



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

October 26, 2012

North Carolina Division of Water Quality
1650 Mail Service Center
Raleigh, NC 27699-1650

ATTN: Mr. Charles Waklid, P.E.
Director

Subject: **Revised Information in response to the On-Hold Letter for Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 47 over the Lumber River on US 401 in Scotland and Hoke Counties, Federal Aid Project No. BRNHS-401(14); Division 8; TIP No. B-4273

Reference: Permit Application dated August 20, 2012
NCDWQ On-Hold Letter dated October 18, 2012

Dear Sir:

The purpose of this letter is to submit revised information in response to the on-hold letter issued by the North Carolina Division of Water Quality (NCDWQ) for the requested 401 Water Quality Certification. Attached are additional and revised permit drawings detailing the requested floodplain benches, to be installed upstream and downstream of the overflow barrel. These revisions will not cause any new impact to the project. Please see the enclosed copy of NCDWQ on-hold letter dated October 18, 2012, revised stormwater management plan, revised permit drawings (Permit Drawing Sheets 2,3,5, and 7 of 7), new permit drawings (Permit Drawing Sheets 3a,5a, and 5b of 7) and roadway plan drawing (Sheet 4). Please include and replace these sheets with the corresponding sheets in the original permit application.

This project calls for a letting date of May 21, 2013 and a review date of April 2, 2013; however, the let date may advance as additional funding becomes available.

We believe DWQ's concerns have been addressed and request that the application be taken off hold. A copy of this revised permit application will be posted on the NCDOT website at <http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please call Jason Dilday at (919) 707-6111.

Sincerely,
for 
Gregory J. Thorpe, Ph.D., Manager
Project Development and Environmental Analysis Unit

The "cc" List:

NCDOT Permit Application Standard Distribution List

with attachments:

Andy Williams, USACE
Amy Euliss, NCDWQ



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Division of Water Quality
Charles Wakild, P.E.
Director
October 18, 2012

Dee Freeman
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina, 27699-1548

Subject: Proposed improvements to Bridge No. 32 on SR 2361 in Rockingham County, Federal Aid
Project No. BRZ-2361(1), State Project No. WBS 4024111, TIP B-4963.

Dear Dr. Thorpe:

The NC Division of Water Quality has reviewed your submittal for a 401 Water Quality Certification for the aforementioned project. Review of your application revealed it lacking necessary information required for making an informed permit decision. The permit application was deficient in the following areas:

- **Constructed floodplain benches need to be added at the inlet and outlet of the overflow barrel. This information was requested by previously requested by phone; however, the updated drawings haven't been received.**

Therefore, pursuant to 15A NCAC 2H .0507(a)(5), we will have to place the permit application on hold until we are supplied the necessary information. You have 21 days to respond in writing with the requested information or notification to this office and the 401 Permitting Unit at 1650 Mail Service Center, Raleigh, NC 27699-1650 that the information is forthcoming. If, at the end of the 21 days, this office has not received this information in writing, we will assume you are withdrawing your application and it will be returned. Furthermore, until the information is received by the NC Division of Water Quality, we request (by copy of this letter) that the US Army Corps of Engineers place the permit application on hold.

If you have any questions or require additional information, please contact Amy Euliss at (336) 771-4959.

Sincerely,

for Charles Wakild
Director

North Carolina Division of Water Quality, Winston-Salem Regional Office
Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6488
Internet: www.ncwaterquality.org

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STORMWATER MANAGEMENT PLAN

B-4963, WBS No. 40241.1.1

ROCKINGHAM COUNTY

Hydraulics Project Manager: Stephen R. Morgan, PE

Date: 10/17/2012

ROADWAY DESCRIPTION

The project involves the replacement of bridge number 32 over Jacobs Creek on SR 2361 (New Lebanon Church Road) in Rockingham County. The overall length of the project is 0.133 mile. The project will replace an existing 100 foot length bridge with a new 2 @ 12'(W) X 11'(H) reinforced concrete box culvert (RCBC) buried 1' below the streambed. An off-site detour will be required.

ENVIRONMENTAL DESCRIPTION

The project is located within the Roanoke River. The proposed bridge is over Jacobs Creek which is classified as C.

Approximately 0.03 acre (76 feet) of surface water will be permanently impacted due to the culvert. Approximately 71 feet of stream will be impacted due to bank stabilization. Approximately 0.01 acre (15 feet) of stream will be temporarily impacted due to construction (use of impervious dikes).

