



REQUEST FOR BID (RFB)

REQUESTOR: City of Georgetown
1134 North Fraser Street
Georgetown, SC 29440
Contact: Daniella Howard, Purchasing Agent
Email: purchasing@cogsc.com
Phone: 843.545.4043

PROJECT: Front Street Underground System Upgrade Project #1919
Specification 171007-04 Phase 1 Materials



PREPARED BY:
UTILITY TECHNOLOGY
ENGINEERS - CONSULTANTS
147-B DUBLIN SQUARE ROAD
ASHEBORO, NC 27203

DATE OF ISSUE: Friday, April 5, 2019

DUE: On or before 2:30 pm EST (local time) Wednesday, May 1, 2019

Return by mail or hand deliver only to:

City of Georgetown
Attn: Purchasing
Project #1919
1134 N Fraser Street
Georgetown, SC 29440

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1 BID DOCUMENTS AND INSTRUCTIONS TO BIDDERS

1.1 PURPOSE

This RFB is in effort to secure competitive prices on material that is to be used for our Front Street UG System Upgrade Project #1919. This RFB is not an offer or a contract. While a separate RFB for construction also includes a request for pricing of materials, the City may choose to purchase the materials directly from the distributor if it is in the City's best interest.

1.2 PROJECT DESCRIPTION

These instructions apply to the preparation of proposals for materials for Phase 1 of the upgrade and replacement of the Georgetown Downtown Front Street electric power distribution system as indicated on the project drawings and in the project specifications.

The City of Georgetown, South Carolina is hereinafter referred to as the "OWNER" or the "CITY". Utility Technology Engineers-Consultants is hereinafter referred to as the "ENGINEER".

Due to the unique nature of goods and or services sought, local vendor preference shall not apply under this RFB.

1.3 BACKGROUND

The City of Georgetown (City) is an incorporated municipality with a population of nearly 10,000 residents. The City is located 60 miles north of Charleston and 36 miles south of Myrtle Beach. It is the end point of the area commonly known as "The Grand Strand". The City is bordered by the Winyah Bay to the east and the Sampit River to the south. Tourism is a major economic driver in the area, as well as local industries, such as International Paper and Tideland Hospital. The City is the county seat and operates under the Mayor-Council form of government as set forth in the State of South Carolina Code Chapter II, Article I, Section 2-1. Additional information is available on our website at www.cogsc.com.

1.4 PROCESS

The City will conduct the selection of a qualified bidder for materials for the Front St UG Upgrade project in the City of Georgetown, South Carolina. The award for this project will be handled in the following manner:

1. The RFB and Bid Form documents will be available on our website, www.cogsc.com and clicking on "Bids".
2. The bids will be received and evaluated as described in this RFB.
3. Lowest qualified, responsible and responsive bid will be presented to the Georgetown City Council for approval.
4. After Council approval, the City of Georgetown will issue Notice of Award.

1.5 SCOPE OF SERVICES

The successful candidate must be able to provide materials for Phase 1 of the upgrade and replacement of the Georgetown Downtown Front Street electric power distribution system. The project material includes but is not limited to the following items as indicated in the project specifications:

- 15 kV, 200 A Loadbreak Elbows
- 15 kV Cable Splices
- 15 kV OH to UG Terminators
- Flood-Seal Multi-port Bus Connectors & Dual Adapter Kits
- Manhole & Pull Box Wall Supports
- Cable Support Brackets
- Cable Clamps
- 600 V Terminal Lugs
- NEMA Stud Connectors
- 15 kV URD Cable, AL, EPR
- 600 Volt Cable, AL

1.6 BID SUBMITTAL EVALUATION

Contracts shall be awarded to the lowest responsive and responsible bid. In determining lowest responsive and responsible bid, in addition to price, the Purchasing Agent, Department Head, and/or the City Administrator or designee shall consider:

- (a) The ability, capacity, and skill of the bidder to perform the contract to provide the items required;
- (b) Whether the bidder can provide the items promptly, or within the time specified, without delay or interference;
- (c) The character, integrity, reputation, judgment, experience, and efficiency of the bidder;
- (d) The quality of performance of previous contracts or services provided by the bidder;
- (e) The previous and existing compliance by the bidder with laws and ordinances relating to the contract or services;
- (f) The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service; and
- (g) Whether the bidder has met the criteria of the RFB requirements, terms and conditions.

1.7 PROJECT SCHEDULE OF EVENTS

The following is the schedule of events listed in the order of occurrence, showing the major milestones from issuance of the RFB to the contract award:

MILESTONE EVENT	DATE	TIME EST (LOCAL TIME)
1. Request for Bid (RFB) Re Bid issued	Friday, April 5, 2019	
2. Pre-Bid meeting (tentative)	N/A	
3. Deadline for questions - emailed to: hsudduth@utilitytec.com	Tuesday, April 23, 2019	4:00 pm
4. Deadline for addenda to be posted to the City's website, www.cogsc.com , under "Bids"	Friday, April 26, 2019	5:00 pm
5. Bid due date	Wednesday, May 1, 2019	On or before 2:30 pm

1.8 QUESTIONS

No answers will be given over the phone.

Questions regarding this RFQ should be submitted in writing to hsudduth@utilitytec.com, no later than 4:00 EST (local time), Tuesday, April 23, 2019. No questions will be accepted after the aforementioned deadline. All submittals shall include the following in the subject line:

Questions – Front Street UG System Upgrade Project #1919 - Materials

You will receive email confirmation that your questions were received on time. If you do not receive confirmation of such within 2 hours, it is the bidder's responsibility to call the purchasing agent at 843.545.4043 to verify that the questions were received before the deadline.

Answers to questions will be posted on the City's website at www.cogsc.com under "Current Bids" as an Addendum no later than 5:00 pm EST (local time), Friday, April 26, 2019.

The City of Georgetown reserves the right to change the project schedule of events as it deems necessary. In the event of a major date change, the City of Georgetown will notify known participants. The City of Georgetown reserves the right to issue addenda to this RFB up to 3 days before the RFB due date as needed to clarify the City of Georgetown's desires, or to make corrections or changes to the RFB document or submittal process.

When the Procurement Division is closed due to force majeure, bid openings will be postponed to the same time on the next official business day.

The City also reserves the right to cancel or reissue the RFB and/or revise the project schedule at any time.

The City reserves the right to reject any or all bids as deemed to be in its best interest, and to accept all or part of the scope of work herein as its project timeline and/or budget allows. All information will be updated and posted on the City's website www.cogsc.com under "Bids". It is the bidder's responsibility to obtain the information directly from the City's website regarding this project.

