



Transportation

PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

December 1, 2015

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

ATTN: Mr. Eric Alsmeyer
NCDOT Division 5 Project Coordinator

Subject: **Application for Section 404 Nationwide Permit 14, Section 401 Water Quality Certification and Neuse Riparian Buffer Authorization** for replacement of Bridge Nos. 227 and 213 on Capital Blvd. at Peace Street and Wade Ave. and revise the interchanges, Wake County, North Carolina. Federal Aid Project Nos. BRNHS-0070(119)/BRSTO-0070(149), TIP Nos. B-5121/B-5317. Debit \$240.00 from WBS Element No. 42332.1.1

Dear Sir:

Please find enclosed the Pre-Construction Notification (PCN) form, Marks Creek Mitigation Site Debit Ledger information, stormwater management plan, permit drawings, and roadway plans for the above referenced project. An Environmental Assessment (EA) was completed for this project in December 2013 and Finding of No Significant Impact (FONSI) was completed in September 2014.

The proposed let date for the project is June 21, 2016 with a review date of March 29, 2016. However, the let date may advance as additional funds become available.

A copy of this permit application and its distribution list will be posted on the NCDOT website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx> under *Quick Links > Permit Applications*. A copy of the EA and FONSI is also available at the above website address under *Quick Links > Environmental Documents*. Thank you for your time and assistance with this project. Please contact Tyler Stanton at either tstanton@ncdot.gov or (919) 707-6156 if you have any questions or need additional information.

Sincerely,


for Richard W. Hancock, P.E. Manager
Project Development and Environmental Analysis Unit

cc: NCDOT Permit Application Standard Distribution List





Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.4 January 2009

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit ☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 14 or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes ☒ No
1d. Type(s) of approval sought from the DWR (check all that apply): ☒ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit ☐ 401 Water Quality Certification – Express ☒ Riparian Buffer Authorization	
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☐ Yes ☒ No
For the record only for Corps Permit: ☐ Yes ☒ No	
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	☐ Yes ☒ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	☐ Yes ☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	☐ Yes ☒ No

2. Project Information

2a. Name of project:	Replacement of Bridge Nos. 227 and 213 on Capital Blvd. at Peace Street and Wade Ave. and revise the interchanges
2b. County:	Wake
2c. Nearest municipality / town:	Raleigh
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-5121/B-5317

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6156
3g. Fax no.:	(919) 212-5785
3h. Email address:	tstanton@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ Other, specify:
4b. Name:	<i>not applicable</i>
4c. Business name (if applicable):	
4d. Street address:	
4e. City, state, zip:	
4f. Telephone no.:	
4g. Fax no.:	
4h. Email address:	
5. Agent/Consultant Information (if applicable)	
5a. Name:	<i>not applicable</i>
5b. Business name (if applicable):	
5c. Street address:	
5d. City, state, zip:	
5e. Telephone no.:	
5f. Fax no.:	
5g. Email address:	

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.796395 (DD.DDDDDD) Longitude: - 78.641048 (-DD.DDDDDD)
1c. Property size:	9.8 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Pigeon House Branch
2b. Water Quality Classification of nearest receiving water:	C; NSW
2c. River basin:	Neuse
3. Project Description	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: The land use is mostly commercial development with some residential with small patches of woods.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.007	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 5,879	
3d. Explain the purpose of the proposed project: To replace structurally deficient bridges	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing bridges along Capitol Blvd at the Peace Street and Wade Avenue and improvements to the interchanges. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	☐ Yes ☒ No ☐ Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary ☐ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes ☒ No ☐ Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	☐ Yes ☒ No
6b. If yes, explain.	

C. Proposed Impacts Inventory						
1. Impacts Summary						
1a. Which sections were completed below for your project (check all that apply):						
☐ Wetlands ☒ Streams - tributaries ☒ Buffers ☐ Open Waters ☐ Pond Construction						
2. Wetland Impacts						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction	2f. Area of impact (acres)	
Site 1 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 2 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
2g. Total wetland impacts						
2h. Comments:						
3. Stream Impacts						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermitte nt (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 ☒ P ☒ T	temp fill, dewatering, bank stabilization	Pigeon House Branch	☒ PER ☐ INT	☒ Corps ☐ DWQ	18	12 perm 91 temp
Site 2 ☐ P ☒ T	dewatering	Pigeon House Branch	☒ PER ☐ INT	☒ Corps ☐ DWQ	18	0 perm 69 temp
Site 3 ☐ P ☒ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		

3h. Total stream and tributary impacts										12Perm 160Temp	
3i. Comments: At Site 2, Pigeon House Branch is lined in a concrete bed and bank. Water here will be dewatered, while the culvert is lengthened and the concrete structure put back in place.											
4. Open Water Impacts If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.											
4a. Open water impact number – Permanent (P) or Temporary (T)		4b. Name of waterbody (if applicable)		4c. Type of impact			4d. Waterbody type		4e. Area of impact (acres)		
O1 ☐ P ☐ T											
O2 ☐ P ☐ T											
O3 ☐ P ☐ T											
O4 ☐ P ☐ T											
4f. Total open water impacts										X Permanent X Temporary	
4g. Comments:											
5. Pond or Lake Construction If pond or lake construction proposed, then complete the chart below.											
5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)			
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded			
P1											
P2											
5f. Total											
5g. Comments:											
5h. Is a dam high hazard permit required?				☐ Yes ☐ No If yes, permit ID no:							
5i. Expected pond surface area (acres):											
5j. Size of pond watershed (acres):											
5k. Method of construction:											

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

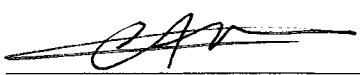
6a. Project is in which protected basin?			☒ Neuse ☐ Tar-Pamlico ☐ Other: ☐ Catawba ☐ Randleman		
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 ☒ P ☐ T	Road crossing	Pigeon House Branch	☐ Yes ☒ No	136	0
B2 ☒ P ☐ T	Road Crossing	Pigeon House Branch	☐ Yes ☒ No	1823	0
B3A ☒ P ☐ T	Bridge	Pigeon House Branch	☐ Yes ☒ No	2711	87
B3A ☒ P ☐ T	Road Crossing	Pigeon House Branch	☐ Yes ☒ No	811	2501
B3B ☒ P ☐ T	Road Impacts other than crossing of streams	Pigeon House Branch	☒ Yes ☐ No	1282	734
B3B ☒ P ☐ T	Road Crossing	Pigeon House Branch	☐ Yes ☒ No	4704	1603
B4 ☒ P ☐ T	Road Crossing	Pigeon House Branch	☐ Yes ☒ No	3321	803
6h. Total buffer impacts				14,788	5,728
6i. Comments: Allowable impacts at Site 3B reflect areas where there is an existing use, a maintained lawn. Per Division 5 this area will be a maintained lawn after construction, therefore impacts are allowable.					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The proposed bridge is 28 feet longer than the existing bridge and will be at approximately the same grade and alignment as the existing structure; the new bridge will span the creek; no deck drains on bridge; permanent impacts to Pigeon House Branch is only for Bank Stabilization and no loss of US Waters; use of Design Standards for Sensitive Watersheds; See Stormwater Management Plan for more measures.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. NCDOT Best Management Practices for Construction and Maintenance Activities will be followed; use of an off-site detour.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☐ Yes ☒ No If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps	
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☐ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	☐ Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan. See Attached Debit Ledger from Marks Creek Mitigation Site for buffer mitigation		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?			☒ Yes ☐ No	
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1	Road impacts other than crossings of streams	1282	3 (2 for Catawba)	3,846
Zone 2	Road impacts other than crossings of streams	734	1.5	1,101
	6f. Total buffer mitigation required:			4,947
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments:				

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☒ Yes ☐ No
1b. If yes, then is a diffuse flow plan included? If not, explain why. Comments: see attached permit drawings.	☒ Yes ☐ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	☒ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: see attached permit drawings.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	☐ Certified Local Government ☐ DWQ Stormwater Program ☒ DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No N/A
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No N/A
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No N/A

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☒ Yes ☐ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☒ Yes ☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☒ Yes ☐ No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes ☒ No
2b. Is this an after-the-fact permit application?	☐ Yes ☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☐ Yes	☒ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☒ Yes	☐ No
5c. If yes, indicate the USFWS Field Office you have contacted.	☒ Raleigh ☐ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? There is no habitat present for any of the listed species		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☐ Yes	☒ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
for <u>Richard W. Hancock, P.E.</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>12-1-2015</u> Date

Marks Creek Mitigation Site
ONEID 092-011

The Marks Creek Mitigation Site is located in Wake County within the USGS hydrologic unit 03020201 of the Neuse River. NCDOT acquired the 66 acre site to mitigate for unavoidable, jurisdictional impacts associated with TIP R-2547. Monitoring requirements were performed from 2004 to 2008 and the site was closed out in 2009. Table 1 shows the final mitigation quantities approved for the site. The site has been placed on the NCDOT On-site Debit Ledger for use within HUC 03020201. Tables 2-5 indicate all mitigation debits that have occurred per regulatory agency approval.

To offset unavoidable buffer impacts associated with T.I.P. B-5121 the Marks Creek Mitigation Site will be debited 4,947 square feet of buffer restoration. The impacts numbers were 1282 sq ft for zone 1 and 734 sq ft for zone 2. These impacts numbers were debited from the ledger with a 3:1 ratio for zone 1 and 1.5:1 ratio for zone 2. This debit is reflected in the debit ledger below.

Table 1. Mitigation Quantities Approved

HUC	Mitigation Type	Starting Amount	Additional Notes
3020201	Stream Preservation	3247 (Ln.Ft.)	
3020201	Riparian Wetland Restoration	3.33 (Ac.)	No debits as of 8/18/14
3020201	Riparian Wetland Preservation	11 (Ac.)	No Debit as of 8/18/2014
3020201	Riparian Wetland Enhancement	13 (Ac)	
3020201	Buffer Restoration	324700 (Sq.Ft.)	

Table 2. Mitigation Debits – Stream Restoration

Mitigation Type	Debit Amount (Ln.Ft.)	Status	Site TIP	Action ID#	NOTES
Stream Restoration	2873	Close Out	R-2814A&B	2008-01316	Mod
Stream Restoration	80	Close Out	I-5338 (Areas 1, 2A, and 2b)		Impacts were 40 lin. Ft. @ 2:1 ratio

Table 3. Mitigation Debits – Riparian Wetland Enhancement

Mitigation Type	Debit Amount (Ac)	Status	Site TIP	Action ID#	NOTES
Riparian Wetland Enhancement	10.9	Close Out	R-2000F&G	199920387	
Riparian Wetland Enhancement	0.98	Close Out	R-3825A	201101695	.49 @2:1
Riparian Wetland Enhancement	.14	Close Out	B-5113		

Table 4. Mitigation Debits – Buffer Restoration

Mitigation Type	Debit Amount (Sq.Ft.)	Status	Site TIP	Action ID#	NOTES
Buffer Restoration	114659	Close Out	U-3804	200421647	
Buffer Restoration	114	Close Out	R-2814-B Mod	2008-01316	
Buffer Restoration	75581	Close Out	B-3528	2008-00153	
Buffer Restoration	1655	Close Out	B-4944	2009-00207	
Buffer Restoration	4242	Close Out	B-5113		
Buffer Restoration	34683	Close Out	I-5338 (Areas 1, 2A, and 2b)		6,915 sq ft of impacts for zone 1 and 9292 sq ft of zone 2 totaling 34,683 sq ft with 3:1 ratio for zone 1 and 1.5:1 for zone 2
Buffer Restoration	12,914	Close Out	B-4659		NCDOT was required to use a 3:1 ratio for zone 1 and a 1.5:1 ratio for zone 2.
Buffer Restoration	4,947	Close Out	B-5121		NCDOT was required to use a 3:1 ratio for zone 1 and a 1.5:1 ratio for zone 2.



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.03; Released October 2015)

WBS Element:	42263.1.1	TIP No.:	B-5121/B-5317	County(ies):	Wake	Page	1	of	2	
General Project Information										
WBS Element:	42263.1.1	TIP Number:	B-5121/B-5317	Project Type:	Bridge Replacement	Date:	10/12/2015			
NCDOT Contact:	Bill Elam			Contractor / Designer:	Kimley-Horn & Associates					
Address:	NCDOT Hydraulics Unit 1020 Birch Ridge Drive Raleigh, NC 27610			Address:	3001 Weston Parkway Cary, NC 27518					
	Phone:	919-707-6718			Phone:	919-677-2153				
	Email:	belam@ncdot.gov			Email:	jason.lawing@kimley-horn.com				
City/Town:	Raleigh			County(ies):	Wake					
River Basin(s):	Neuse			CAMA County?	No					
Wetlands within Project Limits?	No									
Project Description										
Project Length (lin. miles or feet):	0.812 mi.		Surrounding Land Use:	Urban						
	Proposed Project			Existing Site						
Project Built-Up Area (ac.)	20.7 ac.			20.0 ac.						
Typical Cross Section Description:	6 @ 11' wide lanes with an 18' median, 2' - 6" curb & gutter on both sides of travel direction, 14' Berm with sidewalk from back of curb, and sideslopes that vary from 2:1 or flatter.			6 @ 11' wide lanes, curb & gutter on both sides of travel direction, and sideslopes that vary.						
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	70,416	Year:	2036	Existing:	58,083	Year:	2016		
General Project Narrative: (Description of Minimization of Water Quality Impacts)	Replacement of Bridge #227 on US-70/US-401/NC-50 (Capital Boulevard) over Peace Street and Bridge # 213 on US-70/NC-50 (Wade Avenue) over US 401 (Capital Boulevard) and over Pigeon House Branch. Work includes realignment and widening of Capital Boulevard as well as surrounding ramps and -Y- lines around the two bridges. Project also includes replacement/extension of a box culvert under Peace Street which carries Pigeon House Branch. Existing outfall locations and drainage patterns were maintained as much as possible. Pigeon House Branch is only jurisdictional stream on project. Existing project area is highly urbanized. Due to existing development, opportunity for treatment was minimal. In most cases, existing storm drain systems outfalls were directly into Pigeon House Branch and the proposed storm drain systems had no alternative outfall location. Base grass swale with check dams was utilized on -Flyover- prior to outfall through the buffer and into Pigeon House Branch.									
Waterbody Information										
Surface Water Body (1):	Pigeon House Branch			NCDWR Stream Index No.:	27-33-18					
NCDWR Surface Water Classification for Water Body	Primary Classification:			Class C						
	Supplemental Classification:			Nutrient Sensitive Waters (NSW)						
Other Stream Classification:	None									
Impairments:	None									
Aquatic T&E Species?	No	Comments:								
NRTR Stream ID:	D24SW6			Buffer Rules in Effect:		Neuse				
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?		No	Dissipator Pads Provided in Buffer?		No			
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)			(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)					
(If yes, provide justification in the General Project Narrative)										

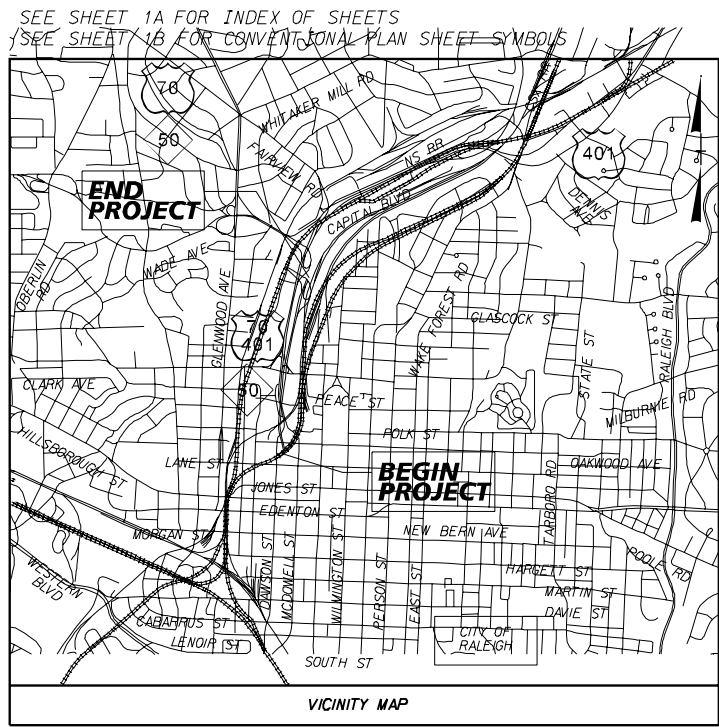


FOR NCDOT PROJECTS

Additional Comments

TIP PROJECT: B-5121 / B-5317

CONTRACT:



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5121/B-5317	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
42263.1.1	BRNHS-0070(119)	P.E. (B-5121)	
46031.1.1	BRSTP-0070(149)	P.E. (B-5317)	
42263.2.1	BRNHS-0070(119)	R/W (B-5121/B-5317)	
42263.2.1	BRNHS-0070(119)	UTL (B-5121/B-5317)	
42263.3.1	BRNHS-0070(119)	CONST (B-5121/B-5317)	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

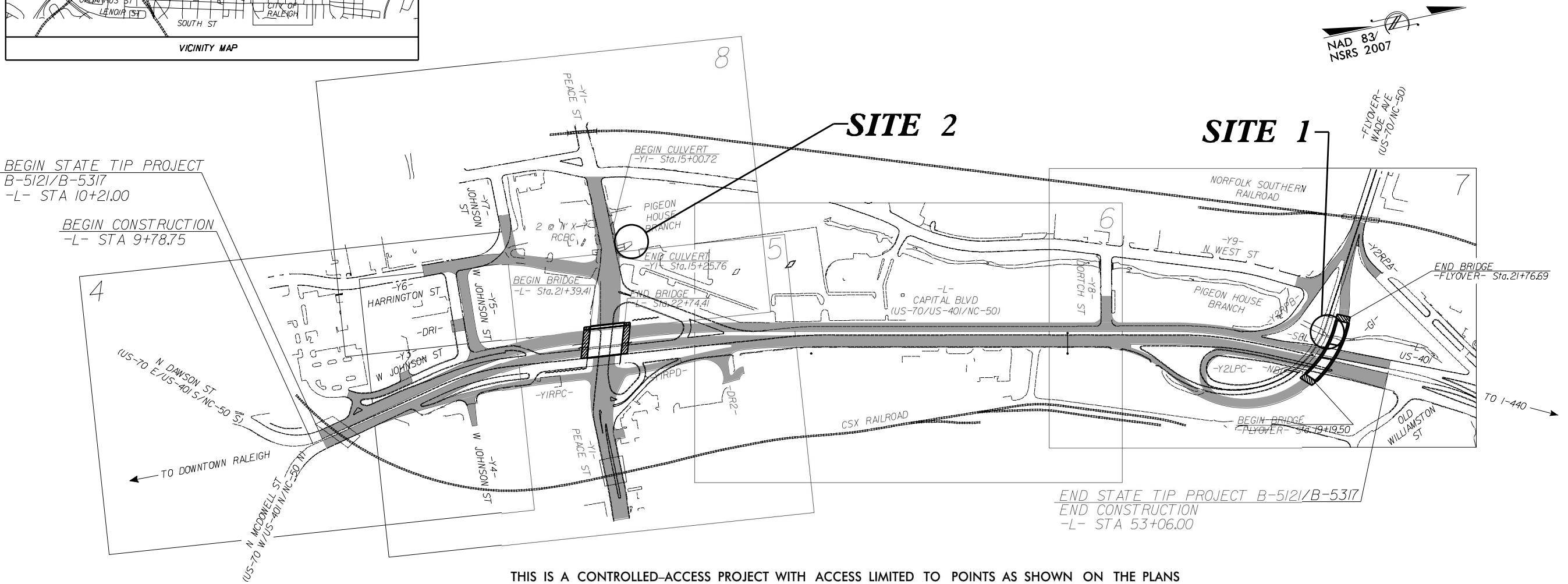
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LOCATION: BRIDGE NO. 227 ON US-70/US-401/NC-50 (CAPITAL BOULEVARD) OVER PEACE STREET
AND BRIDGE NO. 213 ON US-70/NC-50 (WADE AVENUE) OVER US 401 (CAPITAL BOULEVARD)

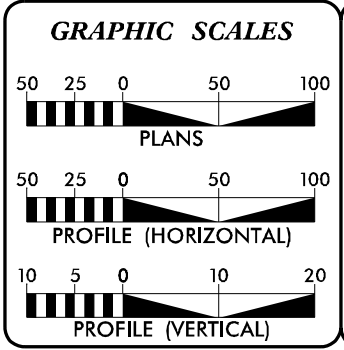
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, STRUCTURES, AND CULVERT

PERMIT DRAWING
SHEET 1 OF 12

WETLAND AND SURFACE WATER IMPACTS PERMIT



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS



DESIGN DATA

AADT 2016	=	58,083
AADT 2036	=	70,416
K	=	10%
D	=	55%
T	=	5%*
V	=	40 MPH
CLASSIFICATION:		
URBAN ARTERIAL		
* 1% TTST 4% DUAL STATEWIDE TIER		

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5121 / B-5317	=	0.786 MILES
LENGTH STRUCTURE TIP PROJECT B-5121 / B-5317	=	0.026 MILES
TOTAL LENGTH TIP PROJECT B-5121 / B-5317	=	0.812 MILES

PLANS PREPARED FOR THE NCDOT BY:

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JUNE 30, 2015

LETTING DATE: JUNE 21, 2016

Kimley»Horn

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

J. JASON PACE, P.E.
PROJECT DESIGN ENGINEER

REKHA PATEL, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN
ENGINEERING COORDINATION SECTION

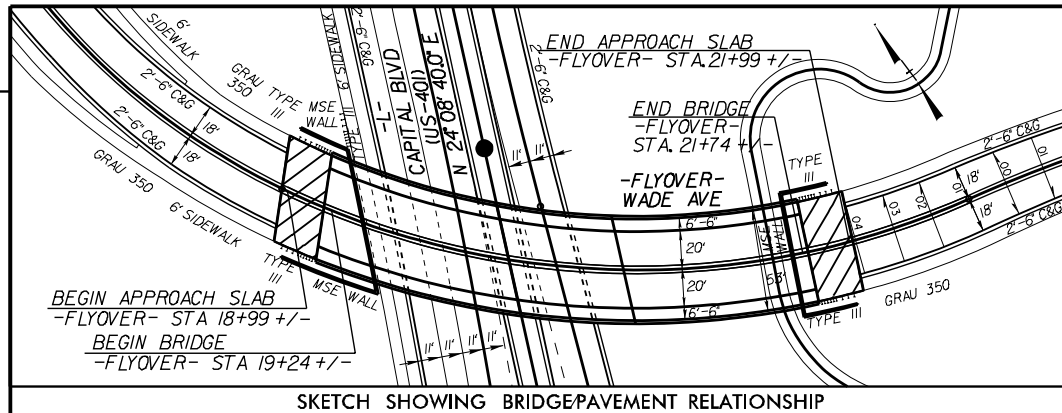
HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.





SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

- | | |
|--|---|
| 23 HENRY J VANPALA
DB 3865 - PG 46
BM 2008 - PG 2034 | 27 JOYNER'S REAL ESTATE
HOLDINGS V LLC
DB 15087 - PG 2007
BM 1959 - PG 262 |
| 24 HOBCO AUTO SALES
DB 14908 - PG 1234
BM 1959 - PG 262 | 28 ISABEL HUFMEYER
DB 7807 - PG 382
BM 2003 - PG 964 |
| 26 LISTON E &
SUSAN S MALPASS
DB 7807 - PG 382
BM 2003 - PG 964 | 29 SUZANNE ABERNETHY
WILLIAM R RUGGLES
DB 13227 - PG 452
BM 1958 - PG 10 |

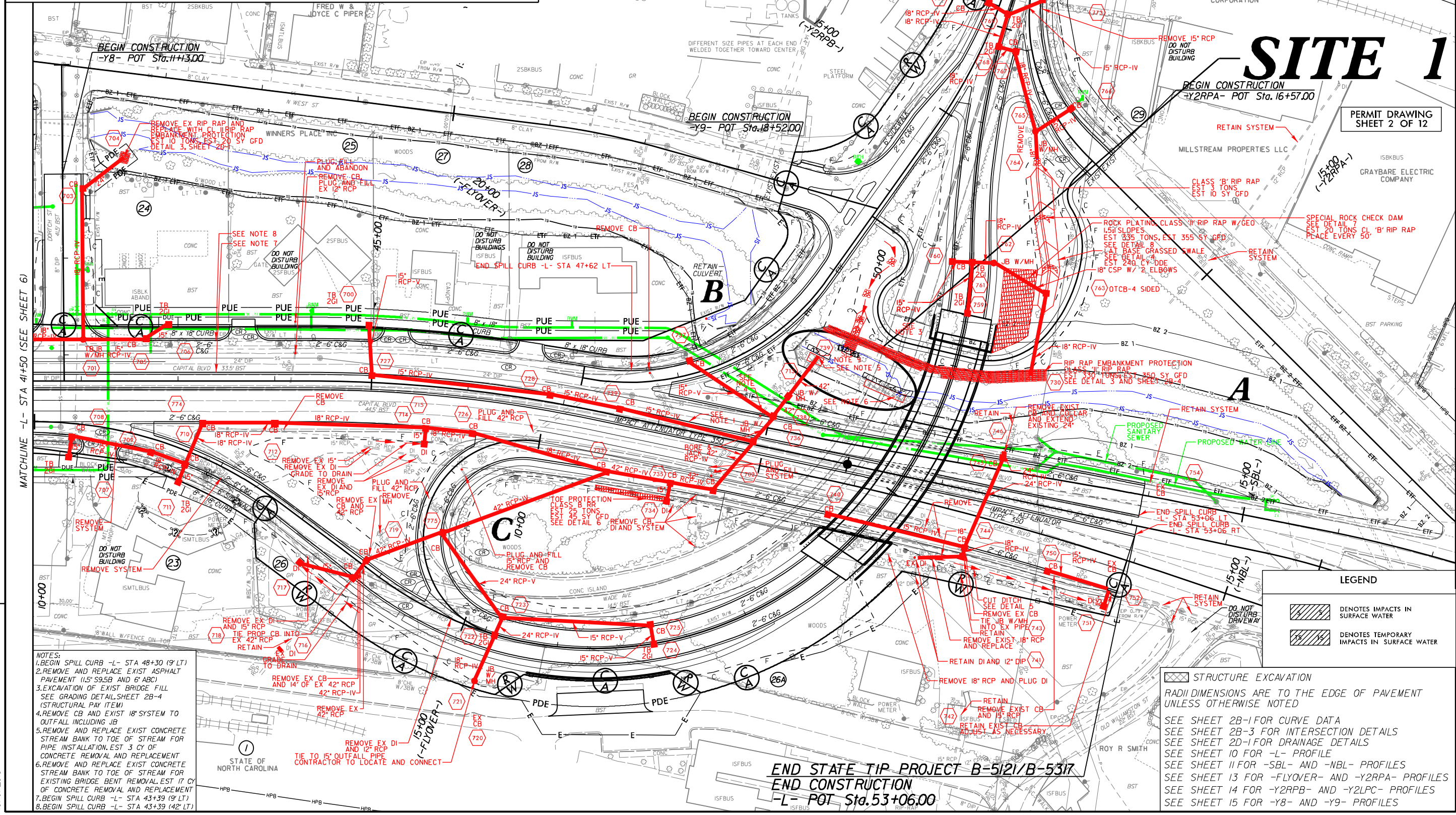
Kimley»Horn
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. B-5121 / B-5317	SHEET NO. 7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NSRS 2007

SITE 1

PERMIT DRAWING
SHEET 2 OF 12



- NOTES:
- BEGIN SPILL CURB -L- STA 48+30 (9' LT)
 - REMOVE AND REPLACE EXIST ASPHALT PAVEMENT (15' S9.5B AND 6' ABC)
 - EXCAVATION OF EXIST BRIDGE FILL SEE GRADING DETAIL SHEET 2B-4 (STRUCTURAL PAY ITEM)
 - REMOVE CB AND EXIST 18\"/>

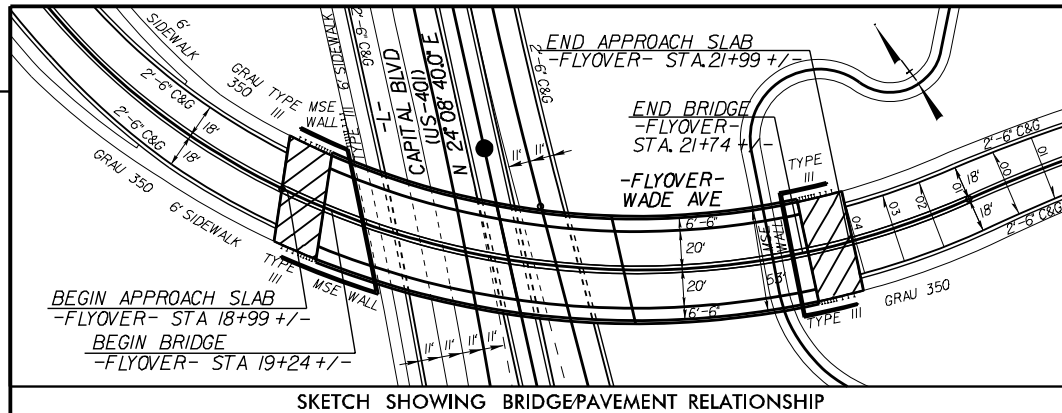
LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

STRUCTURE EXCAVATION
RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED
SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 2D-1 FOR DRAINAGE DETAILS
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 11 FOR -SBL- AND -NBL- PROFILES
SEE SHEET 13 FOR -FLYOVER- AND -Y2RPA- PROFILES
SEE SHEET 14 FOR -Y2RPA- AND -Y2LPC- PROFILES
SEE SHEET 15 FOR -Y8- AND -Y9- PROFILES

REVISIONS

10/9/2015



- | | |
|--|---|
| 23 HENRY J VANPALA
DB 3865 - PG 46
BM 2008 - PG 204 | 27 JOYNER'S REAL ESTATE
HOLDINGS V LLC
DB 15087 - PG 2007
BM 1959 - PG 262 |
| 24 HOBCO AUTO SALES
DB 14908 - PG 1234
BM 1959 - PG 262 | 28 ISABEL HUFMEYER
DB 7807 - PG 382
BM 2003 - PG 964 |
| 26 LISTON E &
SUSAN S MALPASS
DB 7807 - PG 382
BM 2003 - PG 964 | 29 SUZANNE ABERNETHY
WILLIAM R RUGGLES
DB 13227 - PG 452
BM 1958 - PG 10 |

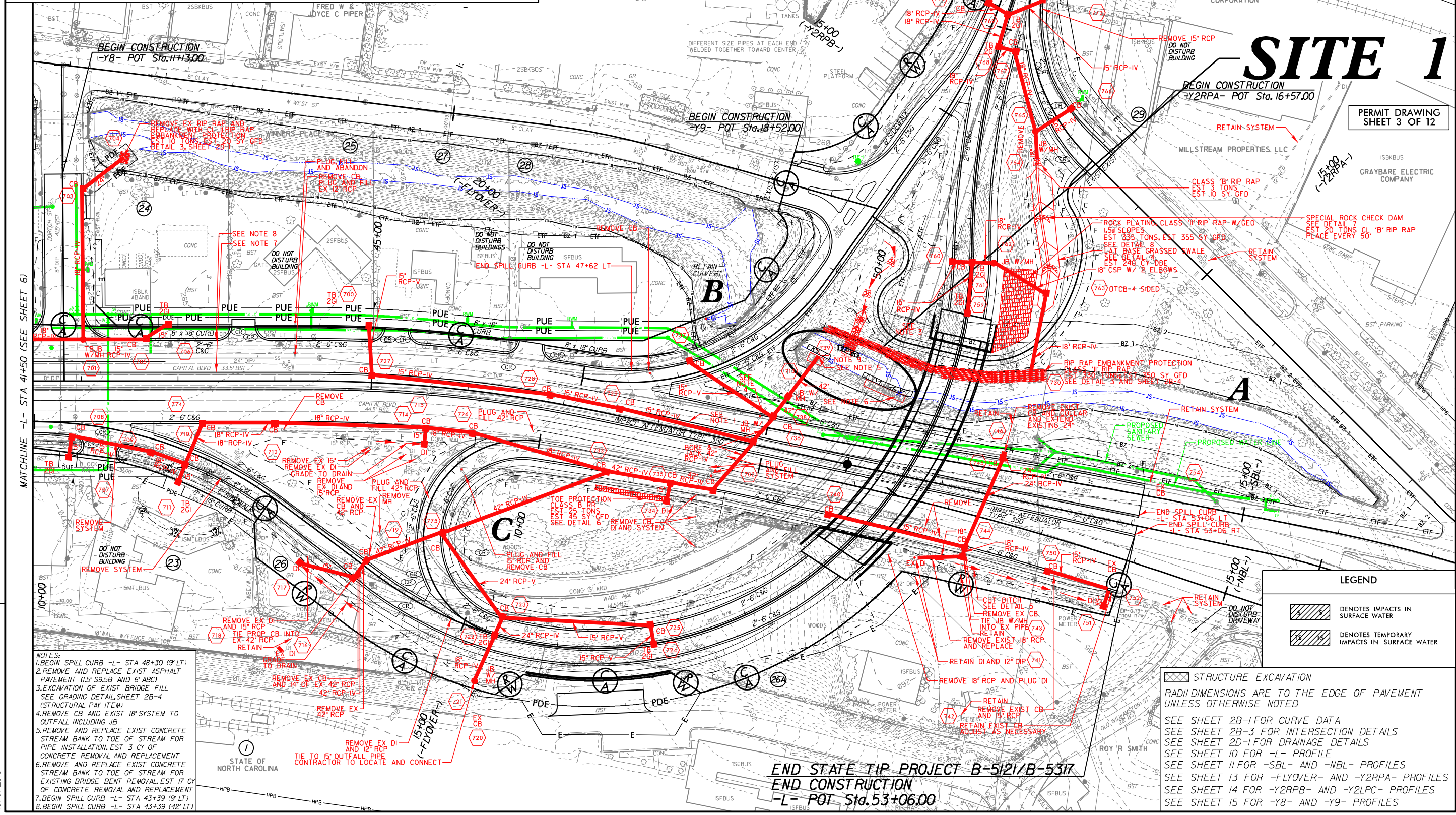
Kimley»Horn
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. B-5121 / B-5317		SHEET NO. 7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

NAD 83/NSRS 2007

SITE 1

PERMIT DRAWING
SHEET 3 OF 12



REVISIONS

10/9/2015

- NOTES:
1. BEGIN SPILL CURB -L- STA 48+30 (9' LT)
 2. REMOVE AND REPLACE EXIST ASPHALT PAVEMENT (15' S9.5B AND 6' ABC)
 3. EXCAVATION OF EXIST BRIDGE FILL SEE GRADING DETAIL SHEET 2B-4 (STRUCTURAL PAY ITEM)
 4. REMOVE CB AND EXIST 18" SYSTEM TO OUTFALL INCLUDING JB
 5. REMOVE AND REPLACE EXIST CONCRETE STREAM BANK TO TOE OF STREAM FOR PIPE INSTALLATION. EST 3 CY OF CONCRETE REMOVAL AND REPLACEMENT
 6. REMOVE AND REPLACE EXIST CONCRETE STREAM BANK TO TOE OF STREAM FOR EXISTING BRIDGE BENT REMOVAL. EST 17 CY OF CONCRETE REMOVAL AND REPLACEMENT
 7. BEGIN SPILL CURB -L- STA 43+39 (9' LT)
 8. BEGIN SPILL CURB -L- STA 43+39 (42' LT)

LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

STRUCTURE EXCAVATION
RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

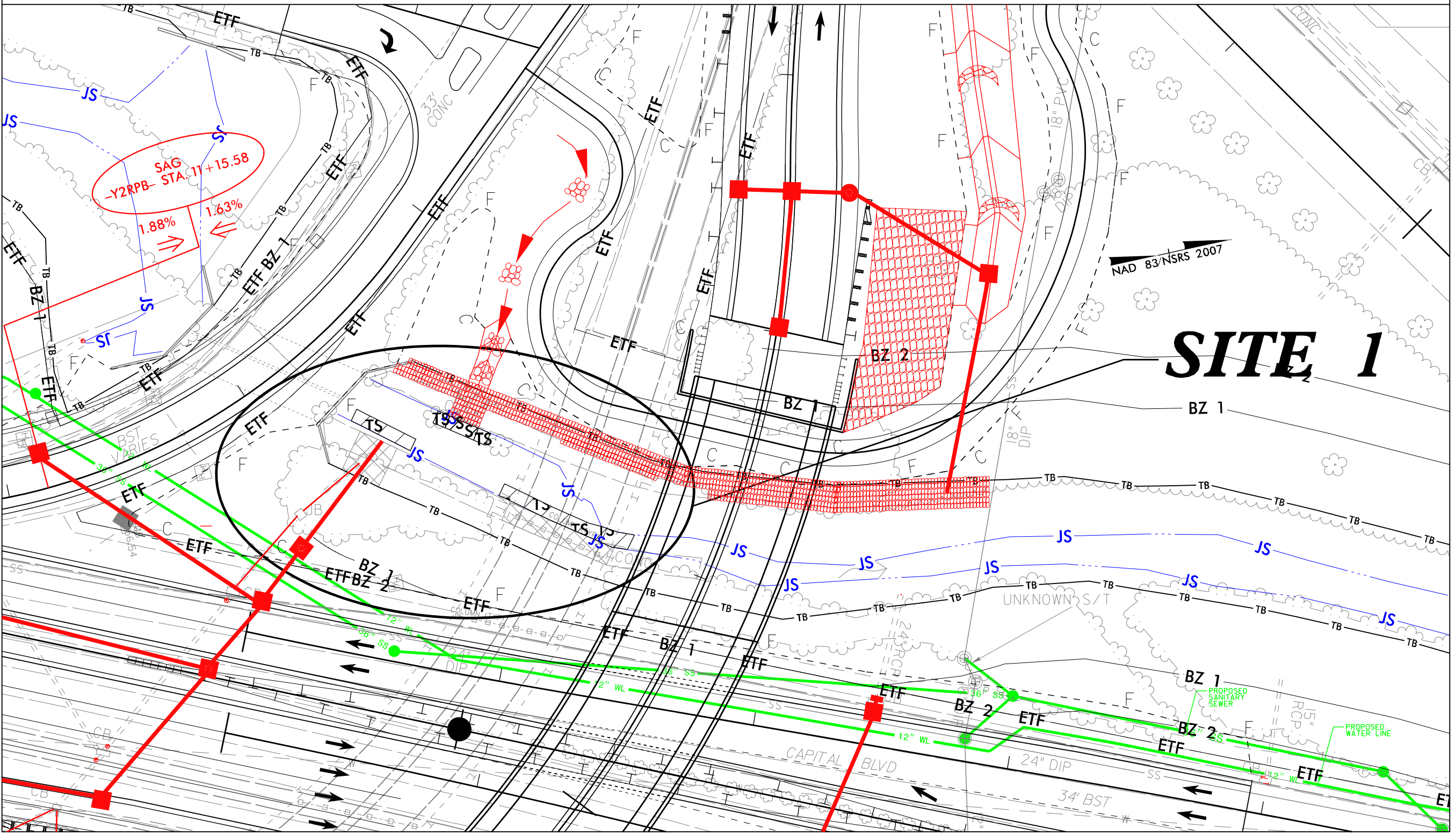
SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 2D-1 FOR DRAINAGE DETAILS
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 11 FOR -SBL- AND -NBL- PROFILES
SEE SHEET 13 FOR -FLYOVER- AND -Y2RPA- PROFILES
SEE SHEET 14 FOR -Y2RPA- AND -Y2LPC- PROFILES
SEE SHEET 15 FOR -Y8- AND -Y9- PROFILES

PROJECT REFERENCE NO. B-5121 / B-5317	SHEET NO. 2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 1 IMPACT ENLARGEMENT

SCALE: 1" = 20'



REVISIONS

10/9/2015

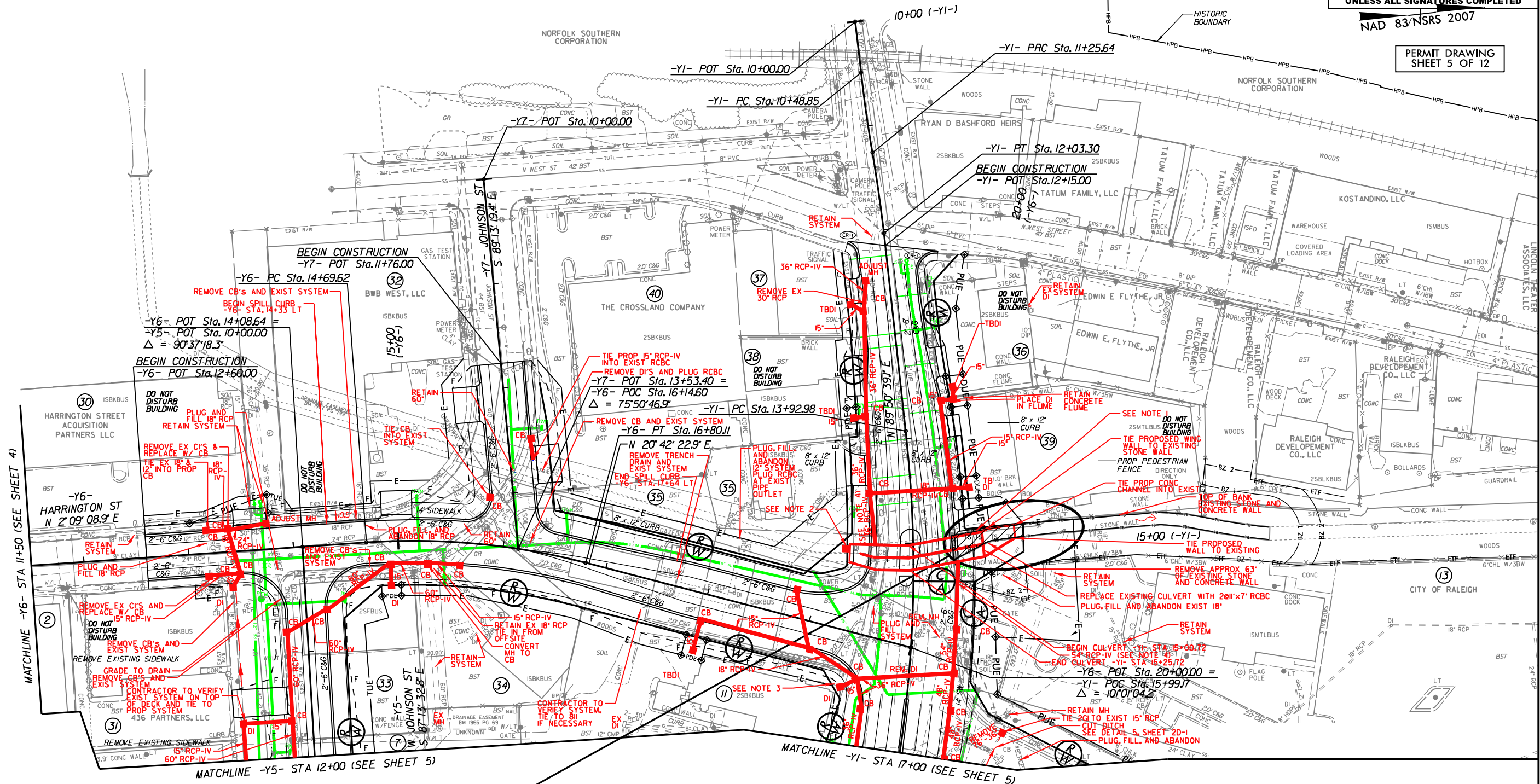
REVISIONS

② WAKE COUNTY DB 12835 - PG 2740 BM 1960 - PG 241	③⑤ CHAUCER INVESTMENTS INC DB 13332 - PG 957 BM 1997 - PG 799	③⑧ MARGARET ALTMAN MANN DB 2989 - PG 318
①① MARGIE MARIE FULLER DB 10559 - PG 1762	③⑥ EDWIN E FLYTHE, JR DB 3126 - PG 580 BM 1885 - PG 82 BM 1977 - PG 393	③⑨ JAMES H ANDERSON CO DB 5940 - PG 289 BM 1993 - PG 141
③③ HESTER & HESTER DB 8181 - PG 1853 BM 1885 - PG 104	③⑦ RICHARD GARDNER DB 8613 - PG 2425	④① ARCHIE LINWOOD KING SUCCESSOR TRUSTEE DB 5369 - PG 541 BM 1947 - PG 73
③④ MANN FAMILY PROPERTIES OF RALEIGH DB 1802 - PG 1658		

Kimley»Horn
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. B-5121 / B-5317	SHEET NO. 8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
NAD 83/NSRS 2007	

PERMIT DRAWING
SHEET 5 OF 12



SITE 2

LEGEND

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTES:

1. REMOVE TOP OF EXISTING STONE WALL TO AN ELEVATION APPROXIMATELY 1' BELOW EXISTING PARKING LOT. REMOVE TOP OF WALL APPROXIMATELY 22' FROM EXISTING RCBC HEADWALL TO BEYOND THE PROPOSED SIDEWALK AND CHAIN LINK FENCE. USE FLOWABLE FILL BETWEEN EXISTING STONE WALL AND OUTSIDE OF PROPOSED RCBC. EST 10 CY FLOWABLE FILL.
2. REMOVE EXIST DI AND INSTALL TB2GION TOP OF RCBC

★ TRAFFIC SIGNAL

RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEETS 2B-2 AND 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 11 FOR -Y1- PROFILE
SEE SHEET 14 FOR -Y5- PROFILE
SEE SHEET 15 FOR -Y6- AND -Y7- PROFILES

REVISIONS

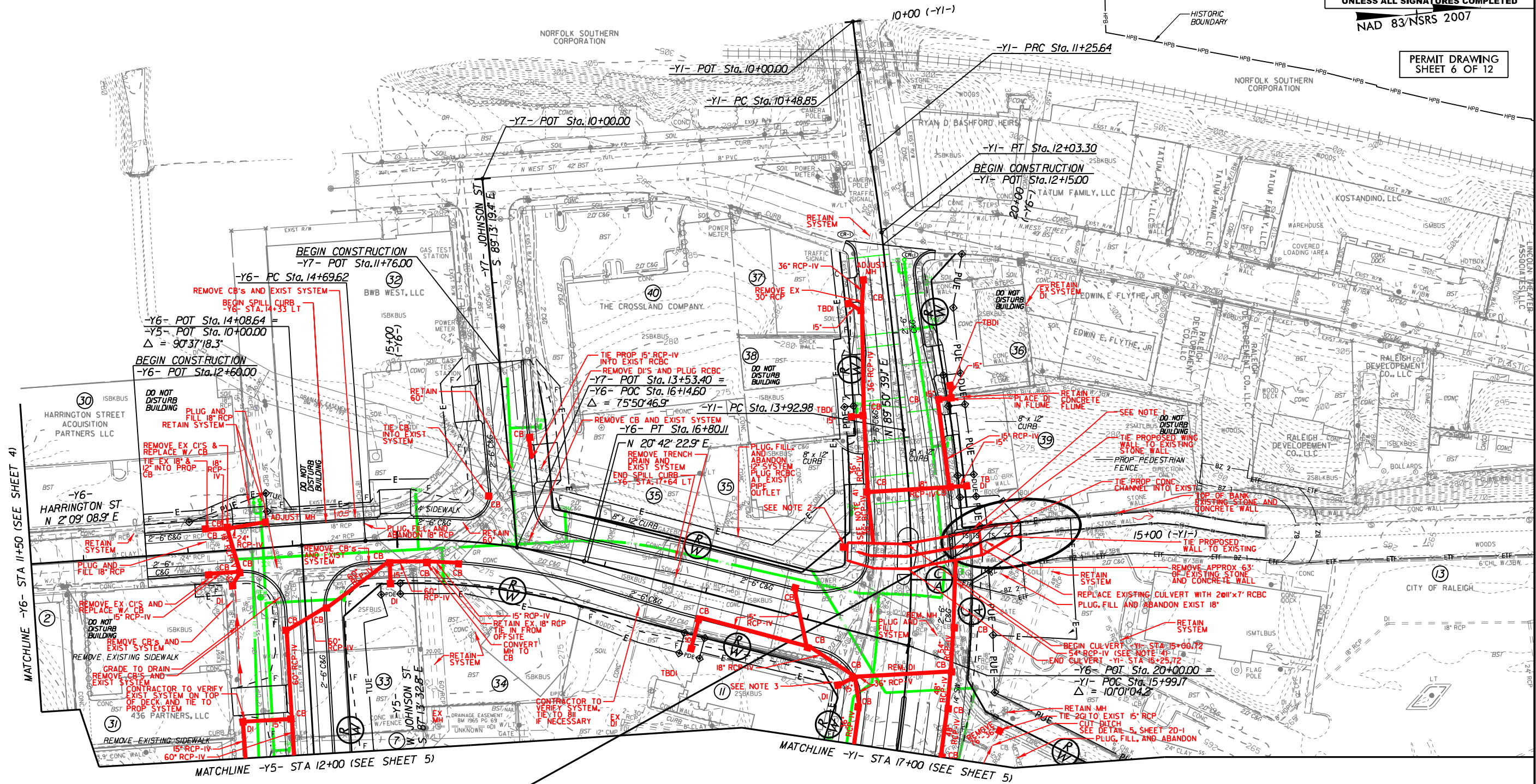
② WAKE COUNTY DB 12835 - PG 2740 BM 1960 - PG 241	③⑤ CHAUCER INVESTMENTS INC DB 13332 - PG 957 BM 1997 - PG 799	③⑧ MARGARET ALTMAN MANN DB 2989 - PG 318
①① MARGIE MARIE FULLER DB 10559 - PG 1762	③⑥ EDWIN E FLYTHE, JR DB 3126 - PG 580 BM 1885 - PG 82 BM 1977 - PG 393	③⑨ JAMES H ANDERSON CO DB 5940 - PG 289 BM 1993 - PG 141
③③ HESTER & HESTER DB 8181 - PG 1853 BM 1885 - PG 104	③⑦ RICHARD GARDNER DB 8613 - PG 2425	④① ARCHIE LINWOOD KING SUCCESSOR TRUSTEE DB 5369 - PG 541 BM 1947 - PG 73
③④ MANN FAMILY PROPERTIES OF RALEIGH DB 11802 - PG 1658		

