Raleigh

MEMO

INVITATION TO BID

274-GoRaleigh Camera Replacement-2024

Project: GoRaleigh Camera Replacement
Location: Raleigh, NC
Department/Division: Transportation/Transit
Project Manager: Sara Tromba; sara.tromba@raleighnc.gov

Bids will be received until **4:00 pm** on **December 30, 2024** by City of Raleigh.

The work consists of providing supply and installation of replacement security cameras, transmitters and receivers, surge protectors and cabling. Please see the attached spec sheets and scope provided for this project. This project requires Davis Bacon compliance, prevailing wage rates are attached. Note, the minimum wage shall be $17.20/hr.

Bidding Documents include this Invitation To Bid, and the following attached forms: Form of Proposal sample contract, Sales Tax Report, DBE form, and General and Supplemental Conditions, Federal requirements including required attachments. The bidding documents also include the specifications, and any Addenda issued prior to receipt of bids. All requirements and obligations of the Bidding Documents are hereby incorporated by reference into the Contract Documents and are binding on the Successful Bidder upon award of the contract.

Each Bidder by submitting his Bid represents that he has read and understands that Bidding Documents and his Bid is made in accordance therewith; and Bidder agrees to be bound by the terms and requirements set forth in the Bidding and Contract Documents; that he has visited the site, has familiarized himself with the local conditions under which the Work is to be performed herein, and has correlated his observations with the requirements of the proposed Contract Documents.

The Schedule for the project shall be as follows:

December 16, 2024	Advertise for bids
December 30, 2024	Bids Due at 4:00 PM by email

All related questions should be directed to and bidding information may be obtained by emailing sara.tromba@raleighnc.gov

CITY OF RALEIGH – PROPOSAL FORM
GoRaleigh Camera Replacement
PROJECT #274-GoRaleigh Camera Replacement-2024

City of Raleigh
Project Manager: Sara
Tromba
Transportation/Transit
510 W Martin Street Suite 200 Raleigh, NC 27601

Date: December 16, 2024

The undersigned bidder has carefully examined the Form of Contract, the Form of Contract Bonds, the General Conditions, the Supplemental Conditions, the Plans and Specifications, all of which are acknowledged to be part of the proposal and the Proposal Form, and the Bidder has also carefully examined the site of the proposed work. The undersigned further agrees to sign a Contract for the work, if offered within ninety (90) days after receipt of Bids, and to furnish surety as specified, upon failure to do so, agrees to forfeit to the Owner, attached Bid Bond in the amount of 5% of the bid if it exceeds $100,000. The Bidder further agrees to provide and furnish all necessary materials, equipment, machinery, and labor necessary to complete the construction of the work in full, in complete accordance with the plans and specifications and the contract documents to the full and entire satisfaction of the City of Raleigh and in accordance with these documents within the time limit specified below.

In addition to all other agreements and assurances, the undersigned Bidder understands and hereby agrees as follows:

1. The Bidder represents and agrees to complete the entire project in the following number of Consecutive Calendar Days: **180 Days** from the date on the Notice to Proceed.
2. The Bidder agrees to comply with the City's policy to encourage bidders to use Certified DBE businesses as specified in the below DBE Requirements.

The Bidder agrees to execute the work described and set forth in the Plans and Specifications for the amounts as follows:

Base Bid: _____

(In written word)

$ _____

(In numerals)

Owner's Contingency (will be determined by the Owner and added to the base bid):

(Note that the Owner's Contingency shall only be used when pre-authorized in writing from the City. No mark-up shall be applied to reimbursable expenses.)

Total Bid Proposal:

_____

(In written word)

$ _____

(In numerals)

Name of General Contractor and License Number _____

Name of Electrical Contractor and License Number _____

Name of Plumbing Contractor and License Number _____

Name of Mechanical Contractor and License Number _____

GS143-128(d) requires all single prime bidders to identify their subcontractors for the above subdivisions of work. A contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except (i) if the listed subcontractor's bid is later determined by the contractor to be non-responsible or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or (ii) with the approval of the awarding authority for good cause shown by the contractor.

UNIT PRICES

Unit prices quoted and accepted shall apply throughout the life of the contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes to the base bid quantity of the work all in accordance with the contract documents.

Refer to Section 012200 "Unit Prices" for further clarification. N/A

ALLOWANCES

Include in the base bid proposal the following allowances as specified in Division 01, Section 012100 “Allowances.”

Allowance No. 1: N/A

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

The undersigned Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Dated	Acknowledge Receipt (initial)

Please check here if no addenda were received: _____

Acknowledged for: _____
(Name of firm or corporation making bid)

By: _____
(Signature of Authorized Representative)

Name: _____
(Print or Type)

Title: _____

Date: _____

PROPOSAL SIGNATURE PAGE

The bidder is required to furnish surety as specified in the General Conditions. Upon failure to do so, the bidder agrees to forfeit to the Owner the attached cashier's check, certified check, or bid bond in the amount of 5% of the total bid proposal.

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project.

Respectfully submitted this day of _____

By: _____
(Name of firm or corporation making bid)

WITNESS:

_____
(Proprietorship or Partnership)

By: _____
Signature

Name: _____
Print or type

Title _____
(Owner/Partner/Pres./V.Pres)

Address _____

_____

ATTEST:

By: _____

Title: _____
(Corp. Sec. or Asst. Sec. only)

License No. _____

Federal I.D. No. _____

Email Address: _____

Office Phone Number: _____

(CORPORATE SEAL)

BIDDER QUALIFICATIONS:

The Bidder shall furnish the following information; designed to assist the Owner in determining whether or not the Bidder is qualified to perform the work described in the Bid and Contract Documents:

1. List three references with contact person and telephone number who are qualified to objectively judge the results of similar work performed by the bidder in the last three years.

A. _____ _____
NAME AND TITLE TELEPHONE NUMBER

_____ _____
PROJECT TITLE/DESCRIPTION DATE OF COMPLETION

B. _____ _____
NAME AND TITLE TELEPHONE NUMBER

_____ _____
PROJECT TITLE/DESCRIPTION DATE OF COMPLETION

C. _____ _____
NAME AND TITLE TELEPHONE NUMBER

_____ _____
PROJECT TITLE/DESCRIPTION DATE OF COMPLETION

2. List previous contracting experience, including contract dollar amounts:

_____

_____

_____

_____

_____

_____

_____

_____

NOTE: The Bidder shall attach additional sheets of information as needed to provide above requested information.

ADDITIONAL BIDDER'S CERTIFICATION

Acceptance of Terms:

In submitting this Proposal, the undersigned agrees that this Bid will remain in effect for a period of ninety (90) days following the opening of the Bids, that the undersigned agrees to enter into a Contract with the Owner, if awarded, on the basis of this Proposal, and that the undersigned agrees to complete the work in accordance with the Contract Documents.

Non-Collusion in Bidding:

The Bidder specifically agrees to abide by all applicable provisions of Article 3 of Chapter 133 of the North Carolina General Statutes. By submission of this Bid, each Bidder and each person signing on behalf of any Bidder certifies, and in case of a joint Bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best knowledge and belief:

1. The prices in this Bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other Bidder or to any competitor;

2. Unless otherwise required by law, the prices quoted in the Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly, to any other Bidder or to any competitor; and

3. No attempt has been made or will be made by the Bidder to induce any other person, partnership, or corporation to submit or not to submit a Bid for the purpose of restricting competition.

Type of Business:

The undersigned hereby represents that it is a

_____
(corporation, partnership, or an individual)

If a corporation, the undersigned further represents that it is duly qualified as a corporation under the Laws of the State of North Carolina and it is authorized to do business in this State.

_____ _____
Firm Name Date

_____
Authorized Signature

_____ _____
Title Name of Project

_____
Address of Business

_____
Office Telephone Number

CONTRACTOR'S PERFORMANCE POLICY

RESOLUTION NO. (1992) -790

A RESOLUTION TO REGULATE THE PARTICIPATION IN THE CITY CONSTRUCTION PROJECTS BY CONTRACTORS WHO MAY NOT BE CAPABLE OF TIMELY AND PROPER COMPLETION OF CITY PROJECTS.

WHEREAS, The City of Raleigh wishes to minimize cost and inconvenience to the citizenry caused by the failure of contractors to complete projects in a timely manner in accordance with approved project schedules; and

Whereas, North Carolina law allows cities to award bids to responsible bidders and the inability to complete work on time is one indication of a lack of responsibility.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RALEIGH:

Section 1. That the City Manager may disqualify bidders from participation in bidding and award of contracts for city construction projects based on the following conditions existing simultaneously:

A. The dollar value of the work completed is less than the dollar value of the work which should have been completed on the basis of the contractor's approved progress schedule by more that twenty percent of the current contract amount. The dollar amount of the work completed will be the total estimate to date shown in the latest partial pay estimate. The current contract amount will be the contract estimate plus accumulated overruns and less accumulated underruns shown in the latest partial payment estimate.

B. The percentage of the work completed is less than the percentage of contract time elapsed on the work by more than twenty percent. The percentage or work completed will be the dollar value of the work completed as defined above divided by the current contract amount as defined above. The percentage of contract time elapsed will be the number of calendar days elapsed as shown in the latest partial pay estimate divided by the total contract time in calendar days.

Section 2. The City Manager shall not include any late days, which are caused by the City in any of his calculations directed at determining bid status.

Section 3. All City construction project specifications shall contain a specific provision clearly outlining the policies set in this Resolution, including the criteria for determining whether a contractor is behind schedule, and the specifications shall clearly state the City's intent to enforce the provisions of this Resolution.

Section 4. The terms of the Resolution shall apply only to contracts for which the specifications for bidders are issued after the effective date of this Resolution.

Section 5. Any contractor who wishes to contest the decision of the City Manager declaring ineligibility may appeal to the City Council by delivering a notice of appeal to the City Clerk no later than ten days after receipt of the City Manager's decision. The notice of appeal shall clearly set out the reasons why the Contractor believes that the terms of this Resolution have been inappropriately applied or the equitable arguments for not applying this Resolution's terms. When considering an appeal the City Council shall consider, among other things, the report of the City Manager, the notice of appeal, and the contractor's current status on any other current City Contracts and its performance on any contracts to which the contractor and the City have been parties to within the two calendar years immediately preceding the filing of the notice of appeal.

Section 6. Bidders so disqualified shall remain disqualified for any period in which they are still in conflict with the schedule provisions of this section.

Section 7. This Resolution is effective upon adoption Adopted 10/6/92

_____

SIGNATURE

_____

PRINTED NAME

_____

TITLE

_____

DATE

END OF CITY OF RALEIGH – BID PROPOSAL FORM

Description of Technology Equipment included in this Bid Package

Summary Equipment List:

(11) 4K fixed IR dome camera
(5) 4K x 4 multi-sensor camera
(4) Wireless radio transmitter
(4) Wireless radio receiver
(8) Surge protector for wireless
(16) Surge protector for camera

Detailed Description of Equipment to be Replaced with Suggested Models

- **Camera 02: camera replacement**
- Model: Avigilon 8.0MP-HD
- IP address: 10.35.146.201
- MAC address: 00:18:85:03:A4:2C
- Hostname: GRSC02ADMINLOBBY
- Replacement: Wisenet PNM-C32083RVQ multi-sensor

- **Camera 17: camera replacement**
- Model: Avigilon 2.0MP-HD
- IP address: 10.35.146.202
- MAC address: 00:18:85:03:B4:CB
- Hostname: GRSC17BUSLOTGATE
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 19: camera replacement**
- Model: Avigilon 5.0MP-HD
- IP address: 10.35.146.204
- MAC address: 00:18:85:03:82:C9
- Hostname: GRSCEMPLOYPARK
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 20: camera replacement**
- Model: Avigilon 2.0MP-HD
- IP address: 10.35.146.205
- MAC address: 00:18:85:03:B4:C1
- Hostname: GRSC20BUSLOTENTER
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 26: camera replacement**
- Model: Avigilon 2.0MP-HD
- IP address: 10.35.146.207
- MAC address: 00:18:85:03:B4:D2
- Hostname: GRSC26EMPLOYPARK
- Replacment: Wisenet QNV-C9083R single dome

- **Camera 37: camera replacement**
- Model: Avigilon 9W-W3-3MH-DP1-B
- IP address: 10.35.146.17
- MAC address: 08:00:23:9A:74:22
- Hostname: GRSC37LOT
- Replacement: Wisenet PNM-C32083RVQ multi-sensor

- **Camera 38: camera replacement**
- Model: Avigilon 2.0MP-HD
- IP address: 10.35.146.206
- MAC address: 00:18:85:03:B4:D7
- Hostname: GRSC38BUSLOT
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 40: camera replacement**
- Model: Avigilon 2.0MP-HD
- IP address: 10.35.146.203
- MAC address: 00:18:85:03:B4:D4
- Hostname: GRSC40BUSLOT
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 54-camera replacement**
- Model: Panasonic WV-SF336
- IP address: 10.35.146.45
- MAC address: 08:00:23:9C:C8:F4
- Hostname: GRSC54ADMINSTORAGE
- Replacement: Wisenet QNV-C9083R single dome

- **Camera 64-camera replacement**
- Model: Avigilon 9W-W3-3MH-DP1-B
- IP address: 10.35.146.13
- MAC address: 00:18:85:19:7C:F5
- Hostname: GRSC64WASHBAY
- Replacement: Wisenet PNM-C32083RVQ multi-sensor

- **Camera 72: camera replacement**
- Model: Avigilon 9W-W3-3MH-DP1-B
- IP address: 10.35.146.185
- Recorded Old IP:10.100.60.185
- MAC address: 00:18:85:24:E7:7C
- Hostname: GRSC72FUELSTOR2
- Replacement: Wisenet PNM-C32083RVQ multi-sensor

- **Camera 62: camera replacement**
- Model: Avigilon 9W-W3-3MH
- IP address: 10.35.146.185 (not being correctly assigned)
- Recorded Old IP:10.100.60.150

- MAC address: 00:18:85:28:99:B7
- Hostname: GRSC62MAINBUSENT
- Replacement: Wisenet PNM-C32083RVQ multi-sensor

- **Access Point 1: wireless receiver replacement**
- Model: Motorola 5760APUSG
- IP address: 10.35.146.6 (likely incorrect)
- Recorded Old IP: 192.168.60.6
- MAC address: 0A:00:3E:DD:8E:A9
- Hostname: GRSAP1(Admin Courtyard Roof)
- Replacement: Cambium CV-H00RPUSA

- **Access Point 2: wireless receiver replacement**
- Model: Motorola 5700SMG
- IP address: 10.35.146.7 (likely incorrect)
- Recorded Old IP: 192.168.60.7
- MAC address: 0A:00:3E:DD:1B:0D
- Hostname: GRSAP2
- Replacement: Cambium CV-H00RPUSA

- **Access Point 3:wireless receiver replacement**
- Model: Motorola 5700SMG
- IP address: Unknown
- Recorded Old IP: 192.168.60.7
- MAC address: 0A:00:3E:DD:1B:0D
- Hostname: GRSAP2
- Replacement: Cambium CV-H00RPUSA

- **Access Point 4: wireless receiver replacement**
- Model: Motorola 5700SMG
- IP address: 10.35.146.200
- Incorrect IP on Raleigh Network: 10.35.146.9
- MAC address: 0A:00:3E:DD:1B:6D
- Hostname: GRSAP4
- Replacement: Cambium CV-H00RPUSA

- **Camera 18-wireless transmitter replacement**
- Model: Panasonic WV-SC385
- IP address: 10.35.146.223
- MAC address: 08:00:23:9A:74:2E
- Hostname: GRSC18PARKING
- Replacement: Cambium CV-C19RPUSA

- **Camera 23- wireless transmitter replacement**
- Model: Panasonic WV-SC385
- IP address: 10.35.146.222
- MAC address: 08:00:23:9A:74:2A

- Hostname: GRSC23BUSLOTNW
- Replacement: CV-C19RPUSA

- **Camera 37-wireless transmitter replacement**
- Model: Panasonic WV-SC385
- IP address: 10.35.146.17
- MAC address: 08:00:23:9A:74:22
- Hostname: GRSC37LOT
- Replacement: CV-C19RPUSA

- **Camera 66-wireless transmitter replacement**
- Model: Avigilon 9W-W3-3MH-DP1-B
- IP address: 10.35.146.120
- MAC address: 00:18:85:19:7C:74
- Hostname: GRSC66REARBUSLOT
- Replacement: CV-C19RPUSA

- **Encoder 5: camera replacement x 4**
- Model: Avigilon ENC-4P-H264
- IP address: 10.35.146.212
- MAC address: 00:18:85:03:A0:D2
- Hostname: GRSENC5

- **Camera 33 MAINT-BAYS CENTRAL CORRIDOR N**
- **Camera 34 MAINT-N PERSONNEL DOOR**
- **Camera 35 MAINT-BAYS CENTRAL CORRIDOR S**
- **Camera 36 MAINT-BAYS S(12,14)**
- Replacements: Wisenet QNV-C9083R single dome

Section 28 20 00 – Video Surveillance System

Part 1 - General

1. Scope

   A. Refer to Section 27 00 00 for additional project scope information.

   B. This section describes the general product and execution requirements related to furnishing and installing the project's Video Surveillance System. Requirements shall be understood to be the City of Raleigh's minimum and shall be expanded as necessary to ensure quality.

   C. Contractor shall be responsible for providing complete and fully functional system as described in this specification and project drawings.

   D. The digital video surveillance system for this project will consist of the following and shall be covered under the Base Bid:

      1. IP security camera system (and associated power supplies and media convertors if required)
      2. Video Monitoring System (VMS) consisting of Milestone Video Archiver(s) and Milestone Video Monitoring Workstation (City of Raleigh standard)
      3. Miscellaneous terminations, programming, licenses and updates to extend up to the Owner's final acceptance of the installed security system.
      4. All necessary wiring, cabling, conduit, raceways, data communication circuits, cable trays, firestopping, labor, tools, equipment, licenses and ancillary materials required to furnish and install new security cameras, video archiver and video monitoring workstation and recording system.
      5. Coordinating, configuring, connecting all cameras, video archiver and video monitoring workstations to Owner's network and testing cameras and associated equipment to ensure fully functioning security system integrated with the Owner's existing Milestone Video Management System.
      6. Contractor shall coordinate with the Owner for all specific network standards and for local area network (LAN) connections.
      7. Contractor shall provide all Milestone and camera integration licenses necessary to integrate the Milestone Video Management System into the Owner's Vykon Access Control System.
      8. Contractor shall be responsible for coordinating any network, software and hardware equipment needed to connect any device or server to the Owner's network. If any device or server does not meet the Owner's network requirement specification, the Contractor shall be responsible to bring the delinquent device up to the Owner's required specification before connecting the device to the Owner's network.

9. Installation of the security camera system and providing onsite professional services to assist in the initial setup and programming of all systems to bring components up to fully functioning operational status for acceptance. This shall include but not be limited to the following:
    a. Determine hardware, software and operations requirements for implementation.
    b. Set up and configure parameters on each camera for recording on the Video Archivers.
    c. Set-up optimum recording parameters on each Video Archiver.
    d. Test video system operations based on a camera by camera walkthrough.
    e. Perform end-user training.

2. Related Work

A. Section 27 00 00 – General Technology Requirements

B. Section 27 05 00 – Communications General Requirements

C. Section 27 05 23 – Pathways for Technology Systems

D. Section 27 11 00 – Communications Equipment Rooms

E. Section 27 15 00 – Communications Horizontal Cabling

F. Section 27 16 00 – Communications Connecting Cords

G. Section 27 18 00 – Communications Labeling and Identification

3. Definitions

A. Refer to Section 27 00 00 for additional definitions.

4. Reference Standards and Codes

A. Refer to Section 27 00 00 for additional standards, codes and requirements.

5. Qualifications

A. The Contractor shall be Milestone system Certified and shall submit evidence of their certification with their bid.
    1. If the Contractor is not properly qualified and certified in a particular system stated in this specification or shown in the project drawings, the Contractor is allowed to sub-contract the work performed on the particular system to a properly qualified and certified sub-Contractor. This Sub-Contractor shall meet the same Contractor requirements as stated elsewhere in this section.

B. Contractor shall supply information attesting to the fact their firm is an authorized product installer / integrator for the proposed system.

C. Contractor shall supply information attesting to the fact that their installation and service technicians are competent factory trained personnel capable of maintaining the video security system and providing reasonable service time.

D. Due to the nature of work involved and the interconnectedness to the City's existing Security Management System, Contractors planning to bid shall have been regularly engaged in the installation and maintenance of IP-based CCTV video, similar in size and scope that outlined herein for a period of no less than five years.

E. Contractor shall provide a minimum of three references whose systems' experience are of similar complexity and have been installed and maintained by the security system integrator in the last five (5) years.

F. The video camera system provided per this section shall be based on Niagara Framework (or "Niagara") a Java-based framework developed by Tridium Inc. Surveillance software and components without a Niagara Framework platform driver are unacceptable.

G. Contractors desiring to bid shall provide the following:

1. Descriptive statement identifying that the Contractor has participated in a prequalification process conducted by the Owner and has been deemed qualified to perform work on any City of Raleigh owned property at the time of bidding.
2. Niagara Compability Statement (NiCS) describing various levels and types of building systems controls interoperability for proposed equipment to meet the specification and Owner's goal of an open system. This NiCS statement is to include:
    a. Station Compatibility In
    b. Station Compatibility Out
    c. Tool Compatibility In
    d. Tool Compatibility Out
2. Include an overview of all system components and devices including network communication devices. Provide the manufacturer specifications for each system component to include any applicable software applications required.

H. At the time of bidding, Contractors shall be licensed by all appropriate authorities (state, municipal and local) for the type of work to be performed. Contractors who have licenses or permits pending, relevant to this project, shall not be considered acceptable for bidding on this project.

I. Acceptable Contractors / Camera Systems Integrators qualified to bid on the video security system hardware and software components and installation are as follows:

1. Envirocon
2. Strategic Connections
3. Premier Commercial Security

4. Approved Equivalent Firms with staff that have passed a formal training program prior to being certified to sell and install the system and that possess certification that requires annual re-qualification.
5. Interested firms should contact the City of Raleigh Integrated Facilities Services Department to submit their materials to become prequalified:

   Echo.Swanzey@raleighnc.gov, James.Walters@raleighnc.gov

J. Refer to Section 27 00 00 for additional requirements.

6. Pre-Construction Submittals

A. Submittals shall be as follows:

1. The contractor shall submit shop drawings for the project. Shop drawings shall include:
   a. Point-to-point wiring diagrams for the entire system and detailing of each device location and all associated wire runs.
   b. Provide a separate layout drawing for each equipment room / Drop location. The equipment room layout drawings shall show each component and detail the wiring for all devices connected to all components within the equipment rack.
   c. Drawings shall also show the labeling of each cable connection point, each wire connected to the connection point and each cable leaving the rack or panel. The layout drawings shall indicate in detail the labeling of each component within the rack or associated panel including, but not limited to, power supplies, terminal strips, switches and Video Archivers.

B. Product data including manufacturer's technical data sheets on each product proposed.

C. Contractor shall submit detailed description of all equipment locations and mounting particulars. The Contractor shall describe coordination efforts that have been made or need to be made by the Contractor and the Owner for the installation to proceed on schedule in the manner described.

D. Contractor shall submit complete and detailed programming parameters of all video surveillance equipment to the Owner a minimum of 30 days prior to the development and implementation of the programming.

E. Contractor shall provide evidence that the power capacity is sufficient for the proper operation of the powered devices under maximum load where AC or DC power supplies are used for Class 1, 2, or 3 Power-Limited Circuits. Detailed calculations of the power requirements shall be acceptable for this purpose.

F. Manufacturer's User's manuals for operations, administration installation and maintenance.

G. Refer to Section 27 00 00 for additional requirements.

7. Construction Progress Submittals

A. Refer to Section 27 00 00 for additional requirements.

8. Closeout Submittals

A. Refer to Section 27 00 00 for additional requirements.
B. As-built drawings
C. Training course materials.
D. Commissioning Test Plan and Check-off List.
E. As-built Drawings – kept up to date throughout system installation and reflecting all changes and additions made to the security systems.

9. General Summary

A. System shall include installation, configuration and integration of IP cameras into a server based NVR with client stations and storage as described in this section and on the drawings.

B. The Category 6 cabling to each camera shall be provided by the structured cabling Contractor. Patch cords for the IP cameras to the network switches and from the IP cameras to the data jack shall all be furnished and installed by this Contractor.

C. System installation shall include, but not be limited to, installation, programming, and configuration of system components as well as all associated software upgrades, patches, and maintenance for the first year.

D. Contractor is responsible for meeting with Owner's representative at time of camera installation to verify exact placement and view of each camera to ensure coverage area is as intended.

10. Drawing Sheets

A. All cameras are designated with a CAM symbol on the project drawings. Each camera has a corresponding label of the format "*#-##".

B. New Category 6 cabling shall be provided at each camera location.

11. Mounting and Installation

A. Contractor shall provide the appropriate mounting hardware for all ceiling types and wall types where cameras shall be located.

B. Wall mounted 180/360 degree or multi-sensor cameras shall be mounted horizontally on a wall arm, gooseneck, parapet, pendant or other similar method.

C. Exterior building mounted cameras shall be mounted on a wall arm/gooseneck if surface mounting is not possible.

D. Cameras mounted in lay-in tile or drop ceiling shall have a tile support bridge with a steel support cable connected to structure to prevent tile sagging, theft

and vandalism.

12. Code and Standard Requirements

A. All work and materials shall conform in every detail to the rules and requirements of the National Fire Protection Association, National Electric Code and any other codes as required by the Authority Having Jurisdiction.

B. All materials shall be listed by UL and shall bear the UL label. If UL has no published standards for a particular item, then other national independent testing standards shall apply and such items shall bear those labels. Where UL has an applicable system listing and label, the entire system shall be so labeled.

C. Cameras shall meet the following standards:

1. MPEG-4:
   a. ISO/IEC 14496-10 AVC (H.264)
2. Networking:
   a. IEEE 802.3af (Power over Ethernet)
3. Network Video:
   a. ONVIF Profile S or better

Part 2 - Products

2.1 Quality Assurance

A. All product materials and equipment shall conform to grade, quality and standards specified. Materials, equipment and software shall be of the most recent version or production design available at the time of installation.

2.2 Approved Manufacturers:

The following manufacturers produce equipment or components which are included in this specification or which are approved for use by the City of Raleigh: (Inclusion on the list below does not imply that all products produced by the manufacturer are acceptable for use in the systems described within this specification.)

1. Altronix
   140 58th Street
   Brooklyn, NY 11220

2. Arecont Vision
   425 East Colorado Street 7th Floor
   Glendale, CA 91205

3. AXIS Communication Inc.
   300 Apollo Drive

Chelmsford, MA 01824

4. Dell Inc.
   1 Dell Way
   Round Rock, Texas 78682

5. Hanwha Techwin America (Samsung)
   50 Frank W. Burr Blvd. Suite 43
   Teaneck, NJ 07666

6. HP Inc.
   1501 Page Mill Road
   Palo Alto CA 94304

7. Life Safety Power
   750 Tower Road, Unit B
   Mundelein, IL 60060

8. Milestone Systems Inc
   8905 SW Nimbus Avenue Suite 400
   Beaverton, OR 97008

9. Panasonic Corporation
   Two Riverfront Plaza
   828 McCarter Hwy.
   Newark, NJ 07102

10. Seneca
    6040 Tarbell Rd
    Syracuse, NY 13206

11. Transition Networks
    10900 Red Circle Drive
    Minnetonka, MN 55343

12. Veracity USA Inc.
    17000 Preston Road, Suite 120
    Dallas, TX 75248

13. Ditek Surge Protection
    One Ditek Center
    1720 Starkey Road
    Largo, FL 33771

14. Fluidmesh Networks
    81 Prospect Street

Brooklyn, NY 11201

2.3 Video Monitoring System (VMS) General Requirements

A. The VMS shall support video encoded in MJPEG and H.264 compression formats.

B. The VMS shall synchronize to a common NTP server as the cameras and other security systems.

C. The VMS shall synchronize with the Owner's Active Directory system and existing Milestone XProtect Corporate VMS.

D. The VMS shall synchronize with the Owner's Niagara Framework based FMCS or to other existing FCMS via Ethernet using the BACnetIP protocol.

E. The VMS shall synchronize with the Owner's Milestone XProtect Corporate management server located in the City's data center.

F. The VMS system shall support all camera system components connected to the Owner's network whether local or remote and integrate with the existing Niagara based server located in the Engineering Services, Facilities and Operations Management office.

G. The VMS shall be connected to the Owner's Exchange system for email based notifications.

H. The Owner shall be able to receive all major and minor software updates at no additional cost for the duration of the project. At the completion of the project the Owner shall have the option to receive a final software update to the latest version before the project is paid in full. All NVRs shall be on a consistent version enterprise wide.

I. The system shall be licensed for Enterprise installation.

J. The system shall log all actions on a per user basis, all alarms and notifications on a per device basis and all errors and failures on a per device basis. These logs shall have the ability to be extracted to a document that can be emailed to an administrator.

K. The NVR software shall launch automatically when operating system is booted and run in the background regardless if a user is logged on.

L. The administrator shall be able to perform the following actions from the interface:

1. Manage the system licenses.

2. Define the client-to-server communications security settings.

3. Configure the network communications hardware, including connection addresses and ports.
4. Configure mail server SMTP settings and port. The Contractor shall coordinate with the Owner on email accounts to be added.
5. Configure event and alarm history storage options.

M. The software shall support the configuration and management of users and user groups. An administrator shall be able to add, delete, or modify a user or user group.

N. The software shall support partitions and limit what users can view in the configuration database. The administrator shall be allowed to segment a system into multiple security partitions. The Contractor shall coordinate with the Owner on required partitions.

1. A user who is given access to a specific partition shall only be able to view component within that partition.
2. A user or user group can be assigned administrator rights over the partition.
3. It shall be possible to specify user and user group privileges on a per partition basis.

O. The software shall provide the ability to configure key frame (I-Frame) interval.

P. The software shall have the ability to assign independent pre- and post-alarm recording on a per camera basis.

Q. The software shall support the configuration of motion detection from the software platform and not through the cameras web interface.

R. The software shall have the ability to assign motion detection zones on a per camera basis.

S. The Archiver Recording Server shall have the ability to redirect audio/video streams to active viewing clients on the network using UDP or TCP.

T. Manufacturer:

1. Milestone: Video Archiver(s) and Milestone Video Monitoring Workstation (City of Raleigh's Standard). **No substitutions**

2.4 Network Video Recorder (NVR)

A. Server NVR's shall be leased through city of Raleigh provider for five years. Include a three-month lead time for lease process to take place for equipment procurement.

