



Transportation

PAT McCrory
Governor

NICHOLAS J. TENNYSON
Secretary

August 5, 2016

N.C. Department of Environmental Quality
Division of Water Resources
1617 Mail Service Center
Raleigh, NC 27699-1617

ATTN: Ms. Amy Chapman
NCDOT Division 10 Project Coordinator

SUBJECT: **Request for Written Authorization for Section 401 Water Quality Certification No. 3883** for the Replacement of Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Road), Division 10, Cabarrus County, North Carolina. Federal Aid Project No. NHIMF-85-2(77)55, TIP Project No. B-5804.

Debit \$240.00 from WBS Element No. 36780.2.FS2

Dear Madam:

In October 2015, impacts associated with this project were permitted under a Section 404 Nationwide Permit (NWP) No. 3 and the corresponding Section 401 Water Quality Certification (WQC) No. 3883. Crystal Amschler of the U.S. Army Corps of Engineers (USACE), in an email dated October 7, 2015, authorized the activities associated with the project to proceed under the NWP 3 with no written authorization required. Additionally, since the impacts to Lake Fisher did not exceed any of the thresholds outlined in WQC No. 3883, written authorization was also not required from the N.C. Division of Water Resources (NCDWR). Therefore, no official permit application was submitted to agencies at that time.

NCDWR has expressed concern with the bridge replacement, specifically regarding its proximity to the water intake in Lake Fisher. Therefore, it was decided that the N.C. Department of Transportation (NCDOT) will request written authorization for a WQC No. 3883, which corresponds to the previously-authorized USACE NWP No. 3.

Please find enclosed the Pre-Construction Notification; a copy of the email from Crystal Amschler, dated October 7, 2015, authorizing the use of a NWP 3; the U.S. Fish and Wildlife Service (USFWS) concurrence for the northern long-eared bat, dated March 13, 2015; the Stormwater Management Plan; permit drawings; and roadway plans for the subject project. An Addendum to the Categorical Exclusion (CE) was completed for this project in March 2015. This project has already let.

A copy of this permit application will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links* >

 Nothing ComparesSM

Permit Applications. A copy of the Addendum to the CE is also available at the above website address under *Quick Links > Environmental Documents*. Thank you for your assistance with this project. If you have any questions or need additional information, please contact Jim Mason at either jmason@ncdot.gov or (919) 707-6136.

Sincerely,



for Philip S. Harris III, P.E., C.P.M.
Natural Environment Section Head

cc:
NCDOT Permit Application Standard Distribution List
Ms. Crystal Amschler, USACE



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: 3 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 DWQ (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 No. 56 over Lake Fisher on SR 2000 (Brantley Road)
2b. County:	Cabarrus
2c. Nearest municipality / town:	Kannapolis
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-5804

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) 707-6136
3g. Fax no.:	(919) 212-5785
3h. Email address:	jsmason@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: 35.4914 (DD.DDDDDD) Longitude: - 80.5774 (-DD.DDDDDD)
1c. Property size:	1.5 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Cold Water Creek (Lake Fisher)
2b. Water Quality Classification of nearest receiving water:	WS-IV, CA
2c. River basin:	Yadkin-Pee Dee
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: SR 2000 (Brantley Rd) is classified as a Local Route in the Statewide Functional Classification System and is not a National Highway System Route. Land use within the vicinity includes Forested Land, Agriculture, Commercial, and Residential.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.0 acres	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 150 linear feet (Lake Fisher, open water)	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge. The road is currently closed due to issues with the bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project consists of replacing the existing 5-span 201-foot long bridge with a 214-foot long 3-span bridge on the existing alignment. Traffic will be maintained via off-site detour. 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. No wetlands on site; project occurs on the existing causeway across Lake Fisher	
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. Project previously permitted under Section 404 NWP 3 and Section 401 WQC 3883 (no written approval required for either) in October 2015; this current application for written approval at request of NCDWR; no changes to impacts.	

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 ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
Site ☐ P ☐ T		Choose One	☐ Yes ☐ No	☐ Corps ☐ DWQ		
2g. Total wetland impacts					0 ac Permanent 0 ac Temporary	
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 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
3h. Total stream and tributary impacts					0 Permanent 0 Temporary	

3i. Comments:									
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	Lake Fisher	Perm. Fill			lake	0.03*			
O1 ☐ P ☒ T	Lake Fisher	Temp. Fill			lake	0.04			
O1 ☐ P ☒ T	Lake Fisher	Ex. Pier Removal			lake	0.02			
O1 ☐ P ☐ T									
4f. Total open water impacts						0.03 ac Permanent 0.06 ac Temporary			
4g. Comments: *Linear footage of perm. impacts to lake total 39 linear ft.									
Additional temp. impacts due to barge anchoring total <0.01 ac.; Additional perm. impacts due to drilled piers total <0.01 ac.									
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 ☐ Catawba			☐ Tar-Pamlico ☐ Randleman	☐ Other:
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)		
Site ☐ P ☐ T			☐ Yes ☐ No				
Site ☐ P ☐ T			☐ Yes ☐ No				
Site ☐ P ☐ T			☐ Yes ☐ No				
Site ☐ P ☐ T			☐ Yes ☐ No				
Site ☐ P ☐ T			☐ Yes ☐ No				
6h. Total buffer impacts							
6i. Comments:							

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 13 feet longer than the existing bridge; An off-site detour will be employed during construction; The proposed bridge will have a vertical curve to direct drainage to both sides of the bridge. This will allow the bridge to be constructed without deck drains and eliminate direct discharge into Lake Fisher; Runoff from the bridge deck will be collected in concrete flumes at each end of the bridge and conveyed down the rip rap embankment at nonerosive velocities; Reinforced 1.5:1 fill slopes were utilized to minimize fill into Lake Fisher; Stormwater treatment will be provided for the approach roadways through the use of open graded friction course.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. NCDOT Best Management Practices for Construction and Maintenance Activities and Best Management Practices for the Protection of Surface Waters will be employed. Since this is a CA water, Design Standards in Sensitive Watersheds will also be employed.		
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: Mitigation is not required for impacts associated with this project.	
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:	0 linear feet	
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold	
4d. Buffer mitigation requested (DWQ only):	0 square feet	
4e. Riparian wetland mitigation requested:	0 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 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.		

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			3 (2 for Catawba)	
Zone 2			1.5	
	6f. Total buffer mitigation required:			
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:	☐ 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? NC Natural Heritage Program data, USFWS website, NCDOT field surveys; Concurrence from USFWS for northern long-eared bat, dated March 13, 2015 (attached).		
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		
 <u>Philip S. Harris III, P.E., C.P.M.</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>08/05/2016</u> Date

Mason, James S

From: Amschler, Crystal C SAW <Crystal.C.Amschler@usace.army.mil>
Sent: Wednesday, October 07, 2015 7:38 AM
To: Mason, James S
Subject: RE: B-5804, Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd), permitting question (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Jim,

Sorry for the delay. Based on the concurrence from FWS, the requirements of the Endangered Species Act have been satisfied and that the activity is authorized to proceed under NWP-3 for maintenance with no further coordination required.

Thanks and let me know if you have any other questions.

Crystal C. Amschler
Project Manager
Asheville Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28403
(828)-271-7980 Ext 231

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at:

http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

-----Original Message-----

From: Mason, James S [mailto:jsmason@ncdot.gov]
Sent: Tuesday, October 06, 2015 4:01 PM
To: Amschler, Crystal C SAW
Subject: [EXTERNAL] FW: B-5804, Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd), permitting question (UNCLASSIFIED)

Crystal-

I was emailing to see if you have had an opportunity to review the information that I provided in the email below. If you could email me back when you have an opportunity it would be much appreciated. Also, please let me know if you require any additional information or have any questions.

Thanks,

Jim

-----Original Message-----

From: Mason, James S
Sent: Friday, September 25, 2015 3:27 PM
To: Amschler, Crystal C SAW
Subject: RE: B-5804, Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd), permitting question (UNCLASSIFIED)

Crystal-

Thank you for your response. I spoke with the Design Build team and it appears that the project will occur primarily on the causeways. However, it appears that there are 5-6 trees that are >4in DBH that will be cleared on the causeways within the permit review area. We had already received concurrence for the NLEB from USACE earlier this year (please see attached). Our Bio Surveys Group reviewed the most recent design and determined that this concurrence is still valid because the final design occurs in an area that is both within and much smaller than the one considered for the project when the concurrence was issued. Since there will be minor tree clearing and we have concurrence for the NLEB, would we be required to request written approval for the NWP 3? Or would no notification be required? If you could email me back when you have an opportunity it would be much appreciated.

Thanks and have a great weekend,

Jim

-----Original Message-----

From: Amschler, Crystal C SAW [mailto:Crystal.C.Amschler@usace.army.mil]
Sent: Tuesday, September 22, 2015 10:40 AM
To: Mason, James S
Cc: Hood, Donna
Subject: RE: B-5804, Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd), permitting question (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jim,

As described I think this project clearly qualifies for authorization under NWP-3. If the project will result in removal of trees within the permit review area, which would be specifically where the discharge of fill material will occur, then consultation on the Northern Long Eared Bat would be required. Since this is a bridge project that spans a lake, I realize that no clearing may actually occur, but if there is any discharge of fill near the banks where trees will be removed we may need to consult. If no tree clearing will occur within the permit areas, then this project would likely qualify for Nationwide 3 with no-notification required.

Crystal C. Amschler
Project Manager
Asheville Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28403
(828)-271-7980 Ext 231

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at:

Blockedhttp://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

-----Original Message-----

From: Mason, James S [mailto:jsmason@ncdot.gov]

Sent: Monday, September 14, 2015 3:45 PM

To: Amschler, Crystal C SAW

Cc: Hood, Donna

Subject: [EXTERNAL] B-5804, Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd), permitting question

Crystal-

I am emailing regarding B-5804, which is the proposed replacement of Bridge No. 56 over Lake Fisher on SR 2000 (Brantley Rd). This is the bridge project that was added to the I-3802A Design Build contract, but it is to be permitting separately from I-3802A. Parsons Brinckerhoff has recently completed the draft permit drawings for the bridge and I wanted to confirm that we are permitting it properly. The impacts for the project are as follows:

- 1) 0.03 ac. permanent fill, plus 0.04 ac. temporary fill in Lake Fisher. These impacts are related to the rip rap wrapping around the proposed end bents
- 2) <0.01 acres of permanent impacts associated with the installation of the drilled piers for the new interior bents
- 3) 0.03 ac. of temporary impacts due to the removal of the existing piers.
- 4) <0.01 ac. of temporary impacts related to anchoring the barge.

Based on the impacts listed above, we were planning on permitting this under a NWP 3. In an email from June, you had stated that we could probably permit this as a NWP 3, but I wanted to confirm that now that we have the final impact numbers before we proceed. If you could email me back regarding this when you have an opportunity it would be much appreciated.

