



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

ADDENDUM NO. 1

October 15, 2026

Contract No. DA00709
TIP No.: N/A
Federal Aid No.: State Funded
WBS Element: BP1.R014.3
County: Tyrrell
Description: Fine Milling and Micro Surfacing on 2 Sections of US-17 Bypass
Letting Date: October 21, 2026

To Whom It May Concern:

This Addendum is issued to modify or clarify the bid documents previously furnished for the above-referenced project. The following changes shall be incorporated into the contract documents:

Proposal Revisions:

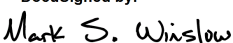
1. **Page 3 – “Table of Contents”:** Updated to include the addition of **Intermediate Contract Time (ICT) Number 2 and Liquid Dated Damages** on page G-24. Please replace the original page #3 with the attached revised page.
2. **Pages G-24 – “Intermediate Contract Time (ICT) Number 2 and Liquid Dated Damages”:** Added ICT No. 2 to stipulate the allowable time frame between the Fine Milling phase and the Microsurfacing phase. Please insert new page G-24 into the original project bid proposal.
3. **Pages TC-1 through TC-11 “Work Zone Traffic Control PSP”:** Updated the Traffic Control Special Provisions to include "Work Zone Digital Speed Limit Signs" and to expand the time allowed for placing resurfacing material. Please replace the original pages #TC-1 through TC-11 with the attached revised pages TC-1 through TC-14.
4. **Pages 87 & 88 – “Itemized Proposal (Bid Form)”:** Updated the item list to add a pay item for "Work Zone Digital Speed Limit Signs." Please replace the original Pages 87 & 88 with the attached revised pages.

Plan Revisions:

1. **Sheet 2 “Typical”:** Updated to include a specific project note stipulating that the contractor has 14 calendar days to begin the Microsurfacing phase once Fine Milling is completed. Please replace original sheet 2 with the attached revised sheet 2.
2. **Sheet 4 “Thermoplastic and Paint Quantities”:** Updated the Summary of Quantities to include pay item number 4423000000-N, Work Zone Digital Speed Limit Signs. Please replace the original sheet 4 with the attached revised sheet 4.
3. **Sheet TMP-1 (Original):** Removed entirely. This sheet is not applicable to this contract. Please delete/discard original sheet TMP-1.
4. **Sheets TMP-1 & TMP-2 (New):** Added to highlight signage for variable speed limit reductions and advance warning signs on high-speed facilities. Insert new sheets TMP-1 and TMP-2 into the plan set.

All other terms and conditions of the original bidding documents remain unchanged.

Sincerely,

DocuSigned by:

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Mark S. Winslow
Division Contract Engineer

Cc: R. K. Sawyer, PE
M. B. Gill, PE
B. N. Braswell, PE
G. J. Liverman, PE
D. B. Otts, PE
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INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:

The Contractor shall begin the work of **Microsurfacing** as shown on **Maps 1 & 2** and shall place and maintain traffic on same. The Contractor will be required to start the work of **Microsurfacing within fourteen (14) calendar days** after completing the **Fine Milling** operations on each map.

The date of availability for this intermediate contract time is the date the Contractor completes the work of **Fine Milling** on each respective map. The completion date for this intermediate contract time is the date the Contractor begins the work of **Microsurfacing** on each respective map.

Liquidated damages for this intermediate contract time will begin on the fifteenth (15th) calendar day following the completion of the Fine Milling operations on that map if the Contractor has not commenced Microsurfacing. **Liquidated damages for this intermediate contract time will be One Thousand Dollars (\$1,000.00) per calendar day.**

**WORK ZONE TRAFFIC CONTROL
Project Special Provisions
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WZTC Traffic Control General Requirements	TC-2
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WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS**TEMPORARY TRAFFIC CONTROL (TTC):**

(7/16/2013) (Rev. 1/20/2026) RWZ-1

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

Install Work Zone Advance Warning Signs in accordance with the detail drawing provided in these plans prior to beginning any other work. Use a lane closure or slow moving operation to complete the work, as necessary, unless otherwise indicated. Refer to Standard Drawing No. 1101.02, 1101.11, 1110.01, 1110.02, 1130.01, 1135.01 and 1180.01 of the *NCDOT Roadway Standard Drawings*. Use a moving operation only if the minimum speed maintained at all times is 3 mph with no stops that narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. Maintain the existing traffic pattern at all times, except in the immediate work zone where lane closures are allowed as determined by the Engineer. If applicable, maintain existing pedestrian facilities in accordance with *Pedestrian Accommodation at Curb Ramp Work Locations*, found elsewhere in this Contract.

Refer to attached details and Standard Drawing No. 1101.02, 1101.03, 1101.04, 1101.05, 1101.11, 1110.01, 1110.02, 1115.01, 1130.01, 1135.01, 1145.01, 1150.01, 1165.01, and 1180.01 of the *NCDOT Roadway Standard Drawings* when closing a lane of travel in a stationary work zone such as pavement patching, resurfacing, curb ramp work, or pavement marking removal. The stationary work zone shall be a maximum of 1 mile in length at any given time on 2 lane, 2 way facilities unless otherwise approved by the Engineer. A pilot vehicle operation may be used in conjunction with flaggers and the appropriate pilot vehicle warning signing as directed by the Engineer. At the discretion of the Contractor, automated flagging assistance devices (AFAD) or portable traffic signals (PTS) may be used to assist, supplement, or replace human flaggers in accordance with the *Flaggers* provision found elsewhere in this contract.

