



PROJECT MANUAL

FOR

SAFE STREETS FOR ALL (SS4A) PHASE 1

FEDERAL PROJECT NUMBER:

693JJ32340072

CITY PROJECT NUMBER:

PMES231813A

BID NUMBER:

269-2026-245

CITY OF CHARLOTTE, NORTH CAROLINA

ADVERTISEMENT DATE: **June 3, 2026**

2024 NCDOT STANDARD SPECIFICATIONS
v. 9-12-2024 (Bonfire Version)

Project #: PMES231813A
Project Name: Safe Streets for All (SS4A) Phase 1

Division 00 - Procurement & Contracting Requirements

PROFESSIONAL ENGINEER SEAL

(Project Special Provisions Prepared for the City of Charlotte, General Services, 600 East Fourth Street, Charlotte, North Carolina 28202):



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00 10 00 – INVITATION TO BID

The City of Charlotte (hereinafter the “City”) will receive sealed bids for the following Project:

PROJECT NAME: Safe Streets for All (SS4A) Phase 1
PROJECT NUMBER: PMES231813A

PRE-BID DATE: June 10, 2026
PRE-BID TIME: 2:00 PM

PRE-BID LOCATION: Charlotte Mecklenburg Government Center (CMGC)
2nd Floor- Room 278
600 East 4th Street
Charlotte, NC 28202

The Pre-Bid meeting is not mandatory, but attendance is strongly encouraged.

BID DUE DATE: July 7, 2026
BID DUE TIME: Before 1:00 PM

BID SUBMISSION LOCATION: Bids must be submitted electronically through the Procurement Portal (<https://charlottenc.bonfirehub.com>)

BID OPENING DATE: July 7, 2026
BID OPENING TIME: 1:00 PM

BID OPENING LOCATION: Microsoft Team Meeting Only
<https://teams.microsoft.com/meet/272862439044997?p=HwwVKeqbd4TEI9hL8q>
Meeting Number (access code): 272 862 439 044 997
Meeting Password: oT99zP6q

NOTICE TO BIDDERS

(As a precautionary measure due to COVID-19), the City will hold all Bid Opening Meetings **via conference call or video conference only** until further notice.

DESCRIPTION OF WORK:

The City of Charlotte seeks to implement systemic Vision Zero strategies to reduce risky behaviors through infrastructure improvements, with a focus on intersections and pedestrian-involved crashes. Project features included under the Safe Streets for All (SS4A) Phase 1 are rectangular rapid flashing pedestrian beacon, accessible pedestrian signal upgrades, lead pedestrian interval signal upgrades, concrete curb ramps, concrete sidewalk, concrete curb & gutter, milling, concrete island, concrete pedestrian refuge and pavement markings.

Bidding documents, which includes a downloadable copy of one (1) Project Manual and one (1) full-size Drawing set, are available for free from the Procurement Portal.

Bidders must be properly licensed within 60 calendar days of the bid opening under North Carolina state law to perform the work.

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH

REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$40,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

A 5% bid security is required with each bid that equals or exceeds **\$100,000**.

The estimated cost of this Project is between **\$1,000,000 and \$5,000,000**.

For information regarding this Invitation to Bid, contact as follow:

Penny Helms, Contracts Administrator
600 East Fourth Street, Charlotte, NC 28202
Direct Phone: (980) 613.1923
Email: Penny.Helms@charlottenc.gov

Please submit questions or inquiries at least seven (7) calendar days before the Bid Due Date. Questions or inquiries past this deadline may not be addressed by the City prior to the Bid Due Date. Questions or inquiries should be submitted in writing through the **Vendor Discussions** section of the Procurement Portal (<https://charlottenc.bonfirehub.com>).

SUBSTITUTION DURING BID PHASE

The intent of these bid documents is to comport with *North Carolina General Statute 133-3* in all instances. Refer to the Substitution Request Form found on the Procurement Portal.

Substitution requests will be accepted via e-mail requests per the following instructions:

- The subject line must identify:
 - The fact that it is a substitution request,
 - The name of the project, and
 - The specification section number for the product;
- All materials shall be in PDF format;
- Manufacturer's model number, and other pertinent identification (including the manufacturer's name address and phone number);
- Attest that the alternate material is in compliance with all specification requirements;
- A line by line comparison of the substituted product compared with the specified products shall be included with the product information; and
- Data to support the justification for the substitution.

Equivalent submittals shall specify manufacturer's model number, and other pertinent identification, and attest that the alternate material is in compliance with all specification requirements.

All requests must be submitted **no later than fifteen (15) full calendar days**, as stated herein or as amended by addendum, prior to the day that bids are due. Requests received after this deadline **will not** be addressed by the engineer. Submit requests to the following:

Sean R. Melville
WSP USA

1001 Morehead Square Drive, Suite 610
Charlotte, North Carolina 28203
Main Phone: 704.342.8465
Email: sean.melville@wsp.com

The City of Charlotte reserves the right to reject any and all bids and to waive any informalities or technicalities as it may deem to be in its best interest.

The contract entered into by and between the successful Bidder and the City will be subject to the requirements of a financial assistance contract between the City and the U.S. Department of Transportation. The Contractor, and his Subcontractors performing Work will be required to comply with federal statutes and regulations including but not limited to: 49 CFR Part 29; the Occupational Safety and Health Standards and the Safety and Health Regulations for Construction, 29 CFR Parts 1910 and 1926; the Davis-Bacon Act; the Anti-Kickback Act; the Contract Work Hours Standards; and the President's Executive Orders No. 11246 and No. 11375.

There is NO goal for participation by Disadvantaged Business Enterprises for this contract.

00 20 00 – INSTRUCTIONS TO BIDDERS

ARTICLE 1: DEFINITIONS

Whenever the following terms are used in the NCDOT Standard Specifications, in any of the Contract Documents, or in the plans, the intended meaning of such terms shall be as follows:

- 1) **“Chief Engineer”**, or **“State Highway Administrator”** shall mean the **“City Engineer”**
- 2) **“Alternate”** or **“Alternate Bid”** shall mean the amount stated in the Bid which may be added to or subtracted from the Base Bid amount if such Alternate(s) are accepted by the City.
- 3) **“Total Amount Bid”** or **“Total Base Bid”** shall mean the correct sum total obtained by adding together the amounts bid for every item in the proposal including contingencies or allowances, but excluding Alternates.
- 4) **“Board of Transportation”** shall mean **“City Council”**
- 5) **“City”** shall mean the **“City of Charlotte, North Carolina”**; the City is the Project Owner
- 6) **“City Engineer”** shall mean the **“Head of the City of Charlotte Engineering and Project Management Division”**.
- 7) **“City Standard”** shall mean the latest edition of the applicable **“Charlotte Land Development Standards Manual (CLDSM)”**, **“Charlotte-Mecklenburg Storm Drainage Design Manual”**, **“Charlotte Mecklenburg BMP Design Manual”** and **“Charlotte-Mecklenburg Utility Department Policies, Procedures, Standards and Specifications”**
- 8) **“Construction Manager”**, **“Engineer”**, **“Division Engineer”** or **“Resident Engineer”** shall mean the City Engineer’s duly authorized Construction Manager to oversee the construction of the project
- 9) **“Contract”** shall mean the reciprocal undertakings, obligations, and rights of the City and the Contractor evidenced by the executed agreement and other Contract Documents between the City and the Contractor, covering the performance of and compensation of the Work.
- 10) **“Contract Amount”**, **“Total Contract Amount”** or **“Contract Sum”** shall mean the Total Base Bid plus Alternates accepted by the City.
- 11) **“Contract Documents”** shall consist of the Project Manual, all forms from Section 00 40 00, Bonds and Certificate of Insurance, Acceptance by the City, and any change orders issued after execution of the contract.
- 12) **“Date of Availability”** shall mean **“Notice to Proceed Date”**
- 13) **“Department”**, **“Department of Transportation”**, **“Division of Highways”**, and **“Raleigh Central Office”** shall all mean **“City of Charlotte General Services”**.
- 14) **“Procurement Portal”** shall mean the electronic portal where Bids will be digitally submitted. The portal can be accessed at <https://charlottenc.bonfirehub.com>.
- 15) **“Project Manual”** shall mean the complete set of bidding documents issued by the City of Charlotte General Services to include the Invitation to Bid, Instructions to Bidders, Bid Forms, sample project forms, conditions and special provisions of the contract, addenda issued prior to the execution of the contract, and drawings.
- 16) **“State”** shall mean **“City of Charlotte”**
- 17) **“State Contract Officer”** shall mean **“Contract Officer”**
- 18) **“Supplemental Agreements”** shall mean **“Change Orders”**

ARTICLE 2: BIDDER'S REPRESENTATIONS

2.1 Contractor's Licenses

Bidders shall be properly licensed under North Carolina state law to perform the Work specified in the Bidding Documents and per **SECTION 102-14** of the NCDOT Standard Specifications. Bidder has 60 days after the bid opening to obtain licensure per SECTION 102-14(B). Bids received from bidders not meeting the applicable Contractors' licensure requirements as required by law and as determined by the Engineer's estimate may be considered non-responsive and may not be considered for award.

2.2 Bidder Qualifications

Any firm that wishes to bid as a prime contractor shall be prequalified with NCDOT as a Bidder prior to submitting a bid. Information regarding prequalification can be found at:

<https://connect.ncdot.gov/business/Prequal/Pages/default.aspx>

Failure to obtain NCDOT pre-qualification before the Bid opening date will be ground for Bid rejection. All proposed subcontractors must be pre-qualified before being allowed to begin work.

2.3 Site Investigation and Conditions Affecting the Work

By submitting a bid, Bidders certify to have carefully examined the Project site and familiarized themselves with the existing conditions on the Project, affecting the cost and execution of the work as described in **Section 102-6** of NCDOT Standard Specifications.

ARTICLE 3: BIDDING PROCEDURES

3.1 Electronic Bids

All bids shall be prepared and submitted in accordance with the following requirements. Failure to comply with any of the requirement may cause the bid to be considered irregular and may be grounds for bid rejection.

- 1) Obtain an account on the Procurement Portal 'Bonfire' to bid electronically at <https://charlottenc.bonfirehub.com>.
- 2) Download and read carefully the Project Manual, Plans, and other supplemental documents related to this project from the Procurement Portal.
- 3) Download electronic bid submittal forms from the Procurement Portal. Bid submittal forms includes 1) Itemized Bid Form, 2) Acknowledgement of Addenda Form, 3) Listing of DBE Subcontractor Form, 4) Certification of Buy America (domestic Steel & Iron) Form, 5) Certification for Federal-Aid Contracts Form, 6) Certification of Debarment Form, 7) Commercial Non-Discrimination Certification Form, 8) Conflict of Interest Form, 9) Non-Collusion, Debarment and Gift Ban Certification (Execution of Bid Form), and 10) Bid Bond Form. Each form must be completed in its entirety. Upon completion, bidders shall upload them back on the Procurement Portal as part of the bid submittal. Failure to complete and submit the required forms may be grounds for bid rejection.
- 4) Itemized bid form in Microsoft Excel format must be completed in its entirety. Bidders shall enter a unit price for each line item requiring a bid amount. The electronic version of the Itemized Bid Form will contain formulas to calculate the extensions, percentages and totals which shall not be altered by the bidders.
- 5) The bid shall be accompanied by a bid bond or bid deposit when applicable. The bid bond shall be prepared in accordance with Article 3.3 Bid Security of this section. Bidder shall use the Bid Bond form provided with the Project Manual.
- 6) Addenda will be published on the Procurement Portal. Bidders shall be responsible for inquiring if any addendum has been issued and shall acknowledge receipt of all addenda on the Acknowledgement of

Addenda" Form. All addenda shall become part of the Contract Documents whether or not received or acknowledged by the Bidder.

- 7) All bids shall be submitted with an electronically affixed digital signature. Affixing a digital ID to the bid shall be equivalent of signing before a notary public. If the bidder does not have such digital ID, a wet signature will be acceptable when it is notarized on the bid form.
- 8) On the day of the bid opening, bids will be opened and read publicly at the time mentioned on the Invitation to Bid.

3.2 The Project Manual

The Project Manual is the bidding document and shall not be altered.

3.3 Bid Security

A **five-percent (5%)** bid security is required with each bid that equals or exceeds **\$100,000**. Bid Bond or Bid Deposit, made payable to the City of Charlotte, must be provided in accordance with **Section 102-10** of NCDOT Standard Specifications.

3.3.1 Electronic Execution of Statutorily-Required Bid Bond

Traditionally, the City has required bonds to be submitted as hard copies with wet signatures. Until further notice, the City will also accept electronically executed bid bonds to satisfy the requirements of N.C.G.S. 143-129(b). In order for electronically executed bid bonds to be valid, a principal and N.C. licensed surety must agree to transact by electronic means. Additionally, the City requires the bidder and surety to use digital signatures that have the following characteristics: (a) each signature is unique to the person using it; (b) the signatures are capable of certification; and (c) each signature is under sole control of the person using it. The notary requirement is waived for bid bonds that are signed electronically.

The bid bond must meet all other statutory criteria for bid bonds and must be submitted in compliance with the Instruction to Bidders. The City reserves the right to reject bid bonds that do not meet the above criteria.

3.4 Sales and Use Tax

Refer to Section 00 70 00 of this Project Manual for additional information on sales and use tax. The City reserves the right to request from the bidder after bid opening the estimated amount of total Eligible Taxes that were used to calculate the Bid and any supporting documentation of such. The Bidder, in submitting the Bid for consideration, agrees to provide any such sales or use tax estimates or documentation that may be requested by the City.

ARTICLE 4: BID AWARDS AND REJECTIONS

4.1 Bid Opening

Bid Opening will be conducted in accordance with **Section 102-13** of NCDOT Standard Specifications.

4.2 Rejection of Bids and Disqualification of Bidders

Rejection of Bids and Disqualification of Bidders will be provided in accordance with **Sections 102-14 and 102-15** respectively of NCDOT Standard Specifications.

4.3 Award and Execution of Contract

Award and execution of Contract will be in accordance with **Section 103** of NCDOT Standard Specifications.

The City will award the contract or contracts conditioned upon funds being available for construction and other governmental approvals as may be required.

The City reserves the right to accept Alternates in any order or combination. The City further reserves the right to determine the low bidder on the basis of the Total Base Bid.

ARTICLE 5: POST-AWARD

5.1 Bonds and Insurance

For bids equal to or greater than **\$100,000**, the successful bidder shall provide the City with performance and payment bonds each in the amount equal to **one hundred percent (100%)** of the contract amount. Bonds shall be submitted to the City upon ten (10) calendar days of award of the Contract and shall be in conformance with NC GS 44A-33. Failure to provide acceptable bonds within ten (10) calendar days of award of the Contract shall be just cause for forfeiture of the bid bond or bid deposit and rescinding the award of the Contract. Award may then be made to the next lowest responsive, responsible bidder or the Project may be re-advertised at the City's sole discretion.

The Contractor shall submit to the City within ten (10) calendar days of recommendation of award of the Contract a certificate of insurance in the minimum amounts required in the Contract Documents.

5.1.1 Electronic Execution of Statutorily-Required Performance and Payment Bonds

Traditionally, the City has required bonds to be submitted as hard copies with wet signatures. Until further notice, the City will also accept electronically executed performance and payment bonds to meet the requirements of N.C.G.S. 143-129(c) and Article 3 of Chapter 44A of the General Statutes. In order for electronically executed bonds to be valid, a principal and N.C. licensed surety must agree to transact by electronic means. Additionally, the City requires the bidder and surety to use digital signatures that have the following characteristics: (a) each signature is unique to the person using it; (b) the signatures are capable of certification; (c) each signature is under sole control of the person using it; and (d) each signature is linked to document in such a manner that if the text of the document is changed, the electronic signature is invalidated. The notary requirement is waived for payment and performance bonds that are signed electronically and electronically submitted.

Per N.C.G.S. 44A-33, bonds are still required to be submitted to the City upon ten (10) calendar days of award of the Contract.

The bonds must meet all other statutory criteria for payment and performance bonds and must be submitted in compliance with the Instruction to Bidders. The City reserves the right to reject payment and performance bonds that do not meet the above criteria.

5.2 Pre-Construction Conference

A pre-construction conference will be scheduled as soon as practical after award of the Contract. The Contractor shall attend the pre-construction conference with the prospective project superintendent, any anticipated major subcontractors and major suppliers. A proposed progress schedule in a form satisfactory to the Construction Manager and a statement of the anticipated monthly progress payments showing the percent of progress each month shall be submitted by the Contractor to the City. The Contractor shall also provide at least two (2) local telephone numbers that may be used to contact the Contractor or the Contractor's authorized representative in the event of an emergency after normal business hours. The Contractor shall also provide the name of the Contractor's on-site representative who is OSHA certified for trenching, shoring, and confined space entry.

5.3 Notice to Proceed

The City will issue a Notice to Proceed (NTP) to the Contractor upon award and execution of the contract. The Contractor shall not perform any Work prior to the date on which the NTP commences. The City reserves the right to issue an Administrative Notice to Proceed authorizing the Contractor to place orders for products requiring long lead times, or to obtain certain permits prior to beginning any Work. If an Administrative Notice to Proceed is issued, the Contractor shall not perform any Work prior to the date on which the Notice to Proceed commences.

00 40 00 – BID FORMS AND SUPPLEMENTS

Bidder shall download individual BID FORMS posted on the Procurement Portal at
<https://charlottenc.bonfirehub.com>

ITEMIZED BID

Bidder Name: _____
Project #: PMES231813A
Project Name: Safe Streets for All (SS4A) Phase 1

SECTION 1: BASE BID

Item	Section	ITEM DESCRIPTION	Qty	Unit	Unit Price (\$)	Amount Bid (\$) (Qty x Unit Price)
1	800	Mobilization	1	LS		
2	226	Grading	1	LS		
3	SP-30	Rock Removal	50.0	CY		
4	1605	Temporary Silt Fence	60	LF		
5	SP-21	Seeding and Mulching	20	SY		
6	SP-44	Traffic Control	1	LS		
7	SP-10	Removal of Existing Curb & Gutter	62	LF		
8	SP-11	Removal of Existing Pavement, Drives & Sidewalks	130	SY		
9	1743	7' Type III Foundation for Pedestal	9	EA		
10	SPU-1	Adjust Existing Sewer Manhole	1	EA		
11	607	Milling Asphalt Pavement, 0.0" to 3.0"	2,694	SY		
12	610	Asphalt Concrete Base Course, Type B 25.0C	40	TN		
13	610	Asphalt Concrete Intermediate Course, Type I 19.0C	12	TN		
14	610	Asphalt Concrete Surface Course, Type S 9.5B	238	TN		
15	620	Asphalt Binder for Plant Mix	19	TN		
16	846	2' 6" Concrete Curb and Gutter	379	LF		

Item	Section	ITEM DESCRIPTION	Qty	Unit	Unit Price (\$)	Amount Bid (\$) (Qty x Unit Price)
17	848	4" Concrete Sidewalk or pad	10	SY		
18	848	6" Concrete Sidewalk or Pad	75	SY		
19	852	5" Monolithic Concrete Islands	62	SY		
20	903	Supports, 3-lb Steel U-Channel	160	LF		
21	904	Sign Erection, Type E	6	EA		
22	901	Contractor Furnished, Type E Sign	256	SF		
23	1205	Thermoplastic Pavement Marking Lines, 4", 90 mils	599	LF		
24	1205	Thermoplastic Pavement Marking Lines, 8", 90 mils	2,831	LF		
25	1205	Thermoplastic Pavement Marking Lines, 24", 90 mils	211	LF		
26	1205	Removal of Pavement Marking Lines, 4"	110	LF		
27	1266	Tubular Markers (Fixed)	36	EA		
28	SP-1	6" Concrete Wheelchair Ramps	332	SY		
29	SPU-1	Adjust Existing Water Meter and Meter Box	3	EA		
30	SP-2	Pedestrian Refuge Island (Pass-Thru)	9	SY		
31	SP-3	16" Pedestrian Signal Head	12	EA		
32	SP-4	10 ft. Metal Base/Pole/Cap for Pedestrian Signal	12	EA		
33	SP-4	Concrete Foundation for 10 foot Metal Base/Pole/Cap for Pedestrian Signal	15	EA		
34	SP-4	15 ft. Metal Base/Pole/Cap for Pedestrian Signal	9	EA		
35	SP-4	Relocate Existing Metal Base, Pole, and Attachments for Pedestrian Signal	3	EA		
36	SP-5	Supply & Install APS Pedestrian Pushbutton Detector & Sign	27	EA		

Item	Section	ITEM DESCRIPTION	Qty	Unit	Unit Price (\$)	Amount Bid (\$) (Qty x Unit Price)
37	SP-6	Type 1 Lead in Cable (Two Pair) Modified 1726	4,580	LF		
38	SP-7	Relocate/Adjust Conduit to Existing Pullbox	4	EA		
39	SP-8	Solar Powered Rectangular Rapid Flashing Beacon	5	PR		
40	SP-9	Select Material	10	TN		
41	SP-12	Combination Meter Pedestal and Grounding Grid	1	EA		
42	SP-13	Supply, Install, & Activate Controller Cabinet	1	EA		
43	SP-14	Concrete Base for Controller Cabinet	1	EA		
44	SP-15	Vehicle Signal Head (Polycarbonate, 12", 3-section HAWK)	4	EA		
45	SP-16	Riser Assembly (2" Sch. 80 PVC)	13	EA		
46	SP-17	Standoff Bracket Assembly	4	EA		
47	SP-18	Adjustment Pull Box, CDOT, (13"x24"x12")	1	EA		
48	SP-18	Adjustment Pull Box, CDOT, (24"x36"x24")	1	EA		
49	SP-19	3 Section 12" Signal Head Cover	4	EA		
50	SP-19	Pedestrian Signal Cover	18	EA		
51	SP-20	Junction Box (13"x24"x12" PC, Traffic Signal logo)	1	EA		
52	SP-20	Junction Box (24"x36"x24" PC, Traffic Signal logo)	3	EA		
53	SP-20	Junction Box (24"x30"x30" PC, CDOT Fiber Optic Logo)	1	EA		
54	SP-31	PM2 - Pole Ground Assembly Unit	1	EA		
55	1706	Backplates	4	EA		
56	1705	Signal Cable (16 AWG - 4 Conductor)	48	LF		

Item	Section	ITEM DESCRIPTION	Qty	Unit	Unit Price (\$)	Amount Bid (\$) (Qty x Unit Price)
57	1705	Signal Cable (16 AWG - 7 Conductor)	3,050	LF		
58	1710	Messenger Cable (3/8" Galvanized)	84	LF		
59	1715	Unpaved Trenching (1-2" SCH80)	14	LF		
60	1715	Unpaved Trenching (2-2" SCH80)	228	LF		
61	1715	Unpaved Trenching (4-2" SCH80)	15	LF		
62	1715	Unpaved Trenching (5-2" SCH80)	5	LF		
63	1715	Paved Trenching (2-2" SCH80)	110	LF		
64	1725	Inductive Loop Sawcut	600	LF		
65	1745	Signs for Signals	13	EA		
66	SP-22	CO(6)FIBER/ML/E - Aerial Fiber Optic Cable Stub Unit	70	LF		
67	SP-23	BM53A(OF) - Adhesive Fiber Optic Warning Sign Assembly Unit (Owner Furnished)	1	EA		
68	SP-24	CHO-4(1)ST/LC - Fiber Optic Jumper Assembly Unit	2	EA		
69	SP-25	CO(24)/6.6M - Aerial Fiber Optic Cable Assembly Unit	90	LF		
70	SP-25	CO(24)/E - Aerial Fiber Optic Cable Assembly Unit	685	LF		
71	SP-26	FOE(TRX)(ESU)AR(4100I) - Ethernet Switch Unit/Module - Aruba	1	EA		
72	SP-27	FOE(TRX)(ESU)(SFP)(1G-LX-31) - Ethernet Small Form-Factor Pluggable Port	2	EA		
73	SP-28	HO-1 - Fiber Optic Splicing Assembly Unit	8	EA		
74	SP-29	HUO(24) - Underground Fiber Optic Closure Assembly Unit	1	EA		
75	SP-34	UO(24) - Underground Fiber Optic Cable Assembly Unit	140	LF		
76	SP-34	UO(24)LW - Underground Fiber Optic Cable Assembly Unit	15	LF		

Item	Section	ITEM DESCRIPTION	Qty	Unit	Unit Price (\$)	Amount Bid (\$) (Qty x Unit Price)
77	SP-35	UO(6)FIBER/ML - Underground Fiber Optic Cable Stub Unit	70	LF		
78	SP-35	UO(6)FIBER/ML(LW) - Underground Fiber Optic Cable Stub Unit	10	LF		
79	SP-36	UO(6)PATCH PANEL/ML - Fiber Optic Patch Panel Unit	1	EA		
80	SP-37	(W)CC - Access to the Traffic Signal Controller Cabinet/Box	1	EA		
81	SP-38	(W)HUO(24) - Underground Splice Closure Rearrangement Unit	1	EA		
82	SP-39	(W)RC - Use of Existing Riser Conduit	2	EA		
83	SP-40	(W)UH - Placing New Conduit or Cable In Existing Handhole Unit	2	EA		
84	SP-41	24 Fibers Aerial Fiber Optic Cable (With Hardware)	770	LF		
85	SP-42	Fiber Optic Power Level Test Assembly Unit	4	EA		
86	SP-43	Fiber Optic Splice Test Assembly Unit	4	EA		
87	SP-33	UH-EBM - Electronic Ball Marker	1	EA		

Total Base Bid:\$_____

Do **not** include any North Carolina Sales and Use Tax that qualifies as Eligible Taxes per Section 00 70 00, Subsection 2.17 "Sales and Use Tax".

ACKNOWLEDGMENT OF ADDENDA

Project #: PMES231813A

Project: Safe Streets for All (SS4A) Phase 1

Name of Company (Bidder): _____

The undersigned acknowledges receipt of the following addenda (initial next to each addendum):

1: _____ 2: _____ # 3: _____ # 4: _____ # 5: _____ # 6: _____ # 7: _____ # 8: _____ # 9: _____

By: _____
Signature of Company's Authorized Representative

Printed Name: _____

Title: _____

Date: _____

CERTIFICATION OF BUY AMERICA (DOMESTIC STEEL & IRON)
FOR
COMPLIANCE WITH NCDOT STANDARD SPECIFICATIONS SECTION 106-1(B)

DOMESTIC STEEL AND IRON PRODUCTS (Buy America):

PROJECT NAME: Safe Streets for All (SS4A) Phase 1

Name of Company (Bidder): _____

The Contractor hereby certifies that it will comply with the requirements of NCDOT Standard Specifications Section 106-1(B).

By: _____
Signature of Contractor's Authorized Official

Name: _____
Printed Name of Contractor's Authorized Official

Title: _____
Title of Contractor's Authorized Official

Date: _____

Subscribed and sworn to before me this _____ day of _____ 202____

Signature of Notary Public _____

of _____ County

State of _____

My Commission Expires: _____

CERTIFICATION FOR FEDERAL-AID CONTRACTS

PROJECT NAME: Safe Streets for All (SS4A) Phase 1

Name of Company (Bidder): _____

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, *Disclosure Form to Report Lobbying*, in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by *Section 1352, Title 31, U.S. Code*. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

By: _____
Signature of Authorized Official

Title: _____

COMMERCIAL NON-DISCRIMINATION CERTIFICATION

Project: Safe Streets for All (SS4A) Phase 1

Name of Company (Bidder): _____

The undersigned Bidder hereby certifies and agrees that the following information is correct:

1. In preparing its Bid, the Bidder has considered all bids submitted from qualified, potential subcontractors and suppliers, and has not engaged in or condoned discrimination, as defined in Section 2 below.
2. For purposes of this form, discrimination means discrimination in the solicitation, selection, or treatment of any subcontractor, vendor, supplier or commercial customer on the basis of a person's race, color, gender, religion, national origin, ethnicity, age, familial status, sex (including sexual orientation, gender identity and gender expression), veteran status, pregnancy, natural hairstyle or disability, or any otherwise unlawful form of discrimination. Without limiting the foregoing, discrimination also includes retaliating against any person or other entity for reporting any incident of discrimination."
3. Without limiting any other remedies that the City may have for a false certification, it is understood and agreed that, if this certification is false, such false certification will constitute grounds for the City to reject the bid submitted with this certification and terminate any contract awarded based on such bid. It shall also constitute a violation of the City's Commercial Non-Discrimination Ordinance and shall subject the Bidder to any remedies allowed thereunder, including possible disqualification from participating in City contracts or bid process for up to two years.
4. As a condition of contracting with the City, the Bidder agrees to promptly provide to the City all information and documentation that may be requested by the City from time to time regarding the solicitation and selection of subcontractors in connection with this solicitation process. Failure to maintain or failure to provide such information shall constitute grounds for the City to reject the bid submitted by the Bidder and terminate any contract awarded on such bid. It shall also constitute a violation of the City's Commercial Non-Discrimination Ordinance and shall subject the Bidder to any remedies allowed thereunder.
5. As part of its bid, the Bidder shall provide to the City a list of all instances within the past ten years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that the Bidder discriminated against its subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.
6. As a condition of submitting a bid to the City, the Bidder agrees to comply with the City's Commercial Non-Discrimination Policy as described in Section 2, Article V of the Charlotte City Code, and consents to be bound by the award of any arbitration conducted thereunder.

By: _____
Signature of Company's Authorized Representative

Title: _____

Date: _____

CONFLICT OF INTEREST

Except as may be identified and explained below, the undersigned hereby certifies that, no member of the Charlotte City Council, officer, employee, or former employee of the City, AND

no relative of persons described above,

has an interest whatsoever (regardless of how indirect and how remote that interest may be) in the Bidder's organization and/or in the proceeds of any contract and/or agreement which might be made between the Bidder and the City as result of the successful bid/proposal accompanied by this certification; no person who is or who during the past twelve (12) months has been a member of the Charlotte City Council, an officer or employee of the City is employed by or on behalf of the Bidder's organization; and that until acceptance of all work or services to be performed under any resulting contract or agreement, the Bidder shall not enter into any contract involving services or property, whether or not related to the performance of any resulting contract or agreement, with any of the aforementioned persons or with any business in which any such person has an interest, direct or indirect.

Except as identified and explained below and with City's prior approval the Bidder shall not engage in any activity, or accept any employment, interest or contribution that would create an appearance of a conflict of interest (personal or organizational) or reasonably appear to compromise the Bidder's judgment with respect to all work or services to be performed under any resulting contract or agreement.

The undersigned certifies that he is legally authorized by the Bidder to make the above representation, and that the representation is true to the best of his knowledge and belief and without deliberate omission of any inquiry which would to the best of his belief tend to change the above representation. The undersigned understands that any representation made knowing it to be false may be cause to disqualify the Bidder from competing for award for the contract at hand, may be cause to terminate the resulting contract and disqualify the Bidder from being awarded future contracts by the City.

The Bidder certifies that neither he nor any agent, representative, or other party acting on his behalf has offered or given any gratuity or gratuities, in the form of gifts, entertainment, or otherwise, to any director, officer, or employee of the City or of any person, firm, consultant or contractor retained by the City, with a view to securing the contract or of securing favorable treatment with respect to the award hereof, and the Bidder further certifies that neither he nor any agent, representative, or other party acting on his behalf will offer or give any such gratuity to any director, officer, or employee of the City or of any such consultant or contractor with a view to securing favorable treatment with respect to any change or amendment to the contract, or to any other action with respect to the performance hereof.

The Bidder further understands that in addition to submitting this certification at the time of bid/proposal submission to the City, the Bidder shall also be required to submit a similar certification at the time of execution of any resulting contract.

NOTE: THIS CERTIFICATION MUST BE SIGNED AND SUBMITTED WITH THE BID/PROPOSAL

Signature: _____

Title: _____ Date of Signing: _____

Firm or Corporate Name: _____

Address: _____

Telephone Number: _____

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

CORPORATION

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. §133-24* within the last three years, and that the prequalified bidder intends to do the work with his own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Full name of Corporation

Address as Prequalified

Attest _____ By _____
Secretary/Assistant Secretary President/Vice President/Assistant Vice President
(Select appropriate title) (Select appropriate title)

Print or Type Signer's name

Print or Type Signer's name

CORPORATE SEAL

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

PARTNERSHIP

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Full Name of Partnership

Address as Prequalified

Signature of Witness

Signature of Partner

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

LIMITED LIABILITY COMPANY

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Full Name of Firm

Address as Prequalified

Signature of Witness

Signature of Member/Manager/Authorized Agent
(*Select appropriate Title*)

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

JOINT VENTURE (2) or (3)

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Instructions: **2 Joint Venturers** Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3) and (4) and execute. On Line (1), fill in the name of the Joint Venture Company. On Line (2), fill in the name of one of the joint venturers and execute below in the appropriate manner. On Line (3), print or type the name of the other joint venturer and execute below in the appropriate manner. On Line (4), fill in the name of the third joint venturer, if applicable and execute below in the appropriate manner.

(1)	_____		
	Name of Joint Venture		
(2)	_____		
	Name of Contractor		

	Address as Prequalified		
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name		Print or Type Signer's Name
	<i>If Corporation, affix Corporate Seal</i>	AND	
(3)	_____		
	Name of Contractor		

	Address as Prequalified		
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name		Print or Type Signer's Name
	<i>If Corporation, affix Corporate Seal</i>	AND	
(4)	_____		
	Name of Contractor		

	Address as Prequalified		
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name		Print or Type Signer's Name
	<i>If Corporation, affix Corporate Seal</i>		

CORPORATE SEAL(S)

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder

Print or type Individual Name

Trading and Doing Business As

Full name of Firm

Address as Prequalified

Signature of Witness

Signature of Prequalified Bidder, Individual

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The prequalified bidder, declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the prequalified bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the prequalified bidder intends to do the work with its own bona fide employees or subcontractors and will not bid for the benefit of another contractor.

By submitting this non-collusion, debarment and gift ban certification, the prequalified bidder is attesting his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder _____
Print or Type Name

Address as Prequalified

Signature of Prequalified Bidder, Individually

Print or Type Signer's Name

Signature of Witness

Print or Type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CERTIFICATION OF DEBARMENT

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction*, *debarred*, *suspended*, *ineligible*, *lower tier covered transaction*, *participant*, *person*, *primary covered transaction*, *principal*, *proposal*, and *voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in Federal or State or City contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No. _____
County _____

Rev. 10-31-24

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to this certification.

STATE OF NORTH CAROLINA
CITY OF CHARLOTTE
CHARLOTTE, NC

BID BOND

Principal: _____
Name of Principal Contractor

Surety: _____
Name of Surety

Contract Number: _____ County: _____

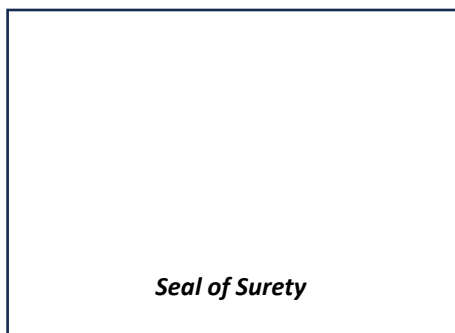
Date of Bid: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the **City of Charlotte** in the full and just sum of five (5) percent of the total amount bid by the Principal for the project stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

NOW, THEREFORE, in accordance with Article 102-10 of the *Standard Specifications*, the condition of this obligation is: the Principal shall not withdraw its bid within sixty (60) days after the opening of the bids, or within such other time period as may be provided in the proposal, and if the **City of Charlotte** shall award a contract to the Principal, the Principal shall, within fourteen (14) calendar days after written notice of award is received by him, provide bonds with good and sufficient surety, as required for the faithful performance of the contract and for the protection of all persons supplying labor, material, and equipment for the prosecution of the work. In the event the Principal requests permission to withdraw his bid due to mistake in accordance with the provisions of Article 103-3 of the *Standard Specifications*, the conditions and obligations of this Bid Bond shall remain in full force and effect until the **City of Charlotte** makes a final determination to either allow the bid to be withdrawn or to proceed with award of the contract. In the event a determination is made to award the contract, the Principal shall have fourteen (14) calendar days to comply with the requirements set forth above. In the event the Principal withdraws its bid after bids are opened except as provided in Article 103-3 of the *Standard Specifications*, or after award of the contract has been made fails to execute such additional documents as may be required and to provide the required bonds within the time period specified above, then the amount of the bid bond shall be immediately paid to the **City of Charlotte** as liquidated damages.

IN TESTIMONY WHEREOF, the Principal and Surety have caused these presents to be duly signed and sealed.

This the _____ day of _____, 20 _____



Seal of Surety

Print or type Surety Company Name NAIC #

By _____
General Agent or Attorney-in-Fact Signature

Print or Type Signer's Name

Rev. 10-31-24

BID BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

Full name of Corporation

Address as prequalified

By _____

Signature of **President, Vice President, Assistant Vice President**
Select appropriate title



Print or Type Signer's name

Affix Corporate Seal

Attest _____

Signature of **Secretary, Assistant Secretary**
Select appropriate title

Print or Type Signer's name

Rev. 10-31-24

BID BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Full name of Firm

Address as Prequalified

By:

Signature of **Member, Manager, Authorized Agent**
Select appropriate title

Print or type Signer's name

Rev. 10-31-24

BID BOND

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Print or type Individual Name

Trading and doing business as

Full name of Firm

Address as Prequalified

Signature of Contractor

Individually

Print or Type Signer's name

Signature of Witness

Print or Type Signer's name

Rev. 10-31-24

BID BOND

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Print or type Individual Name

Address as Prequalified

Signature of Contractor

Individually

Print or Type Signer's name

Signature of Witness

Print or Type Signer's name

Rev. 10-31-24

BID BOND

PARTNERSHIP

SIGNATURE OF CONTRACTOR (Principal)

Full name of Partnership

Address as Prequalified

By _____
Signature of Partner

Print or Type Signer's name

Signature of Witness

Print or Type Signer's name

BID BOND
JOINT VENTURE (2 or 3)
SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *Standard Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name
If Corporation, affix Corporate Seal

Print or type Signer's name

and

(3) _____
Name of Contractor

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name
If Corporation, affix Corporate Seal

Print or type Signer's name

and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name
If Corporation, affix Corporate Seal

Print or type Signer's name

CORPORATE SEALS(S)

00 45 00 – EXECUTION OF CONTRACT (POST BID REQUIREMENT)

Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

CORPORATION

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Full name of Corporation

Address as Prequalified

Attest _____ Signature of Secretary, Assistant Secretary (Select appropriate title)	By _____ Signature of President, Vice President, Assistant Vice President (Select appropriate title)
---	--

_____ Print or Type Signer's name	_____ Print or Type Signer's name
--------------------------------------	--------------------------------------



Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

PARTNERSHIP

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Full Name of Partnership

Address as Prequalified

Signature of Witness

Signature of Partner

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

LIMITED LIABILITY COMPANY

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Full Name of Firm

Address as Prequalified

Signature of Witness

Signature of Member, Manager, Authorized Agent
(Select appropriate Title)

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

JOINT VENTURE (2) or (3)

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating N.C.G.S. § 133-24 within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Instructions: **2 Joint Venturers** Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3) and (4) and execute. On Line (1), fill in the name of the Joint Venture Company. On Line (2), fill in the name of one of the joint venturers and execute below in the appropriate manner. On Line (3), print or type the name of the other joint venturer and execute below in the appropriate manner. On Line (4), fill in the name of the third joint venturer, if applicable and execute below in the appropriate manner.

(1)			Name of Joint Venture
(2)			Name of Contractor
			Address as Prequalified
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name <i>If Corporation, affix Corporate Seal</i>	AND	Print or Type Signer's Name
(3)			Name of Contractor
			Address as Prequalified
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name <i>If Corporation, affix Corporate Seal</i>	AND	Print or Type Signer's Name
(4)			Name of Contractor
			Address as Prequalified
	Signature of Witness or Attest	BY	Signature of Contractor
	Print or Type Signer's Name <i>If Corporation, affix Corporate Seal</i>		Print or Type Signer's Name

CORPORATE SEAL(S)

Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Name of Contractor

Print or type Individual Name

Trading and Doing Business As

Full name of Firm

Address as Prequalified

Signature of Witness

Signature of Contractor, Individually

Print or Type Signer's Name

Print or Type Signer's Name

Contract No. _____
County _____

Rev. 10-31-24

**EXECUTION OF CONTRACT
NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION**

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bona fide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, non-collusion, debarment and gift ban certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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.

SIGNATURE OF CONTRACTOR

Name of Contractor _____
Print or Type Individual Name

Address as Prequalified

Signature of Contractor, Individually

Print or Type Signer's Name

Signature of Witness

Print or Type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CERTIFICATION OF DEBARMENT

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.
2. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded*, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in Federal or State or City contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR 1273)* provided by the Department, without subsequent modification, in all lower tier covered transactions.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No. _____
County _____

Rev. 10-31-24

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐

Check here if an explanation is attached to
this certification.

00 50 00 – ACCEPTANCE BY THE CITY

A CONTRACT FOR:

PROJECT NAME: Safe Streets for All (SS4A) Phase 1

PROJECT NUMBER: PMES231813A CONTRACT NUMBER: _____

CONTRACT AMOUNT (\$): _____

THIS CONTRACT (the "Contract") is made and entered into and shall be by and between the CITY OF CHARLOTTE, a North Carolina Municipal corporation (the "City"), and _____, a company doing business in North Carolina (the "Contractor").

WHEREAS the City of Charlotte advertised an Invitation to Bid (ITB) for the Project on _____, together with all attachments and addenda,

WHEREAS the Contractor submitted to the City a Bid on _____ in response to the ITB, together with all attachments and separately sealed confidential trade secrets, herein referred to as the "Bid",

WHEREAS the execution of the Bid is the same as the execution of the Contract by the Contractor,

WHEREAS the City of Charlotte Council, on _____, authorized the City to enter into this Contract with the Contractor for construction services for the Project,

WHEREAS this Contract includes the following:

- a. Project Manual, including all addenda issued prior to execution of the Contract;
- b. Plans;
- c. Contractor's Bid;
- d. Performance & Payment Bonds;
- e. Execution of Contract by the Contractor;
- f. Acceptance by the City; and
- g. Executed Change Orders issued after execution of the Contract.

WHEREAS the City and the Contractor now desire to fully execute this Contract for the Contractor to provide construction services for the Project in accordance with the terms and conditions set forth in the Contract,

NOW, THEREFORE, the City of Charlotte, acting through its City Council, has caused this Contract to be executed in the name of the City of Charlotte by an authorized official.

CITY OF CHARLOTTE:

By: _____

Print Name: _____

Title: _____

Date: _____

CITY OF CHARLOTTE: FINANCE

By: _____

Print Name: _____

Title: _____

Date: _____

00 55 00 – FEDERAL HIGHWAY ADMINISTRATION (FHWA) SUPPLEMENTAL CONDITIONS

ARTICLE 1: FEDERAL CONTRACTING REQUIREMENTS

1.1 STANDARD NOTES (FEDERAL AID)

A. NCDOT Standard Specifications – The 2024 North Carolina Department of Transportation Standard Specifications for Roads and Structures, herein referred to as the ‘Standard Specifications’, and the 2024 Roadway Standard Drawings, shall apply to all portions of this project except as may be modified by this document.

B. Bidder Prequalification - Bidders are required to be prequalified with NCDOT for their specific discipline. Contractors wishing to become prequalified may obtain information through the NCDOT website at:

<https://connect.ncdot.gov/business/Pages/default.aspx>

C. Disadvantaged Business Enterprise References - Since this is a Federal-aid project with DBE participation, only those requirements and goals set forth by NCDOT Goal Setting Committee are applicable. References to any other requirements or to N.C. General Statute 143-128.2 shall not apply to this project. Refer to Special Provision SP1 G63 of Article 2 DISADVANTAGE BUSINESS ENTERPRISE of this section.

D. Award of Contract - The contract will be awarded to the lowest responsible, responsive bidder. Alternate items will not be considered in determining the low bidder and will only be evaluated after the award of the contract is made.

E. Contractor Licensing – On all Federal-aid contracts, non-licensed contractors are permitted to submit bids, however they must be licensed prior to performing any work. Bidders are permitted 60 days, after bid opening, to become licensed by the North Carolina Licensing Board. If they fail to do so within 60 days, their bid will be considered non-responsive and will be rejected. If the successful bidder does not hold the proper license to perform any plumbing, heating, air conditioning, or electrical work in this contract, he will be required to sublet such work to a contractor properly licensed in accordance with *Article 2 of Chapter 87 of the General Statutes* (licensing of heating, plumbing, and air conditioning contractors) and *Article 4 of Chapter 87 of the General Statutes* (licensing of electrical contractors).

F. Bonds - Please note that all Bid Bonds, Payment Bonds, and Performance Bonds required for this project shall be those found on the NCDOT website. The bonds are located at:

Bid Bonds:

[Bid Proposals for LGAs \(ncdot.gov\)](https://connect.ncdot.gov/business/Pages/default.aspx)

Payment Bonds:

[Bid Proposals for LGAs \(ncdot.gov\)](https://connect.ncdot.gov/business/Pages/default.aspx)

Performance Bonds:

[Bid Proposals for LGAs \(ncdot.gov\)](https://connect.ncdot.gov/business/Pages/default.aspx)

G. Buy America – This project shall be governed by the Buy America requirements for the use of domestic steel and iron products, as outlined in the 2024 NCDOT Standard Specifications Section 106-1 (B).

- H. Build America, Buy America (BABA) – This project shall be governed by the Build America, Buy America (BABA) requirements as outlined in SP1 G05A of Article 1.2 of this section.
- I. Retainage by LGAs – The LGA for this contract will not retain any amount or percentage from progress payments or final estimates due the contractor.
- Retainage by Contractors – Contractors are NOT permitted to retain any amount or percentage from monies due their subcontractors or material suppliers on federally funded projects except as permitted by Subarticle 109-4(B) of the *Standard Specifications*.
- J. Traffic Control – The requirements of the *Manual on Uniform Traffic Control Devices (MUTCD)* – FHWA, as amended by the *NCDOT Supplement to MUTCD*, shall apply. Traffic Control, both vehicular and pedestrian, shall be maintained throughout the project as required by these specifications as modified by the project plans or special provisions.

1.2 BUILD AMERICA, BUY AMERICA (BABA)

(11-15-22)(Rev. 7-16-24)

106

SP1 G05 A

Revise the *Standard Specifications* as follows:

Page 1-48, Article 106-1 GENERAL REQUIREMENTS, add the following after line 49:

(C) Build America, Buy America (BABA)

All manufactured products and construction materials permanently incorporated into any project must meet requirements of the Build America, Buy America (BABA) Act of the Infrastructure Investment and Jobs Act (IIJA). Before any material or product shown on the Department's Build America, Buy America (BABA) List is included for payment on a monthly estimate, the Contractor shall furnish the Engineer with a notarized certification certifying that the items conform to the BABA Act. The Department's Build America Buy America (BABA) List can be found on the Department's website below.

<https://connect.ncdot.gov/letting/LetCentral/NCDOT%20BABA%20Materials%20List.pdf>

Each purchase order issued by the Contractor or a subcontractor for items on the BABA List to be permanently incorporated into any project shall contain in bold print a statement advising the supplier that the manufactured products and construction materials must be produced in the United States of America. The Contractor and all affected subcontractors shall maintain a separate file for BABA List items so that verification of the Contractor's efforts to purchase items produced in the United States can readily be verified by an authorized representative of the Department or the Federal Highway Administration (FHWA).

1.3 RESTRICTIONS ON ITS EQUIPMENT AND SERVICES

(11-17-20)

106

SP1 G090

All telecommunications, video or other ITS equipment or services installed or utilized on this project must be in conformance with UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS **2 CFR, § 200.216 Prohibition on certain telecommunications and video surveillance services or equipment.**

1.4 USE OF UNMANNED AIRCRAFT SYSTEM (UAS)

(8-20-19)(Rev. 3-17-26)

SP1 G092

The Contractor shall adhere to all Federal, State and Local regulations and guidelines for the use of Unmanned Aircraft Systems (UAS). This includes but is not limited to US 14 CFR Part 107, NC GS 15A-300, American Security Drone Act of 2023 (ASDA), Office of Management and Budget (OMB) Memorandum M-26-02, all FAA rules, regulations and policies and all NCDOT UAS Policies. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, as well as operating a UAS registered with the FAA.

All UAS operations shall be approved by the Engineer prior to beginning the operations.

All contractors or subcontractors operating UAS shall have UAS specific general liability insurance to cover all operations under this contract.

The use of UAS is at the Contractor's discretion. No measurement or payment will be made for the use of UAS. In the event that the Department directs the Contractor to utilize UAS, payment will be in accordance with Article 104-7 Extra Work.

1.5 EQUIPMENT IDLING GUIDELINES

(1-19-21)

107

SP1 G096

Exercise reduced fuel consumption and reduced equipment emissions during the construction of all work associated with this contract. Employees engaged in the construction of this project should turn off vehicles when stopped for more than thirty (30) minutes and off-highway equipment should idle no longer than fifteen (15) consecutive minutes.