B. The NVR shall be purpose built for surveillance, video optimized storage and management. The manufacturer shall guarantee performance with the system design at the time of lease.

C. The NVR shall have a dedicated SSD drive for the operating system and software and an additional spinning drive(s) for video recording. The failure of a recording drive shall not affect the operating system drive.

D. The NVR shall have an integrated DVD-RW drive and digital video output to connect to a KVM.

E. Each NVR shall synchronize to the City's Active Directory system for user management. The Contractor shall connect this unit directly to the Owner supplied secure network and coordinate with the City's IT Department for connection and IP information.

F. Contractor shall coordinate with the Owner for the connection of the Milestone equipment into the Owners Vykon system for any remote monitoring and managing. This unit shall be installed, configured, programmed and attached to the network by the Contractor.

G. The NVR shall be rack mount unless noted otherwise. The contractor shall provide with a 4-post to 2-post converter when installed on a 2-post rack.

H. The Contractor shall provide a monitor, keyboard and mouse with each NVR. Provide a KVM when the NVR is rack mounted.

I. Video recording system shall meet the following minimum parameters:

Integrated facility services reserve the right to utilize Milestone Husky product line where we deem appropriate.

Small Site

Disk Config Type	***# of Cameras 12 (Includes 1 POS)***
Live DB Config	2 x 300 GB (600 GB)
Archive DB Config	8TB
OS and Application Volume - Disk Config	2 x 300 GB (600 GB)
Server Config	
Processor	Intel Xeon E-2234 3.6GHz
RAM	16 GB
NIC	2 GB NICs
OS	Windows Server 2019 x64 Standard/Datacenter

Basis of design – Dell R240

Medium Site

Disk Config Type	***# of Cameras 20 + (Includes 2 POS)***
Live DB Config	2 x 300 GB (600 GB) - RAID 1/RAID 10
Archive DB Config	4x 8TB (32 TB)- RAID 5
OS and Application Volume - Disk Config	2 x 300 GB (600 GB) - RAID 1
Server Config	
Processor	Intel Xeon E5-2603 v4
RAM	8 GB
NIC	2 GB NICs
OS	Windows Server 2019 x64 Standard/Datacenter

Basis of design – Dell R550

Large Site

Disk Config Type	***# of cameras 40 + (Includes 4 POS)***
Live DB Config	4 x 300 GB (1.2 TB) RAID 1/RAID 10
Archive DB Config	6x 10 TB (60 TB) RAID 5
OS and Application Volume - Disk Config	2 x 300 GB (600 GB) - RAID 1
Server Config	
Processor	2x Intel Xeon SP Bronze 3104
RAM	8 GB
NIC	2 GB NICs
OS	Windows Server 2019 x64 Standard/Datacenter

Basis of design – Dell R550

Extra Large Site

Disk Config Type	***# of cameras 60 + (Includes 6 POS)***
Live DB Config	4 X 480 GB (1.8 TB) RAID 1/RAID 10
Archive DB Config	9 x 8 TB (72 TB) RAID 5
OS and Application Volume - Disk Config	2 x 300 GB (600 GB) - RAID 1
Server Config	
Processor	Intel Xeon E5-2630 v4
RAM	8 GB
NIC	2 GB NICs
OS	Windows Server 2019 x64 Standard/Datacenter

Basis of Design – Dell R730XD

A. The Milestone Video Archiver shall be configured with the latest version of XProtect Professional + Software.

B. The NVR shall not be manufactured by the Contractor or a company the Contractor owns.

C. The Contractor shall verify all server calculations with the criteria identified within these specifications. The Contractor shall also verify existing site conditions and provide the appropriate hardware to mount the NVRs in a secured, professional and workmanship like manner.

2.5 Video Workstation

A. System overview

1. If workstation is called for machine will be on city lease.

2. Contractor shall provide, configure and install a video monitoring workstation within the facility as indicated on the drawings.

B. Workstation shall consist of the following:

1. The workstations shall be a PC computer with Microsoft Windows 10 64-bit operating system minimum by the factory and with a 64-bit processor. The workstations shall require an external monitor, keyboard and mouse for operation.
2. Provide and install the latest version of Milestone XProtect software on the workstation.
3. As a minimum, the workstation shall have at a minimum 500-watt power supply using an 4th Generation Intel i7-4770 processor. Each workstation shall have 16 GB of RAM memory, a 16x DVD +/- RW drive, 6 USB 2.0 ports, a LAN connection 10/100/1000 MB Ethernet card., an onboard VGA Adapter with 128 MB of RAM and additional case fan cooling. The workstations shall be equipped with a PS-2 or USB wheel mouse and 101-key keyboard or shall meet the manufacturers minimum standard.
4. The workstations shall be housed in a mid-height tower. It shall be constructed of steel and plastic materials. It shall also be operated indoors in a temperature range not to exceed 32 to 104° F (0 to 40° C) and a humidity range not to exceed 0 to 95% relative, in a non-condensing atmosphere. The workstations shall employ a Universal Voltage Power Supply requiring 105 - 240 VAC @ 50 - 60 Hz.
5. The workstations shall have a minimum of internal solid-state hard-drive storage of 1TB.
6. The workstation shall have Dual (2) NVIDIA GTX 970 PCI Express 3.0 graphics cards. These graphic cards shall have 4 GB of on board memory and shall support Microsoft Direct X Level 12_1.

C. Environmental Specifications

1. Operating Temperature Range: 32 to 104ºF (0 to 40ºC).
    a. Operating Humidity Range: 0 to 95%, non-condensing.

D. Certifications
1. CE
2. UL Listed

E. Monitor
1. Provide one (1) 23" LCD monitor with the workstation.

F. The LCD monitor shall be a desktop monitor with optimum resolution of 1366 x 768. The viewing area shall be 508mm x 286 mm. The panel aspect ratio shall be 16:9 and support up to 1080i video format.

G. The monitor shall have front panel controls for power on/off, source/enter, menu/exit, up, down.

H. An LED indicator shall be located on the front of the monitor for power indication.
1. Minimum Monitor Electrical Specifications
i. Input Voltage: 100 to 240 VAC, 50/60Hz
ii. Input Interfaces: S-Video looping, RGB, Component, DVI and HDMI
iii. Power Consumption: 110 Watts
iv. Viewing Area: 508mm x 286mm.
v. Resolution: 1366 x 768.
vi. Brightness: 500cd/m2.
vii. Contrast Ratio: 700:1.
viii. Backlight Type: 6 CCFL.
ix. Viewing Angle: 160°/160°.
x. Response Time: 8ms
xi. Operating Temperature: 32° to 104°F
xii. Certifications: CE Class A, FCC Class A, TUV Listed, and C-Tick.

13. Mapping Software

A. The VMS software shall be provided with native integrated mapping software.

B. The mapping software shall be compatible with PDF, JPEG and PNG.

C. The Contractor shall provide a satellite level map showing all applicable City buildings. This map shall include drill down links to access the interior building floor plans where all interior and exterior devices are shown. There shall be links to jump back to the satellite view from each floor plan.

D. The Contractor shall setup all interior maps to include all devices within the system.

E. The Contractor shall be responsible to provide all the labor to setup these maps and place all the devices.

F. The Contractor shall get sign-off from the Owner and Consultant on the

finished maps.

G. The Contractor shall obtain the building plans from the Owner or Design Consultant for their use.

14. Enterprise System Monitor (ESM)

A. The Contractor shall provide and install ESM software to enable remote management of all NVRs.

B. The ESM server shall be virtualized on the Owners new virtual machine. Coordinate with the IT department the exact system requirements, virtual machine setup and remote access.

C. Provide with SQL Express if capable or a full version of SQL Server Standard if the manufacturer requires it.

15. VMS Video Storage

A. Provide a minimum of thirty-one (31) days and ninety (90) days at point of sale of storage calculated at the following resolution and rates. Provide all hardware, software and configuration needed to accomplish this.

1. The system shall be enabled for an automatic video cleanup at 31 days.

B. Record stream using Unicast RTP/TCP on stream 1.

C. Pre- and post-record buffer of 5 seconds.

1. Interior Cameras:

a. 15 fps

b. 1 keyframe (I-Frame) per second

c. Max resolution

d. 100% full time recording with motion metadata

e. VBR or framerate priority with cap appropriate to resolution and quality

f. H.264 Main Profile compression

g. Smart codec enabled at a medium setting with a dynamic GoP of up to 8 seconds.

h. 1024 Mbps per mega pixel data rates (ie 2048 Mbps for a 2mp camera). No bitrate cap when smart codecs are enabled or 8Mbps when no cap is not possible.

i. Audio encoding (for cameras with microphones connected or built into

them).

2. Exterior Cameras:

   a. 15 fps

   b. 1 keyframe (I-Frame) per second

   c. Max resolution

   d. 100% full time recording with motion metadata

   e. VBR or framerate priority with cap appropriate to resolution and quality

   f. H.264 Main Profile compression

   g. Smart codec enabled at a medium setting with a dynamic GoP of up to 4 seconds.

   h. 1024 Mbps per mega pixel data rates (ie 2048 Mbps for a 2mp camera). No bitrate cap when smart codecs are enabled or 8Mbps when no cap is not possible.

16. Cameras and Devices

A. General:

1. All cameras and devices shall be time synced to the Owner's NTP server. Coordinate with the Owner to acquire the appropriate NTP address to use.

2. The contractor shall coordinate with the owner for IP addressing, network configuration, QoS and multicast network configuration.

3. The Contractor shall enable QoS on all cameras and intercoms for the video stream, audio stream, event/alarm data, management and metadata at the Owners request.

4. The system shall be configured for multicast. All cameras shall have a multicast Time To Live (TTL) setting of at least 64.

5. The Contractor shall select the appropriate mounting hardware for the situation and confirm with consultant and Owner prior to installation.

6. All cameras shall be equipped with remote autofocus or autoback focus with the exception of 180/360 degree cameras and encoded analog cameras.

7. Multi-sensor 180 and 360 cameras shall have each sensor optimally calibrated independently to the conditions.

8. All cameras shall be vandal proof and appropriate for the environment in which it is being installed.

9. All cameras shall have the latest VMS recommended firmware installed and all

cameras of the same model shall have matching firmware versions. The Contractor shall provide all necessary firmware upgrades to keep the Owner on the latest version throughout the duration of the project. At the completion of the project the Owner shall have the option to receive a final firmware update the latest version before the project is paid in full. All cameras of the same make and model shall be on the same firmware version.

10. The contractor shall coordinate with the Owner for IP addressing, network configuration and multicast network configuration.

11. All cameras regardless of manufacturer/model shall have a consistent username and non-standard password set. This shall be documented and provided to the Owner and consultant prior to inspections.

12. The camera requirements below represent general performance criteria. Approved equals will have slight differences in specifications. The Owner and Consultant have complete discretion to reject approved equals that stray too far from the minimum requirements.

B. Camera TYPE-1 CAM – Interior/Exterior Overview Low Light / WDR 5MP Vandal Dome IP camera shall be:
   1. GENERAL DESCRIPTION
      a. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
         - H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously
            - H.265 and H.264 – frame rates to maximum 30 fps at all resolution
            - MJPEG – frame rates to maximum 30 fps Maximum frame rates are available at selected resolutions:H.265 and H.264: 30 fps is available at all resolutions. MJPEG: 30 fps is available
         - The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
         - The camera shall be able to configure various resolution selections
            - 16:9 aspect ratio: 2560 x 1440, 1920 x 1080, 1280 x 720, 800 x 448, 640 x 360
            - 4:3 aspect ratio: 2560 x 1920, 1600 x 1200, 1280 x 960, 1024 x 768, 800 x 600, 640 x 480, 320 x 240,
            - 5:4 aspect ratio: 1280 x 1024, 720 x 576,
            - 3:2 aspect ratio: 720 x 480,
         - The camera shall be able to stream at least 10 independent video stream type using unicast protocol
         - The camera shall support multicast and unicast video streaming
         - The camera shall be able to configure Dynamic DNS (DDNS).
         - Smart Codec, Dynamic GOV, and Dynamic fps to efficiently manage bitrate

of the video stream.

b. Camera – The camera device shall have the following physical and performance properties:
   - Dustproof, waterproof, and IP67 rated.
   - IK10 rated for protection against impacts.
   - True day/night operation with removable IR cut filter
   - Lens: 3.9 - 9.4 mm (2.4x) motorized varifocal lens
     - Low light level operation to 0.07 lux at F1.3 in color mode and 0 lux in black and white mode with IR LED on.
   - The camera shall support digital noise reduction using both 2D and 3D noise reduction technology
   - Integral IR illumination, providing effective visibility of 50m(164.04ft) at 0 Lux when activated in Black & White mode.
   - Configurable a privacy masking regions utilizing a 4 point polygon
   - The camera shall provide video display on smart phone (iPhone, Android) to adjust viewing angle, rotation and focus using a direct USB connection and/or Wi-Fi dongle.
c. Intelligence and Analytics – The camera shall have a suite of integral intelligent operations and analytic functions to include:
   - Motion detection with eight definable detection areas with 8 point polygonal zones, minimum / maximum object size.
   - Detection of logical events of specified conditions from the camera's video input
     - camera tamper (scene change)
     - defocus detection
     - fog detection
     - motion detection with metadata
     - face detection
     - virtual area-based event (intrusion, enter/exit, appear/disappear, loitering)
     - virtual line-based event (directional detection, crossing)
     - Detection of logical events of specified conditions from the camera's audio input
     - sound classification (scream, gunshot, explosion, crashing glass)
     - Interoperability – The camera shall be ONVIF Profile S and G compliant.
     - The camera shall possess the following further characteristics:
       - Built-in web server, accessed via standard browsers including Internet Explorer, Firefox, Chrome & Safari
       - Dual edge recording slot like Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals
       - NAS recording option with configurable pre-alarm and post-alarm recording intervals
       - bi-directional audio
       - Alarms and notifications

- alarm notification triggers:
- motion detection
- tampering detection
- alarm input
- defocus detection
- fog detection
- face detection
- audio detection
- video & audio analytics
- network disconnection
- available notification means upon trigger:
- file upload via FTP and e-mail
- notification via e-mail
- record to local storage (SD card) or NAS storage
- external output
- move to DPTZ preset
- Pixel Counter available in the web viewer.
- PoE capable including heater by PoE

2. RECORDING PROFILE: 30day Archive, 15fps @Full Resolution, 35% Motion Events per 24hrs

3. Basis of Design: Hanwha-Techwin XNV-8080R

4. Provide flush mount kit and any additional mounting hardware as required for each camera. Mounting hardware shall be approved for plenum ceiling and shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary.

C. Camera TYPE-2 – Interior Overview 5MP Vandal Dome IP camera shall be:
1. GENERAL DESCRIPTION
   a. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
      - H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously.
        - H.265 and H.264 – maximum of 30fps at all resolution
        - MJPEG – maximum of 15fps
      - The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
      - The camera shall be able to configure various resolution selections.
        - 16:9+ aspect ratio: 2592 x 1464, 800 x 448
        - 16:9 aspect ratio: 1920 x 1080, 1280 x 720, 640 x 360
        - 4:3 aspect ratio: 1280 x 960, 800 x 600, 640 x 480
        - 5:4 aspect ratio: 720 x 576

- 3:2 aspect ratio: 720 x 480
- The camera shall support unicast video streaming up to 6 users.
- The camera shall support multicast video streaming
- The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
- The camera shall provide WiseStream Ⅱ, Dynamic GOV and Dynamic fps to efficiently manage bit rate of the video stream and reduce storage.

b. Camera – The camera device shall have the following physical and performance properties:
   - Dustproof, waterproof, and IP66 rated.
   - IK10+ rated for protection against impacts.
   - True day/night operation with removable IR cut filter
   - Lens: 3.2 - 10.0mm Motorized Vari-focal
     - Low light level operation to 0.15 lux at F1.6 in color mode and 0 lux in black and white mode with IR LED on.
   - The camera shall be able to produce clear images in highly contrast scenes with multi-exposure wide dynamic range up to 120dB.
   - The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
   - The camera shall be able to configure 6 privacy masking areas with rectangles.
   - The camera shall provide video display on smart phone (iPhone, Android) to adjust viewing angle, rotation and focus.
c. Intelligence and Analytics – The camera shall have a suite of intelligent analytic functions.
   - Motion detection with 4 definable detection areas with 4 point polygonal zones, and minimum/maximum object size.
   - Detection of logical events of specified conditions from the camera's video
     - Tampering, Directional Detection, Virtual Line, Enter/Exit
     - Defocus Detection
     - Motion Detection
d. Interoperability – The camera shall be ONVIF Profile S, G and T compliant.
e. The camera shall possess the following further characteristics:
   - Built-in web server accessed via non-plugin browsers including Google Chrome, IE11, MS Edge, Mozilla Firefox and Apple Safari.
   - Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals
   - NAS recording option with configurable pre-alarm and post-alarm recording intervals
   - Alarms and notifications
     - alarm notification triggers:
       - Alarm input
       - Motion detection
       - Video analytics
       - Network disconnect
     - available notification means upon trigger:

- File Upload via FTP and E-mail
- Notification via E-mail
- Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
- External output

- Pixel Counter available in the web viewer.
- PoE capable including heater by PoE

2. RECORDING PROFILE: 30day Archive, 15fps @Full Resolution, 35% Motion Events per 24hrs

3. Basis of Design: Hanwha-Techwin QNV-8080R

4. Provide flush mount kit and any additional mounting hardware as required for each camera. Mounting hardware shall be approved for plenum ceiling and shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary.

D. Camera TYPE-3 – Interior Transaction Area 5MP Vandal Dome IP camera shall be:
1. GENERAL DESCRIPTION
a. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
- H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously.
  - H.265 and H.264 – maximum of 30fps at all resolution
  - MJPEG – maximum of 15fps
- The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
- The camera shall be able to configure various resolution selections.
  - 16:9+ aspect ratio: 2592 x 1464, 800 x 448
  - 16:9 aspect ratio: 1920 x 1080, 1280 x 720, 640 x 360
  - 4:3 aspect ratio: 1280 x 960, 800 x 600, 640 x 480
  - 5:4 aspect ratio: 720 x 576
  - 3:2 aspect ratio: 720 x 480
- The camera shall support unicast video streaming up to 6 users.
- The camera shall support multicast video streaming
- The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
- The camera shall provide WiseStream Ⅱ, Dynamic GOV and Dynamic fps to efficiently manage bit rate of the video stream and reduce storage.

b. Camera – The camera device shall have the following physical and performance properties:
- Dustproof, waterproof, and IP66 rated.
- IK10+ rated for protection against impacts.
- True day/night operation with removable IR cut filter
- Lens: 3.2 - 10.0mm Motorized Vari-focal
  - Low light level operation to 0.15 lux at F1.6 in color mode and 0 lux in

black and white mode with IR LED on.
- The camera shall be able to produce clear images in highly contrast scenes with multi-exposure wide dynamic range up to 120dB.
- The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
- The camera shall be able to configure 6 privacy masking areas with rectangles.
- The camera shall provide video display on smart phone (iPhone, Android) to adjust viewing angle, rotation and focus.

c. Intelligence and Analytics – The camera shall have a suite of intelligent analytic functions.
   - Motion detection with 4 definable detection areas with 4 point polygonal zones, and minimum/maximum object size.
   - Detection of logical events of specified conditions from the camera's video
     - Tampering, Directional Detection, Virtual Line, Enter/Exit
     - Defocus Detection
     - Motion Detection

d. Interoperability – The camera shall be ONVIF Profile S, G and T compliant.

e. The camera shall possess the following further characteristics:
   - Built-in web server accessed via non-plugin browsers including Google Chrome, IE11, MS Edge, Mozilla Firefox and Apple Safari.
   - Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals
   - NAS recording option with configurable pre-alarm and post-alarm recording intervals
   - Alarms and notifications
     - alarm notification triggers:
       - Alarm input
       - Motion detection
       - Video analytics
       - Network disconnect
     - available notification means upon trigger:
       - File Upload via FTP and E-mail
       - Notification via E-mail
       - Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
       - External output
   - Pixel Counter available in the web viewer.
   - PoE capable including heater by PoE

2. RECORDING PROFILE: 90day Archive, 15fps @Full Resolution, 35% Motion Events per 24hrs

3. Basis of Design: Hanwha-Techwin QNV-8080R

4. Provide flush mount kit and any additional mounting hardware as required for

each camera. Mounting hardware shall be approved for plenum ceiling and shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary.

E. Camera TYPE-4 – Exterior Multi-Sensor 20MP Vandal Dome IP camera shall be:
   1. GENERAL DESCRIPTION
      a. The camera shall provide multi directional view and produce video in various view mode.
      b. The lenses(2M/5M) shall be selectable depending on customer's requirement at site.
      c. Hallway view is available on CH1/2/3/4.
      d. Each Channels support SD Card
      e. It provides one single power supply for all of multi-channels
      f. Video Compression and Transmission – The multi-directional camera shall have the following properties relating to the video signals it produces.
         - H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously
            - H.265 and H.264 [5MP] frame rates to max 30fps (60Hz) / 25fps(50Hz) at all resolution[2MP] frame rates to max 60fps (60Hz) / 50fps(50Hz) at all resolution
            - MJPEG – frame rates to maximum 30fps (60Hz) / 25fps (50Hz) at all resolution
         - The multi-directional camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, bit rate, and other video settings.
         - The multi-directional camera shall have four lenses and each lens shall provide the following resolutions.
            - [5MP] 2560x1920, 2560x1440, 1920x1080, 1600x1200, 1280x1024, 1280x960,1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 320x240
         - The camera shall support unicast video streaming up to 20 users.
         - The camera shall support multicast video streaming up to 10 profiles.
         - The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
         - The camera shall provide WiseStream Ⅱ, Dynamic GOV and Dynamic fps to efficiently manage bit rate of the video stream and reduce storage.
      g. Camera – The multi-directional camera device shall have the following physical and performance properties:
         - IK10 rated for protection against impacts.
         - Lens model:
         - SLA-5M3700Q(3.7mm Zoom Ratio)
         - SLA-5M4600Q(4.6mm Zoom Ratio)
         - SLA-5M7000Q(7.0mm Zoom Ratio)
         - IP66 for protection against dust and water.
         - The multi-directional camera shall be able to capture high contrast scenes with 150 dB for 2MP and 120dB for 5MP multi-exposure wide dynamic

range.
- The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
- 32 privacy masking regions utilizing polygons
- Supporting digital image stabilization the camera shall be able to measure movements in three axes and accurately enhance images from distortions caused by instability.

h. Intelligence and Analytics – The multi-directional camera shall have a suite of integral intelligent operations and analytic functions to include:
   - Motion detection with 8 definable detection areas with 8 point polygonal zones, and minimum/maximum object size.
   - Detection of logical events of specified conditions from the camera's video
     - Defocus detection
     - Fog detection
     - Directional detection
     - Motion detection
     - Appear/Disappear
     - Enter/Exit
     - Loitering
     - Tampering
     - Virtual line
     - Face detection

i. Interoperability – The camera shall be ONVIF Profile S and T compliant.

j. The multi-directional camera shall possess the following further characteristics:
   - Built-in web server, accessed via standard browsers including Internet Explorer, Firefox, Chrome & Safari
   - Micro SD/SDHC/SDXC memory card options, with configurable pre-alarm and post-alarm recording intervals
   - Alarms and notifications
     - alarm notification triggers:
       - Analytics
       - Network disconnect
     - available notification means upon trigger:
       - File Upload via FTP and E-mail
       - Notification via E-mail
       - Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
   - Pixel Counter available in the web viewer.
   - PoE+ capable
   - This device has been verified using STP cable. The use of appropriate GND grounding and STP cable is recommended to effectively protect your product and property from transient voltage, thunderstroke, communication interruption.

2. RECORDING PROFILE: 30day Archive, 15fps @Full Resolution, 35% Motion Events

per 24hrs

3. Basis of Design: Hanwha-Techwin PNM-9002VQ

4. Provide wall mount and/or corner mount kit and any additional mounting hardware as required for each camera. Mounting hardware shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary.

F. Camera TYPE-5 – Interior/Exterior Overview 4K Vandal Dome IP camera shall be:
   1. GENERAL DESCRIPTION
      a. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
         - H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously.
            - H.265 and H.264 – maximum of 30/25fps(60Hz/50Hz) at all resolution
            - MJPEG – maximum of 15/12fps(60Hz/50Hz)
         - The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
         - The camera shall be able to configure various resolution selections.
            - 16:9 aspect ratio: 3840x2160, 3328x1872, 3072x1728, 2688x1520, 1920x1080,1280x720, 800x448, 640x360
            - 4:3 aspect ratio: 2592x1944, 1600x1200, 1280x960, 1024x768, 800x600, 640x480, 320x240
            - 5:4 aspect ratio: 1280x1024, 720x576
            - 3:2 aspect ratio: 720x480
         - The camera shall support unicast video streaming up to 20 users.
         - The camera shall support multicast video streaming up to 10 profiles.
         - The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
         - The camera shall provide WiseStream Ⅱ, Dynamic GOV and Dynamic fps to efficiently manage bit rate of the video stream and reduce storage.
      b. Camera – The camera device shall have the following physical and performance properties:
         - IK10+ rated for protection against impacts.
         - True day/night operation with scheduling and options for external devices.
         - Lens: 2.8-8.4mm motorized varifocal
            - Low light level operation to 0.05 lux at F1.2 in color mode and 0 lux in IR mode.
         - The camera shall be able to produce clear images in highly contrast scenes with multi-exposure wide dynamic range.
         - The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
         - The camera shall be able to configure 32 privacy masking areas with polygonal zones.

- The camera shall have the defog feature to remove fogginess of scene which can be triggered automatically from the fog detection event.
- The camera shall provide video display on smart phone (iPhone, Android) to adjust viewing angle, rotation and focus.

c. Intelligence and Analytics – The camera shall have a suite of intelligent analytic functions.
   - Motion detection with 8 definable detection areas with 8 point polygonal zones, and minimum/maximum object size.
   - Motion detection hand-over to PTZ cameras. The camera shall be able to call a preset of PTZ camera when motion event is triggered.
   - Detection of logical events of specified conditions from the camera's video
     - Defocus detection
     - Directional detection
     - Motion detection
     - Digital auto tracking
     - Appear/Disappear
     - Enter/Exit
     - Loitering
     - Tampering
     - Virtual line
     - Audio detection
     - Sound classification
     - Shock detection
     - Face/upper body detection
     - Fog detection
   - Business Intelligence features
     - People counting
     - Queue management
     - Heatmap
   - Detection and classification of the following sound.
     - Scream
     - Gunshot
     - Explosion
     - Crashing glass
   - Interoperability – The camera shall be ONVIF Profile S / G and T compliant.
   - The camera shall possess the following further characteristics:
     - Built-in web server, accessed via non-plugin browsers including Google Chrome, MS Edge, Mozilla Firefox and Apple Safari.
     - The camera shall provide streaming to multiple smart phones with DDNS provided freely from the manufacturer. In addition, the application shall be available for both iOS and Adroid, free of charge with search keyword, 'Wisenet Mobile'.
     - Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals
     - NAS recording option with configurable pre-alarm and post-alarm recording intervals

- Alarms and notifications
  - alarm notification triggers:
    - Analytics
    - Network disconnect
    - Alarm input
  - available notification means upon trigger:
    - File Upload via FTP and E-mail
    - Notification via E-mail
    - Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
    - Alarm output
    - PTZ preset
    - Handover
    - Audio playback
- Pixel Counter available in the web viewer.
- PoE capable
- IP66/IP67/IP6K9K, IK10+, NEMA4X
- This device has been verified using STP cable. The use of appropriate GND grounding and STP cable is recommended to effectively protect your product and property from transient voltage, thunderstrike, communication interruption.

2. RECORDING PROFILE: 30day Archive, 15fps @ Full Resolution, 35% Motion Events per 24hrs

3. Basis of design: Hanwha-Techwin XNV-9082R

4. Provide wall mount and any additional mounting hardware as required for each camera. Mounting hardware shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary.

G. Camera TYPE-6 – Exterior Overview 4K Bullet IP camera shall be:
1. GENERAL DESCRIPTION
   a. Video Compression and Transmission – The camera shall have the following properties relating to the video signals it produces.
      - H.265, H.264 and MJPEG compression, each derived from a dedicated encoder and capable of being streamed independently and simultaneously.
        - H.265 and H.264 – maximum of 30/25fps(60Hz/50Hz) at all resolution
        - MJPEG – maximum of 15/12fps(60Hz/50Hz)
      - The camera shall be able to configure up to 10 independent video stream profiles with differing encoding, quality, frame rate, resolution, and bit rate settings.
      -

- The camera shall be able to configure various resolution selections.

  16:9 aspect ratio:3840x2160, 3328x1872, 3072x1728, 2688x1520, 1920x1080, 1280x720, 800x448, 640x360

  - 4:3 aspect ratio: 2592x1944, 1600x1200, 1280x960, 1024x768, 800x600, 640x480, 320x240
  - 5:4 aspect ratio: 1280x1024, 720x576
  - 3:2 aspect ratio: 720x480
- The camera shall support unicast video streaming up to 20 users.
- The camera shall support multicast video streaming up to 10 profiles.
- The camera shall be able to configure Dynamic DNS (DDNS). DDNS shall be provided with no additional cost by the manufacturer.
- The camera shall provide WiseStream Ⅱ, Dynamic GOV and Dynamic fps to efficiently manage bit rate of the video stream and reduce storage.

b. Camera – The camera device shall have the following physical and performance properties:
   - IK10 rated for protection against impacts.
   - True day/night operation with scheduling and options for external devices.
     - Low light level operation to 0.05 lux at F1.2 in color mode and 0 lux in IR mode.
     - Lens: 2.8~8.4mm(3x) motorized varifocal
   - The camera shall be able to produce clear images in highly contrast scenes with multi-exposure wide dynamic range.
   - The camera shall support digital noise reduction using both 2D and 3D noise reduction technology.
   - The camera shall be able to configure 32 privacy masking areas with polygonal zones.
   - The camera shall have the defog feature to remove fogginess of scene which can be triggered automatically from the fog detection event.
   - The camera shall provide video display on smart phone (iPhone, Android) to adjust viewing angle, rotation and focus.

c. Intelligence and Analytics – The camera shall have a suite of intelligent analytic functions.
   - Motion detection with 8 definable detection areas with 8 point polygonal zones, and minimum/maximum object size.
   - Motion detection hand-over to PTZ cameras. The camera shall be able to call a preset of PTZ camera when motion event is triggered.