The bidder will acknowledge receipt of all issued addenda in their submittals, if applicable.

No: _____ Dated: _____

No: _____ Dated: _____

No: _____ Dated: _____

1.9 SUBMITTAL INSTRUCTIONS

All procurement procedures are subject to the City's procurement policies as outlined in Section 2-187 of the City's Municipal Code.

To be considered responsive, interested parties must submit the following in a sealed envelope on or before the deadline, 2:30 pm, Wednesday, May 1, 2019 EST (local time):

1. 2 originals
2. 1 electronic copy (ex. CD rom or USB flash drive)

1. Bids must be received no later than the aforementioned deadline. No bid will be accepted after such time. Faxed or emailed bids will not be accepted for any reason. No additional fees, costs, or any other reimbursable expenses will be allowed.
2. The City reserves the right to waive any technicalities or informalities and to accept or reject any and/or all submissions as deemed by its sole judgement to be in its best interest. The City also reserves the right to terminate the selection process without notice, to waive any irregularities in any submittal, and to request additional information from any of the bidders submitting a bid.
3. All bids should be clearly marked on the outside, "Front St UG Upgrade Materials". Submissions must be sealed and clearly identify the name and number of the RFB on the outside of the envelope/package, as well as the submitter's business name, address, and license number (if applicable). No other information shall be included or written on the outside of the bid envelope/package. The City shall not be responsible for unidentified bids.
4. It is the sole responsibility of the bidder to have their bids delivered to the City before the closing hour and dated. The City assumes no responsibility for delivery of bids that are mailed. Late, faxed, or emailed bids will not be accepted nor considered for any reason and will remain unopened. The official clock shall be that of the City's Purchasing Agent, or designee. The City reserves the right to reject any or all bids and to waive any informalities and technicalities in the bid process.
5. Any bidder may withdraw their qualifications either personally or by written request, at any time prior to the scheduled opening of responses. No bidder may withdraw qualifications for a period of 60 days after the opening date. All bidders shall be subject to approval of the City Council.
6. Bids must be submitted by bidder's own format and shall address all RFB requirements. Partial or incomplete bids may be rejected.
7. All costs incurred in preparing the bid, or costs incurred in any other manner by the bidder in responding to this RFB, will be wholly the responsibility of the bidder. All materials and documents submitted by the bidder in response to this RFB become the property of the City and will not be returned.

8. Any proprietary information contained in the bid should be so indicated as follows:

Vendor Disclosure

Notice of SC Freedom of Information Act

“The parties acknowledge that all material submitted may be subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.”

We discourage you from including any information you consider propriety or trade secret, as this material is subject to the FOIA once it's in the City's possession. If you must include any such information in your submission, please identify it by color, labeling, and/or bold font so that it can be readily recognized. In the event the City receives a request for this material, the City will notify those parties who have identified information they believe is proprietary or trade secret of the request. The City has a 10 day deadline to respond to the request. This is your window to file an action challenging the release. Please be on notice that if the City is not served with such an action, the information will be released.

9. Bids must be made in the official name of the company or individual under which business is conducted (showing official business address) and must be signed in ink by a person duly authorized to legally bind the person, partnership, company or corporation submitting the bid. Bids having any erasures or corrections must be initialed in ink by the vendor.
10. Letter of Interest – Must be no more than 2 pages (1 page is 1 side of an 8.5” x 11” paper) in length and include contact information and signature.
11. Statement of Qualifications, Experience, and Availability – Must be no more than 5 pages. It should summarize qualifications, relevant experience, and availability to participate in the RFB process to provide requested services to the City. Key staff members participating should be identified.
12. Proposed Process Approach – Must be no more than 3 pages summarizing the method and approach to providing services to the City.
13. List of Professional References – Must be no more than 1 page listing most recent professional references for similar projects and their contact information.
14. Disqualification and Rejection of Bid – The City reserves the right to reject any bid from a bidder who has failed to perform satisfactorily, or complete on time, or in a manner consistent with the RFB documents, contract of similar nature, or to reject the bid from a bidder who is not in a position to perform such a contract satisfactorily. The City expressly reserves the right to award the contract to the bidder that best meets the requirements as set forth herein.
15. Assignment of Contract – Assignment to the selected bidder of any contract to be entered into in accordance with this RFB will not be recognized by the City unless such assignment has prior written approval of the City
16. Insurance Provisions – (Applicable for work performed on site) - The selected bidder will be required to provide and maintain proof of insurance throughout the contract term in the amount of \$1,000,000.00 and as required at point of contract negotiation by the City's Risk Manager as follows:

- Comprehensive General Liability (per occurrence);
- Comprehensive Auto Liability (per occurrence); and
- Workers' Compensation Liability
- Automobile Liability
- Professional Liability

The City of Georgetown is to be named as “Additional Insured” on the above insurance coverage as respect to the City's interest under the contract. Certificates showing proof of insurance shall be submitted to the City prior to commencement of services under the Agreement. Further, it shall be an affirmative obligation upon the bidder to advise the City's Risk Management

Department at Fax No. 843.527.6173; email, cmcdaniel@cogsc.com, PO Box 939, Georgetown, SC 29442, within 2 days of the cancellation herein, and failure to do so shall be construed to be a breach of the agreement.

17. Indemnification - The selected bidder agrees to indemnify, defend and hold harmless the City of Georgetown and their authorized officers, employees, agents, and volunteers from any and all claims, actions, losses damages, and/or liabilities arising from their acts, errors, or omissions and for any costs or expenses incurred by the City therefore under an agreement.
18. Compliance With Law – The selected bidder and its agents and employees shall be bound and comply with all federal, state and local laws, ordinance rules and regulations, as well as all other governing bodies having legal jurisdiction with respect to the area where such work is performed.
19. City Business License and Permits - (Applicable for work performed on site) - The selected bidder shall be required to obtain all applicable City of Georgetown permits and business licenses prior to work commencing. Contact Jestin Gilliard, Revenues Manager, 843.545.4041 for business license information. Contact the Housing & Community Development Department at 843.545.4017 for permitting information. These expenses shall be included in the total bid cost.
20. Payment terms - a monthly itemized billing statement must be submitted in a form specified by the City of Georgetown for services performed. The City will remit full payment on all undisputed invoices within 30 days from receipt by the appropriate person(s) (to be designated at time of contract) of the invoice(s).
21. Bid and Performance Bonds – (Applicable for work performed on site) Bid and Performance Bonds or other securities may be requested for supply contracts and service contracts as the Risk Manager, Purchasing Agent, and/or Department Head deems advisable to protect the City's interest. Any such bonding requirement shall be set forth in the solicitation.