Thanks,

Jim

Jim Mason

Environmental Specialist

Environmental Coordination & Permitting Group - Western Region

PDEA - Natural Environment Section

N.C. Department of Transportation

Physical Address:

Century Center - Building B

1020 Birch Ridge Dr

Raleigh, NC 27610-4328

Mailing Address:

1598 Mail Service Center

Raleigh, NC 27699-1598

Phone: (919) 707-6136

Email: jsmason@ncdot.gov

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

Classification: UNCLASSIFIED

Caveats: NONE

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

Classification: UNCLASSIFIED

Caveats: NONE



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Asheville Field Office
160 Zillicoa Street
Asheville, North Carolina 28801

March 13, 2015

Ms. Mary Frazer
North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
1598 Mail Service Center
Raleigh, NC 27699-1598

Subject: Review of Potential Impacts to the northern long-eared bat (*Myotis septentrionalis*) associated with the replacement of bridge No. 56 on SR 2000 (Brantley Road) over Lake Fisher in Kannapolis, Cabarrus County, TIP-I-3802/B-5804.

Dear Mary:

According to the information provided, the North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 56 on SR 2000 (Brantley Road) over Lake Fisher (TIP No. B-5804) in Kannapolis, Cabarrus County. The bridge is currently closed to traffic due to a failed bridge inspection. As part of I-3802A, replacing the bridge over the Brantley Road 1-85 interchange is dependent on the crossing of Bridge No. 56. Since Bridge No. 56 is closed to traffic, the I-3802A project footprint was extended to include replacement of Bridge No. 56.

On October 2, 2013 the US Fish and Wildlife Service (USFWS) proposed to list the northern long-eared bat (*Myotis septentrionalis*) (NLEB) for protection under the Endangered Species Act (ESA) for its range. A decision regarding federal listing of this species is anticipated in April 2015. The subject project lies within the range of NLEB in NC. Given that we anticipate this species to be listed under the ESA within the next month, the FHWA and NCDOT have requested a conference with the USFWS regarding the NLEB for the bridge replacement portion of this project.

I have reviewed the information provided for potential impacts to NLEB from implementation of B-5804. Potential winter habitat was assessed and it was determined that no suitable mines or caves exist in the project footprint or within three miles. The bridge structure itself was inspected and no evidence of bat use was noted. Minimal tree clearing will occur on the existing causeway for the bridge demolition and construction and further clearing will occur on the lakeshore to create a barge landing. Total tree clearing is anticipated to be 0.24 acres. Both areas of tree clearing were inspected and the trees, while some are larger than three inches in diameter, were not loose barked and had few crevices or hollows suitable for roosting bats. In addition, habitat along a lakeshore is not considered preferred habitat for NLEB.

Based on the information provided we agree that implementation of project B-5804, a portion of I-3802A, will not jeopardize the continued existence of the NLEB. Further we concur that if the

bat is listed, the project is not likely to adversely NLEB. If NLEB is listed, obligations under Section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

If you have questions about these comments, please contact me at 828-258-3939, ext. 237 or by e-mail. In any future correspondence concerning this project, please reference our Log No. 4-2-11-129, which includes I-3802A and the subject bridge replacement.

Sincerely,

Marella Buncick

- - *original signed* - -



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.02; Released April 2015)

WBS Element: 36780.2.FS2 TIP No.: I3802A/B5804 County(ies): Cabarrus Page 1 of 1

General Project Information

WBS Element:	36780.2.FS2	TIP Number:	I3802A/B5804	Project Type:	Bridge Replacement	Date:	9/9/2015
NCDOT Contact:	Matthew S. Lauffer, PE			Contractor / Designer:	Parsons Brinckerhoff		
Address:	Hydraulics Unit 1590 Mail Service Center Raleigh, NC 27699-1590			Address:	121 West Trade Street, Suite 1950 Charlotte, NC 28202		
	Phone: 919-707-6703				Phone: 704-342-5403		
	Email: mslauffer@ncdot.gov				Email: heafnerc@pbworld.com		
City/Town:	Kannapolis			County(ies):	Cabarrus		
River Basin(s):	Yadkin-Pee Dee			CAMA County?	No		
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.13 mi	Surrounding Land Use:	Residential, Office, Industrial and Agriculture		
	Proposed Project		Existing Site		
Project Built-Up Area (ac.)	0.40 ac.		0.31 ac.		
Typical Cross Section Description:	NB and SB - 10' lanes, and 7'-8" shoulder to accommodate a future sidewalk.		NB and SB - 10' lanes. No sidewalk or paved shoulder.		
Annual Avg Daily Traffic (veh/hr/day):	Design/Future: N/A	Year: N/A	Existing: 1200	Year: 2008	
General Project Narrative: (Description of Minimization of Water Quality Impacts)	Project I-3802A/B-5804 consists of the construction of a 210' long cored slab bridge to replace existing bridge #56 in Cabarrus County on SR 2000 (Brantley Rd.) over Lake Fisher. The existing bridge is in poor condition and is closed to traffic. The proposed bridge will have a vertical curve to direct drainage to both sides of the bridge. This will allow the bridge to be constructed without deck drains and eliminate direct discharge into Lake Fisher. Runoff from the bridge deck will be collected in concrete flumes at each end of the bridge and conveyed down the rip rap embankment at non-erosive velocities. Reinforced 1.5:1 fill slopes were utilized to minimize fill into Lake Fisher. Stormwater treatment will be provided for the approach roadways through the use of open graded friction course. This project creates surface water impacts by the installation of 3' diameter drilled piers and fill required for construction of spill through bridge abutments. A barge will be utilized for construction of the bridge. The barge will be anchored adjacent to the bridge using spuds. It is anticipated that the barge will be launched without creating additional surface water impacts.				

Waterbody Information

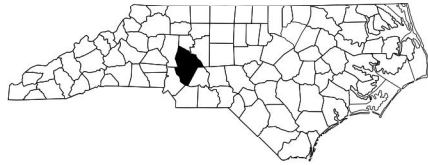
Surface Water Body (1):	Cold Water Creek (Lake Fisher)		NCDWR Stream Index No.:	13-17-9-4-(1)	
NCDWR Surface Water Classification for Water Body	Primary Classification:	Water Supply IV (WS-IV)			
	Supplemental Classification:	CA			
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	LA		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	N/A
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)					

09/08/99

TIP PROJECT: I-3802A /B-5804

CONTRACT: C203328

SYTIME\$\$\$\$\$
DGN\$\$\$\$\$
USERNAME\$\$\$\$\$



PERMIT DRAWING
SHEET 1 OF 7

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

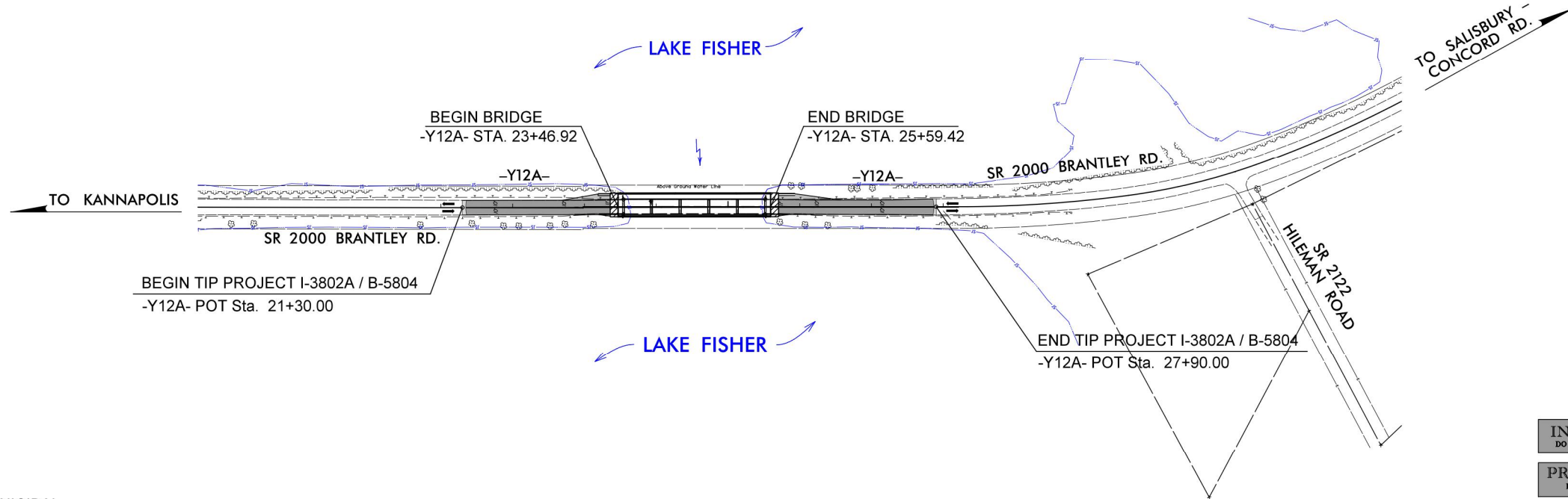
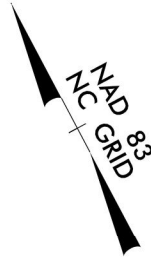
CABARRUS COUNTY

LOCATION: BRIDGE NO. 56 OVER LAKE FISHER ON
SR 2000 (BRANTLEY ROAD)

TYPE OF WORK: DESIGN-BUILD WETLAND
AND STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3802A /B-5804	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
36780.2.FS2	NHIMF-85-2(77)55	DESIGN	BUILD

 **BLYTHE** **PARSONS
BRINCKERHOFF**



THIS PROJECT IS WITHIN THE MUNICIPAL
BOUNDRIES OF THE CITY OF KANNAPOLIS

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



PLANS



PROFILE (HORIZONTAL)



PROFILE (VERTICAL)

DESIGN DATA

ADT 2008 = 1,200

ADT 2035 = N/A

K = N/A

D = N/A

T = N/A *

V = 45 MPH

* TTST = N/A DUAL N/A
FUNC CLASS = LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT I-3802A /B-5804 = 0.085 MI

LENGTH OF STRUCTURE TIP PROJECT I-3802A /B-5804 = 0.040 MI

TOTAL LENGTH OF TIP PROJECT I-3802A /B-5804 = 0.125 MI

PLANS PREPARED BY:

**PARSONS
BRINCKERHOFF**
SUITE 1950
CHARLOTTE, NC 28202
N.C. LIC. NO. F-5168

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 3, 2014

LETTING DATE:
APRIL 3, 2014

NCDOT CONTACT:

PLANS PREPARED FOR:

DIVISION OF HIGHWAYS
1000 Birch Ridge Dr.
Raleigh NC, 27610

DANIEL N. BRIDGES, PE
PROJECT ENGINEER

DAVID B. GOURLEY, PE
PROJECT DESIGN ENGINEER

K. ZAK HAMIDI, PE
DESIGN BUILD PROJECT ENGINEER -
DESIGN BUILD UNIT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN
ENGINEER

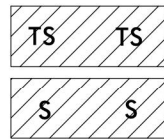
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8/17/99

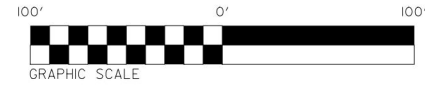
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PARSONS BRINCKERHOFF



