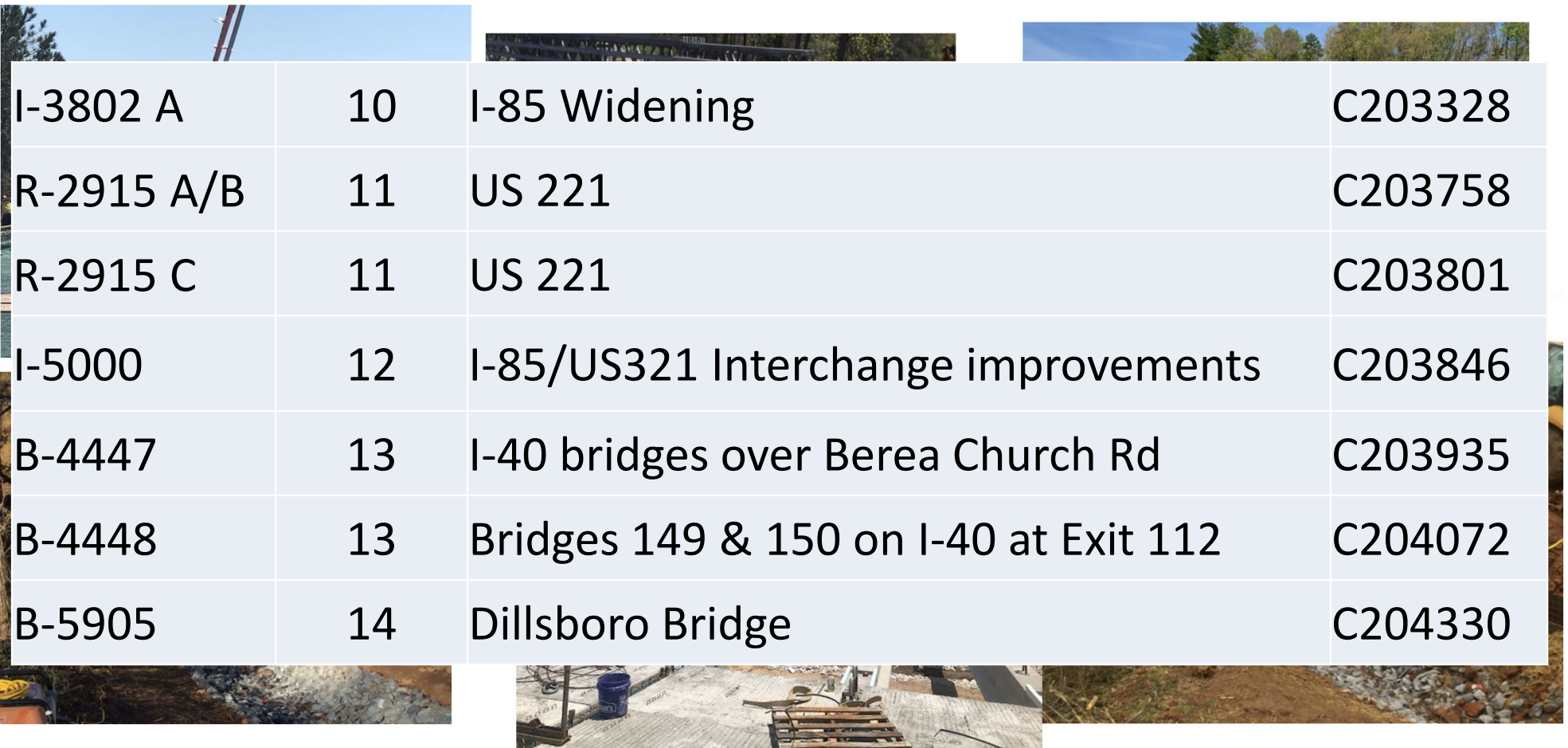
330 unique individuals participated in the 16 PCAs!



