



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

February 12, 2020

Addendum No. 1

RE: Contract # C204467

WBS # 48755.3.GV1

F.A.# NHPIM-0040(097)

Buncombe County (I-6063)

I-40 FROM MILE MARKER 50 TO MILE MARKER 55.

February 18, 2020 Letting

To Whom It May Concern:

Reference is made to the plans (Sketch Maps) and proposal form furnished to you on this project.

The following revisions have been made to the Sketch Maps:

Sheet No.	Revision
5	Revised to correct line weights
8	Revised to include Z1 (Fine Milling)
9	Revised to include notes for On Ramp SB Hendersonville Rd.
New Sheet 13A	Sheet added for Concrete Barrier Single Slope Detail
21	Summary of Quantities revised for pay item corrections

Please void the above listed existing Sheets in your plans and staple the revised Sheets thereto. Staple New Sheet 13A after existing Sheet 13 in your plans.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 02-12-2020"
Table of Contents	Revised to include INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES
G-3 thru G-6	Revised to include the project special provision entitled INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES

<u>Page No.</u>	<u>Revisions</u>
R-25 and New Pages R-26 thru R-28	Revised to include the project special provisions entitled RESPONSE FOR GUARDRAIL/GUIDERAIL MAINTENANCE and FINE MILLING
TC-5 thru TC-9	Revised to modify certain paving requirements

Please void the above listed existing Pages in your proposal and staple the revised Pages thereto. Staple New Pages R-26 thru R-28 after revised page R-25 in your proposal.

On the item sheets the following pay item revisions have been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0002-0000400000-N-801	CONSTRUCTION SURVEYING	Lump Sum	DELETED
0009-0318000000-E-300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	50 TON	DELETED
0010-0320000000-E-310	FOUNDATION CONDITIONING GEOTEXTILE	150 SY	DELETED
0011-0366000000-E-310	15" RC PIPE CULVERTS, CLASS III	130 LF	DELETED
0012-1662000000-E-650	18" RC PIPE CULVERTS, CLASS III	230 LF	DELETED
0013-0378000000-E-310	24" RC PIPE CULVERTS, CLASS III	20 LF	DELETED
0014-0384000000-E-310	30" RC PIPE CULVERTS, CLASS III	16 LF	DELETED
0015-0390000000-E-310	36" RC PIPE CULVERTS, CLASS III	16 LF	DELETED
0016-0396000000-E-310	42" RC PIPE CULVERTS, CLASS III	16 LF	DELETED
0017-0408000000-E-310	54" RC PIPE CULVERTS, CLASS III	16 LF	DELETED
0018-0995000000-E-340	PIPE REMOVAL	300 LF	DELETED
0029-1524200000-E-610	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	50,576 TON	51,566 TON
0057-2703000000-E-854	CONCRETE BARRIER, TYPE (T)	2,100 LF	DELETED

I-6063 (C204467)

Buncombe County

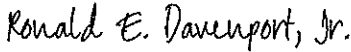
0057-2703000000-E-854	CONCRETE BARRIER, TYPE (SINGLE SLOPE)	NEW ITEM	2,100 LF
0143-1297000000-E-607	MILLING ASPHALT PAVEMENT, 8" DEPTH	NEW ITEM	5,900 SY
0144-1491000000-E-610	ASPHALT CONC BASE COURSE, TYPE B25.0C	NEW ITEM	1,694 TON
0145-1897000000-E-SP	FINE MILLING	NEW ITEM	140,800 SY
0146-3435000000-N-SP	RESPONSE FOR GUARDRAIL/GUIDERAIL MAINTENANCE	NEW ITEM	100 EA

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:

F81B6038A47A442...
Ronald E. Davenport, Jr., PE
State Contract Officer

RED/jjr
Attachments

cc: Mr. Lamar Sylvester, PE
Mr. Mark T. Gibbs, PE
Mr. Chris Peoples, PE
Mr. Jon Weathersbee, PE
Mr. Ken Kennedy, PE
Mr. Ray Arnold, PE
Project File (2)

Ms. Jaci Kincaid
Mr. Kyle Kempf, PE
Ms. Penny Higgins
Ms. Lori Strickland
Mr. Mike Gwyn
Mr. Mitchell Dixon

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

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 02-12-2020

DATE AND TIME OF BID OPENING: **FEBRUARY 18, 2020 AT 2:00 PM**

CONTRACT ID C204467
WBS 48755.3.GV1

FEDERAL-AID NO. NHPIM-0040(097)
COUNTY BUNCOMBE
T.I.P. NO. I-6063
MILES 5.000
ROUTE NO. I 40
LOCATION I-40 FROM MILE MARKER 50 TO MILE MARKER 55.

TYPE OF WORK PAVEMENT REHABILITATION.

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 ROADWAY PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

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The liquidated damages are **Two Thousand Five Hundred Dollars (\$ 2,500.00)** per fifteen (15) minute time period.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:

(2-20-07)

108

SP1 G14 D

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for road closures and restoring traffic to the existing traffic pattern. The Contractor shall not close **I-40 (Ramps)** during the following time restrictions:

DAY AND TIME RESTRICTIONS

Monday thru Sunday

6:00 AM to 8:00 PM

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for road closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the road closures according to the time restrictions stated herein and restore traffic to the existing traffic pattern.

The liquidated damages are **Two Thousand Five Hundred Dollars (\$2,500.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES:

(5-21-13)

108

SP1 G14 I

The Contractor shall complete the work required of installing each new inductive loop after the removal of each existing loop by the milling, patching or resurfacing operations and shall place and maintain traffic on same.

The date of availability for this intermediate contract time for each inductive loop installation will be the date when the Contractor elects to disturb the existing inductive loop.

The completion date for this intermediate contract time for each inductive loop installation will be the date which is seven (7) consecutive calendar days after the date of availability.

The liquidated damages are **Five Hundred Dollars (\$ 500.00)** per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES:

(6-18-13)

108

SP1 G14 K

The Contractor shall complete **all work requiring milling and paving operations along either Map #1 or Map #2** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **March 30, 2020**.

The completion date for this intermediate contract time is **November 1, 2020**.

The Contractor must notify the Engineer, in writing by the Preconstruction Conference, which Map will be selected for this Intermediate Contract Time. The Contractor shall not perform any milling and/or paving operations along the unselected Map until the following Construction Season, with the exception of the required shoulder milling and paving for construction of the median wall. The Contractor may revise this selection by notifying the Engineer in writing thirty (30) days before beginning any milling and/or paving operations along the newly selected Map.

Any milled surface on Any Map shall be replaced prior to the end of the current Construction Season.

The liquidated damages are **Five Hundred Dollars (\$ 500.00)** per calendar day.

PERMANENT VEGETATION ESTABLISHMENT:

(2-16-12) (Rev. 10-15-13)

104

SP1 G16

Establish a permanent stand of the vegetation mixture shown in the contract. During the period between initial vegetation planting and final project acceptance, perform all work necessary to establish permanent vegetation on all erodible areas within the project limits, as well as, in borrow and waste pits. This work shall include erosion control device maintenance and installation, repair seeding and mulching, supplemental seeding and mulching, mowing, and fertilizer topdressing, as directed. All work shall be performed in accordance with the applicable section of the *2018 Standard Specifications*. All work required for initial vegetation planting shall be performed as a part of the work necessary for the completion and acceptance of the Intermediate Contract Time (ICT). Between the time of ICT and Final Project acceptance, or otherwise referred to as the vegetation establishment period, the Department will be responsible for preparing the required National Pollutant Discharge Elimination System (NPDES) inspection records.

Once the Engineer has determined that the permanent vegetation establishment requirement has been achieved at an 80% vegetation density (the amount of established vegetation per given area to stabilize the soil) and no erodible areas exist within the project limits, the Contractor will be notified to remove the remaining erosion control devices that are no longer needed. The Contractor will be responsible for, and shall correct any areas disturbed by operations performed in permanent vegetation establishment and the removal of temporary erosion control measures, whether occurring prior to or after placing traffic on the project.

Payment for *Response for Erosion Control, Seeding and Mulching, Repair Seeding, Supplemental Seeding, Mowing, Fertilizer Topdressing, Silt Excavation, and Stone for Erosion Control* will be made at contract unit prices for the affected items. Work required that is not represented by contract line items will be paid in accordance with Articles 104-7 or 104-3 of the *2018 Standard Specifications*. No additional compensation will be made for maintenance and removal of temporary erosion control items.

MAJOR CONTRACT ITEMS:

(2-19-02)

104

SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the *2018 Standard Specifications*):

Line #	Description
28	Asphalt Concrete Intermediate Course, Type I19.0C
29	Asphalt Concrete Surface Course, Type S9.5D
63	Steel Beam Guardrail

SPECIALTY ITEMS:

(7-1-95)(Rev. 1-17-12)

108-6

SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the 2018 Standard Specifications).

