~ CITY OF RALEIGH ~

DEPARTMENT OF TRANSPORTATION/ROADWAY DESIGN & CONSTRUCTION

OWNER'S CRITERIA

PROGRESSIVE DESIGN-BUILD PROJECT

PROJECT # ES 2026-06

ALT. DELIVERY SIDEWALK BUNDLE NO. 1

DATE AND TIME OF PROPOSAL OPENING:	May 26, 2026, 9:00am
CONTRACT ID:	XX
ROUTES:	Fox Rd., Lead Mine Rd., North Hills Dr., Pecan Rd., Wade Ave.
LOCATIONS:	See Locations Exhibit
TYPE OF WORK:	PROGRESSIVE DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK

NOTICE:

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS $40,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE PROPOSER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

_____ 5% BID BOND OR BID DEPOSIT REQUIRED

_____ XX

PROPOSAL FORM FOR THE PROGRESSIVE DESIGN-BUILD

CONSTRUCTION OF CONTRACT NO. XXXXX

IN THE CITY OF RALEIGH, NORTH CAROLINA

DATE_____ 20_____

CITY OF RALEIGH ROADWAY DESIGN & CONSTSRUCTION

The Design-Build Team herein acknowledges that it has carefully examined the location of the proposed work to be known as Contract No. xxxxxx; has carefully examined the Final Request for Qualifications (RFQ) and all addendums thereto, specifications, special provisions, the form of contract, and the forms of contract payment bond and contract performance bonds, which are acknowledged to be part of the Contract; and thoroughly understands the stipulations, requirements, and provisions. The undersigned Design-Build Team agrees to be bound upon their execution of the Contract and including any subsequent award to them by the City in accordance with this Contract to provide the necessary contract payment bond and contract performance bond within fourteen calendar days after the written notice of award is received by them.

The undersigned Design-Build Team further agrees to provide all necessary materials, machinery, implements, appliances, tools, labor, and other means of construction, except as otherwise noted, to perform all the work and required labor to design, construct and complete all the work necessary for City of Raleigh Contract No. xxxxx by no later than the dates(s) specified in the Final RFP or Technical Proposal, whichever is earlier, and in accordance with the requirements of the Engineer, the Final RFP and Addenda thereto, the 2024 Standard Specifications for Roads and Structures (Standard Specifications), specifications prepared by the Department, the Technical Proposal prepared by the Design-Build Team, at the lump sum price(s) bid by the Design-Build Team in their Proposal.

The Design-Build Team shall provide signed and sealed documents prepared by the Design-Build Team, which specifications and plans show the details covering this project and adhere to the items noted above.

The Design-Build Team acknowledges that project documents furnished by the City are preliminary and provided solely to assist the Design-Build Team in the development of the project design. Unless noted otherwise herein, the City does not warrant or guarantee the sufficiency or accuracy of any information furnished by the City.

The City does not warrant or guarantee the sufficiency or accuracy of any investigations made, nor the interpretations made or opinions of the City as to the type of materials and conditions to be encountered at the project site. The Design-Build Team is advised to make such independent investigations, as they deem necessary to satisfy their self as to conditions to be encountered on this project. The Design-Build Team shall have no claim for additional compensation or for an extension of contract time for any reason resulting from the actual conditions encountered at the site differing from those indicated in any of the

information or documents furnished by the City except as may be allowed under the provisions of the Standard Specification.

Although the City has furnished preliminary screening for this project, unless noted otherwise herein, the Design-Build Team shall assume full responsibility, including liability, for the project design, including the use of portions of the City design, modification of such design, or other designs as may be submitted by the Design-Build Team.

The Design-Build Team shall be fully and totally responsible for the accuracy and completeness of all work performed under this contract, and shall indemnify and hold the City harmless for any additional costs and all claims against the City or the State which may arise due to errors or omissions of the City in furnishing the preliminary project designs and information, and of the Design-Build Team in performing the work.

The published volume entitled North Carolina Department of Transportation, Standard Specifications for Roads and Structures, January 2024, as well as, all design manuals, policy and procedures manuals, and AASHTO publications and guidelines referenced in the Request For Proposals, with all amendments and supplements thereto, are by reference, incorporated and made part of this contract; that, except as herein modified, all the design, construction and Construction Engineering Inspection included in this contract shall be done in accordance with the documents noted above and under the direction of the Engineer.

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GUIDANCE DOCUMENTS

Proposed Guidelines outside of discipline-specific guidelines, manuals and documents

- City of Raleigh Standard Drawings
- Where the contract documents reference approval, coordination, communication, review or other interaction with the "City", the intent is for the subject approval, coordination, etc. to be through the City's Project Manager and the City's Owner Advisor for this contract. Other approvals of submittals or construction will not be considered, unless otherwise noted, and approved by the team listed above in this bullet point.
- City of Raleigh Unified Development Ordinance (UDO). (https://udo.raleighnc.gov/)
- NCDOT Standard Specifications for Road and Bridge Construction
- City of Raleigh Standard Specifications

ROADWAY SCOPE OF WORK

Project Details

- The project is comprised of the design and construction of the following:
    - Fox Road - Construct sidewalk on the north side of Fox Road in the vicinity of Fox Road Elementary School between Jeffreys Creek Lane and Beaverwood Drive.
    - Lead Mine Road - Construct sidewalk on the west side of Lead Mine Road between Charles Drive and Sugar Bush Road.
    - North Hills Dr - Complete missing sidewalk gaps on the north side of North Hills Drive between Lead Mine Road and Hillock Drive (east end).
    - Pecan Rd - On Pecan Road, complete sidewalks gaps between existing transit stops and the sidewalks on south side of South Saunders Street and South Wilmington Street.
    - Wade Ave - Complete sidewalk gaps on the north side of Wade Avenue between St. Mary's St. and Williamson Dr.

