



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

December 15, 2020

U.S. Army Corps of Engineers  
Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, NC 27587

ATTN: Mr. Eric Alsmeyer, NCDOT Regulatory Coordinator  
  
Subject: Request for Modification to the Phased Section 404 Individual Permit and Section 401 Individual Water Quality Certification, Neuse River Riparian Buffer Authorization, Non-404 Jurisdictional Wetlands and Waters Permit for the Construction of the Triangle Expressway Southeast Extension from NC-55 Bypass in Apex to I-40, Wake and Johnston Counties. TIP Nos. R-2721, R-2828, and R-2829. Debit \$570 from WBS 37673.1.TA1.  
  
Reference: USACE Section 404 Authorization SAW-2009-02240, issued October 24, 2019, modified February 4, 2020, corrected February 7, 2020, modified March 30, 2020 and issued April 29, 2020.

NCDWR Water Quality Certification Number 4179 and Neuse River Riparian Buffer Authorization, issued February 15, 2019, modified January 21, 2020, corrected January 30, 2020, modified March 30, 2020 and April 20, 2020 and issued April 23, 2020, modified May 11, 2020 and issued June 1, 2020 (20181249 version 4).

Dear Sir:

The North Carolina Department of Transportation (NCDOT) applied for a phased Section 404 Individual Permit, Section 401 Individual Water Quality Certification (WQC), Neuse River Riparian Buffer Authorization, Non-404 Jurisdictional Wetlands and Waters Permit for the subject project in September 2018. The project, also known as Complete 540, encompasses three NCDOT Transportation Improvement Plan (TIP) projects: R-2721 (NC55 Bypass to US-401), R-2828 (east of US-401 to I-40 Interchange) and R-2829 (east of I-40 to US 64/264). Revised permit applications were submitted in February 2019 and the NCDWR 401 and USACE 404 Permits were issued in February and October of 2019. Additionally, NCDOT received a modified 401 WQC for the Complete 540 Project on January 30, 2020, April 23, 2020, and June 1, 2020 from the NC Division of Water Resources (NCDWR) and a revised Department of the Army authorization #SAW-2009-02240 on February 7, 2020 and April 29, 2020.

During the final design of the bridges at Permit Site 7 on the R-2721B Section, the Design-Build Team changed the span arrangement of the mainline bridge from a five span bridge to a three span bridge as well as the ramp bridge from a five span bridge to a three span bridge. By incorporating these changes there is a decrease in permanent fill impact by 0.08 acre related to the bridge bents.

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
TURNPIKE AUTHORITY  
1578 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1578

Telephone: (919) 707-2700  
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Customer Service: 1-877-368-4968  
Website: [ncdot.gov](http://ncdot.gov)

Location:  
1 SOUTH WILMINGTON STREET  
RALEIGH, NC 27601

Also, during this process the contractor realized that they would need to have additional temporary impacts in order to build the ramp bridge. The site does not provide enough room for them to move and place their cranes at the locations required within the currently permitted footprint. To the north side of the ramp bridge they will need an additional 0.10 acre of temporary impact beyond what was previously permitted as hand clearing. The area is now shown as temporary impact due to the need for either a causeway or crane mats. Where possible the contractor would utilize crane mats but this is likely not possible for the entire area shown as temporary impact. If a causeway or rock placement for leveling the crane mats is required, then the contractor will have geotextile fabric placed prior to rock being installed in order to maintain a barrier between the original ground and fill material. This will aid in removal of the rock.

Similar to the ramp bridge, the mainline bridge was evaluated for construction and the types of impacts have changed location. The site was previously permitted with a causeway with a number of fingers. The contractor has realized the fingers would not be necessary; however, temporary impacts would be needed at different locations to accommodate the cranes and causeway. Temporary impacts are now illustrated down the center of the alignment, to the outside of the bridge, and along the bridge abutments in order to have room for movement of the cranes. As stated above, the contractor will utilize crane mats where possible. Mechanized clearing was able to be reduced slightly. Please note that mechanized clearing is illustrated on the plans but this area would also be potentially impacted temporarily with the causeway or crane mats. It was shown as mechanized clearing due to the mitigation requirement for mechanized clearing as opposed to temporary impacts.