These guidelines for turning off vehicles and equipment when idling do not apply to:

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.
6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.
10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

Any vehicle, truck, or equipment in which the primary source of fuel is natural gas or electricity is exempt from the idling limitations set forth in this special provision.

1.6 U.S. DEPARTMENT OF TRANSPORTATION HOTLINE

(11-22-94)

108-5

SP1 G100

To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free hotline Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the hotline to report such activities.

The hotline is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

1.7 COOPERATION BETWEEN CONTRACTORS

(7-1-95)(Rev. 1-16-24)

105-7

SP1 G133

The Contractor's attention is directed to Article 105-7 of the *Standard Specifications*.

The Contractor on this project shall cooperate with the Contractor working within or adjacent to the limits of this project to the extent that the work can be carried out to the best advantage of all concerned.

1.8 TWELVE MONTH GUARANTEE – LGA PROJECTS

(10-7-13)

108

SP1 G146

(A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to **City of Charlotte**. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of **City of Charlotte**, and/or for use in excess of the design.

(B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. **City of Charlotte's** first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. **City of Charlotte** would be afforded the same warranty as provided by the Manufacturer.

This guarantee provision shall be invoked only for major components of work in which the Contractor would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, and sign structures. This provision will not be used as a mechanism to force the Contractor to return to the project to make repairs or perform additional work that **City of Charlotte** would normally compensate the Contractor for. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

1.9 PROCEDURE FOR MONITORING BORROW PIT DISCHARGE

(2-20-07) (Rev. 1-16-24)

105-16, 230, 801

SP1 G181

Water discharge from borrow pit sites shall not cause surface waters to exceed 50 NTUs (nephelometric turbidity unit) in streams not designated as trout waters and 10 NTUs in streams, lakes or reservoirs designated as trout waters. For lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTUs. If the turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

If during any operating day, the downstream water quality exceeds the standard, the Contractor shall do all of the following:

- (A) Either cease discharge or modify the discharge volume or turbidity levels to bring the downstream turbidity levels into compliance, or
- (B) Evaluate the upstream conditions to determine if the exceedance of the standard is due to natural background conditions. If the background turbidity measurements exceed the standard, operation of the pit and discharge can continue as long as the stream turbidity levels are not increased due to the discharge.
- (C) Measure and record the turbidity test results (time, date and sampler) at all defined sampling locations 30 minutes after startup and at a minimum, one additional sampling of all sampling locations during that 24-hour period in which the borrow pit is discharging.
- (D) Notify DWQ within 24 hours of any stream turbidity standard exceedances that are not brought into compliance.

During the Environmental Assessment required by Article 230-4 of the *Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

The discharge shall be closely monitored when water from the dewatering activities is introduced into jurisdictional wetlands. Any time visible sedimentation (deposition of sediment) on the wetland surface is observed, the dewatering activity will be suspended until turbidity levels in the stilling basin can be reduced to a level where sediment deposition does not occur. Staining of wetland surfaces from suspended clay particles, occurring after evaporation or infiltration, does not constitute sedimentation. No activities shall occur in wetlands that adversely affect the functioning of a wetland. Visible sedimentation will be considered an indication of possible adverse impacts on wetland use.

The Engineer will perform independent turbidity tests on a random basis. These results will be maintained in a log within the project records. Records will include, at a minimum, turbidity test results, time, date and name of sampler. Should the Department's test results exceed those of the Contractor's test results, an immediate test shall be performed jointly with the results superseding the previous test results of both the Department and the Contractor.

The Contractor shall use the *NCDOT Turbidity Reduction Options for Borrow Pits Matrix*, available at <https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/TurbidityReductionOptionSheet.pdf> to plan, design, construct, and maintain BMPs to address water quality standards. Tier I Methods include stilling basins which are standard compensatory BMPs. Other Tier I methods are noncompensatory and shall be used when needed to meet the stream turbidity standards. Tier II Methods are also noncompensatory and are options that may be needed for protection of rare or unique resources or where special environmental conditions exist at the site which have led to additional requirements being placed in the DWQ's 401 Certifications and approval letters, Isolated Wetland Permits, Riparian Buffer Authorization or a DOT Reclamation Plan's Environmental Assessment for the specific site. Should the Contractor exhaust all Tier I Methods on a site exclusive of rare or unique resources or special environmental conditions, Tier II Methods may be required by regulators on a case by case basis per supplemental agreement.

The Contractor may use cation exchange capacity (CEC) values from proposed site borings to plan and develop the bid for the project. CEC values exceeding 15 milliequivalents per 100 grams of soil may indicate a high potential for turbidity and should be avoided when dewatering into surface water is proposed.

No additional compensation for monitoring borrow pit discharge will be paid.

1.10 AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08) (Rev. 1-16-24)

Z-2

General Statute 143C-6-11. (h) Highway Appropriation is hereby incorporated verbatim in this contract as follows:

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(D) of the *Standard Specifications*.

1.11 PLANT AND PEST QUARANTINES

(Imported Fire Ant, Guava Root Knot Nematode, Spongy Moth (formerly known as gypsy moth), Witchweed, Cogon Grass, And Any Other Regulated Noxious Weed or Plant Pest)

(3-18-03) (Rev. 3-18-25)

Z-04a

Within Quarantined Area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a Quarantined County

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or <https://www.ncagr.gov/divisions/plant-industry/plant-protection/plant-industry-plant-pest-quarantines> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and

shoulder cutting.

2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance of any character, if determined by an inspector present a hazard of spreading imported fire ant, guava root knot nematode, spongy moth (formerly known as gypsy moth), witchweed, cogon grass, or other regulated noxious weed or plant pest.

1.12 TITLE VI AND NONDISCRIMINATION

(6-28-77)(Rev 1/16/2024)

Z-6

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts.

The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

(1) Title VI Assurances (USDOT Order 1050.2A, Appendix A)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(a) Compliance with Regulations

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(b) Nondiscrimination

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

(d) Information and Reports

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it and/or the FHWA may determine to be appropriate, including, but not limited to:

- (i) Withholding payments to the contractor under the contract until the contractor complies; and/or
- (ii) Cancelling, terminating, or suspending a contract, in whole or in part.

(f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs (a) through (f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

(2) Title VI Nondiscrimination Program (23 CFR 200.5(p))

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion/creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

- (a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:
 - 1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.
 - 2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.
 - 3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”

4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
 5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
 6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.

1. Applicability

Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.

2. Eligibility

Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.

3. Time Limits and Filing Options

Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

- (i) The date of the alleged act of discrimination; or
- (ii) The date when the person(s) became aware of the alleged discrimination; or
- (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

Title VI and related discrimination complaints may be submitted to the following entities:

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
- Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
- US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070

4. Format for Complaints

Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

5. Discrimination Complaint Form

Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

6. Complaint Basis

Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

**TABLE 103-1
COMPLAINT BASIS**

Protected Categories	Definition	Examples	Applicable Authorities	Nondiscrimination
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. <i>(Executive Order 13166)</i>	
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.		
National Origin <i>(Limited English Proficiency)</i>	Place of birth. Citizenship is not a factor. <i>(Discrimination based on language or a person's accent is also covered)</i>	Mexican, Cuban, Japanese, Vietnamese, Chinese		
Sex	Gender. The sex of an individual. <i>Note: Sex under this program does not include sexual orientation.</i>	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.	
Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.	
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990	

Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. Note: Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. <i>(49 U.S.C. 5332(b); 49 U.S.C. 47123)</i>
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(3) Pertinent Nondiscrimination Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

- (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;
- (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- (f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

(k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);

(l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

(m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

(4) Additional Title VI Assurances

***The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable*

(a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.

The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will thereupon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

(c) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses will be included in deeds, licenses, permits, or similar instruments/ agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):

1. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non- discrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *

3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

1.13 MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

Z-7

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE NUMBER 11246)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations in *41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION

Economic Areas

Area 023 29.7%

Bertie County
Camden County
Chowan County
Gates County
Hertford County
Pasquotank County
Perquimans County

Area 024 31.7%

Beaufort County
Carteret County
Craven County

Area 026 33.5%

Bladen County
Hoke County
Richmond County
Robeson County
Sampson County
Scotland County

Area 027 24.7%

Chatham County
Franklin County
Granville County
Harnett County

Area 029 15.7%

Alexander County
Anson County
Burke County
Cabarrus County
Caldwell County
Catawba County
Cleveland County
Iredell County
Lincoln County
Polk County
Rowan County
Rutherford County

Dare County
Edgecombe County
Green County
Halifax County
Hyde County
Jones County
Lenoir County
Martin County
Nash County
Northampton County
Pamlico County
Pitt County
Tyrrell County
Washington County
Wayne County
Wilson County

Area 025 23.5%

Columbus County
Duplin County
Onslow County
Pender County

Johnston County
Lee County
Person County
Vance County
Warren County

Area 028 15.5%
Alleghany County
Ashe County
Caswell County
Davie County
Montgomery County
Moore County
Rockingham County
Surry County
Watauga County
Wilkes County

Stanly County

Area 0480 8.5%
Buncombe County
Madison County

Area 030 6.3%
Avery County
Cherokee County
Clay County
Graham County
Haywood County
Henderson County
Jackson County
McDowell County
Macon County
Mitchell County
Swain County
Transylvania County
Yancey County

SMSA Areas

Area 5720 26.6%

Currituck County

Area 9200 20.7%

Brunswick County
New Hanover County

Area 2560 24.2%

Cumberland County

Area 6640 22.8%

Durham County
Orange County
Wake County

Area 1300 16.2%

Alamance County

Area 3120 16.4%

Davidson County
Forsyth County
Guilford County
Randolph County
Stokes County
Yadkin County

Area 1520 18.3%

Gaston County
Mecklenburg County
Union County

Goals for Female

Participation in Each Trade

(Statewide) 6.9%

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1.14 FHWA 1273 REQUIRED CONTRACT PROVISIONS FEDERAL - AID CONSTRUCTION CONTRACTS

FHWA-1273 -- Revised October 23, 2023

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).
- b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
- b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
- c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

- d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

- e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

- a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

- b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

- c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

- a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 49 CFR 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, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101.

Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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.c. of this section) and the Davis-Bacon poster (WH-1321) must 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.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.*

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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its reprocurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901-3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDLegacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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 determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeymen under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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. a. By entering into this contract, the contractor certifies that neither it 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

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. 29 CFR 5.5.

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 and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901-3907](#).

4. **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification – Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**
This provision is applicable to all Federal-aid projects funded
under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

1.15 ON THE JOB TRAINING

(10-16-07) (Rev. 4-21-15)

Z-10

Description

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

Minorities and Women

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

Assigning Training Goals

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year.

Training Classifications

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

Records and Reports

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

Trainee Interviews

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

Trainee Wages

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

Achieving or Failing to Meet Training Goals

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

Measurement and Payment

No compensation will be made for providing required training in accordance with these contract documents.

1.16 MINIMUM WAGES

SSP-1

Z-088

Date: January 2, 2026

General Decision Number: NC20260088 01/02/2026 NC88

Superseded General Decision Numbers: NC20250088

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Alamance	Forsyth	Randolph
Anson	Gaston	Rockingham
Cabarrus	Guilford	Stokes
Chatham	Mecklenburg	Union
Davie	Orange	Yadkin
Durham	Person	

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).

Modification Number
0

Publication Date
01/02/2026

SUNC2014-003 11/14/2014

	Rates	Fringes
BLASTER	18.64	
CARPENTER	13.68	.05
CEMENT MASON/CONCRETE FINISHER	13.93	
ELECTRICIAN		
Electrician	18.79	2.72
Telecommunications Technician	15.19	1.25
IRONWORKER	13.30	
LABORER		
Asphalt Raker and Spreader	12.78	
Asphalt Screed/Jackman	14.50	
Carpenter Tender	12.51	.27
Cement Mason/Concrete Finisher Tender	11.04	
Common or General	10.40	.01
Guardrail/Fence Installer	13.22	
Pipelayer	12.43	
Traffic Signal/Lighting Installer	15.65	.24

	Rates	Fringes
PAINTER		
Bridge	23.77	
POWER EQUIPMENT OPERATORS		
Asphalt Broom Tractor	10.00	
Bulldozer Fine	16.13	
Bulldozer Rough	14.36	
Concrete Grinder/Groover	17.92	
Crane Boom Trucks	18.19	
Crane Other	19.83	
Crane Rough/All-Terrain	19.10	
Drill Operator Rock	14.28	
Drill Operator Structure	20.89	
Excavator Fine	16.95	
Excavator Rough	13.63	
Grader/Blade Fine	19.84	
Grader/Blade Rough	15.47	
Loader 2 Cubic Yards or Less	13.31	
Loader Greater Than 2 Cubic Yards	16.19	
Material Transfer Vehicle (Shuttle Buggy)	15.44	
Mechanic	17.51	
Milling Machine	15.22	
Off-Road Hauler/Water Tanker	11.83	
Oiler/Greaser	14.16	
Pavement Marking Equipment	12.05	
Paver Asphalt	15.97	
Paver Concrete	18.20	
Roller Asphalt Breakdown	12.79	
Roller Asphalt Finish	13.76	
Roller Other	12.08	
Scraper Finish	12.65	
Scraper Rough	11.50	
Slip Form Machine	19.60	
Tack Truck/Distributor Operator	14.82	
TRUCK DRIVER		
GVWR of 26,000 Lbs or Less	11.45	
GVWR of 26,001 Lbs or Greater	13.57	.03

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

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 <http://www.dol.gov/agencies/whd/government-contracts>.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least \$13.30 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 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

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 (29 CFR 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 type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida.

2022 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

- 1) Has there been an initial decision in the matter? This can be:
 - a) a survey underlying a wage determination
 - b) an existing published wage determination
 - c) an initial WHD letter setting forth a position on a wage determination matter
 - d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

- 2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via mail to dba.reconsideration@dol.gov or by mail to:

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

The request should be accompanied by a full statement of the interested party's position and 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, D.C. 20210

END OF GENERAL DECISION

1.17 ENERGY EFFICIENCY

The Contractor agrees to comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

This requirement extends to all third party contractors and their contracts at every tier and this clause shall be included in all such subcontracts.

1.18 NO GOVERNMENT OBLIGATION TO THIRD PARTIES

The City and the Contractor acknowledge and agree that the Federal Government is not a party to this Contract and is not subject to any obligations or liabilities to the City, Contractor or any other party pertaining to any matter resulting from the Contract.

The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FHWA. It is further agreed that the clause shall not be modified, except to identify the subcontractors who will be subject to this provisions.

1.19 RECORD RETENTION

The Contractor acknowledge and agree that his company will comply with the record retention requirements detailed in 2 CFR § 200.333. The Contractor further certifies that his company will retain all records as required by 2 CFR § 200.333 for a period of three (3) years after it receives City notice that the City has submitted final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

1.20 PROCUREMENT OF RECOVERED MATERIALS

The Contractor represents and warrants that in its performance under the Contract, the Company shall comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable,

consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

1.21 DHS SEAL, LOGO AND FLAGS

The Contractor shall not use the Department of Homeland Security ("DHS") seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

1.22 RIGHT TO INVENTIONS

If the federal award is a "funding agreement" under 37 CFR 401.2 and the City wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment of performance or experimental, developmental or research work thereunder, the City must comply with 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

1.23 NOTICE OF DISPUTES, BREACHES, DEFAULTS, AND LITIGATION

If a current or prospective legal matter that may affect the City or the Federal Government emerges, the Contractor must notify the City. The Contractor must include a similar notification requirement in each of its subcontracts for twenty-five thousand dollars (\$25,000) or more. Legal disputes that require notification under this provision include, but are not limited to:

- i. A major dispute, breach, default, litigation, or naming the City or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason.
- ii. Matters that may affect the Federal Government (and thereby the City) include, but are not limited to, the or 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.

1.24 DOMESTIC PREFERENCES FOR PROCUREMENTS

As appropriate and to the extent consistent with law, the Contractor should, to the greatest extent practicable under the Contract, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to iron, aluminum, steel, cement, and other manufactured products). Contractor shall include this provision in all subcontracts.

For the purposes of this clause:

- i. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States, and
- ii. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous materials such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

1.25 PROHIBITION ON COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES

The Contractor, by entering into this Contract certifies that, consistent with 2 CFR § 200.216 it will not use "covered telecommunications equipment or services" (as that term is defined in Section 889 of Public Law 115-232) if such equipment or services will be used as a substantial or essential component of any system or as critical technology as part of any system provided under this Contract. The Contractor will include a requirement not to use such "covered telecommunications equipment or services" in any subcontracts let under this Contract.

As used in this clause "Substantial or Essential Component" means any component necessary for the proper function or performance of a piece of equipment, system, or service.

"Covered telecommunications equipment or services" as used in this clause, includes but is not limited to:

- i. telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- ii. 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).
- iii. Telecommunications or video surveillance services provided by such entities listed in (i) or (ii) of this Article or using such equipment provided by entities listed in (i) or (ii) of this Article.
- iv. 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.

1.26 FOREIGN MARKET RESTRICTIONS

In consistent with 49 CFR Part 30, the Contractor shall not knowingly enter into any subcontract under this contract: (1) With a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (U.S.T.R.); or (2) for the supply of any product for use on the Federal Public works project under this contract that is produced or manufactured in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

ARTICLE 2: DISADVANTAGED BUSINESS ENTERPRISE

DISADVANTAGED BUSINESS ENTERPRISE (LOCAL GOVERNMENT AGENCIES)

(10-16-07)(Rev. 10-21-25)

102-15(J)

SP1 G63

The purpose of this Special Provision is to carry out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with Federal funds. This provision is guided by 49 CFR Part 26.

Definitions

Additional DBE Subcontractors - Any DBE submitted at the time of bid that will not be used to meet the DBE goal. No submittal of a Letter of Intent is required.

Committed DBE Subcontractor - Any DBE submitted at the time of bid that is being used to meet the DBE goal by submission of a Letter of Intent. Or any DBE used as a replacement for a previously committed DBE firm.

Contract Goal Requirement - The approved DBE participation at time of award, but not greater than the advertised contract goal.

DBE Goal - A portion of the total contract, expressed as a percentage, that is to be performed by committed DBE subcontractor(s).

Disadvantaged Business Enterprise (DBE) - A firm certified as a Disadvantaged Business Enterprise through the North Carolina Unified Certification Program.

Goal Confirmation Letter - Written documentation from **LGA** to the bidder confirming the Contractor's approved, committed DBE participation along with a listing of the committed DBE firms.

Local Government Agencies (LGA) - The entity letting the contract.

Manufacturer - A firm that owns (or leases) and operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor. A firm that makes minor modifications to the materials, supplies, articles, or equipment is not a manufacturer.

Regular Dealer - A firm that owns (or leases), and operates a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in sufficient quantities, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, concrete or concrete products, gravel, stone, asphalt and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Any supplement of regular dealers' own distribution equipment shall be by a long-term operating lease and not on an ad hoc or contract-by-contract basis.

Distributor - A firm that engages in the regular sale or lease of the items specified by the contract. A distributor assumes responsibility for the items it purchases once they leave the point of origin (e.g., a manufacturer's facility), making it liable for any loss or damage not covered by the carrier's insurance.

Replacement / Substitution – A full or partial reduction in the amount of work subcontracted to a committed (or an approved substitute) DBE firm.

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for DBE certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients of USDOT funds in the state and not limited to the Department of Transportation only. The Certification Program is in accordance with 49 CFR Part 26.

Standard Specifications - The general term comprising all directions, provisions, and requirements contained or referred to in the *North Carolina Department of Transportation Standard Specifications for Roads and Structures* and any subsequent revisions or additions to such book.

United States Department of Transportation (USDOT) - Federal agency responsible for issuing regulations (49 CFR Part 26) and official guidance for the DBE program.

Forms and Websites Referenced in this Provision

DBE Payment Tracking System - On-line system in which the Contractor enters the payments made to DBE subcontractors who have performed work on the project. <https://apps.dot.state.nc.us/Vendor/PaymentTracking/>

DBE-IS Subcontractor Payment Information - Form for reporting the payments made to all DBE firms working on the project. This form is for paper bid projects only. <https://connect.ncdot.gov/business/Turnpike/Documents/Form%20DBE-IS%20Subcontractor%20Payment%20Information.pdf>

RF-1 DBE Replacement Request Form - Form for replacing a committed DBE. <https://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Form%20and%20Instructions.pdf>

SAF Subcontract Approval Form - Form required for approval to sublet the contract. <https://connect.ncdot.gov/projects/construction/Construction%20Forms/SAF%20Form%20-%20Subcontract%20Approval%20Form%20Revised%2004-19.xlsm>.

JC-1 Joint Check Notification Form - Form and procedures for joint check notification. The form acts as a written joint check agreement among the parties providing full and prompt disclosure of the expected use of joint checks. <http://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf>

Letter of Intent - Form signed by the Contractor and the DBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed DBE for the estimated amount (based on quantities and unit prices) listed at the time of bid. <http://connect.ncdot.gov/letting/LetCentral/Letter%20of%20Intent%20to%20Perform%20as%20a%20Subcontractor.pdf>

Listing of DBE Subcontractors Form - Form for entering DBE subcontractors on a project that will meet this DBE goal. This form is for paper bids only. [http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20\(Federal\).docx](http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20(Federal).docx)

Subcontractor Quote Comparison Sheet - Spreadsheet for showing all subcontractor quotes in the work areas where DBEs quoted on the project. This sheet is submitted with good faith effort packages.

<http://connect.ncdot.gov/business/SmallBusiness/Documents/DBE%20Subcontractor%20Quote%20Comparison%20Example.xls>

DBE Regular Dealer/Distributor Affirmation Form – Form is used to make a preliminary counting determination for each DBE listed as a regular dealer or distributor to assess its eligibility for 60 or 40 percent credit, respectively of the cost of materials or supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor, as defined in section 49 CFR 26.55 under the contract at issue. A Contractor will submit the completed form with the Letter of Intent.

<https://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20Regular%20Dealer-Distributor%20Affirmation%20Form%20-%20USDOT%202024.pdf>

DBE Goal

There is NO goal for participation by Disadvantaged Business Enterprises for this contract.

Directory of Transportation Firms (Directory)

Real-time information is available about firms doing business with the NCDOT and firms that are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as DBE certified shall be used to meet the DBE goal. The Directory can be found at the following link. <https://www.ebs.nc.gov/VendorDirectory/default.html>

The listing of an individual firm in the directory shall not be construed as an endorsement of the firm's capability to perform certain work.

Listing of DBE Subcontractors

At the time of bid, bidders shall submit all DBE participation that they anticipate to use during the life of the contract. Only those identified to meet the DBE goal will be considered committed, even though the listing shall include both committed DBE subcontractors and additional DBE subcontractors. Additional DBE subcontractor participation submitted at the time of bid will be used toward the overall race-neutral goal. Only those firms with current DBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of DBE participation. The Contractor shall indicate the following required information:

(A) *If the DBE goal is more than zero,*

- (1) Bidders, at the time the bid proposal is submitted, shall submit a listing of DBE participation, including the names and addresses on *Listing of DBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the DBE participation for the contract.
- (2) If bidders have no DBE participation, they shall indicate this on the *Listing of DBE Subcontractors* by entering the word "None" or the number "0." This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation.** Bids submitted that do not have DBE participation indicated on the appropriate form will not be read publicly during the opening of bids. **City of Charlotte** will not consider these bids for award and the proposal will be rejected.
- (3) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

- (B) *If the DBE goal is zero, entries on the Listing of DBE Subcontractors are not required, however any DBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.*

DBE Prime Contractor

When a certified DBE firm bids on a contract that contains a DBE goal, the DBE firm is responsible for meeting the goal or making good faith efforts to meet the goal, just like any other bidder. In most cases, a DBE bidder on a contract will meet the DBE goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the DBE bidder and any other DBE subcontractors will count toward the DBE goal. The DBE bidder shall list itself along with any DBE subcontractors, if any, in order to receive credit toward the DBE goal.

For example, if the DBE goal is 45% and the DBE bidder will only perform 40% of the contract work, the prime will list itself at 40%, and the additional 5% shall be obtained through additional DBE participation with DBE subcontractors or documented through a good faith effort.

DBE prime contractors shall also follow Sections A or B listed under *Listing of DBE Subcontractor* just as a non-DBE bidder would.

Written Documentation – Letter of Intent

The bidder shall submit written documentation for each DBE that will be used to meet the DBE goal of the contract, indicating the bidder's commitment to use the DBE in the contract. This documentation shall be submitted on the NCDOT's form titled *Letter of Intent*.

The documentation shall be received in the office of the **City of Charlotte** no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the **City Contracting Officer** no later than 10:00 a.m. on the next official state business day.

If the bidder fails to submit the Letter of Intent from each committed DBE to be used toward the DBE goal, or if the form is incomplete (i.e. both signatures are not present), the DBE participation will not count toward meeting the DBE goal. If the lack of this participation drops the commitment below the DBE goal, the Contractor shall submit evidence of good faith efforts, completed in its entirety, to the **City Contracting Officer** no later than 2:00 p.m. on the eighth calendar day following opening of bids, unless the eighth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the **City Contracting Officer** no later than 10:00 a.m. on the next official state business day.

Submission of Good Faith Effort

If the bidder fails to meet or exceed the DBE goal, the apparent lowest responsive bidder shall submit to **City of Charlotte** documentation of adequate good faith efforts made to reach the DBE goal.

One complete set of this information shall be received in the office of the **City Contracting Officer** no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the **City Contracting Officer** no later than 10:00 a.m. on the next official state business day.

Note: Where the information submitted includes repetitious solicitation letters, it will be acceptable to submit a representative letter along with a distribution list of the firms that were solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

Consideration of Good Faith Effort for Projects with DBE Goals More Than Zero

Adequate good faith efforts mean that the bidder took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be expected to obtain sufficient DBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought DBE participation. Mere *pro forma* efforts are not considered good faith efforts.

City of Charlotte will consider the quality, quantity, and intensity of the different kinds of efforts a bidder has made. Listed below are examples of the types of actions a bidder will take in making a good faith effort to meet the goal and are not intended to be exclusive or exhaustive, nor is it intended to be a mandatory checklist.

- (A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the DBEs to respond to the solicitation. Solicitation shall provide the opportunity to DBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
- (B) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved.
 - (1) Where appropriate, break out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - (2) Negotiate with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be sublet includes potential for DBE participation (2nd and 3rd tier subcontractors).
- (C) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (D)
 - (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
 - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE 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 a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime 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. Bidding contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

- (E) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local 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. Contact within 7 days from the bid opening NCDOT's Business Opportunity and Work Force Development Unit at BOWD@ncdot.gov to give notification of the bidder's inability to get DBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the DBE goal.

In addition, **City of Charlotte** may take into account the following:

- (1) Whether the bidder's documentation reflects a clear and realistic plan for achieving the DBE goal.
- (2) The bidders' past performance in meeting the DBE goals.
- (3) The performance of other bidders in meeting the DBE goal. For example, when the apparent successful bidder fails to meet the DBE goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the DBE goal, but meets or exceeds the average DBE participation obtained by other bidders, **City of Charlotte** may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

If **City of Charlotte** does not award the contract to the apparent lowest responsive bidder, **City of Charlotte** reserves the right to award the contract to the next lowest responsive bidder that can satisfy to **City of Charlotte** that the DBE goal can be met or that an adequate good faith effort has been made to meet the DBE goal.

Non-Good Faith Appeal

The **City Contracting Officer** will notify the Contractor verbally and in writing of non-good faith. A Contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a Contractor wishes to

appeal the determination made by the Committee, they shall provide written notification to the **City Contracting Officer**. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

Counting DBE Participation Toward Meeting DBE Goal

(A) Participation

The total dollar value of the participation by a committed DBE will be counted toward the contract goal requirement. The total dollar value of participation by a committed DBE will be based upon the value of work performed by the DBE and the actual payments to DBE firms by the Contractor.

(B) Joint Checks

Prior notification of joint check use shall be required when counting DBE participation for services or purchases that involves the use of a joint check. Notification shall be through submission of Form JC-1 (*Joint Check Notification Form*) and the use of joint checks shall be in accordance with the NCDOT's Joint Check Procedures.

(C) Subcontracts (Non-Trucking)

A DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted toward the contract goal requirement. Work that a DBE subcontracts to a non-DBE firm does not count toward the contract goal requirement. If a DBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the DBE is not performing a commercially useful function. The DBE may present evidence to rebut this presumption to **City of Charlotte**. **City of Charlotte's** decision on the rebuttal of this presumption is subject to review by the Federal Highway Administration but is not administratively appealable to USDOT.

(D) Joint Venture

When a DBE performs as a participant in a joint venture, the Contractor may count toward its contract goal requirement a portion of the total value of participation with the DBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the DBE performs with its forces.

(E) Manufacturer, Regular Dealer, Distributor

A Contractor may count toward its DBE requirement 40 percent of its expenditures for materials or supplies (including transportation costs) from a DBE distributor, 60 percent of its expenditures for materials or supplies (including transportation costs) from a DBE regular dealer and 100 percent of such expenditures obtained from a DBE manufacturer.

A Contractor may count toward its DBE requirement the following expenditures to DBE firms that are not manufacturers, regular dealers or distributors:

- (1) The 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, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.

- (2) With respect to materials or supplies purchased from a DBE, which is neither a manufacturer, regular dealer, nor a distributor count the entire amount of fees or commissions charged that the Department deems to be reasonable, including transportation charges for the delivery of materials or supplies. Do not count any portion of the cost of the materials and supplies themselves.

A Contractor will submit a completed *DBE Regular Dealer/Distributor Affirmation Form* with the Letter of Intent to the **City Contracting Officer**. The **City Contracting Officer** will forward to the State Contractor Utilization Engineer or DBE@ncdot.gov. The State Contractor Utilization Engineer will make a preliminary assessment as to whether a DBE supplier has the demonstrated capacity to perform a commercially useful function (CUF) on a contract-by-contract basis *prior* to its participation.

Commercially Useful Function

(A) DBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to DBEs that perform a commercially useful function in the work of a contract. 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 performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE shall 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, **City of Charlotte** will 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 performing and the DBE credit claimed for its performance of the work, and any other relevant factors.

(B) DBE Utilization in Trucking

The following factors will be used to determine if a DBE trucking firm is performing a commercially useful function:

- (1) The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting DBE goals.
- (2) The DBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) 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.
- (4) The DBE may subcontract the work to another DBE firm, including an owner-operator who is certified as a DBE. The DBE who subcontracts work to another DBE receives credit for the total value of the transportation services the subcontracted DBE provides on the contract.
- (5) The DBE may also subcontract the work to a non-DBE firm, including from an owner-operator. The DBE who subcontracts the work to a non-DBE is entitled to credit for the total value of transportation services provided by the

non-DBE subcontractor not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the DBE and the Contractor will not count towards the DBE contract requirement.

- (6) A DBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the DBE has exclusive use of and control over the truck. This requirement 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. This type of lease may count toward the DBE's credit as long as the driver is under the DBE's payroll.
- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the DBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

DBE Replacement

When a Contractor has relied on a commitment to a DBE subcontractor (or an approved substitute DBE subcontractor) to meet all or part of a contract goal requirement, the contractor shall not terminate the DBE subcontractor or any portion of its work for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another DBE subcontractor, a non-DBE subcontractor, or with the Contractor's own forces or those of an affiliate.

The Contractor must give notice in writing both by certified mail and email to the DBE subcontractor, with a copy to the **City Contracting Officer** of its intent to request to terminate a DBE subcontractor or any portion of its work, and the reason for the request. The Contractor must give the DBE subcontractor five (5) business days to respond to the Contractor's Notice of Intent to Request Termination and/or Substitution. If the DBE subcontractor objects to the intended termination/substitution, the DBE, within five (5) business days must advise the Contractor and the **City of Charlotte** of the reasons why the action should not be approved. The five-day notice period shall begin on the next business day after written notice is provided to the DBE subcontractor.

A committed DBE subcontractor may only be terminated or any portion of its work after receiving the **City of Charlotte's** written approval based upon a finding of good cause for the proposed termination and/or substitution. Good cause does not exist if the Contractor seeks to terminate a DBE or any portion of its work that it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged, or so that the Contractor can substitute another DBE or non-DBE contractor after contract award. For purposes of this section, good cause shall include the following circumstances:

- (a) The listed DBE subcontractor fails or refuses to execute a written contract;
- (b) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR parts 180, 215 and 1200 or applicable State law;
- (f) The listed DBE subcontractor is not a responsible contractor;

- (g) The listed DBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (i) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract; and
- (j) Other documented good cause that compels the termination of the DBE subcontractor.

The Contractor shall comply with the following for replacement of a committed DBE:

(A) Performance Related Replacement

When a committed DBE is terminated for good cause as stated above, an additional DBE that was submitted at the time of bid may be used to fulfill the DBE commitment. A good faith effort will only be required for removing a committed DBE if there were no additional DBEs submitted at the time of bid to cover the same amount of work as the DBE that was terminated.

If a replacement DBE is not found that can perform at least the same amount of work as the terminated DBE, the Contractor shall submit a good faith effort documenting the steps taken. Such documentation shall include, but not be limited to, the following:

- (1) Copies of written notification to DBEs that their interest is solicited in contracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.
- (2) Efforts to negotiate with DBEs for specific subbids including, at a minimum:
 - (a) The names, addresses, and telephone numbers of DBEs who were contacted.
 - (b) A description of the information provided to DBEs regarding the plans and specifications for portions of the work to be performed.
- (3) A list of reasons why DBE quotes were not accepted.
- (4) Efforts made to assist the DBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.

(B) Decertification Replacement

- (1) When a committed DBE is decertified by the NCDOT after the SAF (*Subcontract Approval Form*) has been received by the **City of Charlotte**, the **City of Charlotte** will not require the Contractor to solicit replacement DBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement but not the overall goal.
 - (i) If the DBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract. The Department may continue to count participation equal to the remaining work performed by the decertified firm which will count toward the contract goal requirement and overall goal.
 - (ii) If the DBE's ineligibility is caused solely by its acquisition by or merger with a non-DBE during the performance of the contract. The Department may not continue to count the portion of the decertified firm's performance on the contract remaining toward either the contract goal or the overall goal, even if the Contractor has executed a subcontract

with the firm or the Department has executed a prime contract with the DBE that was later decertified.

- (2) When a committed DBE is decertified prior to the **City of Charlotte** receiving the SAF (*Subcontract Approval Form*) for the named DBE firm, the Contractor shall take all necessary and reasonable steps to replace the DBE subcontractor with another DBE subcontractor to perform at least the same amount of work to meet the DBE goal requirement. If a DBE firm is not found to do the same amount of work, a good faith effort must be submitted to **City Contracting Officer** (see A herein for required documentation).

All requests for replacement of a committed DBE firm shall be submitted to the **City Contracting Officer** for approval on Form RF-1 (*DBE Replacement Request*). If the Contractor fails to follow this procedure, the Contractor may be disqualified from further bidding for a period of up to 6 months

Changes in the Work

When the **City Contracting Officer** makes changes that result in the reduction or elimination of work to be performed by a committed DBE, the Contractor will not be required to seek additional participation. When the **City Contracting Officer** makes changes that result in additional work to be performed by a DBE based upon the Contractor's commitment, the DBE shall participate in additional work to the same extent as the DBE participated in the original contract work.

When the **City Contracting Officer** makes changes that result in extra work, which has more than a minimal impact on the contract amount, the Contractor shall seek additional participation by DBEs unless otherwise approved by the **City Contracting Officer**.

When the **City Contracting Officer** makes changes that result in an alteration of plans or details of construction, and a portion or all of the work had been expected to be performed by a committed DBE, the Contractor shall seek participation by DBEs unless otherwise approved by the **City Contracting Officer**.

When the Contractor requests changes in the work that result in the reduction or elimination of work that the Contractor committed to be performed by a DBE, the Contractor shall seek additional participation by DBEs equal to the reduced DBE participation caused by the changes.

Reports and Documentation

A SAF (*Subcontract Approval Form*) shall be submitted for all work which is to be performed by a DBE subcontractor. **City of Charlotte** reserves the right to require copies of actual subcontract agreements involving DBE subcontractors.

When using transportation services to meet the contract commitment, the Contractor shall submit a proposed trucking plan in addition to the SAF. The plan shall be submitted prior to beginning construction on the project. The plan shall include the names of all trucking firms proposed for use, their certification type(s), the number of trucks owned by the firm, as well as the individual truck identification numbers, and the line item(s) being performed.

Within 30 calendar days of entering into an agreement with a DBE for materials, supplies or services, not otherwise documented by the SAF as specified above, the Contractor shall furnish the **City Contracting Officer** a copy of the agreement. The documentation shall also indicate the percentage (60% or 100%) of expenditures claimed for DBE credit.

Reporting Disadvantaged Business Enterprise Participation

The Contractor shall provide the **City Contracting Officer** with an accounting of payments made to all DBE firms, including material suppliers and contractors at all levels (prime, subcontractor, or second tier subcontractor). This accounting shall be furnished to the **City Contracting Officer** for any given month by the end of the following month. Failure to submit this information accordingly may result in the following action:

- (A) Withholding of money due in the next partial pay estimate; or
- (B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

While each contractor (prime, subcontractor, 2nd tier subcontractor) is responsible for accurate accounting of payments to DBEs, it shall be the prime contractor's responsibility to report all monthly and final payment information in the correct reporting manner.

Failure on the part of the Contractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from further bidding until the required information is submitted.

Failure on the part of any subcontractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from being approved for work on future projects until the required information is submitted.

Contractors reporting transportation services provided by non-DBE lessees shall evaluate the value of services provided during the month of the reporting period only.

At any time, the **City Contracting Officer** can request written verification of subcontractor payments.

The Contractor shall report the accounting of payments on the NCDOT's DBE-IS (*Subcontractor Payment Information*) with each invoice. Invoices will not be processed for payment until the DBE-IS is received.

Failure to Meet Contract Requirements

Failure to meet contract requirements in accordance with Subarticle 102-15(J) of the *Standard Specifications* may be cause to disqualify the Contractor.

00 60 00 – PROJECT FORMS

CONTRACTOR'S AFFIDAVIT

RELEASE AND WAIVER OF CLAIM

STATE OF: _____ **COUNTY OF:** _____

_____,
(Name) (Title)
_____, being first duly sworn, deposes and says that:
(Contractor)

1. The undersigned is authorized to execute this Affidavit, Release and Waiver of Claim on behalf of the Contractor and has personal knowledge of all facts set forth herein;
2. This Affidavit, Release and Waiver of Claim is made concerning the construction of the following project:

Project Name: Safe Street for All (SS4A) Phase 1

Project No.: PMES231813A

3. All payrolls, material bills, sales tax, social security tax, state and federal unemployment insurance, and all other liabilities and taxes owed by the Contractor and arising in any manner from the above-described project have been paid in full;
4. No claim or lien exists in favor of any supplier of materials or labor or in favor of any subcontractor furnishing materials or labor on the above-described project;
5. Notwithstanding the foregoing, if the City of Charlotte or property of the City of Charlotte is subject to any claim or lien which arises in any manner from the failure of the Contractor to pay any liability described above, the Contractor will indemnify and hold the City of Charlotte harmless for any amount which the City of Charlotte is required to pay to discharge such lien or settle such claim and further will pay the City of Charlotte's expenses, costs, and attorney fees incurred in connection therewith;
6. All claims, suits, and proceedings of every name, description, or nature arising out of the above project against the City of Charlotte, its officers, employees and agents have been settled;
7. The Contractor releases and waives any and all claims of every type and description which the Contractor may have against the City of Charlotte arising in any manner from the construction of the above-described project.

(Contractors Signature)

Subscribed and sworn to before me this _____ day of _____ 20____

Signature of Notary Public _____

of _____ County

State of _____

My Commission Expires: _____

Contract No. _____
County _____

Rev. 10-31-24

CITY OF CHARLOTTE

CONTRACT PERFORMANCE BOND

Date of Performance Bond

Execution: _____

Name of Principal Contractor: _____

Name of Surety: _____

Name of Contracting Body: **City of Charlotte**

Charlotte, North Carolina

Amount of Bond: _____

Contract ID No.: _____

County Name: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

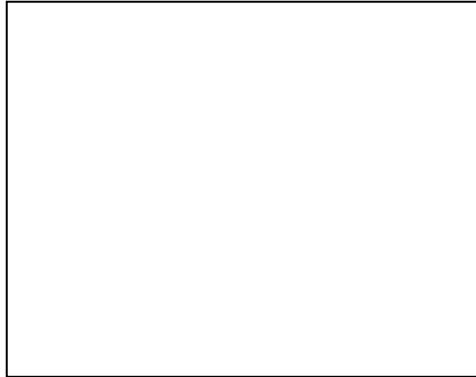
IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Affix Seal of Surety Company



Print or type Surety Company Name NAIC #

By _____
Print, stamp or type name of Attorney-in-Fact

Signature of Attorney-in-Fact

Signature of Witness

Print or type Signer's name

Address of Attorney-in-Fact

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Corporation

SIGNATURE OF CONTRACTOR (Principal)

Full name of Corporation

Address as prequalified

By _____
Signature of **President, Vice President, Assistant Vice**

President

Select appropriate title



Affix Corporate Seal

Print or type Signer's name

Attest _____
Signature of **Secretary, Assistant Secretary**
Select appropriate title

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Limited Liability Company

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Full name of Firm

Address as prequalified

By:

Signature of **Member, Manager, Authorized Agent**
Select appropriate title

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Individual Doing Business under a Firm Name

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Individual Name

Trading and doing business as

Full name of Firm

Address as prequalified

Signature of Contractor

Individually

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Individual Doing Business in His Own Name

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor _____
Print or type Individual name

Address as prequalified

Signature of Contractor _____
Individually

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Partnership

SIGNATURE OF CONTRACTOR (Principal)

Full name of Partnership

Address as prequalified

By

Signature of Partner

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND
Joint Venture (2) or (3)
SIGNATURE OF CONTRACTORS (Principal)

Instructions to Bidders: **2 Joint Ventures**, Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3), (4) and execute. On Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *NCDOT Standard Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name

Print or type Signer's name

If Corporation, affix Corporate Seal

and

(3) _____
Name of Contractor

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name

Print or type Signer's name

If Corporation, affix Corporate Seal

and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

Address as prequalified

Signature of Witness or Attest

By

Signature of Contractor

Print or type Signer's name

Print or type Signer's name

If Corporation, affix Corporate Seal

CORPORATE SEAL(S)

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PERFORMANCE BOND

Attach certified copy of Power of Attorney to this sheet

Contract No. _____
County _____

Rev. 10-31-24

CITY OF CHARLOTTE

CONTRACT PAYMENT BOND

Date of Payment Bond Execution _____

Name of Principal Contractor _____

Name of Surety: _____

Name of Contracting Body: **City of Charlotte** _____

Charlotte, North Carolina _____

Amount of Bond: _____

Contract ID No.: _____

County Name: _____

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

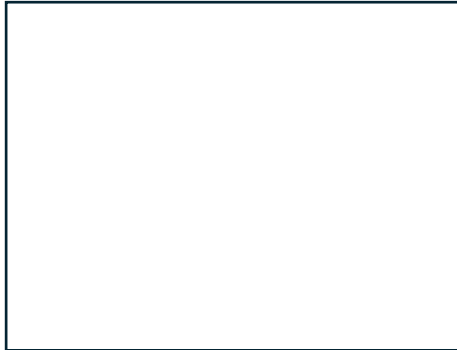
IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

Affix Seal of Surety Company



Print or type Surety Company Name NAIC #

By _____
Print, stamp or type name of Attorney-in-Fact

Signature of Attorney-in-Fact

Signature of Witness

Print or type Signer's name

Address of Attorney-in-Fact

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

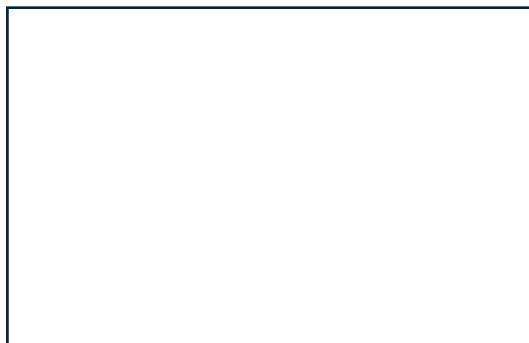
CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

Full name of Corporation

Address as prequalified

By _____
Signature of **President, Vice President, Assistant Vice President**
Select appropriate title



Affix Corporate Seal

Print or type Signer's name

Attest _____
Signature of **Secretary, Assistant Secretary**
Select appropriate title

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Full name of Firm

Address as prequalified

By: _____
Signature of **Member, Manager, Authorized Agent**
Select appropriate title

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Print or type Individual Name

Trading and doing business as

Full name of Firm

Address as prequalified

Signature of Contractor

Individually

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor

Print or type Individual name

Address as prequalified

Signature of Contractor

Individually

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

PARTNERSHIP

SIGNATURE OF CONTRACTOR (Principal)

Full name of Partnership

Address as prequalified

By _____
Signature of Partner

Print or type Signer's name

Signature of Witness

Print or type Signer's name

Rev. 10-31-24

Instructions to Bidders: 2 Joint Ventures, Fill in lines (1), (2) and (3) and execute. 3 Joint Venturers Fill in lines (1), (2), (3), (4) and execute. On Line (1), print or type the name of Joint Venture. On line (2), print or type the name of one of the joint venturers and execute below in the appropriate manner required by Article 102-8 of the *Standard Specifications*. On Line (3), print or type the name of second joint venturer and execute below in the appropriate manner required by said article of the Specifications. On Line (4), print or type the name of the third joint venturer, if applicable and execute below in the appropriate manner required by said article of the Specifications. This form of execution must be strictly followed.

If Corporation, affix Corporate Seal and

If Corporation, affix Corporate Seal and

If Corporation, affix Corporate Seal

00 60 00- 19

Contract No. _____
County _____

Rev. 10-31-24

CONTRACT PAYMENT BOND

Attach certified copy of Power of Attorney to this sheet

**STATE / COUNTY
SALES / USE
TAX STATEMENT**

PROJECT: Safe Streets for All (SS4A) Phase 1

CONTRACTOR/ SUBCONTRACTOR: _____

PERIOD COVERED: _____ PAGE: _____ of _____

Invoice No.	Invoice Date	Vendor's Name	City Vendor No.	Amount Before Taxes	NC Tax	County Tax	Total Invoice Amount	County Paid
Subtotal (Page 1)				\$	\$	\$	\$	
Plus total cost of material withdrawn from our warehouse stock								
Grand Total				\$	\$	\$	\$	

I certify that the above listed vendors were paid sales tax upon purchases of building material 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 of tangible personal property purchased by such contractors for use in performing the contract which does not annex to, affix to, or in some manner become a part of the project, building, structure or repairs included in the above list.

Signed: _____

Subscribed and sworn to before me this _____ day of _____ 20__

Signature of Notary Public _____

of _____ County

State of _____

My Commission Expires: _____

Form DBE-IS

City of Charlotte
600 East Fourth Street
Charlotte, NC 28202

[illegible]

Total Amount Paid to Subcontractor Firms \$

I certify that this information accurately reflects actual payments made and the dates the payments were made to Subcontractors/Subconsultants/Material Suppliers on the above referenced project.

Signature _____ Title: _____

Print Name _____

04/2019 SPPPF030

INSPECTION RECORD FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000
SELF-INSPECTION RECORD FOR LAND DISTURBING ACTIVITIES PER § 113A-54.1
RESPONSE FOR EROSION CONTROL FORM 1675

PROJECT LOCATION
LEVEL II SUPERVISOR
CONTRACTOR

TIP/WBS#
COUNTY

All erosion and sedimentation control measures and stormwater discharge outfalls must be inspected once per seven calendar days AND within 24 hours of a rainfall of 1.0 inch or greater per 24-hour period. Permittee must keep a record of inspections. If using on site rain gage, complete daily rainfall measurement. If using Multi Precipitation Estimator (MPE), attach rainfall data for weekly period.

Day	Date	Rain Amt (in)	Notes
M			
T			
W			
Th			
F			
Sat			
Sun			

Exceptions to standard monitoring requirements

Idle projects: Idle projects must be inspected once every 14 calendar days and after 1.0" of rain in a 24-hour period. Idle projects are projects that have not been completed but where no construction activity occurs for 21 calendar days or more AND the entire project has been adequately stabilized with temporary vegetation pursuant to DEMLR guidelines.

Completed projects: Completed projects are those projects where work has been completed and you're waiting for the permanent vegetation to establish (i.e. waiting for the grass to grow). Completed projects must be inspected once every 30 calendar days AND within 24 hours of a rain event 1.0 inch or greater in 24 hours. The reduced monitoring can begin once construction has been completed, and erodible slopes have been sufficiently stabilized to restrain erosion by application of permanent ground cover varieties and installation of temporary ground cover to include appropriate erosion control matting and/or other approved mulch materials.