- Unless noted otherwise in this RFP/Owner's Criteria, the Design-Build Team shall design and construct the facilities listed above, providing the same or better access, widening, improvements and traffic measures of effective ness, in the City's sole discretion, included in the descriptions above, and as detailed in scope clarification meeting minutes as approved by the City and its Advisor.

- The sidewalks and all other facilities included in this project shall be designed and constructed in accordance with:
    - City of Raleigh Street Design Manual v. 2.0
    - City of Raleigh Complete Streets Policy
    - 2018 AASHTO A Policy on Geometric Design of Highways and Streets.
    - 2011 AASHTO Roadside Design Guide, 4th edition
    - Federal Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way
    - Raleigh Water – Public Utility Design Manual – 2025 Edition
    - City of Raleigh Stormwater Design Manual

- Unless noted otherwise elsewhere in this RFP, the maximum allowable cut and fill slope shall be 2:1. (Reference the Geotechnical Engineering Scope of Work found elsewhere in this RFP).

- The Design-Build Team shall design and construct exit widths and curbs to accommodate the design vehicle path within the curb lines.

- Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design and construct all facilities, providing the same or better access, widening, improvements and traffic measures of effectiveness, in the City's sole discretion, included in the Owner's Criteria and contract documents, and as detailed in scope clarification meeting minutes as approved by the City and its Advisor. The limits of construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.

- Excluding modifications included in the included in the Owner's Criteria and contract documents, and as detailed in scope clarification meeting minutes as approved by the City and its Advisor, the Design-Build Team shall coordinate with, and obtain written approval from, the Engineer and any / all Municipalities for horizontal alignment revisions to City streets. The City will not honor any request for additional contract time or compensation for any efforts required to obtain the aforementioned approval(s), including but not limited to public involvement, additional design effort, additional construction effort, and/or additional environmental agency coordination and approval.

- For all intersection design modifications, the Design-Build Team shall provide a traffic analysis that adheres to the March 25, 2022, NCDOT Congestion Management Capacity Analysis Guidelines for the City's review and acceptance.

- For all roadway designs provide adequate width and pavement widening for curves based on the design vehicle and AASHTO guidance.

- The Design-Build shall not modify existing vehicular use facility geometric design unless approved by the City.

- The Design-Build Team shall bring to the City's attention any deviations from the existing control of access and / or right of way. The proposed control of access and / or right of way limits may deviate in proximity to cultural, historic, or otherwise protected landmarks, including cemeteries, to eliminate / minimize impacts. Prior to negotiating right of way, easements and/or control of access with property owners, the City shall accept the Right of Way Plans developed by the Design-Build Team.

- Except as required elsewhere in this RFP and / or to eliminate a design exception, the Design-Build Team shall not further impact any cultural, historical or otherwise protected landmark or topographic feature beyond that described in Contract Documents provided by the City. Unless approved otherwise by the City, in writing, the Design-Build Team shall not acquire right of way, easements and / or control of access from a parcel with the aforementioned features unless shown unless approved by the City.

- Unless noted otherwise elsewhere in the contract documents, all berms shall be constructed to accommodate a minimum 5-ft sidewalk, and updated to reflect width per the City Street Design Manual based on context.

- Excluding the modifications required herein, the Design-Build Team shall inform the City, in writing of all proposed design revisions, including but not limited to the following:

    - After the City has reviewed and accepted the Design-Build Team's design submittals, the Design-Build Team shall inform the City, in writing, of any changes to previously reviewed submittals, including but not limited to changes to RFC Plans.

- The City prefers not to have design exceptions for the proposed facilities. Prior to requesting / incorporating a design exception into the Preliminary Roadway Plans developed by the Design-Build Team, the Design-Build Team must obtain prior conceptual approval from the City. If conceptual approval is obtained, the Design-Build Team shall be responsible for the development and approval of all design exceptions. A design exception will only be approved if the design exception request demonstrates, in the City's sole discretion, that a design exception is warranted and that it cannot be reasonably and / or feasibly eliminated.

- Prior to recording the Right of Way Plans, the Design-Build Team shall locate and install iron pins and caps with fiberglass right of way markers that delineate the proposed right of way for all parcels within the project limits.

  For all parcels, the Design-Build Team shall locate and install metal caps with xxx.

  The Design-Build Team shall replace all existing right of way and permanent easement markers / monuments damaged and / or relocated during construction.

  The Design-Build Team will furnish the metal caps with fiberglass markers.

  For all parcels, the Design-Build Team shall locate and install iron pins and metal caps with fiberglass markers that delineate all proposed permanent easements within the project limits.

  The Design-Build Team shall replace all existing right of way and permanent easement markers / monuments damaged and / or relocated during construction.

- The Design-Build Team shall provide a Drainage Summary Sheet, Earthwork Summary Sheet, Guardrail Summary Sheet, (permanent and temporary), Shoulder Drain and Under Drain Summary Sheet, and Pavement Removal Summary Sheet in the Final Roadway Plans and RFC Roadway Plans.

- Outside the project limits, the Design-Build Team will not be allowed to use the NCDOT or City right of way and / or property for borrow or waste sites. Within the project limits, the Design-Build Team shall adhere to the following:

  ➢ Only clean waste material may be wasted within the City right of way or property.

➢ Excluding crushed concrete, debris shall not be buried within the City right of way or property.

➢ Normal grading operations shall occur, including but not limited to, grading to drain all existing embankments supporting removed roadway sections.