We are processing almost 150 unique lessons learned and best practices through our CLEAR portal and implementation pathways.



# Western PCAs



I-3802 A	10	I-85 Widening	C203328
R-2915 A/B	11	US 221	C203758
R-2915 C	11	US 221	C203801
I-5000	12	I-85/US321 Interchange improvements	C203846
B-4447	13	I-40 bridges over Berea Church Rd	C203935
B-4448	13	Bridges 149 & 150 on I-40 at Exit 112	C204072
B-5905	14	Dillsboro Bridge	C204330



# I-85 Widening

How can we reduce our risk when dealing with the railroad?



# US 221



How can we provide continuity along a corridor?

How quickly can we apply lessons learned from one corridor section to the next?

# I-85 Interchange Project

How can we design  
with construction  
in mind?





# I-40 Bridges over Berea Church Rd.



Can we scrap the traditional and try something unexpected?

## Bridges 149 and 150 on I-40



Are you considering temporary construction needs in your design?

# Dillsboro Bridge Project



How can we accomplish the same function but with increased value?



# Central PCAs



B-5121/B-5317	5	Peace St and Wade Ave over Capital Blvd.	C203751
B-5239	7	NC 87 Bridges over Haw River and Mill Race	C203676
R-2536	8	Asheboro Bypass	C203617
U-2827B	9	US-421/I-40 Bus in Winston Salem	C203862



# Peace St and Wade Ave

How can we reduce our risk when dealing with the railroad?



# NC 87 Bridges over Haw River and Mill Race



Have we  
evaluated  
everything as  
related to a  
temporary  
bridge?

# Asheboro Bypass



What kind of communication is needed to effectively deliver the project?



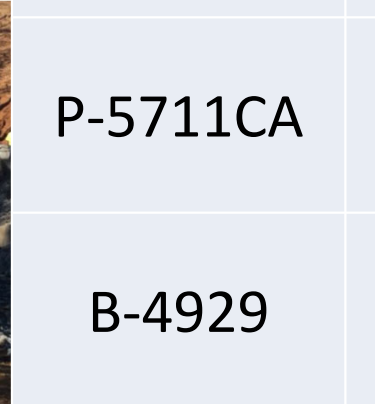





# US-421/I-40 Bus in Winston Salem



How can we remember construction during design of specialty items?

# Eastern PCAs



U-2519CB	6	Fayetteville Outerloop	C293398
R-2250	2	Greenville Southwest Bypass	C203609
P-5711CA	4	Old Battleboro Rd Roundabout	DD00264
B-4929	3	Surf City Bridge	C203789

# Fayetteville Outer Loop



How can you encourage out of the box thinking to save time, money, and improve long-term maintenance?

# Old Battleboro Rd Roundabout

What construction methods  
are being utilized by other  
states that could benefit  
NCDOT?





# Surf City Bridge



What kind of communication is needed specifically for this project?

# Greenville Southwest Bypass



How can construction be included in the design to improve project execution?

# Constructability Review Program



## 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



# Design with Construction in Mind


Lunch and Learn  
thinking about  
Construction from  
Feasibility.

**Volunteers  
needed!**





Find all the information for each of our programs and helpful links on each page on our website.



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 **Employee Directory**  
Staff contacts for Value Management.

# Project Knowledge Share

- Submit Lessons learned into CLEAR
- Sign up for Lunch & Learns/PCA notification
- Find info on PCAs
- Watch Lunch and Learn recordings

Planning Construction Research Roadway Design Work Zone Contracts Toolkit Bike & Pedestrian Project Management **Value Management**

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Home > Connect NCDOT > Projects > Value Management > CLEAR Program > Project Knowledge Sharing

### Submit Lessons Learned and Best Practices

As an industry partner, we value your expertise and invite you to submit best practices and lessons learned from Projects in development and construction. Utilizing the link below, submit into our CLEAR portal – NCDOT's Knowledge Management Program. Your submission will be reviewed and vetted by Department experts and implemented as applicable.

