CITY OF TUSCALOOSA, ALABAMA

PUBLIC WORKS CONTRACT DOCUMENTS

WALTER MADDOX, MAYOR

CITY COUNCIL OF TUSCALOOSA

Council Members:

Phyllis Odom
Harrison Taylor
Cynthia Almond
Matthew Calderone
Kip Tyner
Edwin Pugh
Sonya McKinstry

Glenda Webb, City Attorney

PROJECT: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

PROJECT NUMBER: A16-0307

FOR: Office of the City Engineer

(2015)

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CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS BOND # 8800279
SECTION SIX
PERFORMANCE BONDS
(2015)

STATE OF ALABAMA)
TUSCALOOSA, COUNTY)

KNOWN ALL MEN BY THESE PRESENTS. that we, Jeffcoat and Associates, LLC as principal and FCCI Insurance Company (hereinafter called the "Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama, (hereinafter called the "City") a municipal corporation existing under and by virtue of the laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of $178,243.00 for the payment of which well and truly be made in lawful money of the United States, we do hereby bind ourselves, our successors and assigns and personal representatives, jointly and severally, firmly by the presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the City has entered into a certain written contract with said Contractor for the CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE, PROJECT NUMBER A16-0307 in accordance with contract documents therefore on file in the Office of the CITY ENGINEER at the price of, to-wit: One Hundred Seventy Eight Thousand Two Hundred Forty Three & 00/100 ($ $178,243.00) as more fully appears in said written contract bearing the date of May 27th, 2016, which contract is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if the Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said City from all costs and damages whatsoever which it may suffer by reason of any failure on the part of said Contractor so to do, and shall fully reimburse and repay the said City any and all outlay and expense which it may incur in making good any such default, and shall guarantee all workmanship against defects for a period of one year, this obligation or bond shall be null and void, otherwise it shall remain in full force and effect.

And, for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of said agreement or contract or in the work to be performed thereunder or the specifications accompanying the same shall in any wise affect the obligations of the principal or of the surety under this bond, and notice is hereby waived of any such change, extension of time, alternative of or addition to the terms of the agreement or contract or to the work or to the specifications.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the 7th day of June, 2016.

Jeffcoat & Associates, LLC
Principal
By [signature]
Title

FCCI Insurance Company
Surety
By [signature]

Thomas J. Bole, Attorney-in-Fact
Title

ATTEST:
[signature]
Lee Ann P. Hilton

SECTION SEVEN
LABOR AND MATERIAL BOND
(2015)

KNOWN ALL MEN BY THESE PRESENTS, that we, Jeffcoat and Associates, LLC (hereinafter called the "Contractor") of 5610 Shirley Park Drive, Bessemer, AL 35022 as principal and FCCI Insurance Company (hereinafter called the "Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama, (hereinafter called the "City"), a municipal corporation, existing under and by virtue of the Laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of One Hundred Seventy Eight Thousand Two Hundred Forty Three & 00/100 ($ $178,243.00) for the payment of which well and truly to be made in lawful money of the United States, we do hereby bind ourselves, or successors, assigns and personal representatives, jointly and severally, firmly by these presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS: the City has entered into a certain written contract with said Contractor for the CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE, PROJECT A16-0307 in accordance with contract documents therefore on file in the Office of the CITY ENGINEER at the price of, to-wit: One Hundred Seventy Eight Thousand Two Hundred Forty Three & 00/100 ($ $178,243.00) as more fully appears in said written contract bearing date of May 27th ,2016 , which contract is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if said Principal and all subcontractors to whom any portion of the work provided for in said contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payment to all persons supplying him or them with labor, foodstuffs, or supplies for or in the prosecution of the work provided for in such contract, or in any amendment or extension of or addition to said contract, and for the payment of reasonable attorney's fees, incurred by the claimant or claimants in suits on said bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, foodstuffs, or supplies for or in the prosecution of the work provided for in said contract, payment for which has not been made, shall have a direct right of action in his or their name or names against the principal and surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said contract is to be performed and in any county in which said Principal or Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

(b) In addition to any other legal mode of service, service of summons and other process in suits on this bond brought in Tuscaloosa County may be had on the Principal or the Surety in accordance with Title 27, Chapter 3, Section 24 of the Ala. Code (1975) by serving a copy of the summons and complaint or other pleading or process, with the Commissioner of Insurance of the State of Alabama or his/ her designee and the Principal and Surety agree

to be bound by such mode of service above described and consents that such service shall be the same as personal service on the Principal or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under any workmen's compensation or employer's liability statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

(e) This bond is given pursuant to the terms of Title 39, Chapter 1, Section 1 of the Ala. Code (1975), and all the provisions of law with reference to this character of bond as set forth in said section or as may hereinafter be enacted are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the 7th day of June, 2016.

Jeffcoat & Associates, LLC

Principal

By: Scott Owen

Title

FCCI Insurance Company

Surety

By: Thomas J. Bole

Thomas J. Bole, Attorney-in-Fact

Title

ATTEST:

Lee Ann P. Hilton

Lee Ann P. Hilton

10-029158

FCCI® INSURANCE GROUP

More than a policy. A promise.

GENERAL POWER OF ATTORNEY

Know all men by these presents: That the FCCI Insurance Company, a Corporation organized and existing under the laws of the State of Florida (the "Corporation") does make, constitute and appoint:

Gregg A Tatum; Thomas J Bole; Sharon E Griffith; Grantland Rice III

Each, its true and lawful Attorney-In-Fact, to make, execute, seal and deliver, for and on its behalf as surety, and as its act and deed in all bonds and undertakings provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the sum of (not to exceed $5,000,000): $5,000,000.00

This Power of Attorney is made and executed by authority of a Resolution adopted by the Board of Directors. That resolution also authorized any further action by the officers of the Company necessary to effect such transaction.

The signatures below and the seal of the Corporation may be affixed by facsimile, and any such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached.

In witness whereof, the FCCI Insurance Company has caused these presents to be signed by its duly authorized officers and its corporate Seal to be hereunto affixed, this 22ND day of September, 2011.

Attest: Craig Johnson
Craig Johnson, President
FCCI Insurance Company

FCCI INSURANCE COMPANY CORPORATE SEAL 1994 FLORIDA

Thomas A. Koval Esq., EVP, Chief Legal Officer,
Government Affairs and Corporate Secretary
FCCI Insurance Company

State of Florida
County of Sarasota

Before me this day personally appeared Craig Johnson, who is personally known to me and who executed the foregoing document for the purposes expressed therein.

My commission expires: 9/25/2016

ARLENE CUEMAN
Notary Public, State of Florida
My Comm. Expires Sept. 25, 2016
No. EE 213092

Notary Public

State of Florida
County of Sarasota

Before me this day personally appeared Thomas A. Koval, Esq., who is personally known to me and who executed the foregoing document for the purposes expressed therein.

My commission expires: 9/25/2016

ARLENE CUEMAN
Notary Public, State of Florida
My Comm. Expires Sept. 25, 2016
No. EE 213092

Notary Public

CERTIFICATE

I, the undersigned Secretary of FCCI Insurance Company, a Florida Corporation, DO HEREBY CERTIFY that the foregoing Power of Attorney remains in full force and has not been revoked; and furthermore that the February 24, 2011 Resolution of the Board of Directors, referenced in said Power of Attorney, is now in force.

Dated this 7th day of June, 2016

Thomas A. Koval, Esq., EVP, Chief Legal Officer,
Government Affairs and Corporate Secretary

1-IONA-3592-NA-04, 9/14

HEAT SENSITIVE SHIELD FADES WITH HEAT OR TOUCH

DocuGard #04546 contains a security pantograph, blue background, heat-sensitive ink, coin-reactive watermark, and microtext printing on border.

JEFFC-7 OP ID: K6

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 06/02/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Cobbs Allen - SBU
Cobbs Allen
115 Office Park Drive, Ste 200
Birmingham, AL 35223
Burgett Tonsmeire

CONTACT NAME: Joyce Redding
PHONE (A/C, No, Ext): 205-414-8100 FAX (A/C, No): 205-414-8105
E-MAIL ADDRESS: jredding@cobbsallen.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : National Trust Insurance Co.	20141
INSURER B : Workers First Comp Fund	
INSURER C : Midwest Employers Casualty Co.	23612
INSURER D :	
INSURER E :	
INSURER F :	

INSURED Jeffcoat & Associates LLC
5610 Shirley Park Drive
Bessemer, AL 35022

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			CPP0013252 4	01/28/2016	01/01/2017	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Emp Ben.	$ $ $ $ $ $ $	1,000,000 100,000 5,000 1,000,000 2,000,000 2,000,000 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS			CA 0020024 4	01/28/2016	01/01/2017	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $ $	1,000,000
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			UMB0013627 4	01/28/2016	01/01/2017	EACH OCCURRENCE AGGREGATE	$ $ $	10,000,000 10,000,000
B C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		7213679 PGAL127200	01/01/2016 01/01/2016	12/31/2016 12/31/2016	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $	1,000,000 1,000,000 1,000,000
A	Auto Phy Damage			CA 0020024 4	01/28/2016	01/01/2017	Comp Ded		500
A	Equipment			CPP0013252 4	01/28/2016	01/01/2017	Coll Ded		500

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Proj A16-0307 CityWalk Alberta Parkway Section Phase 1B - Fiber/Cabling Infrastructure System & termination;

CERTIFICATE HOLDER CITYTU2

City of Tuscaloosa
Public Works
P.O. Box 2089
Tuscaloosa, AL 35403

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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General Liability Includes:
Blanket Additional Insured Ongoing and Products Completed Opts CGL 084 (10 13)
Blanket Additional Insured Primary Non-Contributory CGL 025 (11 08)
Blanket Additional Insured and Waiver of Subrogation CGL 088 (10 13)

Auto Liability:
Blanket Additional Insured and Waiver of Subrogation CAU 058 (12 09)

Form 4
Contractors Submitting Bids
(Must be submitted in the contractor's sealed bid)

General Contractor: _____

Contact: _____
Name of Project: _____
Date Submitted: _____

All MBE/DBE/WBE Firms Submitting Bids	Scope of Work

FORM 5
CONTRACTORS SUBMITTING BIDS
(Must be submitted following tentative bid award)

General Contractor: JEFFCOAT & ASSOCIATES LLC
Contact: MIKE DEMPSEY
Name of Project: CITYWALK - ALBERTA PARKWAY - SECTION PHASE 1B
Total Contract Amount: $ 178,243.00
Total Amount of All Subcontractors: $ 24,000.00
Date Submitted: 6/13/6

All MBE/DBE/WBE firms to be utilized	Scope of Work	Contract Amount
KARI-LANE NETWORK CABLING	OSP FIBER INSTALLATION AND SPLICING	$ 24,000.00

(Use additional pages if necessary)

ST: EXC-01
6/14

ALABAMA DEPARTMENT OF REVENUE
SALES AND USE TAX DIVISION
P.O Box 327710 • Montgomery, AL 36132-7710

Application For
Sales and Use Tax Certificate of Exemption

FOR GOVERNMENT ENTITY PROJECT

This Certificate of Exemption will be limited to purchases which qualify for an exemption of sales and use taxes pursuant to Rule No. 810-6-3-.77

PROJECT INFORMATION:

PROJECT NAME	PROJECT OWNER'S FEIN (EXEMPT ENTITY)
CITY OF TUSCALOOSA - CITYWALK - ALBERTA PKWY PHASE 1B - FIBER CABLING INFRASTRUCTURE	63-6001379

STREET ADDRESS OF PROJECT (CITY AND COUNTY INCLUDED)	CITY	ZIP	COUNTY
2201 UNIVERSITY BLVD	TUSCALOOSA	35401	TUSCALOOSA

APPLICANT'S INFORMATION:

RELATION: (CHOOSE ONE)

☐ Exempt Entity ☑ General Contractor ☐ Sub-Contractor

NAICS CODE: 238210

APPLICANT'S LEGAL NAME: JEFFCOAT & ASSOCIATES LLC

FEIN: 841631750

DBA: N/A

CONSUMER'S USE TAX ACCOUNT NUMBER: 9163

MAILING ADDRESS: 5610 SHIRLEY PARK DR. / BESSEMER, AL 35022

CONTACT PERSON: JIM LOLLAR

BUSINESS TELEPHONE NUMBER: (205) 481-1100

ESTIMATED START DATE: 7-5-16

ESTIMATED COMPLETION DATE: 11-5-16

REASON EXEMPTION IS CLAIMED: FEDERALLY FUNDED PROJECT

JOB DESCRIPTION: FIBER CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

WILL ANY POLLUTION CONTROL EXEMPTION BE APPLICABLE?

☐ Yes ☑ No

ESTIMATED POLLUTION CONTROL COST: $ N/A

TOTAL BID AMOUNT	LABOR COST	MATERIAL COST
$ 178,243.00	$ 56,717.85	$ 85,466.38

PROJECT NAME CITY OF TUSCALOOSA - CITYWALK - ALBERTA PKWY

PHASE 1B - FIBER CABLING INFRASTRUCTURE

PROJECT OWNER'S FEIN (EXEMPT ENTITY) 63-6001379

FORM OF OWNERSHIP:

☐ Individual ☐ Partnership ☐ Corporation ☑ Multi member LLC ☐ Single member LLC

If applicant is a corporation, a copy of the certified certificate of incorporation, amended certificate of incorporation, certificate of authority, or articles of incorporation should be attached. If the applicant is a limited liability company or a limited liability partnership, a copy of the certified articles of organization should be attached.

OWNERSHIP INFORMATION:

Corporations – give name, title, home address, and Social Security Number of each officer.

Partnerships – give name, home address, Social Security Number or FEIN of each partner.

Sole Proprietorships – give name, home address, Social Security Number of owner.

LLC – give name, home address, and Social Security Number or FEIN of each member.

LLP – give name, home address, and Social Security Number or FEIN of each partner.

DOUGLAS SCOTT CICERO / 7400 CARROLL RD / DORA, AL 35062 / SSN# 417-06-6591

THOMAS INMAN / 1001 MOUNTAIN TR / BIRMINGHAM, AL 35242 / SSN# 416-76-7080

Douglas Scott Cicero
NAME (PLEASE PRINT)

Douglas Scott Cicero
SIGNATURE

Managing Member
TITLE

6/13/2016
DATE

REVENUE DEPARTMENT USE ONLY

Examiner's Remarks

Examiner _____ Date _____

Supervisor's Recommendation

Supervisor _____ Date _____

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION ONE
ADVERTISEMENT AND NOTICE FOR BIDS
(2015)

Sealed bids will be received by the City of Tuscaloosa, Alabama, a Municipal Corporation, in the Council Chamber in the City Hall, 2201 University Boulevard, on the 4th day of May, 2016, until 10:00, a.m., o'clock, local time, and then publicly opened and read for the furnishing of all labor and material (where required) and equipment for performing a public works project according to the plans, details, specifications and Contract Documents.

Award of the contract will be made within forty-five (45) calendar days from the date of the bid opening.

1. The Project:

A. The Project shall be known as CityWalk – Alberta Phase 1B Section – Fiber/Cabling Infrastructure System and Termination Hardware (City Project No. A16-0307) and the general character of said public works project shall consist of the following:

Installation, termination, testing, labeling, and documentation of a complete fiber/cabling infrastructure system and termination hardware on the Alberta 1B Section of the CityWalk.

B. The approximate quantities of said Project are as follows: installation of (2) 288 count, (4) 48 count, (2) 24 count and (15) 6 count fiber optic cabling as designed in the specifications and the required termination hardware. Also the installation of multiple runs of CAT-6 OSP station cabling in the poles for wireless access points and cameras.

C. Special instructions are as follows: N/A

D. The City will furnish the following: N/A

E. Time of Construction: From the date stated in the Notice to Proceed, the Project time of construction is 120 consecutive calendar days.

2. Plans and Specifications:

Plans and specifications and all related Contract Documents are open for public inspection at the office of Walker Associates, Inc., located at 2890 Rice Mine Road NE, Tuscaloosa, Alabama, 35406 and plans, specifications and other elements of the contract documents may be obtained from the office of the Engineer Walker Associates, Inc., designated as the office of the awarding authority for this purpose, located at 2890 Rice Mine Road NE, Tuscaloosa, Alabama, 35406. The contact person for the project is Chris Crawford or Tim Lewis. They can be reached at 205-561-3778; ccrawford@walkercivil.com; tlewis@talapro.com.

A. Plans, specifications and Contract Documents may be obtained at the above location upon the deposit of $ 100, which amount does not exceed twice the cost of printing, reproduction, handling and distribution of each set of such documents. Deposits by prime

Contractor bidders are refundable in full upon return of all documents in reusable condition within ten (10) days of bid opening. Additional sets of bid documents for prime Contractor bidders, subcontractors, vendors or dealers may be obtained upon payment of the same deposit. Such deposits will be refunded, less the cost of printing, reproduction, handling and distribution, if all the documents are returned in reusable condition within ten (10) days of bid opening.

B. All eligible refunds of deposits for plans and specifications will be made by the City within twenty (20) days of bid opening.

3. Qualification of Bidders:

A. All bidders must be responsible, meeting the criteria and requirements set forth in the Instructions to Bidders and bid proposal.

B. Prequalification of Bidders IS _____ ; IS NOT __X____ required.
If prequalification of bidders is indicated to be required by the preceding sentence, then written prequalification information is available for review at the same office where plans, specifications and Contract Documents are available.

C. The attention of all bidders is called to the provisions of State law governing "general Contractors," as set forth in Ala. Code §34-8-1, et seq. (1975), and rules and regulations promulgated pursuant thereto.

D. If a construction manager is being utilized and this contract is one of a multiple of trade contracts, then the bidder shall be fully licensed for the trade, as determined by applicable law.

E. The City may not enter into a contract with a non-resident corporation or entity which is not qualified under State law to do business in the State of Alabama.

F. All bidders shall possess all other licenses and/or permits required by applicable law, rule or regulation for the performance of the work.

G. All bidders must submit with their proposal, Contractor's license number and a copy of the license. State law, Ala. Code §34-8-8(b), requires all bids to be rejected which do not contain the General Contractor's current license number.

H. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.

4. Construction Manager:

__N/A__ If the preceding blank is marked with an affirmative indication, it means that this contract involves the use of a construction manager and this contract is one of several multiple trade and/or multiple prime contracts for work on the Project. Bidder's attention is called to the supplemental conditions attached to the General Conditions of the Contract Documents regarding this topic.

5. Bid Bonds: Each bidder must submit with its bid a cashier's check drawn on an Alabama bank or a fully executed bid bond on the form that is contained in the Contract Documents executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds, sureties and/or cashier checks will be made payable to the City for an amount not less than 5 percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than $10,000.00.

6. Sales and Use Tax Savings: Alabama Department of Revenue Rule 810-6-3.69.02(2010) exempts certain payment of state, county, and municipal sales and use taxes by the contractor or subcontractor on tangible personal property to be incorporated into the realty pursuant to a contract with a municipal corporation such as the City of Tuscaloosa. All tax exempt purchases shall be in accordance with the laws of this state and the Alabama Department of Revenue. It is the sole responsibility of the successful contractor to make the necessary inquiries and determinations as to what materials or items of tangible personal property to be incorporated into the project qualify as tax exempt in the opinion of the Alabama Department of Revenue. Unless otherwise noted, the project will be bid and administered

in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. Sales and use taxes shall not be included in the bid. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption. The estimate sales and use tax saving must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings may render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor shall be considered in the determination of the lowest responsible and responsive bidder.

7. Pre-Bid Conference: A Pre-Bid Conference IS __X__ IS NOT _____ required for this Project. The Conference is MANDATORY and will be held at **10:00 a.m., Wednesday, April 20th, 2016, in the City of Tuscaloosa City Hall Council Chambers**, Tuscaloosa, Alabama.
If a conference is required, see attachment for specific instructions.

NOTE: **All bidders are advised to carefully read the Instructions to Bidders contained in the Contract Documents, which provisions and requirements are adopted herein by reference.**

CITY OF TUSCALOOSA, ALABAMA,
A MUNICIPAL CORPORATION
Walter Maddox, Mayor

[END ADVERTISEMENT FOR BID—OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION TWO
INSTRUCTION TO BIDDERS
(2015)

***NOTE*: THIS DOCUMENT CONTAINS IMPORTANT BIDDING AND CONTRACTING INFORMATION. ALL POTENTIAL BIDDERS SHOULD READ IT THOROUGHLY**

1. Intention: The Advertisement for Bids, Instruction to Bidders, Contract Agreement, any modifications or supplemental conditions to the Contract Agreement, Bid Proposal, and the Plans and Specifications are interrelated and apply to the complete work to which they relate.

2. Definitions: Where the following words, or the pronouns used in their stead, occur herein, they shall have the following meaning:

"Awarding Authority" shall mean the City of Tuscaloosa, Alabama.

"Bidder" shall mean any person, firm or corporation, that is responsible, submitting a responsive bid for the Project contemplated by the contract documents, who meets the requirements set forth in the contract documents, maintains a permanent place of business, has adequate forces and equipment to perform the work on the Project properly and within the time limit that is established, has sufficient experience in the type work provided for in the contract documents and has adequate financial status and resources to meets its obligations contingent to the work.

"City" or "Owner" shall mean the City of Tuscaloosa, Alabama, as the awarding authority or its authorized and legal representatives.

"Construction Manager" shall mean that person or entity employed by the City to provide Construction Manager Services on the work or Project, who shall be the City's representative on the Project.

"Contractor" shall mean initially the successful or probable low bidder and then the party of the first part to the construction agreement or the legally authorized representatives of such party, including a trade contractor.

"Engineer/Architect" shall mean an Engineer or Architect responsible for design and related services on the Project, and if no Construction Manager is employed, then the Engineer is the representative of the City of Tuscaloosa, Alabama, on the Project. References to the "Engineer" shall mean the Construction Manager, if the City has employed such services, to the extent such services are applicable to construction management activity as set forth in the agreement between the City and the Construction Manager, and the context herein indicates that it would relate to services traditionally and customarily performed by a Construction Manager; otherwise, "Engineer" shall refer to the Engineer or Architect.

"Force Account Work" work paid for by reimbursing for the actual cost for labor, materials and equipment usage incurred in the performance of the work, as directed, including a percentage for overhead and profit where appropriate.
"Gender": a word importing one gender shall if appropriate extend to and be applied to the other gender. The masculine shall include the feminine and vice versa, unless the context clearly indicates otherwise.

"Inspector" shall mean a representative of the Engineer/Architect, Construction Manager or the City, as the case may be.

"Non-Resident Contractor" shall mean a contractor which is neither (a) organized and existing under the laws of the State of Alabama nor (b) maintains its principal place of business in the State of Alabama. A non-resident contractor which has maintained a permanent branch office within the State of Alabama for at least

five (5) continuous years shall not thereafter be deemed to be a non-resident contractor so long as the contractor continues to maintain a branch office within Alabama.

"Project" shall mean the Public Work to which these Contract Documents relate, including the labor, materials and all work to be done by Contractor that is the subject of the bid, plans, specifications and contract documents.

"Public Property" Real property which the awarding authority owns or has contractual right to own or purchase, including easements, rights-of-way, or otherwise.

"Public Work(s)" shall mean a Project consisting of the construction, repair, renovation, or maintenance of public buildings, structures, sewers, water works, roads, bridges, docks, underpasses and viaducts, as well as any other improvement to be constructed, repaired or renovated or maintained on public property to be paid, in whole or in part, with public funds or with financing to be retired with public funds in the form of lease payments or otherwise.

"Responsible Bidder" shall mean a bidder who, among other qualities determined necessary for performance, is competent, experienced and financially able to perform the contract.

"Responsive Bidder" shall mean a bidder who submits a bid that complies with the terms and conditions of the invitation for bids, including plans, drawings, specifications and other provisions of the contract documents.

"Retainage" shall mean that money belonging to the Contractor which has been retained by the awarding authority conditioned upon final completion and acceptance of all work in connection with the Project.

"Singular/Plural" the singular shall include the plural and vice versa, unless the context clearly indicates otherwise.

"Trade Contracts" "Trade contracts" or "multiple prime contracts" are multiple but separate contracts with the City on the same Project that represent significant construction activities performed concurrently with and closely coordinated with construction activities performed on the Project under other trade contracts.

"Unbalanced Bid" Unbalanced bids may be considered non-responsive and may be subject to rejection. An unbalanced bid includes but is not limited to one which results in a substantial advance payment to the contractor.

3. Work to be Performed: The City contemplates the construction of a public works project as generally described in the Advertisement for Bid and as more particularly described, shown and depicted on the plans, specifications, and drawings and in the contract documents.

4. Bidding, Generally:

A. All bids must be made upon the bid proposal forms contained in the contract documents, shall state the amount bid for each item as shown therein and all blanks shall be properly filled in and bid proposal executed as required.

B. Any bidder may withdraw his or its bid, either personally or by telegraphic or written request (not by facsimile), at any time prior to the scheduled opening time for receipt of bids. Except as provided in Ala. Code §39-2-11(b)(c)(d), no bid may be withdrawn after opening of bids prior to the time of returning bid bonds as provided for herein.

C. Any unauthorized conditions, limitations or provisos attached to the bid proposal, except as otherwise provided herein, will render a bid proposal informal and may cause its rejection. Unbalanced bids may be subject to rejection. Bids without the General Contractor's license number and a copy of the license will be rejected.

D. All bids will be opened in public at the time and date specified in the Notice of Advertisement for bids, unless otherwise altered by addendum. All bidders are invited to be present at the opening of bids. No bids will be received after the time established for the opening of bids.
E. All bids are to be enclosed in a sealed envelope addressed to the City of Tuscaloosa, P. O. Box 2089, Tuscaloosa, Alabama and/or hand delivered to the City Clerk, 2201 University Boulevard, City Hall, Tuscaloosa, Alabama. All bids are to be marked to indicate clearly the Project to which it applies and include the following language: "Bid Enclosed" and "Attention City Clerk."

NOTE: Bidders current General Contractor's license number must be displayed on the bid and the sealed envelope.

5. Responsible, responsive bidders: The City reserves the right to reject any bid that is submitted by a bidder that is determined by the City to not be a responsible bidder or whose bid proposal is not responsive.

In determining whether a bidder or bid is responsible and/or responsive, the City reserves the right to also request and consider the following factors:

A. Types or kinds of materials or items best suited to the City's needs for the Project.
B. A current financial statement of the bidder and/ or bonding capability or limits.
C. An accurate inventory of equipment to be used on the Project for a list of key personnel to be used on the Project and detailed histories of their experience.
D. A list of similar work performed by any person, firm, or corporation with the same name as the name or any of the names in the bidder's proposal within the last five (5) years.
E. A list of five (5) references familiar with the bidder's competence, experience, capabilities, skill and integrity.
F. A statement of bidder pertaining to bankruptcies, judgments, liens or litigation within the last five (5) years. Such statement shall also apply to each company, officer and the key personnel on the Project.
G. The General Contractor's State license number and class.
H. Bidder's performance and prosecution of past projects for the City.
I. An unbalanced bid.
J. Other information supplied in the bid proposal.

The City may make such investigations as he deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the City all such information and data for this purpose as the City may request. The City reserves the right to reject any Proposal if the evidence submitted by, or investigation of, such Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations of the Contract and complete the work contemplated therein.

6. Bid Bonds: Each bidder must submit with its bid, a cashiers check drawn on an Alabama bank, made payable to the City of Tuscaloosa or a fully executed bid bond on the form that is contained in the contract documents, executed by a surety company duly authorized and qualified to make bond in the State of Alabama. All bonds and/or cashiers check will be made payable to the City of Tuscaloosa for an amount not less than five (5) percent of the City's or its engineers or architects estimated cost of the Project or of the total bid in the proposal, but in no event more than $10,000.00. The purpose of said bid bond is to insure that the successful bidder will enter into a written contract with the City for the Project on the form included in the contract documents and furnish a performance bond and payment bond executed by a surety company duly authorized and qualified to make such bond in the State of Alabama, in the amount required and provide evidence of insurance as required by the bid documents within time specified or if no time is specified, within thirty (30) days after the forms have been presented to the successful bidder for signature. Provided; however, if extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract bonds and evidence of insurance.

The price or cost of all items bid shall remain in effect for a period of fifty (50) days after Notice of Award.

7. Return of Bid Bonds: All bid bonds, except those of the three lowest bona fide bidders, will be returned immediately after bids have been checked, tabulated and the relation of the bids established. The bid bonds of the three lowest bidders may be retained and if so will be returned as soon as the contract bonds and the contract documents of the successful bidder have been approved and properly executed.

In the event it is necessary to defer a contract award for longer than fifteen (15) days, after opening of bids, then all bid bonds, except that of the potential successful bidders will be returned.

Award of the contract will be made within the time specified after the opening of bids. In the event no award is made within such time, all bids may be rejected and all bonds returned.

Provided; however, the potentially successful bidder may enter into a written agreement with the City for an extension of time for consideration of its bid, in which case, the bidder's bond shall remain in full force and effect or the City may permit said bidder to substitute a satisfactory surety for the cashier's check if submitted as a guaranty to the bid bond.

8. Forfeiture of Bid Bonds: Should the successful bidder or bidders to whom a contract is awarded fail to execute a contract(s) and furnish acceptable contract securities and evidence of insurance, as required, within thirty (30) days after the prescribed forms have been presented to him/her, the City may retain from the proposal guaranty, if it is a cashier's check or recovered from the principal or the sureties, if the guaranty is a bid bond, the difference between the amount of the contract as awarded, and the amount of the proposals of the new lowest bidder. If no other bids are received, the full amount of the proposal guaranty may be so retained and recovered as liquidated damages for such default. Any sum so retained or recovered shall be the property of the awarding authority.

9. Consideration of Bid Proposals:

A. Generally: The contract will be awarded to the lowest responsible and responsive bidder, unless the City determines that all the bids are unreasonable or that it is not in the best interest of the City to accept any of the bids. Award of the contract will be made on the basis of the lowest actual bid amount for the contract, which is defined as the total of the bid and/or extended total amounts for unit price items, plus requested and accepted additive or deductive alternates, pursuant to the provisions hereof. The City reserves the right to reject all bids and/or reject and rebid the Project should it determine the same is in the best interest of the City.
B. Minor irregularities as determined by the City or its representatives, will not cause a bid to be non-responsive and may be waived by the City.
C. Bidder must possess all licenses and permits required by applicable law, rule or regulation for the performance of the work prior to bidding.
D. Where the City elects to prequalify contractors prior to bidding, it shall be understood that such prequalification may be general in nature and shall not limit the City's right to revoke such prequalification pursuant to Ala. Code §39-2-4(d) (1975).
E. Joint ventures shall not generally be considered acceptable bids without special waiver from the City, which must be requested in writing at least thirty (30) days prior to bid opening.
F. Additive and/or Deductive Alternates: If the City has elected to request bids for additive and/or deductive alternates, then the following procedure shall be the basis for calculating such bids:
    1) <u>Deductive Alternates</u>: Any deductive alternate from the base bid shall constitute cumulative deductions from the base bid; and in determining the lowest bidder, if the City elects to consider any deductive alternates, the City will proceed to consider the bids upon the basis of the base bids of all qualified bidders minus the respective deduction stated for the first alternate. If the City determines that it wishes to proceed to consider additional deductive alternates, it may do

so sequentially and in like manner throughout the deductive alternates the City elects, so that the base bids of all qualified bidders shall be calculated minus the respective number of deductive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder less the selected sequential deductive alternates.

2) Additive Alternates: To determine additive alternates, any additive alternate shall constitute cumulative additions to the base bid; and in determining the lowest bidder if the City elects to consider any additive alternates, the City will proceed to consider the bids upon the basis of the base bid of all bidders plus the respective addition stated for the first alternate. If the City determines that it wishes to proceed to consider additional additive alternates it may do so sequentially, and in like manner, throughout the additive alternates, the City elects, so that the base bids of all qualified bidders shall be calculated plus the respective number of additive alternates in sequence the City has elected to consider. The lowest responsible responsive bid will be the lowest actual base bid of a qualified bidder plus the selected sequential additive alternates. Once the City has determined the lowest responsible responsive bidder as set forth herein, then it may award the contract on the basis of accepting and/or rejecting any additive and/or deductive alternates of that bid as it determines is in the best interest of the City.

G. No Bids or Only One Bid: In the event no bid proposals or only one bid proposal is received in response to the City's Advertisement for Bids at the time stated for the opening of bids, the City may elect at its discretion, any of the following options:

1) Advertise for and seek other competitive bids.
2) Direct that the work shall be done by force account under its direction and control.
3) Negotiate for the work through the receipt of informal bids. Provided; however, where only one responsible and responsive bid has been received, any negotiation for the work shall be for a price lower than that bid.

H. An unbalanced bid.

10. Materials and Work: All materials, which the engineering plans specify or are required, will be installed as they are shown on the drawings, plans and/or specs.

A. Brand names, catalog numbers, weights, etc., are used to indicate levels of quality only and are not intended to restrict the bidding. If bidding on an item of another brand or manufacturer than that specified, bidder's proposal should be accompanied by brochures or other pertinent literature giving detailed specifications of the item(s) on which the proposal is being made. Bids or proposals received without sufficient literature to determine equal quality may not be considered. Final determination as to equal quality will be made by the City.

B. Quantities: The quantities shown in the proposal shall be considered by the contractor as the quantities required to complete the work for the purpose of bidding. Should the actual quantities required in the construction of the work be greater or less than the quantities shown, an amount equal to the difference of quantities at the unit prices bid for the items will be added to or deducted from the contract total.

C. Adjustment Items: During the course of work, the prices bid for adjustment items may be used by the City to increase or decrease the total cost for the work if the quantity of work exceeds or is less than the amount shown on plans.

D. The attention of all bidders is called to the fact that all or a portion of this Project may be federally funded and if so, the special conditions of a federally funded contract including federal labor standard provisions, the minimum wage rates included in the contract documents, plans and specifications must be followed.

E. Construction Crews: The Contractor will be required to furnish at least one separate construction crew during the work as set forth in the contract. Unless waived by the City, the Contractor shall perform on the sites and with his own organization and equipment, at least fifty percent of the total amount of the work to be performed under this Contract. The Contractor may only subcontract a maximum of fifty (50%) percent of the work without City consent. If, during the progress of the work hereunder, the Contractor

requests a reduction of such percentage, and the City representative determines that it would be to the City's advantage, the percentage of the labor required to be performed by the Contractor's own organization may be reduced; PROVIDED prior written approval of such reduction is obtained by the Contractor from the City.

NOTE: Bidders are advised to carefully review all other elements of the contract documents for more details concerning requirements for performing work on the Project.

F. In the event the City elects to utilize a Purchasing Agent Appointment agreement in conjunction with this contract, the Contractor will be required to execute such an agreement and perform in accordance therewith.

11. Execution of Contract, Notice to Proceed: Award of the contract will be made within the time specified after the opening of bids.

The bidder to whom award is made shall enter into a written contract for the Project with the City on the forms provided in the contract documents, furnish the required performance and labor and material bonds with proper surety and furnish the evidence of insurance as required, all within thirty (30) days of presentation of the prescribed forms to the bidder. If extenuating circumstances prevail, the City may grant an extension of time not exceeding five (5) days for the return of the contract, required bonds and evidence of insurance.

Within twenty (20) days after presentation by the bidder to the City, the City shall review the bonds, surety and evidence of insurance to ascertain whether they meet the requirements of the contract documents, and if such requirements have been met the City shall complete the execution of the contract.

A notice to proceed order will be issued by the City or its representatives within fifteen (15) days after final execution of the contract by the City. The Contractor shall begin work on the date specified in the Notice to Proceed.

12. Labor, Material and Performance Bonds: Within thirty (30) days after the prescribed forms have been presented, the successful bidder shall execute a performance bond with good and sufficient surety from a company duly authorized and qualified to make such bond in the State of Alabama, a performance bond made payable to the City of Tuscaloosa, with a penalty equal to 100 percent of the amount of the contract price and in addition thereto, another bond with good and sufficient surety by a surety company duly authorized and qualified to make such bond in the State of Alabama, payable to the City of Tuscaloosa, in an amount equal to 100 percent of the contract price with an obligation that such contractor shall promptly make payments to all persons supplying it or them with labor, materials or supplies for or in prosecution of the Project provided for in such contract and for the payment of reasonable attorney's fees incurred by any successful claimants or plaintiffs in civil actions on said bond, pursuant to the provisions of Ala. Code §39-1-1 (1975).

13. Surety and Insurer Qualifications: All certificates of insurance and bonds (furnished in connection with the work to be performed under this contract) shall be countersigned by a licensed agent residing and engaged in doing business in the State of Alabama. The surety and insurer shall be licensed and authorized to do business in the State of Alabama. The surety companies on bonds shall be rated A- or better by A. M. BEST and listed on the United States Treasury Department 570 list.

14. Power-of-Attorney: The attorney-in-fact (resident agent) who executes the performance bond and/or payment bond on behalf of the surety must attach a notarized copy of his or her power-of-attorney as evidence of his authority to bind the surety of the date of execution of the bonds. Certification by a resident agent authorized to do business in Alabama is required.

15. Insurance: The successful contractor shall file with the City, at the time of delivery of the signed contract, satisfactory evidence of insurance, the requirements as set forth in the contract agreement. Satisfactory evidence of insurance shall include at a minimum, the insurers standard "Certificate of Insurance" (modified pursuant to insurance

requirements of the contract agreement) and the agents verification of insurance as required by Section 26. If the City deems that additional evidence or clarification, etc., of insurance is appropriate, the bidder shall promptly furnish the same to the City upon request.

16. Examination of Contract Documents and of the Site of the Project: Before submitting a bid proposal for the Project, each bidder shall carefully examine the Contract Documents, including but not limited to plans, drawings, specifications, contract, etc., visit the site, and satisfy itself as to the nature and location of the Project, and the general and local conditions, including weather, the general character of the site or building, the character and extent of existing work within or adjacent to the site, any other work being performed or proposed thereon at the time of submission of their bids. It shall obtain full knowledge as to transportation, disposal, handling, and storage of materials, availability of water, electric power, and all other facilities in the area which will have a bearing on the performance of the Project for which they submit their proposals. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and visit and has judged for and satisfied himself as to conditions to be encountered regarding the character, difficulties, quality, and quantities of work to be performed and the material and equipment to be furnished, and as to the contract requirements and contingencies involved. It shall be the Bidder's obligation to verify for himself and to his complete satisfaction, all information concerning site and surface conditions.

17. Subsurface Reports: Prior to Bid opening, the City will make available to prospective Bidders, upon request, any information that it may have as to subsurface conditions and surface topography at the work site. Investigations of subsurface conditions were made for the purpose of study and design, and neither the City nor its consultants that performed such testing assume any responsibility whatsoever in respect to the sufficiency or accuracy of borings, or of the logs of test borings, or of other investigations that have been made, or of the interpretations made thereof, and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations are representative of those existing throughout such area, or any part thereof, or that unforeseen developments may not occur.

Logs of test borings, geotechnical reports, or topographic maps showing a record of the data obtained by the investigations of surface and subsurface conditions that are made available shall not be considered a part of the Contract Documents, and are available only for the convenience of the Bidders. Such logs and reports represent only the opinion of the Engineer/Architect or Consultant as to the character of the materials encountered by him in his investigations of the test borings.

Information derived from inspection of logs of test borings, or pits, geotechnical reports, topographic maps, or from Drawings showing location of utilities and structures will not in any way relieve the Contractor from any risk, or from properly examining the site and making such additional investigations as he may elect, or from properly fulfilling all the terms of the Contract Documents.

The City shall not be responsible for any interpretations or conclusions drawn from any subsurface exploration reports or borings. Each bidder is to base his bid upon his determination of the subsurface conditions and of the types and quantities or material to be encountered or needed. Additional tests or other exploratory operations may be made at no cost to the City.

18. Interpretation of Plans and Specifications: If any bidder contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of plans, specifications, or other proposed contract documents, he may submit to the Engineer/Architect or Construction Manager, as the case may be, a written request for an interpretation thereof at least ten (10) days prior to bid opening. The bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by written addendum duly issued and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The City, Construction Manager or Engineer/Architect will not be responsible for any other explanations or interpretations of the proposed documents.

19. General Contractor's Permit or License: The attention of all bidders is called to the provisions of the State law governing general contractors as set forth in Ala. Code §34-8-1 et seq. (1975), particularly in regard to the need for and evidence of a State general contractor's license. The provisions of said statute are adopted herein by reference and form a part of the Contract with the selected bidder should this Project be awarded.

Bidders are reminded that they will be governed by said statutes insofar as they are applicable. To summarize the above quoted statutes, Ala. Code §34-8-1, et seq. (1975) provides that no one is entitled to bid and no contract may be awarded to anyone who does not possess a valid general contractor's permit or license, including specialty classifications for the work, as provided by the foregoing sections of the State Code, and rules and regulations promulgated pursuant thereto and that said bid may not be considered without evidence being produced that he is so qualified. Trade contractors must be duly licensed in accordance with applicable law. The City may not enter into a contract with a nonresident corporation that is not qualified under the State law to do business in Alabama.

Bidder MUST include with proposal contractor's current license number and a copy of the license. State law, Ala. Code §34-8-8(b) (1975) requires all bids to be rejected which do not contain general contractor's license number.

20. U. S. Products Preference: The successful bidder (contractor) shall comply with Ala. Code §39-3-1 (1975), shall agree to utilize in the execution of the Project, materials, supplies and products manufactured, mined, processed or otherwise produced in the United States or its territories, if the same are available at reasonable and competitive prices and not contrary to any sole source specifications. It is further stipulated that a breach of the foregoing provision of this agreement by the contractor in failing to utilize domestic products shall result in a downward adjustment in the contract price equal to any realized savings or benefit to the Contractor.

21. Use of Domestic Steel: The attention of all bidders and that of the successful bidder (contractor) is drawn to Ala. Code §39-3-4 (1975), requiring the use of steel produced within the United States for municipal construction projects when specifications in the construction contract require the use of steel and do not limit its supply to a sole source. This provision is subject to waiver if the procurement of domestic steel products becomes impractical as a result of national emergency, national strike or other causes. Violations of the use of domestic steel requirements shall result in a downward adjustment in the contract price to equal any savings or benefit to the Contractor.

22. In State Bidder Preference: Pursuant to Ala. Code §39-3-5 (1975), in the letting of public contracts in which municipal funds are utilized, except those contracts funded in whole or in part with funds received from a federal agency, preference shall be given to resident contractors, and a nonresident bidder domiciled in a state having laws granting preference to local contractors shall be awarded Alabama public contracts only on the same basis as the nonresident bidders' state awards contracts to Alabama contractors bidding under similar circumstances; and resident contractors in Alabama, as defined in Ala. Code §39-2-12 (1975), be they corporate, individuals or partnerships, are to be granted preference over nonresidents in awarding of contracts in the same manner and to the same extent as provided by the laws of the state of the domicile of the nonresident.

Nonresident bidders must accompany any written bid documents with a written opinion of an attorney-at-law licensed to practice law in such nonresident bidder's state of domicile, as to the preferences, if any or none, granted by the law of that state to its own business entities whose principal places of business are in that state in the letting of a public contract.

23. Applicable Laws: Each Bidder shall inform himself of, and the Bidder awarded a contract shall comply with, federal, state, and local laws, statutes, and ordinances relative to the execution of the work. This requirement includes, but is not limited to, applicable regulations concerning minimum wage rates, the use of domestic products, U.S. steel and resident labor, non-discrimination in the employment of labor, protection of public and employee safety and health, environmental protection, the protection of natural resources, fire protection, burning and non-burning requirements, permits, fees and similar subjects. Certain statutory requirements are summarized immediately hereinafter. The attention of all bidders is called to the fact that the work will be subject to compliance with all applicable City building

and technical codes and will be subject, in addition to all other inspections, to inspection by a representative of the City of Tuscaloosa Building Inspections Department.

24. SRF/DWSRF Special Requirements. If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a loan or loans from the Alabama Department of Environmental Management (ADEM) through either a State Revolving Fund for Wastewater or Water (SRF or DWSRF, respectively), additional requirements for the Contractor exist (Requirements). These Requirements relate to Project objectives for utilization of Minority Business Enterprises/Women Business Enterprises (MBE/WBE). The Contractor must document efforts made to utilize MBE/WBE firms and submit to ADEM, with a copy to the City within ten (10) days after contract execution, evidence of the positive steps in accordance with the requirements to utilize small minority and women businesses in the procurement of subcontracts.

Other Requirements relate to Federal Labor Standards, Title VI of the Civil Rights Act of 1964, Equal Employment Opportunity, Affirmative Action Equal Opportunity Clause, Goals and Timetables, compliance with Occupational Safety and Health Act of 1970 and Section 107 of Contract Work Hours and Safety Standards Act (PL91-54) which are adopted herein by reference to the extent applicable.

For DWSRF and SRF funded projects, special requirements are also set forth in Supplemental General Conditions. If not attached to the contract documents, Contractors should contact the City representative and/or the City's consulting engineer for a copy of all special requirements and conditions.

25. Special Conditions for Federally Funded Contracts. If all or any portion of the Project to which this contract applies is funded in whole or in part by the proceeds of a grant from an agency of the United States Government, additional requirements for the Contractor exist. A summary of these requirements entitled, "Special Conditions for Federally funded Contracts," is attached hereto and made a part hereof. Bidder should contact the Engineer or City Representative to confirm the applicability of these requirements to the Project.

26. Agent's Verification of Insurance. This form or a letter equivalent from the Insurance Agent should be submitted with each Contractor's Bid, or in the alternative, Contractor may provide a copy of the insurance policy or policies reflecting the coverages required herein.

27. Compliance with Immigration Law. By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

28. Compliance with Affordable Health Care Act. By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal compliance laws pertaining to the Affordable Health Care Act. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

29. Compliance with the City of Tuscaloosa Minority Enterprise / Disadvantage Business Enterprise (MBE/DBE/WBE) Policy for Public Works Projects Over $50,000. The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required

to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

The Policy as adopted is entitled THE CITY OF TUSCALOOSA MINORITY ENTERPRISE / DISADVANTAGED BUSINESS ENTERPRISE (MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER $50,000, and is attached hereto as "Exhibit A" (the "Policy"). Contractors are encouraged read the Policy in its entirety, and must follow the instructions contained therein. **The Policy requires submission of various forms at specified times, and failure to do so may result in rejection of bid due to non-responsiveness.** Contractors shall work in coordination with the City of Tuscaloosa's Office of Resilience and Innovation Department.

Office of Resilience and Innovation contact information is as follows:
Robin Edgeworth, Chief Resilience Officer
Telephone: (205) 248-5725
redgeworth@tuscaloosa.com.

Questions about Policy requirements should be directed to the City of Tuscaloosa Office of the City Attorney at 205-248-5140.

[END INSTRUCTION TO BIDDERS—OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS
SECTION THREE

PROPOSAL (BID)

(2015)

NOTE TO BIDDER: Use BLACK ink for completing this Proposal form.

To: THE CITY OF TUSCALOOSA ALABAMA

Address: P.O. BOX 2089
TUSCALOOSA, AL. 35403

Project Title: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

Project No.: A16-0307

Trade: The trade portion of the work for which this Proposal is submitted is:
FIBER/CABLING INFRASTRUCTURE AND TERMINATION (if applicable) HARDWARE

Trade Package No.: DIVISION 27

BIDDER: The name of the Bidder submitting this Proposal is SEFFRONT & ASSOCIATES LLC doing business at 5610 SHIRLEY PARK DR (Street), BESSEMER (City), AL (State) 35022 (Zip)
which is the address to which all communications concerned with this Proposal and with the Contract shall be sent.

Licensed, Class E-S, Alabama General Contractor No.: 38769 (Attach Copy)

Alabama General Contractor Specialty E-S / LOW VOLTAGE

Alabama General Contractor License Major Categories:

(1) E-S / LOW VOLTAGE (2) M-S / HVAC

Bidder's contact person for additional information on this Proposal:

Name: MIKE DEMPSEY **Telephone:** 205-612-5065

ADDENDA: The Bidder hereby acknowledges that he has received Addenda No's. 1, 2, ____, ____ (Bidder shall Insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Proposal(s) includes all impacts resulting from said addenda.

LUMP SUM: The Bidder agrees to accept as full payment of the work proposed under this Project, as services are rendered, as herein specified and as shown on the Contract Documents, upon the undersigned's own estimate of quantities and costs, the following lump sum of: _____ Dollars and _____ cents ($ 178,243.00). *(Amount written in words has precedence)*

ALTERNATES: Attach additional sheets for additive or deductive alternates, if in contract documents.

~~**UNIT PRICES:** Where the Project is bid in unit prices then Bidder agrees to perform the work in the stated quantities of the materials at the unit prices so bid, the cumulative total of which constitutes the base bid set forth below, and to accept as final payment for the work performed under this Project as herein specified the extension of each such unit price for the quantities actually installed in accordance with the following or attached unit price schedule.~~

~~An unbalanced bid, as herein defined, may be considered non-responsive. A bid resulting in a substantial advance payment on an item that is for a single lump sum payment may be considered non responsive.~~

~~Prices for mobilization and demobilization combined shall not exceed 5% of the total base bid unless a reasonable explanation is provided in writing with the bid and accepted by the Owner. Lump sum payments and unit price bids for a single or lump sum payment may be spread over the course of the period of work until the line item is complete at owner's option.~~

~~The Bidder's unit price for materials listed is as including the payment of taxes (See Page 3) where applicable: (Attach additional sheets if required)~~

	Material	Quantity	Unit Price	TOTAL
1.	Complete the Schedule of Values and Bid Response attached.			
2.				
3.				

SALES AND USE TAX SAVINGS ACCOUNTING:

Pursuant to State of Alabama Act 2013-205, Section 1(g) the Contractor accounts for the sales tax NOT included in the bid proposal form as follows:

ESTIMATED SALES AND USE TAX

BASE BID: $ 11,360.00

Additive Alternate (if applicable): $ _____

Failure to provide an accounting of sales tax may render the bid non-responsive. Other than determining responsiveness, sales tax accounting shall not affect the bid pricing nor be considered in the determination of the lowest responsible and responsive bidder.

AS BUILT DRAWINGS: The Bidder's Proposal contains $ 2,000.00 for "as built drawings."

BIDDER'S DECLARATION AND UNDERSTANDING: The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the City, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

The Bidder further agrees that he has checked and verified the completeness of the Contract Documents and that he has exercised his own judgment regarding the interpretation of subsurface information utilizing all pertinent data in arriving at his conclusions. The Bidder shall be fully responsible for any damages or liability arising out of his or his subcontractors pre-bid investigations.

Tuscaloosa CityWalk- Alberta Parkway Phase-1B Fiber Infrastructure

Bid Response Sheet

Phase-1B Bid: Install all fiber and equipment as indicated in the documents (Drawings and Specifications). Install Equipment Cabinets/ Ladder Eqmt. Tray Systems and all associated hardware in the Gateway/ Alberta Tech. Center CW-Communication Room# 120 and all Fiber Ties within the Gateway from CW-Rm.# 120 to ATC-Rm.#113. Install TDOT Fiber Entrance Cable from CW-Rm.# 120 to QB-Vault TDV-1.1/ TDOT Fiber Splice #TC01 (Contractor shall terminate/test the fiber in CW Rm.# 120 and TDOT shall splice the fiber into the City's Fiber Network). Install CW-Fiber Cables from CW-Rm.# 120 to QB-Vault TDV-8/ Fiber Splice #1 through #9 & #10, the fiber shall serve the FS# 4, TPEP# 1, and all IT-Cabinet's (IT-Cab. #1 through #15) along the route – Work Operations: #1 through #9 and #10, #21 through #48, and 100, 100A, 100B, 100C, 100D, 100E & 100F.
PH. 1B Total Price: $ 178,243.00

Note: IT- Communication Rooms, Vaults/Conduit/Innerduct and IT- Pole Mounted Cabinets Systems are provided through separate contracts and bid documents.