Kimley»Horn

P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. B-5121 / B-5317	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
NAD 83/NSRS 2007	

PERMIT DRAWING
SHEET 6 OF 12



SITE 2

LEGEND

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTES:

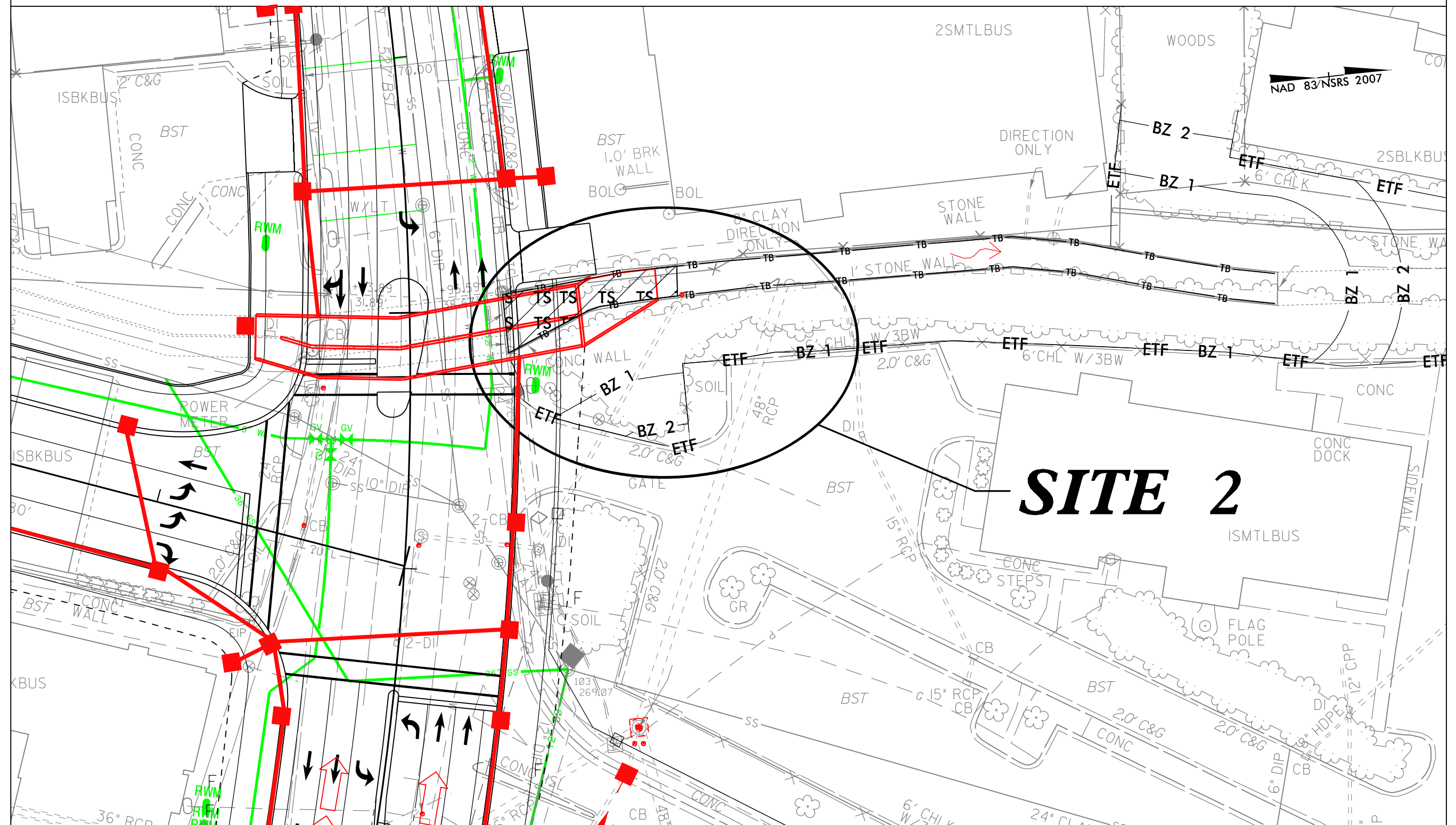
1. REMOVE TOP OF EXISTING STONE WALL TO AN ELEVATION APPROXIMATELY 1' BELOW EXISTING PARKING LOT. REMOVE TOP OF WALL APPROXIMATELY 22' FROM EXISTING RCBC HEADWALL TO BEYOND THE PROPOSED SIDEWALK AND CHAIN LINK FENCE. USE FLOWABLE FILL BETWEEN EXISTING STONE WALL AND OUTSIDE OF PROPOSED RCBC. EST 10 CY FLOWABLE FILL.
2. REMOVE EXIST DI AND INSTALL TB2GION TOP OF RCBC

★ TRAFFIC SIGNAL

RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEETS 2B-2 AND 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 11 FOR -Y1- PROFILE
SEE SHEET 14 FOR -Y5- PROFILE
SEE SHEET 15 FOR -Y6- AND -Y7- PROFILES

SITE 2 IMPACT ENLARGEMENT
SCALE: 1" = 20'



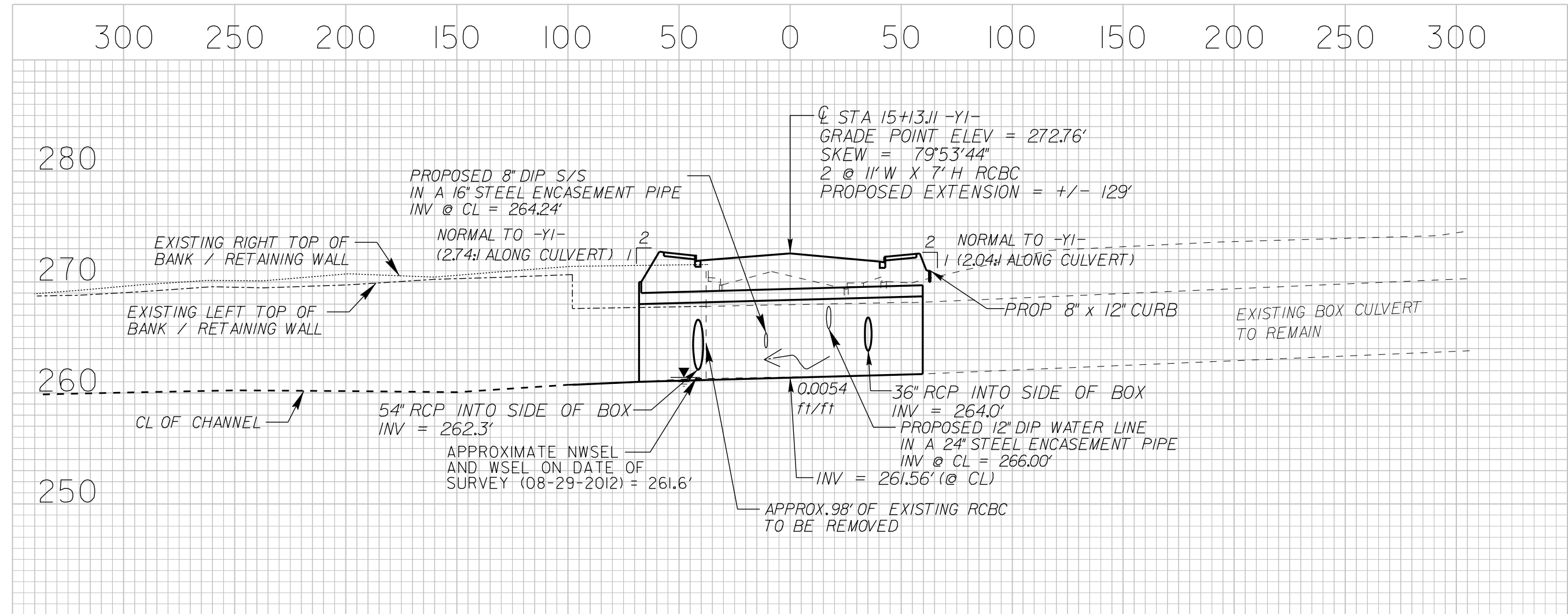
REVISIONS

5/14/99

10/27/2015

PROJECT REFERENCE NO. B-5121 / B-5317		SHEET NO.	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

PERMIT DRAWING
SHEET 8 OF 12

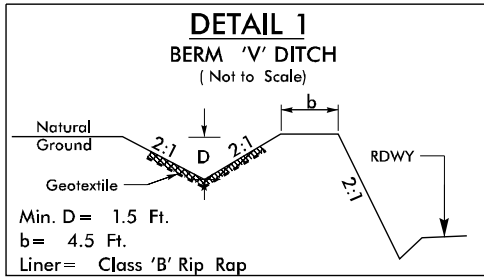


REVISIONS

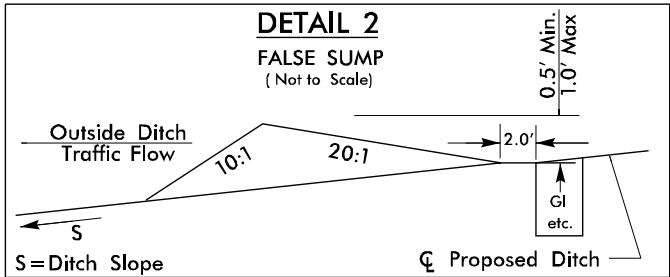
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B-5121 / B-5317	20-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 9 OF 12

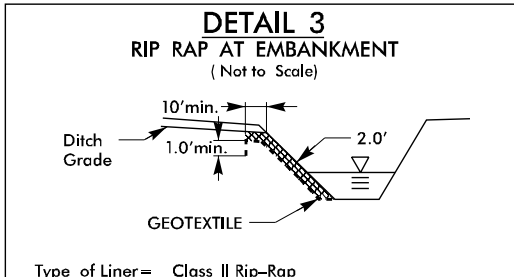
DRAINAGE DETAILS



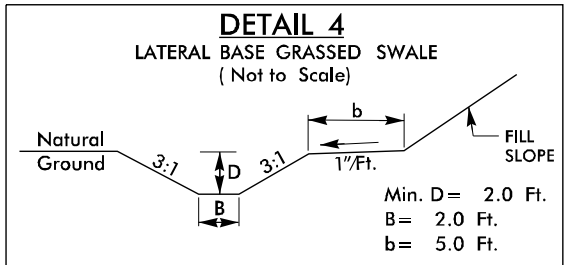
FROM -Y1- STA. 20+65 TO STA. 21+50 (RT)
FROM -Y1RPC- STA. 16+65 TO STA. 18+33.19 (RT)
SEE SHEET 5



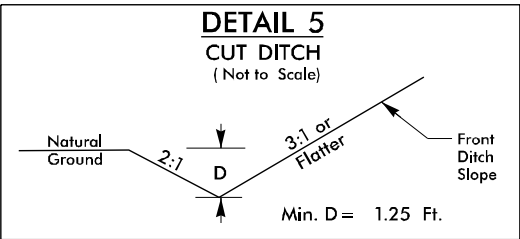
-Y1RPD- 13+00 (RT)
SEE SHEET 5



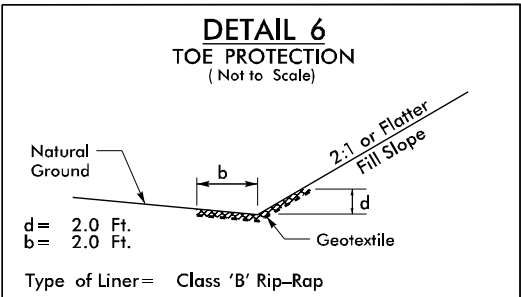
-Y8- STA 10+95 (LT)
FROM -L- STA 49+45 (LT) TO STA. 51+80 (LT)
SEE SHEET 7



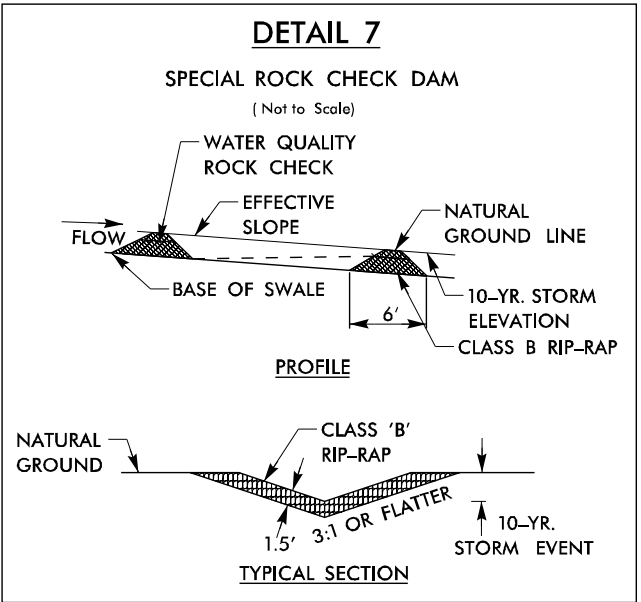
FROM -FLYOVER- STA 22+12 TO STA 23+70 (RT)
SEE SHEET 7



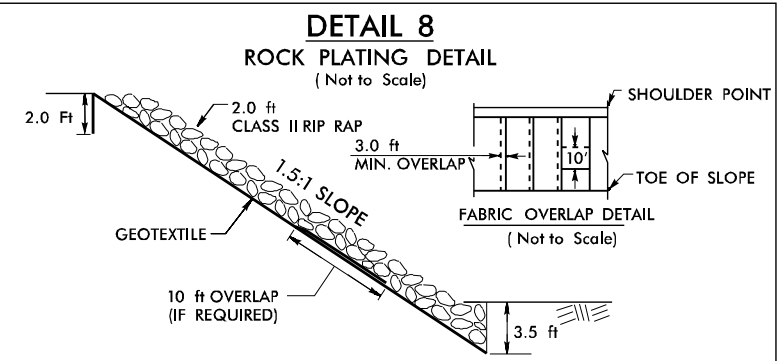
FROM -L- STA 51+00 TO STA 52+90 (RT)
SEE SHEET 7
FROM -Y1- STA 16+70 TO STA 17+27 (LT)
SEE SHEET 8



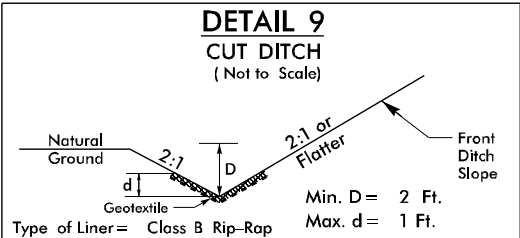
FROM -L- STA 47+50 TO STA 48+25 (RT)
SEE SHEET 7



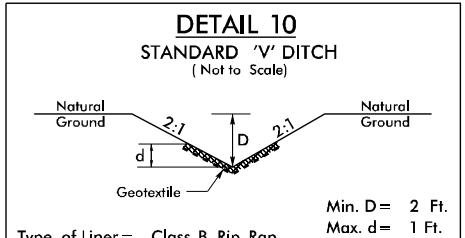
FROM -FLYOVER- STA 22+12 TO STA 23+70 (RT)
SEE SHEET 7



FROM -FLYOVER- STA 21+68 TO STA 22+50 (RT)
SEE SHEET 7



FROM -G1- STA 10+25 TO STA 11+25 (RT)
SEE SHEET 7 AND SHEET 2B-4



FROM -G1- STA. 11+25 (RT) TO STA 11+42 (RT)
SEE SHEET 7 AND SHEET 2B-4

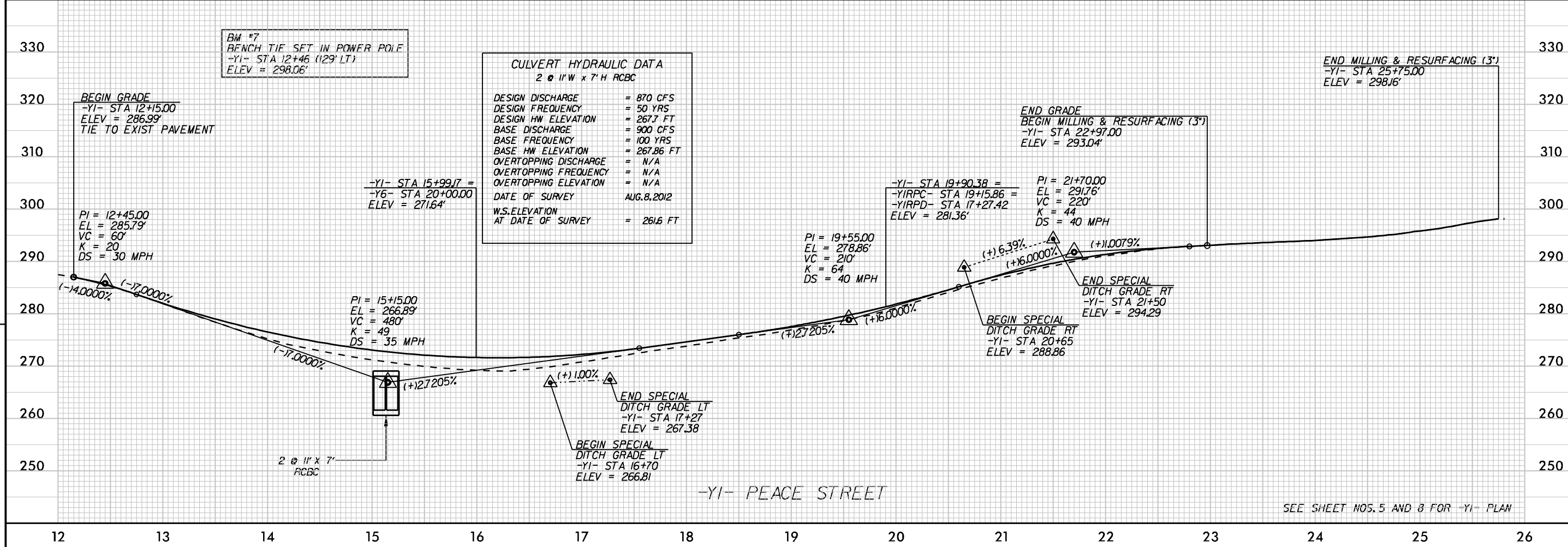
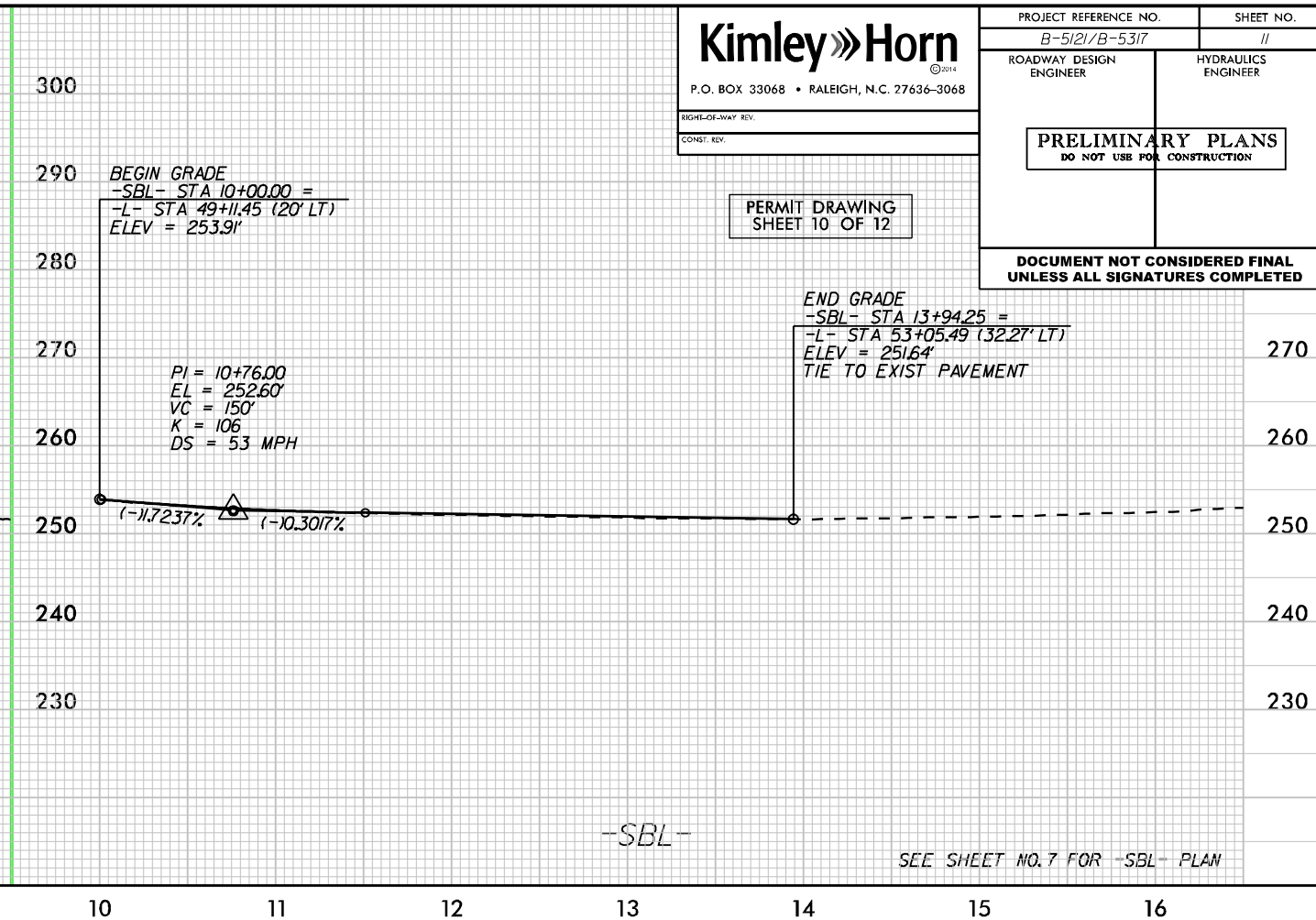
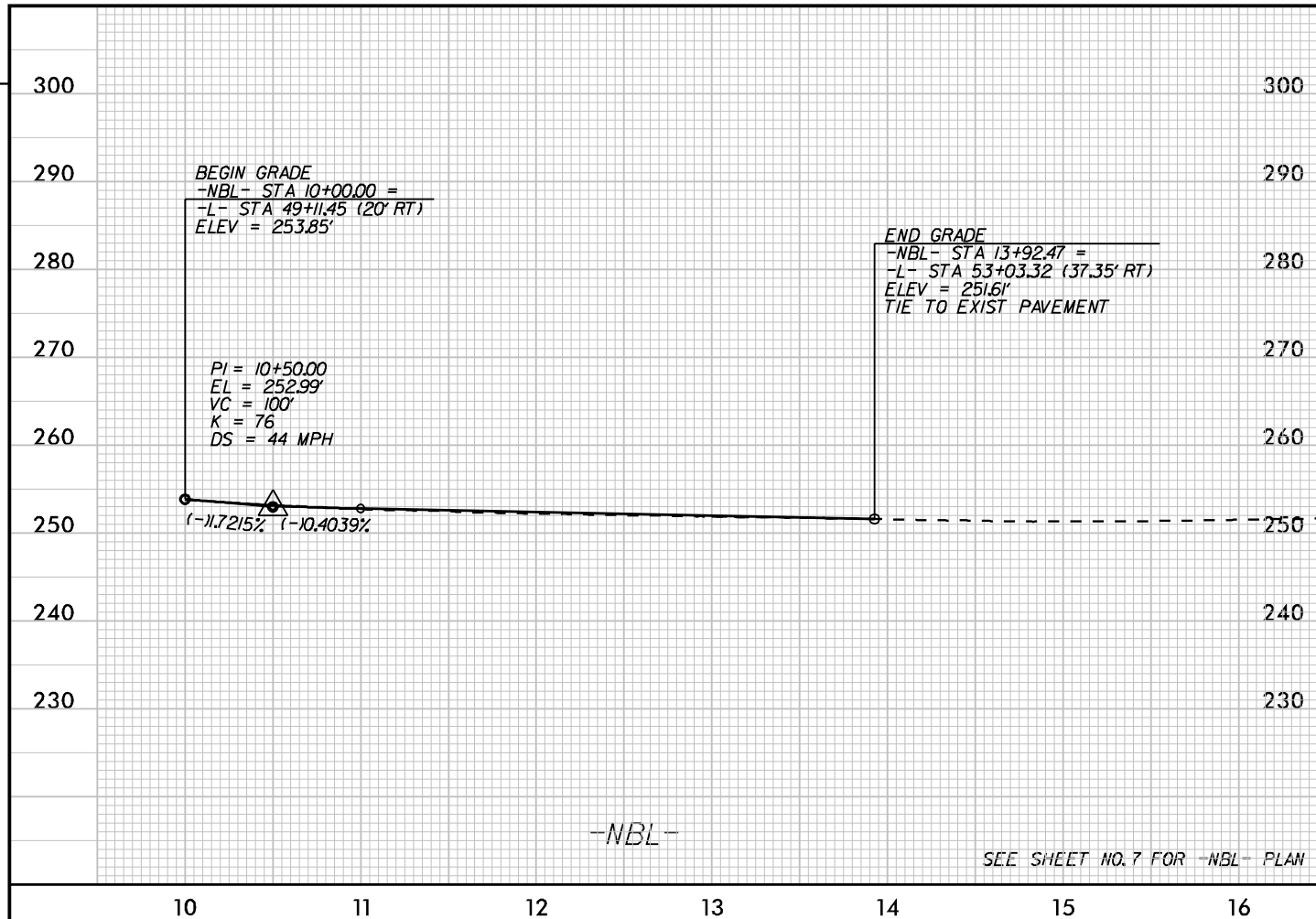
REVISIONS

