STATE OF NORTH CAROLINA
# DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

March 14 2018

**Addendum No. 2**
RE: Contract # C204096
WBS # 34821.3.7
STATE FUNDED
**Guilford County (U-2525C)**
Greensboro Eastern Loop From US-29 North Of Greensboro
To SR-2303 (Lawndale Drive)

**March 20, 2018 Letting**

To Whom It May Concern:

**The Contractor is reminded that, as mentioned in Addendum #1 and as a matter of information only, the Roadway Subsurface Recommendations Report and Recommendations Letter Report for this project have been posted on the web along with the other information for this project.**

Reference is made to the plans and proposal form furnished to you on this project.

The following revisions have been made to the plans:

| Sheet No. | Revisions |
|---|---|
| 2A-1 | Revised to add Note 2 to address the paving limits onto adjacent project U-2524D |

Please void sheet No. 2A-1 in your plans and staple the revised sheet thereto

The following revisions have been made to the proposal:

| Page No. | Revisions |
|---|---|
| Proposal Cover | Note added that reads "Includes Addendum No. 2 Dated 03-14-2018". |
| R-13 | Updated the base asphalt binder price and the date in the third paragraph within the project special provision entitled "Price Adjustment- Asphalt Binder For Plant Mix" (Note: the revised base price in Addendum No. 1 was incorrect) |

*Mailing Address:*
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

*Telephone:* (919) 707-6900
*Fax:* (919) 250-4127
*Customer Service:* 1-877-368-4968

*Location:*
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

*Website:* www.ncdot.gov

| Page No. | Revisions |
|---|---|
| New GT-7.1 | New page added to include the project special provision entitled "Class IV Subgrade Stabilization" |
| SN-8 | Deleted section 1.2.B.10 DMS Mini Controller and revised section 1.2.E DMS Controller and DMS Cabinet |
| SN-20 | Revised section 1.3.H Travel Time DMS-Training |

Please void the above listed pages in your proposal and staple the revised pages thereto. Please add new Page No. GT-7.1 after existing Page GT-6.13.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:
Ronald E. Davenport, Jr.
F81B6038A47A442...

Ronald E. Davenport, Jr., PE
State Contract Officer

RED/jag
Attachments

cc: Mr. Lamar Sylvester, PE
Mr. Mike Mills, PE
Mr. Ron Hancock, PE
Mr. Jon Weathersby, PE
Mr. Ken Kennedy, PE
Ms. Lori Strickland
Project File (2)
Mr. Ray Arnold, PE
Ms. Theresa Canales, PE
Mr. Mike Gwyn
Ms. Jaci Kincaid
Ms. Penny Higgins
Mr. Mitchell Dixon

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

# PROPOSAL

## INCLUDES ADDENDUM No. 2 DATED 03-14-2018
## INCLUDES ADDENDUM No. 1 DATED 03-08-2018

DATE AND TIME OF BID OPENING: **MARCH 20, 2018 AT 2:00 PM**

| | |
|---|---|
| CONTRACT ID | C204096 |
| WBS | 34821.3.7 |

| | |
|---|---|
| FEDERAL-AID NO. | STATE FUNDED |
| COUNTY | GUILFORD |
| T.I.P. NO. | U-2525C |
| MILES | 5.265 |
| ROUTE NO. | |
| LOCATION | GREENSBORO EASTERN LOOP FROM US-29 NORTH OF GREENSBORO TO SR-2303 (LAWNDALE DR). |
| TYPE OF WORK | GRADING, DRAINAGE, PAVING, SIGNALS, ITS, AND STRUCTURES. |

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS $30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A <u>ROADWAY & STRUCTURE</u> PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

excavating, backfilling, hauling and removing excavated materials, constructing temporary walls, installing wall facing, geotextiles and drains, compacting backfill and supplying select material, separation and reinforcement geotextiles, welded wire facing, drain pipes, pipe sleeves, outlet pipes and pads and any incidentals necessary to construct alternate approach fills for integral abutments.