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN
SURFACE WATER



PARSONS
BRINCKERHOFF

121 WEST TRADE STREET
SUITE 100
CHARLOTTE, NC 28202
919.440.1000

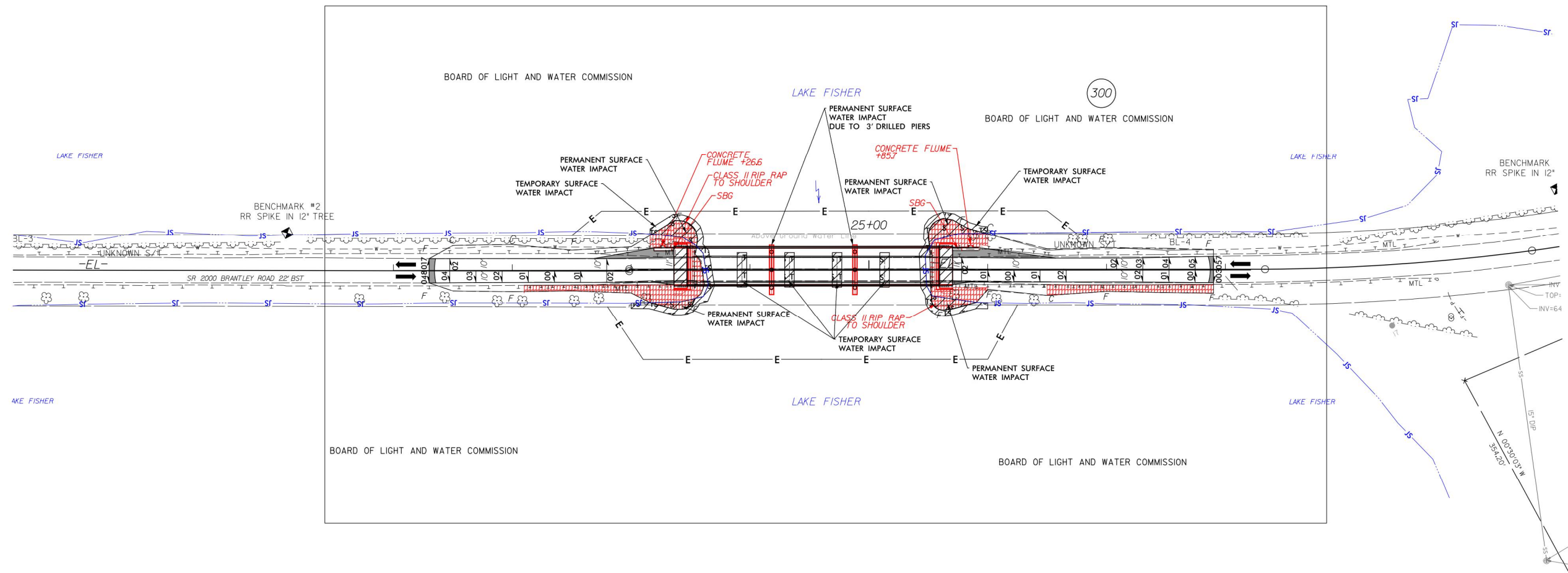
PROJECT REFERENCE NO.		SHEET NO.
I-3802A /B5804		4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

BLYTHE **PARSONS BRINCKERHOFF**

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SEE SHEET 4A



PERMIT DRAWING
SHEET 2 OF 7

OPEN GRADED
FRICTION COURSE
STA 21+30 TO 23+19 LT
STA 25+93 TO 27+90 RT

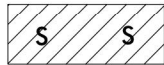
8/17/99

REVISIONS

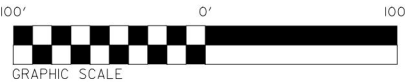
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PARSONS BRINCKERHOFF



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN
SURFACE WATER



PARSONS
BRINCKERHOFF

101 WEST TRADE STREET
SUITE 100
CHARLOTTE, NC 28202
919.440.1000

PROJECT REFERENCE NO.
I-3802A /B5804

SHEET NO.
4

RW SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

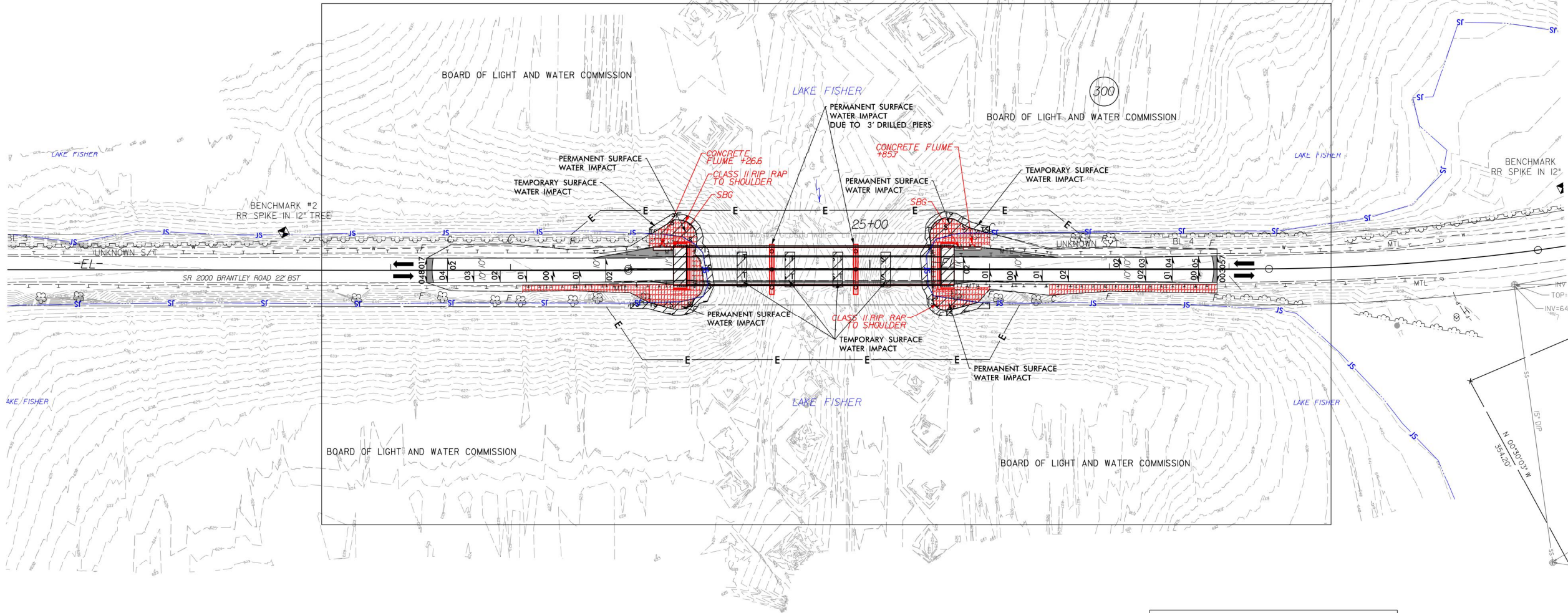


INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NAD 83 NRS 2007

SEE SHEET 4A



PERMIT DRAWING
SHEET 3 OF 7

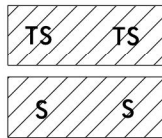
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FRICTION COURSE
STA 21+30 TO 23+19 LT
STA 25+93 TO 27+90 RT

8/17/99

REVISIONS

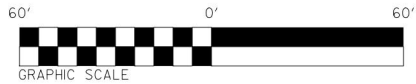
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PARSONS BRINCKERHOFF

PERMIT DRAWING
SHEET 4 OF 7



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN
SURFACE WATER



NAD 83/NSRS 2007

PARSONS
BRINCKERHOFF

121 WEST TRADE STREET
SUITE 100
CHARLOTTE, NC 28202
919.440.1000

PROJECT REFERENCE NO.

I3802A /B5804

SHEET NO.

4A

R/W SHEET NO.

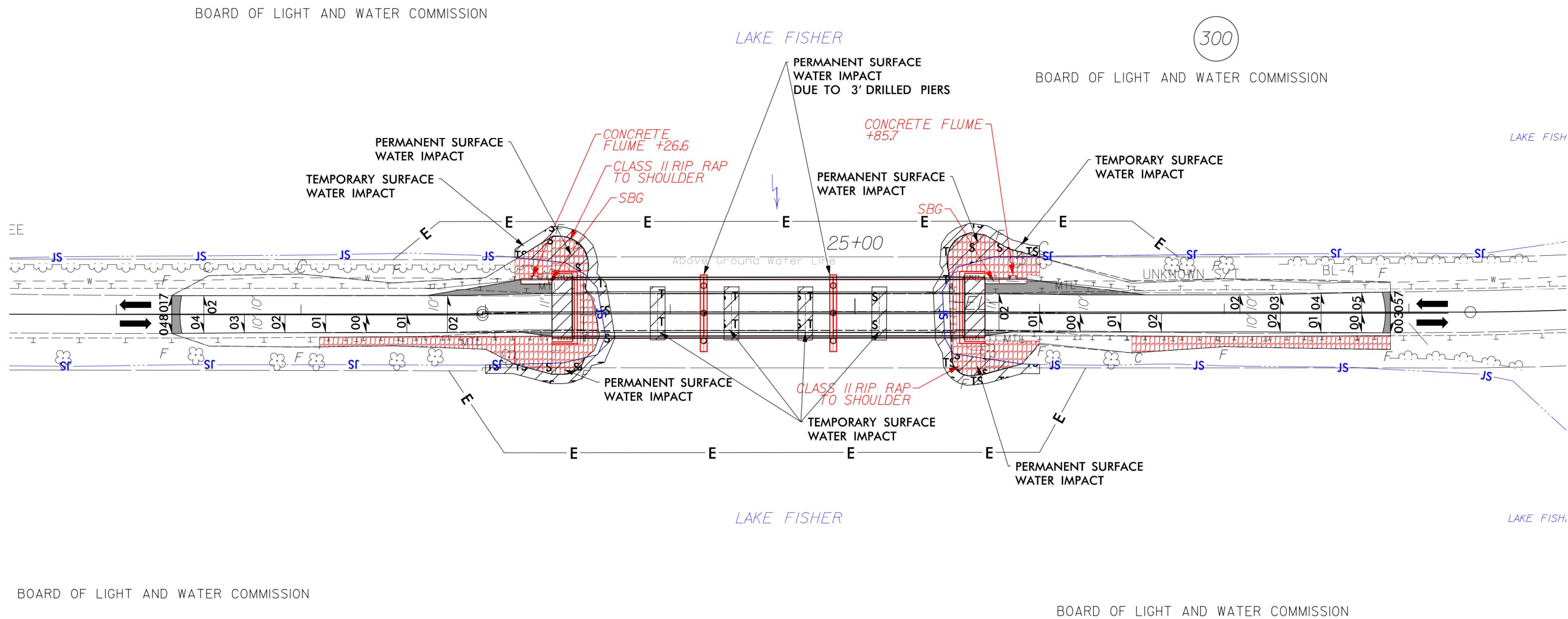
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

