



NORTH CAROLINA
Department of Transportation



Lunch and Learn – Construction Revision Process

Alex D. Stewart, PE

Wilmington Resident Engineer, Division 3

February 22, 2022

adstewart2@ncdot.gov

Topics

1. Construction Revision: As-Builts or Formal Revision?
2. Construction Revision Process
3. Resident Engineer's Office responsibilities implementing a revision
4. Reimbursable agreements (Municipal or Developer)
5. Charging to projects

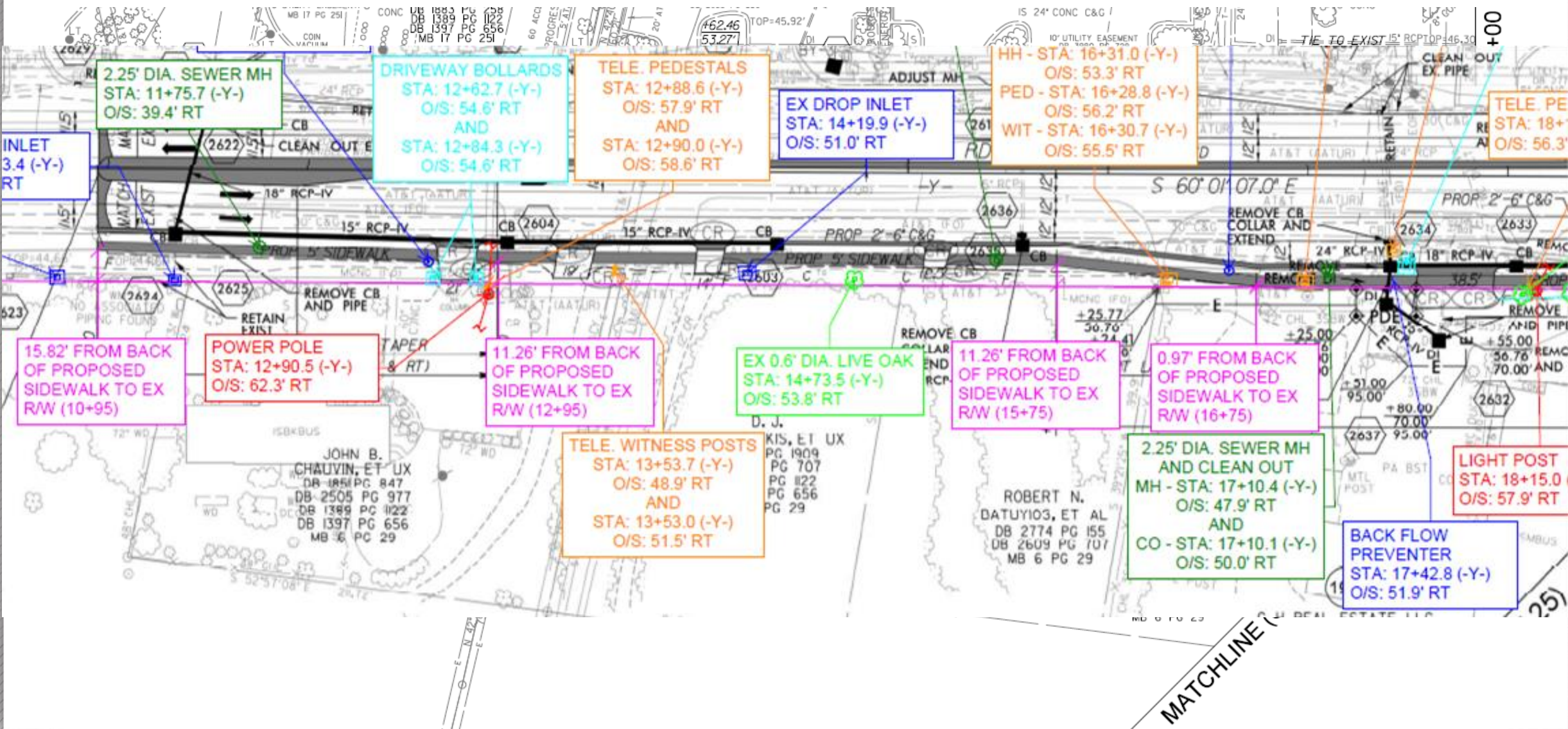
Topics

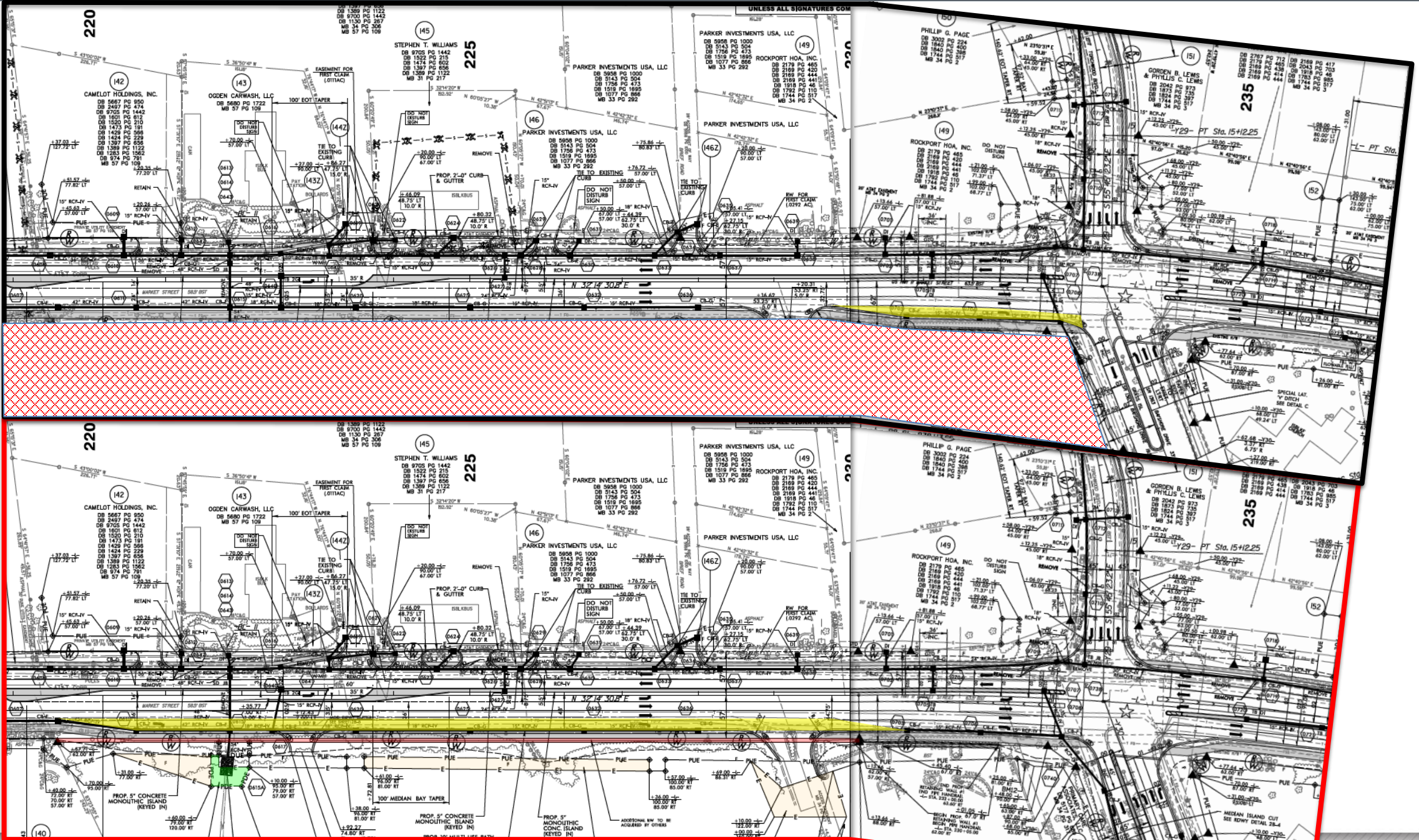
1. Construction Revision: As-Builts or Formal Revision?
2. Construction Revision Process
3. Resident Engineer's Office implementing a Construction Revision
4. Reimbursable agreements - Municipal or Developer
5. Charging to projects

As-Built or Formal Construction Revision?

- Depends on the magnitude of the change
- Depends on the capabilities of the office
- Depends on the comfort level of the Resident Engineer

As-Built or Formal Construction Revision?





As-Built or Formal Construction Revision?