Phase of Grading (Place a check in the box of the current project phase)
Initial installation of erosion and sediment control measures
Clearing and grubbing of existing ground cover
Completion of any grading that requires groundcover
Installation of storm drainage facilities
Completion of all land disturbing activity
Establishment of permanent ground cover sufficient to restrain erosion

Has all land disturbing activity been completed? (Y/N)

Has the final permanent ground cover been completed and established? (Y/N)

By this signature, I certify (in accordance with Part IV, Section B, 6(d) of the NCG010000 permit) that this report is accurate and complete to the best of my knowledge:	
Cert. Level II Supervisor	Cert. #
NCDOT Cert. Level II Representative	
Cert. #	

Form should not be signed until the week is complete and ALL corrective actions have been completed in the 24 hour and/or 5 day time periods.

NOTE: Any erosion control device that is damaged that has the potential to lose sediment and/or pollutants offsite and/or into surface waters should be treated as "URGENT".

00 60 00- 25

RESPONSE FOR EROSION CONTROL - INSPECTOR'S DAILY REPORT
SUBSTITUTE FORM 1675[illegible]

00 70 00 – STANDARD SPECIAL PROVISIONS

Section 00 10 00 (Invitation to Bid) and Section 00 20 00 (Instructions to Bidders) are hereby incorporated and made a part of Standard Special Provisions.

ARTICLE 1: NCDOT STANDARD SPECIFICATIONS

1.1 NCDOT Standard Specifications

2024 NCDOT Specifications: The January 2024 North Carolina Department of Transportation (NCDOT) Standard Specifications for Roads and Structures, herein referred to as the “NCDOT Standard Specifications,” is part of the Contract Documents and incorporated herein by reference. The Contract Documents are intended to be complementary. In case of any conflict among the Contract Documents that cannot otherwise be resolved, the order of precedence shall be as set forth in Section 105-4 of the NCDOT Standard Specifications.

The NCDOT Standard Specifications are hereby modified as follows:

Section #	Modification
101-3	Modify the Definitions as provided in Section 00 20 00 Article 1 of this Project Manual.
102-1	Delete lines 31 through 32.
102-3	Delete lines 12 through 15.
102-7	Delete 3 rd sentence in the second paragraph and replace it with “Contact <i>City of Charlotte</i> office”
102-8	Delete 1 st sentence of the first paragraph.
102-8(A)(11)	In line 31, replace “14 calendar days” with “10 calendar days”.
102-8(B)(9)	In line 32, replace “14 calendar days” with “10 calendar days”.
102-9(C)	Delete lines 26 through 28. In line 42, replace “14 calendar days” with “10 calendar days”.
102-9(C)(2)	Delete lines 35 through 44 and replace it with the following: “Execution of Bid, Non-Collusion Certification, Debarment Certification and Gift Ban Certification forms will be included in the proposal as part of the signature sheets. Execution of the signature sheets will constitute Execution of the Bid, Non-Collusion Certification, Debarment Certification and Gift Ban Certification.”
102-10	In line 11, replace “14 calendar days” with “10 calendar days”. Delete lines 42 to 43.
102-14(A) and 103-2 (A)(4)(a)	In addition to “ <i>State Funded Projects</i> ”, these sections also apply to “ <i>City Funded Projects</i> .”
103-3(A)	Delete the reference to “ <i>North Carolina General Statute 136-28.1</i> ” and replace with the reference to “ <i>North Carolina General Statute 143-129.1</i> ”
103-3(A)(5)	Delete the “48 hours” notice of bid withdrawal and replace with “72 hours”.
103-3(B) and 103-3(C)	Delete these sections in its entirety and replace applicable procedures established in North Carolina General Statutes 143-129.1.
103-3(D)	In line 25, replace “14 calendar days” with “10 calendar days”.
103-7	In line 38, replace “14 calendar days” with “10 calendar days”.
103-9	In line 2, replace “14 calendar days” with “10 calendar days”.
104-8(A)(1)	Delete line 23 through 29 and replace with the following: When the Engineer and the Contractor agree to the prices to be paid, the agreement will set forth in a change order. The Contractor may begin work by written authorization from Engineer before executing the change order.

104-12	Modify the 3 rd sentence of the 1 st paragraph as follows: "This specification applies to proposals submitted by the Contractor using the Value Engineering Proposal (VEP) Submittal Form on the Department's website or equivalent."
104-12(B)	Delete following part from line 20: "the Value Management Office"
104-12(D)	Delete following part from line 2-3: "the Value Management Office at ValueManagementUnit@ncdot.gov"
104-12(E)	Delete following part from line 23: "and the State Value Management Engineer at ValueManagementUnit@ncdot.gov"
104-12(F)	Delete lines 39 through 41 and replace with the followings: "In addition to the technical review, a Design-Build VEP will be reviewed by the City for fairness of approximate savings noted by the Contractor."
104-13	Modify the 2 nd sentence of the 3 rd paragraph as follows: "This proposal shall be submitted to the Engineer."
107-1	Delete lines 37 through 41 in its entirety and replace it with City's Commercial Non-Discrimination Policy of Section 00 70 00 of this Project Manual.
108-4	Insert the following after Line 29: The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the construction conference.
108-10(B)(5)	Delete this section in its entirety.
109-8	Delete this section in its entirety. Fuel Price Adjustments will not apply to this project.
109-11	Delete this section "Interest on Final Payment" in its entirety.

1.2 HAUL ROADS

(7-16-24)

105

SP1 G04

Revise the *Standard Specifications* as follows:

Page 1-45, Article 105-15 RESTRICTION OF LOAD LIMITS, line 31, add the following after second sentence of the second paragraph:

At least 30 days prior to use, the Contractor shall notify the Engineer of any public road proposed for use as a haul road for the project.

1.3 CLEARING AND GRUBBING - METHOD II

(9-17-02) (Rev. 3-19-24)

200

SP2 R02A

Perform clearing on this project to the limits established by Method - II shown on Standard Drawing No. 200.02 of the *Roadway Standard Drawings*. Conventional clearing methods may be used except where permit drawings or conditions have been included in the proposal which require certain areas to be cleared by hand methods.

1.4 BURNING RESTRICTIONS

(7-1-95)

200, 210, 215

SP2 R05

Open burning is not permitted on any portion of the right-of-way limits established for this project. Do not burn the clearing, grubbing or demolition debris designated for disposal and generated from the project at locations within the project limits, off the project limits or at any waste or borrow sites in this county. Dispose of the clearing, grubbing and demolition debris by means other than burning, according to state or local rules and regulations.

1.5 SHOULDER AND FILL SLOPE MATERIAL

(5-21-02)(Rev. 1-16-24)

235, 560

SP2 R45 A

Description

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the *Standard Specifications*.

Measurement and Payment

Where the material has been obtained from an authorized stockpile or from a borrow source and *Borrow Excavation* is not included in the contract, no direct payment will be made for this work, as the cost of this work will be part of the work being paid at the contract lump sum price for *Grading*. If *Borrow Excavation* is included in this contract and the material has been obtained from an authorized stockpile or from a borrow source, measurement and payment will be as provided in Section 230 of the *Standard Specifications* for *Borrow Excavation*.

1.6 GLASS BEAD GRADATION FOR PAVEMENT MARKINGS

(9-17-24)

1087

SP10 R87

Revise the *Standard Specifications* as follows:

Page 10-187, Subarticle 1087-4(C), Gradation & Roundness, after line 6, delete and replace Table 1087-2 with the following:

TABLE 1087-2 GLASS BEAD GRADATION REQUIREMENTS		
Sieve Size	Gradation Requirements	
	Minimum	Maximum
Passing #20	100%	--
Retained on #30	5%	15%
Retained on #50	40%	80%
Retained on #80	15%	40%
Passing #80	0%	10%
Retained on #200	0%	5%

1.7 ELECTRICAL JUNCTION BOXES

(6-18-24)

1091

SP10 R91

Revise the *Standard Specifications* as follows:

Page 10-209, Subarticle 1091-5(A) General, add the following after line 27:

Boxes and covers shall meet all requirements and specifications of ANSI/SCTE 77. Structural load tests shall meet the Tier 15 application type.

Page 10-209, Subarticle 1091-5(B) Polymer Concrete (PC) Junction Boxes, lines 28, delete and replace the subarticle title with the following:

(B) Polymer Concrete (PC), Composite and Thermoplastic Junction Boxes

Page 10-209, Subarticle 1091-5(B) Polymer Concrete (PC) Junction Boxes, add the following after line 28:

For PC junction boxes, use polymer concrete material made of an aggregate consisting of sand and gravel bound together with a polymer and reinforced with glass strands to fabricate box and cover components.

Page 10-209, Subarticle 1091-5(B) Polymer Concrete (PC) Junction Boxes, line 29 replace "polymer concrete (PC) boxes" with "junction boxes".

Page 10-209, Subarticle 1091-5(B) Polymer Concrete (PC) Junction Boxes, lines 31-37, delete the second and third paragraph.

Page 10-209, Subarticle 1091-5(B) Polymer Concrete (PC) Junction Boxes, lines 40-41, delete the fourth sentence of the fourth paragraph and replace with the following:

Bodies of junction boxes shall be a single piece.

Polymer concrete, composite and thermoplastic junction boxes are not required to be listed electrical devices.

1.8 ERRATA

(1-16-24)(Rev.6-16-26)

Z-4

Revise the *2024 Standard Specifications* as follows:

Division 1

Page 1-1, Article 101-2 ABBREVIATIONS, line 25, replace "American Wood-Preservers' Association" with "American Wood Protection Association".

Page 1-18, Article 102-10 BID BOND OR BID DEPOSIT, line 26, replace " Subarticle 102-8(A)(8)(b)" with "Subarticle 102-8(A)(12)(b)".

Page 1-20, Subarticle 102-14(A) State Funded Projects, line 3, replace "\$30,000" with "\$40,000".

Page 1-20, Subarticle 102-14(B) Federal Aid Projects, line 7, replace "\$30,000" with "\$40,000".

Page 1-36, Subarticle 104-12(B) Evaluation of Proposals, line 21, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-36, Subarticle 104-12(D) Preliminary Review, line 37, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(E) Final Proposal, line 3, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(F) Design-Build VEPs, line 36, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-38, Subarticle 104-12(G) Modifications, line 1, replace "Design-Build Unit" with "Alternative Delivery Unit".

Division 3

Page 3-5, Article 305-2 MATERIALS, after line 16, replace " 1032-3(A)(7)" with "1032-3" and add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

Page 3-6, Article 310-2 MATERIALS, after line 9, add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

Division 6

Page 6-15, Article 610-1 DESCRIPTION, line 20, replace "The work includes" with "The work includes, but is not limited to,".

Page 6-15, Article 610-1 DESCRIPTION, line 22, replace "applying the tack coat as specified." with "applying the tack coat in accordance with Section 605.".

Page 6-30, Article 610-14 DENSITY ACCEPTANCE, line 39, replace "QC process." with "QC process in accordance with Section 609.".

Page 6-31, Article 610-16 MEASUREMENT AND PAYMENT, line 13, replace "Hot Mix Asphalt Pavement" with "Asphalt Concrete _____ Course, Type _____".

Page 6-50, Subarticle 661-4(A) Equipment, lines 4-7, replace the first two sentences of the seventh paragraph with the following:

When an erected fixed stringline is utilized for longitudinal profile and cross slope control furnish and erect the necessary guide line for the equipment.

Division 7

Page 7-18, Subarticle 710-10(A) General, lines 7-8, delete "for Surface Testing Concrete Pavement" from the last paragraph.

Division 8

Page 8-27, Article 846-1 DESCRIPTION, line 8, delete "4 inch" from the first paragraph.

Division 9

Page 9-17, Article 904-4 MEASUREMENT AND PAYMENT, prior to line 1, replace " Sign Erection, Relocate Type (Ground Mounted)" with "Sign Erection, Relocate Type ____ (Ground Mounted)".

Division 10

Page 10-51, Article 1024-4 WATER, prior to line 1, delete the "unpopulated blank row" in Table 1024-2 between "Time of set, deviation from control" and "Chloride Ion Content, Max.".

Page 10-170, Subarticle 1081-1(C) Requirements, line 4, replace "maximum" with "minimum".

Division 11

Page 11-15, Article 1160-4 MEASUREMENT AND PAYMENT, line 24, replace "Where barrier units are moved more than one" with "Where barrier units are moved more than once".

Division 15

Page 15-10, Article 1515-4 MEASUREMENT AND PAYMENT, lines 11, replace " All piping" with "All labor, the manhole, other materials, excavation, backfilling, piping".

Division 16

Page 16-14, Article 1633-5 MEASUREMENT AND PAYMENT, line 20-24 and prior to line 25, delete and replace with the following " *Flocculant* will be measured and paid in accordance with Article 1642-5 applied to the temporary rock silt checks."

Page 16-3, Article 1609-2 MATERIALS, after line 26, replace "Type 4" with "Type 4a".

Page 16-25, Article 1644-2 MATERIALS, after line 22, replace "Type 4" with "Type 4a".

Page 16-27, Article 1644-5 MEASUREMENT AND PAYMENT, line 31, replace "Article 1630-4" with "Article 1630-3".

Division 17

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 23, delete and replace "1.25" with "1-1/4".

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 24, delete and replace "(1.25" with ", 1-1/4".

ARTICLE 2: CITY STANDARD PROVISIONS

2.1 Curb and Gutter Tapers and Transitions

The Contractor shall be responsible for constructing concrete curb and gutter end tapers and concrete curb and gutter transitions as shown on the plans and in the specifications, including CLDS 10.19 curb transitions. Payment will be made at the contract unit prices of the adjacent curb and gutter for the various curb types in NCDOT Section 846, "Concrete Curb, Concrete Curb and Gutter, Concrete Gutter, Shoulder Berm Gutter, Concrete Expressway Gutter and Concrete Valley Gutter" and CLDS 10.17 "Curb and Gutter".

2.2 Pipe Culverts

Materials

All rigid pipe shall be in accordance with NCDOT section 1032-6 and NCDOT section 310.

Joint Wrap

All rigid pipe shall be installed per NCDOT section 300-6 (A) except that all pipe shall have Type 2 filtration geotextile wrapped around all pipe joints. Extend geotextile at least 12" beyond each side of the joint, overlap ends by 12" minimum. Secure geotextile against the outside of the pipe by methods approved by the Engineer. There will be no separate measurement or payment for the joint wrapping, the price of the work will be included in the price bid for the individual line item.

Joint Wiping

Interior wiping of concrete pipe joints is prohibited. Treatment, including but not limited to, application of mortar, cement, epoxy or other materials used to seal, fill, or cover internal joint gaps without the written permission from the Engineer will not be allowed. Prior to acceptance, the interior surface of the pipe including the joints, shall be 100% visible for inspection. Any material found to be obstructing the evaluation of the condition of the joint may result in pipe replacement, may require an exterior collar or may require internal joint and/or pipe lining at the contractor's expense.

Pipe Video

Pipe videos provide an opportunity to view the quality of the pipe installation and make appropriate repairs in a timely and efficient manner; view internal structural integrity of the joint, sealant and overall condition of installation that is not otherwise available through traditional inspection practices. All closed storm drainage systems will be videoed by a NASSCO certified provider by the City to evaluate the internal condition of the system. Deficiencies will be identified and provided to the Contractor for repair. Once repairs are completed, the Contractor will be responsible for the costs associated with the re-video of the repairs made, including where external repairs were performed. The City will utilize their provider for the re-video service and will deduct the invoiced amount from the final project payment.

2.3 Existing Utilities

The City has contacted and notified all involved utility owners of the effect of this Project on their respective utility. Construction plans and anticipated construction schedules have been provided to the utility owners. Each utility owner will be requested to attend the preconstruction conference to discuss potential conflicts and their schedule for relocation where required. All adjustments or relocations will be made by the utility owner unless otherwise indicated in the Contract Documents.

The owners of utilities in this Project could include:

1. Alltel / Windstream Communications
2. Duke Energy Company
3. Piedmont Natural Gas Company
4. Charlotte-Mecklenburg Utility Department

5. American Telephone & Telegraph
6. Spectrum
7. MCI Communications
8. Charlotte Department of Transportation
9. Xspedius Communications

The Contractors work shall be in accordance with NCGS 87-115, Underground Utility Safety and Damage Prevention Act” (2013-407, s 2.). To assist the Contractor and utility owners in meeting the requirements of this law, there is a service provider called “NC811.” Most major utilities with underground facilities in the State subscribe to this service.

From within North Carolina, dial 811. For calls originating outside (or inside) of North Carolina, the toll free number (800) 632-4949 may be used. NC811 can also be accessed via the Internet at <https://www.nc811.org/>.

The Contractor shall include the cost of any coordination and cooperation of utilities in his bid.

No additional compensation shall be allowed for delays or inconvenience sustained by the Contractor due to utility relocation or adjustments. No additional payment will be made for re-mobilization required by the utility’s failure to relocate a utility at the request of the Contractor.

No additional compensation will be made for excavating near or around existing utilities, for purposes of locating or for preservation. Not all utilities (underground or above ground) will be relocated. Contractor shall consider any mechanized and/or hand digging necessary to preserve integrity of utilities in his unit bid prices.

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor’s responsibility to arrange for such changes, and the Contractor shall bear all costs of such changes.

2.4 CDOT Street Maintenance Division Street Cut Regulations

The CDOT Street Maintenance Division requires that any Utility Company, Contractor, Developer, or agents thereof engaged in the excavation of streets, sidewalks, and curb and gutter in City of Charlotte street rights-of-way must ensure that;

- A street cut permit is requested and available prior to the commencement of the excavation of streets, sidewalks and curb and gutter within the Right of Way.
- During excavation and restoration activities a certified company representative is present on the job site.

Excavation certification can be obtained by attending a 4-hour class to become familiar with street cut policies, procedures and requirements for excavating and restoring Charlotte right of way infrastructure.

Once these foremen/lead persons obtain certification, they are placed on an approved Street Cut Certification List maintained by SMD.

2.5 Concrete

All concrete used on City projects will be required to meet the NCDOT Standard Specifications for Roadways and Structures. In addition the following City requirements apply:

The City of Charlotte or their Independent Testing Laboratory (ITL) will perform all testing for Slump, Air Content, Temperature, and Compressive Strength for City approved/accepted concrete mix designs.

Compressive Strength Quality Assurance for Incidental Concrete:

The following Quality Assurance Specifications shall apply only to incidental concrete used in the construction of this Project. Incidental concrete shall be defined as any concrete not used in the construction of rigid pavement or any concrete that is not an integral part of a structure. The Engineer reserves the right to reject questionable material at any time in lieu of making reduced payment.

Compressive Strength:

All incidental concrete used in the construction of this Project shall be a minimum 3600 PSI strength at twenty-eight (28) days, unless otherwise specified. No adjustment will be allowed for the required use of high-early strength concrete. When the Contractor is requested to use high-early strength concrete in certain areas, he must furnish a copy of the delivery ticket to the Project Inspector prior to allowing traffic to proceed across the item in question before the required seven (7) day curing period.

Concrete will be tested and accepted with respect to compressive strength on the basis of the average test results of concrete test cylinders. The City's testing company will prepare test cylinders in accordance with ASTM C31 and take them to their laboratory for curing and testing. The Contractor is responsible for providing adequate curing boxes, blankets, burlap, if needed. If the average strength of concrete cylinder test results fail to attain the specified minimum compressive strength at twenty-eight (28) days, but meet or exceed 70% of the minimum compressive strength, the Engineer will have the option of instructing the Contractor to replace all concrete represented by those cylinders with concrete meeting specifications or of allowing the concrete to remain in place at a reduced Contract price. The Contract Unit Price for such concrete left in place shall be reduced by the following formula:

- Reduced Unit Price = Contract Unit Price x $\frac{\text{Avg. Strength of Test Cylinders at 28 Days}}{\text{Specified Minimum Compressive Strength}}$

In the event that concrete cylinder tests fail to meet minimum compressive strengths at twenty-eight (28) days, the Contractor will have the option of taking cores from the concrete in question at the Contractor's expense. Cores must be taken and tested in accordance with ASTM C42. Cores must be taken thirty-one (31) days after placement of concrete. Cores must be taken and tested by a qualified independent testing laboratory approved by the Engineer. A minimum of three (3) cores shall be taken from questionable concrete, unless otherwise specified by the Engineer. Cores shall be taken from locations selected by the Engineer.

If the average strength of the concrete test results (cylinders and cores) fail to attain seventy percent (70%) of the specified minimum compressive strength at twenty-eight (28) days, all applicable concrete shall be rejected. The Contractor, at no additional cost to the City, shall remove the rejected concrete and replace it with concrete that meets specifications.

The Contractor must submit a Process Control plan for review by the City of Charlotte, including the name of the field person in charge for the contractor during concrete placement per the NCDOT Standard Specifications. This person must be concrete certified per ACI and NCDOT Field Level 1 Concrete.

2.6 Reclamation of Waste or Borrow Sources

All removal, disposal, and storage of waste and borrow material for this project will be required to meet the NCDOT Standard Specifications for Roadways and Structures. In addition the following City requirements apply. If any borrow or waste areas are to be utilized, it shall be the responsibility of the Contractor to notify the property owner that the property owner is responsible for any damage occurring at the site, either as part of the agreement with the Contractor, or on his own. The cost of all work of securing the borrow site, sediment control, re-grading and seeding shall be the responsibility of the property owner or contractor per their separate agreement.

The City will not participate in the cost of this reclamation work on the waste or borrow areas. Prior to final payment being made, the Contractor shall obtain a release from the property owner of the borrow or waste site utilized for the Project.

2.7 Hazardous Materials

If the Contractor encounters any materials considered or suspected of being hazardous, he shall immediately secure the area, discontinue operations, and contact the Charlotte-Mecklenburg Hazardous Materials Coordinator, telephone 704-336-2461 for further instructions. All activities shall be required to meet the NCDOT Standard Specifications for Roadways and Structures – **Section 107-25**.

2.8 Sedimentation Pollution Control Act

Certification Requirement

For projects that disturb one or more acres of land and thus require an NPDES General Stormwater Permit for Construction Activities, the prime contractor must provide an employee who has current certification in one or more of the following:

- 1) Charlotte-Mecklenburg Certified Site Inspector
- 2) NCDOT/NCSU's Level 2 Erosion and Sediment Control/Stormwater Certification
- 3) Certified Professional in Erosion and Sediment Control (EnviroCert International)
- 4) Professional Engineer

Documentation of certification shall be submitted at the contract Pre-construction Conference and prior to Notice to Proceed.

The person designated as the certified employee will be responsible for doing the following as it relates to the project:

- Complete erosion control inspection records as specified in the NPDES General Stormwater Permit for Construction Activities and provide copies of records to the City.
- Coordinate the performance of corrective maintenance to erosion and sediment control measures that are found to not be functioning as intended to minimize sediment loss. Discuss corrective actions deemed necessary with the City's Construction Inspector prior to conducting the work.
- Immediately notify the City's Construction Inspector of visible sediment deposition from the project site into any water body or wetland. Such discharges must be reported to the NC Department of Environmental Quality within 24 hours of discovery.

Financial Responsibility

If this project is subject to the "North Carolina Department of Environmental Quality Sediment Pollution Control Act", the City has already acquired the permit. The Contractor, upon recommendation of award shall complete Part B of the Financial Responsibility/Ownership form provided by the City. The City will then transfer financial responsibility of the erosion control permit to the Contractor. The City of Charlotte will pay the cost of the application fees. The Contractor will be responsible for any fines levied for violation of the approved erosion control plan.

2.9 Construction Stakes, Lines, and Grades

Construction stakes, lines and grades will be provided by the City in accordance with **Section 105-9** of the NCDOT Standard Specifications. Surveying will be provided by the City in accordance with the current "Surveying Field Procedures Manual" of the General Services Department.

The Contractor shall request all staking at least FORTY-EIGHT (48) hours in advance of the time that the staking will be required. The Contractor shall be held responsible for the preservation of all stakes and marks, and, if any of the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost of replacing them (\$100.00 per hour) will be charged against him and will be deducted from the payment for

the work. See additional requirements for Construction Stakes, Lines and Grades under the "Traffic Control" Special Provision.

2.10 Maintenance of the Project

Maintenance of the Project shall be in accordance with **Section 104-10** of the NCDOT Standard Specifications.

The Contractor shall furnish and erect, at no additional cost to the City, whatever sidewalks, bridges, culverts, or other works as may be necessary for the protection of the public, including, but not limited to, barricades, fences, etc. and for the safe and proper execution of other public utility lines so as not to interfere therewith or damage or cause damage thereto. The Contractor shall be responsible for all damages to persons or property that occur as a result of his fault, omission, or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all work performed hereunder until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the City.

2.11 Storage of Materials and Equipment

The Contractor shall be responsible for locating and providing storage areas for construction materials and equipment. The material and equipment storage shall comply with all local and state ordinances throughout the construction period. The Contractor shall restore the storage area to its original condition upon completion of the Project or upon such time as directed by the Engineer. Such restoration shall be at no additional cost to the City.

The Contractor shall be responsible for the safeguarding of materials and equipment against fire, theft and vandalism and shall not hold the City responsible in any way for the occurrences of same. The Contractor shall furnish and erect, at no additional cost, whatever works may be necessary for the protection of the public, including but not limited to barricades, fences, etc. Prior to final payment being made, the Contractor shall obtain a release from the property owner of the storage area utilized for the Project.

2.12 Quantity Tickets

All quantity tickets for items shall be submitted to the project inspector at the time of delivery of the materials on the job. Each ticket shall indicate the date, contractor, job location and name, type of material, quantity of material, truck number and signature of the Contractor or his authorized representative.

No tickets will be accepted after the time of delivery.

2.13 Periodic Payments

The City will make partial payments based on the work progress estimates prepared by the Engineer and on the payment requests submitted by the Contractor on a monthly schedule established by the Engineer. Partial payments will be made within thirty (30) calendar days after receipt of a complete and accurate payment request. Partial payments will be approximate only and will be subject to correction in the final estimate and payment.

The Contractor shall submit the following required documents with each payment request:

1. NCDOT Erosion Control Form SPPPF0RM30;
2. Subcontractor Payment Information (NCDOT, Form DBE-IS); and
3. Sales/Use Tax Statement (provided by the City).

The Contractor shall submit an updated project schedule with every partial payment request. The schedule shall detail the entire project and incorporate a Critical Path Method (CPM) analysis that adheres to the Traffic Control Plan, or be in a format that reflects the Work Area Traffic Control Handbook and meets the approval of the Engineer. Partial payment requests that do not include an updated project schedule will be deemed incomplete and the payment request will not be processed until the updated schedule is received. In the event the Contractor fails to submit an updated schedule for a period in excess of thirty (30) days of the scheduled submission date, the

surety will be notified of the pending breach and requested to provide assistance in obtaining the schedule to avoid a declaration of default under the terms of the Contract.

For contracts less than \$50,000.00, partial payments may be made twice each month if, in the judgment of the Engineer, the amount of work performed is sufficient to warrant such payment. No partial payment will be made when the total value of the work performed since the last partial payment, excluding mobilization, is less than \$1,000.00.

Payment requests, Erosion Control Form SPPPF030, NCDOT Form DBE-IS and Sales/Use Tax Statement shall be submitted on the forms provided by the City.

The Contractor shall have a copy of his current payment request on the job site and it may be viewed by subcontractors upon request.

2.14 Final Payment

Final Payment will be made in accordance with [Section 109-9](#) and [109-10](#) of the NCDOT Standard Specifications.

The Contractor shall provide the following documents with the final pay request:

1. Contractor's Affidavit Release and Waive of Claim (form provided by the City);
2. Subcontractor Payment Information (NCDOT, Form DBE-IS);
3. State/County Sales/Use Tax Statement (form provided by the City); and
4. Consent of Surety to Final Payment (AIA Document G707).

No final payment will be authorized until these documents have been properly completed and submitted by the Contractor.

2.15 Payment Reporting

To determine whether disparities exist in City contracting based on race, gender or other factors, and also to measure the effectiveness of the City's Charlotte Business INCLUSION ("CBI") Program, the City tracks the utilization of subcontractors and suppliers on certain City contracts based on race, gender, small business status, and other factors. For analysis purposes, it is important that the City obtain this data not only for minority-owned, women-owned, and small business suppliers and subcontractors, but also for other subcontractors and suppliers. As a condition for receiving payments under this Contract, the Contractor agrees to submit any payment record into InclusionCLT, or any subsequent system designated by the City, detailing the amounts paid by the Contractor to all subcontractors and suppliers receiving payment in connection with this Contract

Failure to provide payment reporting required by this Section shall constitute a default under this Contract, and shall entitle the City to: (a) withhold payment of any amounts due the Contractor (whether under this Contract or otherwise), or (b) exercise any other remedies legally available for breach of this Contract, or (c) impose any other sanctions permitted under the City's Charlotte Business INCLUSION Program. In order to submit payment record into InclusionCLT properly, each prime contractor and all subcontractors identified must be registered in the City's Vendor Registration System. The City may request on a case-by-case basis that the Contractor require certain suppliers to be registered in the City's Vendor Registration System, and may withhold payment of any amounts due the Contractor in the event the Contractor fails to comply with such request.

2.16 Sales and Use Tax

The City is NOT exempt from applicable sales or use taxes assessed by North Carolina or other states. However, the North Carolina Department of Revenue does reimburse the City for the North Carolina sales or use taxes the City pays for certain construction related goods. Therefore, the City utilizes the below procedures for such sales tax. The Contractor agrees to follow the procedures set forth below for all sales or use taxes related to the Work and any other work performed pursuant to this contract.

“Eligible Taxes” are defined as North Carolina sales or use taxes paid by the Contractor for *buildings, materials, supplies, fixtures and equipment that become a part of or annexed to any building or structure that is owned or leased by the City and is being erected, altered or repaired by the City* (North Carolina GS 105-164-14(c)).

“Non-Eligible Taxes” are defined as all other sales or use taxes including those paid to states other than North Carolina, or sales or use taxes paid to North Carolina on purchases or rental of tools, equipment, and disposable supplies, including fuel, used in the Work.

Non-Eligible Taxes

Non-Eligible Taxes shall be included in the Bid and will be included in the Contract Amount.

The Contract Amount as shown in Section 00 50 00 includes full and complete compensation for the Contractor for any and all Non-Eligible Taxes paid by the Contractor in the prosecution of the Work and any other work performed pursuant to this Contract.

Eligible Taxes

Eligible Taxes **shall not** be included in the Bid and will **not** be included in the Contract Amount. Eligible Taxes will be reimbursed separately pursuant to the procedures below.

Prior to award of the Contract, the Contractor shall provide the City with the estimated amount of total Eligible Taxes for the Contract. This estimated amount of total Eligible Taxes will be used solely for the purpose of the City’s budget planning for the Project and will **not** be included in the Contract Amount.

The Contract Amount as shown in Section 00 50 00 excludes Eligible Taxes. The Contractor shall invoice the City for Eligible Taxes as set forth below and the City will reimburse the Contractor for those Eligible Taxes pursuant to the procedures below.

In the event the Contractor fails to materially follow the procedures set forth by this Article, and/or fails to properly document its payment of Eligible Taxes, the City will not be liable to the Contractor in any way for the payment of such Eligible Taxes.

In order to receive the reimbursement for Eligible Taxes, the Contractor shall provide a detailed listing of Eligible Taxes on the Sales/Use Tax Statement (“Tax Statement”) provided in the Contract Documents. Tax Statements must be submitted with each payment request and shall include invoices documenting the Eligible Taxes and the underlying purchases made by the Contractor or by the Contractor’s subcontractor.

Tax Statements must indicate whether such Eligible Taxes was paid by the Contractor or by the Contractor’s subcontractor.

If no Eligible Taxes have been paid for the period in which a payment request is being submitted by the Contractor, then the Contractor shall indicate “No Eligible Taxes paid this period” and submit the Tax Statement accordingly. Tax Statements must be completed and signed by the Contractor/subcontractor’s company officer submitting the statement and certified by a Notary Public.

Tax Statement must list in detail the Eligible Taxes paid for each individual invoice paid by the Contractor/subcontractor. No lump sum, running total, or copies of previously reported statements will be accepted.

Tax Statements must show separately the portion of Eligible Taxes that are paid to the State of North Carolina and the applicable North Carolina county, identifying the county accordingly.

Tax Statements will be reviewed and approved by the City prior to paying the Eligible Taxes reimbursement. Such approval will not be unreasonably withheld.

2.17 Commercial Non-Discrimination Policy

As a condition of entering into this agreement, the Company represents and warrants that it will fully comply with the City's commercial non-discrimination policy, as described in Section 2, Article V of the Charlotte City Code, and consents to be bound by the award of any arbitration conducted thereunder. As part of such compliance, the Company shall not discriminate on the basis of a Protected Class in the solicitation, selection, hiring, or treatment of subcontractors, vendors, suppliers, or commercial customers in connection with a City contract or contract solicitation process, nor shall the Company retaliate against any person or entity for reporting instances of such discrimination. The Company shall provide equal opportunity for subcontractors, vendors and suppliers to participate in all of its subcontracting and supply opportunities on City contracts, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that has occurred or is occurring in the marketplace.

As a condition of entering into this agreement, the Company agrees to:

- (a) Promptly provide to the City all information and documentation that may be requested by the City from time to time regarding the solicitation, selection, treatment and payment of subcontractors in connection with this agreement; and
- (b) If requested, provide to the City within sixty days after the request a truthful and complete list of the names of all subcontractors, vendors, and suppliers that company has used on City contracts in the past five years, including the total dollar amount paid by contractor on each subcontract or supply contract. The Company further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's commercial non-discrimination policy as set forth in Section 2, Article V of the Charlotte City Code, to provide any documents relevant to such investigation that are requested by the City, and to be bound by the award of any arbitration conducted under such policy. The Company understands and agrees that violation of this clause shall be considered a material breach of this agreement and may result in contract termination, disqualification of the Company from participating in City contracts and other sanctions.

The Company understands and agrees that a violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of the company from participating in City contracts or other sanctions.

For purposes of this section, "Protected Class" means a person's race, color, gender, religion, national origin, ethnicity, age, familial status, sex (including sexual orientation, gender identity and gender expression), veteran status, pregnancy, natural hairstyle or disability, as those terms are further defined in Section 2, Article V of the Charlotte City Code.

2.18 E-Verify

Contractor shall comply with the E-Verify requirements of Article 2 of Chapter 64 of the North Carolina General Statutes, and shall require each of his subcontractors to do so as well.

2.19 Indemnification

To the fullest extent permitted by law, the Company shall indemnify, defend, and hold harmless each of the "Indemnitees" (as defined below) from and against any and all "Charges" (as defined below) proximately caused by the Company's breach of contract, or negligent, reckless or intentional acts or omissions constituting a tort under applicable statutes or common law, or violations of applicable statutes or regulations, unless the Charges are proximately caused by or resulting from, in whole or in part, the negligence of an Indemnatee. For Purposes of this Section, (a) the term "Indemnitees" shall mean the City and each of the City's officers, officials, employees, agents NCDOT and independent contractors (excluding the Company) and (b) the term "Charges" shall mean claims,

losses, damages, fines, penalties, royalties, obligations, liabilities, and expenses, including but not limited to reasonable attorneys' fees.

In any case in which the Company provides a defense to the City or other Indemnatee pursuant to this indemnity, the defense will be provided by attorneys reasonably acceptable to the City. The provisions of this Contract regarding indemnity will survive the expiration or termination of this Contract.

If this Contract is funded in full or in part by federal funds, the indemnity rights granted to the City in this Contract shall also extend to the U.S. Government agency that extends such funding, and to the agency's officers, officials, employees, agents, and independent contractors (excluding the Company).

2.20 Guarantee

The Contractor shall guarantee all materials and workmanship for a period of one (1) year from the date of acceptance by the City and shall replace any portions that fail because of faulty materials or workmanship at no additional cost to the City. A six (6) month and eleven (11) month inspection will be held during the warranty period. The Contractor shall immediately repair all defective items upon notification. Items repaired under the provisions shall have an extended warranty period of twelve (12) months from the date of repair of the item.

Areas and/or other work disturbed while accessing and/or repairing/replacing warranty covered items shall be stabilized and repaired at no additional cost to the City.

2.21 Insurance Requirements

Contractor's Liability and Other Insurance: The Contractor shall purchase and maintain with a company acceptable to the City and authorized to do business in the State of North Carolina, such insurance as will protect him from claims under workers' compensation laws, disability benefit laws or other similar employee benefit laws; from claims of damages because of bodily injury, occupational sickness or disease, or death of his employees; from claims for damages because of bodily injury and personal injury; and from claims for damage and destruction of tangible property, including loss of use resulting there-from – any or all of which may arise out of or result from the Contractor's operations under the Contract Documents, whether such operations be by himself or any subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable.

The insurance shall be written for not less than the limits of liability specified below.

Automobile: Bodily injury and property liability covering all owned, non-owned and hired automobiles for limits of not less than \$1,000,000.00 bodily injury each person, each accident and \$1,000,000.00 property damage, or \$1,000,000.00 combined single limit – bodily injury and property damage combined.

Commercial General Liability: Bodily injury and property damage liability as shall protect the Contractor and any subcontractor performing work under this Contract from claims of bodily injury or property damage which arise from operations of this Contracts, whether such operations are performed by the Contractor, any subcontractor, or anyone directly or indirectly employed by either. The amounts of such insurance shall not be less than \$1,000,000.00 bodily injury each occurrence/aggregate and \$1,000,000.00 property damage each occurrence/aggregate or \$1,000,000.00 bodily injury and property damage combined single limits each occurrence/aggregate. This insurance shall include coverage for products/completed operations, personal injury liability and contractual liability assumed under the indemnity provision of this Contract and broad form property damage, explosion, collapse and underground property damage (XC&U). The coverage shall be on an occurrence basis.

Workers' Compensation and Employers' Liability: Shall meet the statutory requirement of the State of North Carolina, in an amount of \$100,000.00 each accident and disease – each employee and \$500,000.00 disease policy limit providing coverage for employees and owners.

The City shall be named as an additional insured under the commercial liability insurance for operations or services rendered under this Contract.

At the time of execution of the Contract, the Contractor shall provide the City with insurance certificates certifying that the foregoing insurance is in force; and such insurance certificates shall include provisions that the insurance shall not be cancelled, allowed to expire, or be materially changed without giving the City thirty (30) days advance written notice by mail.

The insurance certificate **must** include the following language in the "Description of Operations/Locations/Vehicles" box of the insurance form next to the project name: **"City of Charlotte is listed as an additional insured on the general liability policy."** Failure to provide this specific language will delay the execution of this contract.

The Contractor is advised that if any part of the work under this Contract is sublet, he shall require the subcontractor(s) to carry insurance as required above. However, this will in no way relieve the Contractor from providing full insurance coverage on all phases of the Project, including any that are sublet.

When certain work is performed inside rights-of-way owned by railroads, North Carolina Department of Transportation or other agencies, both the Contractor and any subcontractors may be required to furnish individual insurance certificates made in favor by the controlling agency, with limits established by that agency.

2.22 Holiday Work Restrictions

No work shall be performed on the Project which is subject to measurement or payment when City offices are closed for observed City Holidays. For observed City Holidays that occur on a Monday or Friday, no work shall be performed during the Holiday weekend prior to or following the City Holiday, respectively (Saturday and Sunday). This restriction does not relieve the Contractor from the responsibility of ensuring the safety and well-being of pedestrian and vehicular traffic, and for the protection of public and private property.

Additional Holiday restrictions may apply.

In emergencies and certain other conditions deemed necessary by the Engineer, the Contractor may be directed to work on weekends or holidays. There will be no separate measurement or payment for work done under these directives other than those established in the Contract.

2.23 Drainage Structures

The Contractor shall build inverts in all drainage structures in accordance with City Standards. There will be no separate measurement or payment for this work.

2.24 Termination

TERMINATION BY THE CITY FOR CAUSE

1. The City may terminate the Contract if the Contractor:
 - a. Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
 - b. Fails to make payment to subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the subcontractors;
 - c. Persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
 - d. Otherwise is guilty of substantial breach of a provision of the Contract Documents.
2. When any of the above reasons exist, the City, upon certification by the Engineer that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the City and after

giving the Contractor and the Contractor's surety, if any, seven days written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- a. Take possession of the site and all materials, equipment, tools and construction equipment and machinery thereon owned by the Contractor;
 - b. Accept assignment of subcontracts; and
 - c. Finish the work by whatever reasonable method the City may deem expedient. Upon request of the Contractor, the City shall furnish the Contractor a detailed accounting of the costs incurred by the Owner in finishing the work.
3. When the City terminates the Contract for one of the reasons stated above, the Contractor shall not be entitled to receive further payment until the work is finished.

The City Engineer shall have authority to terminate the Contract without additional authorization by City Council.

4. If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, including compensation for the Engineer's services and expenses made necessary thereby, and other damages incurred by the City and not expressly waived, such expenses shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the City. The amount paid to the Contractor or the City, as the case may be, shall be certified by the Engineer, upon application, and this obligation for payment shall survive the termination of the Contract.

TERMINATION BY THE CITY FOR CONVENIENCE

1. The City may, at any time, terminate the Contract for the City's convenience and without cause. Upon written notice from the City of such termination for the City's convenience, the Contractor shall:
 - a. Cease operations as directed by the City in the notice;
 - b. Take actions necessary, or that the City may direct, for the protection and preservation of the work; and
 - c. Except for the work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
2. The City Engineer shall have authority to terminate the Contract without additional authorization by City Council.
3. In case of such termination for the City's convenience, the Contractor shall be entitled to receive payment for work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit for the completed work.

Termination will be with the concurrence of the Federal Highway Administration.

2.25 Dispute Resolution

It is understood and agreed that projects subject to NCGS 143-128(g) requires that disputes arising under a Contract subject to a dispute resolution process specified by the Owner (i.e., the City). In compliance with this statutory provision, the City specifies this Article as the dispute resolution process to be used on this Project, regardless if the Project is or is not subject to NCGS 143-128(g). It is further understood and agreed that this dispute resolution process is based on non-binding mediation and will only be effective to the extent that the Parties to any mediated dispute participate in the mediation in good faith. It is also understood and agreed that the City is under no obligation under any circumstance to secure or enforce the participation of any other Party in the mediation of any dispute subject to this Article and NCGS 143-128(g).

- A. Any dispute arising between or among the Parties listed in Section C of this Article that arises from an agreement to perform services in conjunction with the Project, including without limitation a breach of such agreement, shall be subject to non-binding mediation administered by the American Arbitration Association under the industry appropriate Mediation Rules ("Rules"). To the extent any provision of the Rules is inconsistent with the provisions of this Article, the provisions of this Article shall control. The mediation provided in this Article shall be used pursuant to this Contract and NCGS 143-128(g) and is in lieu of any dispute resolution process adopted by any other government entity, which process shall not apply to this Project.
- B. For purposes of this Article the following definitions shall apply:
 - i) Party or Parties refers to the parties listed in Section C of this Article.
 - ii) Project means project pursuant to this Contract.
- C. The City and any Party contracting with the City or with any first-tier or lower-tier subcontractor for the performance of the Project agree to participate in good faith in any mediation of a dispute subject to this Article and NCGS 143-128(g), including without limitation the following Parties (if any): Contractor, independent contractor(s) of the City, surety(ies), subcontractor(s), and supplier(s).
- D. The Contractor and all other Parties shall include this Article in every agreement to which it (any of them) is a Party in performing the Services of the Project without variation or exception. Failure to do so will constitute a breach of this Contract, and the Contractor or other Party failing to include this Article in any agreement required by this Article shall indemnify and hold harmless the remaining Parties from and against any and all claims, including without limitation reasonable attorney fees and other costs of litigation, arising in any manner from such breach. Notwithstanding the foregoing provisions of this Section, it is expressly understood and agreed that the Parties are intended to be and shall be third-party beneficiaries of the provisions of this Article and can enforce the provisions hereof.
- E. The following disputes are not subject to mediation: (i) a dispute seeking a non-monetary recovery; and (ii) a dispute seeking a monetary recovery of \$15,000 or less.
- F. A dispute seeking the extension of any time limit set forth in an agreement to perform the Services for the Project shall be subject to mediation pursuant to this Article and NCGS 143-128(g), but only if the damages which would be suffered by the Party seeking the extension would exceed \$15,000 if the disputed extension is denied. To the extent that liquidated damages are set forth in such agreement as the measurement of damages for failure by such Party to meet such time limit, such liquidated damages shall be the exclusive standard for determining the amount of damages associated with such dispute.
- G. For purposes of this Article, a dispute is limited to the recovery of monetary damages from the same transaction or occurrence against a single Party or two or more Parties alleged to be liable jointly, severally or in the alternative. Two or more disputes may not be consolidated or otherwise combined without the consent of all Parties to such disputes.
- H. In addition to such matters as are required by the Rules, a request for mediation shall include the amount of the monetary relief requested.
- I. Prior to requesting mediation, a Party must form a good faith belief that it is entitled under applicable law to recover the monetary amount to be included in the request from one or more of the remaining Parties. Such belief must be based on a reasonable and prudent investigation into the dispute that is the subject of the request. The request for mediation must be based on such investigation and may not include any amount or the name of any remaining Party, unless supported by such investigation and good faith belief by the Party requesting the mediation.

- J. If a Party breaches any provision of Section I of this Article, it shall indemnify and hold harmless all other Parties from any costs, including reasonable attorney fees and other costs of litigation, and damages incurred by such other Parties that arise from such breach.
- K. All expenses incurred by a Party to a dispute in preparing and presenting any claim or defense at the mediation shall be paid by the Party. Such expenses include without limitation preparation and production of witnesses and exhibits and attorney fees. All other expenses of the mediation, including filing fees and required traveling and other expenses of the mediator, shall be borne as follows: one half by the Party requesting the mediation, with the remaining parties paying equal shares of the remaining expenses and costs; provided that, if the City is named as a party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties. If more than one Party to a dispute requests a mediation, the mediation expenses and costs to be divided among the Parties shall be borne equally by the Parties to the dispute; provided that, if the City is named as a Party to the mediation, the City shall pay at least one-third of the mediation expenses and costs divided among the Parties.
- L. The mediation shall be held at a location agreeable to the mediator and all of the Parties; provided that, if no agreement can be reached, the mediation will be held at such location in Mecklenburg County as the mediator shall determine.
- M. The provisions of this Article are subject to any other provision of this Contract concerning the submission, documentation and/or proof of any claim or dispute. Such other provisions shall apply in full force and shall be satisfied as a condition precedent to mediation pursuant to this Article.
- N. The Parties understand and agree that mediation in accordance with this Article shall be a condition precedent to institution of any legal or equitable proceeding seeking monetary recovery based on any dispute that is subject to mediation pursuant to this Article.

2.26 Surface Water Quality Protection

All projects must comply with local, state and federal laws including the City of Charlotte's Storm Water Pollution Control Ordinance which prohibits the discharge of non-stormwater, either directly or indirectly, to the stormwater system or waters of the State. Non-stormwater includes, but is not limited to, sediment, concrete, trash, and fuel.

Concrete Wash Water: The Contractor shall properly contain, collect, and dispose of concrete materials and concrete wash water so that it does not enter the street, stormwater drainage system, or water bodies. This may include the creation and maintenance of a concrete washout area on-site and/or use of a portable washout container to haul material off site.

Spill Response: The Contractor shall have spill response materials and an employee who is knowledgeable about using them for to respond to and clean up spills of oil and gas on-site at all times. Spills include any amount of oil or fuel coming off trucks or equipment. They may include, but are not limited to, those that occur during refueling, from equipment or vehicles, or from containers on site. Proper spill response is required for spills that occur on soil or the road. Spill response materials shall include clay absorbent material, spill response pads and booms, shovels and brooms. Spill cleanup materials are subject to inspection by the City and/or their representative(s) at any time. If a spill/leak occurs, all work must be suspended until the spill/leak is contained and cleaned up and/or the truck/equipment is towed off site. If the spill/leak is more than one gallon and/or enters a storm drain or water body, the contractor must notify the City's Construction Inspector within one (1) hour of spill/leak discovery. Spill/leak containment, towing, and cleanup and shall be completed within 24 hours of the occurrence at no additional cost to the City.

Washing Streets: The Contractor shall properly collect and dispose of stormwater pollutants generated during the project, from streets within the project area, to the maximum extent practicable, before washing the streets with potable water. This may include, but is not limited to, hand sweeping, shoveling, vacuuming, and mechanized street sweeping or scrubbing. These best management practices shall be performed at no additional cost to the City and are intended to collect materials for proper disposal rather than wash them into the storm drainage system or waters of the state. They do not replace the need for preventing pollutants from entering the street, but rather, are intended to supplement them.

Fueling Operations: The Contractor shall make its own determination of on-site fuel storage needs. If on-site fuel storage is utilized, the Contractor shall submit a Refueling Operations Plan (The Plan) ten (10) days prior to the start of any project work. The Plan shall include procedures for fuel handling, spill/leak containment, disposal of fuel/leak contaminated material, the location of a fuel tank(s) a minimum of 50' from any storm drain or water body, and a written agreement with the land owner to store fuel on the property. The Plan shall also list emergency contacts and cell phone numbers including the on-site construction supervisor and the designated contractor representative who is responsible for overseeing implementation of The Plan. If a mobile fueling unit is utilized, all storm drains that have the potential to receive a fuel spill during refueling must be protected.

