



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

October 17, 2019

MEMORANDUM TO: Mr. Pat Ivey, P.E.
Division 9 Engineer

FROM: Philip S. Harris, III, P.E., Manager *Carla Dagnino*
for Environmental Analysis Unit

SUBJECT: Forsyth County, Winston Salem Northern Beltway, Section U-2579B,
Modification and Renewal, WBS No. 34839.1.8

Attached are the U.S. Army Corps of Engineers and N.C. Division of Water Resources Permits. All environmental permits have been received for the renewal and modification (for Martin Mill Creek). On this permit.

A copy of this permit package is posted on the NCDOT website at:
<https://xfer.services.ncdot.gov/pdea/PermIssued/>

cc: w/o attachment (see website for attachments)

Mr. Ron Davenport, P.E. Contracts Management
Ms. Amy Euliss, Division 9 Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Ms. Laura Sutton, P.E., Roadway Design
Mr. Byron Sanders, Jr., P.E., Utilities Unit
Mr. Stephen Morgan, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Lamar Sylvester, P.E., State Construction Engineer
Ms. Cheterra Sheff, Single Audit Compliance
Ms. Beth Harmon, Division of Mitigation Services
Mr. Byron Moore, PE, Monitoring and Stewardship



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

October 17, 2019

Regulatory Division

Action ID: SAW-2008-03183

Subject: NC DOT/U 2579B, Winston-Salem Northern Beltway, Individual Permit issued June 17, 2014, After-the-Fact Modification and Extension of Time

Mr. Philip S. Harris, III, P.E., C.P.M.
Natural Environment Section Head
North Carolina Department of Transportation
Division of Highways
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Reference the Department of the Army (DA) permit issued on June 17, 2014, to the North Carolina Department of Transportation (NC DOT) for impacts associated with the new location project identified as U 2579B. The 4.06 mile, three-lane divided facility would extend from US 158 to I 40B/US 421 near Winston Salem, Forsyth County, North Carolina. Coordinates (in decimal degrees) for the site are 36.1178° N, -80.1380° W. The project occurs in the Yadkin River Basin (8-digit Cataloging Unit 03040101). Also reference U.S. Army Corps of Engineers (Corps') modifications dated July 2, 2014 and February 21, 2019. The current standard permit expires on December 31, 2019.

On September 18, 2019, the Corps received NC DOT's request for an after-the-fact modification and a three (3) year extension to the existing standard permit. The after-the-fact modification was constructed in January 2019 (see enclosed email from NC DOT to Corps), when Martin Mill Creek re-routed/migrated towards a permitted bridge fill for U 2579B. Martin Mill Creek was re-routed/re-constructed past the bridge, and the newly located stream banks were lined in riprap. One hundred and forty four (144) linear feet of Martin Mill Creek was permanently impacted.

The stream relocation also required 40 linear feet of temporary stream impacts. See enclosed drawing, entitled: "U-2579B, MARTIN MILL CREEK REALIGNMENT," dated January 31, 2019. With this modification, the U 2579B project will now have 10,744 linear feet of permanent stream impacts and 1,788 linear feet of temporary stream impacts (see enclosed Wetland and Stream Impact Summary Sheets 62 – 64 of 64). The total wetland impacts remain the same at 1.96 acres.

The Corps is in receipt of the September 13, 2019, letter from the North Carolina, Division of Mitigation Services, to provide NC DOT sufficient compensatory mitigation for 144 linear feet of warm water stream channel in the Yadkin River basin (CU 03040101). Per this after-the-fact Martin Mill Creek realignment, the Corps will require an additional 288 linear feet of compensatory mitigation for the U 2579B project. Please see the enclosed Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

We have determined that the proposed changes/modifications to the construction plans including temporary/permanent impacts to jurisdictional waters are minor. Therefore, a supplemental public notice is not necessary. The permit is hereby modified to include the after-the-fact impacts to Martin Mill Creek, (144 linear feet of permanent stream impacts and 40 linear feet of temporary stream impacts, now labeled Permit Site 8A), near Permit Site 8. Furthermore, the **expiration date** for the standard permit is now **December 31, 2022**.

All other conditions of the permit remain in effect as written. Should you have any questions, contact Ms. Nicholle Braspennickx, Charlotte Regulatory Office, via email at Nicholle.M.Braspennickx@usace.army.mil or by telephone at (704) 510-0162.