- District Office
- Project Development Unit
 - Environmental
 - Right of Way
 - Roadway
 - Hydraulics
 - Utilities
 - Utilities by Others
 - Signing and Delineation
 - Signals
 - Pavement Marking Plans
- Programs Management office

Topics

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2. Construction Revision Process
3. Resident Engineer's Office implementing a Construction Revision
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5. Charging to projects

Construction Revision Process

2021-02-11 Construction Revision Memo




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

MEMO TO: Roadway Design Unit
Division Engineers
Division Project Delivery Engineers
Environmental Analysis Unit
Transportation Mobility & Safety
Contract Standards and Development
Division Construction Engineers

Structures Management Unit
Construction Unit
Hydraulics Unit
Project Management Unit
Roadside Environmental Unit
Utilities Unit
Project Managers

FROM: Christopher M. Werner, PE 
Director of Technical Services

DATE: February 11, 2021

SUBJECT: Construction Revisions

The Post-Letting Construction Revision Guidance was developed to provide guidance to the Department on how to incorporate construction revisions into the Let Plans. This guidance shall be followed when submitting construction revisions on Central and Division LET projects.

The [Post-Letting Guidance](#) is information prepared after the roll-out of the Project Delivery Network (PDN) Version 1.0 and will be incorporated in the next version of the Project Delivery Network. Similar to information included in the PDN Version 1.0, additional refinements to the Post-Letting Guidance will be incorporated in future versions of the PDN, based upon user input.

This policy will clarify the responsibilities of the Division representative (typically the Resident Engineer), Project Manager (or representative), Design Leads, Records and Document Management, and Division Proposals Engineer. A brief outline of the process is as follows:

1. The Division Representative will submit the construction revision request to the Project Manager.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TECHNICAL SERVICES DIVISION
MSC 1316
RALEIGH, NC 27699-1516

Telephone: (919) 707-2540
Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TECHNICAL SERVICES DIVISION
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RALEIGH, NC 27699-1516

Telephone: (919) 707-2540
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RALEIGH, NC 27601

Subject: Construction Revisions
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February 11, 2021

2. The Project Manager will coordinate with the Division Representative and the affected Design Leads regarding the proposed construction revision to establish a plan of action as well as a timeline for completion. NCDOT Technical Units should be contacted as needed for projects designed by private consultants.
3. The Design Leads will make the necessary plan revisions and update any quantities and special provisions that are impacted by the construction revision.
4. The Design Leads will place any documentation and revised files into the discipline specific library on the projects Preconstruction SharePoint site and notify the Project Manager that the revisions have been completed. The Design Lead will also notify the Project Manager of the location of the revised files (preferably as a hyperlink in the notification email).
5. The Project Manager will conduct a completeness check of the plans, quantities, and special provisions (if applicable). If the revision has been completed by a private consultant, the Project Manager will submit a draft construction revision letter and the revision to the applicable NCDOT Technical Unit for review (if applicable). A template of the Project Management Unit's Construction Revision form letter can be found [here](#). The construction revision letter should provide the location of the revised plan files as a hyperlink in the body of the letter.
6. When the NCDOT Technical Units provide comments, the Project Manager will coordinate with the Design Leads to address any required changes to the construction revision. The timeframe for completing a revision is dependent on the scope of the revision. The Project Manager will coordinate with the Design Leads to ensure that the revisions are completed in a timely manner.
7. Once all revisions have been made, the Project Manager should confirm that the revised files and documentation have been uploaded to the projects SharePoint site and that all comments have been satisfactorily addressed.
8. On Centrally LET projects, the Project Manager will distribute the final construction revision letter to Records and Document Management by submitting an email to printshopccb@ncdot.gov and copying the Division Representative. On Division LET projects, the Project Manager will distribute all documentation to the Division Proposals Engineer.
9. Records and Document Management or the Division Proposals Engineer will update the files in the Let Plans folder and distribute the Construction Revision.

Subject: Construction Revisions
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In the past, drainage summary sheets were typically not updated during the construction revision process. The Hydraulics Unit has developed a simplified drainage summary for use during the construction revision process. A copy of the simplified drainage summary sheet can be found [here](#). The Hydraulics Design Lead will have an option of using the simplified drainage summary sheet (preferred) or revising the existing drainage summary to address minor changes in the Let Plans.

If you have any questions regarding the Construction Revision process, please contact Roger Kluckman, PE, Specialty Functions and Support Services Group Lead at 919-707-6233 or via email at rkluckman@ncdot.gov.

CMW/rck

ec: Ronnie Keeter, PE
Matt Clarke, PE
Brad Hibbs (FHWA)
Chris Peoples, PE

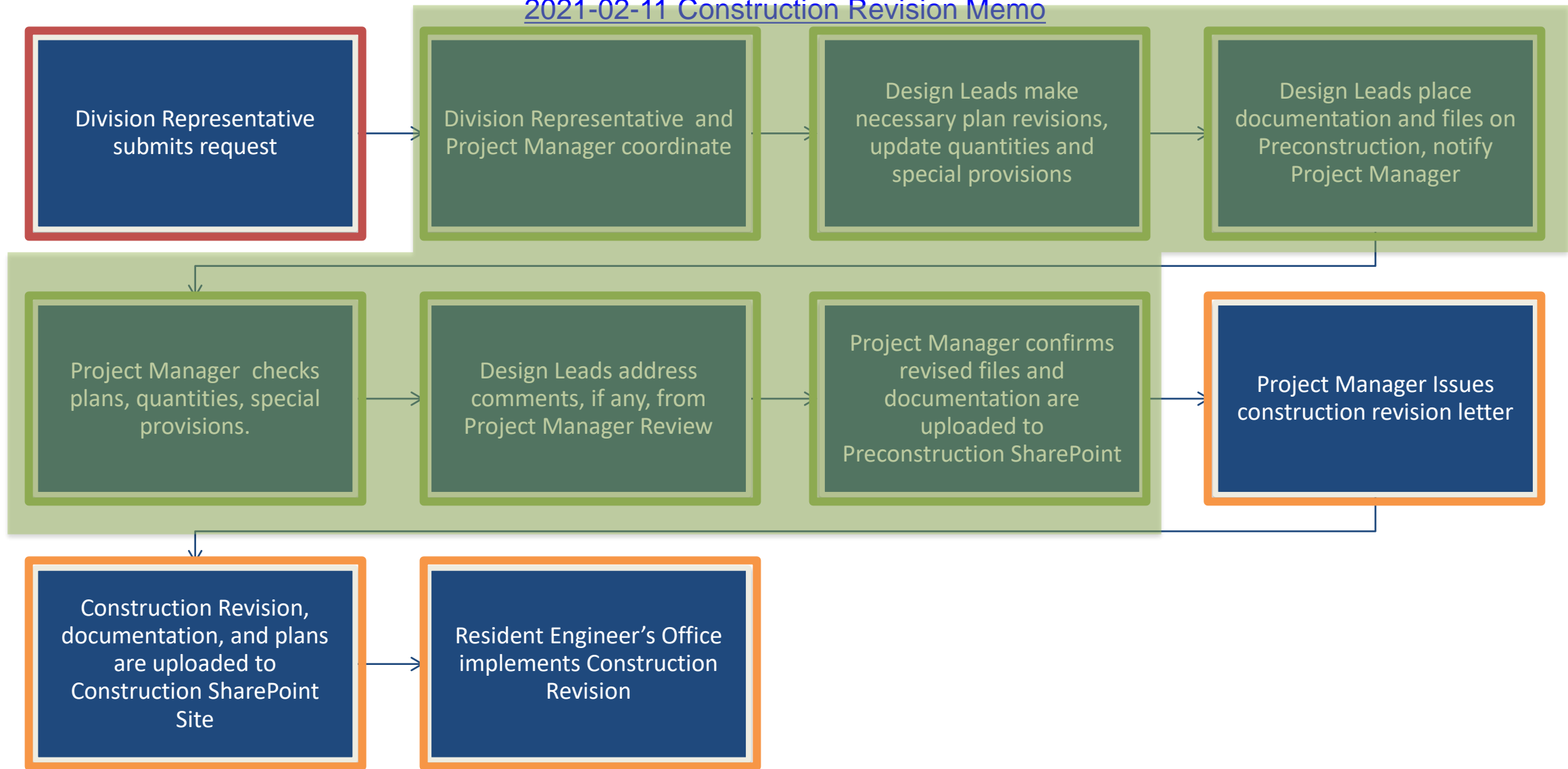
Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TECHNICAL SERVICES DIVISION
MSC 1316
RALEIGH, NC 27699-1516

Telephone: (919) 707-2540
Customer Service: 1-877-368-4968
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Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601