10/18/2015

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

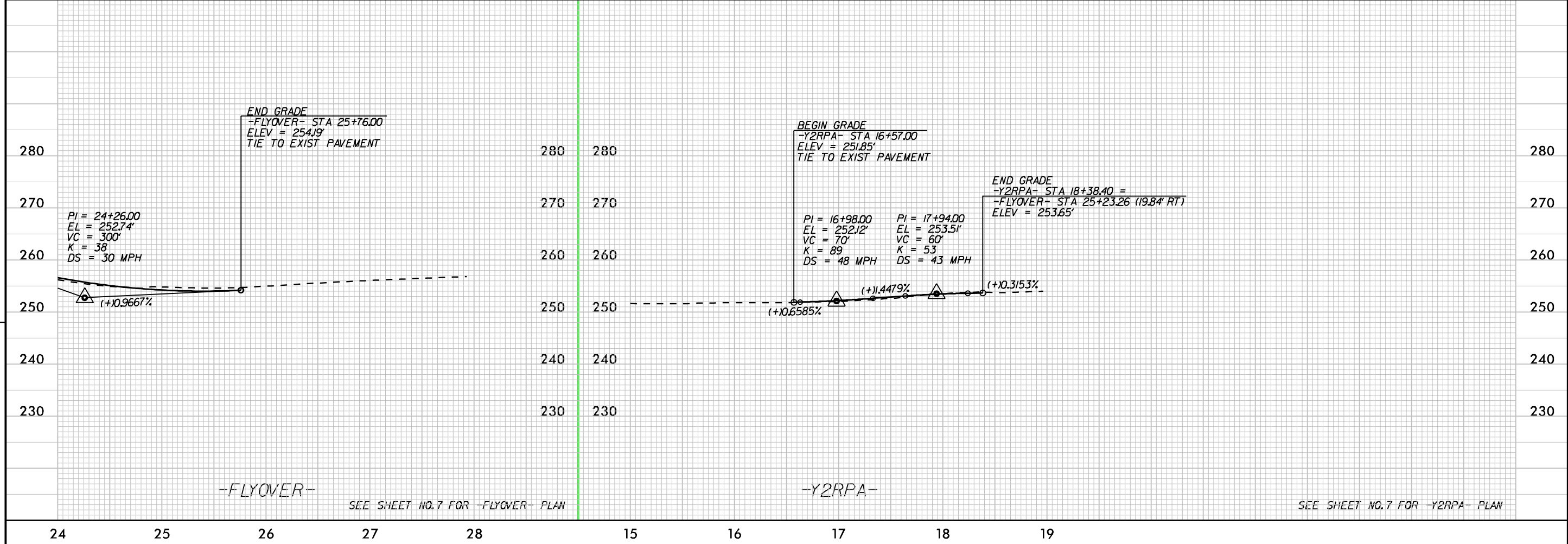
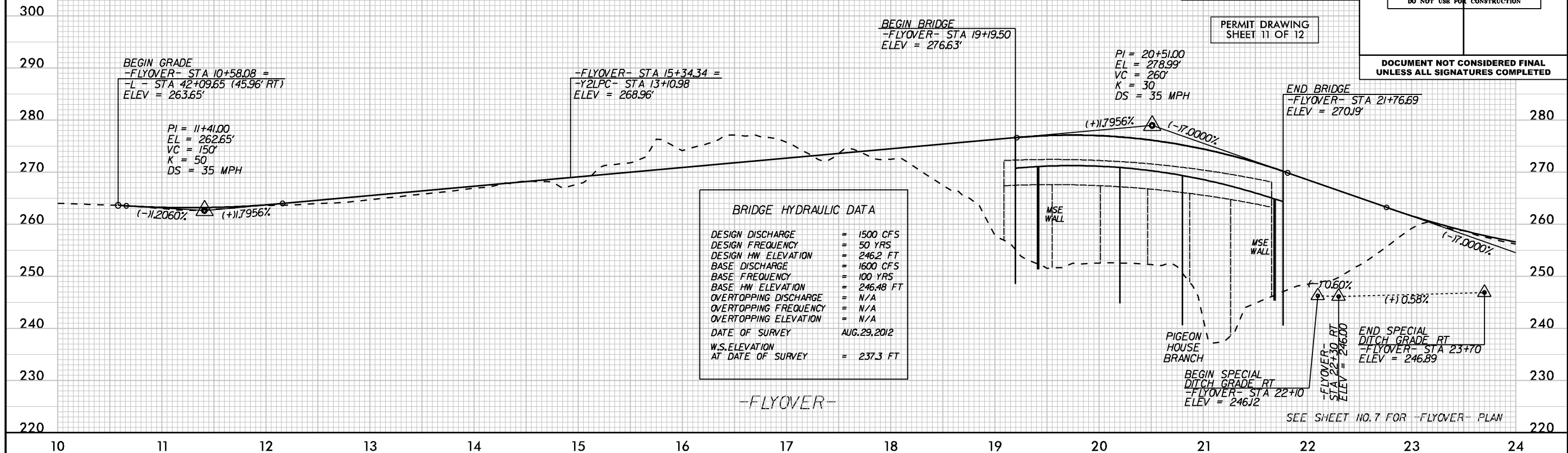
PERMIT DRAWING
SHEET 10 OF 12



REVISIONS

10/8/2015

PERMIT DRAWING
SHEET 11 OF 12

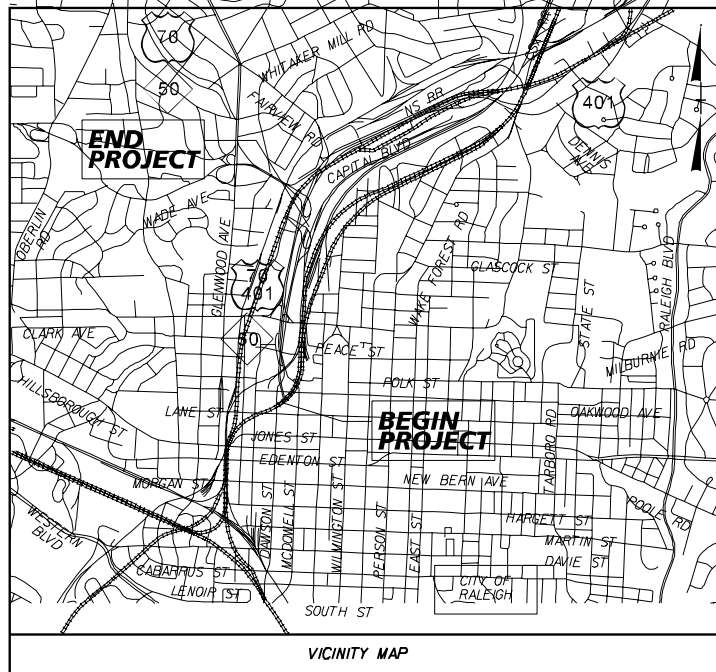


10/8/2015

TIP PROJECT: B-5121 / B-5317

CONTRACT:

SEE SHEET 1A FOR INDEX OF SHEETS
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

LOCATION: BRIDGE NO. 227 ON US-70/US-401/NC-50 (CAPITAL BOULEVARD) OVER PEACE STREET
AND BRIDGE NO. 213 ON US-70/NC-50 (WADE AVENUE) OVER US 401 (CAPITAL BOULEVARD)
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, STRUCTURES, AND CULVERT

BUFFER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5121/B-5317	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
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46031.1.1	BRSTP-0070(149)	P.E. (B-5317)	
42263.2.1	BRNHS-0070(119)	R/W (B-5121/B-5317)	
42263.2.1	BRNHS-0070(119)	UTL (B-5121/B-5317)	
42263.3.1	BRNHS-0070(119)	CONST (B-5121/B-5317)	

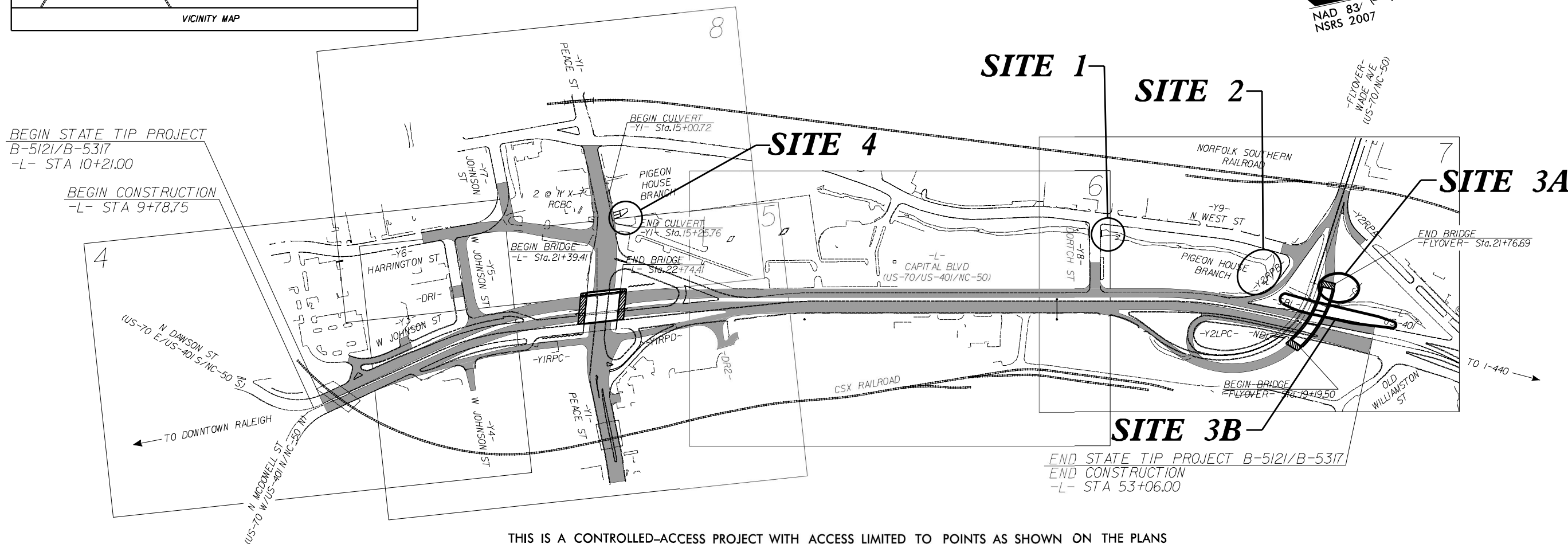
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

BUFFER DRAWING
SHEET 1 OF 7

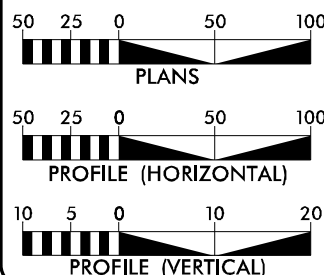
BEGIN STATE TIP PROJECT
B-5121/B-5317
-L- STA 10+21.00

BEGIN CONSTRUCTION
-L- STA 9+78.75



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS

GRAPHIC SCALES



DESIGN DATA

AADT 2016 = 58,083
AADT 2036 = 70,416
K = 10%
D = 55%
T = 5%*
V = 40 MPH
CLASSIFICATION:
URBAN ARTERIAL
* 1% TTST 4% DUAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5121 / B-5317 = 0.786 MILES
LENGTH STRUCTURE TIP PROJECT B-5121 / B-5317 = 0.026 MILES
TOTAL LENGTH TIP PROJECT B-5121 / B-5317 = 0.812 MILES

PLANS PREPARED FOR
THE NCDOT BY:

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 30, 2015

LETTING DATE:
JUNE 21, 2016

Kimley » Horn

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

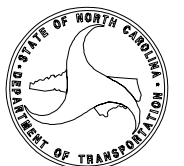
J. JASON PACE, P.E.
PROJECT DESIGN ENGINEER

REKHA PATEL, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN
ENGINEERING COORDINATION SECTION

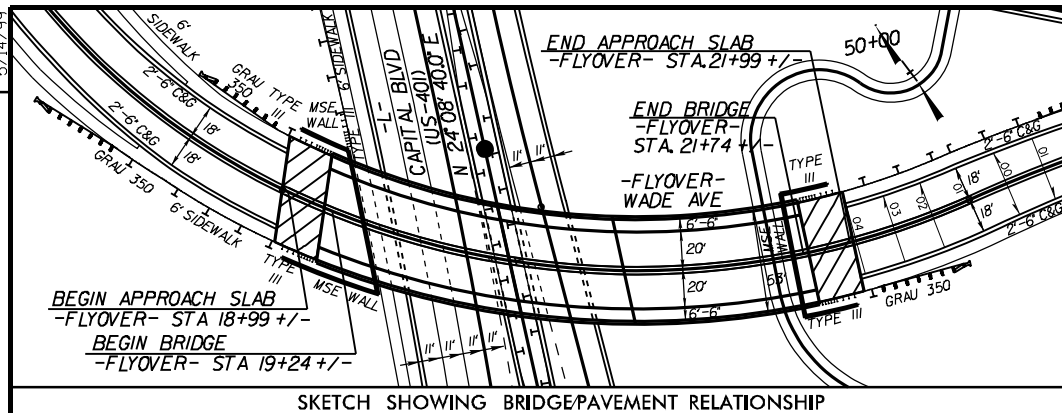
HYDRAULICS ENGINEER

SIGNATURE: P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



5/14/99
10/27/2015



- 23 HENRY J VANPALA
DB 3865 - PG 46
BM 2008 - PG 2034
- 24 HOBCO AUTO SALES
DB 14308 - PG 1234
BM 1959 - PG 262
- 26 LISTON E & SUSAN S MALPASS
DB 7807 - PG 382
BM 2003 - PG 964
- 27 JOYNER'S REAL ESTATE HOLDINGS V LLC
DB 15087 - PG 2007
BM 1959 - PG 262
- 28 ISABEL HUFMEYER
DB 7807 - PG 382
BM 2003 - PG 964
- 29 SUZANNE ABERNETHY WILLIAM R RUGGLES
DB 13227 - PG 452
BM 1958 - PG 10

Kimley»Horn

P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO.		SHEET NO.	
B-5121 / B-5317		7	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			

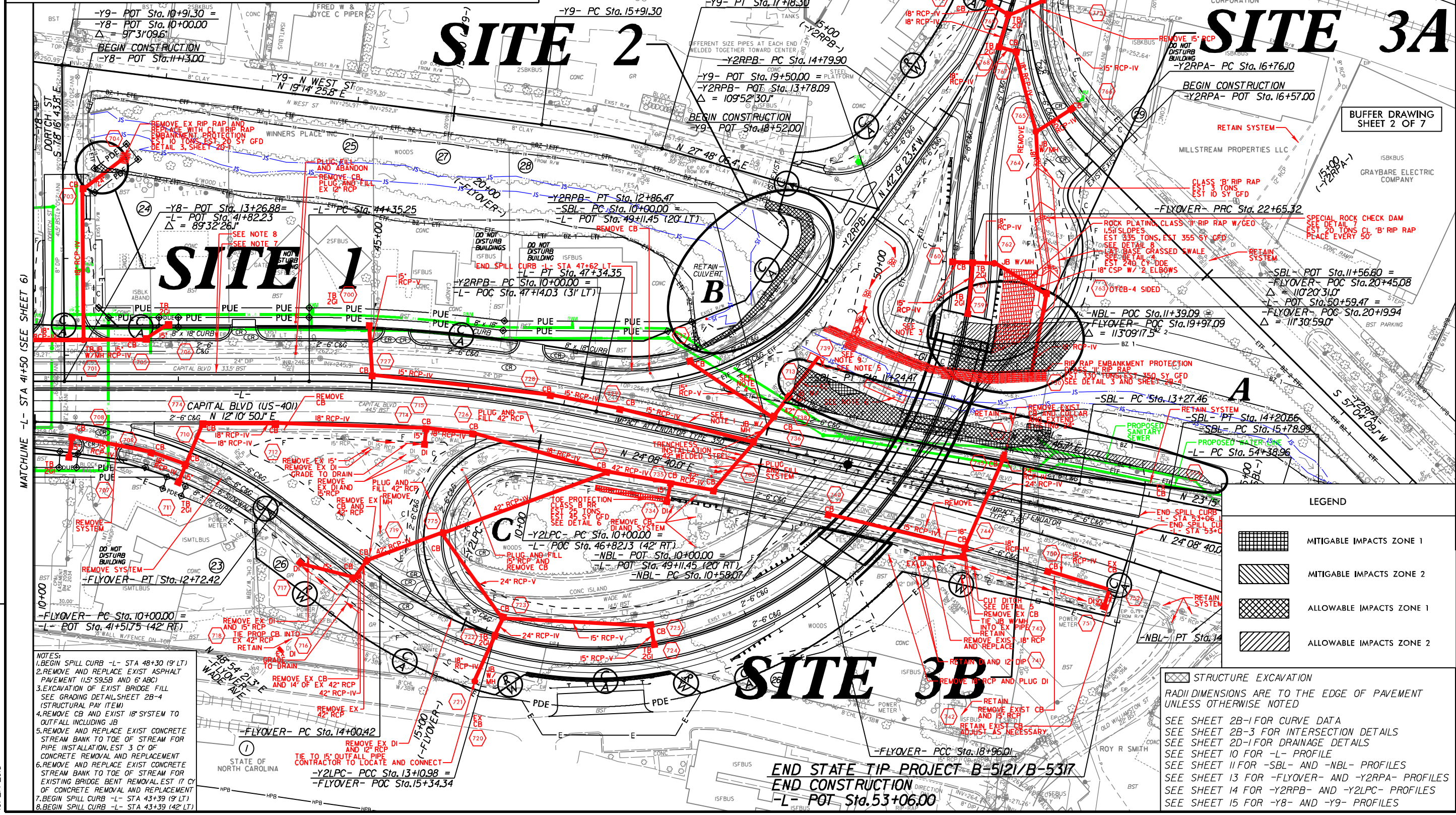
PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

NAD 83/NSRS 2007



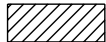
RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 2D-1 FOR DRAINAGE DETAILS
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 11 FOR -SBL- AND -NBL- PROFILES
SEE SHEET 13 FOR -FLYOVER- AND -Y2RPA- PROFILES
SEE SHEET 14 FOR -Y2RPB- AND -Y2LPC- PROFILES
SEE SHEET 15 FOR -Y8- AND -Y9- PROFILES

LEGEND



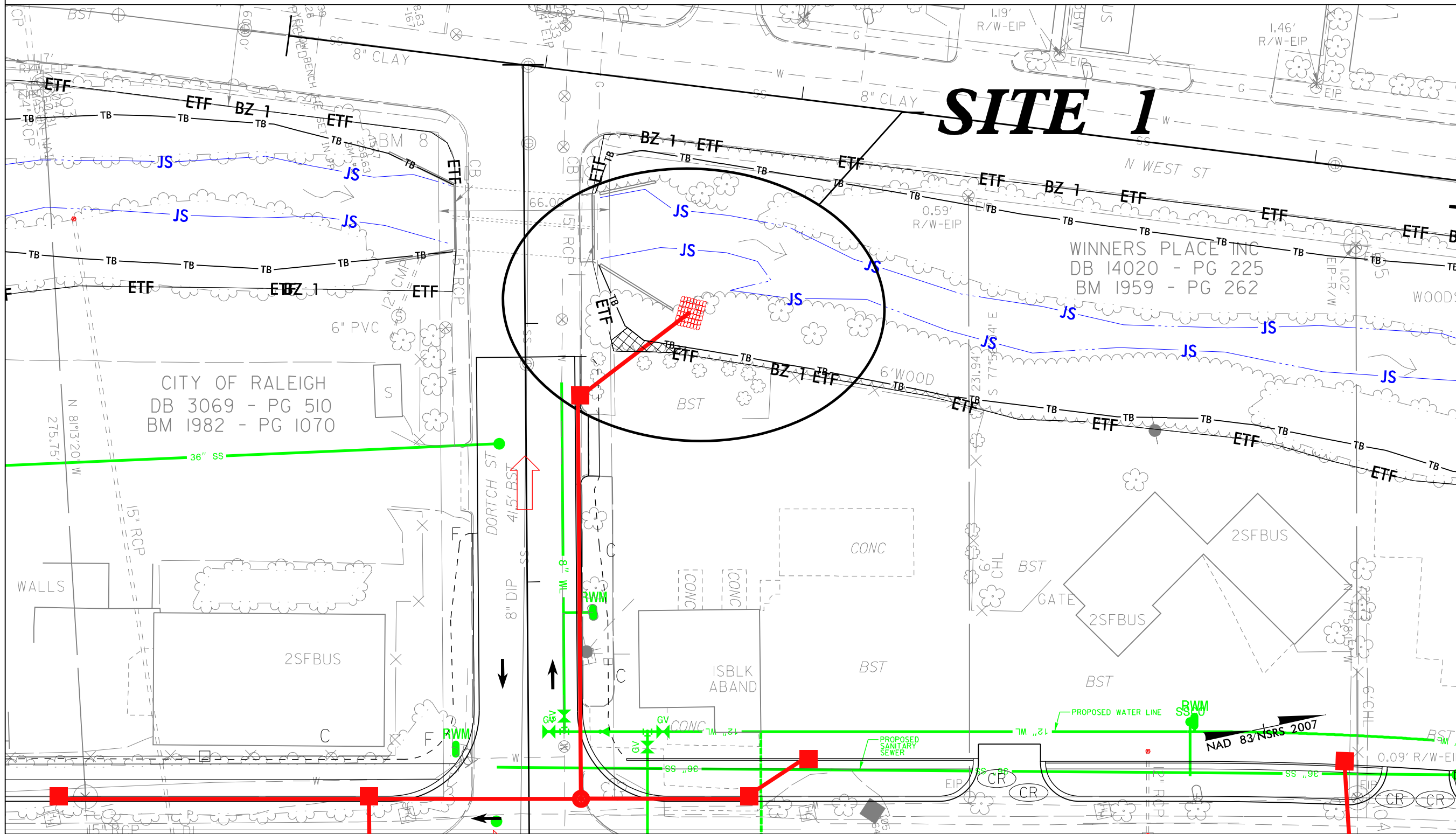
ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

SITE 1 IMPACT ENLARGEMENT

SCALE: 1" = 20'



REVISIONS

10/9/2015

5/14/99

REVISIONS

10/27/2015

LEGEND

ALLOWABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 2

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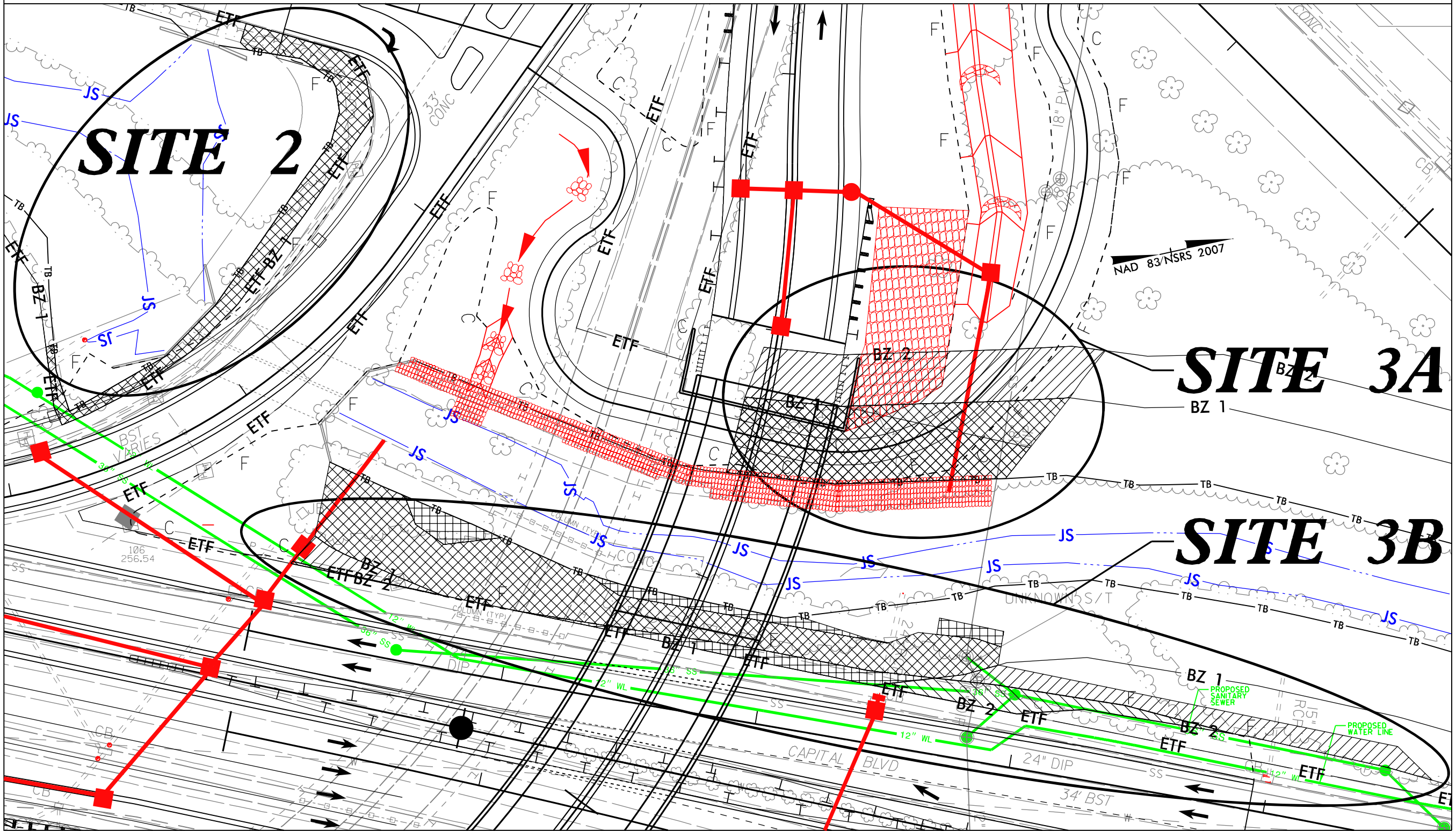
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