- Unless noted otherwise elsewhere in this RFP, all guardrail / guiderail placement shall be in accordance with the Standard Drawings and / or approved details in lieu of standards. Along all 3:1 fill slopes, constructed at fill heights that are equal to or greater than 12 feet, the Design-Build Team shall install guardrail. Along all fill slopes steeper than 3:1, constructed at fill heights that are equal to or greater than six feet, the Design-Build Team shall install guardrail. Excluding construction areas that consist solely of pavement marking obliterations / revisions, the Design-Build Team shall upgrade all existing guardrail in the construction limits in accordance with the aforementioned requirements.

  The guardrail / guiderail design shall be submitted for review with the Preliminary Roadway Plans submittal.

- Unless noted otherwise elsewhere in this RFP, the design speed for all roadways shall be the greater of the minimum design speed for the facility type, as specified in the 2018 AASHTO A Policy on Geometric Design of Highways and Streets, and 2019 Errata or the anticipated/actual posted speed plus five mph. If a speed limit is not physically posted on an existing facility, General Statues mandate the speed limit as 55 mph, resulting in a 60 mph design speed. If a speed limit is not physically posted on an existing facility, General Statutes mandate the speed limit as 35 mph, resulting in a 40 mph design speed.
- The City shall review and accept the Design-Build Team's Design Criteria prior to the Preliminary Roadway Plans submittal.

- Any variations in the City's proposed design and / or construction methods that nullify any decisions reached between the City and the environmental agencies; and / or require additional coordination with the environmental agencies shall be the sole responsibility of the Design-Build Team. The City will not allow any contract time extensions or additional compensation associated with any coordination or approval process resulting from design and / or construction modifications. (Reference the Environmental Permits Scope of Work found elsewhere in this RFP)

- The Design-Build Team shall retain, or design and construct a minimum of one driveway per parcel withing project limits. Properties with more than one pre-existing entrances should be preserved unless approved otherwise by the City during a design exception request.

- At all intersections, with existing / proposed pedestrian facilities, impacted by the Design-Build Team's design and / or construction methods, the Design-Build Team shall retrofit/upgrade all existing substandard curb ramps to current standards.

- The Design-Build Team shall provide an arborist duly licensed and certified with the State of North Carolina.

- The Design-Build Team shall identify the need for any special roadway design details (i.e. any special drainage structures, rock embankment, rock plating, special guardrail, retaining walls, concrete barrier designs, etc.) and shall provide special design drawings as well as operations and maintenance(O&M) manuals to the owner.

- At all locations with paved shoulders that extend beyond the typical width (e.g. to the face of single face barrier, guardrail, edge of expressway / shoulder berm gutter, etc.) or to existing pavement at tie-in points, the Design-Build Team shall taper the wider paved shoulder width to the typical paved shoulder width using an 8:1 taper. (Reference the Pavement Management Scope of Work found elsewhere in the contract documents.

- Excluding areas that could impact cultural, historic or otherwise protected landmarks, the City prefers that all berm widths behind curb and gutter shall be a minimum of ten feet. Thus, justification, in the City's sole discretion, shall be provided for all berm widths that are less than 10-foot outside the aforementioned areas.

- Shoulder berm gutter shall be installed in all fill sections with both guardrail and fill slopes steeper than 4:1, including but not limited to areas of guardrail replacement. Shoulder berm gutter shall not be installed in cut sections.

- Cut and fill slope transitions shall not exceed one increment (e.g. 3:1 to 4:1) per 50 feet where tying to existing topography does not control.

- The Design-Build Team shall design and construct horizontal and vertical curves at all Points of Intersection (PIs) on the horizontal and vertical alignments, respectively

City Information Supplied

- The City will not provide electronic surveys to the Design-Build Team(s). Any supplemental surveys, including but not limited to additional topography, existing and proposed roadway, structure sites,

underground and overhead utilities, existing and proposed drainage, wetland delineation, right of way, parcel names, and deed research and descriptions shall be the responsibility of the Design-Build Team to acquire and process. The Design-Build Team shall modify / incorporate boundary information used for the determination and valuation of property solely under the direct supervision of a Professional Land Surveyor registered in North Carolina. The Design-Build Team shall be responsible for confirming the location of the utilities and the type / size of facilities. All supplemental Subsurface Utility Engineering (SUE) work shall be the responsibility of the Design-Build Team.

- The City will provide information to the Design-Build Teams regarding public outreach that either has been performed, is currently underway, or will be performed prior to the development of the Design-Build Team's Guaranteed Maximum Price (GMP) submittal.

HYDRAULICS SCOPE OF WORK

Project Details

The Design-Build Team shall be required to perform the following:

- Attend a Hydraulic pre-design meeting prior to the first hydraulic submittal.
- Provide a Stormwater Management Plan using the most current City of Raleigh Best Management Practices/Green Stormwater Infrastructure where applicable.
- Provide Culvert Survey Report for work related to pipes with diameters of 48" and larger.
- All proposed drainage should maintain or increase the pre-storm event open area, and result in no increase to the existing Base Flood Elevation(s).
- Prepare the associated Permit Drawings as described in the Environmental Permits Scope of Work. All work resulting from the hydraulics and Permit Drawing reviews shall be the responsibility of the Design-Build Team.
- All drainage structures shall be located outside of wheel paths. If drainage inlets are located in the sidewalk or multi-modal infrastructure, the Design-Build Team shall ensure that grates are safe for use by foot traffic and bicycles.