Line #	Description
63-85	Guardrail
102-104, 109-114	Long-Life Pavement Markings
115-116	Permanent Pavement Markers
118-141	Erosion Control
142	Signals/ITS System

FUEL PRICE ADJUSTMENT:

(11-15-05) (Rev. 2-18-14)

109-8

SP1 G43

Revise the 2018 Standard Specifications as follows:

Page 1-87, Article 109-8, Fuel Price Adjustments, add the following:

The base index price for DIESEL #2 FUEL is \$ 2.0967 per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

The pay items and the fuel factor used in calculating adjustments to be made will be as follows:

Description	Units	Fuel Usage Factor Diesel
Unclassified Excavation	Gal/CY	0.29
Borrow Excavation	Gal/CY	0.29
Class IV Subgrade Stabilization	Gal/Ton	0.55
Aggregate Base Course	Gal/Ton	0.55
Sub-Ballast	Gal/Ton	0.55
Asphalt Concrete Base Course, Type _____	Gal/Ton	2.90
Asphalt Concrete Intermediate Course, Type _____	Gal/Ton	2.90
Asphalt Concrete Surface Course, Type _____	Gal/Ton	2.90
Open-Graded Asphalt Friction Course	Gal/Ton	2.90
Permeable Asphalt Drainage Course, Type _____	Gal/Ton	2.90
Sand Asphalt Surface Course, Type _____	Gal/Ton	2.90
Aggregate for Cement Treated Base Course	Gal/Ton	0.55
Portland Cement for Cement Treated Base Course	Gal/Ton	0.55
___ " Portland Cement Concrete Pavement	Gal/SY	0.245
Concrete Shoulders Adjacent to ___ " Pavement	Gal/SY	0.245

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08) (Rev. 5-13-19)

108-2

SP1 G58

The Contractor's attention is directed to the Standard Special Provision entitled *Availability of Funds Termination of Contracts* included elsewhere in this proposal. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

	<u>Fiscal Year</u>	<u>Progress (% of Dollar Value)</u>
2020	(7/01/19 - 6/30/20)	27% of Total Amount Bid
2021	(7/01/20 - 6/30/21)	63% of Total Amount Bid
2022	(7/01/21 - 6/30/22)	10% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2018 Standard Specifications*. Any acceleration of the progress as shown by the Contractor's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE:

(10-16-07)(Rev. 12-17-19)

102-15(J)

SPI G61

Description

The purpose of this Special Provision is to carry out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with Federal funds. This provision is guided by 49 CFR Part 26.

Definitions

Additional DBE Subcontractors - Any DBE submitted at the time of bid that will not be used to meet the DBE goal. No submittal of a Letter of Intent is required.

Committed DBE Subcontractor - Any DBE submitted at the time of bid that is being used to meet the DBE goal by submission of a Letter of Intent. Or any DBE used as a replacement for a previously committed DBE firm.

Contract Goal Requirement - The approved DBE participation at time of award, but not greater than the advertised contract goal.

DBE Goal - A portion of the total contract, expressed as a percentage, that is to be performed by committed DBE subcontractor(s).

Disadvantaged Business Enterprise (DBE) - A firm certified as a Disadvantaged Business Enterprise through the North Carolina Unified Certification Program.

Goal Confirmation Letter - Written documentation from the Department to the bidder confirming the Contractor's approved, committed DBE participation along with a listing of the committed DBE firms.

Manufacturer - A firm that operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor.

Regular Dealer - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

Replacement / Substitution - A full or partial reduction in the amount of work subcontracted to a committed (or an approved substitute) DBE firm.

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for DBE certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients of

EROSION AND STORMWATER CONTROL FOR SHOULDER CONSTRUCTION AND RECONSTRUCTION:

(11-16-10) (Rev. 1-21-20)

105-16, 225-2, Division 16

SP16 R03R

Land disturbing operations associated with shoulder construction/reconstruction may require erosion and sediment control/stormwater measure installation. National Pollutant Discharge Elimination System (NPDES) inspection and reporting may be required.

Erosion control measures shall be installed per the erosion control detail in any area where the vegetated buffer between the disturbed area and surface waters (streams, wetlands, or open waters) or drainage inlet is less than 10 feet. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. Erosion control measures shall be spot checked every 7 days until permanent vegetative establishment.

In areas where shoulder construction/reconstruction includes disturbance or grading on the front slope or to the toe of fill, relocating ditch line or backslope, or removing vegetation from the ditch line or swale, NPDES inspection and monitoring are required every 7 days or within 24 hours of a rainfall event of greater than 1.0 inch. Maintain daily rainfall records. Install erosion control measures per detail.

In areas where the vegetated buffer is less than 10 feet between the disturbed area and waters of the State classified as High Quality Water (HQW), Outstanding Resource Water (ORW), Critical Areas, or Unique Wetlands, NPDES inspection and monitoring are required every 7 days or within 24 hours of a rainfall event of greater than 1.0 inch. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. The plans or provisions will indicate the presence of these water classifications. Maintain daily rainfall records. Install erosion control measures per detail.

Land disturbances hardened with aggregate materials receiving sheet flow are considered non-erodible.

Sites that require lengthy sections of silt fence may substitute with rapid permanent seeding and mulching as directed by the Engineer.

NPDES documentation shall be performed by a Level II Erosion and Sediment Control/Stormwater certificate holder.

Materials used for erosion control will be measured and paid as stated in the contract.

RESPONSE FOR GUARDRAIL/GUIDERAIL MAINTENANCE:**Description**

Furnish the labor, materials, tools and equipment necessary to move personnel, equipment, and supplies to the project necessary for guardrail/guiderail maintenance.

Construction Methods

In accordance with Article 104-10 of the 2018 Standard Specifications and the Maintenance of the Project Special Provision the Contractor shall perform weekly inspections of guardrail and guiderail and shall report damages to the Engineer on the same day of the weekly inspection.

Where damaged guardrail or guiderail must be repaired or replaced as a result of maintaining the project, such repair or replacement shall be performed within 7 consecutive calendar days of such inspection report.

Measurement and Payment

Response for Guardrail/Guiderail Maintenance will be measured and paid for by counting the actual number of times the contractor moves onto the project specifically for guardrail/guiderail maintenance. Payment for the labor, materials, and equipment necessary to complete the repair or replacement will be made with the various guardrail/guiderail contract items. No additional payment will be made for traffic control for guardrail/guiderail maintenance outside of the various contract items included in the contract.

Payment will be made under:

Pay Item	Pay Unit
Response for Guardrail/Guiderail Maintenance	Each

FINE MILLING:

(8-9-13)

607

SPI 6-17

Description

This work includes fine milling of existing asphalt concrete pavement to remove the existing Ultra-thin Bonded Wearing Course as indicated in the Plans and as directed by the Engineer. The fine milled surface shall provide a texture suitable for use as a temporary riding surface and an immediate overlay with Ultra-thin Bonded Wearing Course with no further treatment or overlays.

Construction Method

(A) Equipment

Use power-driven, self-propelled fine-milling equipment possessing the size and shape to allow traffic safe passage through areas adjacent to the work. Also, ensure the fine-milling equipment will be:

- (1) Equipped with a cutting mandrel with carbide or equivalent tipped cutting teeth designed for fine-milling (5/16 inch spacing) bituminous pavement full lane width to close tolerances.
- (2) Equipped with grade and slope controls operating from a string line or ski and based on mechanical or sonic operation.
- (3) Capable of removing pavement to an accuracy of 3/8 in.
- (4) Furnished with a lighting system for night work, as necessary.
- (5) Provided with conveyors capable of side, rear, or front loading to transfer the milled material from the roadway to a truck.

(B) Fine Milling Operation

Follow the Plans to fine-mill the designated areas and depths, as required. Ensure the following requirements are met:

- (1) Ensure fine-milling methods produce a uniform finished surface and maintain a constant cross slope between extremities in each lane.
- (2) Provide positive drainage to prevent water accumulation on the fine-milled pavement, as shown on the Plans or directed by the Engineer.
- (3) Bevel back the longitudinal vertical edges greater than 2 inch produced by the removal process and left exposed to traffic. Bevel the vertical edges back at least 3 inch for each 2 inch of material removed. Use an attached mold board or other approved method.
- (4) Taper the transverse edges 10 feet to avoid creating a traffic hazard and to produce a smooth surface when removing material at ramp areas and ends of milled sections.
- (5) Protect with a temporary asphaltic concrete tie-in (paper joint) vertical edges at other areas such as bridge approach slabs, drainage structures, and utility appurtenances greater than 1/2 inch areas left open to transversing vehicles. Place the temporary tie-in at taper rate of at least 6 to 1 horizontal to vertical distance.
- (6) Remove dust, residue, and loose milled material from the fine-milled surface. Do not allow traffic on the milled surface and do not place asphaltic concrete on the milled surface until removal is complete.

