



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

April 10, 2023

Addendum No. 1

RE: Contract # C204726

WBS # 46409.3.3

FEDERAL AID NO. 0040103

Buncombe County (I-5889B)

I-40 FROM MILEMARKER 45.25 TO MILEMARKER 50.

April 18, 2023 Letting

To Whom It May Concern:

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads “Includes Addendum No. 1 Dated 04-10-2023”.
TC-1 thru TC-23	WORK ZONE TRAFFIC CONTROL Unit Project Special Provisions set has been replaced in its entirety.

Please void the existing WORK ZONE TRAFFIC CONTROL Unit Project Special Provisions set in your proposal (pages TC-1 thru TC-24) and replace with REVISED WORK ZONE TRAFFIC CONTROL Unit Project Special Provisions set in its entirety (pages TC-1 thru TC-23)

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>
0047-4405000000-E 1110	WORK ZONE SIGNS (PORTABLE)	432 SF	544 SF
0048-4410000000-E 1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	112 SF	122 SF

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

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0050-4422000000-N 1120	PORTABLE CHANGEABLE MESSAGE SIGN	7 EA	8 EA
0053-4445000000-E 1145	BARRICADES (TYPE III)	80 LF	96 LF
0058-4600000000-N SP	RAMP/LOOP CLOSURES	83 EA	DELETED
0060-4600000000-N SP	SINGLE LANE CLOSURE	300 EA	DELETED
0061-4600000000-N SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	4 EA	DELETED
0104-4423000000-N SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	NEW ITEM	4 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/cms
 Attachments

cc: Mr. Boyd Tharrington, PE
 Mr. Tim Anderson, PE
 Mr. Ken Kennedy, PE
 Mr. Mike Gwyn
 Project File (2)

Mr. Forrest Dungan, PE
 Ms. Jaci Kincaid
 Mr. Jon Weathersbee, PE

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

PROPOSAL

INCLUDES ADDENDUM No. 1 DATED 04-10-2023

DATE AND TIME OF BID OPENING: **Apr 18, 2023 AT 02:00 PM**

CONTRACT ID C204726
WBS 46409.3.3

FEDERAL-AID NO. 0040103
COUNTY BUNCOMBE
T.I.P NO. I-5889B
MILES 5.110
ROUTE NO. I-40
LOCATION I-40 FROM MILEMARKER 45.25 TO MILEMARKER 50.

TYPE OF WORK PAVEMENT REHABILITATION AND BRIDGE PRESERVATION.

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 & STRUCTURE PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

TC-1

I-5889B

Buncombe County

WORK ZONE TRAFFIC CONTROL Project Special Provisions Table of Contents

Special Provision	Page
Work Zone Traffic Control for Interstate/Freeway Resurfacing	TC-2
Work Zone Digital Speed Limit Signs	TC-13
Work Zone Presence Lighting	TC-18
Sequential Flashing Warning Lights	TC-21
ADA Compliant Pedestrian Traffic Control Devices	TC-22



DocuSigned by:
William C Carver
163525A8519349F...

04/05/2023

TC-2

I-5889B

Buncombe County

WORK ZONE TRAFFIC CONTROL FOR INTERSTATE/FREEWAY RESURFACING (02/17/2020) (Rev. 5/10/2021)

General Requirements

This Provision is intended for interstate / freeway resurfacing projects. In the event, the day and time restrictions allow for daytime work activities the Work Zone Presence Lighting and Sequential Flashing Lights are to be omitted. However, the Digital Speed Limit Signs and Connected Lane Closure Devices will be required as described below.

Maintain traffic in accordance with Divisions 10, 11 and 12 of the *2018 NCDOT Standard Specifications* and the following provisions:

Install Work Zone Advance Warning Signs in accordance with the attached drawing prior to beginning work.

1. Time Restrictions for Lane Closure and Road Closure Activities

All lane closure and road closure activities shall be performed in compliance with the day and time restrictions listed and defined in this Contract.

Any activities performed outside of these requirements will be subject to liquidated damages unless approved by the Engineer prior to beginning the activity.

The Contractor may place/pre-stage all required signs and traffic control devices necessary for lane closures prior to the closure time as approved by the Engineer. However, flashing arrow boards and changeable message signs shall not indicate lane closure information until 30 minutes or less prior to the installation of the lane closure. Typical pre-staging times are 1 hour for a single lane closure and 2 hours for double and triple lane closures. The travel lane(s) are to be closed at the prescribed times defined in this Contract. When available, law enforcement should be onsite to shadow workers during pre-staging activities.

For removal, the lane(s) must be reopened in compliance with the times defined in this Contract. It is acceptable to remove the signs and traffic control devices from the shoulder/staging area after the lane(s) are reopened to traffic. All electronic lane closure messages and flashing arrow displays shall be off once lanes are opened. When available, law enforcement should remain on the project while workers remove and secure their signs and devices.

2. Work Zone Speed Limits and Digital Speed Limit Signs (DSLs)

TC-3

I-5889B

Buncombe County

All speed limits are the sole authority of the NCDOT. An ordinance by the State Traffic Engineer is required for all speed limits in order to have a lawfully enforceable speed limit. No speed limit messages/signs shall be installed prior to receiving a signed ordinance.

The Regional Traffic Engineering Office and the Division Construction Engineer in coordination with the Work Zone Traffic Control Section will provide all work zone speed limit recommendations based on activities and conditions.

When lane closures are in effect, implement a Work Zone Variable Speed Limit Reduction as stated in the ordinance and in accordance with the attached provision and drawing.

Use Digital Speed Limit Signs (DSLS) to display the work zone speed limit as shown in the attached special provision and drawing. The speed limit shall be continuously displayed on the digital speed limit signs.

The Contractor will be responsible for coordinating with the Engineer when the work zone speed limits are to be changed and will have to seek approval by the Engineer before the speed limit is changed.

When the variable speed limit reductions are in effect, cover or remove any existing speed limit signs located within the active work area that conflict with the variable speed limit reduction.

The speed limit shall be returned to the existing speed limit when the lane closure is removed and traffic is returned to the existing pattern.

3. Connected Lane Closure Devices

Furnish and install Connected Lane Closure Devices that transmit the location of the lane closure to navigational companies and the Statewide Transportation Operations Center (STOC).

4. Work Zone Presence Lighting and Sequential Flashing Warning Lights

Provide the following for nighttime work activities in accordance with attached drawing and special provisions:

- A. Furnish and install Work Zone Presence Lighting to supplement the Contractor's portable construction and equipment lighting for the purpose of alerting motorist to the existence of an active work zone and to encourage compliance with the reduced work zone speed limit. See attached special provision.

TC-4

I-5889B

Buncombe County

B. Furnish and install Sequential Flashing Warning Lights on drums used for merging tapers to assist motorist in determining which direction to merge and to decrease late lane merging. See attached special provision.

5. Law Enforcement

Use two (2) off duty, uniformed law enforcement officers and official law enforcement vehicles, equipped with blue lights during lane closure operations and two (2) additional law enforcement officers for ramp/loop closures when both operations occur simultaneously.