General/Design Criteria

- City of Raleigh Stormwater Design Manual, Current Version and associated Documents

ENVIRONMENTAL PERMITS SCOPE OF WORK

General

The City will allow no direct contact between the Design-Build Team and representatives of the environmental agencies. No contact between the Design-Build Team and the environmental agencies shall be allowed either by phone, e-mail or in person, without representatives of the City's Environmental Officer present. A representative from the City shall be included on all correspondence.

Once the City has obtained the applicable permits based upon the approved Design-Build Team's proposed design and / or construction methods, the Design-Build Team will be responsible for any change in the proposed design and/or construction methods that nullifies any permit. The City shall not allow any contract time extensions associated with this additional coordination.

The Design-Build Team shall meet all environmental / permit conditions. The Design-Build Team shall be required to staff any personnel necessary to provide permit compliance.

Commitments

The City is committed to incorporating all reasonable and practicable design features to avoid and minimize impacts to wetlands, streams, open water, and regulated riparian buffers. Additionally, the City will provide full compensatory mitigation of all stream, wetland, and riparian buffer impacts as required by the regulatory agencies. All work by the Design-Build Team must be accomplished in strict compliance with the plans submitted and approved for the permits drawings and in compliance with all conditions of the permits received and certifications issued by the agencies. The Design-Build Team shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of the permits.

The Design-Build Team shall strictly adhere to these commitments, as well as others, including but not limited to requirements for permitting.

If the Design-Build Team discovers any previously unknown historic or archeological remains while accomplishing the authorized work, they shall immediately suspend activities in that area and notify City Staff Archaeologist and / or Environmental Officer, as listed below, who will initiate the required State / Federal coordination.

EROSION AND SEDIMENTATION SCOPE OF WORK

The Design-Build Team shall be responsible for all aspects of Erosion and Sediment Control Design and Construction in order to gain approved plans from both the City of Raleigh Stormwater, as well as the NCDEQ for a Construction Stormwater General Permit.

The process for review and approval is described at the link below:

https://raleighnc.gov/stormwater/services/stormwater-permitting-and-inspections-development/stormwater-plan-review

No land disturbing activities, including clearing and grubbing, shall occur in any location that does not have accepted RFC Erosion Control Plans. Refer to the most recent versions of the NCDENR - Erosion and Sediment Control Planning and Design Manual for erosion control design guidelines not addressed in this Scope of Work.

The Design-Build Team shall be responsible for determining the Projects located in Environmentally Sensitive Areas and use the higher Peak Inflow Rate and Peak Rainfall Data (25 year).

Erosion and Sedimentation Control Plans shall at a minimum address the following:

I. Complete Set of Plans:

A. RFC Plans

1. The EC plans shall contain a Clearing & Grubbing and Final Grade phase of erosion control design.
2. Use appropriate symbology to clearly identify EC devices and installations.
3. Protect existing and proposed drainage structure inlets within project flow limits.
4. Utilize adequate perimeter controls (temporary silt ditch (TSD), temporary silt fence (TSF), etc.)
5. Utilize infiltration basins, skimmer basins and rock measures with sediment control stone (Temporary Rock Sediment Dame Type 'B" (TRSD-B), Temporary Rock Silt Check Type 'A' (TRSC-A), etc.) at all drainage outlets with a spillway with an adequately designed base length to distribute outflow.
6. Take into account existing topography and show contour lines on C&G phase plans.
7. Utilize Temporary Rock Silt Checks Type 'B' (TRSC-B) and wattles to reduce velocity in existing and proposed ditches with spacing of 250 feet divided by percentage of ditch grade. Also utilize TRSC-Bs in proposed TSDs and temporary diversions (TD).
8. Protect existing streams; do not place erosion control devices in jurisdictional streams.
9. Sediment basins shall be sized to provide adequate silt storage of 3600 cubic feet per disturbed acre with surface area equal to 435 square feet per cubic foot per second (cfs) of the peak inflow rate, Q10 or Q25, using 10-year or 25-year peak rainfall data (NCDENR - Erosion and Sediment Control Planning and Design Manual or NOAA's National Weather Service web site http://hdsc.nws.noaa.gov/hdsc/pfds/orb/nc_pfds.html for partial duration (ARI) time series type). A Sediment Basin Designer Spreadsheet will be provided by the City Stormwater Department upon request.
10. Infiltration Basins shall provide adequate silt storage for 1800 cubic feet per disturbed acre with surface area equal to 325 square feet per cubic foot per second (cfs) of the peak inflow rate, Q10 or Q25, using the 10-year or 25-year peak rainfall data (NCDENR - Erosion and Sediment Control Planning and Design Manual or NOAA's National Weather Service web site http://hdsc.nws.noaa.gov/hdsc/pfds/orb/nc_pfds.html for partial duration (ARI) time series type).

Infiltration Basin shall be designed to dewater in 3 days or less. An Infiltration Basin Designer Spreadsheet will be provided by the City Stormwater Department upon request.

11. Skimmer Basins shall provide adequate silt storage for 1800 cubic feet per disturbed acre with surface area equal to 325 square feet per cubic foot per second (cfs) of the peak inflow rate, Q10 or Q25, using the 10-year or 25-year peak rainfall data (NCDENR - Erosion and Sediment Control Planning and Design Manual or NOAA's National Weather Service web site http://hdsc.nws.noaa.gov/hdsc/pfds/orb/nc_pfds.html for partial duration (ARI) time series type). A Skimmer Basin Designer Spreadsheet will be provided by the NCDOT REU upon request.
12. The minimum and maximum length to width ratio of all Sediment Basins shall be 2:1 (L:W) and 6:1 (L:W), respectively.

EROSION CONTROL DAMAGES

The Design-Build Team shall observe and comply with Federal and State Laws, Local Laws, Ordinances, and Regulations; as well as Orders and Decrees of Bodies having any jurisdiction or authority in accordance with Section 107 of the Standard Specifications.

