TABLE OF CONTENTS

COVER SHEET

PROPOSAL SHEETS

PROJECT SPECIAL PROVISIONS *PAGE NO.*

PROPOSAL FORMS - ITEMIZED SHEET, ETC.

distributor roads and US 29 / US 601 are $2,500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #2 for lane narrowing, lane closure, holiday and special event time restrictions for South Main Street, Winecoff School Road, Lake Concord Road / Branchview Drive (NC 3), Dale Earnhardt Boulevard / Copperfield Boulevard and Roxie Street are $750.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #3 for lane narrowing, lane closure, holiday and special event time restrictions for Lane Street and South Ridge Avenue are $500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #4 for road closure time restrictions for I-85, I-85 ramps / loops, I-85 collector-distributor roads and US 29 / US 601 are $5,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #5 for road closure time restrictions for South Main Street, Winecoff School Road, Lake Concord Road / Branchview Drive (NC 3), Dale Earnhardt Boulevard / Copperfield Boulevard and Roxie Street are $1500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #6 for road closure time restrictions for Lane Street and South Ridge Avenue are $1,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #7 for continuous weekend road closure time restrictions for the US 29 / US 601 ramp / loop reconstruction are $5,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #8 for 60-day continuous road closure time restriction for Winecoff School Road are $5,000.00 per day or any portion thereof.

PAYOUT SCHEDULE

(11-16-09) DB1 G13

No later than 12:00 o'clock noon on the sixth day after the opening of the Price Proposal, the responsive proposer with the lowest adjusted price shall submit a proposed Anticipated Monthly Payout Schedule to the office of the State Contract Officer. The information shall be submitted in a sealed package with the outer wrapping clearly marked "Anticipated Monthly Payout Schedule" along with the Design-Build Team name and the contract number. The Anticipated Monthly Payout Schedule will be used by the Department to establish the monthly funding levels for this project. The Anticipated Monthly Payout Schedule shall parallel, and agree with, the project schedule the Design-Build Team submits as a part of their Technical Proposal. The schedule shall include a monthly percentage breakdown (in terms of the total contract amount percentages) of the work anticipated to be completed. The schedule shall begin with the Date of Availability and end with the Actual Completion Date proposed by the Design-Build Team. If the Payout Schedule is not submitted as stated herein, the Technical and Price Proposals will be considered irregular by the Department, and the bid may be rejected.

Upon apparent substantial completion of the entire project or the work required by an intermediate contract time, the Engineer will make an inspection of the work. If the inspection discloses the entire project or the work required by an intermediate contract time is substantially complete; the Engineer will notify the Design-Build Team in writing that the work is substantially complete. If the inspection discloses the entire project or the work required by an intermediate contract time is not substantially complete, the Engineer will notify the Design-Build Team in writing of the work that is not substantially complete. The entire project or the work required by an intermediate contract time will not be considered substantially complete until all of the recommendations made at the time of the inspection have been satisfactorily completed.

SUBMITTAL OF QUANTITIES, FUEL BASE INDEX PRICE AND OPT-OUT OPTION

(06-08-11) DB1 G43

(A) **Submittal of Quantities**

Submit quantities on the *Fuel Usage Factor Chart and Estimate of Quantities* sheet, located in the back of this RFP, following the Itemized Proposal Sheet.

The Design-Build Team shall prepare an Estimate of Quantities that they anticipate incorporating into the completed project and upon which the Price Proposal was based. The quantity breakdown shall include all items of work that appear in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet. Only those items of work which are specifically noted in the Fuel Usage Factor Chart will be subject to fuel price adjustments. Fuel price adjustments shall not apply to changes in these quantities resulting from a Supplemental Agreement.

Submittal The submittal shall be signed and dated by an officer of the Design-Build Team. The information shall be copied and submitted in a separate sealed package with the outer wrapping clearly marked "Fuel Price Adjustment" and shall be delivered at the same time and location as the Technical and Price Proposal. The original shall be submitted in the Price Proposal.

Trade Secret Information submitted on the *Fuel Usage Factor Chart and Estimate of Quantities* sheet will be considered "Trade Secret" in accordance with the requirements of G.S. 66-152(3) until such time as the Price Proposal is opened.

(B) **Base Index Price**

The Design-Build Team's Estimate of Quantities will be used on the various partial payment estimates to determine fuel price adjustments. The Design-Build Team shall submit a payment request for quantities of work completed based on the work completed for that estimate period. The quantities requested for partial payment shall be reflective of the work actually accomplished for the specified period. The Design-Build Team shall certify that the quantities are reasonable for the specified period. The base index price for DIESEL #2 FUEL is $3.1476 per gallon.

- Submit any other documentation that supports the Design-Build Team's recommendations

Construction of Cement Treated Base Course

The Design-Build Team shall construct the Cement Treated Base Course as specified in Section 540 of the North Carolina Department of Transportation 2012 *Standard Specifications for Roads and Structures* except that Articles 540-5, 540-7 and 540-13 do not apply.

Unconfined Compressive Strength

For Cement Treated Base Course, the Design-Build Team shall make field specimens using a $1/30^{th}$ cubic foot mold. The Design-Build Team shall fill the mold in three lifts, applying 25 blows to each lift with a 5.5 pound hammer dropped 12 inches, cure the specimens for seven days and test them in the laboratory. The minimum and maximum acceptable unconfined compressive strength for soil cement shall be 450 psi and 850 psi, respectively. One test shall be required for every 400 feet per lane width at random locations selected using random number tables.

Submittals for Review During Construction

The Design-Build Team shall submit the unconfined compressive strength test results for review and acceptance.

PRICE ADJUSTMENTS FOR ASPHALT BINDER

(9-1-11) DB6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the 2012 *Standard Specifications for Roads and Structures.*

When it is determined that the monthly selling price of asphalt binder on the first business day of the calendar month during which the last day of the partial payment period occurs varies either upward or downward from the Base Price Index, the partial payment for that period will be adjusted. The partial payment will be adjusted by adding the difference (+ or -) of the base price index subtracted from the monthly selling price multiplied by the total theoretical quantity of asphalt binder authorized for use in the plant mix placed during the partial payment period involved.

The base price index for asphalt binder for plant mix is $559.29 per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on February 1, 2014.

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX

(9-1-11) (Rev. 3-13-13) DB6 R26

Revise the 2012 *Standard Specifications for Roads and Structures* as follows:

Page 6-18, Article 609-11 and Page 6-35, Article 610-14

GEOTEXTILE FOR PAVEMENT STABILIZATION (2-4-14)

Description

Furnish and place geotextile for pavement stabilization in accordance with the Geotechnical Engineering Scope of Work found elsewhere in this RFP. Geotextile for pavement stabilization may be required to prevent pavement cracking and provide separation between the subgrade and pavement section at locations shown in the plans developed by the Design-Build Team and as directed by the Engineer.

Materials

Refer to Division 10 of the 2012 *Standard Specifications for Roads and Structures.*

Item	Section
Geotextiles	1056

Provide Type 5 geotextile for geotextile for pavement stabilization that meets the following requirements:

GEOTEXTILE FOR PAVEMENT STABILIZATION REQUIREMENTS		
Property	**Requirement (MARV[A])**	**Test Method**
Tensile Strength @ 5% Strain (MD & CD[A])	1,900 lb/ft	ASTM D4595
Ultimate Tensile Strength (MD & CD[A])	4,800 lb/ft	ASTM D4595
Melting Point	300° F	ASTM D276

A. Define "minimum average roll value" (MARV), "machine direction" (MD) and "cross-machine direction" (CD) in accordance with ASTM D4439.

Sampling

For the top half of all embankments, the Design-Build Team shall take soil samples of the embankment material as it is constructed. The Design-Build Team shall sample the embankment in three-foot thick zones at a minimum frequency of one sample per 1,000 feet, per each lane, for classification tests. For the aforementioned tests, a lane shall be considered 28 feet wide in one direction for sampling purposes. Additional samples shall be taken to ensure that all the predominant soil types, limits of distribution of these soils and different site conditions have been represented. For embankments less than 1,000 feet in length a minimum of one sample shall be required per three-foot thickness of embankment. The sample in the top most three-foot zone (after the project has been graded to within two inches of final sub-grade elevation) may also serve as the sample for the lime or cement mix design test if it also meets the testing requirements in the *Cement and Lime Stabilization of Sub-Grade Soils* Project Special Provision found elsewhere in this RFP.