**AUTOMATED FINE GRADING:**
(1-16-96) 610 SP5 R05

On mainline portions and ramps of this project, prepare the subgrade and base beneath the pavement structure in accordance with the applicable sections of the *2018 Standard Specifications* except use an automatically controlled fine grading machine using string lines, laser controls or other approved methods to produce final subgrade and base surfaces meeting the lines, grades and cross sections required by the plans or established by the Engineer.

No direct payment will be made for the work required by this provision as it will be considered incidental to other work being paid for by the various items in the contract.

**PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:**
(11-21-00) 620 SP6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2018 Standard Specifications.*

The base price index for asphalt binder for plant mix is **$ 429.00** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **March 1, 2018**.

**ASPHALT CONCRETE PLANT MIX PAVEMENTS:**
(2-20-18) 610, 1012 SP6 R65

Revise the *2018 Standard Specifications* as follows:

**Page 6-17, Table 610-1, MIXING TEMPERATURE AT THE ASPHALT PLANT**, replace with the following:

**TABLE 610-1**
**MIXING TEMPERATURE AT THE ASPHALT PLANT**

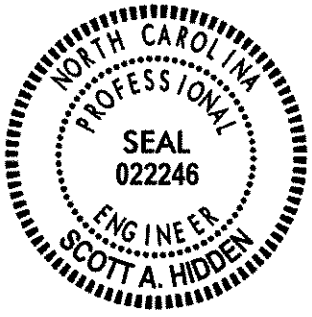
| Binder Grade | JMF Temperature |
|---|---|
| PG 58-28; PG 64-22 | 250 - 290°F |
| PG 76-22 | 300 - 325°F |

**Page 6-17, Subarticle 610-3(C), Job Mix Formula (JMF), lines 38-39,** delete the fourth paragraph.

**Page 6-18, Subarticle 610-3(C), Job Mix Formula (JMF), line 12,** replace "SF9.5A" with "S9.5B".

**CLASS IV SUBGRADE STABILIZATION:** **(SPECIAL)**

Compact Class IV Subgrade Stabilization over Geotextile for Pavement Stabilization to 97% of AASHTO T 180 as modified by the Department. This compaction requirement applies to ABC placed over Geotextile for Pavement Stabilization at locations listed in the plans on Sheet No. 3G-1 and supersedes the compaction requirement in Article 505-3 of the *Standard Specifications*.




DocuSigned by:
Scott A. Hidden
F760CAEB96FC4D3...
3/12/2018

**9. Display Capabilities**

Design the DMS at Existing Overhead Sign Structures 'NN' and 'OO' with at least the following message displays:

- A static display, red green or amber in color with the ability to display a travel time in the following format "XX MINS".
- The color of the display is to be determined by the Engineer.

~~**10. DMS Mini Controller**~~

~~Furnish and install a mini controller inside the DMS that is interconnected with the main controller using a fiber optic cable, CAT 5 cable, or an approved alternate. The mini controller will enable a technician to perform all functions available from the main controller. Provide the mini controller with an LCD/keypad interface. Size the LCD display screen to allow preview of an entire one page message on one screen. Provide a 4 X 4 keypad.~~

~~Alternatively, install an EIA/TIA-232E port inside the DMS enclosure to enable a maintenance technician to communicate with the DMS main controller and obtain access to and perform all functions of the main controller using a laptop computer.~~

**C. DMS Enclosure Structure Mounting**

Mount the DMS enclosure and interconnect system securely to the supporting signs. Design the DMS enclosure supports and structure to allow full access to the DMS enclosure inspection door. Mount the DMS enclosure according to the manufacturer's recommendations.

Submit plans for the DMS enclosure, structure, mounting description and calculations to the Engineer for approval. Have such calculations and drawings approved by a Professional Engineer registered in the state of North Carolina, and bear his signature, seal, and date of acceptance.

Provide removable lifting eyes or the equivalent on the DMS enclosure rated for its total weight to facilitate handling and mounting the DMS enclosure.

Design the DMS structure to conform to the applicable requirements of the *Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals*, 6th Edition, 2013, and the latest Interim Specifications.

**D. DMS / DMS Controller Interconnect**

Furnish and install all necessary cabling, conduit, and terminal blocks to connect the DMS and the DMS controller. Use approved manufacturer's specifications and the Project Plans for cable and conduit types and sizes. Use fiber-optic cable to interconnect sign and controller. Install fiber-optic interconnect centers in the sign enclosure and cabinet to securely install and terminate the fiber-optic cable. Submit material submittal cut sheets for the interconnect center.

