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February 1, 2022

MEMO TO: Prospective Bidders

FROM: Trent Ensley, Procurement Manager

SUBJECT: Advertisement for Invitation Bid

PWC2122028 - CABLE/CONDUCTOR CONTRACT

In accordance with G.S. 143-129, Fayetteville Public Works Commission (PWC) will be pleased to receive your bid until **3:00 p.m. Thursday February 24, 2022**, at the Fayetteville Public Works Commission, Administration building, by the entrance doors, 955 Old Wilmington, Road, Fayetteville, NC 28301 at which time they will be publicly opened and read for the purchase of the following:

Cable/Conductor Contract

Enclosed please find our Instructions to Bidders, Material Specifications, and Bid Proposal forms. Proposals shall be submitted on the forms provided herein, or exact copies thereof, and the Bidder shall return one copy of the entire bid packet along with the completed bid proposal forms and any other information specified in the bid documents.

Bids may be delivered in person or by express mail to the Fayetteville Public Works Commission (PWC) Procurement Department, Attn: Shelby Lesane, 955 Old Wilmington Road, Fayetteville, NC, or maybe mailed to Fayetteville Public Works Commission, Attn: Shelby Lesane, P.O. Box 1089, Fayetteville, NC 28302. Bids received after the stated date and time will not be considered.

Questions regarding this bid must be submitted in writing to the attention of Shelby Lesane, Procurement Advisor at shelby.lesane@faypwc.com later than 5:00 p.m. Monday February 14, 2022 in order to be considered for response.

BUILDING COMMUNITY CONNECTIONS SINCE 1905

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INSTRUCTIONS TO BIDDERS

PWC2122028 CABLE/CONDUCTOR CONTRACT

- 1. Bids shall be received no later than <u>3:00p.m. Thursday February 24, 2022</u> at which time theywill be publicly opened and read aloud outside of the PWC Administrative Building, 955 Old Wilmington Road, Fayetteville, North Carolina, by the entrance doors. Late bids will not be considered and will be returned to the Bidder unopened.
- 2. Bids will be examined promptly after opening and an award will be made at the earliest possible date. Award of bid is subject to approval by the Fayetteville Public Works Commission (PWC) and the Fayetteville City Council.
- 3. Bids must be held firm for acceptance by (PWC) for a period of ninety (90) days after bid opening date. This is necessary for approval of award and issuance of purchase order or contract.
- 4. Submit bids only on the bid proposal form(s) provided herein, or exact copies thereof (See Attachment A).
- 5. Contract award shall be made to the lowest, responsive, responsible bidder(s). PWC reserves the right to award contract(s) or purchase order(s) in the best interest of the Commission. PWC also reserves the right to reject any or all bids and to waive all informalities concerning bid. Bidders may submit a bid for any single item, multiple items, or all items. PWC reserves the right to make a single award for all items or may award separate contracts to multiple vendors for various items to the lowest responsive, responsible bidder or bidders, taking into consideration product quality, delivery time to PWC, and conformity with the set of specification inthe bid. PWC may also consider, among other things, the bidder's past performance conduct on other contracts, and other information as PWC deems necessary to assist in the evaluation of any bid. The right is reserved to reject any or all bids and to waive any and all informalities.
- 6. Bid shall be submitted in a sealed opaque envelope showing the bid title, date and time of opening on the front of the envelope. Bids may be sent via US Mail to Fayetteville Public Works Commission, Attn: Shelby Lesane, Procurement Advisor, P.O. Box 1089, Fayetteville, NC 28302 or may be delivered in person or by express mail to Public Works Commission, Attn: Shelby Lesane, Procurement Advisor, 955 Old Wilmington Road, Fayetteville, NC 28301 specifically called for on the bid proposal form.
- 7. All bids must be signed by an authorized official of the firm. Bids may be rejected if they show any omission, alteration of form, additions not called for, conditional bid, or any irregularities of any kind.
- 8. <u>Alternate Bids:</u> Do not submit alternate bids unless specifically called for on the bid proposal form. To warrant consideration, Proposals must comply with these bid documents. Strict adherence to Material Specifications and Drawings is requested to facilitate review and consideration of theproposal.
- 9. Delivery shall be F.O.B. Fayetteville Public Works Commission Warehouse Facility, 1097 Public Works Drive, Fayetteville, NC 28301.