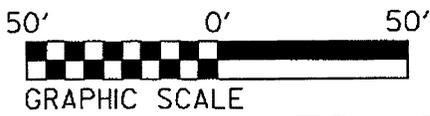
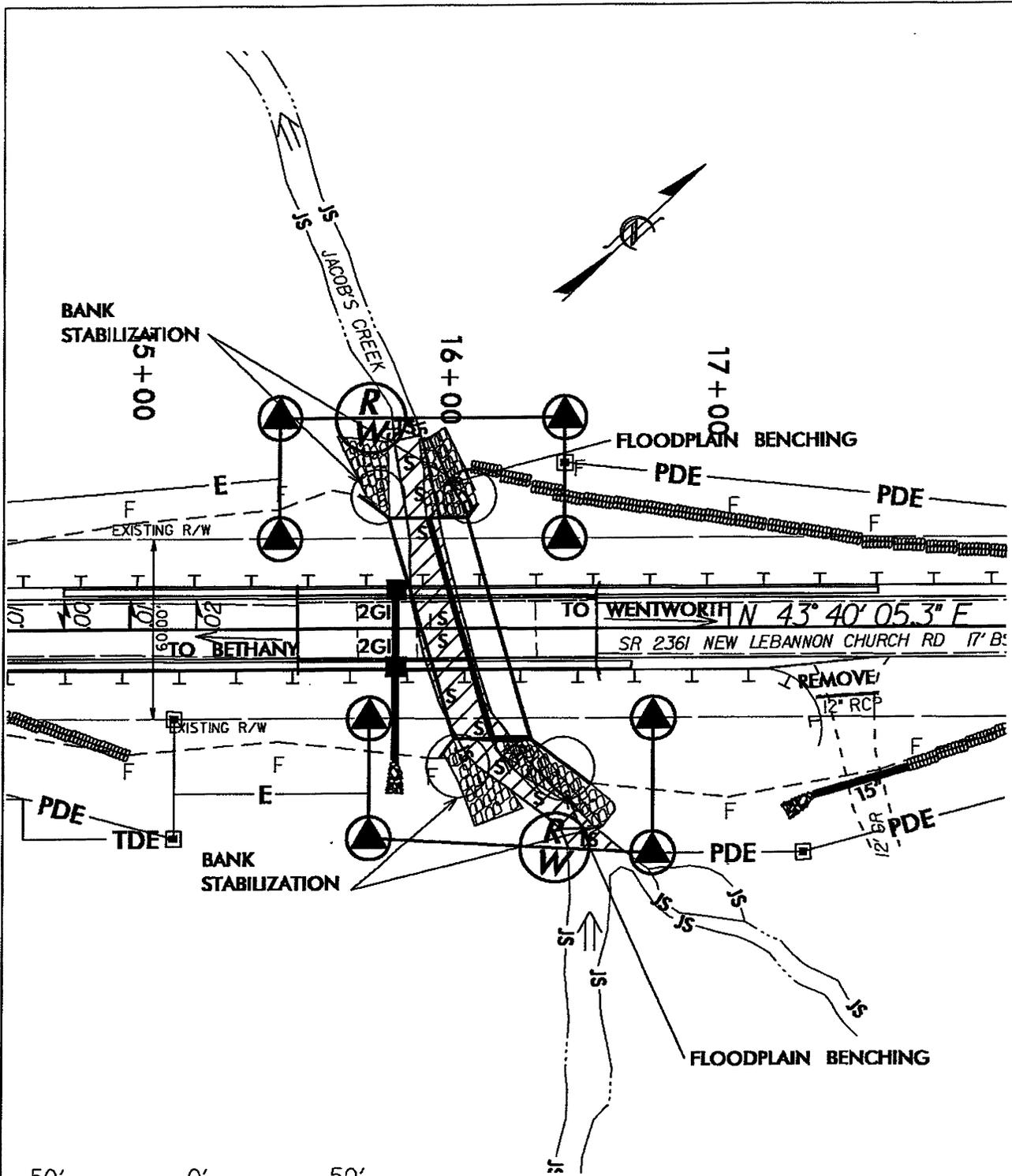
BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

Best Management Practices (BMPs) and measures used in the project are non-structural and are an attempt to reduce the storm water impacts to the receiving stream due to erosion and runoff as well as attenuate and disperse storm water before entering the receiving waters. There is no direct discharge into the receiving water.

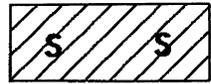
CULVERT

-L- STA 16+10.18

Replace existing bridge over Jacobs Creek with double barrel culvert (2@12'Wx11'H). A 2' sill is used at the entrance to restrict low flow to one barrel to prevent over-widening of the stream near the culvert. The culvert is buried 1' below the natural streambed. Therefore the 2' sill at the entrance has an effective height of 1'. Bank stabilization using class I rip rap is used at the inlet and outlet side of the culvert. Floodplain benching using class I rip rap is also used on the high flow barrel of the culvert. The bench is 1' above the streambed. The construction sequence of the culvert calls for using impervious dikes and a stilling basin. There are temporary impacts in the stream due to the use of impervious dikes in the stream during construction.