Use law enforcement officers to assist in the shadowing of workers during the installation and during the removal of lane closures.

Law enforcement vehicles shall not be parked within the buffer space. When possible, position one law enforcement officer downstream of the other to conduct enforcement operations. When space is confined, conduct enforcement outside of the lane closure area.

Temporary Traffic Control (TTC)

Refer to Standard Drawing No. 1101.02, 1101.11, 1110.01, 1110.02, 1115.01, 1130.01, 1135.01, 1165.01, and 1180.01 of the *2018 NCDOT Roadway Standard Drawings* when closing a lane of travel in a stationary work zone for items such as milling, paving, diamond grinding concrete pavements, minor bridge operations, and approach slab rehabilitation.

Drums are recommended for all lane closure operations occurring at night. However, if skinny drums are used at night, they shall be placed every 20' in the tangent sections of lane closure operations. Skinny drums shall not be used for upstream tapers.

Refer to Roadway Standard Drawing No. 1101.02, sheets 9 and 10, of the *2018 NCDOT Roadway Standard Drawings* for diamond grinding, milling and/or paving of ramps unless otherwise approved to be closed by the Engineer. If approved, see attached drawing for typical placement of devices and signing for the detour route.

Refer to Roadway Standard Drawing No. 1101.03, sheet 7, of the *2018 NCDOT Roadway Standard Drawings* for a closure of the interstate/freeway with traffic detoured via interchange ramps for items such as minor bridge and approach slab rehabilitation. Use flaggers or law enforcement to direct traffic at ramp terminals as directed by the Engineer.

Refer to Roadway Standard Drawing No. 1101.02, sheet 12 or 13, of the *2018 NCDOT Roadway Standard Drawings* for utilizing a moving operation for such items as pavement marking and marker placement. A minimum speed of 3 mph shall be maintained at all times with no stops that

TC-5

I-5889B

Buncombe County

narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. All traffic control devices for this operation are considered incidental to the pay items for pavement markings and markers.

Traffic Operations

1. Project Requirements

Failure to comply with the following requirements will result in a suspension of all other operations:

- A. Before working on ANY MAP, the Contractor shall submit a written construction sequence for traffic control and construction lighting for ALL MAPS to the Engineer at the first pre-construction meeting and the sequence must be approved before closing a lane of traffic.
- B. The standard active work area is 2 miles. This is defined as the distance of Resurfacing Operations taking place in a single work period. However, the maximum allowed lane closure distance is 5 miles. Approval by the Engineer is required before closing more than 2 miles of Interstate to ensure the Contractor has the equipment and labor force to actively pursue the work.
- C. Notify the Engineer 15 consecutive calendar days before resurfacing a bridge or its approaches. Patch and make repairs to bridge surface and its approaches before resurfacing occurs. Coordinate all operations on the bridge and its approaches with the Engineer.
- D. Notify the Engineer 48 hours before resurfacing the areas of existing pavement that require patching. Patch these areas before resurfacing occurs. Allow full depth asphalt patching to cool to the point of supporting traffic without displacement or rutting before reopening closed lane. Coordinate the resurfacing operations of the patched areas with the Engineer.
- E. Notify the Engineer 48 hours before milling or resurfacing will interfere with the existing Signal Loops. Loops may need to be placed in milled surface before resurfacing occurs. Coordinate all signal loop operations with the Engineer.
- F. Obtain written approval of the Engineer before working in more than one location or setting up additional lane closures.
- G. The Contractor on this and any adjacent projects, or subcontractors working within this project shall coordinate lane closure location, type, and direction with the Engineer to best maintain lane continuity through the limits of this and adjacent projects.
- H. Operate equipment and conduct operations in the same direction as the flow of traffic. Maintain vehicular access in accordance with Article 1101-05 of the *2018 NCDOT Standard Specifications*.

TC-6

I-5889B

Buncombe County

- I. Provide appropriate construction lighting in accordance with Section 1413 of the *2018 NCDOT Standard Specifications*.
- J. Contractor shall diamond grind, mill, and pave lanes in an order such that water shall not accumulate.

2. Paving Lift Requirements and Time Limitations

Failure to comply with the following requirements will result in a suspension of all other operations until all lanes of traffic are brought to the same station and elevation:

Paving Overlays and Lifts up to 3”

- A. For surface course paving lifts of 2.0” or less, the Contractor shall conduct his paving operations such that the following conditions are met.

Once paving begins in any lane, the Contractor will be permitted to pave as far as the work operations allow (up to 5 miles) for the initial paving period. In the next days’ paving operation, not to exceed 72 hours, bring the adjacent lane to the same station and elevation. At the end of the work period, 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 3”

For all other paving lifts greater than 3”, bring all newly resurfaced lanes to the same station and elevation by the end of each work period unless the Contractor utilizes the notched wedge paving methods as described below:

- A. Any paving lift greater than 3” shall be mitigated by having an approved wedge apparatus on the paver that shapes the edge 1” vertically and the remaining at a maximum slope steepness of 2:1. The maximum paving lift allowed to use this method is 3”.
- B. At the end of the work period, the Contractor shall place portable “UNEVEN PAVEMENT” signs in advance of the uneven pavement and spaced every ½ mile along

TC-7

I-5889B

Buncombe County

the section of uneven pavement. Once mitigated, all portable “UNEVEN PAVEMENT” signs shall be removed.

- C. In the next day’s paving operation and not to exceed 72 hours, the Contractor shall bring up the adjacent lane to the same station and elevation before any further paving takes place on the project.

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 period.

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 period.

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 period.

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 NCDOT 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.

TC-8

I-5889B

Buncombe County

Obliterated pavement markings shall be replaced by the end of each work period. 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.

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.

For project winterization, install temporary paint markings in accordance with Section 1205-8(C) of the *2018 NCDOT 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 NCDOT Standard Specifications*.

B. Installation

All stationary Work Zone Advance/General Warning 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.

TC-9

I-5889B

Buncombe County

Install all Work Zone Advance/General Warning 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 Work Zone Advance/General Warning signs. Uncover Work Zone Advance/General Warning 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 and 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 using portable work zone signing with compensation covered in the contract unit 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 Standard Drawing No. 1101.02, 1101.11, and 1110.02 of the *2018 NCDOT Roadway Standard Drawings*.

TC-10

I-5889B

Buncombe County

Measurement and Payment

The lane closure distance is measured from the end of the merge taper where traffic is completely in the remaining open lane(s) to the last channelizing device closing the lane. For multiple lane closures, the lane closure distance is measured from the end of the last merge taper to the last channelizing device closing the lane.