In lieu of testing the embankment material, the Design-Build Team shall provide geotextile for pavement stabilization that meets the requirements in the table above for all embankments that are a minimum of ten feet in height (as measured vertically from the toe of the embankment to the elevation of outer edge of pavement) and 200 feet in length.

SOUND BARRIER WALL (BRIDGE MOUNTED) (SPECIAL)

DESCRIPTION

This work consists of furnishing planks, structural steel, and all other materials; handling, transporting, fabricating, galvanizing, and storing materials; furnishing erection drawings, erecting and installing the sound barrier wall members and all other materials as required by the plans developed by the Design-Build Team, 2012 *Standard Specifications for Roads and Structures* and this Project Special Provision.

Post spacing greater than 15 feet will not be permitted. Provide consistent post spacing the entire length of the wall. Use odd post spacing, if necessary, only at the ends of the wall.

A maximum one foot drop or rise in elevation between wall sections shall be permitted. Elevation changes greater than one foot, if necessary, will be allowed only at the end of the wall. Top of wall elevation changes that result in a jagged appearance will not be allowed.

ALTERNATE POST SPACING

As an alternate, the Design-Build Team may submit plans for post spacing greater than 10 feet and less than 15 feet for review and approval. A submittal reducing the post spacing shall include the plank material and design specifications. The submittal shall also include an elevation view depicting the revised post spacing and proposed top of wall elevations. The proposed top of wall elevations shall be equal to or greater than the dimensions shown on the plans developed by the Design-Build Team.

Submit two sets of detailed plans for review. Include all details in the plans developed by the Design-Build Team, including the size, spacing and materials of required piles. Have a North Carolina Registered Professional Engineer check, seal and date the aforementioned plans.

WALL TYPE

Walls that have been assigned "Approved" or "Approved for Provisional Use" status by the Product Evaluation Program will be considered for use as the Sound Barrier Wall (Bridge Mounted) planks. Wall plank design details and materials must meet the design and construction requirements of the project and the applicable loadings except that the wall is not required to meet the traffic loading requirements. Wall structural stability and connection details shall conform to the current edition of the AASHTO LRFD Bridge Design Specifications, except that traffic loading shall not be applied to the sound barrier wall.

The wall shall meet the following aesthetic requirements. The traffic and non-traffic faces of the wall planks shall be configured such that only the post flanges extend beyond the face of the planks such that a uniform surface is visible from the traffic and non-traffic sides of the wall. This uniform surface appearance shall extend from the top of wall to the bottom of the vertical post members. The bottom of the wall shall be detailed for free and complete drainage of wall

areas. Additionally, the plank configuration proposed shall allow for visual inspection of the post to concrete barrier rail bolts from the bottom of the wall, without the need to remove any components.

Prior to submittal of Working Drawings, as described herein, submit a copy of the signed NCDOT Product Status Notification Letter and two sets of preliminary plans for review and acceptance. Include material specifications for all components. Once preliminary plans are accepted, submit Working Drawings in accordance with all applicable portions of the requirements herein, including details necessary to fabricate and construct the proposed components.

Have a North Carolina Registered Professional Engineer check, seal and date the plans developed by the Design-Build Team and, when requested, calculations.

MATERIALS AND FABRICATION

Provide materials and fabricate members in accordance with the requirements of Division 10 of the 2012 *Standard Specifications for Roads and Structures*. The structural planks for the Sound Barrier Wall (Bridge Mounted) shall have the following properties:

Flexural Strength	57,000 psi	ASTM D-790
Tensile Strength	60,000 psi	ASTM D-638
Compressive Strength	65,000 psi	ASTM D-695
Tensile Modulus	3,500,000 psi	ASTM D-638
Flexural Modulus	1,600,000 psi	ASTM D-790
Specific Gravity	1.88 (typ)	ASTM D-792

The structural planks shall be colored and shall be uniform throughout the pultruded composite. The color shall be approved by the Engineer before the planks are delivered to the jobsite.

The structural planks shall exhibit good workmanship and shall be free of burrs, cracks or other objectionable marks which would adversely affect the barrier's performance or serviceability. All cracked, discolored, burned or damaged structural planks shall be rejected either at the fabrication shop or the construction site even after installation, but prior to acceptance of the project.

The structural settle shall meet the requirements of the 2012 *Standard Specifications for Roads and Structures*. The posts, backing angles, bolts, nuts and washers shall be pained to match the structural planks. The paint system used shall be System 1 as described in Section 442 of the 2012 *Standard Specifications for Roads and Structures*, with the exception that the surfaces shall not to be cleaned to an SSPC SP-10 finish after being galvanized and the top coat color shall be approved by the Engineer. After erection, the bolts, nuts, and washers shall be primed by brush; and then the entire support system of posts, backing angles, bolts, nuts and washers shall be top-coated. The structural planks shall be masked off so no overspray or spatters occur. The Design-Build Team shall provide three samples of paint close to the color of the structural planks to the Engineer for his / her selection of the final color. The limits of the painting shall be from the top of the posts to the bottom of the lowest plank.

CONSTRUCTION METHODS

The erection of the sound barrier components shall not begin until the concrete in the bridge railing has reached a minimum compressive strength of 3,000 psi. Install posts as shown on the plans developed by the Design-Build Team or in the accepted submittals with a tolerance of ½-inch per foot from vertical or as necessary to conform to the plank design, if more restrictive.

WORKING DRAWINGS

Submit plank design calculations and specifications for approval prior to purchasing the plank materials. Submit metalwork fabrication drawings for approval prior to fabrication of steel wall components. This submittal shall clearly indicate access for visual inspection of the post attached bolts. Submit an erection plan and plank support components, for review and acceptance prior to fabrication of metalwork. Submit five sets of detail drawings for review and acceptance.

- To drop one northbound through lane, from the right, a minimum of 500 feet from the northern terminus of the Lane Street northbound entrance ramp taper. Excluding the advance lane drop signing installed on an overhead sign assembly, required lane drop signage / pavement markings shall not begin prior to the 500-foot length noted above. (Reference the Signing Scope of Work found elsewhere in this RFP)

- The Design-Build Team shall coordinate with Project I-3803B design and construction to ensure accurate hydrology, capacity, and horizontal and vertical ties that adhere to the design criteria. The Design-Build Team shall not make and design or construction revisions that impact the design or construction of project I-3803B without prior written approval from the Transportation Program Management Director (Reference the Cooperation Between Contractors Project Special Provision found elsewhere in this RFP)

- Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design and construct -Y- Lines, ramps, service roads and cul-de-sacs providing the same or better access, widening, improvements and level of service included in the I-3802 Public Meeting Map provided by the Department. The limits of -Y- Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.

- The Design-Build Team shall design and construct all -Y- Lines such that the through movement is not required to change lanes through the project limits.

- The Design-Build Team will not be required to design or construct ramps or bridges to accommodate future loops.

- The Design-Build Team shall design and construct all diverging diamond interchanges (DDI), in accordance with the requirements noted below:

  - Between and through the DDI crossovers, the Design-Build Team shall design and construct lane widths that accommodate a WB-67; however, the minimum lane width between and through the DDI crossovers shall be 15 feet. All approach / departure lanes to / from the crossovers shall be tapered to the crossover lane-width prior to entering / after exiting the curve approaching / departing the crossover.

  - The Design-Build Team shall design and construct lane widths for all spurs (right and left turn movements from / to the mainline) that accommodate a WB-67; however, the minimum spur lane width shall be 15 feet. All approach / departure ramp lanes to / from the spurs shall be tapered to the spur lane width prior to entering / after exiting the spur. Regardless of the spur lane width, all spur alignments shall be located 15 feet from the edge of travel lane.