BLYTHE PARSONS
BRINCKERHOFF

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



OPEN GRADED
FRICTION COURSE
STA 21+30 TO 23+19 LT
STA 25+93 TO 27+90 RT

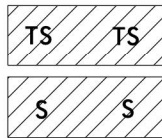
8/17/99

REVISIONS

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PARSONS BRINCKERHOFF

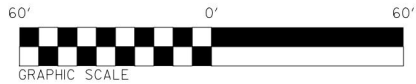
OPEN GRADED
FRICTION COURSE
STA 21+30 TO 23+19 LT
STA 25+93 TO 27+90 RT

PERMIT DRAWING
SHEET 5 OF 7



TS TS
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

S S
DENOTES IMPACTS IN
SURFACE WATER



NAD 83/NSRS 2007

PARSONS
BRINCKERHOFF

121 WEST TRADE STREET
SUITE 100
CHARLOTTE, NC 28202
919.440.1000

PROJECT REFERENCE NO.
13802A /B5804

SHEET NO.
4A

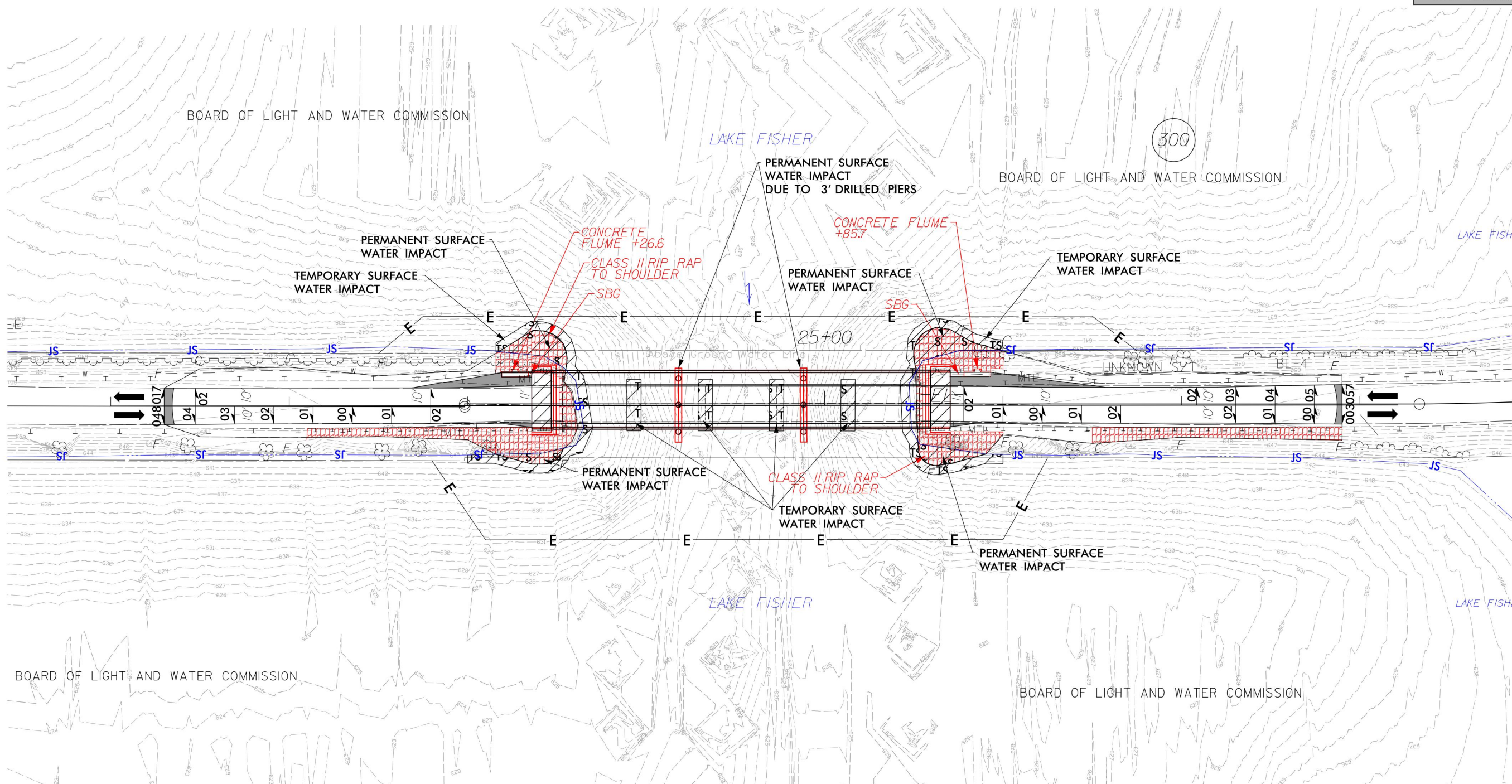
R/W SHEET NO.
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

BLYTHE PARSONS
BRINCKERHOFF

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

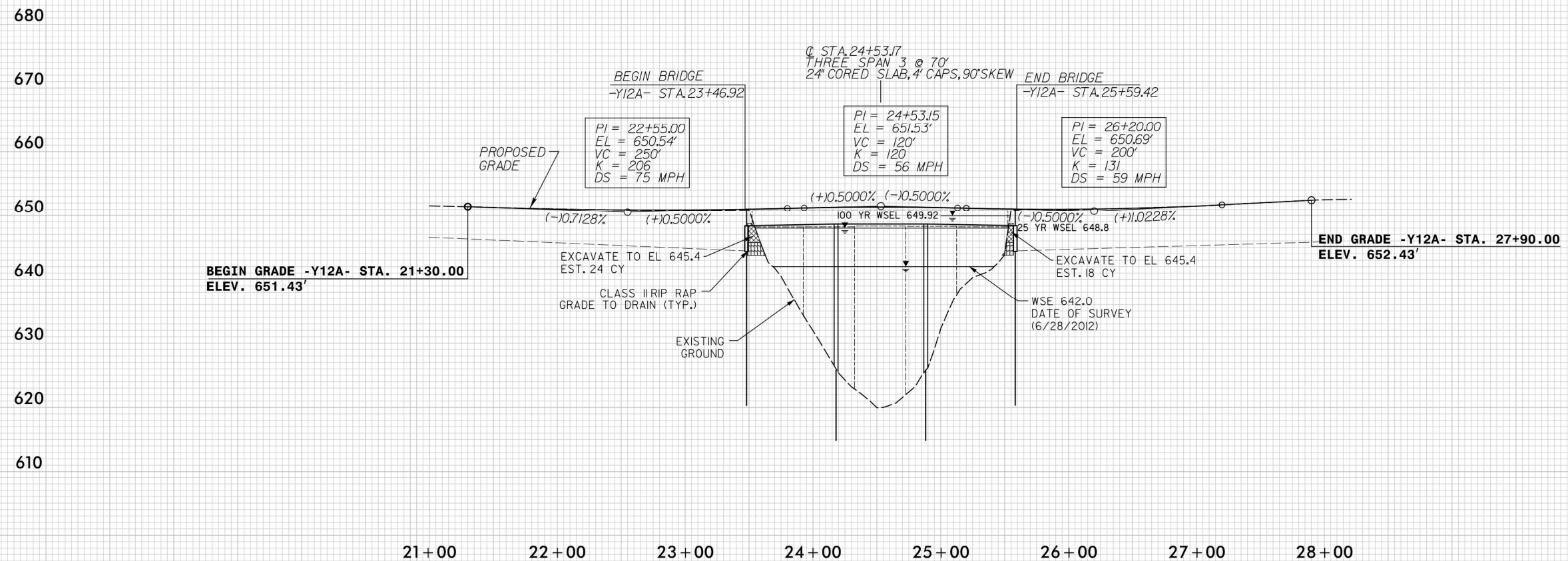
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 4600 CFS
 DESIGN FREQUENCY = 25 YRS
 DESIGN HW ELEVATION = 648.8 FT
 BASE DISCHARGE = 5300 CFS
 BASE FREQUENCY = 100 YRS
 BASE HW ELEVATION = 649.92 FT
 OVERTOPPING DISCHARGE = 6360 CFS
 OVERTOPPING FREQUENCY = 500 YRS
 OVERTOPPING ELEVATION = 650.9 FT

PERMIT DRAWING
SHEET 6 OF 7



WETLAND PERMIT IMPACT SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
	23+00 TO 26+00	FILL						0.03	0.04	39		
	23+88 TO 25+18	EX. PIER REMOVAL							0.02			
TOTALS*:								0.03	0.06	39	0	0

*Rounded totals are sum of actual impacts

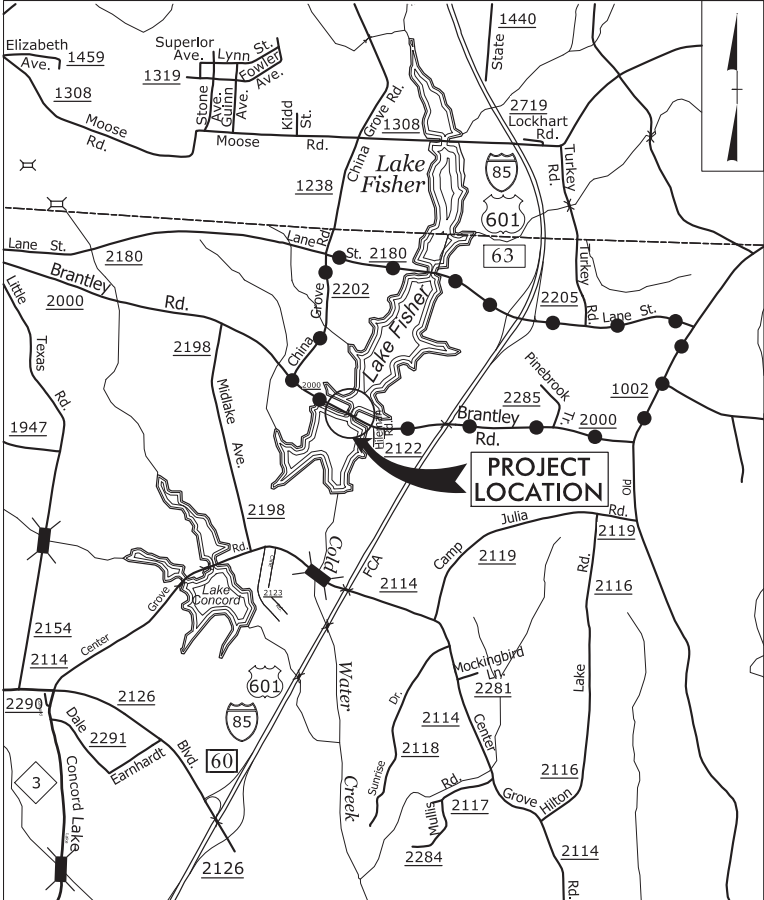
NOTES:
TEMPORARY IMPACTS DUE TO BARGE ANCHORING: 126 SQ. FT. (0.003AC) <0.01 ACRE.
PERMANENT SW IMPACTS DUE TO DRILLED PIERS: 42 SQ. FT. (0.001AC) <0.01 ACRE.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
10/8/2015
Cabarrus
I3802A/B5804
36780.2.FS2
SHEET 7 OF 7

TIP PROJECT: I-3802A /B-5804

CONTRACT: C203328

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheet 1C For Survey Control Sheet