Fiber and Cabling Infrastructure/Backbone Contract Bid Documents-

- Communications Room Equipment Cabinets/Racks with all Hardware and Installation in the Phase1B- Gateway/ Alberta Tech. Center CW-Communication Room# 120
- Communications Room Ladder Cable Tray with all Hardware and Installation in the Phase1B- Gateway/ Alberta Tech. Center CW-Communication Room# 120
- Fiber Infrastructure/Backbone and Fiber Station Cable Installation
- Fiber Termination Interface Enclosures and Adaptor Panel Units Installation
- Fiber Splice Case/Hardware Installation and Fiber Splicing Requirement
- Fiber Termination/ Connector Installation Requirements
- Fiber Testing Requirements and all Record Documentation
- All Fiber Patch/ Jumper Cords Furnished and Installed as Required
- Copper/Cat6 Station Cable Drops Installation with Faceplates and Terminating Hardware in the CW-Communication Room
- Copper/Cat6 Station Cable Drops Installation with SMB Boxes and Terminating Hardware in the Poles for Cameras and Wireless Access Points
- Data Station Panels/ Copper-Cat6 Installation with Terminating Hardware in the CW-Communication Rooms
- Data Station SMB Boxes/ Copper-Cat6 Installation with Terminating Hardware in the Poles Mounted IT/Cabinets for Cameras and Wireless Access Points
- NEMA 4X Rated 5"x5"x3"- Black Boxes/ Pole Mounted at Opening Portals for Security Cameras portal only. (IT-Cabinets and the other (2) 5"x5"x3"Boxes for the IT Portals Wireless Access Points portals are under a separate contract.)
- Equipment Mounting Din Rails in the Pole Mounted IT/Cabinets
- Copper/Cat6 Testing Requirements and all Record Documentation
- All Copper-Cat6 Patch/ Jumper Cords Furnished and Installed as Required
- All As-Built Documentation for the Infrastructure System

City of Tuscaloosa/CityWalk Project Alberta Parkway Section/
Phase-1B Fiber Infrasturcture Schedule of Values Pricing Sheet

Unit Item	Unit Name/Description	Manufacture	Part Number	Unit Type	Unit Price
	Fiber Infrastructure- Schedule of Values Pricing for Labor and Materials as Indicated for Adds and Deletions				
	Equipment Cabinet /Rack, Tray Hardware, Vault Hardware, GND Strips and Label Tags				
1001	Equipment Cabinet 45RUx30"/ CDC4530 (Labor and Material/Eqmt. to Install)	OCC	01P05LLSLP	EACH	$1,694.00
1002	Vertical Cable Management 4" (Labor and Material/Eqmt. to Install)	OCC	10 of each CM3-450	EACH	$254.00
1003	Horizontal Cable Management 2U (Labor and Material/Eqmt. to Install)	OCC	2 of each CM503	EACH	$91.00
1004	Cabinet 19" Ground Bar (Labor and Material/Eqmt. to Install)	OCC	GRD19	EACH	$106.00
1005	Cabinet 19" Power Strip 20A (Labor and Material/Eqmt. to Install)	OCC	PS120	EACH	$204.00
1006	Cabinet Vertical Power Strip 30A (Labor and Material/Eqmt. to Install)	OCC	2 of each PS320	EACH	$378.00
1007	Cabinet Fan Unit (Labor and Material/Eqmt. to Install)	OCC	FAN3	EACH	$274.00
1008	12" Ladder Tray/ Black (Labor and Material/Eqmt. to Install)	Hoffman	LSS12BLK	EACH	$143.00
1009	Junction Clamp Kit (Labor and Material/Eqmt. to Install)	Hoffman	LJSKB	EACH	$13.00
1010	In-Line Butt Kit (Labor and Material/Eqmt. to Install)	Hoffman	LBSKB	EACH	$13.00
1011	12" Angel Support Kit (Labor and Material/Eqmt. to Install)	Hoffman	LWASK12BLK	EACH	$38.00
1012	12" Wall Support Bracket Kit (Labor and Material/Eqmt. to Install)	Hoffman	LTSB12BLK	EACH	$29.00
1013	18"x2" Basket Tray (Labor and Material/Eqmt. to Install)	CABLOFIL	CF54/450	EACH	$153.00
1014	Pull Cord 200lb. (Labor and Material/Eqmt. to Install)	George-Ingram	9465-02	EACH	$52.00
1015	47 Hole Racks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400551	EACH	$64.00
1016	18 Hole Racks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400550	EACH	$43.00
1017	"S" Brackets/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	440556	EACH	$10.00
1018	10" Rack Hooks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400524	EACH	$33.00
1019	4" Duct Plug (Labor and Material/Eqmt. to Install)	JMS	40B1167S	EACH	$59.00
1020	4" Blank Duct Plug (Labor and Material/Eqmt. to Install)	JMS	4D402U	EACH	$41.00
1021	Duct Seal (Labor and Material/Eqmt. to Install)	MCO	MCOPR868	EACH	$9.00
1022	Square-D Ground Bar Kit (Labor and Material/Eqmt. to Install)	Square-D	PK9GTACP	EACH	$26.00
1023	Panduit Ground Tag (Labor and Material/Eqmt. to Install)	Panduit	LTYK	EACH	$15.00
1024	Panduit Ground Tag (Labor and Material/Eqmt. to Install)	Panduit	PT-BGND	EACH	$54.00
1025	Xpress-Tags to Label Locator Conductor (Labor and Material/Eqmt. to Install)	Xpress-Tags	TG_2122-FO	EACH	$2.00
1026	#6 Ground Wire Conductor (Labor and Material/Eqmt. to Install)	THNN	#6 Conductor	PER FOOT	$1.00
1027	#10 Location/Wire Conductor (Labor and Material/Eqmt. to Install)	THNN	#10 Conductor	PER FOOT	$1.00
1028	NEMA 4X/ 5"x5"x3" WP Box (Labor and Material/Eqmt. to Install)	HoffMan	F7806/GB #2568488	EACH	$139.00
1029	Fire-Stop (Labor and Material/Eqmt. to Install)	STI	SSP	EACH	$51.00
1030	Rockwool (Labor and Material/Eqmt. to Install)	3M	Rockwool	EACH	$32.00
1031	4" Conduit PVC/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$14.00
1032	4" Conduit Rigid/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$41.00
1033	4" Conduit EMT/ with all Mounting Hardware- Installed Above the Layin Ceiling (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$30.00
1034	16"x16"x12" Cantex Pull Box/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$201.00
1035	(1) 4.5" Block Wall Core Drill/ Sealed to meet all codes/standards. (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$300.00
1036	(1) 2.5" Block Wall Core Drill/ Sealed to meet all codes/standards. (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$250.00
1037	2" Conduit PVC/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$12.00
1038	2" Conduit Rigid/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$30.00
1039	2" Conduit EMT/ with all Mounting Hardware- Installed Above the Layin Ceiling (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$22.00
1040	(3)1-1/4" Innerducts in each 4" conduit. (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$33.00
1041	DIN-Rail for IT-Cabinets 7" to 9" Section (in each cabinet)	UNK	UNK	EACH	$45.00
	CAT3 and CAT6 UTP Cable, Copper Equipment, Patch Cords and Termination Hardware				
2001	CMR 25 Pair (Labor and Material/Eqmt. to Install)	Mohawk	M58141/ LT48094	PER FOOT	$2.00
2002	ARMM 25 Pair (Labor and Material/Eqmt. to Install)	General	2019000	PER FOOT	$2.00
2003	Copper ID/ Label Tags (Labor and Material/Eqmt. to Install)	Panduit	UNK	EACH	$2.00
2004	100 Pair/110 Type Termination Block (Labor and Material/Eqmt. to Install)	OCC	DCC100/110EFSLK	EACH	$126.00
2005	300 Pair/110 Type Termination Block (Labor and Material/Eqmt. to Install)	OCC	DCC300/110EFSLK	EACH	$287.00
2006	110 Block Cable Organizer (Labor and Material/Eqmt. to Install)	OCC	COH110L	EACH	$19.00
2007	Voice/Telco Patch Panel (Labor and Material/Eqmt. to Install)	OCC	DCC2488/110A5E	EACH	$153.00
2008	Data Station Panel 24 Ports (Labor and Material/Eqmt. to Install)	OCC	DCC2488/110SIX	EACH	$247.00
2009	Data Station Panel 48 Ports (Labor and Material/Eqmt. to Install)	OCC	DCC4888/110SIX	EACH	$372.00
2010	IT-Cabinet/SMB-6 Port Box (Labor and Material/Eqmt. to Install)	OCC	SMEK6-01	EACH	$31.00

2011	ISP and OSP- Surface Mount Box/ SMB Plastic (1) One Port (Labor and Material/Eqmt. to Install)	OCC	SMEK1-01	EACH	$3.00
2012	ISP- Faceplate/ (2) Two Port Plastic (Labor and Material/Eqmt. to Install)	OCC	FPSK02-01	EACH	$3.00
2013	ISP- Faceplate/ (4) Four Port Plastic (Labor and Material/Eqmt. to Install)	OCC	FPSK04-01	EACH	$3.00
2014	ISP- Wall Station Faceplate/ (1) One Port Stainless Steel (Labor and Material/Eqmt. to Install)	OCC	WP-A6-SS	EACH	$23.00
2015	ISP and OSP- Faceplate Plastic Blanks (Labor and Material/Eqmt. to Install)	OCC	AKBLK-01	EACH	$7.00
2016	CAT6 Jacks (Labor and Material/Eqmt. to Install)	OCC	KMJA605	EACH	$15.00
	CMR Cat6 Cable/ Per Station Drop 100' Average Length- Terminated on both ends(DSP Panel & Jack)				
2017	(Labor and Material/Eqmt. to Install)	Mohawk	M58804/ LT56007	EACH	$80.00
	OSP Cat6 Cable/ Per Station Drop 75' Average Length- Terminated on both ends(SMB Panel & Jack)				
2018	(Labor and Material/Eqmt. to Install)	Mohawk	M58772/ LT55553	EACH	$113.00
2019	CAT6 Patch/Jumper Cord- 1' (Labor and Material/Eqmt. to Install)	OCC	PCSIX01B05	EACH	$5.00
2020	CAT6 Patch/Jumper Cord- 2' (Labor and Material/Eqmt. to Install)	OCC	PCSIX02B05	EACH	$6.00
2021	CAT6 Patch/Jumper Cord- 3' (Labor and Material/Eqmt. to Install)	OCC	PCSIX03B05	EACH	$6.00
2022	CAT6 Patch/Jumper Cord- 5' (Labor and Material/Eqmt. to Install)	OCC	PCSIX05B05	EACH	$7.00
2023	CAT6 Patch/Jumper Cord- 7' (Labor and Material/Eqmt. to Install)	OCC	PCSIX07B05	EACH	$8.00
2024	CAT6 Patch/Jumper Cord- 10' (Labor and Material/Eqmt. to Install)	OCC	PCSIX10B05	EACH	$9.00
2025	CAT3 Test Per Pair w/Reports (Detail and Summary) (Labor and Material/Eqmt. to Install)	Labor	Labor	EACH	$10.00
	CAT6 Test Per 4Pair Station Cable w/Reports (Detail and Summary) (Labor and Material/Eqmt. to				
2026	Install)	Labor	Labor	EACH	$10.00
	Fiber SM Cable, Fiber Equipment, Patch Cords and Termination Hardware				
3001	SM 6 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	DX006DSLA9YR	PER FOOT	$1.00
3002	SM 24 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC024JSLACYA	PER FOOT	$2.00
3004	SM 48 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC048JSLACYA	PER FOOT	$3.00
3005	SM 144 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC144JSLACYA	PER FOOT	$6.00
3006	SM 288 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC288JSLACYA	PER FOOT	$8.00
3007	SM 48 Fiber/ ISP INDOOR-OUTDOOR PLENUM (Labor and Material/Eqmt. to Install)	OCC	DX048KSLX9YP	PER FOOT	$4.00
3008	MM 48 Fiber-OM4/ ISP INDOOR-OUTDOOR PLENUM (Labor and Material/Eqmt. to Install)	OCC	DX048KALE9QP	PER FOOT	$10.00
3009	Fiber Termination Interface Enclosure- 4U Unit (Labor and Material/Eqmt. to Install)	OCC	RTS4U-HD16APB	EACH	$337.00
3010	Fiber Termination Interface Enclosure- 2U Unit (Labor and Material/Eqmt. to Install)	OCC	RTS2U-HD16APB	EACH	$278.00
	Fiber Termination Interface Enclosure- Wall Mount Unit/For Pole Cabinet (Labor and Material/Eqmt.				
3011	to Install)	OCC	ZDMB6B	EACH	$84.00
3012	SM-LC/24 Port HD Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	6124SMQLCHD	EACH	$131.00
3013	MM/OM4-LC/24 Port HD Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	6124QLC50GHD	EACH	$147.00
3014	SM_LC/6 Port Standard Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	616DLC	EACH	$42.00
3015	Blank Cover Plates/ Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	600HD	EACH	$11.00
	Fiber Optic LC Connectors/ Single-mode Fiber- Fiber Termination (Labor and Material/Eqmt. to				
3016	Install)	OCC	FC-LC-SM	EACH	$17.00
	Fiber Optic LC Connectors/ Multi-mode Fiber OM4- Fiber Termination (Labor and Material/Eqmt. to				
3017	Install)	OCC	FC-LC-MM-Q/Q	EACH	$17.00
3018	Fiber SM Patch/Jumper Cord- 1M/3' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-1M	EACH	$43.00
3019	Fiber SM Patch/Jumper Cord- 2M/7' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-2M	EACH	$44.00
3020	Fiber SM Patch/Jumper Cord- 3M/10' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-3M	EACH	$45.00
3021	Fiber MM OM4 Patch/Jumper Cord- 1M/3' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-1MG	EACH	$19.00
3022	Fiber MM OM4 Patch/Jumper Cord- 2M/7' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-2MG	EACH	$22.00
3023	Fiber MM OM4 Patch/Jumper Cord- 3M/10' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-3MG	EACH	$24.00
3024	Fiber ID/ Label Tags (Labor and Material/Eqmt. to Install)	Panduit	PST-FO	EACH	$35.00
3025	Fiber Fusion Splicing/ Fiber Fusion Splicing Heat Shrink Sleeves (Labor and Material/Eqmt. to Install)	Corning	2806031-01	EACH	$2.00
3026	Fiber Fan-out Kit (Labor and Material/Eqmt. to Install)	OCC	HCBK12-24900	EACH	$44.00
3027	FG8-6S48 Fiber Splice Case Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-6S48	EACH	$1,142.00
3028	FG8-2S Fiber Splice Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-2S	EACH	$848.00
3029	FG8-6S Fiber Splice Case Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-6S	EACH	$1,050.00
3030	FGT-24S Splice Tray for 24 Fibers (Labor and Material/Eqmt. to Install)	OCC	FGT-24S	EACH	$84.00
3031	FGT-48S Splice Tray for 48 Fibers (Labor and Material/Eqmt. to Install)	OCC	FGT-48S	EACH	$99.00
3032	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-1H	EACH	$70.00
3033	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-2H	EACH	$70.00
3034	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-4H	EACH	$70.00
3035	Fiber Test SM Per Fiber Strand w/Reports (Detail and Summary) (Labor and Material/Eqmt. to Install)	Labor	Labor	EACH	$15.00

The Bidder understands and agrees that if a Contract is awarded, the City may elect to award all schedules under one Contract, lump sum, separately, or in any combination that best serves the interests of the City.

The Bidder further declares that he has carefully examined the Contract documents for the construction of the Project and has checked and verified the completeness of the Contract Documents that he has personally inspected the site that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved. Bidder further declares that he is fully aware of the fact that the description of the work, quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents. Bidder also declares that this Proposal is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Proposal.

The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

START OF CONSTRUCTION AND CONTRACT COMPLETION TIME: The Bidder further agrees to begin work on the date stated in the Notice to Proceed and to fully complete the work, in all respects, within the time specified in the contract documents for completion.

EXPERIENCE OF BIDDER: Unless advised by the awarding authority in the Advertisement for Bids that the same is not required, the Bidder submits the following list of at least three clients for whom projects involving construction of similar projects have been performed within the past 5 years.

1. SOUTHERN COMPANY — 205-992-6412
   Name of Client — Telephone Number

   42 INVERNESS CENTER PKWY — BIRMINGHAM, AL
   Street — City

   CORPORATE OFFICES — $100,000.00 — 7-15-15
   Facility — Size — Date

   JEFFCOAT & ASSOCIATES LLC — 205-481-1100
   Name of Engineer/Architect /Engineering Firm — Telephone Number

2. HONDA — 205-919-8146
   Name of Client — Telephone Number

   1800 HONDA DR — LINCOLN, AL
   Street — City

   MANUFACTURING — $350,000.00 — 9-10-14
   Facility — Size — Date

   HONDA NORTH AMERICA — 205-919-8146
   Name of Engineer/Architect /Engineering Firm — Telephone Number

3. ALABAMA POWER — 205-257-5655
Name of Client — Telephone Number

2770 GUNTER PARK DR E — MONTGOMERY, AL
Street — City

APCO HEADQUATERS — $85,000.00 — 4-10-15
Facility — Size — Date

PWBA-ARCHITECTS INC — 334-244-4990
Name of Engineer/Architect/Engineering Firm — Telephone Number

PERFORMANCE OF WORK BY CONTRACTOR: The Bidder shall perform at least 50 percent of the work with his own forces (refer to the INSTRUCTIONS TO BIDDERS).

SUBCONTRACTORS: Unless the same information has been provided in the prequalification statement, the Bidder further certifies that if his bid is accepted, the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work:

Description of Work N/A

Name

Street, City, State, Zip

Description of Work

Name

Street, City, State, Zip

Description of Work

Name

Street, City, State, Zip

Description of Work

_____
Name

_____, _____, _____
Street City State Zip

SURETY: If the Bidder is awarded a construction contract on this Proposal, the Surety who provides the Performance Bond and Payment Bond will be:

TRAVELERS CASUALTY AND SURETY COMPANY OF AMERICA Whose address is

770 PENNSYLVANIA DR. STE 110, EXTON PA, 19341
Street City State Zip

Single Job Bond Limit _____ Aggregate Job Bond Limit _____

If Sole Proprietor or Partnership:

IN WITNESS hereto the undersigned has set his (its) hand this 10TH day of MAY _____, 20 16.

Mike Dougherty
Signature of Bidder
PROJECT MANAGER
Title

If Corporation:

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers, this _____ day of _____ _____, 20_____.

_____
Name of Corporation

By_____

(seal)

_____
Title

Attest _____
Secretary

****

The Bidder declares that he understands and agrees that the quantities shown in the Advertisement for Bids and in the Proposal are approximate only and are subject to either increase or decrease; and that should quantities be decreased, he also understands and agrees that payment will be made on actual quantities installed at the unit bid prices, and will make no claim for anticipated profits for any decreases in the quantities. Actual quantities will be determined upon completion of the work.

Attached hereto is a (Bid Bond) or (Check) for the sum of EIGHT THOUSAND NINE HUNDRED TWELVE DOLLARS AND FIFTEEN CENTS according to the conditions under "Instructions to Bidders" and provisions therein.

Dated this 10TH day of MAY, 20 16.

BY: Scott Ca

Managing Member
Title

(NOTE) If the Bidder is a corporation, the Proposal shall be signed by an officer of the corporation; if a partnership it shall be signed by a partner. If signed by others, authority for signature shall be attached.

[END OF BID PROPOSAL—OFFICE OF THE CITY ATTORNEY]

Jeffcoat & Associates, LLC
5610 Shirley Park Drive
Bessemer, AL 35022

2323
61-650/620

DATE 05-10-2016

PAY TO THE ORDER OF CITY of TUSCALOOSA $ 8912.15

Eight thousand nine hundred twelve and fifteen cents DOLLARS

Security features included. Details on back.

Servis 1st Bank
SERVISFIRST BANK
850 SHADES CREEK PARKWAY
SUITE 200
BIRMINGHAM, AL 35209

MEMO ref. project A16-0307

Scott Cicero

MP

⑈002323⑈ ⑆062006505⑆ 1110109897⑈

STATE OF ALABAMA)
TUSCALOOSA COUNTY)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION FOUR
BID BOND TO THE CITY OF TUSCALOOSA, ALABAMA
(2015)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ _____ as Principal; and _____ _____ as Surety, (**NOTE:** If cashier's check drawn on an Alabama Bank utilized in lieu of corporate surety, attach check as required by bid documents) are hereby held and firmly bound unto the City of Tuscaloosa, Alabama, a Municipal Corporation, as obligee, hereinafter called the City, in the sum of _____ Dollars ($ _____) for the payment of which sum, well and truly to be made, the said Principal and Surety hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the City a certain Bid (Proposal), attached hereto and made a part hereof, to enter into a contract in writing with the City, for the following Project or portion thereof:

Project: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

Location: TUSCALOOSA, ALABAMA

Architect or Engineer: WALKER ASSOCIATES, INC.

Project Number: A16-0307

NOW, THEREFORE,

(a) If said Bid shall be rejected, or in the alternate,

(b) If said Bid shall be awarded and the Principal shall execute and deliver a contract in the Form of Agreement as included in the Contract Documents for the Project, and shall execute and deliver Performance Bond and Payment Bond in the Forms as attached to the Contract Documents executed by a surety company authorized and qualified to make such bonds in the State of Alabama and in the amounts as required by the Instructions to Bidders and submit the insurance certifications as required by the bid document and fulfill all other qualifications and requirements of the Contract Documents and bid specifications (all properly completed in accordance with said Bid), and shall in all other respects perform the agreement created by the acceptance of said Bid within thirty (30) days after the prescribed forms have been presented to Bidder for execution;

Then, this obligation shall be void, otherwise, the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all default of the Principal hereunder shall be the amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall in no way be impaired or affected by any extension of the time within which the City may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the above-bonded parties have executed this instrument under their several seals, this the _____day of _____, 20____ 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.

WITNESS:

_____

PRINCIPAL:

_____(SEAL)

By: _____

Title: _____

Address: _____

_____

SURETY:

_____(SEAL)

_____

(Business Address)

_____

ATTEST:

_____

By:_____

Title:_____

Attorney in Fact

NOTE: Surety must be qualified and duly authorized to make bonds in the state. All Bonds and Sureties are subject to review and approval by the City Attorney. Valid current Power of Attorney for Corporate Surety must be attached.

NOTE: Bidder may submit a cashier's check drawn on an Alabama bank to the order of the City of Tuscaloosa equal to 5% of the amount bid, in lieu of a Corporate Surety, under the same terms.

[END DOCUMENT—OFFICE OF THE CITY ATTORNEY]

STATE OF ALABAMA

BID LIMIT: U

AMOUNT: UNLIMITED

LICENSE NO.: 38769

TYPE: RENEWAL

State Licensing Board for General Contractors

THIS IS TO CERTIFY THAT

JEFFCOAT & ASSOCIATES LLC

BESSEMER, AL 35022

is hereby licensed a General Contractor in the State of Alabama and is authorized to perform the following type(s) of work:

BC-S: BUILDING MAINTENANCE REPAIR, BC-S: REMODELING AND ALTERATION, E-S: LOW VOLTAGE, M-S: HEATING, VENTILATION, AND AIR CONDITIONING

until **March 31, 2017** when this Certificate expires.

Witness our hands and seal of the Board, dated Montgomery, Ala.,

1st day of **March, 2016**

120130

SECRETARY-TREASURER

CHAIRMAN

CITY OF TUSCALOOSA

BUSINESS LICENSE

EXPIRES DECEMBER 31, 2016

THIS LICENSE IS NOT TRANSFERABLE
OWNERSHIP CHANGE REQUIRES NEW LICENSE
LOCATION CHANGE REQUIRES APPROVAL

ACCOUNT ID: 005149
ISSUE NO: 3819
ISSUE DATE: 02/05/2016

2016

NAICS: 238221
CATEGORY: CONTRACTOR
TYPE: HVAC (CERTIFIED)

LICENSED LOCATION:
GREG HAMRICK
5610 SHIRLEY PARK DR
BESSEMER, AL 35022

JEFFCOAT & ASSOCIATES, LLC
GREG HAMRICK
5610 SHIRLEY PARK DR
BESSEMER, AL 35022

LINDA S. MCKINNEY
DIRECTOR OF REVENUE

WALTER MADDOX
MAYOR

****RENEW BEFORE FEBRUARY 15TH 2017 TO AVOID PENALTIES****

BUSINESS COPY / BUSINESS LICENSE RECEIPT

PLEASE POST TOP PORTION IN A VISIBLE LOCATION	CITY OF TUSCALOOSA REVENUE DEPARTMENT P O BOX 2089 TUSCALOOSA, AL 35403 PHONE: (205) 248-5200 FAX: 205-349-0180 www.tuscaloosa.com

BUSINESS: JEFFCOAT & ASSOCIATES, LLC
GREG HAMRICK
5610 SHIRLEY PARK DR
BESSEMER, AL 35022

NAICS:	238221	AMOUNT:	350.00
CATEGORY:	CONTRACTOR		
TYPE:	HVAC (CERTIFIED)	SUB TOTAL:	350.00
ACCOUNT ID:	005149	ISSUE FEE:	5.00
ISSUE NO:	3819		
ISSUED BY:	MJC		
ISSUE DATE:	02/05/2016	AMOUNT PAID:	355.00

OPTICAL CABLE CORPORATION

Multimedia Design & Integration Specialist (MDIS)
Certification Program

Jeffcoat & Associates, LLC

Has completed training on Copper Category and Fiber Optic standards, testing methods, and OCC fiber optic and copper cable and connectivity product installation practices and
Entitles the Certified OCC MDIS Installer to offer end users a
25 Year Performance Assurance Warranty on Fiber Optic and Copper Applications

OCC MDIS
CERTIFIED INSTALLER

Certificate Number: O01-0115-080415
Certified by: Optical Cable Corporation
Certificate Date: August 2015 – August 2016

Gina Knapp

Gina Knapp
MDIS Administrator

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION FIVE
CONTRACT AGREEMENT
(2015)

THIS AGREEMENT made and entered into this 27th day of May, 20 16, by and between Jeffcoat and Associates, LLC., hereinafter sometimes called the CONTRACTOR, as party of the first part, and the CITY OF TUSCALOOSA, Alabama, a Municipal Corporation, hereinafter sometimes called the CITY or OWNER, as party of the second part,

W-I-T-N-E-S-S-E-T-H:

In consideration of the amounts herein named and of the mutual agreements and provisions herein contained, the Contractor and the City agree in regard to a public works project (hereinafter either the "work" or the "Project") as described in the Advertisement for Bids.

The Contractor will perform the work and/or construct the Project as well as furnish at his own cost and expense all labor, tools, equipment and transportation as are herein and in the Contract documents required to be furnished by the Contractor, and shall perform all the work in a manner and form required to construct the Project described in and shown on the contract documents as the same are hereinafter more specifically described and as provided by the plans, specifications and documents which are attached hereto and made a part hereof, as if fully set out herein and addenda together with all plans and drawings on file in the office specified below.

ARTICLE I. GENERALLY

A. **Contract Documents:** As used throughout the documents constituting the contract, the term "Contract Documents" shall mean and include the following: Advertisement for Bids, Addenda (if issued), the Instructions to Bidders, the Bid Proposal, the General Specifications, the Detail Specifications, Supplemental and Special Conditions (if attached), together with this Contract Agreement and any modifications, including change orders, if made, and the drawings, plans and profiles that are now on file in the office referred to in the advertisement, the Performance Bond and the Labor and Material Bond, executed by the Contractor in connection with this Contract and insurance requirements and certificates.

All such documents hereinabove enumerated are adopted herein by reference and constitute the Contract between the parties to the same extent as if each were set out in full in this agreement.

B. **Independent Contractor:** The Contractor enters into this Contract with the City as an independent contractor and, as such, agrees that neither the City nor its officers, agents, employees or inspectors shall be responsible for the acts or omissions of the Contractor, or any subcontractor, or any of the Contractor's or subcontractor's agents or employees, or any other persons performing any of the work pursuant to this Contract. The Contractor shall be solely responsible for controlling construction manner, means and techniques consistent with the contract documents, plans and specifications.

C. **Order of Precedence:** Should there be a direct conflict between the various elements of the contract documents to the extent that the same cannot be reconciled to be read *in para materia,* then precedence shall be given the same in the following order:

1. Subsequent modifications (change orders or amendments) to contract agreement after execution
2. Addenda (if issued)
3. Supplemental general conditions and special conditions (if included)
4. The Contract Agreement
5. General and technical specifications
6. Large Scale Drawings (if included)
7. Enlarged Plans (if included)
8. Plans (if included)
9. Instructions to bidders
10. Advertisement for bids
11. Proposal (Bid)
12. Purchasing Agent Appointment Agreement (if utilized)

Where more than one document relates to the same matter if both can be given reasonable effect both are to be retained. Written specifications will take precedence over drawings.

D. **Integration; Contract Terms and Construction:**

1. Integration: This Agreement, together with all documents which constitute the "Contract Documents," constitute the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.
2. Amendment in Writing: This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement or change order, in writing, properly executed by all of the parties.
3. Binding Effect: This Agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.
4. Captions: The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.
5. Construction: This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.
6. Mandatory and Permissive: "Shall," "will," and "agrees" are mandatory; "may" is permissive.
7. Governing Laws: The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.
8. Ownership of Contract Documents: The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the design professional. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City and Engineer/Architect harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

E. **Rules of Construction:** For the purposes of this contract, except as otherwise expressly provided or unless the context otherwise requires:

1. Words of masculine, feminine or neuter gender include the correlative words of other genders. Singular terms include the plural as well as the singular, and vice versa.
2. All references herein to designated "articles," "sections," and other subdivisions or to lettered exhibits are to the designated articles, sections and subdivisions hereof and the exhibits annexed hereto unless expressly otherwise designated in context. All article, section, other subdivision and exhibit captions herein are used for reference only and do not limit or describe the scope or intent of, or in any way affect this agreement.
3. The terms "include," "including," and similar terms shall be construed as if followed by the phase, "without being limited to".
4. The terms "herein," "hereof," and "hereunder," and other words of similar import refer to this agreement as a whole and not to any particular article, section, other subdivision or exhibit.
5. All recitals set forth in, and all exhibits to, this agreement are hereby incorporated in this agreement by reference.
6. No inference in favor of or against any party shall be drawn from the fact that such party or such party's counsel has drafted any portion hereof.
7. All references in this agreement to a separate instrument are to such separate instrument as the same may be amended or supplemented from time to time pursuant to the applicable provisions thereof.

F. **Construction Manager - Multiple Trade Contracts**: If indicated in the Advertisement for Bids, the City has elected to engage the services of a Construction Manager for the work on this Project. If so, the same will be indicated in the bid packages and special supplemental conditions will be attached in regard to trade contracts. Contractor, as one of the multiple trade contractors on the Project shall adhere to all terms and conditions of the contract documents, particularly the supplemental conditions regarding multiple trade or multiple prime contractors. Any provision of the general conditions in direct conflict with the supplemental conditions is superseded to the extent of the conflict. If using a Construction Manager format, then this shall be a multiple trade or multiple prime contract agreement subject to the supervision and direction of a Construction Manager, in accordance with the terms and provisions of the Construction Manager's agreement with the City, which agreement is adopted herein by reference.

G. **Coordination of Plans, Specifications, etc.:** The specifications, the plans, drawings and all supplementary documents are essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to be comprehensive to describe and provide a complete work. In case of discrepancy, figured dimensions shall govern.

H. **Corrections of Plans, etc.:** Should any portions of the plans, specifications or drawings be obscure or in dispute, they shall be referred to the Engineer/Architect and he shall decide as to the true meaning and intent. The Engineer/Architect shall also have the right to correct any errors or omissions at any time when such corrections are necessary for the proper fulfillment of said plans and specifications.

I. **Taxes and Charges:** Except to the extent the City and the Contractor are utilizing a "Purchasing Agent Appointment agreement," Contractor shall withhold and pay all sales and use taxes and all withholding taxes, whether local, state or federal and pay all Social Security taxes and also all State Unemployment Compensation taxes, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever, which are now or may hereafter be required to be paid or withheld under any laws. Pursuant to Ala. Code §39-1-3 (1975), Contractor shall be reimbursed for any additional severance, sales or uses taxes incurred as a result of an increase in such taxes during performance of the contract.

J. **Shop Drawings and Submittals.** The Contractor shall submit shop drawings, samples and submittals depicting or representing the construction of portions of the Project in accordance with the plans and specifications to the Engineer/Architect and if there is no Engineer or Architect on the Project, to the City representative. The Contractor

shall pay for or the cost may be withheld from payments to the Contractor for more than two (2) reviews of the shop drawings, samples or submittals or similar element of work by the Engineer, Architect or City representative.

K. **Alabama Immigration Law.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

L. **Compliance with Affordable Health Care Act.** By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal compliance laws pertaining to the Affordable Health Care Act. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom, to the extent allowed by Federal law.

ARTICLE II. PAYMENTS, CLAIMS AND CHARGES, ETC.

A. **Contract Price:** The City will pay and the Contractor will accept in full consideration for the performance of the work/Project, subject to additions and deductions (including but not limited to liquidated damages) as provided in the contract documents and herein, the sum of one hundred seventy eight thousand two hundred forty three and 00/100 ($ 178,243.00) and/or in unit prices as shown in Bidder's schedule for the base bid amount of $ 178,243.00 , being the amount of the Contractor's bid as awarded by the City.

B. **Estimated Quantities and Unit Prices:** If award was made in whole or in part based upon unit prices, the Contractor agrees that the prices given in the Proposal are unit prices. The estimated quantities as stated in the Advertisement for Bids and in the Proposal and as indicated on the plans or in other places are approximate only, are subject either to increase or decrease and are only for the purpose of comparing on uniform basis the bids offered for the Project under this contract. The Contractor further agrees that should the quantities of any of the items of the work be increased, he will do the additional work at the unit prices set out in the Proposal and should the quantities be decreased, payment will be made on actual quantities at the unit prices and he will make no claim for anticipated profits for any decrease in the quantities. Actual quantities will be determined upon completion of the Project.

C. **Overtime Work by Contractor:** If the Contractor for his convenience and at his own expense should desire to carry on his work at night or outside regular hours, he shall submit written notice to the Engineer/Architect and he shall allow ample time for satisfactory arrangements to be made for inspecting the work in progress. At no time shall the notice be given less than 24 hours before such overtime work is started. The Contractor must obtain, through the Engineer/Architect, the City's approval for work at night, on Saturdays, Sundays or legal holidays. The Contractor shall light the different parts of the Project as required to comply with all applicable federal and state regulations and with all applicable requirements of the City.

Overtime hours shall be considered any hours worked by the Contractor on Saturday, Sunday and legal holidays, which in the Engineer/Architect's opinion requires the Engineer/Architect's resident observers' presence to observe such overtime work. Overtime hours requiring the presence of City inspectors shall be considered any hours worked by the Contractor in excess of eight (8) hours during any working day and/or in excess of forty (40) hours from Monday through Friday and/or any time on Saturday, Sunday or legal holiday. In general, it should be expected that the Engineer/Architect's resident observer(s) or City's inspectors will be present at all times that the Contractor is working.

If the Contractor elects to schedule and perform overtime work, the Contractor shall pay the City for the City's resident inspector's salary plus costs for each hour of overtime work. Overtime shall be rounded up to the nearest whole hour. This amount shall include the inspector's salary at overtime rate, labor additive, which includes insurance, social security, workmen's compensation, sick pay, paid holidays, vacation pay and his vehicle and equipment.

Payment to the City shall be made by a deduction from the Contractor's monthly payment invoice for any overtime worked.

D. **Payments on Account/Payments Withheld/Retainage:** Upon presentation of a verified application for payment, which shall include a "Contractor's Affidavit of Payment of Debts and Claims," AIA Form G706 or equivalent, then usually by the fifteenth (15th) day of each calendar month or as soon thereafter as is practical, as the Project progresses, the City shall make partial payments to the Contractor of the billable work performed less payments already made and less deductions for any incomplete, unaccepted or defective work. In making partial payments to the Contractor, there shall be retained five (5%) percent of the estimated amount of work done and value of materials stored on the site or suitably stored and insured off-site. Provided; however, after fifty (50%) percent of the Project has been satisfactorily completed, no further retainage will be withheld.

Retainage shall be held until final completion and acceptance of all work covered by the Contract Documents unless escrow or deposit arrangements are agreed to by the City. When maintenance periods are included in the Contract Documents covering highways, bridges or similar structures, such period shall be considered a component part of the contract and retainage will be held until the expiration of such periods.

On completion and acceptance of each separate building, public work or other separately identifiable and complete division of the Project in regard to which a separate price has been stated in the Contract Documents or can be separately ascertained, payment may be made in full including retainage but less deductions. Provided; however, the City will not consider making such payment on any such item of work if it is an integral part of a complete project.

All materials and work covered by partial payments as provided for herein shall become the sole property of the City; provided, however, the Contractor shall not be relieved from the sole responsibility for the care and protection of materials and work upon which payments have been made and for the restoration of any damaged work.

The City may also withhold from time to time from payment to the Contractor such an amount or amounts as may be necessary to pay and fully satisfy all claims and demands for labor and services rendered in and about the Project, including any such amount or amounts due to be paid to or by any subcontractor or supplier, amounts for City's or Engineer/Architect's observers or inspectors for contractors' overtime as herein provided, or for engineering or design services associated with Contractor initiated change orders or submittals in excess of that permitted herein. The Contractor hereby authorizes the City as its agent, to apply such amounts so withheld to the payment of any amount so due to be paid and all other just and lawful claims other than claims for damages for tort. In case of disagreement with reference to any such claim or claims, the City may keep such amounts so withheld on account of such claim or claims until such disagreement is finally settled and determined.

In addition, the City may also withhold payment of the whole or any part of a verified or approved application for payment from the Contractor to such an extent as may be necessary to protect itself from loss on account of any of the following causes discovered subsequent to its verification or approvals:

1. Defective work.
2. Evidence indicating probable filing of claims by other parties against the Contractor.
3. Failure of the Contractor or subcontractor to promptly make payments to subcontractors or for materials, labor, food stuffs and supplies.
4. Damage to another contractor under separate contract with the City.
5. Assessment of liquidated damages.

When the above grounds are removed, applications for payment will then be verified and/or approved for amounts not previously verified and approved because of them.

The Contractor shall not attempt to withdraw at any time during the term of this contract or any extensions thereof, without the expressed written consent of the City, the whole or any part of the amounts so retained by the City from payments due the Contractor by the establishment of an escrow account or by depositing securities in lieu thereof, pursuant to Ala. Code §39-2-12(e) or (f), or any amendments thereto or any equivalent law, ordinance or regulation. It is expressly agreed between the parties hereto that should the City elect not to consent to the same, then the Contractor shall not elect to, attempt to or in any manner endeavor to withdraw such retained amounts.

E. **Claims for Extra Cost:** If the Contractor claims that any instructions by drawings or otherwise involve extra cost or any extension of time, he shall notify the City in writing within ten (10) days after the receipt of such instructions and in any event before proceeding to execute the Project. Thereafter, the procedure shall be the same as that for change orders. No such claim shall be valid unless made in accordance with the terms of this section. There shall be no damages for delay.

Except as otherwise herein provided, no charge for any extra work will be allowed unless the same has been duly authorized in writing by the City and the price stated in such order.

F. **Differing Site Conditions:** If, in the performance of the Contract, subsurface or latent conditions are found to be materially different from those indicated by the plans and specifications, or unknown conditions of an unusual nature are disclosed differing materially from conditions usually inherent in work of the character shown and specified, the Contractor shall immediately notify the Engineer/Architect in writing regarding such conditions but in no event later than forty-eight (48) hours after discovery of such conditions by the Contractor.

The written notice shall describe the conditions, and other pertinent information, in no event shall such notice be later than forty-eight (48) hours before such conditions are disturbed. Upon such notice, or upon such observation of conditions, the Engineer/Architect will promptly make such changes in the plans and/or Specifications as he finds necessary (if any are necessary) to conform to the different conditions, and any increase or decrease in the cost of the Project resulting from such changes may be adjusted as provided under Change Orders or Claims for Extra Cost as set forth in the Contract documents.

G. **Change Orders:** Change orders shall be allowed only under the following conditions: 1) Minor changes for a total monetary amount less than that required for competitive bidding; or 2) Changes for matters incidental to the original contract necessitated by unforeseeable circumstances arising in the course of work under the contract; or 3) Changes due to emergencies; or, 4) Changes provided for in the original bidding and original Contract Documents as alternates; 5) Changes of relatively minor items not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and generally do not exceed 10 percent of the Contract Price, subject to Alabama Bid Law exceptions.

The Contractor or successful bidder is expected to complete the Project as bid and specified within the financial parameters stated therein. However, if it shall be determined that a change order condition possibly exists in any given case during the performance of the contract, the Contractor shall promptly notify in writing the representative of the City and shall not implement such change until having notified the representative of the City. If the change is minor in the opinion of the representative of the City and does not involve, 1) an adjustment in the contract sum or construction bid price, or 2) result in extension of the contract time, or 3) a material change in the contract scope of services, then the City representative may authorize the change in writing to the Contractor. The Contractor shall not perform such change until receipt of such written change order.

In the event the change order requested by the Contractor involves, 1) an increase in the contract sum or construction bid price, 2) extend the contract time, or 3) materially change the Contractor's scope of work or services, then the Contractor shall request a change order in writing and present the same to the City representative. The representative of the City, shall determine whether this is a change order which can be allowed and, if so, what exception it would fall under. The representative of the City shall then document the same, attach the same to the

Contractor's request for a change order and submit the same with his recommendation to the City Council at its next or any subsequent regularly scheduled Council meeting for approval.

The City reserves the right to institute change orders as the Owner pursuant to the aforesaid terms and conditions.

In no event is a change order to be executed by the Contractor prior to approval thereof by the City, except for emergencies.

H. **Determination of Adjustment of the Contract Sum:** The adjustment of the Contract Sum resulting from a change in the Work shall be determined by one of the following methods as determined by Owner:

1. By mutual agreement to a lump sum based on or negotiated from an itemized cost proposal from the Contractor.
2. Additions to the Contract Sum shall include the Contractor's direct costs plus a maximum 15% markup for overhead and profit. Where subcontract work is involved, the total mark-up for the Contractor and a subcontractor shall not exceed 25%. No allowance for overhead and profit shall be figured on a change which involves a net credit to the Owner. For the purposes of this method of determining an adjustment of the Contract Sum, "overhead" shall cover the Contractor's indirect costs of the change, such as the cost of bonds, superintendent and other job office personnel, watchman, job office, job office supplies and expenses, temporary facilities and utilities, and home office expenses.

I. **Construction Schedule and Periodical Estimates:** Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the City and Engineer/Architect and Construction Manager, a construction schedule in a form satisfactory to the City or Construction Manager, which may include CPM for all major trades, showing the proposed dates of commencement and completion of each of the various activities, of work required under the Contract documents, the interrelationship of each activity, sequences, resources for each and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish (1) a detailed estimate giving a complete breakdown on the contract price and (2) periodical itemized estimates of the work done for the purpose of making partial payments, however the same will not be considered as fixing a basis for additions to or deductions from the contract price. Scheduling is particularly critical if Contractor is a trade contractor and adherence to the Construction Manager progress schedule is required.

NOTE: Depending upon the complexity of the work the City may require CPM or equivalent meeting all criteria above.

J. **Sales and Use Tax Savings:** Pursuant to the invitation for bids, sales and use taxes are not to be included in the bid. The project will be administered in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption. The estimate sales and use tax saving must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings may render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor shall be considered in the determination of the lowest responsible and responsive bidder

ARTICLE III. TIME

A. **Time for Completion/Delays:** The Contractor hereby agrees to commence work under this contract on the date to be specified in a written "Notice to Proceed" of the Engineer/Architect or thirty (30) days from the date of contract execution if no notice is issued, and to fully complete the Project within 120 consecutive calendar days thereafter. If this is a trade contract, then the Contractor shall perform within the time periods and at the times as established by the Construction Manager's approved construction schedule for the project. The Contractor further agrees to pay to the City, liquidated damages for each consecutive calendar day thereafter as hereinafter provided. Time is of the essence and a material element to this agreement.

NOTE: When maintenance periods are included in the contract for highways, bridges or similar structures, such periods shall be considered component parts of the contract. To the extent the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

Delay: If the Contractor is delayed at any time in the progress of work by any of the following causes, the Contractor may be entitled to a reasonable extension of time as determined by the City in which to complete the Project. Provided, however, no such delay nor the extension of time if granted shall be grounds for a claim by the Contractor for damages or for additional cost, expenses, overhead or profit or other compensation:

1. Fires, abnormal floods, tornadoes or other cataclysmic phenomenon of nature.
2. Strikes, embargoes, lockouts, war, acts of public enemy.
3. Change orders.
4. Acts of performance or delays in performance by other contractors employed by the City or their subcontractors.
5. Causes beyond the control of the Contractor.

Provided further, that the Contractor shall immediately give notice in writing to the City and follow extension of time procedures as provided for herein. The City expressly disclaims any liability to Contractor for any cost, expense or damage caused by other contractors, subcontractors or suppliers, including those engaged by the City. The City shall not be liable for damages or cost to the Contractor sustained due to any interference from utilities or appurtenances or from the operations of relocating the same.

B. **Extensions of Time:** All written requests for extensions of time must be submitted to Engineer/Architect within ten (10) days after the occurrence of the cause for delay. The Engineer/Architect shall ascertain the facts and the extent of the delay and shall recommend to the City Council whether it should extend the time for completing the Project. Any extension of time shall be in writing and processed as a change order.

For change orders requesting extensions of time due to rain, wind, flood or other natural phenomenon, the Contractor's written request must be accompanied, at the City's request, by a detailed report of weather at this site for the last ten (10) years with averages showing means and statistical deviations from mean averages to support request for extension.

No extension shall be made for delays due to rain, wind, flood or other natural phenomenon of normal intensity for the locality.

In the event any material changes, alterations, or additions are made as herein specified, which in the opinion of the Engineer/Architect will require additional time for execution of any work under the contract, then in that case, the time of the completion of the Project may be extended through change order. No extensions of time shall be given for any minor changes, alterations or additions. The Contractor shall not be entitled to any reparation or compensation on account of such additional time or extensions of time. To the extent that the construction schedule contains "float," the parties agree that the same belongs to the Project and may be utilized by either party.

C. **Right of the City to Terminate Contract:** If the Contractor should be adjudged as bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed for the Contractor or any of its property, or if it should persistently or repeatedly refuse or fail to supply enough properly skilled workmen or if it should refuse or fail to make prompt payment to persons supplying labor for the Project under the Contract, or persistently disregard instructions of the Engineer/Architect or fail to observe or perform any provisions of the Contract documents, or fail or neglect to promptly prosecute or perform the Project in accordance with the contract documents or otherwise be guilty of a substantial violation of any provision of the Contract documents, then the City may, on giving at least thirty (30) days' written notice to the Contractor, without prejudice to any other rights or remedies of the City in the premises, terminate the Contractor's right to proceed with the Project. In such event, the City may take over the Project and prosecute the same to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any and all excess cost occasioned to the City thereby, including attorney's fees; and in any such case, the City may take possession of and utilize in completing the Project such appliances and plant of the Contractor or its subcontractors as may be on the site work and necessary or useful thereof. In the event of termination, the same shall not relieve the Contractor nor any of its sureties of their obligation pursuant to this agreement. In the event it becomes necessary for the City to maintain any legal action against the contractor, to enforce its rights herein, the Contractor shall pay the City all expenses associated therewith including a reasonable attorney's fee.

Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement. Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as are permitted by the prime contract and approved by Owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit.

D. **Liquidated Damages:** Should the work under this contract not be completed within the time specified, scheduled or as extended, it is understood and agreed that there may be deducted by the City or Engineer/Architect from the partial and/or final payments to the Contractor or otherwise charged to the Contractor, a sum computed at the rate of Two Hundred Dollars ($200.00) per day beginning from the stated or extended date of completion and continuing for so long as the Project remains incomplete. It is understood and agreed that the above deduction is not a penalty, but money due to reimburse the City/Owner for inconvenience and damage to the general public, due to the delay in the completion of the Project and is reasonable. The collection of liquidated damages by the City shall not constitute an election or waiver by the City of recovery of additional delay or non-delay related damages from the Contractor, and the City expressly reserves the right to recover actual damages for other harms resulting from delay. The provisions of the liquidated damage clause shall apply and continue to apply even if the Contractor terminates or abandons the Project prior to the scheduled completion dates.

The amounts of such liquidated damages and actual damages incurred by reason of failure to complete the work stipulated in the Contract are hereby agreed upon as reasonable estimates of the costs which may be accrued by the City. It is expressly understood and agreed that these amounts are not to be considered in the nature of penalties, but as damages which have accrued against the Contractor. The City shall have the right to deduct such damages from any amount due, or that may become due the Contractor, or the amount of such damages shall be due and collectible from the Contractor or Surety.

ARTICLE IV. WORK AND MATERIALS

A. **Cooperation of Contractor:** The Contractor shall have available on the job site, at all times, at least one (1) copy of the plans and specifications if prepared for the Project.

He shall give the Project the constant attention necessary to facilitate the progress thereof and shall cooperate with the City, Engineer/Architect and with other Contractors in every way possible. The Contractor shall at all times have a superintendent, capable of acting as his agent on the Project, who shall receive communications from the Engineer/Architect or his authorized representatives or the City's authorized representative. The superintendent shall have full authority to give and execute orders relating to the Project without delay and to promptly supply such tools, plant equipment, materials and labor as may be required.

The City reserves the right to utilize its own forces on the site or those of another contractor and to communicate through its representative directly with the Contractor.

B. **Coordination - Trade Contractors:** If the supplemental conditions are attached to these general conditions indicating that this Project involves the use of multiple trade or multiple prime contractors under the supervision and direction of a Construction Manager employed by the City, then each such trade contractor shall cooperate and coordinate its construction activities and operations with those of other trade contractors and other entities involved in the Project and included under different sections of the specifications that are dependent upon each other in any manner for proper and correct installation, connection and operation, to assure efficient, prompt, orderly and proper installation of each part of the Project.

When utilizing trade contractors and/or multiple prime contractors under the supervision of Construction Manager cooperation and coordination of activities is extremely important. Refer to the provisions of the supplemental conditions for detailed requirements.

C. **Superintendence:** The Contractor shall assign to and keep at the Project site competent supervisory personnel. The Contractor shall designate, in writing, before starting work, an authorized representative who shall be an employee of the Contractor and shall have complete authority to represent, to receive notice for, and to act for the Contractor. The Contractor shall not permit or allow any work to be conducted upon the Project site without the presence of supervisory personnel. The Engineer/Architect shall be notified in writing prior to any change in superintendent assignment. Using his best skill and attention, the Contractor shall give efficient supervision to the Project. The Contractor shall be solely responsible for all construction means, methods, techniques, and procedures, for providing adequate safety precautions, and for coordinating all portions of the Project under the Contract. It is specifically understood and agreed that neither the Engineer/Architect nor the City shall not have control or charge of and shall not be responsible for the construction means, methods, techniques, or procedures, or for providing adequate safety precautions in connection with the Project under the Contract.

D. **Contractor's Tools and Equipment:** The Contractor's tools and equipment used on the Project shall be furnished in sufficient quantity and of a capacity and type that will adequately and safely perform the work specified, and shall be maintained and used in a manner that will not create a hazard to persons or property, or cause a delay in the progress of the Project.

E. **Furnishing Labor and Equipment:** The Contractor shall furnish and pay for all equipment, labor and supervision, and all such materials as required to be furnished in the Notice to Bidders and as may other-wise be necessary to the completion of the Project and the operation of each construction crew required.

F. **Employees:** The Contractor shall employ only competent, skillful workers on the Project, and whenever any person shall appear to be incompetent or to act in a disorderly, unsafe improper manner, such person shall promptly be removed from the Project by the Contractor.

G. **Materials and Appliances:** Unless otherwise stipulated, the Contractor shall provide and pay for all other materials, water, heating, lighting, fuel, power, transportation, machinery, appliances, telephone, sanitary facilities, temporary facilities and other facilities and incidentals necessary for the execution and completion of the Project.

The Contractor warrants to the City and the Engineer/Architect that, unless otherwise specified, all materials and equipment furnished under this contract shall be new, and both workmanship and materials shall be of good quality, free of faults and defects, and in conformance with the Contract Documents. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. In selecting and/or approving equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for injury or claims resulting from failure of the equipment to comply with applicable federal, state, and local safety codes or requirements, or the safety requirements of a recognized agency, or failure due to faulty design concepts, or defective workmanship and materials. Material and/or equipment damaged by flooding or other causes during the construction period shall be subject to rejection by the Engineer/Architect; reconditioning and/or repairing material and/or equipment is not acceptable.

H. **Asbestos and Hazardous Materials:** Unless specifically authorized and instructed to the contrary by the City, the Contractor shall not permit, allow, place, install or incorporate into the Project or upon the work site, any hazardous material(s), including, but not limited to, any products or materials that contain asbestos in any quantity. It shall be the responsibility of the Contractor to inspect all materials and products delivered for incorporation or installation in the Project to ensure that they contain no hazardous materials or asbestos. Where the Contractor or any subcontractor has or should have a reasonable suspicion that any product or material contains asbestos or other hazardous material, the Contractor shall immediately inspect the material or product, obtain a product or material data sheet, and notify the City's representative prior to installation or incorporation of the same into the Project. Any product or material determined to contain asbestos or other hazardous material shall be removed from the Project immediately and properly disposed of as required by law. Products or material to which the contractor should pay particular attention to avoid the presence of asbestos incorporated therein include, but are not limited to the following: concrete, batt insulation, roof insulation, building felts, mastics, water proofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe installation, duct installation and pre-assembled items of equipment.

At the completion of the Project, the Contractor shall submit a duly executed Asbestos Affidavit in the form as attached hereto prior to final payment.

The Contractor is responsible for insuring that all of its employees and subcontractors are adequately trained to handle hazardous materials in accordance with 49 CFR §172(g).

I. **Protection of Work and Property:** The Contractor shall furnish and install all necessary temporary works for the protection of the Project. The Contractor shall at all times adequately maintain, guard and protect his own work from damage, and safely guard and protect private, commercial, industrial, the City's and others' property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the plans or specifications or caused by agents or employees of the City.

The Contractor shall protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site which are not required to be removed or do not unreasonably interfere with construction, as may be determined by the Engineer/Architect, and be responsible for all cutting or damaging of trees and shrubs or grassed areas, including damage due to careless operation of equipment, stockpiling of materials or equipment.

Care shall be taken by the Contractor in felling trees that are to be removed to avoid any unnecessary damage to vegetation or other trees that are to remain in place. Any limbs or branches unavoidably broken during such operations shall be trimmed with a clean cut and painted with an approved tree priming compound. The Contractor may be required to replace or restore at his own expense all vegetation not protected and preserved, as above required, that may be destroyed or damaged.

The Contractor shall provide and maintain all passageways, guard fences, lights, and other facilities required for protection by federal, state or municipal laws and regulations or local conditions.

The Contractor shall comply with local and state regulations governing the operation of premises which are occupied and shall perform the contract in such a manner as not to interrupt or interfere with the operation of other facilities.

The Contractor shall store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the Project as will not unduly interfere with the progress of his work or the work of any other contractor.

Necessary crossings of curbings, sidewalks, roadways or parkways shall be protected against damage and any damage shall be repaired by or at the expense of the Contractor.

The Contractor shall not place upon the Project or any part thereof, loads inconsistent with the design or safety of that portion of the Project.

The Contractor shall provide and maintain access to all public and private properties at all times and be responsible for any damage caused by his operation to existing driveways, yards, streets, parking lots, utilities, railroads, etc., and such damage shall be corrected at the Contractor's expense. Roadways authorized closed by State or Local authorities shall be maintained to provide access to all fire, police, and other emergency vehicles and all individuals having private property in the closed area. The Contractor shall notify at least 24 hours in advance the Fire, Police, and Transportation Departments having local jurisdiction, the Owner and any other individuals, businesses, or agencies that may be affected.

J. **Protection of Existing Utilities**. Contractor shall be responsible for any damage to existing structures or the interruption of any utility services which shall be repaired or restored promptly by and at the expense of the Contractor.

To that extent, the Contractor shall provide whatever measures are necessary to properly protect and maintain all existing utilities encountered in the course of the work. The Contractor shall be exclusively responsible to the utility owner for any and all damages to the various utilities caused by the Contractor's actions or lack of actions to adequately protect the same.

The Contractor shall determine the exact location of all existing utilities before commencing work and agrees hereby to be fully responsible and liable for any and all damages which might occur by his failure to exactly locate and/or preserve the location of any and all underground or overhead utilities. The Contractor shall be solely and directly responsible to the utility owner for any and all damages to the various utilities, caused by the Contractor's actions or lack of actions to adequately protect such utilities. If any utilities are to be affected during the course of construction, the Contractor shall so notify the owners thereof at least seventy-two (72) hours prior to any such construction activity. The Contractor shall fully cooperate and coordinate with all utility owners in the event of an interruption to any utility service. The cost for locating, uncovering and protecting underground and/or overhead utilities is included within the Contractor's bid price for various other items of work.

The Contractor shall maintain all storm sewers, drains and/or ditches so that flow is not disturbed or impeded. The Contractor shall protect storm drains, inlets and/or ditches, lawns, landscaping and other facilities, from damage during the testing, and flushing.

K. **Limiting Exposures:** The Contractor shall prosecute the work on the Project to insure that no part of the construction, complete or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to the following:

Excessive static or dynamic loading
Excessive internal or external pressures
Excessively high or low temperatures
Thermal shock
Rodent and insect infestation
Combustion
Electrical Current
High speed operation

Excessively high or low humidity
Air contamination or pollution
Water or ice
Solvents
Chemicals
Light
Puncture
Abrasions
Heavy traffic
Soiling, staining and corrosion
Bacteria
Improper lubrication
Unusual wear or other misuse
Contact between incompatible materials
Destructive Testing
Misalignment
Excessive weathering
Unprotected storage
Improper shipping or handling
Theft
Vandalism

The Contractor shall minimize dust and air pollution through the use of water or other devices, require the use of properly operating combustion emission control devices and by encouraging the shutdown of construction vehicles when not in use.

L. **Safety:** The completed Project shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items as may be appropriate or required by law. Further, any feature of the Project (including City-furnished or City-selected equipment) subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. Contractors and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. Contractors shall notify all equipment suppliers and subcontractors of the provisions of this Article.

In selecting and/or accepting equipment for installation in the Project, neither the City nor Engineer/Architect assume responsibility for any personal injury, property damage, or any other damages or claims resulting from failure of the equipment to comply with applicable safety codes or requirements, or the safety requirements of a recognized agency, or failure due to manufacturer's faulty design concepts, or defective workmanship and materials. The Contractor shall indemnify and hold the City, Program Coordinator, and Engineer/Architect harmless against any and all liability, claims, suits, damages, costs, or expenses without limitation arising out of the installation or use of such equipment.

The Contractor shall take all necessary precautions for the safety of employees on the Project and shall comply with all applicable provisions of federal, state, and municipal safety laws and building codes to prevent accidents or injury to persons on or about or adjacent to the premises where the Project is being performed. He shall erect and properly maintain at all times, as required by conditions, and progress of the Project, all necessary safeguards for the protection of workmen and the public, and shall post danger signs warning against the hazards created by features of construction and the site.

Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the State Accident Prevention in Construction provisions to the extent that such provisions are not in contravention with applicable laws.