**E. DMS Controller and DMS Cabinet**

Furnish and install one DMS controller with accessories [redacted] in a protective cabinet [redacted] Travel Time Dynamic Message Sign location. Mount the controller cabinet on the existing Sign support structure. Install cabinet so that the height from the ground to the middle of the

Install a level concrete technician pad measuring a minimum 4 inches thick, 24 inches wide and 36 inches long at the front door of the DMS equipment cabinet as shown on the Typical Details sheet within the Project Plans.

**G. Work Site Clean-Up**

Clean the site of all debris, excess excavation, waste packing material, wire, etc. Clean and clear the work site at the end of each workday. Do not throw waste material in storm drains or sewers.

**H. Travel Time DMS - Training**

Provide adequate equipment operation and setup training to the Department prior to final acceptance. The Department will provide classroom facilities for the training.

The training class shall consist of a minimum of eight (8) hours of equipment operation and setup training for a maximum of five (5) people. Provide up to five (5) Travel Time Dedicated DMS of the type being trained on to be used during the training class. These five (5) Travel Time Dedicated DMS's can be used for training before being installed in the field. Supply all instruction materials, and all teaching aids for each training class. Submit resumes of the trainers for review and approval and provide a course outline along with a copy of the teaching materials to the Engineer for review and approval prior to the training.

Deliver all software to the Department prior to the scheduled training for loading on Department-owned computer equipment to be used during the training.

**1.4. DMS TESTING REQUIREMENTS**

**A. General Test Procedure**

Test the relocated DMS system in a series of design approval and functional tests. The results of each test must meet the specified requirements. These tests shall not damage the equipment. The Engineer will reject equipment that fails to fulfill the requirements of any test. Resubmit rejected equipment after correcting non-conformities and re-testing; completely document all diagnoses and corrective actions. Modify all equipment furnished under this contract, without additional cost to the Department, to incorporate all design changes necessary to pass the required tests.

Provide four copies of all test procedures and requirements to the Engineer for review and approval at least 30 days prior to the testing start date.

Only use approved procedures for the tests. Include the following in the test procedures:

- A step-by-step outline of the test sequence, showing a test of every function of the equipment or system tested.
- A description of the expected nominal operation, output, and test results, and the pass / fail criteria.
- An estimate of the test duration and a proposed test schedule.
- A data form to record all data and quantitative results obtained during the test.
- A description of any special equipment, setup, manpower, or conditions required by the test.

8/17/99

## FINAL PAVEMENT SCHEDULE

| | | | |
|---|---|---|---|
| A1 | 13" PORTLAND CEMENT CONCRETE PAVEMENT (JOINTED WITH DOWELS) | E6 | PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. LAYERS. |
| C1 | PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. | E7 | PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. | E8 | PROP. APPROX. 7 " ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C3 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. | E9 | PROP. APPROX. 10½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 598.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C4 | PROP. 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 LESS THAN 1.5" OR OR GREATER THAN 2" IN DEPTH. | E10 | PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH. |
| C5 | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. | J1 | PROP. 6" AGGREGATE BASE COURSE. |
| C6 | PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR OR GREATER THAN 2" IN DEPTH. | J2 | PROP. 8" AGGREGATE BASE COURSE. |
| D1 | PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD. | J3 | PROP. VAR. DEPTH AGGREGATE BASE COURSE. |
| D2 | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. | K | 8" CLASS IV SUBGRADE STABILIZATION AT AN AVERAGE RATE OF 145 LBS. PER CF. |
| D3 | PROP. APPROX. 3½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. | N | GEOTEXTILE FOR PAVEMENT STABILIZATION |
| D4 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. | P | PRIME COAT AT THE RATE OF .35 GAL. PER SQ. YD. |
| D5 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH. | R1 | 1'-6" CONCRETE CURB AND GUTTER. |
| D6 | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. | R2 | 2'-6" CONCRETE CURB AND GUTTER. |
| D7 | PROP. APPROX. 3½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD. | R3 | 5" MONOLITHIC CONCRETE ISLAND (KEYED IN). |
| D8 | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. | S | 4" CONCRETE SIDEWALK |
| D9 | PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH. | T | EARTH MATERIAL |
| E1 | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. | U | EXISTING PAVEMENT |
| E2 | PROP. APPROX. 4½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD. | V | PROPOSED 3" MILLING |
| E3 | PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD. | W | VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL). |
| E4 | PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD. | | |
| E5 | PROP. 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" IN DEPTH OR GREATER THAN 5½" IN DEPTH. | | |