(C) Quality Acceptance

Provide a fine-milled test section of a minimum of 400 feet in length for approval by the Engineer to ensure the fine milling operation provides a surface texture suitable as a temporary riding surface using a fine milling drum with adequate bit spacing and wrap configuration and proper forward cutting speed.

Ensure the fine-milling operation produces a uniform pavement texture true to line, grade, and cross section.

Fine-mill additional depth to eliminate excessive scabbing of the in place material as directed by the Engineer.

Fine-milled pavement surfaces are subject to visual and straightedge inspections. Ensure a 10 ft. straightedge is kept at the fine-milling operation to measure surface irregularities of the milled pavement surface.

Ensure the cross slope is uniform and no depressions or slope misalignments greater than 1/4 inch per 12 foot exist when the slope is tested with a straightedge placed perpendicular to the center line.

Measurement and Payment

Fine Milling will be measured and paid as the actual number of square yards of pavement surface milled in accordance with this Specification. In measuring this quantity, the length will be the

actual length milled, measured along the pavement surface. The width will be the width required by the plans or directed, measured along the pavement surface. Such price and payment will be full compensation for furnishing equipment, fine-milling, hauling, stockpiling milled material, and satisfactorily performing the work.

Payment will be made under:

Pay Item
Fine Milling

Pay Unit
Square Yard

TC-5

I-6063

Buncombe County

operation, not to exceed 72 hours, bring the adjacent lane to the same station and elevation. At the end of the work day, any uneven lane conditions shall be signed with an "UNEVEN PAVEMENT/NEXT XX MILES" on the portable changeable message signs and portable "UNEVEN PAVEMENT" signs (dual mounted) 1,000' in advance of the uneven pavement and every ½ miles thereafter along the uneven portion of roadway. Once mitigated, all portable "UNEVEN PAVEMENT" signs shall be removed.

For Open Graded Surface Mixes, "UNEVEN PAVEMENT" signs are not required.

- B. For 3" surface course mixes, place in two paving lifts of 1 ½" each unless directed otherwise by the Engineer. Conditions for uneven travel lanes same as described above.

Paving Lifts greater than 2"

For all other paving lifts greater than 2", the Contractor shall bring all newly resurfaced lanes to the same station and elevation by the end of each work day.

Milling Operations (Does Not Apply to Fine Milling)

Conduct milling operations so that any milled pavement is paved back by the end of each work day.

A milled/grooved surface shall not be re-opened to traffic except in cases where inclement weather or mechanical failure prevents the paving back of the lane by the end of the work day.

If milled areas are not paved back within the same work period due to inclement weather or mechanical failure, the Contractor is to furnish and install portable signs to warn drivers of the conditions. The signs include "Grooved Pavement" (W8-15) w/ Motorcycle Plaque mounted below, and "Uneven Lanes" (W8-11). These are to be dual indicated where lateral clearance can be obtained within the median areas. Install the "Grooved Pavement" (W8-15) w/ Motorcycle Plaque 1500' in advance of the milled area. Install the "Uneven Lanes" (W8-11) 500' in advance of the milled area. Alternate these signs every ½ mile. Once mitigated, all portable signs are to be removed.

Slope the pavement at the beginning and ending of the daily milling operation as directed by the Engineer. Sweep and remove all milled material from the roadway as soon as the daily milling operation is completed. Remove any existing pavement adjacent to the milled area that has been damaged and replace with patch material as directed by the Engineer.

Fine Milling / Microsurfacing Operations (Depths less than 1")

For fine milling operations less than 1", paving is not required in the same work period. The paving of the fine milled area is to be conducted within the next work period and not to exceed 72 hours. No advance warning signs are needed for the conditions. However, pavement markings are required by the end of each work day.

TC-6

I-6063

Buncombe County

3. Temporary Pavement Markings:

Review and record the existing pavement markings and markers before obliteration. Re-establish the new pavement markings and markers using the record of existing markings in conjunction with the *2018 Roadway Standard Drawings* unless otherwise directed by the Engineer. Submit the record of the existing pavement markings seven calendar days before the obliteration of any pavement markings.

Obliterated pavement markings shall be replaced by the end of each workday's operation. Interim paint may be used to comply with time limitations if final pavement markings cannot be placed except for milled surfaces or diamond ground surfaces. Final markings shall be placed within 30 days in accordance with Section 1205-4 and Section 1205-5. For milled surfaces, temporary pavement markings shall be used in accordance with Section 1205-8(C). There will be no direct payment for interim paint. Temporary paint will be paid for at the contract unit price.

For concrete surfaces that have been diamond ground as a surface treatment, 4" temporary paint shall be used in accordance with Section 1205-8(C). Upon completion of all diamond grinding operations, 4" line removal shall be used to remove 100% of the 4" temporary paint on the final concrete surface by grinding method only. Use an acceptable method to grind ridges smooth only where pavement markings will be installed prior to placing final pavement marking material. This method shall also be used in the area of the black contrast for surface preparation. Payment for line removal will be made in accordance with Section 1205-10.

For project winterization, install temporary paint markings in accordance with Section 1205-8(C) of the 2018 Standard Specifications. Use 4" lane, edge, and center lines and 8" gore lines. Compensation for this work shall be made in accordance with Section 1205-10 except that no payment will be made if paving is completed more than 30 days before the written notification by the Department that winterization is required.

4. Work Zone Signing:

A. Description

Install advance/general warning work zone signs according to the attached drawings prior to beginning work.

For paving overlays of 3" or greater that create a drop-off adjacent to the median shoulder, install "LOW/SOFT SHOULDER" (SP 13107) signs on the median shoulder. Place initially at the construction limits, and then space 1 mile thereafter. No signing required for the outside shoulder.

Install and maintain signing in accordance with the Divisions 11 and 12 of the *2018 Standard Specifications*.

B. Installation

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All stationary Advance/General warning work zone signs require notification to existing Utility owners per Article 105-8 of the 2018 Standard Specifications and Special Provision SP1 G115 within 3 to 12 full working days prior to installation.

Install all Advance/General warning work zone signs before beginning work on a particular map. If signs are installed more than seven (7) calendar days prior to the beginning of work on a particular map, cover the signs until the work begins. Install each work zone Advance/General warning sign separately and not on the same post or stand with any other sign except where an advisory speed plate or directional arrow is used.

All sign locations to be verified by the Engineer prior to installation. Once the signs have been installed and accepted, any sign relocations requested by the Department will be compensated in accordance with Article 104-7. Any additional signs other than the ones required in this provision or attached drawings will be compensated in accordance with Article 104-7.

If there is a period of construction inactivity longer than 14 calendar days, remove or cover advance/general warning work zone signs. Uncover advance/general warning work zone signs no more than 7 calendar days before work resumes.

All other operations may be suspended upon failure to comply with the above requirements. Such suspended operations would not be resumed until the above requirements are fulfilled.

C. Sign Removal

Once Maps on the Project are substantially completed, it is acceptable to remove the Stationary Work Zone Signs on those Maps in lieu of waiting until all of the Maps are completed on the Project. A Map is substantially complete when the resurfacing operations are completed and the shoulders are brought up to the same elevation as the proposed pavement and when temporary pavement markings (paint) are installed along the centerline and edge lines as well as the ramps and loops. The final pavement markings (Thermoplastic or Polyurea) and/or markers do not have to be installed for the Map to be considered substantially complete. Final Pavement Markings/Markers are installed with portable signing and changeable message signs according to Roadway Standard Drawing 1101.02, sheet 13. Any remaining punch list items requiring traffic control are to be completed with portable work zone signing with compensation covered in the Contract Unit price for price for the required Traffic Control items.

Stationary Work Zone Sign removal is a condition of final project acceptance.

D. Lane Closure Work Zone Signs

Install any required lane closure signing needed during the life of the project in accordance with the Standard Drawing No. 1101.02, 1101.11 and 1110.02 of the *2018 Roadway Standard Drawings*.

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MEASUREMENT AND PAYMENT

Stationary Work Zone Signs will be measured and paid as the actual number of square feet satisfactorily installed at each location and accepted by the Engineer.

Refer to the respective Sections of Division 11 and 12 of the 2018 Standard Specifications or the attached Special Provisions for the satisfactory installation and removal of lane closures and temporary pavement markings and markers.