Due to the types of impacts changing location, there will be an increase in temporary impacts of 0.28 acre which is a change from 0.46 acre to 0.74 acre. There will be a decrease in the hand clearing impacts by 0.09 acre which is a change from 0.55 acre to 0.46 acre. There is a decrease in mechanized clearing of 0.01 acre which is a change from 0.03 acre to 0.02 acre. There is also a decrease in permanent impacts by 0.08 acre for the bridge bents which is a change from 0.20 acres to 0.12 acres of permanent fill. There is an increase in total impacts at Permit Site 7 by 0.10 acre due to temporary fill impacts replacing hand clearing, at the request of the USACE, but a decrease in overall project impacts. Please see the enclosed revised permit drawings and updated impact summary sheets which reflect the changes in impacts.

#### Revised Impacts Summary R-2721B

Only the jurisdictional wetland impacts have changed in this modification request. The proposed impacts to jurisdictional wetlands total 12.45 acres of permanent riparian wetland impacts. There will also be 1.343 acres of temporary wetland impact. This modification request results in changes to Tables 3, 12, and 24 of the previous permit application/modifications. No changes to the other tables were required so they are not included in this modification request.

**Revised Table 3. R-2721B Jurisdictional Resources Impacts**

Impact Type	Riparian Wetland Temp./ Perm. (ac)	Non-Riparian Wetland Temp./ Perm. (ac)	Isolated Wetlands (ac)	Ponds (ac)	Isolated Ponds (ac)	Stream (lf)		Riparian Buffer (sq. ft.) Zone 1/2
						Perm.	Temp.	
Neuse River Basin (HUC 03020201)	<b>1.34/ 12.45</b>	0.0	2.42	14.04	1.52	8,898	555	282/ 839 777,724/ 466,623

Bolded impact amounts represent a change from the 404 (SAE-2009-02240) issued on February 7, 2020 (modified April 29, 2020) and 401 WQC (4179) issued January 30, 2020 (modified April 23, 2020 and June 1, 2020).

**Revised Table 12. R-2721B Wetland Impacts**

<b>Permit Drawing Site Number</b>	<b>NRTR Label</b>	<b>Impact Type</b>	<b>Wetland Type</b>	<b>Permanent Impacts (ac.)</b>	<b>Temporary Impacts (ac.)</b>
1	WAR	Fill	Riparian	0.05	
1	WAR	Mechanized Clearing	Riparian	0.01	
1	WAS	Fill	Riparian	1.37	
1	WAS	Excavation	Riparian	<0.01	
1	WAS	Mechanized Clearing	Riparian	0.11	
2	WAW(1)	Fill	Riparian	0.86	
2	WAW (1)	Mechanized Clearing	Riparian	0.15	
2	WAW (1)	Excavation	Riparian		0.007**
4	WAX	Fill	Riparian	0.14	
4	WAX	Excavation	Riparian	0.01	
4	WAX	Mechanized Clearing	Riparian	0.02	
4	WAY	Fill	Riparian	0.05	
4	WAY	Mechanized Clearing	Riparian	0.02	
5	WBC	Fill	Riparian	1.04	
5	WBC	Mechanized Clearing	Riparian	0.26	
5	WBC	Excavation	Riparian		0.03**
6	WBE	Fill	Riparian	0.49	
6	WBE	Excavation	Riparian	0.07	0.003**
6	WBE	Mechanized Clearing	Riparian	0.03	
7	WBF	Fill	Riparian	<b>0.12</b>	
7	WBF	Mechanized Clearing	Riparian	<b>0.02</b>	
7	WBF	Temporary Causeway	Riparian		<b>0.74</b>
7	WBF	Hand Clearing	Riparian		<b>0.46</b>
8	WBG	Fill	Riparian	0.23	
8	WBG	Excavation	Riparian	<0.01	
8	WBG	Mechanized Clearing	Riparian	0.03	
8	WBG	Temporary Diversion	Riparian		<0.01
9	WBH	Fill	Riparian	0.06	
9	WBH	Excavation	Riparian	<0.01	0.006**
9	WBH	Mechanized Clearing	Riparian	0.26	
12	WBI	Fill	Riparian	0.86	
12	WBI	Excavation	Riparian	0.04	
12	WBI	Mechanized Clearing	Riparian	0.17	
14	WBN (1)	Fill	Riparian	0.31	
14	WBN (1)	Excavation	Riparian	0.06	0.007**
14	WBN (1)	Mechanized Clearing	Riparian	0.09	
14	WBN (1)	Temporary Diversion	Riparian		0
16	WBN (2)	Fill	Riparian	0.74	
16	WBN (2)	Excavation	Riparian	0.03	
16	WBN (2)	Mechanized Clearing	Riparian	0.37	
17	WBP	Fill	Riparian	0.42	
17	WBP	Mechanized Clearing	Riparian	0.09	
17	WBP	Temporary Diversion	Riparian		0
17	WBQ	Fill	Riparian	0.02	
17	WBQ	Mechanized Clearing	Riparian	0.01	
17	WBS	Fill	Riparian	0.04	