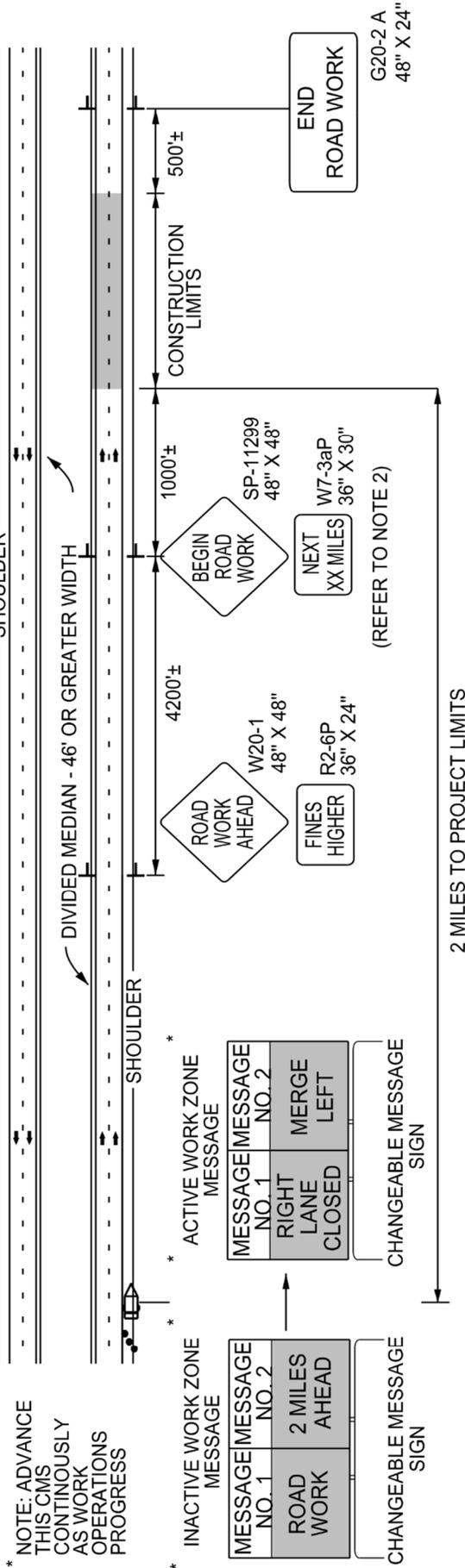
Signs (portable, stationary, and/or barricade mounted), Truck Mounted Attenuators (TMA), Portable Changeable Message Signs (PCMS), Barricades (Type III), Flashing Arrow Boards, Law Enforcement, Pilot Vehicle, Flaggers, Skinny Drums and Drums will be measured and paid in accordance with the item's specific Section in the 2018 Standard Specifications, Section 1105 of the 2018 Standard Specifications, or the item's Special Provision, as determined by the Engineer.

Paint Pavement Marking Lines, Paint Pavement Marking Symbols, and Removal of Pavement Marking Lines will be measured and paid in accordance with Section 1205-10.

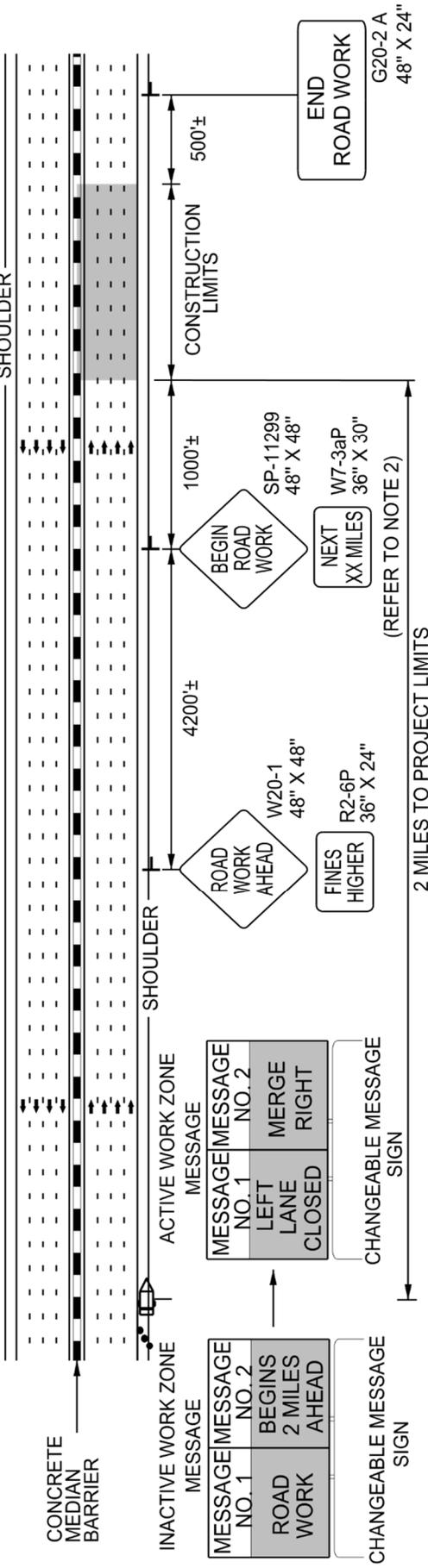
Digital Speed Limit Signs, Connected Lane Closures, Sequential Flashing Warning Lights, and Work Zone Presence Lighting are paid separately in accordance with their respective special provisions.