- 10. Payment for material purchase pursuant to this bid shall be due from PWC to Supplier within thirty (30) days after same has been delivered to PWC and inspected and accepted by PWC. Supplier shall ensure delivery of materials that comply with all of PWC's specifications. If the delivered materials fail to comply with all of PWC's specification or are damaged or otherwise defective, Supplier shall promptly upon PWC's request and at Supplier's sole cost replace the non-compliant materials with compliant materials. PWC reserves all rights and remedies available under the North Carolina Uniform Commercial Code for Supplier's delivery failure.
- 11. All questions regarding this Invitation to Bid shall be submitted in writing to Shelby Lesane, Procurement Advisor, by e-mail to shelby.lesane@faypwc.com, no later than <u>5:00 p.m.</u>, **Monday February 14, 2022.**
- 12. Bidders are expressly prohibited from contacting any PWC official or employee associated with this Invitation to Bid, **except as noted above**. Violation of this provision is grounds for the immediate disqualification of the bidder.
- 13. All changes and clarifications to the Material Specifications and bid documents will be issued in writing in the form of an addendum. No verbal changes or clarifications will be binding upon PWC.
- 14. The term of this contract shall be for a 3-year period from date of execution of the contract. Subject to mutual agreement, the parties may extend the contract for 3 additional periods of one year each. All prices quoted in the bid shall be fixed for purchase orders that PWC issues to the awarded bidder during at least the first 90 days of the contract term. If the bidder proposes to implement variable pricing of goods for which PWC issues purchase orders thereafter solely to reflect any price escalation or de-escalation of the materials used by bidder to manufacture the goods during the remainder of the initial 3-year term and/or any renewal period(s), the bidder shall, in its bid, specify the day of the contract on which variable pricing is to begin (for example Day 91) and provide any one of the following:
 - (a) a single identifiable, verifiable, relevant, and nationally recognized pricing index and the good(s) to which the index will apply (such as "all goods" or cables only");
 - (b) a single weighted basket of specific, identifiable, verifiable, relevant, and nationally recognized indices, the weight to be given to each index, and the good(s) to which the basket will apply; or
 - (c) multiply individual identifiable, verifiable, relevant, and nationally recognized pricing indices and /or weighted baskets of specific, identifiable, verifiable, relevant nationally recognized indices and the good(s) to which each such index or basket will apply.
- 15. <u>Forecast Quantities:</u> PWC will submit to Supplier a nonbinding, forecast for cable and conductor for the current and subsequent years. All forecasts provided by PWC shall not be binding in any way and PWC may modify and such forecast at any time. Supplier represents and warrants that is has the capacity and expertise necessary to manufacture and deliver to PWC the initial forecasted quantity of cable conductor. Supplier and PWC will work together regarding any changes in forecast quantities from the initially forecasted amount. Supplier will have the right to review each forecast and if it cannot meet the forecast Supplier will notify PWC within a

reasonable commercial time and the parties will agree on a revised forecast. PWC and Supplier will work together to develop mutually agreeable release dates, considering PWC's needs and the Supplier's manufacturing schedule.

- 16. <u>Lowest Cost:</u> Supplier warrants and represents to PWC that the prices specified in the contract, as amended from time to time, are and will be as low as the prices at which Supplier is currently selling or will sell or currently intending to sell equivalent cable conductor or similar products in the same or similar quantities, If during the Term, Supplier reduces the prices of the structures, in part or in whole, Supplier will: (i) promptly notify PWC in writing of such reduction; and (ii) apply an equivalent reduction in price to all such products ordered by PWC which have not been previously shipped and invoiced at the time of such reduction. The prices thereafter be adjusted to reject such reduction for the balance of the term or until the prices are further adjusted pursuant to the contract.
- 17. <u>Changes to Purchase Order:</u> All quantities ordered by PWC may be revised as requirements change. PWC may at any time make changes in delivery dates, shipping instructions, quantities ordered, or other terms of the purchase order. PWC will confirm such changes in writing, and Supplier will advise PWC in writing if the changes will result in changes to delivery schedules or other changes.
- 18. <u>Termination for Cause</u>: The occurrence of any one or more of the following events will justify termination for cause:
 - 1. Supplier disregard of Laws or Regulations of any public body having jurisdiction.
 - 2. Supplier disregard of the authority of PWC; or
 - 3. Supplier violation in any substantial way of any provisions of these Contract Documents.