- Detection of logical events of specified conditions from the camera's video
  - Defocus detection
  - Directional detection
  - Motion detection
  - Digital auto tracking
  - Appear/Disappear
  - Enter/Exit
  - Loitering
  - Tampering
  - Virtual line
  - Audio detection
  - Sound classification
  - Shock detection
  - Face/upper body detection
  - Fog detection
- Business Intelligence features
  - People counting
  - Queue management
  - Heatmap
- Detection and classification of the following sound.
  - Scream
  - Gunshot
  - Explosion
  - Crashing glass

d. Interoperability – The camera shall be ONVIF Profile S / G and T compliant.

e. The camera shall possess the following further characteristics:

- Built-in web server accessed via non-plugin browsers including Google Chrome, MS Edge, Mozilla Firefox and Apple Safari.
- The camera shall provide streaming to multiple smart phones with DDNS provided freely from the manufacturer. In addition, the application shall be available for both iOS and Adroid, free of charge with search keyword, 'Wisenet Mobile'.
- Micro SD/SDHC/SDXC memory card with configurable pre-alarm and post-alarm recording intervals

- NAS recording option with configurable pre-alarm and post-alarm recording intervals
- Alarms and notifications
  - alarm notification triggers:
    - Analytics
    - Network disconnect
    - Alarm input
  - available notification means upon trigger:
    - File Upload via FTP and E-mail
    - Notification via E-mail
    - Local storage (SD / SDHC / SDXC) or NAS recording at event triggers
    - Alarm output
    - PTZ preset
    - Handover
    - Audio playback
- Pixel Counter available in the web viewer.
- PoE capable
- IP66/IP67, IK10, NEMA4X

2. RECORDING PROFILE: 30day Archive, 15fps @ Full Resolution, 35% Motion Events per 24hrs

3. Basis of design: Hanwha-Techwin XNO-9082R

4. Provide wall mount and any additional mounting hardware as required for each camera. Mounting hardware shall have knock outs for conduit connectivity with no exposed wiring. Provide additional mounting equipment as necessary

17. Ethernet with PoE Over 75 Ohm Coaxial Cable

A. The contractor shall provide an Ethernet over coaxial cable converter for any camera mounted in an area without local power supply availability or at other locations as required.

B. Each camera shall receive its own dedicated transmitter and receiver unit. Splitting multiple cameras through a single Tx/Rx pair is not allowed.

C. The Contractor shall coordinate with the Elevator Contractor for installation as required.

D. Shall support multi-cast networks.

E. Provide full duplex 10/100Base-T.

F. Shall support IEEE 802.3af (PoE) and IEEE 802.3at (PoE+) on input and output.

G. Can support 802.3at at 20 watts at a minimum of 1,000 feet of 20awg RG-59.

H. Provide with optional power supply when PoE switch is not available.

I. Provide with wall mount or rack mount bracket as required.

J. Manufacturer:

1. Veracity Highwire Powerstar
    a. Provide with dedicated power supply as required.
2. Or approved equal

18. Ethernet with Power over Ethernet (PoE) UTP Surge Suppressor

A. The Contractor shall provide and install a surge protector for all exterior mounted cameras. Cameras that are not attached to the building or reach above the building roof line shall have a surge protector at the camera side and interior termination side.

B. There shall be a minimum of a 36" shielded patch cable from the surge protector to the device to allow for adequate clamping time.

C. When protector is mounted in interior, dry or weather sealed enclosure:

1. Shielded RJ-45 jacks and ground stud
    a. Connect ground directly to ground bar (TMGB/TGB) or ground.
    b. Do not use shielded cable on the output.
2. Maximum supported data rate: 10,000Mb/s (10 Gigabit)
3. Supports IEEE 802.3af (PoE)
4. Max current rating of 30A per pair.
5. UL 497B listed
6. 110 punch down in and 110 punch down out.
    a. 110 punch down in and RJ-45 out may be used when output is connected directly to a switch only when approved in specific situations.
7. Manufacturer:
    a. Ditek DTK-110C6APOE

b. Or approved equal

D. When protector is exposed to weather or moisture:

1. Shielded RJ-45 jacks and ground connection.
   a. Connected ground connection directly to ground.
   b. Do not use shielded cable on the output.
2. Outdoor-rated NEMA 4X enclosure
3. Maximum supported data rate: 1,000Mb/s (1 Gigabit)
4. Supports IEEE 802.3af, 802.3at (PoE) and PoE+ up to 144 watts per port.
5. Max current rating of 20,000A per pair.
6. UL 497B listed
7. RG-45 in and RJ-45 out.
8. Provide with appropriate mounting kit.
9. Manufacturer:
   a. Ditek DTK-MRJPOEX
   b. Or approved equal

19. Ethernet UTP Surge Suppressor (No PoE)

A. The Contractor shall provide and install a surge protector for all exterior mounted cameras. Cameras that are not attached to the building or reach above the building
roof line shall have a surge protector at the camera side and interior termination side.

B. There shall be a minimum of a 36" shielded patch cable from the surge protector to the device to allow for adequate clamping time.

C. When protector is mounted in interior, dry or weather sealed enclosure:

1. Shielded RJ-45 jacks and ground stud
   a. Connect ground directly to ground bar (TMGB/TGB) or ground.
   b. Do not use shielded cable on the output.
2. Maximum supported data rate: 10,000Mb/s (10 Gigabit)
3. Max current rating of 100A per pair.
4. UL 497B listed

5. 110 punch down in and 110 punch down out.
    a. 110 punch down in and RJ-45 out may be used when output is connected directly to a switch only when approved in specific situations.
6. Manufacturer:
    a. Ditek DTK-110C6A
    b. Or approved equal

20. Surge Protection for Low Voltage AC/DC power

A. The Contractor shall provide a surge protector for all exterior devices being supplied by low voltage power. This does not include devices directly connected to a building where the risks of surges are negligible.

B. There shall be a minimum of a 36" shielded cable from the surge protector to the device to allow for adequate clamping time.

C. When protector is mounted in interior, dry or weather sealed enclosure:

1. Nominal voltage rating of 24V AC/DC. Provide correct module per required voltage level if different from 24V.
2. 20,000A surge current rating.
3. Protects 2-pair per module.
4. Accepts up to 10AWG cable
5. Connect directly to ground.
6. UL 497B listed
7. Provide quantity of modules as required for the application.
8. Provide base mounting plate as required for the application.
9. Manufacturer:
    a. Ditek DTK-2MB Mounting Base
    b. Ditek DTK-2MHLP24B Surge Module
    c. Or approved equal

21. Surge Protection for 120 VAC power

A. The Contractor shall provide a surge protector for all 120VAC supplied power supplies.

B. There shall be a minimum of a 36" of cable from the surge protector to the load to allow for adequate clamping time.

C. When the protector is mount in an interior or exterior location:

1. Nominal voltage rating of 120VAC, single-phase, 20A continuous load.
2. Series connected.
3. 54,000 A surge current rating.
4. 35db of EMI/RFI filtering.
5. UL 1449 Type 2 SPD listed
6. UL 1289 EMI/RFI Noise Filtering listed.
7. LED indicator.
8. Form C dry contacts for monitoring.
9. Include with NEMA 4X enclosure.
10. Maintain a minimum of 3' of cable from the surge protector to the load.
11. Manufacturer:
    a. Ditek DTK-TSS4D
    b. Or approved equal

22. Managed Power Supplies

A. The Contractor shall provide and install a power supply for exterior cameras, fiber optic media converters and other devices which require a dedicated power supply capable of outputting 24VAC and 28VAC.

B. The Contractor shall connect each device to an output according to the voltage drop to stay as close to 24VAC at the end point as possible based on actual field measurements.

C. The power supply shall have network modules capable of controlling each individual output via a web interface. Each power distribution module shall be clearly labeled as a 24VAC output or 28VAC output.

D. The power supply shall be grounded with a 6awg cable.

E. The Contractor shall provide (1) Altronix BC300 enclosure, (1) T2428300 transformers and (1) LinQ8PD networked power distribution modules. Alternate Altronix configurations may be submitted.

23. Fiber Optic Media Converters

A. The contractor shall provide fiber optic media converters for locations that require

fiber optic cable due to distances that exceed copper cable distance limitation or as identified on the drawings. Provide a rack mount chassis when multiple outputs are required.

B. Single port, industrial interior/exterior

1. 10/100 Ethernet full duplex
2. Operating temperature of -40 - 167 degrees F
3. 1300 multimode ST fiber connectors
4. Link budget of 12.0 dB
5. DIN Rail mountable, provide with appropriate brackets as required
6. AC version requires 22-36 VAC. Provide with power supply where required.
7. Mount in NEMA rated enclosure when installed in the exterior
8. Manufacturer:
   a. Transition Networks (AC version) M/E-ISW-FX-01AC(ST)
   b. Or approved equal

C. Rack mount multi-port, card based headend

1. 10/100 Ethernet, Class A, full duplex
2. 1300 multimode ST fiber connectors
3. Link budget of 11.0 dB
4. Provide slot quantity as required
5. 120VAC power connection
6. Manufacturer:
   a. Slide in module - Transition Networks C2210-1011
   b. Chassis - Transition Networks ION219A series
   c. Or approved equal

24. Wireless Transmitters/Receivers

A. The Contractor shall provide a wireless point to multi-point system where required.

B. The system shall use unlicensed frequencies.

C. The units shall be managed with a web interface for configuration.

D. The Contractor shall provide the appropriate throughput licensing based on the

camera streaming bandwidth requirements noted within these specifications.

E. The Contractor shall provide the appropriate mounting hardware rated for the appropriate wind, snow and ice loading.

F. All hardware shall be grounded.

G. When point to multi-point is required the Contractor shall utilize a base station with a 120-degree horizontal beamwidth. Point to point may utilize edge units with a 33-degree horizontal beamwidth.

H. Manufacturer:

1. Fluid Mesh FM3200BASE for base units
2. Fluid Mesh FM1200VOLO for edge units
3. Or approved equal

Part 3 - Execution

3.1 Security Cameras and Video Monitoring System

1. Contractor shall provide all necessary wiring, cabling, conduit, labor, tools, equipment, licenses and ancillary materials required to furnish and install new security cameras and video monitoring system (Milestone Video Archiver(s) and Milestone Video Monitoring Workstation) as indicated on the drawings and in these specifications. Contractor shall also connect new cameras to video monitoring system and City's existing security network and coordinate testing and final system configuration.

3.2 Requirements are indicated elsewhere in this specification for work including, but not limited to:

1. Cameras, associated power supplies, media convertors and data cabling and equipment to be provided and installed by the Contractor.
    a. Connection by the Contractor of the new Video Archiver(s), Video Monitoring Workstation and security cameras to the Owner's security network.
        i. The Contractor shall coordinate with the Owner for specific network standards and for local area network (LAN) connections.
2. All cameras shall be connected to the facility's new Milestone Video Archiver(s) for local monitoring and recording. The Contractor shall be responsible for connecting all cameras to the Owner's network and for coordinating and configuring the cameras to be viewable through the Milestone Video Monitoring Workstations.
    a. The new Milestone Video Archiver(s) shall be an extension of the Owner's existing Milestone Video Management System.

b. The Contractor shall provide all Milestone and camera integration licenses necessary to integrate the Milestone Video Management System into the Owner's Vykon Access Control System.

c. It is the Contractor's responsibility to coordinate any network, software and hardware requirement(s) needed to connect any device or server to the Owner's network. If any device or server does not meet the Owner's network requirement specification, the Contractor shall be responsible to provide an adequate replacement or bring the delinquent device up to the Owner's required specification before connecting the device to the Owner's network.

3.3 The extent of security system work for the project includes, but is not limited to, the following under the Base Bid:

a. Installation of new digital video surveillance system cameras, media converters, Milestone Video Archivers, Milestone Workstations and associated equipment and hardware to provide a fully functioning video surveillance system.

b. Miscellaneous terminations, programming, licenses and updates to extend up to the Owner's final acceptance of the installed system.

3.4 The Milestone Video Archivers shall provide management, control, recording and monitoring of all new facility video surveillance system cameras.

3.5 The Contractor shall not have a password to access the Enterprise server. The Contractor shall only have local restricted access.

3.6 Camera installation and work required to bring new security equipment up to operational status for final acceptance by the Owner shall include but not be limited to the following:

a. Determination of hardware, software, and operations requirements for implementation.

b. Set up and configuration of parameters on each camera for recording on the Video Archivers

c. Set-up of optimum recording parameters on each Video Archiver.

d. Testing of video systems operations based on a camera by camera walkthrough.

e. Organizing and conducting end-user training.

3.7 The Contractor shall provide onsite professional services to assist in the initial setup and programming of all systems specified within this specification.

3.8 The Contractor shall coordinate conduit routes and locations with the Electrical Contractor before conduits are to be installed.

1. The Contractor shall coordinate any and all concrete and anchoring information with the General Contractor before the installation of concrete footers for any planned exterior pole supports for cameras.

2. All cabling shall be provided by the Contractor.
3. Contract close out submittals to include:
4. Training course materials – as described in related Section 27 00 00
5. Commissioning Test Plan and Check-Off List
6. As-built drawings to include elementary and wiring diagrams of the security systems to be used for record drawings.

3.9 Testing

A. Refer to Section 27 00 00 for additional requirements.

B. Site tests shall be performed with a representative of the Owner in attendance.

C. Tests shall be performed on each major component of the Video Management System.

D. Prior to energizing or testing the system, ensure the following:

1. All products are installed in a proper and safe manner per the manufacturer's instructions.
2. Dust, debris, solder, splatter, etc., is removed.
3. Cable is dressed, routed, and labeled; connections are consistent with regard to polarity.
4. All products are neat, clean, and unmarred, and parts are securely attached.

E. Contractor shall ensure that each device in the security system is functioning normally and in such a manner as to meet the functional and performance requirements in this specification.

3.10 Training

A. Refer to Section 27 00 00 for additional requirements and information related to the following:

B. Provide system operations, administration, and maintenance training by factory-trained personnel qualified to instruct.

1. The Contractor shall provide scheduled and dedicated training time for administration and investigation for the project site.
2. The Contractor shall provide an allotment of training hours per Section 27 00 00 for the administration and use of the security system and VMS platform.

3. Provide printed training materials for each trainee, including product manuals, course outline, workbook or student guides, and written examinations for certification.

4. Provide hands-on training with operational equipment.

5. Training shall be oriented to the specific system being installed under this contract as designed and specified.

6. Contractor shall provide all necessary documentation of system operating parameters prior to scheduled training sessions.

3.11 Warranty

A. Refer to Section 27 00 00 for additional requirements.

3.12 Installation Practices

A. All services provided shall be professional and conform to the highest standards for safety and industry practices. The Owner reserves the right to halt any installation due to poor workmanship. All work shall be defect free, and the installer shall replace, at their expense, any work found to be defective.

B. The Owner reserves the right to halt any installation due to failure of Contractor to observe installation-free periods due to instructional or administrative requirements. To the maximum extent possible, the Owner will provide advance notice of such periods.

C. Contractor is responsible for providing a complete and functional video surveillance system.

D. All manufactured items, materials, and equipment shall be applied, installed, connected, erected, used, and adjusted as recommended by the manufacturers, or as indicated in their published literature, unless specifically noted herein to the contrary.

E. Contractor shall follow these standards and approved submittals for locations of power supplies. The Owner intends to limit the number and location of power supplies to facilitate more effective long-term support and maintenance of the system.

3.13 Coordination

A. Contractor shall provide up to 12 hours of scheduled and dedicated coordination time to assist Owner with camera positioning and coordination as requested by Owner or Consultant.

3.14 Installation Appearance and Equipment Organization

A. All cables and equipment terminating at panels frames shall be vertically straight,

with no cables crossing each other, from twelve inches inside the ceiling area to the termination block.

B. All cable bundles shall be combed and bundled to accommodate individual termination block rows and panels.

C. For any given telecom room, a horizontal and vertical alignment for all mounting hardware will be maintained to provide a symmetrical and uniform appearance to the distribution frame.

D. All surface-mounted devices shall be firmly secured level and plumb

E. All rack mount equipment shall be securely installed.

3.15 Hardware Layout

A. Hardware positioning and layout shall be reviewed and approved by the Owner prior to construction. The review does not exempt Contractor from meeting any of the requirements stated in this document.

3.16 VMS Installation Practices

A. Verify that the manufacturer approved server hardware, OS meets the Owner's IT standards prior to ordering.

B. Coordinate server power, cooling, and mounting requirements with Owner prior to installation.

C. Coordinate virus scan/security software requirements with Owner and manufacturer prior to installation.

3.17 Device Cabling/Wiring Installation Practices

A. All external wire and cables shall be supported at least every five feet from the structure or as required to maintain not more than 12" cable sag between supports and without over tensioning the cables. Provide j-hooks as needed where cable tray or raceway is not available.

B. This Contractor shall coordinate installation with Division 27 05 00. Cabling Contractor to ensure there is at least 2-inches of physical separation between security cabling and voice/data cabling throughout cable path. Voice/data cabling Contractor has first claim to cable tray.

C. All cables, regardless of length, shall be labeled within 18" of both ends with an identifier that is keyed to the door, room, or corridor number as identified.

D. All cables shall have 6-foot service loops neatly coiled in the equipment room. During initial cable rough-in, this Contractor shall have sufficient slack to route anywhere within the equipment room.

E. Cabling shall be adequately supported with Velcro wire wraps and horizontal support cable managers fastened to rack frame. Cables shall be dressed in a neat and orderly fashion. Any cabling or equipment installation that is deemed unacceptable by the Owner or Consultant shall be replaced or corrected by the Contractor at no additional cost. **Plastic zip ties are not allowed.**

F. All cables are to run at right angles to the structure, placed above the ceiling in halls or corridors.

G. Cables shall not run above red iron joist.

H. Contractor shall make every effort to conceal wiring and other apparatus into walls, floors, and ceilings, assuming code and good engineering practice allows and suggests.

I. Ties and straps shall be installed snugly without deforming cable insulation. Ties shall be spaced at uneven intervals not to exceed four feet. No sharp burrs shall remain where excess length of the cable tie has been cut.

J. Contractor shall notify Owner immediately if obstruction or hazard is discovered in a pathway provided by others.

K. Cable shall be stored and handled to assure that it is not stretched, kinked, crushed, or abraded in any way. Bend radiuses shall meet manufacturer specifications and/or recommendations. Cable shall not be installed in ambient temperatures or moisture conditions above or below the manufacturer's rating.

L. No splices shall be installed in any cable.

3.18 Cable Termination

A. Termination hardware (blocks and patch panels) positioning and layout shall be reviewed and approved by the Owner prior to construction. The review does not exempt Contractor from meeting any of the requirements stated in this document.

3.19 Fire Stopping

A. Fire stopping of openings between floors, fire-rated walls, and smoke-rated walls, created by others for this Contractor to pass cable through, shall be the responsibility of this Contractor. Sealing material and application of this material shall be accomplished in such a manner that is acceptable to the local fire and building authorities having jurisdiction over this work.

B. Any openings created by or for this Contractor and left unused shall be sealed up by this Contractor.

C. This Contractor shall be responsible for creating a waterproof seal in and around any openings that this Contractor creates from the structure to the outside

environment.

3.20 System Inspection

A. Contractor shall coordinate with project representative for inspection after Contractor has completed testing of entire system.

B. Contractor shall have trained Contractor representative and testing equipment on site during inspection to assist with spot verification of tests.

C. Contactor shall verify with Project Representative the precise positioning of camera aim and shall make fine adjustments as requested.

3.21 Labeling

A. Contractor shall neatly label all security devices and cabling at both ends. All labels shall be on Project as-built drawings. Coordinate with the Owner to verify preferred camera housing labelling location prior to final label installation.

3.22 Camera Installation

A. Contractor shall field verify all camera locations and positioning with Owner prior to installation.

3.23 Documentation

A. Upon completion of the installation, Contractor shall provide full documentation sets to the Consultant for approval as described in section 27 60 00. All documentation shall become the property of the Owner.

B. Documentation shall include the additional specific items detailed in the subsections below:

1. Contractor shall provide hard copy and electronic forms of the final test results.
2. Contractor shall provide milestone configuration back up for system installed.
3. Contractor shall provide a completed configuration report from installed Milestone system. Provide report electronically.
4. Contractor shall provide a document including the following:
    a. Camera label/identifier
    b. Location of each drop by orientation/permanent landmark in the room
    c. Contractor shall provide accurate as-built Construction Drawings. The drawings are to include cable routes and device locations.

3.24 Pre-Checkout

A. The Contractor shall demonstrate the following to Owner during system demonstration.

1. The cameras are fully installed and functional.
2. Camera adjustments are complete to the Owner's satisfaction including.
    a. Aim/Zoom
    b. Focus/Back Focus
    c. Masking Zones
    d. Motion Detection Zones
    e. Pre-Sets/Tours

3.25 Final Acceptance

A. In addition to closeout and final testing requirements in sections 27 00 00 and 27 60 00, This Contractor shall demonstrate the following before final approval.

1. Owner training is complete.
2. Punch list items are complete.
3. As-built documentation is complete and submitted to Owner/Consultant.

3.26 Final Procedures

A. Perform final procedures in accordance with section 27 60 00.

End of Section 28 20 00

GENERAL CONDITIONS

INDEX TO GENERAL CONDITIONS

SECTION	TITLE	PAGE
01	Definitions of Terms	GC-2
02	Applicable Requirements	GC-3
03	Contract Bid Guaranty and Security	GC-3
04	Notice & Service Thereof	GC-4
05	Intent of Drawings and Specifications	GC-4
06	Present Documents Govern	GC-5
07	Contractor's Shop Drawings	GC-5
08	Instructions, Minor Changes, Etc.	GC-6
09	Examination of Work by Contractor	GC-7
10	Materials, Services and Facilities	GC-7
11	"Or Equal" Clause	GC-8
12	Testing of Materials	GC-8
13	Inspection of Work By Other Parties	GC-8
14	Authority of the Designer/Engineer	GC-9
15	Prohibited Interests	GC-9
16	Rejections of Work and Materials, and Owner's Right to Do Work	GC-9
17	Royalties and Patents	GC-10
18	Contractor's Superintendence and Personnel	GC-10
19	Lines, Grades, and Measurements	GC-10
20	Layout of Work	GC-11
21	Permits, Licenses, and Impact Fees	GC-11
22	Laws and Regulations	GC-11
23	Subcontracting	GC-11
24	Subcontractors	GC-12
25	Assignments	GC-12
26	Insurance Requirements	GC-12
27	Land and Rights-of-Way	GC-12
28	Protection of Work, Property and Persons	GC-12
29	Prior Use by the City	GC-13
30	Cleaning Up and Site Access	GC-14
31	Disposal of Waste Materials from Any Construction	GC-14
32	Changes in the Work	GC-14
33	Modifications and Price Proposals	GC-14
34	Time for Completion, Liquidated Damages and Time Extensions	GC-16
35	Weather Delay Time Extensions	GC-17
36	Payments to Contractor	GC-18
37	Stored Materials	GC-19
38	Payments Withheld	GC-19
39	Schedules, Reports and Records	GC-20
40	City's Right to Terminate	GC-21
41	Final Acceptance of Work and Final Payment	GC-21
42	Construction Inspection	GC-22
43	Quality Control	GC-22
44	Daily Report of Construction	GC-22
45	Guarantee and Correction of Work	GC-23
46	Drawings and Specifications	GC-23
47	Differing Site Conditions	GC-24
48	Variations in Estimated Quantity	GC-24
49	Warranty of Construction	GC-24
50	Contractor Evaluation	GC-25

1. DEFINITIONS OF TERMS

Wherever used in the Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

"Addenda" shall mean written or graphic instruments issued prior to the execution of the agreement, which modify or interpret the Contract Documents by additions, deletions, clarifications, or corrections.

"Architectural Supplemental Instructions" shall mean the information that allows an architect to provide additional instructions or make minor changes without having to re-work the entire construction plan.

"Authorization Request" shall mean the final action in approving a cost or change event. It may result in a change in the project's cost of work, general conditions or overheads, contingency, or other item which is included in the contract amount.

"Bad Weather Day" shall mean a day when construction Work cannot be performed and is attributable to unusual weather phenomena as defined herein.

"Bid" shall mean the offer or Proposal of the Bidder submitted on the prescribed form setting forth the price(s) for the Work to be performed.

"Bidder" shall mean any person, firm, or corporation submitting a Bid for the Work.

"Bonds" shall mean Bid, Performance, and Payment Bonds and other instruments of security, furnished by the Contractor and his surety in accordance with the Contract Documents.

"Change Order" shall mean the adjustment of the contract of time, or addition or deduction to the overall contract price. A Change Order shall be an amendment to the contract and requires approval by the City of Raleigh through the City Council or City Manager.

"Change Order Directive (COD)" shall mean an instrument used to provide written notice for the Contractor to proceed with the work directed by the Designer or Owner prior to issuance of a formal request for change proposal or change agreement by the Contractor.

"Consultant" shall be defined as the professional services firm employed by the City or Owner.

"Contract Documents" shall consist of Advertisement for Bids, Proposal, Bid Bond, Contract, Contract Performance Bond, Payment Bond, Instructions to Bidders, General Requirements, General Conditions, Supplementary Conditions, Technical Specifications, Certificates of Insurance, and Drawings and any other pertinent documents. The intent of these documents is to include all materials, appliances, tools, labor, and services of every kind necessary for the proper execution of the Work, and the terms and conditions of payment therefore. The Contract Documents shall be considered as one, and whatever is called for by any one of them shall be as binding as if called for by all.

"Contract Price" shall mean the total monies payable to the Contractor under the terms and conditions of the Contract Documents.

"Contract Time" shall mean the number of calendar days stated in the Contract Documents for the completion of the Work.

"Contractor" or "General Contractor" shall mean the individual, firm, or corporation undertaking the execution of the Work as an independent Contractor under the terms of the Contract and acting through his or its agents or employees.

"Cost or Change Event" shall mean a directive to perform work resulting from a proposed change. There may or may not be costs associated with the work. It is initiated as a proposal from the Contractor and sent to the Designer for review. If approved by the Designer, the Designer forwards it to the Owner as a recommendation from the Designer in the form of an Authorization Request.

"City" shall mean City of Raleigh.

"Designer" shall mean the professional architectural and/engineering firm and/or its subconsultants that are responsible for the project design and have placed their professional seals on the construction documents. Can also be noted as "Engineer".

"Drawings" shall mean the part of the Contract Documents, which show largely through graphical presentation the characteristics, design and scope of the Work to be performed and which have been prepared or approved by the City.

"Final Acceptance" shall be defined as concurrence between the Designer and the Owner to accept the project from the contractor. Final acceptance of the project shall not be considered before the final inspection is conducted. Final acceptance does not infer the lack of claims on a project.

"Liquidated Damages" shall mean the amount reasonably estimated in advance to cover the consequential damages associated with the City's economic loss in not having the use of the project for its intended purposes resulting from the Contractor's failure to complete the project by the completion date.

"Modification" shall mean the process of incorporating agreed changes or alterations made to a contract. A contract modification may introduce, revise or cancel specifications, delivery period, price, quantity or terms of an existing contract, while leaving its overall purpose and effect intact.

"Notice of Award" shall mean the written notice to the successful bidder of the acceptance of the bid as approved by the City Council. Notice may be issued in person or via regular mail, certified mail with receipt of delivery, or email with receipt of delivery.

"Notice to Proceed" shall mean written communication issued by the City or its Designer to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work. Notice may be issued in person or via regular mail, certified mail with receipt of delivery, or email with receipt of delivery.

"Owner" shall mean City of Raleigh.

"Owner's Contingency" shall mean the amount of funds included in the contract that represents the Owner's best estimate of funds to provide for allowances and to address unforeseen circumstances or other conditions that may arise during the construction of the project.

"Project" shall mean the undertaking to be performed as provided in the Contract Documents.

"Project Manager" shall be the individual or individuals assigned to coordinate the project and insure that City procedures are followed, and the quality of Work is up to the standards expected. "Request for Proposal" shall mean an offer by a contractor, in response to a request issued by the Designer or Owner for the purpose of requesting an equitable adjustment for a proposed change to an existing contract.

"Shall" is mandatory; "may" is permissive.

"Shop Drawings" shall mean all drawings, diagrams, illustrations, brochures, schedules, and other data, which are prepared by the Contractor, Subcontractor, manufacturer, Supplier, or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.

"Specifications" shall mean a part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and Workmanship specified for this Project.

"Subcontractor" shall mean an individual, firm, or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

"Substantial Completion" shall mean that date determined by the City when the construction of the Project or an expressly stipulated part thereof is sufficiently completed, in accordance with the Contract Documents, so the Project or stipulated part can be fully utilized for the purposes for which it is intended.

"Supplemental General Conditions" shall mean a part of the Contract Documents consisting of modifications or additions to the General Conditions.

"Superintendent" shall mean the Contractor's authorized on job representative designated in writing by the Contractor prior to commencement of any Work

"Supplier" shall mean any person, supplier, or organization who furnishes materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

"Surety" shall mean the bonding or insurance company that represents the Contractor and that assumes responsibility for the completion of the project should the Contractor, for any reason, become unable to complete the project.

"Time Extension" shall mean an increase in the length of time specified in a contract resulting in a revised contract completion date.

"Work" of the Contractor or Subcontractor shall include all labor, material, equipment, transportation, skill, tools, machinery, and other equipment and things useful or necessary in order to complete the Contract.

"Written Notice" shall mean the notification either in handwritten, computer generated, typed, or email form that communicates information or directives.

2. APPLICABLE REQUIREMENTS

The Work shall comply with the Contract Documents and with all applicable codes, laws, and regulations of the City, State, or Federal agencies. In the event of any conflict between the terms of this

Contract and such codes, laws, and regulations, the codes, laws, and regulations shall prevail. If the Contractor performs any Work contrary to such codes, laws, or regulations he shall assume full responsibility therefore and shall bear any and all costs necessary to correct the Work.

3. CONTRACT BID GUARRANTY AND SECURITY

BID GUARRANTY: Bidders shall furnish a bid guaranty in the form of cash, a certified cashier's check issued by a responsible bank or trust company insured by the Federal Deposit Insurance Corporation, made payable to the City of Raleigh, or a Bid Bond issued by a surety licensed to conduct business in the state where the Project is located. The amount of such guaranty shall be equal to 5% of the bid price. The Bid security of the successful Bidder will be retained until the Contractor has executed the Contract and furnished the required Contract security, whereupon it will be returned; if the Contractor fails to execute and deliver the Contract and furnish the required Contract security within ten (10) calendar days of the Notice of Award, Owner may annul the Notice of Award and the Bid security of the Bidder will be forfeited. The Bid security of any other Bidder who the Owner believes to have a reasonable chance of receiving the Award may be retained by Owner until the earlier of (1) the seventh day after the executed Contract is delivered by the Owner to Contractor and the required Contract security is furnished or (2) the sixty-first day after Bid opening. Bid security of other Bidders will be returned within ten (10) days of the Bid opening.