FOR THE COMMANDER



Monte Matthews
Lead Project Manager
Wilmington District

Enclosures

Electronic Copy Furnished w/ enclosures:

Mr. Dave Wanucha
Transportation Permitting Unit
Division of Water Resources – NCDENR
450 West Hanes Mill Road, Suite 300
Winston-Salem, North Carolina 27105

Ms. Amy Euliss
Division Environmental Officer, Division 9
North Carolina Department of Transportation
375 Silas Creek Parkway
Winston-Salem, North Carolina 27127

Ms. Claire Ellwanger
U.S. Fish and Wildlife Service
Asheville Ecological Service Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

Amanetta Somerville
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street SW.
Atlanta, Georgia 30303

Ms. Marla Chambers
Division of Inland Fisheries
NC WRC Western Region
206 Charter Street
Albemarle, North Carolina 28001

Compensatory Mitigation Responsibility Transfer Form

Permittee: North Carolina Department of Transportation, Philip Harris, III, P.E.
Project Name: NC DOT/U 2579B, Winston-Salem Northern Beltway

Action ID: SAW No. 2008-03183
County: Forsyth

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

Instructions to Sponsor: The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements: Note the following is strictly for the Individual Permit Modification dated October 17, 2019, to include the after-the-fact stream realignment of Martin Mill Creek (Permit Site 8A)

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03040101, Yadkin River Basin		
Stream Impacts (linear feet)			Wetland Impacts (acres)		
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian
144 linear feet					
				1.96 acres	

DMS confirmed no additional mitigation for wetlands on this permit mod.

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:			8-digit HUC and Basin: 03040101, Yadkin River Basin			
Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
288 linear feet						
				3.92 acres		

Mitigation Site Debited: _____

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDMS

Name of Sponsor's Authorized Representative: <u>Beth Harmon</u>	
<u>Beth Harmon</u> Signature of Sponsor's Authorized Representative	<u>10/17/2019</u> Date of Signature

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions: A letter from the North Carolina Division of Mitigation (DMS) services, confirming they are willing and able to accept the applicant's compensatory mitigation responsibility, dated 9/13/2019 was included with the preconstruction notification. NC DOT has already obtained 18,161 linear feet of credits from the DMS for the U 2579B project. This form is for the after-the-fact realignment of Martin Mill Creek

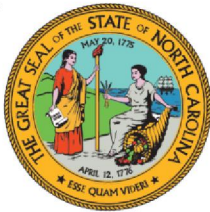
This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. **Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Nicholle Braspennickx
USACE Field Office: Charlotte Regulatory Office
 US Army Corps of Engineers
 8430 University Executive Park Drive, Suite 615
 Charlotte, North Carolina 28262
Email: Nicholle.M.Braspennickx.usace.army.mil

Nicholle Braspennickx
 USACE Project Manager Signature

10/17/2019
 Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

LINDA CULPEPPER
Director

October 7, 2019

Mr. Philip S. Harris, III, P.E., CPM
NCDOT
Environmental Analysis Unit
1598 MSC
Raleigh, NC 27699-1598

Subject: Modification and Renewal to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for improvements to Winston Salem Northern Beltway Eastern Section from US 158 to I-40 Bus/US 421 in Forsyth County, WBS Element No. 34839.2.10, TIP Project No. U-2579B; NCDWR Project No. 20140090 v6.

Dear Mr. Harris:

Attached hereto is a modification and renewal of Certification No. 3987 issued to The North Carolina Department of Transportation (NCDOT) originally dated April 11, 2014 and modified (with revisions) dated July 28, 2014 (v2); subsequently field modified on June 11, 2015 (v3); modified via a field modification on August 8, 2017 (v4); and, modified again on December 17, 2018 (v5).

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

DocuSigned by:

Amy Chapman

9C9886312DCD474...

Linda Culpepper, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Nicholle Braspenickx, US Army Corps of Engineers, Charlotte Field Office
Colin Mellor, NC Department of Transportation
Carla Dagnino, NC Department of Transportation
Amanetta Somerville, US Environmental Protection Agency
Claire Ellwanger, US Fish and Wildlife Service
Marla Chambers, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
File Copy



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

Modification and Renewal to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact an additional 144 linear feet (permanently) and 40 linear feet (temporarily) of jurisdictional streams Forsyth County. The project shall be constructed pursuant to the modification dated received September 18, 2019. The authorized impacts are as described below:

Stream Impacts in the Yadkin Pee Dee River Basin

Site	Permanent Fill in Perennial Stream (linear ft)		Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Additional Mitigation (linear ft)
	Stream Relocation	Culvert	Fill		
8A, New Site	144	-	40	184	144
Totals (for this modification)	144	-	40	184	144

Total Stream Impact: 184 linear feet

The application provides adequate assurance that the discharge of fill material into the waters of the Yadkin Pee Dee River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your modification and renewal application dated received September 18, 2019. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 11, 2014 and modified (with revisions) dated July 28, 2014; and, including subsequent field modifications on June 11, 2015 (v3); and, on August 8, 2017 (v4); and, again on December 17, 2018 (v5) still apply except where superseded by this certification.