Construction Revision Process

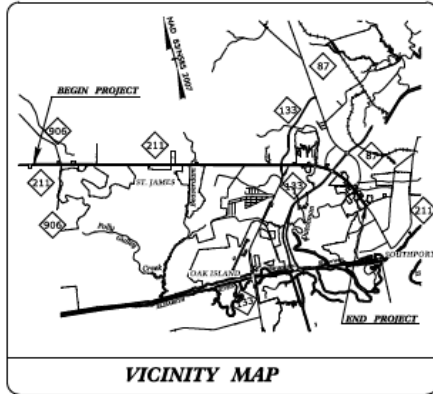
[2021-02-11 Construction Revision Memo](#)





Topics

1. Construction Revision: As-Builts or Formal Revision?
2. Construction Revision Process
3. Resident Engineer's Office implementing a Construction Revision
4. Reimbursable agreements - Municipal or Developer
5. Charging to projects

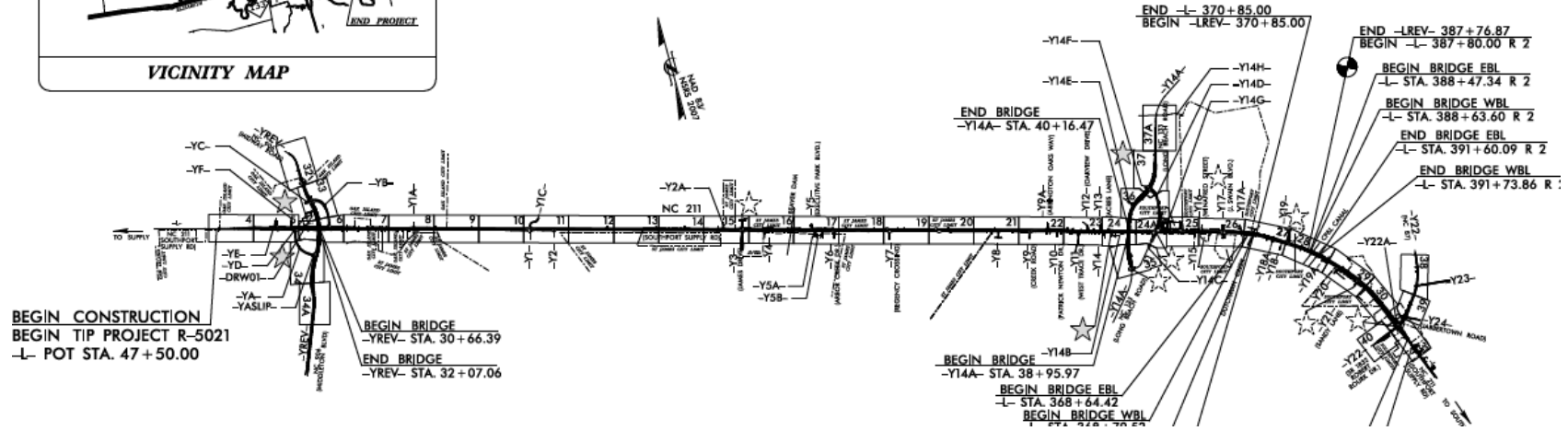


BRUNSWICK COUNTY

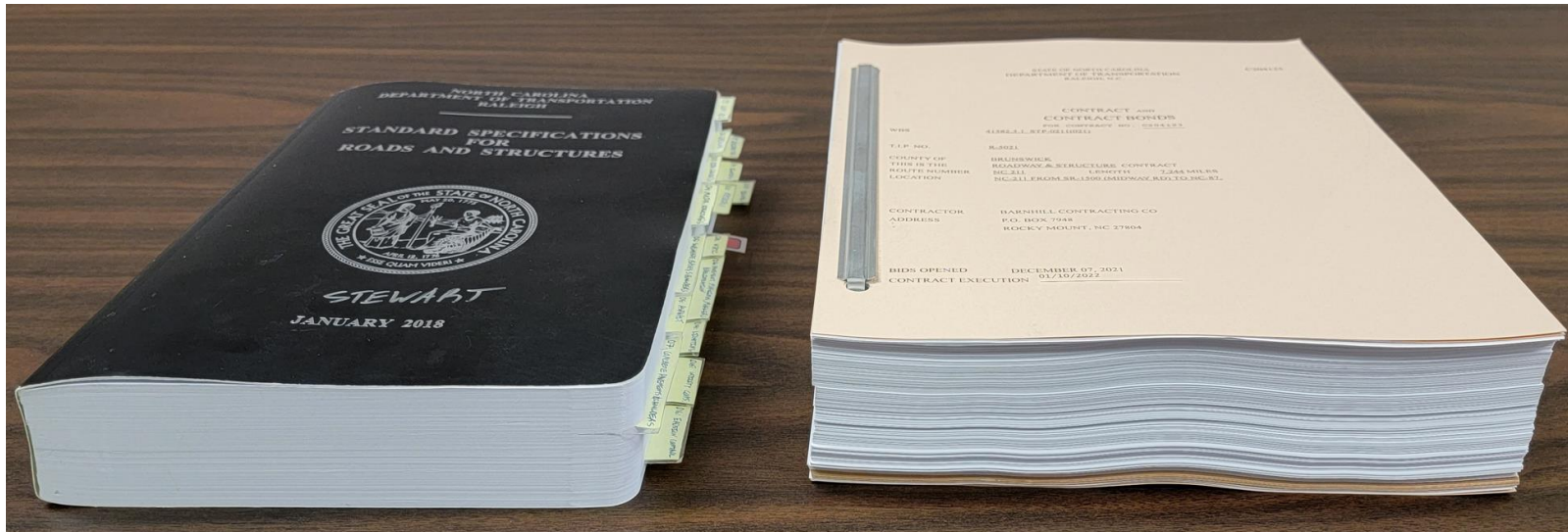
LOCATION: NC 211 FROM WEST OF NC 906 (MIDWAY ROAD) TO EAST OF NC 87

TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES, CULVERTS, SIGNALS, AND RETAINING WALLS

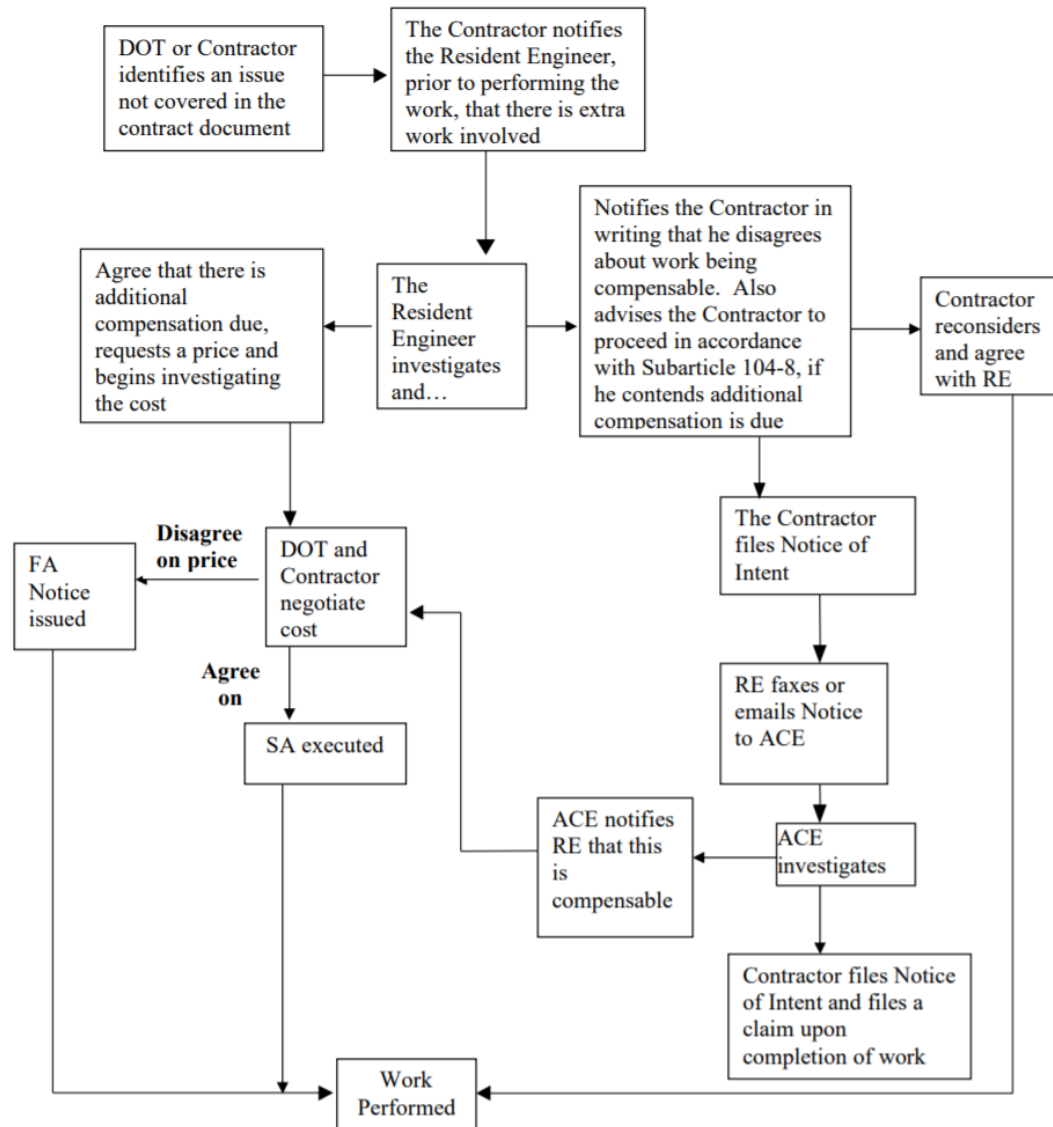
STATE PROJECT NO.	FISCAL YEAR	DESCRIPTION
41582.1.1	STP-0211(021)	PE
41582.2.2	STP-0211(021)	UTILITIES
41582.2.3	STP-0211(021)	RW
41582.3.1	STP-0211(021)	CONSTRUCTION