SECURITY: The Contractor shall furnish a Contract Performance Bond and a Payment Bond, each equal to one hundred percent (100%) of the Contract Price if the base bid price exceeds $300,000. However, the City may impose this requirement on any contract in excess of $30,000. Bonds given shall meet the requirements of the law of the State of North Carolina including but not limited to G.S. 143-129 and G.S. 44A-26. The surety on each Bond shall be a surety company satisfactory to the City and duly authorized to do business in the State of North Carolina.

The Contractor shall also furnish other bid security or bonds that may be required by various Federal, State or Local authorities having jurisdiction as a condition of obtaining permits.

4. NOTICE AND SERVICE THEREOF

Any notice to Contractor from the City relative to any part of this Contract shall be in accordance with the City's Form of Contract.

5. INTENT OF DRAWINGS AND SPECIFICATIONS

The intent of the Drawings, Specifications/project manual and all other documents comprising the Contract Documents, is that the Contractor shall be held responsible to provide and pay for all labor, materials, tools, power, water, equipment, transportation, and other facilities necessary for the proper execution of the Work in accordance with the Contract Documents and all incidental Work necessary to complete the Project in an acceptable manner, ready for use, occupancy, or operation by the City.

The Drawings, Specifications/project manual, and all other documents comprising the Contract Documents, shall be supplementary to each other, and any material, Workmanship, and/or service which may be in one, but not called for in the others, shall be as binding as if indicated, called for, or implied by all. In case of discrepancy or disagreement in the contract documents, the order of precedence shall be: Form of Construction Contract, General Conditions, Supplemental General Conditions, Project Special Conditions, Technical Specifications, large-scale drawings, and small-scale drawings.

Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Designer for the City, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies, or ambiguities shall be done at the Contractor's risk.

Each section or type of Work is described separately in the Technical Specifications. For convenience of reference and to facilitate the letting of contracts and subcontracts, these Specifications are separated into titled sections. Such separation shall not, however, operate to make the City an arbiter to establish limits to the contracts between the Contractor and Subcontractors, nor shall such separation be interpreted as superseding normal construction trade jurisdictions. Should any item of material, equipment, Work, or combinations of such be required in one section, and not be described in that section and a similar item described in another section, that description shall apply regardless of the section under which it is described. In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed drawings shall govern over general drawings.

Attention is directed to the fact that the detailed Specifications and separate sections may be written in short or abridged form. The Contractor shall, in regard to every section of the Specifications and Drawings of articles, materials, operations, or methods:

1. Provide each item mentioned and indicated, of quality or subject to qualifications noted.
2. Perform according to conditions stated, each operation prescribed.
3. Provide therefore all necessary labor, equipment and incidentals.

Whenever in these Specifications or on the Drawings the words "directed," "required," "permitted," "ordered," or words of like import are used, it shall be understood that the direction, requirement, permission or order of the City is intended, and similar words, "approved," "acceptable," "satisfactory," or words of like import shall mean approved by, acceptable to, or satisfactory to the City.

Notwithstanding the appearance of such language in the various sections of the Specifications as, "The Paving Contractor," "The Grading Contractor," etc., the Contractor is responsible to the City for the entire Contract and the execution of all Work referred to in the Contract Documents.

The Designer for the City may (without changing the scope of the Work) furnish the Contractor additional instructions and detail drawings, as necessary to carry out the Work required by the Contract Documents. The additional drawings and instructions thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.

6. PRESENT DOCUMENTS GOVERN

The Contractor shall in no case claim a waiver of any specification requirements on the basis of previous approval of material or Workmanship on other jobs of like nature or on the basis of what might be considered "standard" for material or Workmanship in any particular location. The Contract Documents for this job shall govern the Work.

7. CONTRACTOR'S SHOP DRAWINGS

Absent of more detailed Shop Drawing and Submittal Requirement Provisions noted elsewhere in the Contract or Administrative Specification Requirements, the provisions outlined below shall be followed:

Within thirty (30) consecutive days after the issuance of the Notice to Proceed, the Contractor shall submit a schedule for the submission of all shop drawings, product data, samples, and similar submittals to the Designer. The schedule shall indicate the items, relevant specification sections, other related submittal data, and the date when these items will be furnished to the Designer. Pay applications shall not be approved until the submittal schedule has been submitted.

The approved Drawings will be supplemented by such Shop Drawings as are needed to adequately control the Work. It is mutually agreed that all authorized alterations affecting the requirements and information given on the approved Drawings shall be in writing.

Shop Drawings to be furnished by the Contractor for any structure shall consist of such detailed drawings as may be required for the prosecution of the Work.

Shop Drawings must be approved by the Designer before the Work in question is performed. Drawings for false Work, centering, and form work may also be required, and in such cases shall be likewise subjected to approval unless approval be waived. It is expressly understood, however, that approval of the Contractor's Shop Drawings does not relieve the Contractor of any responsibility for accuracy of dimensions and details. It is mutually agreed that the Contractor shall be responsible for agreement and conformity of his Shop Drawings with the approved Drawings and Specifications.

It is the responsibility of the Contractor to review and approve all Shop Drawings for compliance with the contract documents, with signed evidence of review by the Contractor, before same are submitted to the Designer for approval. Shop Drawings that have not been reviewed and approved by the Contractor will not be approved.

Shop Drawings shall be submitted only by the Contractor who shall indicate by a signed stamp on the drawings that he has reviewed and approved the Shop Drawings and that the Work shown on them is in accordance with Contract requirements and has been checked for dimensions and relationship with Work of all other trades involved. Under no conditions shall Shop Drawings be accepted from anyone other than the Contractor.

The Contractor shall furnish the Designer at least six (6) hard copies of all Shop Drawings for approval. Shop drawings may also be electronically submitted for approval utilizing construction/project management software. Either the Designer or the Contractor shall be the license holder of the software, house the software program on its server, and provide access to the City via a secured password and username. The Designer shall review required submittals promptly, noting desired corrections, if any, and retaining three (3) copies for his use. The remaining copies will be returned to the Contractor by the Designer for his use not later than twenty-one (21) days from the date of the receipt for multiple disciplines or fourteen (14) days from the date of receipt for single discipline. The Contractor shall furnish the required submittals with sufficient information and accuracy to obtain required approval of any item with no more than three submittals. Designer will record time beyond the initial three submittals for reviewing subsequent submittals of shop drawings, samples, or other items requiring approval and the Contractor shall reimburse the Owner for the charges for such time accrued by the Designer. The Contractor shall also be responsible for any delays to the project's schedule resulting from additional reviews.

The Contract Price shall include the cost of furnishing all Shop Drawings and the Contractor will be allowed no extra compensation for such drawings.

The approval of such Shop Drawings shall not relieve the Contractor from responsibility for deviations from Drawings or the Specifications unless he has in writing called attention to such deviations, and the Designer has approved the changes or deviations in writing at the time of submission, nor shall it relieve him from the responsibility for errors of any kind in Shop Drawings. When the Contractor does call such deviations to the attention of the Designer, he shall state in his letter if such deviations involve any extra cost. If this is not mentioned, it will be assumed that no extra cost is involved for making the change.

8. INSTRUCTIONS, MINOR CHANGES, ETC.

All changes, alterations or instructions regarding any feature of the Work that differ from the Drawings and Specifications must be approved in writing in all cases, and no verbal orders will be regarded as a basis for claims for extra Work.

If the Contractor claims that any instruction by Drawings for a change or otherwise involves extra cost or an extension of time, he shall notify the Designer in writing within ten (10) days after the receipt of such instruction and, in any event, before proceeding to execute the Work. Thereafter, the procedure shall be the same as that described for changes in the Work. No such claim shall be valid unless made in accordance with the terms of this section.

No claims for extra cost will be considered based on an escalation of material prices throughout the period of the Contract.

No extra Work is to be performed or any change made that involves any extra cost or extension of time unless approved through an Authorization Request.

The Designer shall have authority, however to order minor changes in the Work not necessitating a cost event or change order, and not inconsistent with the intent of the Contract Documents. Such minor changes shall be affected by written order, bulletin drawing, or supplemental architectural instructions and shall be binding to the Owner and the Contractor.

9 . EXAMINATION OF WORK BY CONTRACTOR

It is understood and agreed that the Contractor, has by careful examination, satisfied himself as to the nature and location of the Work, the conformation of the ground, the character, quality, and quantity of the facilities needed preliminary to and during the prosecution of the Work, the general and local conditions, and all other matters which can in any way affect the Work or the cost thereof under this Contract. No verbal agreement or conversation with any officer, agent, or employee of the City, either before or after the execution of the Contract, shall affect or modify any of the terms or obligations herein contained.

The Contractor shall, in good Workmanlike manner, do and perform all Work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as herein otherwise expressly specified, necessary, or proper to perform and complete all the Work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and said Specifications and in accordance with the Drawings of the Work covered by this Contract and any and all supplemental drawings of the Work covered by this Contract. He shall furnish, erect, maintain, and remove such construction, plants, and such temporary Works as may be required. He alone shall be responsible for the safety, efficiency, and adequacy of his plants, appliances, and methods, and for any damage, which may result from their failure or their improper construction, maintenance, or operation. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and Specifications, local ordinances, and State and Federal laws; and shall do, carry on, and complete the entire Work.

The Contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or any employee of either. The Contractor agrees that no contractual relationship exists between the subcontractor and the Owner in regard to the Contractor and that the subcontractor acts on this Work as an agent or employee of the Contractor.

10. MATERIALS, SERVICES AND FACILITIES

The Contractor shall at all times employ sufficient labor and equipment for prosecuting the Work to full completion in the manner and time specified. Failure of the Contractor to provide adequate labor and equipment may result in default of the Contract. The labor and equipment to be used in the Work by the Contractor shall be sufficient to meet the requirements of the Work and shall be such as to produce a satisfactory quality of Work, in accordance with accepted industry practices within the time specified in the Contract.

If at any time during the construction and completion of the Work covered by these construction documents, the language, conduct, or attire of any Workman of the various crafts be adjudged a nuisance to the Owner or Designer, of if any Workman be considered detrimental to the Work, the Contractor shall order such parties removed immediately from the ground.

Materials and equipment shall be so stored and handled as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located

so as to facilitate prompt inspection. No product that has in any way become unfit for the intended purpose shall be incorporated into the Work.

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, cleaned, and conditioned as directed by the manufacturer.

Materials, supplies, and equipment to be incorporated into the Work shall be new and unused unless otherwise specifically stated in the Contract Documents. The source of supply for all such products shall be submitted to the Designer, together with detailed descriptions thereof in the form of samples, Shop Drawings, tests, or other means necessary to adequately describe the items proposed. If, after trial, it is found that sources of supply, even though previously approved by the Designer, have not furnished products meeting the intent of the Contract Documents, the Contractor shall thereafter furnish products from other approved sources, and shall remove completed Work incorporating products which do not meet Contract requirements.

11. "OR EQUAL" CLAUSE

In accordance with G.S. 133-3, whenever a material or article required is specified or shown on the Drawings and/or Specifications by using the name of the proprietary product or of a particular manufacturer or vendor, the Designer shall denote that the quality standard of the article desired is the intent and the Contractor is not restricted to the specific brand, make, or manufacturer so named. The Designer shall specify three or more examples of items of equal or equivalent design. Any material or article that will perform adequately the duties imposed by the general design may be considered equal and satisfactory providing the material or article so proposed is of equal substance and function. The opinion of the Designer shall be final, and no substitute material or article shall be purchased or installed without such written approval.

Any proposed substitutions of materials, items, or equipment of equal or equivalent design shall be submitted to the Designer for approval or disapproval prior to the opening of bids. Proposed substitutions shall only be submitted by the prime contractors. No requests from subcontractors, manufacturers or suppliers will be accepted.

12. TESTING OF MATERIALS

Unless otherwise specifically provided for, testing of materials and finished articles to be incorporated in the Work at the site shall be made by bureaus, laboratories, or agencies approved by the Designer and Owner. All laboratory tests shall be paid by the Owner unless provided otherwise in the contract documents. The Contractor shall furnish evidence satisfactory to the Designer that the material and finished articles have passed the required tests prior to the incorporation of such materials and finished articles in the Work.

The Contractor shall pay for the laboratory tests to establish design mixes for concrete, asphalt, mortar and other materials proposed for use on the project, and for additional tests to prove compliance with contract documents where materials have tested deficient except where the testing laboratory did not follow the appropriate testing procedures as defined in the Specifications.

13. INSPECTION OF WORK BY OTHER PARTIES

The Contractor shall, at all times, permit and facilitate inspection of the Work by authorized representatives of the City and authorities having jurisdiction in connection with the Work of this Contract. The presence or observations of the Designer or other City representatives at the site of the Work shall not be construed to, in any manner, relieve the Contractor of the responsibility for strict compliance with the provisions of the Contract Documents.

All Work shall be inspected by the Designer or the Owner's or it's Consultants prior to being covered by the Contractor. The Contractor shall give a minimum of two weeks' notice unless otherwise agreed to

by all parties. Not less than 48 hours prior to inspection or testing, the Contractor shall coordinate said events with the Designer, Owner, and/or respective parties. If the inspection fails after the first re inspection, all costs associated with additional re-inspections, including travel, per diem, testing, etc. for the Designer or his authorized representative and the Owner's Consultants, shall be borne by the Contractor.

If the Specifications, City's instructions, laws, ordinances, or an authority having jurisdiction require any Work to be specially tested or approved, the Contractor shall give the Designer timely notice of its readiness for observation or inspection. If the inspection is by another authority, then the Designer shall be advised of the date fixed for such inspection. Required certificates of inspection shall be secured by the Contractor. Contractor having secured all certificates of inspection will deliver same to the Designer upon completion. If any Work should be covered up without approval or consent of the Designer, Project Manager, Special Inspector, it shall, if required by the Designer, be uncovered for examination at the Contractor's expense.

Should any disagreement or difference arise as to the estimate, quantities or classifications or as to the meaning of the Drawings or Specifications, or any point concerning the character, acceptability, and nature of the several kinds of Work, any materials and construction thereof, the decisions of the Designer shall be final and conclusive and binding upon all parties to the Contract.

14. AUTHORITY OF THE DESIGNER/ENGINEER

The Contractor shall perform all of the Work herein specified under the general direction, and to the entire satisfaction, approval, and acceptance of the Designer. The Designer shall decide all questions relating to measurements of quantities; the character of the Work performed and as to whether the rate of progress is such that the Work will be completed within the time limit of the Contract. All questions as to the meaning of these Specifications will be decided by the Designer.

The approval of the Designer of any materials, plants, equipment, Drawings, or of any other items executed, or proposed by the Contractor shall be construed only to constitute an approval of general design. Such approval shall not relieve the Contractor from the performance of the Work in accordance with the Contract Documents, or from any duty, obligations, performance guarantee, or other liability imposed upon him.

Where drawings or specifications are sealed by the Engineer, in lieu of Designer, these same provisions shall apply to the Engineer.

15. PROHIBITED INTERESTS

No official of the City who is authorized in such capacity and on behalf of the City to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction, or material supply contract, or any subcontract in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of or for the City who is authorized in such capacity and on behalf of the City to exercise any legislative, executive, supervisory, or other similar functions in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the Project.

16. REJECTIONS OF WORK AND MATERIALS, AND OWNER'S RIGHT TO DO WORK

All materials and equipment furnished, and all Work done that is not in accordance with the Drawings or Specifications or that is defective will be rejected. All rejected materials, equipment, or Work shall be removed immediately. If rejected materials, equipment, or Work is not removed within forty-eight hours from the date of letter of notification, the Designer shall have the right and authority to stop the Contractor and his Work immediately, and/or shall have the right to arrange for the removal of said rejected materials, equipment, or Work at the cost and expense of the Contractor. All rejected materials, equipment,

or Work shall be replaced with other material, equipment, or Work that conforms with the Drawings and Specifications at no additional cost to the City.

Inspection of the Work shall not relieve the Contractor of any of his obligations to fulfill his Contract and defective Work shall be made good regardless of whether such Work, material, or equipment has been previously inspected by the Designer and accepted or estimated for payment. Neither the final certificate, final payment, occupancy of the premises by the Owner, nor any provision of the contract, nor any other act or instrument of the Owner, nor the Designer shall relieve the Contractor from responsibility for negligence or faulty material or Workmanship or failure to comply with the drawings and Specifications.

If during the progress of the Work or during the period of guarantee, the Contractor fails to prosecute the Work properly or to perform any provision of the contract, the Owner, after seven days' written notice sent in person or via email with delivery confirmation or certified mail, return receipt requested, to the Contractor from the Designer, may perform or have performed that portion of Work. The cost of the Work may be deducted from any amount due or to become due to the Contractor, including retainage, such action and cost of same having been first approved by the Designer. Should the cost of such action of the Owner exceed the amount due or to become due to the Contractor, then the Contractor or his surety, or both, shall be liable for and shall pay to the Owner the amount of said excess.

17. ROYALTIES AND PATENTS

The Contractor shall hold and save the City and its officers, agents, servants, and employees, harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the City, unless otherwise specifically stipulated in the Contract Documents.

18. CONTRACTOR'S SUPERINTENDENCE AND PERSONNEL

The Contractor will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. An experienced Superintendent, and the necessary assistants competent to supervise the Work involved, shall be assigned to the Project by the Contractor and shall be present at the site when Work is in progress. The name of the Superintendent shall be submitted with qualifications of same prior to start of the Work and shall be approved by the Designer prior to start of the Work. The Superintendent so named by the Contractor shall be employed by the Contractor and shall have served in a supervisory capacity on at least one Project of like description and size performed by the Contractor during the previous twelve months. Under no circumstances shall an employee of any Subcontractor serve as Project Superintendent. The Superintendent shall represent the Contractor, and all directions given to the Superintendent shall be as binding as if given to the Contractor.

Only persons skilled in the type of Work that they are to perform shall be employed. The Contractor shall maintain discipline and good order among his employees and shall not employ on the Work any unfit person or persons or anyone unskilled in the Work assigned him. The Contractor shall insure that all employees maintain proper respect and courtesy for the any persons/individuals on the project site or in adjacent off-site areas.

19. LINES, GRADES AND MEASUREMENTS

Such stakes and markings as the Designer may set for either its or the Contractor's guidance shall be preserved by the Contractor. Failure to protect such stakes or markings, or gross negligence on the Contractor's part resulting in loss of same, may result in the Contractor being charged for their replacement.

The Contractor must exercise proper care and caution to verify the grades and figures given him before proceeding with the Work and shall be responsible for any damage or defective Work caused by his failure of such care and caution. The Contractor shall promptly notify the Designer of any errors or discrepancies he may discover in order that the proper corrections may be made.

20. LAYOUT OF WORK

The Contractor shall lay out its work from established base lines and bench marks indicated on the drawings, and shall perform all construction layout, computations and staking from the baseline information and control points shown on the drawings and shall be responsible for all measurements in connection with the layout. The Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Designer/ Owner.

Prior to the start of any layout work, the Contractor shall provide the names and license numbers of the professional land surveyors and/or engineers, licensed in the State of North Carolina, who will be in charge of their survey for the project.

During initial site layout and before existing conditions are disturbed, the Contractor shall verify the basic survey data provided on the contract drawings. Verification shall be initiated from the point(s) shown on the contract drawings and shall include, as a minimum, benchmark elevations, horizontal control points, and sufficient spot checks of critical elevations to ensure that the survey data adequately reflects existing conditions.

The Contractor will provide the Designer and Owner with a copy of the initial, intermediate (as necessary to adequately define an area of concern) and final survey information in a PDF and Auto CADD drawing file, and a point data file in electronic data format which contains the survey control found (or established) in the field by the surveyor. The Auto CADD drawing file will be based on the coordinate system indicated on the contract drawings and will also show street r/w and property corners, easements, and the proposed improvements.

21. PERMITS, LICENSES, AND IMPACT FEES

Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured by the Contractor. Costs for permits, licenses, and impact fees may be included in the total contract amount as an allowance. Refer to the bid documents or Supplemental General Conditions.

22. LAYOUT OF WORK

The Contractor's attention is directed to the fact that all applicable Federal, State, and City laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract Documents the same as though herein written out in full. The Contractor shall keep himself fully informed of all laws, ordinances, and regulations of the Federal, State, and City in any manner affecting those engaged or employed in the Work or the materials used in the Work or in any way affecting the conduct of the Work and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in this Contract, or in the Drawings or Specifications herein referred to, in relation to any such law, regulation, ordinance, order, or decree, he shall herewith report the same, in writing, to the Designer. The Contractor shall always observe and comply with all such laws, ordinances, and regulations, and shall protect and indemnify the City and its agents against any such law, ordinance, regulation, order, or decree, whether by himself or by his employees.

23. SUBCONTRACTING

The Contractor understands and agrees that it shall be a breach of this Contract to subcontract any portion of the Work on this Project unless the Work and the Contractor proposed to perform it have been declared in the Proposal to the Contract. Within thirty (30) days after award of the contract, the Contractor shall submit to the Designer and Owner a list giving the names and addresses of subcontractors, and equipment and material suppliers he proposes to use together with the scope of their respective parts of the Work. Should any subcontractor be disapproved by the Designer or Owner, the Designer or Owner shall communicate its decision to the Contractor. The Contractor shall present substitutions to the Designer

and Owner for approval. If the subcontractor is listed on the MWBE affidavits, another MWBE subcontractor with similar certification/classification shall be substituted.

THE CONTRACTOR FURTHER UNDERSTANDS AND AGREES THAT ANY WORK ON THIS PROJECT WHICH THE CONTRACTOR SECURES IN VIOLATION OF THIS PROVISION SHALL BE DEEMED A GRATUITY FROM THE CONTRACTOR FOR WHICH THE CITY OF RALEIGH SHALL NOT BE OBLIGATED TO PAY. ALSO, THAT ANY WORK DONE BY THE SUBCONTRACTOR AND NOT MEETING THE SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE AT HIS OWN COST.

Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the City.

24. SUBCONTRACTORS

Within seven (7) days after award of the construction contract, the Contractor shall submit to the Designer and to the Owner's Representative, a list giving the names and addresses of subcontractors they propose to use, together with the scope of work and their respective parts of the work.

The Designer may furnish to any subcontractor, upon written request, evidence regarding amounts of money requested to be paid to the Contractor regarding the portion of the subcontractor's work; provided however, that the Contractor has sufficiently broken down the request to allow such determination.

The Owner reserves the right to limit the amount of work, or the percentage of work, to be subcontracted as hereinafter specified.

25. ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the City.

26. INSURANCE REQUIREMENTS

Review the City of Raleigh Form of Contract and Supplemental Conditions for the specific insurance requirements.

27. LAND AND RIGHTS-OF-WAY

Prior to entering on any land or right-of-way, the Contractor shall ascertain the requirements of applicable permits or easements secured by the City or required of the Contractor and shall conduct his Work in accordance with requirements thereof including the giving of notice.

The Contractor shall provide at his own expense and without liability to the City any additional land and access thereto that the Contractor may desire for temporary construction facilities, or for storage of materials.

28. PROTECTION OF WORK, PROPERTY AND PERSONS

The Contractor will be required to protect all Work and materials against damage or injury from the weather. If, in the opinion of the Designer, any Work or materials shall have been damaged or injured by reason of failure to protect such, all such materials or Work shall be removed and replaced at the expense of the Contractor.

The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other

persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, lakes, drainage ways, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. Contractor shall provide continuously sufficient illumination at all barricades and at protective barriers around excavations so that the public is adequately warned of such hazards. The Contractor shall, where necessary, provide and maintain access to and from all adjacent properties as directed by the plans and Specifications, or the Designer, or the Owner's Representative, for street rights of way, along the line of his Work. He shall abide by the Manual on Uniform Traffic Control Devices (MUTCD) for any street closures or traffic control.

The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the Work, all necessary warning safeguards for devices and safety and protection of the Work, the public, and adjoining property. He will notify Owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

The Contractor shall, prior to commencing other on-site Work, accurately locate above and below ground utilities and structures, which may be affected by the Work, using whatever means may be appropriate. The Contractor shall mark the location of existing utilities and structures, not otherwise readily visible, with flagging, stakes, barricades, or other suitable means, and shall preserve and protect all utilities and placement during construction. He shall notify the Designer promptly on discovery of any conflict between the Contract Documents and any existing facility.

In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, or unanticipated conditions where delay would substantially impact the time or cost of Work, the Contractor, upon notification to the Designer, shall act to prevent threatened damage, injury, or loss. Any claim for compensation or extension of time by the Contractor due to such extra Work shall be submitted to the Designer within ten (10) days of the date of performing such Work or deviations in the manner prescribed for a cost event or change order. The Designer will evaluate and determine if the claims asserted by the Contractor warrant a cost event or change order and will make a recommendation to the Owner.

All existing utilities, both public and private, including sewer, gas, water, electrical, and telephone services, etc., shall be protected and their operation shall be maintained through the course of the Work. Any temporary shutdown of an existing service shall be arranged between the Contractor and the utility responsible and hold the City harmless from the result of any damage that may occur as a result of the Contractor's activities.

See the City's Form of Contract and the Supplementary Conditions for additional safety requirements.

29. PRIOR USE BY CITY

Prior to completion of the Work, the City may take over operation and/or use of the uncompleted Project or portions thereof. The Contractor must agree to the prior use, and it must not prevent the Contractor from completing the Work. Such prior use of facilities by the City shall not be deemed as acceptance of any Work or relieve the Contractor from any of the requirements of the Contract Documents.

Where the City has beneficial occupancy of a usable facility prior to the expiration of the specified Contract Time, but where contract Work items remain outstanding, the City, at its option, may, in lieu of all or a proportion of liquidated damages owed by the Contractor, charge the Contractor for actual cost of administering the Contract for a period subsequent to expiration of the Contract completion date (not to exceed the total amount which could be assessed under liquidated damages).

30. CLEANING UP AND SITE ACCESS

The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by Contractor's employees or Work. Upon completion of the Work, the Contractor shall remove all his equipment, tools, materials, and other articles from the property of the City. Delivery of construction materials and equipment shall be only from locations approved by the City.

31. DISPOSAL OF WASTE MATERIALS FROM ANY CONSTRUCTION

Disposal of all waste material from construction sites shall be made in strict accordance with all State laws and City ordinances pertaining to disposal of construction or hazardous waste. It shall be the responsibility of the Contractor to secure the necessary permits and provide all information required to secure said permits. The Contractor shall designate the disposal site prior to beginning construction and in the event waste material is to be disposed of on private property, a letter from the property Owner shall be furnished to the Owner or its representative granting the Contractor or his agent(s) such permission and listing the requirements made by the property Owner on the Contractor, if any.

32. CHANGES IN THE WORK

The City may at any time, as the need arises, order changes within the scope of the Work without invalidating the agreement. If such changes increase or decrease the amount due under the Contract Documents or in the time required for performance of the Work, an adjustment may be authorized by a cost event or change order.

The Contractor must assert any request for an adjustment to the contract price, performance schedule, or both, in writing no later than 10 days from the Contractor's first knowledge of the change, or its right to assert such request for equitable adjustment shall be considered waived. Under no circumstance shall any pending request for adjustment or dispute excuse the Contractor from proceeding with its performance, as changed. The Owner, in its sole discretion, may receive and act upon any request for equitable adjustment at any time before final payment.

The Designer, also, may at any time, make changes in the details of the Work as may also be approved by the Owner. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Designer unless the Contractor believes that such change entitles him to a change in contract price, time, or both, in which event he shall give the Designer written notice thereof within five (5) days after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of authorization from the Owner or the Designer.

33. MODIFICATION AND PRICE PROPOSALS (Form is attached at the end of the General Conditions)

The City may issue modification and price proposal requests for changes during the contract. The Contractor shall submit itemized price proposals including those for all subcontractors and sub-tiers for any such requests. The format used by the City for an adjustment in accordance with this term shall be a Request for Proposal (RFP). The Contractor's proposal shall be submitted within 10 days, or as otherwise directed by the Department, of the Contractor's first knowledge of the proposed change or receipt of the RFP. The City or Designer may also issue a Notice to Proceed associated with the request for proposal should it be determined to be in the City's best interest.

The proposal shall include a detailed breakdown of all labor, equipment, materials, supplies, overhead and profit costs for both the contractor and all subcontractors at any tier to allow a review of the proposal. Material, labor, equipment and other direct cost shall be summarized and totaled as construction direct costs in the proposal. Overheads, profit, and bond shall be added as appropriate line items shown as indirect or soft cost in the proposal. Cost estimates or pricing detail backup shall be completely itemized to include direct labor man-hours, individual craft, and hourly wage rate. Include verifiable labor burden (including craft fringes, FUI, SUI, and FICA) as a separate line item.

All subcontractor proposals shall include this same level of breakdown and detail and shall be so noted in the Contractor's proposal. The contractor shall provide copies of any quotations that have been received in regard to the proposal and shall ensure that adequate competition has been obtained such that the proposal is fair and reasonable. Any credit for deleted work shall also be reflected on the proposal.

Such proposal shall also include a detailed justification for any time extension request that is being requested as part of the equitable adjustment. Any time extension request that arise from the proposal shall be clearly noted, shall identify the specific activity or activities involved, and shall depict the changes necessary in the project schedule in order to accomplish the change. The contractor is advised that any request in contract period must demonstrate that there has been an increase in the critical path for completion of the project that is directly attributed to the change. The contractor shall provide a revised project schedule incorporating any time extension resulting as part of the equitable adjustment.

Lump sum cost estimates or price proposals shall be rejected and returned to the Contractor for itemization as described above. Failure of the Contractor to submit properly itemized cost estimates or price proposals shall not constitute an excusable delay. The equitable adjustment shall not include increased costs or time extension for delay resulting from the Contractor's failure to provide notice or to diligently continue performance. No proposal from the Contractor for an equitable adjustment shall be allowed if not asserted within time frames in this clause.

Following is a Sample Quotation Form for Cost Change Proposals:

Project:

Brief Description of Change:

1.	Materials/ Products (itemized breakdown / quotes attached) Attach additional sheets as required.	$ _____ 1
2.	Owned Equipment (list each item separately)*	$_____
	Rental of Equipment (list each item separately)*	$_____
	Subtotal	$ _____ 2
	TOTAL of 1 + 2	$_____ A
3.	Labor (itemized breakdown)	$ _____ 3
4.	Insurance (Worker's Compensation, Social Security, or as otherwise required or specified): % [Capped at 30%1	$ _____ 4
	TOTAL (A) + 3 + 4	$_____ B
5.	Overhead and Profit {15% of Total (B)}**	$ _____ 5
	TOTAL (B) + 5	$_____ C
6.	Sales Taxes on Total (A)	$ _____ 6
	TOTAL of (C) +6	$ _____ D
7.	Subcontracted Work (if applicable in a similar breakdown (through total (D). Profit and overhead allowance is 15%)	$ _____ 7
8.	Prime Contractor's overhead and profit on item 7 sub-	

	contractors' bids (5%)***	$_____	8
	TOTAL of7 + 8	$_____	E
	TOTAL of (D) + (E)	$_____	F
9.	Performance/Payment Bonds on total (F)	$_____	9

Extension of time requested: _____calendar days
(Time extension request must be provided with detailed schedule information noting the activities on the critical path that are affected by the change)

Notes:

*- Include current schedules with each request if equipment is involved.
**- In case of deductible changes, this figure will be ten percent (10%).
***- In case of deductible changes, this figure will be zero percent (0%).

