A man wearing a blue baseball cap with a logo, a blue long-sleeved shirt, and an orange safety vest with reflective yellow-green stripes. He is standing outdoors in front of a construction site with trees and a fence in the background.

US 321 Construction Presentation

Presented by: Frank Gioscio, PE
and Dean Hardister, PE

Constructed by: W.C. English

Location

- Located between Blowing Rock and Lenoir



Scope



- Type of Work: Grading, Drainage, Paving, Walls & Culverts
- Widening existing 2 lane to 4 lane
- Section B of 3 sections
- 6.57 miles in length
- Construction Cost: ~ \$64 million

Project Statistics

- Approximately 22,000 feet of pipe
- 182,000 Tons of Asphalt
- Over 1,000,000 Ft of Pavement Markings



Earthwork

A photograph of a large-scale earthwork construction site. In the foreground, a yellow excavator is partially visible on the left. The background is dominated by a massive, steep pile of brown earth and rock, showing signs of excavation and grading. The scene is set outdoors with some greenery visible in the upper left corner.

- 3 million CY of unclassified excavation
- 1.8 million CY of waste
- 100,000 SY of pre-splitting rock

Photogrammetry

26 8:36 AM

Cutting Through the Mountain



JAN 25 2008

Pre-Splitting

JAN 25 2008

Rock Crusher



JAN 25 2008

Blasting



19 9:42 AM

Blasting



SEP 23 2005

Blasting



JAN 25 2008



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

RELEASE: Immediate CONTACT: Amanda Valiquette Email: avaliquette@dot.state.nc.us RELEASE NO.: 283	DATE: May 6, 2005 DISTRIBUTION: Special
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**NCDOT TO TEMPORARILY CLOSE A SECTION OF U.S. 321
IN CALDWELL COUNTY**

Blasting Operations to Take Place Tuesday

RALEIGH—The N. C. Department of Transportation (NCDOT) will temporarily close U.S. 321 from Kirby Mountain Road to Blackberry Road in Caldwell County on Tuesday, May 10 from noon until 2 p.m.

During the closure, the following signed detour will be in place:

- **N.C. 18 to Wilkesboro to U.S. 421 North to Boone to U.S. 321 back to Blowing Rock**

The closure is necessary for blasting operations as part of the U.S. 321 widening project.

For the duration of this project, the contractor is allowed to completely close this section of the road on Tuesdays and Thursdays from noon until 2 p.m. only; however, it may not be necessary to close the road each week.

NCDOT reminds motorists to STAY ALERT, travel at non-peak times and use alternate routes, when possible. Plan ahead before you leave by visiting the NCDOT Traveler Information Management (TIMS) Web site at www.ncsmartlink.org or call 511, the state's travel information line for current travel conditions.

For more information on this project, please contact the resident engineer at (828) 265-5088.