- ☆ EXISTING TRAFFIC SIGNAL
- ☆ PROPOSED TRAFFIC SIGNAL



Supplemental Agreement Chart





North Carolina Department of Transportation
Supplemental Agreement Documentation

Page 1 of 10

County/Countries: [REDACTED]

Federal Aid Number: [REDACTED]

Contractor: [REDACTED]

1. Description, location, and justification for change:

CONSTRUCTION REVISION 6-RIGHT TURN LANE AT BAYSHORE DRIVE

This supplemental agreement is written in accordance with article 104-7 of the 2018 Standard Specifications for Roads and Structures for extra work.

This supplemental agreement is for the work associated with construction revision 6 for the construction of a right turn lane at Bayshore Drive.

This supplemental agreement will establish five(5) new line items for the contract. This supplemental agreement will create the following line items:

LC #283: VERTICAL PANEL TYPE 3 OBJECT MARKER – OM3-L. This item will be paid per each. This item will be measured and paid in accordance with article section 1264 of the 2018 Standard Specifications for Roads and Structures.

LC #290: CONCRETE EXPRESSWAY GUTTER. This item will be paid per linear foot. This item will be paid in accordance with section 846 of the 2018 Standard Specifications for Roads and Structures.

LC #291: Generic Erosion Control Item – Fabric Insert Inlet Protection Device. This item will be paid per each and will be paid in accordance with the attached special provision.

LC #292: Generic Erosion Control Item – Fabric Insert Inlet Protection Device Cleanout. This item will be paid per each and will be paid in accordance with the attached special provision.

LC# 293: Relocation of RCP. This item will be paid as a lump sum item. The item will be performed in accordance with Section 106 of the 2018 Standard Specifications for Roads and Structures.

There will also be a change in the plan quantity for the following existing line items. These items will be measured and paid in accordance with the original contract line items as shown in the contract. These line items and quantities are associated with the developer reimbursable agreement, which NCDOT is not participating in the costs:

- LC #6: UNCLASSIFIED EXCAVATION
- LC #8: BORROW EXCAVATION
- LC #19: FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
- LC #20: FOUNDATION CONDITIONING GEOTEXTILE
- LC #22: 48" RC PIPE CULVERTS, CLASS IV
- LC #25: 15" RC PIPE CULVERTS, CLASS IV
- LC #26: 18" RC PIPE CULVERTS, CLASS IV
- LC #27: 24" RC PIPE CULVERTS, CLASS IV
- LC #30: 42" RC PIPE CULVERTS, CLASS IV
- LC #31: PIPE REMOVAL
- LC #32: FINE GRADING
- LC #39: ASPHALT CONC. BASE COURSE, TYPE B25.0C
- LC #40: ASPHALT CONC. INTERMEDIATE COURSE, TYPE I190.C
- LC #42: ASPHALT CONC. SURFACE COURSE, TYPE S9.5C
- LC #43: ASPHALT BINDER FOR PLANT MIX
- LC #55: MASONRY DRAINAGE STRUCTURES
- LC #56: MASONRY DRAINAGE STRUCTURES
- LC #57: MASONRY DRAINAGE STRUCTURES
- LC #61: FRAME W/ GRATE & HOOD, STD. 840.03, TYPE F
- LC #62: FRAME W/ GRATE & HOOD, STD. 840.03, TYPE G

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NCDOT INTRANET
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

- Municipal Agreements
- Reporting
- Agreement Search
- Agreements Prior to 10/1/2008

Search

Criteria

Agreement ID:
Division:
Status:
Agreement Type:
TIP #:
Created by:

County:
Agreement Entity:
WBS Element:

From **To**
 Created:
 Submitted:
 Approved:
 Sent To Entity:
 CO Received:
 Board Approved:
 Fully Executed:

Records: 10

[Export To Excel](#)

Agmt. ID	Parent ID	Type	County	Div	Status	Entity	TIP	WBS	Appr. By	Approved	PDF
9224		TIP	New Hanover	3	Closed	Tribute Investment & Development	U-4751	40191.3.2	cadragonette	3/5/2020	view
9208		TIP	New Hanover	3	Closed	New Hanover County	U-4751	36249.4208	cadragonette	2/13/2020	view
8926		TIP	New Hanover	3	Closed	Tri-City Butte, LLC	U-4751	40191.3.2	cadragonette	8/29/2019	view
7378		TIP	New Hanover	3	Closed	New Hanover County	U-4751	40191.3.2	mrawley	7/10/2017	view
7377		TIP	New Hanover	3	Void	New Hanover County	U-4751	40191.3.2			
7376		TIP	New Hanover	3	Closed	City of Wilmington	U-4751	40191.3.2	mrawley	7/7/2017	view
7346		TIP	New Hanover	3	Void	City of Wilmington	U-4751A	40191.3.3			
7345		TIP	New Hanover	3	Void	New Hanover County	U-4751				
2283	2282	Supplemental (TIP)	New Hanover	3	Closed	City of Wilmington	U-4751	40191	smarshall	3/31/2011	view
2282		TIP	New Hanover	3	Closed	City of Wilmington	U-4751	40191	smarshall	3/29/2011	view

COSTS AND FUNDING

5. The estimated cost of the Project is \$100,000. The Developer shall reimburse the Department 100% of the actual cost of all work performed by the Department, including administrative costs.

COSTS AND FUNDING

8. Based on the attached cost estimate prepared by the Department (Exhibit A), the Developer shall reimburse the Department in one payment based on the estimated cost of including the additional improvements to the Project. The Developer shall submit a check for \$14,790.10 to the Department's Division Engineer upon partial execution of the Agreement by the Developer. The \$14,790.10 payment shall be considered full and complete payment for the additional work the Department has added to its Project at the request of the Developer.

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Time Sheet: Data Entry View

Personnel Number Alex David Stewart Cost Ctr

Data Entry Period

Worklist

Receiver WBS element	Rec. order	Acti...	Func area	S	Name

Data Entry Area

LT	Receiver WBS element	Rec. ...	Acti...	A/A...	Func a...	S	Name	Name	Total
									105.00
									0.00

Data entry view | Release view | Variable view | Entry 1 of 2

ZTE1 - Create FR-1101 Document

Copy

Header Data

Document No. Keydate Cost Center

Job Details

Job	Workdate	Receiver WBS ele...	Fun...	Unit	Rec. order	Network	Acti...	SOP

Employee

Employee No.	Employee Name	SP	SU	Total	J1 A/A	J1

Equipment

Inventory No.	Equipment No.	Equipment Description	Total	J1 Ho

NORTH CAROLINA
NEW HANOVER COUNTY

DOT CONSTRUCTION AGREEMENT

DATE: _____





NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION

AND

WBS Elements _____

Statistical Order No: _____

THIS AGREEMENT is made and entered into on the last date executed below, by and between the North Carolina Department of Transportation, an agency of the State of North Carolina, hereinafter referred to as the "Department" and _____ hereinafter referred to as the "Developer".