2.27 Prohibition of Use of High PAH Pavement Products

No Person shall use, or permit to be used, a high PAH pavement product within the City. For the purposes of this subsection, the term "high PAH pavement product" means a product, material or substance that contains greater than 0.1% (1000 ppm) polycyclic aromatic hydrocarbons (PAH) by weight, and, is intended for use on an asphalt or concrete surface, including but not limited to, a driveway, playground, parking area, sidewalk, pathway, or roadway. High PAH pavement product may contain coal tar, coal tar pitch volatiles, RT-12, refined tar, steam-cracked petroleum residues, heavy pyrolysis oil, steam-cracked asphalt, pyrolysis fuel oil, heavy fuel oil, ethylene tar, ethylene cracker residue, or a variation of those substances assigned the chemical abstracts service (CAS) numbers 65996-92-1, 65996-93-2, 65996-89-6, 8007-45-2, 64742-90-1, or 69013-21-4.

2.28 Billing Records

During the term of this Contract and for three (3) years after it terminates, Contractor will keep documentation sufficient to verify the amounts billed to the City. The City has the right to audit Contractor's time cards, invoices, reports and other documents relating to amounts charged under this Contract, and will not be required to pay for: (a) any time billed that was excessive in light of the result achieved, or (b) any Services that did not meet the standards and requirements referenced in this Contract. Contractor agrees to make such documents available for inspection and copying by the City in Charlotte, North Carolina between the hours of 9:00 a.m. to 5:00 p.m. Monday through Friday, within ten (10) days after the City requests them. The City shall pay its own expenses relating to such audits, but shall not have to pay any expenses or additional costs of the Company. However, if non-compliance is found that would have cost the City in excess of \$10,000 but for the audit, then the Company shall be required to reimburse the City for the cost of the audit.

00 75 00 – PROJECT SPECIAL PROVISIONS

ARTICLE 1: GENERAL REQUIREMENTS

1.1 Contract Time

The Contract Time will begin upon the issuance of the Notice to Proceed and will extend **210** calendar days thereafter.

1.2 Liquidated Damages

Liquidated Damages will be assessed at the rate of **\$2,000.00** per calendar day for failure to complete the Project within the Contract Period.

1.3 Price Adjustments – Asphalt Cement for Plant Mix

"Asphalt Binder for Plant Mix" will be in accordance with Section 620 of the NCDOT Standard Specifications.

The Bidder shall consider that the City will make adjustments in payments due the Contractor where it has been determined that the average terminal F.O.B selling price of asphalt cement has fluctuated.

The Base Price Index for Asphalt Cement for this project is set at **\$732.50** per ton.

This Base Price Index represents an average F.O.B. selling price of asphalt cement at supplier's terminals on **May 1, 2026** as determined by the North Carolina Department of Transportation from a survey of terminals located in North Carolina and adjacent states.

<https://connect.ncdot.gov/projects/construction/Pages/Pavement-Construction-Prices.aspx>

Payment will be made under:

ASPHALT BINDER FOR PLANT MIXTN

1.4 Bituminous Plant Mix Pavements - Recycled

Work in this provision consists of all work covered in Section 1012, "Aggregate for Asphalt Pavements and Surface Treatments" in the NCDOT Standard Specifications, except that the provisions of this section pertaining to compensation shall not apply.

The Engineer will determine acceptability of materials and construction in accordance with the applicable sections of these specifications. Following the application of the appropriate acceptance plan, the decision of the Engineer shall be final as to the acceptance, rejection, or acceptance at an adjusted payment of the material.

Nonconforming materials, projects, items of construction, or complete construction that are not adaptable to correction by reworking shall be removed and replaced, accepted without payment, or accepted at an adjusted payment as stated in these specifications, or if not stated, as directed by the Engineer.

DESIGN MIX FORMULA

The Contractor shall submit for the Engineer's approval, a job mix formula approved by the NCDOT or a job mix formula within the limits of the NCDOT Standard Specifications accompanied by the recommendation of an independent testing laboratory. The formula shall include aggregate gradation, bitumen content, stability, theoretical specific gravity, laboratory specific gravity, percent of voids, and unit weight. The Engineer has the right to reject a state approved mix based on the content of Rap material. For this Contract, RAP (reclaimed asphalt

pavement), shall not constitute more than 30% of the total material used in recycled mixtures - with no allowance for RAS (reclaimed asphalt shingles – maximum 0%).

INTENT OF SPECIFICATIONS

It is the intent of these specifications to provide an equitable means of accepting materials and work that may vary slightly from the specification range stated in the NCDOT Standard Specifications in lieu of total rejection, removal, repair or nonpayment.

When materials or construction are not within the limits of the specification, an adjusted payment maybe allowed as delineated in these specifications, except where the level and variability of test results indicate a degree of nonconformance with requirements so great as to make the material or construction unacceptable. Unacceptable material and construction shall be either reworked or replaced at no cost to the City. The Engineer reserves the right to reject questionable material at any time in lieu of making reduced payment.

COMPENSATION:

Payment at the contract unit prices for the various items covered by Section 610 will be full compensation for all work covered by this section except as provided below.

There will be no separate payment for furnishing non-strip additive. The cost of non-strip additive shall be included in the contract unit price per ton for "Asphalt Concrete Surface Course, S 9.5 B, SF 9.5 A and S 9.5 C".

Where samples of reclaimed asphalt pavement are obtained by milling, removal of the milled pavement will be paid for as provided in Section 607. The plant mix used for replacing the milled pavement will be paid for as provided by the section of the Specifications covering the type of plant mix used.

ARTICLE 2: SPECIAL PROVISIONS (SP)

SP-01, 6" CONCRETE WHEELCHAIR RAMPS

1.0 DESCRIPTION

The work covered by this special provision includes all work covered in Section 848 of the NCDOT Standard Specifications "Concrete Sidewalks and Driveways and Wheelchair Ramps". The concrete wheelchair ramps shall be constructed in accordance with the detail drawings and specifications, at locations indicated in the plans. Truncated domes shall be included and installed per NCDOT Std No. 848.06. Proposed wheelchair ramps may vary from details in order to conform to existing conditions but must meet American with Disabilities Act (ADA) and Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) requirements.

2.0 MATERIALS

All materials shall be in accordance with section 848 of the NCDOT Standard Specifications and detail 848.06 of the NCDOT Roadway Standard Drawings.

3.0 MEASUREMENT

The quantity of wheelchair ramps to be paid for will be the actual number of square yards of wheelchair ramps, measured along the surface of the completed work which has been completed and accepted. There will be no separate measurement for truncated domes. The vertical curb associated with the directional ramps will be included in the square yard measurement.

4.0 PAYMENT

The quantity of wheelchair ramps, measured as provided above, will be paid for at the contract unit price per square yard for "6" Concrete Wheelchair Ramps". There will be no other pay items in this provision. All costs for labor, equipment, and materials necessary to complete this provision (including truncated domes) will be included in the price bid for 6" Concrete Wheelchair Ramps. Payment will be made separately at the contract unit prices for the curb and gutter adjacent to the roadway pavement for the various curb types in NCDOT Section 846.

Payment will be made under:

6" CONCRETE WHEELCHAIR RAMPSSY

SP-02, PEDESTRIAN REFUGE ISLAND (PASS-THRU)

1.0 DESCRIPTION

The work covered by this special provision includes all elements of work covered by section 848, "Concrete Sidewalks, Driveways and Wheel Chair Ramps" of the NCDOT Standard Specifications and the detail for the Pedestrian Refuge Island (Pass-Thru) as shown on the plans. Truncated domes shall be included and installed per NCDOT Std No. 848.06.

2.0 MATERIALS

All materials shall be in accordance with section 848 of the NCDOT Standard Specifications and detail 848.06 of the NCDOT Roadway Standard Drawings.

3.0 MEASUREMENT

The quantity of Pedestrian Refuge Island (Pass-Thru) to be paid for will be the actual number of square yards completed and accepted. There will be no separate measurement of wheelchair ramps or truncated domes. Any concrete slope tie-ins between the pedestrian island cap, monolithic concrete, or planting mix and the pass thru will be paid for under this item and measured in square yards. Any curb required adjacent to the pedestrian refuge island (pass-thru) will be measured by the appropriate curb line item in the contract.

4.0 PAYMENT

Payment for the Pedestrian Refuge Island (Pass-Thru) as measured above shall be paid for at the contract unit price for "Pedestrian Refuge Island (Pass-Thru)". Such payment shall include all labor, equipment and materials required to construct the pass-thru necessary to complete this provision, including truncated domes will be included in the price bid for Pedestrian Refuge Island (Pass thru). Any curb required adjacent to the pedestrian refuge island (pass-thru) will be paid by the appropriate curb line item in the contract.

Payment will be made under:

PEDESTRIAN REFUGE ISLAND (PASS-THRU)SY

SP-03, PEDESTRIAN SIGNAL HEADS

1.0 DESCRIPTION

Furnish and install pedestrian LED signal heads, visors, interconnecting brackets, wire entrance fittings, mounting assemblies, signal cable, lashing wire, pedestrian signal signs, grounding systems and all necessary hardware.

Bag new pedestrian signal heads with burlap bags or bags made of non-ripping material specifically designed for covering signal heads until signal heads are placed in operation. Do not use trash bags of any type.

When new signal heads are placed into operation, immediately bag and remove signals heads that are not to be reused.

Adjust each signal head vertically and horizontally so that light output will be of maximum effectiveness for traffic and pedestrians. Do not tilt signal heads forward. Reposition signal heads as required for various construction phases.

All LED pedestrian signal head modules must be 16" x 18" LED module with full display man and hand with count down. All LED pedestrian signal heads must have 16" X 18" cast aluminum housing, powder-coated federal yellow, cast aluminum door, painted flat black with visor type (z---crate, waffle, mesh, vantage) (See picture 1). Door shall have stainless steel hinge pins that are removable without using tools (See picture 2 & 3). All hardware shall be stainless steel. Housing shall be drilled on one side for clamshell mounting hardware (see picture 4). 3 Position terminal block mounted in housing (see picture5). Front door 16" hinged top or bottom. The door is attached with stainless steel clevis or roll pins and eye bolt/wing nut assemblies. Two equally spaced mounting lugs, integrally cast into the top and bottom of the 16" and the sides of the 12", allow the doors to hinge from either direction. All interior mounting locations on the 16" housing are symmetrically positioned, allowing the rotation of components when using the clamshell bracket to mount to the right or left side. Clamshell mounting bracket should NOT BE MOUNTED to housing. They are to be boxed separately with closure bolt and 2---part mounting assembly symmetrical mounting holes allow for left or right mount neoprene gasket provides a weather tight seal 3---position, 2---row terminal block mounted in the upper half of the signal mounted portion; one side with fast---on

terminals, the other side with screw terminals 28" wire leads (3) provided to wire clamshell terminal block to pedestrian signal terminal block field wiring is terminated on clamshell terminal block flathead 3/16" hex socket closure bolt.



Picture 1 – Cast Aluminum housing, powder-coated Federal Yellow, cast aluminum door painted flat black with visor type (Z-crate, waffle, mesh, vantage).



Picture 2 – Door shall have stainless steel hinge pins that are removable without using tools.



Picture 3 - Door shall have stainless steel eyebolts with wing nuts, and hinge pins that are removable without using tools.



Picture 4 – Housing shall be drilled on one side for clamshell mounting hardware. **Clamshell not to be installed on pedestrian housing.**



Picture 5 – 3 Position terminal block mounted in pedestrian housing with 1 white, 1 blue, and 1 orange wire. Each wire shall have insulated fork connectors on each end.



Picture 1 - clamshell mounting bracket with **tapped** wire entrance hole for wood pole mounting



Picture 2 – clamshell mounting bracket with **tapped and capped** wire entrance hole for wood pole mounting



Picture 3 – clamshell mount bracket with flat head 3/16" hex socket closure bolt



Picture 4 – clamshell with 3 position terminal

2.0 MEASUREMENT

Pedestrian Signal Heads will be measured and paid as the actual number of signal heads of each type listed below furnished, installed and accepted.

16" PEDESTRIAN SIGNAL HEAD

3.0 PAYMENT

Payment will be made under:

16" PEDESTRIAN SIGNAL HEADEA

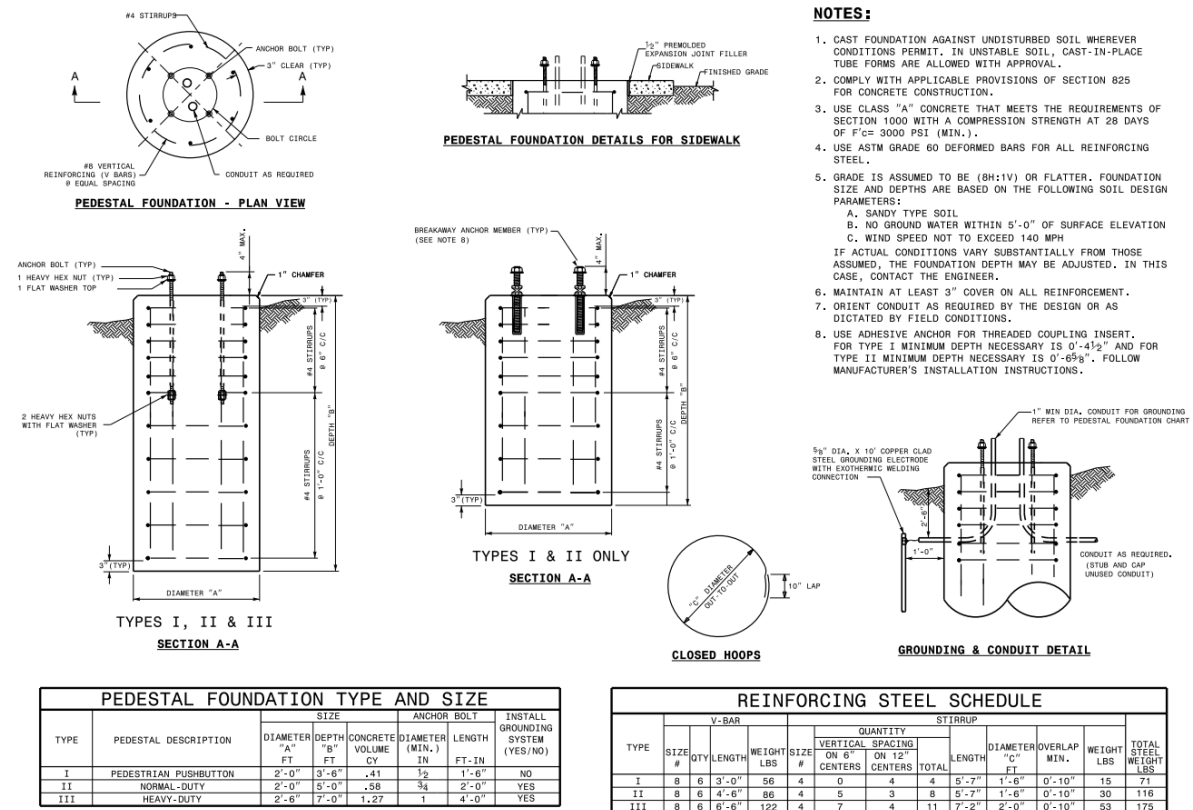
SP-04, PEDESTRIAN POLES AND BASES

1.0 DESCRIPTION

The Contractor shall supply concrete, anchor bolts and forms necessary for constructing proposed or relocated pedestrian pole bases. The Contractor shall supply all material necessary to install a complete pedestrian pole assembly. Pedestals shall be installed in conformance with drawings 1743.04-1-CDOT and 1743.04-2-CDOT.

The contractor shall supply and install 10-ft or 15-ft aluminum pedestrian signal poles with square bellhousing and cap as specified in the plans.

The Contractor shall relocate existing pedestrian poles, pole bases, and caps and all existing attachments including pedestrian signal head and push buttons as identified on the plans. Pedestals and all attachments shall be removed and stored as not to damage the pole or attachments. Pedestals shall be reinstalled in conformance with drawings 1743.04-1-CDOT and 1743.04-2-CDOT.



2.0 MEASUREMENT

Pedestrian Pole Bases and Foundations will be measured and paid as the actual number of each type listed below furnished, installed and accepted.

10FT. Metal Base/Pole/Cap for pedestrian signal
Relocated 10FT. Metal Base/Pole/Cap for pedestrian signal
Concrete foundation for 10FT. Metal Base/Pole/Cap for pedestrian signal
15FT. Metal Base/Pole/Cap for pedestrian signal

3.0 PAYMENT

Payment will be made under:

10FT. METAL BASE/POLE/CAP FOR PEDESTRIAN SIGNAL..... EA
CONCRETE FOUNDATION FOR 10FT. METAL BASE/POLE/CAP FOR PEDESTRIAN SIGNAL..... EA
15FT. METAL BASE/POLE/CAP FOR PEDESTRIAN SIGNAL..... EA
RELOCATE EXISTING METAL BASE, POLE, AND ATTACHMENTS FOR PEDESTRIAN SIGNAL.....EA

SP-05, SUPPLY & INSTALL APS PEDESTRIAN PUSH BUTTON DETECTOR & SIGN

1.0 DESCRIPTION

This item includes the labor, equipment, and any necessary hardware to supply and install one APS Pedestrian Pushbutton Detector & Sign. Installation should be in compliance with MUTCD, ADA and Section 1705-3 (C) of the NCDOT Standard Specifications.

Example:

Polara iNX/iDX Push Button.

2.0 MEASUREMENT Confirm

APS Pedestrian Pushbutton Detector & Sign will be measured and paid as the actual number of APS Detectors & Signs installed and accepted. A sign and corresponding detector shall be considered one unit.

3.0 PAYMENT

Payment will be made under:

SUPPLY & INSTALL APS PEDESTRIAN PUSHBUTTON DETECTOR & SIGNEA

SP-06, LEAD-IN CABLE (1726 MODIFIED)

1.0 DESCRIPTION

Description is as set out in NCDOT Standard Specification 1726.

2.0 MATERIAL

Materials are as set out in NCDOT Standard Specification 1726 with the exception that all lead-in cable must consist of four 18AWG conductors in two pairs of two conductors.

3.0 CONSTRUCTION METHODS

Construction methods are as set out in NCDOT Standard Specification 1726.

4.0 MEASUREMENT AND PAYMENT

Measurement and payment are as set out in NCDOT Standard Specification 1726.

Payment will be made under:

TYPE 1 LEAD IN CABLE (TWO PAIR) MODIFIED 1726.....LF

SP-07, RELOCATE/ADJUST CONDUIT TO EXISTING PULLBOX

1.0 DESCRIPTION

The work covered by this special provision consists of all labor and equipment necessary to install new conduit and/or cable into an existing hand-hole or pull-box in accordance with the manufacturer's specifications and the Charlotte Department of Transportation Traffic Signal Manual. Installation should be in compliance with NCDOT Standard Specifications.

2.0 MATERIAL

No new material for this item unless the CONTRACTOR damages the existing pull-box or conduit while performing this work. Any new material required, such as conduit or pull box, should be paid under section 1715 or 1716.

3.0 CONSTRUCTION METHODS

Construction methods are as set out in NCDOT Standard Specifications Section 1715 or 1716

4.0 MEASUREMENT AND PAYMENT

This work shall be measured by each new conduit that a contractor installs per NCDOT Standards Section 1715 or 1716 into an existing pullbox.

Payment will be made under:

RELOCATE/ADJUST CONDUIT TO EXISTING PULLBOX..... EA

SP-08, SOLAR POWERED RECTANGULAR RAPID FLASHING BEACONS (RRFB)

1.0 GENERAL

- A.** The work covered by this special provision includes furnishing and installing Rectangular Rapid Flashing Beacons (RRFB) in accordance with the current edition of the North Carolina Department of Transportation (NCDOT) Traffic Signal Specifications, CDOT requirements, and the provisions of these specifications.
- B.** RRFB assemblies must be attached to a W11-2 (Pedestrian) crossing warning sign with a diagonal downward arrow (W16-7p) plaque, a pedestrian pole with base (SP-S3), and attachment hardware with pushbuttons in the median stop and on each side of the roadway. On multi-lane approaches, RRFB assemblies shall be dual indicated.
- C.** Equipment must operate on solar power. Solar powered systems must automatically charge batteries and prevent overcharging and over-discharging. Solar powered systems must include a charge indicator and AC/DC battery charger.

2.0 MATERIALS

- A.** Light Bar Housing and Indications
 - 1. The Light Bar housing shall be constructed of durable, corrosion resistant powder-coated aluminum with stainless steel fasteners.
 - 2. Enclosed components shall be modular in design whereby any component can be easily replaced using common hand tools, without having to remove the housing from the pole.

3. All mounting hardware required for mounting the Light Bar housing shall be provided, and shall be stainless steel.
 4. Each of the two vehicle RRFB-XL™ LED indications shall be approximately 7.25" wide x 3" high.
 5. A pedestrian LED indication, approximately 0.5" wide x 2.5" high, shall be side-mounted in the Light Bar housing to be directed at and visible to pedestrians in the crosswalk.
 6. The LEDs used shall be rated for a minimum 15-year life span.
- B. Controller
1. The Controller shall be housed in a NEMA 3R rated aluminum enclosure, intended for indoor or outdoor use, primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water, and damage from ice formation.
 2. The LED light outputs and flash pattern shall be completely programmable, with the capability to actuate RRFB-XL, RRFB, round LED signal beacons and LED-enhanced signs.
 3. The flashing output shall have 70 to 80 periods of flashing per minute, during which one of the yellow indications shall emit two medium pulses of light and the other yellow indication shall emit four short rapid pulses of light followed by a long pulse. The output current shall be maintained as programmed for the duration of the pulse. The flashing output shall be programmable.
 4. The Controller shall be reconfigurable if future MUTCD or State guidelines specify a different flash pattern.
 5. The Controller shall be capable of storing input count data in preset intervals, with downloadable capabilities using optional Windows based PC software program and standard RS232 programming cable.
 6. The Controller shall be, in the unlikely event of failure, replaceable independently of other components.
- C. Battery
1. The Battery shall be a 12VDC Absorbed Glass Mat (AGM) sealed lead-acid, maintenance-free battery.
 2. The Battery shall be rated at 45AH minimum and shall conform to Battery Council International (BCI) specifications.
 3. The Battery shall be solar-charged with a capacity up to 30 days of autonomy without sunlight, varying with ambient temperature and number of activations.
 4. The Battery shall be replaceable independently of other components.
 5. The Battery shall have a minimum operating temperature range of -76o to 140oF (-60o to 60oC).
- D. Wireless Transceiver Radio
1. Radio control shall be solar-powered, operating on a FCC approved 900mhz frequency, hopping spread spectrum network with a normal operating range of 1000 feet.
 2. Radios shall provide wireless communication between the Assemblies to integrate the pushbutton activation of indications.
 3. To ensure all integral indications consistently flash in unison, the Radio shall synchronize the Controllers to activate the indications within 120msec of one other and remain synchronized throughout the duration of the flashing cycle.
 4. Radio systems shall operate from 3.6 VDC to 15 VDC.
 5. The Radio shall be, in the unlikely event of failure, replaceable independently of other components.
 6. The Radio shall have a minimum operating temperature range of -30oF to 165oF (-34.4o to 73.8oC).
- E. Solar Panel
1. The Solar Panel shall provide 55 watts at peak total output.
 2. The Solar Panel shall be affixed to an aluminum plate and bracket, adjustable at an angle of 45o - 60o to facilitate adjustment for maximum solar collection and optimal battery strength.

3.0 EXECUTION

- A. The light intensity of the vehicle indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated November 2008. Manufacturer Certification of Compliance shall be provided upon request.
- B. When activated, all indications associated with a given crosswalk (including those with an advance crossing sign, if used) shall simultaneously commence operation of their alternating rapid flashing within 120msec, and shall cease operation at a predetermined time after the pedestrian actuation.
- C. The Pedestrian indication shall be directed at and visible to pedestrians in the crosswalk, and it shall flash concurrently with the vehicle indications to give confirmation that the RRFB-XL™ is in operation.
- D. The system shall include an actuation counter providing data that can be downloaded on-site to a laptop computer using DB9 or USB type cables.
- E. Autonomy with a fully charged battery shall be up to 14-28 days without sun, dependent upon ambient temperature and number of activations.
- F. Restore any areas impacted by the installation of the crosswalk enhancement assembly to original condition unless otherwise shown in the Plans. Install crosswalk enhancement assembly in accordance with the Americans with Disabilities Act Standards for Transportation Facilities.
- G. Ensure the midblock crosswalk enhancement assembly has a manufacturer's warranty covering defects for two years from the date of final acceptance. Ensure the warranty includes providing replacements within 10 calendar days of notification for defective parts and equipment during the warranty period at no cost to the Department or the maintaining agency.

4.0 MEASUREMENT AND PAYMENT

- A. RRFBs including pushbutton are intended to operate in pairs. The quantity of RRFBs to be paid for will be the actual number of RRFBs which have been furnished, installed and accepted, measured on a per PAIR basis.
- B. The quantity of RRFBs including pushbutton, measured as provided above, will be paid for at the contract unit price per PAIR. Such payment will be full compensation for all work covered by this special provision, including but not limited to all excavation, furnishing and installing the RRFB.

Payment will be made under:

SOLAR POWERED RECTANGULAR RAPID FLASHING BEACONPR

SP-09, SELECT MATERIAL

1.0 DESCRIPTION

Work covered in this special provision consists of furnishing, placing, and compacting select material as shown on the plans or as directed.

Select material shall be placed in pipe culvert excavations within the existing or proposed roadway, including beneath the proposed curb and gutter, or as directed. The Engineer will determine the amount and location of select material to be used on the project. The Contractor shall not remove material from the project without approval from the Engineer.

2.0 MATERIALS

Select material shall meet the requirements of NCDOT Standard Specifications for Roads and Structures, Select Material, Class III, Type 2 (Section 1016-3), or other approved classes or materials as directed.

With written approval and without additional compensation, a higher class of material may be substituted than stated in the Contract Documents.

4.0 MEASUREMENT

There will be no separate measurement or payment for select bedding and select backfill material required in the installation of pipe as illustrated in NCDOT 300.01. All bedding and select backfill material required in the installation of the pipe as illustrated in NCDOT 300.01 will be included in cost of the installed pipe.

When local material meeting the requirements for suitable materials as defined in SP-32 *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* is approved for use by the Engineer, there will be no separate measurement or payment for the local suitable material incorporated into the completed and accepted Project. The cost to furnish, haul, place and compact local suitable material that meets the requirements will be included in the lump sum price bid for Comprehensive Grading (a special provision and pay item in this contract).

When other than local material meeting the requirement for select material is used, the quantity of select material for backfill shall be measured by weighing material in trucks in accordance with section 106-7 Scales and Public Weighmaster, as determined by the Engineer. At the Engineer's discretion, truck measurement in accordance with Article 230-5 (B) may be used instead of weighing material in trucks. A unit weight of 135 lb/cf will be used to convert the weight of select material to tons.

The contract unit prices for Select Material as described above will be full compensation for furnishing, transporting, handling, placing, compacting, and maintaining select material. Unless otherwise directed by the Engineer, there will be no separate payment for select material above the select bedding and backfill materials included in the cost of the installed pipe culvert, which exceeds the following extents:

- horizontally – the outer diameter of the pipe plus three feet
- vertically – from the top of the select backfill material to the ground line, as illustrated in NCDOT 300.01

Material used for the Contractor's means and methods outside of these trench limits shall meet the material requirement and will be at the Contractor's expense.

Do not use *Select Material* until all local material meeting the requirements of suitable material as defined in SP-32 *Earthwork, Excavation, Unsuitable Materials, and Backfill Materials* has been incorporated into the Project. If the Contractor brings select material onto the Project for its own convenience, that material will not be measured or paid for as *Select Material*.

4.1 PAYMENT

Payment will be made under:

SELECT MATERIAL.....TN

SP-10, REMOVAL OF EXISTING CURB & GUTTER

1.0 DESCRIPTION

Removal and disposal of existing concrete curb & gutter within the construction limits as shown on the plans and any additional infrastructure removal identified by the Contractor's means and methods shall be included in this item. Additionally this item includes the saw cutting of existing pavement along existing curb and gutter as described below.

Saw Cutting: all saw cutting required to build the Project. Where asphalt or concrete (curb, sidewalk, roadway, driveways, parking lots, etc.) is to be removed, the Contractor shall provide a neat edge along the pavement being retained by sawing the pavement a minimum of 2" deep and 1' wide before breaking and removing adjacent pavement. When the Contractor proposes to saw pavement more than one foot from the proposed pavement (curb, sidewalk, structure, etc.), the Contractor shall obtain approval from the Engineer prior to saw cutting and removing pavement. The cost of sawing asphalt or concrete shall be included in this item.

2.0 MEASUREMENT

The quantity of Removal of Existing Curb & Gutter to be paid for will be the actual number of linear feet of removal, disposal, and sawcutting, measured along curb and gutter, which has been incorporated into the completed and accepted work.

3.0 PAYMENT

The quantity of Removal of Existing Curb and Gutter, measured as provided above, will be paid for at the contract unit price per linear foot for "Removal of Existing Curb and Gutter ". Such payment will be full compensation for all work covered by this special provision, including but not limited to all removal, disposal, sawcutting.

Payment will be made under:

REMOVAL OF EXISTING CURB & GUTTER..... LF

SP-11, REMOVAL OF EXISTING PAVEMENT, DRIVES & SIDEWALKS

1.0 DESCRIPTION

Removal and Disposal of existing infrastructure including: sidewalk, miscellaneous concrete, asphalt, driveways, pads, slabs, walls, structures, within the construction limits as shown on the plans and any additional infrastructure removal identified by the Contractor's means and methods shall be included in this item.

2.0 MEASUREMENT

The quantity of Removal of Existing PAVEMENT, DRIVES & SIDEWALKS to be paid for will be the actual number of square yards for removal, disposal, of existing infrastructure which has been incorporated into the completed and accepted work.

3.0 PAYMENT

The quantity of Removal of Existing PAVEMENT, DRIVES & SIDEWALKS, measured as provided above, will be paid for at the contract unit price per square yard for "Removal of Existing PAVEMENT, DRIVES & SIDEWALKS". Such

payment will be full compensation for all work covered by this special provision, including but not limited to all removal, disposal as needed to construct the project.

Payment will be made under:

REMOVAL OF EXISTING PAVEMENT, DRIVES & SIDEWALKSSY

SP-12, COMBINATION METER PEDESTAL AND GROUNDING GRID

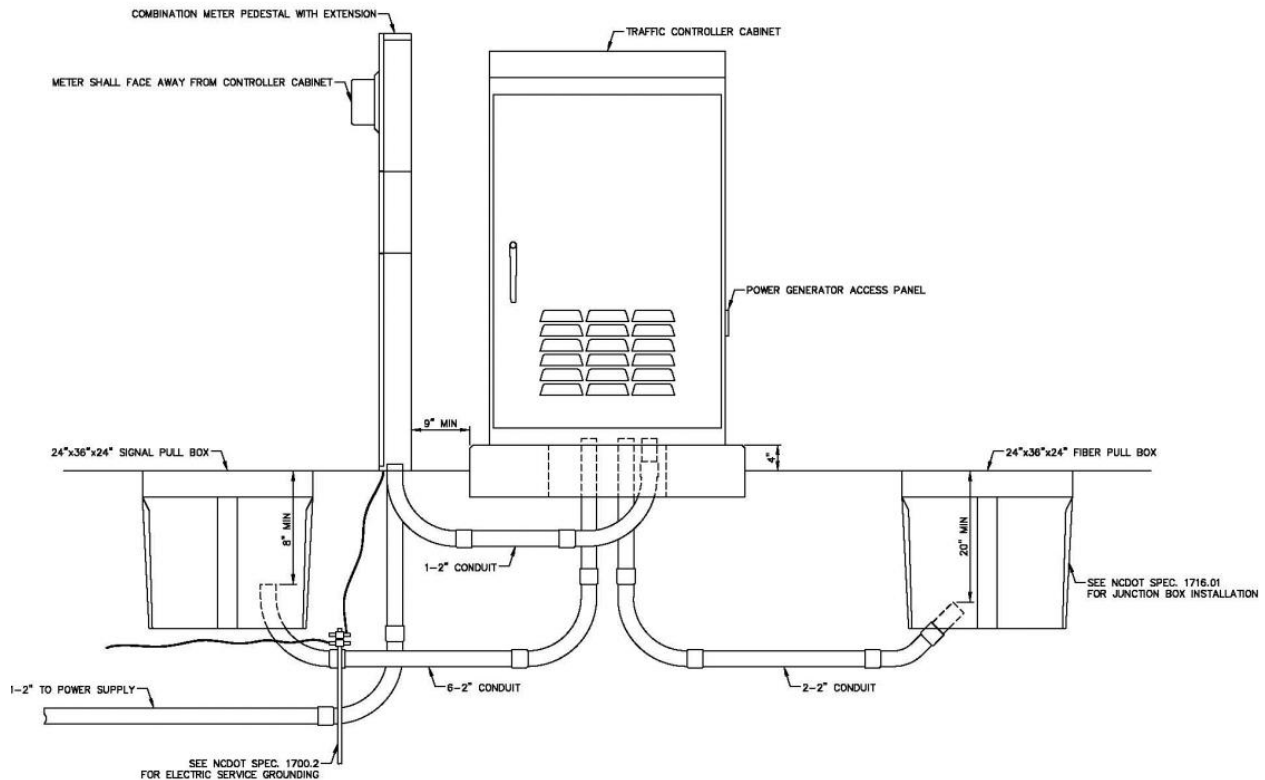
1.0 DESCRIPTION

The work in this special provision consists of all labor and material necessary to install one (1) electrical meter service and disconnect combination panel as a standalone pedestal with grounding grid. This shall be in accordance with drawing 1751.01-5-CDOT. This item includes all material necessary to install an electrical service including, combination panel, conduits, disconnect, wire, breakers, attachment structure, grounding hardware and all other incidentals. New services should be mounted on a pedestal unless approved prior by the Engineer. This unit also includes all labor and material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewage and drainage facilities, and any other property damaged during the unit installation.

Combination pedestals shall:

1. Be no larger than 60" (H) x 14" (W) x 12" (D), installed (subtract total height from embedment for direct bury)
2. Be listed on Duke Energy's Meter Equipment Group approved list or have written approval for use from Duke Energy's Meter Engineering division.
3. Be capable of pad-mount or direct bury installation as applicable.
4. Have no externally visible conduits.
5. Feature a bypass lever in the meter socket.
6. Feature a factory-installed fifth terminal in the meter socket.
7. Feature breakers and breaker knockouts only, no receptacles.

Install a minimum of three grounding rods in accordance with NCDOT Standard Drawing 1700.02 ensuring existing underground facilities are not damaged and test grounding system with approved method ensuring resistance is less than 20 Ohms. All underground bond of grounding electrodes and conductors shall be made using irreversible compression ground connectors. Unless the irreversible compression connectors are designed for use with more than one conductor, only one conductor shall be placed under each irreversible compression ground connector. Ensure all connections are made using a hydraulic, power or ratcheting type crimper with appropriate dies. Use of handheld pliers for crimping is prohibited. For ease of inspection, the top of ground rods shall be no more than 6 inches below finished grade and shall remain exposed until electrical inspection is complete. Detectable burial tape shall be placed directly above all grounding electrodes and conductors and shall be buried at a typical depth of 12"-18. Locate the service equipment near the signal cabinet in a manner that will allow easy access to the service disconnect and does not obstruct motorist sight distance. For overhead electrical service installations, supply & install wire (3 conductor, 8AWG) between the meter pedestal and point-of-service (at top of the riser/weatherhead with 6 feet coil) under this special provision. Conduit and riser from meter pedestal to pole are separate pay items.



2.0 MEASUREMENT

Installed Combination Meter Pedestal and Grounding Grid will be measured and paid as the actual number of pedestals installed and accepted.

3.0 PAYMENT

Payment will be made under:

COMBINATION METER PEDESTAL AND GROUNDING GRID.....EA

SP-13, CONTROLLER CABINET

1.0 DESCRIPTION

The work in this special provision consists of all labor and material necessary for the Contractor to supply and install a controller cabinet and to connect to a meter service. This unit does not include labor and material necessary to install a concrete foundation, combination meter pedestal or grounding grid as those are separate pay items.

The controller cabinet supplied by the contractor should meet the current CDOT specifications for a controller cabinet (See below).

Rev. 11.18.2020

1.1 TS 2 CABINET ASSEMBLY

1.1 This specification describes the minimum acceptable requirements for a TS 2 Type 1 cabinet assembly to house a NEMA TS 2 Type 1 or 2070L solid-state full-actuated traffic signal controller. The assembly shall include the cabinet, flasher, detector card rack, bus user interfaces (BIUs) to fill all positions, shelf-mount power supply, and six flash transfer relays. The cabinet assembly shall be of Configuration #4 (16-position). The assembly shall include ten load switches and eight load switch jumpers.

1.2 Cabinet Design Requirements

1.2.1 The cabinet shall be constructed using unpainted sheet aluminum on the outside with a minimum thickness of 3.2 mm. Inside of the cabinet shall be painted gloss white. No wood, wood fiber products, or other flammable material shall be used in the cabinet. All continuous welds shall be neat and of uniform consistency.

1.2.2 The size of the cabinet shall be Size 6 as defined by TS 2 of the NEMA Standard Publication TS 2 - 1992, as specified by the plans. The load bay shall be configuration 4 (16 position) as defined by TS 2 of the NEMA Standard Publication TS 2 - 1992, as specified by the plans. The vehicle detector rack shall be Configuration #2 as defined by TS 2 of the NEMA Standard Publication TS 2 - 1992.

	Size of Cabinet	Backpanel Configuration – Size of Load Bay	Detector Rack Size
	Base Mount – Size 6 (55"H x 44"W x 26"D)	Type 1 Configuration # 4 16-position (1-8 vehicle, 9-12 ped, 13-16 overlap) load bay with two BIU rack positions	Configuration #2 with 8-position 4-channel and two BIU rack positions

1.2.3 Vertical shelf support channels shall be provided to permit adjustment of shelf location in the field. The channels shall have a single continuous slot to allow shelves to be placed at any height within the cabinet. Channels with fixed notches or holes are not acceptable.

1.2.4 Each cabinet shall be equipped with an extra set of unistrut channels on either side of the front section of the cabinet to permit the purchaser to mount additional equipment as necessary.

1.2.5 Shelves shall be at least 330 mm deep and be located in the cabinet to provide a minimum 25 mm clearance between the back of the shelf and the back of the cabinet. A 38 mm minimum height drawer shall be provided in the cabinet, mounted directly beneath the bottom shelf. The top shelf shall be vented with slots so that air can pass through this shelf. The drawer shall have a hinged top cover and shall be capable of storing documents and miscellaneous equipment. This drawer shall support to 22.5 kg in weight when fully extended. The drawer shall open and close smoothly. Drawer dimensions shall make maximum use of available depth offered by the controller shelf and be a minimum of 600 mm. Drawer must be positioned so that it does not hinder the ability to work on, remove or access any other component in the cabinet.

1.2.6 Two shelves shall be provided in the cabinet and shall be at minimum 305 mm apart in height. There shall be sufficient shelf space to accommodate a controller unit 330 mm high, an MMU, one 8-position card rack and external power supply. An additional space at least 305 mm high, 325 mm wide, and 305 mm deep shall be provided. The shelves shall be placed in such a manner that sufficient ventilation is provided to all electrical components and full access is provided for installation, removal, and maintenance of all internal components from both front door and back door.

1.2.7 The cabinet shall be vented and cooled by two thermostatically controlled fans. The fans shall be a commercially available model with a capacity of at least 2.7 m³/min. The thermostats shall have a minimum adjustable range of 70°F to 110°F and shall be preset to turn on at 95°F.

1.2.8 The cabinet shall be provided with a unique serial number with date of manufacture that shall be stamped directly on the cabinet or engraved on a metal or metalized mylar plate epoxied to the cabinet. The digits shall be at least 5 mm in height and located on the upper right sidewall of the cabinet near the front.

1.2.9 All labeling inside of the cabinet shall be black and shall not be blocked by wiring or internal components.

1.3 Cabinet Door

1.3.1 The cabinet shall be provided with one door in front that will provide access to the cabinet. The door shall be provided with a full-length piano hinge with stainless steel pins spot welded at the top of the hinge. The hinges shall be mounted so that it is not possible to remove them from the door or cabinet without first opening the door. The bottom of the door opening shall extend at least to the bottom level of the back panel. The door and hinges shall be braced to withstand a 74 kg per vertical meter of door height load applied to the outer edge of the door standing open. There shall be no permanent deformation or impairment of any of the door or the cabinet body when the load is removed.

An additional back door shall be provided with all base-mounted cabinets. The front door specification shall apply to all back door applications with the exception of an auxiliary police door.

1.3.2 The cabinet door shall be fitted with a Number 2 Corbin lock and a stainless steel handle with a 16 mm (minimum) diameter shaft (or equivalent cross-sectional area for a square shaft) and a three-point latch. The lock and latch design shall be such that the handle cannot be released until the lock is released. Two keys shall be provided for each cabinet. A gasket shall be provided to act as a permanent dust and weather resistant seal at the controller cabinet door facing. The gasket material shall be of a nonabsorbent material and shall maintain its resiliency after long-term exposure to the outdoor environment. The gasket shall have a minimum thickness of 6.25 mm. The gasket shall be located in a channel provided on the cabinet or on the door(s). An "L" bracket is acceptable in lieu of this channel if the gasket is fitted snugly against the bracket to insure a uniform dust and weather resistant seal around the entire door facing. Any other method is subject to purchaser approval during inspection of an order.

1.3.3 A locking auxiliary police door shall be provided in the door of the cabinet to provide access to a panel that shall contain a signal shutdown switch, a signal flash switch, a manual-automatic switch, and a manual advance push-button switch on a six foot plugable/removable, retractable cord. Manual control of the controller unit from the police door shall override any external control (external logic, etc.) in effect when the Manual-Automatic switch is in the manual position. Each actuation of the manual advance push-button switch shall advance the controller to the next interval. Manual control shall not override any calls for preemption. The police door shall be gasketed to prevent entry of moisture or dust and the lock shall be provided with one brass key. Switches shall be labeled for each operation.

1.3.4 The intake for the vent system shall be filtered with a permanent air filter. The filter should consist of a removable metal frame, 14x20x1 inch thick with replaceable fiberglass mesh filter. The filter shall be securely mounted so that any air entering the cabinet must pass through the filter. The cabinet opening for intake of air shall be large enough to use the entire filter. The air intake and exhaust vent shall be screened to prevent entry of insects. The screen shall have opening no larger than 8.1 mm². The total free air opening of the exhaust vent shall be large enough to prevent excessive backpressure on the fan.

1.4 Wiring

1.4.1 All wiring within the cabinet shall be neat and routed such that opening and closing the door or raising or lowering the back panel will not twist or crimp the wiring. All wiring harnesses shall be either sheathed in nylon mesh sleeving or jacketed with PVC or polyethylene insulation. Wiring leading to the cabinet door shall be sheathed in nylon mesh sleeving or be PVC jacketed cable only. All SDLC cabling shall be Belden #7203A or equivalent.

1.4.2 Size

- A. All conductors between the main power circuit breakers and the signal power bus shall be a minimum size 10 AWG stranded copper. All conductors carrying individual signal lamp current shall be a minimum size 16 AWG stranded copper. All AC service lines shall be of sufficient size to carry the maximum current of

the circuit or circuits they are provided for. Minimum cabinet conductor wire size shall be 22 AWG stranded copper. All wiring and insulation shall be rated for 600 V or greater.

- B. Conductors for AC common shall be white. Conductors for equipment grounding shall be green. All other conductors shall be a color different than the foregoing.
- C. No P.C. boards will be allowed on the back panel of the cabinet. All wiring must be done from the BIUs to the Load Switches using standard 19-gauge wiring.
- D. Conflict monitor wires shall be colored as to correspond with the output being monitored (example: green wire for green output, yellow wire for yellow output, and red wire for red output) or labeled to identify the output that is being monitored.

1.4.3 A barrier terminal block with a minimum of three compression fitting terminals designed to accept up to a #4 AWG stranded wire shall be provided for connection of the AC power lines. The block shall be rated at 50 Amperes.

1.4.4 All terminals shall be permanently identified in accordance with the cabinet wiring diagram using an anodized silk screening process on the aluminum panel. Where through-panel solder lugs or other suitable connectors are used, both sides of the panel shall have the terminals properly identified. Identification shall be placed as close to the terminal strip as possible.

- A. Each controller input and output function shall be distinctly identified with no obstructions, at each terminal point in the cabinet, with both a number and the function designation. The same identification must be used consistently on the cabinet wiring diagrams.
- B. Each load switch socket shall be identified by phase number, overlap number, and pedestrian phase number as applicable. No cabinet equipment, including the load switches themselves, may obstruct these identifications.
- C. Each flash transfer base and power relay base shall be properly identified with no possible obstructions.
- D. Each harness within the cabinet shall be distinctly identified by function on the connector end.
- E. The flasher socket shall be distinctly identified with no possible obstruction.
- F. All other sockets needed within the cabinet to fulfill the minimum requirements of the Invitation to Bid, or attachments thereof, shall be distinctly identified.

1.4.5 The ten-pin controller unit harness (A plug Type 1) shall be long enough to reach any point 600 mm above the controller shelf. The A plug Type 1 and the SDLC cable for the controller shall come from the back of the shelf for use with 2070 controller. The A plug and SDLC cable shall be placed in such a way that the 2070 controller will be on the top shelf. The conflict monitor harness and any required auxiliary harness shall reach 600 mm from the conflict monitor shelf.

The conflict monitor harness and SDLC cable shall be placed in such a way that the conflict monitor will be on the top shelf.

1.4.6 {Intentionally left blank}

1.4.7 Copper bus bars shall be provided for both the power supply neutral (common) and chassis ground. Each bus bar must provide a minimum of ten unused terminals with 8-32 X 5/16" or larger screws. All copper bus bar screw heads shall be accessible with a screw driver. Wires shall enter the bus bars from the bottom and the screw heads shall be accessed horizontally.

Copper bus bars shall be located at the bottom of the detector panel, below the loadbay, and near the barrier terminal block mentioned in section 1.4.3 for chassis ground. Tie all ground bar connections in a single loop with #6 AWG wire. Bond detector racks and any panels mounted with uni-struts to the grounding loop. Uni-struts are not acceptable as ground conductors.

Copper bus bars shall be located below the loadbay for AC neutral. The AC neutral and chassis ground buses shall be tied together with a removable jumper that is a minimum #10 AWG wire.

1.4.8 A 20 Ampere and a 50 Ampere thermal type circuit breaker shall be mounted and wired in the cabinet. The 20 ampere breaker shall protect the base light, trouble light, GFCI receptacle, modem duplex receptacles, and

fans. The 20 Ampere breaker shall be powered from the 50 Ampere breaker. The 50 ampere breaker shall protect the signal load circuits, controller circuits, conflict monitor, flasher, and card rack detector power supply.

1.4.9 The circuit breakers shall be equipped with solderless connectors and installed on the right side wall (facing the cabinet) or lower right hand side of the back panel inside the cabinet. The breakers shall be easily accessible. The breakers shall be positioned so that the rating markings are visible.

1.4.10 A Ground Fault Circuit Interruption (GFCI) type duplex receptacle shall be mounted and wired in the lower right side wall of the cabinet. Four additional duplex receptacles (for use with communications modems) shall be mounted and wired; two in the upper left side of the cabinet and two in the upper right. These receptacles shall be wired on the load side of the 20 Amp circuit breaker. These receptacles shall be easily accessible and unobstructed by any other components.

1.4.11 {Intentionally left blank}

1.4.12 The load side of the main circuit breaker shall be protected by a primary and secondary surge suppressor, the Atlantic Scientific Zone Defender Pro (#16700) and Atlantic Scientific Zone Guardian TS (#41003), or engineer approved equivalent.

1.4.13 {Intentionally left blank}

1.4.14 The suppressor shall be connected to the line filter as recommended by the manufacturer. Number 10 AWG or larger wire shall be used for connections to the suppressor, line filter and load switch bus.

1.4.15 An LED light and door switch shall be installed in the cabinet and placed in such a way that it illuminates the entire cabinet. This light shall be turned on when the cabinet door is opened, and turn off when the cabinet door is closed. A metal oxide varistor (MOV) or other such transient suppression device shall be placed across the AC power input to the light.

1.4.16 A radio frequency interference (RFI) suppresser (line filter) shall be provided and installed on the load side of the signal circuit breaker and shall be protected by the surge protector. This filter shall be rated at 50 amperes and shall provide a minimum attenuation of 50 decibels over the frequency range of 200 Kilohertz to 75 Megahertz.