PLAN VIEW



DENOTES IMPACTS IN SURFACE WATER

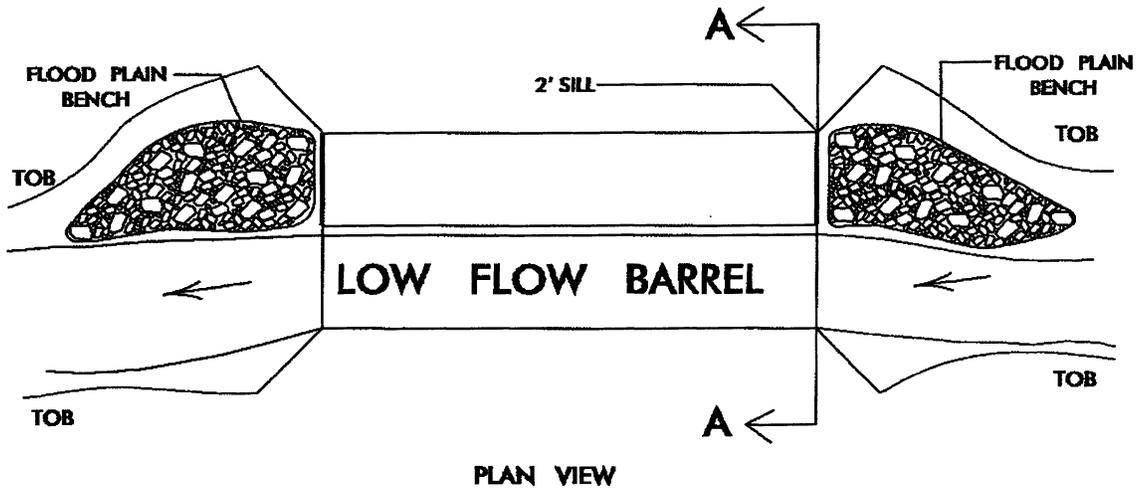


DENOTES TEMPORARY IMPACTS IN SURFACE WATER

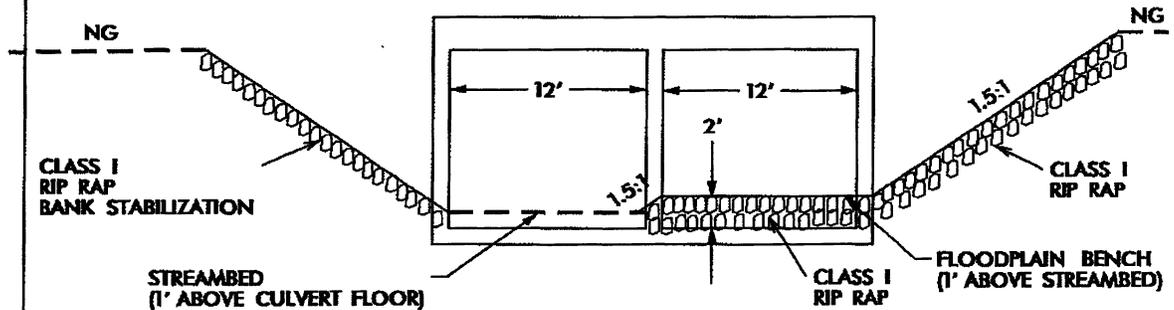
NCDOT
 DIVISION OF HIGHWAYS
 ROCKINGHAM COUNTY
 PROJECT: 4024LL1 (B-4963)
 BRIDGE NO. 32 ON SR 2361
 (NEW LEBANON CHURCH RD)
 OVER LITTLE JACOB'S CREEK