STATIONARY ADVANCE WARNING SIGNS FOR INTERSTATE / FREEWAY RESURFACING PROJECTS

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

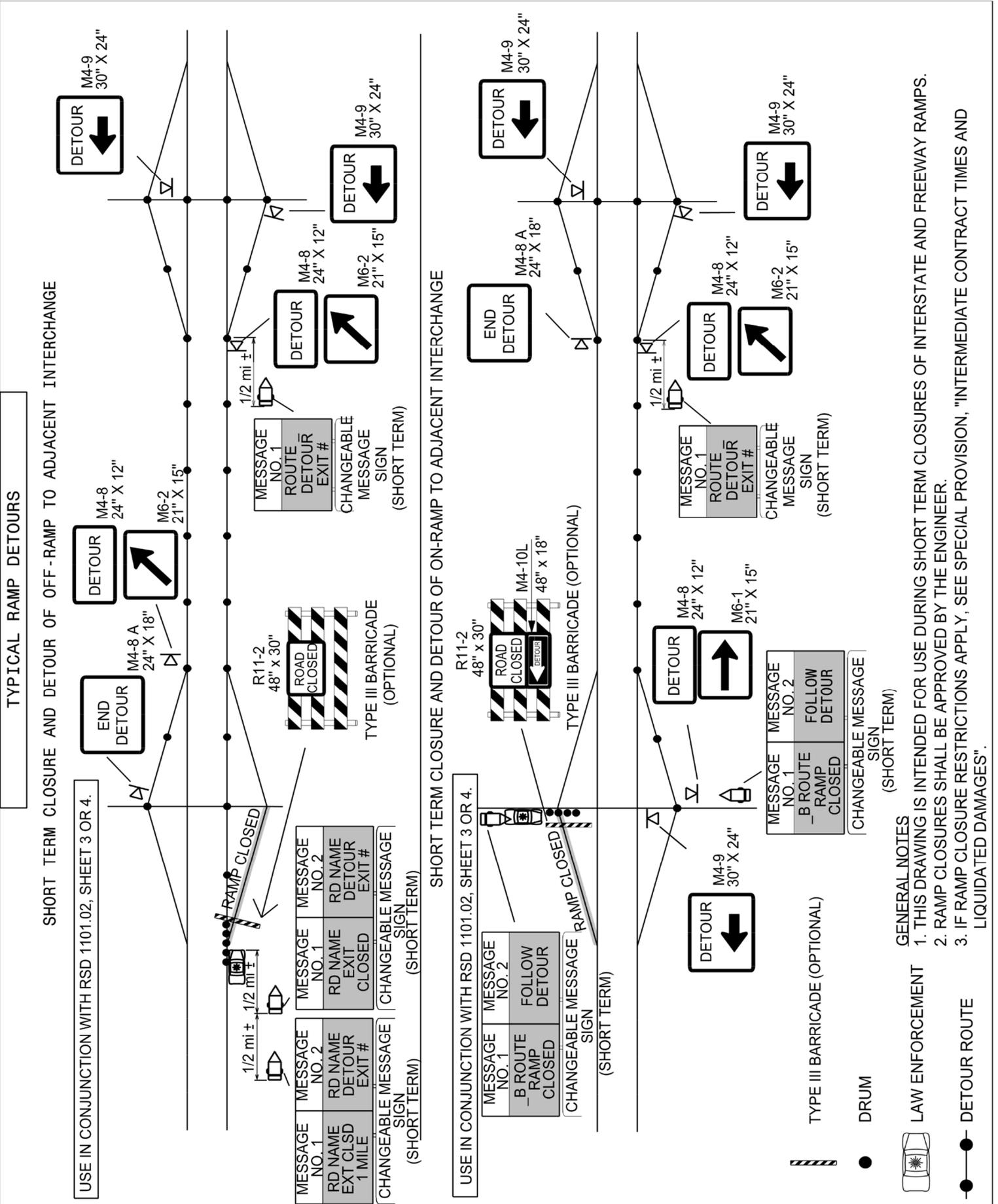


LEGEND

DIRECTION OF TRAFFIC FLOW
 TRAFFIC DRUM
 CHANGEABLE MESSAGE SIGN (CMS)
 STATIONARY SIGN

NOTES

- THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE WORK ZONE VARIABLE SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS DETAIL.
- FOR SIGN W7-3aP, ROUND TO THE NEAREST MILE.
- FOR ENTRANCE AND EXIT RAMP, REFER TO RSD 1101.01, SHEET 1, DETAIL B & C.
- FOR ADDITIONAL NOTES, REFER TO RSD 1101.01, SHEET 1.



TC-13

I-5889B

Buncombe County

WORK ZONE DIGITAL SPEED LIMIT SIGNS

(5/10/2021)

Description

Furnish and install Work Zone Digital Speed Limit Signs on interstates and freeways with speed limits of 55 mph or greater. These signs are regulatory speed limit signs with LED displays for the speed limit numbers.

Materials

Digital Speed Limit Signs shall be a minimum 36” wide x 48” high. The speed limit sign (R2-1) shall be black on white with high intensity white prismatic sheeting.

The Digital Speed Limit Sign shall be mounted such that the bottom of the sign is 7’ above roadway.

The LED panel shall be a minimum of 28” wide x 18” high. The display on the LED panel shall be amber or white.

The LED numbers shall have a minimum 5 wide by 7 high pixel array with a minimum height of 18”.

The LED panel shall have auto brightness/dimming capability.

The black on orange “WORK ZONE” sign shall be mounted above the speed limit sign. It shall be 36” wide x 24” high with high intensity prismatic orange sheeting.

The black on white “\$250 FINE” sign shall be mounted below the speed limit sign. It shall be 36” wide x 24” high with high intensity prismatic white sheeting.

All digital speed limit systems shall have operational software and wireless communications that allows for remote operation and data monitoring. It shall be configured to allow access by the Engineer or their designee to change each sign independently or change the speed limit on all signs at once from a PC, tablet or cellular phone application.

Radar equipment to detect approaching speeds on the digital speed limit systems is optional. However, if the systems have radar, they will be equipped to store the detected speed data. This information should be available in a spreadsheet format and accessed remotely from a secure cloud location.

The Work Zone Digital Speed Limit systems shall have flashing beacons. The beacons are to be a minimum of 8” diameter LED circular yellow. They shall be mounted above and below the sign assemblies and are to be centered. The beacons shall alternately flash at rates not less than 50 or more than 60 times per minute.

TC-14

I-5889B

Buncombe County

In addition, the flashing beacons shall be mounted in such a manner that the \$250 FINE sign is not obscured when in operation.

Digital Speed Limit Signs may be trailer mounted or stationary mounted. The unit shall be solar powered and have the ability to operate continuously. It shall be supplemented with a battery backup system which includes a 110/120 VAC powered on-board charging system.

The batteries, when fully charged, shall be capable of powering the display for 20 continuous days with no solar power. The unit shall be capable of being powered by a standard 110/120 VAC power source.

Store the battery bank and charging system in a lockable, weather and vandal resistant box.

All Work Zone Digital Speed Limit Sign equipment shall be on the NCDOT Approved Products List.

Digital Speed Limit Displays

The speed limit shall be continuously displayed on the signs. All other stationary speed limit signs shall be covered when Digital Speed Limit systems are in operation.

Reduced Speed Limit Displays

The Digital Speed Limit systems shall have beacons activated when the work zone speed limit is reduced. Otherwise, the beacons are to remain off.

IF THE DIGITAL SPEED LIMIT SYSTEM IS EQUIPPED WITH RADAR: The Digital Speed Limit Signs shall display the reduced work zone speed limit without flashing the LED speed limit number unless approaching speeds are detected to be 6 MPH or higher than the displayed speed limit. If speeds are detected 6 MPH or above the displayed Speed Limit, then the LED shall flash the speed limit until the speeds are within the 6 MPH tolerance.

Existing Speed Limit Displays

When the existing speed limit is displayed on the Digital Speed Limit Signs, the beacons are to remain off.

IF THE DIGITAL SPEED LIMIT SYSTEM IS EQUIPPED WITH RADAR: The speed limit number is not to flash unless the approaching speeds are detected to be 6 MPH or higher than the displayed speed limit.

Other Construction Methods

The speed limits are the sole authority of the NCDOT. An ordinance by the State Traffic Engineer is required for all speed limits in order to have a lawfully enforceable speed limit.

TC-15

I-5889B

Buncombe County

The Regional Traffic Engineering Office and the Division Construction Engineer in coordination with the Work Zone Traffic Control Section will provide all work zone speed limit recommendations based on activities and conditions.

The Contractor will be responsible for coordinating with the Engineer when the work zone speed limits are to be changed and will have to seek approval by the Engineer or their designee before the speed limit is changed.

Whenever possible, each trailer mounted unit shall be placed on the paved shoulder and shall have the capability of being leveled.

Measurement and Payment

Work Zone Digital Speed Limit Signs will be measured and paid as the maximum number of Work Zone Digital Speed Limit Signs satisfactorily installed according to the attached detail and properly functioning at any one time during the life of the project.