The contractor may submit for approval recent audited financial statements performed in accordance with generally accepted accounting procedures to help establish an overhead rate for this project. Absent of this information, the rates noted above shall apply.

Where the extra Work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer, and the City, the value of the change shall be computed by application of unit prices based on quantities, estimate or actual as agreed of the items involved, except is such cases where a quantity exceeds the estimated quantity allowance in the contract by more than 15%. In such cases, either party may elect to negotiate a new unit price, based on actual costs, or apply the unit prices in the original bid/proposal subject to the Variations in Estimated Quantity requirement.

34. TIME FOR COMPLETION, LIQUIDATED DAMAGES AND TIME EXTENSIONS

The time of completion is expressed as the number of calendar days from the Notice to Proceed. It is hereby understood and mutually agreed, by and between the Contractor and the City, that the date of beginning, rate of progress and the time for completion of the Work are essential conditions of this Contract; and it is further mutually understood and agreed that the Work embraced in this Contract shall be commenced on a date to be specified in the Notice to Proceed.

The Contractor agrees that said Work shall be prosecuted regularly, diligently and uninterrupted at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the City, that the time for the completion of the Work described herein is a reasonable time for the completion of the same, taking into consideration the average climate range prevailing in this locality.

The Contractor shall commence work as outlined in the Notice to Proceed and shall fully complete all work hereunder within the time of completion stated. For each day in excess of the contract completion number of days, the Contractor(s) shall pay the Owner the sum stated as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the Owner by reason of failure of said Contractor(s) to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof.

The Contractor acknowledges that delays will damage the Owner, but also acknowledges that proof of such damages would be difficult and costly for both parties to determine, and that the injury to the Owner which could result from a failure of the Contractor to complete the Project on schedule is uncertain and cannot be computed with exact precision. In order to liquidate in advance the delay damages that the Owner will be entitled to recover from the Contractor in the event of unexcused delays in the completion of the Project, the Contractor agrees that it will pay, and that the Owner may retain from the funds otherwise

to be paid to the Contractor, the following Liquidated Damages and additional Owner Engineering Expenses and Other Fees, which sums are agreed upon as a reasonable and proper measure of damages which the Owner will sustain by failure of the Contractor to complete Work within the time stipulated, and as Owner's sole and exclusive remedy for any such delays

Owner's Liquidated Damages:	$450/Day
Owner's Additional Engineering Expenses and Other Fees:	$50/Day
Total Liquidated Damages:	$500/Day

It is further agreed that time is of the essence for this Contract and of the Specifications wherein a definite portion and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any Work, the new time limit fixed by such extension shall be of the essence for this Contract.

Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor or that of their subcontractor at any tier, including but not restricted to unavoidable casualties; by acts of God or of the public enemy; by acts of the Government in either its sovereign or contractual capacity; by acts of another Contractor in the performance of a contract with the City; by fires; by floods; by epidemics; by quarantine restrictions; by strikes; by freight embargoes; by unusually severe weather exceeding the average climatic conditions in that area of the Work or by any other causes which the Designer and Owner determine may just the delay, then the contract time may be extended by change order for the time as determined to be reasonable.

Time extensions under this provision do not entitle the Contractor to compensable damages for delays. Any Contractor claim for compensable damages is limited to delays caused solely by the Owner or its agents. Contractor caused delays shall be accounted for before Owner or Designer caused delays in the case of concurrent delays.

Provided further, that the Contractor shall within ten (10) days from the beginning of such delay, notify the City, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter.

35. WEATHER DELAY TIME EXTENSIONS

As noted in the General Conditions Clause entitled, TIME FOR COMPLETION, LIQUIDATED DAMAGES AND TIME EXTENSIONS, if the contract is delayed at any time in the progress of his Work by abnormal weather conditions not reasonably anticipated for the locality where the Work is performed, then the contract time may be extended by change order only for the time which the Designer and Owner may determine is reasonable. The methods to be used for determining the weather delay time extensions are as outlined in this section.

Time extensions will not be granted for rain, wind, snow, or other natural phenomena of normal intensity for the locality where Work is performed. The time for completion includes an allowance for bad weather days based on climatological data and is adjusted to reflect the number of working days per month, which would be affected.

For the purposes of determining the extent of a delay attributable to unusual weather phenomena, please see the table below which notes the maximum number of days by month that can be considered "bad weather" days. For the purposes of this contract, bad weather days to be anticipated are defined as follows:

a. Days on which precipitation exceeds 0.10 inch.
b. Days on which the temperature fails to exceed 40 degrees F average.

(A day, which qualifies on criteria for both precipitation and temperature, shall be counted as one

day.)

Bad weather working days to be included in the contractor's schedule are:

Month	Days	Month	Days	Month	Days
January	17	May	7	September	5
February	15	June	4	October	3
March	5	July	5	November	9
April	4	August	5	December	10

The Contractor shall note actual job site weather conditions on the daily report of construction, along with work performed and any effect of weather conditions on the scheduled activities. Tabulations of weather conditions on the job site. and any effects of weather on the critical path activities, shall be totaled on a monthly basis as work progresses. Periods where weather conditions are more favorable than anticipated shall also be accounted in the weather analysis. If the total accumulated number of working days lost to bad weather exceeds the total number tabulated above, the time for completion will be extended by the difference. Time of completion will not be adjusted for actual bad weather days which total less than the number included in the tabulation.

No weather delays shall be considered for building or structure construction after the building or structure has been dried in, unless such other Work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. This determination will be made in consultation between the Designer and Owner.

36. PAYMENTS TO CONTRACTOR

Cost Breakdown - The Contractor shall be prepared to submit a cost breakdown * schedule of values immediately after the opening of Bids. Cost breakdown shall be based on values of parts of the Work as divided according to sections of the Specifications and shall be further subdivided into labor and materials. The Contractor shall use forms similar to the AIA G702 & G703 Forms for cost breakdown and payment requests. Other pay request forms as provided or approved by the Owner may also be used.

Applications for payment shall be submitted to the Designer for review and certification prior to submittal to the Owner for payment. Applications that have not been certified by the Designer shall be rejected by the Owner and returned to the Contractor. Designers will forward certified pay applications to the Project Manager for prompt payment. The pay application shall include the following information:

1. Total of the contract including change orders or approved authorization requests.
2. Value of Work completed to date.
3. Less 5% Retainage (see additional clarification in this section).
4. Less previous payments.
5. Current amount due.
6. The Contractor shall provide a sales tax statement certifying the amount of sales taxes paid for the Work provided under the contract. Manufacturers are not exempt from paying North Carolina sales taxes for providing an item directly to the City of Raleigh. If you have any questions about the sales tax requirements for the state of North Carolina, please contact the North Carolina Department of Revenue at (919)707-0880.
7. Updated progress schedule reflecting scheduled and actual completion percentages for the overall project as well as activity progress.

As specified in G.S. 143-134.1(b), within seven (7) days of receipt of payment by the Contractor of each periodic or final payment, the Contractor shall pay its subcontractor(s) based on Work completed or service(s) provided. If any periodic or final payment to the subcontractor is delayed by more than seven days after receipt of periodic or final payment by the Contractor, the Contractor shall pay the subcontractor interest, beginning on the eighth day, as a rate of one percent (1%) per month or fraction thereof on the unpaid balance as is due.

In accordance with G.S. 143-134.1(b1), no retainage on periodic or final payments made by the Owner or Contractor shall be allowed on public construction contracts in which the total project costs are less than one hundred thousand dollars ($100,000). When the project if fifty percent (50%) complete, the Owner, with written consent of the surety, shall not retain any further retainage from periodic payments due the Contractor, if the Contractor continues to perform satisfactorily and any nonconforming Work identified in writing prior to that time by the designer or Owner has been corrected and accepted by the designer or Owner. If the Owner determines that the Contractor's performance is unsatisfactory, the Owner may reinstate retainage.

Each pay application shall reference the Owner's assigned purchase order number.

Materials and Work Covered by Partial Payments - All materials and Work covered by progress payments shall, upon payment thereof, become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and Work upon which payments have been made, or the restoration of any damaged Work.

37. STORED MATERIALS

In the preparation of partial estimates, the Owner **NBZ** authorize payment for material delivered to the site and preparatory work done to be taken into consideration subject to the following requirements:

1) The materials have been submitted and approved for use on the project.
2) The materials are satisfactorily stored to protect the materials for their intended use.
3) The Contractor has provided a detailed paid bill of sale or invoice that notes the type and quantity of material included on the invoice, complete with a schedule of unit price values, such that the material inventory can be tracked during installation.

The Contractor shall provide inventory control schedule with each partial payment request that reflects that type of stored material, quantity, unit prices, a schedule noting opening, used that period and ending inventory of materials and total summary of stored material amount being requested on the partial estimate. A copy of a suitable form that may be used by the Contractor is included as an attachment.

The Contractor acknowledges that it has responsibility to insure and protect such stored materials under the terms of its bond and insurance coverage with the Owner, and to maintain such stored materials in proper condition for installation and to fulfill the contract requirements when installed. Payment for the materials as described shall constitute a transfer of title to the Owner but such transfer does not relieve the Contractor of the responsibility to inspect, safeguard and protect the stored materials until they are incorporated into the permanent work. Payment for the materials does not constitute the start of any warranty, either express or implied, as such action shall not begin until the installation is complete and the work accepted.

The Contractor shall be responsible for the safety and security of subject materials and assume all risk for loss of materials.

Materials delivered to the Contractor at locations other than the project site may also be taken into consideration if, in addition to the above, the Contractor provide evidence the materials are being stored in a secured and protected facility and environment. The location for such storage shall be approved by the Designer/ Owner.

38. PAYMENTS WITHHELD

The Designer may recommend to the Owner to withhold payment for any of the following reasons:

a. Faulty Work not corrected.
b. The unpaid balance on the contract is insufficient to complete the Work in the judgment of the Designer.

c. To provide for sufficient contract balance to cover liquidated damages that will be assessed.
d. Evidence that subcontractors have not been paid.

39. SCHEDULES, REPORTS AND RECORDS

The Contractor shall submit to the Designer such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Designer may request concerning Work performed or to be performed.

The Contractor shall submit to the Designer within thirty (30) days after the issuance of the Notice to Proceed schedules showing the order in which he proposes to carry on the Work, including dates at which he will start the various parts of the Work, estimated date of completion of each part; and, as applicable, the dates at which special detail drawings will be required, and respective dates for submission of Shop Drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment. The basic project schedule shall be presented at the preconstruction meeting and no partial payments shall be made until it has been submitted to the Designer and City. The Designer shall specify acceptable scheduling or project management software programs, type of schedule methodology, either bar chart or critical path, to be utilized by the Contractor in reflecting the construction project's progress. The Contractor shall provide the schedule to the Designer and Owner electronically and in hard copy. See supplemental conditions if there are preferred scheduling software required by the Designer and/or Owner and any specific scheduling requirements.

Where a bar chart schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including, but not limited to the placing of orders for materials, submission of shop drawings, and other submittals for approval, approval of shop drawings by Designers, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment and all Work activities to be performed by the Contractor. The Contractor shall allow sufficient time in his schedule for all commissioning, required inspections and completion of the final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

Critical Path Method (CPM) schedule is required for all formal projects. The CPM schedule shall be in time-scaled precedence format. It shall be drawn or plotted with activities grouped or zoned by Work area of subcontract as opposed to random format. The CPM schedule shall be time-scaled on a weekly basis and shall be drawn or plotted at a level of detail or logic which will schedule all salient features of the Work to be performed by the Contractor. The Contactor shall allow sufficient time in his schedule for all commissioning, required inspections, and completion of final punch list(s). Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

The CPM will identify and describe each activity, state the duration of each activity, the calendar dates for the early and late start and the early and late finish of each activity, and clearly highlight all activities on the critical path. "Total float" and "free float" shall be indicated for all activities. Float time shall not be considered for the exclusive use or benefit of either the Owner or the Contractor but must be allocated in the best interest of completing the Work within the contract time. Extensions to the Contract time, when granted, will be granted only when equitable time adjustment exceeds the total float in the activity or path of activities affected by the change.

A cumulative progress-versus-time curve for the activities shall be shown. The vertical scale shall represent cumulative project progress and the horizontal scale shall represent time. Scheduled cumulative progress shall be calculated and plotted on the scale. Actual progress shall be calculated with each payment and plotted as work progresses. This project earnings curve indicating scheduled earnings vs. actual earnings shall generally be plotted and reflected as an earnings "S" curve. The Contractor shall submit this as a schedule of payments that they anticipate they will earn during the course of the Work.

The Contractor shall submit updated schedules at each monthly meeting or at the request of the Designer or Owner. If any activities are behind schedule, the Contractor must indicate in writing what measures will be taken to bring each activity back on schedule and to ensure that the contract completion date is not exceeded. A plan of action and recovery schedule shall be developed and submitted to the Designer when: (1) the Contractor's report indicates delays, that are in the opinion of the Designer or Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled completion date is brought into question; or (2) the updated construction schedule is thirty (30) days behind the planned or baseline schedule and no legitimate time extensions are in process or have been approved; or (3) the Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the CPM schedule which, in the opinion of the Designer or Owner, are of a major nature. The plan of action, when requested by the Designer or Owner, shall be submitted to the Designer and Owner, within five calendar (5) days of the request. The recovery schedule, when required, shall be submitted to the Designer and Owner, within five (5) calendar days of the request.

Failure to provide updated construction schedules, plans of action, or recovery schedules, as requested or required, shall be considered grounds for rejection of pay applications.

40. CITY'S RIGHT TO TERMINATE

See the City of Raleigh Form of Contract concerning the City's right to terminate.

41. FINAL ACCEPTANCE OF WORK AND FINAL PAYMENT

Before issuing final payment, the Contractor shall promptly remove from the premises all materials condemned by the Owner's Representative or Consultant as failing to conform with the Contract, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

Final Acceptance shall occur when the Designer and Owner mutually agree to accept the project from the contractor. Final acceptance of the project shall not be considered before the final inspection is conducted. Final acceptance of the project may occur prior to correction of punch list items.

Final Inspection: Upon notice from the Contractor that his Work is completed, the Designer and Owner shall make a final inspection of the Work and shall notify the Contractor of all instances where his Work fails to comply with the Drawings and Specifications, as well as any defects he may discover. Deficiencies shall be recorded on a "punch list" and the Contractor shall immediately make such alterations as are necessary to make the Work comply with the Drawings and Specifications.

Final Payment: When the Work under this Contract is completed, a final payment request shall be submitted representing the original Contract Price, cost events, and change orders to the Contract. The final payment shall not be due until the Contractor shall have completed all Work necessary and reasonably incidental to the Contract, including final clean up.

The final payment of monies or retained amount due the Contractor for the contract shall not become due until the Contractor has furnished to the Owner, through the Designer, an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work in connection with his contract have been satisfied, and that no claims or liens exist against the Contractor in connection with this contract. To the event that the Contractor cannot obtain similar affidavits from sub contractors to protect the Contractor and the Owner from possible liens or claims against the sub-contractor, the Contractor shall state in his affidavit that no claims or liens exist against any sub-contractor to the best of his (the Contractor's) knowledge, and, if any appear afterward, the Contractor shall hold and save the Owner harmless.

The final payment may not be processed until the Designer has certified that the project has been completed in accordance with the contract Specifications and drawings.

Final acceptance of the Work and the making of final payment shall not constitute a waiver of any claims by the City. Payments otherwise due the Contractor, including Retainage, may be withheld by the City because of defective Work not remedied and unadjusted damage to others by the Contractor or Subcontractors, vendors or laborers.

All requests for final payment must be submitted within 60 days after the Work has been completed and accepted by the City. All requests are subject to final approval and audit by the City of Raleigh.

42 . CONSTRUCTION INSPECTION

The Contractor shall maintain an adequate inspection system and perform all inspections to ensure that the work performed under this contract, including that of all subcontractors, is performed per the contract requirements. The Contractor shall maintain complete inspection records and shall make them available to the City. All work shall be conducted under the general direction of the Contractor. As referenced in Section 13, Inspection of Work by Other Parties, all work is subject to City inspection and tests at all places and at all reasonable times before final acceptance to ensure compliance with the terms of this contract. Such inspections by the City are for the benefit of the City and do not relieve the Contractor of its responsibility for providing adequate inspection and control measures for its work and the work of its subcontractors. Such inspections do not constitute any acceptance of the work by the City unless such partial acceptance is done in writing by the City and clearly indicates the scope of work that is being accepted by the City.

As stated in Section 16. Rejection of Work and Materials and Owner's Right to Do Work, the Contractor shall promptly replace or correct work, without charge, that is found to be in non-conformance with contract requirements unless, in the City's interest, the City consents to accept the work with an appropriate adjustment in the contractor price.

The Contractor shall promptly segregate and remove any rejected work or materials from the work area. If the contractor does not promptly remove or correct defective or rejected work, the City may replace or correct the work and charge the cost to the Contractor or terminate the contract for Default.

43. QUALITY CONTROL

The contractor shall develop and implement a quality control system on subject project to ensure the construction is performed per contract requirements. The quality control system shall consist of plans, procedures, and organization necessary to produce an end-product, which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The system shall also include all work performed by its's subcontractors. The Contractor's project superintendent, separate quality control manager or other designated individual will be appointed by the Contractor to be responsible for the quality of work on the job site. The designated individual shall have the authority to require corrective action for work found to not be in compliance with the contract requirements. Deficiencies and non-conforming work shall be tracked until they have been corrected and found to be in compliance with requirements. Results of quality control inspections shall be documented on the daily report of construction.

44. DAILY REPORT OF CONSTRUCTION

The Contractor's appointed representative shall provide a daily report of construction for each day work is performed on the project. The report is a requirement of the contractor's inspection of construction requirement to ensure all work is performed in compliance with contract requirements. Failure to provide a complete and accurate daily report may result in payment being withheld until the Contractor satisfactorily demonstrates that the work has been inspected. The report, at a minimum, shall include items as noted below to adequately describe the work:

a. List of Prime and any subcontractors at the site.
b. Numerical count of personnel at the site by tradecraft or subcontractor.

c. A list of all construction equipment on site.
d. High and low temperatures, general weather conditions.
e. Accidents (provide specific accident information reports).
f. Meetings and significant decisions.
g. Work performed by location, description and firm
h. Quality control inspections, tests and records.
i. Unusual events.
j. Stoppages, delays, shortages, losses.
k. Emergency procedures taken.
l. Inspection results or requests of governing authorities.
m. Changes received, implemented.
n. Services connected, disconnected.
o. Equipment or system tests and start-ups.
p. Any partial or substantial completions, occupancies.
q. Quantity measurements, weight tickets or invoices to document pay items.

The Contractor shall prepare a daily construction report, recording the information concerning events at the site and submit copies to the Designer or Owner, by noon of the following workday (electronic format is acceptable). Each daily report is to be certified * signed by the authorized Contractor representative as to the facts, accuracy and completeness of the information in the daily report.

A copy of the Contractor's proposed daily report format is to be provided to the Designer or Owner for approval prior to construction.

45. GUARANTEE AND CORRECTION OF WORK

The Contractor shall guarantee all Work to have been accomplished in conformance with the Contract Documents. Neither the final payment application nor any provision of the Contract Documents, nor partial or entire occupancy or use of the Work by the City, shall constitute an acceptance of any part of the Work not done in accordance with the Contract Documents, or relieve the Contractor of liability for incomplete or faulty materials or workmanship. The Contractor shall promptly remedy any omission or defect in the Work and pay for any damage to other improvements or facilities resulting from such omission or defect which shall appear within a period as defined in the Supplemental Conditions. In the event that the Contractor should fail to make repairs, adjustments or other remedy that may be made necessary by such defects, the City may do so and charge the Contractor the cost thereby incurred.

46. DRAWINGS AND SPECIFICATIONS

At the Notice of Contract Award, the Designer will furnish the Contractor an electronic disk or similar electronic file containing all technical contract documents. This file will include a complete set of drawing files and technical specification files which have all amendments incorporated. The disk will contain drawing files in CADD format and technical specifications in PDF format.

The electronic CADD files and the PDF files are being provided for the Contractor's use in printing hard copies of contract documents. In addition, native CADD files are provided in accordance with "AS BUILT DOCUMENTS" paragraph for the Contractor's use in developing and maintaining as-built plans.

The Contractor shall:

1) Check all drawings furnished immediately upon receipt;

2) Compare all drawings and verify the figures before laying out the work;

3) Promptly notify the Designer and City of any discrepancies;

4) Be responsible for any errors which might have been avoided by complying with paragraphs above;

5) Reproduce and print contract drawings and specifications as needed;

6) Maintain, in readable condition at his job office, one complete set of working drawings and specifications for his work, including all approved shop drawings, with such drawings and specifications made available for use by the Designer and City; and,

7) Maintain at the job office, a day-to-day, "as-built' record of work-in-place that is at variance with the contract documents as required in the As-Built Drawing provision of the specification.

Omissions from the drawings or specifications or the inaccurate description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or inaccurate described details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

47. DIFFERING SITE CONDITIONS

Should the Contractor encounter subsurface or latent conditions, or both, at the site, materially differing from those shown on the drawings or indicated in the specifications or differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in this Agreement, the Contractor shall immediately, and in no event later than ten (10) days later, give notice to the Designer/ Owner of such conditions before they are disturbed. The Designer and Owner shall thereupon promptly investigate the conditions and if they find that they materially differ from those shown on the drawings or indicated in the specifications, they shall at once make such changes in the drawings and/or specifications as they may find necessary. Any increase or decrease in the Cost of the Work resulting from such changes shall be adjusted in the manner provided herein for adjustments as to extra and/or additional Work and changes. However, neither the Owner nor the Designer shall be liable or responsible for additional Work, costs or changes to the Work that should have been reasonably determined from any geotechnical, soils and other reports, surveys and analyses made available for the Contractor's review or that should have been reasonably discovered by the Contractor through site observations or through the performance of its obligations pursuant to this Agreement.

48. VARIATIONS IN ESTIMATED QUANTITIES

If the quantity of a unit-priced item in this contract is an estimated quantity and the actual quantity of the unit-priced item varies more than 15 percent above or below the estimated quantity, an equitable adjustment in the contract price for such item shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above 115 percent or below 85 percent of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the Contractor may request, in writing, an extension of time, to be received by the Designer/ Owner within 10 days from the beginning of the delay. Upon the receipt of a written request for an extension, the Designer/ Owner shall ascertain the facts and, if justified, make an adjustment for extending the completion date.

49. WARRANTY OF CONSTRUCITON

The Contractor shall unconditionally warrant materials and workmanship against defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the date of final acceptance of the work or date of beneficial occupancy and shall replace such defective materials or workmanship without cost to the Owner.

If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Owner takes possession.

The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or
(2) Any defect of equipment, material, workmanship, or design furnished.

The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

The Owner shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;
(2) Require all warranties to be executed, in writing, for the benefit of the Owner,
(3) Enforce all warranties for the benefit of the Owner, if directed by the Owner.

Where items of equipment or material carry a manufacturer's warranty, or an extended warranty required by the specifications, for any period in excess of twelve (12) months, then the manufacturer's warranty or extended warranty shall apply for that piece of equipment or material. The Contractor shall replace such defective equipment or materials, without cost to the Owner, within the manufacturer's warranty period.

Additionally, the Owner may bring an action for latent defects caused by the negligence of the Contractor for defects which are hidden or not readily apparent to the Owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.

50. CONTRACTOR EVALUATION

The Contractors overall Work performance on this project shall be fairly evaluated by the Owner and the Designer for determining qualifications to bid on future City projects. In addition to the final evaluation, interim evaluations may be prepared during the progress of the project. The Owner may also request the Contractor's comments to evaluate the Designer's performance.

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SUPPLEMENTARY GENERAL CONDITIONS

INDEX TO SUPPLEMENTARY GENERAL CONDITIONS

SECTION	TITLE	PAGE
01	Project Time & Damages	SGC-2
02	Failure in Completing Work on Time	SGC-2
03	Emergency Contacts	SGC-3
04	Operations of Owner's Facilities	SGC-3
05	Preconstruction Photos/Video	SGC-3
06	Sanitary Facilities	SGC-3
07	Material Tickets	SGC-3
08	Utility Locates	SGC-4
09	NCDOT Encroachment	SGC-4
10	Erosion Control Maintenance and Construction Methods	SGC-4
11	City of Raleigh Standards	SGC-4
12	Estimated Quantities	SGC-4
13	Temporary Construction Facilities	SGC-5
14	Bulletin Board and Project Sign	SGC-5
15	Mobilization and Demobilization (if used)	SGC-5
16	Traffic Control	SGC-6
17	Maintenance of As Built Record Drawings	SGC-6
18	Record Drawings for Substantial Completion	SGC-7
19	Final Cleaning	SGC-7
20	Submission of Operations and Maintenance Data	SGC-7
21	Sales Tax	SGC-8

Attachments
a. Sales Tax Form
b. Stored Materials Form

1. PROJECT TIME & DAMAGES

The Contractor shall commence work to be performed under this agreement on a date to be specified in writing from the City and shall fully complete all work hereunder within 120 Consecutive Calendar Days. For each day in excess of the contract number of days, the contractor shall pay the owner the sum in accordance with Section 2. Failure or Delay in Completing Work on Time as liquidated damages (per day) reasonably estimated and agreed upon with the signing of the contract. The liquidated damages are to cover any losses incurred by the Owner by reason of the failure of the Contractor to complete the work within the time specified such time being the essence of this contract and a material consideration thereof.

2. FAILURE OR DELAY IN COMPLETING WORK ON TIME

Time is an essential element of the Contract, and any delay in the prosecution of the work may inconvenience the public or interfere with the daily operations of the department and demand additional time for supervision. For this reason, it is important that the work be pressed vigorously to completion. Should the Contractor fail to complete the work within the time stipulated in the contract or within such extra time that may be allowed, charges shall be assessed against any money due or that may become due the Contractor.

The amount of such damages for this project are 0 per day. This amount is hereby agreed upon as fixed liquidated damages due the City after the expiration of the time for completion specified in the Contract. The Contractor and his Surety shall be liable for liquidated damages in excess of the amount due the Contractor on the final payment.

These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the City due to the uncertainty and impossibility of making a determination as to the actual and consequential damages which are incurred by the City, and the public as a result of the failure on the part of the Contractor to complete the Work on time.

Application of Damages:

Liquidated damages shall start in accordance with the above schedule upon notification to the Contractor in writing that the apparent Contract Time has been consumed.

a. Deduction from Partial Payments: Liquidated damages, as they accrue, will be deducted from periodic payments, such deductions shall be in addition to the retainage provided for the Contract.
b. Deduction from Final Payment: The full amount of liquidated damages will be deducted from the final payment to the Contractor and /or his Surety.
c. No liquidated damages charged for delay by the City: In case of default of the Contract and the subsequent completion of the Work by the City as hereinafter provided, the Contractor and his Surety shall be liable for the liquidated damages under the Contract, but no liquidated damages shall be chargeable for any delay in the final completion of the Work by the City due to any unreasonable action, negligence, omission or delay of the City. In any suit for the collection of or involving the assessment of liquidated damages, the reasonableness of the amount shall be presumed. The liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute, or under the Contract.

The Contractor shall be liable for and shall pay to the City the above stated amount as fixed, agreed and liquidated damages for each day beyond the designated completion date until the project is completed and accepted.

3. EMERGENCY CONTACTS

The Contractor shall provide by letter names, telephone numbers and addresses of two responsible company representatives prior to beginning work. These two representatives are to be capable and authorized to respond to emergencies, so which arise during the project, nights, holidays or week-ends. The Contractor, by submitting these person's names, certifies that at least one representative will be available for on call emergency response at all times.

4. OPERATIONS OF OWNER'S FACILITIES

The Contractor agrees that all Work done under the Contract Documents shall be carried on in such a manner so as to ensure the regular and continuous operation of the adjoining or adjacent facilities. The Contractor further agrees that the sequence of operations under the Contract Documents shall be scheduled and carried out so as to ensure said regular and continuous operation. The Contractor shall not close any areas of construction until so authorized by the Owner. The Contractor shall control his operations and those of his Subcontractors and all suppliers, to assure the least inconvenience to the public. Under all circumstances, safety shall be the most important consideration.

(b) The Owner will occupy the site and existing building during construction except as herein noted. Cooperate with the Owner to minimize conflicts and facilitate owner usage. Perform the work so as not to interfere with the Owner's operations.

(c) The Owner reserves the right to occupy and place and install equipment in selected construction areas prior to Substantial Completion without accepting the Work in total.

5. PRECONSTRUCTION PHOTOS/VIDEO

The Contractor shall document pre-existing conditions on the project site and submit the photos / video in electronic format. The intent of these photos / video is to document the project conditions such as the pavement and driveways; the condition of the curb & gutter; the condition of the adjoining site boundary; installed improvements and drainage; the condition of the grassing; the condition of any structures and other improvements prior to the start of construction.

The Contractor may also include any pre-existing conditions it wants brought to the attention of the Designer and Owner by including notes and time position on the index sheet. The documentation must be submitted before mobilization to the site.

6. SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workers. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and City of Raleigh. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations. No separate payment will be made for providing these

7. MATERIAL TICKETS

For all work to be paid based on the basis of a material quantity, the Contractor shall turn in all material tickets from the source of supply for the purpose of payment to the Owner on a daily basis. Such tickets shall be totaled by the Contractor and included on the Contractor’s daily report of construction.

8. UTILITY LOCATES

Utilities as shown on the plans are intended to represent general locations only. It shall be the responsibility of the Contractor, prior to construction, to contact appropriate utility companies and utility locates and precisely locate any utilities (both horizontally and vertically) which could be affected by the proposed construction. The Contractor shall be responsible for repair of any damage to the utilities as well as any other damage which may be caused due to the disturbance of the utilities.

If required for construction, the Contractor shall dig sample hand holes to uncover the utility. The digging of sample hand holes shall be coordinated with the Designer and Owner who assist the Contractor to determine the number and location of such holes. There is no line item to pay for such located work, this work is considered incidental to other pay items.