Revised 10/19/2012

DETAIL
(NOT TO SCALE)
DOUBLE-BARREL
LOW FLOW CHANNEL, SILL
AND FLOOD PLAIN



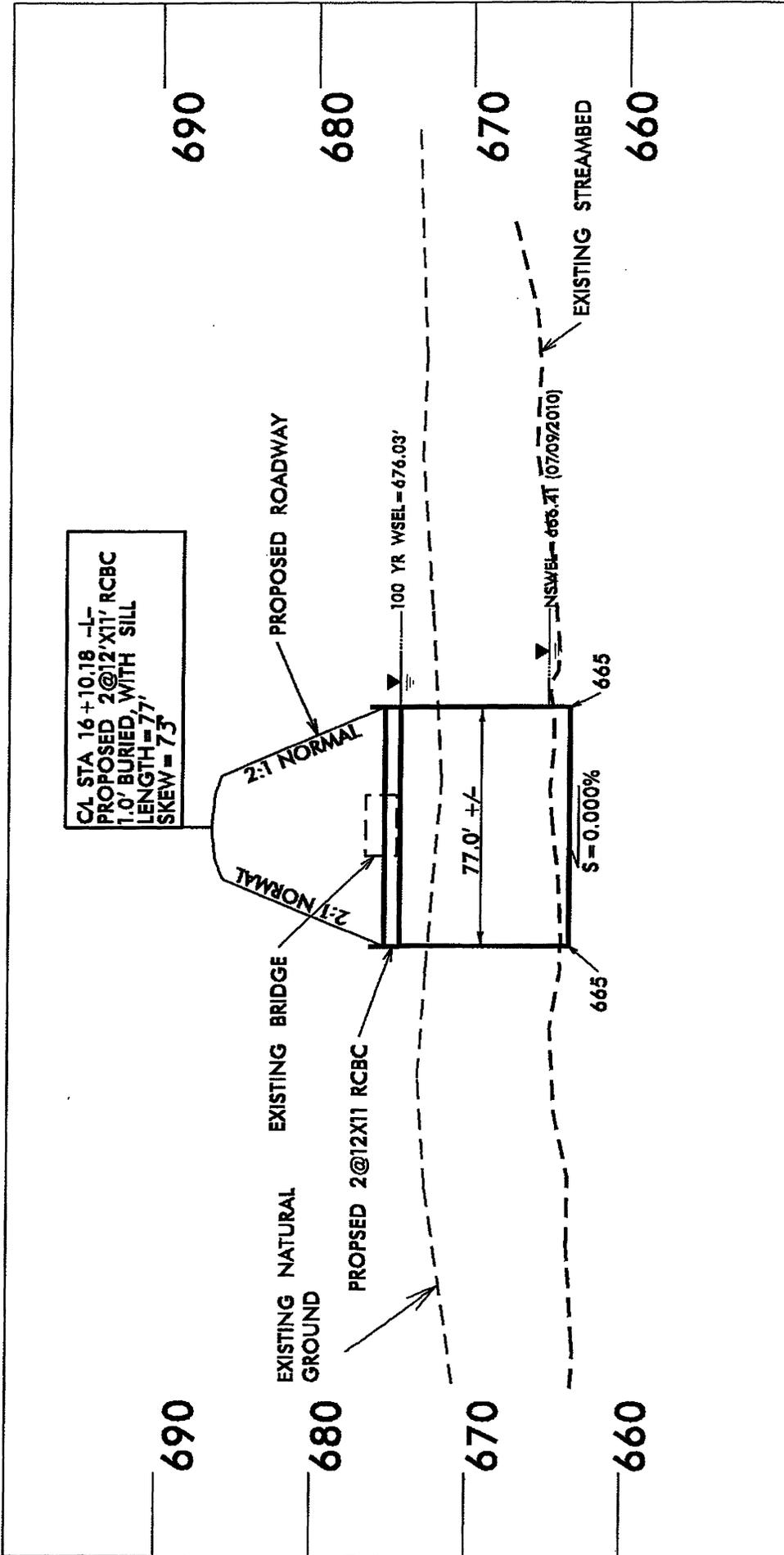
SECTION A-A



V12

PLAN VIEW

NCDOT
DIVISION OF HIGHWAYS
ROCKINGHAM COUNTY
PROJECT: 4024111 (B-4963)
BRIDGE NO. 32 ON SR 2361
(NEW LEBANON CHURCH RD.)
OVER LITTLE JACOB'S CREEK



CA STA 16+10.18 -L-
 PROPOSED 2@12'X11' RCBC
 1.0' BURIED, WITH SILL
 LENGTH = 77'
 SKEW = 73'

PROFILE

SCALE
 1" = 50' HORIZ
 1" = 10' VERT

NCDOT
 DIVISION OF HIGHWAYS
 ROCKINGHAM COUNTY
 PROJECT: 40241.1.1 (B-4963)
 BRIDGE NO. 62 ON SR 2361
 (NEW LEBANON CHURCH RD.)
 OVER LITTLE JACOB'S CREEK

SHEET 5b OF 7

10/18/12

8/17/09

PROJECT REFERENCE NO. B-4963	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