The Contractor shall do whatever work is necessary for safety and be solely and completely responsible for conditions of the jobsite, including safety of all persons (including but by no means limited to the public, site personnel, visitors, or employees) and property during the Contract period. The contract period shall include any subsequent warranty or other period associated with Project deficiency or repair and all hours including, and in addition to, normal working hours.

Safety provisions shall conform to the Federal and State Departments of Labor and the Occupational Safety and Health Act (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to

thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth therein.

The Contractor shall at all times provide proper facilities for safe access to the work by authorized government officials (federal, state, county and local) and representatives of the Owner.

M. **Traffic Control:** The Contractor shall be responsible for traffic control, including plan and devices to the extent the same is required due to work in, upon or in proximity to public right-of-way, streets, roads or vehicular traffic. The traffic control plan and all traffic control devices shall conform at a minimum to the Manual on Uniform Traffic Control Devices for Streets and Highways, Latest Edition, Federal Highway Administration. A copy of which is on file in the office of the City of Tuscaloosa Director of the Department of Transportation for examination. Copies may be obtained from the Alabama Department of Transportation. Should the appropriate public authority determine a greater degree of traffic control is required, then the Contractor shall promptly provide same. The Contractor shall submit a plan to the City Engineer for approval before commencing construction.

Reasonable means of ingress and egress by vehicular and/or pedestrian traffic to property adjacent to the Project shall be maintained at all times. The Contractor shall indemnify and hold the City harmless for any claims or causes of action including but not limited to those for inverse condemnation and/or lost profits arising out of or in any manner associated with access to or the restriction or prevention thereof to adjoining property. Traffic control and erosion control is of paramount importance during the construction of this Project and the terms and conditions in the contract documents in regard to these matters must be strictly adhered to.

N. **Responsibility to Act in Emergency:** In case of an emergency which threatens loss or damage to property, and/or safety, the Contractor shall act, without previous instructions from the City or Engineer/Architect, as the situation may warrant. The Contractor shall notify the Engineer/Architect thereof immediately thereafter. Any claim for compensation by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the City through the Engineer/Architect. The claim will be handled in accordance with the provisions for extra work. However, if the emergency is created or aggravated by the Contractor, he shall be liable for the resulting damages. If the Contractor fails to take necessary action as required by such an emergency, the City may assign another Contractor or use his own forces to perform the emergency work. Costs or damages arising from the failure of the Contractor to act in an emergency may be deducted from the Contractor's request for payment.

O. **Sanitary Regulations:** The Contractor shall provide and maintain such sanitary accommodations for the use of his employees and those of his subcontractors as may be necessary to comply with the requirements and regulations of the local and State Department of Health. At a minimum, necessary sanitary conveniences for the use of the laborers on the work shall be erected and maintained by the Contractor, in such a manner and at such points as shall be approved by the Engineer/Architect. Their use shall be strictly enforced. In the Construction Manager format, the City may provide sanitary accommodations through the Construction Manager.

P. **Cutting, Patching, etc.:** Unless otherwise stated in the contract documents, the Contractor shall do all necessary cutting, fitting and patching of the Project that may be required to properly receive the work, to make its several parts join together properly, receive and provide for the work of various trades, and be received by the work of other contractors, or as required by drawings and specifications to complete the Project. After such cutting, he shall replace or restore or repair and make good all defective or patched work as required by the Engineer/Architect. He shall not cut, excavate or otherwise alter any work in any manner or by a method or methods that will endanger the Project, adjacent property, workmen, the public or the work of any other contractor. The Contractor shall check the location of all sleeves, openings, slots, etc., for the piping, ducts, breeching, conduits, louvers, grills, fans, etc., as they are laid out on the job.

Provisions for openings, holes and clearances through walls, beams, floors, ceilings and partitions shall be made and checked by the Contractor and/or his subcontractor in advance of constructing such parts of the Project and unnecessary, superfluous or dangerous cutting shall be avoided.

Pipes passing through concrete or masonry walls shall be protected by pipe sleeves two sizes larger than the pipe, plus its installation to provide free movement.

Under no condition shall structural, framing or other parts or members subjected to computed stress be cut or disturbed without the approval of the Engineer/Architect. Any plates, studs or joists, and/or rafters that are approved to be cut to execute necessary work shall be securely strapped and braced to restore their strength by approved methods.

Unless otherwise indicated in Supplemental Conditions, all road crossings and/or driveways cut by the Contractor during the performance of the Project shall be returned to service as soon as possible and replaced or repaired within seven (7) calendar days.

All major thoroughfares must be repaired the same day as cut. The Contractor shall be responsible for the safety and welfare of the traveling public while construction work is being done and until the City accepts the Project.

The Contractor will replace at his own expense, all pipe and accessories that may be broken, damaged, stolen or lost and all materials that may become damaged, lost, stolen or misused.

The Engineer/Architect's approval shall be obtained before cutting or drilling holes in concrete or masonry that tend to damage or weaken the load capacity.

Q. **Trailers:** With the approval of the City or Engineer/Architect, the Contractor may park trailers or other structures for housing men, tools, machinery and supplies, but they will be permitted only at approved places and their surroundings shall be maintained at all times in a sanitary and satisfactory manner by the Contractor. On or before the completion of the Project, all such trailers or structures shall be removed, unless the City authorizes their abandonment without removal, together with all rubbish and trash, at the expense of the Contractor.

R. **Construction Staking:** If necessary, the Engineer or the City will furnish initial lines and grades to establish the initial horizontal and vertical control points and define the beginning and ending points of the Project. The Contractor is responsible for engaging the services of a qualified Engineer or land surveyor to replace and/or re-establish in accordance with the construction plans and/or specs, all construction stakes that are disturbed, displaced or destroyed during construction.

If the Contractor finds any errors or discrepancies with the construction staking or the criteria upon which it is based, he/she shall promptly notify the Owner's representative.

S. **Periodic Cleanup**: The Contractor shall periodically, at least weekly, or as requested during the progress of the Project, clean up and remove from the premises, all refuse, rubbish, scrap materials and debris caused by its employees or its subcontractors resulting from its work, to the end that all times the premises are sanitary, safe, reasonably clean, orderly and workmanlike. Trash and combustible materials shall not be allowed to accumulate inside buildings or elsewhere on the premises. At no time shall any rubbish be thrown from window openings, except during renovations with adequate precautions and into proper receptacles. The Contractor shall comply with all municipal litter and construction site ordinances.

Before the Project is considered as complete, all rubbish created by or in connection with the construction must be removed by the Contractor and the premises left in a condition by the Contractor satisfactory to the City. Street, curbs, crosswalks, pavements, sidewalks, fences and other public and private property disturbed shall be

restored to their former condition or better, and final payment will be withheld until such work is finished by the Contractor.

Contractor shall conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws. No burning or burying of rubbish or waste materials is permitted on the Project site. The Contractor shall dispose of any hazardous material in a safe manner, off site, in accordance with applicable laws and regulations and shall not dispose of volatile or hazardous waste in storm or sanitary sewer drainage ditches, streams or waterways.

Contractor shall periodically wet down dry materials and rubbish to lay dust and prevent blowing dust; and shall provide adequate and approved containers for collection and disposal of waste material, debris and rubbish, removing grease, dust, dirt, stains, labels, fingerprints and other foreign materials from exposed and semi-exposed surfaces.

T. **Termite Control.** If the Project involves construction of a building or if otherwise specifically required by the City, then the Contractor shall provide soil treatment for termite control under all interior slabs on grade and foundation walls, and as herein specified. Contractor shall also comply with manufacturer's instructions and recommendations for work, including preparation of substrate and application and shall engage a professional pest control operator, licensed in accordance with regulations of governing authorities for application of soil treatment solution and doing business in the state where the Project is located for a minimum of five (5) years.

Contractor shall not apply soil treatment solution until excavating, filling and grading operations are completed, except as otherwise required in construction operations. To insure penetration, the soil treatment will not be applied to frozen or excessively wet soils or during inclement weather. Contractor shall comply with all handling and application instructions of the soil toxicant manufacturer. The type of materials to be used for soil poisoning shall first be submitted to the City for approval.

The soil treatment solution shall be an emulsible concentrate insecticide for dilution with water, specially formulated to prevent infestation by termites. Fuel oil will not be permitted as a dilutant.

Contractor shall strictly comply with the Environmental Protection Agency's (EPA) rules and regulations governing chemicals and their use. Only soil treatment solutions which are not injurious to planting shall be used. Other solutions may be used as recommended by Applicator when acceptable to the EPA, local governing authorities, and the Engineer/Architect.

Contractor shall comply with the following requirements when applying the soil treatment solution:

1. Surface Preparation: Remove foreign matter which could decrease effectiveness of treatment on areas to be treated. Loosen, rake, and level soil to be treated, except previously compacted areas under slabs and foundations. Toxicants may be applied before placement of compacted fill under slabs if recommended by toxicant manufacturer.
2. Under slab-on-grade structures, treat soil before concrete slabs are placed using either power sprayer or tank type garden sprayer.
    (A) Apply 4-gallons of chemical solution per 10 linear feet to soil in critical areas under slab, including entire inside perimeter inside of foundation walls, along both sides at interior partition walls, around plumbing pipes and electric conduit penetrating slab, and around interior column footings.
    (B) Apply one gallon of chemical solution per 10 sq. ft. as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other coarse absorbent material.
    (C) Apply 4 gallons of chemical solution per 10 linear feet of trench for each foot of depth from grade to footing, along outside edge of building. Dig a trench 6" to 8" wide along outside of foundation

to a depth of not less than 12". Punch holes to top of footing at not more than 12" o.c. and apply chemical solution. Mix chemical solution with the soil as it is being replaced in trench.

3. Post signs in areas of application warning workers that soil poisoning has been applied. Remove signs when areas are covered by other construction.
4. Reapply soil treatment solution to areas disturbed by subsequent excavation or other construction activities following application.

U. Erosion Control.

1. To the extent there has been issued by the City Engineer a land development permit in accordance with applicable ordinances, the Contractor shall conform to and abide by all terms and conditions of such permit.
2. Erosion control measures shall be performed on all disturbed areas in accordance with the BMPP included in the Notice of Intent and with Section 665, Alabama Highway Department Specifications. The CONTRACTOR will perform all erosion control measures necessary to prevent silt and soil from leaving construction area and entering private property or the "Waters of the State." Erosion control measures shall be in strict accordance with Alabama Non Point Source Management Program Document and EPA Storm Water Pollution Prevention for Construction Activities.
3. In accordance with Section 665 of Alabama Highway Department Specifications, temporary erosion control work shall involve the construction of temporary berms, dikes, drains, fences, dams, etc. with the use of temporary seeding, mulching, erosion control netting, hay bales, sandbags, check dams, etc., as necessary in order to prevent silt and soil from leaving rights-of-way and entering private property or from washing into drainage structures located on State or County rights-of-way. CONTRACTOR shall mow grassed areas as required during the construction phase of the contract.
4. Erosion control measures shall be maintained by the CONTRACTOR through the warranty period of the contract. If additional measures are required to correct problems which might occur, these shall be performed by the CONTRACTOR at no additional cost to the OWNER.
5. Materials used for erosion control measures shall be in accordance with Section 665.02 of Alabama Highway Department Specifications and shall include hay bales, sandbags, silt fencing rip rap, crushed stone, mulch or other materials necessary in order to accomplish erosion control.

V. **Wastewater Containment and Management Plan.** In accordance with ADEM Consent Order, NPDES permit NO. AL0022713, Tuscaloosa WWTP, Tuscaloosa County (125) dated September 8, 2009 and the "City of Tuscaloosa, Water and Sewer Department Engineering Report and Compliance Plan", December 2009; to the extent that construction activity by the Contractor involves any wastewater infrastructure or construction activities in close proximity to any wastewater infrastructure and/or to any City sanitary sewer assets the Contractor shall submit to the City Engineer, prior to commencing construction, a wastewater containment and management plan (the "Plan"). The Plan shall adequately address the means, methods and techniques to be employed by the Contractor for containing and transporting wastewater in a sanitary manner without, at any time, permitting the discharge of wastewater into the environment or creating the necessity of a State required sanitary sewer overflow report. The Plan shall be submitted by the Contractor to the Office of City Engineer for review and approval before commencing any construction activity. The City Engineer may waive the requirement of submitting a Plan if he/ she determines that the construction activity to which the Plan would relate does not involve any potential for the discharge of wastewater into the environment or creating the potential for the necessity of a State required sanitary sewer overflow report.

W. **Environmental Clause/Covenant.** Contractor shall not allow any toxic, hazardous or contaminated substances or gases (including, but not limited to, asbestos and raw materials which include hazardous constituents or any other similar substances or materials which are included under or regulated by any local, state, or federal law, rule or regulation pertaining to environmental regulations, contamination, clean-up or disclosure such as, without limitation, the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"); the Clean Air Act (42 U.S.C. Sec. 7401 et seq.); the Clean Water Act (33 U.S.C. §1251 et seq.); the Resource Conservation and

Recovery Act (42 U.S.C. §6901 et seq.); and the Toxic Substances Control Act (42 U.S.C. §2601 et seq.) or state environmental clean-up or disclosure acts and statutes as all such acts and statutes exist now or are hereafter amended (such acts and statutes referred to herein as "Environmental Laws")(such substances or gases referred to herein as 'Hazardous Substances') to be stored, located, or discharged on the premises without specific prior written consent of the City. Contractor shall comply with all Environmental Laws affecting the premises. Contractor covenants to hold the City, its officers, agents and employees harmless from and against any loss, costs, damage or expenses (including attorney's fees and expenses) arising out of the presence of Hazardous Substances (as hereinbefore described) on or about the premises or the violation of any Environmental Laws with respect thereto, the occurrence of which Hazardous Substances on the premises or the violation of any Environmental Laws shall have arisen solely from the acts or omissions of Contractor, its subcontractors, agents, invitees and employees. This indemnity shall survive the termination of this contract and shall inure to the benefit of the City of Tuscaloosa, its successors and assigns.

ARTICLE V. INSURANCE, LIABILITY, ETC.

A. Contractor's Insurance (Generally):

1. Insurance Required. The Contractor shall not commence work under this contract until it has obtained all insurance required by the Contract documents and such insurance has been accepted by the City. The Contractor shall maintain the required insurance during the term of the contract including any extensions of the term.

Insurance shall be written in comprehensive form by insurance companies rated A- or better by A. M. BEST and shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors and shall cover both on-site and off-site operations under this contract and insurance coverage shall extend to any motor vehicles or other related equipment, irrespective of whether the same is owned, non-owned or hired.

The obtaining and maintaining by Contractor and subcontractors of the insurance required herein does not relieve the Contractor of any responsibilities, obligations or duties to the City pursuant to this contract.

2. Additional Insurance. The Contractor shall have an insurance professional review the Contractor's activities in regard to the performance of this contract and the Contractor shall obtain any further or additional insurance or greater limits as recommended by the insurance professional.

3. Insurance Limits. Neither the setting of insurance limits or requirements nor the acceptance or approval of the same by the City imply or represent that the limits or the insurance carrier is sufficient or that such insurance actually has been obtained, that being the responsibility of the Contractor.

4. Subcontractors. The Contractor shall require all subcontractors to take out and maintain the type of insurance required herein to the extent of their involvement in the Project so as to be adequate to protect against liability. In the event any work under this Contract is performed by a subcontractor(s), the Contractor shall remain responsible for any liability directly or indirectly arising out of the work performed under this Contract, regardless of whether or not such work is covered by the subcontractor's insurance. The Contractor shall not allow any subcontractor to commence work on the project until all similar insurance required of the subcontractor has been obtained. All subcontractors shall maintain required insurance during the term of the contract including any extensions of the term.

5. City's Right to Review Coverage. The City shall have the right to inspect and approve Contractor's insurance coverage herein required. Should the City deem it advisable to modify the coverage in any way, it shall so request of the Contractor in writing and should the Contractor fail to modify the coverage, then the City may pay the cost of any increased coverage or take credit for any decreases as may be appropriate. Review or acceptance of insurance by the City or representatives of the City shall not relieve or decrease the responsibility of the Contractor hereunder.

6. Waiver of Subrogation. To the extent that the Contractor is required to maintain insurance coverage for loss or damage to property or bodily injury, including Builders Risk All Risk insurance, the insurance must waive and the Contractor hereby waives subrogation of claims against the City, its officers, agents and employees.

7. City as Additional Insured. The City shall be named as additional insured , for ongoing and completed operations for up to two (2) years, on the Contractor's and any subcontractor's policies for any claims arising out of work performed under this Contract. The Contractor shall provide the City with a Certificate of Insurance naming the City as an additional insured using ISO for CG 2010 1185 (or a substitute form providing equivalent coverage) or on the combination of ISO forms CG 20 10 07 04 or CG 20 33 07 04 and CG 20 37 07 04 (or a substitute or ISO form providing equivalent coverage) naming the City as an additional insured , giving all parties a 30 notice of cancellation or intent not to renew the insurance, a waiver of subrogation and list any and all exclusions. The coverage available to the City as an additional insured shall not be less than $1,000,000 Each Occurrence, $2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project,), $2,000,000 Products/completed Operations Aggregate, and $1,000,000 Personal and Advertising injury limits. Additional insured coverage shall apply as primary, non contributory, insurance with any other insurance afforded to the City and the Contractor.

8. Elevators, Hoist and Cranes. If the Contractor or a subcontractor will utilize in connection with the performance of the work pursuant to this contract an elevator, material hoist, crane or other equipment, or conveyor, then the Contractor shall take out and maintain or require the subcontractor to take out and maintain insurance that shall protect the Contractor and the City against claims for injuries to members of the public (including City employees) or damages to property of others (including City property) arising out of any act of the Contractor or any of its agents, employees or subcontractors resulting from the operation of such elevator, material hoist, crane or other equipment, or conveyor.

B. Insurance:

1. Workmen's Compensation Insurance: The Contractor shall take out and maintain during the term or any extensions of this contract Workmen's Compensation Insurance as required by Alabama law for all of its employees employed at the site of the Project or off-sites related to the Project and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor.

In case any class of employees engaged in any work under this contract at the site of the Project is not protected under the Workmen's Compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, adequate accident insurance for the protection of its employees not otherwise protected.

Water or Navigational Exposure; Where work under this contract may trigger the requirement for Federal Longshoreman's and Harbor worker's Act and Federal Jones Act or insurance required by other applicable law or regulations, the Contractor shall obtain the same if required.

2. Comprehensive Automobile and Vehicle Liability Insurance: The Contractor shall maintain during the term or any extensions of this contract, comprehensive automobile and vehicle liability insurance. The limits of liability shall not be less than $1,000,000 combined single limit or equivalent.

3. Commercial General Liability Insurance: The Contractor shall maintain during the term or any extensions of this contract, Commercial General Liability Insurance, including officers, agents and employees. The limits of liability shall not be less than $1,000,000 Each Occurrence, $2,000,000 General Aggregate (subject to a per project general aggregate applicable to the project), $2,000,000 Products/Completed Operations Aggregate, and $1,000,000 Personal and Advertising Injury Limits Combined Single Limit or equivalent.

4. Owner's Protective Insurance: For projects with a contract amount of $500,000.00 or greater, an Owner's Protective Policy is required in the minimum amount of $1,000,000 each occurrence. Provided; however, the City may require such insurance on projects of lesser amount if an insurance limit amount is stated herein.

5. Umbrella Excess Liability Over Primary Insurance: The Contractor shall take out and maintain during the term of this contract, and any extensions thereof, Umbrella Excess Liability Insurance. The minimum limits of coverage shall be as follows:

Each Occurrence	$ 5,000,000.00
Aggregate	$ 5,000,000.00

The coverage shall be over the required general liability insurance and automobile liability insurance as a minimum. There shall be no gaps or sublimit deductibles, etc.

6. Miscellaneous Insurance: The Contractor shall provide whatever insurance may be required of the City or the Contractor by permits or agreements, etc., with the railroad, highways, or other utilities. The Contractor shall familiarize himself with all insurance requirements contained in easements, permits, and agreements associated with this Project. The Contractor shall provide any Railroad Protective Liability and other General Liability Insurance in the amounts contained in the agreements, permits or easements or in greater amounts if higher limits are appropriate or required elsewhere. The Contractor shall bear the cost of all required insurance and shall include in his bid a sufficient amount to cover the cost of all required insurance. To the extent the City obtains permits or licenses for railroad or highway bores, crossings or other work involved in the Project, the Contractor shall obtain adequate insurance to protect itself and the City.

7. Builders Risk All Risk Insurance: To the extent applicable to the Project, the Contractor shall secure and maintain during the life of this Contract, Builder Risk All Risk Insurance coverage for 100 percent of the Contract Price. This insurance shall not exclude coverage for earthquake, landslide, tornado, flood, collapse or loss due to the result of faulty workmanship. Such insurance shall also provide for any damages caused by injury to, or destruction of, tangible property, including loss of use resulting therefrom, and shall pay all losses to the Contractor and the City as their interest may appear.

If this is a trade contract under a construction manager format, the provisions of this subsection shall not apply.

8. Proof of Carriage of Insurance: The Contractor shall furnish the City with satisfactory proof of carriage of the insurance required herein, in the form of an insurance certificate or if the City elects in the form of a policy. Insurance shall be in a form satisfactory to the City.

(A) The Contractor's and any subcontractor's general liability and automobile liability insurance shall endorse the Owner (City of Tuscaloosa), its officers, agents and employees, as additional insured's for any claims arising out of work performed under this contract.
(B) The Contractor's insurance endorsing the Owner and others as additional insured's shall be "primary" and non contributory as to such endorsed insured's.
(C) Cancellation: The certificate and policy, as the case may be, shall state that the City shall be given thirty (30) days' written notice of cancellation or any change in the insurance coverage.
(D) There shall be a statement that the Contractor and any subcontractors waive subrogation as to the City, its officers, agents, employees and Program Coordinator.
(E) There shall be a statement that full aggregate limits apply per job or contract.
(F) Agents verification of Contractor's insurance on form provided by the City or equivalent.
(G) Insurance shall contain no exclusions for x, c or u.

(G) Full aggregate limits must apply per job or contract.

C. **No Personal Liability of Public Officials:** In carrying out any of the provisions hereof in exercising any authority granted by the Contract, there will be no personal liability upon any public official.

D. **Indemnity:** To the maximum extent permitted by law, the Contractor shall save harmless, indemnify and defend the City, its officers, agents and employees from and against any and all claims and losses, cost, expense or liability including attorney's fees and litigation costs caused by, arising out of, resulting from, or occurring in connection with the performance of the work by the Contractor or any subcontractor, regardless of the fault, breach of contract, or negligence of the City, its officers, agents or employees excepting only such claims or losses that have been adjudicated to have been caused solely by the negligence of the City and regardless of whether or not the Contractor is or can be named a party in a litigation.

Contractor agrees to indemnify and/or reimburse the City for any fines, violations, charges, suits, or sums of money imposed by the Alabama Department of Environmental Management (ADEM), Environmental Protection Agency (EPA), or any administrative agency on the City of Tuscaloosa for any sewage or contaminate discharged or Wetlands regulations violation as a result of or arising out of the work by the Contractor pursuant to this agreement.

E. **Errors and Omissions.** The Contractor does agree to release and hold harmless the City of Tuscaloosa or any of its officers, agents and employees and its Program Coordinator from any damages claimed by the Contractor or subcontractors resulting from or attributable in whole or in part to, errors in or omissions of the plans and specifications, including final drawings of the Engineer/Architect or other design professionals. As to plans, specifications or designs prepared by independent design professionals, the parties agree that any City review or approval thereof was only for overall suitability, maintenance and usability and there are no express or implied warranties by the City as to the adequacy, accuracy, correctness, or code compliance thereof.

F. **Exclusion of Contractor Claims:** In performing its obligations, the Engineer/Architect and its consultants may cause expense for the Contractor or its subcontractors and equipment or material suppliers. However, those parties and their sureties shall maintain no direct action against the City or its officers, employees, agents and program coordinator for any claim arising out of, in connection with, or resulting from the Engineering services performed or required to be performed where such services are performed in good faith to protect the City or the Public.

G. **Inadequate Surety/Insurance.** It is further mutually agreed between the parties hereto that if, at any time after the execution of this agreement, any of the surety bonds of the Contractor or subcontractors relating to the Project for its faithful performance shall be deemed by the City to be unsatisfactory, or if for any reason such bond(s) ceases to be adequate to cover the performance of the work or the surety ceases to do business by agent in Tuscaloosa County, Alabama, the Contractor shall, at its expense, within five (5) days after the receipt of notice from the City so to do, furnish an additional bond or bonds in such form and amount and with such surety or sureties as shall be satisfactory to the City. In such event, no further payment to the Contractor shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in manner and form satisfactory to the City.

H. **Changes.** When changes in the scope of work by written order or change orders aggregate in amount equal to 10 percent of the total contract, including the change order or change orders, the insurance coverage included under this heading shall be increased accordingly by the Contractor. Proof of coverage shall be established by endorsement to the original policy or by re-issue of the original policy to include the added coverage, or in accordance with any other acceptable policy with the insuring company for increasing the coverage.

ARTICLE VI. OBSERVATION OF THE PROJECT

A. **Generally:** The Contractor shall furnish the Engineer/Architect and/or the City's observer with every reasonable facility for ascertaining whether or not the work performed is in accordance with the requirements and intent of the Specifications and Contract Documents. No work shall be done without suitable inspection by the Engineer/Architect's Inspector or the City's observer. Payment for work or failure to reject any defective work shall not in any way prevent later rejection when such defect is discovered, nor obligate the City to final acceptance. All work done when not in accordance with the Plans, specifications and contract will be rejected and, without cost to the City, shall immediately be removed and other work done in accordance therewith by the Contractor. If the Contractor fails to remove the work as above ordered, then the Engineer/Architect shall have the right and authority to stop the Contractor and his work at once and the City may correct the work as herein provided at the cost and expense of the Contractor.

Inspection is not acceptance and shall not constitute acceptance by the City.

The work shall also be subject to inspection by representatives of the City of Tuscaloosa Building Inspection Department.

B. **Observation of the Project:** The Engineer/Architect, the City and its observers, agents, any agency having jurisdiction, and their representatives shall have access at all times to the Project for inspection whenever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and inspection. The City or the Engineer/Architect may appoint or assign observers, with designated duties and restricted authority, to inspect the Project as may be directed, or to make special observations requested in advance by the Contractor, and to report progress of the Project, and manner of procedure, quality of the material and workmanship, and compliance with the Contract Documents.

Inspection or observation is not acceptance and shall not constitute acceptance by the City.

All materials, workmanship, equipment, processes of manufacture, and methods of construction, shall be subject to inspection, examination, and test by such persons at any and all places where such manufacture and/or construction are being carried on. The Engineer/Architect shall have the right to reject material, workmanship and/or equipment that are defective or otherwise not in accordance with the drawings and Specifications and require its correction by the Contractor. Rejected workmanship shall be satisfactorily corrected, and rejected material shall be satisfactorily replaced with proper material by the Contractor without charge therefor, and the Contractor shall promptly segregate and remove the rejected material from the premises. Provided; however, neither the presence or absence of such observers nor the giving or failure to give such advice, direction or instruction shall in any manner relieve the Contractor from any contract requirement.

Upon rejection of material and/or workmanship by the Engineer/Architect or the City, there may be occasion where such deficiencies may be corrected more economically and timely through modification of the design versus removal and replacement. In such instances, the Engineer/Architect shall provide design services on behalf of the City necessary for analysis and correction of the rejected work. Costs associated with hourly fees for these professional services shall be paid by the City and deducted from payment to the Contractor based on the actual costs incurred. Prior to beginning any analysis and accrual of associated professional service fees, the Engineer/Architect shall provide the Contractor and City notice in writing of the intent to begin, summary of the scope of work, estimated time to complete, and estimated total fees. Any costs associated with corrective work performed by the Contractor to remedy such deficiencies shall be the sole responsibility of the Contractor.

Neither the City observers nor the Engineer/Architect, will be authorized to revoke, alter, relax, or waive any requirements of the Contract Documents; to issue instructions contrary to the drawings and Specifications; nor shall they supervise and direct work for the Contractor, nor unreasonably interfere with the Contractor's operations beyond the extent necessary to make certain that the Project is being carried out according to the contract requirements.

Any advice which they may give the Contractor shall not be construed as binding the City in any way, nor as releasing the Contractor from any of the contract requirements.

If the Contractor considers any work demanded of it to be outside the contract requirements, or any ruling of the Engineer/Architect or an inspector to be unfair, it may immediately, upon such work being demanded or ruling made, request written instructions from the Engineer/Architect, or inspector, or within ten days file an appeal to the Engineer/Architect or the City, stating clearly and in detail the basis of its objections. However, pending the decision on such appeal no work shall be done in disregard of the rulings of the Engineer/Architect or inspector or his instructions on items of work affected by such appeal.

The Contractor shall furnish promptly, without extra compensation, all reasonable facilities, labor, and material necessary for safe and convenient access, inspection, and tests that may be required by the Engineer/Architect.

C. **Authority and Duties of Observers:** If City or consultant inspectors, whether for the Engineer/Architect or Construction Manager, are being utilized, they shall be authorized and permitted to inspect all work done. The Inspector shall not be authorized to alter or waive any requirements of the Specifications. He shall have authority to call the attention of the Contractor to failure of the work to conform to the specifications and Contract. He may suspend the Project until any questions at issue can be referred to and decided by the Engineer/Architect or the City.

Neither the Engineer/Architect, Inspector, the City or other representatives for the City shall be responsible in any way for construction means, methods or techniques, nor for the safety of the construction work, progress, or employees of the Contractor or any subcontractors, except as set forth in the Construction Manager contract, if applicable.

The presence of the Inspector shall not in any manner lessen the responsibility of the Contractor pursuant to this agreement.

D. **Defective Work/Correction of Work by the City:** The inspection of the work shall not relieve the Contractor of any of its obligations to fulfill its contract and defective work shall be made good, notwithstanding that such work has been previously inspected by the Engineer/Architect and accepted or estimated for payment. The failure of the Engineer/Architect or inspector to condemn improper workmanship shall not be considered as a waiver of any defect, whether known at the time or discovered later, or as preventing the City at any time subsequently from recovering damages for work actually defective. All work shall be guaranteed by the Contractor against defects in workmanship for a period of one year from date of final payment.

Upon failure and/or neglect by the Contractor to promptly prosecute or perform the work in accordance with the contract documents, including any requirements with respect to the construction schedule, plans or specifications, the City may, without prejudice to any other remedy it may have, correct such deficiencies and may deduct the actual cost thereof from payment, then or thereafter due to the Contractor.

E. **Disagreement:** Should any disagreement or difference arise as to the estimated quantities or classifications or as to the meaning of the drawings or specifications, or any point concerning the character, or acceptability or nature of the several kinds of work, or construction thereof, the decision of the Engineer/Architect shall be final and conclusive and binding on the Contractor.

F. **Stop Work Orders:** During unseasonable weather all work must stop when the Engineer/Architect so directs and all work must be suitably protected by Contractor at all times. However, the Engineer/Architect shall be under no obligation to stop work on the Project. If the Project is stopped, the Contractor shall not be entitled to extra compensation for delays or problems associated with the stoppage.

G. **Progress Meetings:** The Contractor shall conduct regular progress meetings during the course of the Project at least once a month or more often if requested by the City or Engineer/Architect. The meetings shall be held at a site convenient to all parties and if a site cannot be agreed upon, the City will designate a site.

The Contractor or designated representative, the Contractor's Superintendent, all subcontractors, engineers, inspectors, and the City's representative shall attend.

The Contractor shall keep accurate written minutes of the meetings and forward copies thereof to the Engineer/Architect and the City's representative before the next scheduled meeting.

If a trade contract, progress meetings will be conducted by the Construction Manager, who will keep minutes. All trade contractors shall attend unless excused by the Construction Manager.

ARTICLE VII. PROJECT COMPLETION

A. **Substantial Completion:** "Substantial completion" shall be that degree of completion of the Project or a defined portion of the Project, as evidenced by the Engineer/Architect's written notice of Substantial Completion, sufficient to provide the City, at its discretion, the full-time use of the Project or defined portion of the work for the purposes for which it was intended. "Substantial Completion" of an operating facility or operating component of the Project shall be that degree of completion that has provided a minimum of seven (7) continuous days of successful, trouble-free operation in a "fully automatic" manner acceptable to the City and Engineer/Architect and with all redundant systems fully operational. All equipment contained in the Project, plus all other components necessary to enable the owner to operate the facility in the manner that was intended, shall be complete on the substantial completion date.

When the Contractor considers that the Project, or where acceptable to the City, a designated portion thereof is substantially complete, the Contractor shall prepare and submit to the Engineer/Architect a list of items to be completed or corrected and request an inspection for Substantial Completion. The failure by the Contractor to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents. After inspection and/or if an operating facility, after a minimum of seven (7) continuous days of successful, trouble free operation has been achieved during startup, the Engineer/Architect may, at his sole discretion, issue a written notice of substantial completion for the purpose of establishing the starting date for specific equipment guarantees or warranties, and to establish the date that the City will assume the responsibility for the cost of operating such equipment.

Said notice shall not be considered as final acceptance of any portion of the Project or relieve the Contractor from completing the remaining work, including any remaining performance or acceptance testing, within the specified time and in full compliance with the Contract Documents. Specifically, the issuance of a written notice of Substantial Completion shall not relieve the Contractor of his obligation to promptly remedy any omissions and latent or unnoticed defects in the Project covered by the written Notice of Substantial Completion.

B. **Final Inspection:** Upon notice from the Contractor that its work is complete, the Engineer/Architect and/or other representatives of the City shall make a final inspection of the work or Project and conduct test or tests if applicable. The Engineer/Architect shall notify the Contractor of all apparent and/or visible instances where the Project fails to comply with the plans and specifications and contract documents, as well as any defects he may discover (punch list). The Contractor shall immediately make such alterations as are necessary to make the Project comply with the plans and specifications and to the satisfaction of the Engineer/Architect.

Upon completion of all such repairs in a satisfactory manner, and when the Engineer/Architect has determined that the work or Project is acceptable under the contract, including this provision and after publication of final completion and all other requirements of final payment as provided for in this agreement, then he shall issue a final certificate of payment to the City stating that the balance is due the Contractor, less such amounts as may have been withheld by the City from time to time as provided in the contract documents. In recommending to the City that it make such final payment to the Contractor, the Engineer/Architect shall also issue a certificate of final acceptance wherein he shall recommend to the City that it accept the Project and/or work as final and complete pursuant to the contract documents.

Verification, approval, inspection, final inspection, issuance of final acceptance, issuance of final certificate of payment, action or approval by the City upon the final certificate of payment or final acceptance shall not in any way relieve the Contractor of responsibility for faulty materials or workmanship.

All warranty or guarantee periods shall commence and start to run from the date of substantial completion.

C. **"As Built" Drawings:** Unless waived by the City representative, the Contractor must provide to the City a set of "as built" drawings acceptable to the City as a component part of the Project prior to final payment.

D. **Final Cleanup:** Before final completion and final acceptance, the Contractor shall remove from the City's property or rights-of-ways and from all public and private property, all tools, scaffolding, false work, temporary structures and/or utilities, including the foundations thereof (except such as the City permits in writing to remain); rubbish and waste materials resulting from its operation or caused by its employees; and shall remove all surplus materials, leaving the site clean and true to line and grade, and the Project in a safe and clean condition ready for use and operation. In addition to the above, the Contractor shall be responsible for the following special cleaning for all trades as the Project shall have been completed:

1. Cleaning of all painted, enameled, stained or baked enamel work: removal of all marks, stains, fingerprints and splatters from such surfaces.
2. Cleaning of all glass: cleaning and removing of all stickers, labels, stains and paint from all glass and the washing and polishing of the same on interior and exterior.
3. Cleaning or polishing of all hardware.
4. Cleaning all tile, floor finishing of all kinds; removal of all splatters, stains, paint, dirt, and dust, the washing and polishing of all floors as recommended by the manufacturer or required by the Engineer/Architect.
5. Cleaning of all manufactured articles, materials, fixtures, appliances and equipment; removal of all stickers, rust stains, labels (except instructional and/or safety labels) and temporary covers and cleaning and conditioning of all manufactured articles, materials, fixtures, appliances, electrical, heating and air conditioning equipment as recommended or directed by the manufacturers, unless otherwise required by the Engineer/Architect; blowing out or flushing out of all foreign matter from all dust pockets, piping, tanks, pumps, fans, motors, devices, switches, panels, fixtures, boilers, similar features; and freeing identification plates on all equipment or excess paint and the polishing thereof.

In the case of failure to comply with the above requirements for any part of the Project within the time specified by the Engineer/Architect, he may cause the work to be done and deduct the cost thereof from the contract price on the next or succeeding application for payment, or in the event that the cost exceeds the balance due the Contractor, bill the Contractor for the excess.

E. **Notice of Completion:** The Contractor shall, immediately after the completion of the Project and acceptance by the Owner as provided for herein, give notice as required by Ala. Code §39-1-1(f) by an advertisement in some newspaper of general circulation published within the city or county wherein the Project has been done for a period of four (4) successive weeks. The advertisement shall advise interested parties to contact both the Contractor and the specific City representative. The City's representative shall be named along with his proper mailing address. In no instance shall a final payment be made upon the contract until the expiration of thirty (30) days after the completion of the notice. Proof of publication of said notice shall be made by the Contractor to the City of Tuscaloosa by affidavit of the Publisher and a printed copy of the notice published.

Provided, however, that the requirements hereinabove stated for notice and advertisement shall not apply to contractors performing contracts of less than Fifty Thousand Dollars ($50,000.00) in amount and the governing body of the City of Tuscaloosa so as to expedite final payment, shall cause notice of final completion of such contract to be published one time in Tuscaloosa County and shall post notice of final completion on the City of Tuscaloosa's bulletin board for one (1) week and shall require the Contractor to certify under oath that all bills have been paid in full. Final settlement with such Contractor may be made at any time after the notice shall have been posted for one (1) entire week.

NOTE: **When maintenance periods are included in the contract for highways, bridges or similar structures, such periods shall be considered component parts of the contract.**

F. **Final Payment:** Upon completion of the Project by the Contractor and acceptance by the City's representatives of all work required of the Contractor for the Project, but not until thirty (30) days after completion of the notice, the amount due the Contractor pursuant to the Contract Documents shall be paid upon the presentation by the Contractor to the City's representative of the following:

1. A properly executed and duly certified voucher for payment, verified by architect, engineer or other City representative, including therewith evidence that all payrolls and all amounts due for labor and materials, other than claims for damages due to tort, have been fully paid and satisfied and there are no outstanding claims or demands associated with the work on the Project.
2. A release of all claims and claims of lien against the City from the Contractor and all major subcontractors (the City may waive the requirement for subcontractor releases) arising under and by virtue of the contract, on the form attached, duly executed by the Contractor and with the consent of the surety. The Contractor may specifically except claims of the Contractor from the operation of the release if specifically excepted therefrom in stated amounts and the reason therefor.
   The Contractor may with the consent of the City representative, if any subcontractor refuses to furnish such a release, furnish a bond with surety satisfactory to the City representative to indemnify against such claims.
3. Proof of publication of notice of completion including affidavit of publisher and a printed copy of the notice so published, as provided by law.
4. In accordance with Ala. Code §39-2-12(c), a non-resident contractor shall satisfy the City that he or she has paid all taxes due and payable to the State, the City and all applicable political subdivisions.

G. **Acceptance of Final Payment Constitutes Release:** The acceptance by the Contractor of the final payment shall release the City, the Engineer/Architect, as representatives of the City, and their officers, employees, agents, and subconsultants from all claims and all liability to the Contractor for all things done or furnished in connection with the Project, and every act of the City and others relating to or arising out of the work except claims previously made in writing and still unsettled. No payment, however, final or otherwise, shall operate to release the Contractor or his Sureties from obligations under this Contract and the Performance Bond, Payment Bond, and other bonds, warranties and guarantees as herein provided.

ARTICLE VIII. WARRANTY AND GUARANTEES

A. **Warranty and Guarantee:**

1. Warranty: The Contractor warrants to the City and the Engineer/Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified and that all work, materials and equipment will be of good quality, free from fault and defects and in conformance with the contract documents. The work must be safe, substantial and durable construction in all respects. All work, materials and equipment not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Warranties shall commence to run from the date of substantial completion.

The work furnished must be of first quality and the workmanship must be the best obtainable in the various trades. The Contractor hereby guarantees the Project and the work on the Project against defective materials or faulty workmanship for a minimum of one (1) year after final payment by the City and shall replace or repair any defective materials or equipment or faulty workmanship during the period of guarantee at no cost to the City.

2. Guarantee: If, within the designated warranty period or if not designated, within one (1) year from the date of substantial completion, any of the work, materials or equipment is found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of written notice from the City to do so,

unless the City has previously specifically given the Contractor a written acceptance of such specific condition. This obligation shall survive termination of the Contract. The City shall give such notice promptly after discovery of the condition.

3. Roofing Guarantee: If the Project involves a roof on a building or other structure, then the Contractor shall execute and provide the Roofing Guarantee in the form attached hereto. The guarantee shall be delivered to the City and Engineer/Architect prior to final payment.

4. Termite Warranty: If the Project involves termite treatment as required in Article IV, then the Contractor shall furnish to the City a written warranty certifying that the applied soil poisoning treatment will prevent the infestation of subterranean termites and that if subterranean termite activity is discovered during the warranty period, Contractor shall re-treat the soil and repair or replace any damage caused by termite infestation. The warranty shall be for a period of five (5) years from the date of treatment signed by Applicator and Contractor.

B. **Correction of Defective Work During Warranty/Guarantee Period:** The Contractor hereby agrees to make, at his own expense and no cost to the City, all repairs or replacements necessitated by defects in materials or workmanship, provided under the terms of this Contract, and pay for any damage to other works resulting from such defects, which become evident within 1 year after the date of substantial completion unless substantial completion is established by the Engineer/Architect only for specified items of equipment, or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents unless the City has previously given the Contractor a written acceptance of such defects. The Contractor shall promptly correct such defects upon receipt of a written notice from the City to do so. This obligation shall survive the termination of the Contract.

Unremedied defects identified for correction during the warranty period described herein before, but remaining after its expiration, shall be considered as part of the obligations of the warranty. Defects in material, workmanship, or equipment which are remedied as a result of obligations of the warranty shall subject the remedied portion of the Project to an extended warranty period of 1 year after the defect has been remedied.

Repetitive malfunction of equipment shall be cause for equipment replacement and an extension of the guarantee period for the equipment to a date 1 year following acceptable replacement.

The Contractor further assumes responsibility for a similar guarantee for all work and materials provided by subcontractors or manufacturers of packaged equipment components.

The Contractor also agrees to hold the City and the Engineer/Architect and employees harmless from liability or damages, including the Engineer/Architect's and attorneys' fees, and cost and expenses of litigation of any kind arising from damage due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written order for same from the City. If the Contractor fails to make the repairs and replacements promptly, or in an emergency where delay would cause serious risk, or loss, or damage, the City may have the defective work corrected or the rejected work removed and replaced, and the Contractor and his Surety shall be liable for the cost thereof. The Contractor during the warranty period shall repair/replace as rapidly as possible any and all equipment, materials, etc., which are found to be defective. Should any items not be repaired/replaced within thirty (30) days from the time it is reported to the Contractor by the City, then the warranty period shall be extended on that item for a period equal to the time that the item has remained defective, incomplete, or inoperable as determined by the City. The Contractor must certify that the item has been corrected.

The City's rights under this Article shall be in addition to, and not a limitation of, any other rights and remedies available by law.

ARTICLE IX. LAWS, PERMITS, ETC.

A. Laws and Regulations/Royalties, Patents, Copyrights and Permits and Rights-of-Way: The Contractor shall comply with and keep itself fully informed of all laws, ordinances and regulations of federal, state, City and county in any manner effecting those engaged or employed in the Project, or the materials used in the Project, or in any way affecting the conduct of the Project, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. The Contractor shall possess all permits and licenses required by applicable law, rule or regulation for the performance of the Project. If any discrepancy or inconsistency should be discovered in this contract, or in the drawings or specifications herein referred to, in relation to any law, ordinance, regulation, order or decree, it shall forthwith report the same in writing to the Engineer/Architect. It shall at all times, itself, observe and comply with all such existing and future laws, ordinances and regulations.

The Contractor shall protect and indemnify the City, Engineer/Architect, and their respective employees, officers, subconsultants, and agents against any claim or liability arising from or based on the violation of any such laws, ordinances, or regulations. All permits, licenses, and inspection fees necessary for prosecution and completion of the Project shall be secured and paid for by the Contractor, unless otherwise specified.

The Contractor shall obtain and pay for all licenses and permits and shall pay all fees and charges for connection to outside service and the use of property required for the execution and completion of the Project.

The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and code requirements applicable in or bearing on the conduct of the Project unless in conflict with contract requirements. If the Contractor ascertains at any time that any requirements of the Contract is at variance with applicable laws, ordinances, regulations, or building code requirements, it shall promptly notify the Engineer/Architect and any necessary adjustment of the Contract will be made as herein specified under change in orders.

The Contractor shall pay all applicable federal, state and local taxes and assessments on the Project. Wherever the law of the place of building requires a special tax, consumer, use, occupation, or other tax, the Contractor shall pay such tax.

The Contractor shall pay all royalties and license fees. The Contractor shall hold and save the City and its agents and employees harmless from liability of any nature or kind, including costs and expenses, for or on account of any patented or unpatented invention, process, article or appliance manufactured or used in the performance of the contract, including its use by the City.

To the extent that the Project has not been permitted or registered by the Engineer or City, the Contractor shall register or obtain any and all necessary National Pollutant Discharge Elimination System (NPDES) Permits required by USEPA or the Alabama Department of Environmental Management (ADEM) as well as any applicable storm water permits or registration for the construction of the improvements specified in the Contract Documents. The Contractor shall abide by all regulations and conditions relative to the permit or registration and attachments to the permit or registration, including but not limited to sampling and monitoring. The Contractor shall fulfill for the City all the requirements made upon the City by the permit(s) or registration.

The Contractor shall be fully responsible for all aspects of erosion and sediment control. The Contractor shall utilize whatever measures are necessary to prevent pollution or siltation due to his activities. As a minimum, the Contractor shall strictly comply with the erosion control methods referenced in the Alabama Soil and Water Conservation Committee "Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas," latest edition (referred to as the "Alabama Handbook").

If the Contractor has information that any process, article or item specified or delineated by the Engineer/Architect is an infringement of a patent or a copyright, it shall promptly give such information to the Engineer/Architect.

B. Alabama Department of Transportation Rights-of-Way: If any portion of the Project involves work upon State right-of-way, the Contractor agrees to provide the Alabama Department of Transportation with a bond or certified check in the amount required, made payable to the Alabama Department of Transportation, to guarantee the faithful performance of the provisions of a permit and to guarantee that the Contractor shall maintain the work in a manner suitable to the Alabama Department of Transportation for a period of one (1) year. The Alabama Department of Transportation Bond Form must be used. At the end of one (1) year from the completion of this work, the Department of Transportation will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the Department of Transportation shall apply the certified check or bond to the cost of repairing the rights-of-way with State forces.

C. Tuscaloosa County Right-of-Way: If any portion of the Project involves work upon County right-of-way, the Contractor agrees to execute an application and file with Tuscaloosa County a bond or certified check in the amount required, made payable to Tuscaloosa County to guarantee the faithful performance of this provision of this work suitable to the County for a period of one (1) year. At the end of one year from the completion of this work, the County will return the certified check or bond to the applicant provided all provisions of this permit have been complied with. Otherwise, the County shall apply the certified check or bond on the cost of repairing the right-of-way with the County forces.

D. Storm Water Permit and Monitoring:

1. To the extent that the Project has not been permitted or registered by the Engineer or the City, and the Project is defined as an NPDES Construction Site per ADEM Admin. Code Chapter 335-6-12 (the Rule), the Contractor shall submit to the Alabama Department of Environmental Management (ADEM) a Notice of Registration (NOR) under the Rule for Storm Water Discharges during construction activities.
   The Contractor shall strictly adhere to all requirements of the NOR and the rule regardless of which party has obtained coverage.
2. Compliance with all provisions of ADEM Admin. Code Chapter 335-6-12 and this registration is required, including but not limited to, the preparation and implementation of a Construction Best Management Practices Plan (CBMPP) and any other plans as may be required, the regular maintenance of the Best Management Practices (BMPs) to the maximum extent practicable and the submittal of required reports. As required by the Rule, the Contractor shall retain a Qualified Credentialed Professional (QCP) to prepare the CBMPP and to certify that it was prepared in accordance with the requirements of the "Alabama Handbook" and the Rule.
3. This registration neither precludes nor negates an operator's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.
4. The Contractor, unless application for registration has already been made, will be furnished a Storm Water NOR application package when the contract is awarded. The Storm Water NOR application package will include the following:
   a. Typical transmittal letter to ADEM.
   b. NOR applications filled out with Project information.
   c. Project area map.
   d. Other data as required by the NOR for Tier 1 waters if applicable.
5. The Contractor will complete or furnish the following items and submit to ADEM within five working days of the receipt of the NOR application provided by the Owner.
   a. Information as outlined in the typical letter of transmittal, to the address indicated on the letter of transmittal, by registered mail or hand deliver.
   b. The "Alabama Department of Environmental Management (ADEM), Field Operations Division Storm Water Program" Notice of Registration (NOR); NOR shall be signed by a responsible official who is the operator, owner, the sole proprietor of a sole proprietorship,

a general/controlling member or partner, or an executive officer of at least the level of vice-president for a corporation. Additionally, the QCP is required to sign the CBMPP certification part of the NOR.

c. Determine applicable fee per ADEM Fee Schedule F and make check payable to: Alabama Department of Environmental Management for the NOR and submit to the Alabama Department of Environmental Management with the NOR application.

6. Application for the Storm Water Permit shall be made by the Contractor no later than five working days after receipt of application provided by Owner. The Contractor shall not commence any construction activities until ADEM has issued the authorization number for the Project.

7. a. Payment will be made to the Contractor for obtaining the storm water NOR as specified herein for the lump sum amount as shown in the bid schedule. If there is no line item for registration, obtaining the NOR shall be considered a subsidiary obligation of mobilization.

b. Individual erosion and sediment control items shall be paid for at the unit prices as shown in the bid schedule. Routine inspections will be performed by the Owner's representative or Engineer to verify compliance with the CBMPP and the Rule shall be the Contractor's responsibility and shall be incidental to the storm water registration.

c. If no individual erosion and sediment control items are included in the bid schedule the cost of these items shall be incidental to the lump sum amount as shown in the bid schedule for Storm Water Monitoring and Temporary Erosion and Sediment Control and payment shall be made pro rata as the Project progresses.

E. The Contractor shall perform all work in compliance with and as required by any State, Federal or Local registration, permit or license, the terms and conditions of which are adopted herein by reference. The Contractor agrees to indemnify and hold harmless the City, Engineer, and their respective officers, agents and employees from any fines, penalties, damages, claims, liability or judgment arising out of or in any manner associated with the Contractor's failure to perform work on the Project in strict accordance with all storm water registration, permit or license requirements.

ARTICLE X. MISCELLANEOUS CLAUSES

A. Notice and Service Thereof:

1. All notices, demands, requests, change orders, instructions, approvals and claims shall be in writing. Unless expressly otherwise provided elsewhere in this agreement, any election, notice or other communication required or permitted to be given under this agreement shall be in writing and deemed to have been duly given if provided in accordance with the provisions hereof.

2. Any notice to or demand upon the Contractor shall be in writing and shall be sufficiently given if addressed to the Contractor at the address stated herein and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to the Contractor at such address. It shall also be sufficient if such notice or demand be served upon the Contractor personally or its local representative in charge of the Project or delivered at his local office. The Contractor shall, from time to time, designate to the City in writing any change of address to which such notice or demand shall be sent.

3. Any notice to or demand upon the City shall be in writing and shall be sufficiently given if delivered to the office of the City's representative or if addressed to the City representative and deposited in the United States mail in a sealed envelope with sufficient postage prepaid or delivered with charges prepaid to any telegraph company for transmission to such representative of the City.

B. City Representative: The City's representative on this Project is hereby designated as Walker Associates, Inc. and whose address is 2890 Rice Mine Road NE, Tuscaloosa, Alabama 35406. All references to Engineer or Architect shall be to the City representative if no Engineer or Architect is involved in the Project.

With a copy to: Glenda Webb, Esquire, City Attorney, Office of the City Attorney
City of Tuscaloosa, Post Office Box 2089, Tuscaloosa, Alabama 35403-2089
Telephone: (205) 248-5140, Facsimile: (205) 349-0328

C. Contractor Representative: The Contractor's representative on this Project is hereby designated as Mike Dempsey – Jeffcoat and Associates, LLC. and whose address is 5610 Shirley Park Drive, Bessemer, AL. 35022.

D. Capacity: Each party to this agreement represents and warrants to the other as follows:

1. That it is an individual of the age of majority or otherwise a legal entity duly organized and in good standing pursuant to all applicable laws, rules and regulations.
2. That each has full power and capacity to enter into this agreement, to perform and to conclude the same including the capacity, to the extent applicable, to grant, convey and/or transfer; areas, assets, facilities, properties, (both real and personal), permits, consents and authorizations and/or the full power and right to acquire and accept the same.
3. That to the extent required, each party has obtained the necessary approval of its governing body or board and a resolution or other binding act has been duly and properly enacted by such governing body or board authorizing this agreement and said approval has been reduced to writing and certified or attested by the appropriate official of the party.
4. That each party has duly authorized and empowered a representative to execute this agreement on their respective behalf and the execution of this agreement by such representative fully and completely binds the party to the terms and conditions hereof.
5. That absent fraud, the execution of this agreement by a representative of the party shall constitute a certification that all such authorizations for execution exist and have been performed and the other party shall be entitled to rely upon the same. To the extent a party is a partnership, limited liability company or joint venture, the execution of this agreement by any member thereof shall bind the party and to the extent that the execution of agreement is limited to a manager, managing partner or specific member then the person so executing this agreement is duly authorized to act in such capacity for the party.
6. That each party represents and warrants to the other that there is no litigation, claim or administrative action threatened or pending or other proceedings to its knowledge against it which would have an adverse impact upon this transaction or upon either's ability to conclude the transaction or perform pursuant to the terms and conditions of this agreement.
7. That each party has obtained any and all required permits, approvals and/or authorizations from third parties to enable it to fully perform pursuant to this agreement.
8. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement;
9. Each party represents and warrants that the execution and delivery of this agreement and the consummation of the transactions contemplated herein will not conflict with, be in violation of, or constitute (upon notice or lapse of time, or both) a default under the laws of the State of Alabama, any resolution, agreement, or other contract agreement, or instrument to which a party is subject, or any resolution, order, rule, regulation, writ, injunction, decree or judgment of any governmental authority or court having jurisdiction over the party.
10. This agreement constitutes the legal, valid and binding obligation of each party and is enforceable against each party in accordance with its terms, except in so far as the enforceability thereof may be limited by:

(a) Bankruptcy, insolvency or other similar laws affecting the enforcement of creditors' rights
(b) General principles of equity, regardless of whether such enforceability is considered as a proceeding at equity or at law.

11. Neither party will enter into any agreement to do anything prohibited in this agreement or enter into any agreement or take any action which would in any way impair the ability of the other party to faithfully and fully perform its obligations hereunder.
12. Under the provisions of the Constitution and laws of the State of Alabama, each party has the power to consummate the transactions contemplated by this agreement.