  - The four ramp channelization islands shall be raised grass islands bordered with 2'-6" curb and gutter.

  - Excluding the median section between the DDI crossovers, the Design-Build Team shall design and construct five-foot sidewalk on both sides of the -Y- Line. Between the DDI crossovers, the Design-Build Team shall provide a minimum ten-foot wide pedestrian

- The Design Build Team shall design and construct the section of South Main Street depicted as a four-lane curb and gutter facility on the Public Meeting Map provided by the Department as a three-lane curb and gutter facility with a center turn lane.

- The Design-Build Team shall design and construct Winecoff School Road as a two-lane facility without bike lanes.

- The Design-Build Team shall design and construct a full-movement intersection at Dale Earnhardt Boulevard / Old Earnhardt Boulevard.

- At the I-85 / Lane Street interchange, the Design-Build Team shall prepare functional horizontal and vertical designs for roundabouts that include the slip lanes noted below. The Design-Build Team shall make a determination of, and acquire, the additional right of way required for the aforementioned functional designs.

    - Slip lane from the northbound I-85 exit ramp to eastbound Lane Street
    - Slip lane from westbound Lane Street to the northbound I-85 entrance ramp
    - Slip lane from eastbound Lane Street to the southbound I-85 entrance ramp

- Excluding transitions required to tie to existing at the beginning of the project and steeper cross slopes (0.025 maximum) required to eliminate hydroplaning, the I-85 normal crown cross slope shall be 0.02. The I-85 crown point shall be located such that the two inside lanes in each direction of travel slope towards the median and the remaining lanes slope towards the outside.

- The Design-Build Team shall design and construct four-foot wide full depth paved shoulders on both sides of Centergrove Road.

- The Design-Build Team shall design and construct Connector Road as a three-lane typical section that consists of two eastbound lanes and one westbound lane. The second eastbound lane shall begin immediately past the roundabout.

- Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design and construct at-grade intersections with the lane configurations noted in the three (3) interchange diagrams dated July 2013 provided by the Department. All turn lane lengths shall meet the NCDOT standards where vehicle storage does not govern or the lengths required by the aforementioned diagrams, whichever is greater. This determination shall be made by calculating the recommended treatment for turn lanes, incorporating the minimum deceleration lengths, as defined in the NCDOT Roadway Design Manual (Reference Section 9-1, Figure F-4A) and comparing the calculated values with the NCDOT minimum turn lane lengths. At all intersections impacted by the Design-Build Team's design and / or construction, excluding resurfacing, the Design-Build Team shall accommodate the right turn maneuver in accordance with the NCDOT Roadway Design manual (Reference Section 9-1, Figure F-4C).

- For all intersection / interchange design modifications, the Design-Build Team shall provide a traffic analysis that adheres to the January 1, 2012 Congestion Management Capacity Analysis Guidelines for the Department's review and acceptance.

- Unless noted otherwise in this RFP, the Design-Build Team shall design and construct five-foot sidewalk on ten-foot berms along the curb and gutter sections of the following roadways. The Design-Build Team shall install the aforementioned features (sidewalk, berm and curb and gutter) within the outermost construction limits of all proposed widening and construction, including any gaps along the facility where construction activities are not required.

    - US 29 / US 601 – Both sides
    - South Ridge Avenue between US 29 / US 601 and the Transit Station – West side only (Shoulder section on the east side)
    - South Main Street – Both sides south of Stewart Street - West side only north of Stewart Street (Shoulder section on the east side north of Stewart Street)
    - Winecoff School Road – South side and along the outside of the roundabout (Shoulder section on the north side)
    - Connector Road – Both sides
    - Country Club Drive – Both sides from US 29 / US 601 to the first mall entrance
    - Lake Concord Road / Branchview Drive (NC 3) – Both sides
    - Copperfield Boulevard / Dale Earnhardt Boulevard – Excluding the section between the I-85 eastern ramp termini and Roxie Street, both sides from Vinehaven Drive to Old Earnhardt Road. Between the I-85 eastern ramp termini and Roxie Street, only on the widened side(s), providing logical sidewalk termini. The Design-Build Team shall indicate the proposed sidewalk configuration through the I-85 / Copperfield Boulevard / Dale Earnhardt Boulevard interchange in the Technical Proposal.
    - Lane Street – Both sides

- The Design-Build Team shall design and construct 14-foot wide outside through lanes on the roadways noted below:

    - Lake Concord Road / Branchview Drive (NC 3) – Both sides
    - Lane Street – Both sides
    - South Main Street - Both sides throughout the three-lane typical section - West side only throughout the two-lane typical section

- The Design-Build Team shall design and construct concrete pads for new bus stop locations. These pads shall be 8.0’ long by 4.0’ wide by 4.0” thick and constructed approximately at locations shown on the Rider Transit - Current & Potential I-85 Impacts & Considerations Maps provided by the Department. The Design-Build Team shall coordinate the actual concrete pad locations with Mr. L. J. Weslowski of Concord Kannapolis Area Transit (704-920-5878).

- The Design-Build Team shall provide milled rumble strips along the mainline outside and median paved shoulders, including ramp and loop terminals, and acceleration, deceleration and auxiliary lanes, in accordance with the January 2012 Roadway Standard Drawings.

- For all bridges over roadways, railroads and / or greenways, including the future greenway under the Irish Buffalo Creek bridge noted elsewhere in this RFP, the Design-Build Team shall submit vertical and horizontal clearance design calculations at all critical points. The

Design-Build Team shall submit post construction survey points for the aforementioned critical points that verify construction adheres to the vertical and horizontal clearances accepted by NCDOT. The Design-Build Team shall be responsible for all costs associated with correcting vertical and horizontal clearances resulting from any construction variation from the design accepted by NCDOT.

- The Design-Build Team shall design and construct the sound barrier walls listed in the I-3802 Design Noise Report that are within the project limits, and perform any additional geotechnical investigations necessary to design the foundations. The Design-Build Team shall be responsible for the wall envelope details. If the Design-Build Team revises the horizontal and / or vertical alignments such that greater noise impacts are possible on surrounding receptors, the Design-Build Team shall re-analyze and complete a revised noise report, if necessary, for NCDOT and FHWA review and approval. The I-3802 Design Noise Report will be provided to the Design-Build Team to assist in their determination of anticipated additional noise impact on current receptors due to design changes. If adjustments to, or addition of, sound barrier walls are required as a result of design deviations, the Design-Build Team shall be responsible for all costs associated with the adjustments and / or additions.

- The Design-Build Team shall be responsible for all Service Road Studies for landlocked parcels and / or as required by variations to the Department's design. If required by the aforementioned Service Road Studies, the Design-Build Team shall be responsible for the design and construction of all additional service roads, as well as all associated NEPA requirements.

- The NCDOT has determined that a roundabout is not feasible at the Copperfield Boulevard / Vinehaven Drive intersection.

- Excluding haul roads and the existing mainline concrete pavement, full typical section, constructed under TIP Project I-3803B, the Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction. All resurfacing grades shall adhere to the design criteria and standards, provide all required pavement wedging (Reference the Pavement Management Scope of Work found elsewhere in this RFP) and adhere to the minimum requirements noted below:

    - The Design-Build Team shall resurface all lanes and shoulders of an undivided facility throughout the limits of proposed widening and construction.

    - The Design-Build Team shall resurface each one-way roadway of a divided facility throughout the limits of the one-way roadway widening and construction, allowing varying resurfacing limits for the opposing directions of travel.

    - Unless noted otherwise elsewhere in this RFP, for both divided and undivided facilities, the Design-Build Team shall resurface all lanes and shoulders within the outermost construction limits of all proposed widening and construction, including any gaps along the facility where construction activities are not required.

    - The Design-Build Team shall resurface all existing facilities to the limits of pavement marking obliterations / revisions.