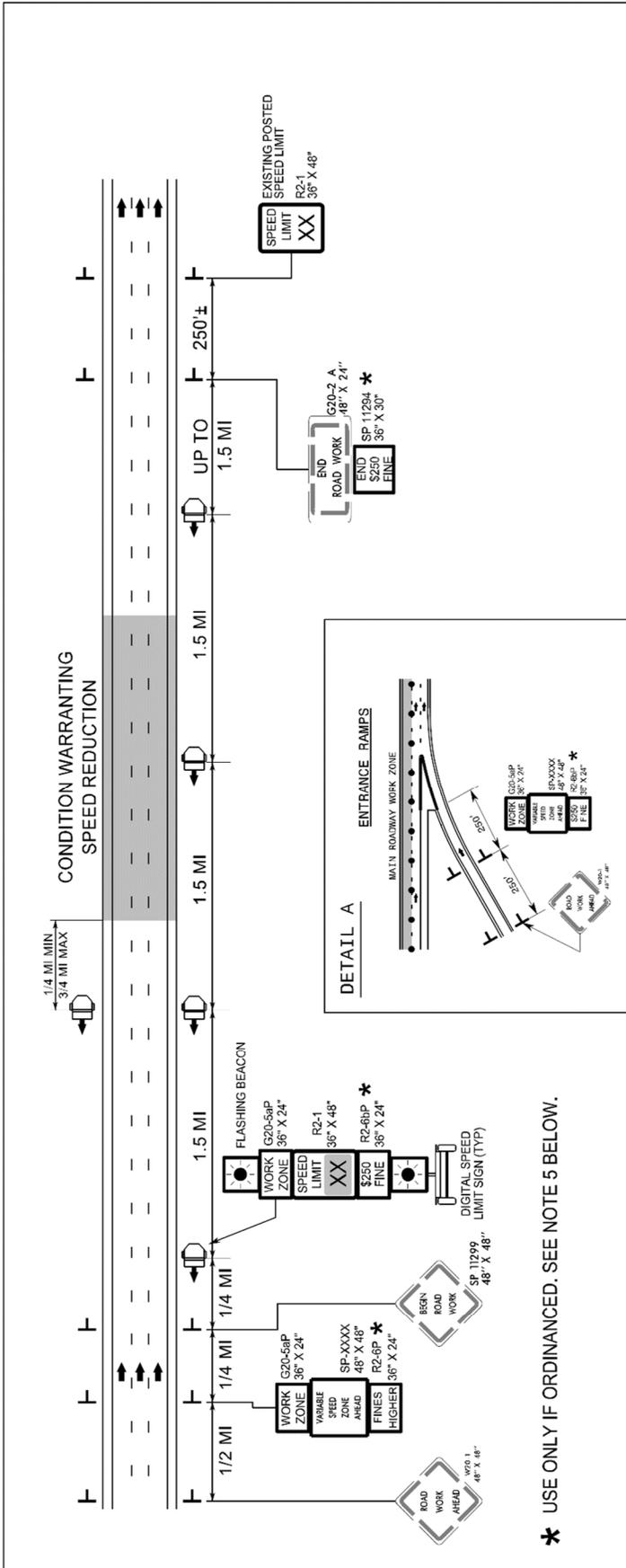
This includes all materials and labor to install, maintain and remove all the Work Zone Digital Speed Limit Signs.

Pay Item

Work Zone Digital Speed Limit Signs

Pay Unit

Each



* USE ONLY IF ORDINANCED. SEE NOTE 5 BELOW.

NOTES

1. THE DIGITAL SPEED LIMIT SIGNS WILL BE INSTALLED (TRAILER MOUNTED OR STATIONARY MOUNTED) IN ADVANCE OF AND SPACED APPROXIMATELY 1.5 MILES THROUGHOUT THE PROJECT LIMITS, UNLESS DIRECTED OTHERWISE.
2. WITHIN 1/4 TO 3/4 MILE UPSTREAM OF CONDITION WARRANTING A SPEED REDUCTION, PLACE A DIGITAL SPEED LIMIT SIGN ON BOTH THE INSIDE AND OUTSIDE SHOULDERS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER. AT ALL OTHER LOCATIONS DOWNSTREAM, PLACE A SINGLE DIGITAL SPEED LIMIT SIGN ON THE OUTSIDE SHOULDER.
IF SIGNS ARE NOT HIGHLY VISIBLE TO ALL MOTORISTS, SUPPLEMENTAL DIGITAL SPEED LIMIT SIGNS ARE PERMITTED ON THE MEDIAN SHOULDER.
3. THE DIGITAL SPEED LIMIT SIGNS TAKE PRECEDENCE OVER EXISTING SPEED LIMIT SIGNS AND SHOULD REMAIN UPRIGHT AND VISIBLE AT ALL TIMES. ALL EXISTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED FOR DURATION OF THE PROJECT.
4. NCDOT HAS SOLE AUTHORITY OF THE SPEED LIMITS DISPLAYED ON THE DIGITAL SPEED LIMIT SIGNS.
5. THE WORK ZONE VARIABLE SPEED LIMIT AND THE \$250 SPEEDING PENALTY ARE SEPARATE ORDINANCES THAT MUST BE SIGNED BY THE STATE TRAFFIC ENGINEER TO BE VALID AND ENFORCEABLE. WITHOUT SIGNED ORDINANCES, THE SPEED LIMIT ON A FACILITY SHALL REMAIN UNCHANGED AND/OR HIGHER FINES SIGNS SHALL NOT BE USED.
6. THE REDUCED SPEED SHALL BE DISPLAYED A MINIMUM OF 1/4 MILE AND A MAXIMUM OF 3/4 MILE IN ADVANCE OF AND THROUGHOUT THE AREA MEETING CONDITIONS LISTED IN THE CHART. THE EXISTING SPEED LIMIT SHALL BE DISPLAYED ON ALL OTHER DIGITAL SPEED LIMIT SIGNS.
7. THE SPEED DISPLAYED SHALL BE THE LOWER OF THE EXISTING SPEED LIMIT OR THE SPEED IN THE WORK ZONE CONDITION CHART.
8. THE BEACONS ON THE DIGITAL SPEED LIMIT SIGNS SHALL ONLY FLASH DURING TIMES THE SPEED IS REDUCED, AND REMAIN OFF AT ALL OTHER TIMES.