Should your project change, you are required to notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 300 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Condition(s) of Certification:

1. Compensatory mitigation for 144 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Division of Mitigation Service (DMS), and that the DMS has agreed to implement the mitigation for the project. The DMS has indicated in a letter dated September 13, 2019 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the DMS Mitigation Banking Instrument signed July 28, 2010.
2. This approval is only valid for the purpose and design that you submitted in your request for modification and renewal dated September 18, 2019. This Certification shall expire upon the expiration of the 404 permit.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 7th day of October 2019

DIVISION OF WATER RESOURCES

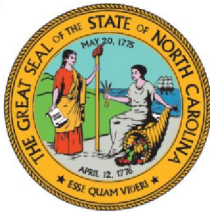
DocuSigned by:

Amy Chapman

9C9886312DCD474...

Linda Culpepper, Director

WQC No. 3987



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

LINDA CULPEPPER
Director

NCDWR Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____
Date _____



From: Euliss, Amy [mailto:aeuliss@ncdot.gov]
Sent: Thursday, January 31, 2019 9:08 AM
To: Lastinger, James C CIV USARMY CESAW (US) <James.C.Lastinger@usace.army.mil>; Wanucha, Dave <dave.wanucha@ncdenr.gov>
Cc: Kiser, Marcus K <mkkiser@ncdot.gov>; Puckett, Lester L <lpuckett@ncdot.gov>; Wyrick, Scott D <sdwyrick@ncdot.gov>; Nifong, Johnny R <jnifong@ncdot.gov>

Subject: [Non-DoD Source] U2579B bank stabilization issues

James and Dave,

As you know, its been a very wet fall and winter. We have had multiple large events (100+ year storms) in the area. We have a few locations where streams are undermining or will undermine our fill slopes and need to be addressed for long term stability. One area is downstream of the culvert on Smith Creek. There are a few locations along Smith Creek that we are going to investigate further to determine the appropriate method. The fill in this area hasn't been installed yet, so we have a little more time to come up with a plan. The other area is permit site 8. Martin Mill Creek has migrated significantly since the project started and is now undermining the fill slope for the bridge. I have included a plan sheet that shows the original location of the stream and the new locations, and a couple pictures. In the first picture you can see the amount of sand that has been deposited forcing the stream to migrate away from it and toward our slope. I outlined the new channel location. In the second picture, you can see rip rap in the distance (circled in red). This is where the stream has migrated to and is undermining the fill slope. The plan here would be to install a channel with the banks lined with rip rap through the sand and connect with the stream on the other side, and fill the old channel.

I would like to know if you are ok with us proceeding with this repair and submitting a permit modification package for all sites at the same time. Let me know your thoughts.