Other pavement designs for this project shall be as listed in the table below:

LINE	Surface	Intermediate	Base	ABC	Stab
-Y3- west of -Y7- (South Main Street)	3.0" S9.5B	3.5" I19.0B	-----	10.0"	No
-Y3- east of -Y7-, Goodman Circle, Central Drive and -Y11- (Centergrove Road)	3.0" S9.5B	2.5" I19.0B	-----	8.0"	No
-Y7- (US 29 / US 601) and -Y30- (Mall Drive)	3.0" S9.5C	3.0" I19.0C	5.0" B25.0C	10.0"	No
Ramp A & Ramp D @ -Y7-, Spur A & Spur D @ -Y7-, Ramps to & from Rest Areas, Ramp A & Ramp D @ -Y13-, and Spur D @ -Y13-	3.0" S9.5B	2.5" I19.0B	-----	8.0"	Yes
Ramp B & Ramp C @ -Y7- and Spur B & Spur C @ -Y7-	3.0" S9.5C	3.5" I19.0C	-----	8.0"	Yes
-Y8- (Branchview Drive and NC 3 / Lake Concord Road)	3.0" S9.5B	3.0" I19.0B	3.0" B25.0B	8"	
-Y10- (Dale Earnhardt Boulevard)	3.0" S9.5B	4.0" I19.0B	5.5" B25.0B	-----	No
Ramp A & Ramp D @ -Y10- and Loop A @ -Y10-	3.0" S9.5B	4.0" I19.0B	-----	10.0"	No
Ramp C @ -Y10-, -Y2_2A- (Winecoff School Road / South Ridge Avenue) from the bridge over the Railroad to the end of construction, and -Y4_2A- (South Ridge Avenue)	3.0" S9.5B	3.0" I19.0B	-----	8.0"	No
Loop D @ -Y10-, -Y1_2A- (Winecoff School Road), -Y2_2A- (Winecoff School Road) from the beginning of construction to the bridge over the Railroad, -Y3_2A- (Connector Road), and the Roundabout that accesses -Y1_2A-, -Y2_2A- and -Y3_2A-	3.0" S9.5B	4.0" I19.0B	-----	8.0"	No
-Y23- (Country Club Drive), -Y34- (Roxie Street) and -Y34A-	3.0" S9.5B	3.0" I19.0B	4.5" B25.0B	-----	No
-Y13- (Lane Street)	3.0" S9.5B	4.0" I19.0B	3.0" B25.0B	8.0"	No
Ramp B & Ramp C @ -Y13- and Spur B & Spur C @ -Y13-	3.0" S9.5C	3.0" I19.0C	-----	10.0"	Yes
-Y33- (Cloverleaf Parkway)	3.0" S9.5B	2.5" I19.0B	4.0" B25.0B		No
-Y36- (Royce Street) and Pump Station Access Road	2.5" SF9.5A	-----	-----	*8.0"	No
-Y12- (Brantley Road), -Y32- (Executive Park Drive) and -Y35- (Turkey Road)	2.5" SF9.5A	2.5" I19.0B	-----	8.0"	No

* Prime coat required over ABC

STRUCTURES SCOPE OF WORK (1-30-14)

Project Details

The Design-Build Team shall be responsible for all structures necessary to complete the project, including the following locations:

- Bridge on I-85 over Irish Buffalo Creek
- Bridge on S. Main Street / Kannapolis Highway over I-85
- Bridge on Railroad over I-85
- Bridge on Railroad over South Main Street / Kannapolis Highway
- Bridge on US 29 / US 601 over I-85
- Bridge on Lake Concord Road (NC 3) over I-85
- Bridge on I-85 over Cold Water Creek
- Bridge on Centergrove Road over I-85
- Bridge on Brantley Road over I-85
- Bridge on Lane Street over I-85
- Bridge on Winecoff School Road over South Main Street, South Ridge Avenue and the Railroad
- All retaining walls as required by the Design-Build Team's design
- Sound barrier walls as listed in the Final Design Noise Report

The Design-Build Team shall also widen the bridge on Dale Earnhardt Boulevard over I-85.

Unless noted otherwise below, the bridges to be constructed over I-85 shall allow for the future construction of another 16 feet of pavement in each direction of I-85 without the need for a future design exception (excluding median shoulder width adjacent to bridge piers), including but not limited to a minimum vertical clearance of 17'-0" for the proposed and aforementioned future construction, and sufficient horizontal clearances for ten-foot paved median shoulders and 12-foot paved outside shoulders. The additional 16 feet allows for the potential future addition of a High Occupancy Toll lane and requisite four-foot wide buffer.

The minimum vertical clearance for the railroad bridge over South Main Street / Kannapolis Highway (-Y3-) and the Dale Earnhardt Boulevard Bridge over I-85 shall be 16'-0". The minimum vertical clearance for the Moose Road Bridge over I-85 shall be equal to or greater than the existing vertical clearance.

The Winecoff School Road bridge over South Main Street, South Ridge Avenue and the Railroad shall accommodate the two realigned existing tracks and two future tracks, one centered 14' east and one centered 14' west of the realigned existing tracks (four tracks total), without future crash walls, or provide 100-foot horizontal clear width, whichever is greater. One of the aforementioned future track locations shall be used as a maintenance road until the time the future track is constructed by others. The substructure units shall provide a minimum of 25'-0" horizontal clearance to the center of the closest realigned and / or future railroad track. The minimum vertical clearances for the Winecoff School Road bridge shall be 16'-0" over South Main Street and South Ridge Avenue, and 23'-0" over the Railroad.

The bridges on I-85 crossing Irish Buffalo Creek shall be of sufficient length to accommodate a ten-foot wide future greenway on the north side of Irish Buffalo Creek. Horizontal clearance for the future greenway shall be a minimum 12 feet from the top of bank to the toe of the bridge end bent slope. Vertical clearance for the future greenway shall be a minimum 10 feet above the existing natural ground surface.

- Concrete ballasted, deck atop girder bridge with a minimum 3'-6" girder spacing shall be used for all railroad bridges.
- No concrete girders will be permitted.
- Proposed railroad bridges must be designed and constructed to allow a minimum of 25 feet of clearance (edge of superstructure to edge of superstructure) from the existing railroad bridges or 50 feet between the closest track realignment centerline and existing track alignment centerline, whichever is greater.
- Inspection walkways shall be provided on both sides.
- Vandal fencing shall be provided on both sides of all railroad bridges.
- Abutments walls (MSE, soil nail, etc.) or temporary shoring that rely on activation of anchors in the railway embankment for strength or stability will not be permitted in front of railroad bridge end bents or to support railroad embankment.
- One 4-inch signal conduit shall be provided in each bridge rail parapet.

All roadway bridges shall meet approved roadway typical sections and grades. Bridge geometry (width, length, skew, span arrangement, etc.) shall be in accordance with the accepted Structure Recommendations prepared by the Design-Build Team.

A live load rating chart for proposed girders shall be included with the highway bridge plans and shall state design assumptions and methodology used in the load rating calculations. A live load rating chart shall be prepared for the existing girders of the structures to be widened; however, no rehabilitation or repair required even if the rating falls below 1.0. The load rating shall be in accordance with the NCDOT *Structures Management Unit Manual* (including policy memos) and *AASHTO's Manual for Bridge Evaluation*.

Regardless of wall height, sound barrier walls shall be designed in accordance with AASHTO LRFD Bridge Design Specifications. Unless otherwise approved by the Department, the top of the sound barrier wall shall be constructed to provide a continuous elevation transition in increments no greater than one- foot. The Design-Build Team shall adhere to the additional sound barrier wall requirements noted below:

- Ground mounted sound barrier walls shall be detailed in accordance with Structure Standards SBW1 and SBW2, and concrete piles shall be used.
- Bridge mounted sound barrier walls shall be designed in accordance with the *Sound Barrier Wall (Bridge Mounted)* Project Special Provisions found elsewhere in the RFP.