Measurement for Lane Closures is the actual number of stationary lane closures satisfactorily installed for paving and all other required operations as shown in Roadway Standard Drawing 1101.02, sheets 4, 5, 6, 8, 9 & 10. All labor, traffic control devices, and signing for lane closures as shown in these Roadway Standard Drawings are paid under this item.

Lane Closures will be measured and paid at the Contractor's unit price for Lane Closure on a per each basis. In the event a dual or triple lane closure is required, they will be measured individually and paid on a per each basis. The ramp lane closures shown in Roadway Standard Drawing 1101.02, sheets 9 & 10, are considered part of the mainline lane closure and will not be measured or paid separately.

Measurement for Ramp/Loop Closures is the actual number of total ramp/loop closures and detours satisfactorily installed for ramp/loop paving and all other required operations as shown on the Short Term Closure and Detour of Interstate/Freeway Ramps detail drawing. All labor, traffic control devices and signing required for re-routing traffic as shown on the Short Term Closure and Detour of Interstate/Freeway Ramps detail drawing are paid under this item.

Ramp/Loop Closures will be measured and paid at the Contractor's unit price for Ramp/Loop Closures on a per each basis. In the event two separate ramps are closed at the same time, they will be measured individually and paid on a per each basis.

Measurement and payment for paint pavement marking lines, paint pavement marking symbols, removal of pavement marking lines will be according to Section 1250-10.

Measurement and payment for law enforcement will be made and paid as the actual number of hours each Law Enforcement Officer provides during the life of the project as approved by the Engineer.

Sequential Flashing Warning Lights, and Work Zone Presence Lighting are paid separately.

Payment will be made under:

Pay Item	Pay Unit
Work Zone Signs (Stationary)	SF
Lane Closure	EA
Ramp/Loop Closure	EA

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Paint Pavement Marking Lines (__”)	LF
Paint Pavement Marking Symbols	EA
Removal of Pavement Marking Lines (__”)	LF
Law Enforcement	HR

County : Buncombe

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0003	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUB-BING	3 ACR		
0004	0036000000-E	225	UNDERCUT EXCAVATION	3,060 CY		
0005	0106000000-E	230	BORROW EXCAVATION	4,274 CY		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	320 CY		
0007	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	1,000 SY		
0008	0255000000-E	SP	GENERIC GRADING ITEM AGGREGATE BASE COURSE FOR BACKFILL	1,100 TON		
0019	1000000000-E	462	6" SLOPE PROTECTION	180 SY		
0020	1099500000-E	505	SHALLOW UNDERCUT	310 CY		
0021	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	700 TON		
0022	1220000000-E	545	INCIDENTAL STONE BASE	840 TON		
0023	1245000000-E	SP	SHOULDER RECONSTRUCTION	20.82 SMI		
0024	1260000000-E	SP	AGGREGATE SHOULDER BORROW	20,588 TON		
0025	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	21,909 SY		
0026	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (2")	4,305 SY		
0027	1330000000-E	607	INCIDENTAL MILLING	2,630 SY		
0028	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	47,028 TON		
0029	1524200000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	51,566 TON		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0030	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2,258 TON		
0031	1577000000-E	620	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	3,275 TON		
0032	1704000000-E	SP	PATCHING EXISTING PAVEMENT	610 TON		
0033	1735000000-E	723	REPAIR OF JOINTED CONCRETE PAVEMENT SLABS	90 SY		
0034	1839140000-E	661	ULTRA-THIN BONDED WEARING COURSE	7,548 TON		
0035	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	105,600 LF		
0036	1881000000-E	SP	GENERIC PAVING ITEM JOINT CONSTRUCTION, REPAIR AND SEALING	3,800 LF		
0037	1891000000-E	SP	GENERIC PAVING ITEM 8" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR	1,070 SY		
0038	1891000000-E	SP	GENERIC PAVING ITEM MILLING CONCRETE PAVEMENT, 0" TO 2" DEPTH	11,666 SY		
0039	1891000000-E	SP	GENERIC PAVING ITEM MILLING CONCRETE PAVEMENT, 2" DEPTH	2,800 SY		
0040	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	16 EA		
0041	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	5 EA		
0042	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	22 EA		
0043	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	7 EA		
0044	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	7 EA		

County : Buncombe

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0045	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	7 EA		
0046	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	12 EA		
0047	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	14 EA		
0048	2396000000-N	840	FRAME WITH COVER, STD 840.54	9 EA		
0049	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	2 EA		
0050	2473000000-N	SP	GENERIC DRAINAGE ITEM CONCRETE PAD FOR SHOULDER DRAIN PIPE OUTLET	176 EA		
0051	2473000000-N	SP	GENERIC DRAINAGE ITEM DRAINAGE STRUCTURE CLEANOUT	30 EA		
0052	2473000000-N	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE CONCRETE APRON FOR DROP INLET	65 EA		
0053	2484000000-E	SP	GENERIC DRAINAGE ITEM 4" PVC (SCHEDULE 40)	4,224 LF		
0054	2484000000-E	SP	GENERIC DRAINAGE ITEM SHOULDER EDGE DRAIN	52,800 LF		
0055	2489000000-E	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE 4" CONCRETE PAVED DITCH	9,150 SY		
0056	2613000000-N	848	REMOVE AND REPLACE CURB RAMPS	4 EA		
0057	2703000000-E	854	CONCRETE BARRIER, TYPE ***** (SINGLE SLOPE)	2,100 LF		
0058	2752000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE 2' 6" CURB & GUTTER	8,619 LF		
0059	2815000000-N	858	ADJUSTMENT OF DROP INLETS	65 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0060	2830000000-N	858	ADJUSTMENT OF MANHOLES	4 EA		
0061	2845000000-N	858	ADJUSTMENT OF METER BOXES OR VALVE BOXES	3 EA		
0062	2905000000-N	859	CONVERT EXISTING DROP INLET TO JUNCTION BOX	1 EA		
0063	3030000000-E	862	STEEL BEAM GUARDRAIL	63,221 LF		
0064	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	190 LF		
0065	3060000000-E	862	STEEL BEAM GUARDRAIL, DOUBLE FACED	460 LF		
0066	3075000000-E	862	TRIPLE CORRUGATED STEEL BM GUARDRAIL	145 LF		
0067	3145000000-E	862	EXTRA LENGTH GUARDRAIL POST (** STEEL) (8')	16 EA		
0068	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	45 EA		
0069	3180000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE ***** (B-83 SHOP CURVED)	2 EA		
0070	3180000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE ***** (III MOD)	2 EA		
0071	3180000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE ***** (III SHOP CURVED)	2 EA		
0072	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	2 EA		
0073	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	88 EA		
0074	3215000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE III	5 EA		
0075	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	10 EA		
0076	3288000000-N	SP	GUARDRAIL END UNITS, TYPE TL-2	2 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0077	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-77	6	EA	
0078	3319000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-83	6	EA	
0079	3360000000-E	863	REMOVE EXISTING GUARDRAIL	46,940	LF	
0080	3387000000-N	SP	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (B-77)	12	EA	
0081	3387000000-N	SP	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (B-83)	4	EA	
0082	3387000000-N	SP	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (III MOD)	2	EA	
0083	3387000000-N	SP	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (III)	8	EA	
0084	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-2)	10	EA	
0085	3389150000-N	SP	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-3)	2	EA	
0086	3649000000-E	876	RIP RAP, CLASS B	400	TON	
0087	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	4,000	SY	
0088	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	510	SF	
0089	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	810	SF	
0090	4424000000-N	SP	WORK ZONE PRESENCE LIGHTING	32	EA	
0091	4434000000-N	SP	SEQUENTIAL FLASHING WARNING LIGHTS	20	EA	
0092	4455000000-N	1150	FLAGGER	36	DAY	
0093	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	10	EA	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0094	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	30 EA		
0095	4480000000-N	1165	TMA	2 EA		
0096	4485000000-E	1170	PORTABLE CONCRETE BARRIER	1,020 LF		
0097	4500000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER	8,000 LF		
0098	4510000000-N	1190	LAW ENFORCEMENT	880 HR		
0099	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM LANE CLOSURE	112 EA		
0100	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM RAMP/LOOP CLOSURE	65 EA		
0101	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	420 EA		
0102	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	39 EA		
0103	4726110000-E	1205	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	6 EA		
0104	4775000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (II)	2,870 LF		
0105	4815000000-E	1205	PAINT PAVEMENT MARKING LINES (6")	488,130 LF		
0106	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	20,654 LF		
0107	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	100 LF		
0108	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	36 EA		
0109	4847030000-E	1205	POLYUREA PAVEMENT MARKING LINES (6", 20 MILS)	19,950 LF		
0110	4847070000-E	1205	POLYUREA PAVEMENT MARKING LINES (12", 20 MILS)	712 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0111	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM 9" COLD APPLIED PLASTIC PAVE- MENT MARKING LINES, TYPE II	600 LF		
0112	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMO PAVEMENT MARKING LINES, 12", 90 MILS (HIGHLY REFLECT- IVE MEDIA)	9,720 LF		
0113	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMO PAVEMENT MARKING LINES, 6", 90 MILS (HIGHLY REFLECTIVE MEDIA)	131,060 LF		
0114	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	48 LF		
0115	4895000000-N	SP	GENERIC PAVEMENT MARKING ITEM NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKERS	1,751 EA		
0116	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	210 EA		
0117	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0118	6000000000-E	1605	TEMPORARY SILT FENCE	8,200 LF		
0119	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	1,190 TON		
0120	6012000000-E	1610	SEDIMENT CONTROL STONE	4,280 TON		
0121	6015000000-E	1615	TEMPORARY MULCHING	60 ACR		
0122	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	3,000 LB		
0123	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	12 TON		
0124	6024000000-E	1622	TEMPORARY SLOPE DRAINS	280 LF		
0125	6029000000-E	SP	SAFETY FENCE	400 LF		
0126	6030000000-E	1630	SILT EXCAVATION	880 CY		
0127	6036000000-E	1631	MATTING FOR EROSION CONTROL	1,450 SY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0128	6042000000-E	1632	1/4" HARDWARE CLOTH	1,480	LF	
0129	6071010000-E	SP	WATTLE	3,800	LF	
0130	6071020000-E	SP	POLYACRYLAMIDE (PAM)	148	LB	
0131	6084000000-E	1660	SEEDING & MULCHING	7.3	ACR	
0132	6087000000-E	1660	MOWING	22	ACR	
0133	6090000000-E	1661	SEED FOR REPAIR SEEDING	250	LB	
0134	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	2	TON	
0135	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	450	LB	
0136	6108000000-E	1665	FERTILIZER TOPDRESSING	3	TON	
0137	6114500000-N	1667	SPECIALIZED HAND MOWING	740	MHR	
0138	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	48	EA	
0139	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	4	EA	
0140	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE	24	EA	
0141	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	36	EA	
0142	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	363	LF	
0143	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (8")	5,900	SY	
0144	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	1,694	TON	
0145	1891000000-E	SP	GENERIC PAVING ITEM FINE MILLING	140,800	SY	