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

WETHERILL ENGINEERING
1223 Jones Franklin Road
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

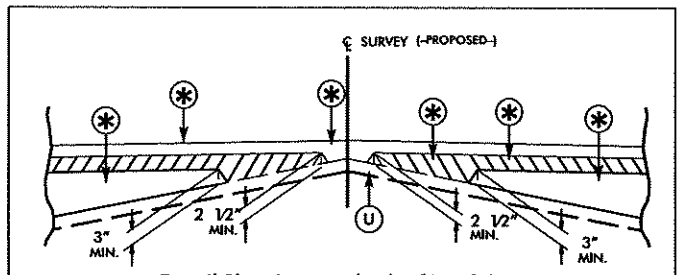
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-2525C | 2A-1 |

ROADWAY DESIGN ENGINEER
Eric L. Wetherill

PAVEMENT DESIGN ENGINEER
NOT A CERTIFIED DOCUMENT AS TO THE ORIGINAL DOCUMENT BUT ONLY AS TO THE REVISIONS.
THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY
CLARK S. MORRISON, PE
NO. 22896
ON 01-19-2018

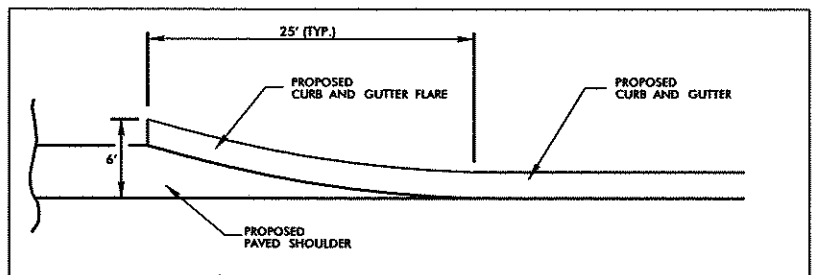
NORTH CAROLINA PROFESSIONAL SEAL 21116 ENGINEER CLARK S. MORRISON
3/13/2018

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



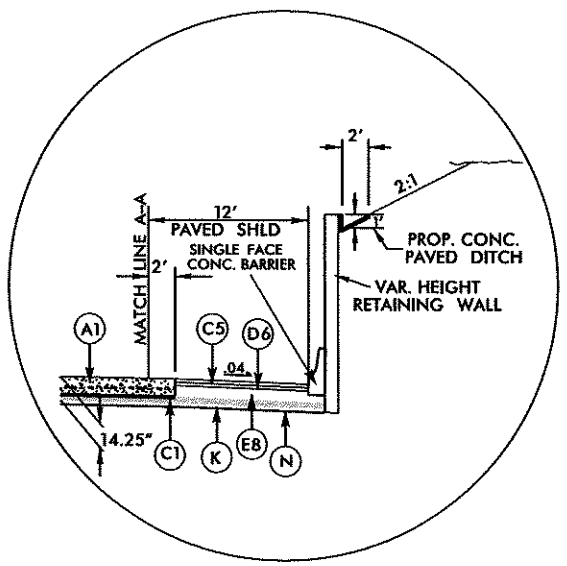

Detail Showing Method of Wedging

NOTE: FOR PAVEMENT TYPES AND DEPTHS SEE RELEVANT TYPICAL SECTION



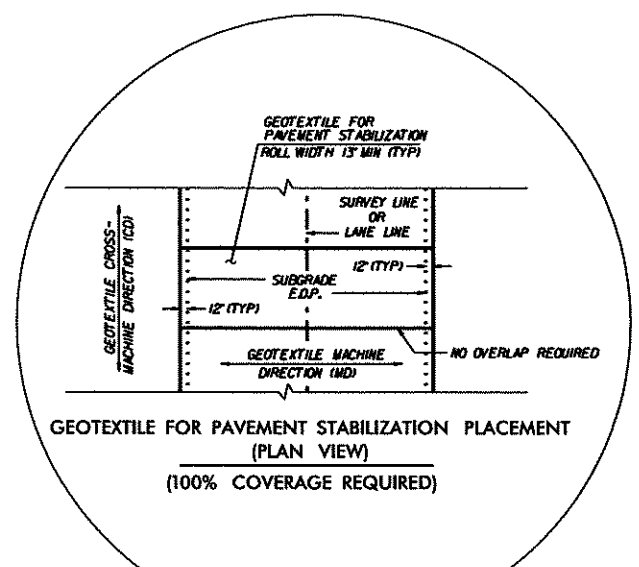

Detail Showing Approach Flare of Curb and Gutter

NOTE: DRAWING NOT TO SCALE



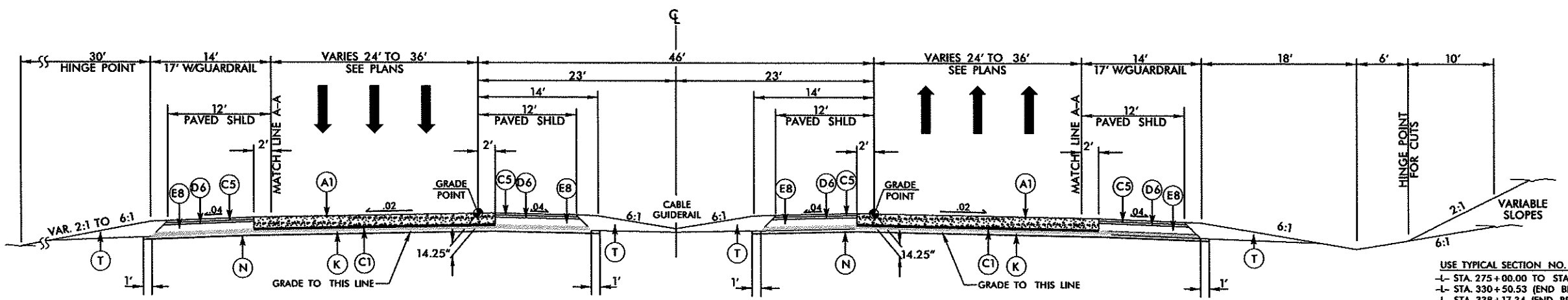