Supplier shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or from such termination.

- 19. <u>Termination for Convenience</u>: PWC shall be entitled to terminate the parties' Agreement for PWC's convenience without further liability upon 30 days prior written notice to Supplier, and PWC shall be obligated to pay Supplier for the materials ordered and delivered before expiration of the notice period.
- 20. <u>Indemnity:</u> Supplier shall indemnify, defend, and hold harmless PWC and its Commissioners, officers, employees, agents, and representatives (collectively, "Indemnities") from and against all claims, actions, liabilities, damages, losses, costs, and expenses (including, without limitation, injury to or death of any persons and damages to property, economic and consequential damages and attorney's fees) asserted by one or more third parties against one or more of the Indemnitees arising out of negligent or willful acts, violations of laws, infringement

of any patent, trademark, trade secret, copyright, or other intellectual property right of a third party, or omissions or breach of the obligations set forth in the parties 'agreement by Supplier or any of its employees, agents, representatives, and subcontractors. Supplier's obligation to indemnify, defend, and hold harmless the Indemnitees shall survive the termination of the parties; and shall include the duty to pay for the reasonable attorneys' fees and costs associated with defending the Indemnitee(s) by the legal counsel of the Indemnitee's choice.

- 21 <u>Dispute Resolution:</u> This Agreement shall be governed by the laws of the State of North Carolina without the application of the laws of any other state. The exclusive venue for all mediations and litigation and any other legal proceedings regarding the parties' agreement shall be the State and Federal Courts serving Cumberland County, North Carolina, and Supplier consents to personal jurisdiction in such courts. Supplier irrevocably waives, to the fullest extentpermitted by law, any objection that it may now or hereafter have to the laying of the venue of any such suit, action, or proceeding brought in any such court serving Cumberland County has been brought in a inconvenient forum.
- 22 Compliance: Supplier hereby acknowledges that "E-Verify" is the federal E-Verify program operated by the US Department of Homeland Security and other federal agencies which is used to verify the work authorization of newly hired employees pursuant to federal law and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes. Supplier further acknowledges that all employers, as defined by Article 2, Chapter 64 of the North Carolina General Statutes, must use E-Verify and after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with N.C.G.S. §64-26(a). Supplier hereby pledges, attests and warrants through execution of this Agreement that Supplier complies with the requirements of Article 2, Chapter 64 of the North Carolina General Statutes and further pledges, attests and warrants that all subcontractors currently employed by or subsequently hired by Supplier shall comply with all E-Verify requirements. Failure to comply with the above requirements shall be considered a breach of this Agreement. Supplier hereby further acknowledges that the execution and delivery of this Agreement constitutes Supplier's certification to PWC and to the North Carolina State Treasurerthat, as of the date of the Effective Date of this Agreement, Contractor is not listed on (a) the Final Divestment List created and maintained by the North Carolina Department of State Treasurer pursuant to the Iran Divestment Act of 2015, Chapter 147, Article 6E of the General Statutes of North Carolina (the "Iran Divestment Act"); or (b) the list of companies that the North Carolina State Treasurer determines to be engaged in a boycott of Israel in accordance with Article 6G of Chapter 147 of the General Statutes of North Carolina. Contractor represents and warrants to Commission that Contractor, and all persons and entities owning (directly or indirectly) an ownership interest in it: (i) are not, and will not become, a person or entity with whom a party is restricted from doing business with under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including, but not limited to, those named on OFAC's Specially Designated and Blocked Persons list) or under any statute, executive order (including, but not limited to, the September 24, 2001, Executive Order 13224 Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action; and (ii) are not knowingly engaged in, and will not knowingly engage in, any dealings or transactions or be otherwise associated with such persons or entities described in clause (i) above. Contractor also shall at all times during the term of this Agreement comply with Executive Order 11246, including but not limited to the Equal Opportunity Clause requirements set forth in 41 C.F.R. § 60-1.4. Contractor shall abide by the requirements of 41 CFR 60-300.5(a) and 60-741.5(a) prohibiting discrimination against qualified individuals on the basis of protected veteran status or disability and requiring affirmative action by covered prime contractors and subcontractors to

employ and advance in employment qualified protected veterans and individuals with disabilities.