BUFFER DRAWING
SHEET 4 OF 7

PROJECT REFERENCE NO. B-5121 / B-5317	SHEET NO. 2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SITES 2, 3A, AND 3B IMPACT ENLARGEMENT

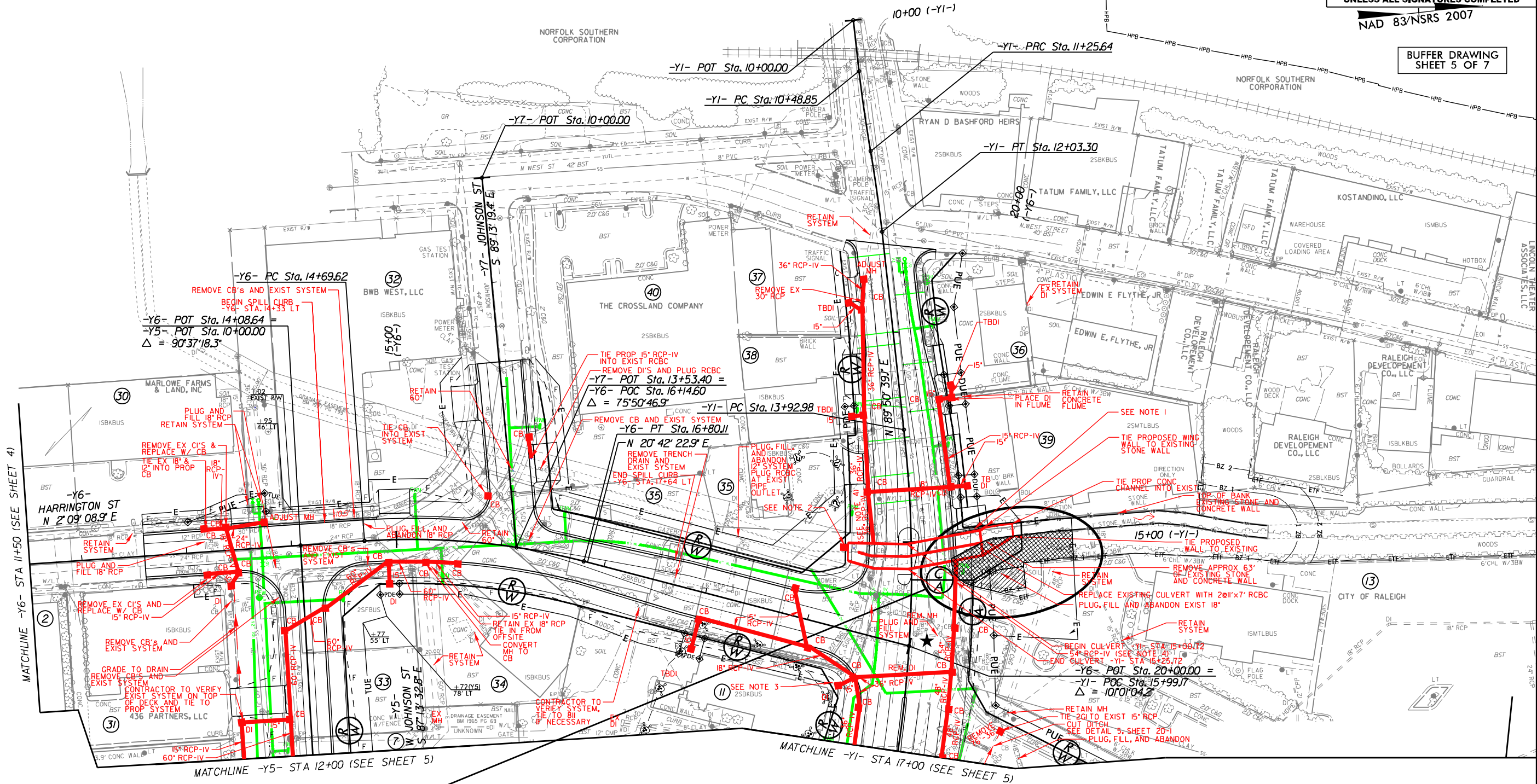
SCALE: 1" = 20'



PROJECT REFERENCE NO.	SHEET NO.
B-5121 / B-5317	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
NAD 83/NSRS 2007	

BUFFER DRAWING
SHEET 5 OF 7

② WAKE COUNTY DB 12835 - PG 2740 BM 1960 - PG 241	③⑤ CHAUCER INVESTMENTS INC DB 13332 - PG 957 BM 1997 - PG 799	③⑧ MARGARET ALTMAN MANN DB 2989 - PG 318
①① MARGIE MARIE FULLER DB 10559 - PG 1762	③⑥ EDWIN E FLYTHE, JR DB 3126 - PG 580 BM 1885 - PG 82	③⑨ JAMES H ANDERSON CO DB 5940 - PG 289 BM 1993 - PG 141
③③ HESTER & HESTER DB 8181 - PG 1853 BM 1885 - PG 104	③⑦ RICHARD GARDNER DB 8613 - PG 2425	④① ARCHIE LINWOOD KING SUCCESSOR TRUSTEE DB 5369 - PG 541 BM 1947 - PG 73
③④ MANN FAMILY PROPERTIES OF RALEIGH DB 11802 - PG 1658		



SITE 4

LEGEND



ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

NOTES:

1. REMOVE TOP OF EXISTING STONE WALL TO AN ELEVATION APPROXIMATELY 1' BELOW EXISTING PARKING LOT. REMOVE TOP OF WALL APPROXIMATELY 22' FROM EXISTING RCBC HEADWALL TO BEYOND THE PROPOSED SIDEWALK AND CHAIN LINK FENCE. USE FLOWABLE FILL BETWEEN EXISTING STONE WALL AND OUTSIDE OF PROPOSED RCBC. EST 10 CY FLOWABLE FILL.
2. REMOVE EXIST DI AND INSTALL TB2GION TOP OF RCBC

★ TRAFFIC SIGNAL

RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT
UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEETS 2B-2 AND 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 11 FOR -Y1- PROFILE
SEE SHEET 14 FOR -Y5- PROFILE
SEE SHEET 15 FOR -Y6- AND -Y7- PROFILES

REVISIONS

10/18/2015

LEGEND

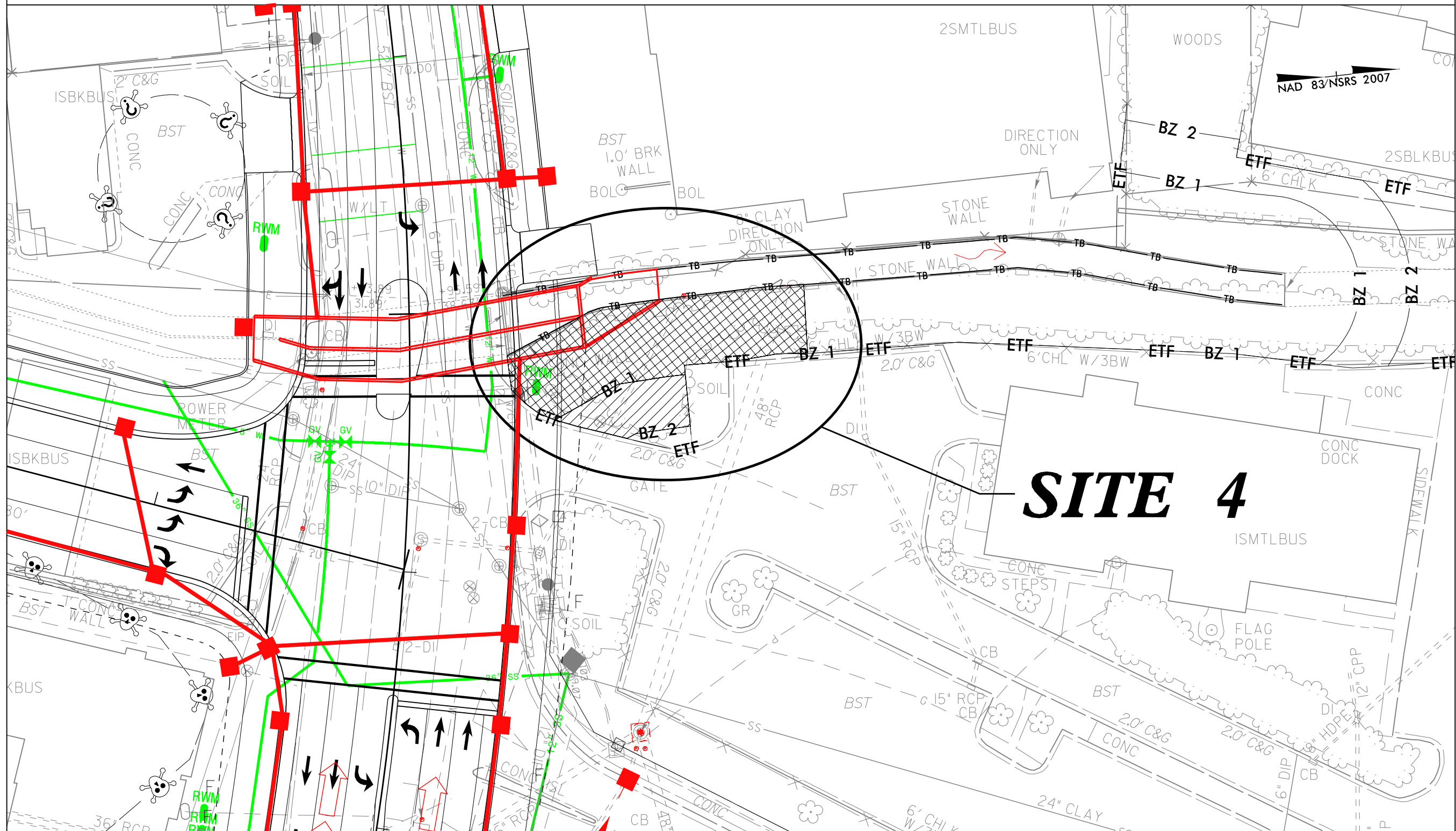


ALLOWABLE IMPACTS ZONE 1



ALLOWABLE IMPACTS ZONE 2

SITE 4 IMPACT ENLARGEMENT
SCALE: 1" = 20'



REVISIONS

10/18/2015

BUFFER IMPACTS SUMMARY													
			IMPACT									BUFFER REPLACEMENT	
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE			ALLOWABLE			MITIGABLE				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)	TOTAL (ft²)	ZONE 1 (ft²)	ZONE 2 (ft²)
1	24" RCP	-Y8- 11+02.00 - 11+12.23 (LT)	X			136	0	136					
2	Roadway	-Y2RPB- 11+27.41 - 13+31.69 (LT)	X			1823	0	1823					
3A	Base Ditch, 18" Outfall Pipe, Greenway	-FLYOVER- 21+76.69 - 22+09.83 (RT)	X			811	2501	3312					
3A	Bridge	-FLYOVER- 21+41.29 - 21+76.69 (RT)		X		2711	87	2798					
3B	Roadway, Sanitary Gravity Sewer	-L- 49+22.20 - 53+72.74 (LT)			X	4704	1603	6307	1282	734	2016		
4	2 @ 11'x7' RCBC	-Y1- 14+92.51 - 15+46.70 (LT)	X			3321	803	4124					
TOTAL:						13506	4994	18500	1282	734	2016		

Notes:

- Site 1 replaces an existing stormwater discharge point with a new outfall pipe
- Site 3B includes impacts due to the fill slope of the proposed Roadway (-L-), existing stormdrain pipe removal, proposed stormdrain pipe, access for existing bridge removal, proposed bridge bent, proposed sanitary sewer and proposed water line

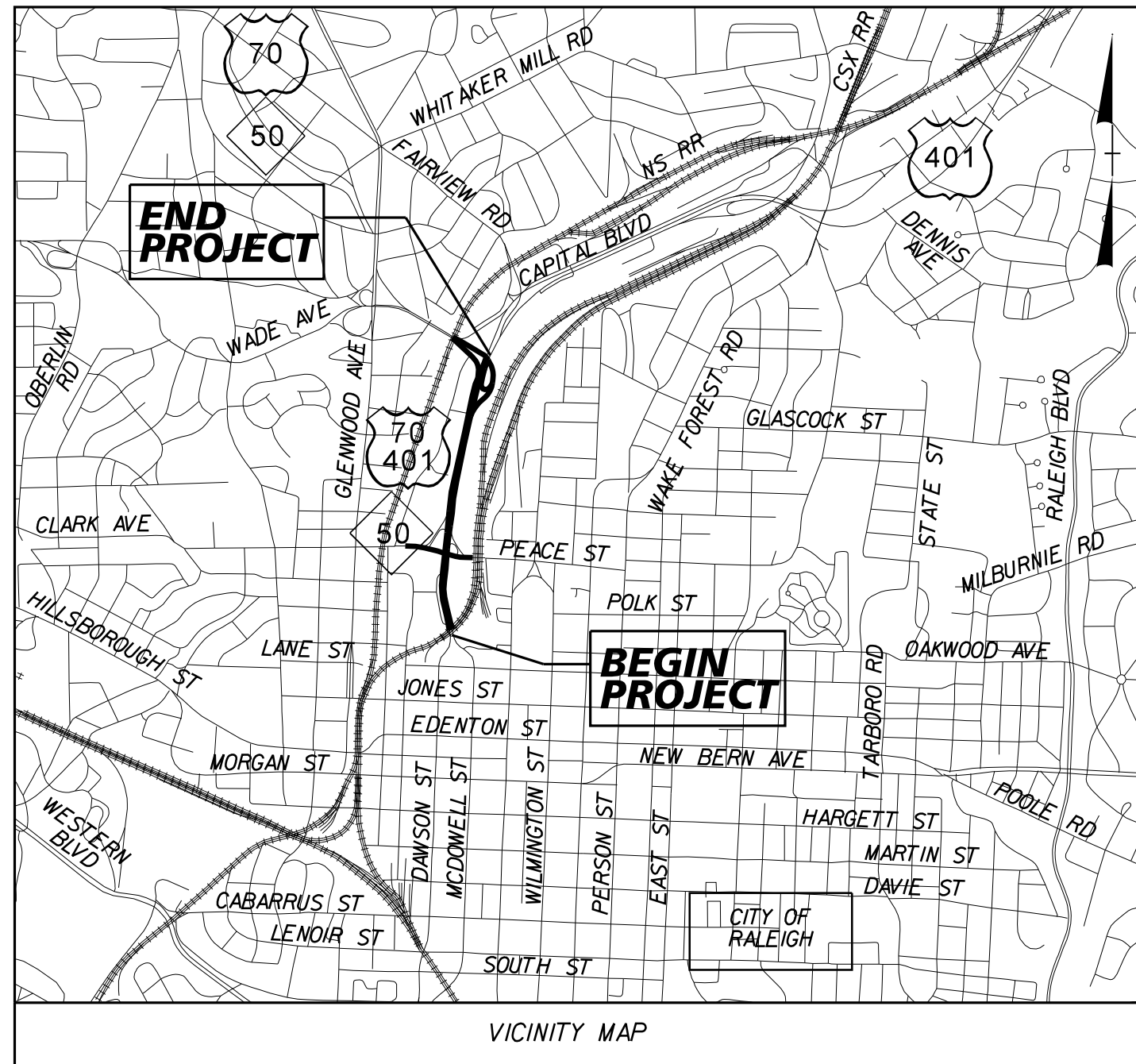
N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE COUNTY
PROJECT: B-5121 / B-5317

TIP PROJECT: B-5121 / B-5317

CONTRACT: C203751

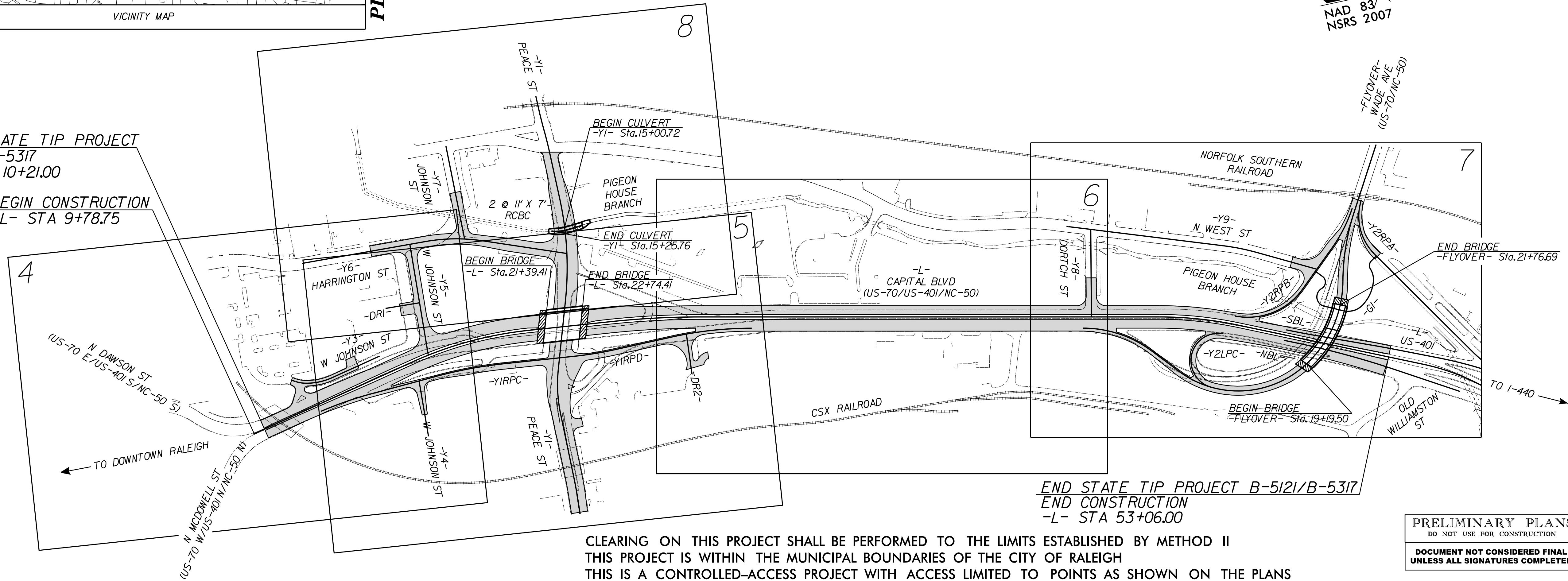
SEE SHEET 1A FOR INDEX OF SHEETS
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS



PLFI PLANS

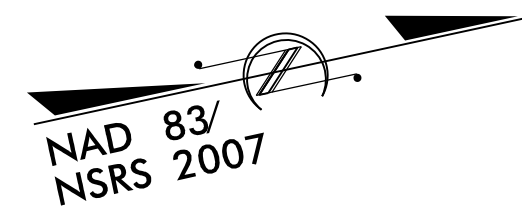
BEGIN STATE TIP PROJECT
B-5121/B-5317
-L- STA 10+21.00

BEGIN CONSTRUCTION
-L- STA 9+78.75

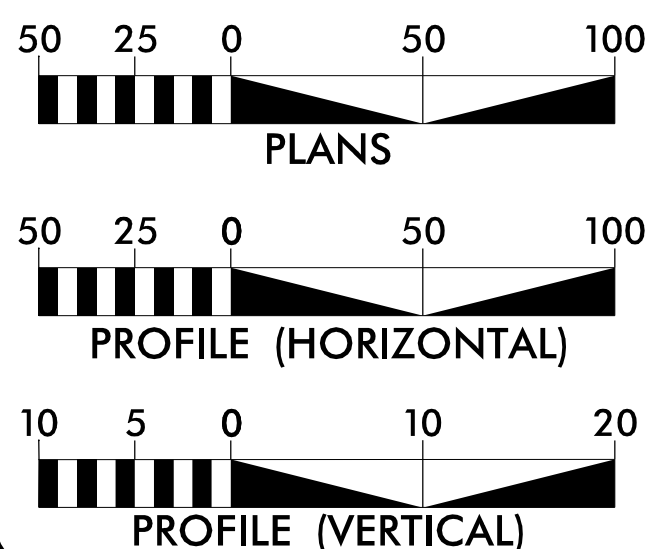


CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE CITY OF RALEIGH
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5121/B-5317	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
42263.1.1	BRNHS-0070(119)	P.E. (B-5121)	
46031.1.1	BRSTP-0070(149)	P.E. (B-5317)	
42263.2.1	BRNHS-0070(119)	R/W (B-5121B-5317)	
42263.2.1	BRNHS-0070(119)	UTL (B-5121B-5317)	
42263.3.1	BRNHS-0070(119)	CONST (B-5121B-5317)	



GRAPHIC SCALES



DESIGN DATA

AADT 2016 = 58,083
AADT 2036 = 70,416
K = 10%
D = 55%
T = 5%*
V = 40 MPH
CLASSIFICATION:
URBAN ARTERIAL
* 1% TTST 4% DUAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5121 /B-5317 = 0.786 MILES
LENGTH STRUCTURE TIP PROJECT B-5121 /B-5317 = 0.026 MILES
TOTAL LENGTH TIP PROJECT B-5121 /B-5317 = 0.812 MILES

PLANS PREPARED FOR
THE NCDOT BY:

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JUNE 30, 2015

LETTING DATE:
JUNE 21, 2016

Kimley»Horn

JEFFREY W. MOORE, P.E.
PROJECT ENGINEER

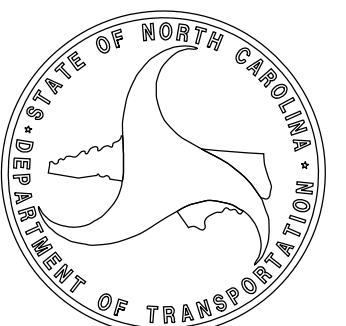
J. JASON PACE, P.E.
PROJECT DESIGN ENGINEER

REKHA PATEL, P.E.
PROJECT ENGINEER
NCDOT ROADWAY DESIGN
ENGINEERING COORDINATION SECTION

HYDRAULICS ENGINEER

SIGNATURE: P.E.
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----x
Property Monument	□ ECM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○-----
Proposed Chain Link Fence	□-----
Proposed Barbed Wire Fence	◇-----
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	---WLB---
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Existing Historic Property Boundary	---HPB---
Known Contamination Area: Soil	☠-----☠
Potential Contamination Area: Soil	☒-----☒
Known Contamination Area: Water	☠-----☠
Potential Contamination Area: Water	☒-----☒
Contaminated Site: Known or Potential	☠☒

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ ○ ○
Well	○ W
Small Mine	⚡
Foundation	□
Area Outline	□
Cemetery	□ +
Building	□ └┐
School	□ └┐ └┐
Church	□ └┐ └┐ └┐
Dam	-----

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	---JS---
Buffer Zone 1	---BZ 1---
Buffer Zone 2	---BZ 2---
Flow Arrow	←
Disappearing Stream	----->
Spring	○-----
Wetland	-----
Proposed Lateral, Tail, Head Ditch	----- FLOM
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite RW Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

VEGETATION:

Single Tree	☼
Single Shrub	☼
Hedge	-----
Woods Line	-----

Orchard	☼☼☼☼
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	Ⓟ
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	-----
H-Frame Pole	●-----●
U/G Power Line LOS B (S.U.E.*)	-----P-----
U/G Power Line LOS C (S.U.E.*)	-----P-----
U/G Power Line LOS D (S.U.E.*)	-----P-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	Ⓟ
Telephone Pedestal	Ⓟ
Telephone Cell Tower	-----
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----T-----
U/G Telephone Cable LOS C (S.U.E.*)	-----T-----
U/G Telephone Cable LOS D (S.U.E.*)	-----T-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----TC-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----TC-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----TC-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----T FO-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----T FO-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----T FO-----

WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
U/G Water Line LOS B (S.U.E*)	-----W-----
U/G Water Line LOS C (S.U.E*)	-----W-----
U/G Water Line LOS D (S.U.E*)	-----W-----
Above Ground Water Line	-----A/G Water-----

TV:

TV Pedestal	-----
TV Tower	-----
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----TV-----
U/G TV Cable LOS C (S.U.E.*)	-----TV-----
U/G TV Cable LOS D (S.U.E.*)	-----TV-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----TV FO-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----TV FO-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----TV FO-----

GAS:

Gas Valve	-----
Gas Meter	-----
U/G Gas Line LOS B (S.U.E.*)	-----G-----
U/G Gas Line LOS C (S.U.E.*)	-----G-----
U/G Gas Line LOS D (S.U.E.*)	-----G-----
Above Ground Gas Line	-----A/G Gas-----

SANITARY SEWER:

Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
U/G Sanitary Sewer Line	-----SS-----
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer-----
SS Forced Main Line LOS B (S.U.E.*)	-----FSS-----
SS Forced Main Line LOS C (S.U.E.*)	-----FSS-----
SS Forced Main Line LOS D (S.U.E.*)	-----FSS-----

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	-----
Utility Located Object	○
Utility Traffic Signal Box	Ⓟ
Utility Unknown U/G Line LOS B (S.U.E.*)	-----?UTL-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----UST-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
U/G Test Hole LOS A (S.U.E.*)	-----
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

Kimley»Horn

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

B-5121 / B-5317

SHEET NO.