Personnel Number	Alex David Stewart														
Data Entry Period	 														
Worklist															
Receiver WBS element	Rec. order	Acti...	Func area	S Name	Name	Total	SA								
Data Entry Area															
LT	Receiver WBS element	Rec. order	Acti...	A/A...	Func a...	S Name	Name	Total	SA	SU	MO	TU	WE	TH	FR
								105.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				9500	2640	U-4902D - CON - US 17 ...	PROJECT MANAGE...	0.00							



NORTH CAROLINA Department of Transportation



Lunch and Learn – Construction Revision Process

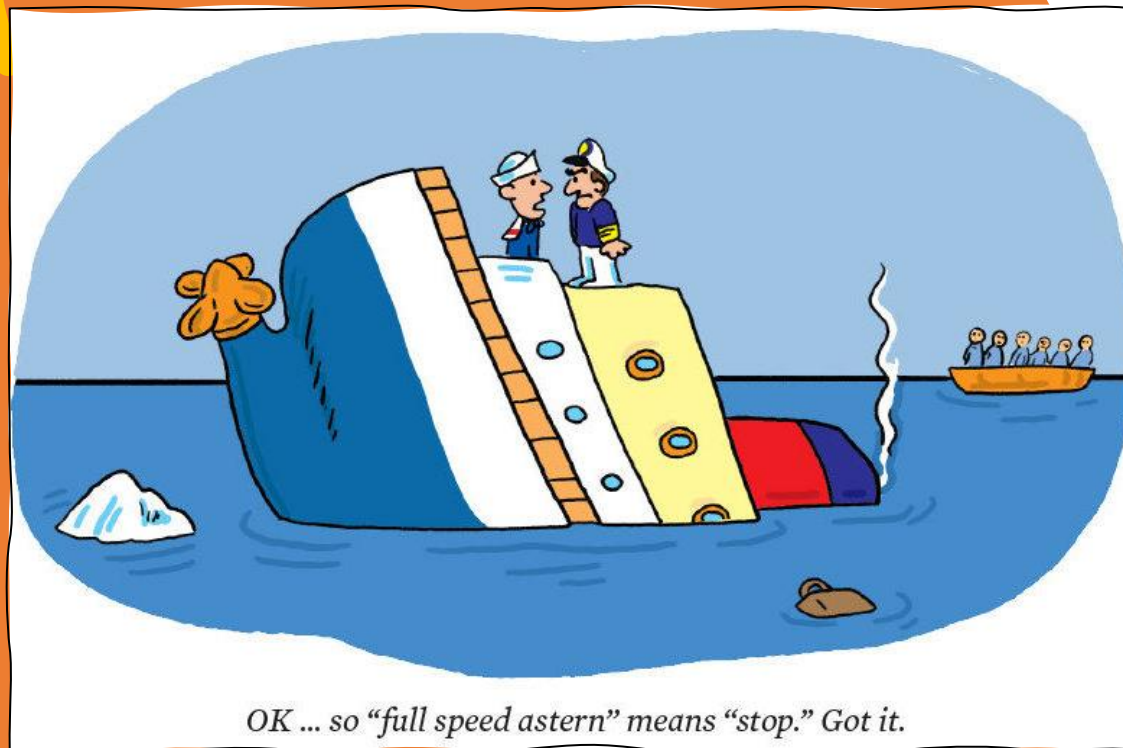
Alex D. Stewart, PE

Wilmington Resident Engineer, Division 3

February 22, 2022

adstewart2@ncdot.gov

Construction Revisions*



(*And what I learned the hard way!)



What does a Construction Revision look like?

SCENARIO #1

- Can come as a Value Engineering Proposal
- VM is responsible for sending to internal units for review
- If accepted, changes will be reflected in As-Builts
- Little to no PM involvement



19-341-05

May 6, 2020

NCDOT Division 1
Attn: Mr. Brooks Braswell
Resident Engineer
113 Airport Dr Suite 100
Edenton, NC 27932

RE: Contract – C204210 NC 46/ US158 from I-95 to St John Church Rd
Value Engineering Proposal – Sta. 85 Temporary Shoring Wall

Dear Mr. Braswell,

Drawing TMP-4 and TMP-13 shows a temporary shoring wall on phase one of the project. Since the work in this area with the new culvert and existing culvert is complete, the guardrail can be removed and the slopes can be re-graded during phase one to allow for the temporary shoring wall to be deleted. Thalle suggest removing this temporary shoring wall and replacing with a slope to ditch. Attached is a markup of the cross sections and current photo of the area.

Cost Analysis

1) Per contract documents			
a. Item 23 Temporary Shoring	652sf x \$46.00 =		(\$29,992.00)
from Sta. L 85+31.5, 5' RT to			
Sta. L 86+10.50, 5' RT			
2) Per Contractor Suggestion			
a. Costs to install slope and ditch	1 LS =		\$3,538.42
with traffic control.			

Per Section 104-12, Thalle proposes this value engineering option for this total net savings of \$26,481.38. After the 50/50 split, this grants the department a savings of \$13,240.69.

CERTIFICATION:

We, Thalle Construction Co, hereby certify that this proposal has been reviewed for validity and reasonableness. To the best of our knowledge, we believe the amount of this proposal is reasonable and reflects the additional work and cost for this change. These data, furnished under the Value Engineering Proposal section 104-12 of the 2018 NCDOT Standard Specifications and shall not be disclosed outside the department or duplicated, used, or disclosed in whole or in part, for any purpose other than to evaluate a value engineering change proposal submitted under the section. This restriction does not limit the Departments right to use information contained in these data if it has been obtained or is otherwise available from the contractor or from another source without limitations.

Please contact us for any questions or comments.

Best Regards,

Gregory Taunton
Project Engineer

CENTRAL LET Construction Revision

VS.

DIVISION LET Construction Revision

DIVISION LET CONSTRUCTION REVISIONS

- Division Managed / Division Let
 - Does not come through Raleigh
 - Division Proposals Engineer must post revisions

ALL

- Change design
- Must be reviewed and approved by appropriate teams
- Revisions must be placed in plan set of record

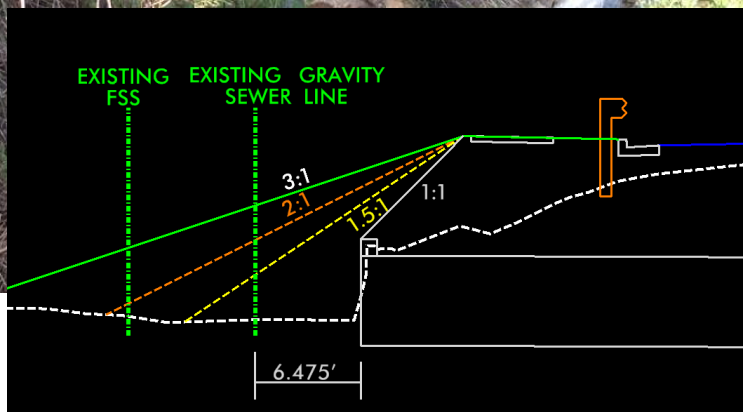
CENTRAL LET CONSTRUCTION REVISIONS

2 kinds:

- Centrally Managed / Centrally Let
- Division Managed / Centrally Let

Centrally Let Construction Revisions
**MUST BE SENT TO RECORDS AND
DOCUMENTS MANAGEMENT**
in order to be placed in the plan
set of record.

Example of a Central Construction Revision



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

MEMO TO:

Kevin G. Bowen, PE
Joseph E. Hummer, PhD, PE
Stephen R. Morgan, PE
Tatia White, PE
Paul Atkinson, PE

Boyd Tharrington, PE
J. Dale Burton, PE, PLS
Corey McLamb, PE
Matt Lauffer, PE
Amity Little

FROM:

Nicole M. Hackler, PE
Senior Project Manager, Project Management Unit

Digitally signed by
Nicole M. Hackler, PE
DN: cn=Nicole M. Hackler, o=North Carolina

DATE:

01/08/2021

SUBJECT:

Project: 34552.3.5 (R-3825B) Johnston County
NC 42 from East of SR 1902 (Glen Laurel Road) to SR 1003 (Buffalo Road) –
Widen to Multilanes

Construction Revision for eSigned Projects:

This is to advise that a Construction Revision has been made to the plans as a result of coordination with Ryan Beamer, Division 4 Resident Engineer. This coordination began on October 9, 2020. The following plan sheets have been modified:

ROADWAY PLAN SHEETS: PSH 1-A, PSH 2A-3, PSH 2A-6, PSH 2C-19 (new), PSH 3G-1, PSH 18, PSH 21, PSH 22

EROSION CONTROL PLAN SHEETS: EC-18, EC-21, EC-22, EC-38, EC-41, EC-42

UTILITY CONSTRUCTION PLAN SHEET: UC-21QA

PAVEMENT MARKING PLAN SHEET: PMP-18

CROSS SECTIONS: X-87, X-88, X-111

Records and Documents Management will upload the plans to the project construction team site and distribute this letter with hard copies attached.

All plans are also available electronically on Sharepoint. Both PDFs and ZIP files with the corresponding Microstation design files can be found at the following location:
[R-3825B Construction Revision 1-8-2021](#)



BEWARE OF PITFALLS...