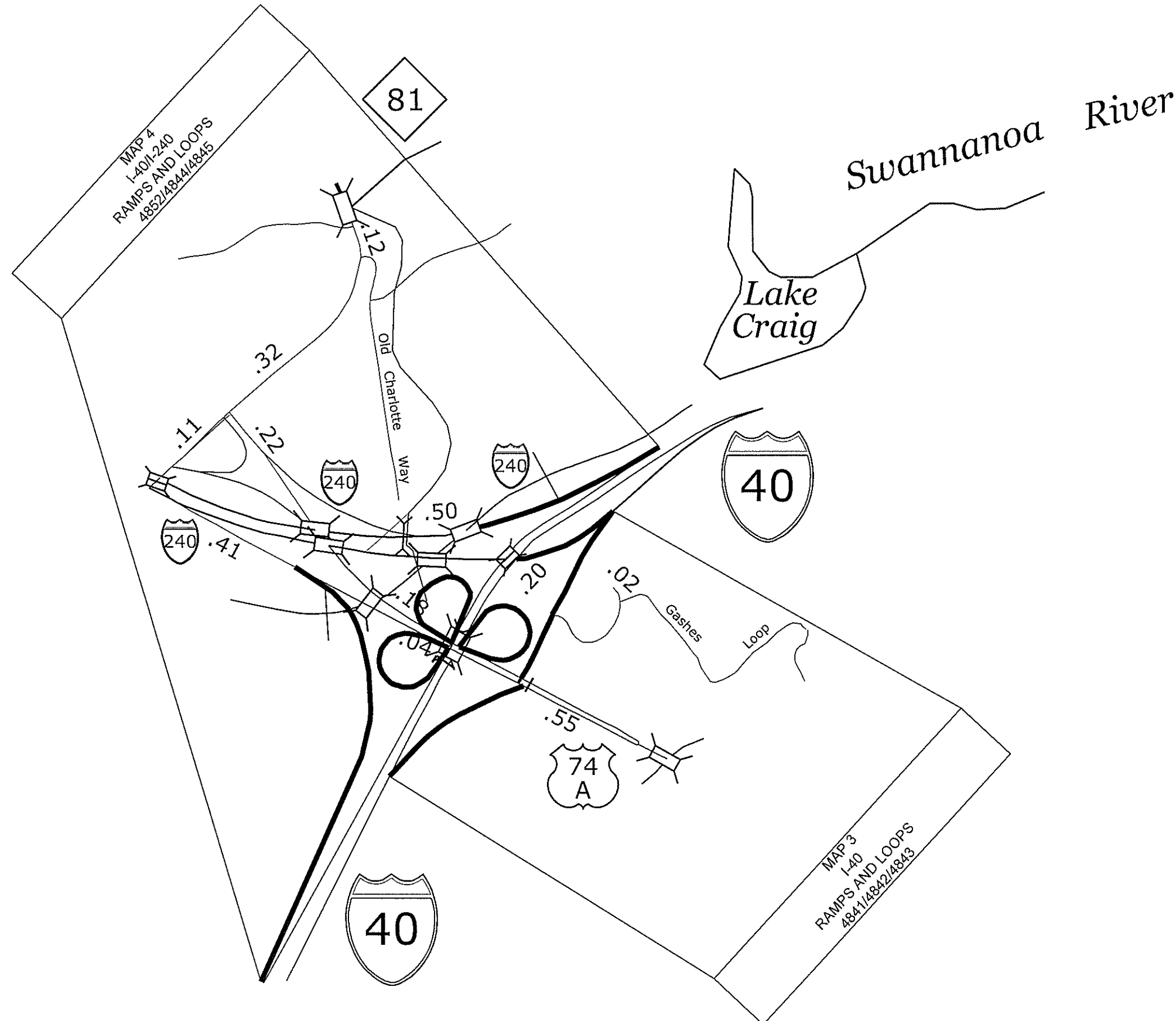
County : Buncombe

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0146	3435000000-N	SP	GENERIC GUARDRAIL ITEM RESPONSE FOR GUARDRAIL/GUIDE- RAIL MAINTENANCE	100 EA		


0935/Feb11/Q1354931.12/D474228380000/E135

Total Amount Of Bid For Entire Project :

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6063	5	
F.A. PROJECT NO.			



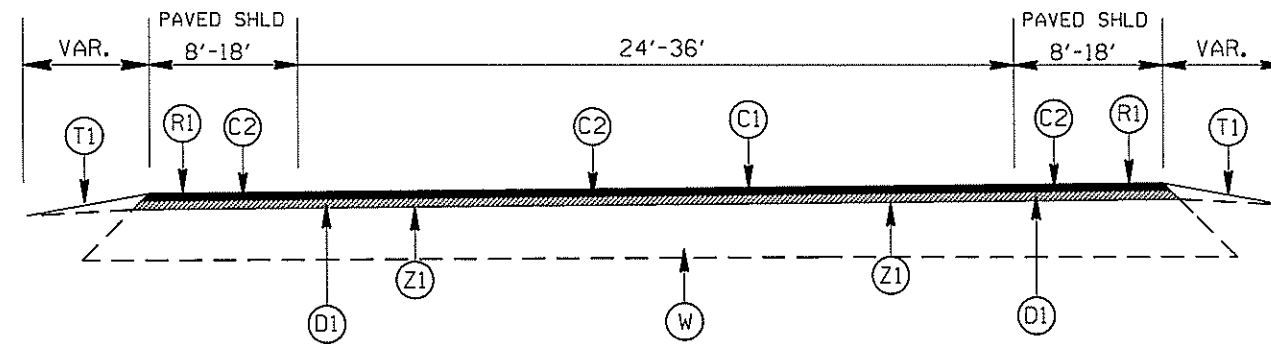
ENLARGED MUNICIPAL AND SUBURBAN AREAS
BUNCOMBE COUNTY
 NORTH CAROLINA
PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - DIVISION 13
INTERSTATE 40 PROJECT LIMITS:
 I-240 / RAMPS AND LOOPS
 4841/4842/4843/4844/4845/4852

SCALE -NA-			REVISIONS	
DATE				
DWG. BY MJ				
DESIGN BY MW				
APPROVED				

WBS # 48755.3.GVI

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	1-6063	8	
F.A. PROJECT NO.			