WORK ZONE CONDITIONS	SPEED TO DISPLAY (SEE NOTE 6 & 7)
2 LANES REDUCED TO 1 LANE	55
3 LANES REDUCED TO 1 LANE	55
3 LANES REDUCED TO 2 LANES	60
4 LANES REDUCED TO 1 LANE	55
4 LANES REDUCED TO 2 LANES	60
4 LANES REDUCED TO 3 LANES	65
1 OPEN LANE WITH CONTINUOUS BARRIER ON BOTH SHOULDERS	55
1 OPEN LANE WITH CONTINUOUS BARRIER ON 1 SHOULDER	60
3 OR 2 OPEN LANES WITH CONTINUOUS BARRIER ON BOTH SHOULDERS	60
3 OR 2 OPEN LANES WITH CONTINUOUS BARRIER ON 1 SHOULDER	65
4 OPEN LANES WITH BARRIER CONTINUOUS ON BOTH SHOULDERS	65
4 OPEN LANES WITH BARRIER CONTINUOUS ON 1 SHOULDER	EXISTING
UNEVEN LANES	60

LANE CLOSURES

CONTINUOUS BARRIER (LENGTH OF BARRIER GREATER THAN 1 MILE)

TC-18

I-5889B

Buncombe County

WORK ZONE PRESENCE LIGHTING

(10/14/19) (Rev. 5/10/2021)

Description

Furnish and install Work Zone Presence Lighting during nightly lane closures on multilane roadways with speed limits of 55 mph or greater.

Materials

Anti-glare lighting systems are required. Work Zone Presence Lighting shall be installed in accordance with the attached detail and the Manufacturer's recommendations.

Supply a power source for each light to provide the light output as described in the chart below.

Each light unit shall be capable of providing a minimum of 14,000 lumens illuminating a minimum area of approximately 3,000 square feet. The light shall be capable of being elevated to a height of 14 feet above the pavement.

Each light unit support base or mounting stand shall have the capability of being leveled such that the light mast is plumb.

Provide Work Zone Presence Lighting listed on the NCDOT Approved Products List.

Construction Methods

Work Zone Presence Lighting is permitted to be prestaged (up to 1 hour prior for single lane closures and up to 2 hours prior for double or triple lane closures) along with other traffic control devices or installed within 1 hour after the necessary traffic control has been installed for the lane closure(s). At the end of the work night, the Work Zone Presence Lighting shall be removed within 1 hour before or after the lane closure(s) is removed.

Whenever possible, each light unit shall be placed on the outside paved shoulder, a minimum of 4 feet from the travel lane and spaced according to the chart below based on the amount of light output for each unit.

Work Zone Presence Lighting is permitted to supplement the Portable Construction Lighting inside the lane closure. At no time shall Work Zone Presence Lighting be used in lieu of Portable Construction Lighting when required.

If there is sufficient existing overhead lighting, Work Zone Presence Lighting may be eliminated as directed by the Engineer.

Lighting Unit Installation Requirements

TC-19

I-5889B

Buncombe County

The lighting units shall be installed in advance of the lane closure as shown on the attached detail and spaced according to the chart below:

Light Output (Lumens)	Illuminated Fixture Area (Sq. Ft.)	AREA 1		AREA 2	
		# of Lights	Spacing*	# of Lights	Spacing*
14,000 - 35,000	4	6	640' (16 skips)	8	480' (12 skips)
35,001 - 59,999	5	5	800' (20 skips)	6	640' (16 skips)
60,000+	6+	4	1,000' (25 skips)	5	800' (20 skips)

*Skips refer to traditional 10' pavement marking lines with 30' gaps.

Area 1: Begins 2,640' downstream from CMS; Extends to just past 1st Lane Closure Sign

Area 2: Begins just past the 1st Lane Closure Sign; Extends to just past the last Lane Closure Sign

MEASUREMENT AND PAYMENT

Work Zone Presence Lighting will be measured and paid as the maximum number of lighting units satisfactorily placed, accepted by the Engineer, and in use at any one time during the life of the project.

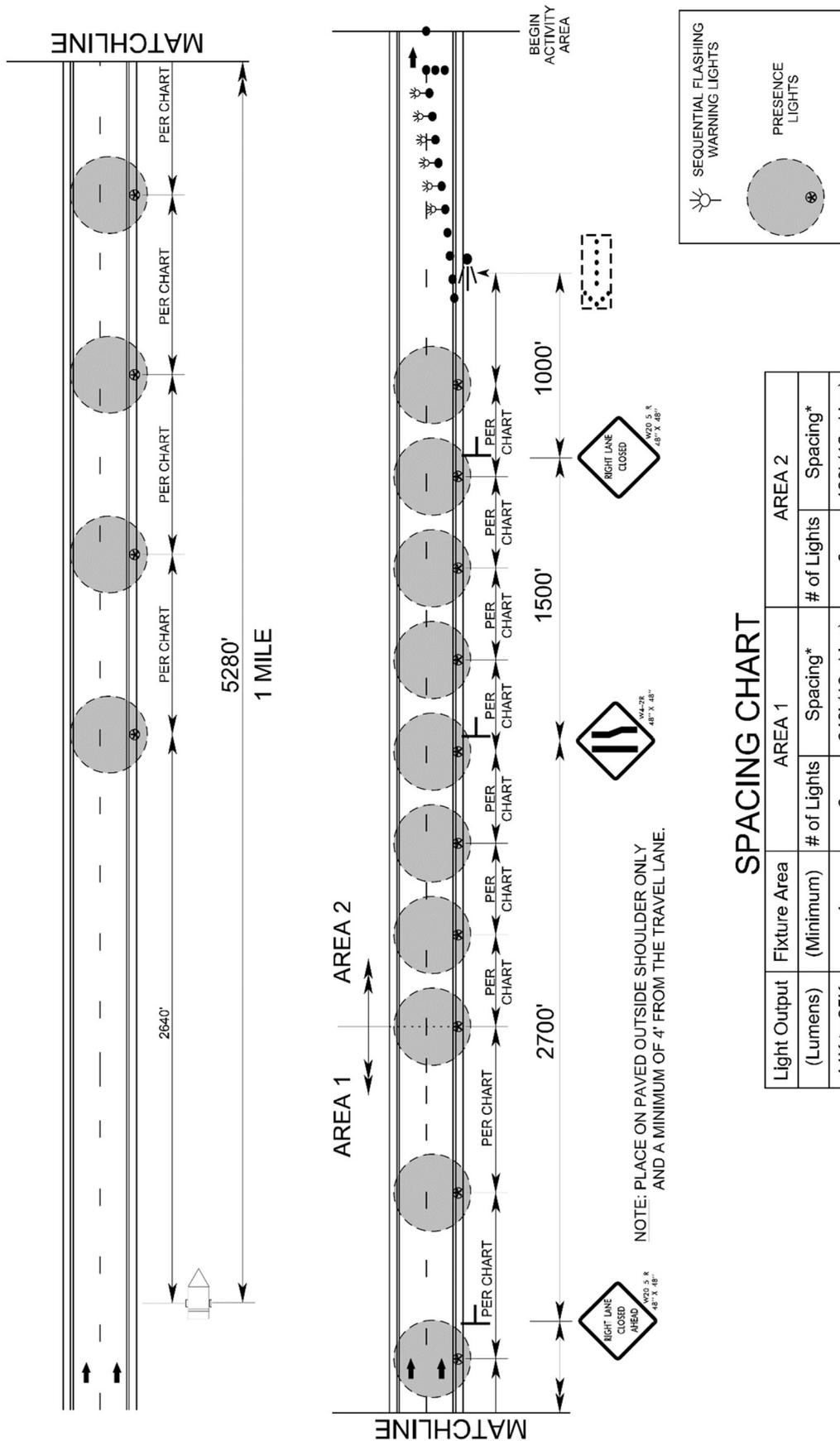
Relocation, replacement, repair, removal, and maintenance of Work Zone Presence Lighting units will be incidental to the work of this section. No measurement or separate payment will be made for power generators, batteries, or other power supply devices.