1.4.17 Transient suppression devices shall be placed on the coil side of all relays in the cabinet. DC relay coils shall have, as a minimum, a reversed biased diode across the coil. AC relays shall have MOV's or equivalent suppression across their coils. RC networks are acceptable. One suppression device shall be supplied for each relay.

1.4.18 Except where soldered, all wires shall be provided with lugs or other approved terminal fittings for attachment to binding posts. Insulation parts and wire insulation shall be insulated for a minimum of 600 volts.

1.4.19 The outgoing traffic control signal circuits shall be of the same polarity as the line side of the power source.

1.4.20 Two switches shall be provided on the inside face of the cabinet door that shall be labeled Test Normal-Flash and Controller On-Off. When the Test switch is in the Flash position, call for flashing operation shall transfer the traffic signal circuits from the outputs of the load switch to the output(s) of a flasher relay. When the Test switch is in the Normal position, the call for flashing operation shall permit the controller unit to continue to run so that its normal operation can be observed. The Controller On-Off switch (located near the Test Normal-Flash switch) will cause the controller unit and any auxiliary equipment to be deactivated. The Test and Controller switches should have some type of guard to protect against accidental activation. There should be ample clearance provided between switch guard and controller face when door is closed.

1.4.21 {Intentionally left blank}

1.4.22 The cabinet shall be wired so that activation of the conflict monitor will cause the controller unit, and any auxiliary equipment, to stop timing.

1.4.23 Conflict and manual flash for vehicle and overlap phases shall be prewired for all red.

1.4.24 The cabinet shall be designed and equipped with eight transfer relay positions for the 16-position cabinet and six transfer relays for the 12-position cabinet. The purchaser should be able to change flash color using simple tools to move the wires. Wires for the flash circuit shall be color coded for each output of the corresponding channel (example: green for green output, yellow for yellow output, and red for red output). Between the back plane and loadbay terminals, flash circuit wires and conflict monitor wires for each channel will be isolated by

channel and not bundled or tie wrapped with any other wires. The flash circuit shall be easy to change without having to remove any components (example: load switch or transfer relay). Flash circuit shall be easily accessible and free of any obstructions.

1.4.25 Transfer relays shall be the plug-in type manufactured by Reno A&E (Part No. TR-200) or Struthers-Dunn (Part No. 21XBXP), or equivalent with LED indication. The relays shall have contacts a minimum of 3/8" diameter in size and shall be rated at a minimum of 30 Amps 102/240 VAC, 20 Amps 28 VDC.

1.4.26 A 75 Amp, solid-state relay shall be wired between the RFI filter output and the load switch power bus. The relay shall be controlled by the signal shutdown switch and the flash switch. The relay shall be mounted to a heat sink designed to allow maximum current flow at 74 C without damaging the relay.

1.4.27 All exposed AC wiring points, including the RFI filter, surge suppresser, and solid state relay shall be covered with a clear non-conductive plastic cover mounted to prevent accidental contact. Unless otherwise noted in this specification, wiring at terminal strips is exempt from this requirement.

1.4.28 The load switch outputs shall be brought out to posted 10-32 X 5/16" binder head screw terminals. An MOV or approved equivalent suppression device shall be installed on each load switch output. These devices shall be located on the front side of the load bay for easy access and replacement. Field wiring for the signal heads shall be connected at this terminal strip. Compression connections are not acceptable. All terminal strips for PEDs, overlaps, and vehicle phases shall all be placed on the same plane, horizontally at the bottom of the loadbay.

1.4.29 An SDLC Hub Assembly shall include a minimum of eight D-Subminiature Female 15 pin (DB15) connectors that are wired in series. Provide one (1) extra SDLC cable capable of reaching both shelves.

2.0 DETECTOR PANEL AND CARD RACK

2.1 The cabinet shall have a loop detector panel mounted on the left side of the cabinet. This panel shall provide for all connections between loops at the street and the detector cards as described in the following sections.

2.2 Detector Card Rack

2.2.1 The vehicle detector card rack for the Size 5 Modified (12-position backpanel) cabinets shall be TS 2 detector rack Configuration #1 and shall accommodate a minimum of eight 2-channel or four 4-channel TS 2 detector units, one BIU and two additional slots for rack mount optical preemption wired 4-channel dominate. The vehicle detector card rack the Size 6 (16-position backpanel) cabinet shall be TS 2 detector rack Configuration #2 and shall accommodate a minimum of eight 4-channel TS 2 detector units, two BIUs and two additional slots for rack mount optical preemption wired 4-channel dominate. Bond detector rack to the grounding loop.

2.2.2 The detector card rack shall have a rigid frame with labels and shall be fabricated from aluminum and shall have slots set in a modular fashion such that the detector card edge connectors shall plug into a socket while sliding between top and bottom card guides for each module. Mounting flanges shall be provided and be turned outward for ease of access. The detector card rack shall be bolted to a cabinet shelf. It shall be possible to unbolt the rack using simple tools. Wiring harnesses to the detector rack shall have connections that are pluggable and do not require any soldering or de-soldering to change out the detector rack.

2.2.3 All wiring to the rack shall be labeled and neatly run to other parts of the cabinet and detector termination panel.

2.2.4 The slots shall be numbered 1 to 8, left to right when viewed from the front of the rack. A flange shall be provided on the top and the bottom of the rack to label each individual channel.

2.2.5 The detector DC supply shall be bussed to a common point and wired to the detector panel.

2.2.6 The chassis ground shall be bussed to a common point and wired to the detector panel.

2.2.7 The logic ground shall be bussed to a common point and wired to the detector panel.

2.2.8 The data address for the detector BIUs shall be according to TS 2.

2.3 Detector Panel

2.3.1 The Detector Panel shall provide all connections between the detector loops and the detector cards. All detector loop input connections shall be easily accessible and free of any obstructions.

2.3.2 The panel shall be constructed of 3.2 mm aluminum.

2.3.3 The panel shall contain a 76 mm horizontal slot in each corner to accommodate 6.3 mm mounting bolts.

- 2.3.4 All inputs from the loops shall be brought through posted 10-32 X 5/16" binder screw terminals or 8-32 X 5/16" binder screw terminals.
- 2.3.5 Each loop pair shall be protected by lightning surge suppresser. The suppressers must be easily accessible and mounted so that they can be replaced without removing the detector panel. Suppressers shall not obstruct terminal strips making it difficult to connect loops.
- 2.3.6 Each detector will have a test switch such that when the switch is closed, a call is placed upon that detector input. The test switch will have three positions; no effect, permanently on, and momentarily on.
- 2.3.7 The detector panel for cabinet Configurations #1, #2 and #3 (12-position) shall provide the following connection points as a minimum for sixteen (16) detectors:

CONNECTION POINT	NO. OF CONNECTION POINTS
EXTERNAL 24V POWER SUPPLY	1
LOOP INPUTS	16
LOGIC GROUND	1
SPARES	6
CHASSIS GROUND BUS	1 BUS

The detector panel for cabinet Configuration #4 (16-position) shall provide the following connection points as a minimum for thirty-two (32) detectors:

CONNECTION POINT	NO. OF CONNECTION POINTS
EXTERNAL 24V POWER SUPPLY	1
LOOP INPUTS	32
LOGIC GROUND	1
SPARES	6
CHASSIS GROUND BUS	1 BUS

- 2.3.8 A chassis ground bus bar shall be provided on the panel and connected to the cabinet by a copper ground strap. The strap shall be bonded to the grounding loop.
- 2.3.9 The cabinet shall be wired and labeled for eight (8) pedestrian pushbutton inputs. The detector panel shall have all eight (8) pedestrian test pushbutton inputs.
- 2.3.10 Cabinet shall have replaceable pedestrian pushbutton isolator PCB that isolates all eight inputs. These shall be able to be replaced without removal of existing equipment and without putting the intersection into FLASH.

3.0 PREEMPT PANEL

- 3.1 A preempt panel shall be provided that contains all interface circuits and wiring for preemption and communication functions. The panel shall be located on the left side of the cabinet interior. Bond panel to grounding loop.
- 3.2 Three momentary test switches, one for each preempt circuit, shall be provided on the preempt panel. The operator shall not be exposed to hazardous voltages during operation of the test switches.
- 3.3 All necessary interconnection cables, relays and mounting hardware shall be provided.
- 3.4 There shall be a switch on the preempt/communication panel, which shall release the local controller to operate in an isolated, full-actuated manner, when necessary for maintenance purposes. The switch positions shall be labeled "SYSTEM" and "FREE".
- 3.5 {Intentionally left blank}
- 3.6 Preempt panel shall have a 12-volt AC relay prewired for preempt input 1.
- 3.7 All inputs and terminals shall be labeled.

4.0 POWER SUPPLY

4.1 The power supply shall be a shelf mounted, enclosed, 24 VDC power supply in accordance to Clause 5.3.5 of the NEMA Standards Publication TS 2-1992.

4.2 One power supply cable per power supply shall be furnished and installed in each cabinet. The wires shall be terminated to bus bars, terminals on the front of the backpanel, detector panels, or connector as appropriate. The connections shall be with forked spade lugs or otherwise as needed. Each individual wire shall be cut to the length required to reach the point at which it is to be connected.

5.0 TWO CIRCUIT SOLID STATE FLASHER

5.1 The solid state, two-circuit flasher shall meet the electrical and physical characteristics described in Clause 6.3 of the NEMA Standards Publication TS 2-1992. The flasher shall be Type III (dual circuit rated at 15 Amps per circuit) unit and so constructed that each component may be readily replaced if needed.

5.2 The two-circuit flasher shall be of solid-state design with LED indicator lights for each circuit and shall contain no electro-mechanical devices.

6.0 LOAD SWITCHES

6.1 The solid-state load switches shall meet the requirements set forth in Clause 6.2 of the NEMA Standards Publication TS 2-1992, and shall be "Triple-Signal Load Switch" type. Load switches shall be PDC model SSS-86 I/O load switch with LED on front, or equivalent.

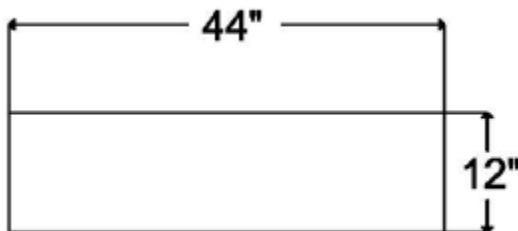
6.2 An indicator light for each circuit shall be provided in each load switch. The indicator light shall be on when a "Low Voltage Active" input to the load switch is present as well as high voltage output.

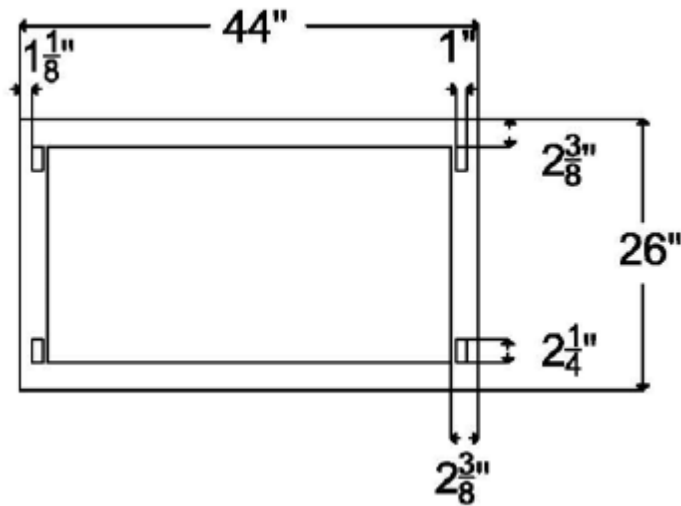
7.0 GENERATOR TRANSFER SWITCH

7.1 The base mount cabinets shall contain an internal generator plug accessible from the outside by locking auxiliary door. The auxiliary door shall be gasketed to prevent entry of moisture or dust. The switch must be equipped with a Cooper CWL530P male generator plug. During a power outage, the transfer switch will isolate the emergency circuits from the utility line allowing for efficient operation of the cabinet and generator without back feeding onto the utility. The generator plug and transfer switch shall be mounted below the lowest shelf so as not to block usable space on shelves or block access to any equipment in the cabinet including copper bus bars.

8.0 CABINET RISER

8.1 Cabinet riser is for a Type-P Size 6 base mount cabinet. Riser is to be constructed of .125" thick 5052 H-32 aluminum. Riser is to be constructed using continuously welded seams. Riser is 12' in height.





The Contractor shall supply all necessary cabinet hardware for configuration and testing ("burn-in") to the Electronics Lab facility at 537 Spratt Street at least 14 days prior to requiring the cabinet be available for field installation – including, but not limited to: cabinet, controller, conflict monitor, jumper card & detection cards. Supplied equipment should meet all current CDOT standards and requirements. The City will perform all testing of the cabinet, controller, conflict monitor and permissive jumper card. The controller cabinet shall be picked up at the CDOT Traffic Signals facility at 537 Spratt Street. The Contractor shall notify either Travis Stewart or Steve Phifer at (704) 336-3919 at least 48 hours in advance of picking up any materials.

The Contractor shall install the controller cabinet on a concrete foundation. Use a minimum of four 3/8" diameter expanding type anchor bolts to secure cabinet to foundation. Unless otherwise specified, install the cabinet using a 12" riser at its base. Seal space between cabinet and foundation with permanent, flexible, waterproof sealing material.

Termination of field wires will be performed by the contractor and will be attached to the load bay using uninsulated fork wire connectors. Termination of low voltage field wires will be performed by the contractor and attached appropriately within the cabinet using insulated fork wire connectors.

The contractor should assume that it will take up to 10 days for a State Electrical Inspector to arrive on site to inspect a new service, and 7 days for a power company to install a new electrical service. Additional days will NOT be granted if these time periods are shorter.

Activation of New Traffic Signals*:

1. When the Contractor is ready to activate the traffic signals necessary for the traffic control phase they shall contact CDOT Traffic Signals (Travis Stewart or Steve Phifer, 704-336-3919) to schedule activating the new signal equipment. A minimum of 48 hours advanced notice is required.
2. Any new traffic signals must flash before being put into full operation. Signals shall flash for a period of 7 days before being activated, unless otherwise approved by The Engineer. Signals shall not be activated on Friday. Signals should be flashed a minimum of three (3) working days and shall not flash for longer than 10 days.
3. The Contractor shall uncover the new signals and shall remain at the site until installation is complete, the new signals are activated and a CDOT Traffic Signals representative has determined that they are functioning as designed.
4. The contractor shall remove any existing STOP signs at the project location immediately following full activation of a full traffic signal, upon the direction of The Engineer, and their associated supports.

**Pedestrian Hybrid Beacons are exempt from a flashing period as they rest in dark.*

9.0 MEASUREMENT

Installed Controller Cabinets will be measured and paid as the actual number of cabinets that are supplied, installed, activated and accepted.

10.0 PAYMENT

Payment will be made under:

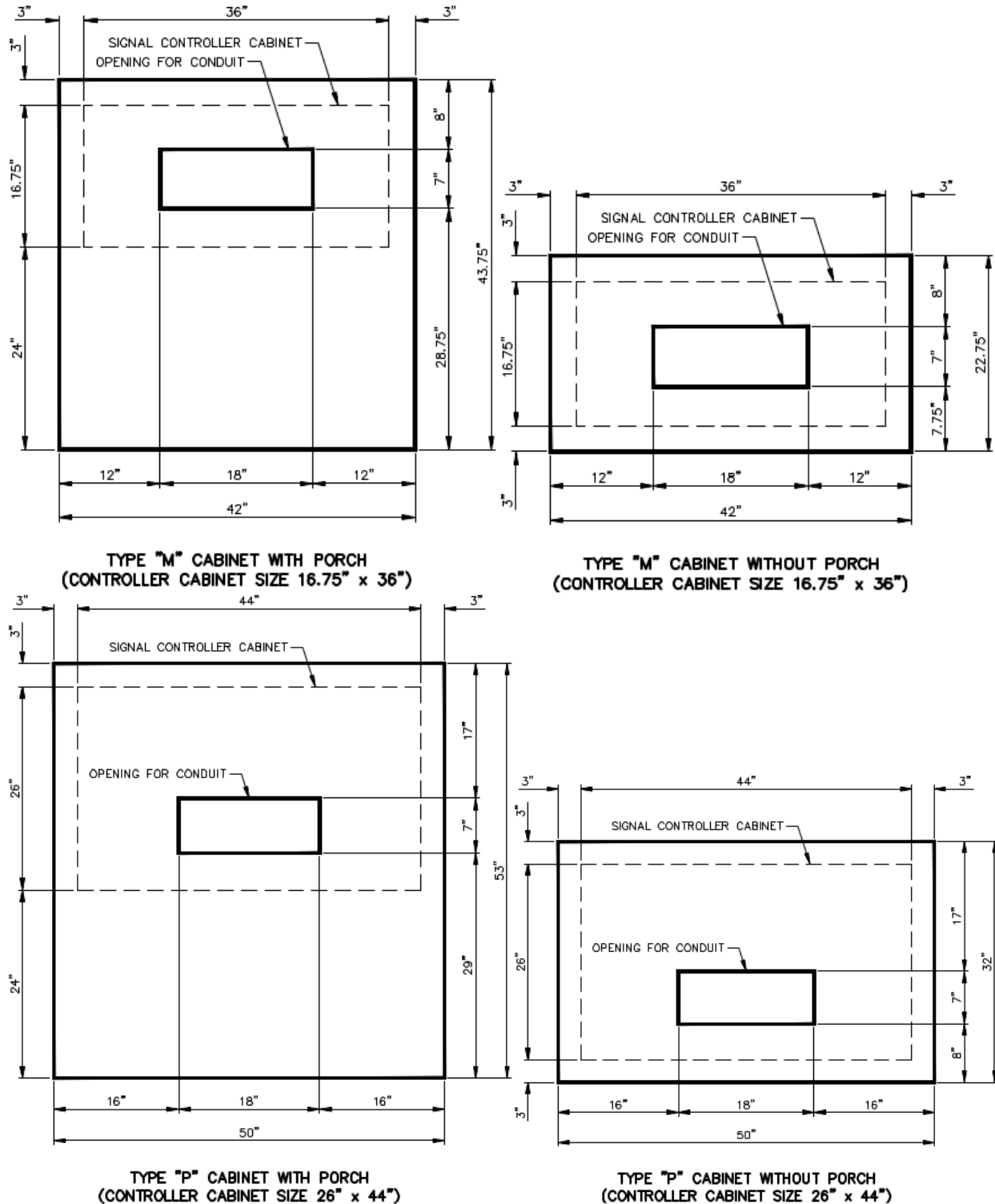
SUPPLY, INSTALL & ACTIVATE CONTROLLER CABINET.....EA

SP-14, CONCRETE BASE FOR CONTROLLER CABINET

1.0 DESCRIPTION

The work in this special provision consists of all labor and material necessary to excavate, form, pour concrete, insert and join conduits to construct a foundation for a signal controller cabinet. This unit also includes all labor and material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewage and drainage facilities, and any other property damaged during the unit installation. The Contractor shall install a concrete foundation for mounting the traffic signal controller cabinet. This cabinet foundation should be dimensioned to accept the correct sized signal cabinet as directed by the engineer.

See CDOT Supplemental Drawings Type "M" 1751.01-3-CDOT and Type "P" 1751.01-4-CDOT



Do not install foundations over uncompacted fill or muck, and ensure ground is level. Concrete shall be poured a minimum of 4" above and 4" below finish grade. Give cabinet foundation a broom finish. Conduits turned up in the slab shall be inside the "conduit window". All 90 degree elbows shall be a sweeping radius not standard 90. Conduits shall be stubbed 4 inches above the ground or slab, turned up flush with and follow the vertical alignment

of utility poles, capped without glue prior to placing concrete near them, and all joints cleaned and glued. Use 3600 psi concrete with standard gravel and 2% maximum calcium chloride.

2.0 MEASUREMENT

Installed Controller Cabinet Concrete Base will be measured and paid as the actual number of cabinet bases installed and accepted.

3.0 PAYMENT

Payment will be made under:

CONCRETE BASE FOR CONTROLLER CABINETEA

SP-15, VEHICLE SIGNAL HEADS (1705 MODIFIED)

1.0 DESCRIPTION

Description is as set out in NCDOT Standard Specification 1705.

2.0 MATERIAL

Materials are as set out in NCDOT Standard Specification 1705 with the addition of:
All vehicle LED signal heads must have yellow polycarbonate housings, black polycarbonate hoods and internal hinges for access doors.

3.0 CONSTRUCTION METHODS

Construction methods are as set out in NCDOT Standard Specification 1705.

4.0 PAYMENT

Measurement and payment are as set out in NCDOT Standard Specification 1705.

Payment will be made under:

VEHICLE SIGNAL HEAD (POLYCARBONATE, 12", 3-SECTION HAWK)EA

SP-16, RISER ASSEMBLY

1.0 DESCRIPTION

Furnish and install riser assemblies with Sch. 80 PVC conduit, Sch. 80 PVC weatherheads, galvanized pole attachment fittings and all necessary hardware.

2.0 MATERIAL

Materials are as set out in NCDOT Standard Specification 1722 with the addition of:
Use only Schedule 80 PVC conduit and weatherheads unless otherwise approved by the Engineer.

3.0 CONSTRUCTION METHODS

Construction methods are as set out in NCDOT Standard Specification 1722.

4.0 MEASUREMENT AND PAYMENT

Measurement and payment are as set out in NCDOT Standard Specification 1722.

Payment will be made under:

RISER ASSEMBLY (2" SCH. 80 PVC)EA

SP-17, STANDOFF BRACKET ASSEMBLY

1.0 DESCRIPTION

Provide Aluminum 24" H-Bar, 1/2" 4-way bar, Conduit Standoff Bracket and T-Slot, to mount 2" conduits with adjustability.

Pole mounting hardware must mount on 3 5/8" centers using 5/8" through bolts and 1/2" lag bolts. Conduit Straps must include T-Slot shapes to secure conduit to standoff bracket with two 1/2" x 1 1/4" hex head bolts, lock washers and hex nuts. The standoff bracket H-bar shall hold the conduits a minimum of 6" from the pole and shall be able to hold up to six 2" Schedule 80 PVC risers, four in front and two in back of the bracket for ITS and signal cables. There should be two standoff brackets for each 10' section of riser. Standoff brackets must be installed at 3' from the ground and at 5' intervals to the top of the riser (four brackets required for 20' riser).

Example: Hubbell Power Systems, Inc. Part #BASOCL6-24FW and part #CSTK2

2.0 MEASUREMENT

The standoff brackets will be measured and paid as the actual number of standoff bracket assemblies furnished, installed and accepted. Schedule 80 PVC Risers will be paid separately under the Riser Assembly Unit. No measurement will be made of pole attachment fittings as these will be incidental to furnishing and installing standoff brackets.

3.0 PAYMENT

Payment will be made under:

STAND OFF BRACKET ASSEMBLYEA

SP-18, CDOT PULL BOX ADJUSTMENT/RELOCATION

1.0 DESCRIPTION

Work covered by this special provision includes adjusting and relocating existing CDOT Traffic Signal Pull Boxes and vaults in accordance with the current edition of the North Carolina Department of Transportation Traffic Signal Specifications and the provisions of these specifications.

2.0 MATERIAL

Adjustment and relocating of existing pull boxes. Additional necessary conduit needs to be captured under SP-8.

3.0 MEASUREMENT

The quantity of pull boxes to be paid for will be the actual number of pull boxes and/or vaults adjusted and accepted for payment per each.

4.0 PAYMENT

The quantity of adjusted and relocated pull boxes, measured as provided above, will be paid for at the contract unit price per each for: 13" x 24" x 12" and 24" x 36" x 24" CDOT Pull Boxes. Payment will be full compensation for all work covered by this special provision, including but not limited to adjusting/relocating pull boxes, excavation, backfill, compaction; and stone bedding.

Payment will be made under:

ADJUSTMENT PULL BOX, CDOT, (13"X24"X12")EA
ADJUSTMENT PULL BOX ,CDOT, (24"X36"X24")EA

SP-19, SIGNAL HEAD COVERS

1.0 DESCRIPTION

The Contractor shall supply and install signal head covers for each signal, until the signals are activated. The signal head covers shall be black in color with the words "OUT OF SERVICE" on the face of the cover. Covers shall be made out of outdoor fabric, solution dyed with urethane finish. The fabric must be weather resistant and treated to withstand mildew. The color shall also be fade resistant. The face of the cover besides the main fabric must consist of a strip in the middle made from see through material only visible when the signal head/pedestrian signal is on for testing. This part must also be made from weather and mildew resistant material. The front facing portion material of the cover shall be doubled. Extra inner layer must be added in black for two purposes: Not to let light through, but only through the perforated portion and to make the cover thicker and firmer. The siding shall have the same color fabric attached all around the "facing" which shall cover the height of all visors with the cord-elastic inserted at the open end to attach around all visors to create more stability and fitness. Siding is not required to have the inner layer. The elastic cord used around the side of the cover must help it stay on more secure and stable. The cord must be made sturdy and strong for industrial purposes. The cord elastic shall not be exposed but placed inside the cover. Straps shall be used for more stabilizing of the covers on the signal heads against unexpected weather. The one-inch wide straps shall be placed on both sides of the covers such that they could be fastened by one-inch buckles around the back of the signal heads. The strap material shall be weather, mildew and fade resistant. The number of straps to be used per signal head: 2-3 Section Head -2 sets (each set consist of two pieces) 1-Section Head -1 set. The signal covers shall be removed once the signal is activated and shall be turned over to the City as City property.

2.0 MEASUREMENT

Signal Head Covers will be measured and paid as the actual number of signal head covers of each type listed below furnished, installed, removed and returned to the city:

3 SECTION 12" SIGNAL HEAD COVER
PEDESTRIAN SIGNAL COVER

3.0 PAYMENT

Payment will be made under:

3 SECTION 12" SIGNAL HEAD COVER.....EA
PEDESTRIAN SIGNAL COVER.....EA

SP-20, JUNCTION BOX

1.0 DESCRIPTION

The work covered by this special provision includes all elements of work required to furnish and install junction boxes, including but not limited to providing all materials, placing the junction boxes, excavating, backfilling, compacting, and all incidentals necessary to complete the work in accordance with the plans, NCDOT Standard Drawing Number 1716.01, and Section 1716 of the NCDOT Standard Specifications.

2.0 MATERIALS

Boxes and other incidentals shall be in accordance with NCDOT Standard Drawing Number 1716.01 and Section 1716 of the NCDOT Standard Specification (except "NCDOT" will be replaced with "CDOT" or "DUKE", as applicable, on the covers of pull boxes. "TRAFFIC SIGNAL" or "ELECTRICAL" may be used in lieu of "CDOT"/"DUKE" with the Engineer's approval).

3.0 CONSTRUCTION METHODS

Installation shall be in accordance with the manufacturers' specifications, plans, and NCDOT Standard Drawing Number 1716.01, and Section 1716 of the NCDOT Standard Specifications.

4.0 MEASUREMENT

The quantity of junction boxes will be the actual number of junction boxes installed and accepted on a per each basis.

5.0 PAYMENT

The quantity of junction boxes, measured as provided above, will be paid for at the contract unit price per each. Payment will be full compensation for all elements of work required to furnish and install precast polymer concrete junction boxes, including but not limited to providing all materials, placing the junction boxes, excavating, backfilling, compacting, and all incidentals necessary to complete the work in accordance with the plans, NCDOT Standard Drawing Number 1716.01, and the NCDOT Standard Specifications.

Payment will be made under:

JUNCTION BOX (13"x24"x12" PC, TRAFFIC SIGNAL LOGO)EA
JUNCTION BOX (24"x36"x24" PC, TRAFFIC SIGNAL LOGO)EA
JUNCTION BOX (24"x30"x30" PC, CDOT FIBER OPTIC LOGO)EA

SP-21, SEEDING AND MULCHING

1.0 DESCRIPTION

Prepare seedbed; furnish, place and incorporate limestone, fertilizer and seed; compact seedbed; furnish, place and secure mulch; mow; and perform other operations necessary for the permanent establishment of vegetation from seed on shoulders, slopes, ditches or other roadside areas.

Perform seeding and mulching on all earth areas disturbed by construction and on portions of areas seeded under previous contracts as directed by the Engineer where there is unsatisfactory vegetative cover.

Adapt operations to variations in weather or soil conditions as necessary for the successful establishment and growth of the grasses or legumes.

Preserve the required line, grade and cross section of the area treated.

The actual conditions which occur during the construction of the project will determine the quantity of mowing. The quantity of mowing may be increased, decreased or eliminated entirely as directed by the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

2.0 MATERIALS

Item-Section: Fertilizer 1060-2, Limestone 1060-3, Seed 1060-4, Mulch for Erosion Control 1060-5, Tacking Material 1060-5

3.0 COORDINATION WITH

When grading operations have been suspended, and seeding and mulching has been performed on areas where work has been suspended, include in the work of seeding and mulching of the adjacent sections any necessary overlapping of operations on previously established vegetative cover

4.0 SEEDBED PREPARATION

Cut and satisfactorily dispose of weeds or other unacceptable growth on the areas to be seeded. Shape and smooth uneven and rough areas outside of the graded section, such as crop rows, farm contours, ditches and ditch spoil banks, fence line and hedgerow soil accumulations and other minor irregularities which cannot be obliterated by normal seedbed preparation operations, to provide for more effective seeding and for ease of subsequent mowing operations.

Scarify or otherwise loosen the soil to a depth of not less than 5 inches except as otherwise provided below or otherwise directed by the Engineer. Break clods and work the top 2 inches to 3 inches of soil into an acceptable seedbed by the use of soil pulverizers, drags or harrows; or by other methods approved by the Engineer. Remove all rock and debris 3 inches or larger on median, shoulder and ditch cut or fill slopes which are 3:1 or flatter, before the application of seed and fertilizer. Remove rock 6 inches and larger displaced during seeding operations.

Scarify, groove, trench or puncture all slope surfaces. The depth of preparation and the degree of smoothness of the seedbed may be reduced on cut slopes that are 2:1 and steeper, as permitted by the Engineer.

On cut slopes that are either 2:1 or steeper, the Engineer may permit the preparation of a partial or complete seedbed during the grading of the slope. If at the time of seeding and mulching operations such preparation is still

in a condition acceptable to the Engineer, additional seedbed preparation may be reduced or eliminated.

Limit seedbed preparation to within 2 feet of the edge of any pavement to a depth of 2 inches to 3 inches.

Do not prepare seedbed when the soil is frozen, extremely wet or when the Engineer determines that it is an otherwise unfavorable working condition.

5.0 APPLYING AND COVERING LIMESTONE, FERTILIZER AND SEED

(A) General

The contract will state the seasonal limitation for seeding operations; the kinds of grades of fertilizers; the kinds of seed; and the rates of application of limestone, fertilizer and seed.

Obtain approval from the Engineer before using equipment for the application, covering or compaction of limestone, fertilizer and seed. Approval may be revoked by the Engineer at any time if equipment is not maintained in satisfactory working condition, or if the equipment operation damages the seed.

Apply limestone, fertilizer and seed within 24 hours after completion of seedbed preparation unless otherwise permitted by the Engineer. When the Engineer determines that weather and soil conditions are unfavorable, do not distribute any limestone or fertilizer and do not sow any seed.

Take adequate precautions to prevent damage to traffic, structures, guardrails, traffic control devices or any other appurtenances during the application of fertilizer. Provide adequate covering or change methods of application as required to avoid such damage. Repair any damage that occurs, including any cleaning that may be necessary.

(B) Limestone and Fertilizer

Limestone may be applied as a part of the seedbed preparation, provided it is immediately worked into the soil. If not so applied, distribute limestone and fertilizer uniformly over the prepared seedbed at the specified rate of application and then harrow, rake or otherwise thoroughly work or mix into the seedbed.

(C) Seed

Distribute seed uniformly over the seedbed at the required rate of application, and immediately harrow, drag, rake or otherwise work so as to cover the seed with a layer of soil. Cover to a depth as directed by the Engineer. If two kinds of seed are to be used which require different depths of covering, sow separately.

When a combination seed and fertilizer drill is used, drill fertilizer with seed after applying and incorporating limestone into the soil. If using two kinds of seed requiring different depth of cover, the seed requiring the lighter cover may be sown broadcast or with a special attachment to the drill, or drilled lightly following the initial drilling operation.

When using a hydraulic seeder for application of seed and fertilizer, do not allow the seed to remain in water containing fertilizer for more than 30 minutes before application unless otherwise permitted by the Engineer.

Compact the seedbed immediately after seed has been properly covered in the manner and degree approved by the Engineer.

(D) Modifications

When adverse seeding conditions are encountered due to steepness of slope, height of slope or soil conditions, the Engineer may direct or permit that modifications be made in the above requirements which pertain to incorporating limestone into the seedbed; covering limestone, seed and fertilizer; and compaction of the seedbed.

Such modifications with approval by the Engineer may include but not be limited to the following:

(1) The incorporation of limestone into the seedbed may be omitted as follows:

(a) On cut slopes steeper than 2:1;

(b) On 2:1 cut slopes when a seedbed has been prepared during the excavation of the cut and is still in an acceptable condition; or

(c) On areas of slopes where the surface of the area is too rocky to permit the incorporation of the limestone.

(2) The rates of application of limestone, fertilizer and seed on slopes 2:1 or steeper or on rocky surfaces may be reduced or eliminated.

(3) Compaction after seeding may be reduced or eliminated on slopes 2:1 or steeper, on rocky surfaces or on other areas where soil conditions would make compaction undesirable.

6.0 MULCHING

(A) General

Mulch all seeded areas unless otherwise indicated in the contract or directed by the Engineer.

Use grain straw as mulch at any time of the year. If permission to use material other than grain straw is requested and the use of such material is approved by the Engineer, the seasonal limitations, the methods and rates of application, the type of binding material or other conditions governing the use of such material will be established by the Engineer at the time of approval.

(B) Applying Mulch

Apply mulch within 24 hours after completion of seeding unless otherwise permitted by the Engineer. Exercise care to prevent displacement of soil or seed or other damage to the seeded area during the mulching operations.

Spread mulch uniformly by hand or by approved mechanical spreaders or blowers which will provide an acceptable application. An acceptable application will be that which will allow some sunlight to penetrate and air to circulate but also partially shade the ground, reduce erosion and conserve soil moisture.

(C) Holding Mulch

Provide and apply tacking material to hold mulch in place. Apply emulsified asphalt tackifier at a rate of 0.10 gallons per square yard (approximately 484 gallons per acre). Apply cellulose hydro mulches at a rate of 1000 pounds (dry weight) per acre. Apply other approved tackifiers at manufacturer's recommended application rate. Take adequate precautions to prevent damage to traffic, structures, guardrails, traffic control devices or any other appurtenances during the application of asphalt binding material. Provide adequate covering or change methods of application as required to avoid such damage. Repair any damage that occurs, including any cleaning that may be necessary.

Take sufficient precautions to prevent mulch from entering drainage structures through displacement by wind, water or other causes and promptly remove any blockage to drainage facilities which may occur.

7.0 MAINTENANCE OF SEEDING MULCHING

Maintain areas where seeding and mulching have been performed in a satisfactory condition until final acceptance

of the project.

Mow at the location and times as directed by the Engineer.

Correct areas of damage or failure due to any cause by repairing or completely reworking as directed by the Engineer.

Repair in accordance with Section 1661 where extensive seedbed preparation is unnecessary.

Rework seeding and mulching in accordance with this section where correction requires extensive seedbed preparation, or where earthwork repairs or complete reshaping are necessary.

As an exception to the above, repair areas of damage or failure resulting either from negligence on the part of the Contractor in performing subsequent construction operations or from not taking adequate precautions to control erosion and siltation as required throughout the various sections of the specifications, at no cost to the Department.

8.0 MEASUREMENT

Seeding and Mulching will be measured and paid in acres, measured along the surface of the ground completed and accepted. No direct payment will be made for furnishing and applying the limestone and fertilizer as such work and materials will be incidental to the work covered by Seeding and Mulching.

Mowing will be measured and paid in acres measured along the surface of the ground mowed as directed by the Engineer. Where an area has been mowed more than once at the direction of the Engineer, separate measurement will be made each time the area is mowed.

Corrective work will be compensated where seeding and mulching has been damaged or has failed to establish a satisfactory stand of vegetation.

Where earthwork and seeding and mulching has been damaged to the extent that earthwork repairs or complete reshaping are necessary, the Contractor will be paid at the contract unit price for the excavated material required for repairs to the damaged earthwork, and at the contract unit price for Seeding and Mulching for correcting the damaged seeding and mulching.

As an exception to the above, repair, at no cost to the Department, any damage to earthwork or seeded and mulched areas which is due to carelessness or neglect on the part of the Contractor.
Tacking Material is incidental to Seeding and Mulching and no additional payment will be made.

9.0 PAYMENT

Payment will be made under:

SEEDING AND MULCHING.....SY

SP-22, CO()FIBER/ML - AERIAL FIBER OPTIC CABLE STUB UNIT

1.0 DESCRIPTION

Consists of all labor and material to install one (1) foot of fiber optic cable for a field-terminated patch panel on new aerial supporting messenger or existing strand and cable(s), bonding of the shield and strand in accordance with the Construction Sheets. The number in the parentheses provides for the number of fibers in the stub and should match precisely the number of ports of the associated patch panel unit. The fiber cable shall be riser-rated, single-mode, indoor/outdoor, gel-free, all dielectric cable with flame retardant UV-resistant outer jacket, and an attenuation loss not exceeding 0.4db/km @ 1310nm. The attenuation loss for the complete assembly shall not exceed 1.5db. Also, included is the placing of a CDOT-provided cable identification tag at each handhole or pull box. The fiber optic patch panel shall be paid for under the UO()PATCH PANEL/ML.

Lash to strand with .045-inch stainless steel lashing wire and hardware, double lashing the cable to the strand.

Example:

Corning FREEDM® LST™ Cables, Part # 006ESF-T4101D20 (6 fiber, single mode, Gel-free Cable, indoor/outdoor riser, with markings every 4 feet, performance rated for SMFO with no additional special requirements)

The following suffixes may be used:

(OF) - Insert prior to the first slash (/). The unit is identical to the CO()/FIBER/ML unit except that the Contractor furnished fiber optic cable is replaced by an owner-furnished fiber optic cable.

Options designated by the following suffixes apply:

/6.6M – Consists of all labor and material necessary to install aerial fiber optic cable when new aerial supporting messenger with associated hardware is required. The supporting messenger (as required) for this unit shall be ¾ inch diameter 6.6M class A galvanized steel, extra high strength, grade strand. All pole line hardware to be hot dipped galvanized steel.

/E – Consists of all labor and material necessary to install aerial fiber optic cable when installation is only on existing strand.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation shall be measured and paid by the lineal foot.

3.0 PAYMENT

Payment will be made under:

CO(6)FIBER/ML/E - AERIAL FIBER OPTIC CABLE STUB UNIT.....LF

SP-23, BM53A-ADHESIVE FIBER WARNING SIGN ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material to install one (1) adhesive backed reflective vinyl sign, printed with "WARNING FIBER OPTIC CABLE - before digging in this area call" and with "Charlotte DOT 704-336-2050" added. The sign should be mounted 5' above ground level on a cable riser guard as shown on the construction sheets.

Example:

REPNET Inc., sign No. SD-5956R.

Or Engineer approved equivalent

The following suffix may be used:

(OF) - The unit is identical to the BM53A unit except that the Contractor-furnished sign is replaced by an owner-furnished sign.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

BM53A(OF) - ADHESIVE FIBER OPTIC WARNING SIGN ASSEMBLY UNIT (OWNER FURNISHED).....EA

SP-24, CHO-4(1)ST/LC - FIBER OPTIC JUMPER ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to install a duplex single fiber, single mode fiber jumper with a 3mm jacket. The length (in meters) of the jumper shall be indicated in the parentheses. The fiber jumper shall be routed between patch panels or equipment in a splice cabinet, traffic control box (TCB), camera control box (CCB) or traffic management center (TMC). The jumper connections are shown in the splice details.

Options designated by the following suffixes apply:

SC/ST - SC connector and ST connector.

ST/LC – ST connector and LC connector.

ST/ST - ST connectors on both ends.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

CHO-4(1)ST/LC-FIBER OPTIC JUMPER ASSEMBLY UNIT.....EA

SP-25, CO()-AERIAL FIBER OPTIC CABLE ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to install one (1) foot of aerial dry tube fiber optic cable on new aerial supporting messenger or existing strand and cable(s), including bonding of the shield and strand in accordance with the Construction Sheets. The number of fibers in the cable shall be indicated in the parentheses. Installation method will be indicated after slash (/) as shown below. Also included is the placing of a CDOT provided cable identification tag at each pole.

Lash to strand with .045-inch stainless steel lashing wire and hardware, double lashing the cable to the strand. The fiber optic cable will be single mode, low water peak, single jacket, armored, with a loose no gel buffer tube and dielectric strength member construction. The number of fibers required is shown in parenthesis. The cable will be double window tested at 1310nm and 1550nm with .35db/km and .25db/km attenuation, respectively.

The length of aerial cable measured for compensation purposes includes the sum of the cable distances between supporting structures as indicated by the sequential foot markings.

This unit does not include labor and material for fiber splicing, splice closures, housings or organizers. The labor and material for these items are provided for in other units.

The following suffixes may be used:

(OF) -Insert prior to the slash (/). The unit is identical to the CO() unit except that the Contractor-furnished fiber optic cable is replaced by an owner-furnished fiber optic cable.

NA - The unit is identical to the CO() unit except that the armored fiber-optic cable is replaced with non-armored fiber optic cable. The fiber optic cable will be single mode, low water peak, single jacket, sunlight resistant, with a loose gel filled buffer tube, dielectric strength member construction, toneable wire beneath the outer jacket, and a 600lb load-rating. This unit is only to be used when specified in the plans or approved by an engineer.

Example:

AFL LMHD-Series OSP Heavy Duty MicroCore® Cable –LMHD_Series AFL No. LM0129C6201T1

Or Engineer approved equivalent

Options designated by the following suffixes apply:

/6.6M - Consists of all labor and material necessary to install aerial fiber optic cable when new aerial supporting messenger with associated hardware is required. The supporting messenger (as required) for this unit shall be ¾ inch diameter 6.6M class A galvanized steel, extra high strength, grade strand. All pole line hardware to be hot dipped galvanized steel.

/E - Consists of all labor and material necessary to install aerial fiber optic cable when installation is only on existing strand.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

CO(24)/6.6M-AERIAL FIBER OPTIC CABLE ASSEMBLY UNIT.....	LF
CO(24)/E-AERIAL FIBER OPTIC CABLE ASSEMBLY UNIT.....	LF

SP-26, FOE(TRX)(ESU)AR - ETHERNET SWITCH UNIT/MODULE – ARUBA

1.0 DESCRIPTION

Consists of all labor and materials necessary to securely mount one (1) industrial (ruggedized) Ethernet switch in an existing traffic control box. The mounting method must be approved by the Engineer before installation. The unit will be an industrially hardened, fully managed Ethernet switch with a minimum operating temperature range of -40 to +70 degrees C. The unit will have a minimum of eight (12) copper 10/100/1000 Ethernet ports and two (2) Small Form-factor Pluggable (SFP) ports. The provided SFP modules will be single mode, LC type. The contractor is to provide all power supplies, modules, auxiliary equipment, transformers and power cords (4' minimum) necessary to have a fully functioning 10/100/1000 Ethernet switch that can be powered from a standard 110 VAC 3-pronged outlet.

See "FOE(TRX)(ESU)AR(4100i) CX4100i Ethernet Switch Details" for connection notes.

The unit must be fully compatible and support interoperability with the traffic control network core Aruba 8320 switch. The fiber jumpers routed between the patch panel stub and the transceiver are not part of this unit and will be compensated under the CHO-4() unit.

The Ethernet switch will meet the following specifications:

- IEEE 1588 PTP v2.
- NEMA TS-2 Compliant.
- Customized Industrial Automation Smartport configuration templates.
- DIN-rail and wall mount options.
- Small Form-factor Pluggable (SFP) options for 1000Base-LX and 1000Base-ZX deployments.
- Common Industrial Protocol (CIP) management support.
- Supported by Aruba Clearpass Policy Manager with DUR and NetEdit
- Provide both 30W and 60W PoE.
- PoE support for LLDP MED.

The Ethernet switch will support the following protocol/security features sets:

- Virtual Local Area Networks (VLANs)/Quality of Service (QoS).
- IGMPv3 snooping
- IGMP Filtering
- IEEE 802.1d
- IEEE 802.1x.
- Port Based Access Control Lists for Layer 2 Interfaces.
- MAC Address Filtering.
- Secure Shell (SSH) v2 Protocol.
- SNMPv3.
- TACACS+ and RADIUS authentication.
- MAC address notification.
- DHCP snooping.
- DHCP Interface Tracker (Option 82).
- Port Security.
- Support for up to 512 ACLs with two Profiles:
- Security (384 security ACL entries and 128 QoS Policies).

- QoS (128 Security ACL entries and 384 QoS Policies).
- Configurable up to 8000 MAC addresses
- Configurable up to 255 IGMP groups.
- Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9220 bytes (jumbo frames) for bridging on Gigabit Ethernet ports, and up to 1998 bytes for bridging of Multiprotocol Label Switching (MPLS) tagged frames on both 10/100 and 10/100/1000 ports.
- Built-in programmable and easy-to-use REST API interface.
- Unidirectional link detection (UDLD)

Options designated by the following suffix(es) apply:

(4100i) – Aruba CX 4100i; 12-Eight (12) copper 10/100/1000 Ethernet ports

Example:

Model: Aruba CX 4100i Switch JL817A

Power Supply: Mean Well NDR-240-48 5 Amp

When switch is assembled steel or stainless steel DIN rail must be used, aluminum is not acceptable.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

FOE(TRX)(ESU)AR(4100i)- ETHERNET SWITCH UNIT/MODULE – ARUBA.....EA

SP-27, FOE(TRX)(ESU)(SFP) - EHTERNET SMALL FORM-FACTOR PLUGGABLE PORT

1.0 DESCRIPTION

Consists of all labor and material necessary to securely install one (1) fiber optic Ethernet Small Form-Factor Pluggable (SFP) port that plugs into the Fast Ethernet port or slot on the Ethernet switch. The type of SFP will be shown in the last set of parentheses. The port shall be compatible with IEEE 802.3ah Draft 3.0 and with standard as specified in IEEE 802.3. The connectors shall be dual LC connectors. The SFP furnished shall be a “hot swappable”, non-ruggedized, commercial rated transceiver with an operating temperature range of 0 to 70 degrees C.

Options designated by the following suffixes apply:

Standard Fiber Optics:

1G-LX-31 A 1310nm, single-mode, ruggedized, Gigabit Ethernet 1000Base-LX SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store SFP-1G-LH/10KM SKU Number: 11775

1G-ZX-55 A 1550nm, single-mode, ruggedized, Gigabit 1000 Base-ZX SFP transceiver with an operating range of 80km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store SFP1G-ZX-55/80KM SKU Number: 11776

1Gigabit BiDi Optics:

GLC-BX-10U A 1310nm-TX/1550nm-RX, BiDirectional, single-mode, non-ruggedized, Gigabit 1000 Base-LX SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store GLC-BX-10U-10KM SKU Number: 39135

GLC-BX-10D A 1550nm-TX/1310nm-RX, BiDirectional, single-mode, non-ruggedized, Gigabit 1000 Base-LX SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store GLC-BX-10D-10KM SKU Number: 39138

GLC-BX80-UA A 1490nm-TX/1550nm-RX, BiDirectional, single-mode, non-ruggedized, Gigabit 1000 Base-ZX SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store GLC-BX80-UA-80KM SKU Number: 49480

GLC-BX80-DA A 1550nm-TX/1490nm-RX, BiDirectional, single-mode, non-ruggedized, Gigabit 1000 Base-ZX SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions.