PAVEMENT SCHEDULE



TYPICAL SECTION NO.1
EAST AND WEST BOUND MAINLINE

(C1)	PROP. APPROX. 5/8" ULTRA-THIN BONDED WEARING COURSE, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LIFTS.
(C3)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C4)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 3.0" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. 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 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
(T1)	ASB SHOULDER MATERIAL
(R1)	RUMBLE STRIPS
(V1)	MILLING EXISTING ASPHALT, 1.5" DEPTH
(V2)	MILLING EXISTING ASPHALT, 2.0" DEPTH
(V3)	MILLING EXISTING CONCRETE, 2.0" DEPTH
(V4)	MILLING EXISTING ASPHALT PAVED SHOULDERS AT BRIDGES, 1.5" DEPTH
(V5)	MILLING EXISTING CONCRETE, 0- 2.0" DEPTH
(W)	EXISTING CRC
(U)	EXISTING ASPHALT PAVEMENT
(Z)	EXISTING CONCRETE PAVEMENT
(Z1)	MILLING EXISTING ULTRA-THIN BONDED WEARING SURFACE (FINE MILLING)

- * ULTRA-THIN BONDED WEARING COURSE SHALL EXTEND A MINIMUM OF 1 FOOT OUTSIDE OF LANE.
- * RUMBLE STRIPS SHALL BE LOCATED 1 FOOT OUTSIDE OF ULTRA-THIN BONDED WEARING COURSE ON EITHER SIDE.
- * NO BRIDGES WILL BE RESURFACED.

WBS # 48755.3.GVI

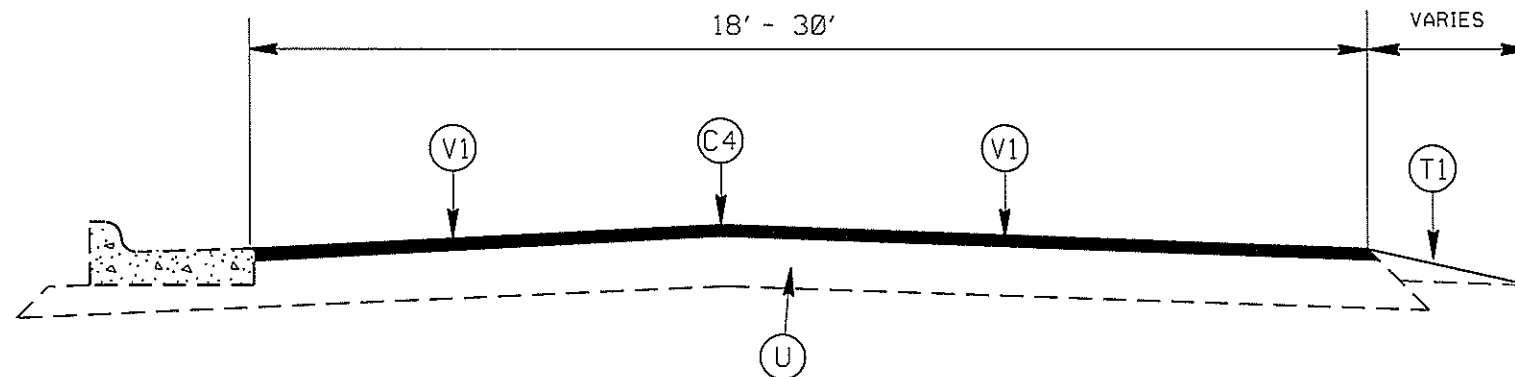
SCALE	-HA-	REVISIONS
DATE		
DWG. BY	MJ	
DESIGN BY	MH	
APPROVED		



TYPICAL 2 IS OMITTED.

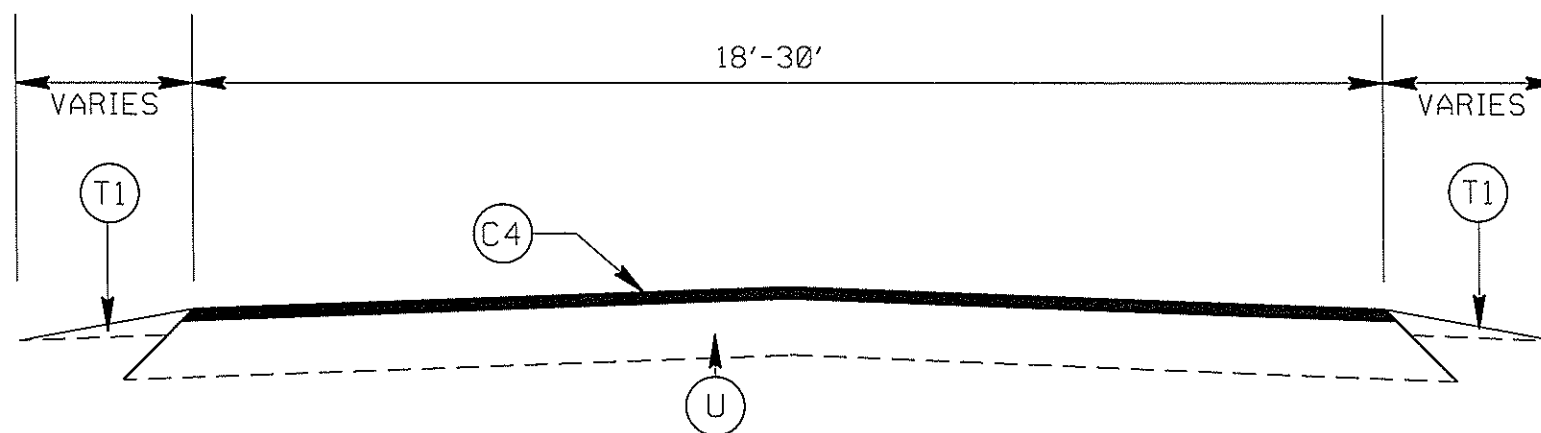
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	1-6063	9	
F.A. PROJECT NO.			

PAVEMENT SCHEDULE



TYPICAL SECTION NO. 3
RAMPS 5854/5855

On Ramp from SB Hendersonville Rd on to WB I-40



TYPICAL SECTION NO. 4
RAMPS I-240/5853/5855

On Ramp from SB Hendersonville Rd on to WB I-40

(C1)	PROP. APPROX. 5/8" ULTRA-THIN BONDED WEARING COURSE, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 3.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LIFTS.
(C3)	PROP. APPROX. 2.0" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
(C4)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 3.0" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
(D2)	PROP. VARIABLE DEPTH ASPHALT CONC. 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 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
(T1)	ASB SHOULDER MATERIAL
(R1)	RUMBLE STRIPS
(V1)	MILLING EXISTING ASPHALT, 1.5" DEPTH
(V2)	MILLING EXISTING ASPHALT, 2.0" DEPTH
(V3)	MILLING EXISTING CONCRETE, 2.0" DEPTH
(V4)	MILLING EXISTING ASPHALT PAVED SHOULDERS AT BRIDGES, 1.5" DEPTH
(V5)	MILLING EXISTING CONCRETE, 0- 2.0" DEPTH
(W)	EXISTING CRC
(U)	EXISTING ASPHALT PAVEMENT
(Z)	EXISTING CONCRETE PAVEMENT