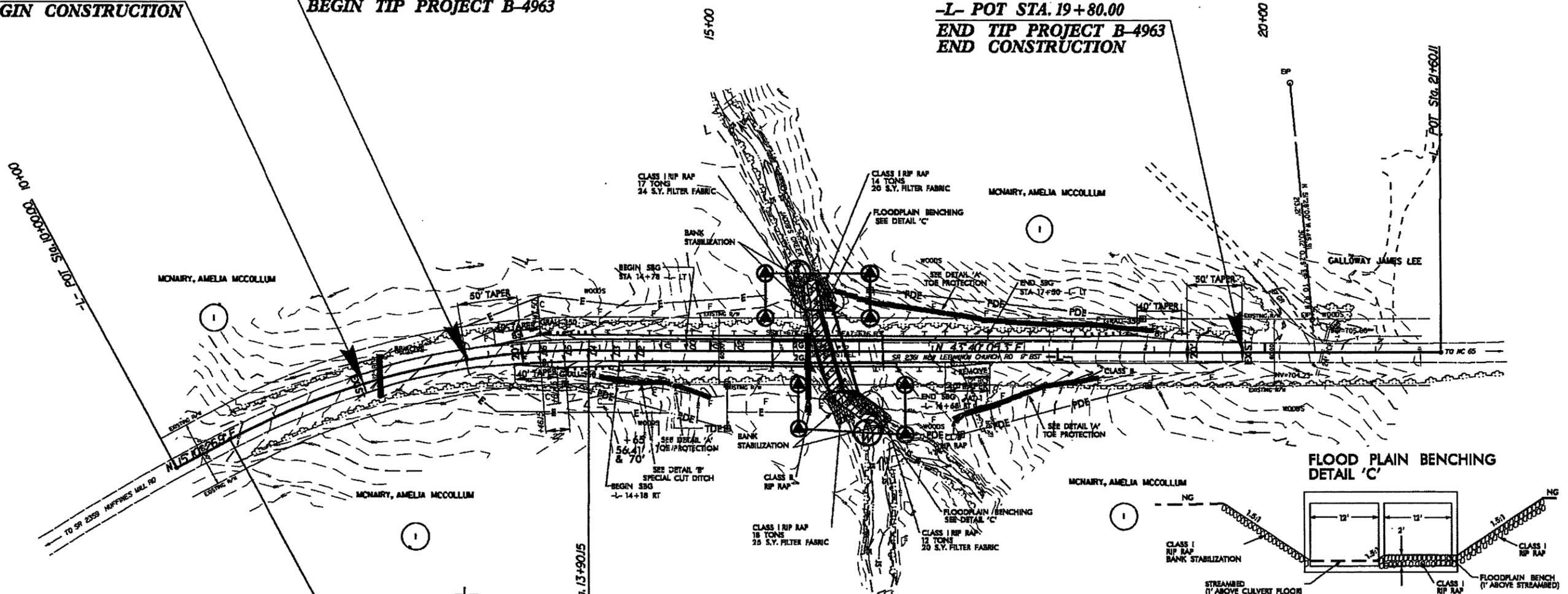
NOTE:
RESURFACE ONLY -L- STA.
11+85.00 TO -L- STA. 12+80.00

-L- POC STA. 11+85.00
BEGIN CONSTRUCTION

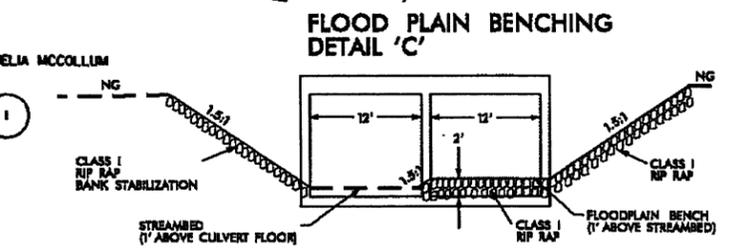
-L- POC STA. 12+80.00
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BEGIN TIP PROJECT B-4963

-L- POT STA. 19+80.00
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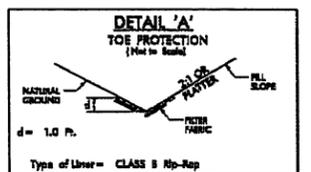
Permit Drawing
Sheet 2 of 7
Revised 10/19/2012



-L-
PI Sta 12+25.85
Δ = 28° 29' 38.4\"/>

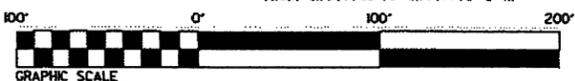


NOTE: MAINTAIN 12' LOW FLOW CHANNEL DIMENSION.
TAPER FLOOD PLAN BENCH AS SHOWN IN PLAN VIEW.



DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



FOR -L- PROFILE, SEE SHEET NO. 5

8/17/09

PROJECT REFERENCE NO. B-4963	SHEET NO. 4
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



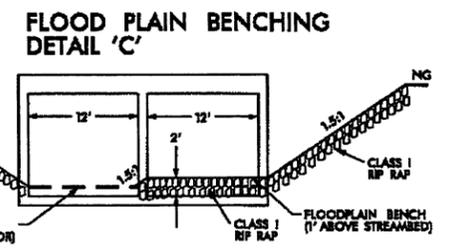
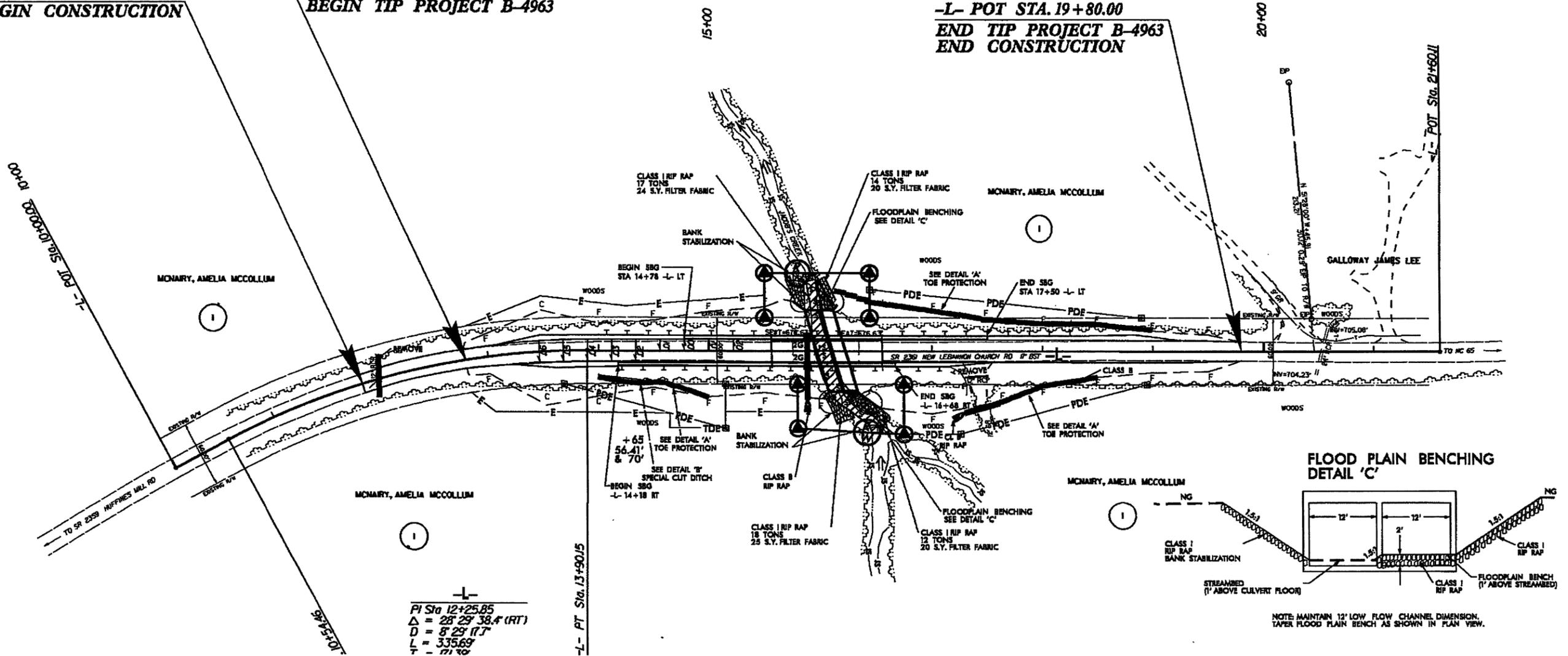
NOTE:
RESURFACE ONLY -L- STA.
11+85.00 TO -L- STA. 12+80.00

-L- POC STA. 11+85.00
BEGIN CONSTRUCTION

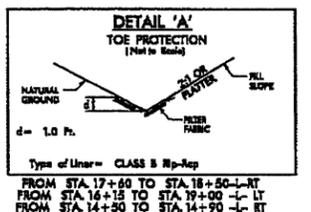
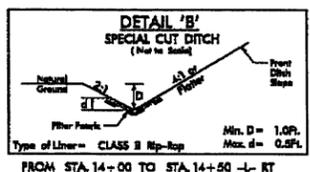
-L- POC STA. 12+80.00
BEGIN TIP PROJECT B-4963
BEGIN TIP PROJECT B-4963

-L- POT STA. 19+80.00
END TIP PROJECT B-4963
END CONSTRUCTION

Permit Drawing
Sheet 3 of 7
Revised 10/19/2012



NOTE: MAINTAIN 12' LOW FLOW CHANNEL DIMENSION, TAPER FLOOD PLAIN BENCH AS SHOWN IN PLAN VIEW.