Example: Fiber Store GLC-BX80-DA-80KM SKU Number: 49481

10Gigabit BiDi Optics:

SFP-10G-BXU A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 10km SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G23-BX10 SKU:36351

SFP-10G-BXD A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 10km SFP transceiver with an operating range of 10km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G32-BX10 SKU:36353

SFP-10G-BX20U A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 20km SFP transceiver with an operating range of 20km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G23-BX20 SKU:42450

SFP-10G-BX20D A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 20km SFP transceiver with an operating range of 20km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G32-BX20 SKU:42306

SFP-10G-BX40U A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 40km SFP transceiver with an operating range of 40km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G23-BX40 SKU:19359

SFP-10G-BX40D A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 40km SFP transceiver with an operating range of 40km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G32-BX40 SKU:19358

SFP-10G-BX60U A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 60km SFP transceiver with an operating range of 60km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G23-BX60 SKU:124447

SFP-10G-BX60D A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 60km SFP transceiver with an operating range of 60km commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G32-BX60 SKU:124446

SFP-10G-BX80U A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 80km SFP transceiver with an operating range of 60km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G45-BX80 SKU:74011

SFP-10G-BX80D A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 80km SFP transceiver with an operating range of 60km commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G54-BX80 SKU:74012

SFP-10G-BX100U A 1270nm-TX/1330nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 100km SFP transceiver with an operating range of 60km and commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G45-BX100 SKU:74013

SFP-10G-BX100D A 1330nm-TX/1270nm-RX BiDirectional, single-mode, non-ruggedized, Gigabit 10GBase 100km SFP transceiver with an operating range of 60km commercial rated with an operating temperature range of 0 to 70 degrees C. SFP shall support digital optical monitoring (DOM) functions

Example: Fiber Store SFP-10G54-BX100 SKU:74014

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

FOE(TRX)(ESU)(SFP)(1G-LX-31) - EHTERNET SMALL FORM-FACTOR PLUGGABLE PORT.....EA

SP-28, HO-1 - FIBER OPTIC SPLICING ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and materials necessary to Fusion Splice one (1) glass fiber in any cable in accordance with the associated detail drawings. The labor shall include initial measurement, minimizing the attenuation to no more than 0.1db, splicing and stowing the spliced fiber in a fiber organizer. A heat-shrink splice protector is to be applied to each completed fusion splice. The labor and material for the fiber organizer is part of the splice closure unit. Note that cables are not to be cut and unused fibers and buffer tubes are to be expressed through and not cut/spliced as noted in the plans.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

HO-1 - FIBER OPTIC SPLICING ASSEMBLY UNIT.....EACH

SP-29, HUO(24)-UNDERGROUND FIBER OPTIC CLOSURE ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to install a 6.5"x17" or 9.5"x19" underground fiber optic splice closure in accordance with the manufacturer's installation instructions. Armored cables are to be bonded together and secured to one bolt on the bulkhead and a ground lug put on that bolt on the exterior side of the bulkhead. This closure is to be equipped with enough splice trays to accommodate the number of splices in parenthesis. The number of splices in each tray shall not exceed the manufacturer's recommendation. At buffer tube entry points into the splice tray each buffer tube is to be wrapped with felt tape and secured with tie wraps. Fiber cables are to be labeled on the outside of the splice case with the "From" destination and the "To" destination noted on a cable marker tag and secured to the cables. For mid-entry applications, all buffer tubes shall be unwrapped and secured

separately in the storage basket. For mid-entry applications, remove 180 inches of outer sheathing and armored jacket and for all other applications remove 90 inches of outer sheathing and armored jacket. The below table should be used to identify splice enclosure design. The part numbers are shown in bold.

CDOT reserves the right to open any splice enclosure at any time during construction to inspect the workmanship and/or take photos for records.

Prefix	None	L	G	G1/G2	T
Cables For Mid-Entry Splice	COYOTE Dome Express 6.5" x 17" (Loose Tube) Splice Case (2) 8003701 Included 8006988	COYOTE Dome 9.5" x 19" Closure Splice Case (2) 8003692 Included (2) 8003693 Included COYD919B-000	COYOTE Grommet for adding 6F Drop (Up to 4 cables) 8003664	COYOTE Grommet for adding cables: 6F to 144F 8003701 For 192F & 288F Use 8003693	Additional single fusion 24 Count splice trays needed 80809958
24 Fiber	X		X	X	1
36 Fiber	X		X	X	1
48 Fiber	X		X	X	2
72 Fiber	X		X	X	3
96 Fiber	X		X	X	4
144 Fiber		X	X	X	6
192 Fiber		X	X	X	8
288 Fiber		X	X	X	12

The following suffix may be used:

OF - The unit is identical to the HUO() unit except that the Contractor-furnished fiber optic cable splice closure is replaced by an owner-furnished fiber optic cable splice closure.

Example:

HUO(24) includes:

COYOTE 8006988 – Dome Express 6.5" x 17" (Loose Tube) Splice Case with (2) 8003701 grommets included,
COYOTE 8003664 – Grommet for adding 6F Drop (up to 4 drop cables),
COYOTE 8003701 - grommets for adding cables (as needed), and
COYOTE 80809958 – 1 additional single fusion 24 count splice trays.

Or Engineer approved equivalent

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

HUO(24) - UNDERGROUND FIBER OPTIC CLOSURE ASSEMBLY UNIT.....EACH

SP-30, ROCK REMOVAL

1.0 Description

Work covered by this special provision consists of the removal and disposal of rock encountered within the construction limits.

2.0 Construction Methods

Rock shall be defined as any subsurface material (except foundations and pavements) which cannot be excavated by a backhoe, or track hoe which is capable of producing 31,000 pounds of curling force.

When rock is encountered, the Engineer shall be notified to:

- verify that the material cannot be removed as defined above or incorporated into the project feature
- determine the measurement limits

Removal methods include, but are not limited to, drilling, pneumatic hammering, blasting, etc. or as directed by the Engineer.

Blasting shall be performed as specified in Article 220-3 of the Standard Specifications.

Disposal shall be in accordance with Section 802 in the Standard Specifications.

3.0 Measurement

The quantity of rock removal to be paid for will be the actual number of cubic yards of rock, measured in its original position and computed by the average end area method, which has been removed and disposed of.

Measurements for the determination of actual quantities of rock removed shall be computed as described below or as directed by the Engineer:

Storm Drainage

- Pipe
 - Horizontally – as illustrated in NCDOT 300.01;
 - Lower Limit – as illustrated in NCDOT 300.01
- Box Culverts/Bends/Bottomless Culverts
 - Horizontally – outer width of culvert or footer plus six (6) feet (3 feet each side);

- Lower Limit – one (1) foot below the bottom of the barrel or footing;

Channels

- Two (2) feet below the finished grade or;
- Stream/channel structures – as directed by the Engineer.

Ponds

- Below normal pool – to finished grade;
- Above normal pool – two (2) feet below finished grade;

Structures

(Includes but not limited to: headwalls, drainage structures (catch basins, drop inlets, risers, etc.), rip rap aprons, flared end sections, retaining walls, etc.)

- To the subgrade elevation as shown on the plans or details;
- Horizontally – two (2) feet from each exterior surface (outer wall of the structure or footer; boulder or rip rap extents, as approved for stream structures and rip rap aprons)

Roadways, Yards, Etc.

- Two (2) feet below finished grade;

Charlotte Water Utilities

- Refer to Charlotte Water Design Manual

There will be no measurement of quantities of rock removed beyond these limits. Where the Engineer makes a recommendation for incorporating the encountered rock material into the project feature, there shall be no separate payment for incorporating the in situ rock into the project feature.

4.0 Payment

The quantity of rock removal, measured as provided above, will be paid for at the contract unit price per cubic yard for "Rock Removal." Such payment will be full compensation for all work covered by this special provision including but not limited to drilling, pneumatic hammering, blasting (including complying with Article 220-3 of the Standard Specifications), excavating, and disposing of rock encountered within the pay limits of the project.

Payment will be made under:

ROCK REMOVAL..... CY

SP-31, PM2-POLE GROUND ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to construct and install, using #6 AWG bare copper ground wire, a pole ground assembly. This unit also includes all labor and material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit installation. The following items will be required.

- 1 5/8" by 8' copper clad steel ground rod

1 ground rod clamp

#6 AWG bare copper ground wire and ground wire staples as required

Staples on ground wire should be about 18-inches apart. Ground wire should clear all hardware by 2-inches minimum and be stapled to maintain this position. The ground rod should be driven 24 inches from the pole with the ground wire and top of the rod at a minimum 24-inch depth.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

PM2-POLE GROUND ASSEMBLY UNIT.....EA

SP 32, EARTHWORK, EXCAVATION, UNSUITABLE MATERIALS, AND BACKFILL MATERIALS

1.0 DESCRIPTION

Earthwork shall be performed to the lines and grades indicated on the plans. The work shall include excavation, furnishing, placement, compaction, and satisfactory disposal of all materials encountered within the limits of the Work necessary for the construction of the Project.

All excavated materials that are not required for the Project or are unsuitable for fills shall be considered as waste and shall be hauled off the site at the Contractor's expense.

The Contractor shall be responsible for all borrow material required to construct the Project as shown on the plans.

2.0 MATERIALS

Provide bedding material in accordance with Article 1016-3 for Class II, Type 1 or Class III, Type 1 or Type 2 select material.

Provide backfill material in accordance with Article 1016-3 for Class II, (Type 1 for flexible pipe) or Class III select material.

Provide foundation conditioning material in accordance with Article 1016-3 for Class V or VI select material

Provide foundation conditioning geotextile in accordance with Article 1056-2 for Type 2 geotextile.

Provide borrow material in accordance with Article 1018.

3.0 MEASUREMENT AND PAYMENT

There will be no direct payment for earthwork, excavation, unsuitable materials, and backfill materials described in this special provision. Payment will be made at the contract unit prices for the various items covered by sections

226 Undercut Excavation, 300 Pipe Installation, 305 Drainage Pipe, 310 Pipe Culverts, SP-01 Comprehensive Grading, and SP-03 Select Material.

(A) Unsuitable Material

Unsuitable material shall be defined as any and all unsuitable materials regardless of its nature. Unsuitable Material not incorporated into the Project shall be removed, hauled, and disposed by the Contractor only as authorized by the Engineer. Stockpiled Unsuitable Material shall be disposed of no less than once per week.

Proposed Project Subgrade, other than Pipe Culvert Trench Subgrade

Unsuitable material *below* the proposed project sub-grade, including but not limited to below the invert of an open channel or bottom of detention facilities, shall be removed, measured, hauled, disposed of, replaced, and paid for under NCDOT Section 226, *Undercut Excavation*.

Unsuitable material *above* the proposed project sub-grade shall be removed, hauled, and disposed of at no additional cost to the City.

Proposed Pipe Culvert Trench Subgrade

Unsuitable material *below* the proposed project pipe culvert trench subgrade within the approved trench excavation limits for storm drainage pipe and storm drainage culvert (including but not limited to box culverts, oval pipe culverts and three-sided culverts/bridges) shall be removed, measured, hauled, disposed of, replaced, and paid for in accordance with Section 300-9 (B) *Foundation Conditioning Material* and Section 300-9 (C) *Foundation Conditioning Geotextile*.

Unsuitable material *above* the proposed pipe culvert trench sub-grade shall be removed, hauled, disposed of at no additional cost to the City.

(B) Bedding and Backfill

- Pipe (including round, elliptical, etc.)
 - There will be no separate measurement or payment for select bedding and select backfill material required in the installation of pipe as illustrated in NCDOT 300.01. All bedding and select backfill material will be included in cost of the installed pipe.
- Culvert (Box Culverts/Bends/Bottomless Culverts)
 - There will be no separate measurement or payment for bedding required in the installation of culverts as illustrated in Figure 2.1 of the *Precast Reinforced Concrete Culvert* Special Provision or as shown on the plans. All bedding material will be included in cost of the installed pipe or culvert.
 - Material needed for buried culvert inverts and channel inverts inside three-sided bridge/culverts shall be incidental to the cost of the culvert unless otherwise directed by the Engineer.

When local material meeting the requirements for the select bedding and backfill is approved for use by the Engineer, no deductions in the cost of pipe culvert will be made. Local material is defined as material generated on the project site or within the project limits.

Within the Existing or Proposed Roadway

- Pipe (including round, elliptical, etc.)
 - For pipe located within the existing or proposed roadway, including beneath the proposed curb and gutter or between road ditch lines, the Contractor shall use suitable material from the elevation of the select backfill material included in the cost of the installed pipe to the subgrade.
- Culvert (Box Culverts/Bends/Bottomless Culverts)

- For culverts located within the existing or proposed roadway, including beneath the proposed curb and gutter or between road ditch lines, the Contractor shall use suitable material from the elevation of the bedding included in the cost of the installed culvert to the subgrade.

When local material meeting the requirements for suitable material is approved for use by the Engineer, there will be no separate measurement or payment for the material incorporated into the completed and accepted Project.

For NCDOT maintained streets, suitable material shall be defined as meeting NCDOT 1018.

For City maintained streets, suitable material shall be defined as material meeting both:

- Unified Soil Classification System (USCS) designation of GW, GP, GM, GC, SW, SP, SM, or SC and
- American Association State Highway Transportation Official (AASHTO) Soil Classification System designation of A-1, A-3, A-2-4, or A-2-5.

When local suitable material is not available to complete the backfill of the trench, the Contractor shall use select material in accordance with SP-03 *Select Material*.

Do not use *Select Material* until all local suitable material has been incorporated into the Project. There shall be no measurement or payment made for *Select Material* brought to the site at the Contractor's convenience.

Outside of the Proposed or Existing Roadway

- Pipe (including round, elliptical, etc.)
 - For pipe located outside the existing or proposed roadway, the Contractor shall use local suitable material from the elevation of the select backfill material included in the cost of the installed pipe to the finished grade or subgrade.
- Culvert (Box Culverts/Bends/Bottomless Culverts)
 - For culverts located outside the existing or proposed roadway, the Contractor shall use local suitable material from the elevation of the bedding included in the cost of the installed culvert to the finished grade or subgrade.

When local suitable material is not available to complete the backfill of the trench, the Contractor shall use select material in accordance with SP-03, *Select Material*.

Do not use *Select Material* until all local suitable material has been incorporated into the Project. There shall be no measurement or payment made for select material brought to the site at the Contractor's convenience.

(C) Other

No separate measurement or payment will be made for any other excavation, furnishing, placement, compaction or satisfactory disposal of material encountered within the limits of Work necessary for construction of the Project. All other earthwork shall be considered incidental to the Project and paid for in *Comprehensive Grading*, unless noted elsewhere in the Contract Documents.

SP-33, UH-EBM - ELECTRONIC BALL MARKER

1.0 DESCRIPTION

Consists of labor and materials to install one electronic ball marker in equipment handholes and splice boxes below finish grad. The electronic ball marker shall be placed inside the handhole or splice box to mark the location as noted in the plans. Ensure that the electronic ball marker is a device specifically manufactured to electronically

mark and locate underground facilities. Ensure that the electronic ball marker includes circuitry and an antenna encased in a waterproof polyethylene shell. Ensure that the outer shell is impervious to minerals, chemicals, and temperature extremes normally found underground plant environments. Ensure that the electronic box marker does not require batteries or active components to operate. Ensure that electronic ball markers used to mark fiber optic cable applications are orange in color and operate at 101.4 kHz. When excited by a marker locator, ensure that the electronic ball marker's passive circuits produce an RF field to direct the marker locator to its position. Ensure that the electronic ball marker has a minimum operating range of 5 feet from the marker locator. Electronic ball markers furnished, installed, and tested shall be measured as each.

Example:

Greenlee Omnimarker #0163-0001-1, 4" Ball Marker, or equivalent to be approved by the Engineer.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

UH-EBM - ELECTRONIC BALL MARKER.....EA

SP-34, UO() - UNDERGROUND FIBER OPTIC CABLE ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to install one (1) foot of underground dry tube fiber optic cable in underground conduit and handholes. The number in the parenthesis shall indicate the fiber optic cable count. This unit also consists of setting up the cable within the handhole, providing and placing pull lines, duct seals or plugs, and rodding and cleaning of ducts, all as required in accordance with the Construction Sheets. The Contractor shall not exceed the maximum pulling tension of the cable as specified by the manufacturer. Also included is the placing of a CDOT provided cable identification tag at each handhole or pullbox.

The fiber optic cable will be single mode, low water peak, single jacket, armored, sunlight resistant, outdoor rated, with a loose no gel buffer tube and dielectric strength member construction. The number of fibers required is shown in parenthesis. The cable will be double window tested at 1310nm and 1550nm with .35db/km and .25db/km attenuation, respectively.

The length of underground cable measured for compensation purposes is determined by measuring the distances paralleling the cable plus the vertical lengths of cable installed on supporting structures. Fiber stored in handholes must be coiled and taped at the 9 and 3 o'clock position so that it cannot get under the handhole lid and cause damage.

Options designated by the following suffixes may be used:

LW - Consists of all necessary labor and material to install simultaneously with the underground fiber optic cable an insulated #10 AWG solid copper locate wire. The sections of locate wire shall be joined together with compression couplers or terminated on a ground rod.

Example:

Sosmetal Products, Inc. Non-Insulated, seamless, #10AWG crimp butt connector.

Or Engineer approved equivalent

+MAX(1) -The unit is identical to the UO() unit except that a single Max Cell, of the size indicated in parenthesis, will be pulled in with the cable.

ISP - The unit is identical to the UO() unit except that the cable shall be Indoor/Outdoor Plenum rated.

OF - The unit is identical to the UO() unit except that the Contractor furnished fiber optic cable is replaced by an owner-furnished fiber optic cable. Use parentheses if used with LW suffix [i.e., UO()LW(OF)].

(NA) - The unit is identical to the UO() unit except that the armored fiber-optic cable is replaced with non-armored fiber optic cable. The fiber optic cable will be single mode, low water peak, single jacket, sunlight resistant, with a loose gel filled buffer tube, dielectric strength member construction, toneable wire beneath the outer jacket, and a 600lb load-rating.

Example:

AFL LMHD-Series OSP Heavy Duty MicroCore® Cable –LMHD_Series AFL No. LM0129C6201T1 for non-armored fiber-optic cable.

Or Engineer approved equivalent

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

UO(24) - UNDERGROUND FIBER OPTIC CABLE ASSEMBLY UNIT.....LF
UO(24)LW - UNDERGROUND FIBER OPTIC CABLE ASSEMBLY UNIT.....LF

SP-35, UO()FIBER/ML - UNDERGROUND FIBER OPTIC CABLE STUB UNIT

1.0 DESCRIPTION

Consists of all labor and material to install one (1) foot of fiber optic cable for a field-terminated patch panel. The number in the parentheses provides for the number of fibers in the stub and should match precisely the number of ports of the associated patch panel unit. The fiber cable shall be riser-rated, single-mode, indoor/outdoor, gel-free, all dielectric cable with flame retardant UV-resistant outer jacket, and an attenuation loss not exceeding 0.4db/km @ 1310nm. The attenuation loss for the complete assembly shall not exceed 1.5db. Also, included is the placing of a CDOT-provided cable identification tag at each handhole or pull box. The fiber optic patch panel shall be paid for under the UO()PATCH PANEL/ML. Fiber stored in handholes must be coiled and taped at the 9 and 3 o'clock position so that it cannot get under the handhole lid and cause damage.

Example:

Corning FREEDM® LST™ Cables, Part # 006ESF-T4101D20 (6 fiber, single mode, Gel-free Cable, indoor/outdoor riser, with markings every 4 feet, performance rated for SMFO with no additional special requirements)

Or Engineer approved equivalent

The following suffix may be used:

(OF) - Insert prior to the first slash (/). The unit is identical to the UO()/FIBER/ML unit except that the Contractor furnished fiber optic cable is replaced by an owner-furnished fiber optic cable.

(LW) - Consists of all necessary labor and material to install, simultaneously with the underground fiber optic cable, an insulated #10 AWG solid copper locate wire. The sections of locate wire shall be joined together with compression couplers or terminated on a ground rod.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

UO(6)FIBER/ML - UNDERGROUND FIBER OPTIC CABLE STUB UNIT.....LF
UO(6)FIBER/ML(LW) - UNDERGROUND FIBER OPTIC CABLE STUB UNIT.....LF

SP-36, UO()PATCH PANEL/ML - FIBER OPTIC PATCH PANEL UNIT

1.0 DESCRIPTION

Consists of all labor and material to install one (1) field-terminated fiber optic cable patch panel. The number in the parentheses provides for the number of ports in the housing and should match precisely the number of fibers in the fiber stub. The patch panel shall be equipped with enough ST-type connector ports to accommodate all fibers in the stub and each port shall have a factory-installed fiber jumper of one meter in length. The unit shall be placed on a traffic control box shelf, but not permanently secured. The entire housing of the unit shall be constructed of metal and the dimensions of the unit shall not exceed 1.75"H x 8"W x 8"L. This unit includes the required number of single fusion splices to splice each fiber of the fiber optic stub to the jumpers of the patch panel. The attenuation loss for the complete assembly shall not exceed 1.5db. The position number associated with each port shall be stenciled, at the factory, on the face of the housing. The fiber optic cable shall be paid for under the UO()FIBER/ML unit.

Example:

Multilink FWM-1X-SP wall-mount enclosure, Part # ML-33-006-B-SM6-T9-001-00-00.

Or Engineer approved equivalent

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

UO(6)PATCHPANEL/ML - FIBER OPTIC PATCH PANEL UNIT.....EA

SP- 37, (W)CC - ACCESS TO THE TRAFFIC SIGNAL CONTROLLER CABINET/BOX

1.0 DESCRIPTION

Consists of all labor and material necessary to install the cable into existing traffic signal controller cabinet/Box (TCB) through a CDOT provided conduit entrance/access. The Contractor shall contact CDOT to make sure CDOT has created a spare conduit entrance/access. It is the Contractor's responsibility to ensure a spare conduit entrance has been created by CDOT before the cable and conduit are routed to the TCB. At locations shown on the plans the Contractor shall connect the new or existing conduit/riser/handhole to the existing TCB where the CDOT provided spare conduit terminates. If the terminus of the CDOT created conduit entrance to the TCB is not marked, it is the Contractors responsibility to locate the entrance terminus and ensure it is usable. This unit also includes all labor and material required to repair and/or replacement of street, sidewalks, roads, drives, lawns, shrubbery, watermain, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit installation.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

(W)CC - ACCESS TO THE TRAFFIC SIGNAL CONTROLLER CABINET/BOX.....EA

SP- 38, (W)HUO - UNDERGROUND SPLICE CLOSURE REARRANGEMENT UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary to re-enter an existing underground fiber optic splice closure to add a new cable and/or update splicing. Included is the installation of the necessary splice trays to splice the number of fibers as indicated in the plans. New splice trays must be designed for use with the existing splice case. Upon completion of any splicing the case is to be pressure tested. The Contractor will be compensated for any splicing under the HO-1 unit.

Options designated by the following suffixes apply:

(5.5) - The unit is identical to the (W)HUO unit except that the existing end plate is to be replaced with a new 6-port end plate (bulkhead). This item is only appropriate for older splice cases (with bolts on either side) that require replacing the end plate when a new cable is added to the splice enclosure.

(RP) - The unit is identical to the (W)HUO unit except the existing splice enclosure case is to be replaced. This unit can only be used with the approval of the Engineer. Prior to doing any work at an existing splice enclosure, do a visual inspection of the existing splice case. If there are any visible cracks or evidence of water damage or intrusion, notify the Engineer for inspection of existing case. If an existing splice enclosure is replaced, the new splice enclosure must be designed for use with the existing splice trays.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

(W)HUO(24) - UNDERGROUND SPLICE CLOSURE REARRANGEMENT UNIT.....EA

SP- 39, (W)RC - USE OF EXISTING RISER CONDUIT

1.0 DESCRIPTION

Consists of all labor and material necessary to install the cable into an existing riser conduit. If requires, replace existing weather head using method approved by the engineer. Do not cut the fiber optic cable to replace or modify the weather head. Modify the existing riser so that the riser is approximately the same height as the new fiber optic cable attachment and does not exceed the minimum bending radius as recommended by the manufacturer.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

(W)RC - USE OF EXISTING RISER CONDUIT.....EA

SP- 40, (W)UH - PLACING NEW CONDUIT OR CABLE IN EXISTING HANDHOLE UNIT

1.0 DESCRIPTION

Consists of all labor necessary to install new conduit and/or cable into an existing handhole in accordance with the Construction Sheets. Conduit must extend at least 3" above gravel base and must be trimmed to be at least 6" below the handhole lid. This unit also includes all labor and material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, watermains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewage and drainage facilities, and any other property damaged during the unit installation. Any fiber slack storage added to handhole will be pay under Underground Fiber Optic Cable Assembly Unit.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

(W)UH-PLACING NEW CONDUIT OR CABLE IN EXISTING HANDHOLE UNIT.....EA

SP-41, AERIAL FIBER OPTIC CABLE (WITH HARDWARE)

1.0 DESCRIPTION

Consists of all labor and material necessary to install one (1) foot of aerial dry tube fiber optic cable in place including supporting messenger of ¼ inch diameter 6.6M class A galvanized steel extra high strength grade strand, .045-inch stainless steel lashing wire and hardware, double lashing the cable to the strand, bonding of the shield and strand in accordance with the Construction Sheets. All pole line hardware to be hot dipped galvanized steel. Also included is the placing of a CDOT provided cable identification tag at each pole.

The fiber optic cable will be single mode, low water peak, single jacket, armored, with loose no gel buffer tube and dielectric strength member construction. The number of fibers required is shown on the plans and will not exceed 288-fibers for this unit. The cable will be double window tested at 1310nm and 1550nm with .35db/km and .25db/km attenuation, respectively.

The length of aerial cable measured for compensation purposes includes the sum of the cable distances between supporting structures as indicated by the sequential foot markings.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

24 FIBERS AERIAL FIBER OPTIC CABLE (WITH HARDWARE)LF

SP-42, FIBER OPTICAL POWER LEVEL TEST ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary for the Contractor to make optical power level measurements on each terminated fiber including each transmit and receive fiber between the fiber end points at the optical patch terminations. The fibers are to be bi-directional tested at the optical patch terminations. Forms will be provided to record the test results. The optical power level measurements are to be made at both 1310 and 1550nm.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

FIBER OPTIC POWER LEVEL TEST ASSEMBLY UNIT.....EA

SP-43, FIBER OPTIC SPLICE TEST ASSEMBLY UNIT

1.0 DESCRIPTION

Consists of all labor and material necessary for the Contractor to make optical time-domain reflectometer (OTDR) signature traces on all fibers. All non-terminated fibers are to be bi-directional tested and terminated fibers are to be tested in one direction only. The signature traces are to be made at both 1310 and 1550nm. In addition, digital copies of each signature trace shall be furnished to the Engineer on a flash drive.

2.0 MEASUREMENT

Labor, equipment, and materials required in the installation of each item.

3.0 PAYMENT

Payment will be made under:

FIBER OPTIC SPLICE TEST ASSEMBLY UNIT.....EA

SP-44, TRAFFIC CONTROL

1.0 DESCRIPTION

Beginning Work and Street Closings: The Contractor is responsible for notifying the Engineering & Operations Division of the Charlotte Department of Transportation (CDOT: 704-336-4119) in accordance with "Approval and Notification Requirements for Work in the Public Right-Of-Way" Section and "Notifications for complete Roadway Closure" Section of the Work Area Traffic Control Handbook (WATCH) of any work where the number of travel lanes is reduced from normal conditions.

During daily construction work hours, the Contractor will maintain at least one lane of traffic. During periods of construction inactivity, all lanes of traffic will be open unless otherwise shown on the plans or noted in the specifications.

Right-of-Way Use Permit: The Contractor will not be responsible for obtaining the Right-of-Way Use Permit(s) from CDOT for approval to work in the streets rights-of-way in Charlotte. The Project Task Order and Plans will serve as the Right of Way Use Permit(s).

Traffic Control Plan: Traffic control will be performed by the Contractor based upon the Traffic Control Special Provisions. The Traffic Control Special Provisions may refer to details in the WATCH or plan sheets for major work items, or both.

The Contractor shall be thoroughly familiar with the current edition of the WATCH. All traffic control devices and procedures shall conform to the requirements of the WATCH, the current edition of the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), the current edition of the North Carolina Department of Transportation (NCDOT) Supplement to the Manual on Uniform Traffic Control Devices for Streets and Highways, the NCDOT Roadway Standard Drawings and the current edition of the NCDOT Standard Specifications for Roads and Structures.

Under no circumstances shall the WATCH requirements be less restrictive than what is required by the MUTCD or NCDOT Supplement to the MUTCD. Any requirements prescribed by the MUTCD or amendments by the NCDOT Supplement to the MUTCD will supersede the requirements of the WATCH should conflict arise.

The Contractor shall maintain the traffic control as described herein unless the Contractor submits an alternate traffic control plan to the Engineer and it is approved by the Engineer. The Engineer may direct the Contractor to modify the traffic control if, in the Engineer's opinion, traffic is not moving safely or efficiently.

Traffic Control Phasing for this project shall be in accordance with any Traffic Control Plans and the reference diagrams from the WATCH. The contractor shall adhere rigidly to these plans and diagrams. If these diagrams are not typical for field conditions, the diagrams may be combined or altered upon approval of the Engineer. The standards and diagrams are the minimum required. Additional signs, cones, drums, barricades and warning devices may be used, but at no time will less than what is specified on the plans, in the standards, and on diagrams be acceptable.

Maintenance of Traffic: The Contractor shall maintain all travel lanes in accordance with the Traffic Control Plan sheets, and the WATCH diagrams referenced in the Traffic Control Phasing. Construction or maintenance work that involves closure of a lane of traffic will not be allowed during the peak flow hours as described in Section "Peak Flow Hours" of the WATCH, unless otherwise specified in the Contract Documents.

The Contractor shall use flagger control in accordance with the WATCH diagrams referenced in the Traffic Control Phasing and with "Flagging Procedures", "Duration of Work", and Temporary Traffic Control Zone Devices" Sections of the WATCH.

In areas of drop-offs and low shoulders, the Contractor shall backfill up to the edge and elevation of the existing pavement in accordance with "Miscellaneous Considerations, DROP-OFFS AND LOW SHOULDERS" Section of the WATCH.

The Contractor will be required to maintain ingress and egress to all businesses and dwellings, and easy access to fire hydrants in accordance with "Miscellaneous Considerations, INGRESS AND EGRESS" Section of the WATCH.

The Contractor shall not work on both sides of the road simultaneously within the same area.

The Contractor shall mark all hazards within the Project limits with well-maintained signs, barricades, warning and/or channelizing devices.

Traffic Control Devices: The Contractor shall furnish, install, operate, relocate, maintain and remove all temporary traffic control devices necessary for controlling traffic in accordance with the WATCH. The Contractor shall notify CDOT regarding conflicting permanent signs. Only CDOT forces shall install, remove or relocate any permanent signs within the right-of-way. All construction signs and barricades shall remain in place until the appropriate permanent signs and pavement markings are installed.

Pedestrian Considerations: The Contractor shall accommodate the needs of all pedestrians in accordance with Section "Pedestrian Considerations" of the WATCH.

Equipment and Material Storage: During periods of construction inactivity, all construction materials and equipment shall be stored by the Contractor as specified in “Miscellaneous Considerations, STORAGE OF EQUIPMENT AND MATERIALS” Section of the WATCH.

Traffic Signals: The Contractor shall not disturb any traffic signal equipment unless otherwise noted on the project task order, traffic signal plans or directed to do so by the Engineer.

Excavation and Trenches: Excavations and trenches that cannot be properly backfilled and patched prior to the end of the workday shall be secured as specified in Section “Excavations and Trenches” of the WATCH.

2.0 MEASUREMENT

There will be no separate measurement made for Traffic Control.

3.0

PAYMENT

Traffic Control will be paid at the lump sum price for “Traffic Control”. This payment will be full compensation for all elements of work required to complete the Project as specified.

Partial payments will be made as follows:

- 25% of the lump sum price on the first partial payment estimate made after any work has been performed on the item of “Traffic Control”.
- 25% of the lump sum price on the first partial payment after work is 25% complete.
- 25% of the lump sum price on the first partial payment after work is 50% complete.
- 25% of the lump sum price on the first partial payment after work is 100% complete.

Payment will be made under:

TRAFFIC CONTROL LS

ARTICLE 3: CHARLOTTE WATER SPECIAL PROVISIONS

WATER AND SANITARY SEWER STANDARD SPECIFICATION AND SPECIAL PROVISIONS

SPU-1, ADJUST WATER VALVES, WATER METER BOXES, WATER MANHOLES, WATER VAULTS, SANITARY SEWER MANHOLES & SANITARY SEWER LID CONVERSION

DESCRIPTION

The Contractor shall provide all labor and equipment necessary to adjust water valves, water meter boxes, water manholes, water vaults, fire hydrants, sanitary sewer manholes and convert sanitary sewer lids to solid lid and sealed as shown on the plans or as directed by the Engineer.

The Contractor will be required to obtain the Charlotte Water (CLTWater) Water and Sewer Policies, Procedures, Standards and Specifications or "Design Manual" which contains the standard specifications and details for water and sewer construction.

This publication will be considered supplementary to these Bid Documents, and in the event of contradiction, the bid Documents shall take precedence. All Construction shall be in accordance with these Standard Specifications unless amended by these Project Special Provisions.

Any references to "Engineer" in this Utility Section will be defined as the Chief Engineer of Charlotte Water of the City of Charlotte, duly authorized, acting directly or through duly authorized representatives.

The work covered by these specifications consists of constructing various utilities as required by the plans and provisions herein or as directed by the Engineer. The Contractor shall furnish any and all materials, labor, equipment, and incidentals necessary to complete the proposed utility work.

Apply the applicable provisions of the Rules and Regulations of the North Carolina Department of Environment and Natural Resources, Division of Environmental Health to the construction of water lines. Apply the Rules and Regulations of the North Carolina Department of Environment and Natural Resources, Division of Environmental Management to the construction of sanitary sewer lines except as otherwise provided.

CLTWater DESIGN MANUAL

The Contractor is hereby advised that the Material Specifications, Detailed Specifications, Erosion Control Specifications, and Standard Details as referenced in the Charlotte Water (CLTWater) Design Manual, dated July 27, 1995, are made a part of this contract by reference. A printed copy of the Design Manual will be kept by the Contractor on each job site at all times, and a copy shall also be kept at the Contractor's primary place of business and /or it's Charlotte branch office. Any contractor/subcontractor working on a CLTWater project will be required to own a copy of the Design Manual. The Design Manual is currently available on Compact Disk (PC compatible) in Adobe Acrobat PDF format only, and copies are available free of charge from the Engineering Division of CLTWater.

REVISIONS TO THE CLTWater DESIGN MANUAL

Paragraph A. Handling and Storage of Materials, Page XIV-20 of the Water Specification/Details (DS) and Paragraph A. Handling and Storage of Materials, of the CLTWater Design Manual shall be replaced with the following:

A. HANDLING AND STORAGE OF MATERIALS

The Contractor shall be responsible for the safe storage of materials furnished by or to him, and accepted by him and intended for the work, until they have been incorporated in the completed project. The interior of all pipe, manholes and other accessories shall be kept free from dirt and foreign materials at all times.

1. Transportation of Materials and Equipment: The Contractor and his Suppliers are directed to contact the North Carolina Department of Transportation to verify axle load limits on State maintained roads (and bridges) which would be used for hauling of equipment and materials for this project. The Contractor and his Suppliers shall do all that is necessary to satisfy the Department of Transportation requirements and will be responsible for any damage to said roads which may be attributed to this project.
2. All materials required to construct this project shall be furnished by the contractor shall be delivered and distributed at the site by the Contractor or his material supplier.
3. Loading and Unloading Materials: Ductile iron pipe and cast iron accessories shall be loaded and unloaded by lifting with hoists or skidding so as to avoid shock or damage. Concrete pipe, clay pipe, PVC pipe and precast manholes will be unloaded with hoists and/or as recommended by the respective manufacturers. Under no circumstances shall such materials be dropped. Pipe handled on skidways shall not be skidded or rolled against pipe already on the ground.
4. Responsibility for Materials on Site: In distributing the material at the site of the work, each piece shall be unloaded opposite or near the place where it is to be laid in the trench. Each piece shall be redundantly chocked at each end to prevent movement or rolling. Pedestrian or vehicular traffic shall not be unduly inconvenienced in placing of material along the streets or right-of-way, as applicable.
5. The Contractor will string in advance no more than the amount of pipe and material that can be installed within two (2) weeks unless approved by the Engineer. All the materials shall be placed in such a manner as not to hinder access, endanger or impede traffic, create a public nuisance or endanger the public.
6. Materials strung through residential areas (or any area with maintained lawns) shall be placed in such a manner as not to restrict normal lawn maintenance, and must either be installed within two (2) weeks or removed to an approved storage yard, as required by the Engineer.
7. Material and Equipment Storage Sites: The Contractor will be responsible for locating and providing storage areas for construction materials and equipment. Unless prior written consent from the owner of the proposed storage area is received by this Department, the Contractor will be required to store all equipment and materials within the limits of the project site or the limits of the water transmission right-of-way and temporary construction easement provided. The materials and equipment storage shall comply with all local and state ordinances throughout the construction period. Material and equipment may only be stored within road right-of-way if approved by the controlling agency. Bulk storage of stacked materials shall not be permitted in or along road right-of-ways.
8. Storage sites shall be fenced with adequate protection to reasonably prevent the public from entering the site. The Contractor shall be responsible for the safeguarding of materials and equipment against fire, theft, and vandalism and in a manner which does not place the public at risk, and shall not hold the City responsible in any way for the occurrence of same.
9. Care of Coatings and Linings: Pre-cast manholes, pipe and fittings, including rings and covers, steps, straps, etc., shall be so handled that the coating or lining will not be damaged. If, however, any part of the coating or lining is damaged, the repair shall be made by the Contractor at his expense in a manner satisfactory to the Engineer.

Paragraph G.1 ¾" - 1" WATER SERVICES - Meter Yoke Assembly, Page XIV-10 of the Water Specification and Details shall be replaced with the following:

G. ¾" - 1" WATER SERVICES

Meter Yoke Assembly: Meter yoke shall be the angle ball type, with vertical inlet and horizontal outlet, with compression connections for water service tubing. Yokes shall be equipped with brass angle ball stop cutoff valve and coupling the angle ball stop for 5/8" meters (3/4" services) shall be 5/8"x3/4" (5/8" meter connection and 3/4" copper tubing connection) straight outlet coupling for the tailpiece. The angle ball stop shall have lock wings that allow the valve to be locked in the closed position. The yoke piece shall be of Cast or Ductile Iron. Horizontal type meter yoke may be used for special situations, as approved by the Engineer. Meter yoke assemblies shall be provided for all 5/8" and 1" meter and of fire line detection meters up to 1-inch. Expansion connection between meter and yoke shall be 3 piece units by McDonald, Mueller or Hones.

The following meter yoke assemblies are approved:

Manufacturer	5/8" Meter	1" Meter
Ford	501	Y504
McDonald	14-1	14-4
Mueller	H-5010	H-5040

The following angle ball valves are approved:

Manufacturer	5/8" Meter	1" Meter
Ford	BA94-313WG	BA94-444WG
McDonald	MB4642BYT-01	MB4642BYT-04
Mueller	B24273	B24273

The following yoke outlet pieces are approved:

Manufacturer	5/8" Meter and 1" Meter
Ford	C94-23
McDonald	4753Y-22
Mueller	H-14218

There will be no separate measurement or payment for changes for the above referenced modifications. All costs associated with this item, including equipment, labor and material, shall be considered incidental and included in the costs of the various pay items in the Proposal.

GENERAL CONSTRUCTION REQUIREMENTS

The proposed utility construction shall meet the applicable requirements of the NCDOT Standard Specifications, all applicable permits, and the Charlotte Water standard details as shown on the plans, as outlined in the following provisions, or as directed by the Engineer.

EXISTING UTILITIES

The Contractor will be required to excavate to determine the precise location of utilities, or other underground obstructions, which may be shown on the Construction Plans. Such location and excavation shall be at least 500 feet ahead of construction or as noted in the Special Provision Section of this document. All utility owners will be notified prior to excavation as required by the 1985 Underground Damage Prevention Act. Owners who are members of NC 811 may be notified in accordance with current NC 811 procedures. The Contractor will be fully responsible for damage to any utilities if the owners have not been properly notified as required by the Underground Damage Prevention Act. Utility owners may, at their option, have representatives present to supervise excavation in the vicinity of their utilities. The cost of such supervision, if any, shall be borne by the Contractor. Conflicts with underground utilities may necessitate changes in alignment and/or grade of this construction. All such changes will be approved by the Engineer before construction proceeds. When underground obstructions not shown on the Construction Plans are encountered, the Contractor shall promptly report the conflict to the Engineer and shall not proceed with construction until the conflict is resolved by the Engineer.

REPAIRS TO EXISTING FACILITIES

If repair or replacement of existing utilities (public/private) is required due to damage, obsolescence or other reasons not due to the negligence of the Contractor, the repairs shall be performed by the Contractor when so directed and payment will be made in accordance with the appropriate Pay Item.

Any repair or replacement is necessary due to the negligence of the Contractor, shall be performed by the Contractor at his expense, under the Engineer's direction.

INTERRUPTION OF WATER SERVICE

The Contractor will be required to have all materials and equipment on the job site seventy-two (72) hours prior to any planned service interruption. Existing water mains may be taken out of service for a maximum of 8 hours for each relocation, abandonment and/or re-connection unless otherwise directed by the Engineer. Coordination with CLTWater is required to cut and plug the line at various locations shown on the plans. The Contractor will provide adequate work force during this time to complete the required connection and refill and return the existing water main to service. The Charlotte Fire Department shall be notified of any interruptions of water mains 72 hours prior to interruption.

The Contractor will be required to dispose of any water from the isolated main and to dispose of air during the filling operation. The Contractor shall operate all valves required to isolate the existing mains as directed by the Inspector. Charlotte Water will not be responsible for delays, rescheduling, etc., resulting from incomplete isolation of the mains.

The CLTWater Inspector in conjunction with the Contractor will be responsible for notifications of all customers affected by the interruption of service. Service interruptions shall be scheduled by CLTWater at a time most convenient to the public.

Work may be required at night, weekends and/or holidays, as determined by CLTWater. Customers shall be notified at least 72 hours (not including weekends/holidays) prior to any interruption of service. All costs incurred by the Contractor for these services will be included in the various pay items in the Proposal.

UTILITY CONNECTIONS

Make connections between existing and proposed utilities at times most convenient to the public, without endangering the utility service, and in accordance with the Owner's requirements. Make connections on weekends, at night, and on holidays if necessary. Should the position of any pole, pipe, conduit, or other structure

require removal or adjustment, the Engineer will coordinate the change with the owner of the obstructions or a representative of the Owner.

SEWER LINE CLEARANCE

Whenever a sewer main crosses under other utility lines (gas, telephone conduit, storm drain, etc.) there shall be 2 foot clearance between the top of the sewer and the bottom of the affected utility. Stone bedding shall be used from 6 inches below the sewer to 12 inches above the sewer from one foot outside the utility trench. If this clearance is not possible, the sewer line shall be Ductile Iron Pipe from one foot outside the utility trench with a minimum length of 10 feet.

OPERATING AND ADJUSTING EXISTING VALVES

The Contractor, in conjunction with the Inspector, will locate, operate, and log the number of turns for all valves which may require operation during this construction. The Contractor will locate and adjust any valve box which has been paved over, etc., or does not conform with CLTWater Standard Details, if directed by the Engineer. This work will be completed ahead of water main pipe installation/relocation/ replacement. Any cost for adjusting existing valve boxes will be included in the appropriate pay item in the Proposal. Payment for operation valves, except during filling, for testing, disinfection and activation, will be in accordance with the appropriate pay item.

INSTALLING VALVES AND FITTINGS

VALVES

Valves and fittings shall be installed in the manner specified for installation and assembly of pipe. Valves and hydrants shall be installed at locations shown on the plans and/or as directed by the Engineer.

Valve Boxes:

A valve box conforming to the Standard Details shall be installed for every gate valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut, with the box cover flush with the surface of the pavement or other existing surface.

Where the box is not set in pavement, the top section shall be anchored by an 18"x18"x6" concrete pad, or an approved pre-cast concrete pad, set flush with the existing terrain. The top section will be grouted into the pre-cast concrete pad. The location of valves will be identified by the letter "V" imprinted into the curb adjacent to mainline or hydrant valve.

All butterfly valves shall be installed with operating nuts plumb and centered beneath a manhole frame and cover, valve box top section and riser pipe as shown in the standard details. Extension stems as shown on the standard detail will be required on valves where the operating nut is more than 4 feet below the top of the frame and cover.

Valve Blocking:

All end of line valves 12 inches and smaller installed on PVC or DIP water mains and all 12 inch valves installed along PVC water mains shall be securely wedge blocked with concrete bearing against, and cut into the excavated sides of the trench. Care shall be taken in forming and pouring the "wedge" blocking so the fitting joints will be accessible for repair and/or valve extraction.

Blocking Fittings:

All plugs, caps, tees, and bends deflecting 11-1/4 degree or more on pressure mains 6 inches in diameter or larger shall be provided with thrust blocking, placed as shown on the Plans and/or directed by the Engineer, and consisting of ready mix concrete having compressive strength of not less than 3,600 PSI at 28 days.

Bagged mix concrete may be used for blocking, anchorage, concrete valve pads, etc. on water mains and valves 12 inches or smaller, when less than 0.5 yd³ is required. Blocking shall be placed between solid ground and the fittings to be anchored. The area of bearing on the pipe and on the ground in each instance shall be that shown or directed by the Engineer. The blocking shall be so placed that the pipe and fittings will be accessible for repair.

Restrained joints shall be installed where shown on the plans, standard details or when approved by the Engineer, and may be installed in lieu of blocking. Installation shall be per manufacturer's recommendations, as shown on the plans, special provisions, and/or as directed by the Engineer. Restrained joints will not be allowed on PVC pipe.

ADJUSTMENT/RELOCATION OF WATER SERVICES AND METER BOXES/VAULTS

All water services, meters, boxes, and vaults shall be adjusted and/or relocated by the Contractor as specified and as shown on the Plans and Standard Details. "Adjustment" shall be defined as vertical movement only. "Relocation" shall be defined as horizontal movement and shall include the associated vertical adjustment.

Concrete meter boxes will be required for all ¾" and 1" water meter relocations.

If the existing service line is in suitable condition, as determined by the Engineer, connection can be made to the existing service line and the new service line can be installed to the new meter location.

If the existing service line is not suitable for use, as determined by the Engineer, the connection shall be made at the existing main and the entire service line shall be replaced. The Contractor may connect at the existing corporation or install a new corporation at the existing main.

UTILITY RELOCATIONS

Water:

Install existing water meters and meter boxes that are to be relocated adjacent to the right of way, as shown on the utility plans, or as directed.

Relocation of water meters consists of the removal and installation at the appropriate location of the water meter, meter yoke, meter valve, and meter box. This work also includes all pipe, corporation stops and tapping saddles necessary for this relocation. Perform all work in accordance with the applicable plumbing codes, as shown on the plans, and as directed. Place relocated meter boxes with the top of the meter box flush with finish grade of the project.

Locate and install fire hydrants as shown on the utility plans.

Relocate all existing fire hydrants in the road construction area, and others that will be a hazard to the motorist, adjacent to the right of way, as shown on the plans, and/or as directed. Separate existing fire hydrants to be relocated at the hydrant base from the existing pipe and place in the new location. Where necessary, remove the hydrant shoe and replace with the appropriate type to connect the relocated hydrant to the new pipe. Furnish, install or remove hydrant extension pieces to provide the proper bury of the pipe and hydrant. Provide all necessary pipe, valves, and fittings necessary for this relocation. Handle pipe and appurtenances in such a manner as to ensure delivery to the site and installation in a sound, undamaged condition. Store plastic pipe out of direct sunlight until placement. All plastic pipes showing discoloration, or deterioration will be rejected for use and

replaced with suitable pipe, at no additional cost. Carefully examine all pipe, fittings, and appurtenances for defects before placing, rejecting any found defective. If, at any time before completion of the contract, any broken pipe or any defects are found in the lines or in any of their fittings or appurtenances, replace them.

On tie-in sections, the Contractor may be required to anchor pipe bends, tees, etc. with precast concrete blocking, timbers, rodding, or other approved method to allow the water line to be placed back into service as soon as possible. Make final connections to existing mains where indicated on the drawings, as required to fit the actual conditions, or as directed. Order materials, install the new line, provide thrust restraint, and perform sterilization and pressure tests on the new line prior to installation and tie-in of the new line into service to the satisfaction of the Engineer. Notify owners in advance of any interruptions of water service with ample time to make arrangements. Limit interruption of water service on main lines to a maximum of 8 hours unless otherwise approved.

Sewer:

Make final connections of the proposed sewer work to the existing system where indicated on the drawings, as required to fit the actual conditions, or as directed. Notify the owner at least 24 hours in advance of all arrangements for temporary service and for agreement with the owner as to the time that service may be interrupted.

Do everything necessary, including temporary pumping, in order to keep all existing sewers active for either the duration of this contract or until the Engineer authorizes connections.

CONNECTION TO EXISTING SEWERS

In cases where construction will disrupt the existing sewer flow, prior to beginning any work, the Contractor shall prepare and submit a plan and schedule indicating how the existing flow will be handled and the time frame in which he intends to work. The CLTWater Inspector in conjunction with the Contractor will be responsible for notifications of all customers affected by interruption. Interruptions shall be scheduled by CLTWater at a time most convenient to the public. Work may be required at night, weekends and/or holidays, as determined by CLTWater. Customers shall be notified at least 72 hours (not including weekends/holidays) prior to any interruption of service.

All costs for maintenance of sewer flow shall be included in the various pay items in the Proposal.