The following will not be permitted on the project:

- Cored slab, box beam, fracture critical, cast-in-place deck slab and integral deck/girder bridges
- Precast barrier rails
- Empirical method for deck design.
- Precast Culverts
- Interior pile bents for grade separations.
- Monotube or cantilever DMS (if required on project) support structures.
- Attachment of sign structures to bridges.
- Bridge attachments (e.g. ITS conduit, waterlines) in the overhang of bridge structures
- Casting of conduit in the bridge deck or barrier rail for roadway bridges

Bridge Widening and Rehabilitation for Roadway Bridges

The Design-Build Team shall provide closure pours with cross-joint reinforcement / dowels. Intermediate diaphragms are not required in the closure bay. The Design-Build Team shall provide bent diaphragms in the closure bay and the plans shall reflect that these diaphragms be

RAILROAD COORDINATION SCOPE OF WORK (2-3-14)

The Design-Build Team shall be fully responsible for coordinating with the railroads to secure the railroad agreements necessary for the removal and replacement of railroad bridges, railroad facilities, and track work on the North Carolina Railroad Company (Railroad Owner) ("NCRR") corridor, operated and maintained by Norfolk Southern Railway (Railroad Operator) ("NSR") over I-85 and US-29A and any modification to these agreements that may be necessary based on their design or construction methods. The Design-Build Team shall be responsible for all design work, and all construction required for all railroad roadbed (up to and including the sub ballast), all new railroad bridge work, the removal of the existing railroad bridges, the removal of all ballast and roadbed for bypassed or abandoned track, all related grading and site work, and obtaining all required insurances. Unless noted otherwise elsewhere in this RFP, NSR, or their representative(s), will provide all materials and perform all track construction above the sub ballast, including the tie-ins between the existing track alignments and all proposed temporary and/or permanent track alignments. NSR will also have responsibility for installation of grade crossing surfaces and the removal of the existing tracks, ties, and other track materials for bypassed or abandoned track. NSR will furnish, install and remove all grade crossing signals, gates, and any related train control signals / communications systems. All materials removed for this Project within 25 feet of the centerline of any existing, abandoned, or future tracks shall remain the property of NCRR and / or NSR. The Design Build Team shall assume no credit for the removed materials in their Price Proposal.

The Design-Build Team shall be responsible for all costs incurred by the Railroad Owner and Railroad Operator associated with this project to include, but not be limited to, plan reviews, Railroad furnished materials, signals and communications work, track and related construction by the Railroad or its representative(s), required insurances, and railroad flagging. The Railroad Owner and Railroad Operator will not incur cost, and, except as provided in the Temporary Right of Entry dated April 4, 2000 (as extended and supplemented), between the Railroad Owner, Railroad Operator and NCDOT, the Design Build Team shall not enter into or onto the NCRR rail corridor until an Agreement is executed, insurance requirements are met, and the Railway receives written authorization to incur cost.

The Design-Build Team shall be responsible for acquisition for the Department of any right of way / easement necessary to provide NCRR a minimum 100 foot width each side of the center point of the proposed tracks including the third track. The right of way / easement width shall be increased as may be necessary to maintain all railroad drainage, structures, outfalls, ditches, slopes and provide equipment access for future maintenance thereof within the railroad corridor unless otherwise approved by the Railroad Owner. NCRR does not intend to dispose of any existing right of way / easement that may be outside the 200-foot minimum width.

Preparation for Construction within the Existing NCRR Corridor, operated by NSR

I. The Design-Build Team shall comply with the following applicable documents, unless noted otherwise elsewhere in this RFP and / or a design exception is received from NSR, NCRR and NCDOT via the NCDOT's Transportation Program Management Director:

A. *AREMA Manual for Railway Engineering,* latest edition

HYDRAULICS SCOPE OF WORK (2-3-14)

Project Details

- The Design-Build Team shall employ a private engineering firm to perform hydraulic design for all work required under this contract. The private engineering firm must be prequalified for hydraulic design work under the Department's normal prequalification procedures prior to the Technical Proposal submittal date.

- The Design-Build Team shall hold a pre-design meeting with the Transportation Program Management Director and Hydraulic Review Engineer upon acceptance of the Preliminary Roadway Plans developed by the Design-Build Team.

- The Design-Build Team shall design all storm drainage systems using Geopak Drainage.

- The Design-Build Team shall design and install I-85 median drainage that accommodates a future managed travel lane in each direction (additional 16-foot width in each direction) that drains to the median.

- The Design-Build Team shall construct bicycle-safe drainage grates, as identified in the January 1994 *North Carolina Bicycle Facilities Planning and Design Guidelines*, along all bicycle accommodations defined in the Roadway Scope of Work found elsewhere in this RFP.

- Throughout the project limits, the Design-Build Team shall hydraulically and structurally analyze all existing box culverts and pipes within the existing / proposed right of way. Based on these analyses, the following shall be adhered to:

    - The Design-Build Team shall provide the appropriate mitigation for all hydraulically deficient box culverts and / or pipes. The Design-Build Team shall identify all hydraulically deficient box culverts and / or pipes and their proposed mitigation in the Technical Proposal.

    - The Design-Build Team shall remove and replace all existing metal storm drain pipes that have any segment (top of pipe) within eight feet of the top of the I-85 existing / proposed subgrade. The cover on all replacement pipes shall adhere to the appropriate NCDOT pipe class and cover requirements. For pipes that are entirely below eight feet of the top of the I-85 existing / proposed subgrade, regardless of the existing pipe slope, the Design-Build Team will not be required to remove or replace existing metal cross pipes that are found to be hydraulically and structurally adequate.

    - As directed by the Engineer, the Design-Build Team shall provide the appropriate mitigation for all structurally deficient box culverts and / or pipes. Mitigation, for structural deficiencies in box culverts and / or pipes, including but not limited to all repairs, will be paid for as extra work in

8. Maintain access to all residences, schools, bus stops, mass transit facilities (park and ride lots), emergency services and businesses at all times.

9. Traffic traveling in the same direction shall not be split (i.e. separation by any type of barrier, bridge piers, existing median, etc.).

10. Prior to incorporation, obtain written approval from the Engineer for all road closures.

11. The Design-Build Team shall maintain access to the rest areas at all times.

12. The Design-Build Team will be allowed to utilize an offsite detour for the Centergrove Road and Brantley Road construction. The Design-Build Team shall not concurrently close Centergrove Road and Brantley Road.

    As permitted under Intermediate Contract Time #8, the Design-Build Team will be allowed to utilize an off-site detour for construction of the Winecoff Road roundabout and western terminus tie-in.

    Other offsite detours will only be permitted to the extent allowed under Intermediate Contract Times #4, #5 and #6 herein and as warranted below. Prior to incorporation, all offsite detour routes shall receive Department written approval and adhere to the following requirements:

    - The Design-Build Team shall be responsible for investigating all detour routes, including but not limited to, analyzing traffic capacity, investigating impacts to emergency services and schools, analyzing design characteristics to ensure the design supports the traffic volumes and investigating pavement structural adequacy, including but not limited to bridge postings on the detour route.

    - The Design-Build Team shall determine and provide improvements required to accommodate detoured traffic prior to utilizing detour routes.

    - Offsite detours that have non-signalized at-grade railroad crossings shall not be allowed.

    - The Design-Build Team shall include all proposed offsite detours in the Technical Proposal, providing justification for using such detours along with duration. Possible detour warrants could include, but are not limited to, road closures due to substandard horizontal or vertical clearance limits, grade changes at tie-in locations and oversize and / or overweight limits.

    - Submit the detour route and all associated sign designs for review and acceptance prior to incorporation.

    - Unless approved in writing by the City of Concord and / or Kannapolis, use only State maintained roads for offsite detour routes.