**Revised Table 12. R-2721B Wetland Impacts (cont.)**

Permit Drawing Site Number	NRTR Label	Impact Type	Wetland Type	Permanent Impacts (ac.)	Temporary Impacts (ac.)
18	WBR	Fill	Riparian	0.18	
20	WBY	Fill	Riparian	0.62	
20	WBY	Excavation	Riparian	2.25	
20	WBY	Mechanized Clearing	Riparian	0.05	
21	WBZ	Fill	Riparian	0.40	
21	WBZ	Mechanized Clearing	Riparian	0.09	
22	WCB	Fill	Riparian	0.14	
22	WCB	Excavation	Riparian	<0.01	
25	WBW	Fill	Riparian	0.03	
26		Mechanized Clearing	Non Riparian	0	
1*	WAS	Temporary Fill	Riparian		0.04
1*	WAS	Mechanized Clearing	Riparian	0.01	
2*	WAW	Temporary Fill	Riparian		0.05
<b>Total Riparian Impacts:</b>				<b>12.45</b>	<b>1.343</b>

\*Impacts associated with the Town of Cary sewer relocation. \*\*Impacts are also accounted for in mechanized clearing impacts. Bolded impact amounts represent a change from the 404 (SAE-2009-02240) issued on February 7, 2020 (modified April 29, 2020) and 401 WQC (4179) issued January 30, 2020 (modified April 23, 2020 and June 1, 2020).

**Revised Table 24. R-2721B Proposed Compensatory Mitigation**

Mitigation Type	Riparian Wetland (ac)	Non-Riparian Wetland (ac)	Isolated Wetlands (ac)	Stream (lf)	Riparian Buffer Calculation (sq. ft.)		Riparian Buffer Total (sq. ft.)
					Zone 1	Zone 2	
Neuse River Basin (HUC 03020201)	<b>24.90</b>	0.0	1.95	7,982	557,272x 3.0 = 1,671,816	373,750 x 1.5 = 560,625	2,232,441

Bolded mitigation amounts represent a change from the original issued 404 (SAW-2009-02240)/401 WQC (4179) and subsequent modifications/revisions.

Currently NCDOT has acquired mitigation for R-2721B from NCDMS to compensate for 14.64 acres of wetland impacts. The mitigation amount required for this modification, after the changes addressed above, is 12.45 acres which is below the mitigation acquired by 2.19 acres. Therefore, no other changes to the required mitigation are necessary due to this modification request.

## REGULATORY APPROVALS

Section 404: We are requesting a modification to the USACE Permit Number SAW-2009-02240 Section 404 Individual Permit for the above-described activities.

Section 401: We are requesting a modification to the WQC Permit Number 4179 Section 401 Individual Water Quality Certification, Neuse Riparian Buffer Authorization, and Non-404 Jurisdictional Wetlands and Waters Permit (IWGP10000) from NCDWR. We are providing this application to NCDEQ, for their approval. Authorization to debit the \$570.00 Permit Modification Fee from TIP No. R-2721/WBS 37673.1.TA1 is hereby given.