During periods of construction inactivity, return the traffic pattern to the existing alignment and remove or cover any work zone signs. When covering work zone signs, use an opaque material that prevents reading of the sign at night by a driver using high beam headlights. Use material which does not damage the sign sheeting. Replace any obliterated markings as required by other sections of the *Standard Specifications* and the Engineer.

When personnel and/or equipment are working within 5 feet of an open travel lane, close the nearest open travel lane using Standard Drawing No. 1101.02 of the *NCDOT Roadway Standard Drawings*.

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When personnel and/or equipment are working within a lane of travel, close the lane according to the traffic control plans, Standard Drawing No. 1101.02 of the *NCDOT Roadway Standard Drawings* or as directed by the Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane.

Do not work simultaneously, on both sides of an open travel way, within the same location, on a two-lane, two-way road. Perform work only when weather and visibility conditions allow safe operations as directed by the Engineer.

When utilizing a slow-moving operation for such items as pavement marking and marker placement, the operation shall consist of the vehicles and devices as shown on Standard Drawing No. 1101.02, Sheet 14 or 15, of the *NCDOT Roadway Standard Drawings*. Traffic cones may be used when necessary to provide additional protection of wet pavement markings. Ballast all traffic cones so they will not be blown over by traffic.

PAVING OPERATIONS:

1) Paving Lift Requirements and Time Limitations:

For paving lifts of 2 inches or less, bring all newly resurfaced lanes to the same station and elevation within 72 hours. If not brought up to the same station and elevation within 72 hours, the Contractor shall place portable UNEVEN PAVEMENT signs in advance of the uneven pavement and spaced every ½ mile along the section of uneven pavement. Once mitigated, all portable UNEVEN PAVEMENT signs shall be removed. No additional compensation will be made for these signs or any other type of portable warning signs as these are included as part of the *Temporary Traffic Control* contract pay item.

For paving lifts greater than 2 inches, bring all newly resurfaced lanes to the same station and elevation by the end of each work day unless the Contractor utilizes the notched wedge paving methods as described below.

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:

1. During paving operations, any paving lift greater than 2 inches for asphalt surface course mixes shall be mitigated by having an approved wedge apparatus on the paver that shapes the edge 1 inch vertically and the remaining at a maximum slope steepness of 2:1. For intermediate and base course mixes, use an approved wedge device that shapes the edge with a maximum slope steepness of 2:1. The maximum paving lift allowed to use this method is 3 inches.

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2. At the end of the work day, the Contractor shall place portable UNEVEN PAVEMENT signs in advance of the uneven pavement and spaced every ½ mile along the section of uneven pavement. Once mitigated, all portable UNEVEN PAVEMENT signs shall be removed. No additional compensation will be made for these signs or any other type of portable warning signs as these are included as part of the *Temporary Traffic Control* contract pay item.
3. 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.

2) Asphalt Surface Treatments (AST)

For AST Operations, there is no drop-off condition to be signed. Stationary LOOSE GRAVEL and UNMARKED PAVEMENT signs shall replace LOW/SOFT SHOULDER signs. For placement and spacing of these signs, see the Signing Detail Sheet. All other advance warning signs are to be portable mounted. These signs are included as part of the *Temporary Traffic Control* contract pay item.

3) Fine Milling/Microsurfacing (Depths less than 1 inch)

For fine milling operations less than 1 inch, 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 **14 Days**. No advance warning signs are necessary for these conditions unless the paving operations exceed 72 hours. If this occurs, install portable UNMARKED PAVEMENT signs. These signs are incidental to the other items of work included as part of the *Temporary Traffic Control* contract pay item. See RWZ-3 for Pavement Marking replacement requirements.

4) Shoulder Drop-Off Requirements

Whenever paving operations create an edge of pavement drop-off greater than 2 inches, within 72 hours, the Contractor shall backfill at a 6:1 slope from the edge and finished elevation of the pavement that has an edge of pavement drop-off as follows:

- (A) Drop-off that exceeds 2 inches on roadways with posted speed limits of 45 mph or greater.
- (B) Drop-off that exceeds 3 inches on roadways with posted speed limits less than 45 mph.

Backfill the edge of pavement drop-off with suitable compacted material, as approved by the Engineer. The material, equipment and labor associated with this operation will be paid as *Aggregate Shoulder Borrow* or *Borrow Excavation* in accordance with the *Shoulder Reconstruction Per Shoulder Mile* special provision found elsewhere in the contract. If the

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Shoulder Reconstruction Per Shoulder Mile special provision is not included in the contract, the work of pavement drop-off repair as described above will be paid as extra work in accordance with Article 104-7.