DENOTES IMPACTS IN SURFACE WATER

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

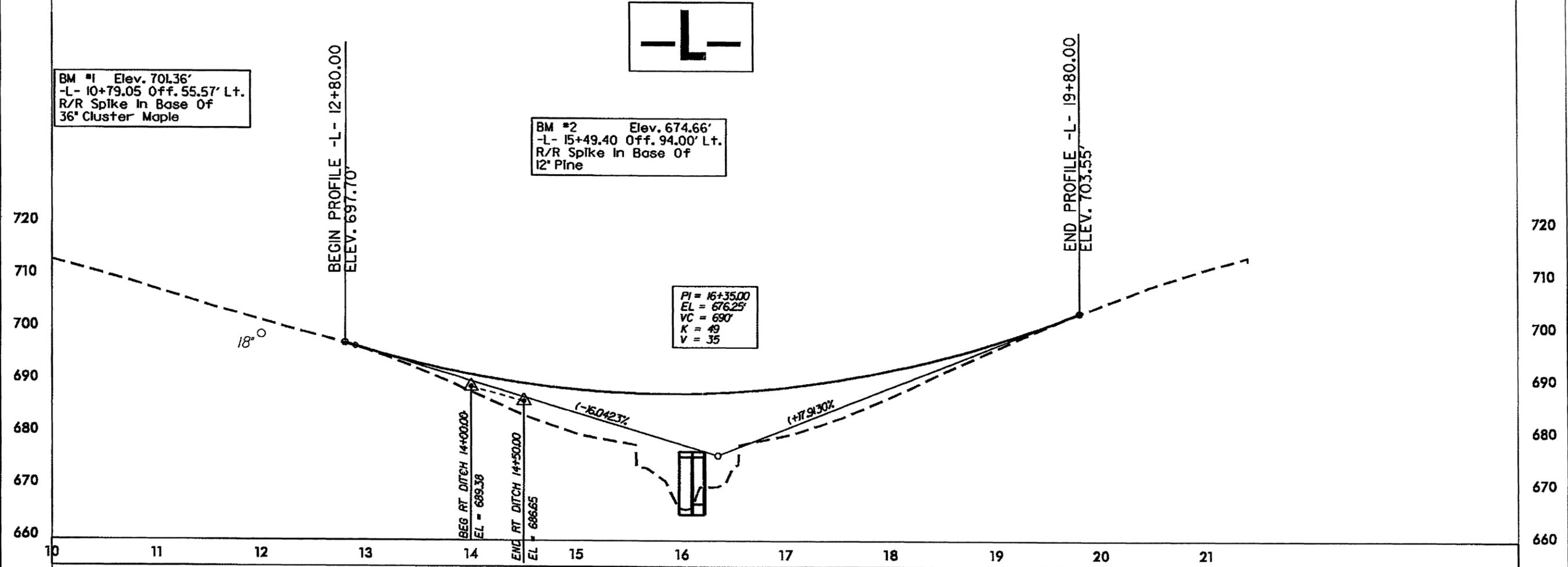


FOR -L- PROFILE, SEE SHEET NO. 5

5/14/99

PROJECT REFERENCE NO. B-4963	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 3a of 7



BM #1 Elev. 701.36'
-L- 10+79.05 Off. 55.57' Lt.
R/R Spike in Base Of
36" Cluster Maple

BM #2 Elev. 674.66'
-L- 15+49.40 Off. 94.00' Lt.
R/R Spike in Base Of
12" Pine

PI = 16+35.00
EL = 676.25'
VC = 690'
K = 49
V = 35

PIPE HYDRAULIC DATA	
DRAINAGE STRUCTURE NO.	
DRAINAGE AREA	= 7 AC
DESIGN FREQUENCY	= 25 YRS
DESIGN DISCHARGE	= 5.32 CFS
DESIGN HW ELEVATION	= 670.0 FT
100 YEAR DISCHARGE	= 8.47 CFS
100 YEAR HW ELEVATION	= 700.46 FT
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING DISCHARGE	= 12.6 CFS
OVERTOPPING ELEVATION	= 701.34 FT

CULVERT HYDRAULIC DATA	
DESIGN DISCHARGE	= 890 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 674.87 FT
BASE DISCHARGE	= 1270 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 676.03 FT
OVERTOPPING DISCHARGE	= 1740+ CFS
OVERTOPPING FREQUENCY	= 500+ YRS
OVERTOPPING ELEVATION	= 688.07 FT