E. Ownership of Contract Documents: The Contract Documents, and copies of parts thereof, are furnished and owned either by the City or the Engineer/Architect. All portions of the Contract Documents, and copies of parts thereof, are the instruments of service for this Project. They are not to be used on other work and are to be returned to the City on request at the completion of the Project. Any reuse of these materials without specific written verification or adaptation by the City will be at the risk of the user and without liability or legal expense to the City or Engineer/Architect. Such user shall hold the City, its officers, agents and employees harmless from any and all damages, including reasonable attorneys' fees, from any and all claims arising from any such reuse. Any such verification and adoption shall entitle the City to further compensation at rates to be agreed upon by the user and the City.

F. No Waiver of Rights: Neither the inspection by the City or the Engineer/Architect or any of their officers, employees, agents, or subconsultants, nor any order by the City for payment of money, nor any payment for, or acceptance of, the whole or any part of the Project by the City or Engineer/Architect, nor any extension of time or change order, nor any possession taken by the City or its employees, or non enforcement of any provision of this agreement by either party shall operate as a waiver of any provision of this agreement, or any power herein reserved to the City, or any right to damages, nor shall any waiver of any breach in this agreement be held to be a waiver of any other or subsequent breach. Acceptance or final payment shall not be final and conclusive with regards to latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the City's rights under any warranty.

G. Subletting or Assigning of Contract:

1. Limitations: The Contractor shall not sublet, assign, transfer, convey, sell or otherwise dispose of any portion of the agreement, his obligations, right, or interest therein, or its power to execute such agreement, to any person, firm or corporation without written consent of the City and such written consent shall not be construed to relieve the Contractor of any duty or responsibility for the fulfillment of the agreement. A sale, conveyance or transfer of 50% or more of the stock or ownership of the Contractor shall be considered an assignment. Provided; however, in no event shall any portion of this agreement be assigned to an unsuccessful bidder whose bid was rejected because he or she was not a responsible or responsive bidder. Use of subcontracts up to a combined (total) value of 50 percent of the value of all work will not be construed as an assignment. Unless otherwise stipulated in the proposal or general conditions, the Contractor shall perform, with its own organization, work with the value not less than fifty (50) percent of the value of all work embraced in the contract.
2. Subcontractor's Status: A subcontractor shall be recognized only in the capacity of an employee or agent of the Contractor.

H. Third Party Beneficiaries: It is the intent of the parties hereto that there shall be no third party beneficiaries to this agreement.

I. Final Integration: This Agreement constitutes the entire agreement of the parties, as a complete and final integration thereof with respect to its subject matter. All written or oral understandings and agreements heretofore had between and among the parties are merged into this Agreement, which alone fully and completely expresses their understandings. No representation, warranty, or covenant made by any party which is not contained in this Agreement or expressly referred to herein has been relied on by any party in entering into this Agreement.

J. Force Majeure: Neither party to this Agreement shall hold the other party responsible for damages or delay in performance caused by acts of God, strikes, lockouts or other circumstances beyond the reasonable control of the other or the other party's employees, agents or contractors.

K. Amendment in Writing: This Agreement may not be amended, modified, altered, changed, terminated, or waived in any respect whatsoever, except by a further agreement in writing, properly executed by all of the parties.

L. Binding Effect: This agreement shall bind the parties and their respective personal representatives, heirs, next of kin, legatees, distributees, successors, and assigns.

M. Captions: The captions of this Agreement are for convenience and reference only, are not a part of this Agreement, and in no way define, describe, extend, or limit the scope or intent of this Agreement.

N. Construction: This Agreement shall be construed in its entirety according to its plain meaning and shall not be construed against the party who provided or drafted it.

O. Mandatory and Permissive: "Shall", "will", and "agrees" are mandatory; "may" is permissive.

P. Governing Laws: The laws of the State of Alabama shall govern the validity of this Agreement, the construction of its terms, the interpretation of the rights, the duties of the parties, the enforcement of its terms, and all other matters relating to this Agreement.

Q. Liability of the City or City Officials. Notwithstanding any provision hereof to the contrary, the parties agree and acknowledge that the liability and obligations of the City, City officials or City employees as set forth herein are subject to the limitations imposed on municipalities by the Constitution and laws of the State of Alabama. No present or future official, officer or employee of the City shall ever be personally liable for the performance of any obligations hereunder.

R. Non Discrimination: The Contractor agrees that in performing the work and services as required herein under this agreement, not to discriminate against any person on the basis of race color, religion, sex, age or disability. (The Contractor shall fully comply with the Americans with Disabilities Act), the Fair Labor Standards Act and all other applicable laws and regulations).

S. Fines and Penalties: The Contractor shall be solely liable for any and all fines or penalties which may be levied by any governmental authority against the Owner and/or Contractor which are related to the Contractor's operations. The Owner shall deduct the amount of the levied fine or penalty from the Contract amount.

T. Agreement Date/Counterparts: The date of this Agreement is intended as and for a date for the convenient identification of this Agreement and is not intended to indicate that this Agreement was necessarily executed and delivered on said date. This instrument may be executed in any number of counterparts, each of which so executed shall be deemed an original, but all such counterparts shall together constitute but one and the same instrument.

U. Use of Words and Phrases. The following words and phrases, where used in this document, shall be given the following and respective interpretations: "Herein," "hereby," "hereunder," "hereof," and other equivalent words refer to this document as an entirety and not solely to the particular portion hereof in which any such word is used.

The definitions set forth in any portion of this Agreement unless the text or context indicates differently shall be deemed applicable whether the words defined are herein used in the singular or the plural. Wherever used herein any pronoun or pronouns shall be deemed to include both singular and plural and to cover all genders.

V. **Severability.** Each provision of this agreement shall be considered to be severable and, if for any reason, any such provision or any part thereof, is determined to be invalid and contrary to any existing or future applicable law, such invalidity shall not impair the operation of or affect those portions of this agreement that are valid, but this agreement shall be construed and enforced in all respects as if the invalid or unenforceable provision or part thereof had been omitted.

IN TESTIMONY WHEREOF, said Contractor has hereto affixed its signature and said City of Tuscaloosa has caused these presents to be executed by Walter Maddox, Mayor of the City of Tuscaloosa, and attested by the City Clerk, on the day and year first above written, in four counterparts, each of which shall, without proof or accounting for the other, be accepted as an original.

PARTY OF THE FIRST PART

Mike D
ATTEST

JEFFCOAT & ASSOCIATES LLC
Contractor

BY: Scott Cicero
ITS: Managing Member

ATTEST:

City Clerk

CITY OF TUSCALOOSA, A MUNICIPAL CORPORATION/PARTY OF THE SECOND PART/CITY, OWNER

Walter Maddox, Mayor

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

I, James E Lollar Sr, a Notary Public in and for said State at Large, hereby certify that Scott Cicero, who is named as Managing Member, is signed to the foregoing document, and,

- [x] Who is known to me, or
- [ ] Whose identity I proved on the basis of _____, or
- [ ] Whose identity I proved on the oath/affirmation of _____, a creditable witness to the signer of the above document

and that being informed of the contents of the document, he/she, as such officer and with full authority, executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the 2nd day of JUNE, 2016.

STATE OF ALABAMA NOTARY PUBLIC
JAMES E LOLLAR SR
My Commission Expires
May 7, 2019

James E Lollar Sr
Notary Public.

My Commission Expires: _____

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)

Before me, the undersigned, a Notary Public in and for the State of Alabama, appeared Walter Maddox, Mayor of the City of Tuscaloosa and acknowledged that his signature is affixed hereto in his capacity as Mayor of the City of Tuscaloosa.

Done this the 22nd day of June, 2016.

Melinda L Causey
Notary Public in and for the
State of Alabama at Large

My Commission Expires: May 26, 2020

[END OF CONTRACT AGREEMENT OFFICE OF THE CITY ATTORNEY]

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS
SECTION SIX
PERFORMANCE BONDS
(2015)

STATE OF ALABAMA)
TUSCALOOSA, COUNTY)

KNOWN ALL MEN BY THESE PRESENTS, that we, Jeffcoat and Associates, LLC. as principal and _____ (hereinafter called the "Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama, (hereinafter called the "City") a municipal corporation existing under and by virtue of the laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of $178,243.00 for the payment of which well and truly be made in lawful money of the United States, we do hereby bind ourselves, our successors and assigns and personal representatives, jointly and severally, firmly by the presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the City has entered into a certain written contract with said Contractor for the CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE, PROJECT NUMBER A16-0307 in accordance with contract documents therefore on file in the Office of the CITY ENGINEER at the price of, to-wit: one hundred seventy eight thousand two hundred forty three and 00/100 ($178,243) as more fully appears in said written contract bearing the date of May 27th , 20 16 , which contract is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if the Contractor shall fully and faithfully perform all the undertakings and obligations under the said agreement or contract herein before referred to and shall fully indemnify and save harmless the said City from all costs and damages whatsoever which it may suffer by reason of any failure on the part of said Contractor so to do, and shall fully reimburse and repay the said City any and all outlay and expense which it may incur in making good any such default, and shall guarantee all workmanship against defects for a period of one year, this obligation or bond shall be null and void, otherwise it shall remain in full force and effect.

And, for value received it is hereby stipulated and agreed that no change, extension of time, alteration or addition to the terms of said agreement or contract or in the work to be performed thereunder or the specifications accompanying the same shall in any wise affect the obligations of the principal or of the surety under this bond, and notice is hereby waived of any such change, extension of time, alternative of or addition to the terms of the agreement or contract or to the work or to the specifications.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the _____ day of _____, 20_____.

_____
Principal
By_____
Title

_____
Surety
By _____

_____
Title

ATTEST:

_____

CITY OF TUSCALOOSA PUBLIC WORKS CONTRACT DOCUMENTS

SECTION SEVEN
LABOR AND MATERIAL BOND
(2015)

KNOWN ALL MEN BY THESE PRESENTS, that we, Jeffcoat and Associates, LLC. (hereinafter called the "Contractor") of 5610 Shirley Park Drive, Bessemer, AL. 35022 as principal and _____ (hereinafter called the "Surety"), as surety, do hereby acknowledge ourselves indebted and firmly bound and held unto the City of Tuscaloosa, Alabama, (hereinafter called the "City"), a municipal corporation, existing under and by virtue of the Laws of the State of Alabama, for the use and benefit of those entitled thereto, in the penal sum of one hundred seventy eight thousand two hundred forty three & 00/100 ($ 178,243.00) for the payment of which well and truly to be made in lawful money of the United States, we do hereby bind ourselves, or successors, assigns and personal representatives, jointly and severally, firmly by these presents.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS: the City has entered into a certain written contract with said Contractor for the CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE, PROJECT A16-0307 in accordance with contract documents therefore on file in the Office of the CITY ENGINEER at the price of, to-wit:
One hundred seventy eight thousand two hundred forty three & 00/100
($ 178,243.00) as more fully appears in said written contract bearing date of May 27th ,20 16 , which contract is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if said Principal and all subcontractors to whom any portion of the work provided for in said contract is sublet and all assignees of said Principal and of such subcontractors shall promptly make payment to all persons supplying him or them with labor, foodstuffs, or supplies for or in the prosecution of the work provided for in such contract, or in any amendment or extension of or addition to said contract, and for the payment of reasonable attorney's fees, incurred by the claimant or claimants in suits on said bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, foodstuffs, or supplies for or in the prosecution of the work provided for in said contract, payment for which has not been made, shall have a direct right of action in his or their name or names against the principal and surety on this bond, which right of action shall be asserted in a proceeding, instituted in the county in which the work provided for in said contract is to be performed and in any county in which said Principal or Surety does business. Such right of action shall be asserted in a proceeding instituted in the name of the claimant or claimants for his or their use and benefit against said Principal and Surety or either of them (but not later than one year after the final settlement of said Contract) in which action such claim or claims shall be adjudicated and judgment rendered thereon.

(b) In addition to any other legal mode of service, service of summons and other process in suits on this bond brought in Tuscaloosa County may be had on the Principal or the Surety in accordance with Title 27, Chapter 3, Section 24 of the Ala. Code (1975) by serving a copy of the summons and complaint or other pleading or process, with the Commissioner of Insurance of the State of Alabama or his/ her designee and the Principal and Surety agree to be bound by such mode of service above described and consents that such service shall be the same as personal service on the Principal or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation recoverable under any workmen's compensation or employer's liability statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

(e) This bond is given pursuant to the terms of Title 39, Chapter 1, Section 1 of the Ala. Code (1975), and all the provisions of law with reference to this character of bond as set forth in said section or as may hereinafter be enacted are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the _____ day of _____, 20____.

_____
Principal

By: _____

_____
Title

_____
Surety

ATTEST:

By:_____

_____

_____
Title

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

CONTRACTOR'S RELEASE OF LIENS AND CLAIMS
Project No. A16-0307

THIS Contractor's Release of Liens and Claims is made in accordance with that certain contract between the CITY OF TUSCALOOSA, ALABAMA, a Municipal Corporation, (hereinafter the "City") and Jeffcoat and Associates, LLC. (hereinafter the "Contractor" or undersigned), for a project known as CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE in regard to which the undersigned warrants and certifies to the City as follows:

1. That there are no amounts owed by the undersigned or any tier of subcontractor or supplier of the undersigned which could become the basis for a lien or suit against the properties of the Contractor or the property of the City or any funds held by or in the possession of the City in regard to the Project.

2. That the undersigned has satisfied all claims and indebtedness of every nature in any way connected with the work, including (but not limited to) all payrolls, amounts due to subcontractors, accounts for labor performed and materials furnished, incidental services, liens and judgments.

3. In consideration of the receipt by the undersigned from the City of final payment under the above mentioned contract, the undersigned hereby waives and relinquishes all liens and claims of lien which the undersigned may have against the aforesaid property or funds; and further, undersigned also hereby remises, releases and forever discharges the City, its officers, agents and employees, of any and all claims, demands and causes of action whatsoever which the undersigned has, might have or could have against the City by reason of or arising out of the above-mentioned contract. The undersigned further agrees to indemnify and hold the City, its officers, agents and employees harmless against any and all claims or demands from subcontractors or suppliers arising out of the aforementioned contract.

IN WITNESS WHEREOF, the undersigned has duly executed this release this the _____ day of _____ _____, 20_____.

CONTRACTOR:

_____

BY: _____
TITLE: _____

I, _____, after being duly sworn, depose and say as follows: That I am the _____ of the _____ Corporation and hereby certify that I am duly authorized to execute this Contractor's Release of Liens and Claims.

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
Sworn to and subscribed before me on this the _____ day of _____, 20_____.

_____
Notary Public

_____
CONSENT OF SURETY:

_____
SURETY

BY: _____
ATTORNEY-IN-FACT FOR SURETY

CITY OF TUSCALOOSA PUBLIC WORKS
ROOFING GUARANTEE
Project No. A16-0307

Name of Project N/A

Location TUSCALOOSA, ALABAMA

Owner City of Tuscaloosa

General Contractor _____

Address _____

Date of Acceptance _____ Date of Expiration _____

1. The General Contractor does hereby certify to the City of Tuscaloosa that the roofing work included in this contract was installed in strict accordance with all requirements of the plans and specifications.

2. The General Contractor does hereby guarantee the roofing and associated work including all flashing, both composition and metal, against leaks due to faulty workmanship for a period of five (5) years and against leaks due to faulty or defective materials for twenty (20) years, starting on the date of acceptance of the Project by the City.

3. Subject to the terms and conditions listed below, the General Contractor guarantees that during the Guarantee Period he will at his own cost and expense, make or cause to be made such repairs to, or replacements of said work, as are necessary to correct faulty and defective work and materials as are necessary to maintain said work in watertight conditions, and further, to respond on or within three (3) calendar days upon proper notification of leaks or defects by the City or Architect.

A. Specifically excluded from this Guarantee are damages to the work, other parts of the building and building contents caused by: Lightning, windstorm, hail storm and other unusual phenomena of elements; and, Fire. When the work has been damaged by any of the foregoing causes, the Guarantee shall be null and void until such damage has been repaired by the General Contractor, and until the cost and expense thereof has been paid by the City or by the responsible party so designated.

B. During the Guarantee Period, if the City allows alteration of the work by anyone other than the General Contractor, including cutting, patching and maintenance in connection with penetrations, and positioning of anything on the roof, this Guarantee shall become null and void upon the date of said alterations. If the City engages the General Contractor to perform said alterations, the Guarantee shall not become null and void, unless the General Contractor, prior to proceeding with said work, shall have notified the City in writing, showing reasonable cause for claim that said alterations would likely damage or deteriorate the work, thereby reasonably justifying a termination of this Guarantee.

C. Future building additions will not void this guarantee, except for that portion of the future addition that might affect the work under this contract at the point of connection of the roof areas, and any damage caused by such addition. If this contract is for roofing of an addition to an existing building, then this guarantee covers the work involved at the point of connection with the existing roof.

D. During the Guarantee Period, if the original use of the roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray cooled surface, flooded basin, or other use of service more severe than originally specified, this Guarantee shall become null and void upon the date of said change.

E. The City shall promptly notify the General Contractor of observed, known or suspected leaks, defects or deterioration, and shall afford reasonable opportunity for the General Contractor to inspect the work, and to examine the evidence of such leaks, defects or deterioration.

IN WITNESS THEREOF, this instrument has been duly executed this the___ day of _____, 20___.

_____
General Contractor's Authorized Signature
NAME AND TITLE _____

CITY OF TUSCALOOSA
ASBESTOS AFFIDAVIT
Project No. A16-0307

DATE: N/A

BUILDING OWNER: _____

_____

_____

PROJECT: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

TO WHOM IT MAY CONCERN:

The undersigned certifies that to the best of his knowledge, no products containing asbestos have been included in the construction of the captioned Project. Special care was exercised to avoid asbestos-containing products, including reviewing product data sheets, reviewing product labels, and visually verifying products in the field. Special care to avoid asbestos has been used in the selection, purchase, and installation of products, including, but not limited to, the following: concrete, batt insulation, roof insulation, building felts, mastics, waterproofing products, adhesives, resilient flooring products, ceiling tiles, interior coatings, exterior coatings, roofing, pipe insulation, duct insulation, and pre-assembled items of equipment.

Respectfully submitted,

_____
Signature

_____ _____
Typed Name Title

_____
Firm Name

_____
Address

_____

Sworn to and subscribed before me on this the _____
day of _____, 20_____.

_____ _____
Notary Public. County, State

My Commission Expires:

_____

PROJECT NAME CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B –FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

PROJECT NO. A16-0307

CONTRACTOR/INSURED Jeffcoat and Associates, LLC.

STATE OF ALABAMA)
)
TUSCALOOSA COUNTY)

AGENT'S VERIFICATION OF CONTRACTOR'S INSURANCE

This is to certify to the City of Tuscaloosa, Alabama, a Municipal Corporation, that the Contractor in the above referenced Project does possess a policy or policies of insurance reflected on the Certificate of Insurance issued for the Project by the undersigned agency of which I am an authorized representative. I have read the contract document as it relates to insurance requirements and said Contractor's insurance is effective as of the dates stated in the certificate and meets or exceeds all ratings, limits, and amounts as required by the same.

This the _____ day of _____, 20_____.

AGENCY: _____

_____

_____

BY: _____

ITS: _____

STATE OF ALABAMA)
TUSCALOOSA COUNTY)

NOTICE OF CONDITIONAL BID AWARD
CITY OF TUSCALOOSA, ALABAMA

VIA FACSIMILE: _____

TO: Jeffcoat and Associates, LLC.
5610 Shirley Park Drive
Bessemer, AL. 35022

Project Name: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE
Project Number: A16-0307
Date: May 24, 2016

You are here notified pursuant to Ala. Code §39-2-6 (1975), that the City of Tuscaloosa has made a conditional bid award to you in regard to the above-referenced Project based upon your proposal of $ 178,243.00 _____.

The above bid award ☐ Does ☒ Does Not include the following additive and/or deductive alternates as requested in the bid documents:

Additive Alternates		Deductive Alternates	
1. _____	($_____)	1. _____	($_____)
2. _____	($_____)	2. _____	($_____)
3. _____	($_____)	3. _____	($_____)

Pursuant to Ala. Code §39-2-8 (1975), you are required to enter into a written contract on the form included in the proposal, plans and specifications, furnish a performance bond and a payment bond executed by a surety company authorized and qualified to make such bonds in the State of Alabama, in the amount required in the bid documents, and present evidence of insurance also as required by the bid documents, within the period of time stated therein or, if no period of time is stated, within thirty (30) days after the prescribed forms have been presented to you for signature.

Pursuant to Ala. Code §39-2-11 (1975), if you fail to execute the contract and furnish acceptable contract securities and evidence of insurance as required by the bid documents within the period of time as set forth, the awarding authority may retain all or a part of the proposal guarantee and may award the contract to the second lowest responsible responsive bidder. Under such circumstances, the owner will be entitled to consider all rights arising out of its acceptance of your proposal as abandoned.

DONE this 25th day of May, 2016.

CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: [signature]
City's Representative/Engineer/Architect

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice of conditional bid award and acknowledge the contents of the same on this the 2nd day of JUNE 2016.

CONTRACTOR:

[signature]
By its: Managing member

STATE OF ALABAMA)
TUSCALOOSA COUNTY)
CITY OF TUSCALOOSA)

NOTICE TO PROCEED WITH PUBLIC WORKS PROJECT
CITY OF TUSCALOOSA, ALABAMA

Project Name: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE
Project No.: A16-0307
Date: June 29th

TO: Jeffcoat and Associates, LLC.
5610 Shirley Park Drive
Bessemer, AL. 35022

Pursuant to Ala. Code §39-2-10 (1975), you are hereby notified to immediately commence work in full accordance with the terms and conditions of the Contract Documents in the above referenced Project, dated February 29, 20 16, on or before July 5th, 2016, and you are to complete the work within the time specified therein.

CITY OF TUSCALOOSA, ALABAMA
A MUNICIPAL CORPORATION
Post Office Box 2089
Tuscaloosa, Alabama 35403-2089

By: Savannah Howell
City's Representative

ACCEPTANCE OF NOTICE

I, on behalf of the above named contractor, do hereby accept receipt of the above notice to proceed with the referenced Project and acknowledge the contents of the same on this the _____ day of _____ 2016

CONTRACTOR:

Mike D[illegible]

By Its: PROJECT MANAGER

CONTRACT CHANGE ORDER NO.

City of Tuscaloosa, Office of the City Attorney

DATE: _____ **PROJECT: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE**

TO: Jeffcoat and Associates, LLC.

(Contractor)

TERMS: You are hereby authorized, subject to the provisions of your Contract for this Project, to make the following changes thereto in accordance with the attached Change Order Request and supporting documents and to:

FURNISH the necessary labor, materials and equipment to:

_____

_____

_____

_____

_____

TOTAL ADDITION OR REDUCTION TO CONTRACT PRICE:

(Note: Numbers in parentheses are deductions).

ORIGINAL CONTRACT PRICE	$_____
LESS CONTINGENCY/ALLOWANCE	$_____
NET ORIGINAL CONTRACT PRICE	$_____
Net total of previous Change Orders	$_____
Previous revised Contract Price	$_____
This Change Order No. _____ ☐Add ☐Deduct	$_____
Revised Contract Price this date	$_____

Extension of time resulting from this Change Order _____ (Indicate number of calendar days).

The amount of this Change Order will be the responsibility of _____

This Contract Modification constitutes full and mutual accord and satisfaction for all time and all cost related to this change. By acceptance of this Contract Modification, the Contractor hereby agrees that the modification represents an equitable adjustment to the Contract, and further, agrees to waive all right to file any further claims or changes arising out of or as a result of this change, or the accumulation of executed Contract Modifications on this Contract.

The Contractor and Owner(s) hereby agree to the terms of this Change Order as contained herein.

CONSENT OF SURETY

_____
(Company)

By: _____

CONTRACTING PARTIES

_____
(Contractor)

By: _____
(Authorized Representative)

RECOMMENDED

By: WALKER ASSOCIATES, INC.

_____
(Design Engineer or Architect)

CITY OF TUSCALOOSA

By: _____
(Mayor)

CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY

CHANGE ORDER REQUEST

OWNER: CITY OF TUSCALOOSA

ARCHITECT/ENGINEER: WALKER ASSOCIATES, INC.

CONTRACTOR: Jeffcoat and Associates, LLC.

PROJECT: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

CHANGE ORDER REQUEST NO. _____ **DATE:** _____

---

1. DESCRIPTION OF CHANGE:

2. CHANGE ORDER COSTS: _____

Proposal Attached _____ **Cost Estimated/Proposal Required**

Item	*Quantity*	*Material Unit Price*	*Labor (Hours)*	*Labor Unit Price*	*Sub-Total Cost*
a.					
b.					
c.					
d.					
e.					
f.*					
				TOTAL:	

*If more than 6 items, provide attachments.

3. INSTITUTED BY:

4. JUSTIFICATION OF NEED:

5. JUSTIFICATION OF CHANGE ORDER VERSUS COMPETITIVE BIDDING:

---

6. COSTS REVIEW:

---

7. THIS CHANGE ORDER IS SUBMITTED FOR REVIEW AND APPROVAL AND IS CLASSIFIED AS THE FOLLOWING TYPE:

- ☐ Minor change of a total monetary value less than required for competitive bidding.
- ☐ Changes for matters relatively minor and incidental to the original contract necessitated by unforeseeable circumstances arising during the course of work.
- ☐ Emergencies arising during the course of work.
- ☐ Change or alternates provided for in the original bidding where there is no difference in price of the Change Order from the original best bid on the Alternate.
- ☐ Change of relatively minor terms not contemplated when the plans and specifications were prepared and the Project was bid and which are in the public interest and do not exceed 10% of the Contract Price.

---

8. EXTENSION OF TIME REQUESTED: Calendar Days:

RECOMMENDED:

BY:_____
Tuscaloosa's Consulting Engineer/Architect

BY:_____
City Representative

APPROVED:

BY:_____
Contractor

BY:_____
Owner's Legal Advisor

BY:_____
Owner's Authorized Representative

STATE OF ALABAMA)
COUNTY OF TUSCALOOSA)
CITY OF TUSCALOOSA)

LEGAL NOTICE
NOTICE OF COMPLETION OF PUBLIC WORKS PROJECT
(Over $50,000)

Pursuant to Ala. Code §39-1-1 (1975), notice is hereby given that

Jeffcoat and Associates, LLC. has completed its contract with
(Name of Company)

the City of Tuscaloosa, Alabama, for the CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE
(Name of Project)

located at TUSCALOOSA, ALABAMA. This notice will be
(Location of the Project)

published for a period of four (4) successive weeks beginning: _____
(Date)

A final settlement will not be made upon the contract until the expiration of thirty (30) days after completion of notice. Any person or firm having claims on said Project for materials or labor should contact the above contractor at:

5810 Shirley Park Drive, Bessemer, AL. 35022

_____
(Address of Contractor)

in the time and manner as required by law.

CITY OF TUSCALOOSA
OFFICE OF THE CITY ATTORNEY
P. O. BOX 2089
TUSCALOOSA, ALABAMA 35403

DATED: _____

CITY OF TUSCALOOSA
SPECIAL CONDITIONS FOR
FEDERALLY FUNDED CONTRACTS

I. DEFINITIONS

"Construction Contract" means a contract for construction, rehabilitation, alteration, and/or repair, including painting and decorating.

"Contractor" means an entity that has entered into an agreement with the local government for the performance of specific work on a project or activity, the provision of professional services, or for the supply of equipment and/or materials.

" HUD " means U.S. Department of Housing and Urban Development (Federal Agency).

"Local Government" means the City of Tuscaloosa.

"Program" means the Community Development Block Grant Disaster Recovery (CDBG-DR) (Federal Program) operated under the provisions of HUD

"Projects/Activities" means those undertakings which are included in the Program and are funded wholly or in part by CDBG-DG and HUD

"Project Area" means the corporate limits of the City of Tuscaloosa.

"Subcontractor" means a person, firm or corporation supplying services or labor and materials or only labor or only materials for work at the site of the project, for and under contract or agreement with the Contractor.

II. CONFLICT OF INTEREST

A. Interest of Members of the Local Government. No officer, employee or agent of the local government who exercises any function or responsibilities in connection with the planning and carrying out of the program, or any other person who exercises any functions or responsibilities in connection with the program, shall have any personal financial interest, direct or indirect, in this contract, and the Contractor shall take appropriate steps to assure compliance.

B. The Contractor agrees that it will incorporate into every subcontract required in writing the following provision: Interest of Contractor and Employees. The Contractor agrees that no person who presently exercises any functions or responsibilities in connection with the program, has any personal financial interest, direct or indirect, in this contract. The Contractor further covenants that he presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of his services hereunder.

The Contractor further covenants that in the performance of this contract no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or his employees must be disclosed to the City. Provided, however, that this paragraph shall be interpreted in such a manner so as not to unreasonably impede the statutory requirement that maximum opportunity be provided for employment of and participation by low income residents of the area.

C. Provisions of the Hatch Act. Neither the funds provided by this agreement nor the personnel employed in the administration of the agreed upon work shall be in any way or to any extent engaged in the conduct of political activities in contravention of Chapter 15 of Title 5, U. S. Code.

III. **EQUAL OPPORTUNITY REQUIREMENTS:** During the performance of this contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age, or disability. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, national origin, age, or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment, or recruitment advertising; layoff or termination; rates of pay or other forms of compensations; and selection of training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.

2. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age, or disability.

3. The Contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, a notice advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

5. The Contractor will furnish to the local government all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the local government, HUD, and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules regulations, and orders.

6. In the event of the Contractor's non-compliance with the nondiscrimination clauses of this agreement or with any of the said rules, regulations, or orders, this agreement may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further local government contracts in accordance with procedures authorized in Executive Order 11246 of September 24 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the City, Secretary of Labor, or as otherwise provided by law.

7. The Contractor will include the provisions of paragraph 1 through 6 above in every subcontract or purchase order unless exempted by rules, regulations, or orders of the local government or the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed as a means of enforcing such provisions, including sanctions for noncompliance: Provided however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the City, the Contractor may request the local government to enter into such litigation to protect the interests of the local government.

8. The Contractor agrees that it will assist and cooperate actively with the local government and the Secretary of Labor in obtaining the compliance of subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the local government and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the local government in the discharge of its primary responsibility for securing compliance.

9. The Contractor further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the

Executive Order. In addition, the agency agrees that if it fails or refuses to comply with these undertakings, the local government may take any or all of the following actions: terminate or suspend in whole or in part this contract; refrain from extending any further assistance to the Contractor under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such Contractor.

10. Non-segregated Facilities. The Contractor certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The Contractor covenants that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. As used in this paragraph, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise.

11. No person in the United States shall, on the ground of race, color, religion, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity made possible by or resulting from this contract. The agency and each employer will comply with all requirements imposed by or pursuant to Title VI of the Civil Rights Act of 1964.

12. The Contractor shall maintain data which records its affirmation action in equal opportunity employment, including but not limited to employment, upgrading, demotions, transfers, recruitment or recruitment advertising, layoffs or terminations, pay or other compensation, and selection for training.

IV. LABOR STANDARDS PROVISIONS - CONSTRUCTION CONTRACTS ONLY

A. Contract Work Hours and Safety Standards Act

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 laborer or mechanic in any work-week in which he is employed on such work to work in excess of forty hours in any work-week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of forty hours in any work-week.
2. Violations; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in subparagraph 1, the Contractor and any subcontractor responsible therefore shall be liable to any affected employee for his unpaid wages. In addition, such Contractor and subcontractor shall be liable to the City for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph 1 in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work-week of forty hours without payment of the overtime wages required by the clause set forth in subparagraph 1.
3. Withholding for Unpaid Wages and Liquidated Damages. The local government may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages.

B. Employment of Certain Persons Prohibited. No person under the age of sixteen years and no person who at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this contract.

C. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the labor standards provisions of this contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceedings or has testified or is about to testify in any proceedings under or relating to the labor standards applicable under this contract.

D. Questions Concerning Certain Federal Statutes and Regulations. All questions arising under this contract which relate to the application or interpretation of the aforesaid Contract Work Hours and Safety Standards Act, the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Act, or the labor standards provisions of any other pertinent Federal statute, shall be referred, through the City of Tuscaloosa and the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purpose of this contract.

V. ENVIRONMENTAL PROTECTION REQUIREMENTS

A. The Contractor hereby agrees that any facility to be utilized in the performance of any nonexempt contract or subcontract shall not be a facility included on the list of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

B. The Contractor also agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

C. As a condition of the award of the contract, the Contractor agrees to give prompt notice to the City of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

D. The Contractor agrees that it will include or cause to be included the criteria and requirements in subparagraph A through D of this section in every nonexempt subcontract and that it will take such action as the City or the EPS may direct as a means of enforcing such provisions.

VI. FINANCIAL MANAGEMENT: The Contractor shall maintain effective control over and accountability for all funds, property, and other assets that are provided for by this agreement. The Contractor shall adequately safeguard all such assets and shall assure that they are used solely for authorized purposes.

A. Ineligible Costs. In addition to any costs that are ineligible under other criteria included herein the following costs are specifically ineligible:

1. Bad Debts. Any loses arising from uncollected accounts and other claims, and related costs.
2. Contingencies. Contributions to a contingency reserve or any similar provisions for unforeseen events.
3. Contributions and Donations.
4. Entertainment. Costs of amusements, social activities, and incidental costs, such as meals, beverages, lodgings, and gratuities, relating to entertainment.
5. Fines and Penalties. Costs resulting from violations of or failure to comply with Federal, State, and local laws and regulations.
6. Interest and Other Financial Costs. Interest on borrowing (however represented), bond

discounts, cost of financing and refinancing operations, and legal and professional fees paid in connection herewith.

7. Legislative Expenses. Salaries and other expenses of local government bodies such as county supervisors, city councils, school boards, etc., whether incurred for purposes of legislation or executive direction.
8. Membership Expenses. Cost of membership in an organization which devotes a substantial part of its activities to influencing legislation.
9. Travel. Costs in excess of those allowed by the Contractor for its equivalent employees. In any case, the difference in cost between first-class air accommodations and less-than-first-class air accommodations are not available and is so documented.
10. Meeting Attendance. Costs of attending meetings which are not open for attendance on a non-segregated basis.

B. Property Management Standards. The Contractor's property management standards for non-expendable personal property acquired under this contract shall include the following procedural requirements:

1. Property records shall be maintained accurately and provide for: a description of the property; manufacturer's serial number or other identification number; acquisition data, cost, and source of property; percentage of Federal funds used in the purchase of property; location, use and condition of the property; and ultimate disposition data including sales price or the method used to determine current fair market value.
2. A physical inventory of property shall be taken and the results reconciled with the property records at least once each year to verify the existence, current utilization, and continued need for the property.
3. A control system shall be in effect to ensure adequate safeguards to prevent loss, damage, or theft to the property. Any loss, damage, or theft of non-expendable property shall be investigated and fully documented.
4. Adequate maintenance procedures shall be implemented to keep the property in good condition.

C. Procurement Standards

1. The Contractor shall maintain a code or standard of conduct which shall govern the performance of its officers, employees, or agents in contracting with and expending grant funds. Local government officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from Contractors or potential Contractors.
2. All procurement transactions regardless of whether negotiated or advertised and without regard to dollar value shall be conducted in a manner so as to provide maximum open and free competition.

VII. GENERAL REQUIREMENTS

A. Retention of Records. All records maintained by the Contractor that pertain to this agreement shall be retained by the Contractor for a period of three years or such longer period as the local government or HUD may require in specific cases.

B. Reports and Information. The Contractor, at such times as the local government may require, shall furnish such statements, reports, records, data and information, as may be requested pertaining to matters covered by this agreement.

C. Audit Requirements. The local government, the Comptroller General of the United States, and/or __

HUD (Federal Agency), or any of the duly authorized representatives shall have access to all tasks, accounts, records, reports, files and other papers or property of the Contractor pertaining to funds provided under this agreement for the purpose of making surveys, audits, examinations, excerpts, and transcripts. The Contractor's financial management system shall be audited at least once a year. Audits may be made at less frequency considering the nature, size and complexity of the activity. The Contractor shall implement a systematic method to assure timely and appropriate resolution of audit findings and recommendations.

D. Breach of Contract Terms and Conditions. In the event of the Contractor's noncompliance with the terms and conditions of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part. Provided, that the right of the Contractor to proceed with this contract shall not be terminated or the Contractor charged with liquidated damages because of delays in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted, to acts of God, or of the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes, if the Contractor shall within ten days from the beginning of any such delay notify the City in writing of the cause of the delay. The City shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in the City's judgment, the findings of fact justify such an extension, and the City's findings of fact thereon shall be final and conclusive on the parties hereto, subject only to appeal, within thirty days, by the Contractor to the City whose decision on such appeal as to the facts of delay and the extension of time for completing the work shall be final and conclusive on the parties hereto.

E. Safety Standards. No Contractor or subcontractor contracting for any part of a construction contract shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards promulgated by the Secretary of Labor.

F. Lead-based Paint Regulations. The construction or rehabilitation of residential structures with assistance provided under this contract is subject to the HUD Lead-based Paint regulations, 24 CFR part 35. Should this contract include activities involving the construction or rehabilitation of residential structures, the Contractor hereby agrees to comply with the regulations of 24 CFR part 35.

G. Subcontracts. The Contractor shall insert in any subcontracts all of the terms and conditions set forth in this contract and also a clause requiring the subcontractors to include these terms and conditions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

H. Davis-Bacon. As applicable, Contractors shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5), the provisions of which are incorporated by reference into this contract as if contained herein.

I. Debarment of contactors/subcontractors / City's right to monitor. All contracting and subcontracting agencies shall be actively registered in the sam.gov system and have a non-debarred status to perform work. The City of Tuscaloosa shall have all rights to any and all documentation related to the project. Periodic monitoring visits will be performed by City of Tuscaloosa staff to ensure all federal and contract requirements are followed.

J. Green Building Standard for Replacement and New Construction of Residential Housing. Contractors must meet the Green Building Standard in this subparagraph for: (i) all new construction of residential buildings; and (ii) all replacement of substantially-damaged residential buildings. Replacement of residential buildings may include reconstruction (i.e., demolishing and re-building a housing unit on the same lot in substantially the same manner) and may include chances to structural elements such as flooring systems, columns or load bearing interior or exterior walls. For purposes of this Notice, the Green Building Standard means the contractor will require that all construction covered by subparagraph, above, meet an industry-recognized standard that has achieved certification under at least one of the following programs (i) ENERGY STAR (Certified Homes or Multifamily High Rise); (ii)

Enterprise Green Communities; (iii) LEED (NC, Homes, Midrise, Existing Buildings O&M, or Neighborhood Development); (iv) ICC-700 National Green Building Standard; (v) EPA Indoor AirPlus (ENERGY STAR a prerequisite); or (vi) any other equivalent comprehensive green building program, including regional programs. Standards for rehabilitation of non-substantially-damaged residential buildings: For rehabilitation other than that described in subparagraph, above, contractors must follow the guidelines specified in the HUD CPD Green Building Retrofit Checklist, available on the CPD Disaster Recovery Web site. Contractors must apply these guidelines to the extent applicable to the rehabilitation work undertaken, including the use of mold resistant products when replacing surfaces such as drywall. When older or obsolete products are replaced as part of the rehabilitation work, rehabilitation is required to use ENERGY STAR- labeled, WaterSense labeled, or federal Energy Management Program (FEMP)-designated products and appliances. Implementation: For construction projects completed under construction, or under contract prior to the date that federal assistance was approved for the project the contractor is encouraged to apply the applicable standards to the extent feasible but the Green Building Standard is not required; (ii) for specific which an ENERGY STAR-or-WaterSense-labeled or FEMP-designated product does not exist, the requirement to use such products does not apply. The City encourages contractors to implement green infrastructure policies to the extent practicable.

VIII. <u>ADECA-FUNDED CONTRACTS:</u> The Contractor shall include the following provisions in all construction contracts funded by the Alabama Department of Economic and Community Affairs (ADECA). For all ADECA-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. <u>Section 109 Clause, Housing and Community Development Act of 1974</u>. No person in the United States shall on the grounds of race, color, national origin or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title.

B. <u>Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) (applicable to contract/subcontracts exceeding $10,000).</u> Contractor's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

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, are as follows:

Goals for Minority Participation (Insert Goals)	Goals for Female Participation (Insert Goals)

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 geographic area located outside of the covered area, it shall apply the goals established for such geographic 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 non-Federally 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 efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. 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 for 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 60-4. Compliance with the goals will be measured against the total work hours performed.

C. "Section 3" Compliance in the Provision of Training, Employment and Business Opportunities.

1. The work to be performed under this Contract is a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12, U.S.C. 1701u. Section 3 requires that to the greatest extent feasible, opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by, persons residing in the area of the project.

2. The parties to this Contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this Contract. The parties to this Contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.

3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of this commitment under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the Subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 135. The Contractor will not subcontract with any Subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the Subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department issued hereunder prior to the execution of the Contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its contractors and subcontractors, its successors and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified in 24 CFR Part 135.

D. Section 402 Veterans of the Vietnam Era (if $10,000 or over). Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era.

1. The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based

on their disability or veteran status in all employment practices such as the following: employment upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

2. The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this Contract and those which occur during the performance of this Contract, including those not generated by this Contract and including those occurring at an establishment of the Contractor other than the one wherein the Contract is being performed but excluding those of independently operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of $10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs 4 and 5.

3. Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and non-veterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the Contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.

4. The reports required by paragraph 2 of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the Contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C.1787. The Contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this Contract identifying data for each hiring location copies of the reports submitted until the expiration of one year after final payment under the Contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

5. Whenever the Contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by the contract clause.

6. This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.

7. The provisions of paragraphs 2, 3, 4 and 5 of this clause do not apply to openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.

8. As used in this clause:

   a. "All suitable employment openings" includes, but is not limited to, openings which occur in the following .job categories: production and nonproduction; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical; and executive, administrative, and professional openings that are compensated on a salary basis of less than $25,000 per year. This term includes full-time employment, temporary employment of more than three days' duration, and part—time employment. It does not include openings which the Contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer—union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government.

   b. "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico and the Virgin Islands.

   c. "Openings which the Contractor proposes to fill from within his own organization" means employment openings for which no consideration will be given to persons outside the Contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the Contractor proposed to fill from regularly established "recall" lists.

   d. "Openings which the Contractor proposes to fill pursuant to customary and traditional employer-union hiring arrangements" means employment openings which the Contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the Contractor and representatives of his employees.

9. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.

10. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.

11. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and

employees.

12. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the Contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.

13. The Contractor will include the provisions of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any subcontractor or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for non-compliance.

E. Certification of Compliance with Air and Water Acts (applicable to Federally assisted construction contracts and related subcontracts exceeding $100,000). Compliance with Air and Water Acts. During the performance of this Contract, the Contractor and all Subcontractors shall comply with the requirements of the Clean Air Act, as amended, 42 USC 1857 et seg., the Federal Water Pollution Contract Act, as amended, 33 USC 1251 et seq., and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended. In addition to the foregoing requirements, all nonexempt Contractors and Subcontractors shall furnish to the Owner, the following:

1. A stipulation by the Contractor or Subcontractors that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency (EPA) pursuant to 40 CFR 15.20.

2. Agreement by the Contractor to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 USC 1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended, (33 USC 1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

3. A stipulation that as a condition for the Contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, or EPA indicating that a facility utilized, or to be utilized for the Contract, is under consideration to be listed on the EPA List of Violating Facilities.

4. Agreement by the Contractor that he will include, or cause to be included, the criteria and requirements in paragraphs A through D of this section in every nonexempt subcontract and requiring that the Contractor will take such actions as the Government may direct as a means of enforcing such provisions.

F. 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.

G. Drug-Free Workplace Requirements. The Drug-Free Workplace Act of 1988 (42 U.S.C. 701) requires grantees (including individuals) of federal agencies, as a prior condition of being awarded a grant, to certify that they will provide drug-free workplaces. Each potential recipient must certify that it will comply with drug-free workplace requirements in accordance with the Act and with HUD's rules at 24 CFR part 24, subpart F.

H. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a

member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

IV. DISASTER RECOVERY FUNDED CONTRACTS:___The Contractor shall include the following provisions in all Disaster Recover (DR) funded construction contracts. For all DR-funded construction contracts, in the event the provisions contained in this section conflict with provisions contained elsewhere in this document, the provisions contained in this section shall prevail.

A. The Contractor agrees to abide by all applicable Federal regulations in receiving, disbursing and accounting for Community Development Block Grant funds including, but not limited to all applicable sections of 24 CFR 570.

B. ADA Compliance. The Contractor hereby covenants and agrees that, in performing its responsibilities and obligations hereunder, the Contractor, its officers, agents or employees will not, on the grounds of race, color, sex, religion, national origin, disability or age, discriminate or permit discrimination against any person or groups of persons in any manner. The Contractor further agrees to comply with all applicable State and Federal ordinances and regulations, including but not limited to, the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA), the Civil Rights Act of 1964 and any regulations promulgated there under.

C. Section 3 Compliance. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing. The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations. Contractor agrees to send to each labor organization or representative of workers with which the Contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the Contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin. Contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. Contractor will not subcontract with any subcontractor where the Contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135. Contractor will certify that any vacant employment positions, including training positions, that are filled (1) after Contractor is selected by before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the Contractor's obligations under 24 CFR part 135. Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

D. Section 109 Compliance. No person in the United States will, on the ground of race, color, national origin, religion, or sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity administered of provided under this Agreement, pursuant to Section 109 of title I of the Housing and Community Development Act of 1974 (Title I) (42 U.S.C. 5309).

E. Section 402 Compliance. Contractors and subcontractors shall take affirmative action to employ and

advance in employment qualified covered veterans. Disabled veterans, recently separated veterans (veterans within 3 years of their discharge or release from active duty), veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized (referred to as "other protected veterans"), and Armed Forces service medal veterans are covered veterans under VEVRAA, pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended (VEVRAA).

F. Copeland Anti-Kickback Act Compliance. Pursuant to The Copeland "Anti-Kickback" Act, 40 USC §3145 and 18 USC §874, no contractor or subcontractor operating under this agreement shall induce an employee to give up any part of the compensation to which he or she is entitled under his or her contract of employment. Contractors and subcontractors shall submit a weekly statement of the wages paid to each employee performing on covered work during the preceding payroll period.

G. Affirmative Action. During the performance of this contract, the contractors and subcontractors operating under this agreement shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Contractors and subcontractors operating under this agreement shall comply with Affirmative Action laws and regulations to ensure equal employment opportunities, including, but not limited to 41 CFR Part 60-1; 41 CFR Part 60-2; 41 CFR Part 60-250; 41 CFR Part 60-741; compliance with E.O. 11246, "Equal Employment Opportunity," as amended by E.O. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity."

H. Compliance with Goals for Minority and Female Participation. The City of Tuscaloosa has voluntarily adopted a Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities to the fullest extent allowed by state and federal law. It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprises for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal. The Developer is encouraged to adopt corresponding goals to those of the City's Minority / Disadvantaged Business Enterprise ("MBE/DBE/WBE") Program.

I. Compliance with Environmental Laws; including The Clean Air Act and Clean Water Act. Contractors and subcontractors operating under this agreement shall be responsible for ensuring compliance with Federal, State, or local pollution control laws and related requirements, including but not limited to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). If a contracting officer becomes aware of noncompliance with clean air or water standards in facilities used in performing nonexempt contracts, that contracting officer shall notify the agency head, or a designee, who shall promptly notify the EPA Administrator or a designee in writing.

J. Byrd Anti-Lobbying Agreement. Contractors operating under this agreement shall file the required certification under the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient.

K. HUD Form 4010 See next page.

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section l(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

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

(2) The classification is utilized in the area by the construction industry; and

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract in the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section l(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section l(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at *http://www.dol.gov/esa/whd/forms/wh347instr.htm* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

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

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. **Apprentices and Trainees.**

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant ',to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

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

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than $5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds $100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen 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 the individual is employed on such work to work in excess of 40 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 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (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 watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in sub paragraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds $100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

L. Davis Bacon-Wage Rates

(Insert applicable Davis-Bacon Wage Rates Here)

General Decision Number: AL160002 01/08/2016 AL2

Superseded General Decision Number: AL20150002

State: Alabama

Construction Type: Highway

Counties: Blount, Calhoun, Etowah, Shelby, St Clair and Tuscaloosa Counties in Alabama.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, bulding structures in rest areas projecs, and railroad construction; bascule, suspension & spandrel arch bridges desgned for commercial navigation; bridges involving marine construction; other major bridges)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016

* SUAL2011-001 01/04/2011

	Rates	Fringes
Carpenter	$ 13.88	
Concrete finisher	$ 13.26	
Electrician	$ 19.73	
Laborers:		
Asphalt Raker	$ 11.23	
Concrete Laborer	$ 10.84	
Grade Checker	$ 12.58	
Guardrail Erector	$ 12.47	
Pipe Layer	$ 12.58	
Side Rail/Form Setter	$ 11.97	
Traffic Control Specialist	$ 11.27	
Unskilled	$ 9.84	
Power equipment operators:		
Aggregate Spreader	$ 14.17	
Asphalt Distributor	$ 14.27	
Asphalt Paver	$ 11.85	
Asphalt Spreader	$ 13.65	

Backhoe, Clamshell,
Dragline, and Shovel.....$ 15.87
Broom (Sweeper).....$ 11.68
Bulldozer.....$ 14.73
Crane & Derrick.....$ 20.63
Front End Loader.....$ 13.38
Mechanic.....$ 17.54
Milling Machine.....$ 12.31
Motor Grader and Motor
Patrol.....$ 16.10
Oiler/Greaseman.....$ 13.33
Roller (Self-Propelled).....$ 12.38
Scraper.....$ 13.00
Striping Machine.....$ 15.20
Track Hoe/Excavator.....$ 14.64
Tractor and Loader (farm
rubber tired).....$ 11.40
Tractor/Loader (all other
work).....$ 11.22

Truck drivers:
Multi-Rear Axle.....$ 12.25
Single Rear Axle.....$ 11.54

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests

for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

==========

END OF GENERAL DECISION

ST: EXC-01
6/14

ALABAMA DEPARTMENT OF REVENUE
SALES AND USE TAX DIVISION
P.O Box 327710 • Montgomery, AL 36132-7710

Application For
Sales and Use Tax Certificate of Exemption

FOR GOVERNMENT ENTITY PROJECT

This Certificate of Exemption will be limited to purchases which qualify for an exemption of sales and use taxes pursuant to Rule No. 810-6-3-.77

PROJECT INFORMATION:

PROJECT NAME			PROJECT OWNER'S FEIN (EXEMPT ENTITY)
STREET ADDRESS OF PROJECT (CITY AND COUNTY INCLUDED)	CITY	ZIP	COUNTY

APPLICANT'S INFORMATION:

RELATION: *(CHOOSE ONE)*	NAICS CODE
☐ Exempt Entity ☐ General Contractor ☐ Sub-Contractor	
APPLICANT'S LEGAL NAME	FEIN
DBA	CONSUMER'S USE TAX ACCOUNT NUMBER
MAILING ADDRESS	
CONTACT PERSON	BUSINESS TELEPHONE NUMBER ( )
ESTIMATED START DATE	ESTIMATED COMPLETION DATE
REASON EXEMPTION IS CLAIMED	
JOB DESCRIPTION	
WILL ANY POLLUTION CONTROL EXEMPTION BE APPLICABLE? ☐ Yes ☐ No	ESTIMATED POLLUTION CONTROL COST $

TOTAL BID AMOUNT	LABOR COST	MATERIAL COST
$	$	$

PROJECT NAME	PROJECT OWNER'S FEIN (EXEMPT ENTITY)

FORM OF OWNERSHIP:

☐ Individual ☐ Partnership ☐ Corporation ☐ Multi member LLC ☐ Single member LLC

If applicant is a corporation, a copy of the certified certificate of incorporation, amended certificate of incorporation, certificate of authority, or articles of incorporation should be attached. If the applicant is a limited liability company or a limited liability partnership, a copy of the certified articles of organization should be attached.

OWNERSHIP INFORMATION:

Corporations – give name, title, home address, and Social Security Number of each officer.

Partnerships – give name, home address, Social Security Number or FEIN of each partner.

Sole Proprietorships – give name, home address, Social Security Number of owner.

LLC – give name, home address, and Social Security Number or FEIN of each member.

LLP – give name, home address, and Social Security Number or FEIN of each partner.

NAME *(PLEASE PRINT)* SIGNATURE

TITLE DATE

REVENUE DEPARTMENT USE ONLY

Examiner's Remarks

Examiner Date

Supervisor's Recommendation

Supervisor Date

Instructions For Preparation of Form ST: EXC-01
Sales and Use Tax Certificate of Exemption for Government Entity Project

In order to expedite the processing of your application, please include the following documentation when submitting your application:

Exempt Entity:
1. Signed Application
2. Copy of Executed/Signed Contract and/or Letter of Intent

General Contractor:
1. Signed Application
2. Copy of Executed/Signed Contract and/or Letter of Intent
3. List of Sub-Contractors
4. Alabama Board of General Contractor's License
5. State/County Business License (usually obtained through county probate office)
6. Any other municipal business licenses associated with the project

Sub-Contractor:
1. Application
2. Alabama Board of General Contractor's License
3. State/County Business License (usually obtained through county probate office)
4. Any other municipal business licenses associated with the project
5. List of Sub-Contractors (if any)

General contractors and sub-contractors:
Any updates regarding the sub-contractors working on a project, additions and/or deletions, must be submitted to the Department within 30 days of occurrence.

If an extension is needed for a project, please contact the Department of Revenue at the address, numbers, or emails listed below.

THERE IS A FILING REQUIREMENT IF YOUR APPLICATION IS APPROVED. The return will be filed through the Consumer's Use Tax account. If you do not currently have a Consumer's Use Tax account, one will be opened for you. The return should be filed every filing period that the Contractor's Exemption Certificate is active/open and should include the Project No., Exemption No., and the total amount of purchases for the filing period. If there is no product purchased with the exemption certificate, then a zero return must be filed for the period. There is a requirement of one entry for each exemption certificate that is active for each filing period. The information associated with the Contractor's Exemption Certificates is input at the bottom of the return.

The application and applicable documentation may be mailed, faxed, or emailed to the following:

Fax:	(334) 353-7867	
Emails:	amber.hartley@revenue.alabama.gov	brenda.wallace@revenue.alabama.gov
Mailing Address:	ATTN: Contractor's Exemption Alabama Dept. of Revenue Sales & Use Tax Division - Room 4303 PO Box 327710 Montgomery, AL 36132-7710	

Exhibit A

THE CITY OF TUSCALOOSA
MINORITY ENTERPRISE/DISADVANTAGED BUSINESS ENTERPRISE
(MBE/DBE/WBE) POLICY FOR PUBLIC WORKS PROJECTS OVER $50,000

General Mission Statement

THE CITY OF TUSCALOOSA (hereinafter, "City") has voluntarily adopted a Minority/Disadvantaged Business Enterprise (MBE/DBE/WBE") Program designed to encourage the participation and development of minority and disadvantaged business enterprises and to promote equal business opportunities in the City to the fullest extent allowed by state and federal law.

It is the intent of the City to foster competition among contractors, suppliers, and vendors that will result in better quality and more economical services rendered to the City. Under this policy, the City of Tuscaloosa has established a goal of ten to twenty percent (10-20%) inclusion of minority and disadvantaged business enterprise (hereinafter sometimes "MBE/DBE/WBE") for all services required to deliver City projects. In no case shall the stated percentage be the determining factor in contract awards. Rather, contractors must demonstrate a good faith effort to attain the desired percentage goal.

Program Goals

It is the goal of this program:

- To ensure non-discrimination in the award and administration of City contracts.
- To help to remove barriers to the participation of DBE/MBE/WBE's in competing for City contracts.
- To ensure a level playing field exists on which DBE/MBE/WBE's can compete fairly for City contracts.