NCDOT

Fill Construction



19 9:31 AM

Fill Construction



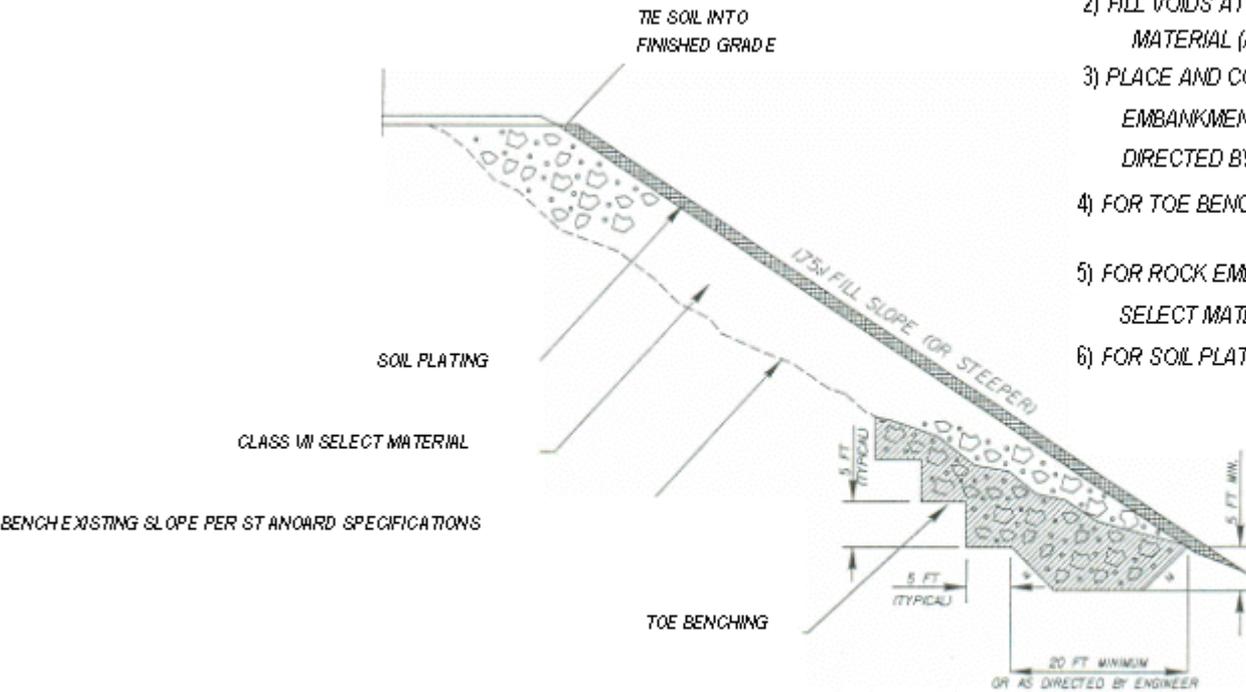
Fill Construction



JAN 25 2008

NOTES,

- 1) USE CLASS VII SELECT MATERIAL TO CONSTRUCT ALL FILLS WHICH ARE 1.75:1 (H,V) OR STEEPER AS SHOWN ON PLANS.
- 2) FILL VOIDS AT THE TOP OF FILL WITH CLASS IV SELECT MATERIAL (ABC) PRIOR TO CONSTRUCTION OF ROADWAY SUBGRADE.
- 3) PLACE AND COMPACT SOIL TO A DEPTH OF 3 FEET ON ALL EMBANKMENTS CONSTRUCTED OF CLASS VII SELECT MATERIAL OR AS DIRECTED BY THE ENGINEER.
- 4) FOR TOE BENCHING SEE SPECIAL PROVISION
- 5) FOR ROCK EMBANKMENT CONSTRUCTION USING CLASS VII SELECT MATERIAL SEE SPECIAL PROVISION.
- 6) FOR SOIL PLATING OF ROCK EMBANKMENT SEE SPECIAL PROVISION.



ROCK EMBANKMENT AND SOIL PLATING

N.T.S.

Bore and Jacking



19 9:25 AM

Structural Plate Pipe



25 7:51 AM

Culvert Extension



21 8:44 AM

Wall Construction

- A Total of Ten Retaining Walls
- Seven MSE Walls
- Three Soil Nail Walls
- Total Cost of Wall Construction Equals \$4.485 Million



Soil Nail Wall



JAN 25 2008

MSE Wall



SEP 6 2006

Soil Nail Pull Test



Soil Nail Pull Test



25 8:40 AM

Soil Nail Pull Test



21 9:17 AM

Slope Repair



Slope Repair



Slope Repair



Slope Repair





Erosion Control

- Slope Drains
- Silt Basins
- Sediment Traps
- Silt Fence
- Rock Checks



Staged Seeding & Mulching



SEP 22 2005

Erosion Control



21 8:45 AM

Erosion Control



19 9:32 AM

Erosion Control



26 8:40 AM

Erosion Control



26 8:38 AM

Erosion Control



26 8:39 AM

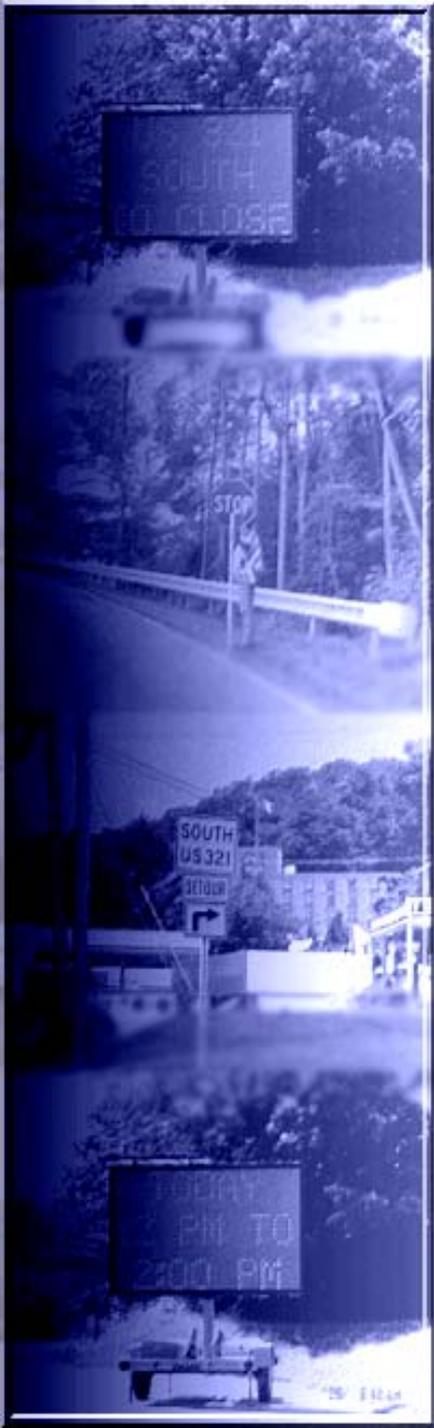
Erosion Control



28 8:42 AM

Traffic Control

- Road Closure for Blasting
- CMS Boards
- Posted Detour
- Lane Closures
- Flaggers



Traffic Control



26 9:48 AM

Traffic Control



26 9:48 AM

Road Closure!



115 12-18-20

LEFT
ON 24



12 8:15 PM

Traffic Control

SOUTH
US 321

DETOUR



MARTIN
STATE

CUS
YOU

SEM

FOR
SALE
BY OWNER

Car Wash

QUALITY

26 10:01 AM

Traffic Control



26 8:49 AM