- 23. Each bidder should demonstrate its efforts, that it will be able to provide, the supply of product as required during the contract period. A vendor statement that sufficient material and production capacity is available from the producer must be enclosed with the bid to demonstrate the Supplier's approach to meet the forecasted volume of product as contained in the bid package.
- 24. **Insurance:** Supplier shall maintain during the provision of Services and for at least three (3) years thereafter commercial general liability insurance with a combined single limit of liability of not less than \$1,000,000 for each occurrence of bodily injury and/or property damage and an annual aggregate of liability of not less than \$2,000,000 for bodily injury and/or property damage, and annual aggregate of liability of not less than \$2,000,000 for Completed Operations and Products certificate of insurance confirming such coverage, and Supplier shall direct its insurers to provide to PWC annually certificates confirming such coverage during the coverage period.
- 25. **Assignment:** The Supplier may not assign this agreement or any of its rights, duties or obligations hereunder, or subcontract any of the services to be performed hereunder, without the prior written consent of the PWC.

1-065-090 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CONDUCTOR, 954 MCM, AAC, H.D.

Description:

Bare 954 kcmil, 37-strand, Class AA, EC 1350-H19 hard drawn, aluminum conductor. Code word: MAGNOLIA.

Performance Standards:

Minimum ultimate tensile strength: 16,000 lbs.

Outside Diameter: 1.124"

Ampacity: 700 amps, 75'C rise over 25'C; sun, no wind

AC Resistance per 1000'@ 20'C: .0191 ohms

Material: Aluminum alloy 1350

ASTM B-231: Aluminum Conductors, Concentric Lay Standard ASTM B-230: Aluminum Wire 1350-H19 for Electrical Purposes

Delivery Standards:

To be shipped on non-returnable reels with steel-bushed arbor holes, each reel containing approximately 3700 lbs. (4130") of conductor. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	MAGNOLIA
PRYSMIAN/GENERAL CABLE	MAGNOLIA
NEXANS	MAGNOLIA
CME	MAGNOLIA
NEHRING	MAGNOLIA

Note: Catalog ir	nformation is	shown for	reference	use only.	Supplier is	responsible for
conforming to s	pecifications	as stated.				

Specification reviewed by:	
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1-065-260

Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, TRIPLEX, #2 AL

Description:

Aluminum triplex cable assembly consisting of two 0.45" cross-linked polyethylene covered #2 AWG ?-strand EC aluminum conductors and a bare #2 aluminum alloy neutral. Preference is for 6201 with 5005 as an alternate. Stranded covered conductors will be separately identified throughout cable length and will be permanently marked with size, manufacturer, and year. Code word: SHRIMP

Performance Standards:

Ampacity: 105 amps (sun, no wind; 90°C conductor, 40°C ambient)

Insulating level: 600 volts ac

Breaking Strength: 2150 lbs. minimum (neutral)

Delivery Standards:

To be shipped in 1800' lengths wound on non-returnable wooden reels. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	SHRIMP-XLP
PRYSMIAN/GENERAL CABLE	SHRIMP-XLP
NEXANS	SHRIMP-XLP
CME	SHRIMP-XLP
NEHRING	SHRIMP-XLP

Specification reviewed by:	

1-065-265 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, TRIPLEX, #6 AL

Description:

Aluminum Triplex cable assembly consisting of two 0.45 inch cross-linked polyethylene covered #6 AWG 7-strand EC aluminum conductors and a bare #6 aluminum alloy neutral. Preference is for 6201 with 5005 as an alternate. Stranded covered phase conductors will be separately identified throughout cable length and will be permanently marked with size, manufacturer and year. Code Word: HIPPA

Performance Standards:

Ampacity: 60 Amps (Sun, No wind; 90 C Conductor, 40 C Ambient)

Insulating level: 600 Volts AC

Breaking Strength: 1110 Lbs. Minimum (neutral)

Delivery Standards:

To be shipped in 2200' lengths wound on non-returnable wooded reels. Cable shall be shipped in an upright **vertical** position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	HIPPA-XLP
PRYSMIAN/GENERAL CABLE	HIPPA-XLP
NEXANS	HIPPA-XLP
CME	HIPPA-XLP
NEHRING	HIPPA-XLP

Specifications reviewed by:	

1-065-510 Revision Date: July 15, 2021 Revised By: Glenn Andersen

CABLE, 1/0 AL, EPR, 25KV, 1/C, CN

Description:

Underground primary distribution cable for installation in duct or direct burial rated 90°C, wet or dry, consisting of the following components:

Conductor: Solid, #1/0 AWG, EC-1350 aluminum alloy, ASTM B609

Conductor Shield: Minimum 12 mil, semi-conducting, extruded, compatible, strippable

Insulation: 260 mil, extruded, thermosetting ethylene propylene rubber (EPR)

Insulation Shield: Minimum 30 mil, free-stripping, semi-conducting **Neutral:** Bare copper concentric, full neutral (16 x #14 or equivalent) **Outer jacket:** 45 mil, linear low-density polyethylene (HMWPE/LLDPE)

Nominal outside diameter: 1.20 inches

Conductor shield, insulation and insulation shield to be applied in a continuous triple extrusion process; bare copper concentric neutral helically applied and uniformly spaced per !CEA S-94-649. Cable shall be identified with manufacturer's name, size and type of conductor, thickness & type of insulation, sequential footage, rated voltage and year of manufacture. Jacket shall be extruded with 3 red stripes. Each reel shall indicate beginning and ending footage on side.

Performance Standards:

Conductor: ASTM B-231

Cable shall meet or exceed requirements of ICEA Standard S-94-649 and AEIC CS8-07.

Delivery Standards:

Cable ends shall be sealed at both ends. Cable will be wound and shipped on 5,000 foot (+/-4%) wooden reels, covered/wrapped during shipment, with a maximum flange diameter of 72 inches and drum diameter as specified by NEMA WC26. The arbor hole shall be reinforced with a steel plate as shown in the photograph on Page 2 of this specification. Cable shall be shipped in an upright **vertical** position on the flanges. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

PWC Warehouse personnel (910-223-4355) will be notified of delivery 24 hours in advance. Deliveries shall be accompanied by certified test reports, partial discharge plots, and engineering information per above ICEA Standards.

Types Accepted:

Manufacturer OKONITE PRYSMIAN KERITE *Product* 161-23-4069

Note - Catalog numbers are shown for reference use only. Supplier is responsible for conforming to the above specifications.

Chacification	reviewed by:		
Specification	i reviewed by:		

1-065-522 Revision Date: July 15, 2021 Revised By: Glenn Andersen

CABLE, 750 MCM AL, EPR, 25KV, 1/C, CN

Description:

Underground primary distribution cable for installation in duct or direct burial rated 90°C, wet or dry, consisting of the following components:

Conductor: 750 kcmil, EC-1350 aluminum alloy, ASTM B-231, 61 strand, Class B, strand-filled **Conductor Shield:** Minimum 20 mil, semi-conducting, extruded, compatible, strippable

Insulation: 260 mil, extruded, thermosetting ethylene propylene rubber (EPR)

Insulation Shield: Minimum 40 mil, free-stripping, semi-conducting **Neutral:** Bare copper concentric, one-third neutral (15 x #10 or equivalent) **Outer jacket:** 70 mil, linear low-density polyethylene (HMWPE/LLDPE)

Nominal outside diameter: 2.08 inches

Conductor shield, insulation and insulation shield to be applied in a continuous triple extrusion process; bare copper concentric neutral helically applied and uniformly spaced per ICEA S-94-649. Cable shall be identified with manufacturer's name, size and type of conductor, thickness & type of insulation, sequential footage, rated voltage and year of manufacture. Jacket shall be extruded with 3 red stripes. Each reel shall indicate beginning and ending footage on side.

Performance Standards:

Conductor: ASTM B-231

Cable shall meet or exceed requirements of ICEA Standard S-94-649 and AEIC CSB-07.