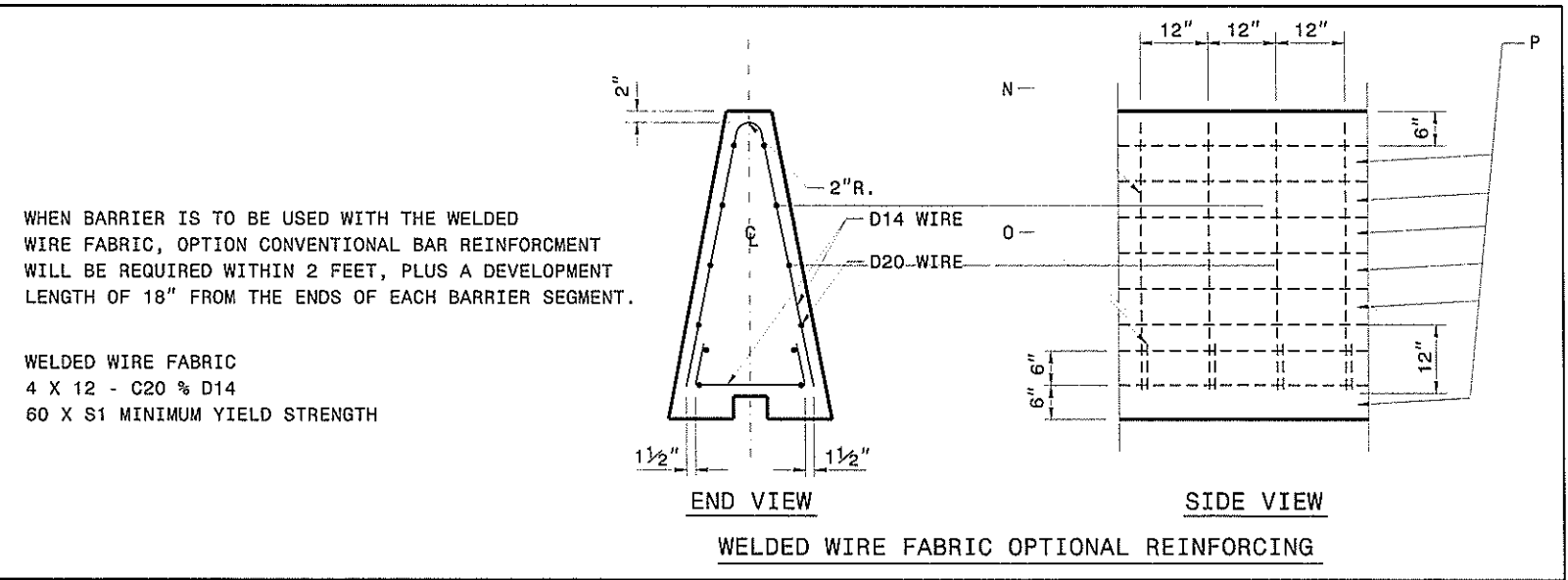
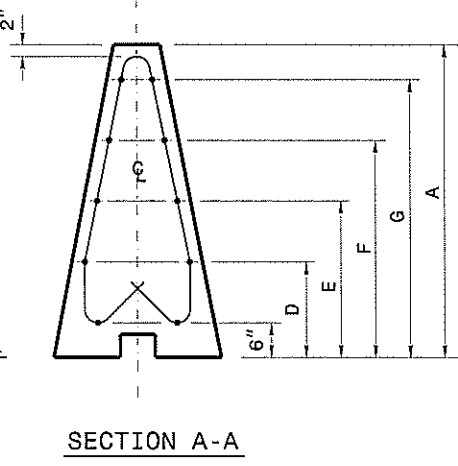
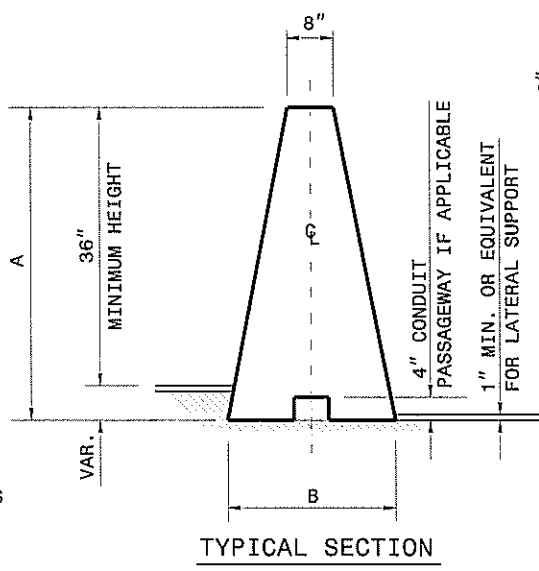
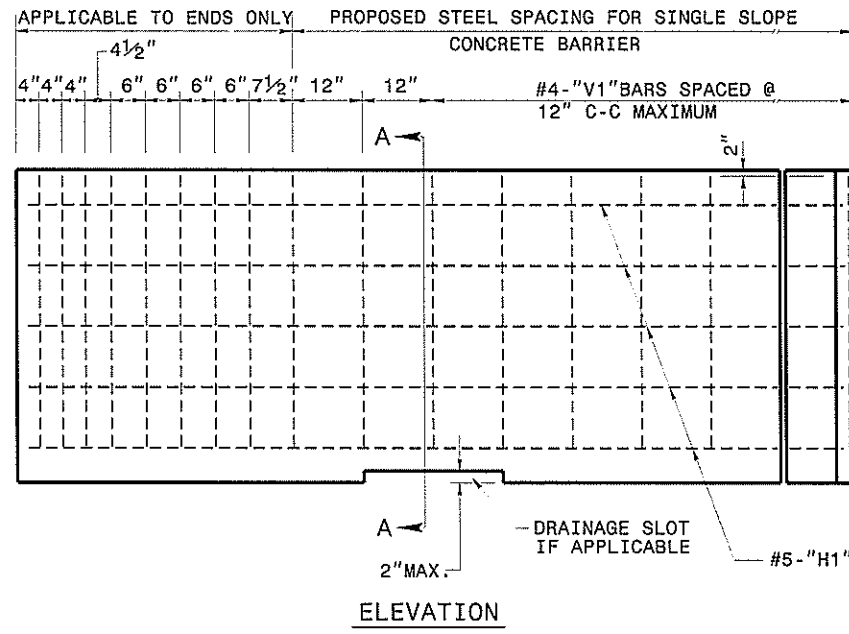
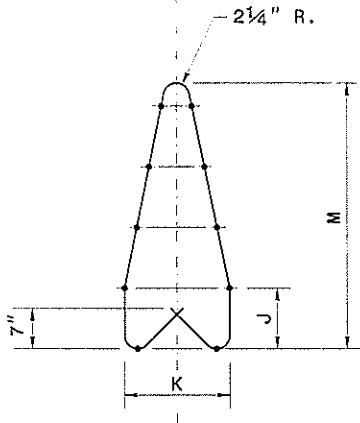
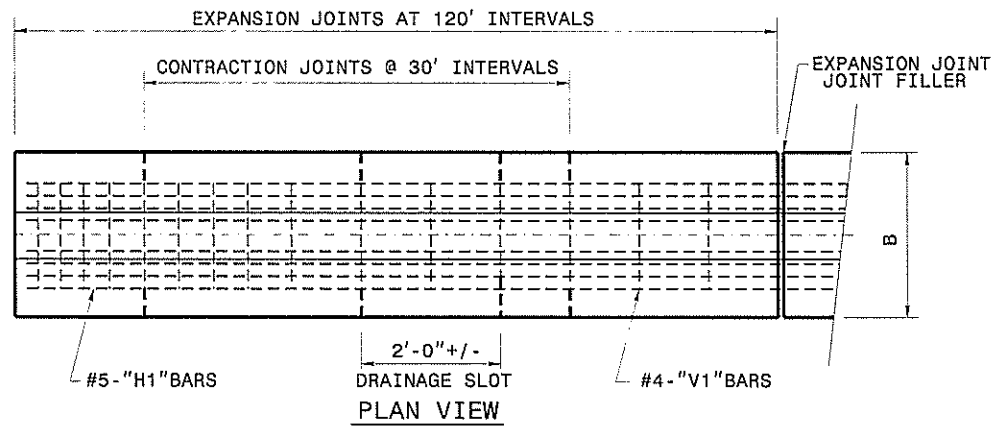
WBS # 48755.3.GVI

SCALE	-NA-		REVISIONS
DATE			
DWG. BY	MJ		
DESIGN BY	MW		
APPROVED			

GENERAL NOTES:

1. USE CLASS "AA" CONCRETE.
2. MAINTAIN 2" OF COVER OVER ALL REBAR. CHAMFER TOP AND ENDS OF BARRIER 1/2 INCH.
3. USE BAR SPLICE LENGTHS A MINIMUM OF 20 TIMES THE NORMAL DIAMETER OF THE BAR. ANY METHOD DEvised BY THE CONTRACTOR AND APPROVED BY THE ENGINEER THAT WILL ASSURE THE LONGITUDINAL ROADWAY STEEL WILL BE POSITIONED +/- 1/2 INCH AS DIMENSIONED WILL BE SATISFACTORY.
4. REFER TO ROADWAY STANDARD DRAWING NO.854.01 FOR EXPANSION AND CONTRACTION JOINT, FILLER AND OTHER SPECIFICATIONS.

WELDED WIRE FABRIC MAY BE USED AS AN OPTION TO CONVENTIONAL REINFORCEMENT FOR CAST-IN-PLACE BARRIER. WELDED WIRE FABRIC SHALL BE MADE IN ACCORDANCE WITH ASTM A497. CONDUIT TO BE PROVIDED ONLY WHEN CALLED FOR ELSEWHERE IN THE PLANS. POSITION OF THE CONDUIT CONDUIT PASSAGEWAY MAY BE ADJUSTED TO FACILITATE CONSTRUCTION, SUBJECT TO APPROVAL BY THE ENGINEER.