VICINITY MAP
OFFSITE DETOUR

RFC ROADWAY PLANS
SEPTEMBER 28, 2015

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

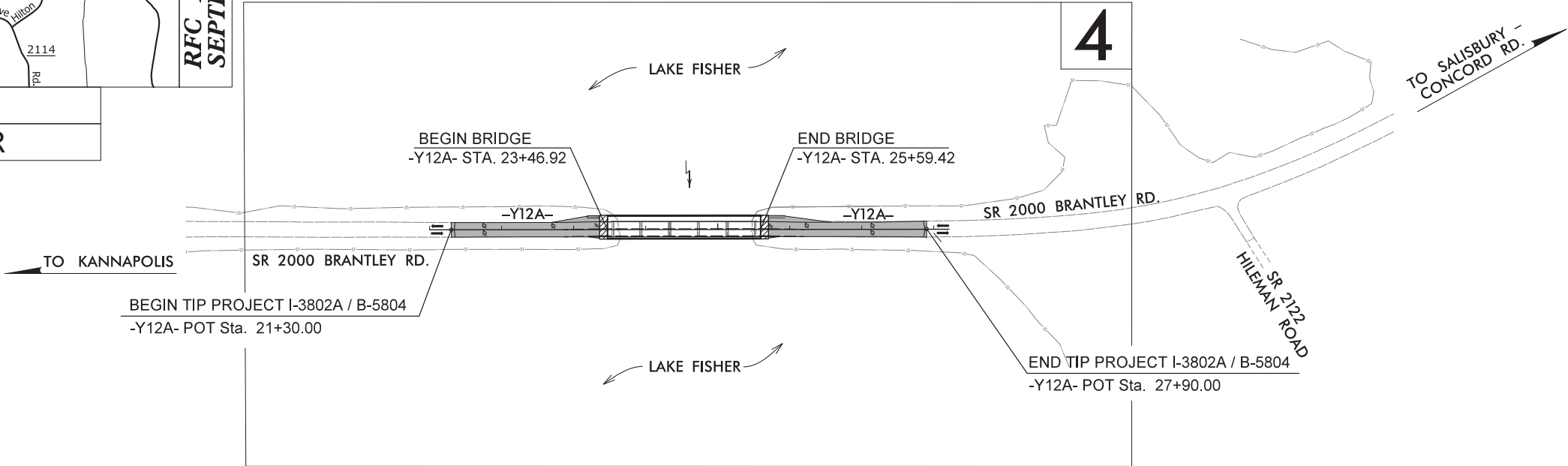
CABARRUS COUNTY

LOCATION: BRIDGE NO. 56 OVER LAKE FISHER ON
SR 2000 (BRANTLEY ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

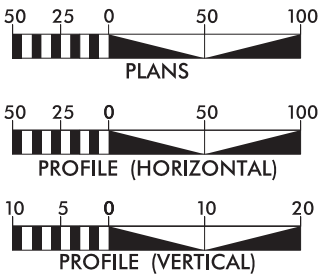
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-3802A /B-5804	1	
STATE PROJ.NO.		F.A.PROJ.NO.	DESCRIPTION
36780.2.FS2		NHIMF-85-2(77)55	DESIGN BUILD

RFC ROADWAY PLANS
SUBMITTED: 10-05-15
SUBMITTAL #D-138



THIS PROJECT IS WITHIN THE MUNICIPAL
BOUNDRIES OF THE CITY OF KANNAPOLIS

GRAPHIC SCALES



DESIGN DATA

ADT 2008 = 1,200
ADT 2035 = N/A
K = N/A
D = N/A
T = N/A *
V = 45 MPH
* TTST =N/A DUAL N/A
FUNC CLASS = LOCAL
SUBREGIONAL TIER

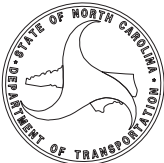
PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT I-3802A /B-5804 = 0.085 MI
LENGTH OF STRUCTURE TIP PROJECT I-3802A /B-5804 = 0.040 MI
TOTAL LENGTH OF TIP PROJECT I-3802A /B-5804 = 0.125 MI

PLANS PREPARED BY:
PARSONS BRINCKERHOFF
121 WEST TRADE STREET
SUITE 1950
CHARLOTTE, NC 28202
NC LIC. NO. E-50165
2012 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
APRIL 3, 2014
LETTING DATE:
APRIL 3, 2014
NCDOT CONTACT:

PLANS PREPARED FOR:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr.
Raleigh NC, 27610
DANIEL H. BRIDGES, PE
PROJECT ENGINEER
DAVID B. GOURLEY, PE
PROJECT DESIGN ENGINEER
K. ZAK HAMIDI, PE
DESIGN BUILD PROJECT ENGINEER -
DESIGN BUILD UNIT

HYDRAULICS ENGINEER
P.E.
SIGNATURE:
ROADWAY DESIGN ENGINEER
P.E.
SIGNATURE:



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL PLAN SHEET SYMBOLS
1-C	SURVEY CONTROL SHEETS
2	TYPICAL SECTIONS AND DETAILS
2-A THRU 2-C	SPECIAL DETAILS
3	GUARDRAIL SUMMARY
3-A	EARTHWORK SUMMARY
4	PLAN / PROFILE SHEET
X-0 THRU X-5	CROSS-SECTIONS

GENERAL NOTES

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:
Duke Energy Corporation
Concord Electric
Public Service of North Carolina
MSNC
Windstream
City of Concord
City of Kannapolis

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

PROJECT REFERENCE NO. I-3802A/B-5804		SHEET NO. I-A
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 	
		

STANDARD DRAWINGS

2012 ROADWAY ENGLISH STANDARD DRAWINGS
EFF. 01-17-2012
REV. 10-30-2012

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE
DIVISION 2 - EARTHWORK
200.02 Method of Clearing - Method II
225.02 Guide for Grading Subgrade - Secondary and Local
225.04 Method of Obtaining Superelevation - Two Lane Pavement
225.06 Method of Grading Sight Distance at Intersections
DIVISION 4 - MAJOR STRUCTURES
422.11 Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS
654.01 Pavement Repairs
DIVISION 8 - INCIDENTALS
806.01 Concrete Right-of-Way Marker
815.02 Subsurface Drain
815.03 Pipe Underdrain and Blind Drain
846.01 Concrete Curb, Gutter and Curb & Gutter
850.01 Concrete Paved Ditches
862.01 Guardrail Placement
862.02 Guardrail Installation
862.03 Structure Anchor Units (Beg. March 2013 Letting use detail in lieu of Standard)
862.04 Anchoring End of Guardrail - B-77 and B-83 Anchor Units
876.01 Rip Rap in Channels
876.02 Guide for Rip Rap at Pipe Outlets
876.04 Drainage Ditches with Class 'B' Rip Rap

Note: Not to Scale

**S.U.E. = Subsurface Utility Engineering*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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-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-----
Known Soil Contamination: Area or Site	-----☠☠-----
Potential Soil Contamination: Area or Site	-----☠☠?-----

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	-----< FLOW -----
False Sump	⊠

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊙ MILEPOST 35
Switch	⊠ 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	-----Ⓜ W-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----Ⓜ W ▲-----
Proposed Right of Way Line with Concrete or Granite R/W Marker	-----▲ Ⓜ W-----
Proposed Control of Access Line with Concrete C/A Marker	-----▲ Ⓜ C A-----
Existing Control of Access	-----Ⓜ C A-----
Proposed Control of Access	-----Ⓜ C A-----
Existing Easement Line	-----E-----
Proposed Temporary Construction Easement	-----E-----
Proposed Temporary Drainage Easement	-----TDE-----
Proposed Permanent Drainage Easement	-----PDE-----
Proposed Permanent Drainage / Utility Easement	-----DUE-----
Proposed Permanent Utility Easement	-----PUE-----
Proposed Temporary Utility Easement	-----TUE-----
Proposed Aerial Utility Easement	-----AUE-----
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	Ⓜ CR
Existing Metal Guardrail	-----T T T T-----
Proposed Guardrail	-----T T T T-----
Existing Cable Guiderail	-----T T T T-----
Proposed Cable Guiderail	-----T T T T-----
Equality Symbol	⊙
Pavement Removal	⊠
<i>VEGETATION:</i>	
Single Tree	⊙
Single Shrub	⊙
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	⊠ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	⊠ CONC
Bridge Wing Wall, Head Wall and End Wall	Ⓜ CONC WW
MINOR:	
Head and End Wall	Ⓜ CONC HW
Pipe Culvert	-----
Footbridge	----->-----
Drainage Box: Catch Basin, DI or JB	⊠ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	Ⓜ
Storm Sewer	-----S-----

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	●
Recorded U/G Power Line	-----P-----
Designated U/G Power Line (S.U.E.*)	-----P-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	Ⓜ
Telephone Booth	Ⓜ
Telephone Pedestal	Ⓜ
Telephone Cell Tower	Ⓜ
U/G Telephone Cable Hand Hole	Ⓜ
Recorded U/G Telephone Cable	-----T-----
Designated U/G Telephone Cable (S.U.E.*)	-----T-----
Recorded U/G Telephone Conduit	-----TC-----
Designated U/G Telephone Conduit (S.U.E.*)	-----TC-----
Recorded U/G Fiber Optics Cable	-----T FO-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----T FO-----

WATER:

Water Manhole	Ⓜ
Water Meter	Ⓜ
Water Valve	Ⓜ
Water Hydrant	Ⓜ
Recorded U/G Water Line	-----W-----
Designated U/G Water Line (S.U.E.*)	-----W-----
Above Ground Water Line	-----A/G Water-----

TV:

TV Satellite Dish	Ⓜ
TV Pedestal	Ⓜ
TV Tower	Ⓜ
U/G TV Cable Hand Hole	Ⓜ
Recorded U/G TV Cable	-----TV-----
Designated U/G TV Cable (S.U.E.*)	-----TV-----
Recorded U/G Fiber Optic Cable	-----TV FO-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----TV FO-----

GAS:

Gas Valve	◇
Gas Meter	◇
Recorded U/G Gas Line	-----G-----
Designated U/G Gas Line (S.U.E.*)	-----G-----
Above Ground Gas Line	-----A/G Gas-----

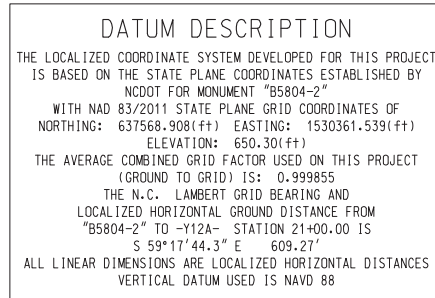
SANITARY SEWER:

Sanitary Sewer Manhole	Ⓜ
Sanitary Sewer Cleanout	Ⓜ
U/G Sanitary Sewer Line	-----SS-----
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer-----
Recorded SS Forced Main Line	-----FSS-----
Designated SS Forced Main Line (S.U.E.*)	-----FSS-----

MISCELLANEOUS:

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

SURVEY CONTROL SHEET PRELIMINARY



```

*****
BM1      ELEVATION = 674.14
N 638026      E 1529404
Y12A STATION 28+21.00
  N 64°09'21.86" W DIST    1551.82
RR SPIKE IN 13" PINE
*****

```

```

*****
BM2      ELEVATION = 647.38
N 637758      E 1530100
Y12A STATION 28+21.00
  N 59°45'11.36" W DIST      811.23
RR SPIKE IN 12" TREE
*****

```

```

*****
BM3          ELEVATION = 648.94
N 637289      E 1531060
Y12A STATION 28+21.00
  S 76°49'43.23" E DIST      266.15
RR SPIKE IN 15" POPLAR
*****