- Posting Construction Revisions takes time (and your contractor may not be able to wait)
- Check to make sure your Construction Revision gets uploaded
- Once uploaded, check for version control
- Construction Revisions can be expensive!



Connect NCDOT
BUSINESS PARTNER RESOURCES

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

C204108 - R-3825B: NC 42 - FROM EAST OF SR 1902 TO SR 1003 · Plans

Plans/Contracts

Construction Projects for Division 04 ▶ C204108 - R-3825B: NC 42 - FROM EAST OF SR 1902 TO SR 1003

Construction Home
Contract Administration Dashboard
Project Site
→ Submittal Dropoff
→ Materials Received Report (MRR)
→ Project Contractors
→ Project Contacts
→ Project Calendar
→ Project Info
Preconstruction site R-3825B
Pay Records - RESTRICTED

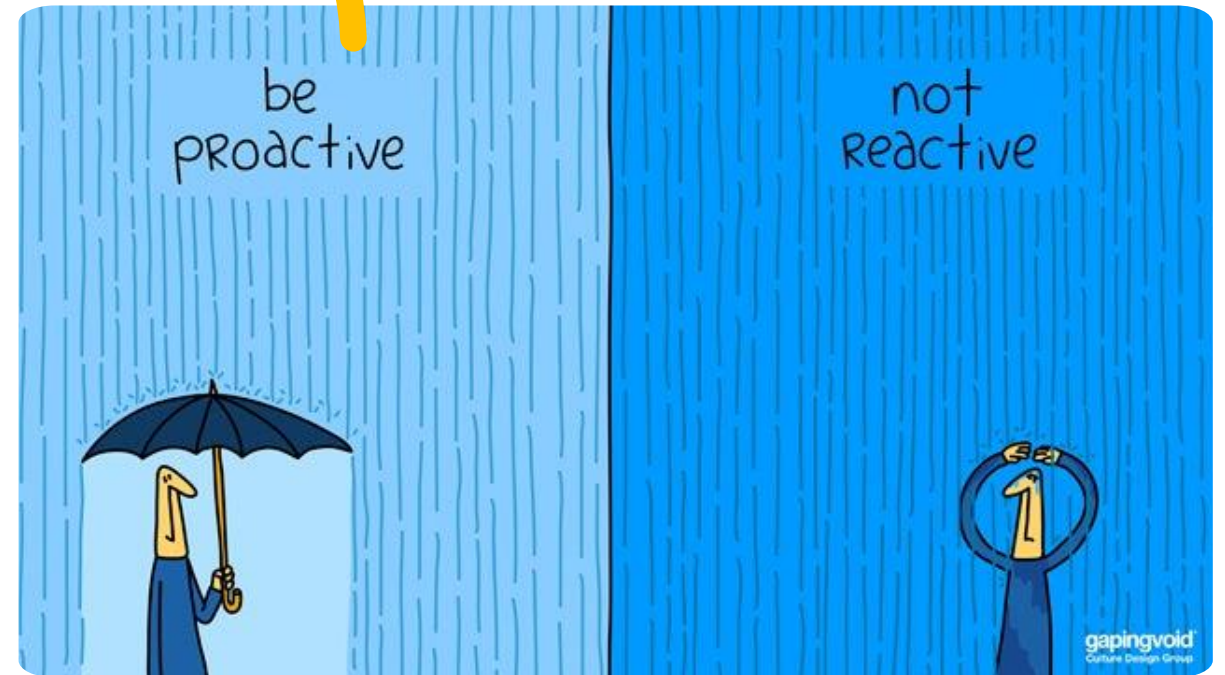
By Type All Documents Find a file

Name	Modified	Modified By
Plan Set Type : (7)		
FEMA Certifications	December 29, 2017	System Account
File_Plan_Report_Plans_2020-06-12T081043	May 12, 2020	Malcolm J. Bell
Individual Sheets	August 18, 2020	Dixon, Mitchell J
XXXX NOT the Plan Set of Record!	December 29, 2017	System Account
Roadway	December 29, 2017	System Account
Structures	December 29, 2017	System Account
Voided Sheets	December 29, 2017	System Account



Take-Aways

- ❑ Division Construction staff can do a lot of work themselves, but Project Managers are here to offer technical expertise and support.
- ❑ Be proactive. If your Division thinks they might like assistance with construction revisions, make it happen.
 - Set up meetings – monthly / bi-monthly / as needed
 - Assemble a small team of experts
 - Set up a cost-plus contract ahead of time
- ❑ Check your work.
- ❑ Learn from your mistakes.
- ❑ Keep the finish line in sight.





Construction Revisions

A Design Perspective

Lunch and Learn
February 22, 2022
Tatia L. White



Topics of Discussion

➤ **Plan Sheets**

➤ **Quantities**

➤ **Content Management**



Certification of Final Drawings

21 NCAC 56.1103(a)

- 1) Reproducible document (PDF)
- 2) Seal
- 3) Signature
- 4) Date
- 5) All Sheets Must Be Certified
- 6) Plans Produced by Firms
 - Name, Address and License Number of Firm

Weston & SampsonSM
WSE of North Carolina, PC
598 East Chatham Street Suite 137 Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
NC License: C-4847

RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
8307 University Executive Park Drive, Suite 260
Charlotte, North Carolina 28262
704-549-4260 Tel. 704-549-4277 Fax.
www.ramevkemp.com
NC License No. C-0910

Stantec
Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

CONTRACT: 203751 TIP NO: B-5121/B-5317

STRUCTURES

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

5/21/0-5317

Certification of Final Drawings – Revision

21 NCAC 56.1103(a)

(7) Revisions

- **Description of Revision**
- **Date**
- **New Responsible Engineer**

Construction Revisions

➤ Description of Revision

➤ Construction revision notes

- Tells the story
- Clouds, Triangles, Symbols?
- Yes to denote the location
- Still needs an accompanying revision note

➤ Date

- Date of the revision note is in a similar timeframe of date of seal

The diagram illustrates the relationship between revision notes and a professional seal. It features two overlapping boxes representing revision notes and a central professional seal. Annotations include a yellow circle around the date '05/14/21' in both notes, a red cloud-like shape connecting the two notes, and green checkmarks indicating approval. A yellow circle highlights the date '5/13/2021' in the seal's signature line.

05/14/21 - C **Revision: Added**
retain **Change from**
-Y7 **ALT**

05/14/21 - C **Revision: Added**
retaining wa **Change from**
-Y7 - Statio **- ALT**

ROADWAY DESIGN
ENGINEER
NORTH CAROLINA
PROFESSIONAL
SEAL
025878
ENGINEER
SHERRI E. CALHOUN

DocuSigned by:
Sherri Calhoun 5/13/2021
4121927AD5764C3...

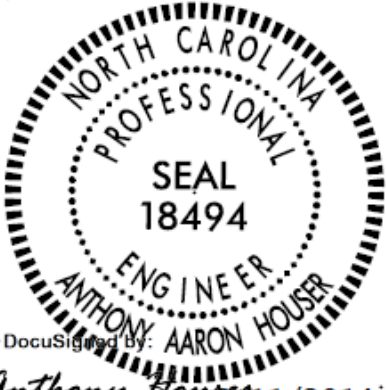



Construction Revisions

- New Responsible Engineer

- Seal, Signature and Date for Revision Engineer

- 21 NCAC 56.1103(c) - Exceptions to Certification

(7) Not a Certified Document
Original Document but
Revisions - This document
issued and sealed by
(license number), on
document is only certified as to the
revisions.