RIGHT DITCH - - - - -

SEE SHEET 4 FOR -L- PLAN VIEW

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PROJECT REFERENCE NO. B-4963	SHEET NO. 4
HW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

10/19/2012
Rev



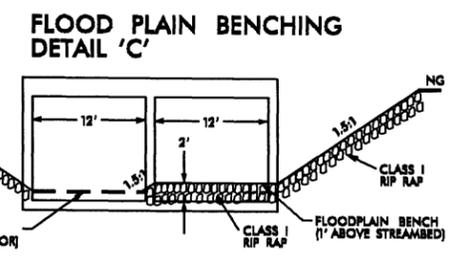
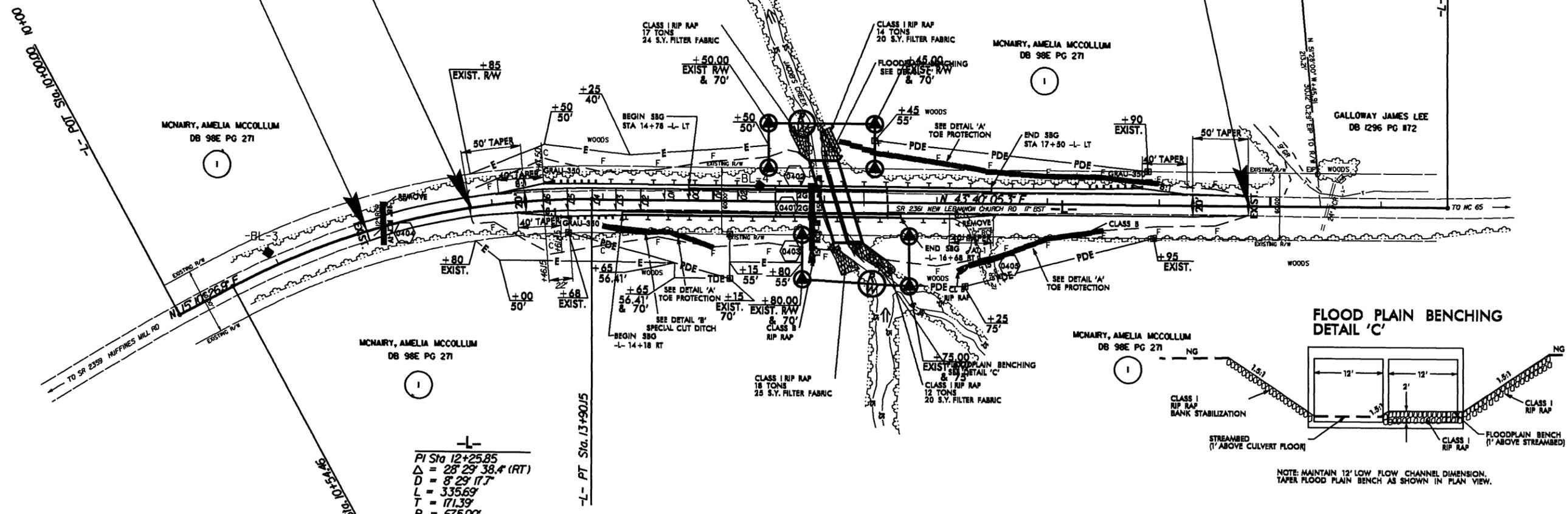
NOTE:
RESURFACE ONLY -L- STA. 11+85.00 TO -L- STA. 12+80.00

**-L- POC STA. 11+85.00
BEGIN CONSTRUCTION**

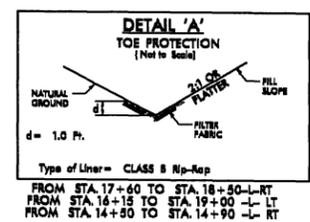
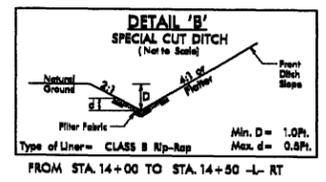
**-L- POC STA. 12+80.00
BEGIN TIP PROJECT B-4963
BEGIN TIP PROJECT B-4963**

**-L- POT STA. 19+80.00
END TIP PROJECT B-4963
END CONSTRUCTION**

REVISIONS



NOTE: MAINTAIN 12' LOW FLOW CHANNEL DIMENSION, TAPER FLOOD PLAIN BENCH AS SHOWN IN PLAN VIEW.



FOR -L- PROFILE, SEE SHEET NO. 5