Definition

1. "Minority Business Enterprise" ("MBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned and controlled by an African American, or Black American.
2. "Women-owned Business Enterprise" ("WBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is at least fifty-one percent (51%) owned, operated and controlled on a daily basis by one or more female American citizens.
3. "Disadvantaged Business Enterprise" (DBE") means a business which is an independent and continuing enterprise for profit, performing a commercially useful function and is owned by a majority of persons who are United States citizens or permanent resident aliens (as defined by the Immigration and Naturalization Service) of the United States, and who are Asian, Black, Hispanic or Native Americans, according to the following definitions:

"Asian" – means persons having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

"African American" or "Black American" means persons having origins in any black racial group of Africa.

"Hispanic" means persons of Spanish or Portuguese culture with origins in Mexico, South of Central America, or the Caribbean Islands regardless of race.

"Native American" means persons having origins in any of the original peo9ple of North America, including American Indians, Eskimos and Aleuts.

Equal Business Opportunity

It is the policy of the City to promote full and equal business opportunities for all persons doing business with the City, regardless of race, sex or national origin. It is the ultimate goal of this policy to promote an equitable business climate district. The City will seek to increase minority and women participation for contracts that require formal bids. These efforts will be for contracts above $50,000 as allowed by the Alabama Public Works law. These efforts are designed to help prevent discrimination against minorities and disadvantaged businesses and promote more completion among vendors, suppliers, and contractors of the City of Tuscaloosa.

The City has established a goal of ten to twenty percent (10-20%) of the total construction related expenditures to be provided by minority and disadvantaged business enterprises. While the policy provides for voluntary participation by the City and is dependent upon race-neutral and gender-neutral considerations, contractors are encouraged to comply with the City's policy. The City of Tuscaloosa shall periodically review the policy, including race/gender-neutral remedies, to determine its effectiveness.

Good Faith Effect

The City require contractors to demonstrate a good faith effort to attain the goal of 10-20% participation of MBE/DBE/WBE's in all levels of the Public Works contracting process. Contractors shall document their efforts to obtain minority and disadvantaged business participation in the bid documents. Contractors should note that failure to document a good faith effort to the satisfaction of the City may subject the contractor to bid rejection for non-responsiveness.

The following process shall constitute a good faith effort under the City's policy:

(1) Contractors deciding to bid on a City project shall submit the MBE/DBE/WBE Documentation Statement and Acknowledgement (Form1). Submission of Form 1 confirms the commitment of the contractor to participate in the inclusion effort for the project. Form 1 must be submitted to the City of Tuscaloosa Office of Resilience and Innovation no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(2) Contractors shall submit MBE/DBE/WBE Bid Solicitation Notice (Form 2). Form 2 must be submitted to the City of Tuscaloosa Office of Resilience and Innovation no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier. The City reserves the right to modify the submittal deadline as-needed.

(3) Contractors shall submit a brief plan for achieving the stated MBE/DBE/WBE Participation Goal for his/her trade (Form 3). Form 3 must be submitted in the contractor's sealed bid.

(4) Contractor shall submit a listing of all MBE/DBE/WBE contractors that submitted bids **(Form 4)**. Form 4 must be submitted in the contractor's sealed bid. (Note: In the event a MBE/DBE/WBE contractor submits a bid after the general contractor has sealed the bid, contractors should write on the envelope the name(s) and scope of work of the MBE/DBE/WBE contractor who submitted the bid.)

(5) Contractors shall be required to work in cooperation with the City in the implementation of this program. Failure to do so, in the discretion of the City, may result in a rejection of bid due to non-responsiveness.

Following compliance with item (5) above, submission of Form 1, Form 2, Form 3, and Form 4 at the above-prescribed times shall satisfy the good faith effort requirement. Failure to do so may result in rejection of bid due to non-responsiveness.

Additional Administrative Requirements/Procedure

(1) Once a tentative contract award has been made, the successful contractor shall submit a list of all MBE/DBE/WBE firms the contractor proposes to utilize during the execution of the contract **(Form 5)**. In addition, the contractor shall include on Form 5 all firms that the major subcontractors propose to utilize.

(2) If the successful contractor will be subcontracting less than the started percentage goal, the Contractor must complete a "MBE/DBE/WBE Unavailability Certification" **(Form 6)**. Form 6 is due once a tentative contract award has been made.

(3) Contractors shall obtain the listing of certified MBE/DBE/WBE business by contacting the City of Tuscaloosa Office of Resilience and Innovation to assist in soliciting MBE/DBW/WBE participation for the project.

(4) Contractors shall not be required to use a MBE/DBE/WBE subcontractor who cannot display reasonable technical and financially qualifications to perform the work in question.

(5) In addition to the above requirements, contractors should note that the City reserves the right to periodically audit payroll records to ensure compliance with the program. The City employs the services of a Compliance Director.

(6) Upon completion of the project and prior to release of retainage or final payment, the contractor shall submit a Project Closeout Report **(Form 7)** that includes final accounting of all MBE/DBE/WBE firms utilized on the project.

(7) On a monthly basis, contractors shall submit updated MBE/DBE/WBE reports (Monthly Report Form) to identify any changes in MBE/DBE/WBE firm utilization **(Form 8)**. Contractors shall submit Form 8 directly to the City of Tuscaloosa Office of Resilience and Innovation.

Race/Gender – Neutral Remedies

The City recognizes that race/gender – neutral remedies may be effective tools used to increase MBE/DBE/WBE participation. Therefore, the City will continue to explore these remedies. The remedies will include, but will not be limited to, the following:

1. Technical assistance techniques to identify and increase the participation of MBE/DBE/WBE's in the City's contracting, subcontracting and purchasing opportunities.
2. Continuation of the certification process.

The City will periodically review the success of these measures in order to determine the extent to which the measures provide equitable access to the City's contracting, subcontracting and purchasing opportunities.

The City has determined that this policy complies with all applicable local, state and national laws concerning the contracting and purchasing process. The City shall not sacrifice product quality for lower pricing, but shall make all awards in accordance with applicable law. It shall be the primary responsibility of the City to insure that this policy is followed, and that all actions regarding the contracting and purchasing process comply with all applicable statues as well as the defined goals relative to MBE/DBE/WBE participation on all construction projects.

Contact Information:

City of Tuscaloosa Office of Resilience and Innovation
Robin Edgeworth, Chief Resilience Officer
(205) 248-5725
redgeworth@tuscaloosa.com

Form 1 (one page)
Documentation Statement and Acknowledgement

(Due no later than seven (7) days prior to the bid, or at the pre-bid conference, whichever is earlier)

PROJECT NAME: CITYWALK – ALBERTA PARKWAY SECTION PHASE 1B – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

The City of Tuscaloosa has adopted a program to encourage the participation of Minority Business Enterprises/Disadvantaged Business Enterprises (MBE/DBE/WBE) on its public works construction projects. The signed statement serves as a commitment by the undersigned company to comply with this program as outlined by the City, relative to the involvement of MBE/DBE/WBE firm in City guidelines.

The undersigned Company will adhere to City program guidelines set forth to utilize MBE/DBE/WBE businesses in all construction projects, and all program forms (1-8) have been reviewed and understood.

Mike Dempsey	5-8-16
Company Representative (Signature)	Date
MIKE DEMPSEY	PROJECT MANAGER
Company Representative (Printed)	Title
JEFFCOAT AND ASSOCIATES LLC	205-481-1100
Company Name	Telephone Number
BESSEMER, AL 35022	205-481-4546
City, State, Zip	Fax Number

Form 2 (6 pages)
Bid Solicitation Notice

(Due no later than seven (7) days prior to the bid, or at the pre-bid Conference, whichever is earlier)

BID DATA

1. GENERAL CONTRACTOR: JEFFCOAT AND ASSOCIATES LLC

   ADDRESS: 5610 SHIRLEY PARK DR

   BESSEMER, AL 35022

   CONTACT (S): MIKE DEMPSEY

   PHONE: 205-612-5065

   FAX: 205-481-4546

   E-MAIL: MDEMPSEY@JEFFCOATASSOC.COM

2. OWNER: CITY OF TUSCALOOSA

3. NAME OF PROJECT: CITYWALK - ALBERTA PARKWAY PHASE 1B

4. SCHEDULE PRE-BID MEETING

   DATE/TIME: 5-4-16
   LOCATION: TUSCALOOSA CITY HALL

5. DATE/TIME FOR RECEIPT OF BIDS: 5-11-16

6. SCHEDULE BID OPENING

   DATE/TIME: 5-11-16
   LOCATION: TUSCALOOSA CITY HALL

7. ESTIMATED JOB START DATE: WITHIN 30 DAYS OF AWARD

8. ESTIMATED COMPLETION DATE: 120 DAYS FROM START

PROJECT: _____

_____

LOCATION: _____

BID DATE: _____

GENERAL CONTRACTOR CONTACT:

NAME _____

ADDRESS: _____

_____

TELEPHONE: ( ) _____

FAX: ( ) _____

EMAIL: ( ) _____

_____

DEADLINE FOR PROPOSALS

_____

DATE/TIME

* Estimated Contract Opportunity Value:
(1) 0-25,000 (2) 25,000-50,000 (3) 50,000-100,000 (4) 100,000 - 500,000 (5) over 500,000

DIVISION 02 – EXISTING CONDITIONS
(1) (2) (3) (4) (5) *

[ ] 02 21 SURVEYS
[ ] 02 22 GEOTECHNICAL INVESTIGATIONS
[ ] 02 41 DEMOLITION
[ ] 02 42 REMOVAL and SALVAGE of CONSTRUCTION MATERIALS
[ ] 02 43 STRUCTURE MOVING
[ ] 02 50 SITE CONTAINMENT
[ ] 02 55 UNDERGROUND STORAGE TANK REMOVAL
[ ] 02 61 TRANSPORTATION and DISPOSAL of HAZARDOUS MATERIALS
[ ] 02 62 ASBESTOS REMEDIATION
[ ] 02 63 LEAD REMEDIATION
[ ] 02 65 MOLD REMEDIATION
[ ] 02 81 CHEMICAL SAMPLING, TESTING and ANALYSIS
[ ] 02 __ _____
(Please fill-in other opportunity)

DIVISION 3 - CONCRETE (1) (2) (3) (4) (5)
[ ] 03 01 MAINTENANCE OF CONCRETE
[ ] 03 11 CONCRETE FORMING
[ ] 03 15 CONCRETE ACCESSORIES
[ ] 03 21 REINFORCING STEEL
[ ] 03 22 WELDED WIRE FABRIC REINFORCING
[ ] 03 30 CAST-IN-PLACE CONCRETE
[ ] 03 31 STRUCTURAL CONCRETE
[ ] 03 35 CONCRETE FINISHING
[ ] 03 37 SPECIALTY PLACED CONCRETE
[ ] 03 39 CONCRETE CURING
[ ] 03 41 PRECAST STRUCTURAL CONCRETE
[ ] 03 45 PRECAST ARCHITECTURAL CONCRETE
[ ] 03 47 SITE-CAST CONCRETE
[ ] 03 62 NON-SHRINK GROUTING
[ ] 03 63 EPOXY GROUTING
[ ] 03 81 CONCRETE CUTTING
[ ] 03 82 CONCRETE BORING
[ ] 03 __ _____
(Please fill-in for other opportunity)

DIVISION 4 - MASONRY (1) (2) (3) (4) (5)
[ ] 04 21 CLAY UNIT MASONRY
[ ] 04 22 CONCRETE UNIT MASONRY
[ ] 04 23 UNIT MASONRY PANELS
[ ] 04 36 MULTIPLE-WYTHE MASONRY
[ ] 04 43 STONE MASONRY
[ ] 04 57 MASONRY FIREPLACES
[ ] 04 71 MANUFACTURED BRICK MASONRY
[ ] 04 73 MANUFACTURED STONE MASONRY
[ ] 04 __ _____
(Please fill-in for other opportunity)

DIVISION 5 - METALS (1) (2) (3) (4) (5)
[ ] 05 12 STRUCTURAL STEEL FRAMING
[ ] 05 14 STRUCTURAL ALUMINUM FRAMING
[ ] 05 15 WIRE ROPE ASSEMBLIES
[ ] 05 21 STEEL JOIST FRAMING
[ ] 05 31 STEEL DECKING
[ ] 05 35 RACEWAY DECKING ASSEMBLIES
[ ] 05 41 STRUCTURAL METAL STUD FRAMING
[ ] 05 42 COLD-FORMED METAL JOIST FRAMING
[ ] 05 44 COLD-FORMED METAL TRUSSES
[ ] 05 51 METAL STAIRS
[ ] 05 52 METAL RAILINGS
[ ] 05 53 METAL GRATINGS
[ ] 05 55 METAL STAIR TREADS & NOSING
[ ] 05 56 METAL CASTINGS
[ ] 05 58 FORMED METAL FABRICATIONS
[ ] 05 71 DECORATIVE METAL STAIRS
[ ] 05 73 DECORATIVE METAL RAILINGS
[ ] 05 75 DECORATIVE FORMED METAL
[ ] 05 __ _____
(Please fill-in for other opportunity)

DIVISION 6 – WOODS, PLASTICS & COMPOSITES
(1) (2) (3) (4) (5)

[ ] 06 11 WOOD FRAMING

[___] 06 12 STRUCTURAL PANELS
[___] 06 15 WOOD DECKING
[___] 06 16 SHEATING
[___] 06 17 SHOP FABRICATED STRUCTURAL WOOD
[___] 06 22 MILLWORK
[___] 06 25 PREFINISHED PANEL
[___] 06 26 PANELING
[___] 06 43 WOOD STAIRS & RAILINGS
[___] 06 44 ORNAMENTAL WOODWORK
[___] 06 48 WOOD FRAMES
[___] 06 __ _____
(Please fill-in for other opportunity)

DIVISION 7 – THERMAL & MOISTURE PROTECTION {1} {2} {3} {4} {5}
[___] 07 11 DAMPPROOFING
[___] 07 12 BUILT-UP BITUMINOUS WATERPROOFING
[___] 07 13 SHEET WATERPROOFING
[___] 07 16 CEMENTIOUS & REACTIVE WATERPROOFING
[___] 07 19 WATER REPELLANTS
[___] 07 21 THERMAL INSULATION
[___] 07 22 ROOF & DECK INSULATION
[___] 07 24 EXTERIOR INSULATION & FINISH SYSTEMS
[___] 07 25 WEATHER BARRIERS
[___] 07 26 VAPOR RETARDERS
[___] 07 31 SHINGLES & SHAKES
[___] 07 32 ROOF TILES
[___] 07 33 NATURAL ROOF COVERINGS
[___] 07 41 ROOF PANELS
[___] 07 42 WALL PANELS
[___] 07 46 SIDING
[___] 07 51 BUILT-UP BITUMINOUS ROOFING
[___] 07 52 MODIFIED BITUMINOUS MEMBRANE ROOFING
[___] 07 53 ELASTOMETRIC MEMBRANE ROOFING
[___] 07 54 THERMOPLASTIC MEMBRANE ROOFING
[___] 07 56 FLUID APPLIED ROOFING
[___] 07 58 ROLL ROOFING
[___] 07 61 SHEET METAL ROOFING
[___] 07 65 FLEXIBLE FLASHING

[___] 07 71 ROOF SPECIALTIES
[___] 07 72 ROOF ACCESSORIES
[___] 07 81 APPLIED FIREPROOFING
[___] 07 84 FIRESTOPPING
[___] 07 91 PREFORMED JOINT SEALS
[___] 07 92 JOINT SEALANTS
[___] 07 95 EXPANSION CONTROL
[___] 07 __ _____
(Please fill-in for other opportunity)

DIVISION 8 - OPENINGS {1} {2} {3} {4} {5}
[___] 08 11 METAL DOORS & FRAMES
[___] 08 12 METAL FRAMES
[___] 08 13 METAL DOORS
[___] 08 14 WOOD DOORS
[___] 08 16 COMPOSITE DOORS
[___] 08 17 INTEGRATED DOOR OPENING ASSEMBLIES
[___] 08 31 ACCESS DOORS & PANELS
[___] 08 32 SLIDING GLASS DOORS
[___] 08 33 COILING DOORS & GRILLES
[___] 08 34 SPECIAL FUNCTION DOORS
[___] 08 36 PANEL DOORS
[___] 08 38 TRAFFIC DOORS
[___] 08 41 ENTRANCES & STOREFRONTS
[___] 08 42 ENTRANCES
[___] 08 43 STOREFRONTS
[___] 08 44 CURTAIN WALL & GLAZED ASSEMBLIES
[___] 08 51 METAL WINDOWS
[___] 08 52 WOOD WINDOWS
[___] 08 53 PLASTIC WINDOWS
[___] 08 54 COMPOSITE WINDOWS
[___] 08 56 SPECIAL FUNCTION WINDOWS
[___] 08 62 UNIT SKYLIGHTS
[___] 08 63 METAL-FRAMED SKYLIGHTS
[___] 08 71 DOOR HARDWARE
[___] 08 74 ACCESS CONTROL HARDWARE
[___] 08 75 WINDOW HARDWARE
[___] 08 79 HARDWARE ACCESSORIES
[___] 08 81 GLASS GLAZING
[___] 08 83 MIRRORS
[___] 08 84 PLASTIC GLAZING
[___] 08 88 SPECIAL FUNCTION GLAZING
[___] 08 91 LOUVERS
[___] 08 95 VENTS
[___] 08 __ _____
(Please fill-in for other opportunity)

DIVISION 9 - FINISHES {1} {2} {3} {4} {5}
[___] 09 21 PLASTER & GYPSUM ASSEMBLIES
[___] 09 22 SUPPORTS FOR PLASTER & GYPSUM
[___] 09 23 GYPSUM PLASTERING
[___] 09 24 CEMENT PLASTERING
[___] 09 26 VENEER PLASTERING
[___] 09 28 BACKING S & UNDERLAYMENTS
[___] 09 29 GYPSUM
[___] 09 30 TILING
[___] 09 51 ACOUSTICAL CEILINGS
[___] 09 54 SPECIALTY CEILINGS
[___] 09 62 SPECIALTY FLOORING
[___] 09 63 MASONRY FLOORING
[___] 09 64 WOOD FLOORING

[___] 09 65 RESILIENT FLOORING
[___] 09 66 TERRAZZO FLOORING
[___] 09 68 CARPETING
[___] 09 72 WALL COVERINGS
[___] 09 77 SPECIAL WALL SURFACING
[___] 09 91 PAINTING
[___] 09 93 STAINING & TRANSPARENT FINISHING
[___] 09 96 HIGH PERFORMANCE COATINGS
[___] 09 97 SPECIAL COATINGS
[___] 09 _____
(Please fill-in for other opportunity)

DIVISION 10 - SPECIALTIES {1} {2} {3} {4} {5}
[___] 10 11 VISUAL DISPLAY UNITS
[___] 10 14 SIGNAGE
[___] 10 22 PARTITIONS
[___] 10 26 WALL & DOOR PROTECTION
[___] 10 28 TOILET, BATH & LAUNDRY ACCESSORIES
[___] 10 44 FIRE PROTECTION SPECIALTIES
[___] 10 51 LOCKERS
[___] 10 71 EXTERIOR PROTECTION
[___] 10 74 MANUFACTURED EXTERIOR SPECIALTIES
[___] 10 75 FLAGPOLES
[___] 10 81 PEST CONTROL DEVICES
[___] 10 88 SCALES
[___] 10 _____
(Please fill-in for other opportunity)

DIVISION 11 - EQUIPMENT {1} {2} {3} {4} {5}
[___] 11 11 VEHICLE SERVICE EQUIPMENT
[___] 11 12 PARKING CONTROL EQUIPMENT
[___] 11 13 LOADING DOCK EQUIPMENT
[___] 11 14 PEDESTRIAN CONTROL EQUIPMENT
[___] 11 24 MAINTENANCE EQUIPMENT
[___] 11 31 RESIDENTIAL APPLIANCES
[___] 11 33 RETRACTABLE STAIRS
[___] 11 41 FOODSERVICE STORAGE EQUIPMENT
[___] 11 42 FOOD PREPARATION EQUIPMENT
[___] 11 43 FOOD DELIVERY CARTS AND CONVEYORS
[___] 11 44 FOOD COOKING EQUIPMENT
[___] 11 46 FOOD DISPENSING EQUIPMENT
[___] 11 47 ICE MACHINES
[___] 11 48 CLEANING & DISPOSAL EQUIPMENT
[___] 11 52 AUDIO-VISUAL EQUIPMENT
[___] 11 53 LABORATORY EQUIPMENT
[___] 11 66 ATHLETIC EQUIPMENT
[___] 11 67 RECREATIONAL EQUIPMENT
[___] 11 82 SOLID WASTE HANDLING
[___] 11 _____
(Please fill-in for other opportunity)

DIVISION 12 - FURNISHINGS {1} {2} {3} {4} {5}
[___] 12 21 WINDOW BLINDS
[___] 12 22 CURTAINS & DRAPES
[___] 12 23 INTERIOR SHUTTERS
[___] 12 24 WINDOW SHADES
[___] 12 32 MANUFACTURED CASEWORK
[___] 12 35 SPECIALTY CASEWORK
[___] 12 36 COUNTERTOPS
[___] 12 46 FURNISHING ACCESSORIES
[___] 12 48 RUGS & MATS
[___] 12 51 OFFICE FURNITURE
[___] 12 52 SEATING
[___] 12 54 HOSPITALITY FURNITURE
[___] 12 58 INSTITUTIONAL FURNITURE
[___] 12 61 FIXED AUDIENCE SEATING
[___] 12 63 STADIUM & ARENA SEATING
[___] 12 67 PEWS & BENCHES
[___] 12 92 INTERIOR PLANTERS & ARTIFICAL PLANTS
[___] 12 93 SITE FURNISHINGS
[___] 12 _____
(Please fill-in for other opportunity)

DIVISION 13 - SPECIAL CONSTRUCTION {1} {2} {3} {4} {5}
[___] 13 11 SWIMMING POOLS
[___] 13 17 TUBS & POOLS
[___] 13 18 ICE RINKS
[___] 13 21 CONTROLLED ENVIRONMENT ROOMS
[___] 13 24 SPECIAL ACTIVITY ROOMS
[___] 13 28 ATHLETIC & RECREATIONAL SPECIAL CONSTRUCTION
[___] 13 31 FABRIC STRUCTURES
[___] 13 34 FABRICATED ENGINEERED STRUCTURES
[___] 13 36 TOWERS
[___] 13 42 BUILDING MODULES
[___] 13 48 SOUND, VIBRATION, & SEISMIC CONTROL
[___] 13 49 RADIATION PROTECTION
[___] 13 _____
(Please fill-in for other opportunity)

DIVISION 14 - CONVEYING SYSTEMS {1} {2} {3} {4} {5}

[___] 14 11 MANUAL DUMBWAITERS
[___] 14 12 ELECTRIC DUMBWAITERS
[___] 14 21 ELECTRIC TRACTION ELEVATORS
[___] 14 24 HYDRAULIC ELEVATORS
[___] 14 27 CUSTOM ELEVATOR CABS & DOORS
[___] 14 28 ELEVATOR EQUIPMENT & CONTROLS
[___] 14 31 ESCALATORS

[___] 14 32 MOVING WALKS
[___] 14 42 WHEELCHAIR LIFTS
[___] 14 51 CORRESPNDENCE & PARCEL LIFTS
[_ _] 14 91 FACILITY CHUTES
[___] 14 92 PNEUMATIC TUBE SYSYTEMS
[___] 14 __ _____
(Please fill-in for other opportunity)

DIVISION 21 --FIRE SUPPRESSION {1} {2} {3} {4} {5}
[___] 21 11 FIRE-SUPPRESSION WATER SERVICE PIPING &METHODS
[___] 21 12 FIRE SUPPRESSION STANDPIPES
[___] 21 13 FIRE SUPPRESSION SPRINKLER SYSTEMS
[___] 21 21 CARBON-DIOXIDE FIRE EXTINGUISHING SYSTEMS
[___] 21 22 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
[___] 21 31 CENTIFUGAL FIRE PUMPS
[___] 21 __ _____
(Please fill-in for other opportunity)

DIVISON 22-PLUMBING {1} {2} {3} {4} {5}
[___] 22 07 PLUMBING INSULATION
[___] 22 11 FACILITY WATER DISTRIBUTION
[___] 22 13 FACILITY SANITARY SEWERAGE
[___] 22 14 FACILITY STORM DRAINAGE
[___] 22 41 COMMERICAL PLUMBING FIXTURE
[___] 22 42 COMMERICAL PLUMBING FIXTURES
[___] 22 45 EMERGENCY PLUMBING FIXTURES
[___] 22 47 DRINKING FOUNTAINS & WATER COOLERS
[___] 22 51 SWIMMING POOL PLUMBING SYSTEMS
[___] 22 66 CHEMICAL-WASTE SYSTEMS FOR LAB & HEALTHCARE FACILITIES
[___] 22 __ _____
(Please fill-in for other opportunity)

DIVISON 23-HEATING VENTILATION AIR CONDITIONING {1} {2} {3} {4} {5}
[___] 23 07 HVAC INSULATION
[___] 23 09 INSTRUMENTATION & CONTROL FOR HVAC
[___] 23 13 FACILITY FUEL-STORAGE TANKS
[___] 23 21 HYDRONIC PIPING & PUMPS
[___] 23 22 STEAM & CONDENSATE PIPING & PUMPS
[___] 23 31 HVAC DUCTS & CASINGS
[___] 23 33 AIR DUCT ACCESSORIES
[___] 23 34 HVAC FANS
[___] 23 37 AIR OUTLETS & INLETS
[___] 23 38 VENTILATION HOODS
[___] 23 41 PARTICULATE AIR FILTRATION
[___] 23 52 HEATING BOILERS
[___] 23 54 FURNACES
[___] 23 56 SOLAR ENERGY HEATING EQUIP.
[___] 23 57 HEAT EXCHANGES FOR HVAC
[___] 23 62 PACKAGED COMPRESSOR & CONDENSOR UNITS
[___] 23 63 REFRIGERANT CONDENSORS
[___] 23 64 PACKAGED WATER CHILLERS
[___] 23 65 COOLING TOWERS
[___] 23 73 INDOOR CENTRAL-STATION AIR-HANDLING UNITS
[___] 23 74 PACKAGED OUTDOOR HVAC EQUIP
[___] 23 82 CONVECTION HEATING & COOLING UNITS
[___] 23 84 HUMIDITY CONTROL EQUIPMENT
[___] 23 __ _____
(Please fill-in for other opportunity)

DIVISON 26-ELECTRICAL {1} {2} {3} {4} {5}
[___] 26 09 INSTRUMENTATION & CONTROL FOR ELECTRICAL SYSTEMS
[___] 26 12 MEDIUM VOLTAGE TRANSFORMERS
[___] 26 22 LOW VOLTAGE TRANSFORMERS
[___] 26 24 SWITCHS & PANELS
[___] 26 25 ENCLOSED BUS ASSEMBLIES
[___] 26 27 LOW VOLTAGE DISTRIBUTION EQUIPMENT
[___] 26 28 LOW VOLTAGE CIRCUIT PROTECTIVE DEVICES
[___] 26 29 LOW VOLTAGE CONTROLLERS
[___] 26 32 PACKAGED GENERATOR ASSEMBLIES
[___] 26 35 POWER FILTERS & CONDITIONERS
[___] 26 42 CATHODIC PROTECTION
[___] 26 51 INTERIOR LIGHTING
[___] 26 52 EMERGENCY LIGHTING
[___] 26 53 EXIT SIGNS
[___] 26 54 CLASSIFIED LOCATION LIGHTING
[___] 26 55 SPECIAL PURPOSE LIGHTING
[___] 26 56 EXTERIOR LIGHTING
[___] 26 61 LIGHTING SYSTEMS & ACCESSORIES
[___] 26 71 ELECTRICAL MACHINES
[___] 26 __ _____
(Please fill-in for other opportunity)

COMMUNICATIONS- 27 {1} {2} {3} {4} {5}
[✓] 27 13 COMMUNICATIONS BACKBONE CABLING
[___] 27 41 AUDIO-VIDEO SYSTEMS
[___] 27 51 DISTRIBUTED AUDIO VIDEO
[___] 27 52 HEALTHCARE COMMUNICATIONS & MONITORING SYSTEMS
[___] 27 53 DISTRIBUTED SYSTEMS

[___] 27 __ _____
(Please fill-in for other opportunity)

ELECTRONIC SAFETY & SECURITY- 28 {1} {2} {3} {4} {5}
[___] 28 13 COMMUNICATIONS BACKBONE CABLING
[___] 28 16 INTRUSION DETECTION
[___] 28 23 VIDEO SURVEILLANCE
[___] 28 31 FIRE DETECTION
[___] 28 33 FUEL-GAS DETECTION
[___] 28 39 MASS NOTIFICATION SYSTEMS
[___] 28 __ _____
(Please fill-in for other opportunity)

EARTHWORK-31 {1} {2} {3} {4} {5}
[___] 31 06 SCHEDULES FOR EARTHWORK
[___] 31 11 CLEARING & GRUBBING
[___] 31 13 SELECTIVE TREE & SHRUB REMOVAL & TRIMMING
[___] 31 14 EARTH STRIPPING & STOCKPILING
[___] 31 22 GRADING
[___] 31 23 EXCAVATION & FILL
[___] 31 25 ERSION & SEDIMENTATION
[___] 31 31 SOIL TREATMENT
[___] 31 32 SOIL STABILIZATION
[___] 31 33 ROCK STABILIZATION
[___] 31 36 GABIONS
[___] 31 37 RIPRAP
[___] 31 41 SHORING
[___] 31 43 CONCRETE RAISING
[___] 31 45 VIBROFLORATION & DENSIFICATION
[___] 31 46 NEEDLE BEAMS
[___] 31 48 UNDERPINNING
[___] 31 52 COFFERDAMS
[___] 31 56 SHURRY WALLS
[___] 31 62 DRIVEN PILES
[___] 31 63 BORED PILES
[___] 31 __ _____
(Please fill-in for other opportunity)

EXTERIOR IMPROVEMENTS- 32 {1} {2} {3} {4} {5}
[___] 32 11 BASE COURSES
[___] 32 12 FLEXIBLE PAVING
[___] 32 13 RIGID PAVING
[___] 32 16 CURBS, GUTTERS SIDEWALKS & DRIVEWAYS
[___] 32 17 PAVING SPECIALTIES
[___] 32 18 ATHLETIC & RECREATIONAL SURFACING
[___] 32 31 FENCES & GATES
[___] 32 32 RETAINING WALLS
[___] 32 34 FABRICATED BRIDGES
[___] 32 35 SCREENING DEVICES
[___] 32 84 PLANTING IRRIGATION
[___] 32 91 PLANTING PREPARATION
[___] 32 92 TURF & GRASSES
[___] 32 93 PLANTS
[___] 32 94 PLANTING ACCESSORIES
[___] 32 96 TRANSPLANTING
[___] 32 __ _____
(Please fill-in for other opportunity)

UTILITIES-33 {1} {2} {3} {4} {5}
[___] 33 11 WATER UTILITY DISTRIBUTION PIPING
[___] 33 12 WATER UTILITY DISTRIBUTION EQUIPMENT
[___] 33 16 WATER UTILITY STORAGE TANKS
[___] 33 21 WATER SUPPLY WELLS
[___] 33 31 SANITARY UTILITY SEWERAGE PIPING
[___] 33 36 UTILITY SEPTIC TANKS
[___] 33 41 STORM UTILITY DRAINAGE PIPING
[___] 33 42 CULVERTS
[___] 33 44 STORM UTILITY WATER DRAINS
[___] 33 46 SUBDRAINAGE
[___] 33 49 STORM DRAINAGE STRUCTURES
[___] 33 51 NATURAL GAS DISTRIBUTION
[___] 33 52 LIQUID FUEL DISTRIBUTION
[___] 33 71 ELECTRICAL UTILITY TRANSMISSION & DISTRIBUTION
[___] 33 81 COMMUNICATIONS & STRUCTURES
[___] 33 __ _____
(Please fill-in for other opportunity)

TRANSPORATION-34 {1} {2} {3} {4} {5}
[___] 34 11 RAIL TRACKS
[___] 34 41 ROADWAY SIGNALING AND CONTROL EQUIPMENT
[___] 34 71 ROADWAY CONSTRUCTION
[___] 34 72 RAILWAY CONSTRUCTION
[___] 34 __ _____
(Please fill-in for other opportunity)

MATERIAL PROCESSING & HANDLING EQUIPMENT-41 {1} {2} {3} {4} {5}
[___] 41 21 CONVEYORS
[___] 41 22 CRANES & HOISTS
[___] 41 __ _____
(Please fill-in for other opportunity)

POLLUTION CONTROL EQUIP-44 {1} {2} {3} {4} {5}
[___] 44 11 PARTICULATE CONTROL EQUIPMENT
[___] 44 __ _____
(Please fill-in for other opportunity)

WATER & WASTEWATER EQUIPMENT-46 {1} {2} {3} {4} {5}
[___] 46 07 PACKAGED WATER & WASTEWATER TREATMENT EQUIPMENT
[___] 46 __ _____
(Please fill-in for other opportunity)

FORM 3 (1page)

PARTICIPATION GOAL

(Must be submitted in the contractor's sealed bid)

General Contractor: JEFFCOAT & ASSOCIATES LLC

Contact: MIKE DEMPSEY

Name of Project: CITY WALK - ALBERTA PKWY SET PHASE 1B - FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

Date Submitted: 5-11-16

The project has a goal of ten to twenty percent (10-20%) MBE/DBE/WBE participation. Provide a brief summary of how this goal will be achieved. Failure to submit this form may result in a bid being rejected for non-responsiveness.

My goal for this project is Ø %.

I plan on achieving this goal by:

Form 4
Contractors Submitting Bids
(Must be submitted in the contractor's sealed bid)

General Contractor: JEFFCOAT & ASSOCIATES LLC

Contact: MIKE DEMPSEY
Name of Project: CITY WALK - ALBERTA PKWY SCT. PHASE 1B - FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE
Date Submitted: 5-11-16

All MBE/DBE/WBE Firms Submitting Bids	Scope of Work
N/A	

FORM 5
CONTRACTORS SUBMITTING BIDS
(Must be submitted following tentative bid award)

General Contractor: _____
Contact: _____
Name of Project: _____
Total Contract Amount: $ _____
Total Amount of All Subcontractors: $ _____
Date Submitted: _____

All MBE/DBE/WBE firms to be utilized	Scope of Work	Contract Amount

(Use additional pages if necessary)

Form 6
Unavailability Certification
(Must be submitted following tentative bid award)

I, _____(Name/Title), of _____ (Company) certify that on _____ (Date) I contacted the following Minority/Disadvantaged Business Enterprise to obtain proposals/bids for the following work items:

MDE/DBE/WBE Firm	Work Items Sought	Form of Proposal Sought

To the best of my knowledge and belief, said Minority/Disadvantaged Business Enterprises were unavailable for work on this project, or unable to prepare a proposal/bid for the following reason(s):_____

_____

_____

_____

(This form to be completed by each MBE/DBE/WBE listed, which was contacted, but did not submit a bid/proposal)

_____ (Name of MBE/DBE/WBE) was offered an opportunity to submit a proposal on the above identified work on _____ (Date) by _____ _____ (Company Name).

The above statement is a true and accurate account of why I did not submit a proposal/bid on this project.

_____ (Signature of MBE/DBE/WBE)

_____ (Date)

_____ (Title)

(Use additional pages if necessary)

Form 7
Project Closeout Report
(To be submitted upon completion of project)

General Contractor:_____
Contact:_____
Name of Project:_____
Total Contract Amount: $_____
Final Contract Amount: $_____
Date Submitted:_____

All MBE/DBE/WBE firms verified	Original subcontract amount	Final subcontract amount

Form 8
Monthly Report Form
(To be submitted monthly directly to the City's consultant)

General Contractor:_____
Contact:_____
Name of Project:_____
Total Contract Amount: $_____
Date Submitted:_____

Billings

Each MBE/DBE/WBE Contractor utilized	Original subcontract amount	Previous amount	This period amount	Total Amount

(Use additional pages if necessary)

SECTION 270000 – COMMUNICATIONS

PART 1 - GENERAL

1.1 INTRODUCTION/ RELATED DOCUMENTS

A. These specifications establish technical and operation requirements for various technologies planned for the CityWalk project under construction by the City of Tuscaloosa. The physical infrastructure, such as fiber, is a critical connector for IT-Communication Devices such as Security Cameras, Wireless Access Point Units, Information Terminals, Digital Signage and Network Connection Equipment throughout the project area. A properly designed and constructed telecommunications system shall be adaptable to change over time and support current and future needs.

B. The City of Tuscaloosa is soliciting bids from qualified Contractors for the material and labor to install a Fiber Network System. This bid and resultant contract is for the Alberta Parkway Segment of the total CityWalk. The total City Walk is being implemented along a 5.2 mile greenway walking/biking path. The project will be built in 3 segments and installed over an 18 – 24 month period. The CityWalk will originate at Harmon Park near the intersection of 10th Avenue and Greensboro Avenue and terminate at a community park located in the Alberta community. Each Section will be bid separately.

C. The successful Contractor/ Vendor will be required to submit a proposal that demonstrates a technical expertise, past experience with similar fiber systems/networks, a clear understanding of the objectives/goals of the City, and capacity to engage additional resources to enhance or expand the fiber system/network. The contractor/ vendors shall include in their company's proposal the product descriptions, approach, and total proposed solution. The Owner has the right to select the bid that is most responsive.

D. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

E. The design and construction of the telecommunications system shall:
   1. Provide telecommunications architecture based on recognized standards to support efficient, long-lasting, cost-effective operations.
   2. Reduce the amount of time required to install new networks or to reconfigure existing networks.
   3. Provide the flexibility to operate multiple high bandwidth technologies on a single structured cabling system.
   4. Eliminate the cost of installing non-standard, proprietary, vendor-specific cabling by providing standards-based cabling systems that will support a wide variety of equipment.
   5. Improve network manageability and facilitate automated cabling system management through the use of uniform and industry standard identification and numbering schemes.
   6. Allow for the growth of anticipated high speed, high bandwidth Local Area Networks (LANs), Metropolitan Area Networks (MANs) and Wide Area Networks (WANs) that may be required by future specialized applications.

1.2 STANDARDS:

A. Effective telecommunications and networking cannot be accomplished without adherence to standards. Additionally cabling infrastructure costs cannot be contained without adherence to sound installation and management practices. To ensure that the future telecommunications and connectivity needs of agencies are met in a cost-effective manner, these documents confirm the support of the ANSI/TIA/EIA and IEEE standards for telecommunications.
B. American National Standards Institute (ANSI) approves standards as having been properly developed.
C. ANSI/TIA/EIA-526, Optical Fiber Systems Test Procedures.
D. ANSI/TIA/EIA-568, Commercial Building Telecommunications Cabling Standard.
E. ANSI/EIA/TIA-569, Commercial Building Standard for Telecommunications Pathways and Spaces.

F. ANSI/TIA/EIA-606A, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.
G. ANSI/TIA/EIA-607, Commercial Building Grounding and Bonding Requirements for Telecommunications.
H. IEEE 802.3, Local Area Network Ethernet Standard.
I. Building Industry Consulting Service International, Inc. (BICSI) Telecommunications Distribution Methods Manual (TDMM).
J. NFPA 70, National Electrical Code, Article 250, Grounding; Article 645, Information Technology Equipment; Article 770, Optical Fiber Cables and Raceways; Chapter 8, Communications Systems.

1.3 STRUCTURED CABLING SYSTEM (SCS):

A. The OWNER requires following the general cabling industry practice of using a SCS. Other cabling systems may be installed in addition to the SCS, but as a minimum the OWNER requires that a SCS be installed. A properly designed SCS allows the contractor to fulfill the telecommunications needs without knowing specifically what electronic equipment will be utilized. The SCS is geared for long-term stability and flexibility and is based on the idea of providing cabling facilities that can be accessed along the CityWalk over time as needed. The SCS approach allows the primary route, vaults, and counts to remain as additional connections are used along the CityWalk.

B. There are typically seven major components of the SCS as follows:
1. Service Entrance Facilities (Conduit, Innerduct Pathway, and Fiber Service Entrance)
2. Main Equipment Room/Telecommunications Room (Main Comm. Hub for Facility Connections)
3. Backbone Cabling (Fiber Cable Distribution throughout the Project Route)
4. Horizontal Cabling (Station Cable Drop Distribution throughout the Project Route/ In Poles and the Comm. Room)
5. Work Area Outlets (Station Cable Drop Locations throughout the Project Route/ In Poles and the Comm. Room)
6. Grounding and Bonding (In the Comm. Room and the at the Pole Mounted IT-Cabinets)
7. Administration and Labeling (In the Comm. Room and the at the Pole Mounted IT-Cabinets as well as the End Station Jacks/Faceplates and SMB Boxes)

1.4 SCOPE:

A. The OWNER requires a uniform cabling plan in each type of station for data, wireless, signage and video distribution to allow for flexible changes, system renovations, equipment migrations and constant upgrades. This cabling system shall be based on industry standard SCS's that are not proprietary and conform to current ANSI/TIA/EIA Commercial Cabling Standards.

1.5 QUALIFICATIONS:

A. Telecommunications Installer:
1. The installation of cable, equipment, terminations and associated services shall be performed by a Telecommunications Contractor that is currently a Manufacturer's Certified Structured Cabling System installer in good standing with minimum of (5) years of experience on similar systems.
2. The installation company shall have an RCDD on staff performing the role of Project Manager, be available for consultation and attend project meetings. In addition the contractor will appoint a job superintendent to provide onsite support and make decision regarding the scope of work and changes required by the work.
3. The Contractors Project manager and job superintendent and shall act as primary points of contact for activities regarding this project. The job superintendent shall be required to make on-site decisions regarding the scope of the work and changes required by the work. The job superintendent shall be on the job-site whenever work is being performed or workers are present.
4. The Project Manager shall notify the appropriate owner representative/RCDD, telecommunications

system designer and the Agency's Inspector of change requests and inspections. Final approval for change requests must be obtained prior to commencement of work. Scheduling and coordinating inspections between the Contractor, the owner representative /RCDD and the Agency's Inspector is critical.

5. The selected Contractor shall be fully capable and experienced in the installation of telecommunications distribution systems and have a minimum of five (5) years of experience installing SCS's. To ensure the system has continued support, the City will contract only with a Contractor having a successful history of SCS installations.
6. The Contractor shall have an RCDD on staff that will ultimately be responsible for this project. The RCDD shall have sufficient experience in this type project and be able to lend adequate technical support to the field forces during installation, during the warranty period and extended warranty periods or maintenance contracts. The credentials (current BICSI certification stamp) of the responsible RCDD must be attached to the Specifications response for evaluation by the City. The City reserves the right to require the Contractor to assign another RCDD whom, in the City opinion, possesses the necessary skills and experience required.
7. The owner may, with full cooperation of the Contractor, visit installations to observe equipment operations and consult with references. Specified visits and discussion shall be arranged through the Contractor; however, the Contractor personnel shall not be present during discussions with references. The Contractor must provide a minimum of five (5) reference accounts at which similar work, both in scope and design, have been completed by the Contractor within the last two (2) years.
8. In the event multiple Vendors submit a joint response, a single Vendor shall be identified as the Prime Vendor. Prime Vendor responsibilities shall include performing overall project administration and serving as a focal point for the owner to coordinate and monitor plans, schedules status information and administer changes required. The Prime Vendor shall remain responsible for performing tasks associated with installation and implementation of the entire telecommunications project.
9. All Sub-Contractors shall be approved by the Designer. The Sub-Contractor information shall be submitted with the Bid Proposal Documents. All submittals are subject to approval.
10. Qualifications for System Installer:
    a. All telecommunication installers must have five or more years' experience backed up with credential showing certification and must be regularly engaged in the installation of communications systems. The Contracting Officer may reject any proposed installer who can't show evidence of such qualifications. The contractor shall install 10% of the complete system for inspection by the City representative to show compliance with contract documents. If the contractor fails the inspection, the contractor shall bear the liability of procuring the services of an installer who can install the systems to comply with the contract documents and these specifications.

1.6 QUALITY ASSURANCE:

A. The Contractor shall install work in accordance with the latest OWNER Requirements, the latest BICSI Cabling Installation Manual, EIA/TIE Standards Telecommunications building cabling systems planning and design manual.

1.7 SUBMITTALS:

A. The Contractor shall submit shop drawings and product data to the owner's representative/RCDD and designer for review and approval prior to commencement of work.
B. The Contractor shall indicate installation details, cable routing, system configuration, and outlet numbering on shop drawings.
C. The Contractor shall submit appropriate product data for each component to be supplied.
D. The Contractor shall submit manufacturer's installation instructions.

E. The Contractor shall submit (2) two copies of a complete, bound, project record manual consisting of the following:
   1. Product cut sheets for products supplied.
   2. Test reports for horizontal cabling.
   3. Test reports for backbone cabling.
   4. Manufacturer's warranties.
   5. "D-size" As-built drawings in hard copy and electronically using AutoCAD's latest version.
   6. Complete Data File of the Drawings and Test Reports including the Summary Reports on a Flash Drive.

F. The As-built drawings shall accurately record location of service entrance conduit, termination backboards, outlet boxes, cable raceways, cable trays, pull boxes, and equipment racks electronically using AutoCAD's latest version and on a minimum "D" size reproducible paper prints.

G. The Contractor shall prepare 11" x 17" as-built serving zone drawings for each TR. The drawings shall be laminated, framed and secured to the wall in the Main ER/TR Room.

H. The Contractors/ Vendors for the Fiber Infrastructure System, Security Camera System, Wireless Network System and the Data Network System shall coordinate and set up all System Records including but not limited to the following; The IT-Cabinet Numbers, Equipment Cabinet Numbers, Switch Numbers, Fiber Panel Numbers, Fiber Cabling Numbering, Fiber Splice Case Numbers, QB-Vaults Numbers, Camera Numbers, WAP Numbers, Fiber Assignments, Switch Port Assignments, Jack ID Assignments, Data Station Patch Panel Port Assignments, IP Number Assignments and MAC Addresses for all devices connected to each section of the network system. The information from each Contractor/ Vendor shall be coordinated with the Designer/ Consultant and the CMS/FMS- Record Management System Contractor/ Vendor.

1.8 WORK SEQUENCE TASK LIST:

Fiber and Cabling Infrastructure/Backbone Construction Project- Phase1B-

TASK	DESCRIPTION
1.	Contract Documents Signed.
2.	Notice to Proceed.
3.	Provide all Material Submittal Documents for Review and Approval.
4.	Place Order on all Materials.
5.	Set up Staging Area/ Materials Storage Warehouse.
6.	Receiving Materials.
7.	CW-Communications Room# 120 (2) Equipment Cabinets/Racks with all Hardware Installation in the Gateway/ Alberta Tech. Center CW-Communication Room.
8.	CW-Communications Room# 120 Ladder Cable Tray with all Hardware Installation in the Gateway/ Alberta Tech. Center CW-Communication Room.
9.	CityWalk Fiber Tie Cables in the Gateway/ Alberta Tech. Center Installation from CW-Rm.# 120 to ATC-Rm.# 113 and TDOT Fiber Entrance Cable to QB-Vault TDV-#1.1
	a. Install FOC-48/SM Indoor/Outdoor Plenum Fiber Cable from CW-Rm.# 120 to ATC-Rm.# 113.

b. Install FOC-48/MM-OM4 Indoor/Outdoor Plenum Fiber Cable from CW-Rm.# 120 to ATC-Rm.# 113.
c. Install FOC-48/SM Fiber Demark Cable from CW-Rm.# 120 to QB-Vault TDV-1.1/ TDOT Fiber Splice #TC01 (Contractor shall terminate/test the fiber in CW Rm.# 120 and TDOT shall splice the fiber into the City's Fiber Network). Work Operations: #21 and Fiber Splice #TC01.
d. Fiber Termination Interface FODPU Enclosures and Adaptor Panel Units Installation in CW-Rm.# 120 and ATC-Rm.# 113.
e. Fiber Termination/ Connector Installation Requirements/ Preparations/ Operations in the FODPU Enclosures and Adaptor Panel Units Installation in CW-Rm.# 120 and ATC-Rm.# 113.
f. Fiber Testing Requirements and all Record Documentation- Perform all Fiber Test in CW-Rm.# 120 and ATC-Rm.# 113.
g. ARMM 25-24 and CMR 25-24 Tie and Equipment Cables, VPP Patch Panels, DSP Panel, 110 Blocks Installation, Termination and Testing between and in CW-Rm.# 120 and ATC-Rm.#113.

10. Vault Hardware installation/ placement in all TDV Vaults- #1.1/ TDV Vaults- #1 through #8, 18 and 47 Hole Racks/ Rack Hooks, etc.
11. NEMA 4X Rated 5"x5"x3"- Black Boxes/ Pole Mounted at Opening Portals for Security Cameras portal only, installation/placement. (IT-Cabinets and the other (2) 5"x5"x3"Boxes for the IT Portals Wireless Access Points portals are under a separate contract.)
12. Fiber Infrastructure/Backbone and Fiber Station Cable Installation-
    a. Install FOC-288/SM Backbone Fiber Cable/ AP01 from CW-Rm.# 120 to QB-Vault TDV-8/ Work Operations: #22 and Fiber Splice #1 through #9.
    b. Install FOC-288/SM Backbone Fiber Cable/ AP02 from CW-Rm.# 120 to QB-Vault TDV-8/ Work Operation: #23 and Fiber Splice #10.
    c. Install FOC-48/SM Backbone Fiber Cable/ AP01 from QB-Vault TDV-2/ Work Operations: #2/ Fiber Splice #2 to QB-Vault TDV-2.1/ Work Operation: #3/ Fiber Splice #3.
    d. Install FOC-24/SM Backbone Fiber Cable/ AP01 from QB-Vault TDV-2.1/ Work Operations: #3/ Fiber Splice #3 to Work Operation: #37 in FS #4.
    e. Install FOC-24/SM Backbone Fiber Cable/ AP01 from QB-Vault TDV-2.1/ Work Operations: #3/ Fiber Splice #3 to Work Operation: #38 in TPEP #1.
    f. Install FOC-6/SM Station Fiber Cables from TDV- #1 to IT-Cabinets #1 and #2.
    g. Install FOC-6/SM Station Fiber Cables from TDV- #2 to IT-Cabinets #3.
    h. Install FOC-6/SM Station Fiber Cables from TDV- #3 to IT-Cabinets #4 and #5.
    i. Install FOC-6/SM Station Fiber Cables from TDV- #4 to IT-Cabinets #6 and #7.
    j. Install FOC-6/SM Station Fiber Cables from TDV- #5 to IT-Cabinets #8 and #9.
    k. Install FOC-6/SM Station Fiber Cables from TDV- #6 to IT-Cabinets #10 and #11.
    l. Install FOC-6/SM Station Fiber Cables from TDV- #7 to IT-Cabinets #12 and #13.
    m. Install FOC-6/SM Station Fiber Cables from TDV- #8 to IT-Cabinets #14 and #15.

13. Contractor to provide a Mock-up of (1) one of the IT-Cabinets (IT-Cabinet #1) to be reviewed and approved before the fit-up of the remaining Cabinets are performed. Once approved all other cabinet can be completed.
14. Fiber Splice Case/Hardware Installation and Fiber Splicing Requirements/ Preparations/ Operations in TDV Vaults- #1 through #8.

15. Fiber Termination Interface FODPU Enclosures and Adaptor Panel Units Installation in all IT-Cabinets #1 through #15 and in FS #4 as well as the TPEP #1.
16. Data Station SMB Boxes- 6 Port/ Copper-Cat6 Installation with Terminating Hardware in the Poles Mounted IT/Cabinets for Cameras and Wireless Access Points in all IT-Cabinets #1 through #15.
17. Equipment Mounting Din Rails in the Pole Mounted IT/Cabinets- Install in all IT-Cabinets #1 through #15.
18. Fiber Termination/ Connector Installation Requirements/ Preparations/ Operations in the FODPU Enclosures and Adaptor Panel Units in all IT-Cabinets #1 through #15 and in FS #4 as well as the TPEP #1.
19. Copper/Cat6 Station Cable Drops Installation with SMB- 1 Port Boxes and Terminating Hardware in the Poles for Cameras and Wireless Access Points in Poles- #1, #2, #3, #4, #5, #7, #9, #11, #13, #15, #17, #19, #21, #23, and #25.
20. Fiber Testing Requirements and all Record Documentation- Perform all Fiber Test.
21. Copper/Cat6 Testing Requirements and all Record Documentation- Perform all Copper/Cat6 Test.
22. Provide all Fiber Patch/ Jumper Cords Furnished and Installed as Required.
23. Provide all Copper-Cat6 Patch/ Jumper Cords Furnished and Installed as Required.
24. Final Inspection/ Completion of Punch List Items.
25. Provide all Project As-Built and Testing Documentation for the Infrastructure System.
26. Provide all Project System Warranty Documentation and Certificates for the Infrastructure System.

1.9 WARRANTIES:

A. The Contractor shall furnish a manufacturer's warranty of products, applications and workmanship for 25 years from the date of acceptance by the state. Products and workmanship shall carry warranties equal to or greater than the warranty from the date of acceptance by the state.

B. Materials and workmanship shall be fully guaranteed by the Contractor for 25 years from transfer of title against defects. The defects which may occur, as the result of faulty materials or workmanship within 25 years after installation and acceptance by the City shall be corrected by the Contractor at no additional cost to the City.

C. The Contractor shall promptly, at no cost to the City, correct or re-perform (including modifications or additions as necessary) nonconforming or defective work within 25 years after completion of the project.

D. The Contractor shall procure equipment and materials that carry warranties against defects and workmanship whenever available. The Contractor shall transfer to the Agency Owner additional warranties offered by the manufacturers, at no additional costs to the Agency.

E. The Contractor's obligation under its warranty is limited to the cost of repair of the warranted item or replacement thereof, at the Contractor's option. Insurance covering said equipment from damage or loss is to be borne by the Contractor until full acceptance of equipment and services.

F. The Telecommunications contractor will maintain a set of drawings to document all as-built information as it occurs throughout the project. This will be maintained on a daily basis.

G. At the end of the project, the telecommunications contractor shall provide (2) two sets of the revised as-built drawings accurately showing all termination locations, cable routing, and labeling.

H. As-Built Document Requirements: (2)Hard Copy of the Drawings and Test Reports as well as (2) Complete Data File of the Drawings and Test Reports including the Summary Reports on a Flash Drive.

I. Provide two (2) copies of all operation manuals for all switches and electronic devices, bound in three-ring binders.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 270000

SECTION 270500 - COMMON WORK RESULTS FOR COMMUNICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

1.2 SUMMARY

A. Section Includes:
1. Communications equipment coordination and installation.
2. Sleeves for pathways and cables.
3. Sleeve seals.
4. Grout.
5. Common communications installation requirements.
6. Pull Boxes

1.3 DEFINITIONS

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.4 SUBMITTALS

A. Product Data: For sleeve seals.

1.5 COORDINATION

A. Coordinate arrangement, mounting, and support of communications equipment:
1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for pathways installed at required slope.
4. So connecting pathways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

C. Coordinate location of access panels and doors for communications items that are behind finished surfaces or otherwise concealed.

D. Coordinate selection and application of Firestopping specified in Architectural Division Section "Through-Penetration Firestop Systems."

PART 2 - PRODUCTS

2.1 SLEEVE SEALS

A. Description: Modular sealing device, designed for field assembly, to fill annular space between sleeve and pathway or cable.
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, but are not limited to, the following:
      a. STI Firestop Products
      b. Nelson Firestop Products
      c. 3M; Fire Protection Products Division

   2. Sealing Elements: EPDM interlocking links shaped to fit surface of cable or conduit. Include type and number required for material and size of pathway or cable.
   3. Pressure Plates: Stainless steel. Include two for each sealing element.
   4. Connecting Bolts and Nuts: Stainless steel of length required to secure pressure plates to sealing elements. Include one for each sealing element.

