



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

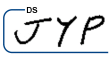
JOSH STEIN
GOVERNOR

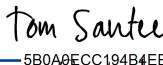
DANIEL H. JOHNSON
SECRETARY

February 9, 2026

MEMORANDUM TO: Heather Lane, P.E.
Division Project Development Engineer

ATTENTION: Casey Whitely, P.E., PLS
Bridge Program Manager

FROM:  Tom Santee, P.E.
Eastern Region Manager – Geotechnical Engineering Unit

DocuSigned by:

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STATE PROJECT: 48190.1.1 (B-5995)
F.A. PROJECT: N/A
COUNTY: Pamlico

DESCRIPTION: Bridge No. 57 on -L- (SR 1302) over Dawson Creek

SUBJECT: Geotechnical Report – Revised Design and Construction
Recommendations

The Geotechnical Engineering Unit (GEU) has revised the roadway recommendations to include the rock plating for this project and presents the following recommendations. This report supersedes the previous Geotechnical Report – Design and Construction Recommendations dated November 17, 2021.

I. Slope/Embankment Stability

A. Slope/Embankment Stability

Recommend all roadway slopes be constructed no steeper than 3:1 (H:V) except at the locations listed in Section I.D.

B. Undercut

Recommend 50 cubic yards of Undercut Excavation for embankment stability be included in the contract as a contingency item to be used at the direction of the Engineer.

C. Geotextile for Soil Stabilization

Include 50 square yards of Geotextile for Soil Stabilization in the contract as a contingency item to be used at the discretion of the Engineer.

D. Rock Plating

Rock Plating is required at the following locations. Extend rock plating to 2.5:1 (H:V) slope.

Alignment	Approx. Begin Station	Approx. End Station	LT/RT	SY
-L-	16+25 ±	17+04 ±	LT	170
-L-	20+78 ±	21+75 ±	LT	210

Please include 380 square yards of Rock Plating in the project contract. Please note rock plating locations exclude the area of bridge end slope riprap which will be paid as a structure pay item. For Rock Plating, see Section 275 of the Standard.

II. Subgrade Stability

A. Undercut for Subgrade Stability

Include 200 cubic yards of Undercut Excavation in the contract as a contingency item to be used at the discretion of the Engineer.

B. Special Ditches

Special ditches are not recommended for this project.

C. Subsurface Drainage - Subsurface Drain

Recommend 200 linear feet of 6" Perforated Subdrain Pipe for subsurface drain (Roadway Standard Drawing 815.02) be included in the contract as a contingency item to be used at the discretion of the Engineer.

D. Geotextile for Soil Stabilization

Recommend 200 square yards of Geotextile for Soil Stabilization be included in the contract as a contingency item to be used in Section II A.

III. Borrow Specifications

A. Borrow Criteria

Common borrow for embankment construction to subgrade shall meet Coastal Plain specifications outlined in the Standard Specifications, Article 1018-2(B).

B. Select Granular Material

Recommend 250 cubic yards of Select Granular Material be included in the contract for backfill as a contingency item for Section I. B. and II. A.

Select granular material for embankment/backfill for geotextile for soil stabilization if required, or backfill in water shall meet the criteria outlined in the Standard Specifications, Article 1016-3, Class II and/or III and should be placed 3 ft above the geotextile for soil stabilization.

C. Shrinkage Factor

A shrinkage factor of 30 percent is recommended for calculation of earthwork on this project.

D. Borrow Reconnaissance and Availability

Sandy soils with good to excellent engineering properties are available in nearby areas.

IV. Miscellaneous

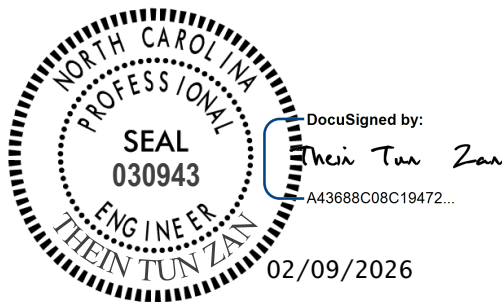
A. Reduction of Unclassified Excavation - Loss Due to Clearing and Grubbing

No significant loss of unclassified excavation is anticipated due to clearing and grubbing.

B. Reduction of Unsuitable Unclassified Excavation - Unsuitable Waste

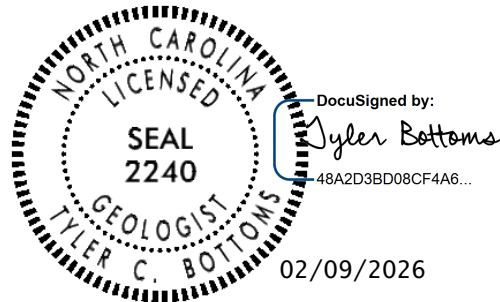
Based on the current roadway plans, unclassified excavation along this project will be primarily derived from shallow subgrade cuts. These areas contain granular soils which are suitable for subgrade construction.

Prepared By:



Thein Tun Zan, P.E.
Geotechnical Design Engineer

Prepared By:



Tyler C. Bottoms, L.G.
Project Geological Engineer

TGS/JYP/TCB/TTZ

See Page 5 for Bore Logs



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
 Summary of Quantities

WBS Number: 48190.1.1
 TIP Number: B-5995
 Description: Bridge No. 57 on SR 1302 over Dawson Creek

County: Pamlico
 Field Office / PEF: GFO

Project Engineer: Thein Tun Zan
 Project Geologist: Tyler Bottoms

Pay Item No.	Pay Item/ Quantity Adjustment	Spec Book Section No. or Special Provision (SP) Reference	Report Section	Alignment	Begin Station	End Station	Quantity	Units / %
0036000000-E	Undercut Excavation	225 - Roadway Excavation	I. B	Contingency	N/A	N/A	50	CY
0036000000-E	Undercut Excavation	225 - Roadway Excavation	II. A	Contingency	N/A	N/A	200	CY
Total Quantity of Undercut Excavation =							250	CY
0106000000-E	Borrow Excavation	230 - Borrow Excavation	III. B	Contingency	N/A	N/A	250	CY
Total Quantity of Borrow Excavation =							250	CY
0196000000-E	Geotextile for Soil Stabilization	270 - Geotextile for Soil Stabilization	I. C	Contingency	N/A	N/A	50	SY
0196000000-E	Geotextile for Soil Stabilization	270 - Geotextile for Soil Stabilization	II. D	Contingency	N/A	N/A	200	SY
Total Quantity of Geotextile for Soil Stabilization =							250	SY
0223000000-E	Rock Plating	275 - Rock Plating	I. D	-L-	16+25.00	17+04.00	170	SY
0223000000-E	Rock Plating	275 - Rock Plating	I. D	-L-	20+78.00	21+75.00	210	SY
Total Quantity of Rock Plating =							380	SY
2044000000-E	6" Perforated Subdrain Pipe	815 - Subsurface Drainage	II. C	Contingency	N/A	N/A	200	LF
Total Quantity of 6" Perforated Subdrain Pipe =							200	LF

These Items Only Impact Earthwork Totals								
N/A	Shrinkage Factor	235 - Embankments	III. C	N/A	N/A	N/A	30	%

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