BARRIER HEIGHT (IN.)	DIMENSIONS											
	A	B	D	E	F	G	K	L	M	N	O	P
42"	42	24	13 1/2	21	28 1/2	36	15	9 1/4	36	72	28	4
48"	48	26 9/32	15	24	33	42	17 1/2	10 3/4	42	84	31 1/2	5
52"	54	28 9/16	16 1/2	27	37 1/2	48	19 1/2	12 1/4	48	96	34 3/4	6



CONTRACT SERVICES & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

SINGLE SLOPE CONCRETE BARRIER

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 08-18-06
 CHECKED BY: _____ DATE: _____
 FILE SPEC: details\mbr211-eng\std\guardrail\single slope concrete barrier.dwg

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO.	SHEET NO.	TOTAL NO.
I-6063	21	

SUMMARY OF QUANTITIES

PROJECT NO	COUNT	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	SUPPL. CLEARING & GRUBBING	UNDER-CUT EXCAVATION	BORROW	DDE	GEO-TEXTILE FOR SOIL STABILIZATION	6" SLOPE PROTECTION	SHALLOW UNDERCUT	CLASS IV SUB-GRADE STABILIZATION	AGGR. BASE COURSE FOR BACK-FILL	INC. STONE BASE	SHOULDER RECON.	ASB	1 1/2" MILLING	2" MILLING	8" MILLING	INC. MILLING	
										MI	FT	ACR	CY	CY	CY	SY	SY	CY	TON	TONS	TONS	SMI	TON	SY	SY	SY	SY	
48755.3.GV1	Buncombe	1	I-40 West 55-50	From the ramp gore coming from Porter Cove to I-40 West to 300' West MM 50	1, 9	2	MD	NO	NO	4.861	24' to 60'	1.5	1,530	2,122	160	500	80	150	350	550	420	10	10,168	1,170		2,950	1,120	
		2	I-40 East 50 to 55	From 300' West of MM 50 to MM 55	1, 9	2	MD	NO	NO	4.861	24' to 60'	1.5	1,530	2,122	160	500	100	160	350	550	420	10	10,168	1,170		2,950	1,120	
		3	I-40 Eastbound	RAMPS AND LOOPS	3 thru 8	2	2WU	NO	NO	1.339	24				14								0.30	120	10,066	2,385		190
		4	I-40 Westbound	RAMPS AND LOOPS	3 thru 8	2	2WU	NO	NO	2.307	24				16								0.52	132	9,503	1,920		200
GRAND TOTAL FOR PROJ NO. I-6063										13.368		3	3,060	4,274	320	1,000	180	310	700	1,100	840	20.82	20,588	21,909	4,305	5,900	2,630	

FINE MILLING	BASE COURSE, B25.0C	INTERMEDIATE COURSE, I19.0C	SURFACE COURSE, S9.5D	ASPHALT BINDER FOR PLANT MIX	POLYMER MOD. ASPH. BINDER FOR PLANT MIX	PATCHING EXIST. PAVEMENT	REPAIR OF JOINTED CONC PAVEMENT SLABS	ULTRA-THIN BONDED WEARING COURSE	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONC)	JOINT CONST. REPAIR AND SEALING	8" CRC PAVEMENT REPAIR	MILLING CONC PAVEMENT 2"	MILLING CONC PAVEMENT 0"-2"	SHOULDER EDGE DRAIN	(SCHEDULE 40) 4 INCH PVC	FRAME W/ 2 GRATES, STD 840.16	FRAME W/ 2 GRATES, STD 840.20	FRAME W/ 2 GRATES, STD 840.22	FRAME W/ 2 GRATES, STD 840.24	FRAME W/ 2 GRATES, STD 840.29	FRAME W/ GRATE & HOOD, STD 840.03, TYPE E	FRAME W/ GRATE & HOOD, STD 840.03, TYPE F	FRAME W/ GRATE & HOOD, STD 840.03, TYPE G	FRAME W/ COVER, STD 840.54	STEEL FRAME W/ 2 GRATES, STD 840.37	CONC PAD FOR SH. DRAIN PIPE OUTLET	DRAINAGE STRUCTURE CLEANOUT	REM & REPL CONC APRON FOR DROP INLET	
SY	TONS	TONS	TONS	TONS	TONS	TONS	SY	TON	LF	LF	SY	SY	SY	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
70,400	847	22,537	23,958	1,120	1,550	140		3,674	52,800		540	1,400	3,625	26,400	2,112	8	2	11	3	3	3	6	7	4	1	88	15	20	
70,400	847	23,033	24,333	1,144	1,573	140		3,729	52,800		500	1,400	3,625	26,400	2,112	8	3	11	4	4	4	6	7	5	1	88	15	45	
		685	1,576	33	97	190	30	145		1,400	30		2,093																
		773	1,699	37	97	140	60			2,400			2,323																
140,800	1,694	47,028	51,566	2,334	3,317	610	90	7,548	105,600	3,800	1,070	2,800	11,666	52,800	4,224	16	5	22	7	7	7	12	14	9	2	176	30	65	

REM. & REPL 2' 6" CURB & GUTTER	REM. & REPL 4" CONC PAVED DITCH	REM. & REPL CURB RAMPS	CONC BARRIER, SINGLE SLOPE DOUBLED FACED	ADJ. OF DROP INLETS	ADJ. OF MANHOLES	ADJ. OF METER OR VALVE BOXES	CONVERT EXIST. DROP INLET TO JUNC. BOX	STEEL BEAM GUARDRAIL	STEEL BEAM GUARDRAIL, SHOP CURVED	STEEL BEAM GUARDRAIL, DOUBLE FACED	TRIPLE CORRUGATED STEEL BM GUARDRAIL	EXTRA LENGTH GUARDRAIL POST (8' STEEL)	ADDITIONAL GUARDRAIL POSTS	GRAU, TYPE B-83 SHOP CURVED	GRAU, TYPE III MODIFIED	GRAU, TYPE III SHOP CURVED	GREU, TYPE AT-1	GREU, TYPE CAT-1	GRAU, TYPE III	GREU, TYPE TL-3	GREU, TYPE TL-2	GRAU, TYPE B-77	GRAU, TYPE B-83	REM. EXI. GUARDRAIL	TEMP. GRAU, TYPE B-77	TEMP. GRAU, TYPE B-83	TEMP. GRAU, TYPE III	TEMP. GRAU, TYPE III MODIFIED
LF	SY	EA	LF	EA	EA	EA	EA	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	LF	EA	EA	EA	EA
3,807	4,385		1,050	33				31,610	90	230	70	8	20	1	2	1	1	44	2	5	1	3	4	23,470	6	2	4	1
2,963	4,575		1,050	32			1	31,611	100	230	75	8	25	1		1	1	44	3	5	1	3	2	23,470	6	2	4	1
987		2			4	3																						
862	190	2																										
8,619	9,150	4	2,100	65	4	3	1	63,221	190	460	145	16	45	2	2	2	2	88	5	10	2	6	6	46,940	12	4	8	2

TEMP. GREU, TYPE TL-2	TEMP. GREU, TYPE TL-3	RIP RAP, CLASS B	GEOTEXTILE FOR DRAINAGE	TEMP. SILT FENCE	STONE FOR EROS. CONTROL, CLASS B	SEDIMENT CONTROL STONE	TEMP. MULCHING	SEED FOR TEMP. SEEDING	FERTILIZER FOR TEMP. SEEDING	TEMP. SLOPE DRAINS	SAFETY FENCE	SILT EXCAVATION	MATTING FOR EC	1/4" HARDWARE CLOTH	WATTLE	POLY-ACRYLAMIDE (PAM)	SEED & MULCHING	MOWING	SEED FOR REPAIR SEEDING	FERTILIZER FOR REPAIR SEEDING	SEED FOR SUPPL. SEEDING	FERTILIZER TOP-DRESSING	SPECIALIZED HAND MOWING	RESPONSE FOR EC	CONC WASHOUT STRUCTURE	FABRIC INSERT INLET PROTECTION DEVICE	FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	INDUCTIVE LOOP
EA	EA	TON	SY	LF	TON	TON	ACR	LB	TON	LF	LF	CY	SY	LF	LF	LB	AC	ACR	LB	TON	LB	TON	MHR	EA	EA	EA	EA	LF
6		200	2,000	4,000	590	2,000	30	1,500	6	140	200	440	725	700	1,800	70	3.2	11	125	1	225	1.5	370	24	2	12	18	
4	2	200	2,000	4,200	600	2,280	30	1,500	6	140	200	440	725	780	2,000	78	3.2	11	125	1	225	1.5	370	24	2	12	18	
																	0.4											363
																	0.5											
10	2	400	4,000	8,200	1,190	4,280	60	3,000	12	280	400	880	1,450	1,480	3,800	148	7.3	22	250	2	450	3	740	48	4	24	36	363