Bid Security: In an amount equal to or at least five percent (5%) of the amount of the bid shall be required for all competitive bidding for construction contracts exceeding \$100,000. Bid security shall be a legitimate bid bond provided by a surety company authorized to do business in South Carolina, or the equivalent in cash, certified check, cashiers' check, or money order. The City, at its option, may require bid bonds on construction contracts under \$100,000 when the circumstances warrant. Noncompliance with this provision mandates that the City reject the bid. Bid security will be returned to the unsuccessful bidders upon contract award by the Purchasing Agent.

When a construction contract is awarded in excess of \$100,000 the following bonds or security shall be delivered by the successful bidder to the City and shall become binding on the parties upon execution of the contract. Bid or performance bonds shall not be used in substitution for determination of bidder's responsibility.

- (a) A performance bond shall be in an amount equal to one hundred and ten percent (110%) of the contract amount; and
- (b) A payment bond for the protection of all persons supplying labor and material to the bidder or its sub bidders for the performance of the work shall be in an amount equal to one hundred percent (100%) of the contract amount.

Approved by council 1.19.2017

AN ORDINANCE TO AMEND
CHAPTER 2 ADMINISTRATION –
ARTICLE IV PROCUREMENT

SECTION 2-185 COMPETITIVE SEALED BIDS LOCAL VENDOR PREFERENCE

WHEREAS, Council has determined that the existing Purchasing Regulations of the City of Georgetown should be revised and updated; and

WHEREAS, Council desires to further its support of local businesses when awarding contracts for the provision of supplies and construction services to the City through established procurement procedures.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Georgetown, South Carolina that the existing Chapter 2, Article IV, of the City Code of Ordinances.

ARTICLE IV. PROCUREMENT
DIVISION 2. ETHICS IN CITY CONTRACTING

Section 2-185 Competitive Sealed Bids (Bidding)

Local Vendor Preference Option

1. A vendor shall be deemed a Local Georgetown City/County vendor for the purposes of this Section if such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Georgetown County, and maintains a representative inventory or commodities within the City/County on which the bid is submitted, and has paid all taxes and business license fees duly assessed.
2. This option allows the lowest local bidder whose bid is within five-percent (5%) of the lowest non-local Bidder to match the bid submitted by the non-local Bidder and thereby be awarded the contract. This preference shall apply only when (a) the total dollar purchase is \$10,000 or more; (b) the vendor has a physical business address located and operating within the limits of Georgetown County and has been doing business in the City/County for a period of 12 months or more; and (c) the vendor provides proof of payment of all applicable Georgetown City/County taxes, business license and fees if so requested.
3. Should the lowest responsible and responsive Georgetown City/County bidder not exercise its right to match the bid as granted herein, the next lowest qualified Georgetown City/County bidder shall have that right and so on. The right to match the non-Georgetown City/County bidder's bid shall be exercised within 24 hours of notification.
4. In order to qualify for the local preference authorized by this Section, the vendor seeking same shall be required to submit with its bid a statement containing relevant information which demonstrates compliance with the provisions of this Section. This statement shall be on the "MANDATORY VENDOR SUBMITTAL" form included in this bid document. Failure to provide such affidavit at the time the bidder submits its bid shall constitute a waiver of any claim for preference.

FRONT STREET UNDERGROUND
ELECTRICAL SYSTEM UPGRADE
PROJECT #1919
SPEC 171007-04 PH. 1 MATERIALS
4/5/2019

5. For all contracts for architecture, professional engineering, or other professional services governed by Section 2-187, Professional and Construction Services, the City shall include the local business status of a bidder among the factors considered when selecting which bidders are "most highly qualified." In determining which bidder is the "most qualified" for purposes of negotiating a satisfactory contract, preference shall be given to a local business where all other relevant factors are equal.

6. Local preference shall not apply to the following categories of contracts:

- (a) Goods or services provided under a cooperative purchasing agreement or similar "piggyback" contract;
- (b) Contracts for professional services except as provided for in Section 2-187 above;
- (c) Purchases or contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference;
- (d) Purchases or contracts made pursuant to a noncompetitive award process, unless otherwise provided by this section; or
- (e) Any bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either City Council or City Administrator, or where such suspension is, in the opinion of the City Attorney, required by law.



MANDATORY VENDOR SUBMITTAL FORM

AN ORDINANCE TO AMEND
CHAPTER 2 ADMINISTRATION - ARTICLE IV
PROCUREMENT – JANUARY 19, 2017

SECTION 2-185 COMPETITIVE SEALED BIDS LOCAL VENDOR PREFERENCE

ARTICLE IV.
PROCUREMENT
DIVISION 2. ETHICS IN CITY CONTRACTING

I certify that [Company Name] _____ is a **Resident Bidder** of Georgetown City/County as defined in the City of Georgetown Ordinance Chapter 2 Administration, Article IV Procurement, Section 2-185, and our principal place of business is _____ [City and State].

I certify that [Company Name] _____ is a **Non-Resident Bidder** of Georgetown City/County as defined in the City of Georgetown Ordinance Chapter 2 Administration, Article IV Procurement, Section 2-185, and our principal place of business is _____ [City and State].