Tie-ins to existing activated sewer lines will be allowed when proper precautions are taken to protect the existing main. Tie-ins to existing unactivated sewer lines not installed under the same contract will not be allowed without written approval from all parties involved (CLTWater, contractors, contract holders, etc.). The Contractor will be required to install watertight masonry plugs in the proposed pipeline at the existing manhole and at the first proposed manhole until all construction is complete and testing begun. If the proposed sewer does not begin at an existing manhole, a straddle type manhole as shown on the Standard Details will be constructed over (and around) the undisturbed existing pipeline and the proposed pipeline plugged as specified. The existing pipeline will not be broken-out and the new invert formed until all testing has been successfully completed. Any connection with 18 inch and smaller pipe at an existing precast or cast-in-place manhole will require the Contractor to core the necessary opening through the manhole wall. Connections to existing manholes with 21 inch and larger pipe may be cored or sawed as approved by the Engineer.

Sewer:

Make final connections of the proposed sewer work to the existing system where indicated on the drawings, as required to fit the actual conditions, or as directed. Notify the owner at least 24 hours in advance of all arrangements for temporary service and for agreement with the owner as to the time that service may be

interrupted. Do everything necessary, including temporary pumping, in order to keep all existing sewers active for either the duration of this contract or until the Engineer authorizes connections.

A. Temporary Watertight Plugs:

The Contractor shall install temporary watertight plugs in the proposed sewer line at any manhole that is incomplete, at the open end of the pipeline prior to leaving the job site daily and elsewhere as dictated by good engineering and construction practices. All installed pipe shall be backfilled or otherwise securely tied down to prevent flotation in the event water enters or rises in the trench.

The plugs as installed shall prevent infiltration or the introduction of any foreign material into either the existing or proposed systems.

The City will not accept any pipeline or manhole which contains any silt, sedimentation or other foreign material, within. The Contractor shall at his own expense flush, or otherwise cause the line (and manholes) to be cleaned out without any discharge into the existing system.

Upon completion of all construction, the Contractor will be responsible for the complete removal of all watertight plugs, in the sequence necessary to allow testing and subsequent activation, all under the direction of the Engineer.

B. Scheduling:

When the flow of an existing sewer must be interrupted and/or bypassed, the Contractor shall, before beginning any construction, submit a work schedule which will minimize the interruption and/or bypassing of wastewater flow during construction. This schedule must be approved by the appropriate controlling agencies and Engineer and may require night, holiday, and/or weekend work.

C. Bypass Pumping:

If pumping is required, an identical standby pump shall be on site in the event of failure of the primary pump. If, at any time during construction, effluent from the existing sewer is not full contained by the bypass system, gravity service will be restored by a temporary tie to the new construction and work shall be suspended until the problem is resolved to the satisfaction of the Engineer. The Contractor shall be responsible for any fines levied as a result of effluent reaching the creek. The Contractor will be required to verify his method of handling sewer flows during construction by pumping at peak flows for 1 hour as approved by the Engineer.

TESTING AND INSPECTION FOR WATER LINES

Required testing of pipelines and valves shall be done under the direct supervision of the Project Inspector. Field testing shall not negate the requirements for material certifications as contained in the material specification section of this contract. Unless otherwise directed by the Engineer, all testing and disinfecting will be completed prior to connection to any existing line. The Contractor shall provide open ventilation of confined spaces. The Contractor shall be responsible for providing all equipment and personnel necessary to comply with OSHA confined spaces regulations.

Hydrostatic and Leakage Tests:

All sections of water mains greater than 100 linear feet shall be tested and disinfected in accordance with the Standard Specifications. All relocated services must be tested prior to re-connection and transfer of service.

The Contractor shall furnish equipment, labor and new materials including caps, plugs, sleeves, jumpers, valves, check valves and corporation stops required to make temporary connections to water mains for testing and disinfection. All materials, such as sleeves and corporation stops that are to remain as permanent fixtures, will be new materials. The Contractor will, if required by the Engineer, complete the testing and disinfection required by these specifications prior to connection to existing mains.

Sections of water mains less than 100 linear feet shall be tested and disinfected in a manner approved by the Engineer. Where formal disinfection and leakage tests are not required, extreme cleanliness shall be required. Leakage tests will be limited to that which can be observed. No visible evidence of leakage will be allowed. All pipe, caps, plugs, etc., will be disinfected and flushed thoroughly prior to installation. Open ends of pipe will be sealed or protected in a manner approved by the Engineer to protect the existing system during this work.

On completion of the line or sections of the lines, connections and appurtenances, the line shall be filled and hydrostatically tested. The water for this purpose can be taken from existing lines under the supervision of the Engineer's Inspector and leakage will be measured by the Inspector with a meter furnished by Charlotte Water. All leaks and any defective material shall be repaired or replaced to the satisfaction of the Engineer and the tests repeated until the requirements of this specification are met. Any special equipment, pumps, etc. required to make the test shall be furnished and operated by the Contractor as directed by the Inspector.

The Contractor shall use great care to be sure that all air is expelled from each section under test. If fire hydrants or other openings are not available for the purpose of expelling air, the Contractor shall provide air releases of sufficient size (as determined by the Engineer) in accordance with City Standard Drawings, at his expense. Specific procedures for testing mains are as follows:

Test pressure will be 200 PSI at the low point of the section under test. When testing against butterfly valves, the differential pressure at the valve must not exceed 150 PSI for valves rated at 150 PSI. If the test cannot be made with differential pressure of 150 PSI, 250 PSI valves will be specified. Differential pressures across gate valves may be up to 200 PSI.

Allowable leakage for 16 inch nominal diameter pipe will be 1.7 gallons/hour per Table 6, AWWA C-600. Pressure and leakage tests will be run concurrently and for a duration of four hours except as modified below.

The Contractor will pressurize the line and verify that it is within allowable leakage before the official test is started.

The Inspector will begin the test and remain at the job for the first hour, making sure that the test pressure is maintained within ± 5 PSI. The Contractor is to maintain the pressure within ± 5 PSI for the duration of the test period. At the end of the first hour, with the line pumped to full test pressure, he will read the meter and record the first hour leakage. If the first hour leakage is within allowable, he will return at the end of the fourth hour and again read the meter. If the total leakage for the four hour period does not exceed four times the first hour leakage, the test will be terminated. If the total leakage exceeds four times the first hour leakage, but is still within allowable, the test will be held an additional hour. If the fifth hour leakage does not exceed the average hourly leakage for the first four hours, the test will be terminated at the end of the fifth hour. Otherwise, the test will be held until the leakage is non-increasing and within allowable for two consecutive hours.

If leakage exceeds allowable for the four hour test, the test will be terminated and re-scheduled after the Contractor has verified that actual leakage is within the allowable leakage, but no earlier than the next work day. If the first hour leakage does not exceed 10% of the allowable, or if the allowable leakage rate does not exceed 0.4 gallons/hour, the test may be terminated at the end of two hours provided the second hour leakage does not exceed the first hour leakage. If the second hour leakage exceeds the first hour leakage, the test will be held for an additional period as described in the paragraph above.

The maximum length of pipe tested in one test shall be 5,000 feet or as close to 5,000 feet as possible depending on valve spacing.

During the last stages of the test and without any reduction in pressure, first the hydrant guard valves will be closed, then progressing in an orderly manner from the end opposite the test pump, each main line valve will be closed and pressure released to determine if it is holding pressure (minimum 10 minutes per valve closing).

TESTING AND INTERNAL INSPECTION FOR SEWER LINES

The Contractor shall provide proper ventilation of sewer lines and manholes during any test or inspection procedure. The Contractor shall be responsible for providing all equipment and personnel necessary to comply with OSHA confined spaces regulations.

Gravity Sewer Pipe Leakage Testing:

No sooner than 10 days following completion of backfill, the Contractor along with the project inspector will be required to determine the level of the ground water table. If the level of ground water table is above the top of the pipe, the sewer line shall be tested for infiltration. If there is no ground water above the top of the pipe the sewer line shall be low pressure air tested. Each test shall be performed as follows:

Infiltration:

Weirs are to be furnished by CLTWater and installed by the Contractor. The infiltration shall not exceed 100 gallons per day per 1 inch diameter per mile as measured for a reach of pipe the same diameter up to one mile in length. However, when excessive infiltration can be isolated to a particular section (manhole-manhole) the limit will be applied to that section. There shall be no visible points of infiltration. Any section (manhole-manhole) must be isolated and tested separately if so directed by the Engineer. The Charlotte Water reserves the right to TV any sewer line to detect sources of infiltration.

Low Pressure Air Test:

Tests shall be performed in accordance with ASTM C-828 and C-924 on sewer lines 42 inch in diameter and smaller. Test pressure will be measured by gauges furnished by CLTWater and installed by the Contractor above ground at the manhole opposite the air supply. The Contractor shall furnish all other test equipment required including connecting hoses at the CLTWater supplied gauge.

Sewer lines larger than 42 inches in diameter shall be tested for infiltration as specified above and each joint shall be visually inspected by a CLTWater representative.

Manhole Leakage Testing:

Manholes shall be tested by plugging the inlet and outlet pipes with airtight plugs and using one of the following procedures:

Exfiltration Fill the manhole to the rim with water and allow the level to equalize due to saturation. Refill the manhole and mark the level to begin the test. The test shall last at least 2 hours and allowable leakage shall be 3 gallons per hour. The Engineer will select 25% of the manholes on the project to be tested. If any manhole fails, an additional manhole will be tested. Manholes that fail the test shall be repaired as specified and retested until they pass.

Vacuum Air:

Manhole vacuum air testing shall be performed in accordance with ASTM C-1 244. The Engineer will select 25% of the manholes on the project to be tested. Manholes that fail the test shall be repaired as specified and retested until they pass. Manholes that show leaks and are repaired prior to testing shall be tested as specified.

SANITARY SEWER REPAIRS

All leaks shall be repaired by identifying and exposing the defective section of pipe and completing repairs as follows:

PVC, VC or Ductile Iron Pipe:

Defective or damaged pipe including leaking joints shall be removed and replaced with sound new pipe. The pipe shall be re-connected with approved couplings.

Manholes:

Any damage to the interior wall of the manhole resulting from penetration of the lift holes shall be repaired with non-shrink cement grout.

Leaks through manhole joints or walls or around pipe collars, may be repaired from inside the manhole with non-shrink cement grout. If the size of the leak, or the external water pressure, prevents such repairs, the manhole shall be excavated and repaired from outside.

Leaks around boots or gaskets used to join pipe to manholes shall be repaired by external concrete collars or as approved by the Engineer.

Measurement and Payment

The quantity of water valves, water meter boxes, water manholes, water vaults and sanitary sewer manholes adjusted shall be measured by and paid for at the contract unit price per each for "Adjust Existing Water Valve", "Adjust Existing Meter Box", "Adjust Existing Fire Hydrant", "Adjust Existing Water Manhole", "Adjust Existing Water Vault" and "Adjust Existing Sewer Manhole". The quantity of existing manholes requiring the frame and cover to be replaced with solid lids and sealed/watertight covers shall be measured and paid for at the contract unit price per each for "Convert to Solid Lid & Sealed Frame & Cover (Watertight)". Such prices and payments will be full compensation for all materials, equipment, labor, and incidentals necessary to complete the work as required.

Payment will be made under:

ADJUST EXISTING WATER METER AND METER BOX..... EA
ADJUST EXISTING SEWER MANHOLE..... EA

ARTICLE 4: REAL ESTATE SPECIAL PROVISIONS



Right of Entry Agreement

Project Overview	
Project Name/ID	Sidewalk improvements
Property	Jay M. Robinson Middle School
Property Address	5925 Ballantyne Commons Parkway, Charlotte, NC 28277
Parcel No(s).	22915109 containing 30.573 acres
Defined Area(s) as shown in Exhibit A	
Requestor	City of Charlotte
Requested Purpose	Sidewalk and entrance improvements

This agreement is made and entered into as of the 25th day of March 2026, by and between **THE CHARLOTTE-MECKLENBURG BOARD OF EDUCATION** ("Owner") and **Requestor**.

WITNESSETH:

WHEREAS, Owner owns the property referenced above, known as ("Property"); and

WHEREAS, Requestor has requested to enter upon a portion of the Property for the aforementioned purpose, as generally shown on **Exhibit A** (the "Site"); and WHEREAS, Owner has agreed to execute this Right of Entry Agreement to allow Requestor and Requestor's contractor to access the subject property for the aforementioned purpose and

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants hereafter set forth, IT IS AGREED:

1. Requestor shall be entitled to go upon the Property with machinery, equipment and manpower to permit aforementioned work at the location generally shown on **Exhibit A**. The exact dates, times and means of access to the Property shall be coordinated in advance with CMS Facilities Management staff to ensure that school functions are not interrupted.

Charlotte-Mecklenburg Schools: Right of Entry Agreement 1
Revised October 2024



Contact: Nathaniel Jones, Portfolio Manager

nathaniel1.jones@cms.k12.nc.us
980-403-1381

2. Requestor will be responsible for the safety and protection of its employees and contractors, students and school personnel, and the general public in connection with the work being performed.
3. Requestor agree to release, indemnify and hold harmless Owner from and against any liability, obligations, claims, damages, litigation costs and expenses (including attorneys' fees) imposed on, incurred by or asserted against Owner for any reason whatsoever including, but not limited to, accident or other occurrence causing injury or death, sickness or disease, or damage or destruction of property arising out of Requestor presence on the Property.
4. Unless such insurance requirements are waived or modified by Owner or the Charlotte-Mecklenburg Department of Insurance and Risk Management ("DIRM"), Requestor certifies existence of, and agreement to purchase and maintain, during its performance under the Contract the following insurance from one or more insurance companies acceptable to Owner and authorized to do business in the State of North Carolina:

Automobile	Requestor shall maintain bodily injury and property damage liability insurance covering all owned, non-owned and hired automobiles. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each person/each occurrence.
Commercial General Liability	Requestor shall maintain commercial general liability insurance that shall protect Requestor from claims of bodily injury or property damage which arise from performance under the Contract. This insurance shall include coverage for contractual liability. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each occurrence/annual aggregate.
Worker's Compensation and Employers' Liability Insurance	If applicable to "Requestor", Requestor shall meet the statutory requirements of the State of North Carolina for worker's compensation coverage and employers' liability insurance.

Requestor shall also provide any other insurance or bonding specifically recommended in writing by the DIRM or required by applicable law. Certificates of such insurance shall be furnished by Requestor to Owner and shall contain the provision that Owner be given 30 days' written notice of any intent to terminate by

Charlotte-Mecklenburg Schools: Right of Entry Agreement 2
Revised October 2024



either Requestor or the insuring company. Failure to furnish insurance certificates or to maintain such insurance shall be a default under the Contract and shall be grounds for immediate termination of the Contract.

5. If any of Owner's property (or any improvements thereon) is damaged or disturbed during Requestor work on the property, Requestor agrees to immediately restore the property and/or the improvements as nearly as possible to the condition that existed as of the date of this Agreement. Requestor activities or Requestor property shall not interfere in any manner with Owner's use and operation of its property nor endanger school personnel or pupils or the public at large.
6. Construction and/or site visits should occur on weekends or weekdays only during times at midday when it would not interfere with drop offs/pickups (no ingress or egress from one half hour before and to one half after the morning and afternoon bells. The bell schedule for this School Property is 8:00 a.m. and 3:00 p.m. Requestor or Requestor's contractor must have an executed copy of this agreement on their person at all times while on the Owner's property.
7. Requestor acknowledges the Owner policy on "Registered Sex Offenders," prohibits anyone registered or required to register as a sex offender from being present on any Owner Property for any reason, whether before, during or after school hours. "Owner Property" includes all property owned or operated by the Charlotte-Mecklenburg Board of Education, including school campuses and buildings, athletic fields, playgrounds, parking lots, bus stops, vehicles, school buses, activity buses and any other properties owned or controlled by Owner. Requestor expressly agrees that it, and any of its employees, contractors, agents or vendors will comply with this policy and acknowledges that any individual that violates this policy are subject to removal from Owner Property by Owner and/or law enforcement officials and may also be subject to criminal prosecution. Requestor understands and agrees that it has a responsibility to ensure that all contractors, agents or vendors are in compliance herewith.
8. The bringing and using of alcoholic beverages and/or tobacco products on school grounds is prohibited.
9. Pets, including dogs, are not permitted on Owner property unless they are clearly identified and certified as support animals in accordance with applicable laws and regulations.
10. The term of this Agreement shall commence on 7/1/26 and expire on 6/30/27; provided, however, Owner may terminate this agreement for convenience by giving immediate notice to the Requestor.

Charlotte-Mecklenburg Schools: Right of Entry Agreement 3
Revised October 2024



IN WITNESS WHEREOF, the parties hereto have executed this Right of Entry as of the day and year first mentioned above.

Requestor: CITY OF CHARLOTTE

By: Walta Blackmon, PE
Name: Walta B Blackmon
Title: Senior Project Manager

CHARLOTTE-MECKLENBURG BOARD OF EDUCATION

By: C. Robert Sorrell

Name: Robert Sorrell
Title: Real Estate Specialist

Charlotte-Mecklenburg Schools: Right of Entry Agreement 4
Revised October 2024

Polaris 3G Map – Mecklenburg County, North Carolina

Jay M. Robinson MS Exhibit A

Date Printed: 3/25/2026 9:36 AM

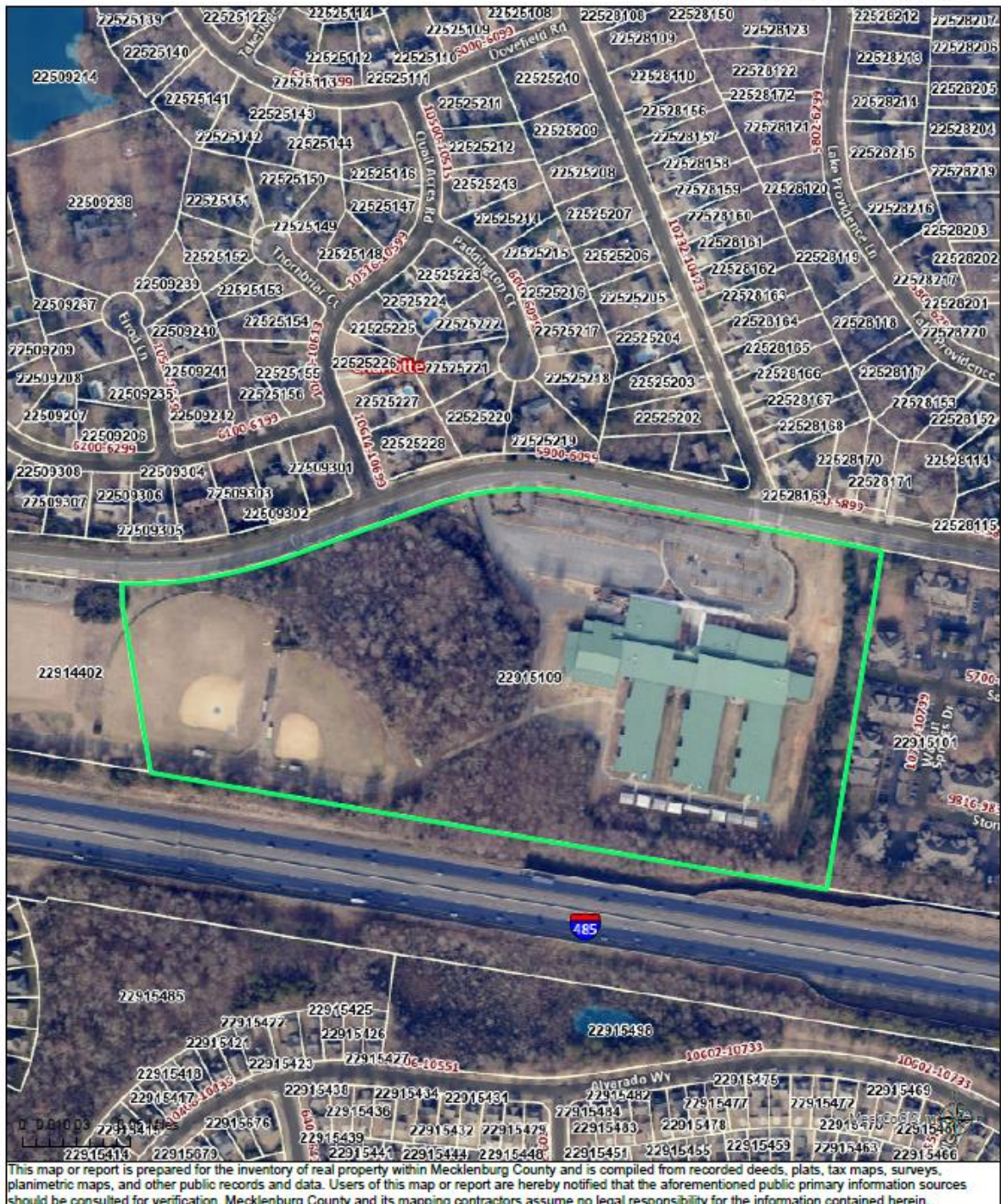


EXHIBIT 1: NCDOT ENCROACHMENT AGREEMENT



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL JOHNSON
SECRETARY

NCDOT PRECONSTRUCTION MEETING
OR
FINAL INSPECTION
REQUEST

Prior to beginning any work inside NCDOT ROW, use the link or QR code below to submit your request for a meeting. Please allow 2 business days for a response by the appropriate inspector. Please note that this form must be completed and submitted to NCDOT prior to the pre-construction meeting OR final inspection.

NCDOT Review Engineer: Click or tap to enter text review engineer.

<https://arcg.is/1O9i5G0>



If you have questions or issues please call 980-523-0016

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 10 DISTRICT 2
7605 DISTRICT DRIVE
CHARLOTTE, NC 28213

Telephone: (980)523-0000
Fax: (704)598-1758
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
7605 DISTRICT DRIVE
CHARLOTTE, NC 28213



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL JOHNSON
SECRETARY

September 30, 2025

Division 10

City of Charlotte
600 East Fourth Street
Charlotte, NC 28202

SUBJECT: Non-Utility Encroachment Contract – City of Charlotte – SS4A Phase 1 -
Ballantyne Commons Pkwy @ Woodview Cir - Project No. PMES231813A-4

Encroachment Number: E102-060-25-00720

To Whom It May Concern:

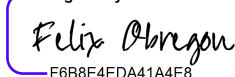
A review of the subject encroachment has been completed by the appropriate staff agencies of the Division of Highways. Plans for construction at the above referenced location have been approved for construction at this time and are subject to the attached special provisions.

This encroachment involves installation of ADA compliant curb ramps and traffic signals (APS/LPI) along Ballantyne Commons Pkwy (SR-4979) at Woodview Circle.

Please contact our District Office at (980) 523-0000 should additional information be needed.

Cordially,

Signed by:


F6B8E4EDA41A4E8...

Felix Obregon, PE
Division Engineer

FAO/KHB

Enclosure

cc: File

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 10 DISTRICT 2 OFFICE
7605 DISTRICT DRIVE
CHARLOTTE, NC 28213

Telephone: (980) 523-0000
Fax: (704) 598-1758
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
7605 DISTRICT DRIVE
CHARLOTTE, NC 28213

ROUTE Ballantyne Commons Pkwy (SR-4979)PROJECT SS4A Phase 1 Ballantyne Commons COUNTY OF Mecklenburg

DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY ENCROACHMENT AGREEMENT FOR
CURB AND GUTTER, PAVEMENT WIDENING AND
STORM DRAINAGE

-AND-

City of Charlotte

THIS AGREEMENT, made and entered into this the 30th day of SEP, 20 25, by and between the Department of Transportation, party of the first part; and City of Charlotte

party of the second part,

WITNESSETH

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) Ballantyne Commons Pkwy (SR-4979), located on Ballantyne Commons Pkwy at the Woodview Circle Intersection

with the construction and/or erection of: ADA compliant curb ramps and traffic signals (APS/LPI).

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the said party of the second part binds and obligates himself to install the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway.

That the party of the second part agrees to provide during construction proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

It is clearly understood by the party of the second part that the party of the first part will assume no responsibility for any damage that may be caused to such facilities, within the highway rights of way limits, in carrying out its construction.

That the party of the second part agrees to restore all areas disturbed during construction to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any construction operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the encroaching site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

R/W (161B) : Party of the Second Part certifies that this agreement is true and accurate copy of the form

R/W (161B) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY: Felix Brumskine/KB
DIVISION ENGINEER

ATTEST OR WITNESS:

Walta Blackmon

Walta Brumskine Blackmon, PE | Senior Project Manager

Keith Bryant

Keith Bryant, PE | Division Manager

Second Party

INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered City official is on file in the Raleigh office of the State Utilities Manager. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

This agreement must be accompanied, in the form of an attachment, by plans or drawings showing the following applicable information:

1. All roadways and ramps.
2. Right of way lines and where applicable, the control of access lines.
3. Location of the proposed encroachment.
4. Length and type of encroachment.
5. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road, intersection, etc. (To assist in preparation of the encroachment plan, the Department's roadway plans may be seen at the various Highway Division Offices, or at the Raleigh office.)
6. Drainage structures or bridges if affected by encroachment.
7. Typical section indicating the pavement design and width, and the slopes, widths and details for either a curb and gutter or a shoulder and ditch section, whichever is applicable.
8. Horizontal alignment indicating general curve data, where applicable.
9. Vertical alignment indicated by percent grade, P.I. station and vertical curve length, where applicable.
10. Amount of material to be removed and/or placed on NCDOT right of way, if applicable.
11. Cross-sections of all grading operations, indicating slope ratio and reference by station where applicable.
12. All pertinent drainage structures proposed. Include all hydraulic data, pipe sizes, structure details and other related information.
13. Erosion and sediment control.
14. Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment agreement provided that such information cannot be shown on plans or drawings.
15. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installation included in this agreement.
16. Method of handling traffic during construction where applicable.
17. Scale of plans, north arrow, etc.

SPECIAL PROVISIONS

Non-Utility Encroachmen

SS4A Phase 1 – Ballantyne Commons Pkwy @ Woodview Circle

E102-060-25-00720

Pre-Construction

1. You are to notify Mr. Elijah Hager of NCDOT at least 48 hours prior to beginning any work within NCDOT right-of-way to set up a pre-construction meeting. **Notification for Encroachment agreement on NCDOT R/W** is attached. All departments and agencies involved should be notified of the meeting. If you have any questions, please call 980-523-0000.
2. Any work within the public right of way without authorization of NCDOT shall be removed at the owner's expense. Any work done within the right-of-way prior to the preconstruction meeting will be subject to removal and replacement at the owner's expense.
3. Contact the appropriate utility companies involved and make satisfactory arrangements to adjust the utilities in conflict with the proposed work prior to construction.
4. **Utility taps, irrigation facilities, decorative signs, etc. are not covered under the driveway permit approval. Encroachment agreements must be obtained for installation of above facilities.** Questions regarding what installations will be covered by the driveway permit and encroachment agreements should be handled at the pre-construction meeting. Any utility to be installed across a railroad will require an encroachment agreement from the railroad company.
5. Notify Mr. Garret Ratcliffe, County Maintenance Engineer, at 980-523-0160, seventy-two hours prior to beginning any grading operation on State right-of-way in order to coordinate removal of material.
6. **The developer shall contact Tou Lee, Division Traffic Engineer, at 704-983-4400 if any road work is to occur within 500' of a traffic signal to determine if a new signal plan may be required or if any signal equipment may be impacted by this project. If a new signal plan is required, the developer shall enter into an agreement with the NCDOT to cover the costs of signal plan review and inspection of signal work. Any damage done to the existing signal equipment shall be repaired by the developer as soon as construction allows.**
7. The approval is subject to driveway being constructed as shown on the approved plan and attached. Any revisions to the approved plans must be approved through a Field Service Engineer, with NCDOT. Driveway permit will become void if construction of the driveway has not been started within **one year** beginning at the approval date of permit, otherwise, an extension must be requested in writing.
8. An executed copy of this agreement shall be present at the construction site at all times during construction. If safety or traffic conditions warrant such an action, NCDOT reserves the right to further limit, restrict, or suspend operations within the right-of-way.
9. Any portion of this driveway permit determined to be in conflict with any Transportation Improvement Project will be removed and/or relocated at the Owner's expense.

10. The encroaching party agrees to provide traffic control devices, lane closures, road closures, positive protection, and/or any other warning or positive protection devices necessary for the safety of road users during construction and subsequent maintenance. This shall be performed in conformance with the latest NCDOT Roadway Standard Drawings and Standard Specifications for Roads and Structures and amendments or supplements thereto. When there is no guidance provided in the NCDOT Roadway Standard Drawings and Standard Specifications for Roads and Structures, comply with the Manual on Uniform Traffic Control Devices for Streets and Highways and amendments or supplements thereto. Work shall not start until all the required signs, barricades, warning and/or channeling devices are installed. Information as to the above rules and regulations may be obtained from the NCDOT Division Engineer.

Traffic Control

11. The contractor shall begin the construction only after the traffic and erosion controls have been installed to the satisfaction of the Engineer.
12. Maintain erosion control devices as needed. Contractor will inspect these weekly and after storms.
13. **Any work requiring equipment or personnel within 5 feet of the travel lane of an undivided facility and within 10 feet of a travel lane of a divided facility shall require a lane closure with appropriate tapers.**
14. Lane closure is only permitted during the night-time hours (8:00PM – 6:00AM) during normal business days. See other holiday restrictions below. Traffic shall be maintained and access to all driveways of adjacent properties, especially fire, police and emergency services, must be always maintained. Pedestrian passage must be marked, maintained and always protected. Transit facilities must be maintained, suspended or relocated as directed by CATS.

ADDITIONAL NCDOT HOLIDAY LANE CLOSING RESTRICTIONS are as follows:

New Year's: From 4pm, Dec. 31, until 9am, Jan. 2.

Easter: From 4pm, Thursday before the holiday until 6pm the Monday after holiday.

Memorial Day: From 4pm, Friday, until 9am Tuesday.

Independence Day: From 4pm on the day before holiday, until 9am on the day after. If the holiday lands on a Friday, Saturday, Sunday or Monday, then there will be no lane closures from 4pm on the Thursday before until 9am the Tuesday after.

Labor Day: From the hours of 4pm, Friday until 9am Tuesday.

Thanksgiving: From 4pm, Tuesday until 9am Monday.

Christmas: From 4pm the Friday before the week of Christmas Day, until 9am the following Tuesday after the week of Christmas Day.

15. No lane closures shall be allowed on days or times in which special events are occurring in the area which may include but not be limited to CIAA and ACC Tournaments, NASCAR races, college graduations, move-ins and sporting events, plus Panthers, Knights and Hornets games. The time restrictions, including the requirement to perform work within the roadway at night, will be adjusted by the Engineer or Inspector for that project. Further restrictions may also be required depending on the size and location of the event.

16. **NCDOT WORK ZONE TRAFFIC CONTROL QUALIFICATIONS AND TRAINING PROGRAM**

- a. Effective July 1, 2010, all flagging operations within NCDOT Right of Way require qualified and trained Work Zone Flaggers.
- b. Effective July 1, 2011, qualified and trained Work Zone Traffic Control Supervisors will be required on Significant Projects.
- c. Training for this certification is provided by NCDOT approved training sources and by private entities that have been pre-approved to train themselves. If you have questions, refer to our web site at <https://connect.ncdot.gov/projects/WZTC/Pages/Training.aspx>, or contact the NCDOT Work Zone Traffic Control Section (919) 814-5000.

17. All AASHTO and OSHA guidelines for safety shall be adhered to.
18. Ingress and egress shall be maintained to all businesses and dwellings affected by this project. Special attention shall be paid to police and fire stations, fire hydrants, bus stops and hospitals. All driveways along the project shall be put back with the same quality or better, with the approval of the Owners.
19. No access, parking, or material storage shall be allowed along or from Control of Access Highways. No parking or material storage shall be allowed along the shoulders of any state-maintained roadway. During non-working hours materials and equipment shall be located behind the ditch line, as close as possible to the right-of-way line and be properly secured.
20. The entrance should be controlled with traffic control devices if deemed necessary by the District Engineer.
21. Control access opening is to be a standard 60-foot opening.
22. Sight distance shall be always maintained.
23. A minimum of one 12-foot lane shall be always maintained.

Earthwork and Grading

24. All fill areas/backfill shall be compacted to 95% density in accordance with AASHTO T99 as modified by the NCDOT. All material to a depth of 8 inches below the finished surface of the subgrade shall be compacted to a density equal to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. The subgrade shall be compacted at a moisture content which is approximately that required to produce the maximum density indicated by the above test method. The contractor shall dry or add moisture to the subgrade when required to provide a uniformly compacted and acceptable subgrade.
- 24a. All pipes shall be tested and installed in accordance with NCDOT specifications. Testing firm and inspector must be NCDOT certified.
25. Shoulders are to be reconstructed after resurfacing. The material used in the construction of earth shoulders shall be approved by the assigned Engineer. Shoulders should be compacted to 95% density in accordance with AASHTO T99 as modified by NCDOT.
26. Please mail a copy of the compaction test of the above site to Mr. Elijah Hager (District 2 office).
27. Excavated areas adjacent to pavement having more than a 2" drop shall have a slope no greater than 6:1 and designated by appropriate delineation during periods of inactivity, including, but not limited to, night and weekend hours.
28. Maximum cut and fill slopes should not exceed 2:1 within the right-of-way.

29. Shoulder fill section embankments:

Fill Height (feet)	Maximum Slope
0-5	2:1
5-8	2.5:1
8 Greater	3:1

30. Excavation material shall not be placed on the pavement. Drainage structures shall not be blocked with excavation materials.
31. Trenching, bore pits, and/or other excavations shall not be left open or unsafe overnight. The Contractor shall comply with all OSHA requirements and provide a competent person on site to supervise excavation at all times.
32. There shall be no discretionary digging, excavation, or any change in the State right-of-way without approval from the NCDOT Mecklenburg County District Office.
33. Slope shoring will not be permitted on State right-of-way. Use trench boxes only.
34. All excavation inside the theoretical 1:1 slope from the existing edge of pavement to the bottom of the nearest trench wall shall be made in accordance with the following conditions:
- Active excavation shoring, such as sheet piling shall be installed. The design of the shoring shall include the effects of traffic loads. The shoring system shall be designed and sealed by an engineer registered in North Carolina. Shoring plans and design calculations shall be submitted to the Division Engineer for review prior to construction. Trench boxes shall not be accepted as shoring.
 - The trench backfill material shall meet the Statewide Borrow Criteria. The trench shall be backfilled in accordance with Section 300-7 of the latest *NCDOT Standard Specifications for Roads and Structures*, which basically requires the backfill material to be placed in layers not to exceed 6 inches loose and compacted to at least 95% of the density obtained by compacting a sample in accordance with AASHTO T99 as modified by NCDOT.
 - A qualified NCDOT inspector should be on site at all times during construction. The encroaching party should be required to reimburse NCDOT for the cost of providing the inspector. If NCDOT cannot supply an inspector, the encroaching party (not the utility contractor) should make arrangements to have a qualified inspector, under the supervision of a Professional Engineer registered in North Carolina, on the site at all times. The Registered Engineer should be required to certify that the utility was installed in accordance with the encroachment agreement and that the backfill material meets the Statewide Borrow Criteria.
 - All trench excavation inside the limits of the theoretical 1:1 slope, as defined by the policy, shall be completely backfilled and compacted at the end of each construction day. No portion of the trench shall be left open overnight.
 - An appropriate performance bond should be posted for a period of two (2) to five (5) years to cover any long-term pavement repairs which may be required as a result of the installation.
35. The encroaching party is to contact Mr. Kevin Miller, Regional Geological Engineer, telephone number (980) 258-6400, prior to blasting.

Roadway and Storm Drainage Work

36. No NCDOT maintained roads are to be modified with this permit unless otherwise specified by NCDOT Engineer.
37. The slope of proposed lane widening shall be based upon center lane or existing roadway with the slope of the existing pavement taken into consideration and with a shoulder type section re-established.
38. After any widening and/or paving operations, contact NCDOT inspector for information to add stone. (i.e. Compressed ABC stone)
39. Pavement is to be saw cut. A 1-2' wide mill and overlay of the construction joint will be required.

40. Pavement repairs shall match the existing roadway elevation without dips or raises. Mill and overlay shall be a continuous process spanning a maximum of only 24 hours.
41. NCDOT will require full width mill and overlay resurfacing on all projects involving widening. While minimal limits of resurfacing may be shown on the approved plans, the NCDOT field inspector will make the final decision of the exact limits and shall be contacted by the contractor prior to paving operations. If any subgrade issues are encountered, they shall be resolved at that time. The contractor will also contact the field inspector following the completion of paving and prior to pre-marking the area.

Petitioner is also encouraged to coordinate paving requirements with scheduled NCDOT resurfacing operations by contacting the District Office at 980-523-0000.

42. All asphalt materials are to be installed to QMS for asphalt and pavement, **Maintenance Version 2024**, or the QMS program containing the 2024 standard specifications.
43. If the contractor chooses to use stabilization fabric underneath pavement widening, a P.E. certified design for the use and installation of the fabric must be submitted to the District Office for approval.
44. The pavement widening shall be paint striped to provide motorists delineation and guidance. Pavement marking plans will be provided to the NCDOT along with the widening plans. Paint striping will be the responsibility for the Encroaching party. The contractor will notify the Division Traffic Engineer, at (704) 983-4400 forty-eight hours prior to pre-lining the project and final application of paint striping. Pre-lining of the project shall be inspected and approved prior to final application.
45. Any drainage structure disturbed or damaged shall be restored to its original condition as directed by the Mecklenburg County District Office.
46. Driveway drainage pipe must be a minimum of 15" in diameter.
47. Any existing cross pipe that does not have adequate shoulder length after pavement widening shall be extended as directed by the District Engineer. Backfill of pipe beneath the roadway must be of approved materials and must be must be tested for required density.
48. A maximum of 500 feet of pipe may be installed and the trench properly backfilled, graded, seeded, and mulched before proceeding with trenching
49. Catch basins shall be constructed in accordance with NCDOT standard drawing numbers 840.01, 840.02, 840.04, or 840.05. Frames, grates, and hoods shall be constructed in accordance with NCDOT standard drawing number 840.03
50. Curb cuts and ramps shall be constructed in conformance with the NCDOT Guidelines for Curb Cuts and Ramps for Disabled Persons manual. Wheelchair ramps are to be constructed in accordance with NCDOT standard number 848.06 to comply with the Americans with Disability Act.
51. Concrete curb and gutter is to be constructed in accordance with NCDOT standard drawing number 846.01. The curb and gutter shall be placed on a minimum of 6" of B25.0C. The curb and gutter shall be sealed and inspected prior to backfilling behind the curb and gutter.
52. Proposed traffic-bearing manholes and valve covers shall be flush mounted and shall be an NCDOT approved design HS-25 load bearing.
53. Manholes shall be adjusted to the correct elevation according to the existing ground. Edges of such structures protruding more than 1.5" above the surface of temporary pavement will be protected by asphalt wedge, shoe or other appropriate means.

54. All manholes, splice boxes, and/or vaults within NCDOT right of way shall be of a pre-approved design. If any proposed structure is not of design pre-approved by NCDOT, the encroaching party shall submit details and calculations signed and sealed by a Professional Engineer for approval prior to construction. Please contact Project Services to obtain approved list.
55. All roadway signs that are removed due to construction will be reinstalled as soon as possible.
56. Any disturbed guardrail shall be reset according to the applicable standard or as directed by the District Engineer. The Contractor will contact NCDOT inspector at (980) 523-0000 prior to the removal or installation of any guardrail.
57. The resetting of the Control of Access fence shall be in accordance with the applicable NCDOT standard and as directed by the District Engineer.
58. No open cutting of pavement is allowed. If permitted for specific situations, only one half of the road width shall be open cut at one time in order to maintain traffic. When restoring open cuts, only approved materials are to be used for backfill.

Utilities

59. Method for crossing under all State roads shall be by dry bore.
60. Under no condition shall jetting or wet boring, with water, of utility pipelines or encasements under pavements be allowed.
61. Directional drilling methods have not been given statewide approval for use on NCDOT right of way. Under no condition shall jetting alone or wet boring with water for utility pipelines be allowed. Directional boring using jetting with a Bentonite (or equivalent material) slurry is approved at a minimum depth of 10' below the pavement surface (15' below the surface of controlled access roads) and 5' below any ditch line. Directional boring is not allowed in embankment material. Directional boring is allowed beneath embankment material in naturally occurring soil. Any parallel installation utilizing the directional boring method shall be made at a minimum depth of 3' below the ground surface except where the parallel installation crosses a paved roadway. All directional bores shall maintain 10 feet minimum horizontal distance from the nearest part of any structure, including but not limited to bridges, footings, pipe culverts, or box culverts. All directional bores shall maintain 10 feet minimum vertical distance from the nearest part of pipe culverts or box culverts. Directional bores are not allowed beneath bridge footings, culvert wing wall footings, or retaining walls. The tip of the drill string shall have a cutter head. Detection wire shall be placed with non-ferrous material. Any changes shall be submitted to the District Engineer for approval prior to construction. For multiple conduit installations, install conduits with 5 feet minimum horizontal separation between each conduit or install multiple conduits within a single duct. All directional bores shall maintain a minimum distance of 5 feet from the nearest part of pipe and box culverts and 10 feet minimum horizontal distance including but not limited to bridges and footings. **An overbore shall not be more than two inches (2") greater than the diameter of the pipe or encasement. An overbore exceeding two inches (2") greater than the diameter of the pipe or encasement will be considered if the encroachment agreement includes a statement signed and sealed by a North Carolina Registered Professional Engineer indicating that an overbore in excess of two inches (2") of the pipe or encasement will arch and no damage will be done to the pavement or subgrade. HDPE pipe installed by directional boring shall not be connected to existing pipe or fittings for one week from the time of installation to allow tensional stresses to relax.**
62. Smooth wall or spiral weld steel pipe may be jacked through dry bores slightly larger than the pipe bored progressively ahead of the leading edge of the advancing pipe as spoil is mucked by the auger back through the pipe. As the dry boring operation progresses, each new section of the encasement pipe shall be butt-welded to the section previously jacked into place. Encasements shall extend from ditch line to ditch line in cut sections, five feet beyond the toe of slopes in fill sections, and 3 feet behind curbs in curb sections.
63. If voids are encountered or occur outside the encasement pipe, grout holes shall be installed in the top section of the encasement pipe at 10 foot centers and the voids filled with 1:3 Portland Cement Grout at sufficient pressure to fill all voids before moving to another site.

64. In the event an obstruction is encountered during boring operations, the auger is to be withdrawn and the excessive pipe is to be cut off, capped and filled with 1:3 Portland Cement Grout at sufficient pressure to fill all voids before moving on to another site.
65. Casing pipe shall be sealed at the ends to prevent flowing water and debris from entering the annular space between the casing and the carrier. Plug with concrete, brick, link seal, or other material approved by the District Engineer. Ensure drainage of encasement by leaving a 1 inch diameter weep hole in the seal of the lower end of the encasement.
66. Splice boxes, manholes, water valves, vaults and other appurtenances shall be located at the right-of-way line. Such structures shall not be placed in the ditch line, side slopes of the ditch, or in the pavement.
67. Regulator stations, metering stations, cathodic test stations, and anode beds are not permitted within the NCDOT right of way; however, header wires are permitted.
68. Gas mains shall meet current NCDOT standards (SDR-11) or the plans shall be signed, sealed, and dated by a North Carolina Licensed Professional Engineer.
69. No pump stations are allowed on NCDOT right-of-way.
70. Detection tape shall be buried in trenches approximately 1 foot above any fiber optic cable. Where conduit is installed in the right of way and is not of ferrous material, locating tape or detection wire shall be installed with the conduit.
71. In the event a utility will be buried beneath any pipe culvert, the void from the bottom of the utility shall be backfilled and compacted to 95% of its original density. When the density cannot be obtained, the remainder of the void shall be filled with grout up to the outside horizontal diameter of the pipe culvert.
72. Minimum vertical clearance shall be 18' and meet NESC requirements for aerial crossings over NCDOT roadways and 15'-6" and meet NESC requirements for longitudinal parallel installations.
73. Guy wires to ground anchors and tub poles should not be placed between a pole and the travel way and should be located outside the clear recovery area.
74. Luminaire and utility poles shall be set outside the Clear Recovery Area in accordance with the latest version of the AASHTO Roadside Design Guide or made breakaway in accordance with the requirements of NCHRP Report 350. Any relocation of the poles from the original design due to the clear recovery area shall require a re-submittal for the lighting design. All poles inside Control of Access Right of Way shall be breakaway regardless of location and be in accordance with the requirements of NCHRP Report 350.

Landscaping and Planting

75. Complete restoration including fertilizing, seeding, and mulching of all areas disturbed during construction will follow within a maximum of fifteen (15) working days of the initial disturbing activity.
76. An approved planting permit must be obtained from NCDOT before any planting will be permitted within the State right-of-way. To apply for a planting permit, please contact Mr. Bruce Myers, Roadside Environmental Engineer, at 704-244-8260.
77. A copy of the approved NCDOT Planting Permit must be provided prior to issuance of any COs, bond release, and/or street acceptance.

78. Grass cover to be established on all disturbed areas in accordance with recommendations of the Division Roadside Environmental Engineer.

August 1 – June 1

100# KY 31 TALL FESCUE
OR ALTA TALL FESCUE
15# ALTA TALL FESCUE
15# RELIANT HARD FESCUE
500# FERTILIZER
400# LIMESTONE

May 1 – September 1

100# KY 31 TALL FESCUE
OR ALTA TALL FESCUE
15# KENIBLUE BLUGRASS
15# RELIANT HARD FESCUE
25# KOBE OR KOREAN LESPEDEZA
500# FERTILIZER
400# LIMESTONE

On cut and fill slopes 2:1 or steeper add 25# Rye Grain November 1 through March 1.

On cut and fill slopes 2:1 or steeper add 30# Sericea Lespedeza January 1 through December 1.

Fertilizer shall be **10-20-20** analysis. Upon written approval of the Engineer, a difference analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis.

River birches will not be planted near storm or sanitary sewer lines as they intrude at the pipe joints.

General

79. Testing of materials such as concrete, stone, backfill material, etc. shall be the responsibility of the applicant. NCDOT inspectors will not be responsible for performing or supplying any tests for materials used in construction. If there are any questions about this they should be addressed at the pre-construction meeting.
80. All materials and workmanship shall conform to NCDOT Specification Manual, and shall be built using NCDOT stamped, approved materials.
81. Specifications shall be the latest NCDOT Standard Specification for Roads and Structures. Construction will be supervised by NCDOT.
82. The encroaching party shall comply with all applicable Federal, State, and Local environmental regulations and shall obtain all necessary Federal, State, and Local environmental permits, including but not limited to, those related to sediment control, storm water, wetland, streams, endangered species, and historical sites.
83. **Any “out parcels” or excluded area should be served internally with no additional access onto abutting roadways. The developer should convey this condition in any lease or sell agreements.**
84. Dedicate to the NCDOT any right-of-way or easements required to contain the proposed construction. The District Engineer shall be given verification of the dedication.
85. Right of Way monuments disturbed during construction shall be referenced by a registered Land Surveyor and reset after construction.
86. The North Carolina Department of Transportation does not guarantee the right-of-way of the road, nor will it be responsible for any claims for damages brought by any property owner. Work to be performed within railroad Right-of-Way will normally require a 3- or 4-party agreement.
87. Upon completion of the installation, you must notify the NCDOT’s Mecklenburg County District Office at 7605 District Drive, Charlotte, NC 28213, in writing so that an inspection can be made.
88. **The Department has the capability to reevaluate/modify the plans in the event the proposed is deemed detrimental to our roadway and/or public safety during construction.**

Environmental Provisions

1. The encroaching party shall comply with all applicable federal, state, and local environmental regulations and shall obtain all of the necessary federal, state, and local environmental permits, including, but not limited to, those related to erosion control, storm water, wetlands, streams, endangered species, and sites of historical significance.
2. It is the responsibility of the encroaching party to secure any needed environmental permits and/or authorizations prior to beginning construction. Permit authorizations from the US Army Corps of Engineers Asheville Regulatory Field Office, (828) 271-7980, and the NC Division of Water Quality Mooresville Regional Office, (704) 663-1699, are required for any stream or wetland impacts. If you, or your representative, determine that no permits or authorizations are needed, attach a letter of verification to the encroachment application stating such.
3. It should be noted that there are federally protected plant species found within the Department of Transportation rights of way. While the department makes every effort to assure that these roadside populations are identified by posting “Do Not Mow” signs, it is the responsibility of the encroaching party to assure that these populations remain undisturbed. Assistance with threatened and endangered species issues can be obtained through the US Fish and Wildlife Service Asheville Field Office, (828) 258-3939.

VERIFICATION OF COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

(Check Appropriate Box)

- ☒ Permits from the N.C. Department of Environmental Quality and the U.S. Army Corp of Engineers are not required for this project. However, all applicable federal and state regulations have been followed.
- ☐ The required permits from the N.C. Department of Environmental Quality and the U.S. Army Corp of Engineers have been obtained for this project. Copies of the permits are attached.
- ☐ All applicable NPDES Stormwater Permit requirements have been or will be met for this project.
- ☒ The project is in compliance with all applicable sedimentation and erosion control laws and regulations.