9. NCDOT ENCROACHMENT

On State maintained roads, the NCDOT will issue an encroachment agreement for the project. If encroachment agreement has not been issued at the time of bid opening, the Contractor will be required to incorporate all NCDOT standard encroachment requirements in the base bid for the various items in the contract. No separate payment will be made for work required in accordance with the standard encroachment agreement. Any major deviations from the approved plans and specifications required to comply with the final encroachment agreement will be identified by Addendum before bids are opened, or by change order after contract award, if required.

10. EROSION CONTROL MAINTENANCE AND CONSTRUCTION METHODS

The provisions and requirements of the erosion control permit will be in accordance with City and State standards and specifications for soil erosion and sediment control. Soil erosion control measures shall be installed as described prior to any land disturbing work being done. All erosion control measures must be maintained so that they prevent soil erosion and sediment losses throughout the project, and will remain in place until the denuded areas are stabilized and the permanent seed has germinated. The entrapped sediment from all temporary measures shall be removed before 50% of the original sediment storage capacity has been depleted.

The Contractor shall schedule and conduct construction activities in a manner that will minimize soil erosion and the resulting sedimentation and turbidity of surface waters. The Contractor shall comply with the requirements herein regardless of whether or not a National Pollution Discharge Elimination System (NPDES) permit for the work is required.

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Designer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Designer. The Contractor shall not utilize the construction method until it is approved by the permitting agency.

11. CITY OF RALEIGH STANDARDS

Any work defined to follow the City of Raleigh Standards shall follow the appropriate City of Raleigh Specifications. These are available from the City or Raleigh website.

12. ESTIMATED QUANTITIES

Contract prices submitted by the Contractor in the Proposal shall be full compensation for all labor, materials, equipment, tools, specialties, and incidentals necessary for the Contractor to fully complete the

Work as shown on the Drawings and specified in the Contract Documents to be performed under this Contract.

Estimated quantities stipulated in the Proposal or other parts of the Contract Documents are solely for the purpose of comparing the bids received for the Work and determining an initial contract price.

a. The actual quantities of work done and materials furnished can differ from the estimated quantities shown in the Proposal.

b. The final contract price will be based upon the final quantities of pay items incorporated into the Work adjusted by these Contract Documents.

The method of measurement and computations used in determining the quantity of the various pay items incorporated into the work will be those methods generally recognized as accepted engineering practice. Adjustments in unit price or time for variations in quantities are subject to the Contract General Provisions entitled Variations in Estimated Quantity.

Any work required for which an estimated quantity and unit price has not been provided in the Contract Documents shall be considered incidental and separate payment will not be provided.

13. TEMPORARY CONSTRUCTION FACILITIES

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor for temporary office area, the number of trailers to be used, avenues of egress to the fenced area and details of the fence installation. Temporary utility services shall also be located on the plan. Any areas which may have to be graveled to prevent the tracking of mud and location of any construction entrances shall also be identified. The Contractor shall also indicate if the use of a supplemental, material storage or other staging area is desired.

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust shall be adequate to ensure safe operation at all times.

The Contractor shall be responsible for the security of its own facilities and equipment. In addition, the contractor shall notify the appropriate law enforcement agency of any requested periodic security checks of the temporary project field office. Areas used by the Contractor for the office area and storage of equipment or material, or other use, shall be restored to the original or better condition.

14. BULLETIN BOARD AND PROJECT SIGN

The Contractor shall install, in a conspicuous location, the project bulletin board immediately upon beginning of work under this contract. The board shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size, for displaying the equal employment opportunity poster, any wage decision and wage rates that may be required by the contract, safety and emergency contact information and other information.

If a project sign is required, the Contractor shall furnish, erect, and maintain the project sign in the location approved by the Designer and Owner. Upon completion of work under this contract, the bulletin board and project sign shall be removed from the job site and shall remain the property of the contractor.

15. MOBILIZATION AND DEMOBILIZATION (if used based on project specifications)

The total cost bid for mobilization and de-mobilization, when a unit price is provided for in the bid proposal form, is not to exceed five (5) percent of the total contract bid. All costs for mobilization and de-

mobilization shall be included in the contract unit price. There shall be no additional compensation for mobilization and no adjustments to the unit prices based on changes in the scope of work, including, but not limited to, any additions to the work on the contract. The Contractor will be paid in increments based on the status of the actual mobilization effort up to seventy-five (75) percent of the total bid cost. An amount equal to twenty-five (25) percent of the total mobilization cost shall be withheld until the completion of punch-list items and removal of all equipment and temporary construction for project demobilization is complete. the breakdown of this bid item is as follows:

Mobilization – Equal installments to reflect	-	a total of 75%
Demobilization and completion of punch list	–	a total of 25%
Total		100%

Any amount that the contractor has bid in excess of the amount noted above will be retained by the Owner and paid on the final payment estimate.

16. TRAFFIC CONTROL

Work and access may be restricted as noted in the contract. Work hours may vary depending on traffic conditions and constraints. Traffic control plans may be required as required in the contract. Notice may be required to Wake County, City or NCDOT.

It is the Contractor's responsibility to provide all necessary traffic control and signage and provide for maintenance of traffic for the work associated with this project. The cost for this work is to be included in the bid item included in the contract or in the existing unit prices or contract amount if no bid item is included. Traffic control shall be provided in accordance with the current edition of the Manual of Uniform Traffic Control Devices and appropriate City and NCDOT requirements.

17. MAINTENANCE OF AS-BUILT RECORD DRAWINGS

Absent of a more specific contract requirement elsewhere in the Contract Documents, the contractor shall maintain and mark-up a reproducible set of prints at the project site to show as-built conditions. This set of prints shall become the record drawings and shall be kept current and available for review by the Designer and Owner at all times. All changes from the contract drawings which are made in the work, or additional information which might be uncovered during the construction, including uncharted utilities, shall be accurately and neatly recorded as they occur by means of details and notes to the drawings. All changes and/or required additions to the preliminary record drawings shall be clearly identified in a contrasting color and which is compatible with reproduction of the preliminary record drawings.

The record drawings shall be updated by no less frequently than weekly during the construction. Measurements shall be shown for all change of direction points and all surface or underground components such as valves, manholes, drop inlets, cleanouts, meter, etc. The general depth range of each underground utility line shall be shown or installation detail referenced (i.e., 3 to 4 feet in depth). The description of exterior utilities includes the actual quantity, size, and material of utility lines. Any request for information and / or Designer instructions that depict revisions to the record drawings shall be identified.

The correct grade or alignment of roads, structures or utilities if any changes were made from contract drawings shall be noted. Correct elevations, if changes were made in site grading, shall be noted. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor, including but not limited to fabrication, erection, installation plans and shop drawings shall be noted. The location and dimensions of any changes within the building or structure shall be noted.

As a condition of each payment request, the Contractor and Designer shall verify that as built drawing conditions are being maintained. If the Contractor fails to maintain the as-built drawings as required

herein, the Owner may deduct an amount representing the estimated monthly cost of maintaining the as-built drawings from the monthly progress payment.

18. RECORD DRAWINGS FOR SUBSTANTIAL COMPLETION

The Contractor shall provide a marked-up copy of the currently maintained set of record drawings to the Designer for review prior to scheduling the substantial completion inspection. The Designer shall verify that the submitted drawings provide sufficient information for the Owner to adequately operate and maintain the project until the final approved set of as built drawings are provided. If acceptable, at the time of the substantial completion inspection, the Contractor shall deliver a copy of these record drawing for the Owner's use until the final approved as-built record drawings are provided.

19. FINAL CLEANING

Final cleaning of the premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. carpet and soft surfaces shall be vacuumed. equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of any uncompleted clean-up items shall be submitted on the day of final inspection.

20. SUBMISSION OF OPERATIONS AND MAINTENANCE DATA

Absent of a more specific contract requirement elsewhere in the Contract Documents, the contractor shall submit Operation and Maintenance (O&M) Data specifically applicable to this contract. The Contractor shall provide a complete and concise depiction of the provided equipment, product, or system. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal.

The format of the O&M Data shall general follow the following outline and include sufficient information to adequately depict the information:

a. Safety Precautions of the Equipment
b. Normal Operation Procedures
c. Emergency Operations procedures.
d. Environmental conditions specific for the equipment
e. Required lubrication data
f. Preventive maintenance plan and schedule for the equipment
g. Troubleshooting guides and diagnostic techniques to be used
h. Wiring diagrams and control diagrams
i. Maintenance and repair procedures
j. Removal and replacement instructions
k. Spare parts and source of supply list
l. Completed warranty information
m. Testing equipment and special tools required shall be provided
n. Installing contractor information.

The Contractor O&M data shall include a list that includes the name, address, and telephone number of the general contractor and each subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization most convenient to the project site. Adequate training shall be provided to the Owner to properly operate and maintain the equipment. O&M Data shall be available to the Owner for reference during the training.

21. SALES TAX

North Carolina Sales Tax and Use Tax and Local Option Sales and Use Tax do apply to materials entering into Municipal Work (N.C. Sales and Use Tax Regulations No. 42 & 57, Paragraph A), and such costs shall be included in the bid proposal and contract sum.

The procedures for reporting sales taxes paid by the contractor are as follows:

a. It shall be the general contractor's responsibility to furnish the owner documentary evidence showing the materials used and sales tax paid by the general contractor and each of his sub-contractors and where paid. Any county sales tax included in the contractor's statements must be shown separately from the state sales tax. If more than one county is shown, each county shall be listed separately.

b. The documentary evidence shall consist of a certified statement, by the general contractor and each of his subcontractors individually, showing total purchases of materials from each separate vendor and total sales taxes by each county paid each vendor. The certified statement must show the invoice number (s) covered and inclusive dates of such invoices. State sales tax shall be listed separately from county sales tax. If more than one county is shown, each county shall be listed separately.

c. Materials used from general contractor's or sub-contractor's warehouse stock shall be shown in a certified statement at warehouse stock prices.

d. The general contractor shall not be required to certify the sub-contractor's statements.

e. The documentary evidence to be furnished to owners eligible for sales or use tax refunds covers sales and or use taxes paid on building materials used by contractors and sub-contractors in the performance of contract with churches, orphanages, hospitals not operated for profit and other charitable or religious institutions or organizations not operated for profit and, incorporated cities, towns, and counties in this State. The documentary evidence is to be submitted to the above-named institutions, organizations and governmental units to be included in claims for refunds to be prepared and submitted by them to obtain refunds provided by G. S. 105-164.14 (2) and (3) of the 1961 Statute and is to include the purchases of building materials, supplies, fixtures and equipment which become a part of or annex to buildings, or structures being erected, altered or repaired under contract with such institutions, organizations, or governmental units.

f. The contractor is advised that all requests for payment, partial or final, for work completed under this contract must include a sales tax report submitted in accordance with the procedures outlined above.

North Carolina Sales Tax
(Paid During This Estimate Period)

Project: _____ Project Location: _____County Pay Estimate Number: _____

Contractor: _____ Period Ending: _____

Date	Vendor	Invoice Number	Invoice Amount	State Tax	County Tax	Transit Tax	Total Tax	County
TOTALS								

I certify that the above listed vendors were paid sales tax upon purchases of building materials during the period covered by the construction estimate, and the property upon which such taxes were paid with or will be used in the performance of this contract. No tax on purchases or rentals of tools and/or equipment is included in the above list. All of the material above became a part of or is annexed to the building or structure being erected, altered or repaired.

_____ County, North Carolina

Signed and sworn to (or affirmed) before this day by _____

_____
(name of principal) (signature of principal)

Date: _____ _____
Notary Public's Signature

_____ _____
(Notary's printed or typed name, Notary Public) (Official Seal) My commission expires:

CITY OF RALEIGH STORED MATERIAL LOG

Contract Number: _____
Project: _____
Contractor: _____

Payment Estimate Number: _____
Period Ending: _____

A	**B**	**C**	D	E	F
DESCRIPTION OF MATERIAL	Materials on Hand from Prior Period	New Materials Stored This Period	Total Materials On Hand This Period D = (B+C)	Materials Installed This Period	Materials On Hand At End of Period F = (D-E)
TOTALS	$0.00	$0.00	$0.00	$0.00	$0.00

NOTE: This form is to be used as documentation to support the value of Stored Materials reported on the Application for Payment
Detailed invoices have been provided to support the materials as described above.

"General Decision Number: NC20240090 01/05/2024

Superseded General Decision Number: NC20230090

State: North Carolina

Construction Type: Highway

Counties: Brunswick, Cumberland, Currituck, Edgecombe, Franklin, Greene, Hoke, Johnston, Nash, New Hanover, Onslow, Pender, Pitt, Wake and Wayne Counties in North Carolina.

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

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination,

		if it is higher) for all	
		hours spent performing on	
		that contract in 2024.	

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2024

SUNC2014-005 11/17/2014

	Rates	Fringes
BLASTER	$ 21.04	
CARPENTER	$ 13.72 **	
CEMENT MASON/CONCRETE FINISHER	$ 14.48 **	
ELECTRICIAN		
Electrician	$ 17.97	
Telecommunications Technician	$ 16.79 **	.63
IRONWORKER	$ 16.02 **	
LABORER		
Asphalt Raker and Spreader	$ 12.46 **	
Asphalt Screed/Jackman	$ 14.33 **	
Carpenter Tender	$ 12.88 **	
Cement Mason/Concrete Finisher Tender	$ 12.54 **	
Common or General	$ 10.20 **	
Guardrail/Fence Installer	$ 12.87 **	
Pipelayer	$ 12.17 **	
Traffic Signal/Lighting Installer	$ 14.89 **	
PAINTER		

Bridge	$ 24.57	
POWER EQUIPMENT OPERATOR		
Asphalt Broom Tractor	$ 11.85 **	
Bulldozer Fine	$ 17.04 **	
Bulldozer Rough	$ 14.34 **	
Concrete Grinder/Groover	$ 20.34	2.30
Crane Boom Trucks	$ 20.54	
Crane Other	$ 20.08	
Crane Rough/All Terrain	$ 20.67	
Drill Operator Rock	$ 14.38 **	
Drill Operator Structure	$ 21.14	
Excavator Fine	$ 16.60 **	
Excavator Rough	$ 14.00 **	
Grader/Blade Fine	$ 18.47	
Grader/Blade Rough	$ 14.62 **	
Loader 2 Cubic Yards or Less	$ 13.76 **	
Loader Greater Than 2 Cubic Yards	$ 14.14 **	
Material Transfer Vehicle (Shuttle Buggy)	$ 15.18 **	
Mechanic	$ 17.55	
Milling Machine	$ 15.36 **	
Off-Road Hauler/Water Tanker	$ 11.36 **	
Oiler/Greaser	$ 13.55 **	
Pavement Marking Equipment	$ 12.11 **	
Paver Asphalt	$ 15.59 **	
Paver Concrete	$ 18.20	
Roller Asphalt Breakdown	$ 12.45 **	
Roller Asphalt Finish	$ 13.85 **	
Roller Other	$ 11.36 **	
Scraper Finish	$ 12.71 **	
Scraper Rough	$ 11.35 **	
Slip Form Machine	$ 16.50 **	
Tack Truck/Distributor Operator	$ 14.52 **	
TRUCK DRIVER		
GVWR of 26,000 or Less	$ 11.12 **	
GVWR of 26,001 Lbs or Greater	$ 12.37 **	

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.20) or 13658 ($12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or

""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current

negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

DBE UTILIZATION

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT PROVISIONS & FORMS

The DBE goal for this contract is 13%.

Note: Proposers may get enhanced evaluation credit for committing to utilizing NCDOT federally certified DBE firms as subcontractors or suppliers, on the resulting contract.

In soliciting DBE participation, the Contractors should utilize the Directory of Firms. This is a real-time consolidated list of firms that have been certified through North Carolina's Unified Certification Program as DBE.

This Contract is subject to the requirements of 49 C.F.R. Part 26 Participation by DBE in Department of Transportation Financial Assistance Programs.

POLICY

As a recipient of funds from the Federal Transit Administration (FTA), the City has established a DBE Program in accordance with regulations of the U.S. Department of Transportation (DOT), 49 C.F.R. Part 26 and has committed to ensuring compliance on all FTA-funded projects through monitoring, reporting, and goal-setting.

The DBE Program is incorporated into and made a part of the bidding documents and resulting contract. Copies of the DBE Program may be obtained online under the City of Raleigh DBE Program.

It is the policy of the City to ensure that DBEs, as defined in 49 C.F.R. Part 26, have an equal opportunity to receive and participate in DOT-assisted and/or federally funded contracts. The City's objectives are to:

- Ensure nondiscrimination in the award and administration of DOT-assisted and/or federally funded contracts;
- Create a level playing field on which DBEs can compete fairly for DOT-assisted and/or federally funded contracts;
- Ensure that the DBE Program is narrowly tailored in accordance with applicable law;
- Ensure that only firms that fully meet 49 C.F.R. Part 26 eligibility standards are permitted to participate as DBEs;
- Help remove barriers to the participation of DBEs in DOT-assisted and/or federally funded contracts; and
- Assist the development of firms that can compete successfully in the marketplace outside the DBE Program.

The GoRaleigh Civil Rights Officer has been designated as the DBE Liaison Officer (DBELO). In that capacity, the DBELO is responsible for implementing all aspects of the DBE Program. Implementation of

the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by the City in its financial assistance agreements with the DOT.

EVALUATION CRITERIA

The City of Raleigh has a commitment to the utilization of locally based certified DBEs. Firms who submit a viable plan to include certified DBEs with their proposals will receive five (5) points as part of the 100 points qualifications schedule. In addition to submitting a DBE utilization plan with your proposal to receive the 5 points, your firm must submit documentation to establish that you have contacted 10-15 firms to participate in the plan. To find DBE firms go to the NCDOT DBE Search.

REQUIRED FORMS – DBE UTILIZATION

Forms and instructions to be provided with bids (please submit color copies):

- Form A must be completed and signed by all proposers, regardless if they are proposing DBE subcontractors. It includes a request for information on all subcontractors and suppliers.
- Form B is submitted each month with pay applications by the selected/awarded firm. (NOT REQUIRED WITH THE PROPOSAL AT THIS TIME.)
- Form C is submitted if the firm attempted to find DBE subcontractors but was unable to identify partners.
- Form D is a Letter of Intent and would apply if any DBE firms' commitments are made by the selected firm. Each have to be signed and confirmed by our staff before the review committee process begins.

II. APPLICATION

Pursuant to 49 C.F.R. Part 26 and the DBE Program, all Bidders must affirmatively ensure that in any contract entered into with the City, DBEs will be afforded equal opportunity to participate in subcontracting opportunities.

A Bid will not be considered responsive unless the Bidder complies with 49 C.F.R. Part 26 and the DBE Program. Failure to carry out the pre-award requirements stated in the DBE Contract Provisions will be sufficient grounds to reject the Bid. Moreover, failure by the Contractor to comply with 49 C.F.R. Part 26 and the DBE Program after award shall constitute a breach of Contract.

The Bidder shall thoroughly examine and be familiar with provisions of 49 C.F.R. Part 26 and the DBE Program. Submission of a Bid shall constitute an acknowledgment upon which the City may rely that the Bidder has thoroughly examined, and is familiar with said regulations and contract requirements. Failure or neglect of a Bidder to receive or examine any of these government regulations and contract requirements shall in no way relieve him from any obligations with respect to his Bid or this Contract.

III. REQUIREMENTS

The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 C.F.R. Part 26 and the DBE Program in the award and administration of this DOT-assisted contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the City deems appropriate. Each subcontract the Contractor signs with a subcontractor (both DBE and non-DBE subcontractors) must include the assurance in this paragraph. Such contract language is located in Section VIII below. (See 49 C.F.R. §26.13(b)).

Bidders are required to document sufficient DBE participation to meet the goal established for this Contract or, alternatively, document adequate Good Faith Efforts to do so, as provided for in 49 C.F.R.

§26.55. Specifics regarding Good Faith Efforts is located in Section VI below. Award of this Contract is conditioned upon the submission of the following concurrent with and accompanying the sealed Bid:

1. The names and addresses of DBE firms that will participate in this Contract;

2. A description of the work each DBE will perform;

3. The dollar amount of the participation of each DBE firm participating;

4. Written documentation of the Bidder's commitment to use a DBE subcontractor whose participation it submits to meet the Contract goal;

5. Written confirmation from the DBE that it is participating in the Contract as provided in the Contractor's commitment; and

6. If the Contract goal is not met, evidence of Good Faith Efforts to do so.

Bidders must present the information required above as a matter of responsiveness with the Bid submission. Additional information on all required documentation is specified in Section VII below.

(See 49 C.F.R. §26.53 (3)). By submitting a Bid, the Bidder gives assurances that he/she will meet the Contract goal for DBE participation in performance of this Contract, or as an alternative, that the Bidder has made such Good Faith Efforts as required in Section VI below.

The Contractor is required to pay each subcontractor under this Contract for satisfactory performance of its contract no later than seven (7) days from the receipt of each progress payment or final payment the full amount the Contractor receives from the City for each subcontractor's work and materials under the subcontract. Any delay or postponement of payment from the above referenced time frame may result in liquidated damages and/or sanctions as stipulated in Contract Documents. Exceptions may occur only for good cause following written approval by the City. This clause applies to both DBE and non-DBE subcontractors.

The Contractor is required to return retainage payments to each subcontractor within seven (7) days after the subcontractors work is satisfactorily completed. Any delay or postponement of payment from

the above referenced time frame may occur only for good cause following written approval of the City. This clause applies to both DBE and non-DBE subcontractors.

For purposes of this Section, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the City. When the City has made incremental acceptance of a portion of the Contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

The Contractor's failure to pay subcontractors as provided shall be a material breach for which the City may cancel this Contract.

The Contractor may not hold retainage from its subcontractors once the City has provided notice that the work completed by the subcontractors has been completed and has been accepted.

To terminate a DBE subcontractor, the Contractor must follow the procedure stated in Section 26.53(f) of the DBE Program. The Contractor shall not terminate a DBE subcontractor without prior written consent of the City. Prior written consent will only be provided where there is "good cause" for termination of the DBE firm, as established by Section 26.53(f)(3) of the DBE Program. In those instances where "good cause" exists to terminate a DBE subcontractor, the City will require the Contractor to make good faith efforts to replace a DBE that is terminated or has otherwise failed to complete its work on a contract with another certified DBE, to the extent needed to meet the Contract goal. The Contractor shall notify the DBELO immediately of the DBE's inability or unwillingness to perform and provide reasonable documentation.

If the Contractor fails or refuses to comply, the Contracting Officer will issue an order stopping all or part of payment/work until satisfactory action has been taken. If the Contractor still fails to comply, the Contracting Officer may terminate the Contract.

IV. REQUIRED DOCUMENTATION

A Bid will not be considered responsive unless the Bidder complies with 49 C.F.R. Part 26 and the City's DBE Program. The applicable forms in this section MUST be completed and included with the Bid (or specified timeframe) if a Bidder is to be considered responsive. If these forms are not submitted as such, the Bidder will be considered non-responsive and the Bid rejected. The required forms are listed below.

1. LIST OF SUBCONTRACTORS/SUPPLIERS – FORM A

The Bidder must submit its proposed DBE and non-DBE utilization on FORM A (List of Subcontractors/Suppliers) listing ALL subcontractors and suppliers that will be providing goods or services under the Contract. This form is to include all subcontractors the Bidder proposes to use, not just the DBE subcontractors. Bidders are required to list the names, contact information, annual gross receipts, age of firm, respective scope of work/service to be performed, NAICS Code, NCDOT Reporting Number, the dollar values of each subcontract that the Bidder proposes for participation in the Contract work, and the dollar value of total DBE participation for the Contract.

Blank forms will be deemed to represent zero participation. Forms without a signature will be considered non-responsive.

2. EVIDENCE OF GOOD FAITH EFFORTS – FORM C

If the information submitted in FORM A indicates that the City's goal will not be met, the Bidder shall also submit evidence sufficient to show to the City's satisfaction that the Bidder has in good faith made every reasonable effort, in the City's judgment, to meet such goal prior to contract award. FORM C (Evidence of Good Faith Efforts) must be completed and all accompanying documentation provided to show DBE firms that were contacted, but were not utilized. More information relating to Good Faiths Efforts is located in Section VI below.

Blank forms will be deemed to represent zero Good Faith Efforts. Completed forms without accompanying documentation will be considered non-responsive.

3. LETTER OF INTENT – FORM D

The Letter of Intent (FORM D) must be completed for EACH DBE listed on FORM A. Letters of Intent are not required to be submitted with the Bid, but can be submitted with the Bid. However, the apparent low Bidder will be required to submit Letters of Intent within three (3) business days from the time the City makes the request.

All documentation submitted at time of Bid, as well as additional data provided by the successful Bidder, is considered part of the Contract Documents. Any alterations, substitutions, deletions, etc., to data provided at time of submission of Bid must have prior approval of the DBELO.

V. DBE PARTICIPATION TOWARDS DBE GOAL

In accordance with 49 C.F.R. Part 26 and the DBE Program, the City may set contract specific goals. The degree of goal attainment by DBE contractors and DBE suppliers should be calculated as follows:

1. When a DBE participates in a contract, only the value of the work actually performed by the DBE counts toward the DBE goal and shall be calculated as follows:

A. Count the entire amount of that portion of a construction contract (or other contract not covered by paragraph 2 of this Section) that is performed by the DBE's own forces. Include the cost of supplies and materials obtained by the DBE for the work of the contract, including supplies purchased or equipment leased by the DBE (except supplies and equipment the DBE subcontractor purchases or leases from the prime contractor or its affiliate).

B. Count the entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or

insurance specifically required for the performance of a DOT-assisted contract, toward DBE goals, provided you determine the fee to be reasonable and not excessive as compared with fees customarily allowed for similar services.

C. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the DBE's subcontractor is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

2. When a DBE performs as a participant in a joint venture, count a portion of the total dollar value of the contract equal to the distinct, clearly defined portion of the work of the contract that the DBE performs with its own forces toward DBE goals.

3. Count expenditures to a DBE contractor toward DBE goals only if the DBE is performing a commercially useful function on that contract.

A. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, you must evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing, and the DBE credit claimed for its performance of the work, and other relevant factors.

B. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate.

C. If a DBE does not perform or exercise responsibility for at least thirty percent (30%) of the total cost of its contract with its own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.

D. When a DBE is presumed not to be performing a commercially useful function as provided in this Section, the DBE may present evidence to rebut this presumption. You may determine that the firm is performing a commercially useful function given the type of work involved and normal industry practices.

E. Your decisions on commercially useful function matters are subject to review by the concerned operating administration but are not administratively appealable to DOT.

4. Use the following factors in determining whether a DBE trucking company is performing a commercially useful function:

A. The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

B. The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

C. The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

D. The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

E. The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement. If a recipient chooses this approach, it must obtain written consent from the appropriate Department Operating Administration.

F. Example: DBE Firm X uses two (2) of its own trucks on a contract. It leases two (2) trucks from DBE Firm Y and six (6) trucks from non-DBE Firm Z. DBE credit would be awarded for the total value of transportation services provided by Firm X and Firm Y, and may also be awarded for the total value of transportation services provided by four of the six (6) trucks provided by Firm Z. In all, full credit would be allowed for the participation of eight (8) trucks. With respect to the other two (2) trucks provided by Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks Firm X receives as a result of the lease with Firm Z.

G. For purposes of this Section, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

5. Count expenditures with DBEs for materials or supplies toward DBE goals as provided in the following:

A. If the materials or supplies are obtained from a DBE manufacturer, count one hundred percent (100%) of the cost of the materials or supplies toward DBE goals. For purposes of this paragraph, a manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

B. If the materials or supplies are purchased from a DBE regular dealer, count sixty percent (60%) of the cost of the materials or supplies toward DBE goals. For purposes of this paragraph, a regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

1) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

2) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

3) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this paragraph.

C. With respect to materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, toward DBE goals, provided you determine the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. Do not count any portion of the cost of the materials and supplies themselves toward DBE goals, however.

6. If a firm is not currently certified as a DBE in accordance with the standards of this Section at the time of the execution of the contract, do not count the firm's participation toward any DBE goals, except as provided for in 49 C.F.R. §26.87(i).

7. Do not count the dollar value of work performed under a contract with a firm after it has ceased to be certified toward your overall goal.

8. Do not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE.

VI. DOCUMENTATION OF GOOD FAITH EFFORTS

In order to be responsive, a Bidder must make good faith efforts to meet the DBE participation goal set forth in the Contract. The Bidder must document the good faith efforts it made in that regard. Thus, the Bid submitted to the City must be accompanied by written documentation prepared by the Bidder evidencing all of its sufficient and reasonably good faith efforts toward fulfilling the goal. These efforts must be active steps, and ones, which could reasonably be expected to lead to sufficient DBE participation to meet the Contract DBE participation goal.

Mere pro forma efforts are not acceptable and will be rejected by the DBELO. The DBELO shall be responsible for determining whether the Bidder satisfied the good faith efforts.

Good faith efforts require that the Bidder consider all qualified DBEs, who express an interest in performing work under the Contract. This means that the Bidder cannot reject a DBE as unqualified unless the Bidder has sound reasons based on a thorough investigation of the DBE’s capabilities. Further, the DBE’s standing within its industry, membership in specific groups, organizations or associations and political or social affiliation are not legitimate causes for the rejection or non-solicitation of bids in the Contractor’s efforts to meet the Contract DBE participation goal. The following list, which is not exclusive or exhaustive, sets forth the types of actions, which indicate good faith efforts on the part of a Bidder to meet the DBE goal.

1. Attendance at a pre-bid meeting, if any, scheduled by the City to inform DBEs of subcontracting opportunities under a given solicitation.

2. Advertisement in general circulation media, trade association publications, and minority-focus media for at least twenty (20) days before Bids are due. If twenty (20) days are not available, publication for a shorter reasonable time is acceptable.

3. Written notification to capable DBEs that their interest in the Contract is solicited.

4. Documentation of efforts to negotiate in good faith with interested DBEs for specific subcontracts. It is the Bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers, so as to facilitate DBE participation. Such documentation includes at a minimum:

A. The names, addresses, and telephone numbers of DBEs that were contacted and the date(s) of contact;

B. A description of the information provided to DBEs regarding the plans and specifications for portions of the work to be performed;

C. A statement explaining why additional agreements with DBEs were not reached;

D. For each DBE the Bidder contacted but rejected as unqualified, the reason for the Bidder's conclusion; and

E. Documentation of efforts made to assist the DBEs contacted that needed assistance in obtaining bonding or insurance required by the Bidder or the City.