PROJECT REQUIREMENTS:

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

1. 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. If applicable, the Contractor shall also submit a description of how pedestrian access will be maintained during any curb ramp work. Refer to *Pedestrian Accommodation at Curb Ramp Work Locations*, found elsewhere in this Contract, for pedestrian maintenance requirements.
2. The temporary use of portable concrete barrier and the need for any long-term temporary traffic patterns are not anticipated and are not covered by this provision. If the Engineer determines there is a need, then coordinate with the Work Zone Traffic Control Section at 919-814-5000.
3. Obtain written approval of the Engineer before working in more than one location or setting up additional lane closures. The maximum length of any one lane closure is 1 mile unless otherwise directed by the Engineer.
4. If Lane Closure Restrictions apply, see Intermediate Contract Times and Liquidated Damages special provision.
5. Contractor shall mill and pave lanes in an order such that water shall not accumulate.
6. Traffic Control for the milling and/or paving of ramps is to be done according to Standard Drawing No 1101.02, Sheets 10 & 11, unless otherwise approved to be closed by the Engineer. If approved, Contractor will provide plans and devices for the detour according to Standard Drawing No 1101.02, Sheets 12 & 13, at no additional cost to the department.
7. If milled areas are not paved back within 72 hours, the Contractor is to furnish and install portable signs to warn drivers of the conditions. These are to include, but not limited to ROUGH ROAD (W8-8), UNEVEN LANES (W8-11), and GROOVED PAVEMENT (W8-15) w/ Motorcycle Plaque mounted below. These are to be dual indicated on Multi-Lane Roadways with speed limits of 45 mph and greater where lateral clearance can be obtained within the median areas. These portable signs are incidental to the other items of work included as part of the *Temporary Traffic Control* contract pay item.

WORK ZONE SIGNING:**Description**

Install advance/general warning work zone signs according to the Detail Drawing provided in these plans prior to beginning of work. Install and maintain signing in accordance with the attached drawings and Divisions 11 and 12 of the *Standard Specifications*.

(A) Installation

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

Install Advance/General warning work zone signs before beginning work on a particular map. If signs are installed more than 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 stationary signing is to be installed as shown on the detail drawing(s) unless otherwise directed by the Engineer. The signs as shown on the detail drawing(s) are all that are required for a contractor to begin a resurfacing contract. Any additional signs requested by the Engineer shall be installed within 7 business days of the start of contract work. All sign locations are 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 shown in the drawing will be compensated in accordance with Article 104-7.

No stationary -Y- Line advance warning signage is required unless there is more than 1,000 feet of resurfacing along the -Y- line. Whenever work proceeds through an intersection, portable signs shall be used for traffic control. There will be no direct compensation for any portable signing.

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.

(B) Sign Removal

Once Maps on the Project are substantially complete, it is acceptable practice to remove the Stationary Work Zone Signs in lieu of waiting until all of the Maps are completed on the Project. A Map is substantially complete when the resurfacing operations are finished and the shoulders are brought up to the same elevation as the proposed pavement and when pavement markings (paint) are installed along the centerline and edge lines. The final pavement markings (ex. Thermoplastic/Polyurea) or pavement markers (Raised/Snowplowable) do not have to be installed for Maps to be considered substantially complete. Final pavement marking/markers are installed with portable signing according to Standard Drawing 1101.02, Sheets 14 & 15. Any remaining punch list items requiring traffic control are compensated as part of the *Temporary Traffic Control* contract pay item.

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

(C) 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 *NCDOT Roadway Standard Drawings*. Any required portable signs for lane closures are compensated as part of the *Temporary Traffic Control* contract pay item.

MEASUREMENT AND PAYMENT:

Temporary traffic control work, including, but not limited to installation and removal of portable signs, cones, drums, skinny drums, flaggers (including AFAD or PTS units), changeable message boards, truck mounted attenuators, flashing arrow boards, and pilot vehicles for the sole purpose of maintaining vehicular traffic will be paid at the contract lump sum price for *Temporary Traffic Control*.

The *Temporary Traffic Control* pay item does not include work zone advance or general warning signs.

The *Temporary Traffic Control* pay item does not include Pedestrian Channelizing Devices and applicable signs, Audible Warning Devices, Temporary Curb Ramps, or a Pedestrian Transport Service required for the sole purpose of maintaining pedestrian movements. Refer to *Pedestrian Accommodation at Curb Ramp Work Locations*, found elsewhere in this Contract, for measurement and payment information for these items.

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Partial payments for *Temporary Traffic Control* will be made as follows: The cumulative total of the lump sum price for temporary traffic control will be equal to the percent complete (project) as calculated for each partial pay estimate. Additional flashing arrow boards and message boards beyond those shown in the contract, detail drawings or *Roadway Standard Drawings* required by the Engineer will be paid as extra work in accordance with Article 104-7 of the *Standard Specifications*.

The work of satisfactorily installing and removing work zone advance and/or general warning signs, including, but not limited to, furnishing, locating, installing, covering, uncovering and removing stationary signs will be measured for each required sign and paid at the contract price for *Work Zone Advance/General Warning Signing (SF)*. Payment for *Work Zone Advance/General Warning Signing* will be limited to a maximum of 90% of the total installed quantity. The remaining 10% will be paid once all signs have been removed.

The Lump Sum price for *Temporary Traffic Control* will include the work of 4 flaggers (including AFAD or PTS units) per operation per map being utilized at the same time on any day. If a pilot vehicle is used for an operation, the Lump Sum Price for *Temporary Traffic Control* will include the work of 5 flaggers. The operator of a pilot vehicle will be considered one of the 5 flaggers.

Any additional flagging beyond the included amount covered in the *Temporary Traffic Control* pay item will be considered supplemental flagging and compensated at a rate of \$35.00 per hour for each additional flagger (including AFAD or PTS units) as approved by the Engineer. The minimum measurement for each additional flagger will be 4 hours, even if the actual additional flagger hours are less than 4 hours.