The individual permit modification package for the Complete 540 project (STIP Projects R-2721, R-2828 and R-2829) is available at <https://xfer.services.ncdot.gov/pdea/PermApps/>

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Deanna Riffey at [driffey@ncdot.gov](mailto:driffey@ncdot.gov) or 919-707-6151.

Sincerely,

DocuSigned by:

*Rodger Rochelle*

2CF80ADB9B414F0  
Rodger Rochelle, P.E.  
North Carolina Turnpike Authority  
Chief Engineer

cc: NCDOT Permit Application Standard Distribution List

# PERMIT DRAWING SHEET 20 OF 69

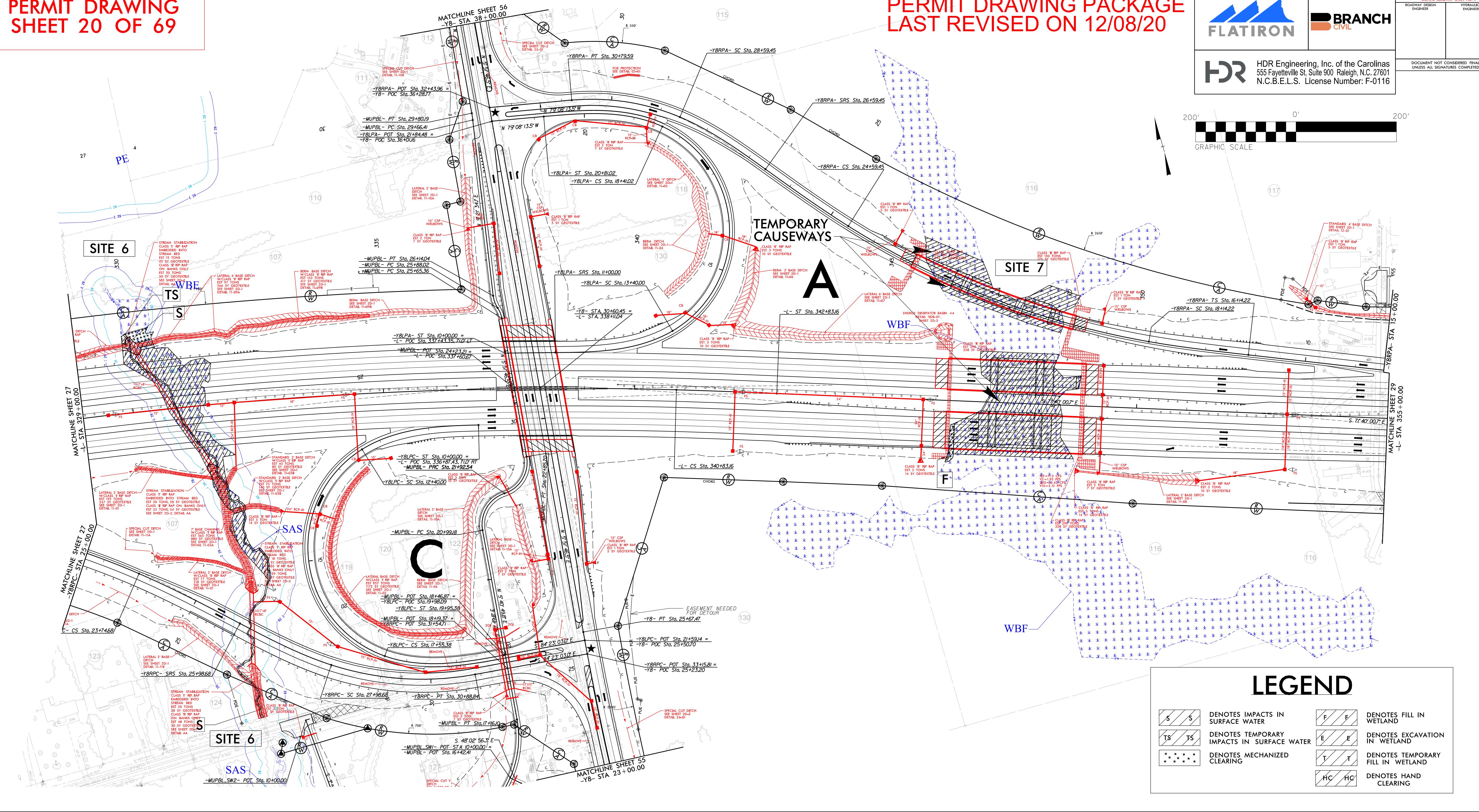
# PERMIT DRAWING PACKAGE

## LAST REVISED ON 12/08/20



HDR Engineering, Inc. of the Carolinas  
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601  
N.C.B.E.L.S. License Number: F-0116