<p>ROADWAY DESIGN ENGINEER</p>  <p>DocuSigned by: <i>Anthony Houser</i> 8/11/2014</p>	<p>PAVEMENT DESIGN ENGINEER</p>  <p>DocuSigned by: <i>Clark S. Morrison</i> 5/21/2018</p>	<p>ROADWAY DESIGN ENGINEER</p> <p>NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.</p> <p>THIS DOCUMENT ORIGINALLY SEALED BY : Houser</p>	<p>PAVEMENT DESIGN ENGINEER</p>  <p>DocuSigned by: <i>Clark S. Morrison</i> 5/21/2018</p>
		 <p>DocuSigned by: <i>Bryan C. Key</i> 5/21/2018</p>	<p>5/21/2018</p>

Content Management

- **Why is it important?**
 - Documents History of Design
 - Easy Retrieval
- **What is the system?**
 - 6 Digit Code (ex. 100_001)
 - Use Same Code for Revised Sheets
- **Who is responsible for maintenance?**
 - Records and Documents Management (Central Let)
 - Division Proposals Engineer (Division Let)

- 100 Roadway Plans
- 150 Right of Way Plans
- 200 Transportation Management Plans

- 410 Structure Plans - Culverts
- 420 Structure Plans - Walls
- 500 Roadway Subsurface Plans
- 510 Structure Subsurface Plans
- 520 Geoenvironmental

KEY POINTS

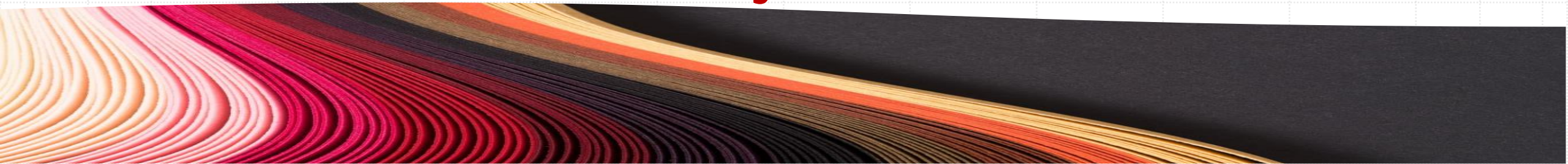
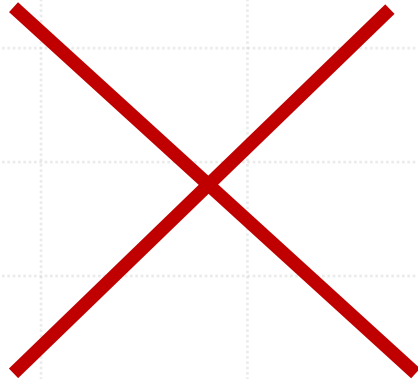
Accurate/Coordinated Design

Plan Sheets Meet Administrative Code

Provide Accurate Quantity Adjustments

Content Management

Easy to Follow





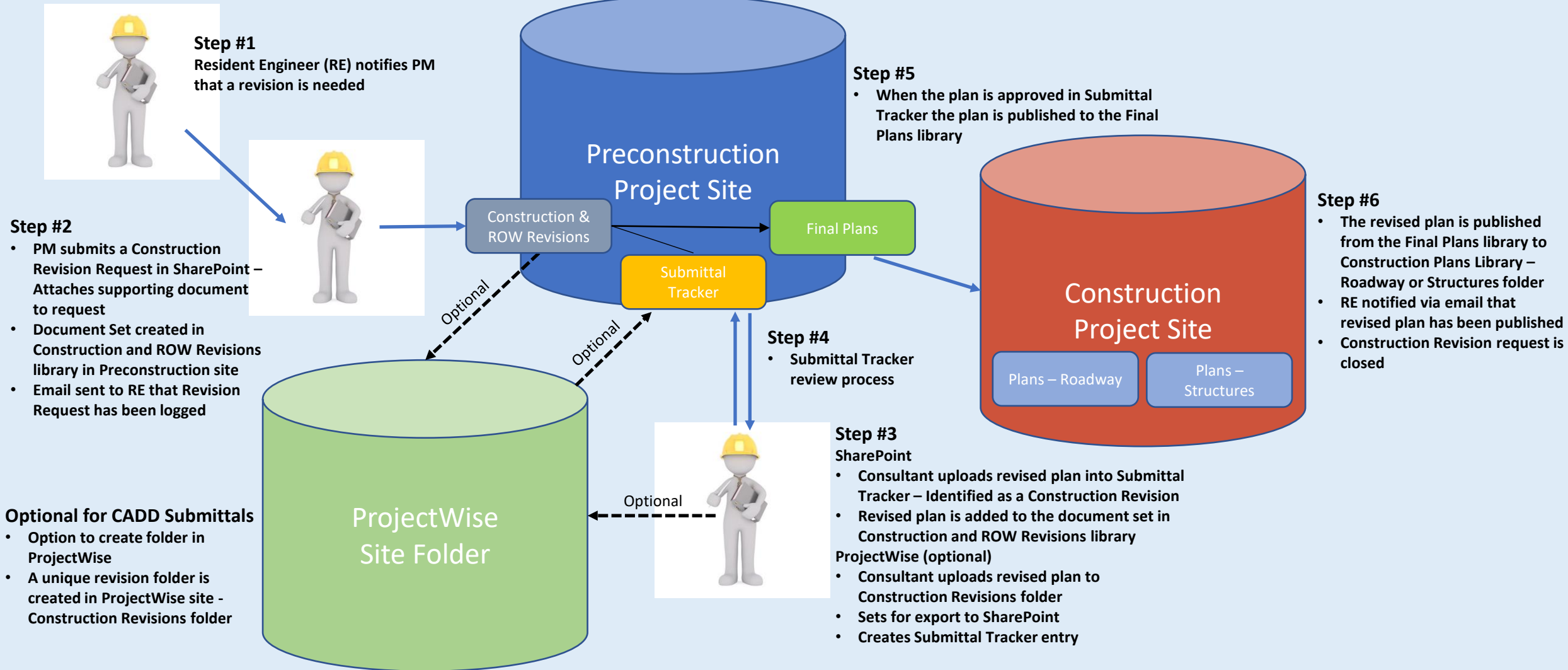
Thank You for Your Time!



Construction Revisions – Post Let

Process Flow

Construction Revisions – Post Let



Construction Revisions – Post Let

- Ability for Project Managers, Resident Engineers (RE) and ROW Agents to track revisions for a project
- Available from [Preconstruction Dashboard](#) and Left Navigation
- **Request** (add) a new Revision
- **Manage** (edit) an existing Revision
- **Cancel** a Revision Request
- **Hyperlink to Revision** document set in Construction and ROW Revisions library

The screenshot displays the 'PRECONSTRUCTION DASHBOARD' for project '17BP.1.R.74'. The dashboard includes a navigation menu with options like 'Submittal Process', 'Project Commitments', 'Project Structures', 'Encroachments', 'Construction and ROW Revisions', and 'Avoidance and Minimization'. Below the menu, a table titled 'Construction & Right of Way Revisions for 17BP.1.R.74' is shown. The table has columns for 'Rev #', 'Revision Description', 'Contract', 'Plan Set', 'Discipline(s)', 'Revision Document Set', and 'Status'. One revision is listed: R-001, Storm water drainage, C204134, 230 Erosion Control Plans, Erosion Control, Revision, In Progress. A pagination control shows '1' and an 'Add Revision' button is located at the bottom left.

Rev #	Revision Description	Contract	Plan Set	Discipline(s)	Revision Document Set	Status
R-001	Storm water drainage	C204134	230 Erosion Control Plans	Erosion Control	Revision	In Progress

Construction Revisions – Post Let

Construction & Right of Way Revisions Request form for 17BP.1.R.74

Complete the following form to initiate a Construction and/or Right of Way revision specific Plan Set(s). When Submitted, a corresponding document set will be created in the Construction Revisions library, located under the Post Let section, in the Preconstruction site. If the consulting firm will be using ProjectWise to submit the revised plan(s), please select the Create PW Folder checkbox. A nightly script will be run to create folders specific to each Plan Set specified.

TIP

WBS: 17BP.1.R.74

Project Description: Bridge Preservation - Test Project for ATLAS

Contract Number: C204134 ✓

Revision Number: R-001 ✓

Revision Description: Storm water drainage ✓

Revision Type: Construction Revision ✓

Revision Reason: Adjustment to Proposed Design ✓

Plan Set: 230 Erosion Control Plans ✓

Discipline(s): Archaeology and Architecture, Congestion Management, Erosion Control, Geoenvironmental ✓

Requestor: Resident Engineer ✓

Requestor Name: Brian Oliphant Anitha Moota (Name of individual requesting this revision)

Requestor Email: bwoliphant@ncdot.gov; ext-amoota@ncdot.gov (Requestor's email address)

Create PW Folder:

Attach the supporting document (e.g. Letter, Email) initiating this Construction and/or Right of Way Revision Request (Optional):

Test Document 2.pdf [Browse]

Save Cancel

Request New Revision Form

- Associate **Construction Revision** with the Construction Contract
- **Revision Number** is manually assigned
- **Revision Type** specific to Construction Revision, Right of Way Revision, or both
- **Plan Set** selection is specific to the plan sheet(s) being revised
- **Requestor** specific to Resident Engineer or Right of Way Agent
- **Requestor Name and Email** information is based on the Requestor and Project Contacts defined in Construction site
- **Optional: Create Revision folder** in ProjectWise for CADD submittals
- **Required: Attach document** initiating the Revision request

Construction Revisions – Post Let

The screenshot displays a web application interface for project management. On the left, a navigation sidebar includes sections for 'Preconstruction Home', 'Precon Dashboard', and 'Project Site', with sub-links like 'Change Report', 'Recently Modified', and 'Key Documents'. Below these are 'Project Management' and 'Precon Tools' sections. A 'NOTICE' banner is visible. The main content area is titled '17BP.1.R.74 Construction and ROW Revisions' and features a document management interface with options for 'New', 'Upload', and 'Sync'. A table lists documents with columns for 'Name', 'REV#', 'REV Topic', 'StrRef', and 'Affected Plan Sets'. The document '2022-02-03_230 Erosion Control Plans_R-001' is highlighted with a blue box. A blue circle highlights the 'Post LET' menu item in the sidebar, with an arrow pointing to the highlighted document in the table.