The Design-Build Team shall take all reasonable precautions to comply with all regulations of all authorities having jurisdiction over public and private land governing the protection of erosion and sedimentation. Any fines, remediation required or charges levied against the City for failing to comply with all rules and regulations concerning erosion and sediment control, due to the Design-Build Team's negligence, carelessness, or failure to implement the Erosion and Sedimentation Control Plans and Specifications; or failure to maintain an approved Storm Water Pollution Prevention Plan (SWPPP), regardless of absence of neglect, shall be deducted from monies due the Design-Build Team. In addition to said fines, remediation required, or charges levied, any associated engineering costs or actions taken by the City in order for the City to comply with rules and regulations, as a result of the Design-Build Team's negligence, carelessness, or failure to implement the Erosion and Sedimentation Control Plans and Specifications; and/or the SWPPP, regardless of absence of neglect, shall be deducted from the monies due to the Design-Build Team.

PAVEMENT MANAGEMENT SCOPE OF WORK

The Design-Build Team may use prior City sidewalk pavement designs, but will take responsible charge and sign/seal drawings for all pavement designs used.

RIGHT OF WAY SCOPE OF WORK

Support City Real Estate with Parcel needs and exhibits as needed

TRAFFIC ENGINEERING SCOPE OF WORK

Standards and Specifications

The Design-Build Team shall design the Temporary Traffic Control Plans (TTCP) in accordance with the requirements of these contract documents and the version of the standards listed below that are effective at the date of proposal opening.

- FHWA *A Manual on Uniform Traffic Control Devices (MUTCD)*
- AASHTO *A Policy on Geometric Design of Highways and Streets*
- AASHTO *Roadside Design Guide*
- Americans with Disabilities Act of 1990 (ADA)
- FHWA *Standard Highway Signs*
- FHWA *A Rule on Work Zone Safety and Mobility (23 CFR 630 Subpart J and K)*
- Transportation Research Board *Highway Capacity Manual*

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience developing TTCP for the City of Raleigh and in the State of North Carolina.

TRANSPORTATION MANAGEMENT PLANS

Local access to all residences and businesses shall be maintained at all times during construction by the Design-Build Team.

The Design-Build Team shall produce TMPs for each phase of work that impacts road users. The TMPs shall include details of all planned detours, traffic control devices, striping, and signage applicable to each phase of work. The information on the TMP shall be of sufficient detail to allow verification of design criteria and safety requirements, including but not limited to, typical sections, alignment, striping layout, drop off conditions, and temporary drainage. The Design-Build Team shall develop TMPs that include procedures to communicate TMP information to the public about road and travel conditions within the work zone and affected roadway network.

The Design-Build Team shall prepare the TTCP for the proposed project sites. Development of the TTCP should proceed as follows:

- Perform scope clarification with the City Staff and Owner Advisor Team to clarify expectations.
- Review project sites to gain understanding of traffic patterns and potential traffic management strategies.
- Submit a TTCP to the City management team for review and acceptance.
- The TTCP shall include detour details, detour signing, sign designs and locations of traffic control devices.; construction phasing/sequence, and project notes. Provide street names for all streets used.
- Use traffic control devices that conform to City requirements.

Traffic Control Devices

Excluding areas within 1,000 feet of a signalized intersection, channelizing device spacing shall not exceed a distance in feet equal to twice the posted speed limit. When channelizing devices are installed within 1,000 feet of a signalized intersection, their spacing shall not exceed a distance in feet equal to the posted

speed limit. Channelizing devices shall be spaced ten feet on-center in radii. Channelizing devices shall be three feet off the edge of an open travel way when lane closures are not in effect. Skinny drums shall only be allowed as defined in Section 1180 of the NCDOT Standard Specifications.

Place Type III barricades, with "ROAD CLOSED" signs (R11-2) attached, of sufficient length to close entire roadway. Stagger or overlap barricades as needed to allow for ingress or egress.

PCMS should be placed off the shoulder of the roadway and behind a traffic barrier, if practical. Where placement of a traffic barrier is not practical to shield the PCMS, the PCMS should be placed off the shoulder and outside of the clear zone. If a PCMS must be placed on the roadway shoulder or within the clear zone, it shall be delineated with retroreflective temporary traffic control (TTC) devices. When PCMSs are not being used to display TTC messages, they shall be relocated such that they are outside of the clear zone or shielded behind a traffic barrier and turned away from traffic.

If any trailer mounted traffic control device must be placed on the roadway shoulder or within the clear zone, it shall be delineated with retroreflective temporary traffic control (TTC) devices.

All traffic control devices, including but not limited to, temporary or permanent barrier systems, shall be placed / located a minimum two-foot offset (shy distance) from the edge of an open travel lane.

Lane and Shoulder Closure Requirements

On all roads under staged construction, the Design-Build Team shall not install more than one lane closure in any one direction.

The Design-Build Team shall remove lane closure devices from the lane when work is not being performed behind the lane closure or when a lane closure is no longer needed.

When personnel and/or equipment are working within 15-feet of an open travel lane, the Design-Build Team shall close the nearest open shoulder, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and/or equipment are working within 5 ft of an open travel lane on an undivided facility, close the nearest open travel lane unless the work area is protected by barrier or guardrail.

When personnel and/or equipment are working within 10-feet of an open travel lane, the Design-Build Team shall close the nearest open travel lane, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and/or equipment are working within a lane of travel of an undivided or divided facility, the Design-Build Team shall close the lane. The Design-Build Team shall conduct the work so that all personnel and / or equipment remain within the closed travel lane.