Payment will be made under:

Pay Item

Temporary Traffic Control

Work Zone Advance/General Warning Signing

Pay Unit

Lump Sum

Square Foot

RESURFACING OPERATIONS:

(7-15-14) (11-13-23) (10-14-24) RWZ-2

Coordinate the installation of items required by the contract documents and resurfacing operations such that these operations are completed in the order as agreed upon with the Engineer at the first pre-construction meeting. Refer to the Provisions, Typicals and Details unless otherwise directed by the Engineer.

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.

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.

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.

For partial or wheel track milling operations on two-way, two-lane facilities, mill and pave back by the end of each work day. For Partial or wheel track milling operation on multi-lane facilities, the lane being milled may be left closed and paved back within 72 hours.

The following options are available during Resurfacing and milling operations on two-way, two-lane facilities when the entire roadway or entire lane is to be milled:

- (A) Mill a single lane and pave back by the end of each work day.
- (B) Mill the entire width of roadway and pave back within 72 hours.

The following options are available during Resurfacing and milling operations on multi-lane facilities when all lanes or a single lane in one direction are to be milled:

- (A) Mill a single lane and pave back by the end of each work day.
- (B) Mill the entire width of pavement for all lanes to be milled in any direction daily and pave back within 72 hours.

Slope the pavement at the beginning and end 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. Continue milling operations until the section of roadway being milled is complete. Remove any existing pavement adjacent to the milled area that has been damaged and replace it with patch material as directed by the Engineer.

Operate equipment and conduct operations in the same direction as the flow of traffic. Maintain vehicular access in accordance with Section 1101-05 of the *Standard Specifications* using suitable backfill material approved by the Engineer.

Provide appropriate lighting in accordance with Section 1413 of the *Standard Specifications*.

Milled Rumble Strips

When utilized, milled rumble strips shall be installed in accordance with the contract.

PAVEMENT MARKINGS AND MARKERS:

(7-15-14) (11-13-23) (10-14-24) RWZ-3

Markings: All Facilities

Pavement markings shall be installed in accordance with Standard Drawings 1205.01 through 1205.15 of the *Roadway Standard Drawings* and Section 1205 of the *Standard Specifications* with the exception of the following changes underlined in Table 1205-1 in Subarticle 1205-3(D):

(D) Time Limitations for Replacement

TABLE 1205-1 TIME LIMITATIONS FOR REPLACEMENT		
Facility Type	Marking Type	Replacement Deadline
Full-control-of-access multi-lane roadway (4 or more total lanes) and ramps, including Interstates	All markings	By the end of each workday's operation if the lane is opened to traffic
Multi-lane roadways (3 or more lanes) and ramps	Center Line, Lane Line, Railroad symbols, Stop bars, school symbols and <u>crosswalk markings</u>	By the end of each workday's operation if the lane is opened to traffic (temporary paint with beads may be used)
	Edge Lines, gore lines and all other symbols	By the end of the 3rd calendar day after obliteration
Two-lane, two-way roadways	All centerline markings, railroad, Stop bars, school symbols and <u>crosswalk markings</u>	By the end of the 5th calendar day after obliteration
	Edge Lines and all other symbols	By the end of the <u>30th</u> calendar day after obliteration

Prior to placing pavement marking material on concrete surfaces that are diamond ground, use an acceptable method to grind ridges smooth only where pavement marking will be installed.

Type 3 Cold Applied Plastic may be used in lieu of Type 2 Cold Applied Plastic. If Type 3 Cold Applied Plastic is used, it shall be paid for using the Type 2 Cold Applied Plastic pay item.

Unless otherwise specified, Heated-in-Place Thermoplastic may be used in lieu of Extruded Thermoplastic for stop bars, symbols, characters and diagonals. If Heated-in-Place Thermoplastic is used, it shall be paid for using the Extruded Thermoplastic pay item.

Unless otherwise specified, Heated-in-Place Thermoplastic may be used in lieu of Cold Applied Plastic for stop bars, symbols, characters and diagonals on asphalt or concrete roadways. If Heated-in-Place Thermoplastic is used, it shall be paid for using the Cold Applied Plastic pay item.

Markers: All Facilities

Remove existing pavement markers in preparation for paving. Repair any pavement damage due to existing pavement marker removal prior to the end of the work day. Dispose of existing pavement markers as directed by the Engineer. No direct payment will be made for this work as it will be incidental to the paving operation.

Install permanent pavement markers within 60 calendar days after completing the resurfacing on each map. Pavement markers shall be installed in accordance with the contract.

Markings and Markers: All Facilities

Review and record the existing pavement markings and markers before resurfacing. Re-establish the new pavement markings and markers using the record of existing markings in conjunction with the contract. Unless otherwise directed by the Engineer, new pavement markings and markers not meeting the current standards should be updated as specified in the contract. Have existing or proposed passing zones reviewed by the engineer before installation. Submit the record of the existing pavement markings seven calendar days before the obliteration of any pavement markings.

Mainline pavement shall not be left milled, unmarked or uneven at the end of a paving season. If the Contractor begins any map and does not complete within the seasonal restrictions, including placement of final pavement markings or permanent markers, the Contractor shall be responsible for, at his expense, Paint in accordance with Article 1205-08 and Temporary Markers in accordance with Section 1251 of the *Standard Specifications*.