2.2 GROUT

A. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR COMMUNICATIONS INSTALLATION

A. Comply with NECA 1.

B. Measure indicated mounting heights to bottom of unit for suspended items and to center of unit for wall-mounting items.

C. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide maximum possible headroom consistent with these requirements.

D. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both communications equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

E. Right of Way: Give to piping systems installed at a required slope.

3.2 SLEEVE-SEAL INSTALLATION

A. Install to seal exterior wall penetrations.

B. Use type and number of sealing elements recommended by manufacturer for pathway or cable material and size. Position pathway or cable in center of sleeve. Assemble mechanical sleeve seals and install in annular space between pathway or cable and sleeve. Tighten bolts against pressure plates that cause sealing elements to expand and make watertight seal.

3.3 FIRESTOPPING

A. Apply Firestopping to penetrations of fire-rated floor and wall assemblies for communications installations to restore original fire-resistance rating of assembly. Firestopping materials and installation requirements are specified in Architectural Division Section "Through-Penetration Firestop Systems."

END OF SECTION 270500

SECTION 270520 – GROUNDING & BONDING FOR COMMUNICATIONS SYSTEMS FOR INSIDE AND OUTSIDE PLANT FACILITIES

PART 1 - GENERAL

1.1 TELECOMMUNICATIONS SERVICE ENTRANCE FACILITIES

A. Access to the telecommunications grounding system specified by ANSI/TIA/EIA-607-A is mandatory.

1.2 MAIN TELECOMMUNICATIONS EQUIPMENT ROOMS

A. Access shall be made available to the telecommunications grounding system specified by ANSI/TIA/EIA – 607 - Commercial Building Grounding and Bonding Requirements for Telecommunications.

1.3 TELECOMMUNICATIONS ROOMS

A. Access shall be made available to the telecommunications grounding system specified by ANSI/TIA/EIA – 607 - Commercial Building Grounding and Bonding Requirements for Telecommunications.

1.4 GROUNDING AND BONDING

A. The National Electrical Code (NEC) provides grounding, bonding, and electrical protection requirements to ensure life safety. Modern telecommunications systems require an effective grounding infrastructure to ensure optimum performance of the wide variety of electronic information transport systems that may be used throughout the life of a building. The grounding and bonding requirements of ANSI/TIA/EIA-607 are intended to work in concert with the cabling topology specified in ANSI/TIA/EIA-568, and installed in pathways and spaces as specified in ANSI/TIA/EIA-569. The requirements of these standards, and of this manual, are in addition to the requirements of the NEC.

B. Conduits for Backbone and Horizontal Cabling Pathways shall be bonded to the grounding electrode system per the NEC.

C. All conduits shall be bonded to the grounding system as per NEC.

D. Telecommunications grounding, bonding, and electrical protection at state facilities shall comply with the requirement of the NEC, ANSI/TIA/EIA-607, and the additional requirements stated herein.

E. Telecommunications Main Grounding Busbar (TMGB)
   1. The TMGB shall be installed at an accessible and convenient location in each Entrance Facility.
   2. The TMGB shall be a pre-drilled copper busbar with standard NEMA bolt hole sizing and spacing. The busbar shall be ¼-inch thick x 4-inch wide, with length sized to accommodate ground connection of telecommunications racks, equipment, and shielded cables in the room, plus provision for 30% growth.
   3. The TMGB shall be bonded to the building main electrical service-grounding electrode. No other grounding point for the TMGB shall be allowed. The TMGB shall not be bonded independently to water pipe, structural steel or electrical conduit.

F. Telecommunications Ground Busbar (TGB)
   1. The Telecommunications Grounding Busbar (TGB) shall be a pre-drilled copper busbar with standard NEMA bolt hole sizing and spacing. The busbar shall be ¼-inch thick x 2-inch wide, with length sized to accommodate ground connection of all telecommunications racks, equipment, and shielded cables in the room, plus provision for 30% growth. The TGB shall be installed in each of the Telecommunications Rooms.

2. The TGB's shall be bonded together. Refer to the Telecommunications Riser Diagram.
3. The Telecommunications Grounding Busbar (TGB) for the IT- Comm. Cabinets shall be a Square-D Ground Bar Kit Model/Part# PK9GTACP. It shall be mounted in the upper right corner. The Contractor/ Vendor shall provide and install the TGB and make-up all ground connections. All grounding connections shall be tagged and labeled.

G. Equipment Racks, Equipment Cabinets and Cable Ladder Racks
1. Equipment racks, equipment cabinets, cable ladder racks and exposed non-current carrying metal parts of the telecommunications Structured Cabling System shall bonded to the TMGB or TGB.
2. Each section of a cable ladder rack or tray, shall be bonded together by one of three ways:
   a. Remove paint down to bear metal at the point where the rack section interconnection hardware is mounted. Bond the rack assembly to the TMGB or TGB with a #6 AWG ground wire unless noted otherwise.
   b. Bond individual rack sections together using braided metal bonding straps or #6 AWG ground wires. The straps or ground wire shall be attached with bolts through holes drilled in the cable rack sections. The bolts must contact bear metal on the rack sections. Bond the rack assembly to the TMGB or TGB with a #6 AWG ground wire unless noted otherwise.
   c. Bond individual rack sections to a #6 AWG ground cable unless noted otherwise run throughout the entire length of rack. The ground cable shall be bonded to the TMGB or TGB.

H. Grounding and Bonding of Backbone Cables
1. OSP copper backbone cables shall have the metallic cable shields bonded to the ground lug of the primary protector block at the entrance to each building.
2. Optical fiber cables that contain metallic shielding or metallic strength members must have those metallic components bonded to the TMGB at each end of the cable.
3. Inside plant copper or optical fiber backbone cables that contain metallic shielding shall have their shields bonded to the TMGB at each end.
4. The metallic shield of splices made to backbone cables shall be bonded together to maintain shield continuity.

PART 2 - PRODUCTS

2.1 TELECOMMUNICATIONS SERVICE ENTRANCE FACILITIES

A. GROUNDING AND BONDING
1. Service Entrance TMGB
   a. Provide a bond with a minimum of a # 6 AWG unless noted otherwise, green insulated ground wire from the TMGB to the main electrical service building ground. TMGB (1/4" x 4" x 12") provided by others under a separate contract.
   b. Label grounding and bonding hardware and connections per ANSI/TIA/EIA 606-A. Panduit ground tag pt. #LTYK. Contractor shall provide Ground Tags on all grounding connections.
   c. The ground busbar assembly shall be copper, 1/4" x 4" x 12" with insulators and support bracket. Provide lugs for each Bonding Conductor (BC) and the Telecommunications Bonding Backbone (TBB). Hardware (bolts) shall be silicone bronze and lugs shall be copper alloy sized for connecting the BC and TBB to the TMGB and TGB.
   d. Rack mounted equipment ground busbar shall be 3/16" x ¾" x 18 5/16" for attachment to 19" mounting rails of equipment racks and cabinets. Provide splice plates for attachment to multiple equipment racks and cabinets, #6-32 silicon bronze screws, ground lugs and mounting hardware.

2.2 MAIN TELECOMMUNICATIONS EQUIPMENT ROOMS

A. GROUNDING AND BONDING

1. The TGB shall be bonded to the Main Electrical service building ground by means of a # 6 AWG unless noted otherwise, green insulated ground wire. TGB (1/4" x 2" x 12") provided by others under a separate contract.

2. Label grounding and bonding hardware and connections per ANSI/TIA/EIA 606A.

3. The ground busbar assembly shall be copper, 1/4" x 2" x 12" with insulators and support bracket. Provide lugs for each BC and the TBB. Hardware (bolts) shall be silicone bronze and lugs shall be copper alloy sized for connecting the BC and TBB to the TMGB and TGB.

4. Rack mounted equipment ground busbar shall be 3/16" x ¾" x 18 5/16" for attachment to 19" mounting rails of equipment racks and cabinets. Provide splice plates for attachment to multiple equipment racks and cabinets, #6-32 silicon bronze screws, ground lugs and mounting hardware.

2.3 TELECOMMUNICATIONS ROOMS

A. GROUNDING AND BONDING

1. The TGB shall be bonded to the Main Electrical service building ground by means of a # 6 AWG unless noted otherwise, green insulated ground wire.

2. Label grounding and bonding hardware and connections per ANSI/TIA/EIA 606-A.

3. The ground busbar assembly shall be copper, 1/4" x 4" x 13.5" with insulators and support bracket. Provide lugs for each BC and the TBB. Hardware (bolts) shall be silicone bronze and lugs shall be copper alloy sized for connecting the BC and TBB to the TMGB and TGB.

4. Rack mounted equipment ground busbar shall be 3/16" x ¾" x 18 5/16" for attachment to 19" mounting rails of equipment racks and cabinets. Provide splice plates for attachment to multiple equipment racks and cabinets, #6-32 silicon bronze screws, ground lugs and mounting hardware.

2.4 ADMINISTRATION AND LABELING

A. The BC shall be provided with a self adhesive, self laminating, mechanically printed label with a clear protective laminating over wrap or mechanically printed heat shrink tubing.
The label shall be approved by the owner's representative/RCDD prior to application.

B. The TGB and TMGB shall be provided with a copper, brass or 1/16" mechanically stamped tag, 3" square surface area minimum, legible and permanently affixed. The tag shall be approved by the owner's representative /RCDD prior to application.

C. The Contractor shall provide and install Ground Label Tags on all Grounds Conductors at all locations, such as ground termination unit (TMGB and TGB), Equipment Rack/Cabinets, ladder tray, wall rack, the conduits, wall cable tray, vaults, and IT-Cabinets. The tag shall be a "Caution Ground Do Not Remove" yellow and green tag, Panduit Pt.# PT-BGND.

D. The Contractor shall provide and install (1) #10 Location/Wire Conductor (Black in color) from the main communication equipment room (Terminated on a Square-D Termination Strips 10 Position) through all Vaults to the IT-Cabinets. The Location/Wire Conductors from the IT-Cabinets to the serving QB-Vaults shall be spliced in vaults on Square-D Termination Strips 10 Position, which shall be mounted level on

the side wall of the vaults 6" from the bottom and 6" from the corner. The main conductor through the vault shall terminate on the same strips. The Location/Wire Conductors and Terminal Strips shall be labeled with Orange 3.5" x 2.5" Tags. The tag shall be labeled "Fiber Location Conductor/ Do Not Remove" tag, Xpress-Tags Pt.# TG-2122-FO .

2.5 GROUNDING

A. Comply with requirements in Division 16 Section for grounding conductors and connectors.

B. Telecommunications Main Bus Bar:
1. Connectors: Mechanical type, cast silicon bronze, solderless compression-type wire terminals, and long-barrel, two-bolt copper alloy lugs for connection to ground bus bar.
2. Ground Bus Bar: Copper, minimum 1/4 inch thick by 4 inches wide with 9/32-inch holes spaced 1-1/8 inches apart.
3. Stand-Off Insulators: Comply with UL 891 for use in switchboards, 600 V. Lexan or PVC, impulse tested at 5000 V.

C. Comply with ANSI-J-STD-607-A.

D. Label grounding and bonding hardware and connections per ANSI/TIA/EIA-606-A.

PART 3 - EXECUTION

3.1 TELECOMMUNICATIONS SERVICE ENTRANCE FACILITIES

A. GROUNDING AND BONDING
1. The Contractor shall install the grounding busbar as required by ANSI/TIA/EIA 607-A and the NEC. At locations indicated.
2. Equipment racks, conduits, cable trays, ladder racks, etc. shall be bonded to the grounding busbar.
3. Bonding connectors and clamps shall be mechanical type made of silicon bronze.
4. Terminals shall be solderless compression type, copper long-barrel NEMA two bolts.
5. The Contractor shall bond the shield of shielded cables to the grounding busbar per applicable code and manufacturers recommended practices.
6. Grounding and bonding shall be in accordance with ANSI/TIA/EIA-607-A and the NEC.
7. Labeling shall be in accordance with ANSI/TIA/EIA 606-A.

3.2 MAIN TELECOMMUNICATIONS EQUIPMENT ROOMS

A. GROUNDING AND BONDING
1. The Contractor shall install the grounding busbar as required by ANSI/TIA/EIA 607-A and the NEC. At locations indicated.
2. Equipment racks, conduits, cable trays, ladder racks, etc. shall be bonded to the grounding busbar.
3. Bonding connectors and clamps shall be mechanical type made of silicon bronze.
4. Terminals shall be solderless compression type, copper long-barrel NEMA two bolts.
5. The Contractor shall bond the shield of shielded cables to the grounding busbar per applicable code and manufacturers recommended practices.
6. Grounding and bonding shall be in accordance with ANSI/TIA/EIA-607-A and the NEC.
7. Labeling shall be in accordance with ANSI/TIA/EIA 606-A.

3.3 TELECOMMUNICATIONS ROOMS

A. GROUNDING AND BONDING

1. The Contractor shall install the grounding busbar as required by ANSI/TIA/EIA 607 and the NEC. At locations as indicated.
2. Equipment racks, conduits, cable trays, ladder racks, etc. shall be bonded to the grounding busbar.
3. Bonding connectors and clamps shall be mechanical type made of silicon bronze.
4. Terminals shall be solderless compression type, copper long-barrel NEMA two bolts.
5. The Contractor shall bond the shield of shielded cables to the grounding busbar per applicable code and manufacturers recommended practices.
6. Grounding and bonding shall be in accordance with ANSI/TIA/EIA-607 and the NEC.
7. Labeling shall be in accordance with ANSI/TIA/EIA 606A.

3.4 GROUNDING

A. Install grounding according to the BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

B. Comply with ANSI-J-STD-607-A.

C. Locate grounding bus bar to minimize the length of bonding conductors. Fasten to wall allowing at least 2-inch clearance behind the grounding bus bar. Connect grounding bus bar with a minimum No. 2/0 AWG grounding electrode conductor from grounding bus bar to suitable electrical building ground.

D. Bond metallic equipment to the grounding bus bar, using not smaller than No. 6 AWG equipment grounding conductor.
   1. Bond the shield of shielded cable to the grounding bus bar in communications rooms and spaces.

3.5 ADMINISTRATION AND LABELING

A. The Contractor shall permanently secure the label within six (6) inches from both ends of the BC.

B. The Contractor shall permanently secure the tag within six (6) inches from the TMGB and TGB.

END OF SECTION 270520

SECTION 270530 – PATHWAYS FOR TELECOMMUNICATIONS SYSTEMS

PART 1 - GENERAL

RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

GENERAL

A. Telecommunications Space Overview
   1. The design of spaces to house telecommunications cabling and equipment shall be in accordance with the ANSI/TIA/EIA 569A: Commercial Building Standard for Telecommunications Pathways and Spaces and addenda to this standard.
   2. Rooms used for telecommunications, including Entrance Facilities (EF), the Telecommunications Equipment Rooms (TER), and Telecommunication Rooms (TR) shall be dedicated to the sole use of Telecommunications. No other building facility equipment shall be housed in rooms used for telecommunications including, but not limited to, fire alarm systems, monitoring systems, security systems, janitorial services, supply storage, departmental storage, etc.

TELECOMMUNICATIONS ROOM REQUIREMENTS (EF/TR ROOMS AND POLE MOUNTED IT-CABINETS)

1. General Communication Room: (Rooms/ Building and IT- Comm. Cabinets are under a separate contract.)

   A. The Main Telecommunications Remote Equipment Room/ Shelter/ Building or Main Telecommunications Equipment Room in the Gateway/ Alberta Tech. Center Building shall be connected to the backbone pathway for cabling to the Telecommunications Fiber Facilities and the IT-Telecommunications Comm. Cabinets (Pole Mounted).

   B. The Main ER/TR shall be equipped with (2) two floor mounted 19" (480 mm), 4-post telecommunication enclosed equipment cabinets.

   C. Backboard layouts and design will be as shown on the drawings. All backboards will be constructed of 3/4" high density Birch exterior plywood and cut to size as indicated; 4' x 8' mounted vertically 6" AFF, covering two walls of communication equipment room, (8) Backboards Total. Backboards will be painted on all surfaces, including front, back and edges, with two (2) coats of fire retardant Light Grey paint.

   F. General: The communications wiring closets will provide the following: two (2) duplex 110/120 VAC minimum 20-amp filtered dedicated power utilizing NEMA L-5-20 R receptacles; two (2) duplex 208/240 VAC minimum 30-amp filtered dedicated power utilizing NEMA L-5 30 R receptacle. Environmental controlled (AC/HVAC) ambient temperature not to exceed 70° Fahrenheit; access secured; install two (2) free standing, enclosed type, 19-inch equipment cabinets, bolted to the floor, with a minimum 3-feet clearance in front and behind nearest wall.

   G. Backboards: Telephone backboards (TBB) will be 4x8 feet, ¾"-inch thickness with two (2) coats of insulating fire-retarding paint (light grey). The backboard shall be mounted in a vertically

position 6" above finished floor, covering two walls of ER. One grounded electrical power outlet will be provided in each terminal room, mounted beneath TBB. The Telephone Backboard

H. Grounding: The resistance to ground (ground wire and the grounding electrode system) must be five (5) OHMS or less.

2. BACKBONE PATHWAYS

A. All Backbone Pathways (Vaults and Conduit Duct-banks) are being provided under a separate contract.

B. The Contractor shall provide all Firestop and duct seal material and installation in conduits/ sleeves.

PART 2 - PRODUCTS

2.1 LADDER RACK

1. Contractor to provide ladder rack and stand-offs as shown on drawings for support of backbone cables passing vertically and horizontally in the ER.

A. Include connecting hardware and support hardware for a complete installation including, but not limited to, equipment cabinets to runway mounting plates, wall angle support brackets, butt splice swivels, junction splice connections and grounding kits.

B. Ladder Rack:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

   A. Hoffman
   B. Cooper B-Line
   C. Chatsworth

2. Ladder Rack Materials: Metal, suitable for indoors and protected against corrosion, finished in black powder coat. Ladder rack shall be a tubular side bar type nominally 3/8" thick by 1-1/2" high (Minimum) with 1/2" x 1" welded rings spaced 9" on center. UL Listed Black in color.

   a. Ladder Racks: Nominally 12 inches wide, and a rung spacing of 9 inches.
   b. 12" Equipment Ladder Tray-
      Hoffman UL Listed
      12" Tray/ Black Pt.# LSS12BLK
      Junction Clamp Kit Pt.# LJSKB
      In-Line Butt Kit Pt.# LBSKB
      12" Angel Support Kit Pt.# LWASK12BLK
      12" Wall Support Bracket Kit Pt.# LTSB12BLK

2.2 Cable Trays (Wall Mounted behind Entrance Conduits in ER Fiber cable Routing and Management/ Mounted Vertically (3) Sections 2"x18"x 10'):

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   Basket Tray Type:

   a. CABLOFIL
   b. Cooper B-Line, Inc.

c. Flex Tray

2. Cable Distribution and Conduits (Wall Mounted Vertically behind Entrance Conduits in ER Fiber cable Routing and Management): Provide (2) 18"x 2" basket tray (CABLOFIL Pt.# CF54/450) with all necessary fittings to compose a complete system as noted on drawings.

2.3 STRUCTURED CABLING (HORIZONTAL) SUPPORTS

A. Metallic J-hooks shall be used for this project to route cable from above cable outlet to cable tray. **(NIC/ Not In this Contract)**

B. Cable Support: NRTL labeled. Cable support brackets shall be designed to prevent degradation of cable performance and pinch points that could damage cable. Cable ties are not allowed.
1. Comply with NFPA 70 and UL 2043 for fire-resistant and low-smoke-producing characteristics.
2. Adjustable cable supports, plenum rated.

2.4 CONDUIT SYSTEMS

A. Conduit and Boxes: Comply with requirements in Division 26 Section "Raceway and Boxes for Electrical Systems. "Flexible metal conduit shall not be used. **(NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.)**

1. Outlet boxes shall be no smaller than 4 11/16" x 4 11/16 "x 2 ½ " with single gang adapter plate. **(NIC/ Not In this Contract)**

2. Station conduits shall be 1" EMT conduit with bushing, stubbed to cable that systems. Terminated and grounded. **(NIC/ Not In this Contract)**

B. All construction and installation work shall be done in a thorough and workmanlike manner, in accordance with the plans, specifications, and drawings. All construction materials and labor are subject to the Owner/Architect's approval, prior to the work commencement.

The Telecommunications Contractor will be responsible for fire stopping all of the firewall penetrations or fire barriers, conduit wall sleeves cable trays, riser sleeves, and conduits. Fire stopping is to be done with rock wool, SSAMW and SPEC-SEAL-SSP100 putty, with Duct Seal MCO PR868 to meet all city, state, and national fire codes.

C. All Telecommunication conduits required for installation in the building floor slabs and above ceilings shall be **furnished and installed by the Electrical Sub-contractor under Division 26-Electrical under a separate contract.** These conduits are to be routed as shown on the Division 27 – Telecommunications drawings. **(NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.)**

D. All conduits shall be thoroughly cleaned before installation. During the construction process and after the duct line is complete; the ends of the conduits shall be plugged to prevent entry of any foreign matter. Particular care shall be taken to keep the conduits free of concrete or any other substance during the course of the construction process. Where it is necessary to cut the tapered end on a piece of conduit at the site, the cut shall be made with a tool or lathe designed for that specific purpose. After the duct line has been completed, a mandrel, not less than twelve inches (12") long, having a cross section of approximately one-quarter inch (1/4") less than the inside cross section of the conduit, shall be pulled through each conduit. Afterward, a brush with stiff bristles and swabs shall be pulled through the conduit to make certain that no foreign materials have entered.

E. The Contractor shall install a polyolefin pull line, of two hundred pound 200lb.) Tensile strength, in each conduit. George-Ingram, Part Number 9465-02, or equivalent, is the acceptable polyolefin pull line.

Conduits:

a. Galvanized Rigid steel (GRC) or Intermediate Grade steel conduit (IMC): Use for 1-¼" diameter and larger; for circuit's exposed to weather or moisture; in hazardous locations; run underground or in concrete. Terminate with double locknuts and O.Z. Type BLG grounding type bushing in dry locations and watertight hubs in wet locations. Join with threaded fittings. Do not use split fittings underground.
b. Electrical Metallic Tubing (EMT): Use in dry locations only; use for branch circuits; auxiliary and control circuit's; telephone circuits. Join and terminate with steel rain-tight compression insulated throat fittings except auxiliary, control and telephone circuit's 1-¼" diameter and larger use all-steel setscrew insulated throat fittings.
c. Approved manufacturers for Galvanized Rigid Conduit (GRC), Intermediate Metallic Conduit (IMC), and Electrical Metallic Tubing (EMT) are Triangle, Allied, and Wheatland.
d. Flexible steel conduit's (FC): Spirally wound interlocked steel raceway: National Electrical Products "Greenfield". Use for interior day locations for final connections to recessed lighting fixtures and to vibrating equipment (motors, transformers, etc.). Terminate with galvanized steel compression fittings approved for grounding.
e. Liquid-tight flexible steel conduit (LT) shall have the same construction as flexible steel conduit above, except with PVC coating by Anaconda (Steatite). Use in exterior and wet locations for final connections to vibrating equipment. Terminate with galvanized steel compression fittings approved for grounding.
f. PVC conduit shall be PVC/TC-8EB or as required by local codes. Connections shall be fully bonded and sealed, using approved epoxy cement.

F. Installation costs are to include all necessary equipment for a turnkey job such as hangers; fittings set screw, connector ends, bushings, and color coding, as well as the repainting/clean-up of drywall area around each new outlet box. Also, it shall be the contractor's responsibility to make and restore all firewall penetrations (various types) to the government, State, County and City specifications.

G. All conduits are to be placed above and below the lay-in ceilings as required for the type systems, and must be supported from the overhead with unistrut and supported to wall structures.

H. The Contractor shall install pull cords in each conduit.

I. Include all required conduit cut in boxes.

J. The conduit installation work is to comply with the latest edition of the National Electrical Code, National Electrical Safety Code, Standard Building Code, Local Ordinances and other standards indicated herein.

K. The contractor is to Color code all conduit with 1" inch wide band of vinyl plastic electrical tape, 3M Company "Scotch 35", applied two (2) full turns around conduit, 6 inches from all conduit terminations into the pull boxes on each side of the walls, floors, or roof penetrated by conduit and where conduit enters the wall to outlets below.

CONDUIT COLOR CODE SYSTEM

Voice/Data:	Blue/Black
Data:	

Electrical pull box covers must be labeled with the name of the feeder source and the feeder load. The labeling must be done in painted stencil letters. These conduits shall be installed as indicated on the construction drawings and to the Owner/Architect's satisfaction.

L. Support all boxes from structure. Support Outlet Boxes in metal stud walls with Caddy Type H metal supports. Locate adjacent power, telephone and data Telecommunication outlets side by side with minimum distance between. Use additional metal supports as required.

M. Install adjacent outlets at different levels in one vertical line where possible. Group outlets at same level where possible.

N. Thread-less rigid or intermediate grade fittings shall not be used.

O. Bushings shall be steel or malleable iron, galvanized, with smooth 1050-rated phenolic ring with grounding lug where required.

P. Electrical metallic tubing, thread less type connectors and couplings, etc., use galvanized steel, concrete tight, insulated throat, set screw type.

Q. Connectors for flexible steel conduit shall be UL approved for grounding, galvanized steel, thread less type, with insulated throat.

R. Where ground conductor is installed in conduit 1¼" and larger, provide insulated ground bushings and bond full size ground wire from bushings to box or cabinet with self-tapping screw and appropriate lug.

S. Conduit supports: Use approved straps, rods, hangers, and trapeze channels. Conduit shall not be supported with wire or perforated straps.

T. Conduit penetrations through roof shall be made in pitch pockets approved by the Owner/Architect and shall be located adjacent to the equipment served.

2.5 INNERDUCT **(NIC/ Not In This Contract) All Vaults, Conduit Duct-banks and Innerducts are being installed under a separate contract. (NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.)**

A. The corrugated innerduct placed in all conduits are installed under a separate contract. Three (3) 1 1/4" innerducts will be installed in each conduit as shown on the drawings. Innerduct will be Orange in color and will be furnished with pre-threaded (900 lb.) pull-tapes.

B. The innerduct assignment for each individual cable, for any conduit section, is specified on the drawings. Cable will not be placed in innerducts, other than that specified on the drawings, without approval from the engineer/designer.

C. It will be the Telecommunications Contractor's responsibility to determine whether conduits assigned for occupancy will be rodded and cleaned. Conduits, which cannot be cleaned, will be reported to the engineer/designer. Water based lubricant will be applied to reduce tension on the innerducts.

D. The maximum pulling load on the innerducts will not exceed 600-lbs tension. Allow extra footage of pull lines to compensate for the stretch of the innerduct during the pull. After the pull is completed, allow the innerduct to resume normal length.

E. Provide sufficient length of innerduct to extend 6 inches beyond the conduit ends. Innerducts will be installed in accordance with manufacturer's instructions and industry standards. Care will be taken to avoid kinking the innerduct or applying excessive tension during installation. (NIC/ Not In this Contract)

2.6 FIRESTOPPING AND SEALING CONDUITS/TRAYS

The Telecommunications Contractor will be responsible for sealing and firestopping of all penetrations and conduits used and un-used in the telecommunications system. The Fire and smoke wall penetrations shall be sealed promptly in all active walls so as not to diminish the level of life safety. Seal around conduits, sleeves and other wiring raceways passing through floors, fire rated walls, or partitions which extend to underside of the structure above in strict conformance with project drawings.

Note: The contractor will be responsible for fire stopping all of the firewall penetrations or fire barriers; conduit wall sleeves cable trays, riser sleeves, and conduits. Fire stopping is to be done with rock wool, SSAMW and SPEC-SEAL 100 putty, with 3 M CS-195 to meet all State and National Fire Codes. The Contractor shall install STI-EZ PATH fire rated pathways PT.#EZD33FWS and PT.#EZP333W as required and as indicated on the drawings to meet all city, state, and national fire codes.

PART 3 - EXECUTION

1. LADDER RACK

A. Install at 84" AFF per manufacturer's recommendations and secured to the top of equipment racks.

B. The ladder rack shall be supported at three foot intervals with triangular support brackets from the walls and securely attached to the equipment.

C. Cable radius waterfalls shall be attached to the ladder rack to maintain cable bending radius where cables enter and exit the ladder rack.

D. Cable shall be secured to the ladder rack using reusable Velcro type cable ties to arrange cables in logical bundles.

E. Telecommunications grounding and bonding shall be in accordance with applicable codes and regulations. Comply with ANSI/TIA/EIA-607-A and the NEC.

F. Comply with requirements for demarcation point, pathways, cabinets, and racks specified in Division 17 Section "Communications Equipment Room Fittings." Drawings indicate general arrangement of pathways and fittings.

G. Ladder racks shall comply with NEMA VE2 and ANSI/TIA/EIA 569-B.

2. VERTICAL LADDER RACKS

A. Vertical ladder rack shall be installed by the Contractor.

B. The vertical ladder rack shall be installed on the wall above/below sleeves from the floor to the ceiling above. Stand offs shall be installed as necessary to support the required ladder rack. The anchoring system provided shall be suitable for the type of wall and the weight to be supported by the ladder rack.

3. STRUCTURED CABLING (HORIZONTAL) SUPPORTS (NIC/ Not In this Contract)

A. Metallic J-hooks shall not be used for this project.

B. Provide Velcro type tie wraps for the structured cabling.

C. The adjustable cable supports shall be rated to carry Category 6 cabling and sized not to exceed the manufacturer's recommended quantity of cables.

D. Voice/Data station cables are to be placed to all locations from the Telecommunication Equipment Rooms as indicated on the wiring limits defined on the drawings. All cables are to be run in cable trays and conduit, as indicated on drawings. The telecommunication contractor shall route this cabling as indicated on the drawings and provide proper spacing to prevent any EMF/EMI/RFI interference.

END OF SECTION 270530

SECTION 270540– UNDERGROUND DUCTS AND RACEWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

1.2 GENERAL

A. Underground Ducts and Raceways for Communications Systems Overview
   1. The design of the Underground Raceway System shall be in accordance with the ANSI/TIA/EIA 758: Customer – Owned Outside Plant Telecommunications Cabling Standard and addenda to this standard.

PART 2 - PRODUCTS

2.1 PULL BOXES.MAINTANCE HOLES/VAULTS **(NIC/ Not In This Contract) All Vaults, Conduit Duct-banks and Innerducts are being installed under a separate contract. (NIC/ PARAGRAPHS A, B, AND D FOR INFORMATION PURPOSES ONLY.) (NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.)**

A. Pull-boxes shall be of the type, design and size as shown on the drawings. Construct pull and junction boxes per National Electrical Manufacturer's Association (NEMA) standards. Sizes shall be per the National Electric Code. Pull boxes shall be single door, NEMA 12 type enclosures with 16 gauge steel construction, continuously welded seams, ground smooth, and continuous piano type door hinge and gasketed door. Locking shall utilize a three point latching handle with key lock, counter clockwise rotation to open. These units shall be as manufactured by Hoffman. After installation, the cabinets shall be painted to match building walls. Pull boxes inside buildings shall be furnished with galvanized finish and with screw covers, ten gage steel minimum. Provide gasketed cover with brass screws for all weatherproof boxes. Seal around conduits or other wiring material passing through the floor or through partitions which extend to the slab above or passing through fire resistant rated ceiling or walls to prevent passage of fumes, smoke or fire. Sealing methods shall be in strict accordance with standard drawings included in the bid documents.

B. New Vaults shall be sized as shown on the drawings. Underground vaults shall be Quazite Composolite precast concrete with concrete covers, part number PG4872BA48/vault equipped with cover part number PG4872HA00/cover. The contractor shall use all manufacturers suggested installation practices in the joining of all materials. Standard hardware required for construction and utilization of the maintenance holes/vaults shall be provided as detailed on the drawings. This includes the racking bolt assemblies, vertical support brackets, rack hooks, etc., as shown in the drawings. ALL bottoms of open bottom underground vaults shall be filled with a four (4) inch deep layer of pea gravel. Maintenance holes/vaults distributed by Oldcastle Precast, Tucker GA, telephone number 480-899-1937.

   1.) Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Old Castle
      b. Hubbell
      c. Strongwell

(This Item Is In The Contract)-

C. The **Fiber Infrastructure Vendor/ Contractor** shall install all cable support/ routing hardware in the QB/ Vaults. The Installation of all Standard Vault Hardware shall be completed prior to the fiber cable placement. The Standard Vault Hardware required for construction and utilization of the Maintenance Holes- QB/Vaults shall be provided as detailed on this drawing.

1. This includes the racking bolt assemblies, vertical support brackets, rack hooks, etc., as indicated in the drawing documents.

2. **Contractor to Install-**
   a. (4) 47 Hole Racks/ Hubbell Pt.# 400551 in each vault
   b. (2) 18 Hole Racks/ Hubbell Pt.# 400550 in each vault
   c. (16) "S" Brackets/ Hubbell Pt.# 440556 in each vault
   d. (18) 10″ Rack Hooks/ Hubbell Pt.# 400524 in each vault

D. All holes required in the concrete structures for installation of OSP/ISP shall be mechanically cored and sleeves installed.

2.2 CONDUITS CONSTRUCTION/EXCAVATION AND RESTORATION OF GROUNDS **(NIC/ Not In This Contract) All Vaults, Conduit Duct-banks and Innerducts are being installed under a separate contract. (NIC/ PARAGRAPHS A-D, AND F-HH FOR INFORMATION PURPOSES ONLY.) (NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.)**

A. All construction and installation work shall be done in a thorough and workmanlike manner, in accordance with the plans, specifications, and drawings. All construction materials and labor are subject to the Engineer/Architect's approval, prior to the work commencement. The contractor shall be responsible for restoring all grounds to the original (pre-construction) condition. The restoration must conform to all original grades, such as asphalt, concrete sidewalks, curbs, sod, grass, etc.

B. All Conduits will be concrete encased, four inch (4″) PVC / TC 8EB, as shown on the drawings unless noted otherwise. The conduit's are to be buried at a minimum depth of thirty-six inches (36″) for future grade, unless otherwise stated on the construction drawings. All trenches shall be backfilled and tamped on twelve – inch (12″) levels. A twenty-four inch (24″) backfill is required prior to the buried cable warning tape. The Buried Cable warning tape is required in all trenches and is to be placed above the conduits.

C. Four (4) #4 reinforcing rods shall be installed in all concrete duct banks when entering buildings. The rods shall extend six feet (6') from the building. The rods are to be tied to the building as required. The contractor may elect to install rigid galvanized steel conduit for at least six fees (6') before entering the building in lieu of installing #4 reinforcing rods.

D. The conduit shall consist of single, round bore conduit for future cables. The number of and the size of the ducts shall be indicated on the construction drawings. The duct lines shall be laid at a minimum grade of four (4″) per one hundred foot (100') slope towards the maintenance holes and vaults. The terminations at the maintenance holes and vaults and the buildings shall utilize end bells.

(This Item Is In The Contract)-

E. The **Fiber Infrastructure Vendor/ Contractor** shall provide and install the duct plugs at all of the maintenance holes and vaults, such as **JMS (Jack Moon) Brand, number JMS 40B1167S (4″) duct plugs.** All cables entering the ducts shall be sealed according to the industry standards to provide a watertight seal. Any changes in the direction of the runs shall be accomplished by using special couplings or bends manufactured for that specific purpose. All unoccupied conduits and innerducts shall be sealed **with JMS 4D402U**, or as required. The underground conduit system shall be sealed using **duct seal part number MCOPR868** where applicable.

F. The conduit shall be thoroughly cleaned before laying it. During the construction process and after the duct line is complete; the ends of the conduits shall be plugged to prevent water from washing mud into the conduits. All entrances into the maintenance holes/vaults dust window are to be grouted to prevent seepage of water and debris into the vault. Particular care shall be taken to keep the conduits free of concrete or any other substance during the course of the construction process. Where it is necessary to cut the tapered end on a piece of conduit at the site, the cut shall be make with a tool or a lathe designed for that specific purpose. After the duct line has been completed, a material, not less than twelve inches (12″) long, having a cross section of approximately one-quarter inch (1/4″) less than the inside cross section of the conduit, shall be pulled through each conduit. Afterward, a brush with stiff bristles and swabs shall be pulled through the conduit to make certain that no particles of earth, sand, gravel, to etc., have been left in the line. The underground-encased conduit shall be TC-8EB and meet the industry standards suitable for encasement in concrete.

G. Conduits shall be completely encased in concrete six-inches (6″) on top and three-inch (3″) minimum, all other sides as indicated (4″ PVC/TC-8EB) on the construction drawings. The thickness of the concrete encasement, is a minimum, and may be increased to fit the actual shape of the trench. Spacing blocks shall be made of concrete, plastic pt. #SZ88NJN & pt. #289NJN or other suitable non-metallic material. Joints in the conduits shall be staggered at least 6 inches. Conduits shall be jointed with the manufacturer's approved compound. Ducts shall be securely anchored to prevent movement during the placement of the concrete.

H. Multiple conduits shall be placed in concrete with at least three inches (3″) clear around the conduit and a minimum of four inches (4″) at the top if places less than 36″ below grade, as shown on the drawings.

I. An orange warning tape (8 inches) shall be installed twenty four inches (24″) above the concrete encased conduits.

J. The Contractor shall install a polyolefin pull line, of two hundred pound (200lb) tensile strength, in each conduit. George-Ingram, part number 9465-02, or equivalent, is the acceptable polyolefin pull line.

K. As applicable, the contractor will do all bracing and shoring's necessary to support or retain the earth banks and face of the excavation, as well as to adequately protect the workman. The contractor is to consider the adjacent buildings, pavement, and the other existing improvements from damage during this process. The contractor shall provide timber, curbing, planking, or select piling of adequate sections when required. The contractor must erect barricades as necessary for safety. Excavations shall be closed and/or barricaded for public protection prior to leaving the job site at night. The protection should include warning lights and or guards.

L. In preparing the trench bed for the conduit installation, level the trench bed to form an even base. In some cases, it may be necessary to provide and/or finish earth to establish an even base. If,

upon excavation, the trench bed appears to be incapable of firmly supporting the conduit, the owner/architect will determine whether a concrete base is required.

M. PVC Duct separators shall be placed at intervals of approximately six feet (6') and fastened securely.

N. Concrete pour: All concrete shall be poured onto the duct banking using a chute and evenly distributing the concrete by hand to provide a minimum encasement. Concrete strength: All concrete shall conform to Class "B", Type I as per specification Section 03300, Cast in Place Concrete.

O. Backfill material: Backfill material shall consist of crushed aggregate meeting requirements of the AHJ and other applicable authorities. Testing of the backfill placement is the vendor's expense. Drainage Fill: Washer gravel, crushed stone, or slag, size 1-1/2″ down, with finer aggregate for topping is acceptable. Granular Fill: Washed gravel or crushed stone size 3/8″ down to 1/4″, no fines are acceptable.

P. Accessibility to fire hydrants, fire alarm boxes, sidewalks and driveways shall be maintained. As necessary, temporary bridges over the trenches must be used to carry storm water away from the work area.

Q. Entrance/In-Building conduit will be EMT type or rigid type conduit, as shown on the drawings. The contractor shall provide conduit installation for all horizontal and vertical feeders, supports, and pull boxes, as required by the National Electrical Code (NEC) and /or as shown on the construction drawings.
Conduits:

1. Galvanized Rigid steel (GRC) or Intermediate Grade steel conduit (IMC): Use for 1-1/4' diameter and larger: for circuit's exposed to weather or moister: in hazardous locations: run underground or in concrete. Terminate with double locknuts and O.Z. Type BLG grounding type bushing in dry locations and watertight hubs in wet locations. Join with threaded fittings. Do not use split fittings underground.
2. Electrical Metallic Tubing (EMT): Use in dry locations only: use for branch circuit's, auxiliary and control circuits and telephone circuits. Join and terminate with steel rain-tight compression insulated throat fittings except auxiliary, control and telephone circuit's 1-1/4″ diameter and larger use all-steel setscrew insulated throat fittings.
3. Approved manufactures for Galvanized Rigid Conduit (GRC), Intermediate Metallic Conduit (IMC), and Electrical Metallic Tubing (EMT) are Triangle, Allied, and Wheatland.
4. Flexible Steel Conduit's (FC): Spirally wound interlocked steel raceway: National Electrical Products "Greenfield". Use for interior day locations for final connections to recessed lighting fixtures and to vibrating equipment (motors, transformers, etc.). Terminate with galvanized steel compression fittings approved for grounding.
5. Liquid-tight flexible steel conduit (LT) shall have the same construction as flexible steel conduit above, except with PVC coating by Anaconda (Steatite). Use in exterior and wet location for final connections to vibration equipment. Terminate with galvanized steel compression fittings approved for grounding.

Q. Installation costs are to include all necessary equipment for a turnkey job such as: hangers, fittings set screws, connector end, bushings, and color coding, as well as the repainting/clean up of drywall area around each new outlet box. Also, it shall be the contractor's responsibility to make and restore all firewall penetrations (various types) to the State and County specifications.

R. All conduits are to be placed above the lay-in ceilings and must be supported from the overhead with unistrut.

S. The Contractor shall install pull cords in each conduit.

T. Include all required conduit cut in boxes.

U. The conduit installation work is to comply with the latest edition of the National Electrical Code, National Electrical Safety Code, Standard Building Code, Local Ordinances, and other standards indicated herein. Color code all conduit with one inch (1″) wide band of vinyl plastic electrical tape, 3M Company "Scotch 35", applied two (2) full turns around conduit, 6 inches (6″) from all conduit terminations into the pull boxes on each side of the walls, floors or roof penetrated by conduit and where conduit enters the wall to outlets below:

Conduit	Color Code System
Information System:	
Voice/Data	Black
Data	

V. The electrical pull box cover must be labeled with the name of the feeder source and the feeder load. The labeling must be done in painted stencil letters. These conduits shall be installed as indicated on the construction drawings and to the Owner/Architects satisfaction.

W. Support all boxes from structure. Support Outlet Boxes in metal stud walls with Caddy Type H metal supports. Locate adjacent power, telephone, and data Telecommunication outlets side by side with minimum distance between. Use additional metal supports as required.

X. Install adjacent outlets at different levels in one vertical line where possible. Group outlets at same level where possible.

Y. Thread-less rigid or intermediate grade fittings shall no be used.

Z. Bushings shall be steel or malleable iron, galvanized, with smooth 105 rated phenolic ring with grounding lug where required.

AA. Electrical metallic tubing using thread-less type set screw type connectors and coupling. Galvanized steel using concrete tight, insulated throat.

BB. Connectors for flexible steel conduit shall be UL approved for grounding, galvanized steel, thread-less type, with insulated throat.

CC. Where ground conductors are installed in conduit 1-1/4″and larger, provide insulated ground bushings and bond full size ground wire from bushings to box or cabinet with self-tapping screw and appropriate lug.

DD. Seal around conduits, sleeves and other raceways passing through floors, fire rated walls, or partitions which extend to underside of the structure above in strict conformance with project drawings.

EE. Fire and smoke wall penetrations shall be sealed promptly in all active walls so as not to diminish the level of life safety.

FF. The contractor will be responsible for labeling/tagging all Firewall/Smoke Penetrations with a red tag, indicating the Company Name, Date, Permit Number, Job/Project number, and color code the conduit on each side of the penetration with Brown/Blue tape. The contractor is to provide digital photos of all completed conduct/wall penetrations.

GG. Conduit supports: Use approved straps, rods, hangers, and trapeze channels. Conduit shall not be supported with wire or perforated straps.

HH. Conduit penetrations through roof shall be made in pitch pockets approved by Owner/Engineer and shall be located adjacent to the equipment served.

2.3 INNERDUCT

(NIC/ Not In This Contract) All Vaults, Conduit Duct-banks and Innerducts are being installed under a separate contract. (NIC/ Not In this Contract except where called out on the drawings. See Drawings. Concerning the FS #4 and TPEP #1.) Install Innerducts (3) 1.25 in each conduit from vault to pull box at each building.

A. OSP HDPE type corrugated innerduct, as manufactured by Carlon or equivalent. Three 1 1/4″ innerducts will be installed in conduits as shown on the drawings. Each inner duct will be Orange in color and will be furnished with pre-threaded pull-tapes. Innerduct shall be PT# A6D2N1JNNC (1130lb.) pull cord for OPS/HDPE installations.

B. The innerduct assignment for each individual cable, for any conduit section, is specified on the drawings. Cable will not be placed in innerducts, other than that specified on the drawings, without approval from the engineer/designer. It will be the Telecommunications Contractor's responsibility to determine whether conduits assigned for occupancy will be rodded and cleaned. Conduits, which cannot be cleaned, will be reported to the engineer/designer. Water based lubricant will be applied to reduce tension on the innerducts. The maximum pulling load on the innerducts will not exceed 600-lbs tension. Allow extra footage of pull lines to compensate for the stretch of the innerduct during the pull. After the pull is completed, allow the innerduct to resume normal length. Provide sufficient length of innerduct to extend 6 inches beyond the conduit ends. Innerducts will be installed in accordance with manufacturer's instructions and industry standards. Care will be taken to avoid kinking the innerduct or applying excessive tension during installation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive the system. Notify Designer if areas are not acceptable. Do not proceed with installation until unacceptable conditions have been corrected.

3.2 INSTALLATION

A. Install system in accordance with manufacturer's instructions.

B. Install system at locations as required.

3.3 FIELD QUALITY CONTROL

A. Complete commissioning checklist at completion of installation and submit copies to Architect.

END OF SECTION 270540

SECTION 270600 – SCHEDULE FOR COMMUNICATIONS

PART 1 - GENERAL

1.1 SCHEDULE

A. The contractor shall prepare a construction schedule with milestones and duration of tasks defined. The schedule shall be a Gant type chart electronically produced by Microsoft Project software or approved equal.

B. Coordinate schedule with the owners representative/RCDD

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 270600

SECTION 270800 – COMMISSIONING OF COMMUNICATIONS

PART 1 - GENERAL

1.1 GENERAL

A. The owner representative/RCDD will review the contractor progress throughout the construction process.

B. The owner representative/RCDD reserves the right to attend construction meetings, inspect the job site during construction to ensure compliance with the specifications and TDMM, telecommunications codes and standards.

C. The owner representative/RCDD shall be included in all phases of the project.

D. The owner representative/RCDD will assist the contractor with the analysis, approval and commissioning of the structured cabling system.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 270800

SECTION 271100 - COMMUNICATIONS EQUIPMENT ROOM FITTINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

1.2 SUMMARY

A. Section Includes:
1. Telecommunications mounting elements.
2. Telecommunications equipment racks and cabinets.
3. Telecommunications service entrance pathways.

B. Related Sections:
1. Division 271300 Section "Communications Backbone Cabling" for Structural Cabling associated with system panels and devices.
2. Division 271500 Section "Communications Horizontal Cabling" for Structural Cabling associated with system panels and devices.

1.3 DEFINITIONS

A. BICSI: Building Industry Consulting Service International.

B. Ladder Rack: A fabricated structure consisting of two longitudinal side rails connected by individual transverse members (rungs).

C. LAN: Local area network.

D. RCDD: Registered Communications Distribution Designer.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for equipment racks and cabinets. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Shop Drawings: For communications equipment room fittings. Include plans, elevations, sections, details, and attachments to other work.
1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Equipment Racks and Cabinets: Include workspace requirements and access for cable connections.
3. Grounding: Indicate location of grounding bus bar and its mounting detail showing standoff insulators and wall mounting brackets.

C. Qualification Data: For Installer, layout technician, installation supervisor, and field inspector.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Telecommunications Pathways and Spaces: Comply with ANSI/TIA/EIA-569-B.

C. Grounding: Comply with ANSI-J-STD-607-A.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install equipment frames and ladder racks until spaces are enclosed and weather-tight, wet work in spaces is complete and dry, and work above ceilings is complete. Polyvinyl floor tile shall be in place prior to mounting systems to the floor.

1.7 COORDINATION

A. Coordinate layout and installation of communications equipment with Owner's telecommunications and LAN equipment and service suppliers.

B. Coordinate location of power raceways and receptacles with locations of communications equipment requiring electrical power to operate.

PART 2 - PRODUCTS

2.1 EQUIPMENT CABINETS/ FRAMES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. OCC
   2. Hoffman
   3. Cooper B-Line

B. General Cabinet/Frames Requirements:
   1. Equipment Frames: Freestanding, Enclosed Cabinet- 4 post modular units designed for telecommunications terminal support and coordinated with dimensions of units to be supported.
   2. Module Dimension: Width compatible with EIA 310 standard, 19-inch panel mounting.
   3. Finish: Manufacturer's standard, baked-polyester black powder coat.
   4. UL Listed.

C. Floor-Mounted Cabinet/Racks:
   1. Vertical and horizontal cable management channels, top and bottom cable troughs, grounding lug.
   2. Baked-polyester powder coat black finish with Doors.
   3. Freestanding floor mounted Server Cabinet will be OCC Catalog Number 45RUx30": PT# CDC4530- Option Code# 01P05LLSLP -black with Doors as defined on drawings and as manufactured by OCC.

a. Install Equipment Cabinets w/vertical organizers and shall be furnished complete with accessories. Quantities are to be as specified and shown on drawings. There shall be OCC Vertical Cable Management 4" wide cable channels Pt.# CM3-450 and OCC Horizontal Cable Management Pt.# CM503 (2U) . OCC Server Cabinets to be installed with accessories as required.

b. Each cabinet is to include:

One (1) - OCC Ground Bar Pt.# GRD19
One (1) - OCC 19" Power Strip, 20 A, Pt.# PS120 -Black
Two (2) - OCC Vertical Power Strip 20A, Pt.# PS320 -Black
One (1) - OCC Fan Unit Pt.# FAN3
Twenty (20) - OCC Vertical Cable Management 4" wide cable channels Pt.# CM3-450. (10) each side.
Two (2) - OCC Horizontal Cable Management Pt.# CM503 (2U)

D. Modular Freestanding Cabinets:
1. Removable and lockable side panels.
2. Hinged and lockable front and rear doors.
3. Adjustable feet for leveling.
4. Screened ventilation openings in the front and rear doors.
5. Cable access provisions in the roof and base.
6. Grounding bus bar.
7. Roof or door mounted, 550-cfm fan with filter.
8. Power strips.
9. Baked-polyester powder coat black finish with Red Doors.
10. Cabinets keyed alike.

E. Cable Management for Equipment Cabinet/Frames:
1. Metal, with integral wire retaining fingers.
2. Baked-polyester powder coat black finish.
3. Vertical cable management panels shall have front and rear channels.
4. Provide horizontal crossover cable manager at the top of each relay rack, with a minimum height of two rack units each.
5. Horizontal cable managers shall have extended covers to hide patch cables lacing into vertical cable managers.

2.2 LABELING

A. Comply with USASOC and ANSI/TIA/EIA-606-A and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

PART 3 - EXECUTION

3.1 ENTRANCE FACILITIES

A. Coordinate with owner for the installation of demarcation point, protected entrance terminals.

3.2 FIRESTOPPING

A. Comply with requirements in Division 07 Section "Through-Penetration Firestop Systems." Comply with TIA/EIA-569-A, Annex A, "Firestopping."

B. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.3 IDENTIFICATION

A. Identify system components, cabling, and cabling complying with ANSI/TIA/EIA-606-A. Comply with ALL requirements FOR "Interior Painting" for painting backboards. For fire-resistant plywood, do not paint over manufacturer's label. For paint additive coats on AC grade plywood, provide label on backboard.

B. See Division 271500 Section "Communications Horizontal Cabling" for additional identification requirements. See Evaluations for discussion of TIA/EIA standard as it applies to this Section. Paint and label colors for equipment identification shall comply with ANSI/TIA/EIA-606-A.

C. Labels shall be preprinted or computer-printed type.

3.4 AS - BUILT DRAWINGS

A. The ER/TR Communications Room shall have a (contractor furnished) complete set of as – built drawings for the area being served with unique jack ID for each outlet for the complete system section where in the Comm. Facility or Pole Mounted stations. As – built drawings shall be 11" x17" and shall be mounted in a hard cover/ plastic next to the door.

B. The Telecommunications contractor will maintain a set of drawings to document all as-built information as it occurs throughout the project. This will be maintained on a daily basis. At the end of the project, the telecommunications contractor shall provide (2) two set of the revised as-built drawings accurately showing all termination locations, cable routing, and labeling. Requirements: (2) Hard Copy of the Drawings and Test Reports as well as (2) Complete Data File of the Drawings and Test Reports including the Summary Reports on a Flash Drive.

C. Provide two (2) copies of all operation manuals for all switches and electronic devices, bound in three-ring binders.

D. The Contractors/ Vendors for the Fiber Infrastructure System, Security Camera System, Wireless Network System and the Data Network System shall coordinate and set up all System Records including but not limited to the following; The IT-Cabinet Numbers, Equipment Cabinet Numbers, Switch Numbers, Fiber Panel Numbers, Fiber Cabling Numbering, Fiber Splice Case Numbers, QB-Vaults Numbers, Camera Numbers, WAP Numbers, Fiber Assignments, Switch Port Assignments, Jack ID Assignments, Data Station Patch Panel Port Assignments, IP Number Assignments and MAC Addresses for all devices connected to each section of the network system. The information from each Contractor/ Vendor shall be coordinated with the Designer/ Consultant and the CMS/FMS- Record Management System Contractor/ Vendor.

END OF SECTION 271100

SECTION 271300 - COMMUNICATIONS BACKBONE CABLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

1.2 SUMMARY

A. Section Includes:
1. Pathways.
2. UTP cable.
3. 8.3/125-micrometer, single mode optical fiber cabling optical fiber cabling and 50/125-Micrometer, multi-mode/OM4 optical fiber cabling.
4. Cable connecting hardware, patch panels, and cross-connects.
5. Cabling identification products.

B. RELATED SECTIONS: 271500 - Communications Horizontal Cabling

1.3 DEFINITIONS

A. BICSI: Building Industry Consulting Service International.

B. Cross-Connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

C. EMI: Electromagnetic interference.

D. IDC: Insulation displacement connector.

E. LAN: Local area network.

F. RCDD: Registered Communications Distribution Designer.

G. UTP: Unshielded twisted pair.

1.4 BACKBONE CABLING DESCRIPTION

A. Backbone cabling system shall provide interconnections between Telecommunications rooms in the telecommunications cabling system structures as well as the IT-Comm. Cabinets. Cabling system consists of backbone cables, intermediate and main cross-connects mechanical terminations, and patch cables or jumpers used for backbone-to-backbone cross-connection.

B. Backbone cabling cross-connects shall be located in Telecommunications rooms. Bridged taps and splitters shall not be used as part of backbone cabling.

1.5 PERFORMANCE REQUIREMENTS

A. General Performance: Backbone cabling system shall comply with transmission standards in ANSI/TIA/EIA-568-B.1, when tested according to test procedures of this standard.

1.6 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings:
1. System Labeling Schedules: Electronic copy of labeling schedules, in software and format selected by Owner.
2. System Labeling Schedules: Electronic copy of labeling schedules that are part of the cabling and asset identification system of the software.
3. Cabling administration drawings and printouts.
4. Cabling diagrams to show typical cabling schematics including the following:
   a. Cross-connects.
   b. Patch panels.
   c. Patch cables.
5. Cross-connects and patch panels. Detail mounting assemblies, and show elevations and physical relationship between the installed components.
6. Ladder rack layout, showing ladder rack route to scale, with relationship between the rack and adjacent structural, electrical, and mechanical elements. Include the following:
   a. Vertical and horizontal offsets and transitions.
   b. Clearances for access above and to side of ladder racks.
   c. Vertical elevation of ladder racks above the floor or bottom of ceiling structure.
   d. Load calculations to show dead and live loads as not exceeding manufacturer's rating for rack and its support elements.