The Design-Build Team shall not perform work involving heavy equipment within 15-feet of the edge of travel way when work is being performed behind a lane closure on the opposite side of the travel way.

Off-Site Detours

Excluding signal retiming as directed by the Engineer, improvements to the detour routes will not be required. In the event the Design-Build Team proposes any deviations / improvements to the above stated detour routes, it shall be the sole responsibility of the Design-Build Team to obtain approval from the City Engineer and perform all required environmental studies and obtain environmental permits for any proposed changes.

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

Unless approved otherwise by the controlling governmental or private entity, in writing, use only state-maintained roads for off-site detour routes and / or haul roads.

The Design-Build Team shall be responsible for the installation and maintenance of all supplemental detour signing within and off the project limits.

Pavement Edge Drop-off Requirements

The Design-Build Team shall mitigate longitudinal pavement edge or terrain drop-off conditions created by construction operations. Where drop-off conditions equal to or greater than 4" will be present, the Design-Build Team shall provide positive protection.

Signing

The Design-Build Team shall install advance work zone warning signs when work is within 40 feet from the edge of travel lane. The advance work zone warning signs shall be installed no more than three days prior to beginning construction.

When no work is being conducted for a period longer than one week, the Design-Build Team shall remove or cover all advance work zone warning signs, as directed by the Engineer. Stationary work zone warning signs shall be covered with an opaque material that prevents reading of the sign at night by a driver traveling in either direction.

When portable work zone signs are not in use for periods longer than 30 minutes, the Design-Build Team shall lay the portable work zone sign flat on the ground and collapse the sign stand and lay it flat on the ground.

The Design-Build Team shall install and maintain all detour signing and devices required for road closures. The Design-Build Team shall cover or remove all detour signs and devices required for road closures, within and outside of the project limits, when a detour is not in operation.

The Design-Build Team shall cover or remove all detour signs within and off the project limits when a detour is not in operation.

The Design-Build Team shall ensure all necessary signing is in place prior to altering any traffic pattern.

The Design-Build Team shall ensure proper signing is in place at all times during construction as required by the MUTCD. Guide signs shall be maintained and modified, as required by the TMP, throughout the entire project construction duration. Temporary or modified Type A or B guide signs may be stationary mounted on temporary supports or on a portable movable system. Temporary guide signs that are not overhead-mounted shall be installed such that the bottom of the sign is a minimum of 7 feet and no more than 10 feet above the pavement surface and shall be rigid enough to withstand 90 MPH winds. Laterally, the outer edge of the guide sign shall not be more than 60 feet from the edge of travel. All temporary signing shall be shown on the TTCP, IMP, and / or Temporary Signing Plans to be reviewed and approved by the City Traffic Group and Owner Advisor, as appropriate, prior to incorporation.

Temporary Pavement Markings, Markers and Delineation

The Design-Build Team shall install pavement markings and markers in accordance with the Standard Specifications, and in accordance with the manufacturer's procedures and specifications.

Unless noted otherwise elsewhere in these contract documents, removal of the temporary pavement markings on asphalt surfaces shall be accomplished to minimize damage to the road surface. Pavement markings shall not be obscured with any type of black pavement markings (paint or other material). The Design-Build Team shall remove all temporary pavement markings without removing more than 1/32 inch of the pavement surface.

The Design-Build Team shall tie proposed pavement marking lines to existing pavement marking lines.

The Design-Build Team shall show temporary pavement markings on the TMP that meet the requirements of the contract documents.

The Design-Build Team shall only use pavement marking and marker products that conform to {REVISE MATERIAL SPEC}. The use of any devices that are not shown on the {APPROVED MATERIAL SPEC} shall require written approval from the City prior to incorporation.

The Design-Build Team shall not place temporary markings other than Cold Applied Plastic Type 4 - Removable Tape on any final pavement surface unless the temporary markings are placed in the exact location of the final pavement markings, or an alternate approved by the City.

Excluding pavement markings and markers not visible to traffic, conflicting pavement markings and markers shall be defined as any pavement marking or marker not being used for the current traffic pattern which is within six feet of any pavement marking required for the current traffic pattern.

Remove any conflicting markings or markers before shifting traffic to a new pattern.

The Design-Build Team shall install temporary pavement markings that are the same width as existing pavement markings. For roadways that do not have existing pavement markings, the Design-Build Team

shall install temporary pavement markings that are the same width required for the final pavement markings in the Pavement Markings Scope of Work per the contract documents.

Project Requirements and Time Restrictions

All time restrictions and notes shall be included in the TMP General Notes, unless noted otherwise elsewhere in these contract documents.

Intermediate Contract Times for Lane Narrowing, Lane Closure, Holiday and Special Event Restrictions (To be clarified with selected team)

Except as allowed otherwise elsewhere in this RFP, the Design-Build Team shall maintain the existing traffic pattern and shall not close or narrow a single lane of traffic during the times listed below.

ROAD	DAYS	TIME RESTRICTIONS	NOTES
Fox Road			
Lead Mine Road			
North Hills Drive			
Pecan Road			
Wade Avenue			

In addition, the Design-Build Team shall not close or narrow a lane of traffic on the aforementioned facilities, detain, and / or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy. At a minimum, these requirements / restrictions shall apply to the following schedules:

1. For unexpected occurrence that creates unusually high traffic volumes, as directed by the Engineer.

2. For New Year's Day, between the hours of 7:00 AM December 31st and 6:00 PM January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until 6:00 PM the following Tuesday.