PROJECT REFERENCE NO.	SHEET NO.
R-2721	28
<b>R-2721B ROADWAY SHEET NO. 11</b>	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



**PERMIT DRAWING  
SHEET 20A OF 69**

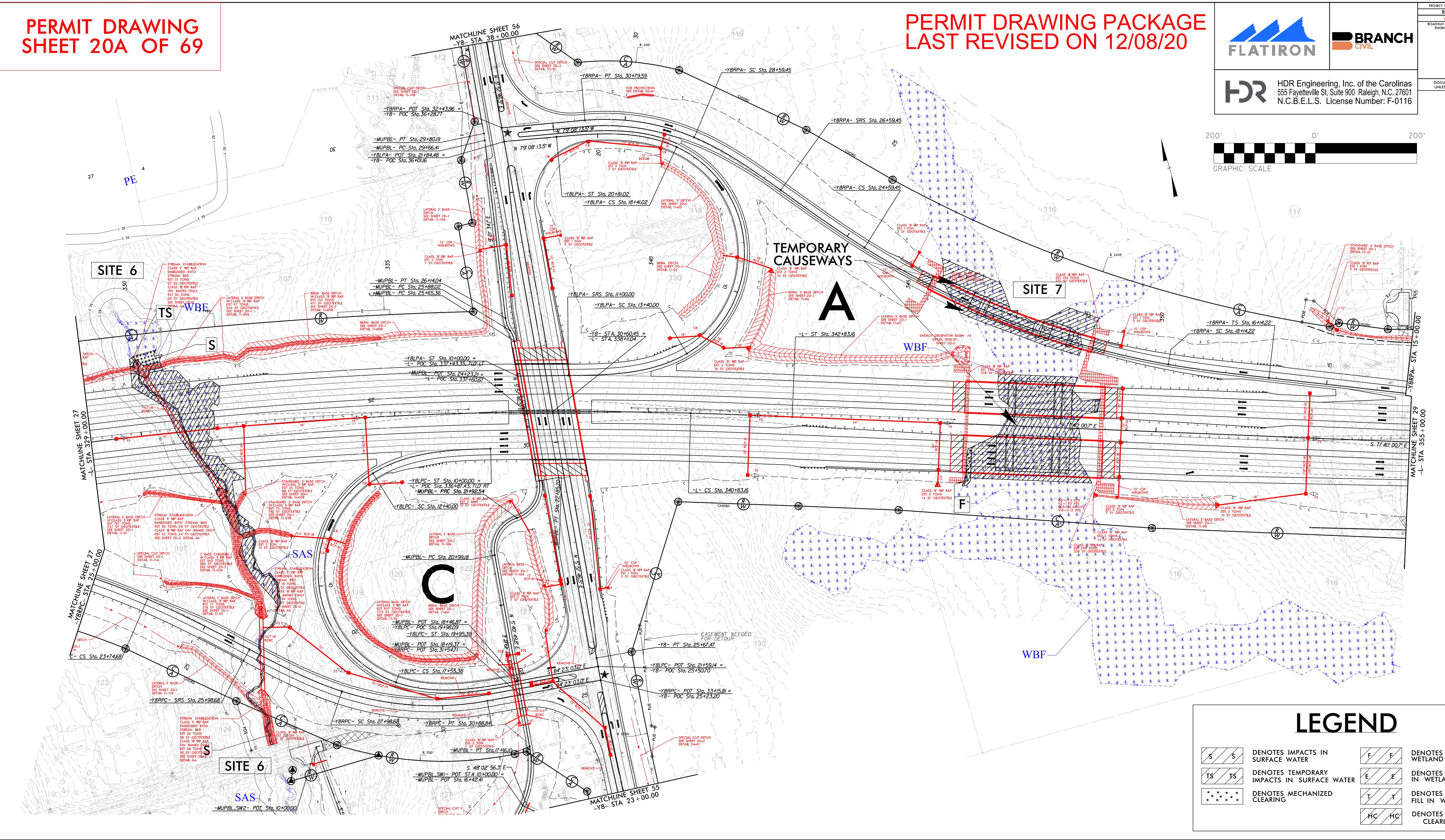
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**LEGEND**