2A-1

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN)

C1	PROPOSED APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C3	PROPOSED APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C4	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C5	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C6	PROPOSED VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROPOSED APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D3	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D4	PROPOSED VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROPOSED APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E3	PROPOSED APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
E4	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E5	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E6	PROPOSED APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 621 LBS. PER SQ. YD.
E7	PROPOSED VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.
J1	PROPOSED 4" AGGREGATE BASE COURSE
J2	PROPOSED 6" AGGREGATE BASE COURSE
J3	PROPOSED 2" SELECT GRANULAR MATERIAL
L	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION
N2	GEOTEXTILE FOR SOIL STABILIZATION
R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6
R3	PROPOSED 5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R4	PROPOSED 8" X 18" CONCRETE CURB
S	PROPOSED 4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING EXISTING PAVEMENT
W	WEDGING DETAIL FOR RESURFACING

PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED

TYPICAL SECTION NO. 1

-L- STA 10+21.00 TO STA 21+39.41 (BEGIN BRIDGE)
-L- STA 22+74.41 (END BRIDGE) TO STA 49+11.45

NOTES:

1. PLACE ABC IN MEDIAN FROM -L- STA 10+21.00 TO 10+57.76 AND FROM -L- STA 11+33.33 TO 12+25.25
2. MATCH LINE TO TYPICAL SECTION NO. 11 (RT SIDE) ALONG -Y3-
3. REMOVE EXISTING CONCRETE PAVEMENT TO EXISTING SUBGRADE EXCEPT WHERE NOTED
4. ALL DRIVEWAYS, UP TO THE RADIUS POINT, SHALL BE CONSTRUCTED WITH THE FULL-DEPTH PAVEMENT DESIGN OF THE INTERSECTING ROADWAY.

TYPICAL SECTION NO. 1A

-L- STA 42+35.61 TO STA 47+14.03 (LT)

TYPICAL SECTION NO. 1B

-L- STA 15+18.23 TO STA 21+39.41 (BEGIN BRIDGE) (RT)
-L- STA 22+74.41 (END BRIDGE) TO STA 27+04.30 (RT)

TYPICAL SECTION NO. 1C

-DETSB- STA 12+73.74 TO STA 15+06.63 (LT)
-DETSB- STA 15+95.74 TO STA 19+77.09 (LT)
-DETSB- STA 21+60.05 TO STA 27+06.88 (LT)

NOTE: CONSTRUCT -L- LINE UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE. THE FINAL LAYER (1.5\"/>

TYPICAL SECTION NO. 1D

-L- STA 29+95.02 TO STA 35+18.34 (RT)
-L- STA 39+25.17 TO STA 41+51.75 (RT)

PROJECT REFERENCE NO.

B-5121 / B-5317

SHEET NO.

2A-2

ROADWAY DESIGN ENGINEER

P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PAVEMENT DESIGN ENGINEER

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RIGHT-OF-WAY REV.

CONST. REV.

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

TYPICAL SECTION NO. 2

-NBL- STA 10+00.00 TO STA 13+92.47
-SBL- STA 10+00.00 TO STA 13+94.25

NOTE: REMOVE EXISTING CONCRETE PAVEMENT TO EXISTING SUBGRADE EXCEPT WHERE NOTED

TYPICAL SECTION NO. 3

-YI- STA 12+15.00 TO STA 22+97.00

NOTES:
1. MILL NOTCH TO KEY-IN S9.5B FROM -YI- STA 12+15.00 TO STA 12+90.00 AND STA 22+22.00 TO STA 22+97.00
2. CONSTRUCT 10' SIDEWALK FROM BACK OF CURB FROM -YI- STA 20+53.06 TO STA 22+30.92 (RT)
3. SAWCUT PAVEMENT 1' MINIMUM FOR REMOVAL OF EXISTING CURB AND GUTTER (APPLIES TO ENTIRE PROJECT)

TYPICAL SECTION NO. 3A

-YI- STA 12+15.00 TO STA 14+67.43 (LT)
-YI- STA 12+15.00 TO STA 14+09.21 (RT)

TYPICAL SECTION NO. 3B

TEMPORARY WIDENING

-YI- STA 12+39.84 TO STA 15+78.55 (RT)

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN)	
C1	15' S9.5C
C2	2' S9.5B
C3	2' S9.5C
C4	3' S9.5B
C5	3' S9.5C
C6	VAR. DEPTH S9.5B
D1	2.5' 119.0C
D2	4' 119.0B
D3	4' 119.0C
D4	VAR. DEPTH 119.0B
E1	4' B25.0B
E2	4' B25.0C
E3	4.5' B25.0B
E4	5' B25.0B
E5	5' B25.0C
E6	5.5' B25.0B
E7	VAR. DEPTH B25.0B
J1	4' AGGREGATE BASE COURSE
J2	6' AGGREGATE BASE COURSE
J3	SELECT GRANULAR MATERIAL
L	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION
N2	GEOTEXTILE FOR SOIL STABILIZATION
R1	2'-6" CONCRETE CURB & GUTTER
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6
R3	5' MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R4	8' X 18" CONCRETE CURB
S	4' CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING EXISTING PAVEMENT
W	WEDGING

PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.
B-5121 / B-5317

SHEET NO.
2A-3

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

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UNLESS ALL SIGNATURES COMPLETED

TYPICAL SECTION NO. 4

-YI- STA 22+97.00 TO STA 25+75.00

NOTE: RETAIN EXIST CONCRETE ISLAND FROM
-YI- STA 23+20.00 TO STA 24+94.28

TYPICAL SECTION NO. 5

-YIRPC- STA 11+72.25 TO STA 18+74.21

-YIRPD- STA 11+04.56 TO STA 16+85.76 (REVERSE DIRECTION)

NOTE:
1. THE ADJACENT THROUGH LANE PAVEMENT DESIGN SHALL EXTEND
TO THE BACK OF THE GORE (10-FOOT WIDTH) (APPLIES TO ENTIRE PROJECT)

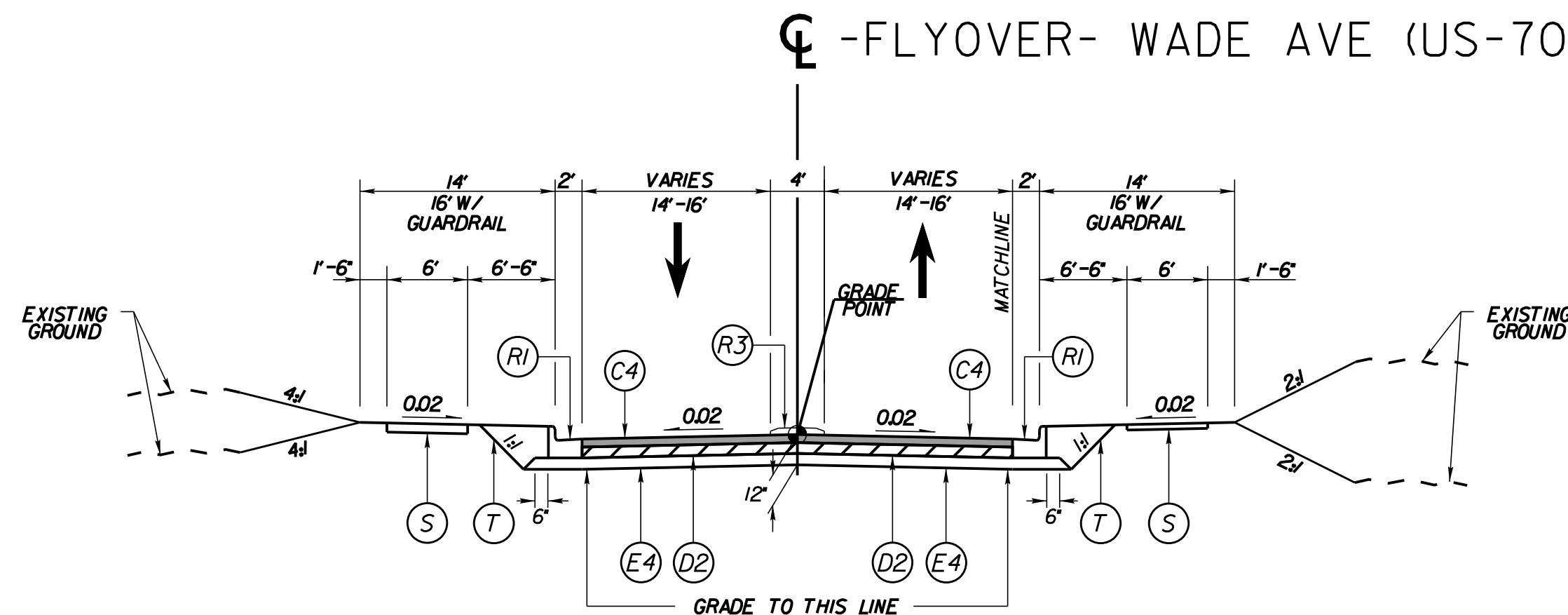
TYPICAL SECTION NO. 6

-FLYOVER- STA 10+58.08 TO STA 15+34.34

NOTE: OVERLAY EXISTING PAVEMENT WHERE APPLICABLE IN
ACCORDANCE WITH WEDGING DETAIL FOR RESURFACING

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN)	
C1	1.5" S9.5C
C2	2" S9.5B
C3	2" S9.5C
C4	3" S9.5B
C5	3" S9.5C
C6	VAR. DEPTH S9.5B
D1	2.5" 119.0C
D2	4" 119.0B
D3	4" 119.0C
D4	VAR. DEPTH 119.0B
E1	4" B25.0B
E2	4" B25.0C
E3	4.5" B25.0B
E4	5" B25.0B
E5	5" B25.0C
E6	5.5" B25.0B
E7	VAR. DEPTH B25.0B
J1	4" AGGREGATE BASE COURSE
J2	6" AGGREGATE BASE COURSE
J3	SELECT GRANULAR MATERIAL
L	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION
N2	GEOTEXTILE FOR SOIL STABILIZATION
R1	2'-6" CONCRETE CURB & GUTTER
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6
R3	5' MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R4	8' x 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING EXISTING PAVEMENT
W	WEDGING

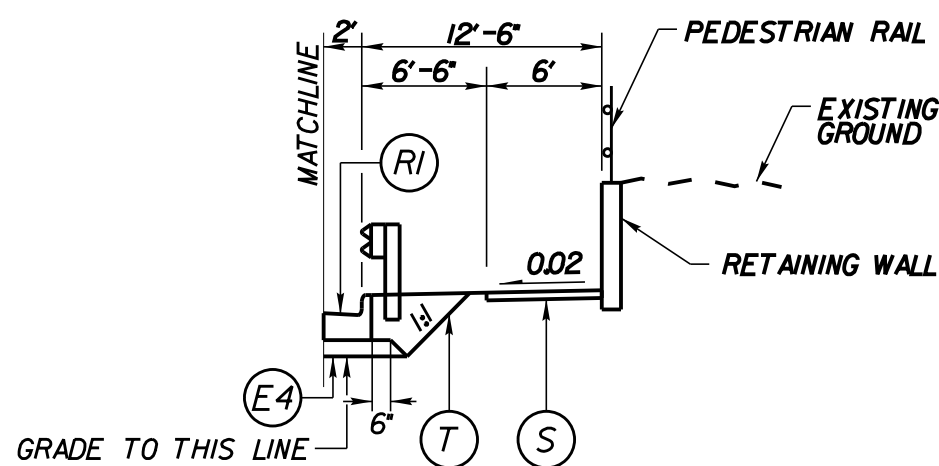
PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED



TYPICAL SECTION NO. 7

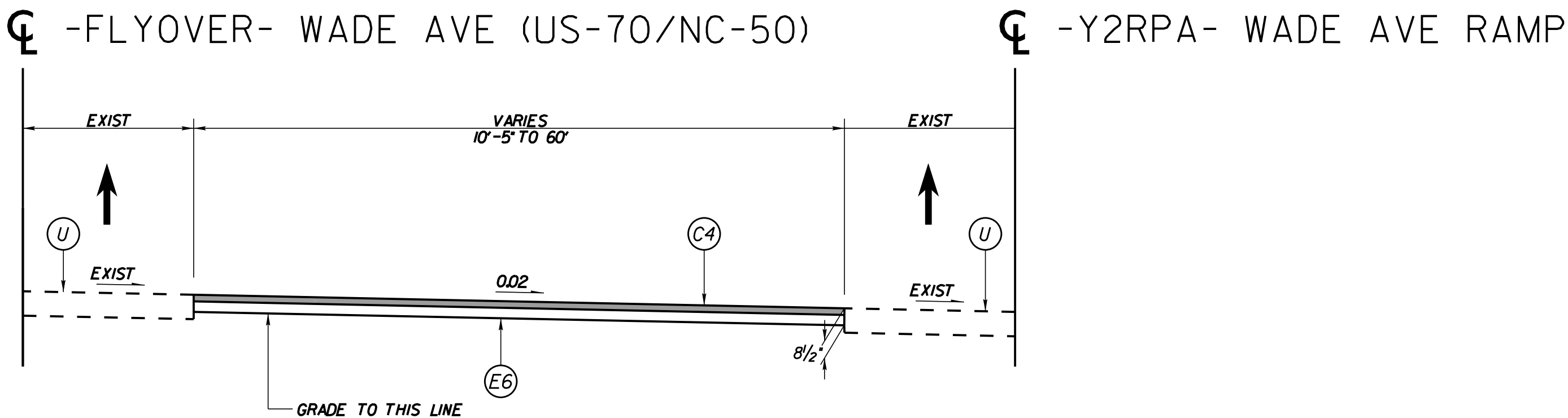
-FLYOVER- STA 15+34.34 TO STA 19+19.50 (BEGIN BRIDGE)
-FLYOVER- STA 21+76.69 (END BRIDGE) TO STA 25+76.00 (SEE NOTE 2)

NOTES:
1. TRANSITION SIDEWALK FROM 6'-6" TO BACK OF CURB FROM -FLYOVER- STA 17+60.74 TO 18+22.00
2. SIDEWALK AT BACK OF CURB FROM -FLYOVER- STA 21+76.69 (LT/RT) TO 23+94.07 (LT) AND 24+16.48 (RT)
3. MILL NOTCH TO KEY-IN S9.5B FROM -FLYOVER- STA 25+01.00 TO STA 25+76.00
4. OVERLAY EXISTING PAVEMENT FROM -FLYOVER- STA 22+28.00 TO STA 25+01.00
IN ACCORDANCE WITH WEDGING DETAIL FOR RESURFACING



TYPICAL SECTION NO. 7A

-FLYOVER- STA 15+73.00 TO STA 17+10.50 (RT)



TYPICAL SECTION NO. 7B

TEMPORARY WIDENING
-FLYOVER- STA 24+14.15 TO STA 24+84.08 (RT)

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	B-5121 / B-5317		2A-4	
	ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)				
C1	1.5' S9.5C			
C2	2" S9.5B			
C3	2" S9.5C			
C4	3" S9.5B			
C5	3" S9.5C			
C6	VAR. DEPTH S9.5B			
D1	2.5' I19.0C			
D2	4" I19.0B			
D3	4" I19.0C			
D4	VAR. DEPTH I19.0B			
E1	4" B25.0B			
E2	4" B25.0C			
E3	4.5' B25.0B			
E4	5" B25.0B			
E5	5" B25.0C			
E6	5.5' B25.0B			
E7	VAR. DEPTH B25.0B			
J1	4" AGGREGATE BASE COURSE			
J2	6" AGGREGATE BASE COURSE			
J3	SELECT GRANULAR MATERIAL			
L	CLASS IV SUBGRADE STABILIZATION			
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION			
N2	GEOTEXTILE FOR SOIL STABILIZATION			
R1	2'-6" CONCRETE CURB & GUTTER			
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6			
R3	5' MONOLITHIC CONCRETE ISLAND (KEYED-IN)			
R4	8" x 18" CONCRETE CURB			
S	4" CONCRETE SIDEWALK			
T	EARTH MATERIAL			
U	EXISTING PAVEMENT			
V	MILLING EXISTING PAVEMENT			
W	WEDGING			
PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED				

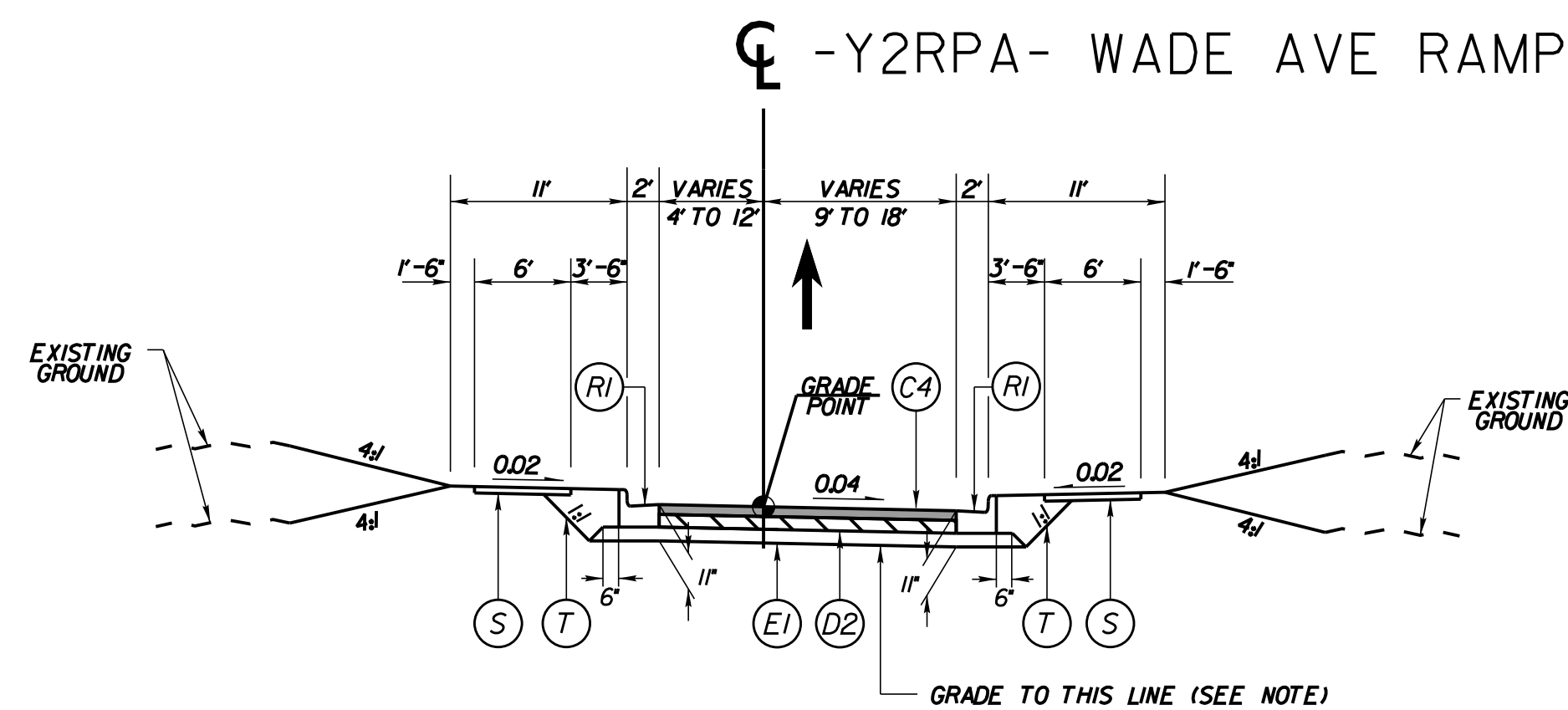
PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED

PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN)

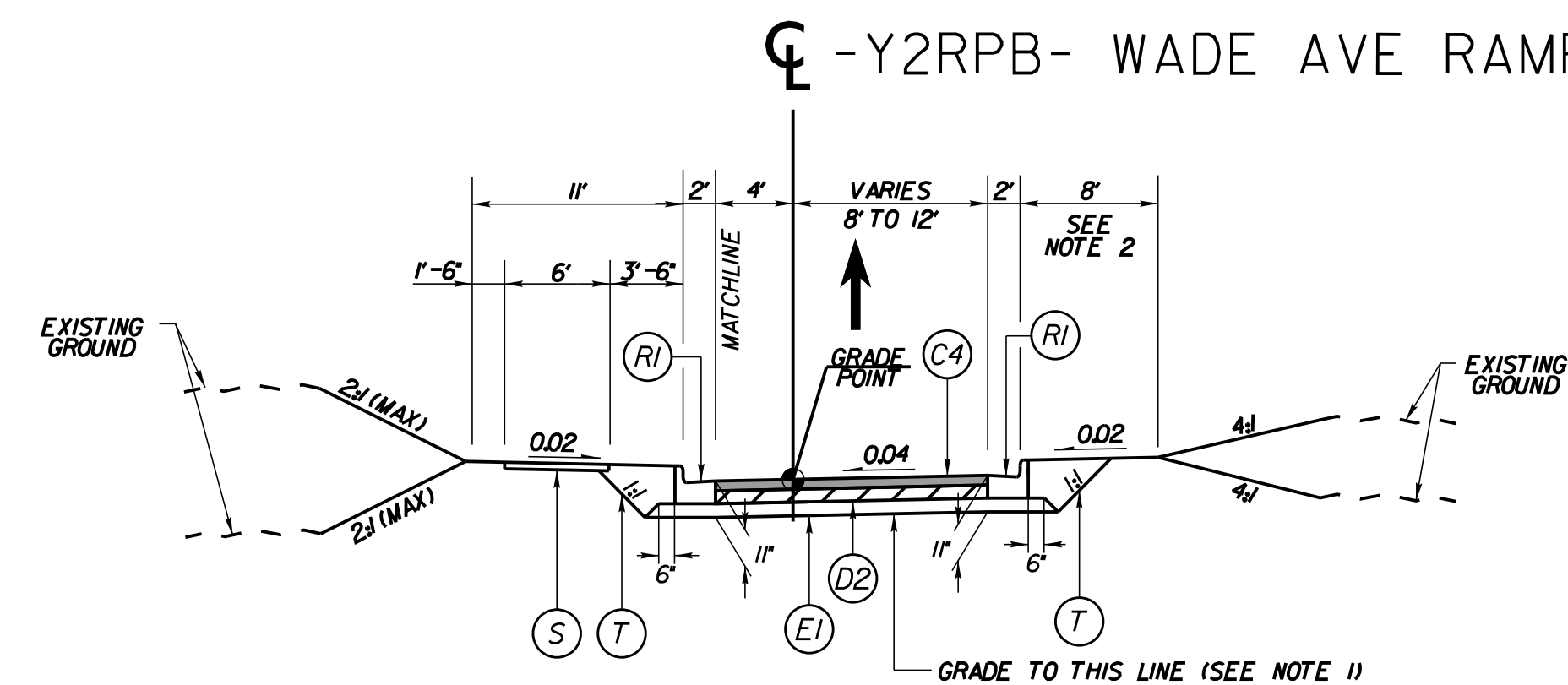
C1	1.5" S9.5C
C2	2" S9.5B
C3	2" S9.5C
C4	3" S9.5B
C5	3" S9.5C
C6	VAR. DEPTH S9.5B
D1	2.5" 119.0C
D2	4" 119.0B
D3	4" 119.0C
D4	VAR. DEPTH 119.0B
E1	4" B25.0B
E2	4" B25.0C
E3	4.5" B25.0B
E4	5" B25.0B
E5	5" B25.0C
E6	5.5" B25.0B
E7	VAR. DEPTH B25.0B
J1	4" AGGREGATE BASE COURSE
J2	6" AGGREGATE BASE COURSE
J3	SELECT GRANULAR MATERIAL
L	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION
N2	GEOTEXTILE FOR SOIL STABILIZATION
R1	2'-6" CONCRETE CURB & GUTTER
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6
R3	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R4	8" X 18" CONCRETE CURB
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING EXISTING PAVEMENT
W	WEDGING