3. For Easter, between the hours of 7:00 AM Thursday and 6:00 PM Monday.

4. For Memorial Day, between the hours of 7:00 AM Friday and 6:00 PM Tuesday.

5. For Independence Day, between the hours of 7:00 AM the day before Independence Day and 6:00 PM the day after Independence Day. If Independence Day is on a Friday, Saturday, Sunday, or Monday, then between the hours of 7:00 AM the Thursday before Independence Day and 6:00 PM the Tuesday after Independence Day.

6. For Labor Day, between the hours of 7:00 AM Friday and 6:00 PM Tuesday.

7. For Thanksgiving, between the hours of 7:00 AM Tuesday and 6:00 PM Monday.

8. For Christmas, between the hours of 7:00 AM the Friday before the week of Christmas Day and 6:00 PM the following Tuesday after the week of Christmas Day.

Liquidated Damages for Intermediate Contract #1 for the above lane narrowing, lane closure, holiday and special event time restrictions are $xxx.xx per hour or any portion thereof.

The date of availability shall be the date the Design-Build Team elects to close the roadway and assumes Released for Construction Approved plans. The Design-Build Team shall provide the Engineer a minimum of 30 days written notice prior to the date of availability.

Site Specific Criteria

- Fox Road
- Lead Mine Road
- North Hills Drive
- Pecan Road
- Wade Avenue

SIGNING & SIGNALS SCOPE OF WORK

Standards and Specifications

The Design-Build Team shall design the Transportation Management Plans (TMP) in accordance with the requirements of these contract documents and the version of the standards listed below that are effective at the date of proposal opening.

- FHWA *A Manual on Uniform Traffic Control Devices (MUTCD)*
- AASHTO *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*
- AASHTO *Roadside Design Guide*
- Americans with Disabilities Act of 1990 (ADA)
- FHWA *Standard Highway Signs*
- FHWA *A Rule on Work Zone Safety and Mobility (23 CFR 630 Subpart J and K)*
- Transportation Research Board *Highway Capacity Manual*

In case of conflicting design parameters, and/or ranges, in the various resources, the proposed designs shall adhere to the most conservative values, unless noted otherwise elsewhere in the contract documents.

Submittal Requirements

The Design Build Team shall provide the following submittals for Signing and Pavement Marking:

- Preliminary Plans (50%) identifying overview strategies for signing and pavement marking, but not requiring full detail
- 100% Plans

- Released for Construction (RFC) Plans (Note: if 100% plans are reviewed and found sufficient, they may be approved for RFC Plans)

Note: Approval is at the sole discretion of the City and its Advisors.

Signs to be Furnished by Design-Build Team

The Design-Build Team shall furnish signs in accordance with the MUTCD.

Signing Project Limits

Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design, fabricate and install all Type A, B, D, E and F signs and supports (including overhead sign structures) required through the construction limits of the mainline, as well as all -Y- Lines, all service roads, all turn-arounds / cul-de-sacs, all roundabouts, all ramps and all loops. Unless noted otherwise elsewhere in the Contract Documents, the Design-Build Team shall design, fabricate and install all signs required beyond the roadway construction limits of the mainline, all -Y- Lines, all service roads, all turn-arounds/ cul-de-sacs, all roundabouts, all ramps and all loops to ensure adequate advance signage and spacing is provided. The Design-Build Team shall coordinate with all current and future projects (if plans available) to assure proper signing has been addressed for current and future installations.

Sign Designs

The Design-Build Team shall include all sign designs in the Signing Plans. All sign designs shall be prepared using the latest version of GuideSign software.

The Design-Build Team shall design, fabricate, and install all signs required for the mainline, all -Y- Lines, all ramps, all loops, all service roads, all roundabouts, and all turnarounds / cul-de-sacs, including Type A and B overhead signs, Type A, B, and D ground mounted signs, and exit gore signs. The Design-Build Team shall size and locate all Type E signs (warning and regulatory) and Type F signs (route marker assemblies).

Prior to submittal of RFC Signing Plans, the Design-Build Team shall coordinate with the City Traffic and the City Owner Advisor on destination cities and / or street names on guide signs.

Sign Locations

The Design-Build Team shall determine the station location of all signs and sign structures.

Ground Mounted Sign Supports

The Design-Build Team shall design, fabricate and install ground mounted sign supports in accordance with the Standard Drawing .

Prior to installation, the Design-Build Team shall 1) field verify all Type A and B ground mounted sign supports, 2) recalculate the field verified S-Dimensions, using the latest edition of the design software on

the website noted above, and 3) revise the beam sections, where applicable. The Design-Build Team shall use the most recent version of the ground mounted sign support selection workbook tool, in accordance with the submittal schedule outlined in the "Instructions" tab of the tool.

Unless otherwise approved by the City, the vertical mounting height for ground mounted Type D, E and F signs shall be a minimum of seven feet and maximum of eight feet from the edge of the travel lane to the bottom of the sign.

Unless noted otherwise elsewhere in this RFP, all Type D, E and F signs shall be installed on U-channel posts in accordance with the Standard Drawing. Type D signs shall not exceed eight feet in width and / or 24 square feet. Unless positively protected, all Type D signs shall be installed on a maximum of two U-channel posts.

Sign Maintenance

During project construction, the Design-Build Team shall maintain all existing signs within the project limits (including all Logo Signs and temporary sign installations that may be required by the Transportation Management Plans) to ensure the signs are in good condition, perform as intended, and are visible to motorists. (Reference Articles 901-4 and 1092-2 of the NCDOT Standard Specifications) All signs and supports remaining / existing at the completion of this project shall be plumb, oriented correctly and adhere to AASHTO requirements.

CADD Files

After acceptance of RFC Signing Plans, the Design-Build Team shall provide the final Signing Plans to the City in .pdf and MicroStation format.