**CLEAR Lesson Learned Form**

Department personnel can access these forms by going to the CLEAR portal: **CLEAR Communicate Lessons, Exchange Advice, Record (ncdot.gov)**

Learn more about the program and our 2021 Innovation Challenge: <https://youtu.be/CAXt4gDu7yk>

Sign-up for Notification of upcoming PCAs [here](#).

Sign-Up for Notifications of upcoming Lunch and Learns [here](#).

### Post Construction Assessments

The Post Construction Assessments review identified projects following substantial completion of the project. The assessments bring together the design team, NCDOT personnel, and contractors to review lessons learned and best practices related to the construction of these projects. These lessons are shared across various NCDOT Divisions and Units to improve out knowledge share and transfer.

A map of all projects that will have a Post Construction Assessment can be found [here](#):

If you have any questions on the Post Construction Assessments please contact the Value Management Team at [CLEAR@NCDOT.GOV](mailto:CLEAR@NCDOT.GOV).

### How to use this page

Detailed instructions on how to use this page-

[Click here for PDF](#)

[Click here for Video](#)

### Post Construction Assessments Access

Click Log In to access the Site with all the projects.

**Log in**

If this is your first time here, scroll down to see if you need to request access.

### Lunch and Learn Recordings

✓	Name
>	Session : Bridge Stormwater Runoff Managemen
>	Session : Construction Revision Process - 02/22/

External Users – Create a Business NCID

# 2022 PCAs

- PCA Request Form on PCA Connect site to recommend projects
- PCAs can be conducted at substantial completion with no outstanding claims or contract issues
- PDH Credits will be awarded for PCAs in 2022.

## Post Construction Assessment (PCA) Request Form

Fill out this form if you have a project that you would like the Value Management Office to facilitate a Post Construction Assessment (PCA).

To see previous Post Construction Assessments look under Projects on this page and click the tab - Completed Assessments.

PCAs on projects can be conducted at substantial completion with no outstanding claims or contract issues. They include the contractor, design teams, and NCDOT personnel.

The Submitter Information at the beginning of the form is for follow up purposes so we can contact you regarding scheduling the PCA. This section should be completed by the person completing the form. The place to enter the additional contact information for other project personnel involved is later on in the form.

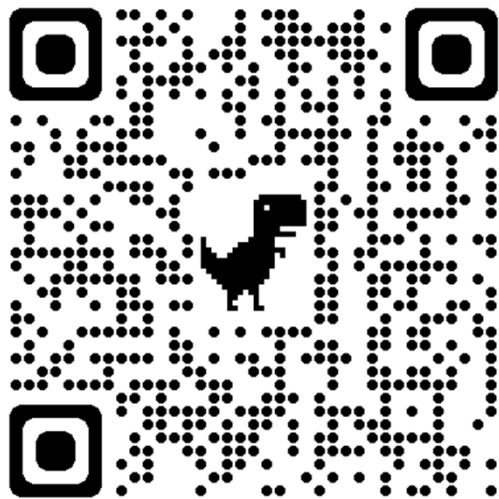
[Click Here For Form](#)

# 2022 PCAs Scheduled

- March 15<sup>th</sup>: (complete)
  - R-5516 - Slocum Gate Flyover
- April 18<sup>th</sup>:
  - R-5749: US 74 at Hallsboro Rd
- April 25<sup>th</sup>:
  - B-4490: Rowan Street Bridge over CSX
- May 17<sup>th</sup>:
  - B-4491: NC 59 over I-95 Bus/US 301



# Questions?



Alyson Tamer, PE, CPM

State Value Management Engineer

[awtamer@ncdot.gov](mailto:awtamer@ncdot.gov)

[ValueManagementUnit@ncdot.gov](mailto:ValueManagementUnit@ncdot.gov)

[CLEAR@ncdot.gov](mailto:CLEAR@ncdot.gov)