(X) _____
Signature of Company Officer

Date

1.10 GENERAL CONTRACTUAL REQUIREMENTS

1. Force Majeure - The bidder shall not be liable for any excess costs if the failure to perform the contract arises out of causes beyond the control and without the fault or negligence of the bidder. Such causes may include, but are not limited to acts of God or of the public enemy, acts of Governments in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the bidder.
2. Governing Law - Except to the extent that this agreement may be governed by any federal law, including federal bankruptcy law, this Agreement shall be governed by, constructed and interpreted under, and enforced exclusively in accordance with the laws of the State of South Carolina, and the courts in the State of South Carolina shall have jurisdiction with respect to any dispute arising hereunder.
3. Bidder Qualifications - Bidder must, upon request of the City, furnish satisfactory evidence of its ability to furnish products and/or services in accordance with the terms and conditions of this RFB. The City of Georgetown reserves the right to make the final determination as to the bidder's ability to provide the services herein.
4. Bidder Responsibility – Each bidder shall fully acquaint him/herself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this RFB. It is expected that this will sometimes require on-site observation. The failure or omission of the bidder to acquaint him/herself with existing conditions shall in no way relieve him/her of any obligation with respect to this RFB or to a contract.
5. Affirmative Action - The bidder will take affirmative action in complying with all federal and state requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap.
6. WMBE Statement - It is the policy of the City of Georgetown to provide minorities, and women equal opportunity for participating in all aspects of the City's contracting and procurement programs, including but not limited to employment, construction projects, and lease agreements consistent with the laws of the State of South Carolina. It is further the policy of the City of Georgetown to prohibit discrimination against any person or business in pursuit of these opportunities on the basis of race, color, national origin, religion, sex, age, handicap, or veteran status. It is further the policy of the City of Georgetown to conduct its contracting and procurement programs so as to prevent such discrimination and to resolve any and all claims of such discrimination.
7. Termination - Subject to the following provisions, any contract resulting from this request for bids may be terminated by the City provided a 30 day advance notice in writing by the City Administrator, or his designee, is given to the bidder:
 - 7.1 Non-Appropriations - Funds for this contract are payable from local appropriations. If the sufficient appropriations are not made to pay the charges under the contract it shall terminate without any obligation to the City.
 - 7.2. Convenience - In the event that a contract is terminated or canceled upon request and for the convenience of the City without the required 30 day advance written notice, then the City shall negotiate reasonable termination costs, if applicable.
 - 7.3 Cause - Termination by the City for the cause, default or negligence on part of the bidder, shall be excluded from the foregoing provisions; termination costs, if any shall not apply. The 30 day advance notice requirement is waived and the default provision herein shall apply.
 - 7.4 Default – In case of default by the bidder, the City reserves the right to purchase any and all items/services in default in open market, charging bidder with any excessive costs. **SHOULD SUCH CHARGE BE ASSESSED, NO SUBSEQUENT BIDS OF THE DEFAULTING BIDDER WILL BE CONSIDERED UNTIL THE ASSESSED CHARGE HAS BEEN SATISFIED.**

8. Prime Bidder Responsibilities - The bidder will be required to assume sole responsibility for the complete effort as required by this RFB. The City will consider the bidder to be the sole point of contact with regard to all contractual matters.
9. Subcontracting - If any part of the work covered by this RFB is to be subcontracted, the bidder shall identify the subcontracting organization and the contractual arrangements made therewith at the time of the offer. All sub bidders must be approved by the City. The successful bidder will also furnish the corporate or company name and the names of the officers of any sub bidders engaged by the bidder.
10. Ownership of Material – All materials and documents submitted by the bidder in response to this specification become the property of the City of Georgetown and will not be returned to the bidder.
11. Compliance with State and Federal Requirements – State and Federal requirements that are more restrictive than these set forth herein shall be followed by the bidder.
12. Contract Amendments - Amendments to any agreement between the City and the bidder must be reviewed and approved in writing by the City of Georgetown City Administrator or his designee.
13. Assignment - No contract or its provisions may be assigned, sublet, or transferred without the written consent of the City of Georgetown Finance Department.
14. Records Retention and Right to Audit – The City shall have the right to audit the books and records of the bidder as they pertain to this contract. Such books and records shall be maintained for a period of 3 years from the date of final payment under contract.
15. The City may conduct performance audits of the bidder, as determined necessary by the City. Pertaining to all audits, the bidder shall make available to the City, access to its computer files containing the history of the contract performance and all other documents related to the audit. Additionally, any software used by the bidder shall be made available for auditing purposes at no cost to the City.
16. Independent Bidder Status - The parties hereby agree that the bidder is an independent bidder of the City and that nothing in an agreement with the City shall be deemed to place the parties in a relationship of employer/employee, partners, or joint ventures. Neither party shall have the right to obligate or bind the other in any manner. Each party agrees and acknowledges that it will not hold itself out as an authorized agent with the power to bind the other party in any manner. Each party shall only be responsible for any withholding taxes, payroll taxes, disability insurance payments, unemployment taxes, or other similar taxes or charges with respect to its activities in relation to performance of its obligations of an agreement.
17. Representations of Bidder - Bidder represents, warrants, and covenants that:
 - (a) In providing the services bidder shall utilize the care and skill used by members of bidder's profession practicing under similar circumstances at the same time and in the same locality.
 - (b) All employees provided by the bidder (employees) to the City shall have the qualifications, skills and experience necessary to perform his/her job in accordance with the requirements of the agreement. The City may request removal of any employee for good cause.
 - (c) Bidder is a business, validly existing and in good standing under the Laws of the State of South Carolina.
18. Indemnity Provisions - Bidder agrees to and shall indemnify and hold the City harmless from and against all liability, loss, damages or injury, and all costs and expenses (Including attorney fees and costs of any suit related thereto) suffered or incurred by the City, arising from or related to the terms of this project, or bidder's performance thereunder.
19. City Business License and permits - The selected bidder shall be required to obtain all applicable City of Georgetown permits and business licenses **prior to work commencing**. Contact Jestin Gilliard, Revenues Manager, jgiiliard@cogsc.com or 843.545.4041, for business license information. Contact the Housing & Community Development Department at 843.545.4017 for permitting information. These expenses shall be included in the total bid cost.

1.11 PROPOSALS

Proposals which are not prepared in accordance with these instructions will imply that the Bidder does not intend to comply with all of the contract conditions and such proposals will be considered irregular.

Each proposal will include the following information and completed forms:

- Bid Form
- Cut sheets for all materials provided, except as indicated in Section 4.9.

Unit prices quoted and accepted shall apply for one year from the date of bid, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the scope of the work, all in accordance with the contract documents. The City reserves the right to purchase individual items from different bidders at the Unit Prices listed below. The City may also choose to purchase ALL items at the lump sum price listed in Section 0.