```

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: [HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION](https://connect.ncdot.gov/resources/location)

THE FILES TO BE FOUND ARE AS FOLLOWS:
B5804_LS_BASELINE.TXT
B5804_LS_INPUT.TXT

2. SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

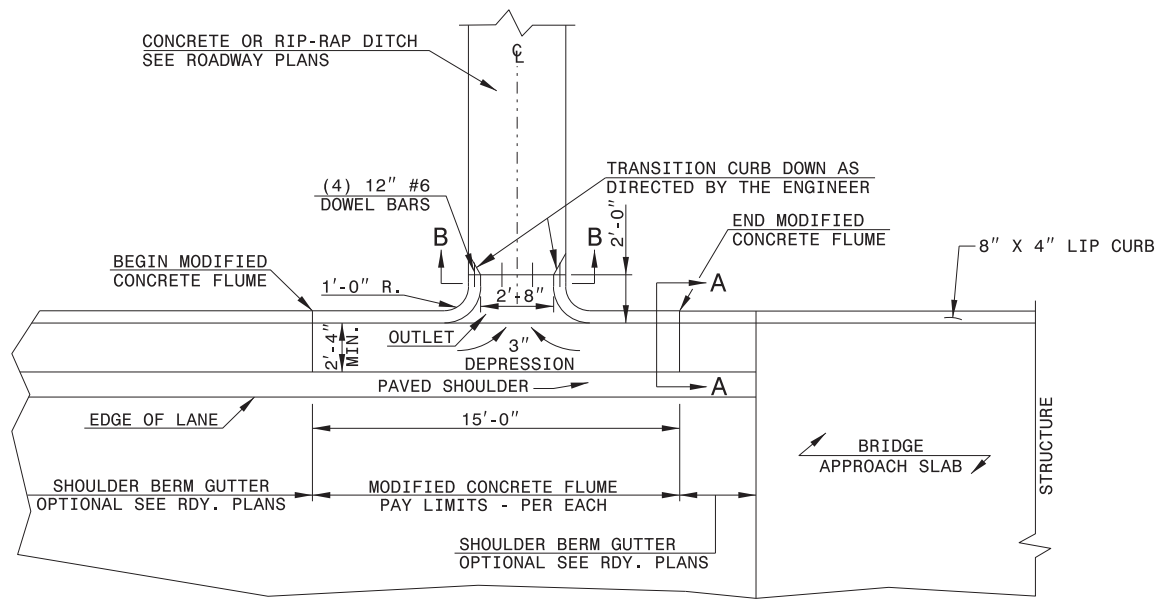
3. PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM, UTILIZING THE NCGS RTN SYSTEM (VRS).

MONUMENTS USED OR SET FOR PROJECT CONTROL BY THE NCDOT
LOCATION AND SURVEYS UNIT:

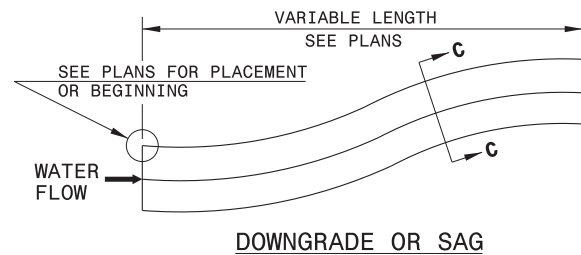
- INDICATES GEODETIC CONTROL MONUMENTS FOR HORIZONTAL CONTROL
 ■ INDICATES BASELINE MONUMENTS FOR HORIZONTAL PROJECT CONTROL
 ✕ INDICATES BENCHMARKS FOR VERTICAL CONTROL

NOTE: DRAWING NOT TO SCALE

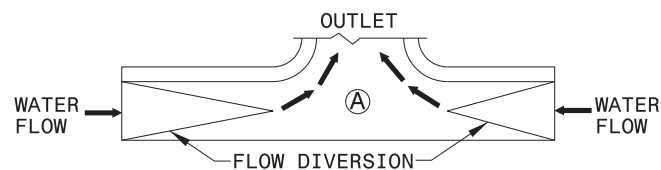
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR MODIFIED CONCRETE FLUME WITH CONCRETE OR RIP-RAP DITCH
SHEET 1 OF 1	MODFLMDTCH



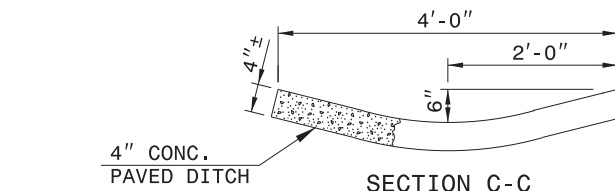
PLAN VIEW



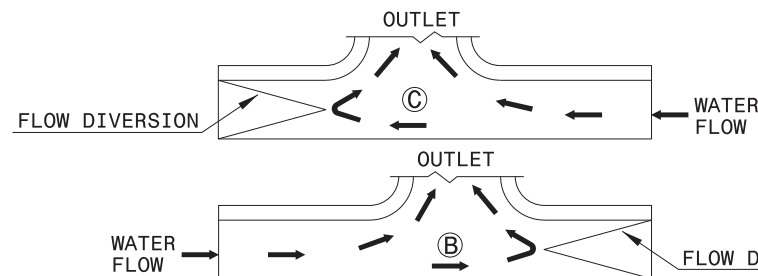
DOWNGRADE OR SAG



SAG

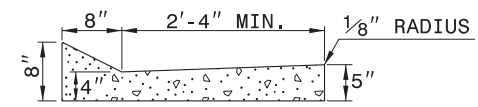


SECTION C-C

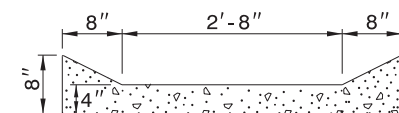


FLOW DIVERSION EXAMPLES

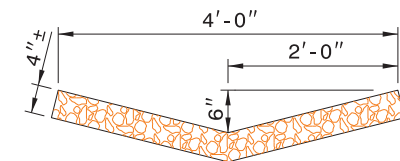
DOWN GRADE



SECTION A-A



SECTION B-B

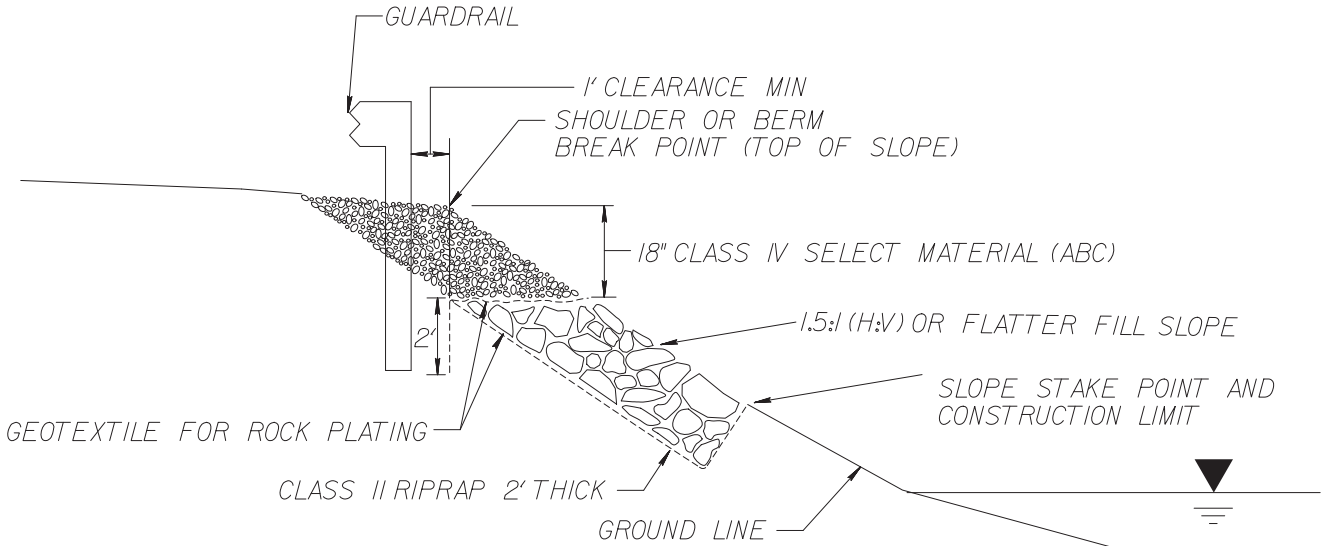


RIP-RAP LINED DITCH

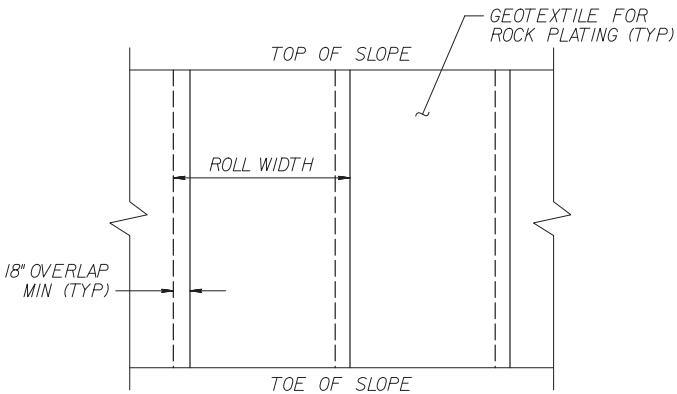
NOTES:

- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ENGLISH DETAIL DRAWING FOR MODIFIED CONCRETE FLUME WITH CONCRETE OR RIP-RAP DITCH
SHEET 1 OF 1	MODFLMDTCH



ROCK PLATING DETAIL



GEOTEXTILE OVERLAP DETAIL
(PLAN VIEW)

NOTES:

- SEE ROADWAY PLANS AND SUMMARY SHEETS FOR ROCK PLATING LOCATIONS.
- FOR STANDARD ROCK PLATING,SEE SECTION 275 OF THE STANDARD SPECIFICATIONS.