WORK ZONE DIGITAL SPEED LIMIT SIGNS

(5/10/2021) (Rev. 12/16/2025)

Description

Furnish and install Work Zone Digital Speed Limit Signs as indicated in the plans or as directed by the Engineer. Work Zone Digital Speed Limit Signs are regulatory speed limit signs with LED displays for the speed limit numbers.

Materials

Digital Speed Limit Signs shall be a minimum 36 inches wide x 48 inches 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 feet above roadway.

The LED panel shall be a minimum of 28 inches wide x 18 inches 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 G20-5aP WORK ZONE sign shall be mounted above the speed limit sign. It shall be 36 inches wide x 24 inches high with high intensity prismatic orange sheeting.

The black on white R2-6bP \$250 FINE sign shall be mounted below the speed limit sign. It shall be 36 inches wide x 24 inches 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.

The Work Zone Digital Speed Limit systems shall have flashing beacons. The beacons are to be a minimum of 8 inch 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.

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

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Digital Speed Limit Signs may be trailer mounted or stationary mounted. The unit shall be solar powered and 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 standard 110/120 VAC power source.

Store the battery bank and charging system in a locked, 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 stationary speed limit signs shall be covered when Digital Speed Limit systems are in operation.

Displaying Reduced Speed Limits

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

Displaying Existing Speed Limits

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

Other Construction Methods

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

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.

Install stationary mounted advance warning signs WORK ZONE, VARIABLE SPEED ZONE AHEAD, and \$250 FINE according to the attached detail.

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.

Stationary mounted advance warning signs installed according to the attached detail are measured and paid separately in accordance with Article 1110-4 of the Standard Specifications.

Pay Item

Work Zone Digital Speed Limit Signs

Pay Unit

Each

County: BERTIE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	1330000000-E	607	INCIDENTAL MILLING	9,106 SY		
0003	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2 TON		
0004	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	30 TON		
0005	1891000000-E	SP	GENERIC PAVING ITEM FINE MILLING (3/4")	190,078 SY		
0006	1891000000-E	SP	GENERIC PAVING ITEM MICRO SURFACING SINGLE COURSE, TYPE III	199,186 SY		
0007	4413000000-E	SP	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	620 SF		
0008	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0009	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	2,930 LF		
0010	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	6 EA		
0011	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	307,929 LF		
0012	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	2,930 LF		
0013	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	6 EA		
0014	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES, (6", 65 MILS)	153,965 LF		
0015	4895000000-N	SP	GENERIC PAVEMENT MARKING ITEM REMOVAL OF SNOWPLOWABLE DELINEATION	855 EA		
0016	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	855 EA		

County: BERTIE

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0017	4423000000-N	SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	14 EA		

1007/Oct15/Q868514/D60263100000/E17

Total Amount Of Bid For Entire Project :

PAVEMENT SCHEDULE

C1	PROP. APPROX. 0.375" MICROSURFACING, TYPE III AT AT AN AVERAGE RATE OF 20-24 LBS. PER SQ. YD.
V1	INCIDENTAL MILLING, 3/4" IN DEPTH
V2	FINE MILLING OF ASPHALT PAVEMENT, 3/4" IN DEPTH
U	EXISTING PAVEMENT

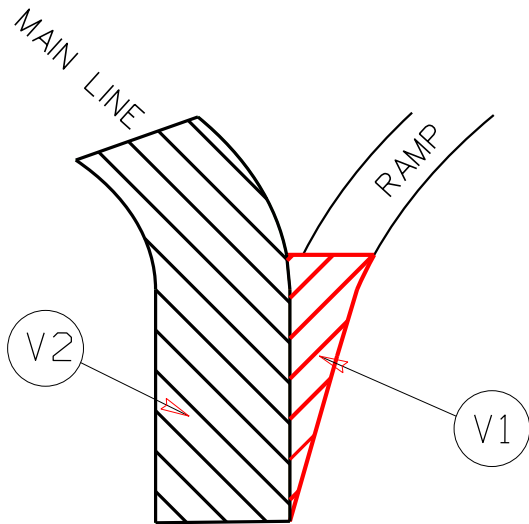
NOTES:

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.01.19.10081	2

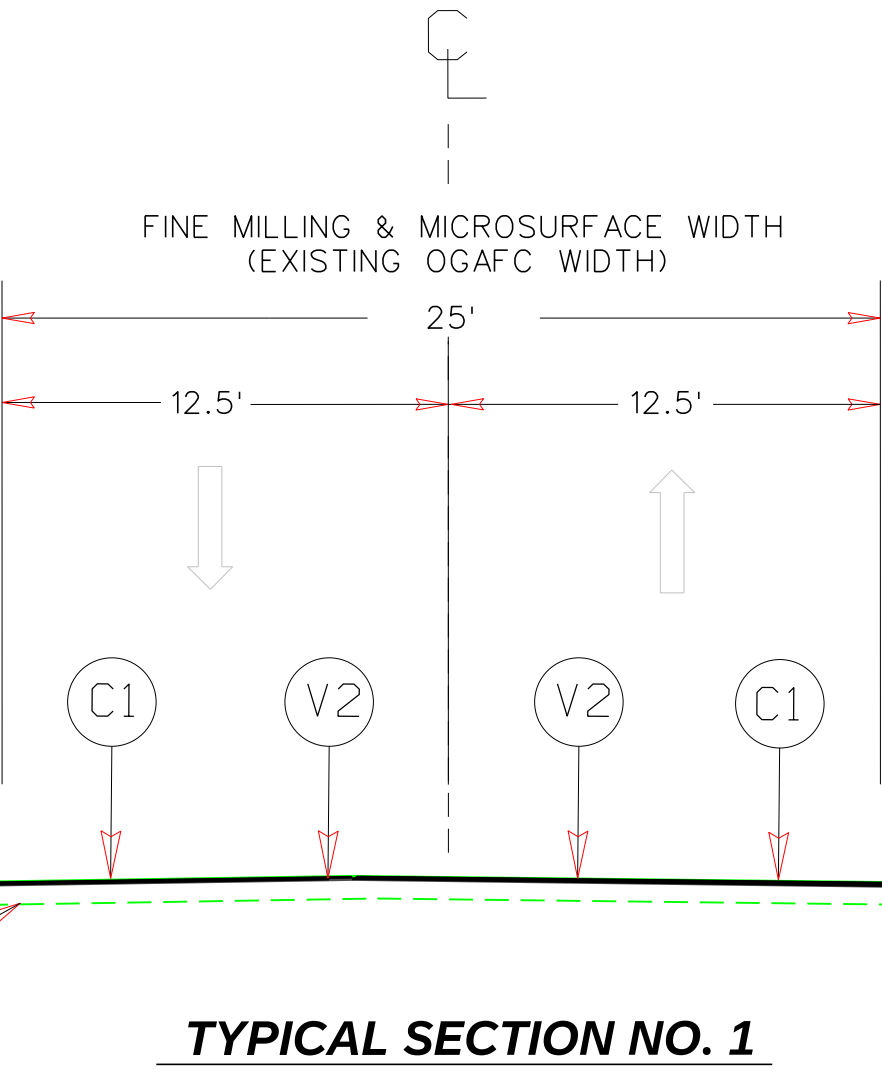
REVISED
10/15/2026,
ADDENDUM 1

- * ALL INTERSECTING ROADS ARE TO BE MICROSURFACED TO THE ENDS OF THEIR RADII, THE MAIN LINE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER. THIS SHALL INCLUDE ANY TAPERS AND TURN LANES LOCATED BOTH ON THE MAIN LINE OR INTERSECTING PAVED ROADWAY.
- * FINE MILLING & 0.375" OF MICROSURFACING SINGLE COURSE, TYPE III IS TO BE APPLIED THE FULL WIDTH OF EXISTING OPEN GRADED FRICTION COURSE (TRAVEL LANES).
- * EXISTING SNOWPLOWABLE PAVEMENT MARKERS ARE TO BE REMOVED BEFORE FINE MILLING. COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE FOR 'REMOVAL OF EXISTING SNOWPLOWABLE DELINEATION'
- * DEPRESSIONS IN PAVEMENT THAT MAY REMAIN AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND FINE MILLING SHALL BE THOROUGHLY CLEANED OF ALL DEBRIS, COATED WITH AN APPROVED TACK MATERIAL, AND PATCHED USING AN APPROVED PLANT MIX ASPHALT. COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE FOR 'ASPHALT PLANT MIX, PAVEMENT REPAIR.'
- * IRREGULAR AREAS ARE TO BE FINE MILLED TO MATCH SURFACE TEXTURE OF MAIN LINE FINE MILLING, PRIOR TO OVERLAY WITH MICROSURFACING. COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE FOR 'INCIDENTAL MILLING.' (SEE DETAIL 1 FOR 'INCIDENTAL MILLING' DETERMINATION)
- * ONCE FINE MILLING HAS BEEN COMPLETED FOR A GIVEN MAP, CONTRACTOR HAS 14 CALENDAR DAYS TO BEGIN MICROSURFACING OPERATION FOR THAT MAP.

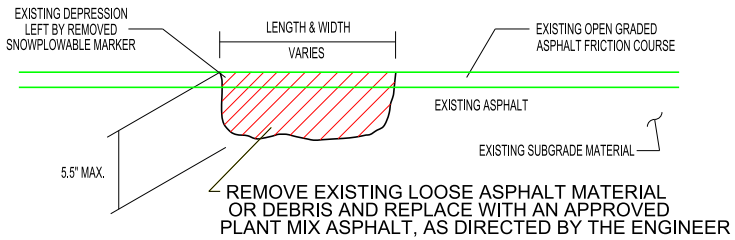
INCIDENTAL MILLING OF RAMPS



DETAIL 1



TYPICAL SECTION NO. 1
USE WITH MAPS 1 - 2



*NOTE: EDGES OF PATCHED AREA ARE TO BE CLEANED OF ALL DEBRIS AND COATED WITH AN APPROVED TACK MATERIAL BEFORE PLACING ASPHALT.