Item #	Description	Manufacturer	Catalog No.	Quantity	Unit Price	Lead Time
1	15 kV, 200 A Loadbreak Elbows (ea)					
2	15 kV Cable Splices (ea)					
3	15 kV OH to UG Terminators (ea)					
4	Flood-Seal Multi-port Bus Connectors, 6 outlets, with rubber insulating sleeve covers (ea)					
5	Flood-Seal Dual Adapter Kit (ea)					
6	Flood-Seal Multi-port Bus Connectors, 3 outlets, Y type, with rubber insulating sleeve covers (ea)					
7	Manhole Wall Supports, stainless steel slotted channel, 72" long, 13/16" x 1-5/8", 12 GA (ea)					
8	Pull Box Wall Supports, stainless steel slotted channel, 38" long, 13/16" x 1-5/8", 12 GA (ea)					
9	Cable Support Brackets, stainless steel slotted channel, 18" long, 1-5/8"x1-5/8", 12 GA (ea)					
10	Cable Clamps, 1-7/8", polymer, with stainless steel strap (ea)					
11	600 V Terminal Lugs, 750 kcmil AL, 2-hole NEMA (ea)					
12	600 V Terminal Lugs, 500 kcmil AL, 2-hole NEMA (ea)					

Item #	Description	Manufacturer	Catalog No.	Quantity	Unit Price	Lead Time
13	600 V Terminal Lugs, 350 kcmil AL, 2-hole NEMA (ea)					
14	600 V Terminal Lugs, # 4/0 AWG AL, 2-hole NEMA (ea)					
15	600 V Terminal Lugs, # 2/0 AWG AL, 2-hole NEMA (ea)					
16	600 V Terminal Lugs, #10 AWG AL, 2-hole NEMA (ea)					
17	600 V Terminal Lugs, #12 AWG AL, 2-hole NEMA (ea)					
18	600 V Terminal Lugs, 500 kcmil AL, 1-hole NEMA (ea)					
19	600 V Terminal Lugs, 350 kcmil AL, 1-hole NEMA (ea)					
20	600 V Terminal Lugs, #4/0 AWG AL, 1-hole NEMA (ea)					
21	600 V Terminal Lugs, #2/0 AWG AL, 1-hole NEMA (ea)					
22	600 V Terminal Lugs, #10 AWG AL, 1-hole NEMA (ea)					
23	600 V Terminal Lugs, #12 AWG AL, 1-hole NEMA (ea)					
24	4-hole NEMA Stud Connectors, (ea)					
25	6-hole NEMA Stud Connectors, (ea)					
26	15 kV URD Cable No. 1/0 AWG AL, EPR (ft)					
27	600 V, Single Conductor Secondary UD Cable 500 kcmil AL (ft)					
28	600 V, Single Conductor Secondary UD Cable 350 kcmil AL (ft)					

2.2 LUMP SUM PRICE

The undersigned bidder hereby proposes and agrees, if the Bid is accepted, to furnish ALL materials and equipment required as indicated or specified in the Contract Documents to be furnished by Contractor for the lump sum. The bidder shall complete Section 2.1 in addition to providing a lump sum price.

Project:

FRONT STREET UNDERGROUND ELECTRICAL SYSTEM UPGRADE PROJECT #1919 Materials

_____ Dollars (\$ _____)

The undersigned Bidder agrees to provide all materials specified for the Front Street underground electrical _____ days after receipt of award from the City.

2.3 RECEIPT OF ADDENDA

The undersigned Bidder acknowledges receipt of the following Addenda, which have been considered in preparation of this Bid:

No. _____ Dated _____.

No. _____ Dated _____.

No. _____ Dated _____.

Dated in _____, this ____ day of _____, 20____.
(Location)

2.4 IDENTIFICATION OF BIDDER (Individual, Partnership, Corporation)

If an Individual: _____
(name)

Doing business as: _____
(name)

If a Partnership: _____
(name)

by: _____
Partner

If a Corporation: _____
(NAME)

(a _____ Corporation)
(STATE)

2.5 SIGNATURE OF BIDDER

By: _____
(Signature)

(Print name)

(Title)

Attest: _____
(Signature)

(SEAL)

Business Address of Bidder: _____

Telephone Number: _____

3 CONTRACT

City of Georgetown
Georgetown, South Carolina

THIS CONTRACT, made this _____ day of _____, 20 _____, by _____
_____, hereinafter called Contractor, and the City of Georgetown,
Georgetown, South Carolina, hereinafter called the City.

WITNESSETH

THAT WHEREAS, a Contract for the construction of

CITY OF GEORGETOWN, SOUTH CAROLINA

FRONT STREET UNDERGROUND ELECTRICAL SYSTEM UPGRADE #1919 – MATERIALS

HAS RECENTLY BEEN AWARDED TO Contractor by City at and for a total price of

_____ Dollars (\$ _____)

and as named in the Proposal attached hereto;

AND WHEREAS, it was provided in said award that a formal Contract would be executed by and between Contractor and City, evidencing the terms of said award, and that Contractor would commence the work to be performed under this agreement on a date to be specified in a written order of City.

NOW THEREFORE, Contractor doth hereby covenant and agree with City that it well and faithfully perform and execute such work and furnish such work and furnish such materials and equipment, in accordance with each and every one of the conditions, covenants, stipulations, terms, and provisions contained in said Specifications in accordance with the Plans, at the total price named therefore in the Proposal attached hereto, and will well and faithfully comply with and perform each and every obligation imposed upon it by said Plans and Specifications and the terms of said award.

Contractor shall promptly make payments to all laborers and others employed thereon.

Contractor shall be responsible for all damages to the property of the facility that may be consequent upon the normal procedure of its work or that may be caused by or result from the negligence of Contractor, its employees or agents, during the progress of or connected with the prosecution of the work, whether within the limits of the work or elsewhere. Contractor must restore all property so injured to a condition as good as it was when Contractor entered upon the work.

Contractor shall furthermore be responsible for and required to make good at its expense any and all damages of whatever nature to persons or property, arising during the period of the Contract, caused by carelessness, neglect, or want of due precaution on the part of Contractor, its agents, employees, or workmen.

Contractor shall also indemnify and save harmless the City, and the officers and agents thereof, and the officers and agents thereof from all claims, suits, and proceedings of every name and description which may be brought against the City, or the officers and agents thereof, for or on account of any injuries or damages to persons or property received or

FRONT STREET UNDERGROUND
ELECTRICAL SYSTEM UPGRADE
PROJECT #1919
SPEC 171007-04 PH. 1 MATERIALS
4/5/2019

sustained by any person or persons, bidder or corporation, or by or in consequence of any materials used in said work or by or on account of any accident, or of any other act or omission of Contractor, its agents, employees, servants, or workmen.

It is agreed and understood that the Notice to Prospective Bidders, the Definitions, Instructions to Bidders, Plans and Specifications, the accepted Proposal, and the enumerated addenda are part and parcels of this Contract, to the same extent as if incorporation herein full.

And the City doth hereby covenant and agree with Contractor that it will pay to Contractor, when due and payable under the terms of said Specifications and said award, the above-mentioned sum, and that it will well and faithfully comply with and perform each and every obligation imposed upon it by said Specifications and the terms of said award.