NOTE: A Bidder using good business judgment would consider a number of factors in negotiating with subcontractors and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for Bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a contractor to perform the work of a contract with its own organization does not relieve the Bidder of the responsibility to make Good Faith Efforts, GFEs. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

5. Documentation of efforts to utilize the services of available minority/women community organizations; minority/women contractor's groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

6. Documentation that the Bidder has broken out Contract work items into economically feasible units in fields where there are available DBE firms to perform the work in order to increase the likelihood that DBEs goals will be achieved.

7. Evidence that adequate information was provided to interested DBEs about the plans, specifications and requirements of the Contract, and that such information was communicated in a timely manner with sufficient time to allow the DBEs to respond to the solicitation.

8. Documentation of efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

Bidders must present the information required above as a matter of responsiveness on FORM C together with accompanying documentation. (See 49 C.F.R. §26.53 (b)(3)(i)).

VII. DBE REPORTING AND RECORD KEEPING REQUIREMENTS

Once a Bidder has been awarded a Contract, there are continuing obligations under the DBE Program. The City shall verify the veracity and accuracy of representations made by the Contractor as well as to ensure their compliance with these requirements. To ensure that all such obligations and representations are met, the City will conduct periodic reviews of the Contractor's DBE involvement efforts during Contract performance. These procedures will include, but not be limited to, the following:

1. The Contractor shall submit a monthly report on DBE Participation with each request for payment from the City. Such information shall be provided on MONTHLY PAYMENT TO SUBCONTRACTORS/SUPPLIERS – FORM B. Failure to submit this form with every request for payment will result in delays in payment.

2. The Contractor shall bring to the attention of the DBELO any situation in which regularly scheduled progress payments are not made to DBE subcontractors.

3. The Contractor shall maintain their books, records, and accounts for three (3) years following the performance of this Contract. These records shall be maintained by the Contractor in a fashion, which is readily accessible to the City and shall be made available for inspection upon request by any authorized representative of the City or FTA. This reporting requirement also extends to any subcontractor.

4. The Contractor shall make good faith efforts to replace a DBE subcontractor that is unable to perform successfully with another DBE. The Contractor shall not terminate a DBE subcontractor without DBELO's prior consent. To terminate a DBE subcontractor, the Contractor must follow the procedure stated in Section 26.53(f) of the DBE Program.

5. Any alterations, substitutions, deletions, etc., to data provided to the City must have prior approval of the DBELO.

6. The City will monitor the progress of DBE work through on-site visits, communication with DBEs, and review reports regarding employment as well as DBE participation.

7. The City will perform interim audits of contract payments to DBEs. The audit will review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in the schedule of DBE participation.

8. The City will track and report the extent of the Contractor's race-neutral business assistance efforts. For reporting purposes, race-neutral DBE participation includes, but is not limited to, the following: (i) DBE participation through a prime contract, a DBE obtains through customary competitive procurement procedures; (ii) DBE participation through a subcontract on a prime contract that does not carry a DBE goal; DBE participation on a prime contact exceeding a contract goal; and (iii) DBE participation through a subcontract from a prime contract that did not consider a firm's DBE status in making the award.

VIII. CONTRACT CLAUSES

The Contractor shall include the following in each subcontract the Contractor signs with a subcontractor (both DBE and non-DBE subcontractors):

1. The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 46 C.F.R. Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate.

2. The Contractor is required to pay each subcontractor (DBEs and non-DBEs) under this Contract for satisfactory performance of its contract no later than seven (7) days from the receipt of each progress payment or final payment the full amount the Contractor receives from the City for each subcontractor's work and materials under the subcontract. Any delay or postponement of payment from the above referenced time frame may result in liquidated damages and/or sanctions as stipulated in Contract Documents. Exceptions may occur only for good cause following written approval by the City.

3. The Contractor is required to return retainage payments to each subcontractor within seven (7) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City. This clause applies to both DBE and non-DBE subcontractors.

IX. INFORMATION

If you have any questions concerning the required documentation listed above, or concerning the DBE requirements in general, contact:

Richard D. Vinson

Regulatory Compliance and Civil Rights Officer
Department of Transportation- Transit
P.O. Box 590
Raleigh, NC 27602
(o) 919-996-4087
richard.vinson@raleighnc.gov
GoRaleigh.org

The documentation required in this section shall be submitted with the firm's Proposal.

List of Subcontractors - FORM A Instructions

Note: a correctly completed Form A will list **all subcontractors and suppliers** a bidder's plan to directly utilize. Each company will have 2nd or 3rd tier subcontractors or suppliers should submit individual Form A. Only DBEs certified by NCDOT may submitted to meet the contract goal.

Form A instructions to fill out form

1. Bidders name is the name of the company that will be entering into contract agreements or purchasing supplies and materials from subcontractors listed in the document.
2. Project name is the name of the of the identification listed on the solicitation.
3. Name and address of each subcontractor/supplier that is intended to do work on the project: a: Annual Gross Receipts gross receipt range must be identified for each company according to the range provided.
4. Contact person and phone number plus email address if available.
5. Approximate age of firm.
6. Description of work or supplies to be provided by the subcontractor.
7. NAICS code (if available) for the work provided by the subcontractor.
8. NCDOT reporting number # (specifically for DBE subcontractors and suppliers).
9. Total project $ dollars that are projected to be spent with each subcontractor/supplier (Dollars committed to be to DBE subcontractor).
10. Percentage (%) of the total Bid amount is the percent of dollars to be spent with each subcontractor or supplier calculations equal total projected dollars divided by total bid amount DBE supply or utilization may only count 60% towards DBE and total DVM out includes the contingency amount.
11. Your company must acknowledge that you have confirmed that each DBE submitted is certified as such in the NCDOT database https://partner.ncdot.gov/VendorDirectory/default.html
12. Print additional copies of the extended Form A to list all subcontractors or suppliers which do not fit on one page. On each sheet the company with subcontractors and suppliers must **Print:** The company name under **Bidder's name**, the solicitation title, and **Project name**
13. The project totals including for all vendors listed on the company's Form A and extended Form A must be listed on the 1st page including the following: The **total DBE utilization** in $ dollars, the **total bid amount** in $ dollars, Percentage (%) of the total **DBE utilization** (Total DBE Utilization/ Total bid amount including contingency)
14. Read the Certification statement before signing your form A.
15. An authorized official from your company must sign the Form. That official math then **Print:** Name, Title, and Submittal Date.
16. Additional questions on filling relating to the completion of the form should be directed to the contact provided included with the solicitation.

LIST OF subcontractors/ SUPPLIERS FORM A

Project DBE and non-DBE Subcontractor/ Supplier Utilization, Commitment

Federal Disadvantaged Business Opportunity Program. Note this MUST be submitted with your Bid. Make copies as needed

If you fail to meet the DBE Goal for this Project, you MUST complete FORM C and attach documentation of your GOOD FAITH EFFORTS with your Bid package.

Bidders Name_____ Project Name_____

Below **ALL subcontractors AND suppliers** (including DBEs) that you intend to use on this Contract. Continue listing on the supplemental form

Subcontractor/Supplier's Name & Address	Contract Person & Phone #	Age of Firm	Description of Work	NAICS Code	NCDOT Reporting #	Total Projected $	% of Bid Amount
Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							
Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							

I acknowledge that I have confirmed the certification of each DBE listed above on https://partner.ncdot.gov/VendorDirectory/default.html

Total DBE Utilization $ Total Bid Amount $ Percent DBE Utilization (Total DBE Utilization/ Total Bid Amount) %

Please read the following "Certification" statement before signing:

"The undersigned certifies has he/she has read understand and agree to be bound by the DBE program Requirements including the accompanying FORM(s) A and the other terms and conditions in the Notice to Bidders. The undersigned further certifies that he/she is legally authorized by the Bidder to make the statement and representation and that said statements and representations are true and correct to the best of his/her knowledge and belief. It is the intent by the undersigned to enter into a formal agreement(s) with subcontractors/suppliers named on this Form conditioned upon execution of a contract with the City. All DBE subcontractor /supplier must provide proof of the DBE status or receive confirmation of the status from the City Civil Rights Officer prior to contract award. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder knowing them to be false, or if there is a failure of the successful Bidder (i.e., the Contractor) to implement any of the stated agreements, intentions, objective, goals, commitments and substitutions set forth herein without prior approval by the Civil Rights Officer or a designee, then in any such events the Contractors act of failure to act, as the case may be, shall constitute a material breach of the contract, entitling the City to terminate the contract for default. The right to so terminate shall be in addition to, and not in lieu of, any other rights and remedies the City may have four other defaults under the contract, or otherwise. Additionally, the Contractor will be subject to the loss of any future contract awards".

_____

Signature of Authorized Official

_____

Printed Name

_____

Title

_____

Submittal Date

LIST OF subcontractors/ SUPPLIERS FORM A

Project DBE and non-DBE Subcontractor/ Supplier Utilization, Commitment

Federal Disadvantaged Business Opportunity Program. Note this MUST be submitted with your Bid. Make copies as needed

If you fail to meet the DBE Goal for this Project, you MUST complete FORM C and attach documentation of your GOOD FAITH EFFORTS with your Bid package.

Subcontractor/Supplier's Name & Address	Contract Person & Phone #	Age of Firm	Description of Work	NAICS Code	NCDOT Reporting #	Total Projected $	% of Bid Amount
Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							
Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							
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Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							
Annual Gross Receipts: Less than 500,000 500,000 to 1M $1-2M $2-5M Over $ Over $5M							

Monthly Payments To Subcontractors/Suppliers - FORM B

The following form has been designed to track Contractor's commitments and actual monthly payments to subcontractors/suppliers on a City project. The form has been formatted to allow the Contractor's representatives to print or type in the requested information. (Typing is preferred)

Submit this form with your company's monthly invoices for payment for work by your company on the City's contract.

Contract Number#: List the projects assigned contract number if it is not already listed

Project Name: List the official name of the project if it does not already appear.

Contractor Name: List your company name.

Non-DBE or DBE Contractor: Check X whether your company (as the contractor) is a DBE certified firm

Reporting Month/Year: Identify the month of the transactions that is being reporting.

Dollars Paid to Contractor: Identify all payments that have been made to your company from this contract since the notice to proceed.

List all Subcontractors, Subconsultants, and Material Suppliers that have worked and/or that your company intends to use on the project. Note: The X check box column is for City Staff use Only

Company, Contact Person, Email and Phone	**Work performed or materials provided**	**Total Dollars Commitment**	**Dollars paid this Month**:	**Total Dollars Paid Since NTP**

Company, Contact Person, Email and Phone: List the subcontractor/supplier companies' names, contact persons, email address and phone numbers.

Work performed or materials provided: Identify what type of work or materials that were supplied by the subcontractor/supplier companies

Total Dollars Commitment: Identify the company's total project estimated dollar commitment to the subcontractor/supplier companies.

Dollars paid this Month: List the total amount of actual payments made to the subcontractor/supplier company in the reporting month listed

Total Dollars Paid Since NTP: List the total amount of actual payments made to the subcontractor/supplier since the Notice to Proceed

The official authorized and responsible for certifying payments listed on the form should:

Print his or her name and title

Type the phone number of the representative responsible for certifying subcontractor payments

Sign and date the form in the presence of a notary. Have the notary certify the representative's signature.

Monthly Payments To Subcontractors/Suppliers - FORM B

Contractor Name: _____ Non- DBE X DBE X

Reporting Month/Year: _____ Contract No.: _____ Dollars Paid to Contractors: _____

Submit this form with invoice. Below list all Subcontractors, Subconsultants, and Material Suppliers that have worked and/or that your company intends to use on this Project. Lis actual payments made in the reporting month listed above.

Company, Contact Person, Email and Phone	**Work performed or materials provided**	**Total Dollars Commitment**	**Dollars paid this Month**:	**Total Dollars Paid Since NTP**

I certify that is information accurately reflects actual payments made to Subcontractors, Subconsultants, and Material Suppliers on the above referenced Project, and that all Suppliers providing goods under this Contract have been listed in the Sales Tax Statements submitted to the City in connection with this Payment Affidavit. If no subcontractors of suppliers are listed on the preceding chart of Sales Tax Statements, the Contractor certifies that no subcontractors or suppliers were used in Performing the Project/Contract for the payment period indicated.

_____

Signature of Authorized Official Printed Name Title Date Phone Number of Signer

NOTARY CERTIFICATION

Place Seal

STATE OF

COUNTY OF

Subscribed and sworn to and subscribed before me this _____ day of _____, 20_____,

_____ _____

Print Name of Notary Public Signature of Notary Public

My Commission Expires _____

Evidence of Good Faith Efforts – FORM C

This completed form and supporting documentation must be submitted with the Bid Package if the information on FORM A indicates you cannot meet the DBE Goal established for this Contract.

Bidders Name: _____
Project Name: _____Project Number: _____
Contact Person:_____
Mailing Address:_____
Phone:_____ Email: _____
Printed Name: _____ Title: _____
Signature: _____

To determine whether a Bidder has demonstrated Good Faith Efforts to reach the DBE utilization goal(s) on the above-referenced project, the DBELO will consider, AT A MINIMUM, evidence of GOOD FAITH EFFORTS as described in the table below together with the required supporting documentation. All supporting documentation and evidence of good faith efforts must be clearly labeled and submitted with this form.

The list below is not a mandatory checklist, nor is it intended exclusive or exhaustive. Efforts under each listed category are not determinative and the totality of the efforts will be evaluated applying the standards set forth in 49 CFR Part 26 and the DBE Program.

YES (X)	NO (X)	Evidence of Good Faith Efforts
		PRE-BID MEETING(S): The Bidder attended all pre-bid meetings scheduled by the City to inform DBEs of contracting and subcontracting opportunities.
		ADVERTISEMENT: The Bidder advertised in general circulation and/or trade association publications concerning subcontracting opportunities, and allowed DBEs reasonable time to respond
		WRITTEN NOTICES(S): The Bidder took the necessary steps to provide written notice in a manner reasonably calculated to inform DBs of subcontracting opportunities and allowed sufficient time for them to participate effectively.
		INFORMATION: The Bidder provided interested DBEs with adequate information about the plans, specifications and requirements of the subcontract.
		GOOD FAITH NEGOTATIONS: The Bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.
		CONTRACT RECORDS: The Bidder has maintained the following records for each DBEs that has bid on the subcontracting opportunity: 1. Name, address, and telephone number 2. A description of information provided by the Bidder or subcontractor; and 3. A statement of whether an agreement was reached, and if not, including any reasons for concluding that the DBE was unqualified to perform the job.
		COMMUNITY RESOURCES: The Bidder used the services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that aided in the recruitment and placement of DBE firms.
		SMALL CONTRACT(S): The Bidder selected specific portions of the Work to be performed by DBEs in order to increase the likelihood of meeting the DBE goals (including breaking down contracts into smaller units to facilitate DBE participation)
		GOOD FAITH NEGOTIATIONS: The Bidder negotiated in good faith with interested DBEs and did not reject DBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.
		FOLLOW-UP: The Bidder followed-up initial indication of interest by DBEs by contracting those DBEs to determine with certainty if they remained interested in bidding.

Letter of Intent - FORM D

LETTER OF INTENT FROM DBE TO PERFORM AS A SUBCONTRACTOR OR SUPPLIER

Disadvantage Business Enterprise
(This page shall be submitted for each DBE firm)

DBE Firm: DBE Firm_____ Address: _____
City _____ State: _____ Zip: _____
NCDOT: _____ Expiration Date of Certification: _____

DBE Contact Person: Name: _____ Phone: _____

Bidder: Name: _____ Address: _____
City: _____ State: _____ Zip: _____

Contracting Firm: Name: _____
(If Different than Bidder)

DBE Subcontractor Classification: x Subcontractor x Manufacturer x Supplier

Work item(s) to be performed by DBE	Description of Work Item	Quantity	Total Dollar Value

The Bidder is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follow:

DBE Contract amount: $_____ Percent of total contract: _____%
Dollar value of the DBE's subcontracting that will be sublet to non-DBE contractors: $_____
Dollar value of the DBE's subcontracting that will be sublet to DBE contractors: $_____
*If DBE will not be subcontracting any of the work described above, a zero must be shown in each blank.

CERTIFICATION:
The above-named DBE firm certifies that it will perform that portion of the contract the Bidder or Contracting Firm (as applicable) for the estimated dollar value as stated herein above.

By:_____
(Signature) (Title) (Date)

FEDERAL AND STATE REQUIREMENTS AND SPECIAL CONDITIONS

for

TECHNOLOGY EQUIPMENT

Facility improvements and installations

(Over $2,000 and under $150,000)

1. General

The work performed under this contract will be financed, in part, by grants provided under programs of the Federal Transit Administration. Citations to federal law, regulation, and guidance references include, but are not limited to, the Master Agreement FTA MA (21), dated October 1, 2014, FTA Circular 4220.1F, dated November 1, 2008; "Best Practices Procurement Manual", updated March 13, 1999 with revisions through October 2005; Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,", 2 C.F.R part 1201, dated December 19, 2014, will supersede and apply in lieu of U.S. DOT's common grant rules, 49 C.F.R. parts 18 and 19, State and Local Governments and Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations and any subsequent amendments or revisions thereto.

THE FOLLOWING MAY BE USED SYNONYMOUSLY:
"BIDDER" AND "CONTRACTOR"
"PURCHASER", "PROCURING AGENCY" AND "OWNER"

2. Federal Changes

Contractor shall at all times comply with all applicable Federal Transit Administration (FTA) regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between Purchaser and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

FTA's new authorizing legislation, MAP-21 made significant changes to FTA's public transportation programs.

(1) MAP-21 requirements apply to:

a. New grants and cooperative agreements for which FTA awarded FY 2013 or a later fiscal year funds appropriated or made available to carry out MAP-21 programs,

b. Amendments to existing grants and cooperative agreements for which FTA awarded funds made available or appropriated to carry out MAP-21 programs, and

c. All "recoveries" funds FTA awards, irrespective of the fiscal year for which those funds were appropriated,

(2) Fiscal Year 2012 and previous fiscal year funding requirements apply as follows:

a. In some instances, as determined by FTA, previous program requirements apply or will apply to grants and cooperative agreements for which FTA awarded Fiscal Year 2012 or a previous fiscal year funds, but

b. In other instances, as determined by FTA, MAP-21 program requirements (including MAP-21 "cross-cutting requirements" identified in section 49 of this Master Agreement) apply or will apply to grants and cooperative agreements for which FTA awarded Fiscal Year 2012 or a previous fiscal year funds.

3. Notification of Federal Participation

To the extent required by Federal law, the State of North Carolina agrees that, in administering any Federal assistance Program or Project supported by the underlying Grant Agreement or Cooperative Agreement, any request for proposals, solicitation, grant application, form, notification, press release, or other publication involving the distribution of FTA assistance for the Program or the Project that it will identify the FTA grant source by listing the Catalog of Federal Domestic Assistance Number of the program. The following FTA grant programs will be eligible to participate in this bid, 20.505, 20.507, 20.500, 20.513, 20.509, 20.516, 20.519, 20.521, 20.525, and 20.526. Federal funding assistance up to eighty (80%) percent may be provided.

4. Definitions

Third Party Agreement, in accordance with the Master Agreement unless FTA determines otherwise in writing, includes all of the following agreements, such as:

(1) Third party contracts,
(2) Leases,
(3) Third party subcontracts; and
(4) Other similar arrangements or agreements.
Third Party Participant, in accordance with the Master Agreement unless FTA determines otherwise in writing, includes all of the following participants, such as:

(1) Third party contractors,
(2) Lessees,
(3)Third party subcontractors, and
(4) Other participants in the Project

5. Conflict of Interest

No employee, officer, board member, or agent of the Owner shall participate in the selection, award, or administration of a contract supported by Federal Transit Administration (FTA) funds if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when the employee, officer, board member, or agent, any member of his or her immediate family, his or her partner, or an organization that employs, or is about to employ any of the above, has a financial or other interest in the firm selected for award.

6. Lobbying

Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, PL 104-65 (2 U.S.C. §1601,et seq.). Contractors who apply or bid for an award of $250,000 or more shall file the certification required by 49 CFR part 20, “New Restrictions on Lobbying.” Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S. C. 1352. Each tier shall comply with Federal statutory provisions o the extent applicable prohibiting the use of Federal assistance funds for activities designed to

influence congress to a State legislature on legislation or appropriations, except through proper official channels. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

7. Civil Rights

(1) **Nondiscrimination** - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12101, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age, In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(a) The third party contractor and all lower tiers shall comply with all provisions of FTA Circular 4702.1 "Title VI Requirements and Guidelines for Federal Transit Administration Recipients", issued October 1, 2012.

(2) **Equal Employment Opportunity** - The following equal employment opportunity requirements apply to the underlying contract:

(a) Race, Color, Religion, National Origin, Disability, Age, Sexual Origin, Gender Identity, or Status as a Parent - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, Title VI of the Civil Rights Act, 28 C.F.R. § 50.3, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note, and as further amended by Executive Order 13672, "Further Amendments to Executive Order 11478, Equal Employment Opportunity in the Federal Government, and Executive Order 11246, Equal Employment Opportunity," July 21, 2014, and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, sex, disability, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(b) Equal Employment Opportunity Requirements for Construction Activities. For activities determined by the U.S. Department of Labor (U.S. DOL) to qualify as "construction," the Contractor agrees to comply and assures the compliance of each subcontractor at any tier of the Project, with all applicable equal employment opportunity requirements of U.S. DOL regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 *et seq.*, which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order No. 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000(e) note, and also with any Federal laws, regulations, and directives affecting

construction undertaken as part of the Project.

(3) **Nondiscrimination on the Basis of Age** – The Contractor agrees to comply with all applicable requirements of the Age Discrimination Act of 1975, as amended, 42 U.S.C. §§ 6101 *et seq.*, and with implementing U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance, 45 C.F.R. Part 90, which prohibit discrimination against individuals on the basis of age.

The Age Discrimination in Employment Act (ADEA) 29 U.S.C. §§ 621 through 634 and with implementing U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. Part 1625, which prohibits discrimination against individuals on the basis of age.

(4) **Nondiscrimination on the Basis of Sex** - The Contractor agrees to comply with all applicable requirements of Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. §§ 1681 *et seq.*, and with implementing U.S. DOT regulations, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 49 C.F.R. Part 25, that prohibit discrimination on the basis of sex.

(5) **Access for Individuals with Disabilities** - The Contractor agrees to comply with 49 U.S.C. § 5301(d), which states the Federal policy that elderly individuals and individuals with disabilities have the same right as other individuals to use public transportation services and facilities, and that special efforts shall be made in planning and designing those services and facilities to implement transportation accessibility rights for elderly individuals and individuals with disabilities. The Contractor also agrees to comply with all applicable provisions of section 504 of the Rehabilitation Act of 1973, as amended, with 29 U.S.C. § 794, which prohibits discrimination on the basis of disability; with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 *et seq*., which requires that accessible facilities and services be made available to individuals with disabilities; and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 *et seq*., which requires that buildings and public accommodations be accessible to individuals with disabilities. In addition, the Contractor agrees to comply with applicable Federal regulations and directives and any subsequent amendments thereto, except to the extent the Federal Government determines otherwise in writing, as follows:

(1) U.S. DOT regulations "Transportation Services for Individuals with Disabilities (ADA)" 49 C.F.R. Part 37;

(2) U.S. DOT regulations "Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance," 49 C.F.R. Part 27;

(3) Joint U.S. Architectural and Transportation Barriers Compliance Board (U.S. ATBCB) U.S. DOT regulations, "Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 C.F.R. Part 1192 and 49 C.F. R. Part 38;

(4) U.S. DOJ regulations "Nondiscrimination on the Basis of Disability in State and Local Government Services,"28 C.F.R. Part 35;

(5) U.S. DOJ regulations "Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities." 28 C.F.R. Part 36;

(6) U.S. GSA regulations “Accommodations for the Physically Handicapped,” 41 C.F.R. Subpart 101-19;

(7) U.S. Equal Employment Opportunity Commission, “Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act,” 29 C.F.R. Part 1630;

(8) U.S. Federal Communications Commission regulations “Telecommunications Relay Services and Related Customer Premises Equipment for the Hearing and Speech Disabled,” 49 C.F.R. Part 64, Subpart F;

(9) U.S. Architectural and Transportation Barriers Compliance Board regulations, “Electronic and Information Technology Accessibility Standards.” 36 C.F.R. Part 1194;

(10) FTA regulations, "Transportation of Elderly and Handicapped Persons," 49 C.F.R. part 609; and

(11) Federal regulations, "Miscellaneous Civil Rights Amendments (RRR)," pertaining to nondiscrimination on the basis of disability within 49 C.F.R. Parts 27, 37, and 38 were published in 79 Fed. Reg. 21402, April 16, 2014; and

(12) Federal civil rights and nondiscrimination directives implementing the foregoing Federal laws and regulations, except to the extent the Federal Government determines otherwise in writing.

(6) **Access to Services for Persons with Limited English Proficiency**. The Contractor agrees to comply with Executive Order No. 13166,"Improving Access to Services for Persons with Limited English Proficiency," 42 U.S.C. § 2000d-1 note, and U.S. DOT Notice, "DOT Policy Guidance Concerning Recipients’ Responsibilities to Limited English Proficiency (LEP) Persons," 70 *Fed. Reg*. 74087, December 14, 2005, except to the extent that the Federal Government determines otherwise in writing.

(7) **Drug or Alcohol Abuse-Confidentiality and Other Civil Rights Protections**. To the extent applicable, the Contractor agrees to comply with the confidentiality and other civil rights protections of the Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. §§ 1101 *et seq*., with the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, as amended, 42 U.S.C. §§ 4541 *et seq*., and with the Public Health Service Act of 1912, as amended, 42 U.S.C. §§ 290dd through 290dd-2, and any amendments thereto.

(8) **Other Nondiscrimination Laws**. The Contractor agrees to comply with applicable provisions of other Federal laws and regulations, and follow applicable directives prohibiting discrimination, except to the extent that the Federal Government determines otherwise in writing.

(9) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

(10) Remedies for failure to comply with applicable Federal Civil Rights laws and Federal regulations may be enforced as provided in those Federal laws or Federal regulations.

8. Contracting with Disadvantaged Business Enterprises

The newest version on the Department of Transportation's Disadvantaged Business Enterprise (DBE) program became effective October 1, 2004.

a. This contract is subject to the requirements of U.S. DOT regulations, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," 49 C.F.R. Part 26 *[U.S. DOT published final rule, "Disadvantaged Business Enterprise: Program Improvements," 49 C.F.R. Part 26, on January 28, 2011 (see 76 Fed. Reg. 5083)],* and Section 1101(b) of MAP-21, 23 U.S.C. § 101 note, as amended by Section 451 of the Hiring Incentives to Restore Employment (HIRE) Act, Pub. L. 111-147, March 18, 2010, 23 U.S.C. § 101 note.

The City of Raleigh Transportation/Transit Division's overall goal for DBE participation is **13%.**

b. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the **Procuring Agency** deems appropriate. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).

The successful bidder/offeror will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.

c. The contractor is required to pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than 30 days after the contractor's receipt of payment for that work from the Procuring Agency**.** In addition, these may apply:

- **the contractor may not hold retainage from its subcontractors; or**
- **is required to return any retainage payments to those subcontractors within 30 days after the subcontractor's work related to this contract is satisfactorily completed; or**
- **is required to return any retainage payments to those subcontractors within 30 days after incremental acceptance of the subcontractor's work by the Procuring Agency and contractor's receipt of the partial retainage payment related to the subcontractor's work.**

d. The contractor must promptly notify the **Procuring Agency** whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the **Procuring Agency.**

9. Clean Air Act

(a) The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to Section 306 of the Clean Air Act as amended, 42 U.S.C. § 7606, and other applicable provisions of the Clean Air Act, as amended, 42 U.S.C. §§ 7401 through 7671q. The Contractor agrees to report any violation to the Purchaser and understands

and agrees that the Purchaser will, in turn, report each violation as required to assure notification to the State and/or FTA and the appropriate EPA Regional Office.

(b) The Contractor also agrees to include these requirements in each subcontract exceeding $250,000 financed in whole or in part with Federal Assistance provided by FTA.

10. Clean Water

(a) The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to Section 508 of the Clean Water Act, as amended, 33 U.S.C. § 1368, and other applicable requirements of the Clean Water Act, as amended, 33 U.S.C. §§ 1251 through 1377, The Contractor agrees to report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(b) The Contractor also agrees to include these requirements in each subcontract exceeding $250,000 financed in whole or in part with Federal assistance provided by FTA.

11. Environmental Protection *(requirements for environmental studies)*

The Contractor agrees to comply with all applicable requirements of the National Environmental Policy Act of 1969, as amended, (NEPA) 42 U.S.C. §§ 4321 through 4335 (as restricted by 42 U.S. C. § 5159, if applicable); Executive Order No. 11514, as amended, "Protection and Enhancement of Environmental Quality," 42 U.S.C. § 4321 note; FTA statutory requirements at 49 U.S.C. § 5323(c)(2)), as amended by MAP-21, ; U.S. Council on Environmental Quality regulations pertaining to compliance with NEPA, 40 C.F.R. Parts 1500 through 1508; and joint FHWA FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. Part 771 and 49 C.F.R. Part 622; were published in the Federal Register, 78 Fed. Reg. 8963, February 7, 2013; and other applicable Federal environmental protection regulations that may be promulgated at a later date. The Contractor agrees to comply with the applicable provisions of 23 U.S.C. § 139 "Efficient environmental reviews for project decision making", pertaining to environmental procedures, and 23 U.S.C. § 326, pertaining to Purchaser's responsibility for categorical exclusions, in accordance with the provisions of joint FHWA/FTA final guidance, "Environmental Review Process (Public Law 109-59)," 71 Fed. Reg. 66576 *et seq*. November 15, 2006. Joint FHWA and FTA final guidance, "Interim Guidance on MAP-21 Section 1319 Accelerated Decisionmaking in Environmental Reviews," dated January 14, 2013, and any applicable Federal directives that may be issued at a later date, except to the extent that FTA determines otherwise in writing.

12. Environmental Justice *(requirements for environmental studies)*

The Contractor agrees to comply with the policies of Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 42 U.S.C. § 4321 note; as well as facilitating compliance with that Executive Order; and DOT Order 5610.2, "Department of Transportation Actions To Address Environmental Justice in Minority Populations and Low-Income Populations," 62 *Fed. Reg*. 18377 *et seq*., April 15, 1997, except to the extent that the Federal Government determines otherwise in writing; and the most recent and applicable edition of FTA Circular 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients,", August 15, 2012, to the extent consistent with applicable Federal laws, regulations, and guidance.

13. Energy Conservation

The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plans issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. Sect. 6321 et seq.