Construction Revisions

After submittal of RFC Signing Plans, the Design-Build Team shall submit all construction revisions to the Department for review and acceptance prior to incorporation. The Design-Build Team shall provide an updated excel spreadsheet with all construction revisions that modify an overhead sign structure's geographic coordinate information.

As-Built Plans

After project completion, the Design-Build Team shall provide final electronic Signing Plans to the City. At a minimum, these Signing Plans shall include all revisions that occurred during construction, as well as field verifications for ground mounted sign supports and overhead structures. These Signing Plans shall be provided in .pdf and MicroStation format.

UTILITIES COORDINATION SCOPE OF WORK

The Design-Build Team shall obtain the services of a Professional Services Firm (PSF) knowledgeable in the City of Raleigh Utility Coordination Process involved with utility relocation / installation and highway construction. During procurement phase and the life of the project, the Design-Build Team will only be

allowed direct contact with the utility owners when the aforementioned PSF is present. The PSF shall be responsible for coordinating all utility relocations, removals, and/or adjustments where the Design-Build Team and Utility Company, with concurrence from the City, 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. The City will be the approving authority for all utility agreements and approval of plans. 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.

After all utility conflicts have been identified by the Design-Build Team, if requested by the Design-Build Team, the City will write a letter to the affected utility owners introducing the project to the owners and requesting their cooperation with the Design-Build Team to adjust utilities in a timely manner.

The Design-Build Team shall be responsible for ensuring the utilities are relocated both horizontally and vertically, in accordance with the accepted utility relocation plans. Unless directed by the City, additional compensation for coordination and relocations after the initial relocation shall be at no additional cost to the Department and any additional costs of the utility owner shall be the responsibility of the Design Build Team.

Cost Responsibility and Compensable Interest:

The Design-Build Team shall be responsible for relocating water and sewer facilities that have prior rights or other compensable interest; however the cost of relocating these facilities, as well as any necessary design and permitting for these utilities, will be paid for as Extra Work. The City will be responsible for all other non-betterment utility relocation costs when the utility owner has prior rights of way / compensable interest. The utility owner shall be responsible for the relocation costs if they cannot furnish adequate evidence of prior rights or a compensable interest in their facilities.

The Design-Build Team shall be responsible for evaluating and submitting recommendations for the cost responsibility (prior rights and compensable interests) for the utility relocations. A compensable interest for a conflicting utility is identified as follows:

A. Existing or prior easement rights within the limits of the project, either by recorded right of way or adverse possession.

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.

Utility Relocation Plans

Excluding water and sewer conflicts, if the Design-Build Team's design and / or construction creates a utility conflict, the Design-Build Team shall request that the utility owner submit relocation plans (Highway Construction Plans to be provided by the Design-Build Team to utility owners) that show existing utilities and proposed utility relocations for approval by the City. If Permanent Utility Easement (PUE) is required to

relocate a utility, the PUE acquired will be the minimum area necessary to safely relocate the utility. Wetlands, Historical Areas and areas that can be shared with a Drainage/Utility Easement (DUE) or Aerial Utility Easement (AUE) shall be taken into account. If during the Departments review, the PUE is determined to be excessive the City will request the PUE be reduced as necessary. In .pdf format, the Design-Build Team shall electronically submit one half-size set and one full size set of Utility Relocation Plans to the City, for review and approval. The City shall approve the Utility Relocation Plans prior to any utility relocation work beginning. The Design-Build Team shall also be responsible for submitting the appropriate agreements to be used with the Utility Relocation Plans. After the review process is complete, the City will submit an electronic copy of the authorization letter to the Design-Build Team. The City will also submit an electronic copy of the approved Utility Relocation Plans, estimate and agreement to the City's Resident Engineer. If the Utility Relocation Plans are approved subject to changes, it shall be the Design-Build Team's responsibly to coordinate these changes with the appropriate utility owner.

General:

The Design-Build Team shall not commence work at points where the highway construction operations are adjacent to utility facilities, until making arrangements with the utility company to protect against damage that might result in expense, loss, disruption of service or other undue inconvenience to the public or utility owner. The Design-Build Team shall be responsible for damage to the existing or relocated utilities resulting from the Team's operations. In the event of interruption of any utilities by the project construction, the Design-Build Team shall promptly notify the proper authority (Utility Owner) and cooperate with the owner in the prompt restoration of service. If total property acquisition is unavoidable due to encroachment into wells and/or septic systems, then the Design-Build Team shall investigate and determine if extending water and/or sewer lines to the affected property is cost effective. If the City concurs with the determination that a utility extension is cost effective, the costs associated with the utility construction shall be addressed in accordance with Article 104-7 of the January 2024 NCDOT Standard Specifications for Roads and Structures.

The Design-Build Team shall accommodate utility adjustments, reconstruction, new installation and routine maintenance work that may be underway or take place during the progress of the contract. The Design-Build Team shall make arrangements to relocate water, sewer or gas facilities in which the entities are covered under General Statute 136-27.1 or 136-27.2 and/or occupy a compensable interest. If relocation of these facilities is required, a Use and Occupancy Agreement shall be executed through the Utilities Coordination Agent.

Guidelines and Standards

- City of Raleigh Public Utilities Design Manual
- NCDOT Utility Accommodation Manual
- Federal Aid Policy Guide - Subchapter G, Part 645, Subparts A & B
- Federal Highway Administration's Program Guide, Utility Adjustments & Accommodations on Federal Aid Highway Projects
- NCDEQ Public Water Supply - Rules governing public water supply

- NCDEQ Division of Water Resources - Title 15A - Environment and Natural Resources