13. On all roadways within the project limits, the Design-Build Team shall provide safe access for wide-loads and oversized permitted vehicles through the work zone. Safe access shall entail, but is not limited to, a sufficient pavement structure (Reference the Pavement Management Scope of Work found elsewhere in this RFP), required vertical clearance and minimum clear zone widths as follows:

18. Except as allowed by Intermediate Contract Times #1, #4 and #7 below, the I-85 collector-distributor roads, and / or the loops connected to the collector-distributor roads, shall not be closed prior to making modifications to the existing interchange configuration that adhere to the following:

    - The Design-Build Team shall provide a traffic analysis for the Department's review and approval. At a minimum, this traffic analysis shall verify that the interchange modifications provide the required capacity, including but not limited to turn lane storage lengths and traffic signal modifications, upon closure of the I-85 collector-distributor roads and / or loops connected to the collector-distributor roads. (Reference the ITS & Signals Scope of Work found elsewhere in this RFP)
    - Based on the aforementioned traffic analysis recommendations, the Design-Build Team shall design and construct these interchange modifications such that all movements are fully operational and open to traffic. (Reference the Roadway Scope of Work found elsewhere in this RFP)

19. An at-grade railroad crossing shall remain operational on Winecoff School Road until the Winecoff School Road realignment and grade separation are fully operational. The Design-Build Team will be allowed to permanently close and remove the South Ridge Avenue bridge over I-85 prior to the Winecoff School Road realignment and grade separation becoming operational. (Reference the Railroad Coordination and Structures Scopes of Work found elsewhere in this RFP)

B. Transportation Management Plan Requirements

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience designing and sealing Transportation Management Plans for the North Carolina Department of Transportation (NCDOT) on comparable projects. The Design-Build Team shall list projects in the Technical Proposal, including description and similarity to the subject project, that the PEF developed Transportation Management Plans.

The Design-Build Team shall develop Transportation Management Plans that maintain all types of traffic (motorists, bicyclists, greenways and pedestrians within the highway, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) as defined by the *Manual for Uniform Traffic Control Devices (MUTCD).*

The Transportation Management Plans shall adhere to the "*Design-Build Submittal Guidelines"* and the "*Guidelines for Preparation of Traffic Control Plans for Design-Build Projects"*, which by reference are incorporated herein and are a part of the contract. These documents are available on the Design-Build website.

The Work Zone Traffic Control web site contains useful information that may be needed for the design of the Transportation Management Plans.

https://connect.ncdot.gov/projects/WZTC/Pages/default.aspx

The Staging Concept shall meet the contract requirements and be accepted by the Department before the first phase can be submitted. Construction shall not begin until the first phase submittal meets the contract requirements and is accepted by the Department. Construction shall not begin on subsequent phase submittals until they meet the contract requirements and are accepted by the Department. Any changes to the Staging Concept after acceptance shall require a submittal for review prior to any future phasing submittals. All submittals shall follow the 2012 *NCDOT* Roadway Standard Drawings, NCDOT 2012 *Standard Specifications for Roads and Structures,* the *Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects, Manual for Uniform Traffic Control Devices* and the *Design-Build Submittal Guidelines.*

II. Project Operations Requirements

The following are Time Restrictions and notes that shall be included with the Traffic Control Plans General Notes, unless noted otherwise elsewhere in this RFP:

A. Time Restrictions

1. Intermediate Contract Time #1, #2 and #3 for Lane Narrowing, Lane Closure, Holiday and Special Event Restrictions.

As a minimum, the Design-Build Team shall maintain existing traffic patterns and shall not close or narrow a lane during the times below. When traffic is placed into the final traffic pattern for any roadway, that shall become the minimal traffic pattern and the following time restrictions shall still apply.

Road Name	Day and Time Restrictions
I-85 (including ramps / loops and collector – distributor roads)	Monday through Sunday 6:00 a.m. to 9:00 p.m.
South Main Street and South Ridge Avenue	Monday through Friday 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 7:00 p.m.
Winecoff School Road	Monday through Friday 6:00 a.m. to 9:00 a.m. and 1:45 p.m. to 7:00 p.m. - School Days / 3:00 p.m. to 7:00 p.m. - Non-School Days
US 29 / US 601	Monday through Friday 6:00 a.m. to 9:00 p.m. Saturday and Sunday 9:00 a.m. to 9:00 p.m.

hours of 6:00 a.m. the Thursday before Independence Day and 9:00 p.m. the Tuesday after Independence Day.

(e) For Labor Day, between the hours of 6:00 a.m. the Friday before Labor Day to 9:00 p.m. the Wednesday after Labor Day.

(f) For Thanksgiving, between the hours of 6:00 a.m. the Tuesday before Thanksgiving to 9:00 p.m. the Tuesday of the following week.

(g) For Christmas, between the hours of 6:00 a.m. the Friday before the week of Christmas Day and 9:00 p.m. the following Tuesday after the week of Christmas Day.

(h) For any NASCAR event at the Charlotte Motor Speedway, between the hours of 6:00 a.m. the Wednesday before the 1st track event until 9:00 p.m. the day after the last track event.

(i) For any Carolina Panthers game played in Charlotte, from five (5) hours before the game to five (5) hours after the game.

Liquidated Damages for Intermediate Contract Time #1 for the above lane narrowing, lane closure, holiday and special event time restrictions for I-85, I-85 ramps / loops, I-85 collector-distributor roads and US 29 / US 601 are $2,500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #2 for the above lane narrowing, lane closure, holiday and special event time restrictions for South Main Street, Winecoff School Road, Lake Concord Road / Branchview Drive (NC 3), Dale Earnhardt Boulevard / Copperfield Boulevard and Roxie Street are $750.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time # 3 for the above lane narrowing, lane closure, holiday and special event time restrictions for Lane Street and South Ridge Avenue are $500.00 per 15-minute period or any portion thereof.

2. Intermediate Contract Time #4, #5 and #6 for Road Closure Restrictions for Construction Operations

Unless allowed otherwise elsewhere in this RFP, at a minimum, the Design-Build Team shall maintain the existing traffic pattern for all roadways and follow the road closure restrictions listed below. When a road closure is used, the Design-Build Team shall reopen the travel lanes by the end of the road closure duration to allow the traffic queue to deplete before re-closing the roadway.

Unless allowed otherwise elsewhere in this RFP, the Design-Build Team shall 1) not close any direction of travel for the following roads or any ramps / loops during

Liquidated Damages for Intermediate Contract Time #4 for the above road closure time restrictions for I-85, I-85 ramps / loops, I-85 collector-distributor roads and US 29 / US 601 are $5,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #5 for the above road closure time restrictions for South Main Street, Winecoff School Road, Lake Concord Road / Branchview Drive (NC 3), Dale Earnhardt Boulevard / Copperfield Boulevard and Roxie Street are $1,500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time # 6 for the above road closure time restrictions for Lane Street and South Ridge Avenue are $1,000.00 per 15-minute period or any portion thereof.

3. **Intermediate Contract Time #7 for Continuous Weekend Road Closure Time Restrictions for US 29 / US 601 Ramp / Loop Reconstruction**

   One ramp / loop closure, with an approved offsite detour, will be permitted for the reconstruction of each ramp and loop at the US 29 / US 601 interchange for no more than 58 consecutive hours beginning on Friday at 8:00 p.m. and ending on Monday at 6:00 a.m. The Design-Build Team shall not concurrently close the entrance and exit ramp / loop in the same direction within the interchange. The Design-Build Team shall not close any ramps or loops at interchanges adjacent to the US 29 / US 601 ramp / loop undergoing reconstruction.

   Liquidated Damages for Intermediate Contract Time #7 for the above continuous weekend road closure time restrictions for the US 29 / US 601 ramp / loop reconstruction are $5,000.00 per 15-minute period or any portion thereof.

4. **Intermediate Contract Time #8 for 60-Day Continuous Road Closure Restriction for Winecoff School Road Construction Operations**

   Closure of Winecoff School Road, with an approved offsite detour, will be permitted for construction of the Winecoff Road roundabout and western terminus tie-in for no more than 60 consecutive calendar days and **ONLY** when school is not in session at Winecoff Elementary School. The Design-Build Team shall not concurrently close Winecoff School Road and South Main Street.

   Liquidated Damages for Intermediate Contract Time #8 for the above 60-day continuous road closure time restriction for Winecoff School Road are $5,000.00 per day or any portion thereof.

Hauling Restrictions

The Design-Build Team shall adhere to the hauling restrictions noted in the NCDOT 2012 *Standard Specifications for Roads and Structures*.