ASPHALT PLANT MIX, PAVEMENT REPAIR DETAIL

DETAIL 2

REVISED 10/15/2026, ADDENDUM 1

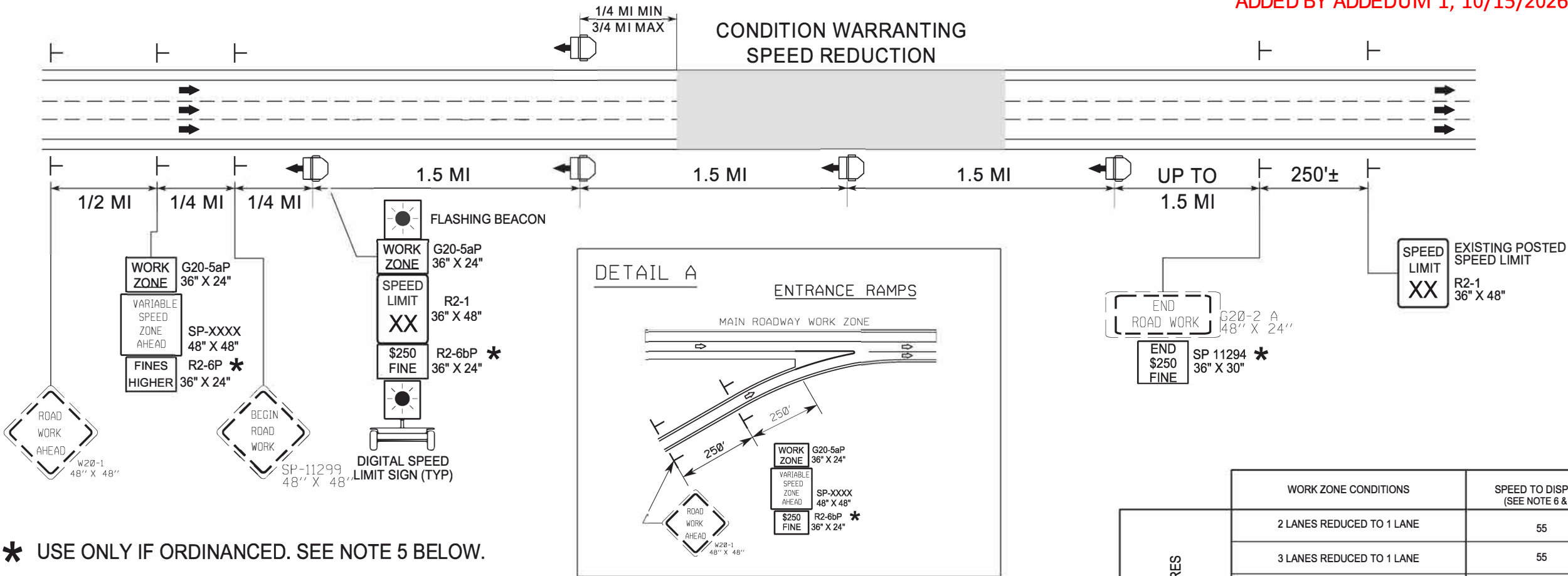
PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.01.19.10081	4	

THERMOPLASTIC AND PAINT QUANTITIES

												4413000000-E	4423000000-N	4457000000-N	4700000000-E	4725000000-E	4810000000-E		4825000000-E	4845000000-N	4890000000-E		4895000000-N	4900000000-N
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	WORK ZONE ADVANCE / GENERAL WARNING SIGNING	WORK ZONE DIGITAL SPEED LIMIT SIGNS	TEMPORARY TRAFFIC CONTROL (SP)	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS), MERGE ARROW	PAINT PAVEMENT MARKING LINES (4") WHITE	PAINT PAVEMENT MARKING LINES (4") YELLOW	PAINT PAVEMENT MARKING LINES (12")	PAINT PAVEMENT MARKING SYMBOL (MERGE ARROW)	HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES, (6", 65 MILS) WHITE	HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES, (6", 65 MILS) YELLOW	GENERIC PAVEMENT MARKING ITEM (REMOVAL OF EXISTING SNOWPLOWABLE DELINEATION)	PERMANENT RAISED PAVEMENT MARKERS
								MI	FT			SF	EA	LS	LF	EA	LF	LF	LF	EA	LF	LF	EA	EA
2027CPT.01.19.10081	Bertie	1	US-17 BYP N	FROM BRIDGE #167 TO END DIVIDED HIGHWAY	1	2	2WD	6.47	25	2.08	8.55	310	7	1	1,559	3	85,404	68,323	1,559	3	42,702	34,162	427	427
2027CPT.01.19.10081	Bertie	2	US-17 BYP S	FROM BEGIN DIVIDED HIGHWAY TO BRIDGE # 168	1	2	2WD	6.49	25	0.1	6.59	310	7	*	1,371	3	85,668	68,534	1,371	3	42,834	34,267	428	428
TOTAL FOR PROJ NO. 2027CPT.01.19.10081							12.96					620	14	*	2,930	6	171,072	136,857	2,930	6	85,536	68,429	855	855
																	307,929				153,965			
GRAND TOTAL							12.96					620	14	1	2,930	6	171,072	136,857	2,930	6	85,536	68,429	855	855
																	307,929				153,965			

STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2027CPT.01.019.10081	TMP-1
STATE PROJECT NUMBER		DESCRIPTION
2027CPT.01.19.10081		P.E., CONST.

ADDED BY ADDEDUM 1, 10/15/2026



* USE ONLY IF ORDINANCED. SEE NOTE 5 BELOW.