Pay Item

Work Zone Presence Lighting

Pay Unit

Each



SPACING CHART

Light Output (Lumens)	AREA 1		AREA 2	
	Fixture Area (Minimum)	# of Lights	# of Lights	Spacing*
14K to 35K	4	6	8	480' (12 skips)
35.1K to 60K	5	5	6	640' (16 skips)
60K +	6+	4	5	800' (20 skips)

*SKIPS REFER TO TRADITIONAL 10' PAVEMENT MARKING LINES WITH 30' GAPS.

AREA 1: BEGINS 2,640' DOWNSTREAM FROM CMS; EXTENDS TO JUST PAST 1ST LANE CLOSURE SIGN

AREA 2: BEGINS JUST PAST THE 1ST LANE CLOSURE SIGN; EXTENDS TO JUST PAST THE LAST LANE CLOSURE SIGN

NOTE: PLACE ON PAVED OUTSIDE SHOULDER ONLY AND A MINIMUM OF 4' FROM THE TRAVEL LANE.

TC-21

I-5889B

Buncombe County

SEQUENTIAL FLASHING WARNING LIGHTS

(10/08/2016) (Rev. 5/10/2021)

Description

Furnish and install Sequential Flashing Warning Lights on drums used for the merging tapers of nightly lane closures on all multilane roadways with speed limits of 55 mph or greater.

Materials

The Sequential Flashing Warning Lights shall meet all the requirements for warning lights within the current edition of the Manual of Uniform Traffic Control Devices (MUTCD).

Each light unit shall be capable of operating fully and continuously for a minimum of 200 hours when equipped with a standard battery set.

Each light in the sequence shall be flashed at a rate of not less than 55 times per minute and not more than 75 times per minute. The flash rate and flash duration shall be consistent throughout the sequence.

Supply a Type 3 Certification (Independent Test Lab results) documenting all actual test results for the specified parameters contained in the Institute of Transportation Engineer's (ITE's) *Purchase Specification for Flashing and Steady Burn Warning Lights*. The laboratory shall also identify all manufacturer codes and part numbers for the incandescent lamp or LED clusters, lenses, battery, and circuitry, and the total width of the light with the battery in place. The complete assembly shall be certified as crashworthy when firmly affixed to the channelizing device.

All Sequential Flashing Warning Lights shall be on the NCDOT Approved Products List.

Construction Methods

These lights shall flash sequentially beginning with the first light and continuing until the final light.

The Sequential Flashing Warning Lights shall automatically flash in sequence when placed on the drums that form the merging taper.

The number of lights used in the drum taper shall equal the number of drums used in the taper.

Drums are the only channelizing device allowed to mount sequential flashing warning lights.

The Sequential Flashing Warning Lights shall be weather independent and visual obstructions shall not interfere with the operation of the lights.

The Sequential Flashing Warning Lights shall automatically sequence when placed in line in an open area with a distance between lights of 10 to 100 feet.

TC-22

I-5889B

Buncombe County

If one light fails, the flashing sequence shall continue. If more than 1 light fails, all of the lights are to be automatically turned to the “off” mode. Non-sequential flashing is prohibited.

When lane closures are not in effect, the Sequential Flashing Warning Lights shall be deactivated.

Measurement and Payment

Sequential Flashing Warning Lights will be measured and paid as the maximum number of sequential flashing warning lights satisfactorily installed and properly functioning at any one time during the life of the project.

This includes all materials and labor to install, maintain and remove all the Sequential Flashing Warning Lights.

Pay Item	Pay Unit
Sequential Flashing Warning Lights	Each

ADA COMPLIANT PEDESTRIAN TRAFFIC CONTROL DEVICES:

(10/31/2017) (Rev. 6/3/2022)

Description

Furnish, install, and maintain all ADA compliant pedestrian traffic control devices for existing pedestrian facilities that are disrupted, closed, or relocated by planned work activities.

The ADA compliant pedestrian traffic control devices used to either close, redirect, divert or detour pedestrian traffic are Pedestrian Channelizing Devices.

Construction Methods

The ADA compliant pedestrian traffic control devices involved in the closing or redirecting of pedestrians as designated on the Transportation Management Plan (TMP) shall be manufactured and assembled in accordance with the requirements of the Americans with Disabilities Act (ADA) and be on the NCDOT approved products list.

Pedestrian Channelizing Devices shall be manufactured and assembled to be connected as to eliminate any gaps that allow pedestrians to stray from the channelizing path. Any Pedestrian Channelizing Devices used to close or block a pedestrian facility shall have a “SIDEWALK CLOSED” sign affixed to it and any audible warning devices, if designated on the TMP.

Measurement and Payment

TC-23

I-5889B

Buncombe County

Pedestrian Channelizing Devices will be measured and paid as the maximum number of linear feet of *Pedestrian Channelizing Devices* furnished, acceptably placed, and in use at any one time during the life of the project.

No direct payment will be made for any sign affixed to a pedestrian channelizing device. Signs mounted to pedestrian channelizing devices will be considered incidental to the device.

Relocation, replacement, repair, maintenance, or disposal of *Pedestrian Channelizing Devices* will be incidental to the pay item.

Payment will be made under:

Pay Item

Pedestrian Channelizing Devices

Pay Unit

Linear Foot

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	480 SY		
0003	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	50 SY		
0004	0255000000-E	SP	GENERIC GRADING ITEM AGGREGATE FOR BACKFILL	1,800 TON		
0005	1245000000-E	SP	SHOULDER RECONSTRUCTION	16.78 SMI		
0006	1260000000-E	SP	AGGREGATE SHOULDER BORROW	2,183 TON		
0007	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (2")	255,078 SY		
0008	1330000000-E	607	INCIDENTAL MILLING	2,249 SY		
0009	1524200000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5D	29,019 TON		
0010	1577000000-E	620	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	2,012 TON		
0011	1704000000-E	SP	PATCHING EXISTING PAVEMENT	40 TON		
0012	1839140000-E	661	ULTRA-THIN BONDED WEARING COURSE	6,805 TON		
0013	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	89,745 LF		
0014	1881000000-E	SP	GENERIC PAVING ITEM JOINT CONSTRUCTION, REPAIR, AND SEALING	4,350 LF		
0015	1891000000-E	SP	GENERIC PAVING ITEM REPAIR OF 8" CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	1,750 SY		
0016	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	5 EA		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0017	2473000000-N	SP	GENERIC DRAINAGE ITEM DRAINAGE STRUCTURE CLEAN OUT	25 EA		
0018	2473000000-N	SP	GENERIC DRAINAGE ITEM DRAINAGE STRUCTURE REPAIR	5 EA		
0019	2473000000-N	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE 12" FUNNEL DRAIN PIPE ELBOWS	15 EA		
0020	2473000000-N	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE CONCRETE APRON	47 EA		
0021	2473000000-N	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE METAL FUNNELS	15 EA		
0022	2484000000-E	SP	GENERIC DRAINAGE ITEM REMOVE AND REPLACE 12" FUNNEL DRAIN PIPE	300 LF		
0023	2535000000-E	846	*** X *** CONCRETE CURB (8" X 6")	540 LF		
0024	2738000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE 4" CONCRETE PAVED DITCH	1,700 SY		
0025	2738000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE 5" CONCRETE ISLANDS	604 SY		
0026	2752000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE 2'-6" CURB AND GUTTER	620 LF		
0027	2752000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE 8" X 6" CURB	1,040 LF		
0028	2752000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE CONCRETE EXPRESSWAY GUTTER	740 LF		
0029	2752000000-E	SP	GENERIC PAVING ITEM REMOVE AND REPLACE SHOULDER BERM GUTTER	2,740 LF		
0030	2830000000-N	858	ADJUSTMENT OF MANHOLES	1 EA		
0031	3030000000-E	862	STEEL BEAM GUARDRAIL	39,275 LF		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0032	3045000000-E	862	STEEL BEAM GUARDRAIL, SHOP CURVED	62.5 LF		
0033	3090000000-N	862	TRIPLE CORRUGATED STEEL BEAM GUARDRAIL TERMINAL SECTIONS	21 EA		
0034	3120000000-E	862	20" TUBULAR TRIPLE CORRUGATED STEEL BEAM GUARDRAIL	4,920 LF		
0035	3135000000-N	862	W-TR STEEL BEAM GUARDRAIL TRANSITION SECTIONS	39 EA		
0036	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	30 EA		
0037	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	32 EA		
0038	3215000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE III	22 EA		
0039	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	35 EA		
0040	3319000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B-83	1 EA		
0041	3345000000-E	864	REMOVE & RESET EXISTING GUARDRAIL	1,354 LF		
0042	3360000000-E	863	REMOVE EXISTING GUARDRAIL	50,125 LF		
0043	3420000000-E	SP	GENERIC GUARDRAIL ITEM REMOVAL OF EXISTING 20" TUBULAR TRIPLE CORRUGATED STEEL BEAM GUARDRAIL	5,040 LF		
0044	3435000000-N	SP	GENERIC GUARDRAIL ITEM RESPONSE FOR GUARDRAIL/GUIDERAIL MAINTENANCE	100 EA		
0045	3635000000-E	876	RIP RAP, CLASS II	50 TON		
0046	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	1,320 SF		
0047	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	544 SF		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0048	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	122 SF		
0049	4415000000-N	1115	FLASHING ARROW BOARD	6 EA		
0050	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	8 EA		
0051	4424000000-N	SP	WORK ZONE PRESENCE LIGHTING	15 EA		
0052	4430000000-N	1130	DRUMS	260 EA		
0053	4445000000-E	1145	BARRICADES (TYPE III)	96 LF		
0054	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	20 LF		
0055	4455000000-N	1150	FLAGGER	20 DAY		
0056	4480000000-N	1165	TMA	3 EA		
0057	4510000000-N	1190	LAW ENFORCEMENT	1,000 HR		
0059	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM SEQUENTIAL FLASHING WARNING LIGHTS	16 EA		
0062	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	123,802 LF		
0063	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	120 LF		
0064	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	3,671 LF		
0065	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	65 LF		
0066	4720000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (90 MILS)	8 EA		
0067	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	24 EA		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	727,048 LF		
0069	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	720 LF		
0070	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	19,420 LF		
0071	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	390 LF		
0072	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	32 EA		
0073	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	101 EA		
0074	4847096000-E	SP	POLYUREA PAVEMENT MARKING LINES, ***, ** MILS (STANDARD GLASS BEADS) (6", 20 MILS)	6,926 LF		
0075	4905100000-N	SP	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER	1,092 EA		
0076	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0077	6000000000-E	1605	TEMPORARY SILT FENCE	100 LF		
0078	6012000000-E	1610	SEDIMENT CONTROL STONE	100 TON		
0079	6029000000-E	SP	SAFETY FENCE	100 LF		
0080	6036000000-E	1631	MATTING FOR EROSION CONTROL	150 SY		
0081	6042000000-E	1632	1/4" HARDWARE CLOTH	50 LF		
0082	6084000000-E	1660	SEEDING & MULCHING	1 ACR		
0083	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	10 EA		
0084	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	4 EA		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0085	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	516 LF		
0086	7456000000-E	1726	LEAD-IN CABLE (***** (14-2)	110 LF		
0104	4423000000-N	SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	4 EA		
STRUCTURE ITEMS						
0087	8161000000-E	420	GROOVING BRIDGE FLOORS	75,775 SF		
0088	8660000000-E	SP	CONCRETE REPAIRS	2.8 CF		
0089	8664000000-E	SP	SHOTCRETE REPAIRS	2,278.9 CF		
0090	8678000000-E	SP	EPOXY RESIN INJECTION	31 LF		
0091	8860000000-N	SP	GENERIC STRUCTURE ITEM PEDESTRIAN PROTECTION	Lump Sum	L.S.	
0092	8860000000-N	SP	GENERIC STRUCTURE ITEM WATERCRAFT SAFETY	Lump Sum	L.S.	
0093	8867000000-E	SP	GENERIC STRUCTURE ITEM FOAM JOINT SEALS FOR PRESERVATION	1,650 LF		
0094	8881000000-E	SP	GENERIC STRUCTURE ITEM FLOWABLE FILL	4 CY		
0095	8881000000-E	SP	GENERIC STRUCTURE ITEM LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	686.7 CY		
0096	8882000000-E	SP	GENERIC STRUCTURE ITEM ELASTOMERIC CONCRETE FOR PRESERVATION	344.6 CF		
0097	8892000000-E	SP	GENERIC STRUCTURE ITEM BRIDGE JOINT DEMOLITION	1,536 SF		
0098	8892000000-E	SP	GENERIC STRUCTURE ITEM EPOXY COATING	3,048 SF		

County: BUNCOMBE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0099	8893000000-E	SP	GENERIC STRUCTURE ITEM FINE MILLING	23,164 SY		
0100	8893000000-E	SP	GENERIC STRUCTURE ITEM HYDRO-DEMOLITION OF BRIDGE DECK	9,299 SY		
0101	8893000000-E	SP	GENERIC STRUCTURE ITEM PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH	9,299 SY		
0102	8897000000-N	SP	GENERIC STRUCTURE ITEM REMOVE AND REPLACE W 6 X 9 POSTS	7 EA		
0103	8897000000-N	SP	GENERIC STRUCTURE ITEM TEMPORARY RIVER TRAFFIC WARNING SIGNS	15 EA		

0906/Apr10/Q1520220.28/D453325136000/E101

Total Amount Of Bid For Entire Project :