ROCK PLATING DETAIL

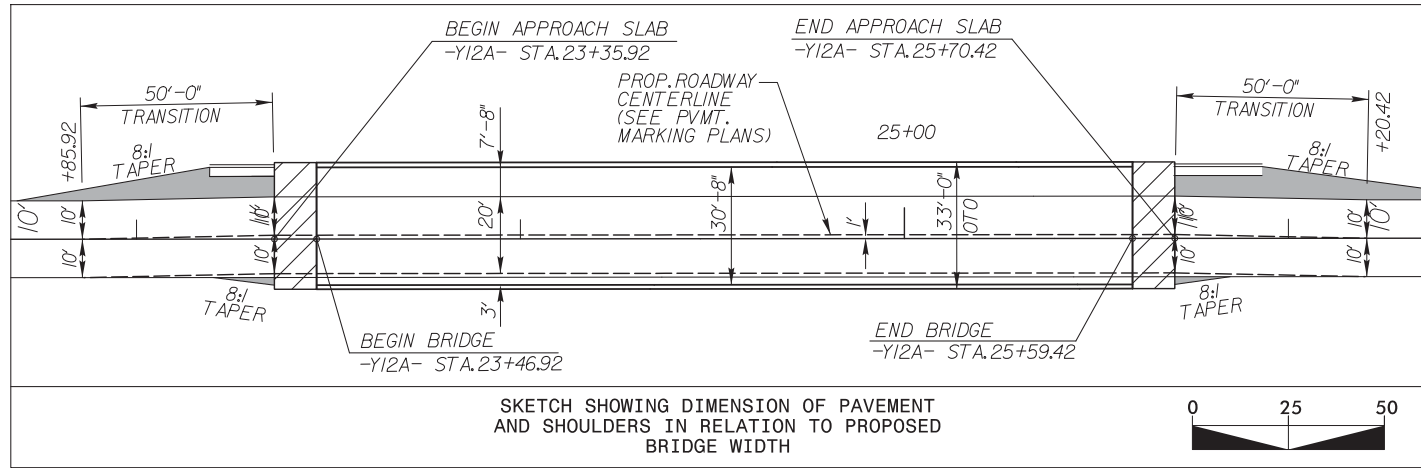
-Y12- 22+10 to 23+00
& 26+50 to 27+90
ROCK PLATING

SUMMARY OF EARTHWORK					
Station	Station	Uncl. Excav.	Embank. +20%	Borrow	Waste
21+30.00	23+46.92	104	25		79
25+59.42	27+90.00	152	16		136
PROJECT TOTALS:		256	41		215
Structure Excavation		42			42
PROJECT TOTALS:		298	41		257
GRAND TOTALS:		298			
SAY:		300			

8/17/99

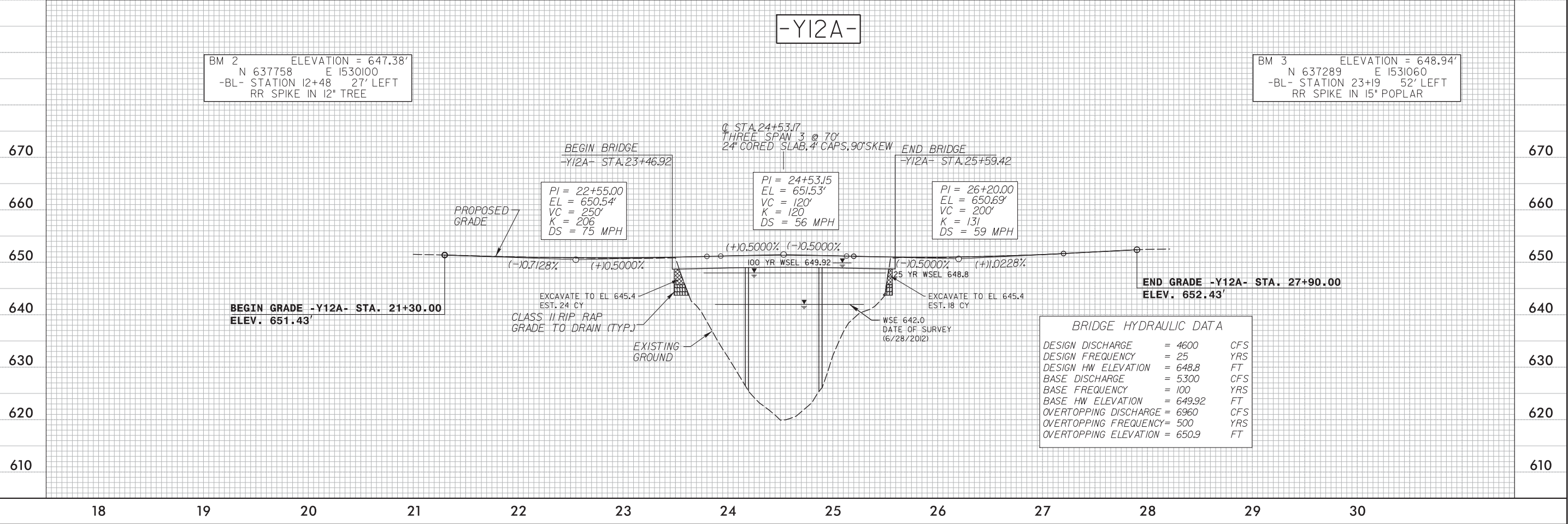
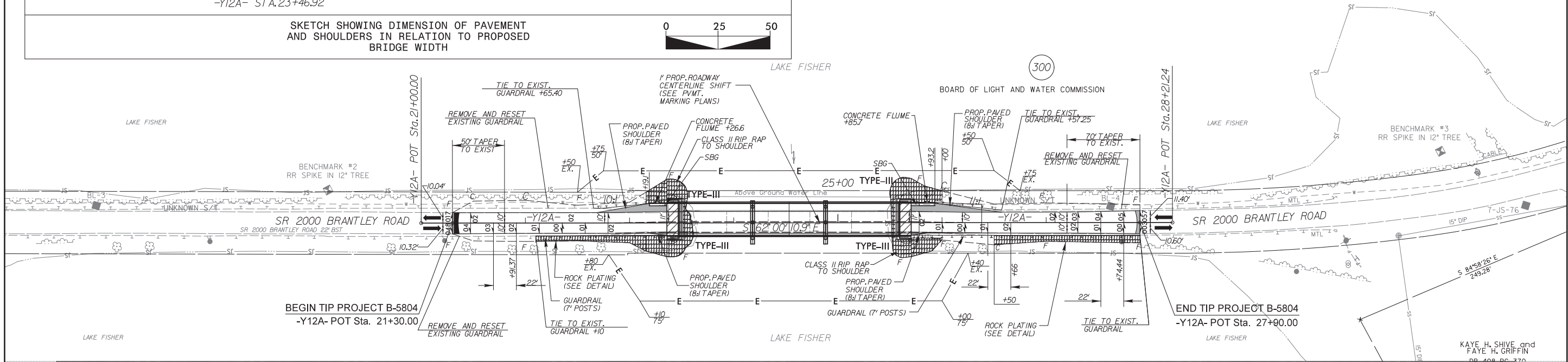
REVISIONS

9/30/2015
I:\173610A - 13802A\B5804\Roadway\Proj\B5804_Rdy_PSH_04.dgn
Davis



MAD 83 NRS 2007

PROJECT REFERENCE NO. I-3802A / B-5804		SHEET NO. 04	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	