Project Name: Charlotte Safe Streets For All

Township: Charlotte County: Mecklenburg

Project Engineer: Zachery P. Andrews, PE Phone Number 704-512-0529

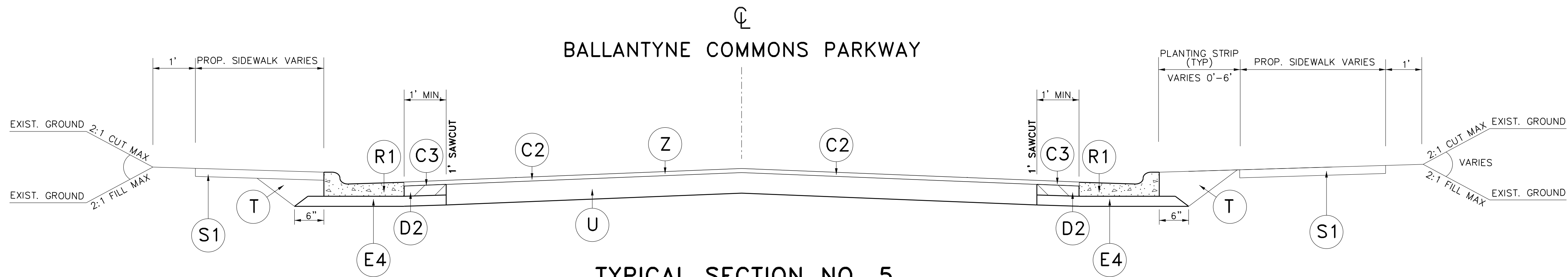
Project Contact: Walta Blackman, PE

Applicant's Name: Zachery P. Andrews, PE

P.E. Seal

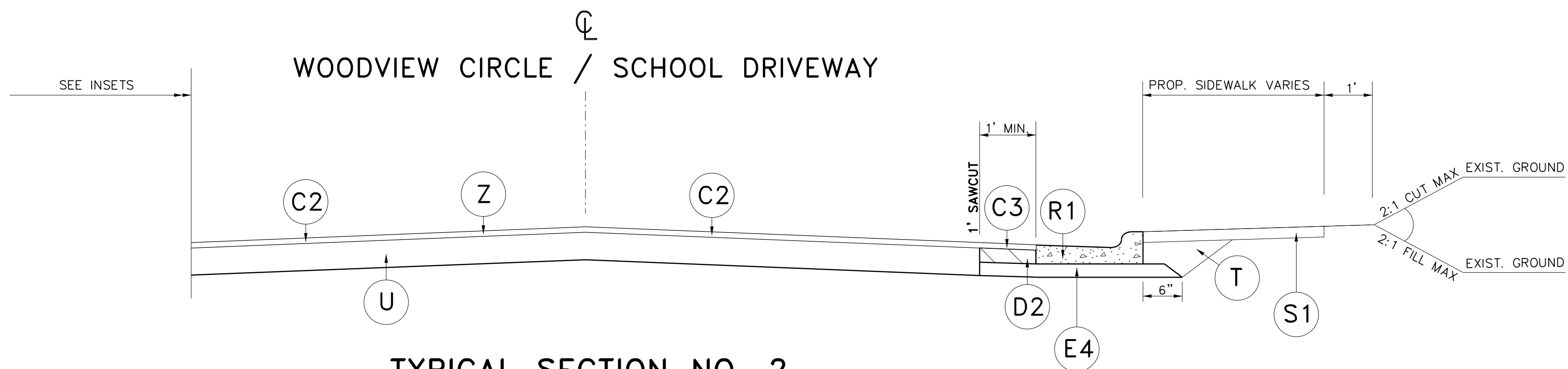
Date Submitted: 08/18/2025





TYPICAL SECTION NO. 5
BALLANTYNE COMMONS PARKWAY
NTS

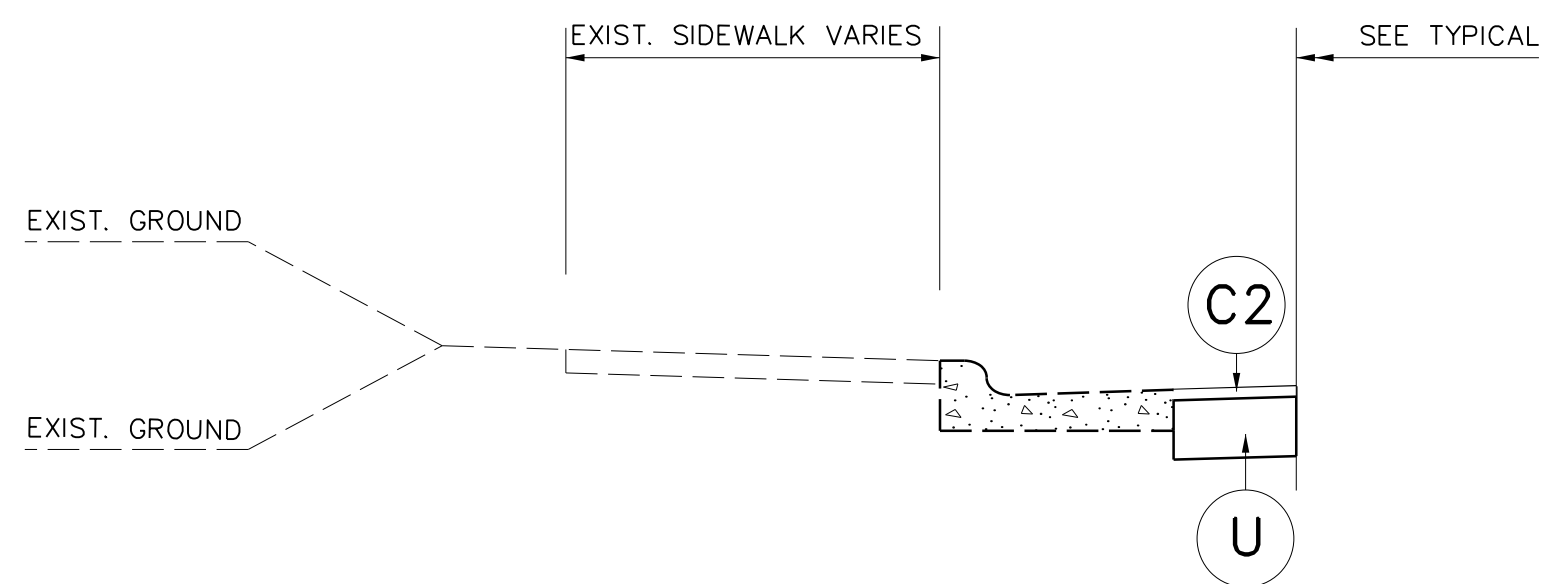
*SEE PLANS FOR RESURFACING/CONSTRUCTION LIMITS



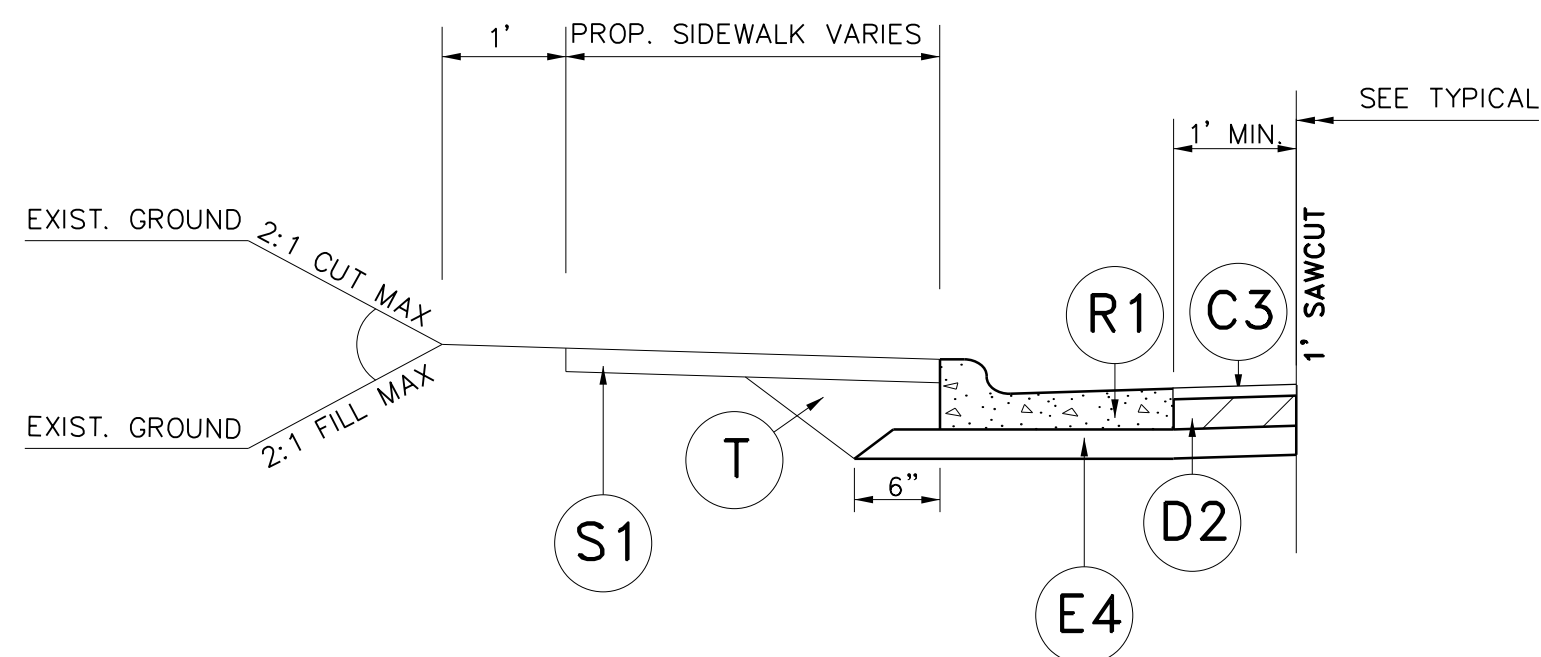
TYPICAL SECTION NO. 2
WOODVIEW CIRCLE / SCHOOL DRIVEWAY
NTS

*SEE PLANS FOR RESURFACING/CONSTRUCTION LIMITS

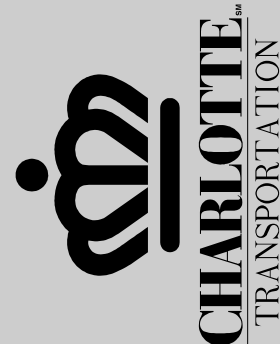
INSET 1 WOODVIEW CIRCLE



INSET 2 SCHOOL DRIVEWAY



PAVEMENT SCHEDULE	
CODE	DESCRIPTION
(C2)	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S 9.5 C, AT AN AVERAGE RATE OF 168 LBS PER SQ YD
(C3)	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S 9.5 C, AT AN AVERAGE RATE OF 168 LBS PER SQ YD
(D2)	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 313.5 LBS PER SQ YD IN EACH OF 2 LAYERS
(E4)	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS PER SQ YD
(R1)	2'-6" STANDARD CURB AND GUTTER CLDS STD. 10.17A
(T)	EARTH MATERIAL
(U)	EXISTING PAVEMENT
(Z)	MILLING - 1.5" DEPTH



Plans Prepared By: Project #: 240610

DAVENPORT

19 BROOKSTOWN DRIVE, SUITE PH
WINSTON-SALEM, NC 27107
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D

NO.	DATE	BY	DESCRIPTION

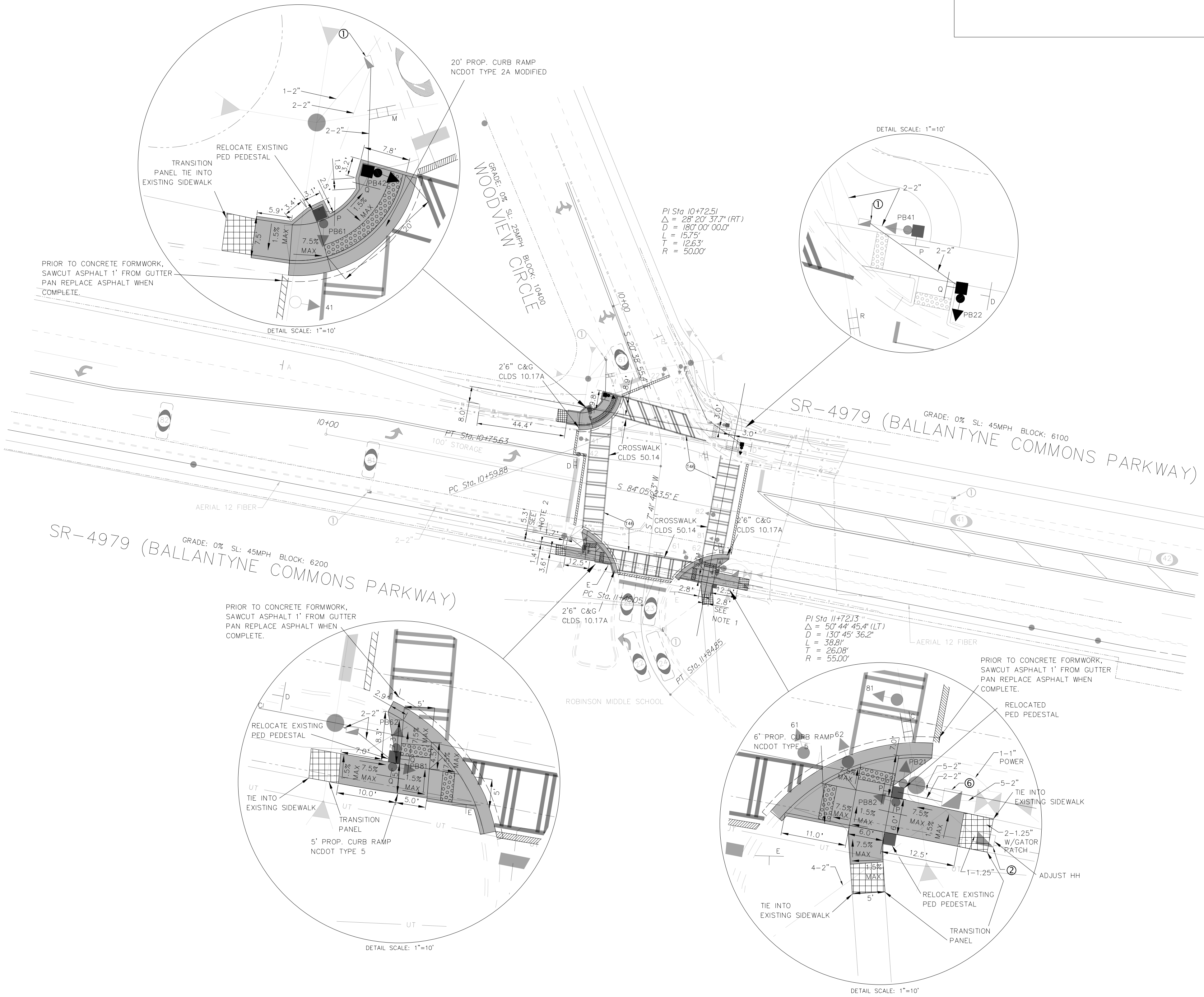
NOT APPROVED
FOR CONSTRUCTION

00667	2PA	6/2025
SIGNAL NO.	PREPARED BY	DATE
NCDOT ID NO.		

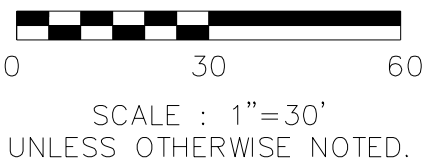


PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
T46	WHITE CROSSWALK LINE (8")



- NOTES:
1. CONTRACTOR TO LOCATE THE CENTERLINE OF THE PROPOSED RAMP BY MEASURING 3' FROM THE EXISTING RAMP IN THE NE QUADRANT AND 2.8' FROM THE EXISTING INTERSECTION OF THE SIDEWALKS ON BALENTYNNE AND THE MIDDLE SCHOOL ENTRANCE IN THE SE QUADRANT.
 2. CONTRACTOR TO LOCATE THE CENTERLINE OF THE PROPOSED RAMP BY MEASURING 3' FROM THE PROPOSED RAMP IN THE SE QUADRANT TO 5.3' FROM THE EXISTING SIGNAL POLE IN THE SW QUADRANT
 3. CONTRACTOR TO LOCATE THE CENTERLINE OF THE PROPOSED RAMP BY MEASURING 3' FROM THE EXISTING RAMP IN THE NE QUADRANT AND 8' FROM THE SIDEWALK TRANSITION TO BACK OF CURB IN THE NW QUADRANT.



Plans Prepared By: **DAVENPORT**

Project #: 240610

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DART@DART-NC.COM
NCELS PERM LICENSE NO. C2522

REVISION DESCRIPTION	BY	DATE	NO.

FINAL DRAWINGS!
FOR REVIEW PURPOSES ONLY

01576	BFD	07/2025
SIGNAL NO.	PREPARED BY	DATE
NCDOT ID NO.		
APPROVED BY		

BALLANTYNNE COMMONS PARKWAY @ WOODVIEW CIRCLE

SIGNAL PLAN

SHEET **SIG1** OF **SIG4**

SIGNAL HEAD WIRING

[illegible]

(XX) = SPLICE IN POLE BASE [XX*] = TERMINAL BLOCK IN SIGNAL HEAD LSX* = TERMINAL IN LOAD BAY * = LOAD RESISTOR

FINAL DRAWINGS
FOR REVIEW PURPOSES ONLY

SHEET SIG3	BALLANTYNE COMMONS PARKWAY @ WOODVIEW CIRCLE
OF SIG4	SIGNAL WIRING DIAGRAM

01576
SIGNAL NO.
NCDOT ID NO.
APPROVED BY

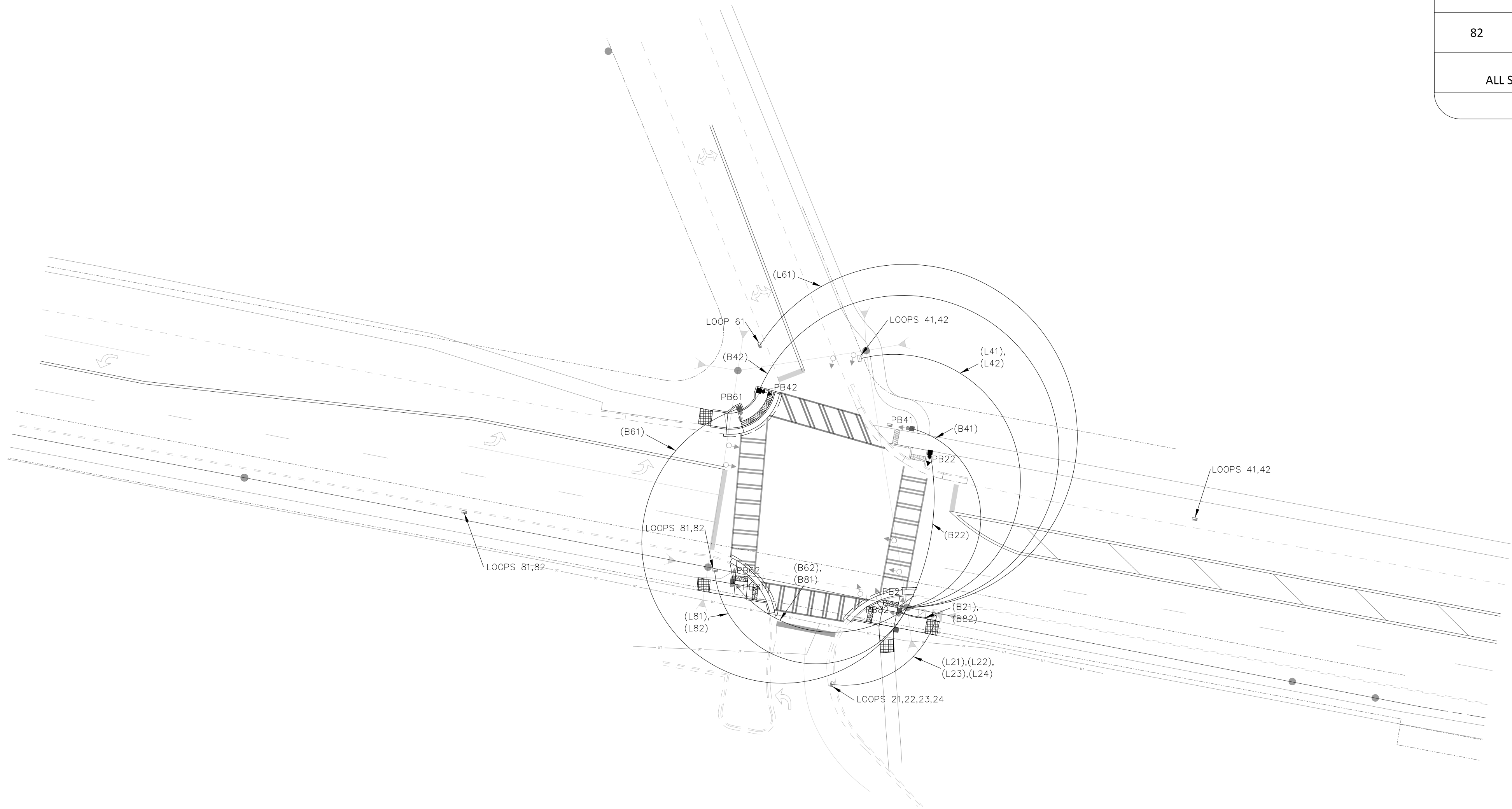
	BFD	07/2025
	PREPARED BY _____	DATE PREPARED _____

[illegible]

Plans Prepared By: Project #: 240610

 **DAVENPORT**

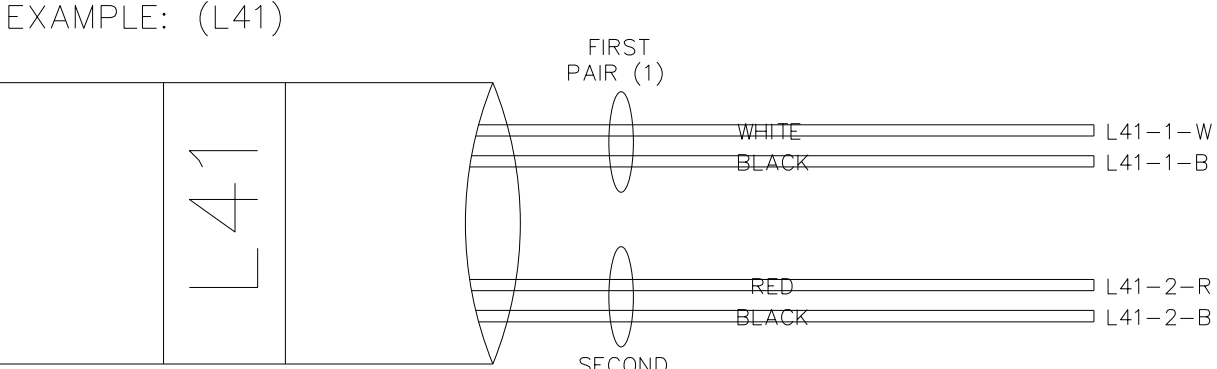
HOME OFFICE:
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336.744.1636 www.davenportmi.com
NCELS FRM LICENSE NO. C-522



LOOP WIRING								
Loop Number	Wire	Terminal	Controller Detector Number	Phase	Timing		Size	Comments
					Feature	Time		
21	L21-1-W	LT1-1	1	2	-	-	6'X25'	@ STOP BAR
	L21-1-B	LT1-2						
22	L21-2-R	LT1-3	2	2	-	-	6'X25'	35' FROM STOP BAR
	L21-2-B	LT1-4						
23	L23-1-W	LT1-5	3	2	Delay	2	6'X25'	@ STOP BAR
	L23-1-B	LT1-6						
24	L23-2-R	LT1-7	4	2	Delay	2	6'X25'	35' FROM STOP BAR
	L23-2-B	LT1-8						
41	L41-1-W	LT1-9	5	4	-	-	6'X6'	95' FROM STOP BAR
	L41-1-B	LT1-10						
42	L41-2-R	LT1-11	6	4	-	-	6'X6'	200' FROM STOPBAR
	L41-2-B	LT1-12						
61	L61-1-W	LT1-13	7	6	-	-	6'X25'	@ STOP BAR
	L61-1-B	LT1-14						
81	L81-1-W	LT1-15	8	8	-	-	6'X18'	95' FROM STOP BAR
	L81-1-B	LT1-16						
82	L81-2-R	LT1-17	9	8	-	-	6'X18'	200' FROM STOPBAR
	L81-2-B	LT1-18						
NOTE: ALL STOP BAR LOOPS EXTEND 5' BEYOND THE STOPBAR UNLESS OTHERWISE NOTED. ALL LOOPS RECEIVE THREE TURNS.								

LOW-VOLTAGE WIRE NAMING CONVENTION:
CABLES:
(Ann) A = Loops(L)/Pushbutton(B) nn = cable number

WIRES:
Ann-C-D A = Loops(L)/Pushbutton(B), nn = cable number,
 C = pair number, D = conductor in pair



NOTE: Conductor colors may vary. Record plan actual colors installed.

NOTE:
1. ALL LEAD-IN WIRE SHOULD BE TWO PAIR CABLE.



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Project #: 240610

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336.246.4400
NOBLE PERM LICENSE NO. C-2522

DESCRIPTION			
NO.	DATE	BY	

FINAL DRAWINGS!
FOR REVIEW PURPOSES ONLY

01576 SIGNAL NO.	BFD PREPARED BY	07/2025 DATE
NCDDOT ID NO.	APPROVED BY	

BALLANTYNE COMMONS
PARKWAY @
WOODVIEW CIRCLE

LOW VOLTAGE
WIRING DIAGRAM

SHEET
SIG4
OF
SIG4

GENERAL NOTES

A) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE REQUIREMENTS OF THE MOST CURRENT EDITIONS OF THE CHARLOTTE DEPT. OF TRANSPORTATION(CDOT) WORK AREA TRAFFIC CONTROL HANDBOOK(W.A.T.C.H.), THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES(M.U.T.C.D.), THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION(NCDOT) SUPPLEMENT TO THE M.U.T.C.D., THE NCDOT ROADWAY STANDARD DRAWINGS AND THE CURRENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.

B) THE CONTRACTOR IS TO NOTIFY CDOT IN WRITING 10 WORKING DAYS IN ADVANCE OF ANY ROAD CLOSURE OR 5 WORKING DAYS PRIOR TO CLOSING ONE OR MORE TRAVEL LANES IN ACCORDANCE WITH THE SECTION APPROVAL AND NOTIFICATION REQUIREMENT FOR WORK IN THE PUBLIC RIGHT-OF-WAY OF THE W.A.T.C.H. HANDBOOK.

C) ALL SIGNAL REVISIONS OR SHIFTS OF SIGNAL HEADS WILL BE THE RESPONSIBILITY OF CDOT; PRIOR TO REVISING TRAFFIC LANES WHICH REQUIRE SIGNAL REVISIONS, THE CONTRACTOR SHALL NOTIFY THE CDOT IMPLEMENTATION SECTION MANAGER (704-336-4119) OR THEIR REPRESENTATIVE A MINIMUM OF 30 CALENDAR DAYS IN ADVANCE. TRAFFIC LANES SHALL NOT BE SHIFTED UNTIL THE REQUIRED SIGNAL REVISION/SHIFT IS COMPLETE AND READY FOR ACTIVATION. ALL COMPLETE RESTRINGS OR NEW TRAFFIC SIGNALS REQUIRE 60 CALENDAR DAYS NOTICE.

D) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH, INSTALL, RELOCATE, AND MAINTAIN ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, WARNING AND/OR CHANNELIZING DEVICES FOR WORK SITES AND DETOUR ROUTES AS SHOWN IN TRAFFIC CONTROL PLANS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

E) CONSTRUCTION PHASING MAY DICTATE THAT TWO OR MORE TYPICAL W.A.T.C.H. DIAGRAMS OR STANDARDS BE USED IN ONE AREA OF CONSTRUCTION. CHANNELIZING DEVICES ASSOCIATED WITH THESE TYPICALS SHALL BE MOVED, SUPPLEMENTED, CHANGED, OR REMOVED AS NECESSARY TO COMPLY WITH THE CONSTRUCTION PHASING OF THE PLANS. THE LOCATION AND POSITIONING OF THESE DEVICES SHALL BE APPROVED BY THE ENGINEER TO ENSURE THAT THE MOTORIST DOES NOT RECEIVE FALSE INFORMATION WHEN TWO OR MORE TYPICALS AND/OR ROADWAY STANDARD DRAWINGS OVERLAP.

F) CONTRACTOR SHOULD BE AWARE THAT WHEN THE CONSTRUCTION AREA IS IN OR NEAR A VERTICAL CREST OR HORIZONTAL CURVE, THE WORK AREA SHALL BE EXTENDED SO THAT LANE CLOSURE BEGINS IN ADVANCE OF THE CURVE AND MINIMUM STOPPING SIGHT DISTANCE IS MET.

G) OFF-DUTY POLICE OFFICERS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER TO BE PRESENT FOR CONTROLLING TRAFFIC DURING CONSTRUCTION HOURS.

H) THE CONTRACTOR SHALL MARK ALL HAZARDS WITHIN THE LIMITS OF THE PROJECT WITH WELL-MAINTAINED SIGNS, BARRICADES, WARNING AND/OR CHANNELIZING DEVICES. ON CONNECTING ROADS, ALL BARRICADES, SIGNS, WARNING, AND/OR CHANNELIZING DEVICES SHALL BE MOVED, SUPPLEMENTED, CHANGED, OR REMOVED AS REQUIRED DURING THE PROGRESS OF CONSTRUCTION AS APPROVED BY THE ENGINEER.

I) WORK ON THE PROJECT OR ANY SEPARATE ACTIVITY THEREIN SHALL NOT START UNTIL ALL OF THE REQUIRED SIGNS, BARRICADES, WARNING, AND/OR CHANNELIZING DEVICES ARE INSTALLED AND APPROVED BY THE ENGINEER.

J) THE CONTRACTOR SHALL CONTACT THE CDOT IMPLEMENTATION SECTION MANAGER (704-336-4119) OR REPRESENTATIVE WITH THE CITY OF CHARLOTTE DEPARTMENT OF TRANSPORTATION (CDOT) TWO WEEKS PRIOR TO BEGINNING ANY WORK.

K) THE CONTRACTOR MUST MAINTAIN DURING ALL PERIODS OF CONSTRUCTION ACTIVITY THE ABILITY TO FLAG TRAFFIC USING QUALIFIED FLAGGERS WHEN NECESSARY OR REQUIRED.

L) THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT MARKINGS AND ADDRESS CONFLICTING PAVEMENT MARKINGS IN ACCORDANCE WITH THE SECTION "TEMPORARY TRAFFIC CONTROL ZONE DEVICES" OF THE W.A.T.C.H. HANDBOOK OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAINTAIN ANY EXISTING PAVEMENT MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

M) THE CONTRACTOR SHALL MAINTAIN TWO WAY TRAFFIC ON ALL PORTIONS OF THIS PROJECT UNLESS OTHERWISE SPECIFIED IN THE PLANS, PROJECT NOTES, OR BY THE ENGINEER. FOR ALL APPROVED ROAD AND LANE CLOSURES, THE CONTRACTOR MUST NOTIFY THE CDOT IMPLEMENTATION SECTION MANAGER (704-336-4119) OR REPRESENTATIVE A MINIMUM OF TEN WORKING DAYS PRIOR TO THE ROAD CLOSING, AND FIVE WORKING DAYS PRIOR TO A 24-HOUR/PEAK HOUR LANE CLOSURE.

N) CONTRACTOR WILL BE REQUIRED TO PROVIDE PROPERTY OWNERS AND TENANTS ACCESS TO THEIR PROPERTY THROUGHOUT THE PROJECT LIMITS, INCLUDING REASONABLE INGRESS AND EGRESS FOR BUSINESSES. SPECIAL ATTENTION SHALL BE PAID TO FIRE HYDRANTS.

O) THE CONTRACTOR IS TO NOTIFY (BY MAIL) ALL PROPERTY OWNERS AND OCCUPANTS WHO HAVE DIRECT ACCESS TO THE ROADWAY WITHIN THE PROJECT LIMITS A MINIMUM OF 5 AND A MAXIMUM OF 10 WORKING DAYS PRIOR TO INSTALLING TRAFFIC CONTROL DEVICES IN FRONT OF THOSE PROPERTIES. NOTIFICATIONS SHOULD INCLUDE CONTACT PERSONS NAME, TELEPHONE NUMBER, EMAIL ADDRESS, AND MAILING ADDRESS.

P) THE CONTRACTOR SHALL PATROL THE WORK SITE AT THE BEGINNING AND END OF EACH WORK DAY, AT A MINIMUM, TO ENSURE THAT ALL TRAFFIC CONTROL DEVICES ARE IN PLACE AND FUNCTIONING PROPERLY. CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES ARE IN PLACE AND FUNCTIONING AT ALL TIMES DURING PERIODS OF CONSTRUCTION INACTIVITY.

Q) DURING PERIODS OF INACTIVITY OR AT NIGHT, EQUIPMENT SHALL NOT BE PARKED IN SUCH A MANNER AS TO BLOCK SIDEWALKS, TRAFFIC CONTROL DEVICES, OR THE MOTORISTS' VIEW OF TRAFFIC. EQUIPMENT SHALL BE AT LEAST 10 FEET AWAY FROM THE TRAVEL LANE. EQUIPMENT SHALL NOT BLOCK SIDEWALKS AT ANY TIME UNLESS THE SIDEWALK ITSELF IS UNDERGOING CONSTRUCTION.

R) WHENEVER TRAFFIC MUST BE ROUTED ACROSS THE CENTERLINE DURING CONSTRUCTION ACTIVITY, THE TWO OPPOSING DIRECTIONS MUST BE PHYSICALLY SEPARATED. TRAFFIC CONES CAN BE USED FOR THIS PURPOSE DURING DAYLIGHT HOURS; REFLECTORIZED CONES OR DRUMS MUST BE USED AT NIGHT. TRAFFIC SHALL NOT BE ROUTED ACROSS THE CENTERLINE DURING CONSTRUCTION INACTIVITY UNLESS PAVEMENT MARKING CONFLICTS ARE APPROPRIATELY ADDRESSED AND AGREEMENT ON REMOVAL OR NOT IS WORKED OUT WITH THE ENGINEER IN ACCORDANCE WITH THE SECTION "DURATION OF WORK" OF THE W.A.T.C.H. HANDBOOK. IF THE ENGINEER APPROVES TRAFFIC TO CROSS THE CENTER LINE DURING CONSTRUCTION INACTIVITY, ONLY REFLECTORIZED DRUMS MUST BE USED.

S) THE CITY ENGINEER OR DIRECTOR OF THE CHARLOTTE DEPARTMENT OF TRANSPORTATION OR NCDOT ENGINEER OR THEIR REPRESENTATIVES ARE AUTHORIZED TO STOP ANY WORK WITHIN PUBLIC RIGHT OF WAY THAT DOES NOT FOLLOW THIS TRAFFIC CONTROL PLAN OR REQUIREMENTS OF THE W.A.T.C.H. AND THE M.U.T.C.D. UNTIL SUCH REQUIREMENTS ARE MET.

T) ADJACENT LANES TO CONSTRUCTION ZONES MAY REMAIN OPEN IF LATERAL CLEARANCE BETWEEN EDGE OF TRAVEL LANE AND EQUIPMENT IS EQUAL TO OR GREATER THAN 5 FEET ON NCDOT STREETS OR 2 FEET ON CITY STREETS (INCLUDING WIDTH OF DRUM). IF A DROPOFF EXISTS WITHIN THE WORK ZONE, CONTRACTOR SHOULD FOLLOW THE SECTION "MISCELLANEOUS CONSIDERATIONS" OF THE W.A.T.C.H. HANDBOOK PERTAINING TO ADJACENT LANE CLOSURES DUE TO DROPOFFS.

U) THE CONTRACTOR SHALL FOLLOW THE PHASING AS DESCRIBED HEREIN. THE CONTRACTOR SHALL COMPLETE THE REQUIREMENTS OF EACH CONSTRUCTION PHASE IN SEQUENCE. WHEN A CONSTRUCTION PHASE IS DIVIDED INTO STEPS, THE CONTRACTOR SHALL COMPLETE THE REQUIREMENTS OF EACH STEP IN SEQUENCE UNLESS OTHERWISE SPECIFIED IN THE PLAN OR APPROVED BY THE ENGINEER. (EXAMPLE: THE REQUIREMENTS OF PHASE I SHALL BE COMPLETED BEFORE PROCEEDING TO PHASE II; THE REQUIREMENTS OF STEP 1 OF PHASE I SHALL BE COMPLETED BEFORE PROCEEDING TO STEP 2 OF PHASE I). ALL WORK DESCRIBED IN THE PROJECT PHASING SHALL BE PERFORMED BY THE CONTRACTOR, EXCEPT WHERE IT IS SPECIFIED FOR CERTAIN WORK TO BE PERFORMED BY OTHERS.

V) THE CONTRACTOR SHALL NOT BE ALLOWED TO STOP TRAFFIC FOR MORE THAN 5 MINUTES AT A TIME IN ANY ONE DIRECTION.

W) CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON BOTH SIDES OF THE ROAD SIMULTANEOUSLY WITHIN THE SAME AREA EXCEPT WHERE THE ROADWAY IS DIVIDED BY A RAISED MEDIAN AND PEDESTRIAN TRAFFIC IS MAINTAINED ON AT LEAST ONE SIDE UNIMPEDED. IT WILL BE ACCEPTABLE TO CONSTRUCT BORE PITS ON EACH SIDE OF A ROADWAY FOR BORING UTILITIES UNDER THE ROADWAY UNLESS SUPERCEDED BY ENGINEER TO COMPLY WITH PEDESTRIAN REQUIREMENTS OR LATERAL CLEARANCE FROM TRAVEL LANES.

X) THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO THE SECTION "PEDESTRIAN CONSIDERATIONS" OF THE W.A.T.C.H. PEDESTRIANS MUST NOT BE REROUTED TO CROSS TO THE OTHER SIDE OF THE ROAD UNLESS THE ENGINEER AGREES THAT THERE IS NO ALTERNATE SAFE ROUTE ON THE SAME SIDE OF THE STREET. THE ALTERNATIVE PEDESTRIAN ROUTE IF APPROVED/USED MUST INCLUDE ACCESSIBILITY AND DETECTABLE FEATURES CONSISTENT WITH THE EXISTING PEDESTRIAN FACILITY.

Y) THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO THE SECTION "TEMPORARY TRAFFIC CONTROL ZONE DEVICES" OF THE W.A.T.C.H. NEITHER PORTABLE NOR PERMANENT SIGNS OR SIGN SUPPORT SHOULD OBSTRUCT SIDEWALKS UNLESS THE SIDEWALK ITSELF IS UNDERGOING CONSTRUCTION. A 4' MINIMUM CLEAR PATH MUST BE MAINTAINED WHEN A PORTABLE SIGN IS TO BE PLACED IN THE EXISTING SIDEWALK OTHERWISE, ROAD SIGNS SHOULD BE MOUNTED ON A POST WITH A MINIMUM VERTICAL CLEARANCE OF 7' FROM THE SURFACE OF THE SIDEWALK.

PROJECT NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL ALL FINAL PAVEMENT MARKINGS AND SHALL PROVIDE AND INSTALL ALL FINAL SIGNAGE.

2. CONTRACTOR SHALL ONLY WORK ON ONE CORNER OF AN INTERSECTION AT A TIME.

3. DURING THE HOURS OF 7:00 AM-9:00 AM AND 4:00 PM-6:00 PM MONDAY THRU FRIDAY CONSTRUCTION OR MAINTENANCE WORK WHICH INVOLVES CLOSURE OF A TRAVEL LANE ON CITY STREETS WILL NOT BE ALLOWED. DURING THE HOURS OF 6:00 AM TO 8:00 PM MONDAY THRU FRIDAY CONSTRUCTION MAINTENANCE WORK WHICH INVOLVES CLOSURE OF A TRAVEL LANE ON NCDOT STREETS WILL NOT BE ALLOWED EXCEPT FOR EMERGENCY SITUATIONS OR WITH APPROVAL FROM CDOT OR NCDOT.

4. THE CONTRACTOR SHALL LIMIT CONSTRUCTION TO ONE STREET AT A TIME, UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONTRACTOR SHALL LIMIT CONSTRUCTION TO ONE BLOCK EACH DAY IN ORDER TO DECREASE THE AMOUNT OF BACKFILL.

CONSTRUCTION PHASING

THE FOLLOWING PHASING REFERS TO SPECIFIC TRAFFIC CONTROL DRAWINGS SHOWN OR DIAGRAMS FROM "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 AND WORK AREA TRAFFIC CONTROL HANDBOOK (W.A.T.C.H.) PUBLISHED BY CDOT. THE CONTRACTOR SHALL FOLLOW THESE PROCEDURES AND DIAGRAMS. IF THESE PROCEDURES AND/OR DIAGRAMS ARE NOT TYPICAL FOR FIELD CONDITIONS, THE DIAGRAMS MAY BE COMBINED OR ALTERED UPON APPROVAL OF THE ENGINEER. THE STANDARDS, PROCEDURES AND DIAGRAMS SHOWN IN THE TRAFFIC CONTROL PLANS OR IN THE WATCH MANUAL ARE THE MINIMUM REQUIRED. ADDITIONAL SIGNS, CONES, BARRICADES, AND WARNING DEVICES MAY BE USED, BUT AT NO TIME WILL BE LESS THAN WHAT IS SPECIFIED IN THE STANDARDS, PROCEDURES AND DIAGRAMS BE ACCEPTABLE. STATION RANGES IDENTIFIED IN THE PHASING ARE APPROXIMATE.

PHASE I

STEP 1: THE CONTRACTOR SHALL PLACE ALL CONSTRUCTION WARNING SIGNS ONE WEEK PRIOR TO THE BEGINNING OF WORK. THE APPROACH WARNING SIGNS SHALL BE PLACED ON BALLANTYNE COMMONS PKWY, AND WOODVIEW CIR. AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

STEP 2: USING NCDOT ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 9, AND WATCH DIAGRAM 1, AS NEEDED, INSTALL IMPROVEMENTS ALONG THE SOUTHEAST QUADRENT OF THE INTERSECTION WHILE MAINTAINING TRAFFIC.

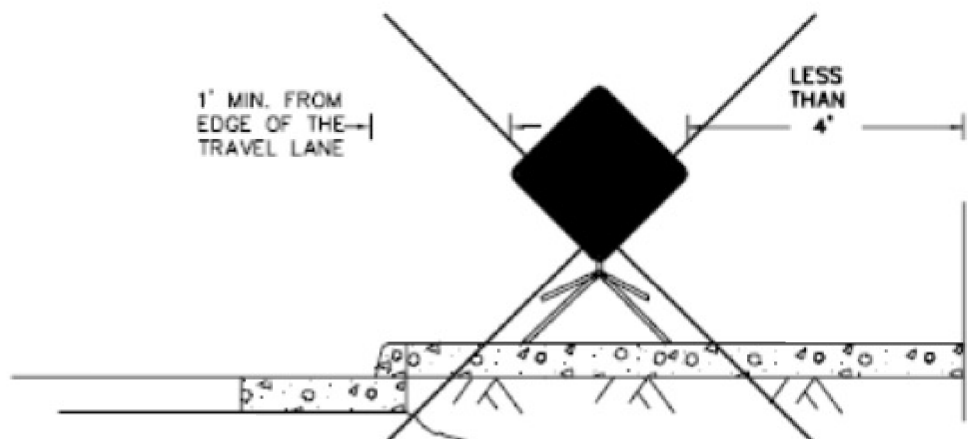
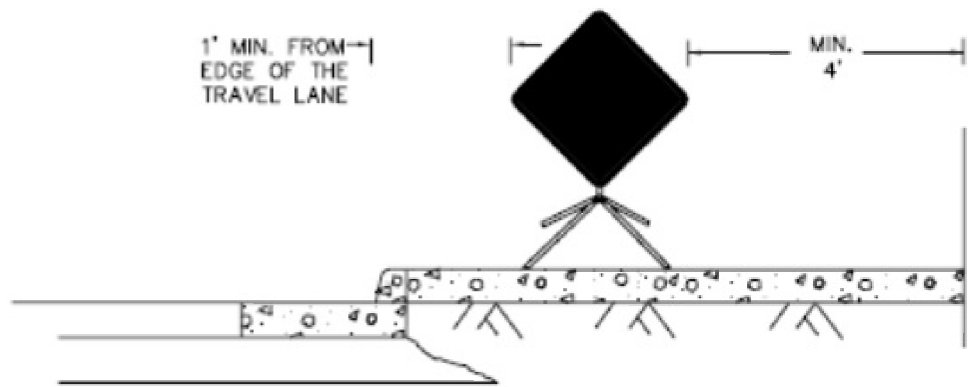
STEP 3: USING NCDOT ROADWAY STANDARD DRAWING 1101.02 SHEET 3 OF 9, AND WATCH DIAGRAM 1, AS NEEDED, INSTALL IMPROVEMENTS ALONG THE SOUTHWEST QUADRENT OF THE INTERSECTION WHILE MAINTAINING TRAFFIC.

PHASE II

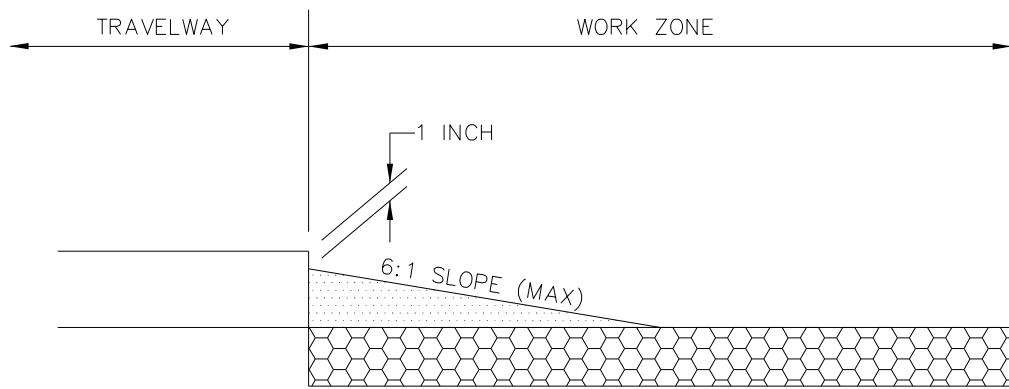
STEP 1: USING NCDOT ROADWAY STANDARD DRAWING 1101.02 SHEET 1, 2 AND 3 OF 9, AND WATCH DIAGRAM 1, AS NEEDED, INSTALL IMPROVEMENTS ALONG THE NORTHWEST QUADRENT OF THE INTERSECTION WHILE MAINTAINING TRAFFIC.

STEP 2: USING NCDOT ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, AS NEEDED, COMPLETE THE FINAL MILL AND OVERLAY AND INSTALL FINAL PAVEMENT MARKINGS THROUGHOUT PROJECT LIMITS. PLACE TRAFFIC IN FINAL PATTERN.

STEP 3: THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION WARNING SIGNS UPON COMPLETION.

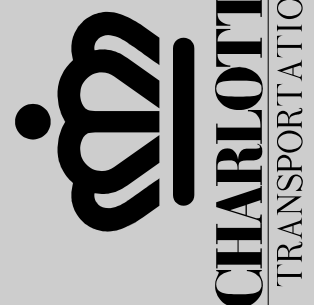


ALTERNATIVE OPTION IS TO PLACE SIGN BEHIND SIDEWALK WHEN POSSIBLE. OTHERWISE, MAY NEED TO POST MOUNT SIGN WITH 7' MINIMUM VERTICAL CLEARANCE FROM SIDEWALK SURFACE



DETAIL A

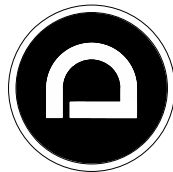
N.T.S.



Project #: 240610

DAVENPORT

HOME OFFICE
118 BROOKSTOWN AVENUE, SUITE 101
CHARLOTTE, NC 28203
336.344.1111
NCELE PERM LICENSE NO. C-2522



DESCRIPTION

BY

DATE

NO.

FINAL DRAWINGS!
FOR REVIEW PURPOSES ONLY

1" = 30'

ZPA

PREPARED BY

DATE

01576
SIGNAL NO.

NCDOT ID NO.

APPROVED BY

BALLANTYNE COMMONS
PARKWAY @
WOODVIEW CIRCLE

TRAFFIC CONTROL
PLAN

TCP1

OF
TCP1

00 90 00 – ADDENDA