17BP.1.R.74 › 17BP.1.R.74
Bridge Preservation - Test Project for ATLAS
Northampton

Division 01 Preconstruction › 17BP.1.R.74

Preconstruction Home
Precon Dashboard
Project Site

Change Report
Recently Modified
Key Documents
Project Contacts
Email Project Contacts
Project Info 17BP.1.R.74
Project Structures

Project Management
Project Schedule

Precon Tools

NOTICE: finalization provisions For any cl the Divisio

17BP.1.R.74 › Construction and ROW Revisions

Division 01 Preconstruction › 17BP.1.R.74

Preconstruction Home
Precon Dashboard
Project Site

Change Report
Recently Modified

Collaboration

LET Preparation

Post LET

- Construction and ROW Revisions (2)

ATLAS Tools

+ New Upload Sync More

All Documents By Topic ... Find a file




Name	REV#	REV Topic	StrRef	Affected Plan Sets
2022-02-08_520 Geoenvironmental_R-002	...			
2022-02-03_230 Erosion Control Plans_R-001	...			






- **Construction and ROW Revisions** library under Post Let
- Revised plan sheets will be stored in documents sets specific to the revision request
- **Optional:** A corresponding folder will also exist in ProjectWise for publishing/export purposes

Construction Revisions – Post Let

Sample Email for Construction Revision Request

Construction and ROW Revision Request for Contract

 Preconstruction <SharePointAdminT@ncdot.gov>
To  Oliphant, Brian W;  Moota (CAI), Anitha

  Reply  Reply All  Forward 

Thu 2/3/2022 8:13 AM

A Construction and/or Right of Way Revision has been submitted for Contract Number C204134. Click [here](#) to view the request. Below are the details:

Revision Number/Description: R-001
Plan Set: 230 Erosion Control Plans

A separate email notification will be received when the revised plan has been approved.

Thanks



NORTH CAROLINA
Department of Transportation



Value Engineering Proposals

Benard Chola, PE

February 22, 2022

Value Engineering Proposals

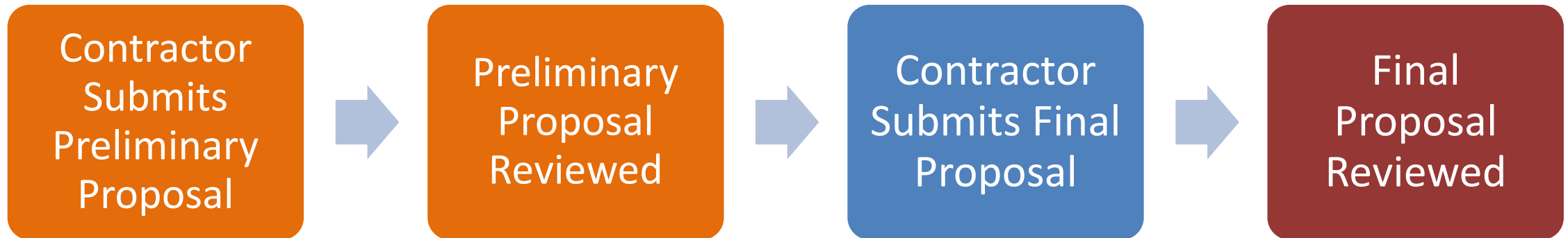


VE Study



VE Proposal

VEP Process



VEP & Construction Revision



VEP Updates

Submittal Tracker

3 Preconstruction ▶ B-4448

Sub# *

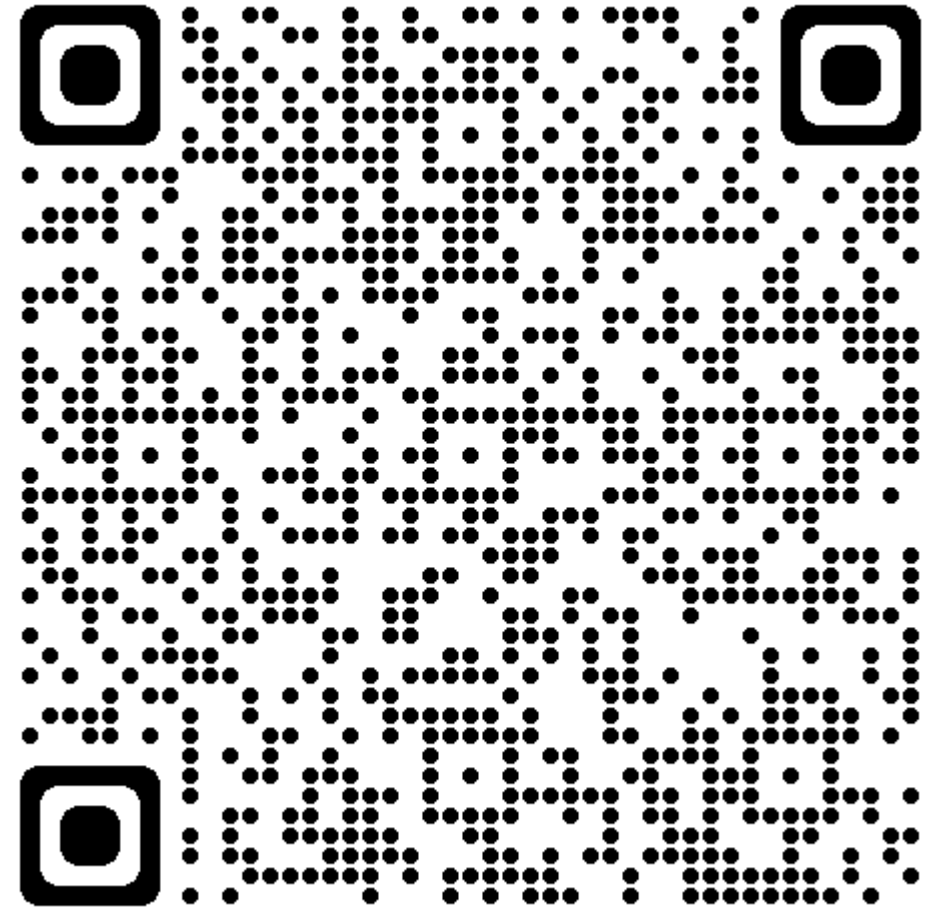
Assign a submittal number. If this is a resubmission for a prior submittal, use the prior submittal number.

Value Engineering Proposal					Resident Engineer		Project Manager		Technical Review							
Number	Proposal Type	Date Received	Contract Number	TIP Number	Name	Confirm Date	Name	Date Notified	Unit	Name	Date Sent	Due Date	Date Rev'd	Recommendation Comments	Decision	What is needed if "Need More Information"
21-003	Final	11/13/20	C204163	I-3819B, U-6039	Matthew Evans	11/13/20	Theresa Ellerby	11/13/20	Roadway						Select	
VE Proposal Description The contractor for the above referenced project, The LANE Construction Corporation, submitted a value engineering proposal (VEP) to eliminate continuous weekend lane closures; providing a minimum 6" overlay over a minimum 17" of existing asphalt pavement as determined by GPR data and verification cores. Work will be performed during nightly lane closures or through the current plan MOT phased construction. The benefits of the proposed design include (1) meet the required design requirements, (2) decrease impact to traffic and (3) construction cost savings. According to the final VEP, the proposed changes will result in \$152,708.87 in construction cost savings.									Structures						Select	
									Geotech						Select	
									Hdraulics						Select	
									Pavement	Josh Holland	11/13/20	11/27/20	11/23/20	The cores indicate that the asphalt depths range from 9" to +21". Matthew Evans, Division 12 Resident Engineer, confirmed that concrete is present below the asphalt. There are two areas of concern, southbound station 345+60 (9" asphalt on concrete) and northbound station 245+73 (13.25" asphalt on concrete). Since the proposal is a 6" mill and replace, I suggested to Matthew that those areas may require removal of all of the asphalt on top of the concrete and he was in agreement with me. With that in mind, the VEP #3 would be acceptable.	Accepted	

- ction Home
- hboard
- report
- Modified
- ments
- ontacts
- ject Contacts
- fo B-4448
- ructures

Contact Information

Benard Chola, PE
Value Management Program Engineer
919 707 6688 office
bchola@ncdot.gov



Scan Me