The Design-Build Team shall conduct all hauling operations as follows:

- The Design-Build Team shall not conduct any hauling operations against the flow of traffic of an open travelway unless an approved temporary traffic barrier or guardrail separates the traffic from the hauling operation.
- The Design-Build Team shall not haul during the holiday and special events time restrictions listed in Intermediate Contract Time #1, #2 and #3, unless the hauling

operation occurs completely behind temporary traffic barrier or guardrail and does not impact traffic operations.

- All entrances and exits for hauling to and from the work zone shall conform to the 2012 Roadway Standard Drawings. All hauling entrances, exits and crossings shall be shown on the Transportation Management Plan.
- Haul vehicles shall not enter and / or exit an open travel lane at speeds more than 10 mph below the posted speed limit.
- A hauling access point to the I-85 median will be allowed at the north end and south end of the project. The Design-Build Team shall coordinate additional hauling access points to the I-85 median with the Division, who has final approval of the locations selected.
- Hauling operations that perpendicularly cross a roadway shall require Transportation Management Plans and are subject to the time restrictions, and holiday, holiday weekend and special event time restrictions listed in ICT #1, # 2 and #3.
- Single vehicle hauling and multi-vehicle hauling shall not be allowed ingress and egress from any open travel lane during the following time restrictions. The following hauling time restrictions apply only where egress and / or ingress occur between the work area and any travel lane of the roads noted below. Hauling operations that are conducted entirely behind a temporary traffic barrier or guardrail are allowed at all times and excluded from the following time restrictions:

For Single Vehicle Hauling

Road Name	Day and Time Restrictions
I-85, including all ramps / loops and collector-distributor roads	Monday through Friday 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

For Multi-Vehicle Hauling

Road Name	Day and Time Restrictions
I-85, including all ramps / loops and collector-distributor roads	Monday through Friday 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.
South Main Street, South Ridge Avenue, US 29 / US 601, Lake Concord Road / Branchview Drive (NC 3), Dale Earnhardt Boulevard / Copperfield Boulevard, Roxie Street and Lane Street	Monday through Friday 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.
Winecoff School Road	Monday through Friday 7:00 a.m. to 9:00 a.m. and 1:45 p.m. to 6:00 p.m. - School Days / 4:00 p.m. to 6:00 p.m. - Non-School Days

UTILITIES SCOPE OF WORK (2-4-14)

The Design-Build Team shall obtain the services of a Private Engineering Firm (PEF) knowledgeable in the NCDOT Utility Coordination Process involved with utility relocation / installation and highway construction. The Design-Build Team shall be responsible for coordinating all utility relocations, removals, and / or adjustments where the Design-Build Team and Utility Company, with concurrence from the Department, determine that such work is essential for highway safety and performance of the required highway construction. Coordination shall be for all utilities whether or not they are specifically identified in this scope of work and shall include any necessary utility agreements when applicable. NCDOT will be the approving authority for all utility agreements and approval of plans.

Cost Responsibility

The Design-Build Team shall be responsible for the relocation of water and sewer facilities as described in the Water and Sewer section of this scope of work.

The NCDOT will be responsible for all non-betterment utility relocation cost when the utility company has prior rights of way / compensable interest. The utility company shall be responsible for the relocation costs if they can not furnish evidence of prior rights of way or a compensable interest in their facilities. The Design-Build Team shall be responsible for verifying / determining the cost responsibility (prior rights and compensable interest) for the utility relocations. The Design-Build Team shall be responsible for all costs associated with utility relocations due to haul roads and / or any other temporary conditions resulting from the Design-Build Team's methods of operation or sequence of work.

Project Details

The Design-Build Team shall be responsible for verifying the utility locations, type of facilities, and identifying the utility owners in order to coordinate the relocation of any utilities, known and unknown, in conflict with the project. The following utilities are known to be located within the project construction limits:

Utility Owner	Utility Type	Cost Responsibility
Duke Energy	Power / Transmission	NCDOT (Prior Rights)
Duke Energy	Power / Distribution	NCDOT (Prior Rights)
AT&T	Aerial & Buried Telephone	NCDOT (Aerial-Prior Rights)
Sprint/Nextel	Telecommunication	Utility Owner
City of Kannapolis	Water / Sewer/ Pump Station	Utility Owner
City of Concord	Water	Utility Owner
Piedmont Natural Gas	Natural Gas	Utility Owner
City of Concord	Power	NCDOT (Prior Rights)
Windstream Communications	Telecommunication	Utility Owner
PSNC	Natural Gas	Utility Owner
Time Warner Cable	Cable	Utility Owner
Water and Sewer Authority of Cabarrus County	Water / Sewer	NCDOT (GS136-27.1)
NCDOT	Water / Sewer (Rest Areas)	NCDOT

Water and Sewer

The Design-Build Team shall be responsible for relocating the City of Concord, the City of Kannapolis, and the Cabarrus County Water and Sewer Authority facilities impacted by the project's construction and as required herein, including design, permitting and construction. The Design-Build Team shall include all costs for design, permitting and construction of these facilities, including but not limited to the replacement and / or relocation of all backflow preventers, in their lump sum bid for the entire project.

The Design-Build Team shall submit permits directly to the agencies and obtain approval from the agencies. The Design-Build Team shall be responsible for all permit fees.

The Design-Build Team shall be responsible for submitting five (5) sets of 11 x 17 utility construction drawings to the State Utility Agent, via the Transportation Program Management Director, for further handling. Each set shall include a title sheet, plan sheets, profiles and special provisions if required. The necessary Utility Agreement with the City of Concord, and the City of Kannapolis, for reimbursement to the NCDOT, shall be a two party agreement between the NCDOT and the City of Concord, and / or the City of Kannapolis; and will be negotiated and executed by the Department. The necessary Use and Occupancy Agreement with Cabarrus County Water and Sewer Authority and the NCDOT shall be developed and executed by the Department unless betterment is developed as part of the relocation. If so, a Utility Agreement shall be executed by the Department with the Cabarrus County Water and Sewer Authority.

The Design Build Team shall remove and dispose of all existing water facilities located within the I-85 right of way that serve the existing rest areas. The Design-Build Team shall provide water service, consisting of a minimum six-inch water line, to the rest areas from municipal facilities that are capable of consistently supplying 50 psi water pressure and are located completely outside the I-85 right of way. Within the rest area property, all water lines installed under existing paved surfaces shall be installed using boring construction methods. The Design Build Team shall install one fire hydrant at each rest area. Prior to the Design-Build Team developing the fire hydrant designs, the Design-Build Team shall obtain written approval of the fire hydrant locations from the Resident Engineer.

The Design Build Team shall remove and dispose of all abandoned forced main sewer facilities located within the I-85 right of way that previously served the rest areas (between Concord Lake Road / NC 3 and the rest area sewage pump station). If any other existing sanitary sewer facilities located with the I-85 right of way that serve the rest areas are impacted by the Design-Build Team's design and / or construction methods, the Design-Build Team shall remove and dispose of the existing sanitary sewer facilities and provide sanitary service to the rest areas from municipal facilities that are located completely outside the I-85 right of way.

The Design-Build Team shall not interrupt water or sanitary sewer service to the rest areas at any time.

fabricating, locating and installing all Type E (warning and regulatory signs) and Type F signs (route marker assemblies).

The Design-Build Team will not be required to provide additional truck restriction signing for the Copperfield Boulevard interchange.

The Design-Build Team shall design, fabricate and install milemarkers every **0.2-mile** on the mainline. Each milemarker location shall have two milemarkers, mounted back to back on one barrier sign support assembly anchored to the mainline concrete median barrier. The milemarker designs shall be in accordance with the Intermediate Enhanced Reference Location Signs (D10-5) referenced in the *Standard Highway Signs* (2004 Edition and the 2012 Supplement to the 2004 Edition) and the NCDOT Roadway Standard Drawing No. 903.3. The aforementioned revised Roadway Standard Drawing may be referenced on the website noted below:

https://connect.ncdot.gov/resources/safety/Pages/Signing-and-Delineation.aspx

The Design-Build Team shall install 30" x 36" Chevron Alignment signs along all interchange loops and, as necessary, on ramps. The Design-Build Team shall install all Chevron Alignment signs on two u-channel posts that are spaced 24" apart. The Design-Build Team shall adhere to the Chevron Alignment sign height, spacing and orientation requirements specified in the MUTCD.