PAVEMENT EDGE SLOPES ARE 1:H UNLESS OTHERWISE INDICATED



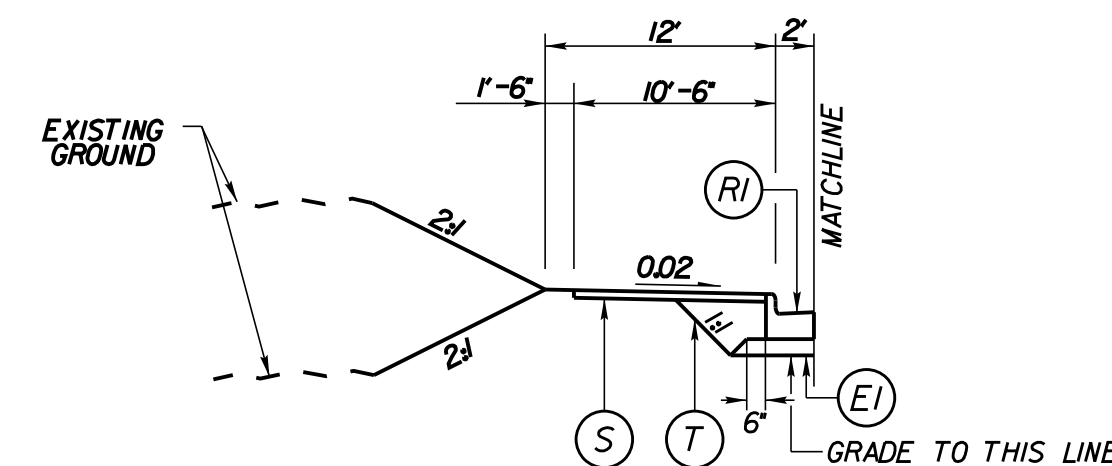
TYPICAL SECTION NO. 8
-Y2RPA- STA 16+57.00 TO STA 18+38.40

NOTE: OVERLAY EXISTING PAVEMENT WHERE APPLICABLE IN ACCORDANCE WITH WEDGING DETAIL FOR RESURFACING

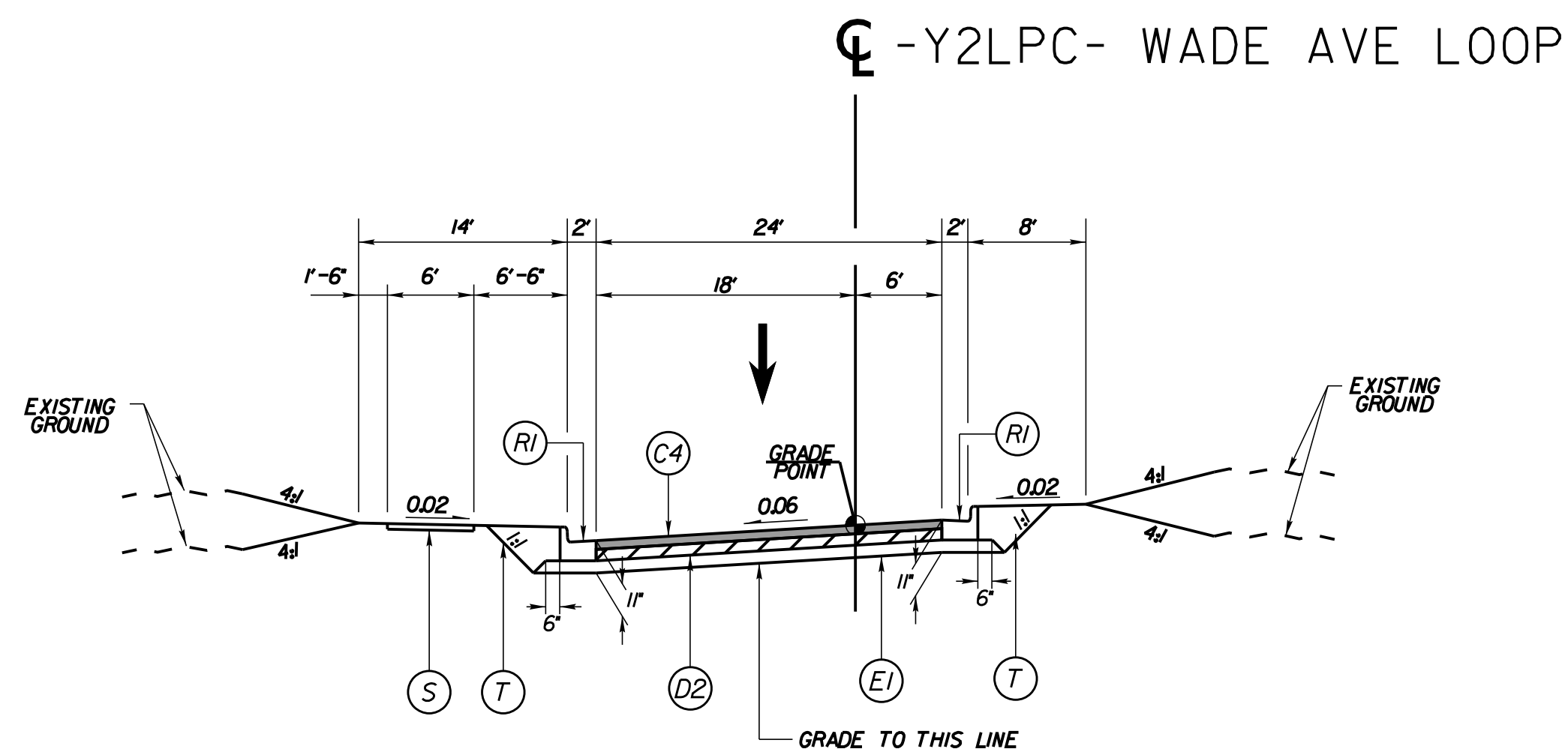


TYPICAL SECTION NO. 9
-Y2RPB- STA 10+41.83 TO STA 15+83.50

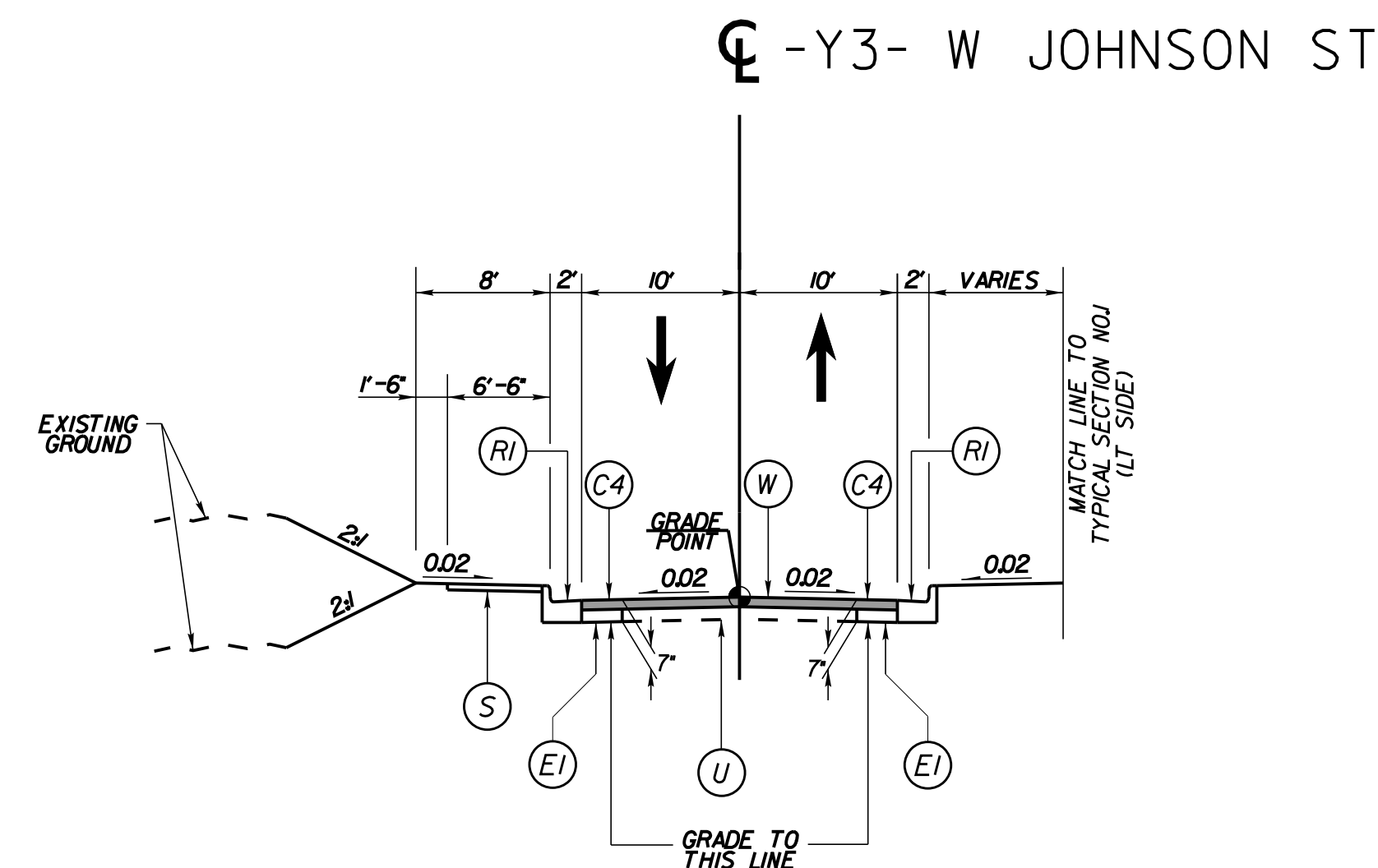
NOTES:
1. OVERLAY EXISTING PAVEMENT WHERE APPLICABLE IN
ACCORDANCE WITH WEDGING DETAIL FOR RESURFACING
2. USE 4' BERM ON -Y2RPB- FROM STA 12+15.00 TO 12+55.00 (RT)



TYPICAL SECTION NO. 9A
-Y2RPB- STA 10+00.00 TO STA 13+02.62 (LT)



TYPICAL SECTION NO. 10
-Y2LPC- STA 10+00.00 TO STA 13+10.98



TYPICAL SECTION NO. 11
-Y3- STA 10+03.00 TO STA 12+56.00

NOTE: MILL NOTCH TO KEY-IN S9.5B AS APPLICABLE

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.
B-5121 / B-5317

SHEET NO.
2A-6

ROADWAY DESIGN ENGINEER

PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

-Y4- W JOHNSON ST
-Y8- DORTCH ST
-Y9- N WEST ST
-DR2-

TYPICAL SECTION NO. 12

-Y4- STA 10+12.05 TO STA 11+27.00
-Y8- STA 10+67.00 TO STA 12+84.88
-Y9- STA 18+52.00 TO STA 19+24.48
-DR2- STA 10+20.02 TO STA 11+29.00

NOTE: MILL NOTCH TO KEY-IN S9.5B AT ENDS OF -Y- LINES AS APPLICABLE

-Y5- W JOHNSON ST

TYPICAL SECTION NO. 13

-Y5- STA 10+18.00 TO STA 13+65.23

-Y6- N HARRINGTON ST
-Y7- JOHNSON ST

TYPICAL SECTION NO. 14

-Y6- STA 12+60.00 TO STA 19+58.46
-Y7- STA 11+76.00 TO STA 13+32.79

NOTES:
1. MILL NOTCH TO KEY-IN S9.5B AT ENDS OF -Y- LINES AS APPLICABLE
2. USE 9' BERM (7.5' SIDEWALK AT BACK OF CURB) ON -Y6- FROM STA 12+60.00 TO 13+50.00 LT AND STA 12+60.00 TO 14+00.00 RT
3. USE 8' BERM (6.5' SIDEWALK AT BACK OF CURB) ON -Y7- FROM STA 11+76.00 TO 12+44.18 LT AND STA 11+76.00 TO 11+92.19 RT
4. INSTALL SPILL CURB FROM -Y6- STA 14+33.00 TO 17+64.00 (LT)

-DRI-

TYPICAL SECTION NO. 15

-DRI- STA 10+45.00 TO STA 11+10.90

NOTE: USE 6' CONCRETE PAVEMENT FROM
-DRI- STA 10+45.00 TO STA 10+57.00

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN)	
C1	1.5' S9.5C
C2	2' S9.5B
C3	2' S9.5C
C4	3' S9.5B
C5	3' S9.5C
C6	VAR. DEPTH S9.5B
D1	2.5' 119.0C
D2	4' 119.0B
D3	4' 119.0C
D4	VAR. DEPTH 119.0B
E1	4' B25.0B
E2	4' B25.0C
E3	4.5' B25.0B
E4	5' B25.0B
E5	5' B25.0C
E6	5.5' B25.0B
E7	VAR. DEPTH B25.0B
J1	4' AGGREGATE BASE COURSE
J2	6' AGGREGATE BASE COURSE
J3	SELECT GRANULAR MATERIAL
L	CLASS IV SUBGRADE STABILIZATION
N1	GEOTEXTILE FOR PAVEMENT STABILIZATION
N2	GEOTEXTILE FOR SOIL STABILIZATION
R1	2'-6" CONCRETE CURB & GUTTER
R2	SPECIAL 2'-6" CURB & GUTTER, SEE SHEET 2C-6
R3	5' MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R4	8' x 18" CONCRETE CURB
S	4' CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING EXISTING PAVEMENT
W	WEDGING

PAVEMENT EDGE SLOPES ARE 1% UNLESS OTHERWISE INDICATED



* SHOULDER WIDTHS ARE DUE TO HYDRAULIC SPREAD

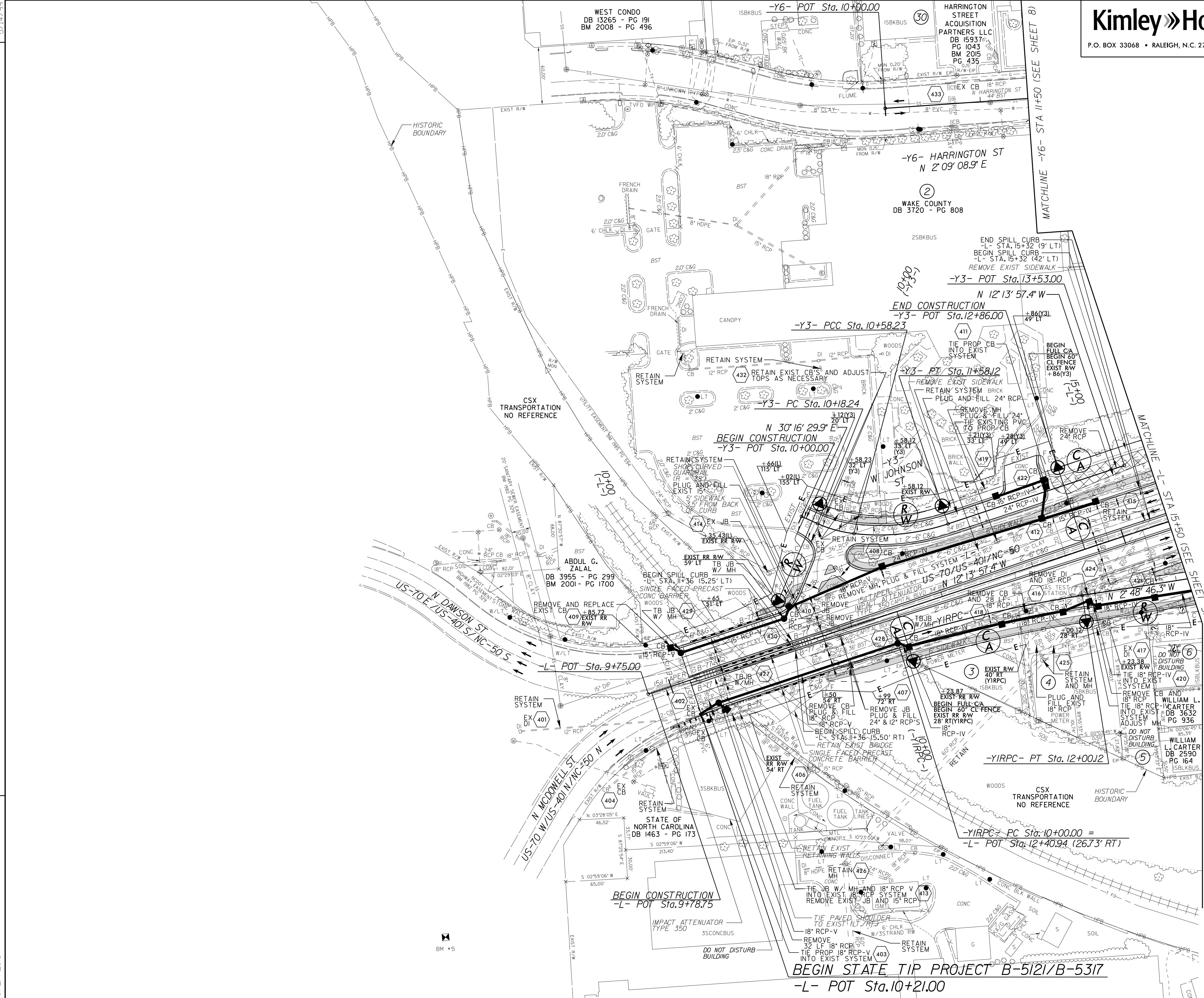


PAVEMENT EDGE SLOPES ARE 1:H UNLESS OTHERWISE INDICATED

REVISIONS
09/21/15 - RW REVISIONS: UPDATED PROPERTY LINES, PROPERTY OWNER NAME AND DEED REFERENCE ON PARCEL 30. - PJS

5/14/99

10/27/2015



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PROJECT REFERENCE NO.		SHEET NO.
B-5121 / B-5317		4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

NAD 83/NSRS 2007

- 3 RALEIGH DEVIL, LLC
DB 12835 - PG 2740
BM 1960 - PG 241
- 4 WILLIAM L. CARTER
DB 6339 - PG 820
BM 1979 - PG 560
- 5 WILLIAM L. CARTER, JR
DB 4382 - PG 9
- 6 ED. CHARITABLE DVLPMTS
PROJ, INC
DB 7559 - PG 768

NAD 83/NSRS 2007

② WAKE COUNTY DB 12835 - PG 2740 BM 1960 - PG 241	⑧ MCC OUTDOOR LLC DB 1239 - PG 2535	⑫ MCKNITT & ASSOCIATES LLC DB 8614 - PG 460 DB 2008 - PG 180	⑯ 622 CAPITAL LLC DB 14601 - DB 1647
⑥ ED. CHARITABLE DVLPMTS PROJ. INC DB 7559 - PG 768	⑩ MORRIS COMMUNICATIONS CORP DB 3521 - PG 669 DB 13727 - PG 2236	⑬ CITY OF RALEIGH DB 12531 - PG 472 BM 2007 - PG 117 BM 1959 - PG 116	
⑦ ARCHIE LINWOOD KING SUCCESSOR TRUSTEE DB 5369 PG 541	⑪ MARGIE MARIE FULLER DB 10559 - PG 1762	⑭ STATE OF NORTH CAROLINA BM 2008 - PG 180	

MATCHLINE -Y5- STA 12+00 (SEE SHEET 8)

MATCHLINE -YI- STA 17+00 (SEE SHEET 8)

REVISIONS

09/21/15 – RW REVISIONS: COMBINED PARCELS 7, 9, AND 41 INTO PARCEL 7. – JWM
10/02/15 – RW REVISIONS: REVISED PUE AND TCE ON PARCEL 13. – JWM
11/04/15 – RW REVISIONS: REVISED PUE ON PARCEL 8. – JWM

MATCHLINE -L- STA 28+00 (SEE SHEET 6)

DO NOT
DISTURB
BUILDING

35B
COT
M

(15)

THE COTTON MILL
CONDOMINIUMS

DB 6789 - DB 351
BM 2008 - PG 180

R2- POT Sta. 10+00.00 =
 RPD- POC Sta. 12+45.23
 = 87°41'10.3"
END CONSTRUCTION
 -DR2- POT Sta. 11+29.00
 -DR2- POT Sta. 11+50.00

★ TRAFFIC SIGNAL

RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT
UNLESS OTHERWISE NOTED

```
SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEETS 2B-2 AND 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 2D-1 FOR DRAINAGE DETAILS
SEE SHEET 9 FOR -L- PROFILE
SEE SHEET 11 FOR -Y1- PROFILE
SEE SHEET 12 FOR -Y1RPC- AND -Y1RPD- PROFILES
SEE SHEET 14 FOR -Y4- AND -Y5- PROFILES
SEE SHEET 15 FOR -DR1- AND -DR2- PROFILES
SEE SHEET S-1 THRU S-? FOR STRUCTURE PLANS
```

NOTES:

1. END SPILL CURB -L- STA.16+38 (42' LT)
2. REMOVE 60 LF. OF EXIST 60" RCP
TIE JB W/ MH TO EXIST SYSTEM
3. BEGIN SPILL CURB -YIRPC- STA.13+57 (6' LT)
4. BEGIN SPILL CURB -YIRPC- STA.17+46 (20' RT)
5. END SPILL CURB -YIRPD- STA.14+78 (4' RT)
BEGIN SPILL CURB -YIRPD- STA.14+78 (20' LT)
6. END SPILL CURB -YIRPD- STA.16+45 (35' LT)
7. REMOVE MH, PLUG AND FILL EXISTING SYSTEMS
8. TEMPORARY SHORING (TYP)

(SEE TRANSPORTATION MANAGEMENT PLANS)

END CONSTRUCTION
-YI- POT Sta.25+75.00
END MILLING AND RESURFACING

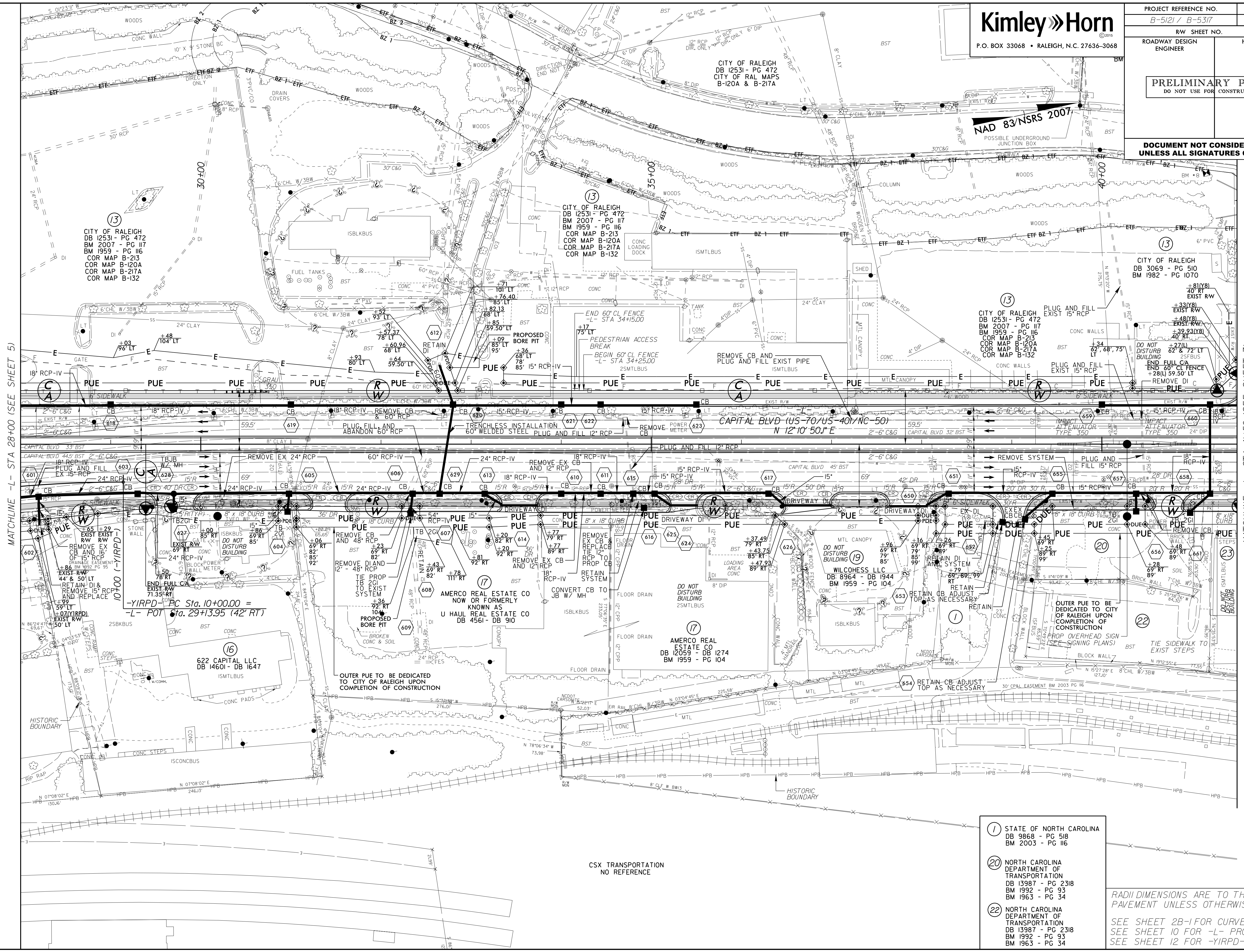
SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