C. Qualification Data: For Installer, qualified layout technician, installation supervisor, and field inspector.

D. Source quality-control reports.

E. Field quality-control reports.

F. Maintenance Data: For splices and connectors to include in maintenance manuals.

G. Software and Firmware Operational Documentation:
1. Software operating and upgrade manuals.
2. Program Software Backup: On magnetic media or compact disk, complete with data files.
3. Device address list.
4. Printout of software application and graphic screens.

1.7 QUALITY ASSURANCE OF PRODUCTS

A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E-84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 50 or less.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Test cables upon receipt at Project site.
1. Test optical fiber cable to determine the continuity of the strand end to end. Use optical loss test set.

2. Test optical fiber cable while on reels. Use an Optical Time Domain Reflectometer to verify the cable length and locate cable defects, splices, and connector, including the loss value of each. Retain test data and include the record in maintenance data.
3. Test each pair of UTP cable for open and short circuits with a TDR.

1.9 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install cables and connecting materials until wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period. Polyvinyl floor tile shall be in place prior to mounting systems to the floor.

1.10 COORDINATION

A. Coordinate layout and installation of telecommunications pathways and cabling with Owner's Representatives and RCDD.

1.11 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Patch-Panel Units: 10% of each type.
2. Connectors and covers: 10% of each type.

PART 2 - PRODUCTS

2.1 EQUIPMENT CABINETS/ FRAMES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. OCC
2. Hoffman
3. Cooper B-Line

B. General Frame Requirements:
1. Equipment Frames: Freestanding, modular units designed for telecommunications terminal support and coordinated with dimensions of units to be supported. See Section 271100.
2. Module Dimension: Width compatible with EIA 310 standard, 19-inch panel mounting.
3. Finish: Manufacturer's standard, baked-polyester black powder coat.
4. UL Listed.

C. Floor-Mounted Racks: Modular-type, construction.
1. Vertical and horizontal cable management channels, top and bottom cable troughs, grounding lug.
2. Baked-polyester black powder coat finish.

D. Modular Freestanding Cabinets:
1. Removable and lockable side panels.
2. Hinged and lockable front and rear doors.
3. Adjustable feet for leveling.
4. Screened ventilation openings in the front and rear door.
5. Cable access provisions in the roof and base.
6. Grounding bus bar.
7. Roof or door mounted, 550-cfm fan with filter.
8. Power strip.

9. Baked-polyester black powder coat finish.
10. Cabinets keyed alike.

E. Cable Management for Equipment Frames:
1. Metal, with integral wire retaining fingers.
2. Baked-polyester black powder coat finish.
3. Vertical cable management panels shall have front and rear channels, with covers.
4. Provide horizontal crossover cable manager at the top of each relay rack, with a minimum height of two rack units each.
5. Horizontal cable managers shall have extended covers to hide patch cables lacing into vertical cable managers.

2.2 UTP FEEDER CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. OCC
2. Mohawk
3. General
4. Superior Essex

B. Description: 100-ohm, see Drawings for number of pairs formed into 25-pair binder groups covered with a thermoplastic jacket.
1. Comply with ICEA S-90-661 for mechanical properties.
2. Comply with ANSI/TIA/EIA-568-B.1 for performance specifications.
3. Comply with ANSI/TIA/EIA-568-B.2.
4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
   a. Communications, Riser Rated: Type ARMM, CMR or CMP, complying with UL 1666.

C. Furnish and install ARMM CMR Cable Types, 24 AWG, to comply with the National/Electrical Code, as stated in Section 800-3 (b) and as shown on the drawings.

ARMM 25 Pair 24 AWG General Pt. #2019000

CMR 25 Pair 24 AWG Mohawk Pt. #M58141/ LT48094

All non-riser/stub cable will be CMR type cable, 24 AWG.

D. Furnish and install CMR 25 pair cables to link the voice patch panels in the racks and the wall termination field for voice patching operations, as shown on the drawings. The voice patch panels will be linked using 25 pair cables of the required length and number, as shown on the drawings. Length is to be field verified. Cable must have terminated connections at rack end. The number of cables shall be as required for each location. If required in the contract / project.

Furnish and install CMR room tie cables Mohawk Pt. #M58141/ LT48094- CMR, gray color, as manufactured by Mohawk and as shown on the drawings.

Furnish and install ARMM riser cables General Pt. #2019000- ARMM, gray color, as manufactured by General and as shown on the drawings.

E. UNDERGROUND COPPER CABLE (OSP/INTERBUILDING BACKBONE)- **(NIC/ Not In This Contract)** No Underground Copper Backbone/ Feeder Cable in this contract.

1. All construction and installation work shall be done in a thorough and Workmanship Manner and in accordance with the plans, specifications and drawings. All construction materials and labor are subject to the engineer/designer's approval prior to the commencement of work. Underground cable shall be RUS-PE-89 / or RUS-PE-39 Type Cable, 24 AWG or UF type.

   PE-89AL Filled Foam Skin Cable RUS Pt. #XXXXXXX pair 24AWG PE89AL **(NIC)**

2. A cable feeder of suitable dimension shall be used between the face of the duct, to Protect the cable and guide it into the duct as it is payed off the reel. The cable shall not be bent, at any locations to less than ten (10) times the outside diameter of the cable. The contractor shall use the able feeder guides, feeding sheaves and all other proper equipment necessary for cable pulling operations. If proper equipment is not used, the Engineer/Owner's representative shall stop all cable pulling operation until corrective action is taken.
3. The mechanical stress placed upon a cable during installation shall not be such that cable is twisted or stretched. The contractor shall obtain the maximum pulling tension that will be allowed on the cable to pull the cable into the conduit section.
4. As the cable is payed off the reel, it much be carefully inspected for jacket defects. If defects are noticed, the puling operation shall be stopped immediately. The Owner/Architect will determine what corrective action will be taken.
5. As the cables are pulled off the reel into the cable feeder guide, they shall be sufficiently lubricated.
6. Cable placement shall be stopped immediately if the able on the reel does not payoff freely. The cause of the binding must be cleared, to the satisfaction of the Architect before the pulling operation can be resumed.
7. Sufficient cable shall be provided in each pedestal/cable closure to properly rack and splice the cable as shown on the drawings.
8. All cable ends shall be protected at all times, with acceptable end caps, except during the splicing operations. During the splicing operations, "Open Splice" protections shall be available for immediate installation in case of sudden rising water.
9. Splice cases shall be Preformed Line Production copper closures, size and accessories as detailed on drawings.

F. UNDERGROUND/ ENTRANCE COPPER CABLE SYSTEM INSTALLATION- **NIC (Not In This Contract).**

1. The Telecommunication contractor shall be responsible for furnishing, splicing, connection, and installing the copper voice and data cables at all locations as shown on the drawings. All construction and installation work shall be done in a thorough and workmanlike manner in accordance with plans, specifications and drawings. All construction materials and labor are subject to approval prior to the start of work (ANSI/TIA/EIA-606).

   a. There will be two (2) different methods of splicing used: **NIC (Not In This Contract).**

      1. Underground splicing: 3M 4000 super mini modules with DPM and grease caps will be used when performing straight and bridge splicing. 3M 4000 modules will be used when performing clearing and capping. All splices are to be made in Preformed Line Products underground splice closures as indicated to the drawings. (Underground splices.) **NIC.**
         See Drawings.

2. Inside Plant/Riser splicing: Pic-A-Bond amp part number 6122-2 will be used when performing straight, bridge and clear and capping. All splices are to be made in stainless split sleeve (Preformed Line Products – Armadillo, part# 8006750). Entrance splices, when completed, will be wrapped with 3M splicer wrap or equivalent. (All other entrances splice) **NIC - See Drawings.**

Note: All cable sheaths shall be bonded and grounded throughout the plant with 4460-S's and associated closure/hardware accessories to confirm with (ANSI/TIA/EIA607). Bonding cable sheaths shall conform to standards (ANS/TIA/EIA 607) total number of 4460's in relation to size of cables. All cables in the plant will be identified with red plastic cable tags.

2. The contractor shall provide all miscellaneous splicing materials necessary to complete each splice:

a.	Color coded binder ties	PP24X50F
b.	Bonding braid dispenser pack	25/4467
c.	Scotchlok sheath bonds	4460S or 4462
d.	3M 88 Tape	88T
e.	3M LR tape	LR Tape
f.	3M Cable Wraps	3M
g.	3M #4442 Re-enterable Gel	3M
h.	3M 4000 Modules Connectors	DPM
i.	AMP Pic-A-Bond Connectors	6122-2

3. Building entrance protection will he Circa 1880B1-50 protectors with gas tube/heart sensor Protectors, Circa C4B1E. **NIC - See Drawings**
4. Protectors and Cable sheaths shall be bonded and grounded at all locations throughout the OSP/ISP Cable plant, to new grounds provided by contractor in the telephone equipment rooms with proper grounding attachments. Cable protections and grounding shall conform to (ANSI/TIA/EIA-607). All sheaths throughout the Outside Plant/Inside Plant must be bonded, as indicated above.

2.3 UTP CABLE HARDWARE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. OCC
   2. Ortronics
   3. Siemon

B. General Requirements for Cable Connecting Hardware: Comply with TIA/EIA-568-B.2, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher. Connectivity solution shall be manufactured by the same company for an end-to-end solution.

C. Connecting Blocks (voice only): 110-style IDC for Category 3. Provide blocks for the number of cables terminated on the block, plus 20 percent spare. Integral with connector bodies, including plugs and jacks where indicated.

D. Cross-Connect: Modular array of connecting blocks arranged to terminate building feeder cables and permit interconnection between cables.
   1. Number of Terminals per Field: One for each conductor in assigned cables.

E. The voice backbone cables will be terminated on wall mounted 110 type blocks OCC 100 Pair Block Pt # DCC100/110EFSLK and OCC 300 Pair Block Pt # DCC300/110EFSLK. The Contractor shall provide and install 110 Cable Organizers OCC Pt.# COH110L. There shall be 25 pair cables run from the 100 and 300 pair 110 blocks to the cabinet and terminated into Voice/Telco Patch

Panel OCC Pt.# DCC2488/110A5E in order to create a cross connect field in the rack for connection of backbone cable to the station cables.

F. At the station end, data cables will be terminated on faceplates and equipped as defined in Section 271500. All conductors will be terminated on both ends, station and Telecommunications Equipment Room.

G. The data station cables will be terminated on rack mounted OCC Modular Patch Panels (Fully Loaded).

H. The Patch Panels:
Data Panel shall have (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for data cables.
DA Panel shall have (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for door access cables.
CAM Panel shall have (24 or 48 Ports Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for camera cables.
WAP Panel shall have (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK)) for wireless access point cables.

I. OCC Horizontal cable Management assembly, OCC Part # CM503 shall be installed as indicated on the drawings.

2.4 OPTICAL FIBER CABLE AND FIBER SLICE CASES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. OCC
2. Corning
3. Siemon

B. Description: Single mode, 8.3/125-micrometer and multi-mode 50/125-OM4 micrometer, number of strands as shown on drawings, nonconductive dielectric, 900 UM tight buffered, optical fiber cable.

1. Comply with ICEA S-83-596 for mechanical properties.
2. Comply with ANSI/TIA/EIA-568-B.3 for performance specifications.
3. Comply with ANSI/TIA/EIA-492BAAA for detailed specifications.
4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444, UL 1651, and NFPA 70 for the following types:
   a. Riser Rated, Nonconductive: Type OFNR or OFNP, complying with UL 1666.
5. Maximum Attenuation: 0.5 dB/km at 1310 nm and 0.5 dB/km at 1550 nm.
6. Mode Field Diameter: Between 8 and 10 microns, ± 10%.
7. Dispersion: Zero dispersion wavelengths, 1310 nm ± 10 nm, ANSI/TIA/EIA-455-169 or ANSI/TIA/EIA-455-175.
8. Cut-off wavelength shall be less than 1279 nm measured in accordance with ANSI/TIA/EIA-455-170.
9. Individual fiber tube colors per ANSI/TIA/EIA-606-A.

C. APPROVED FIBER TYPES:

Fiber Type and Size	Fiber Pt#	Fiber Color
SM 6 Fiber-OSP	OCC, DX006DSLA9YR	Yellow
SM 024 Fiber-OSP	OCC, HC024JSLACYA	Yellow
SM 048 Fiber-OSP	OCC, HC048JSLACYA	Yellow

SM 144 Fiber-OSP	OCC, HC144JSLACYA	Yellow
SM 288 Fiber-OSP	OCC, HC288JSLACYA	Yellow
SM 048 Fiber-ISP/Indoor-Outdoor Plenum	OCC, DX048KSLX9YP	Yellow
MM/50-OM4 048 Fiber- ISP/Indoor-Outdoor Plenum	OCC, DX048KALE9QP	Aqua

D. The cable shall be UL listed type OFNR and is suitable for installation in building risers in accordance with National Electrical Code Article 770.

E. The contractor shall provide FOC-6, FOC-24, FOC-48, FOC-144, FOC-288, FOC-048/SM-PL and FOC-048/MM-OM4-PL channel high density fiber optic breakout cable in accordance with the requirements of this description, the detail drawings, and as specified in the contract.

F. Applicable Documents:
The following documents of the latest issue form a part of this specification to the extent specified herein:

ANSI/TIA/EIA-STD-RS-455	Standard Test Procedures for Fiber Optic Fibers, Cables, Transducers, Connecting and Terminating Devices
ANSI/TIA/EIA-STD-RS-359	Standard Colors for Color Identification and Coding
ANSI/TIA/EIA-568-B.3	Optical Fiber Cabling Components Standard
ANSI/TIA/EIA-598C	Fiber Optic Cable Color Coding
ICEA-S-104-696	Standard for Indoor-Outdoor Optical Fiber Cable
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-HDBK-454	Standard General Requirements for Electronic Equipment
MIL-STD-810	Environmental Test Methods and Engineering Guidelines
UL Subject 1666	Standard Flame Test for Flame Propogation Height of Electrical and Optical Cable Installed Vertically in Shafts
NFPA 70-2014	National Electrical Code Article 770, Optical Fiber Cable

G. Requirements:
Assembly: The fiber optic cable shall consist of, but not be limited to, the following components:

1. tight-buffer fiber unit
2. rod fillers
3. armid yarn strength members
4. protective outer jacket

H. The cable shall be assembled by helically stranding a plurality of tight-buffer fiber units and, if necessary, rod fillers around a central rod filler; and pressure extruding a protective outer jacket directly over the stranded cable core.

I. Optical Fiber: Each optical fiber shall meet the following dimensional requirements:

	Singlemode Diameter (µm)
Cladding	125
Primary Coating	245

J. Tight-Buffer Fiber Unit: The tight-buffer fiber unit shall consist of 12 optical fibers surrounded by an acrylate coating which encases the optical fibers to form a fiber unit. Each fiber unit shall be surrounded

by and in direct physical contact with a synthetic color coded thermoplastic elastomeric polymer jacket. The subcable outside diameter shall be 2.0 mm.

K. Outer Jacket: The outer jacket shall consist of an extrusion of indoor/outdoor, oil resistant, low temperature, flame retardant Polyvinylchloride (PVC) having a nominal wall thickness of 1.27 millimeters and a minimum wall thickness of 0.6 millimeters at any point. The jacket shall be pressure extruded directly over the outer layer of the stranded cable core and shall completely fill the outer interstices of the outer layer of the stranded cable core. The outer jacket shall be smooth and be free from holes, splits, blisters, and other surface flaws.

L. Ripcord: The cable shall contain a non-wicking aramid yarn beneath the cable jacket to serve as a ripcord for jacket removal.

M. Cable Marking: The outer jacket shall be surface printed with the manufacturer's identification and the required UL markings. Optional markings including date of manufacture, manufacturer's part number, and sequential numerical meter marks shall be as required by the purchase order.

N. 3-Colors: The subcable outer jackets shall be color coded in accordance with ANSI/TIA/EIA-598C. The color of the outer jacket shall be black or yellow (SM-Yellow and MM/OM4-Aqua.). The color of the markings on the cable shall be white. Primary colors shall be in accordance with EIA-STD-RS-359.

O. Cable Diameter: The overall cable diameter shall be 15.0 mm.

P. Optical Performance: The optical performance shall meet the requirements:

Wavelength	1310 nm	1550 nm
Maximum Attenuation	0.5 dB/km	0.5 dB/km
Nominal Zero Dispersion Slope	0.092 ps/(nm^2-km)	

Q. Mechanical Performance:

Fiber Proof Test: All fibers shall be subjected to a minimum proof stress of 0.7 GPa. (100 kpsi)

Fiber Strippability: Both the primary fiber buffer layers, subcable jackets, and outer jacket shall be easily removed with commercially available mechanical stripping tools.

Minimum Bend Radius: The minimum bend radius of the cable under full rated tensile load shall be no larger than 15x the outside diameter of the cable and no more than 10x the outside diameter of the cable with no load on the cable.

Minimum Tensile Strength: The cable shall withstand a minimum installation tensile load of 2,700N and a minimum continuous tensile load of 600N. Installation loads in excess of 2700N (600 lbs) are not recommended.

Impact Resistance: The cable shall withstand an impact force per ICEA 696 Indoor/Outdoor Standard.

Crush Resistance: The cable shall withstand compression load of 1800 N/cm, per ANSI/TIA/EIA-RS-455-41A.

Cyclic Flex Resistance: The cable shall withstand cyclic flexing 2000 cycles per the requirements of ANSI/TIA/EIA-RS-455-104A.

Environmental Performance: The fiber optic cable shall comply with the requirements specified herein when subjected to the following environmental conditions.

Temperature: The cable shall comply with the optical and mechanical performance requirements if specified herein over the operating temperature range of -40°C to + 85°C. The cable shall not be damaged

in any way when exposed to the storage temperature range of -55°C to + 85°C. Installation temperature of actual cable is -20°C to + 60°C.

Humidity: The cable shall comply with the optical and mechanical performance requirements if specified herein up to 95% relative humidity (non-condensing) when subjected to moisture resistance conditioning according to Method 106B of MIL-STD-202 except that the specimen shall not be vibrated.

Moisture Resistance: Optical and mechanical performance shall not be degraded and the cable shall not be damaged in any way by immersion in ground water. The cable shall block water penetration without the use of gel flooding compounds according to EIA-455-82B per 1 meter water head pressure and 1 meter open end cable for 24 hours.

Fungus Resistance: The outer jacket material used in construction of this cable shall be fungus inert as described in requirement 4 of MIL-HDBK-454.

Sunlight/UV Resistance: The outer jacket material shall be suitable for long-term exposure to sunlight and weather, with a life expectancy in excess of 20 years. Suitability shall be determined in accordance with MIL-STD-810, method 505.

Flame Retardancy: The cable shall be UL listed type OFNR as meeting the requirements of UL Subject 1666.

R. Quality Assurance Provision: The fiber optic cable shall meet or exceed the requirements of this specification when measured in accordance with the methods of the individual requirements or the following methods as defined in EIA-STD-RS-455.

1. fiber dimensions
2. attenuation
3. bandwidth
4. numerical aperture
5. fiber proof test
6. cable bending
7. tensile load
8. impact resistance
9. crush resistance
10. attenuation vs. temp

S. Quality Standard: Manufacturer shall provide ISO 9001 certification.
Preparation for Delivery:

T. Reels: The fiber optic cable shall be shipped on non-returnable wooden reels in continuous lengths as specified in the purchase order with a -0% +10% overrun tolerance. The diameter of the drum shall be at least 20x the diameter of the cable.

U. Marking: Waterproof labels shall be attached to the reel showing length, cable identification number, date of manufacture, and UL Listing labels.

V. The Fiber Cable Facilities shall be fusion spliced as specified on the drawings..

W. Perform Fusion Splices with loss not to exceed 0.2 dB. Each splice will be tested bi-directionally with an Optical Time domain Reflectometer (OTDR) to verify splice loss at the time of splicing. Any splice not meeting the minimum loss will be redone. Identify any required splice in the submittal. Any splice required but not identified in the submittals will be brought to the attention of the engineer/designer for approval prior to being accomplished.

X. Fiber Splices shall be performed with the appropriate Corning Heat Shrink Sleeves (Corning Pt.# 2806031-01/ 50 Pack).

Y. Fiber Fan-out Kits shall be provided and installed as required within the cable facility system. The Contractor shall install OCC Fan-out Kits Pt.# HCBK12-24900.

Z. The Fiber Splices shall be made in an OCC Fibreguard 800 Series Enclosures as specified on drawings. The enclosures shall contain all fiber splice trays such as FGT-24S for 24 fibers and FGT-48S for 48 fibers. The enclosures shall also contain all Fibregard Grommet Kits such as FGD-1H, FGD-2H andFGD-4H.

See Fiber Splice Enclosures Kits Below:

1. OCC Fibreguard 800 Series Enclosures 8.1" X 24.9" Pt.# FG8-6S
2. OCC Fibreguard 800 Series Enclosures 8.1" X 24.9" Pt.# FG8-6S48
3. OCC Fibreguard 800 Series Enclosures 8.1" X 24.9" Pt.# FG8-2S

2.5 OPTICAL FIBER CABLE HARDWARE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. OCC
2. Corning
3. Siemon

B. Cross-Connects and Patch Panels:

Fiber Enclosure Panels shall be available in rack mount, 4RU/ also in wall mount versions. Single mode fibers shall be terminated in enclosures as indicated.

1. Fiber Optic Distribution Panel Units (FODPU) Rack Mount shall be 4U and 2U, OCC Pt.# RTS4U-HD16APB & OCC Pt.# RTS2U-HD16APB and will be installed at locations shown on the drawings. The panels will be sized for maximum capacity to accommodate fiber counts of the cables.

2. The FODPU Rack Mounted panels will be installed in 19" Equipment Cabinets, complete with accessories located and as defined on the drawings. Fiber optic adaptor panels will be furnished and mounted in freestanding racks. Exact location of the racks will be approved by the engineer/designer to enable the owner to expand the backbone cabling into the horizontal distribution system. The 19" racks will be installed as indicated. The racks will be located to provide and to meet clearance requirements of other equipment, which may be located in the same area or as indicated on the drawings.

3. Fiber Optic Distribution Panel Units (FODPU) Wall Mount shall be OCC Pt.# ZDMB6B (In IT-Cabinets) and will be installed at locations shown on the drawings. The panels will be sized for maximum capacity to accommodate fiber counts of the cables.

4. Contractor shall provide a Mock-up of (1) one of the IT-Cabinets (IT-Cabinet #1) to be reviewed and approved before the fit-up of the remaining Cabinets are performed. Once approved all other cabinet can be completed.

5. The Contractor shall install (1) NEMA 4X Rated 5"x5"x3"- Black Boxes/ Pole Mounted at the Opening Portals for Security Cameras portal only, (IT-Cabinets and the other (2) 5"x5"x3"Boxes for the IT Portals Wireless Access Points portals are under a separate contract.)

6. The FODPU Wall Mounted panels will be installed in the IT-Comm. Equipment Cabinets that are Pole Mounted, complete with accessories located and as defined on the drawings. Fiber optic adaptor panels will be furnished and mounted in the IT-Comm. Equipment Cabinets. Exact location in the cabinets will be approved by the engineer/designer to enable the owner to expand system. The units will be located to provide and to meet clearance requirements of other equipment, which may be located in the same area or as indicated on the drawings.

7. FODPU Rack Mounted shall be furnished with loaded duplex adapter panels:

   SM-LC/24 Port HD, OCC Pt# 6124SMQLCHD for Single-mode fiber with 24 LC (Blue) adaptors for single-mode fibers.

   SM_LC/6 Port Standard, OCC Pt # 616DLC with 6 LC (Blue) adaptors for single-mode fibers.

   Blank Cover Plates (Black) for all unfilled locations will be furnished with blank cover plates, OCC Pt.#600HD.

   MM-LC/24 Port HD, OCC Pt# 6124QLC50GHD for Multimode Fiber with 24 LC (Aqua) adaptors for multimode fibers.

8. Fiber Optic connectors shall be "LC" for Single-mode and Multimode Fiber Cables. The connector shall be:

   OCC Pt# FC-LC-SM: For SM with BLUE boot and housing for Single-mode.

   OCC Pt# FC-LC-MM-Q/Q: For MM/50-OM4 with AQUA boot and housing for Multimode.

9. Connector couplings at the termination panels will be protected with dust caps at all times.

10. The Contractor shall furnish all Fiber Optic Duplex Patch Cords/Jumpers, OCC Single –mode and Multimode OM4, 1 meters, 2 meters and 3 meters in length. Patch cords shall have LC to LC connections as required, SM/yellow and MM/Aqua in color. Contractor shall provide the following:

    a. OCC Pt.# D8LCUPC-LCUPC-1M, 3'-(50) SM of each.
    b. OCC Pt.# D8LCUPC-LCUPC-2M, 7'-(50) SM of each.
    c. OCC Pt.# D8LCUPC-LCUPC-3M, 10'-(50) SM of each.
    d. OCC Pt.# D5LC-LC-1MG, 3'-(50) MM/OM4 of each.
    e. OCC Pt.# D5LC-LC-2MG, 7'-(50) MM/OM4 of each.
    f. OCC Pt.# D5LC-LC-3MG, 10'-(50) MM/OM4 of each.

C. Cable Connecting Hardware:
   1. Comply with Optical Fiber Connector Intermateability Standards (FOCIS) specifications of ANSI/TIA/EIA-604-2, ANSI/TIA/EIA-604-3-A, and ANSI/TIA/EIA-604-12. Comply with ANSI/TIA/EIA-568-B.3.
   2. Quick-connect, simplex and duplex, Type LC connectors. Insertion loss not more than 0.75 dB. Minimum return loss of 20 dB.
   3. Type SFF connectors may be used in termination racks, panels, and equipment packages.
   4. The connector shall have optical axial pull strength at 2.2N at 0 degree angle and 2.2N at 90 degree angle, with a maximum 0.5 dB increase in attenuation in accordance with ANSI/TIA/EIA-455-6B.

2.6 IDENTIFICATION PRODUCTS

A. Comply with TIA/EIA-606-A and UL 969 for a system of labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

B. The Contractor shall provide and install Fiber Label Tags on all cables at all locations, such as fiber termination unit, ladder tray, wall rack, before entering the conduit/innerducts, vaults, IT-Cabinets and wall mounted fiber termination unit. The tag shall be a "Caution Fiber Optic Cable" yellow and black tag, Panduit Pt.# PST-FO.

C. The Contractor shall provide and install (1) #10 Location/Wire Conductor (Black in color) from the main communication equipment room (Terminated on a Square-D Termination Strips 10 Position) through all Vaults to the IT-Cabinets. The Location/Wire Conductors from the IT-Cabinets to the serving QB-Vaults shall be spliced in vaults on Square-D Termination Strips 10 Position, which shall be mounted level on the side wall of the vaults 6" from the top and 6" from the corner. The main conductor through the vault shall terminate on the same strips. The Location/Wire Conductors and Terminal Strips shall be labeled with Orange 3.5" x 2.5" Tags. The tag shall be labeled "Fiber Location Conductor/ Do Not Remove" tag, Xpress-Tags Pt.# TG-2122-FO.

2.7 TESTING AND ACCEPTANCE

A. Prior to placement of the cable, each fiber will be tested from both ends while on the spool with an Optical Time Domain Reflectometer (OTDR) at a wavelength of 850 and 1300 NM for Multi-mode and 1310 and 1550 NM for Single-mode. The OTDR test will ensure that the fibers conform to the manufacturers attenuation specifications and that no damage occurred during shipping. Hard copy results of the tests will be provided to the engineer/designer prior to, approval for the placement to proceed. A representative of the cable manufacturer will certify the test results.

B. The Telecommunications contractor will provide a thorough testing program for the fiber optic and copper cabling. This testing will include preliminary testing and final acceptance testing. Final acceptance testing will be performed jointly by the contractor and engineer/designer. The contractor will provide proposed testing procedures and test equipment to the engineer/designer prior to the commencement of the tests. All fibers will be individually tested with connectors attached. The testing will include continuity, transmission loss test (dB losses) splice loss test (dB losses) and other cabling system testing normally performed. All faults will be corrected and retested. The tests will be performed in accordance with the manufacturer's recommendations.

C. OTDR Multi-mode and Single-mode Cable Test Procedures:

An Optical Time Domain Reflectometer (OTDR), which combines a stable light source and photo detector, will be used to measure the total internal reflection of all optical fibers. The Contractor will ascertain and certify that the SC connectors are at .25 dB loss or less for each fiber strand Multi-mode and Single-mode. Splice loss for both must be maintained at .20 dB loss or less.

1. All OTDR Testing will comply with industry standards and test equipment manufacturer specifications. The test configuration will consist of one graded index 50.0/125-OM4 Multi-mode Fiber Optic Patch Cord from the OTDR to the system cable being tested (Multi-mode Fiber), and one 8.3/125 Single-mode Fiber Optic Patch Cord from the OTDR to the system cable being tested (Single-Mode Fiber).

2. The test jumper connector will be cleaned with a lint free wipe before insertion into the system couplers.

3. On the OTDR, once a correlation is set on the screen, the cursors will not be reset or moved until all cable strands involved are plotted and tested.

4. All Multi-mode testing will be performed at wavelengths of 820 NM to 850 NM for low pass testing and 1300 NM to 1326 NM for high-end test. All Single-mode testing will be performed at wavelengths of 1300 NM to 1310 NM for low pass testing and 1550 NM to 1560 NM for high-end test. Measure the loss in the A to B direction, Lab, at B. Then, measure the loss in the B to A opposite direction, Lba, at A. Calculate fiber path loss by averaging the loss measurements. (Loss A to B + loss B to A / 2.) All measured and calculated losses will be recorded in a table similar to that shown below.

OPTICAL TRANSMISSION LOSS MEASUREMENTS

Cable Path Identification:

Location A: Operator A:

Location B: Operator B:

Fiber Length: Wavelength:
Date:

Design Loss (fiber + connectors)

MEASURED AND CALCULATED LOSSES

Fiber Path	Lab	Lba	L(average) dB
No. Color	dB	dB	(Lab + Lba)/2

Hard copy test results at both wavelengths for both Multi-mode and Single-mode Fiber must be submitted for system documentation on 8-1/2" X 11" sheet of paper. Test results must state the equipment type, the span name, the fiber number loss in dB, I.O.R. (Index of Refraction), the type of scan, and the date of the test.

5. All end caps (dust caps) will be replaced on all couplers after the testing is completed. All face covers and rear panel doors on the FODPU will be put back into their proper places after the testing is completed.

Recorded loss measurements will not exceed the manufacturer's specifications for dB loss at the tested wavelengths as stated in the cable specifications. A fiber path loss, which is higher than the design loss, indicates a problem with the measurement or fiber path. The measured transmission loss will first be confirmed using the above procedures, including cleaning and

inspecting the connectors. Then, the fiber path will be checked to determine the cause or causes of the high loss, such as improperly constructed terminations, damaged connectors, pinched fiber, etc. The Contractor will correct all faults and retest the fibers to insure transmission losses are within specifications.

Upon completion of the above tests, submit one (1) copy of a written and one (1) data file CD or Flash Drive report detailing the test results for the Owners review, prior to final acceptance testing. The report must exemplify that the installation conforms to the specifications and is ready for final inspection and testing.

D. Copper backbone/equipment cable testing will consist of testing for:

Types of copper (outside plant/backbone) cable testing: (Some documentation must be done in MS Word report form.)
Shield continuity
Conductor continuity
Conductor Insulation resistance
AC/DC Voltage induction
Loop resistance
Shield to ground (Meg. Test) Cables must meg to infinity.

Typical test equipment used for these tests include:
Model T136B Circuit test set
Biddle Major Megger Insulation tester
Model 435/535 (TDR) Biddle digital Radar cable test set
Volt/Ohm meter
3M/Dynatel 573A Sheath fault/ Cable locator (other series are-900, 945, 965T, 745 and 2273)
Dracon Model 77 Cable analyzer or System 36 Cable analyzer.
Signal Level Testing Equipment for CATV System.

Typical
Cable testing will be preformed on a per pair basis.
Cable Meg testing will be preformed on a per section basis.
COAX Cable testing will be preformed bases on system design/amplifier end of line readings.

E. Data/DA/CAM/WAP Station testing will be performed with a Fluke Tester DTX-1800/DTX-5000, Micro Test Omni/Scanner II, and/or IDEAL LAN TEK – 7G latest software release, with detailed reports of all testing. (CAT 6 Specifications)

F. Acceptance Testing will be performed by the contractor and observed by the engineer/designer and owner. These tests will include random testing of fibers and copper cables selected by the engineer/designer, to verify conformance to these specifications. Any or all of the above tests will be performed as instructed by the engineer/designer, at the time of the acceptance test.

Complete re-testing will be performed, and any necessary corrections made, should any acceptance test fail to meet specified standards.

The contractor will furnish one (1) complete set of all test reports and records. This set will consist of an electronic copy and hard copy of all test reports, and drawings showing as built and installed cable routing, termination points, fiber assignments and termination panel wiring. This must include all fiber

pre-installation tests, splice tests, and final installed tests results and all copper tests. Testing device software will be included and will be suitable for downloading on the owner's computers.

The owner will accomplish owner acceptance of the system on the satisfactory completion of the acceptance test and receipt of all final test reports.

PART 3 - EXECUTION

3.1 ENTRANCE FACILITIES

A. Coordinate backbone cabling with the protectors and demarcation point provided by communications service entrance facilities provider with the owner's representative/RCDD.

3.2 CABING METHODS

A. Cabling Method: Install cables in raceways and ladder racks except within equipment racks and cabinets. Conceal raceway and cables except in unfinished spaces.
   1. Comply with requirements for raceways and boxes.

B. Cabling Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

C. Cabling within Enclosures: Bundle, lace, and train cables within enclosures. Connect to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.

3.3 INSTALLATION OF CABLES

A. Comply with NECA 1.

B. General Requirements for Cabling:
   1. Comply with ANSI/TIA/EIA-568-B.1.
   2. Comply with BICSI ITSIM, "Cable Termination Practices."
   3. Install 110-style IDC termination hardware unless otherwise indicated.
   4. Terminate all conductors; no cable shall contain un-terminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
   5. Cables shall not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.
   6. Install lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.
   7. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Use lacing bars and distribution spools.
   8. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
   9. Cold-Weather Installation: Bring cable to room temperature before de-reeling. Heat lamps shall not be used for heating.
   10. In the communications equipment room, install a 10-foot- long service loop on the end of cable. Stored in a Bracket Tray System Mounted as directed by the Designer.
   11. Pulling Cable: Comply with BICSI ITSIM, "Pulling Cable." Monitor cable pull tensions.
   12. Comply with the Army reserve IT manual.

C. UTP Cable Installation:
   1. Comply with ANSI/TIA/EIA-568-B.2.

2. Do not untwist UTP cables more than 1/2 inch from the point of termination to maintain cable geometry.
3. Do not remove more than 1/2 inch of the outer jacket.

D. Optical Fiber Cable Installation:
1. Comply with ANSI/TIA/EIA-568-B.3.
2. Cable may be terminated on connecting hardware that is rack or cabinet mounted.

E. Open-Cable Installation:
1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.

F. Group connecting hardware for cables into separate logical fields.

G. Separation from EMI Sources:
1. Comply with BICSI TDMM and ANSI/TIA/EIA-569-B recommendations for separating unshielded copper voice and data communication cable from potential EMI sources, including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches.
3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches.
4. Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: No requirement.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches.
5. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches.
6. Separation between Communications Cables and Fluorescent Fixtures: A minimum of 12 inches.

3.4 FIRESTOPPING

A. Comply with requirements for "Through-Penetration Firestop Systems." Comply with ANSI/TIA/EIA-569-B, Annex A, "Firestopping."

B. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.5 IDENTIFICATION

A. Identify system components, cabling, and cabling complying with ANSI/TIA/EIA-606-A. Comply with requirements for identification specified.

B. See Division 271500 Section "Communications Horizontal Cabling" for additional identification requirements. See Evaluations for discussion about ANSI/TIA/EIA standard as it applies to this Section. Paint and label colors for equipment identification shall comply with ANSI/TIA/EIA-606-A.

C. Comply with requirements in Division 271500 Section "Communications Horizontal Cabling" for cable and asset management software.

D. Cable Schedule: Install in a prominent location in each equipment room and cabling closet. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.

E. Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications closets, backbone pathways and cables, terminal hardware and positions, horizontal cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors.

F. Cable and Wire Identification:
1. Label each cable within 6 inches of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
2. Each wire connected to building-mounted devices is not required to be numbered at device if color of wire is consistent with associated wire connected and numbered within panel or cabinet.
3. Label each terminal strip and screw terminal in each cabinet, rack, or panel.
   a. Individually number cabling conductors connected to terminal strips and identify each cable or cabling group being extended from a panel or cabinet to a building-mounted device with name and number of particular device as shown.
   b. Label each unit and field within distribution racks and frames.
4. Identification within Connector Fields in Equipment Rooms and Cabling Closets: Label each connector and each discrete unit of cable-terminating and connecting hardware.

G. Labels shall be preprinted or computer-printed type with printing area and font color that contrasts with cable jacket color but still complies with requirements in ANSI/TIA/EIA 606-A, for the following:
1. Cables use flexible vinyl or polyester that flexes as cables are bent.

3.6 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
1. Visually inspect UTP and optical fiber jacket materials for NRTL certification markings. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments, and inspect cabling connections for compliance with ANSI/TIA/EIA-568-B.1.
2. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cables, and labeling of components.
3. Test UTP copper cabling for DC loop resistance, shorts, opens, intermittent faults, and polarity between conductors. Test operation of shorting bars in connection blocks. Test cables after termination but not cross-connection.
   a. Test instruments shall meet or exceed applicable requirements in ANSI/TIA/EIA-568-B.2. Perform tests with a tester that complies with performance requirements in "Test Instruments (Normative)" Annex, complying with measurement accuracy specified in "Measurement Accuracy (Informative)" Annex. Use only test cables and adapters that are qualified by test equipment manufacturer for channel or link test configuration.
4. Optical Fiber Cable Tests:
   a. Test instruments shall meet or exceed applicable requirements in ANSI/TIA/EIA-568-B.1. Use only test cables and adapters that are qualified by test equipment manufacturer for channel or link test configuration.

b. Link End-to-End Attenuation Tests:
   1) Singlemode backbone link measurements: Test at 1310 and 1550nm for SM in 2 directions according to ANSI/TIA/EIA requirements.
   2) Attenuation test results for backbone links shall be less than 2.0 dB. Attenuation test results shall be less than that calculated according to equation in ANSI/TIA/EIA-568-B.1.

C. Data for each measurement shall be documented. Data for submittals shall be printed in a summary report that is formatted similar to Table 10.1 in BICSI TDMM, or transferred from the instrument to the computer, saved as text files, and printed and submitted.

D. Remove and replace cabling where test results indicate that they do not comply with specified requirements.

E. End-to-end cabling will be considered defective if it does not pass tests and inspections.

F. Prepare test and inspection reports.

3.7 WARRANTY

A. The Structured Cabling System shall carry a manufacturer's 25 year product, labor and applications assurance warranty. Manufacturer and owners representative/RCDD shall perform an end-to-end audit on infrastructure prior to releasing warranty.

3.8 AS-BUILT DRAWINGS AND MANUALS

The Telecommunications contractor will maintain a set of drawings to document all as-built information as it occurs throughout the project. This will be maintained on a daily basis.

At the end of the project, the telecommunications contractor shall provide (2) two set of the revised as-built drawings accurately showing all termination locations, cable routing, and labeling. Requirements: (2)Hard Copy of the Drawings and Test Reports as well as (2) Complete Data File of the Drawings and Test Reports including the Summary Reports on a Flash Drive.

Provide two (2) copies of all operation manuals for all switches and electronic devices, bound in three-ring binders.

The Contractors/ Vendors for the Fiber Infrastructure System, Security Camera System, Wireless Network System and the Data Network System shall coordinate and set up all System Records including but not limited to the following; The IT-Cabinet Numbers, Equipment Cabinet Numbers, Switch Numbers, Fiber Panel Numbers, Fiber Cabling Numbering, Fiber Splice Case Numbers, QB-Vaults Numbers, Camera Numbers, WAP Numbers, Fiber Assignments, Switch Port Assignments, Jack ID Assignments, Data Station Patch Panel Port Assignments, IP Number Assignments and MAC Addresses for all devices connected to each section of the network system. The information from each Contractor/ Vendor shall be coordinated with the Designer/ Consultant and the CMS/FMS- Record Management System Contractor/ Vendor.

END OF SECTION 271300

SECTION 271500 - COMMUNICATIONS HORIZONTAL CABLING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Front End Bid Documents, apply to this section.

1.2 SUMMARY

A. Section Includes:
1. Pathways.
2. UTP cabling.
3. Cable connecting hardware, patch panels, and cross-connects.
4. Telecommunications outlet/connectors.
5. Cabling system identification products.
6. Cable management system.

B. Related Sections:
1. Division 271300 Section "Communications Backbone Cabling" for voice and data cabling associated with system panels and devices.

1.3 DEFINITIONS

A. BICSI: Building Industry Consulting Service International.

B. Cross-Connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

C. EMI: Electromagnetic interference.

D. IDC: Insulation displacement connector.

E. LAN: Local area network.

F. Outlet/Connectors: A connecting device in the work area on which horizontal cable or outlet cable terminates.

G. RCDD: Registered Communications Distribution Designer.

H. UTP: Unshielded twisted pair.

1.4 HORIZONTAL CABLING DESCRIPTION

A. Horizontal cable and its connecting hardware provide the means of transporting signals between the telecommunications outlet/connector and the horizontal cross-connect located in the communications equipment room. This cabling and its connecting hardware are called "permanent link," a term that is used in the testing protocols.

1. ANSI/TIA/EIA-568-B.1 requires that a minimum of two telecommunications outlet/connectors be installed for each work area.

2. Horizontal cabling shall contain no more that one transition point or consolidation point between the horizontal cross-connect and the telecommunications outlet/connector.
3. Bridged taps and splices shall not be installed in the horizontal cabling.
4. Splitters shall not be installed as part of the optical fiber cabling.

B. Pole mounted Security Cameras, Wireless Access Points and all other types of Data Devices shall be routed through the pole shaft. The Cable type shall be Cat-6 OSP Cable.

C. All in slab station cabling shall be Cat-6 OSP Cable.

D. A work area is approximately 100 sq. ft., and includes the components that extend from the telecommunications outlet/connectors to the station equipment.

E. The maximum allowable horizontal cable length is 295 feet. This maximum allowable length does not include an allowance for the length of 16 feet to the workstation equipment. The maximum allowable length does not include an allowance for the length of 16 feet in the horizontal cross-connect.

1.5 PERFORMANCE REQUIREMENTS

A. General Performance: Horizontal cabling system shall comply with transmission standards in ANSI/TIA/EIA-568-B.1, when tested according to test procedures of this standard.

1.6 SUBMITTALS

A. Product Data: For each type of product indicated.
1. For UTP cable, include the following installation data for each type used:
   a. Nominal OD.
   b. Minimum bending radius.
   c. Maximum pulling tension.

B. Shop Drawings:
1. System Labeling Schedules: Electronic copy of labeling schedules, in software and format selected by Owner.
2. System Labeling Schedules: Electronic copy of labeling schedules that are part of the cabling and asset identification system of the software.
3. Cabling administration drawings and printouts.
4. Cabling diagrams to show typical cabling schematics, including the following:
   a. Cross-connects.
   b. Patch panels.
   c. Patch cables.
5. Cross-connects and patch panels. Detail mounting assemblies, and show elevations and physical relationship between the installed components.

C. Samples: For workstation outlets, jacks, jack assemblies, in specified finish, one for each size and outlet configuration and faceplates for color selection and evaluation of technical features.

D. Qualification Data: For Installer, layout technician, installation supervisor, and field inspector.

E. Source quality-control reports.

F. Field quality-control reports.

G. Maintenance Data: For splices and connectors to include in maintenance manuals.

H. Software and Firmware Operational Documentation:
   1. Software operating and upgrade manuals.
   2. Program Software Backup: On magnetic media or compact disk, complete with data files.
   3. Device address list.
   4. Printout of software application and graphic screens.

1.7 QUALITY ASSURANCE

A. Testing Agency Qualifications: An NRTL.
   1. Testing Agency's Field Supervisor: Currently certified by BICSI as an RCDD to supervise on-site testing.

B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   1. Flame-Spread Index: 25 or less.
   2. Smoke-Developed Index: 50 or less.

C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Test cables upon receipt at Project site.
   1. Test each pair of UTP cable for open and short circuits.

1.9 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install cables and connecting materials until wet work in spaces is complete and dry, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.

1.10 COORDINATION

A. Coordinate layout and installation of telecommunications pathways and cabling with Owners Representative/RCDD and the City Representative.

B. Coordinate telecommunications outlet/connector locations with location of power receptacles at each work area.

1.11 SOFTWARE SERVICE AGREEMENT

A. Technical Support: Beginning with Substantial Completion, provide software support for two years.

B. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within two years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.
   1. Provide 30 days' notice to Owner to allow scheduling and access to system and to allow Owner to upgrade computer equipment if necessary.

1.12 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Patch-Panel Units: 10% of each type.
   2. Connecting Jacks: 10% of each type.
   3. Device Plates: 10% of each type.

1.13 VOICE REQUIRMENTS:

A. General: All voice wiring system for newly projected facility construction or renovation shall comply with the Electronic Industry and Telecommunication Industry Association standards 568-1991(Residential and light commercial telecommunication standards).

B. Voice Cable: Telephone cables must be 24-gauge solid copper, color coded in contrast to other facility cabling with an overall insulated vinyl jacket. Each cable must be continuous in length from the outlet to the terminal backboard (TBB) indicated on the drawings. Splicing of cables is prohibited. Outlets mounted 18-inches above finished floor shall be serviced by one (1) four-pair, 100 OHM, Cat 6 cable.

C. Cross connect Blocks: Type 110 blocks shall be provided with standoff brackets to terminate all subscriber lines. The blocks shall be attached starting 36-inches from the left side, working left to right of the telephone backboard in vertical rows spaced apart with all station cabling routed behind the brackets.

D. Auxiliary Devices: All auxiliary devices such as D-rings, A-rings, distribution spindles, Wire ties, etc. not shown on drawings but are required for high grade installation shall be provided.

E. Outlets: All outlets shall comply with RUS specification, PE-76, Modular Hardware and FCC Rules and Regulations Part 68, Subpart F.

   1. Standard 18-inch AFF outlets: Will have one "Category 6" rated, eight conductor 8P8C (eight-position/eight pin), RJ-45 jacks blue in color (this one will be part of the 4-port wall plate). The flush mounted cover shall be plastic and office white in color. There shall be a modular outlet where noted on drawings. Outlets shall be located within 1 foot of an electrical service outlet (except for common areas such as hallways and rest rooms) or every 6 feet of linear wall space, which ever is greater. Each outlet shall be numbered to correspond with the number on the voice patch panel.

   2. Wall Voice/Phone 48 to 54 inches AFF outlets: Outlets shall be single modular, 8P8C (eight-position/eight pin) (RJ-45) outlet having a push-in/slide-down type back plate (EIA/TIA 570-1991, figure 9). For wall mounted phones, the wall mount jack shall be mounted 48 to 54 inches above the finished floor, four pairs will be terminated.

1.14 DATA CABLING SYSTEM AND CABLING FOR POLE MOUNTED DEVICES (Cameras and WAP):

A. General: The data cabling systems shall comply with the Electronic Industry and Telecommunication Industry Association standard 568B. Facilities are wired incorporating a star topology, with each workstation connected to a communications closet situated no more than 90 meters of actual cable length to the work area. Direct connections between Comm. Rooms/ Termination Points are allowed to accommodate bus and ring configurations.

B. ISP Type Patch Panels: Utilize patch panels in the wiring closet cabinets to terminate all distribution cables. Specifications will comply with T568B wiring patterns and provide supports for a minimum of 48 ports per

PART 2 - PRODUCTS

2.1 UTP CABLE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. OCC
2. Mohawk
3. General
4. Siemon

B. Description: CMR Cat6 Cable, 100-ohm, 4-pair UTP, 300 MHz certified cable, covered with Blue for Data-1 through Data-4, Blue for DA/Door Access, Blue for CAM/Cameras and Blue for WAP/Wireless Access Points Cable Jackets for the Comfort Building and /or Remote Comm. Shelter Building and OSP Cat6 Cable, 100-ohm, 4-pair UTP, 300 MHz certified cable, covered with Black for Data-1 through Data-4, Black for CAM/Cameras and Black for WAP/Wireless Access Points Cable Jackets for the IT-Comm. Cabinet to Pole Mounted Devices or as directed by the Designer.

1. Comply with ICEA S-90-661 for mechanical properties.
2. Comply with ANSI/TIA/EIA-568-B.1 for performance specifications.
3. Comply with ANSI/TIA/EIA-568-B.2, Category 6.
4. Listed and labeled by an NRTL acceptable to authorities having jurisdiction as complying with UL 444 and NFPA 70 for the following types:
   a. Communications, Non-plenum Rated: Type CMR. As Required.
   b. Communications, Plenum Rated: Type CMP. As Required.
   c. Communications, OSP Rated: Type OSP. As Required for In-Slab Wet Conditions. All in-slab, below slab and in outdoor installs are considered wet conditions and require OSP Type Cat-6 Station Cable.

C. APPROVED CABLES

CMR Cat6 Cable: OCC Pt.# OCC-UE64R-05 (Blue) For In Building

CMR Cat6 Cable: Mohawk Pt.# M58804/ LT56007 (Blue) For In Building

OSP Cat6 Cable: Mohawk Pt.# M58772/ LT55553 (Black) For In Pole and Slab.

D. INTERNAL BUILDING COPPER CABLE [HORIZONTAL DATA STATIONS]

All Data station wiring will be completed in a thorough and workmanlike manner in accordance with plans, specifications and drawings. Particular notice will be paid to all outlet block wiring, which will be in accordance with current standards (ANSI/TIA/EIA-568-A&B and 569) and practices, regarding twisted cable lengths at the blocks /panels and cable lengths in the outlet boxes.

1. All Data Wall station outlets (D/W) will be cabled with:

Non-Plenum Areas
Data-W (Wall): Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
Data-W (Wall): Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

2. All Data-1 station outlets (D1) will be cabled with:

Non-Plenum Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

3. All Data-2 station outlets (D2) will be cabled with:
Non-Plenum Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)
Data-2: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)
Data-2: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

4. All Data-4 station outlets (D4) will be cabled with:
Non-Plenum Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)
Data-2: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)
Data-3: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)
Data-4: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
Data-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)
Data-2: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)
Data-3: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)
Data-4: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

5. All DA/Door Access-1 station outlets (DA1) will be cabled with:
Non-Plenum Areas
DA-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
DA-1: Mohawk, 4 pair CAT 6 cable pt. Pt.# M58772/ LT55553 (Black)

6. All CAM/Cameras-1 station outlets (DA1) will be cabled with:
Non-Plenum Areas
CAM-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
CAM-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

OSP In-Poles
CAM-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

7. All WAP/Wireless Access Point-1 station outlets (WAP1) will be cabled with:
Non-Plenum Areas
WAP-1: Mohawk, 4 pair CAT 6 cable Pt.# M58804/ LT56007 (Blue)

OSP In-Slab Areas
WAP-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

OSP In-Poles
WAP-1: Mohawk, 4 pair CAT 6 cable Pt.# M58772/ LT55553 (Black)

2.2 UTP CABLE HARDWARE

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. OCC
2. Ortronics
3. Siemon

B. General Requirements for Cable Connecting Hardware: Comply with ANSI/TIA/EIA-568-B.2, IDC type, with modules designed for punch-down caps or tools. Cables shall be terminated with connecting hardware of same category or higher.

C. Connecting Jack: 110-style IDC rated for Category 6. Integral with connector bodies, including plugs and jacks where indicated.

D. Cross-Connect: Modular array of connecting blocks arranged to terminate building cables and permit interconnection between cables.

1. Number of Terminals per Field: One for each conductor in assigned cables.

E. Patch Panel: Modular panels housing multiple-numbered jack units with IDC-type connectors at each jack for permanent termination of pair groups of installed cables. Patch panels shall support labels. Patch panels must have rear management bar for strain relief of horizontal cables.

F. The data station cables will be terminated on rack mounted OCC Modular Patch Panels (Fully Loaded).

G. The Cabinet/ Rack Mounted Panels for:

Data Panels shall have OCC, (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for data cables.

DA Panels shall have OCC, (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for door access cables.

CAM Panels shall have OCC, (24 or 48 Ports Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for camera cables.

WAP Panels shall have OCC, (24 or 48 Ports) Pt# DCC2488/110SIX or Pt# DCC4888/110SIX (BLACK) for wireless access point cables.

Pole mounted Comm. IT- Cabinet CAM and WAP Panels shall be a OCC, SMB/ 6 Port Box it shall have (6 Ports) Pt# SMEK6-01 (Office White) for wireless access points and security camera cables. The SMB shall be fully loaded with (6) OCC, Category 6 Jacks Pt. #KMJA605 (Blue).

H. Jacks and Jack Assemblies: Modular, color-coded, eight-position modular receptacle units with integral IDC S310-type terminals. Jacks shall be universally wired, have a rear strain relief cap. OCC, Part #KMJA605 Jack Module / Stuffer Cap. (Blue)

I. Patch Cables:

1. Patch cables shall be 100% factory-made and tested four-pair cables available in 1', 2', 3', 5', 7' and 10' lengths, Blue in color. Patch cables shall be made by the same manufacturer as the installed system to ensure a full channel warranty. Work area patch cables shall have bend-relief-compliant boots to ensure Category 6 performance. Patch cables shall have latch guards to

protect against snagging and terminated with an eight position modular plug at each end. Work area patch cables shall be provided for 100% of horizontal cables terminated.

2. Patch cords shall be furnished for connection of the data patch panel terminals to station outlet cabling and for outlet jack terminations to equipment.

The Contractor shall furnish Patch cables as shown: (CAT6 Patch Cords), one patch cable for each type/system station and at both ends and for each cross connect for the system.

A. Data patch cables, OCC Pt# PCSIX01B05- Blue - one foot in length for Communication Room End, IT-Comm. Cabinet and CAM/WAP Station End: (150) of each.
B. Data patch cables, OCC Pt# PCSIX02B05- Blue - two feet in length for Communication Room End, IT-Comm. Cabinet and CAM/WAP Station End: (150) of each.
C. Data patch cables, OCC Pt# PCSIX03B05- Blue - three feet in length for Communication Room End, IT-Comm. Cabinet and CAM/WAP Station End: (150) of each.
D. Data Patch cables, OCC Pt# PCSIX05B05- Blue - five feet in length for Communication Room End, IT-Comm. Cabinet and CAM/WAP Station End: (150) of each.
E. Data Patch cables, OCC Pt# PCSIX07B05- Blue - seven feet in length for Work Station End: (150) of each.
F. Data patch cables, OCC Pt# PCSIX10B05- Blue - ten feet in length for Work Station End: (150) of each.

3. Patch cords shall have bend-relief-compliant boots and color-coded icons to ensure Category 6 performance. Patch cords shall have latch guards to protect against snagging.

2.3 TELECOMMUNICATIONS OUTLET/CONNECTORS

A. Jacks: 100-ohm, balanced, twisted-pair connector; four-pair, eight-position modular. Comply with ANSI/TIA/EIA-568-B.1.