All sign designs shall be included in the Signing Plans. All sign designs shall be prepared using the latest version of GuideSign software. Refer to the Signing and Delineation Unit's main website below located under Private Engineering Firm by clicking on Seed Files (guidsign_english.dgn) for the latest GuidSign updates:

https://connect.ncdot.gov/resources/safety/Pages/Signing-and-Delineation.aspx

Logo Signs

The Design-Build Team will not be responsible for designing, locating or installing any new Logo Signs (blue service signs with specific business panels).

Prior to project completion, the Design-Build Team shall relocate and / or replace all existing Logo Signs located within the project limits on the Design-Build Proposal submittal date.

Sign Maintenance

The Design-Build Team shall maintain all existing signs during construction, including temporary installations of Guide and Logo Signs on supports to ensure signs are properly maintained and visible during project construction. The Design-Build Team shall be responsible for designing and installing all temporary sign supports. If damage occurs to the Logo Signs or the business panels during construction or installation, the Design-Build Team shall immediately notify the Division Logo Coordinator. The Design-Build Team shall replace all Logo Signs and / or Logo business panels that are damaged during construction. If the Logo Signs are replaced, the Design-Build Team shall remove the business panels and return them to the Division Logo Coordinator. During project construction, the Design-Build Team shall maintain the Logo Signs order of preference in accordance with the MUTCD Section 2J.01.

Temporary Signs

The Design-Build Team shall be responsible for the design, fabrication and installation of all temporary signs and supports. (Reference the Signing Requirements Section of the Transportation Management Scope of Work found elsewhere in this RFP for additional temporary signing requirements.)

Sign Locations

The Design-Build Team shall be responsible for determining the station locations for all signs. To avoid sign placement in locations where their usefulness will be short- lived, the Design-Build Team shall coordinate the proposed sign designs and locations with the Department.

Ground Mounted Supports

Unless otherwise approved by the Engineer, ground mounted signs on a freeway or expressway, with breakaway or yielding supports, shall be located a minimum of 30 feet from the edge of the outside travel lane to the nearest edge of the sign. All other ground mounted signs on a freeway or expressway shall be positively protected.

** NOTE ** Deleted bullet on exit gore signs

NCDOT will provide the software for ground mounted sign support designs. The Design-Build Team shall be responsible for all design, fabrication and installation of ground mounted supports and signs. Instructions for loading support design software will be made available upon request.

The Design-Build Team shall design, fabricate and install ground mounted sign supports in accordance with the revised NCDOT Roadway Standard Drawing 903D10, Sheet 2 of 3, dated March 8, 2012. The aforementioned revised Roadway Standard Drawing may be referenced on the website noted below:

https://connect.ncdot.gov/resources/safety/Pages/Signing-and-Delineation.aspx

Overhead Sign Assemblies

The Design-Build Team shall install signs on overhead sign assemblies in accordance with the following requirements:

- All primary guide signs on facilities that have three or more lanes per direction shall be installed on an overhead sign assembly.
- The Design-Build Team shall install the northbound Lane Street exit directional sign and advance lane drop signing on a full span overhead sign assembly.

The Design-Build Team shall replace all existing overhead sign structures that span one mainline direction of travel (extend from the outside edge of pavement to the median) and are located where concrete median barrier is proposed.

SR 1008 (South Main Street) – 1 Proposed Signal		
Signal Number	**Intersection Description**	**Work Requirements**
10-2166	SR 1008 (South Main Street) at Connector Road	The Design-Build Team shall design and install a new, fully actuated traffic signal at these locations. They shall include a 2070L controller. The cabinets shall include auxiliary output files, closed loop system detectors and system interconnection equipment. Vehicle detection, as noted above, shall be maintained for all movements throughout the life of the project. The Design-Build Team shall use **wood poles** as signal supports. This traffic signal shall be fully operational prior to opening the intersection to traffic. Existing pedestrian signal facilities shall be maintained / operational throughout construction, including but not limited to during all temporary signal phases. The Design-Build Team shall provide pedestrian signal heads at each approach with existing or proposed sidewalk. Prior to installation, the Division Traffic Engineer shall approve all pedestrian pushbutton locations in the field. **This signal shall be interconnected into the Concord City Signal System.** (Reference Section III for signal communication requirements)

SR 1008 (South Main Street) – 1 Signal Removal		
Signal Number	**Intersection Description**	**Work Requirements**
10-0581	SR 1008 (South Main Street) at SR 1790 (Winecoff School Road)	As required by the Design-Build Team's Transportation Management Plan, the Design-Build Team shall modify this existing traffic signal to match all temporary construction phasing. The Design-Build Team shall remove this existing traffic signal. Prior to removal, the Design-Build Team shall coordinate with the NCDOT Division Traffic Engineer and the NCDOT Regional Traffic Engineer. The Design-Build Team shall return the traffic signal controller, cabinet, including all contents, and signal heads to the Division 10 Traffic Services Office located at 903 Coble Avenue, Albemarle, NC 28001. The Design-Build Team shall dispose of and / or retain ownership of all other traffic signal equipment.

SR 2180 (Lane Street) – 1 Signal Removal		
Signal Number	**Intersection Description**	**Work Requirements**
10-1992	SR 2180 (Lane Street) at I-85 NB Ramps	As required by the Design-Build Team's Transportation Management Plan, the Design-Build Team shall modify this existing traffic signal to match all temporary construction phasing. The Design-Build Team shall remove this existing traffic signal. Prior to removal, the Design-Build Team shall coordinate with the NCDOT Division Traffic Engineer and the NCDOT Regional Traffic Engineer. The Design-Build Team shall return the traffic signal controller, cabinet, including all contents, Wavetronix Detection and signal heads to the Division 10 Traffic Services Office located at 903 Coble Avenue, Albemarle, NC 28001. The Design-Build Team shall dispose of and / or retain ownership of all other traffic signal equipment.

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC140090 01/03/2014 NC90

Z-90

Date: January 3, 2014

General Decision Number: NC140090 01/03/2014 NC90

Superseded General Decision Numbers: NC20130090

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Anson
Cabarrus
Gaston
Mecklenburg
Union

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, railroad construction, bascule, suspension and spandrel arch bridges designed for commercial navigation, bridges involving marine construction, and other major bridges).

Modification Number	Publication Date
0	01/03/2014

SUNC2011-071 09/16/2011

	Rates	Fringes
CARPENTER (Form Work Only)	14.70	
CEMENT MASON/CONCRETE FINISHER		
Anson, Cabarrus, and Gaston Counties	12.87	
Mecklenburg County	12.62	
Union County	12.75	
INSTALLER (Guardrail) (includes Guardrail/Post Driver Work)	11.16	
IRONWORKER (Reinforcing)	14.88	
LABORER		
Asphalt, Asphalt Distributor, Raker, and Spreader	11.78	
Common or General		
Anson and Cabarrus Counties	11.14	
Gaston County	10.63	
Mecklenburg County	11.55	
Union County	10.32	
Concrete Saw	14.26	
Landscape	10.35	
Luteman	12.88	
Mason Tender (Cement/Concrete)	11.25	
Pipelayer	12.93	
Traffic Control (Cone Setter)	12.53	
Traffic Control (Flagger)	9.99	

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC140096_01/03/2014_NC96

Z-96

Date: January 3, 2014

General Decision Number: NC140096 01/03/14 NC96

Superseded General Decision Numbers: NC20130096

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Bladen	Lee	Robeson
Cleveland	Lenoir	Rowan
Columbus	Lincoln	Sampson
Davidson	Montgomery	Scotland
Duplin	Moore	Stanly
Harnett	Richmond	Wilson
Iredell		

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, railroad construction, bascule, suspension and spandrel arch bridges designed for commercial navigation, bridges involving marine construction, and other major bridges).

Modification Number	Publication Date
0	01/03/2014