Whenever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all gender as the context may require.

FURTHER AGREEMENTS

Contractor shall, upon completion of all work awarded under this Contract, furnish to City invoices or copies of invoices for all materials purchased for said work, and such invoices shall state the amount of South Carolina sales tax paid for said materials, and Contractor shall also furnish City an affidavit certifying the total costs of materials purchased for all work performed under the Contract and the total amount of South Carolina sales tax paid for said materials.

IN TESTIMONY WHEREOF, Contractor and City have duly signed and sealed this Contract.

(Imprint Corporate Seal below this line)

By _____

Title: _____

ATTEST:

(Secretary)

CITY OF GEORGETOWN
GEORGETOWN, SOUTH CAROLINA

By _____
City Administrator

ATTEST:

(Secretary)

4 GENERAL CONDITIONS

4.1 GENERAL

These specifications are for furnishing DDP job site, Georgetown, South Carolina, materials for the Front Street Underground Upgrade. The materials shall be furnished complete and ready for installation and shall include:

- 15 kV, 200 A Loadbreak Elbows
- 15 kV Cable Splices
- 15 kV OH to UG Terminators
- Flood-Seal Multi-port Bus Connectors & Dual Adapter Kits
- Manhole & Pull Box Wall Supports
- Cable Support Brackets
- Cable Clamps
- 600 V Terminal Lugs
- NEMA Stud Connectors
- 15 kV URD Cable, AL, EPR
- 600 Volt Cable, AL

Material to be furnished in accordance with drawing E1011 – Miscellaneous Details, Section 5 - Materials, and these specifications.

4.2 DELIVERY

The equipment shall be delivered DDP job site, Georgetown, South Carolina, by truck shipment and unloaded by others. Exact delivery locations will be provided to the successful bidder after award of the contract. The Owner shall receive a shipping notice for the equipment at least 48 hours before delivery is made.

The successful bidder shall submit to the Owner duplicate copies of shipping notices describing each shipment of material or equipment.

In addition, the successful bidder shall telephone the City designated representative at least 72 hours prior to arrival of the equipment at the delivery sites, to notify the Owner of the method of shipment and date of arrival. This telephone notification shall be made only between 8:00 a.m. and 5:00 p.m., Monday through Friday.

The successful bidder shall pay all demurrage costs resulting from delays in unloading, if those delays are caused by failure of the Contractor to notify the Owner of shipment or to schedule shipment as specified above.

4.3 SCHEDULE

Time is a basic consideration in this proposal. Material delivery shall be on or before July 1, 2019.

4.4 IDENTIFICATION

All correspondence, shipping notices, shop drawings, specifications, engineering data, and other documents pertaining to the equipment and materials furnished under these specifications shall be identified by the Owner's name, the UTEC specification and project number 171007-04, and the name of the item of equipment or material.

4.5 SHIPPING REQUIREMENTS

All materials shall be suitably protected to prevent damage and loss during shipment. All small items shall be bagged, identified and shipped in boxes or crates. The contents of all boxes and crates shall be identified with a packing slip.

4.6 CODES AND STANDARDS

Except where specifically stated otherwise, all equipment furnished under these specifications shall conform to the latest applicable standards of ASTM, NEMA, NESC, ANSI, IEEE, NEC, and EEI and shall be in accordance with the applicable requirements of the Federal "Occupational Safety and Health Standards".

The requirements of the drawings and the written text of these specifications shall govern in case of conflict between them and any of the referenced codes and standards except the mandatory standards which shall govern in all cases. Any conflict between standards shall be referred to the Engineer who will determine which standard shall govern.

4.7 CORRECTION OF MANUFACTURING ERRORS

Equipment and materials shall be complete in all respects within the limits herein outlined. All manufacturing errors or omissions required to be corrected in the field shall be done by the manufacturer or his duly authorized representative and at the Supplier's expense.

4.8 MATERIALS AND WORKMANSHIP

Materials will be suitable for the work, new, unused, and the best of their respective kind; and manufactured, fabricated, assembled, and finished with workmanship of the highest quality and in accordance with the best recognized practice.

4.9 SHOP DRAWINGS

The successful bidder shall submit shop drawings to the Engineer for review as specified herein. Drawings will be for the exact material or equipment to be supplied or installed and shall be clearly marked to show specific model and any options or modifications. Drawings shall be submitted within 15 days after receipt of Purchase Order. Shop drawings are required for the following items. Cut sheets are not required for these items at time of bid.

- Manhole & Pull Box Wall Supports
- Cable Support Brackets

Drawings and data submitted shall be fully completed and certified by the successful bidder to be in compliance with the requirements of these specifications.

The Engineer's review of drawings will cover only general conformity of the data to the requirements of this specification, external connections, interfaces with equipment and materials furnished under separate specifications, and dimensions. The Engineer's review does not indicate a thorough review of all dimensions, quantities, and details of the equipment, material device, or item indicated or the accuracy of the information submitted; nor shall review by the Engineer be construed as relieving the successful bidder from any responsibility for errors or deviations from the requirements of these specifications. The Engineer will review submitted drawings in a timely fashion.

No material or equipment shall be ordered, shipped, or installed prior to submission and review of manufacturer's drawings. Any material or equipment installed prior to submission and review of drawing shall be removed, replaced, or reinstalled at the CITY's option.

Letters of transmittal shall accompany all submittals of engineering data.

5 MATERIALS

The contractor shall provide materials as indicated on Drawing E1011 and the table below.

Item No.	Description	Manufacturer (or equal)	Part Number (or equal)	Base Quantity (ft)	Spare (ft)	Total (ft)
1	15 kV, 200 A Loadbreak Elbow			20	1	21
2	15 kV Cable Splice			3	1	4
3	15 kV OH to UG Terminator			3	1	4
4	Flood-Seal Multi-port Bus Connectors, 6 outlets, with rubber insulating sleeve covers	Homac	175 Series	32	2	34
5	Flood-Seal Dual Adapter Kit	Homac	175 Series	2	1	3
6	Flood-Seal Multi-port Bus Connectors, 3 outlets, Y type, with rubber insulating sleeve covers	Homac	125 Series	14	2	16
7	Manhole Wall Support, stainless steel slotted channel, 72" long, 13/16" x 1-5/8", 12 GA			13	1	14
8	Pull Box Wall Support, stainless steel slotted channel, 38" long, 13/16" x 1-5/8", 12 GA			9	1	10
9	Cable Support Bracket, stainless steel slotted channel, 18" long, 1-5/8"x1-5/8", 12 GA			84	6	90
10	Cable Clamp, 1-7/8", polymer, with stainless steel strap	ZSi	Porce-a-Clamp	312	18	330
11	600 V Terminal Lug, 750 kcmil AL, 2-hole NEMA			3	1	4
12	600 V Terminal Lug, 500 kcmil AL, 2-hole NEMA			119	6	125
13	600 V Terminal Lug, 350 kcmil AL, 2-hole NEMA			41	2	43
14	600 V Terminal Lug, # 4/0 AWG AL, 2-hole NEMA			27	3	30
15	600 V Terminal Lug, # 2/0 AWG AL, 2-hole NEMA			12	1	13
16	600 V Terminal Lug, # 10 AWG AL, 2-hole NEMA			3	1	4