USE WITH TYPICAL SECTION NO. 1

- LT. STA. 292+18.41 TO STA. 293+83.56 (REVERSE TYP.)
- RT. STA. 399+25.05 TO STA. 401+27.72
- LT. STA. 400+14.77 TO STA. 402+20.72 (REVERSE TYP.)
- RT. STA. 446+62.32 TO STA. 448+24.14
- LT. STA. 447+36.13 TO STA. 448+97.42 (REVERSE TYP.)




GEOTEXTILE FOR PAVEMENT STABILIZATION PLACEMENT (PLAN VIEW)

(100% COVERAGE REQUIRED)




TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1 AS FOLLOWS

- STA. 275+00.00 TO STA. 329+41.26 (BEGIN BRIDGE)
- STA. 330+50.53 (END BRIDGE) TO STA. 336+24.67 (BEGIN BRIDGE)
- STA. 338+17.34 (END BRIDGE) TO STA. 469+89.30 (BEGIN BRIDGE)
- STA. 470+98.30 (END BRIDGE) TO STA. 552+99.67 LB

NOTE: 1) USE MILLED RUMBLE STRIPS FOR MEDIAN AND OUTSIDE ASPHALT PAVED SHOULDER. SEE STD. 665.01

NOTE: 2) PERFORM FINE GRADING AND INSTALL PROPOSED PAVEMENT AT THE FOLLOWING LOCATIONS;
U-2524D -L-REV- STA. 501+00.00 TO STA. 502+99.94 LB
U-2524D -L- STA. 503+00.89 LA TO STA. 520+34.53 LB

3/13/2018
...\rdy_psh_82A-1_typ.dgn