NOTES

1. THE DIGITAL SPEED LIMITS SIGNS WILL BE INSTALLED (TRAILER MOUNTED OR STATIONARY MOUNTED) IN ADVANCE OF AND SPACED APPROXIMATELY 1.5 MILES THROUGHOUT THE THE PROJECT LIMITS, UNLESS DIRECTED OTHERWISE.
2. WITHIN ¼ TO ¾ 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 ¼ MILE AND A MAXIMUM OF ¾ 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)
LANE CLOSURES	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
CONTINUOUS BARRIER (LENGTH OF BARRIER GREATER THAN 1 MILE)	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

APPROVED: _____
DATE: _____
SEAL
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

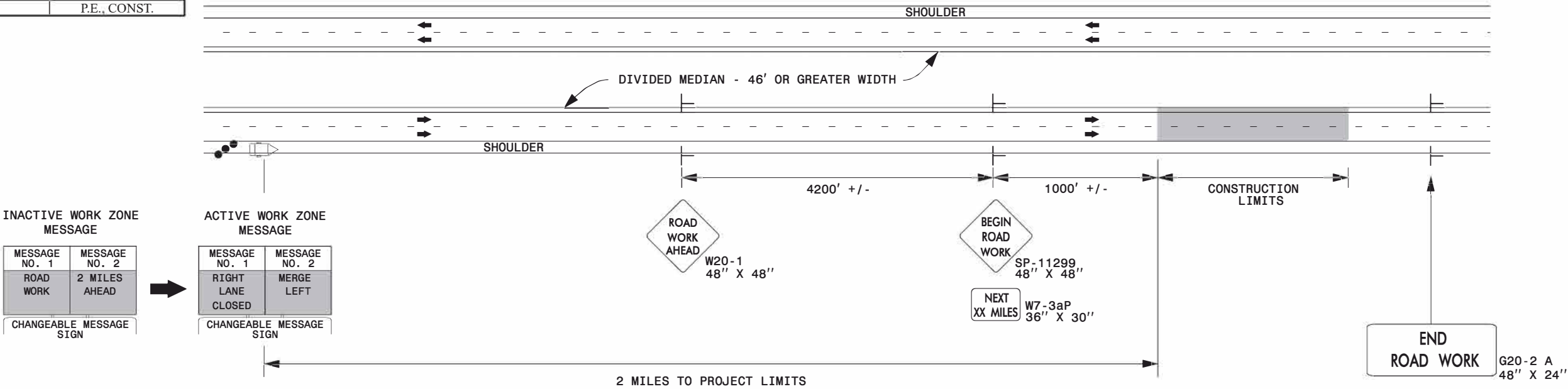


WORK ZONE
VARIABLE
SPEED LIMIT
REDUCTION

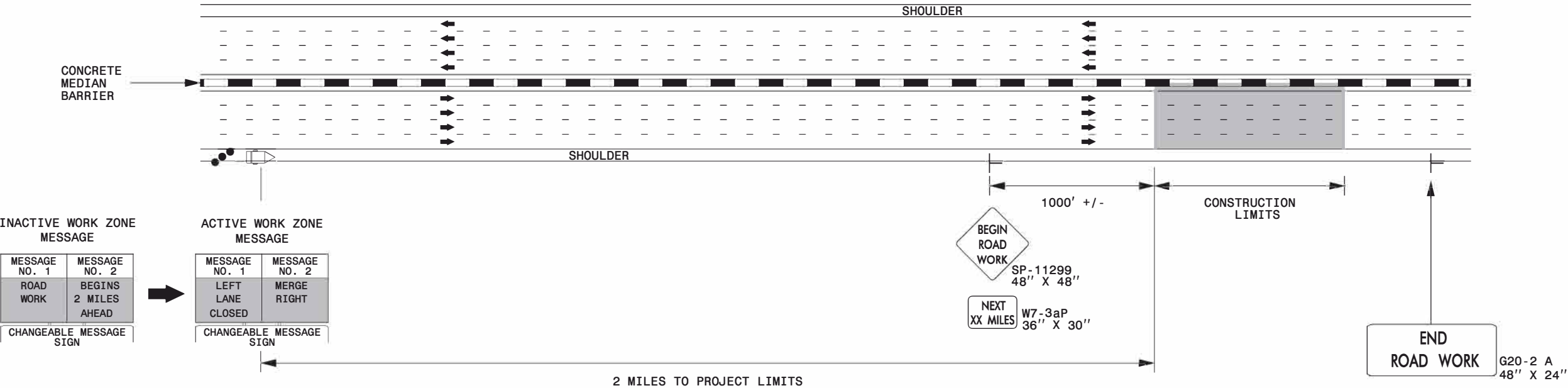
STATE	STATE PROJECT REFERENCE NUMBER	SHEET NO.
NC	2027CPT.01.19.10081	TMP-2
STATE PROJECT NUMBER		DESCRIPTION
2027CPT.01.19.10081		P.E., CONST.

DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER

ADDED BY ADDENDUM 1, 10/15/2026



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



NOTES:

- 1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6' AS MEASURED FROM THE EDGE OF PAVEMENT.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
- 3) FOR MEDIAN WIDTHS LESS THAN 46' (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
- 4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
- 5) INSTALL "ROAD WORK AHEAD" (W20-1) ALONG ENTRANCE RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP WITHIN THE WORK ZONE.
- 6) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER AND WITH DIVIDED MEDIANS OF 46' OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

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



RESURFACING ADVANCE
WARNING SIGNS FOR
HIGH SPEED FACILITIES
≥ 60 MPH