Item No.	Description	Manufacturer (or equal)	Part Number (or equal)	Base Quantity (ft)	Spare (ft)	Total (ft)
17	600 V Terminal Lug, # 12 AWG AL, 2-hole NEMA			2	1	3
18	600 V Terminal Lug, 500 kcmil AL, 1-hole NEMA			8	1	9
19	600 V Terminal Lug, 350 kcmil AL, 1-hole NEMA			3	1	4
20	600 V Terminal Lug, # 4/0 AWG AL, 1-hole NEMA			14	1	15
21	600 V Terminal Lug, # 2/0 AWG AL, 1-hole NEMA			5	1	6
22	600 V Terminal Lug, # 10 AWG AL, 1-hole NEMA			4	1	5
23	600 V Terminal Lug, # 12 AWG AL, 1-hole NEMA			2	1	3
24	4-hole NEMA Stud Connector			17	1	18
25	6-hole NEMA Stud Connector			4	1	5
26	15 kV URD Cable, No. 1/0 AWG AL, EPR			3840	360	4200
27	600 V, Single Conductor Secondary UD Cable 500 kcmil AL			5395	605	6000
28	600 V, Single Conductor Secondary UD Cable 350 kcmil AL			1605	395	2000

6 TECHNICAL SPECIFICATIONS

SECTION 16120 - WIRES AND CABLES

1. GENERAL

1.1. SUMMARY

This Section includes wires and cables and associated splices, connectors, and terminations for wiring systems rated 600 volts and less.

Related Sections: The following Sections contain requirements that relate to this Section:

- Division 16 Section 16124 "Medium-Voltage Cables."
- Division 16 Section 16190 "Supporting Devices" for supports and anchors for fastening cable directly to building finishes.

1.2. SUBMITTALS

Submit manufacturer's catalog descriptions of each wire, cable, or conductor for engineer's approval before ordering cable.

1.3. QUALITY ASSURANCE

Comply with NFPA 70 "National Electrical Code" for components.

Listing and Labeling: Provide products specified in this Section that are listed and labeled.

The Terms "Listed and Labeled": As defined in the "National Electrical Code," Article 100.

1.4. DELIVERY, STORAGE, AND HANDLING

Deliver wire and cable according to NEMA WC-26.

2. PRODUCTS

2.1. MANUFACTURERS

Available Manufacturers: Subject to compliance with requirements, Manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

Wires and Cables:

- American Wire Group
- Houston Wire & Cable
- Prysmian Group
- Southwire Co.
- Okonite Co.

Connectors for Wires and Cables:

- AFC, Monogram Co.
- AMP, Inc.
- Anderson, Square D Co.
- Electrical Products Division, 3M Co.
- O-Z/Gedney Unit, General Signal
- Thomas & Betts
- Burndy

2.2. LOW VOLTAGE INSULATED CONDUCTORS AND CABLES

Insulated conductors must be rated 600 volts and conform to the requirements of NFPA 70, including listing requirements, or in accordance with NEMA WC 70. Service entrance conductors must conform to UL 854, type USE.

2.3. CONNECTORS AND SPLICES

Low voltage cables in manholes or pull boxes shall be terminated with compression NEMA spade terminals with insulated sleeves. Connectors shall be submersible insulated multi-port bus, Thomas & Betts Homac Flood-Seal, 125 Series or 175 Series as noted on the drawings, or acceptable equal.

END OF SECTION 16120

SECTION 16124 – MEDIUM VOLTAGE CABLES

1. GENERAL

1.1. SUMMARY

This Section includes cables and related splices, terminations, and accessories for electrical distribution systems rated above 2,000 volts.

Related Sections: The following Sections contain requirements that relate to this Section:

- Division 16 Section 16190 “Supporting Devices” for cable and termination supports.

1.2. SUBMITTALS

General: Submit the following information.

- Product data for cables and cable accessories, including splices and terminations including warranty statement.
- Product certificate signed by manufacturer that its products comply with the specified requirements.
- Product Test Reports: Certified reports of manufacturers’ design and production tests indicating compliance of cable and accessories with referenced standards.
- Maintenance Data: For cables and accessories.

1.3. QUALITY ASSURANCE

Manufacturer Qualifications: Bidder experienced in manufacturing medium voltage cable and accessories similar to those indicated for this project, with a record of successful in-service performance.

Comply with NFPA 70 “National Electric Code” for components.

Listing and Labeling: Provide products specified in this Section that are listed and labeled.

The terms “listed and labeled”: As defined in the “National Electrical Code”, Article 100.

Single-Source Responsibility: All medium voltage cable shall be the product of a single manufacturer.

2. DELIVERY, STORAGE & HANDLING

2.1. CABLE REELS

Deliver medium voltage cables on factory reels conforming to NEMA WC26.

3. PRODUCTS

3.1. MANUFACTURERS

Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- Power Cable:
 1. Cablec Corp.
 2. Hubbell Inc., The Kerite Co.
 3. The Okonite Co.
 4. Power Cable Division, Pirelli Cable Corp.
- Cable Splicing and Terminating Products and Accessories:
 1. Cooper Power Systems, Inc., RTE Components
 2. Elastimold
 3. Raychem Electrical Products Division

4. 3M Electrical Products Division

- Separable Insulated Connector Components and Accessories:
 1. Cooper Power Systems, Inc., RTE Components
 2. Elastimold
 3. Joslyn Manufacturing Co.

3.2. CABLE

Type: MV105, Primary UD EPR cable

Conductor: Aluminum phase conductor, stranded

Conductor Stranding: Filled with water swellable agent meeting or exceeding ICEA T-31-610 water penetration resistance and ANSI/NEMA class A connectorability requirements.