Amy Euliss

Division 9 Environmental Officer

North Carolina Department of Transportation

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in wetlands (ac)	Permanent SW impacts (ac)	Temporary SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	28+00 -Y-	ROAD FILL	0.03		<0.01	0.02		0.02		142		
2	16+00 -Y1 RPD-	ROAD FILL - INTERMITTENT						0.01		109		
		ROAD FILL - PERENNIAL						0.02		208		
		STREAMBANK STABILIZATION						<0.01	<0.01	10	37	
3	21+56-25+22 -Y1-	2 @ 7' x 6' RCBC						0.06	<0.01	438	33	
3A	17+36-21+53 -Y1-	DETOUR - ROAD FILL							0.08		545	
3B	20+55-21+32 -Y1-	DETOUR - ROAD FILL							0.03		194	
4	501+51-503+21 -L-	ROAD FILL						0.03	<0.01	493	18	
		STREAMBANK STABILIZATION						<0.01	<0.01	9	31	
5	503+85-507+80 -L-	ROAD FILL						0.05	<0.01	740	22	
5A	507+39-509+64 -L-	ROAD FILL						0.01		306		
6	523+00 -L-	ROAD FILL	0.03			<0.01		0.02	<0.01	312	42	
7	527+00 -L-	ROAD FILL	0.52			0.01						
		ROAD FILL - POND						0.59				
8	559-75 -L-	2 @ 10' x 6' RCBC						0.06	<0.01	442	53	
		STREAMBANK STABILIZATION						<0.01	<0.01	58	44	
9	560+75 -L-	ROAD FILL	0.03			0.01						
10	560+50-568+74 -L-	ROAD FILL	0.01					0.07	<0.01	783	22	
10A	566+84-572+75 -L-	ROAD FILL						0.05		684		
11	615+00 -L-	3 @ 10' x 9' RCBC						0.43	0.02	808	57	
11A	19+76-21+44 -Y4RPBD-	CHANNEL CHANGE						0.08	0.01	223	41	
12	15+84-18+86 -Y4RPBD-	CHANNEL CHANGE						0.01	0.02	88	205	
TOTALS:			0.62	0.00	< 0.01	0.05		1.53	0.19	5,853	1,344	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in wetlands (ac)	Permanent SW impacts (ac)	Temporary SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
13	20+00-21+40 -Y4RPBD-	ROAD FILL	0.33									
14	629+95-635+90 -L-	ROAD FILL	0.04					0.05		688		
15	636+32-641+55 -L-	ROAD FILL	0.18					0.04		332		
		ROAD FILL-POND						2.38				
15A	644+00-645+00 -L-	ROAD FILL						<0.01		108		
16	643+56-644+61 -L-	ROAD FILL						<0.01		104		
		ROAD FILL-POND						0.16				
17	663+65-667+00 -L-	ROAD FILL	0.09			<0.01		0.06		928		
18	667+15 -L-	3 @ 12' x 10' RCBC						0.06	0.02	377	67	
		STREAMBANK STABILIZATION						0.02	0.01	80	59	
19	668+50 -L-	ROAD FILL	0.47			0.01						
20	687+80-691+59 -L-	ROAD FILL						0.03		163		
		ROAD FILL-POND						0.85				
21	22+50 -Y1-	ROAD FILL	0.02									
22	40+50 -Y4-	OUTLET PAD	0.01									
23	45+65 -Y4-	CULVERT EXTENSION						0.06	0.01	100	32	
		STREAMBANK STABILIZATION						0.02	0.06	54	89	
23A	44+95-45+18 -Y4-	ROAD FILL						<0.01		57		
23B	45+07-46+34 -Y4-	ROAD FILL						0.01		135		
24	80+73-81+57 -Y4RPBD-	ROAD FILL						0.02		202		
24A	80+50-81+51 -Y4RPBD-	ROAD FILL	0.06									
25	37+31 -Y4RPA-	30" RCP						<0.01		73		
		STREAMBANK STABILIZATION						<0.01	<0.01	21	16	
TOTALS:			1.20			0.02		3.67	0.03	3,268	142	

11/19/2018 Revisions shown in red text.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)

SHEET 63 of 64

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS					
			Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in wetlands (ac)	Permanent SW impacts (ac)	Temporary SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)	
26	29+16-31+12 -Y4RPC-	ROAD FILL-POND							0.38				
27A	104+63 - 107+53 -Y4-	ROAD FILL							0.02		205		
27B	107+60 -Y4-	42" WELDED STEEL	0.05						0.01	<0.01	130	14	
27C	107+58 - 108+44 -Y4-	30" RCP							<0.01		116		
28	50+50 - 56+00 -Y4- Rf	STREAMBANK STABILIZATION							0.02	0.15	365	188	
29	145+62 -Y4-	ROAD FILL				<0.01							
30	64+34 -Y4-	STREAMBANK STABILIZATION							<0.01		28		
31	557+28 -L-	STREAMBANK STABILIZATION							<0.01		21		
2018 Permit Modifications													
23	44+10 to 47+96 -Y4-	3 @ 8' x 9' RCBC Extension							0.06		151		
		STREAMBANK STABILIZATION							0.02	0.05	36	121	
28	47+96 to 56+85 -Y4-	2 @ 10' x 10' RCBC and							0.12		598	127	
		1 @ 10' x 8' RCBC							0.04	<0.01	194		
		STREAMBANK STABILIZATION											
2019 Permit Modifications													
8A		STREAM RELOCATION									144	40	
SUBTOTALS, THIS PAGE:			0.05			<0.01			0.66	0.06	1,623	302	
SUBTOTALS, PAGE 1			0.62		<0.01	0.05			1.53	0.19	5,853	1,344	
SUBTOTALS, PAGE 2			1.20			0.02			3.67	0.03	3,268	142	450
TOTALS:			1.87		<0.01	0.08			5.86	0.28	10,744	1,788	450

11/19/2018 Revisions shown in red text.

09/18/2019 Revisions shown in blue text.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

U-2579 B Forsyth County
Winston Salem Northern Beltway
(Eastern Section) (Future I-74)

SHEET 64 of 64