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES EXCAVATION IN WETLAND
	DENOTES TEMPORARY CLEARING
	DENOTES MECHANIZED CLEARING
	DENOTES FILL IN WETLAND

**PERMIT DRAWING PACKAGE  
LAST REVISED ON 12/08/20**

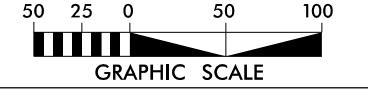
PROJECT REFERENCE NO. R-2721 SHEET NO. 28  
ROADWAY DESIGN SHEET NO. 1 OF 1  
ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER  
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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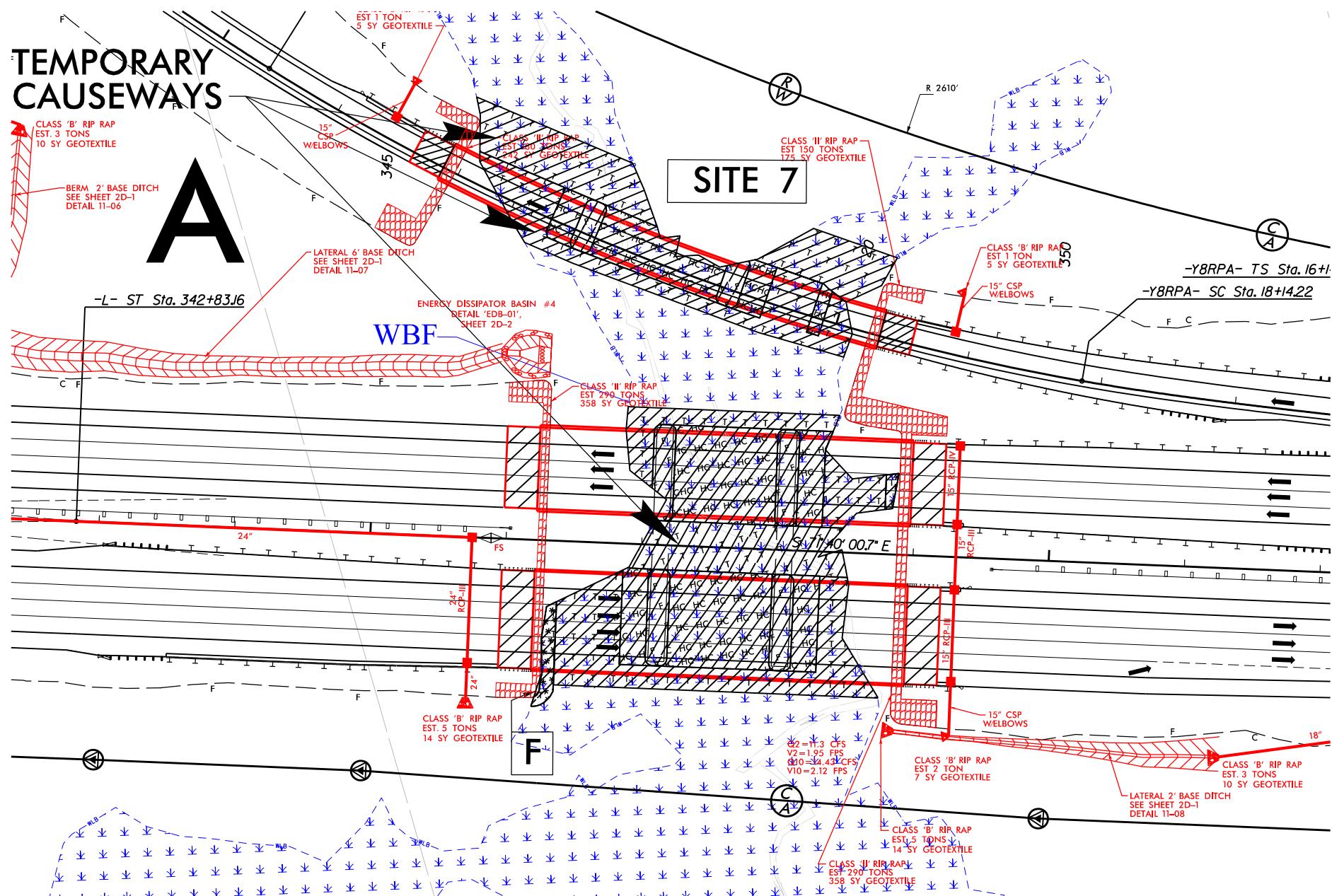