CROSS-SECTIONS INDEX OF SHEETS

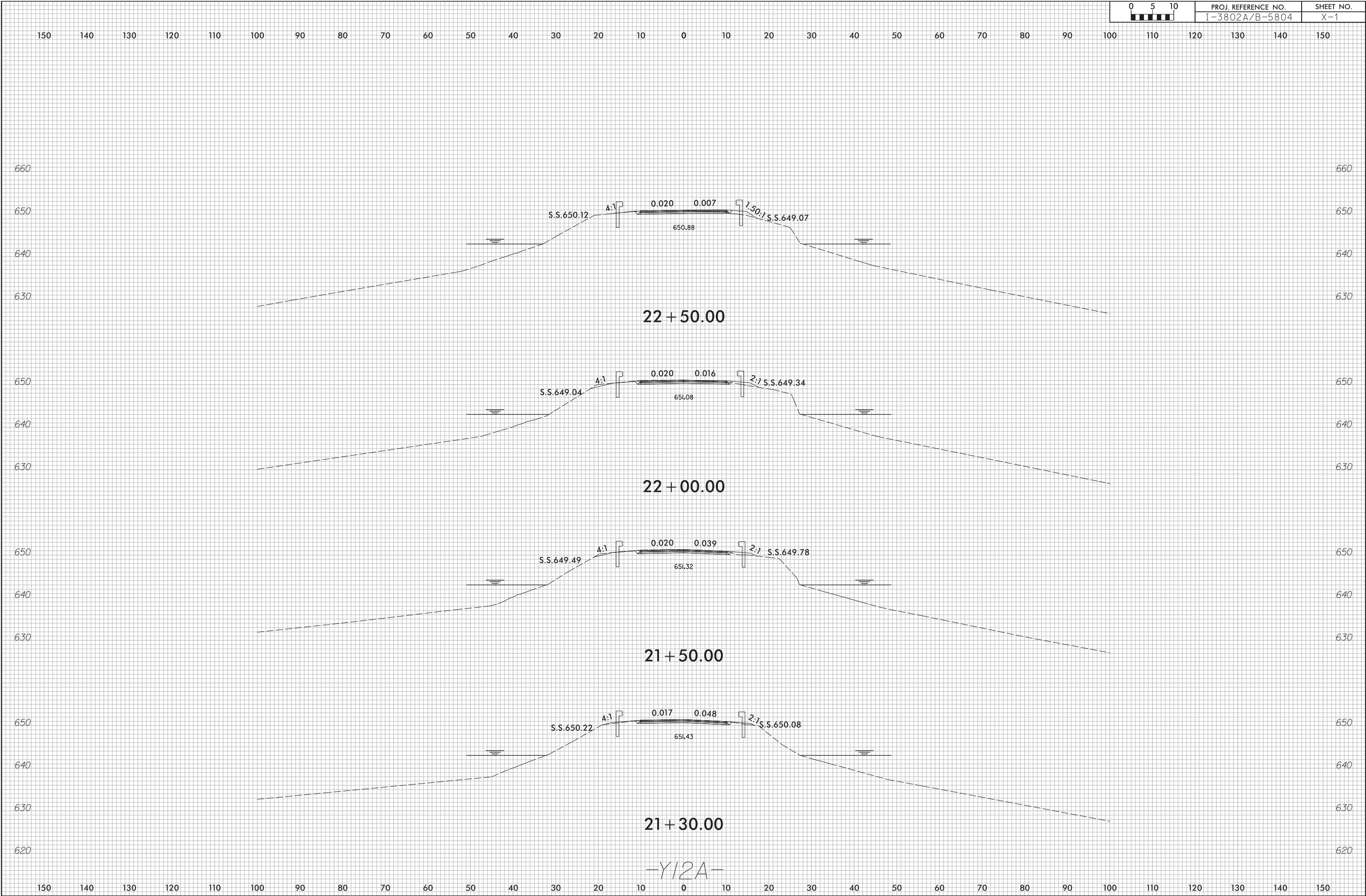
-Y12A-.....X-1 THRU X-5



STRUCTURE EXCAVATION

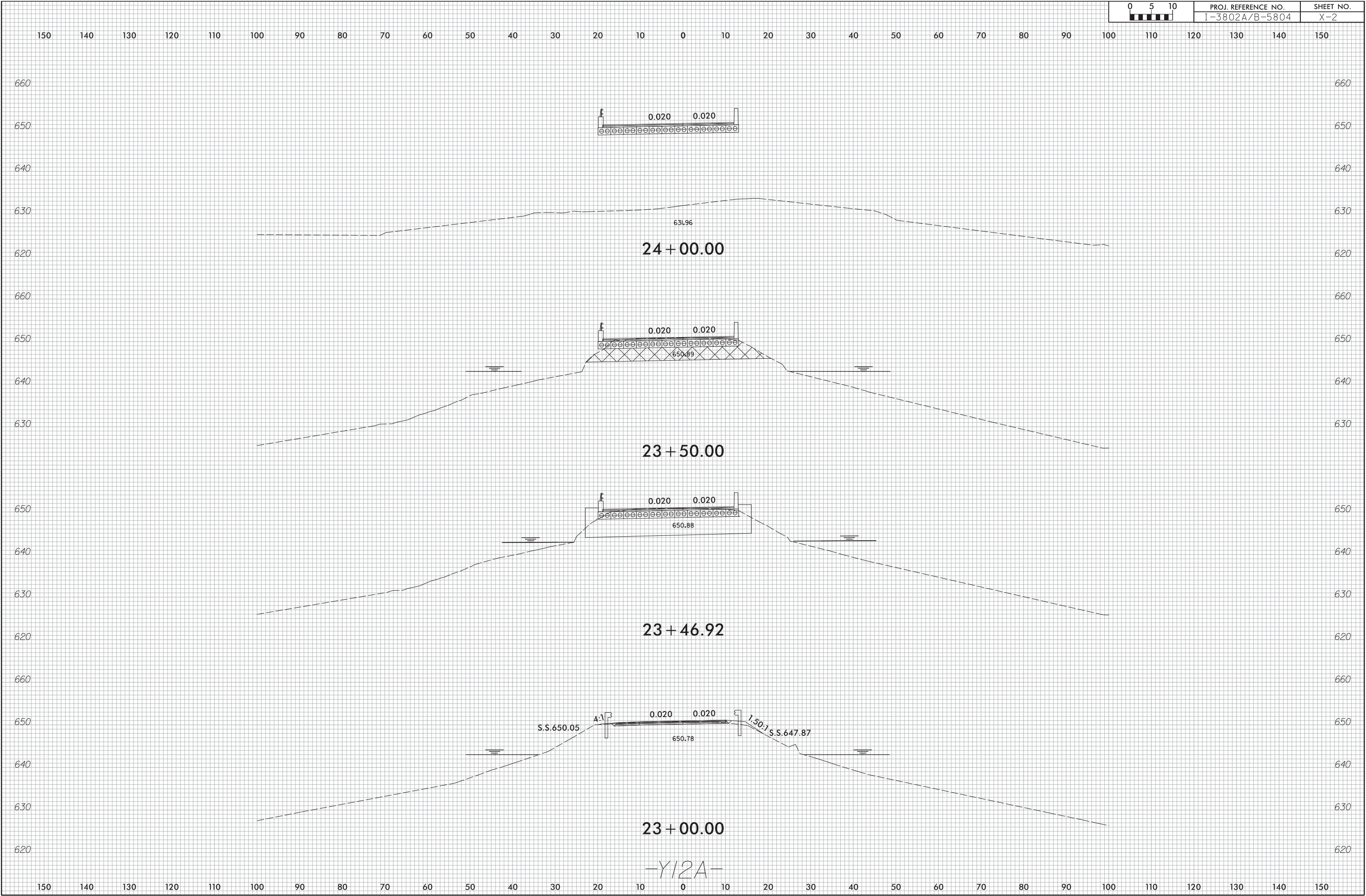
8/23/99

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	I-3802A/B-5804	X-1



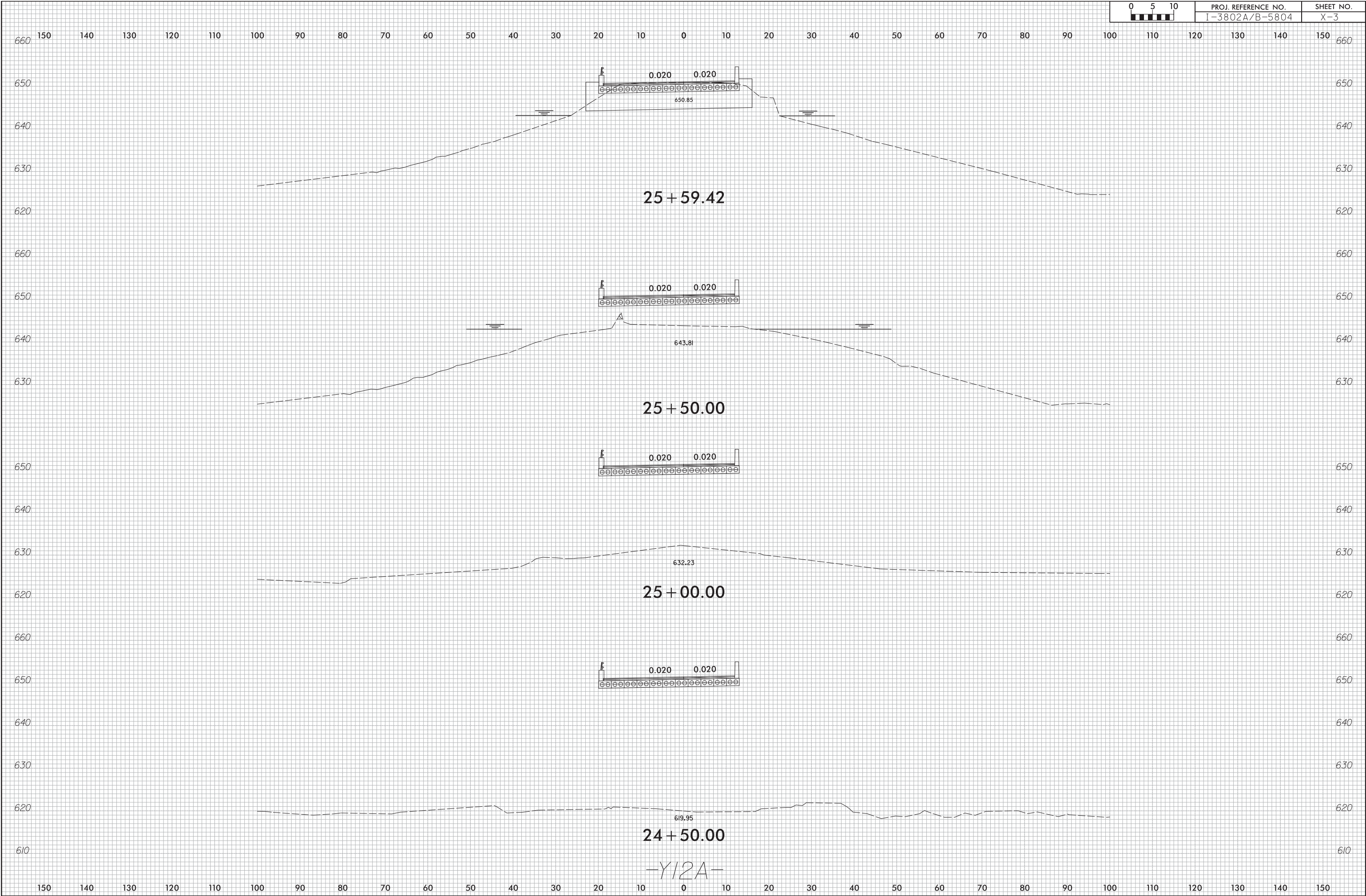
8/23/99

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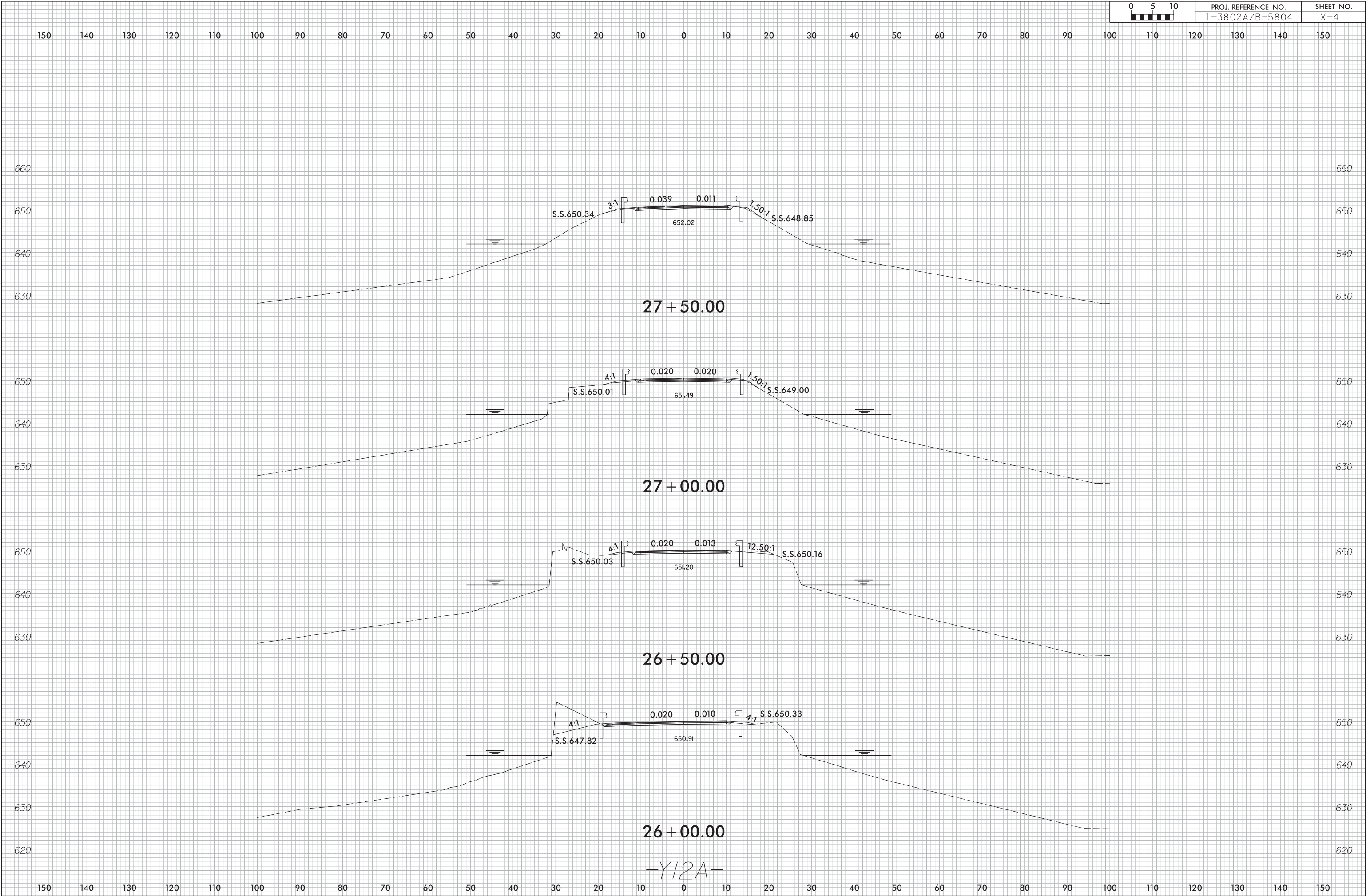
8/23/99

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	I-3802A/B-5804	X-3



8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	I-3802A/B-5804	X-4



8/23/99

0510 [Scale Bar]	PROJ. REFERENCE NO. I-3802A/B-5804	SHEET NO. X-5
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150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

9/14/2015
T:\175610A - I3802A\B5804\Roadway\XSC\B5804_Rdy.xpl.dgn
Davisch

660
650
640
630

660
650
640
630

S.S. 651.09 4:1 0.057 0.003 1.50:1 S.S. 648.84
652.43

27 + 90.00

-Y12A-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150