B. Workstation Outlets: To be One, Two, and Four Port -connector assemblies shall be mounted in a (2) and /or (4) Port Single Gang Plastic Faceplate, with Label Strip and Cover also using port blanks as required (Office White in color). All WAP's and Camera's (Building Mounted and/or Pole Mounted -connector assemblies shall be mounted in a (1) Port SMB/ Surface Mount Plastic Box/Faceplate, with Label Strip and Cover (Office White in color).

1. ISP- Wall Station Faceplate/ (1) One Port Stainless Steel OCC Pt. #WP-A6-SS.
2. ISP- Faceplate/ (2) Two Port Plastic OCC Pt. #FPSK02-01. (Office White in color).
3. ISP- Faceplate/ (4) Four Port Plastic OCC Pt. #FPSK04-01. (Office White in color).
4. ISP and OSP- Faceplate Plastic Blanks: OCC Pt. #AKBLK-01. (Office White in color).
5. ISP and OSP- Surface Mount Box/ SMB Plastic (1) One Port OCC Pt.#SMEK1-01. (Office White in color).
6. OSP- Surface Mount Box/ SMB Plastic (6) Six Port OCC Pt.#SMEK6-01. (Office White in color). Use for IT-Comm. Cabinet Station Cable Termination.
7. ISP and OSP- Cat6 Jack OCC Pt.#KMJA605. (Blue in color). Use at all locations for Station Cable Terminations.
8. For use with snap-in jacks accommodating any combination of UTP work area cables. See drawings for jack layout in faceplate. Flush mounting jacks, positioning the cable.
9. Legend: Snap-in, clear-label covers and machine-printed paper inserts.

C. All Data/DA/CAM/WAP Stations Jacks shall be fitted as follows:

Data/Wall (D/W) Stations:

1-Port OCC Faceplate Part # WP-A6-SS Stainless Steel with
(1) OCC Part #KMJA601 Jack Module / Stuffer Cap. (Office White)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

Data-1 (D1) Station:
2 -Port OCC Faceplate Part #FPSK02-01 Plastic (Office White) with
(1) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(1) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

Data-2 (D2) Station:
2 -Port OCC Faceplate Part #FPSK02-01 Plastic (Office White) with
(2) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

Data-4 (D4) Station:
4 -Port OCC Faceplate Part #FPSK02-01 Plastic (Office White) with
(4) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

DA-1/ Door Access (DA) Station:
1 -Port OCC SMB Faceplate Part #SMEK1-01 Plastic (Office White) with
(1) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

CAM-1/ Camera (CAM) Station:
1 -Port OCC SMB Faceplate Part #SMEK1-01 Plastic (Office White) with
(1) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

WAP-1/ Wireless Access point (WAP) Station:
1 -Port OCC SMB Faceplate Part #SMEK1-01 Plastic (Office White) with
(1) OCC Part #KMJA605 Jack Module / Stuffer Cap. (Blue)
(0) Faceplate Blanks: OCC Pt #AKBLK-01. (Office White)

2.4 IDENTIFICATION PRODUCTS

A. Comply with ANSI/TIA/EIA-606-A and UL 969 for labeling materials, including label stocks, laminating adhesives, and inks used by label printers.

B. Comply with requirements in Division 16 Section.

2.5 CABLE MANAGEMENT SYSTEM (If Required)

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

B. Basis-of-Design Product: (Blank)

C. Description: Computer-based cable management system, with integrated database and graphic capabilities.

D. Document physical characteristics by recording the network, TIA/EIA details, and connections between equipment and cable.

E. Information shall be presented in database view, schematic plans, or technical drawings.
   1. AutoCAD drawing software shall be used as drawing and schematic plans software.

F. System shall interface with the following testing and recording devices:
   1. Direct upload tests from circuit testing instrument into the personal computer.
   2. Direct download circuit labeling into labeling printer.

2.6 SOURCE QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to evaluate cables.

B. Factory test UTP and optical fiber cables on reels according to ANSI/TIA/EIA-568-B.1.

C. Factory test UTP cables according to ANSI/TIA/EIA-568-B.2.

D. Cable will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 CABLING METHODS

A. Cabling Method: Install cables in raceways/pathways provided in these documents and shall be adjustable cable straps except within cabinets, desks, and counters. Conceal cables except in unfinished spaces.
   1. Install non- plenum cable in environmental air spaces, including plenum ceilings.
   2. Comply with requirements for raceways and boxes specified.

B. Cabling Method: Conceal conductors and cables in accessible ceilings, walls, and floors where possible.

C. Cabling within Enclosures: Bundle, lace, and train cables to terminal points with no excess and without exceeding manufacturer's limitations on bending radii. Provide and use lacing bars and distribution spools.

3.2 INSTALLATION OF CABLES

A. Comply with NECA 1.

B. General Requirements for Cabling:
   1. Comply with ANSI/TIA/EIA-568-B.1.
   2. Comply with BICSI" Cable Termination Practices."
   3. Install 110-style IDC termination hardware unless otherwise indicated.
   4. Terminate conductors; no cable shall contain un-terminated elements. Make terminations only at indicated outlets, terminals, cross-connects, and patch panels.
   5. Cables may not be spliced. Secure and support cables at intervals not exceeding 30 inches and not more than 6 inches from cabinets, boxes, fittings, outlets, racks, frames, and terminals.

6. Install lacing bars to restrain cables, to prevent straining connections, and to prevent bending cables to smaller radii than minimums recommended by manufacturer.
7. Bundle, lace, and train conductors to terminal points without exceeding manufacturer's limitations on bending radii, but not less than radii specified in BICSI ITSIM, "Cabling Termination Practices" Chapter. Install lacing bars and distribution spools.
8. Do not install bruised, kinked, scored, deformed, or abraded cable. Do not splice cable between termination, tap, or junction points. Remove and discard cable if damaged during installation and replace it with new cable.
9. Cold-Weather Installation: Bring cable to room temperature before de-reeling. Heat lamps shall not be used for heating.
10. In the communications equipment room, install a 10-foot- long service loop on each end of cable.
11. Pulling Cable: Comply with BICSI ITSIM, "Pulling Cable." Monitor cable pull tensions.

C. UTP Cable Installation:
1. Comply with ANSI/TIA/EIA-568-B.2.
2. Do not untwist UTP cables more than 1/2 inch from the point of termination to maintain cable geometry.
3. Do not remove more than ½ inch of jacket material.

D. Open-Cable Installation:
1. Install cabling with horizontal and vertical cable guides in telecommunications spaces with terminating hardware and interconnection equipment.
2. Install UTP cable in a wire way or pathway, cable tray and/or conduit system.
3. Cable shall not be run through structural members or in contact with pipes, ducts, or other potentially damaging items.

E. Group connecting hardware for cables into separate logical fields.

F. Separation from EMI Sources:
1. Comply with BICSI TDMM and ANSI/TIA/EIA-569-A for separating structural cable from potential EMI sources, including electrical power lines and equipment.
2. Separation between open communications cables or cables in nonmetallic raceways and unshielded power conductors and electrical equipment shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 5 inches.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 12 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 24 inches.
3. Separation between communications cables in grounded metallic raceways and unshielded power lines or electrical equipment shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: A minimum of 2-1/2 inches.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 6 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 12 inches.
4. Separation between communications cables in grounded metallic raceways and power lines and electrical equipment located in grounded metallic conduits or enclosures shall be as follows:
   a. Electrical Equipment Rating Less Than 2 kVA: No requirement.
   b. Electrical Equipment Rating between 2 and 5 kVA: A minimum of 3 inches.
   c. Electrical Equipment Rating More Than 5 kVA: A minimum of 6 inches.
5. Separation between Communications Cables and Electrical Motors and Transformers, 5 kVA or HP and Larger: A minimum of 48 inches.
6. Separation between Communications Cables and Fluorescent Fixtures: A minimum of 12 inches.

G. The contractor will be responsible for terminating and testing all station cables. Typical wiring diagrams for the Voice/Data jacks are indicated on the drawings. Bundled station cables will enter the terminal

room on the new backboards, through distribution rings and down to the TBB and Station Patch Panels as shown on the drawings.

H. All cables shall be neatly bundled and securely fastened using Velcro Fasteners/ Material, VelcroUSAPt. #189645. Colors shall be black. **Only Velcro fasteners are to be used on this project.**

3.3 FIRESTOPPING

A. The Contractor is responsible for all firestopping requirements and shall comply with all "Through-Penetration Firestop Systems" installations.

B. Comply with ANSI/TIA/EIA-569-B, Annex A, "Firestopping."

C. Comply with BICSI TDMM, "Firestopping Systems" Article.

3.4 IDENTIFICATION

A. Identify system components, cabling, and cabling complying with ANSI/TIA/EIA-606-A. Comply with requirements for identification specified in Division 16 Section.
   1. Color-code cross-connect fields. Apply colors to telecommunications terminal backboards, connections, covers, and labels.

B. Using cable management system software specified in Part 2, develop Cabling Administration Drawings for system identification, testing, and management. Use unique, alphanumeric designation for each cable and label cable, jacks, connectors, and terminals to which it connects with same designation. At completion, cable and asset management software shall reflect as-built conditions.

C. Comply with requirements in Division 09 Section "Interior Painting" for painting (Light Grey) backboards. For fire-resistant plywood, do not paint over manufacturer's label.

D. Paint and label colors for equipment identity shall comply with ANSI/TIA/EIA-606-A.

E. Cable Schedule: Post in prominent location in each equipment room. List incoming and outgoing cables and their designations, origins, and destinations. Protect with rigid frame and clear plastic cover. Furnish an electronic copy of final comprehensive schedules for Project.

F. Cabling Administration Drawings: Show building floor plans with cabling administration-point labeling. Identify labeling convention and show labels for telecommunications rooms, backbone pathways and cables, terminal hardware and positions, horizontal cables, work areas and workstation terminal positions, grounding buses and pathways, and equipment grounding conductors. Follow convention of ANSI/TIA/EIA-606-A. Furnish electronic record of all drawings, in the latest version of AutoCad.

G. Cable and Wire Identification:
   1. Label each cable within 6 inches of each termination and tap, where it is accessible in a cabinet or junction or outlet box, and elsewhere as indicated.
   2. Each wire connected to building-mounted devices is not required to be numbered at device if color of wire is consistent with associated wire connected and numbered within panel or cabinet.
   3. Exposed Cables and Cables in Ladder Rack: Label each cable at intervals not exceeding 15 feet.
   4. Label each terminal strip and screw terminal in each cabinet, rack, or panel.
      a. Individually number cabling conductors connected to terminal strips, and identify each cable or cabling group being extended from a panel or cabinet to a building-mounted device shall be identified with name and number of particular device as shown.
      b. Label each unit and field within distribution racks and frames.

5. Identification within Connector Fields in Equipment Rooms and Cabling Closets: Label each connector and each discrete unit of cable-terminating and connecting hardware.

H. Labels shall be preprinted or computer-printed type with printing area and font color that contrasts with cable jacket color but still complies with requirements in ANSI/TIA/EIA-606-A.
   1. Cables use flexible vinyl or polyester that flex as cables are bent.

I. The contractor is to identify and stencil all station cables as shown on the drawings.
All station cables will be designated with the building #, ER or TR room number, (XXX) rack number, and panel letter; P01, P02, P03 etc. and station cable number (sample B035, C01, P01-001). All equipment will be labeled using Panduit Labeling Solution Software and labels as defined on drawings.
Patch Panels – Laser printable Label sheets
Multimedia Panels – Laser printable Label sheets
Cross Connect Blocks – Hubbell
Face Plates and Outlet Ports – Laser printable Label sheets
Fiber Adapter Panels- Hubbell
Icons – Hubbell # as designated or pre-printed icons.
All labels will indicate letter(s) and number(s).

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:
   1. Visually inspect UTP cable jacket materials for NRTL certification markings. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments, and inspect cabling connections for compliance with ANSI/TIA/EIA-568-B.1.
   2. Visually confirm Category 6, marking of outlets, cover plates, outlet/connectors, and patch panels.
   3. Visually inspect cable placement, cable termination, grounding and bonding, equipment and patch cables, and labeling of all components.
   4. UTP Performance Tests:
      a. Perform the following tests according to ANSI/TIA/EIA-568-B.1 and ANSI/TIA/EIA-568-B.2:
         1) Wire map.
         2) Length (physical vs. electrical, and length requirements).
         3) Insertion loss.
         4) Near-end crosstalk (NEXT) loss.
         5) Power sum near-end crosstalk (PSNEXT) loss.
         6) Equal-level far-end crosstalk (ELFEXT).
         7) Power sum equal-level far-end crosstalk (PSELFEXT).
         8) Return loss.
         9) Propagation delay.
         10) Delay skew.
   5. Final Verification Tests: Perform verification tests for UTP systems after the complete communications cabling and workstation outlet/connectors are installed.

C. Document data for each measurement. Data for submittals shall be printed in a summary report that is formatted to the BICSI TDMM standards, or transferred from the instrument to the computer, saved as text files, and printed and submitted.

D. End-to-end cabling will be considered defective if it does not pass tests and inspections.

E. Prepare test and inspection reports.

3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel in cable-plant management operations, including changing signal pathways for different workstations, rerouting signals in failed cables, and keeping records of cabling assignments and revisions when extending cabling to establish new workstation outlets. Include training in cabling administration software.

3.7 WARRANTY

A. The Structured Cabling System a **shall carry manufacturer's 25 year product, labor and applications assurance warranty**. Manufacturer and owners representative/RCDD shall perform an end-to-end audit on infrastructure prior to releasing warranty

3.8 AS-BUILTS DRAWINGS AND MANUALS

The Telecommunications contractor will maintain a set of drawings to document all as-built information as it occurs throughout the project. This will be maintained on a daily basis.

At the end of the project, the telecommunications contractor shall provide (2) two set of the revised as-built drawings accurately showing all termination locations, cable routing, and labeling. Requirements: (2)Hard Copy of the Drawings and Test Reports as well as (2) Complete Data File of the Drawings and Test Reports including the Summary Reports on a Flash Drive.

Provide two (2) copies of all operation manuals for all switches and electronic devices, bound in three-ring binders.

The Contractors/ Vendors for the Fiber Infrastructure System, Security Camera System, Wireless Network System and the Data Network System shall coordinate and set up all System Records including but not limited to the following; The IT-Cabinet Numbers, Equipment Cabinet Numbers, Switch Numbers, Fiber Panel Numbers, Fiber Cabling Numbering, Fiber Splice Case Numbers, QB-Vaults Numbers, Camera Numbers, WAP Numbers, Fiber Assignments, Switch Port Assignments, Jack ID Assignments, Data Station Patch Panel Port Assignments, IP Number Assignments and MAC Addresses for all devices connected to each section of the network system. The information from each Contractor/ Vendor shall be coordinated with the Designer/ Consultant and the CMS/FMS- Record Management System Contractor/ Vendor.

END OF SECTION 271500

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ADDENDUM NO. 1

Date:	May 6, 2016
Project Name:	CityWalk – Alberta 1B Section – Fiber/Cabling Infrastructure System and Termination Hardware for the City of Tuscaloosa
City Project Number:	A16-0307
WA Project Number:	12-101

This addendum to drawings and contract documents dated February 29, 2016 and any previous addenda for the above referenced project supersedes all contrary and conflicting information contained in said drawings, specifications and addenda. Said drawings, specifications and addenda are hereby amended in the following particulars that are in full force as part of this contract.

Bidders shall acknowledge receipt of this addendum on their bid.

ITEM NO. 1 – PRE-BID MEETING:

A mandatory pre-bid meeting was held at 10:00 a.m. on Wednesday, May 4, 2016. The agenda meeting minutes and sign-in sheet are attached.

ITEM NO. 2 – ELECTRONIC RELEASE FORM:

An Electronic Release form is included in this addendum. Any request for digital files shall also be accompanied by the attached Electronic Release Form.

ITEM NO. 3 – UPDATED FEDERAL WAGE RATES:

Attached are updated federal wage rates for the project and shall replace pages currently in the bid documents.

END OF ADDENDUM NO. 1

Christian D. Crawford, P.E.
Alabama Registration No. 31597

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CITYWALK – ALBERTA 1B SECTION – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE

TUSCALOOSA CITY HALL
COUNCIL CHAMBERS

CITY OF TUSCALOOSA PROJECT NO. A16-0307
WALKER ASSOCIATES PROJECT NO. 12-101

PRE-BID AGENDA

Wednesday, May 4, 2016, 10:00 a.m. CDT

General:

- Welcome (Please Silence all Radios and Phones)
- Pre-Bid Conference is MANDATORY for all Bidders; Sign-In Sheet (Complete for Record) will be included with Addendum No. 1. Be sure to legibly write email address as all Addenda will be issued electronically via email.
- Name and Location of Project: CityWalk – Alberta 1B Section – Fiber/Cabling Infrastructure System and Termination Hardware. Along Alberta Parkway from 25th Avenue to
- Introduce Owner and Owner's Representatives (City of Tuscaloosa, Walker Associates, TALA Professional Services)

Project Summary:

- Overall Summary of the Project: Project includes placement of an Optical Fiber Backbone Cabling Network/ Feeder and Distribution System as well as all Category-6 station cabling facilities. The facility network is to support an overall technology scheme for the Alberta 1B CityWalk Section. The respective fiber network will be installed in an existing conduit pathway system. The Fiber Network work shall include singlemode 288/ 48/24/6 strand fiber cable and multimode 48 strand fiber cable, enclosure panels/cabinets, fiber splicing, fiber termination and all testing. The Category-6 station cabling facilities work shall include CAT6 CMR and OSP cabling, termination panels/jacks, terminations, and all testing. Contractor shall be responsible for all work, scheduling and coordination.
- Contract Documents (City of Tuscaloosa Contract Documents with Federal Supplemental Documents Housing and Urban Development (HUD). Review Federal Supplementals in the Contract Documents for any and all additional requirements.
- Davis-Bacon Wage Rates apply as per the Federal Supplemental Documents.
- Contractors are encouraged to utilize minority subcontractors where applicable. The City of Tuscaloosa maintains a database which identifies eligible minority contractors and subcontractors.

- The contractor shall pay special attention to Exhibit A – City of Tuscaloosa MBE/DBE/WBE Policy for Public Works Projects over $50,000. Forms 1 & 2 included as part of Exhibit A must be completed and submitted to the Engineer by close of business **(5:00pm CDT on May 4, 2016)**. These forms are attached to this agenda and could be completed and returned before leaving this meeting. Forms 3 & 4 must be completed and included with the Contractor's sealed bids. Omission of these forms could result in the bid being rejected and determined as non-responsive.
- The Contractor shall be required to comply with the Alabama Immigration Law and provide certification of the same by completing the sworn affidavit provided in the contract documents. This form is also required for all Subcontractors.
- Contract Documents: Drawings and Specifications are available for pickup at Walker Associates, Inc.
- Sales and Use Tax Savings: The project will be administered in compliance with the State of Alabama Act 2013-205, Certificate of Exemption from Sales and Use Tax for Governmental Entities, regarding sales and use taxes. The Contractor shall be responsible for obtaining a certificate of exemption from the Alabama Department of Revenue for purchases of materials and other tangible property made part of the project. Any subcontractors purchasing materials or other tangible personal property as part of the project shall also be responsible for obtaining a certificate of exemption. The estimate sales and use tax saving must be accounted for on the bid proposal. Failure to provide the estimated sales and use tax savings may render the bid as non-responsive. Other than determining responsiveness of the bid, sales and use tax accounting shall not affect the bid pricing nor shall be considered in the determination of the lowest responsible and responsive bidder

Receipt of Bids:

- Bids shall be received Wednesday, May 11, 2016 at 10:00 a.m. CDT at the Tuscaloosa City Hall in the Council Chambers.
- Proposal Form and Schedule of Values and receipt of all addenda (submit one copy with bid)
- Bid Bond with Power of Attorney
- Exhibit A - MBE/DBE/WBE Policy Forms 3 & 4
- Proposal Envelope must have Project Name, Owner Name, City of Tuscaloosa Project Number (A15-0551), Contractor Name, and Contractor State License Number on outside of envelope.

Contractual Requirements:

- Payment and Performance Bonds will be required for this project.
- ***Construction Observation Services*** will be provided by the Owner full time and performed by Walker Associates, Inc. and TALA Professional Services.
- Time for Completion will be 120 consecutive calendar days.
- Liquidated Damages Amount: $200.00 per day beyond the stated completion date.
- Record Drawings are required and are considered a subsidiary obligation to the Performance of the Work. The Contractor shall coordinate any deviation from the plans with the Owner's Representative and provide red line drawings during the closeout phase of the project.
- Lump Sum Contract with provided Schedule of Values: Schedule of Values can be found in the Contract Documents and must be completed and submitted with lump sum bid amount. Upon request by the Contractor, an electronic copy of the schedule of values can be provided. The Contractor shall be required to sign & submit an electronic release form. This form is attached to the prebid agenda & will also be included with Addendum No. 1.

Project Coordination:

- Scheduling with Tuscaloosa Department of Transportation will be required for traffic control. The Contractor is to prepare and submit to Owner's Representative a detailed traffic control plan for any lane closures in advance of proposed work requiring closure. TCP will be reviewed by the Owner's Representative then shall be submitted to OCE and TDOT for approval prior to implementation of TCP and start of associated work. The Contractor shall at minimum plan on a one (1) week review period and time to address comments.
- Public/Private Residence and Vehicle Access: Contractor must maintain access to all existing business or residences. Any work which will affect access for these people shall be coordinated so alternate access is provided as needed. A minimum of 7-days notice is required and should be done in writing to those affected. A copy of the notification shall be provided to the Owner's Representative.

- Progress and Coordination Meetings: Progress and Coordination meetings will be required for the project. Time and frequency of these meeting will be determined prior to construction and as the project progresses.

Project Conditions:

- Construction Project Area – Defined by limits of work shown in plans.
- Security at Site – No on-site security provided, recommend contractor secure equipment at end of work day. (The Contractor may use temporary construction fencing as necessary to protect their equipment and materials.)
- Job Site Offices and Safety for the project are the Contractor's responsibility.

Miscellaneous:

- Clarification Requests **WILL NOT** be accepted after Monday, May 9th at 5:00 p.m. CDT. All questions and clarification request shall be submitted in writing to the Project Designer/Engineer on or before this date and time.
- Material Submittals: If hard copies are provided, they shall be 3 ring bound – No Exceptions. Electronic copies of material submittals will be accepted and are preferred. Electronic submittals shall include transmittal summarizing items covered with respective material submittal.
- Lead Time on Material Items: Coordinate with all subs regarding material lead time. Material delays will not be a valid excuse for project delays or failure to complete on time.
- Pay Applications (Review and Submittal): Upon submittal of pay request, the Owner's Representative has 10 days to review pay application. Preferred method of pay application submittal process would be to meet on a predetermined percentage of work complete at the billing cycle cut-off date to review and agree upon the percentage for that month's pay application. The Contractor will then prepare the pay application and all required supporting documentation (certified payroll, stored materials, etc.) and submit to Owner's Representative. If all required items are not submitted then the pay application will be returned for corrections. Upon receipt of a completed, approved pay application, it will then be forwarded to the City for final approval and processing.
- There will be an OPTIONAL walk-thru the project site immediately following the Pre-Bid Meeting for anyone interested. A site walk through was conducted after the pre-bid meeting. The main communications room in the Gateway, vaults, conduit and fiber routing, as well as the pole mounted IT-Cabinets were reviewed. All who attended had No questions.

Proposed Addenda:

Addendum No. 1 (Currently not issued):

- Pre-Bid Agenda Meeting Minutes & Sign-In Sheet

Questions/Comments:

PRE-BID SIGN-IN SHEET
CITYWALK – ALBERTA 1B SECTION – FIBER/CABLING INFRASTRUCTURE SYSTEM AND TERMINATION HARDWARE
CITY OF TUSCALOOSA PROJECT NO. A16-0307
WALKER ASSOCIATES PROJECT NO. 12-101
TUSCALOOSA CITY HALL, COUNCIL CHAMBERS, TUSCALOOSA, ALABAMA
MAY 4, 2016, 10:00 A.M.

NAME	REPRESENTING	PHONE	FAX	E-MAIL ADDRESS
Chris Crawford	Walker Associates	205-561-3778	—	CCrawford@walkercivil.com
TERRY S. WEAVER	TALA	(205)612-4811	—	wcs.tsweaver1@att.net
SEAN KING	ONE PATH	478-258-3986	—	SKING@1Path.com
Kye Lane	ONE PATH/KARI-LANE	205 663 2214		KARI@KARI-LANE.com
Clay Smalley	Hall-Taylor Const.	205-758-8265		clay_smalley@msn.com
McCAGE BLAZER	WHITESKY COMMUNICATIONS	205-310-9979		cage@whiteskynet.NET
[illegible]	City of Tusc	248-5700		cdrake@tuscaloosa.com
Kirby Michaels	Premier Service Co.	205-752-6332	205-345-3679	kmichaels@psc1261.com
Bill Wursluk	GRAYBAR ELE	205-244-2614	205-326-3350	Bill.Wursluk@GRAYBAR.com
AG Melson	OCC	800-622-7711	540-265-0724	ag.melson@occfiber.com
MELISSA JONES	OCC	"	"	mjones@occfiber.com
Wendell Bolt	Digital Group, LLC	205-639-7307		wbolt@digitalgroupllc.com
Dwayne Hughes	Data-1cl of LA	5 806-3135		dwayne@datatlofla.com
Naomi Jones	Blackbelt Technologies	205-989-0056	205-449-9181	dworksabbtconsulting.com
MIKE DEMPSEY	JEFFCOAT AND ASSOCIATES LLC	205-612-5065	205-481-4546	MDEMPSEY@JEFFCOATASSOC.com
Tim LEWIS	TALA	205-369-3406	—	tlewis@TALApro.com
Kristen Love	OCA (CITY)	205-248-5140	—	klove@tuscaloosa.com
Jonathan Skelton	City (IT)	205-248-5056		jskelton@tuscaloosa.com

WALKER ASSOCIATES, INC.
ENGINEERING, PLANNING, GIS & SURVEYING

2890 Rice Mine Road NE
Tuscaloosa, AL 35406
P (205) 561-3778 | F (205) 561-3779

Electronic Document Release

To:	Bidders
Project:	City of Tuscaloosa Citywalk – Alberta 1B Section – Fiber/Cabling Infrastructure System and Termination Hardware City of Tuscaloosa Project No.: A16-0307
Date:	05/05/2016
Document:	Design Files

The delivery of this electronic data is a component of Walker Associates' instruments of service and is for the benefit of the client for whom the service has been performed. This delivery constitutes a non-exclusive, limited license for the recipient to use this electronic data for the specific purpose of responding to the clients' requirements on this project.

It is our professional opinion that this electronic data provides design, and or survey information current as of the date of its initial release. Any use of this electronic data is at the sole risk and liability of the user who retains the responsibly of meeting project requirements.

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From: _____
Chris Crawford, P.E.

Company: _____

Recipient: _____

Date: _____

General Decision Number: AL160002 01/08/2016 AL2

Superseded General Decision Number: AL20150002

State: Alabama

Construction Type: Highway

Counties: Blount, Calhoun, Etowah, Shelby, St Clair and Tuscaloosa Counties in Alabama.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, bulding structures in rest areas projecs, and railroad construction; bascule, suspension & spandrel arch bridges desgned for commercial navigation; bridges involving marine construction; other major bridges)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016

* SUAL2011-001 01/04/2011

	Rates	Fringes
Carpenter	$ 13.88	
Concrete finisher	$ 13.26	
Electrician	$ 19.73	
Laborers:		
Asphalt Raker	$ 11.23	
Concrete Laborer	$ 10.84	
Grade Checker	$ 12.58	
Guardrail Erector	$ 12.47	
Pipe Layer	$ 12.58	
Side Rail/Form Setter	$ 11.97	
Traffic Control Specialist	$ 11.27	
Unskilled	$ 9.84	
Power equipment operators:		
Aggregate Spreader	$ 14.17	
Asphalt Distributor	$ 14.27	
Asphalt Paver	$ 11.85	
Asphalt Spreader	$ 13.65	

Backhoe, Clamshell,
Dragline, and Shovel.....$ 15.87
Broom (Sweeper).....$ 11.68
Bulldozer.....$ 14.73
Crane & Derrick.....$ 20.63
Front End Loader.....$ 13.38
Mechanic.....$ 17.54
Milling Machine.....$ 12.31
Motor Grader and Motor
Patrol.....$ 16.10
Oiler/Greaseman.....$ 13.33
Roller (Self-Propelled).....$ 12.38
Scraper.....$ 13.00
Striping Machine.....$ 15.20
Track Hoe/Excavator.....$ 14.64
Tractor and Loader (farm
rubber tired).....$ 11.40
Tractor/Loader (all other
work).....$ 11.22

Truck drivers:
Multi-Rear Axle.....$ 12.25
Single Rear Axle.....$ 11.54

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

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

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

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

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

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

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

On survey related matters, initial contact, including requests

for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

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

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

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

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

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

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

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

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

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END OF GENERAL DECISION

WALKER ASSOCIATES, INC.
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TALA Professional Services

1116 20th Street South #306
Birmingham, Alabama 35205
205-578-1993 (p)
www.talapro.com

ADDENDUM NO. 2

Date:	May 10, 2016
Project Name:	CityWalk – Alberta 1B Section – Fiber/Cabling Infrastructure System and Termination Hardware for the City of Tuscaloosa
City Project Number:	A16-0307
WA Project Number:	12-101

This addendum to drawings and contract documents dated February 29, 2016 and any previous addenda for the above referenced project supersedes all contrary and conflicting information contained in said drawings, specifications and addenda. Said drawings, specifications and addenda are hereby amended in the following particulars that are in full force as part of this contract.

Bidders shall acknowledge receipt of this addendum on their bid.

ITEM NO. 1 – QUESTIONS AND CLARIFICATIONS:

Q: 1. The drawing and specs are in conflict with regards to the box size required at the Fire Station and Police Station. Please confirm size required.

A: The Drawings and New SOV indicate 16"x16"x12" and Specs Indicates 12"x12"x8". The Correct size for the Cantex Pull Box required at the Fire Station and Police Station is a **16"x16"x12".**

Q: 2. Regarding the pole mounted junction boxes for the cameras. Can you confirm that those are to be provided and installed by the cabling vendor?

A: Yes, the **5"x5"x3" Camera Portal Box** is to be Provided and Installed by the Fiber Infrastructure Contractor/ Cabling Vendor.

Q: 3. Is the locate wire to be installed by the cabling contractor or others?

A: Yes, the **#10 Locator Conductor Wire, Terminals and Labeling** (Gateway to Vault, Vaults to Vaults, Vaults to IT-Cabinets as well as Terminals in each vault and cabinet.) is to be Provided and Installed by the Fiber Infrastructure Contractor/ Cabling Vendor.

Q: 4. Is it necessary to install duct plugs (Jack Moon) in **ALL** Conduits both used and unused or just the ones that cable is installed in?

A: Yes, the **Jack Moon Duct Plugs are required** (Around the innerducts in the 4" conduits and in the 1-1/4" innerducts, for used and unused conduits and innerducts) is to be Provided and Installed by the Fiber Infrastructure Contractor/ Cabling Vendor.

Q: 5. Are the Fiber and Copper Patch Cables/Cords/Jumpers provided and installed by the cabling contractor or by others?

A: Yes, the **Fiber and Copper Patch Cables/Cords/Jumpers are required** to be Provided in the amounts as indicated in the Specs and Installed, in the numbers as required in the IT-Cabinets, WAP and Camera Portal Boxes, all will be done by the Fiber Infrastructure Contractor/ Cabling Vendor.

Q: 6. Due to the time constraint, will a scanned copy of the bid bond be accepted as part of the seal bid response with the understanding that the original will be produced after the opening of the proposals. It's just a short time in order for us to get the original bid bond back from our corporate office located in Nashville, TN.

A: Kristen L. Love- 5/9/16 3:11PM, "A scanned copy proving the existence of a valid bid bond-- enclosed within their sealed bid is acceptable. They will have to produce the original before any contracts are executed."

Q: 7. I am seeking clarification on the pathways for the 24Strand fibers, one each going into the Fire Station and the Police Station. Drawing TD01 notes 26 and 29 state that we will be responsible for locating and extending the (2) 4" Conduits to the building, then placing the junction box as well as extending (2) 2" entrance conduits into each building. Is this correct? YES, See Below.

It was my understanding during the pre-bid meeting that the existing conduits were already extended to the building with the junction boxes already in place and we were just tying the (2) new 2" entrance conduits to the junction box and extending to the data room located within each building. INCORRECT. See Below.

A: Please see attached TALA Field Drawing 1 of 2, which indicates Work Operations 26, 27, 28, at Fire Station Number-4 and Work Operations 29, 30, 31 at East Police Precinct Buildings. These work operations calls for the contractor to locate the existing (2) 4" conduits stubbed out to the buildings from QB-TDV2.1. The (2)4" conduits at the Fire Station is Approx. 10' to 12' from the outside building wall. The (2)4" conduits at the Police Station is Approx. 6' to 8' from the outside building wall. The Fiber Infrastructure Contractor/ Cabling Vendor will be required to locate these conduits (2-4"), extend them to the wall, turn them up to above ground level and place the Cantex Pull Boxes at the base of the build wall 6" to 12"AGL. Then place (2)2" up the building wall. Core the wall and install the (2)2" conduits to the Existing Comm. Rooms in each build. The Pull Boxes and Conduits shall be painter to match the Building Colors.

ITEM NO. 2 – Additional Work Item and Field Sketch 1 &2:

Work Operation 201.

-Please see attached TALA Field Drawing 2 of 2, The Fiber Infrastructure Contractor/ Cabling Vendor shall include Labor and Materials to Install Innerducts as required.

-Drawing indicates Work Operations 201, Which is to:

1. Install (3) 1-1/4" Innerducts in each of the (4)4" Conduits from QB-TDV2 to QB-TDV2.1.
2. Install (3) 1-1/4" Innerducts in each of the (2)4" Conduits from QB-TDV2.1 to the Cantex Pull Box at the Fire Station.
3. Install (3) 1-1/4" Innerducts in each of the (2)4" Conduits from QB-TDV2.1 to the Cantex Pull Box at the Police Station.

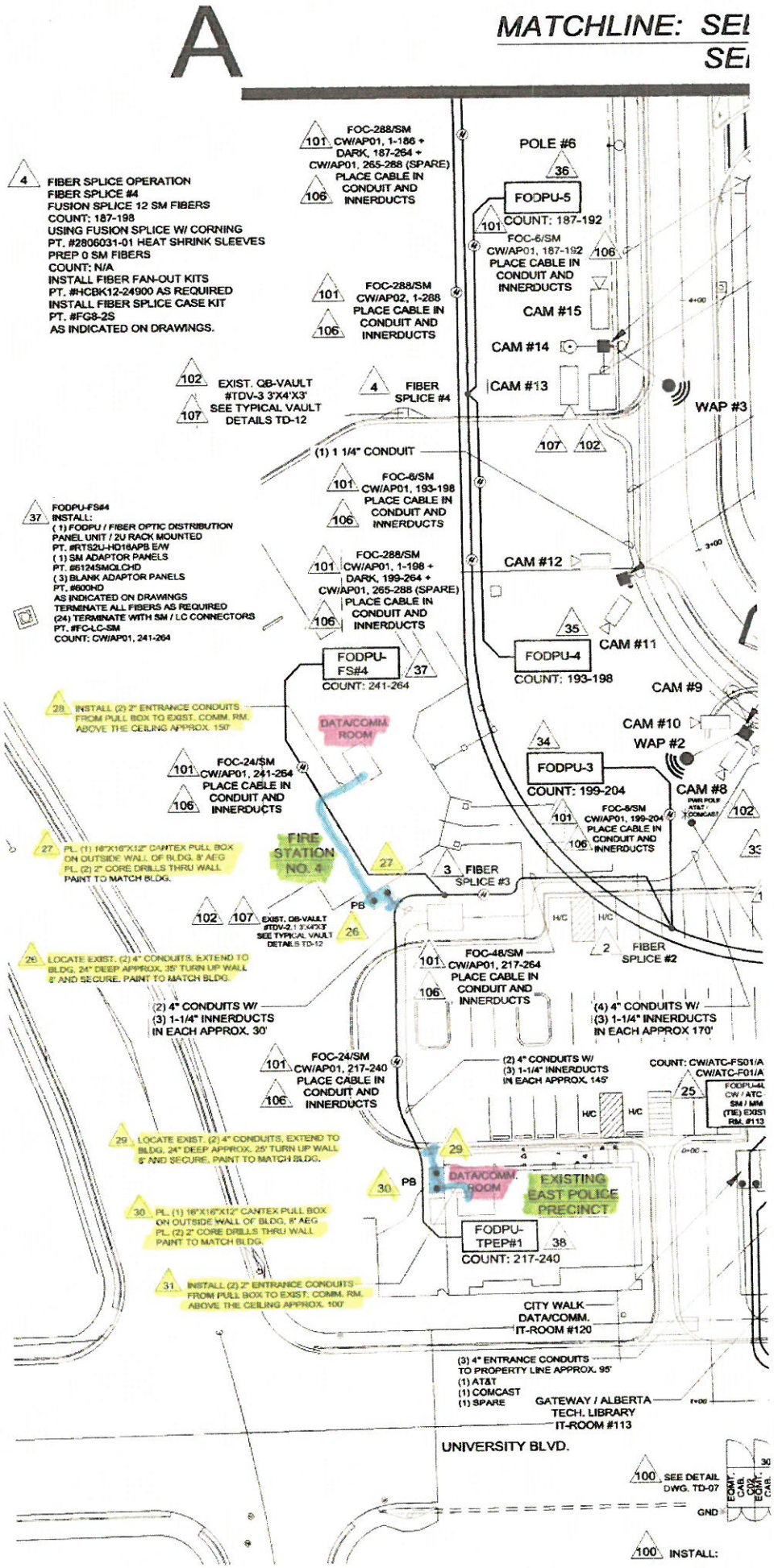
ITEM NO. 3 – Replace Schedule of Values with Attached:

Replace the Schedule of Values with the attached in its entirety. Item was added due to the additional work item to be included in the project.

END OF ADDENDUM NO. 2

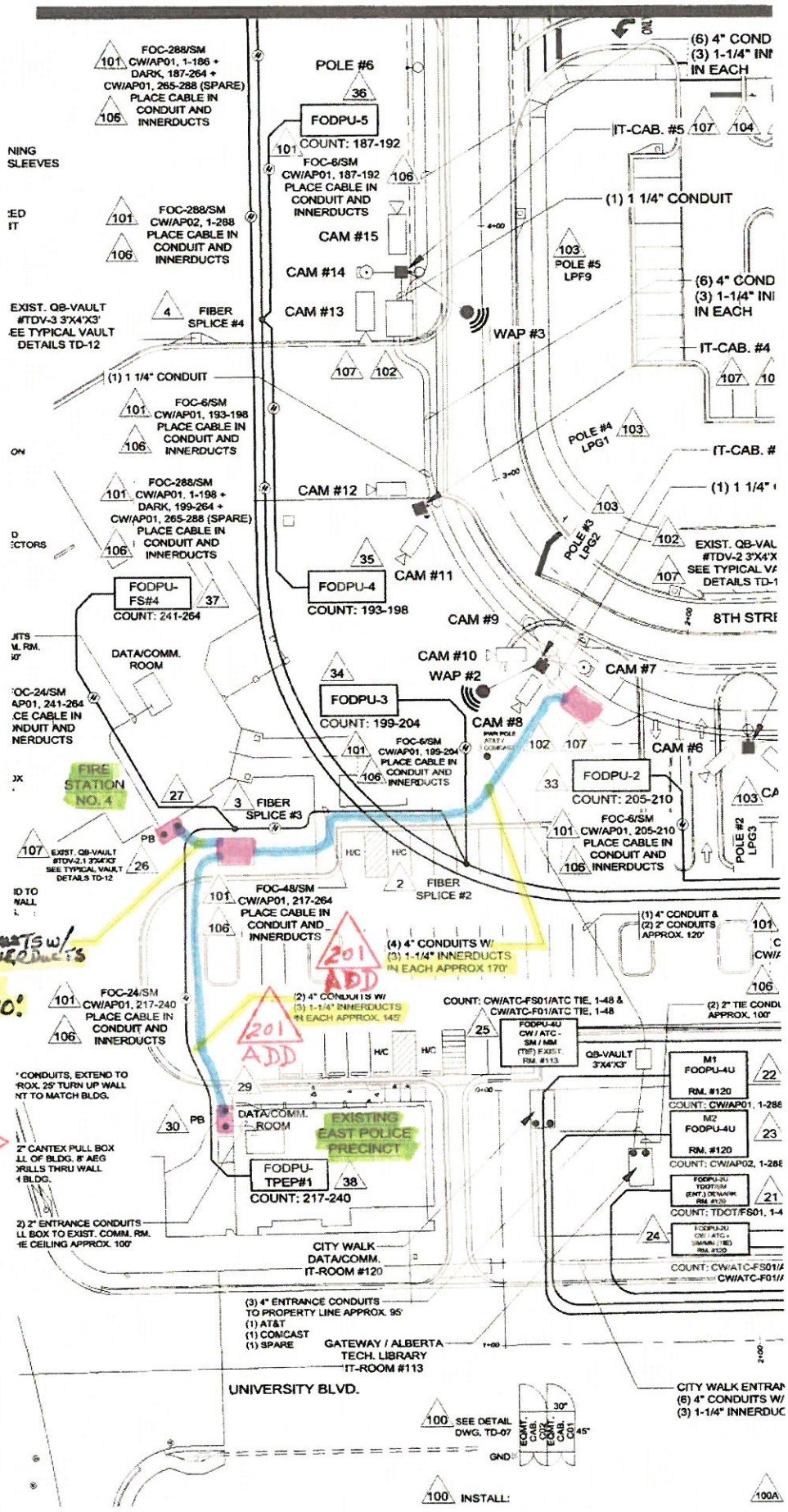
Christian D. Crawford, P.E.
Alabama Registration No. 31597

Attachments: Field Drawings 1 &2
Schedule of Values



5/10/16
TALA FIELD
TD-01
DWG 1 of 2

MATCHLINE: SEE DRAWING #T.
SEE SHEET #3 OF



City of Tuscaloosa/CityWalk Project Alberta Parkway Section/
Phase-1B Fiber Infrastuncture Schedule of Values Pricing Sheet

Unit Item	Unit Name/Description	Manufacture	Part Number	Unit Type	Unit Price
	Fiber Infrastructure- Schedule of Values Pricing for Labor and Materials as Indicated for Adds and Deletions				
	Equipment Cabinet /Rack, Tray Hardware, Vault Hardware, GND Strips and Label Tags				
1001	Equipment Cabinet 45RUx30" CDC4530 (Labor and Material/Eqmt. to Install)	OCC	01P05LLSLP	EACH	$ -
1002	Vertical Cable Management 4" (Labor and Material/Eqmt. to Install)	OCC	10 of each CM3-450	EACH	$ -
1003	Horizontal Cable Management 2U (Labor and Material/Eqmt. to Install)	OCC	2 of each CM503	EACH	$ -
1004	Cabinet 19" Ground Bar (Labor and Material/Eqmt. to Install)	OCC	GRD19	EACH	$ -
1005	Cabinet 19" Power Strip 20A (Labor and Material/Eqmt. to Install)	OCC	PS120	EACH	$ -
1006	Cabinet Vertical Power Strip 30A (Labor and Material/Eqmt. to Install)	OCC	2 of each PS320	EACH	$ -
1007	Cabinet Fan Unit (Labor and Material/Eqmt. to Install)	OCC	FAN3	EACH	$ -
1008	12" Ladder Tray/ Black (Labor and Material/Eqmt. to Install)	Hoffman	LSS12BLK	EACH	$ -
1009	Junction Clamp Kit (Labor and Material/Eqmt. to Install)	Hoffman	LJSKB	EACH	$ -
1010	In-Line Butt Kit (Labor and Material/Eqmt. to Install)	Hoffman	LBSKB	EACH	$ -
1011	12" Angel Support Kit (Labor and Material/Eqmt. to Install)	Hoffman	LWASK12BLK	EACH	$ -
1012	12" Wall Support Bracket Kit (Labor and Material/Eqmt. to Install)	Hoffman	LTSB12BLK	EACH	$ -
1013	18"x2" Basket Tray (Labor and Material/Eqmt. to Install)	CABLOFIL	CF54/450	EACH	$ -
1014	Pull Cord 2000lb. (Labor and Material/Eqmt. to Install)	George-Ingram	9463-02	EACH	$ -
1015	47 Hole Racks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400551	EACH	$ -
1016	18 Hole Racks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400550	EACH	$ -
1017	"S" Brackets/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	440556	EACH	$ -
1018	10" Rack Hooks/ Hubbell (Labor and Material/Eqmt. to Install)	Hubbell	400524	EACH	$ -
1019	4" Duct Plug (Labor and Material/Eqmt. to Install)	JMS	40B1167S	EACH	$ -
1020	4" Blank Duct Plug (Labor and Material/Eqmt. to Install)	JMS	4D402U	EACH	$ -
1021	Duct Seal (Labor and Material/Eqmt. to Install)	MCO	MCOPR868	EACH	$ -
1022	Square-D Ground Bar Kit (Labor and Material/Eqmt. to Install)	Square-D	PK9GTACP	EACH	$ -
1023	Panduit Ground Tag (Labor and Material/Eqmt. to Install)	Panduit	LTYK	EACH	$ -
1024	Panduit Ground Tag (Labor and Material/Eqmt. to Install)	Panduit	PT-BGND	EACH	$ -
1025	Xpress-Tags to Label Locator Conductor (Labor and Material/Eqmt. to Install)	Xpress-Tags	TG 2122-FO	EACH	$ -
1026	#6 Ground Wire Conductor (Labor and Material/Eqmt. to Install)	THNN	#6 Conductor	PER FOOT	$ -
1027	#10 Location/Wire Conductor (Labor and Material/Eqmt. to Install)	THNN	#10 Conductor	PER FOOT	$ -
1028	NEMA 4X/ 5"x5"x3" WP Box (Labor and Material/Eqmt. to Install)	HoffMan	F7806/GB #256848888	EACH	$ -
1029	Fire-Stop (Labor and Material/Eqmt. to Install)	STI	SSP	EACH	$ -
1030	Rockwool (Labor and Material/Eqmt. to Install)	3M	Rockwool	EACH	$ -
1031	4" Conduit PVC/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1032	4" Conduit Rigid/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1033	4" Conduit EMT/ with all Mounting Hardware- Installed Above the Layin Ceiling (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1034	16"x16"x12" Cantex Pull Box/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$ -
1035	(1) 4.5" Block Wall Core Drill/ Sealed to meet all codes/standards. (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$ -
1036	(1) 2.5" Block Wall Core Drill/ Sealed to meet all codes/standards. (Labor and Material/Eqmt. to Install)	UNK	UNK	EACH	$ -
1037	2" Conduit PVC/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1038	2" Conduit Rigid/ with all Mounting Hardware & Painted to Match Wall Color (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1039	2" Conduit EMT/ with all Mounting Hardware- Installed Above the Layin Ceiling (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1040	(3)1-1/4" Innerducts in each 4" conduit. (Labor and Material/Eqmt. to Install)	UNK	UNK	PER FOOT	$ -
1041	DIN-Rail for IT-Cabinets 7" to 9" Section (in each cabinet)	UNK	UNK	EACH	$ -
	CAT3 and CAT6 UTP Cable, Copper Equipment, Patch Cords and Termination Hardware				
2001	CMR 25 Pair (Labor and Material/Eqmt. to Install)	Mohawk	M58141/ LT48094	PER FOOT	$ -
2002	ARMM 25 Pair (Labor and Material/Eqmt. to Install)	General	2019000	PER FOOT	$ -
2003	Copper ID/ Label Tags (Labor and Material/Eqmt. to Install)	Panduit	UNK	EACH	$ -
2004	100 Pair/110 Type Termination Block (Labor and Material/Eqmt. to Install)	OCC	DCC100/110EFSLK	EACH	$ -
2005	300 Pair/110 Type Termination Block (Labor and Material/Eqmt. to Install)	OCC	DCC300/110EFSLK	EACH	$ -
2006	110 Block Cable Organizer (Labor and Material/Eqmt. to Install)	OCC	COH110L	EACH	$ -
2007	Voice/Telco Patch Panel (Labor and Material/Eqmt. to Install)	OCC	DCC2488/110A5E	EACH	$ -
2008	Data Station Panel 24 Ports (Labor and Material/Eqmt. to Install)	OCC	DCC2488/110SIX	EACH	$ -
2009	Data Station Panel 48 Ports (Labor and Material/Eqmt. to Install)	OCC	DCC4888/110SIX	EACH	$ -
2010	IT-Cabinet/SMB-6 Port Box (Labor and Material/Eqmt. to Install)	OCC	SMEK6-01	EACH	$ -
2011	ISP and OSP- Surface Mount Box/ SMB Plastic (1) One Port (Labor and Material/Eqmt. to Install)	OCC	SMEK1-01	EACH	$ -
2012	ISP- Faceplate/ (2) Two Port Plastic (Labor and Material/Eqmt. to Install)	OCC	FPSK02-01	EACH	$ -
2013	ISP- Faceplate/ (4) Four Port Plastic (Labor and Material/Eqmt. to Install)	OCC	FPSK04-01	EACH	$ -
2014	ISP- Wall Station Faceplate/ (1) One Port Stainless Steel (Labor and Material/Eqmt. to Install)	OCC	WP-A6-SS	EACH	$ -
2015	ISP and OSP- Faceplate Plastic Blanks (Labor and Material/Eqmt. to Install)	OCC	AKBLK-01	EACH	$ -
2016	CAT6 Jacks (Labor and Material/Eqmt. to Install)	OCC	KMJA605	EACH	$ -
2017	CMR Cat6 Cable/ Per Station Drop 100' Average Length- Terminated on both ends(DSP Panel & Jack) (Labor and Material/Eqmt. to Install)	Mohawk	M58804/ LT56007	EACH	$ -
2018	OSP Cat6 Cable/ Per Station Drop 75' Average Length- Terminated on both ends(SMB Panel & Jack) (Labor and Material/Eqmt. to Install)	Mohawk	M58772/ LT55553	EACH	$ -
2019	CAT6 Patch/Jumper Cord- 1' (Labor and Material/Eqmt. to Install)	OCC	PCSIX01B05	EACH	$ -
2020	CAT6 Patch/Jumper Cord- 2' (Labor and Material/Eqmt. to Install)	OCC	PCSIX02B05	EACH	$ -
2021	CAT6 Patch/Jumper Cord- 3' (Labor and Material/Eqmt. to Install)	OCC	PCSIX03B05	EACH	$ -
2022	CAT6 Patch/Jumper Cord- 5' (Labor and Material/Eqmt. to Install)	OCC	PCSIX05B05	EACH	$ -
2023	CAT6 Patch/Jumper Cord- 7' (Labor and Material/Eqmt. to Install)	OCC	PCSIX07B05	EACH	$ -
2024	CAT6 Patch/Jumper Cord- 10' (Labor and Material/Eqmt. to Install)	OCC	PCSIX10B05	EACH	$ -
2025	CAT3 Test Per Pair w/Reports (Detail and Summary) (Labor and Material/Eqmt. to Install)	Labor	Labor	EACH	$ -
2026	CAT6 Test Per 4Pair Station Cable w/Reports (Detail and Summary) (Labor and Material/Eqmt. to Install)	Labor	Labor	EACH	$ -
	Fiber SM Cable, Fiber Equipment, Patch Cords and Termination Hardware				
3001	SM 6 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	DX006DSLA9YR	PER FOOT	$ -
3002	SM 24 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC024JSLACYA	PER FOOT	$ -
3004	SM 48 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC048JSLACYA	PER FOOT	$ -
3005	SM 144 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC144JSLACYA	PER FOOT	$ -
3006	SM 288 Fiber-OSP (Labor and Material/Eqmt. to Install)	OCC	HC288JSLACYA	PER FOOT	$ -
3007	SM 48 Fiber/ ISP INDOOR-OUTDOOR PLENUM (Labor and Material/Eqmt. to Install)	OCC	DX048KSLX9YP	PER FOOT	$ -
3008	MM 48 Fiber-OM4/ ISP INDOOR-OUTDOOR PLENUM (Labor and Material/Eqmt. to Install)	OCC	DX048KALE9QP	PER FOOT	$ -
3009	Fiber Termination Interface Enclosure- 4U Unit (Labor and Material/Eqmt. to Install)	OCC	RTS4U-HD16APB	EACH	$ -
3010	Fiber Termination Interface Enclosure- 2U Unit (Labor and Material/Eqmt. to Install)	OCC	RTS2U-HD16APB	EACH	$ -
3011	Fiber Termination Interface Enclosure- Wall Mount Unit/For Pole Cabinet (Labor and Material/Eqmt. to Install)	OCC	ZDMB6B	EACH	$ -
3012	SM-LC/24 Port HD Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	6124SMQLCHD	EACH	$ -
3013	MM/OM4-LC/24 Port HD Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	6124QLC50GHD	EACH	$ -
3014	SM/LC/6 Port Standard Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	616DLC	EACH	$ -
3015	Blank Cover Plates/ Adaptor Panel (Labor and Material/Eqmt. to Install)	OCC	600HD	EACH	$ -
3016	Fiber Optic LC Connectors/ Single-mode Fiber- Fiber Termination (Labor and Material/Eqmt. to Install)	OCC	FC-LC-SM	EACH	$ -
3017	Fiber Optic LC Connectors/ Multi-mode Fiber OM4- Fiber Termination (Labor and Material/Eqmt. to Install)	OCC	FC-LC-MM-Q/Q	EACH	$ -
3018	Fiber SM Patch/Jumper Cord- 1M/3' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-1M	EACH	$ -
3019	Fiber SM Patch/Jumper Cord- 2M/7' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-2M	EACH	$ -
3020	Fiber SM Patch/Jumper Cord- 3M/10' (Labor and Material/Eqmt. to Install)	OCC	D8LCUPC-LC-3M	EACH	$ -
3021	Fiber MM OM4 Patch/Jumper Cord- 1M/3' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-1MG	EACH	$ -
3022	Fiber MM OM4 Patch/Jumper Cord- 2M/7' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-2MG	EACH	$ -
3023	Fiber MM OM4 Patch/Jumper Cord- 3M/10' (Labor and Material/Eqmt. to Install)	OCC	D5LC-LC-3MG	EACH	$ -
3024	Fiber ID/ Label Tags (Labor and Material/Eqmt. to Install)	Panduit	PST-FO	EACH	$ -
3025	Fiber Fusion Splicing/ Fiber Fusion Splicing Heat Shrink Sleeves (Labor and Material/Eqmt. to Install)	Corning	2806031-01	EACH	$ -
3026	Fiber Fan-out Kit (Labor and Material/Eqmt. to Install)	OCC	HCBK12-24900	EACH	$ -
3027	FG8-6S48 Fiber Splice Case Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-6S48	EACH	$ -
3028	FG8-2S Fiber Splice Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-2S	EACH	$ -
3029	FG8-6S Fiber Splice Case Kit (Labor and Material/Eqmt. to Install)	OCC	FG8-6S	EACH	$ -
3030	FGT-24S Splice Tray for 24 Fibers (Labor and Material/Eqmt. to Install)	OCC	FGT-24S	EACH	$ -
3031	FGT-48S Splice Tray for 48 Fibers (Labor and Material/Eqmt. to Install)	OCC	FGT-48S	EACH	$ -
3032	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-1H	EACH	$ -
3033	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-2H	EACH	$ -
3034	Fibregard Grommet Kits (Labor and Material/Eqmt. to Install)	OCC	FGD-4H	EACH	$ -
3035	Fiber Test SM Per Fiber Strand w/Reports (Detail and Summary) (Labor and Material/Eqmt. to Install)	Labor	Labor	EACH	$ -