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N.C.B.E.L.S. License Number: F-0116



## TEMPORARY CAUSEWAYS

**A**



## LEGEND

	DENOTES IMPACTS IN SURFACE WATER		DENOTES FILL IN WETLAND
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER		DENOTES TEMPORARY FILL IN WETLAND
	DENOTES MECHANIZED CLEARING		DENOTES HAND CLEARING

### WETLAND AND SURACE WATER IMPACTS 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 (Pond) (ac)	Permanent SW impacts (Stream) (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Natural Stream Design (ft)
1	244+00-L-/248+00-L-	3@8'x10' RCBC							0.08		302	
	244+00-L-/248+00-L-	FILL	1.42		< 0.01	0.12						
	244+00-L-/248+00-L-	BANK STABILIZATION							< 0.01	0.01	50	36
	244+00-L-/248+00-L-	CULVERT STABILIZATION							0.02		69	
2	279+00-L-/280+22-L-	FILL	0.86			0.15		0.95	0.03	< 0.01	398	11
3	281+00 -L-/283+00-L-	2@7'X7' RCBC							0.04		285	
	281+00 -L-/283+00-L-	FILL								0.01		46
	281+00 -L-/283+00-L-	CULVERT STABILIZATION							0.01		96	
4	313+00-L-/317+00-L-	FILL	0.19		0.01	0.04			0.01		107	14
5	322+00-L-/325+00-L-	1@6'X8' RCBC							0.05		458	52
	322+00-L-/325+00-L-	FILL	1.04			0.26						
	322+00-L-/325+00-L-	CULVERT STABILIZATION							0.01		57	
6	330+00-L-/332+00-L-	1@6'X8' RCBC (1)	0.41		0.03	0.03			0.02		284	10
	330+00-L-/332+00-L-	1@6'X8' RCBC (2)							0.02		244	
	330+00-L-/332+00-L-	FILL	0.08		0.04				0.02		311	
	330+00-L-/332+00-L-	CULVERT STABILIZATION							0.01		113	
7	346+00-L-/349+00-L-, 21+00-Y8RPA-/25+00-Y8RPA-	BRIDGES	0.12	0.74		0.02	0.46					
8	365+00-L-/366+50-L-	FILL	0.23	< 0.01	< 0.01	0.03			< 0.01		105	
9	366+50-L-/13+50 -Y10A-	1@6'X8' RCBC	0.01			0.26			0.01		237	37
	366+50-L-/13+50 -Y10A-	66" RCP	0.05		< 0.01				< 0.01		105	
	366+50-L-/13+50 -Y10A-	FILL			< 0.01				0.01		204	
	366+50-L-/13+50 -Y10A-	CULVERT STABILIZATION							0.01		115	
10++	380+00 -L-/383+00-L-	42" RCP						1.52				
<b>TOTALS* THIS SHEET:</b>			<b>4.42</b>	<b>0.74</b>	<b>0.10</b>	<b>0.90</b>	<b>0.46</b>	<b>2.47</b>	<b>0.35</b>	<b>0.02</b>	<b>3540</b>	<b>205</b>
<b>TOTALS* ENTIRE R-2721B:</b>			<b>8.38</b>	<b>0.74</b>	<b>4.71</b>	<b>1.77</b>	<b>0.46</b>	<b>15.56</b>	<b>0.84</b>	<b>0.05</b>	<b>8898</b>	<b>540</b>

\*Rounded totals are sum of actual impacts.