10/27/2015

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PROJECT REFERENCE NO.		SHEET NO.
B-5121 / B-5317		6
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS		DO NOT USE FOR CONSTRUCTION
DOCUMENT NOT CONSIDERED FINAL		UNLESS ALL SIGNATURES COMPLETED



REVISIONS

08/14/15 - RW REVISIONS: CHANGED PARCEL 21 TO PARCEL 13 - P/S
10/26/15 - RW REVISIONS: COMBINED PARCELS 17 AND 18 INTO PARCEL 17; UPDATED PROPERTY OWNER NAME ON PARCEL 17 - JWM

- 1 STATE OF NORTH CAROLINA
DB 9868 - PG 518
BM 2003 - PG 116
- 20 NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
DB 13987 - PG 2318
BM 1992 - PG 93
BM 1963 - PG 34
- 22 NORTH CAROLINA
DEPARTMENT OF
TRANSPORTATION
DB 13987 - PG 2318
BM 1992 - PG 93
BM 1963 - PG 34

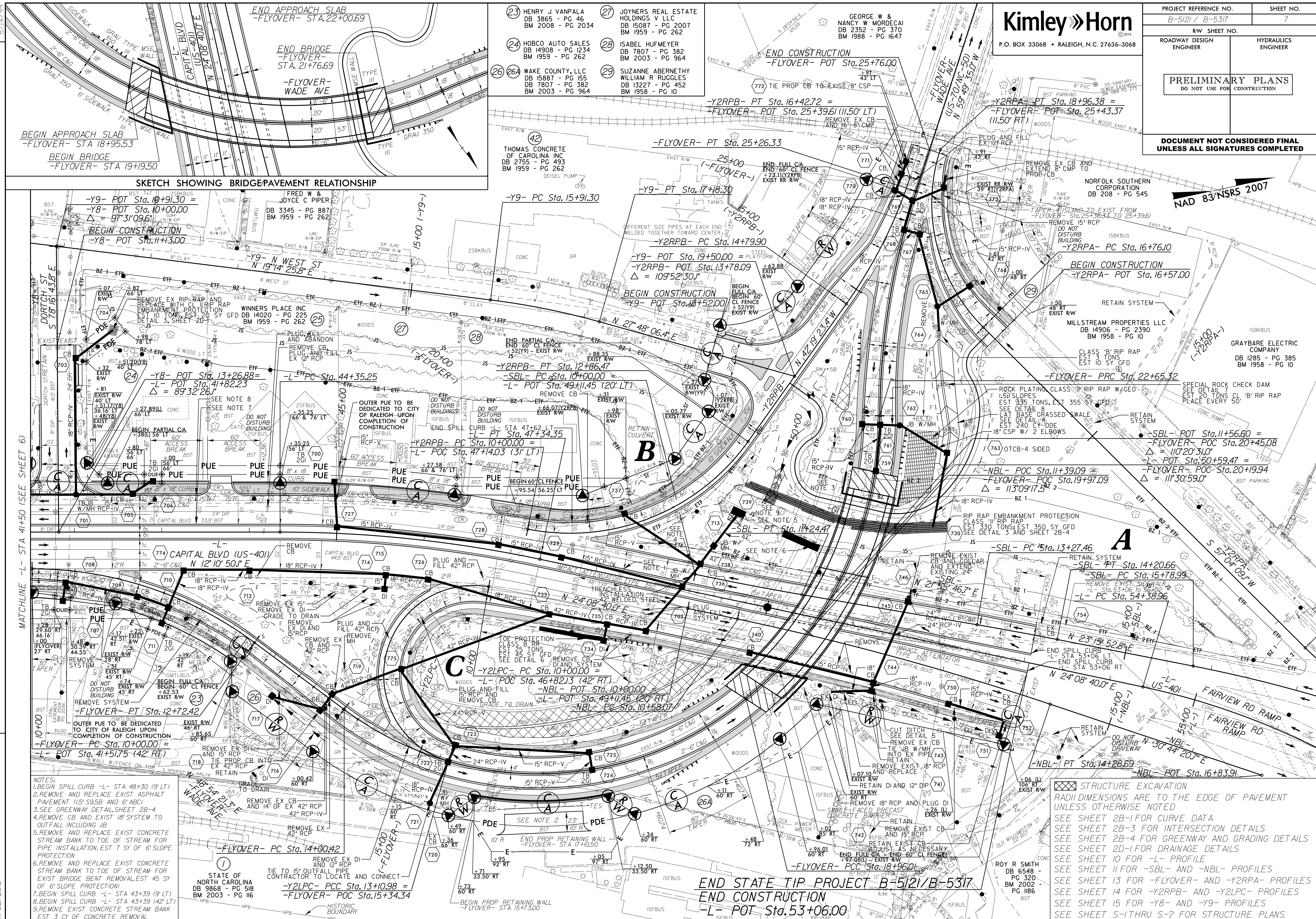
RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 12 FOR -YIRPD- PROFILE

CSX TRANSPORTATION
NO REFERENCE

REVISIONS

11/02/2015



- | | | |
|---|--|---|
| ② WAKE COUNTY
DB 12835 - PG 2740
BM 1960 - PG 241 | ③④ MANN FAMILY
PROPERTIES OF RALEIGH
DB 11802 - PG 1658 | ③⑦ RICHARD GARDNER
DB 8613 - PG 2425 |
| ⑦ ARCHIE LINWOOD KING
SUCCESSOR TRUSTEE
DB 5369 PG 541
BM 1947 PG 73 | ③⑤ CHAUCER
INVESTMENTS INC
DB 13332 - PG 957
BM 1997 - PG 799 | ③⑧ MARGARET ALTMAN
MANN
DB 2989 - PG 318 |
| ⑪ MARGIE MARIE FULLER
DB 10559 - PG 1762 | ③⑥ EDWIN E FLYTHE, JR
DB 3726 - PG 580
BM 1885 - PG 82
BM 1885 - PG 104 | ③⑨ JAMES H ANDERSON CO
DB 5940 - PG 289
BM 1993 - PG 1441 |
| ③③ HESTER & HESTER
DB 8181 - PG 1853
BM 1885 - PG 104 | | |

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PROJECT REFERENCE NO.

B-5121 / B-5317

SHEET NO.

8

RW SHEET NO.

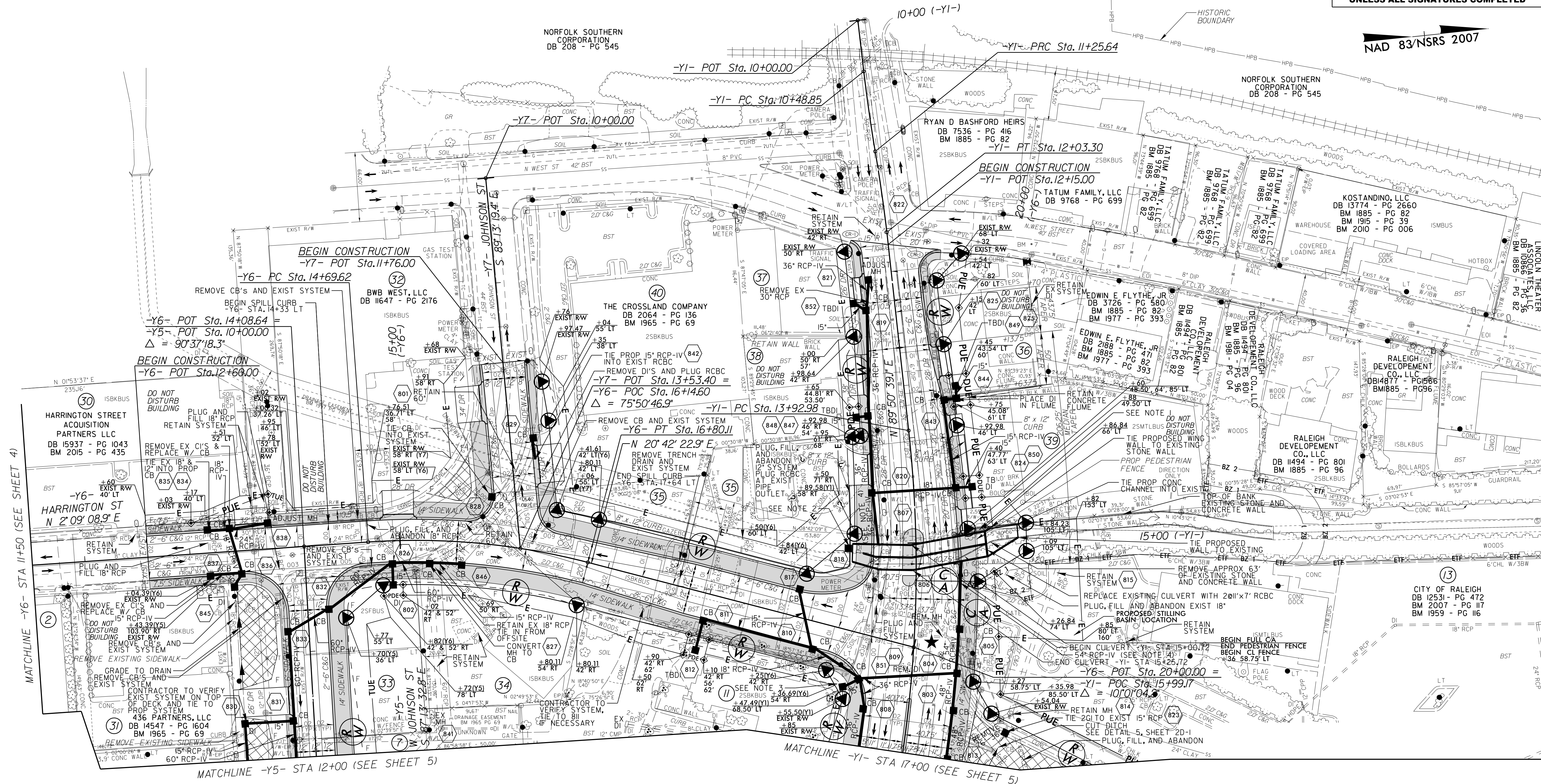
ROADWAY DESIGN
ENGINEERHYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

BM7 ELEVATION = 298.06
N 742285 E 2105248
FROM BL-162 TO BM7
N 17°15'03" E DIST 144.27'
BENCH TIE SET IN POWER POLE

NAD 83/NSRS 2007



NOTES:

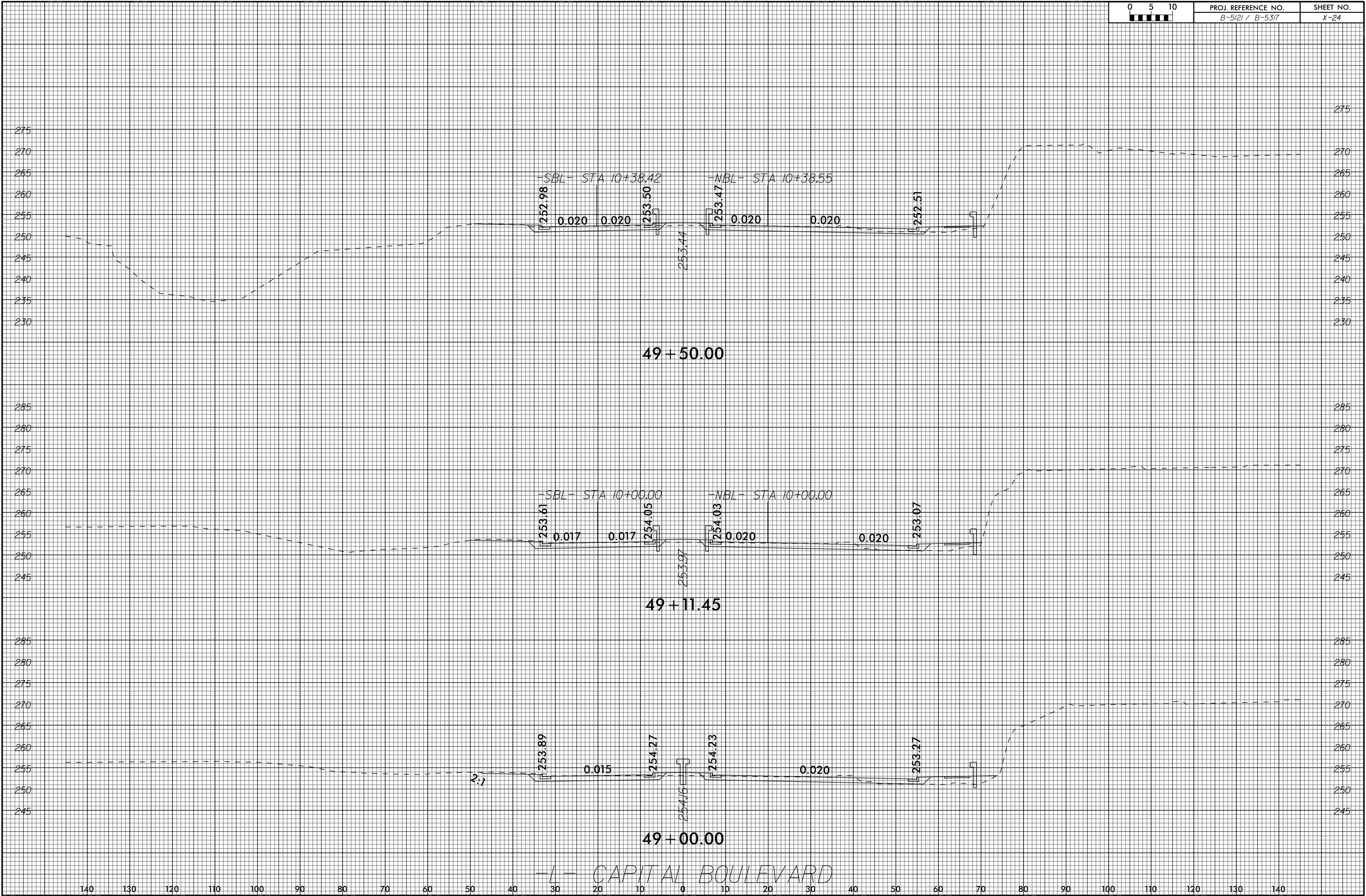
1. REMOVE TOP OF EXISTING STONE WALL TO AN ELEVATION APPROXIMATELY 1' BELOW EXISTING PARKING LOT. REMOVE TOP OF WALL APPROXIMATELY 22' FROM EXISTING RCBC HEADWALL TO BEYOND THE PROPOSED SIDEWALK AND CHAIN LINK FENCE. USE FLOWABLE FILL BETWEEN EXISTING STONE WALL AND OUTSIDE OF PROPOSED RCBC. EST 10 CY FLOWABLE FILL.
2. REMOVE EXIST DI AND INSTALL TB 261 ON TOP OF RCBC.
3. GRADE LOW AREA AROUND PROPOSED SIGNAL POLE TO DRAIN TO DROP INLET (851). CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND KEEP ANY WATER FROM BEING TRAPPED ALONG -Y1- AND -Y6-.
4. OUTLET PIPE INTO SIDE OF CULVERT.

★ TRAFFIC SIGNAL

RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT
UNLESS OTHERWISE NOTED

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEETS 2B-2 AND 2B-3 FOR INTERSECTION DETAILS
SEE SHEET 11 FOR -Y1- PROFILE
SEE SHEET 14 FOR -Y5- PROFILE
SEE SHEET 15 FOR -Y6- AND -Y7- PROFILES
SEE SHEET C-1 THRU C-X FOR CULVERT PLANS

8/23/99



10/27/2015

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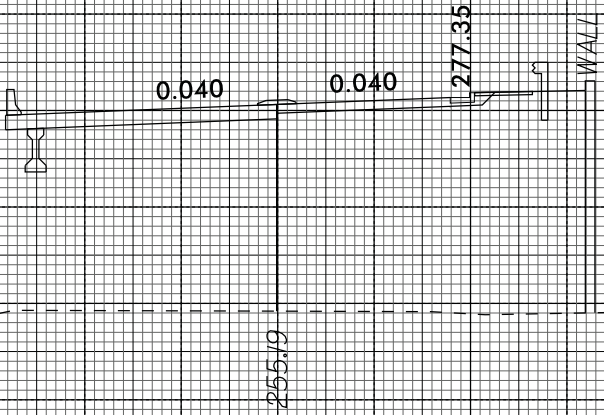
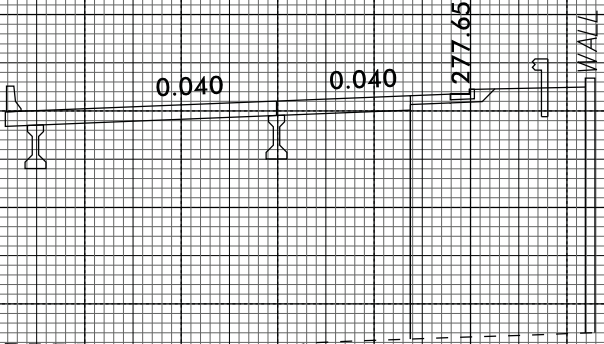
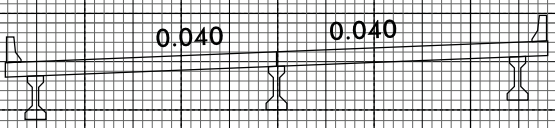
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FLYOVER WADE AVENUE

20 + 00.00

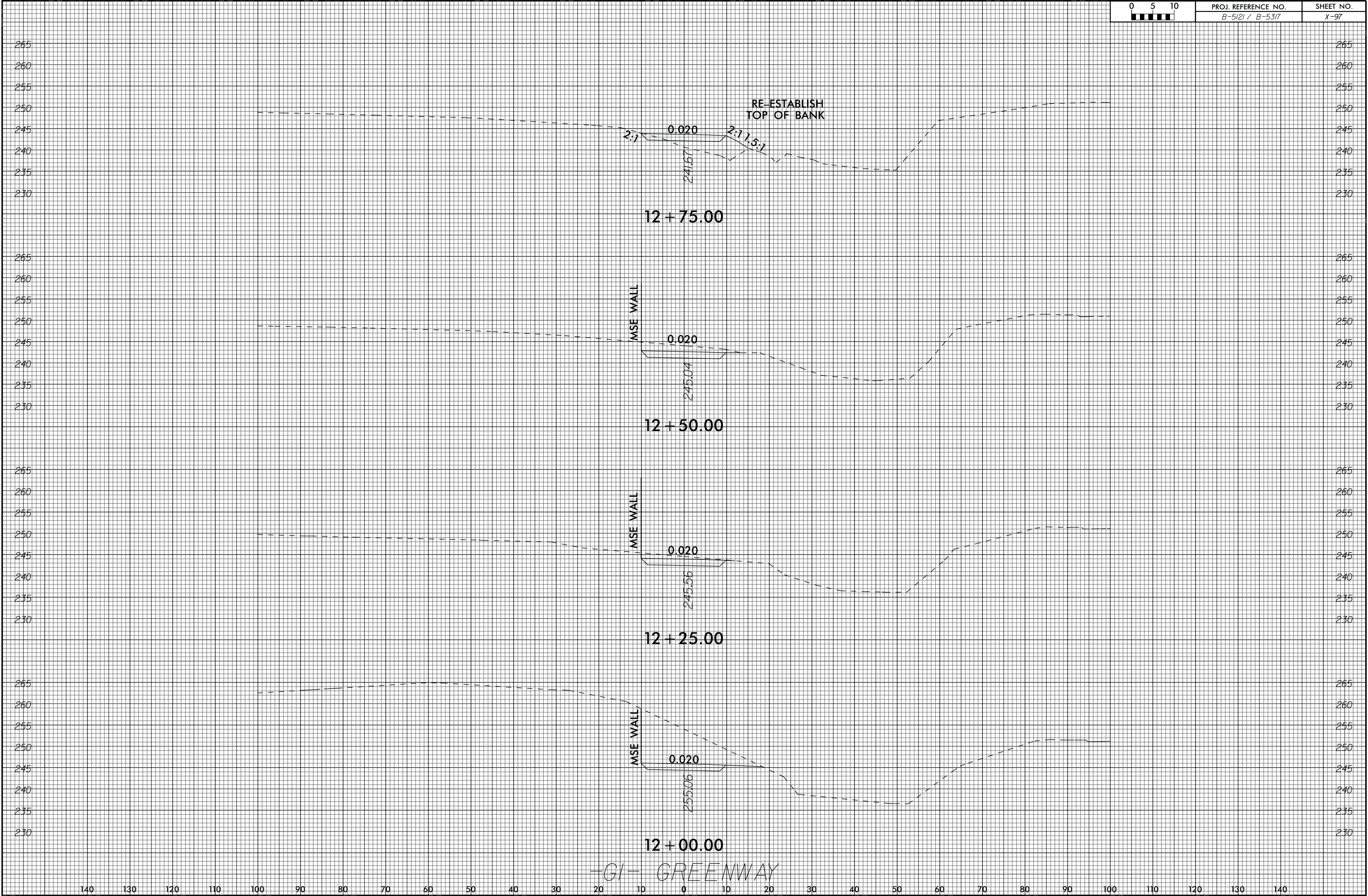
19 + 50.00

19 + 19.50



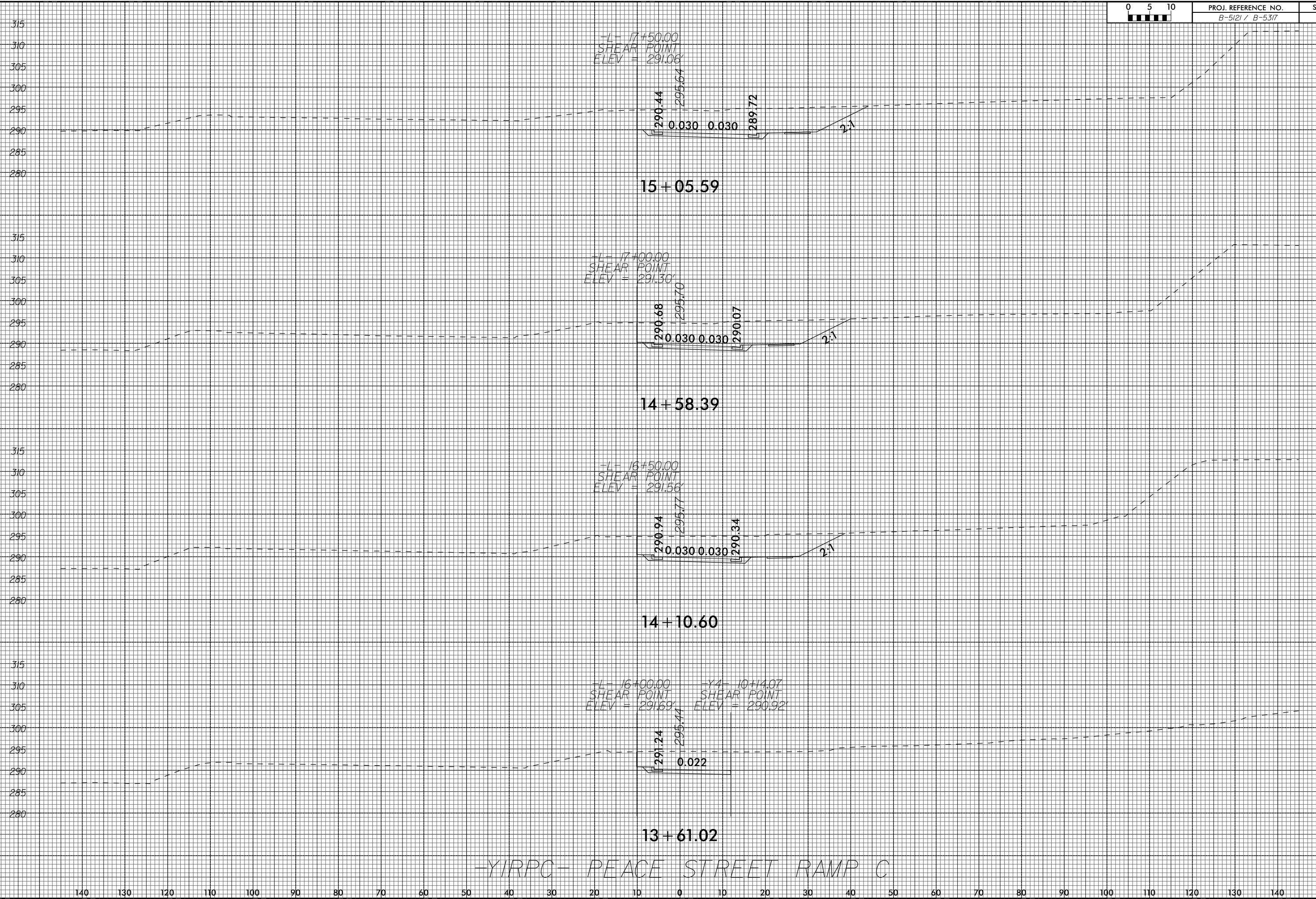
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-YIRPC- PEACE STREET RAMP C