Delivery Standards:

Cable ends will be sealed at both ends. Cable will be wound and shipped on 1,500' (+/- 4%) wooden reels, covered/wrapped during shipment, with a maximum flange diameter of 72 inches and drum diameter as specified by NEMA WC26. The arbor hole shall be reinforced with a steel plate as shown in the photograph on Page 2 of this specification. Cable shall be shipped in an upright **vertical** position on the flanges. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

PWC Warehouse personnel (910-223-4355) will be notified of delivery 24 hours in advance. Deliveries shall be accompanied by certified test reports, partial discharge plots, and engineering information per above ICEA Standards.

Types Accepted:

ManufacturerProductOKONITE162-23-4096PRYSMIANKERITE

Note - Catalog numbers are shown for reference use only. Supplier is responsible for conforming to the above specifications.

1-065-580 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, URD TRIPLEX, 4/0 AL

Description:

Three-conductor triplexed cable assembly, 600 volts, consisting of two #4/0 AWG 19-strand 1350-H19 aluminum identified phase conductors and one #2/0 AWG 19-strand 1350-H19 aluminum neutral conductor, all covered by an abrasion-resistant 0.080" cross-linked polyethylene rated at 90°C, wet or dry locations, with a permanent yellow stripe neutral identifier per ICEA S-81-570 Part 4. Stranded covered phase conductors shall be separately identified throughout cable length and shall be permanently marked with size, manufacturer, sequential footage, year, and phase.

Each reel shall permanently show the beginning and ending footage and the reel tare weight on the side of the reel (ideally on a metal tag). Code word: SWEETBRIAR.

Performance Standards

General performance requirements per ICEA S-81-570 Parts 3 and 4 and qualification

tests per ICEA S-81-570 Part 6 as follows:

Sharp Impact Test: 10 inch-pounds minimum

Blunt Impact Test: 40 inch-pounds minimum

Abrasion Resistance Test: 200 cycles minimum

Crush Test: 650 lbs. minimum Puncture: 50 lbs. minimum

Scoring: 200 cycles minimum average

Delivery Standards:

Wound and shipped on 1000' wood reels with a 54" maximum flange height and a minimum drum diameter to meet NEMA WC26. Cable shall be shipped in an upright **vertical** position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

ManufacturerProductSOUTHWIRESWEETBRIARPRYSMIAN/GENERAL CABLESWEETBRIAR/SUPERTUF/ST-XLSNEXANSSWEETBRIAR/XLPYS-ARCMESWEETBRIAR/XLPSUPERNEHRINGSWEETBRIAR

Sı	pecificatio	on reviewed b	y:	

1-065-585

Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, URD TRIPLEX, 2 AL

Description:

Three-conductor triplexed cable assembly, 600 volts, consisting of two #2 AWG 7-strand 1350-H19 aluminum phase conductors and one #2 AWG 7-strand 1350-H19 aluminum neutral conductor, all covered by an abrasion-resistant 0.060" cross-linked polyethylene rated at 90°C, wet or dry locations, with a permanent yellow stripe neutral identifier per ICEA S-81-570 Part 4. Two stranded covered phase conductors shall be individually identified throughout cable length and shall be marked with size, manufacturer, sequential footage, year, and phase.

Each reel shall permanently show the beginning and ending footage and the reel tare weight on the side of the reel (ideally on a metal tag). Code word RAMAPO.

Performance Standards

General performance requirements per ICEA S-81-570 Part 3 and 4 and qualification tests per

ICEA S-81-570 Part 6 as follows:

Sharp Impact Test: 10 inch-pounds minimum
Blunt Impact Test: 40 inch-pounds minimum
Abrasion Resistance Test: 200 cycles minimum

Crush Test: 650 lbs. minimum **Puncture:** 50 lbs. minimum

Scoring: 200 cycles minimum average

Delivery Standards:

Wound and shipped on 1000' non-returnable reels. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	RAMAPO
PRYSMIAN/GENERAL CABLE	RAMAPO
NEXANS	RAMAPO
CME	RAMAPO
NEHRING	RAMAPO

Note:	Catalog	information is	shown f	for	reference	use	only.	Supplier	is respons	sible	for
confor	ming to	specifications	s as state	ed.							