#### NOTES:

++Site includes only isolated resources.

Sites containing temporary excavation listed below are included in the mechanized clearing impacts:

Site 2 = .007ac ; Site 5 = .03ac ; Site 6 = .003ac

Site 9 = .006ac ; Site 14 = .007ac, Grand Total = .053ac Temp Excavation

**PERMIT DRAWING PACKAGE LAST REVISED ON 12/08/20**

Revised 2016 09 09

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 DECEMBER 2020  
 WAKE COUNTY  
 TIP R-2721B  
 STATE PROJ. # 6.401078  
 SHEET 68 OF 69

WETLAND AND SURACE WATER IMPACTS 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 (Pond) (ac)	Permanent SW impacts (Stream) (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)
11	386+00-L-/391+00-L-	48" RCP						4.43	0.04	< 0.01	404	60
	386+00-L-/391+00-L-	FILL							< 0.01	< 0.01	20	
12	384+50-L-/387+00-L-	FILL	0.86		0.04	0.17			0.01	< 0.01	157	46
13++	408+00-L-/411+00-L-	FILL	0.21		0.06							
14	412+00-L-/416+00-L-	FILL	0.31		0.06	0.09			0.03	< 0.01	413	28
15	414+50-L-/415+50-L-	1@7'X8' RCBC						2.30	< 0.01		142	
16	420+00-L-/425+00-L-	42" RCP	0.74		0.03	0.37			0.04	< 0.01	315	13
	420+00-L-/425+00-L-	FILL							< 0.01		64	
	420+00-L-/425+00-L-											
17	437+00-L-/30+00-Y13A-	2@7'X7'RCBC	0.48			0.10			< 0.01	< 0.01		46
	437+00-L-/30+00-Y13A-	FILL							< 0.01		170	
	437+00-L-/30+00-Y13A-	BANK STABILIZATION							0.02		216	
	437+00-L-/30+00-Y13A-	CULVERT STABILIZATION							0.05		163	
18	459+50-L-/463+50-L-	2@7'X8'RCBC	0.18					6.36	0.02		116	
	459+50-L-/463+50-L-	CULVERT STABILIZATION							< 0.01		75	
19++	15+00-Y13LPC-	EXCAVATION			2.15							
20	478+00-L-/488+00-L-	FILL	0.62		2.25	0.05			0.07	0.01	830	60
21	490+00-L-	2@6'X8'RCBC	0.40			0.09			0.08	< 0.01	977	34
	490+00-L-	FILL							0.02		233	
	490+00-L-	CULVERT STABILIZATION							0.02		151	
22	495+00-L-	1 @ 6'X8' RCBC	0.14		< 0.01				0.03	< 0.01	490	13
	495+00-L-	FILL							0.01		257	
	495+00-L-											
23	65+30-Y13-	FILL							< 0.01	< 0.01	9	11
24	10+00-Y13B-	15" RCP							< 0.01	< 0.01	1	17
	10+00-Y13B-	FILL							< 0.01		13	
TOTALS* THIS SHEET:			3.93	0	4.61	0.87	0	13.09	0.47	0.03	5216	328
TOTALS*	ENTIRE R-2721B:		8.38	0.74	4.71	1.77	0.46	15.56	0.84	0.05	8898	540

\*Rounded totals are sum of actual impacts.

NOTES:

++Site includes only isolated resources.

Sites containing temporary excavation listed below are included in the mechanized clearing impacts:

Site 2 = .007ac ; Site 5 = .03ac ; Site 6 = .003ac

Site 9 = .006ac ; Site 14 = .007ac, Grand Total = .053ac Temp Excavation

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NC DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

DECEMBER 2020

WAKE COUNTY

TIP R-2721B

STATE PROJ. # 6.401078

## **WETLAND AND SURFACE WATER IMPACTS SUMMARY**

\*Rounded totals are sum of actual impacts.

## NOTES:

++Site not impacted in final design

PERMIT DRAWING PACKAGE LAST REVISED ON 12/08/2023

NC DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

DECEMBER 2020

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