Rated System Voltage Class: for 12.47 kV application: 15 kV, Primary UD

Insulation: Discharge resistant ethylene propylene rubber (EPR) conforming to ANSI/ICEA S-94-649, UL 1072, RUS 1728F-U1 and AEIC CS8. Insulation shall be of a color contrasting with the extruded semi-conducting shield. Insulation rating shall equal or exceed 100 percent of the rated system voltage class. The cable shall be heat, moisture, ozone and corona resistant, for use at 105 C conductor temperature. The insulation compound shall be compounded by the manufacturer in its own facility.

Concentric Neutral: Bare copper wires.

Jacket: Insulating linear low density polyethylene applied over the insulation shield. The jacket shall be oil, acid, alkali and sunlight resistant and meet or exceed NEMA WC74 and UL 1072.

Standards: The cable shall meet or exceed the following standards: ANSI/ICEA S-94-649, UL 1072, RUS 1728F-U1 and AEIC CS8

3.3. SPLICE KITS

Connectors: IEEE 404, compression type, as recommended by cable or splicing kit manufacturer for the application.

Splicing Products: As recommended in writing by the splicing kit manufacturer for the specific sizes, ratings, and configurations of cable conductors and splices specified. Include all components required for complete splice, with detailed instructions.

Heat-shrink splicing kit of uniform cross-section polymeric construction with outer heat-shrink jacket.

Premolded, cold-shrink rubber, inline splicing kit.

3.4. LOAD BREAK ELBOW CONNECTORS

The molded rubber 15 kV class, fused, load break, elbow cable connector termination kits shall be designed and manufactured for terminating the specified power cables. Contractor shall coordinate with manufacturers' data to determine exact diameters. Insulation class shall be equivalent to that of the cable.

Elbow connectors shall meet ANSI and IEEE standards C37.40, C37.41, C37.47, and 386-2006. Elbow connectors shall be fully shielded and insulated capable of full range current limiting fuse protection. Molded materials shall be of high quality peroxide-cured insulating and semi-conducting EPDM rubber. Standard features shall include a copper probe adapter, coppertop connector, copper load break probe with an ablative arc-follower tip and stainless steel reinforced pulling eye. Feed-thru elbow connectors shall be provided where indicated on the drawings.

3.5. CABLE TERMINATIONS

The terminations shall be Class 1 for shielded cable, meeting the latest release of IEEE Standard 48, and suitable for use outdoors on underground circuit dip poles. The terminations shall be of the molded elastomer, prestretched elastomer, or heat-shrinkable elastomer type, with multiple molded nontracking skirt modules, and compression-type connector. Terminations for shielded cables shall include a shield ground strap.

Terminations, must be provided with mounting brackets suitable for the intended installation and with grounding provisions for the cable shielding. Terminations must be provided in a kit, including: skirts, stress control terminator, ground clamp, connectors, lugs, and complete instructions for assembly and installation. Terminations must be the product of one manufacturer, suitable for the type, diameter, insulation class and level, and materials of the cable terminated.

3.6. SOURCE QUALITY CONTROL

Test and inspect cables according to NEMA WC74 before shipping.

3.7. MEDIUM VOLTAGE CABLE WARRANTY

The cable manufacturer shall warrant each reel of cable to be free from defects in material, design and workmanship to provide reliable performance for a twenty-five (25) year life.

The warranty assumes the cable is installed, spliced, terminated and maintained in accordance with manufacturer's recommendations.

Prior to termination or splicing of cable, the contractor responsible for same shall submit qualifications of his personnel responsible for this work and their qualification to do same. Upon approval by the engineer in writing, contractor may proceed with this portion of the work.

Defective cable shall be replaced at no cost to the owner.

- When the manufacturer and the owner mutually determine a portion of or all the cable is defective, the cable manufacturer shall furnish replacement of said cable without charge.
- The replacement cable shall comply with these requirements and be delivered to the original delivery point free of any charge to the owner or the state of North Carolina.

Contractor shall state on his bid form the name of the cable manufacturer he intends to supply. Failure to do this places the contractor at risk of rejection of his bid.

Cable shop drawings shall include said described warranty from the cable manufacturer properly signed, and having the manufacturer's corporate seal affixed thereto.

END OF SECTION 16124

SECTION 16190 - SUPPORTING DEVICES

1. GENERAL

1.1. RELATED DOCUMENTS

Requirements of the following Division 16 Sections apply to this section:

- Division 16 Section 16050 "Basic Electrical Materials and Methods."

1.2. SUMMARY

This Section includes secure support from the building structure for electrical items by means of hangers, supports, anchors, sleeves, inserts, seals, and associated fastenings.

Related Sections: The following Sections contains requirements that relate to this Section:

- Refer to other Division 16 sections for additional specific support requirements that may be applicable to specific items.

1.3. SUBMITTALS

General: Submit the following information.

Product data for each type of product specified.

Shop drawings indicating details of fabricated products and materials.

1.4. QUALITY ASSURANCE

Electrical Component Standard: Components and installation shall comply with NFPA 70 "National Electrical Code."

Electrical components shall be listed and labeled by UL, ETL, CSA, or other approved, nationally recognized testing and listing agency that provides third-party certification follow-up services.

2. PRODUCTS

2.1. MANUFACTURERS

Available Manufacturers: Subject to compliance with requirements, Manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- Slotted Metal Angle and U-Channel Systems:
 1. Allied Tube & Conduit
 2. American Electric
 3. B-Line Systems, Inc.
 4. Cinch Clamp Co., Inc.
 5. GS Metals Corp.
 6. Haydon Corp.
 7. Kin-Line, Inc.
 8. Unistrut Diversified Products

2.2. MANUFACTURED SUPPORTING DEVICES

Raceway Supports: Riser clamps, conduit straps, threaded C-clamps with retainers, and spring steel clamps.

U-Channel Systems: 12-gage stainless steel channels, with 9/16-inch-diameter holes, at a minimum of 8 inches on center, in top surface. Provide fittings and accessories that mate and match with U-channel and are of the same manufacture.

2.3. FABRICATED SUPPORTING DEVICES

General: Shop- or field-fabricated supports or manufactured supports assembled from U-channel components.

Steel Brackets: Fabricated of angles, channels, and other standard structural shapes. Connect with welds and machine bolts to form rigid supports.

END OF SECTION 16190

7 DRAWINGS

The following drawings for the Front Street Underground Electrical System Upgrade Project #1919 are included as a part of this specification:

Drawing No.	Sheet No.	Title
E1011	1	Miscellaneous Details