14. Fly America

The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

15. Buy America

The contractor agrees to comply with 49 U.S.C. § 5323(j), as amended by MAP-21 and 49 C.F.R. part 661, to the extent consistent with MAP-21, and subsequent amendments to those regulations that may be promulgated. The Contractor also agrees to comply with FTA directives to the extent those directives are consistent with MAP-21, except to the extent that FTA determines otherwise in writing. Buy America requirements state that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waiver requirements are listed in 49 CFR 661.7. Appendix A grants a general public interest waiver from the Buy America requirements that apply to microprocessors, computers, microcomputers, or software, or other such devices, which are used solely for the purpose of processing or storing data. This general waiver does not extend to a product or device which merely contains a microprocessor or microcomputer and is not used solely for the purpose of processing or storing data. Small purchases (currently less than $250,000) made with capital, operating, or planning funds are also exempt from the Buy America requirements.

The Buy America requirements flow down from FTA recipients and subrecipients to first tier contractors, who are responsible for ensuring that lower tier contractors and subcontractors are in compliance.

Effective June 20, 2018 small purchases (under the $250,000 threshold) made with FTA funds, will not be subject to the Buy America requirement. The value of small purchases should be determined by using "contract price" and not "unit price".

16. Cargo Preference

46 U.S.C. 55305 and 46 CFR Part 381 impose cargo preference requirements in contracts and subcontracts in which equipment, materials or commodities may be transported by ocean vessel in carrying out the project. If the Contractor has knowledge

of or anticipates any equipment, materials or commodities that may be shipped by ocean vessel, the Contractor is obligated to inform the Owner, so that additional requirements and clauses may be attached to this Contract.

17. Davis-Bacon Act

Davis-Bacon Act, as amended, 40 U.S.C. §§ 3141 *et seq.*, pursuant to FTA enabling legislation requiring compliance with the Davis-Bacon Act at 49 U.S.C. § 5333(a), and implementing U.S. DOL regulations, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction (also Labor Standards Provisions Applicable to Nonconstruction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. Part 5;

The Davis-Bacon and Copeland Acts are codified at 40 USC 3141, *et seq.* and 18 USC 874. The Acts apply to grantee construction contracts and subcontracts that "at least partly are financed by a loan or grant from the Federal Government." 40 USC 3145(a), 29 CFR 5.2(h), 49 CFR 18.36(i)(5). The Acts apply to any construction contract over $2,000. 40 USC 3142(a), 29 CFR 5.5(a). 'Construction,' for purposes of the Acts, includes "actual construction, alteration and/or repair, including painting and decorating." 29 CFR 5.5(a). The requirements of both Acts are incorporated into a single clause (*see* 29 CFR 3.11) enumerated at 29 CFR 5.5(a) and reproduced below.

Davis-Bacon and Copeland Anti-Kickback Acts

(1) Minimum wages - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be

employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.
(v)(A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer

shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(2) Withholding - The [insert *name of grantee*] shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the City of Raleigh may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the

construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the City of Raleigh for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following: (1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and

shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees - (i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with

the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with requirements of the Copeland "Anti-Kickback" Act, as amended - The contractor shall comply with the requirements of 18 U.S.C. § 874 and 40 U.S.C. § 3145, and implementing U.S. DOL regulations, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in part by Loans or Grants from the United States," 29 C.F.R. Part 3, which are incorporated by reference in this contract.

(6) Subcontracts - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

18. Debarment and Suspensions

This contract is a covered transaction for purposes of 2 CFR Part 1200, which adopts and supplements the provisions of U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 CFR Part 180. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 2 CFR 180.995, or affiliates, as defined at 2 CFR 180.905, are excluded or disqualified as defined at 2 CFR 180.940, 180.935 and 180.945.

The contractor is required to comply with 2 CFR 180, Subpart C and must include the requirement to comply with 2 CFR 180, Subpart C in any lower tier covered transaction it enters into.

By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the **Procuring Agency.** If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to **Procuring Agency**, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 2 CFR 180, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

The Procuring Agency agrees and assures that its third party contractors and lessees will review the "Excluded Parties Listing System" at https://www.sam.gov before entering into any subagreement, lease or third party contract.

The Procuring Agency will be reviewing all third party contractors under the Excluded Parties Listing System at https://www.sam.gov before entering into any contracts.

If the Procuring Agency, recipient, or subrecipient suspends, debars, or takes similar action against a Third Party Participant or individual, the Agency, recipient, or subrecipient will provide immediate written notice to the:

(a) NCDOT/Public Transportation Division,
(b) FTA Regional Counsel for the Region in which the Agency is located or implements the Project,
(c) FTA Project Manager if the Project is administered by FTA Headquarters Office, or
(d) FTA Chief Counsel.

The requisite Debarment and Suspension Certification is included as ATTACHMENT D (attach additional statement if necessary) and must be executed for contracts of $25,000 or more and prior to the award of the contract.

19. Termination or Cancellation of Contract

The Owner (Grant Recipient) may terminate this contract, in whole or in part, at any time by written notice to the Contractor when it is in the Owner's or Government's best

interest. The Owner shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to the Owner all data, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process. The Contractor shall be paid for the products delivered up to the time of termination. The Contractor shall promptly submit its termination claim to the Owner to pay the Contractor. If the Contractor has any property in its possession belonging to the Owner, the Contractor will account for the same, and dispose of it in the manner the Owner directs. A 30-day notice of termination shall be required.

If the termination is for the convenience of the Owner shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services.

20. Breach of Contract

If the Contractor fails to make delivery of the equipment, supplies, or services within the specified terms of the contract, or fails to perform within the provisions of the contract, the contract may be terminated by reason of default or breach. A written notice of default or breach of contract shall be presented to the Contractor within three (3) working days of such failure. The Contractor will only be paid the contract price for equipment, supplies, or services delivered and accepted in accordance with the requirements set forth in the contract.

If it is determined that the Contractor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Contractor, the Owner, after setting up a new delivery of performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.

The Owner in its sole discretion may, in the case of breach of contract, allow the Contractor a specified period of time in which to correct the defect. In such case, the notice of termination will state the time period in which the correction is permitted and other appropriate conditions.

If Contractor fails to remedy to the Owner's satisfaction the breach or default or any of the terms, covenants, or conditions of this contract within twenty (20) days after written notice from the Owner setting forth the nature of said breach or default, the Owner shall have the right to terminate the Contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude the Owner from also pursuing all available remedies against Contractor and its sureties for said breach or default.

If there is credible evidence that a Third Party Participant (Contractor) has submitted a false claim under the False Claims Act, 31 U.S.C. § 3729 *et seq*., or has committed a criminal or civil violation of law pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving Federal funding, notification of FTA is required.

If a legal matter as described above emerges, the Recipient must promptly notify the U.S. DOT Inspector General, in addition to the FTA Chief Counsel or FTA Regional Counsel for the Region in which the Recipient is located and the NCDOT.

21. Resolution of Disputes

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of the Owner. This decision shall be final and conclusive unless within ten (10) days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the authorized representative of the Owner. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the authorized representative of the Owner shall be binding upon the Contractor and the Contractor shall abide be the decision.

Performance During Dispute - Unless otherwise directed by the Owner, the Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury of damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the Owner and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the Owner is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the Owner, Architect or
Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

22. Protest Procedures

To ensure that protests are received and processed effectively the Purchaser shall provide written bid protest procedures upon request. In all instances information regarding the protest shall be disclosed to the N.C. Department of Transportation (NCDoT). All protest requests and decisions must be in writing. A protester must exhaust all administrative remedies with the Purchaser before pursuing remedies through the NCDoT. Reviews of protests by the NCDoT will be limited to the Purchaser's failure to have or follow its protest procedures, or its failure to review a complaint or protest. An appeal to the NCDoT must be received by the Department within three (3) working days of the date the protester knew or should have known of the violation. An appeal to FTA must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protester knew or should have known of the violation. Violations of Federal law or regulation will be handled by the complaint process stated within that law or regulation. Violations of State or local law or regulations will be under the jurisdiction of State or local authorities.

23. No Federal Government Obligations to Third Parties

The Purchaser and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Purchaser, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

24. False or Fraudulent Statements an Claims

(1) The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. §3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its activities in connection with this Project. Accordingly, by executing the Grant Agreement or Cooperative Agreement, the Recipient certifies or affirms the truthfulness and accuracy of each statement it has made, it makes, or it may make in connection with the Project covered by the Grant Agreement or Cooperative Agreement. In addition to other penalties that may apply, the Recipient also acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986, as amended, on the Contractor to the extent the Federal Government deems appropriate.

(2) The Contractor also acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, certification, or agreement with or to the Federal Government involving a project authorized by 49 U.S.C. chapter 53 or any other Federal statute, the Federal Government reserves the right to impose on the Recipient the penalties of 18 U.S.C. § 1001 or other applicable Federal statute to the extent the Federal Government deems appropriate.

(3) The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

25. Access to Records and Reports

The Contractor agrees to permit, and require its subcontractors to permit, the U.S. Secretary of Transportation, and the Comptroller General of the United States, and, to the extent appropriate, the State, or their authorized representatives, upon their request to inspect all Project work, materials, payrolls, and other data, and to audit the books, records, and accounts of the Contractor and its subcontractors pertaining to the Project, as required by 49 U.S.C. § 5325(g).

Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S. D. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5303, 5307, 5309, 5310, 5311, 5316, or 5317.

The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three (3) years after that date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 C.F.R. 18.39 (i)(11).

The State of North Carolina, Office of the State Auditor, now requires that all records now be retained for five (5) years after that date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives have disposed of all such litigation, appeals, claims or exceptions related thereto.

26. Contract Work Hours and Safety Standards Act

Contract Work Hours and Safety Standards Act, as amended, 40 U.S.C. §§ 3701 *et seq.,* specifically, the wage and hour requirements of section 102 of that Act at 40 U.S.C. § 3702, and implementing U.S. DOL regulations, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction (also Labor Standards Provisions Applicable to Nonconstruction Contracts Subject to the Contract Work Hours and Safety Standards Act)," 29 C.F.R. Part 5; and the safety requirements of section 107 of that Act at 40 U.S.C. § 3704, and implementing U.S. DOL regulations, "Safety and Health Regulations for Construction," 29 C.F.R. Part 1926.

Pursuant to Section 102 (Overtime):
(These clauses are specifically mandated under DOL regulation 29 C.F.R. §5.5 and when preparing a construction contract in excess of $2,000 these clauses should be used in conjunction with the Davis-Bacon Act clauses as discussed previously.)

(1) Overtime requirements - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $ 10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) Withholding for unpaid wages and liquidated damages - The Owner/grantee shall upon its own action or upon written request of an authorized representative of the

Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) Subcontracts - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

(5) Payrolls and basic records - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

Section 107 (OSHA):
Contract Work Hours and Safety Standards Act - (i) The Contractor agrees to comply with section 107 of the Contract Work Hours and Safety Standards Act, 40 U.S.C. section 3704, and applicable DOL regulations, "Safety and Health Regulations for Construction " 29 C.F.R. Part 1926. Among other things, the Contractor agrees that it will not require any laborer or mechanic to work in unsanitary, hazardous, or dangerous surroundings or working conditions.

(ii)Subcontracts - The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the

goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

27. Project Labor Agreements (formerly Neutrality in Labor Relations)

As a condition of contract award, the Owner may require a third party contractor or subcontractor to have an affiliation with a labor organization such as a project labor agreement, consistent with Executive Order No. 13502, “Use of Project Labor Agreements [PLA] for Federal Construction Projects,” February 6, 2009, 41 U.S.C. ch. 39, Refs & Annos., except as the Federal Government determines otherwise in writing.

28. Privacy

To the extent that the Contractor, or its subcontractors, if any, or any to their respective employees administer any system of records on behalf of the Federal Government, the Contractor agrees to comply with, and assure the compliance of its subcontractors, if any, with the information restrictions and other applicable requirements of the Privacy Act of 1974, as amended, 5 U.S.C. Sect. 552, (the Privacy Act).

The Contractor shall obtain the express consent of the Department and the Federal Government before the Contractor, and any subcontractors, or any of their respective employees operate a system of records on behalf of the Federal Government. Failure to do so may result in termination of the Contract and civil and criminal penalties for violation of the Privacy Act.

The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

29. National Intelligent Transportation Systems Architecture and Standards

To the extent applicable, the Contractor agrees to conform to the National Intelligent Transportation Systems (ITS) Architecture and Standards requirements of 23 U.S.C. § 517(d), as amended by MAP-21, and follow the provisions of FTA Notice, “FTA National ITS Architecture Policy on Transit Projects,” 66 *Fed. Reg.* 1455 *et seq*., January 8, 2001, and any other implementing directives FTA may issue at a later date, except to the extent FTA determines otherwise in writing. *(applicable to ITS projects)*

30. Recycled Products

The Recycled Products requirement applies to all contracts for items designated by the EPA, when the purchaser or contractor procures $10,000 or more of one of these items during the fiscal year, or has procured $10,000 or more of such items in the previous fiscal year, using Federal funds. New requirements for "recovered materials" will become effective May 1, 1996. These regulations apply to all procurement actions involving items designated by the EPA, where the procuring agency purchases $10,000 or more of one of these items in a fiscal year, or when the cost of such items purchased during the previous fiscal year was $10,000. These requirements flow down to all contractor and subcontractor tiers.

To the extent possible the contractor agrees to comply with U. S. Environmental Protection Agency (U.S. EPA), “Comprehensive Procurement Guidelines for Products Containing Recovered Materials,” 40 CFR Part 247, which implements section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. 6962.

The contractor agrees to provide competitive preference for products and services that conserve natural resources, protect the environment and are energy efficient, except to the extent that the Federal Government determines otherwise in writing.
These items include, but may not be limited too:

Paper and paper products, excluding building and construction paper grades.
***Construction products*:**
(a) Building insulation products, including the following items:
  (1) Loose-fill insulation, including but not limited to cellulose fiber, mineral fibers (fiberglass and rock wool), vermiculite, and perlite;
  (2) Blanket and batt insulation, including but not limited to mineral fibers (fiberglass and rock wool);
  (3) Board (sheathing, roof decking, wall panel) insulation, including but not limited to structural fiberboard and laminated paperboard products, perlite composite board, polyurethane, polyisocyanurate, polystyrene, phenolics, and composites; and
  (4) Spray-in-place insulation, including but not limited to foam-in- place polyurethane and polyisocyanurate, and spray-on cellulose.
(b) Structural fiberboard and laminated paperboard products for applications other than building insulation, including building board, sheathing, shingle backer, sound deadening board, roof insulating board, insulating wallboard, acoustical and non-acoustical ceiling tile, acoustical and non-acoustical lay-in panels, floor underlayments, and roof overlay (coverboard).
(c) Cement and concrete, including concrete products such as pipe and block containing:
  (1) Coal fly ash;
  (2) Ground granulated blast furnace slag (GGBF);
  (3) Cenospheres; or
  (4) Silica fume from silicon and ferrosilicon metal production.
(d) Carpet made from polyester fiber made from recovered materials for use in moderate-wear applications such as single-family housing and similar wear applications.
(e) Floor tiles and patio blocks containing recovered rubber or plastic.
(f) Shower and restroom dividers/partitions containing recovered plastic or steel.
(g) (1) Consolidated latex paint used for covering graffiti; and
  (2) Reprocessed latex paint used for interior and exterior architectural applications such as wallboard, ceilings, and trim; gutter boards; and concrete, stucco, masonry, wood, and metal surfaces.
(h) Carpet cushion made from bonded polyurethane, jute, synthetic fibers, or rubber containing recovered materials.
(i) Flowable fill containing coal fly ash and/or ferrous foundry sands.
(j) Railroad grade crossing surfaces made from cement and concrete containing fly ash, recovered rubber, recovered steel, recovered wood, or recovered plastic.
(k) Modular threshold ramps containing recovered steel, rubber, or aluminum.
(l) Nonpressure pipe containing recovered steel, plastic, or cement.
(m) Roofing materials containing recovered steel, aluminum, fiber, rubber, plastic or plastic composites, or cement.
Transportation products:
(a) Traffic barricades and traffic cones used in controlling or restricting vehicular traffic.
(b) Parking stops made from concrete or containing recovered plastic or rubber.
(c) Channelizers containing recovered plastic or rubber.
(d) Delineators containing recovered plastic, rubber, or steel.
(e) Flexible delineators containing recovered plastic.
Miscellaneous products:
(a) Pallets containing recovered wood, plastic, or paperboard.

(b) Sorbents containing recovered materials for use in oil and solvent clean-ups and as animal bedding.
(c) Industrial drums containing recovered steel, plastic, or paper.
(d) Awards and plaques containing recovered glass, wood, paper, or plastic.
(e) Mats containing recovered rubber and/or plastic.
(f) (1) Non-road signs containing recovered plastic or aluminum and road signs containing recovered aluminum.
(2) Sign supports and posts containing recovered plastic or steel.
(g) Manual-grade strapping containing recovered steel or plastic.
(h) Bike racks containing recovered steel or plastic.
(i) Blasting grit containing recovered steel, coal and metal slag, bottom ash, glass, plastic, fused alumina oxide, or walnut shells.

Park and recreation products:

(a) Playground surfaces and running tracks containing recovered rubber or plastic.
(b) Plastic fencing containing recovered plastic for use in controlling snow or sand drifting and as a warning/safety barrier in construction or other applications.
(c) Park benches and picnic tables containing recovered steel, aluminum, plastic, or concrete.
(d) Playground equipment containing recovered plastic, steel, or aluminum.

Landscaping products:

(a) Hydraulic mulch products containing recovered paper or recovered wood used for hydroseeding and as an over-spray for straw mulch in landscaping, erosion control, and soil reclamation.
(b) Compost made from yard trimmings, leaves, grass clippings, and/ or food waste for use in landscaping, seeding of grass or other plants on roadsides and embankments, as a nutritious mulch under trees and shrubs, and in erosion control and soil reclamation.
(c) Garden and soaker hoses containing recovered plastic or rubber.
(d) Lawn and garden edging containing recovered plastic or rubber.
(e) Plastic lumber landscaping timbers and posts containing recovered materials.

Non-paper office products:

(a) Office recycling containers and office waste receptacles.
(b) Plastic desktop accessories.
(c) Toner cartridges.
(d) Plastic-covered binders containing recovered plastic; chipboard and pressboard binders containing recovered paper; and solid plastic binders containing recovered plastic.
(e) Plastic trash bags.
(f) Printer ribbons.
(g) Plastic envelopes.
(h) Plastic clipboards containing recovered plastic.
(i) Plastic file folders containing recovered plastic.
(j) Plastic clip portfolios containing recovered plastic.
(k) Plastic presentation folders containing recovered plastic.
(l) Office furniture containing recovered steel, aluminum, wood, agricultural fiber, or plastic.

31. State and Local Disclaimer

The use of many of the suggested clauses are not governed by Federal law, but are significantly affected by State law. The language of the suggested clauses may need to be modified depending on state law, and that before the suggested clauses are used in the grantees procurement documents, the grantees should consult with their local attorney.

32. Incorporation of Federal Transit Administration (FTA) Terms

The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, dated November 1, 2008, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any (name of grantee) requests which would cause (name of grantee) to be in violation of the FTA terms and conditions.

33. Hold Harmless

Except as prohibited or otherwise limited by State law, the Contractor agrees to indemnify, save, and hold harmless the Purchaser/Owner of this Purchase Contract and its officers, agents, and employees acting within the scope of their official duties against any liability, including all claims, losses, costs and expenses accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the contractor or subcontractor in the performance of this contract and that are attributable to the negligence or intentionally tortuous acts of the contractor.

The Contractor represents and warrants that it shall make no claim of any kind or nature against the Purchaser or it's agents who are involved in the delivery or processing of contractor goods to the Purchaser. The representation and warranty in the preceding sentence shall survive the termination or expiration of this contract.

34. Safe Operation of Motor Vehicles

a. Seat Belt Use.

Pursuant to Executive Order No. 13043, April 16, 1997, 23 U. S. C. § 402, the Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned, rented, or personally-operated vehicles and include this provision in any third party subcontracts, leases or similar documents in connection with this project.

b. Distracted Driving, Including Texting While Driving.

Consistent with Executive Order No. 13513, "Federal Leadership on Reducing Text Messaging While Driving," October 1, 2009, 23 U.S.C. Section 402 note, and DOT Order 3902.10, "Text Messaging While Driving," December 30, 2009, FTA encourages each third party contractor to promote policies and initiatives for its employees and other personnel that adopt and promote safety policies to decrease crashes by distracted drivers, including policies to ban text messaging while driving, and to include this provision in any third party subcontract leases or similar documents in connection with this project.

c. Safety. The Contractor is encouraged to:

(a) Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers including policies to ban text messaging while driving—

Company-owned or rented vehicles; Privately-owned vehicles when on official Project related business or when performing any work for or on behalf of the Project; or any vehicle, on or off duty, and using an electronic device.

(b) Education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

d. Definitions

(1) "Driving" means operating a motor vehicle on a roadway, including while temporarily stationary because of traffic, a traffic light, stop sign, or otherwise. "Driving" does not include being in your vehicle (with or without the motor running) in a location off the roadway where it is safe and legal to remain stationary.

(2) "Text Messaging" means reading from or entering data into any handheld or other electronic device, including for the purpose of short message service texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication. The term does not include the use of a cell phone or other electronic device for the limited purpose of entering a telephone number to make an outgoing call or answer an incoming call, unless the practice is prohibited by State or local law.

35. Metric System

To the extent required by U.S. DOT or FTA, the Contractor agrees to use the metric system of measurement in its Contract activities as may be required by 49 U.S.C. Sect. 205a et seq.; Executive Order No. 12770, "Metric Usage in Federal Government Programs," 15 U.S.C. Sect. 205a; and other regulations, guidelines and policies issued by U.S. DOT or FTA. To the extent practicable and feasible, the Contractor agrees to accept products and services with dimensions expressed in the metric system of measurement.

36. Geographic Information and Related Spatial Data.

In accordance with U.S. OMB Circular A-16, "Coordination of Geographic Information and Related Spatial Data Activities," August 19, 2002, and OMB Circular A-16, Supplemental Guidance "Geospatial Line of Business," November 10, 2010, the Contractor agrees to implement this Project so that any activities involving spatial data and geographic information systems activities financed directly or indirectly, in whole or in part, by Federal assistance, are consistent with the National Spatial Data Infrastructure promulgated by the Federal Geographic Data Committee, except to the extent that FTA determines otherwise in writing.

37. Exclusionary or Discriminatory Specifications

The Contractor agrees that it will comply with the requirements of 49 U.S.C. Sect. 5325(h) by refraining from using any funds derived from FTA in performance of this Contract to support procurements using exclusionary or discriminatory specifications.

38. North Carolina State Ethics Requirement

Pursuant to Governor Perdue's Executive Order # 24, this section should be included in the terms and conditions of all contracts let by the Governor's Cabinet Agencies and the Office of the Governor:

1) "By Executive Order 24, issued by Governor Perdue, and N.C. G.S.§ 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e., Administration, Commerce, Correction, Crime Control and Public Safety, Cultural Resources, Environment and Natural Resources, Health and Human Services, Juvenile Justice and Delinquency Prevention, Revenue, Transportation, and the Office of the Governor). This prohibition covers those vendors and contractors who:

   (1) have a contract with a governmental agency; or
   (2) have performed under such a contract within the past year; or
   (3) anticipate bidding on such a contract in the future.

For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review Executive Order 24 and G.S. Sec. 133-32.

Executive Order 24 also encouraged and invited other State Agencies to implement the requirements and prohibitions of the Executive Order to their agencies. Vendors and contractors should contact other State Agencies to determine if those agencies have adopted Executive Order 24."

To be added near the signature portion of all contracts let by the Governor's Cabinet Agencies and the Office of the Governor:

"N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization."

39. Sensitive Security Information

Each third party contractor must protect, and take measures to ensure that its subcontractors at each tier protect, "sensitive security information" made available during the administration of a third party contract or subcontract to ensure compliance with "The Homeland Security Act", as amended, specifically 49 U.S.C. Section 40119(b), The Aviation and Transportation Security Act, as amended, 49 U.S.C. § 114(r), U.S. DOT regulations, "Protection of Sensitive Security Information," 49 C.F.R. part 15, and U.S. Department of Homeland Security, Transportation Security Administration regulations, "Protection of Sensitive Security Information," 49 C.F.R. part 1520.

40. Geographic Preference

Procurements shall be conducted in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographical preferences in evaluation or award of bids or proposals, except where applicable Federal statutes expressly mandate or encourage geographic preference. This does not preempt State licensing laws.

41. NC E-Verify Requirements

To ensure compliance with the E-Verify requirements of the General Statutes of North Carolina, all contractors, including any subcontractors employed by the contractor(s), by submitting a bid, proposal or any other response, that involve a combination of purchase of any material, equipment, supplies and construction or service must attest and affirm that they are aware and in full compliance with Article 2 of Chapter 64, (NCGS64-26(a)) relating to the E-Verify requirements by executing and submitting the E-verify Affidavit included in this Invitation for Bids as Attachment E. ***(Must be completed for all construction contracts and all bids or quotes requiring service or installation.)***

42. Flow Down

Notice to FTA and U.S. DOT Inspector General of information related to fraud, waste, abuse, or other legal matters. This applies to all contracts at all tiers expected to equal or exceed $25,000. Recipient must require a prime contractor to "flow down" the requirement to subcontractors.

Notification to FTA; Flow Down Requirement. If a current or prospective legal matter that may affect the Federal Government emerges, the Recipient must promptly notify the FTA Chief Counsel and FTA Regional Counsel for the Region in which the Recipient is located. The Recipient must include a similar notification requirement in its Third-Party Agreements and must require each Third Party Participant to include an equivalent provision in its sub agreements at every tier, for any agreement that is a "covered transaction" according to 2 C.F.R. §§ 180.220 and 1200.220.

(1) The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason.

(2) Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in the Award, the accompanying Underlying Agreement, and any Amendments thereto, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements.

(3) Additional Notice to U.S. DOT Inspector General. The Recipient must promptly notify the U.S. DOT Inspector General in addition to the FTA Chief Counsel or Regional Counsel for the Region in which the Recipient is 95 located, if the Recipient has knowledge of potential fraud, waste, or abuse occurring on a Project receiving assistance from FTA. The notification provision applies if a person has or may have submitted a false claim under the False Claims Act, 31 U.S.C. § 3729, et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance. This responsibility occurs whether the Project is subject to this Agreement or another agreement between the Recipient and FTA, or an agreement involving a principal, officer, employee, agent, or Third-Party Participant of the Recipient. It also applies to subcontractors at any tier. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Recipient. In this paragraph, "promptly" means to refer information without delay and without change. This notification provision applies to all divisions of the Recipient, including divisions tasked with law enforcement or investigatory functions.

43. Prohibition on certain telecommunications and video surveillance services or equipment.

(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

(1) Procure or obtain;

(2) Extend or renew a contract to procure or obtain; or

(3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115-232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

(c) See Public Law 115-232, section 889 for additional information.

(d) See also § 200.471.

ATTACHMENT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY and VOLUNTARY EXCLUSION
LOWER TIER COVERED TRANSACTION

(To be submitted with all bids exceeding $25,000.)

(1) The prospective lower tier participant (Bidder/Contractor) certifies, by submission of this bid or proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) The prospective Bidder/Contractor also certifies by submission of this bid or proposal that all subcontractors and suppliers (this requirement flows down to all subcontracts at all levels) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(3) Where the prospective lower tier participant (Bidder/Contractor) is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this bid or proposal.

The lower tier participant (Bidder/Contractor), _____, certifies or affirms the truthfulness and accuracy of this statement of its certification and disclosure, if any.

DATE _____

SIGNATURE _____

COMPANY _____

NAME _____

TITLE _____

State of _____

County of _____

Subscribed and sworn to before me this ___ day of _____, 20____.

Notary Public _____

My Appointment Expires _____

ATTACHMENT B

STATE OF NORTH CAROLINA
COUNTY OF WAKE

AFFIDAVIT OF COMPLIANCE WITH N.C. E-VERIFY STATUTES

(To be submitted with all bids)

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of _____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.

2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Dept. of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.

3. ☐ Employer employs 25 or more employees, and is in compliance with the provisions of N.C. General Statute §64-26. Employer has verified the work authorization of its employees through E-Verify and shall retain the records of verification for a period of at least one year.

   ☐ Employer employs fewer than 25 Employees and is therefore not subject to the provisions of N.C. General Statute §64-26.

4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the provisions of N.C. General Statute §64-26.

5. Employer shall keep the State of North Carolina informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina Statutes.

   This _____day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name and Title

State of _____

County of _____

Subscribed and sworn to before me this ___ day of _____, 20____.

Notary Public _____

(SEAL)

My Appointment Expires _____

ATTACHMENT C

CERTIFICATION OF COMPLIANCE WITH

DAVIS–BACON PROVISIONS

PROJECT: _____
(List name of construction project/repair)

LOCATION: _____ NC **COUNTY:** _____
(City)

CONTRACTOR/SUBCONTRACTOR: _____

In accordance with the requirements of the Davis-Bacon Act, all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government are being paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of Chapter 31 of title 40, United States Code.

In addition, the owner/representative must conduct adequate oversight for compliance with Davis-Bacon and related Acts through (a) the review of payrolls and associated certifications, (b) conducting of employee interviews if necessary, and (c) the posting of the Davis-Bacon Poster, all wage determinations, and additional classifications (as appropriate) on the work site.

The Contractor/Subcontractor, _____, certifies or affirms the truthfulness and accuracy of the above statement and that the referenced project will be in compliance with the Davis-Bacon requirements.

_____ _____
Date Signature of Contractor's Authorized Official

_____
Name and Title of Contractor's Authorized Official

Subscribed and sworn to before me this ___ day of _____, 20__, in the State of _____; and the County of _____.

Notary Public _____

My Appointment Expires _____

ATTACHMENT D

STATE OF NORTH CAROLINA
COUNTY OF _____

AFFIDAVIT OF COMPLIANCE WITH N.C. E-VERIFY STATUTES
(Must be completed and submitted for all bids/quotes requiring service)

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of _____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.

2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Dept. of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.

3. ☐ Employer employs 25 or more employees, and is in compliance with the provisions of N.C. General Statute §64-26. Employer has verified the work authorization of its employees through E-Verify and shall retain the records of verification for a period of at least one year.

   ☐ Employer employs fewer than 25 Employees and is therefore not subject to the provisions of N.C. General Statute §64-26.

4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the provisions of N.C. General Statute §64-26.

5. Employer shall keep the State of North Carolina informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina Statutes.

   This _____day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name and Title

State of _____

County of _____

Subscribed and sworn to before me this ___ day of _____, 20___.

Notary Public _____

(SEAL)

My Appointment Expires _____