1-065-590 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, URD TRIPLEX, #6 AL

Description:

Three-conductor, triplexed cable assembly, 600 volts, consisting of two #6 AWG, ?-strand 1350-H19 aluminum phase conductors and one #6 AWG, ?-strand 1350-H19 aluminum neutral conductor, all covered by an abrasion-resistant 0.060" cross-linked polyethylene rated at 90'C, wet or dry locations, with a permanent yellow stripe neutral identifier per ICEA S-81-570 Part 4. Insulated phase conductors shall be separately identified throughout cable length and shall be permanently marked with size, manufacturer, sequential footage, year, and phase.

Each reel shall permanently show the beginning and ending footage and the reel tare weight on the side of the reel (ideally on a metal tag). Code word ERSKINE.

Performance Standards

General performance requirements per ICEA S-81-570 Parts 3 and 4 and qualification tests per

ICEA S-81-570 Part 6 as follows:

Sharp Impact Test: 10 inch-pounds minimum
Blunt Impact Test: 40 inch-pounds minimum
Abrasion Resistance Test: 200 cycles minimum

Crush Test: 650 lbs. minimum **Puncture:** 50 lbs. minimum

Scoring: 200 cycles minimum average

Delivery Standards:

Wound and shipped on 1000' non-returnable reels. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	ERSKINE
PRYSMIAN/GENERAL CABLE	ERSKINE
NEXANS	ERSKINE
CME	ERSKINE
NEHRING	ERSKINE

Note:	Catalog	information	is showr	ı for	reference	use only.	Supplier is r	esponsible	to
Speci	fication i	reviewed by	/:						

conforming to specifications as state while Works Commission Fayetteville, NC Electric Systems Division **Material Specification**

Specification reviewed by:

1-065-606 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CABLE, URD TRIPLEX, 350 MCM, AL

Description:

Three-conductor triplexed cable assembly, 600 volts, consisting of two 350 MCM 19-strand 1350-H19 aluminum identified phase conductors and one #4/0 AWG 19-strand 1350-H19 aluminum neutral conductor, all covered by an abrasion-resistant 0.080" cross-linked polyethylene rated at 90°C, wet or dry locations, with a permanent yellow stripe neutral identifier per ICEA S-81-570 Part 4. Stranded covered phase conductors shall be separately identified throughout cable length and shall be permanently marked with size, manufacturer, sequential footage, year, and phase.

Each reel shall permanently show the beginning and ending footage and the reel tare weight on the side of the reel (ideally on a metal tag). Code word: WESLEYAN

Performance Standards

General performance requirements per ICEA S-81-570 Parts 3 and 4 and qualification

tests per ICEA S-81-570 Part 6 as follows:

Sharp Impact Test: 10 inch-pounds minimum

Blunt Impact Test: 40 inch-pounds minimum

Abrasion Resistance Test: 200 cycles minimum

Crush Test: 650 lbs. minimum Puncture: 50 lbs. minimum

Scoring: 200 cycles minimum average

Delivery Standards:

Wound and shipped on 1000' wood reels with a 54" maximum flange height and a minimum drum diameter to meet NEMA WC26. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	WESLEYAN
PRYSMIAN/GENERAL CABLE	WESLEYAN
NEXANS	WESLEYAN
CME	WESLEYAN
NEHRING	WESLEYAN

Note: Catalog information is shown for reference	use only. Supplier is responsible for
conforming to specifications as stated.	

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Shacification	reviewed by:		
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1-065-100 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CONDUCTOR, 336 MCM ACSR 18/1

Description:

Bare aluminum 336.4 kcmil 18/1-strand conductor; single layer of 18 strands of 0.1367" hard-drawn EC aluminum stranded with a single high-strength 0.1367" Class A (ASTM B245) zinc coated steel core. Code Word MERLIN.

Performance Standards:

Conformance to ASTM B232

Aluminum Conductivity: 61% Steel Conductivity: 8%

Minimum ultimate tensile strength: 8,500 lbs.

Outside Diameter: 0.684"

Ampacity: 355 Amperes, 75°C rise over 25°C; sun, no wind

AC Resistance per mile @ 20°C: 0.3298 ohms

Delivery Standards:

Conductor to be wound and shipped on wooden non-returnable reels, each containing approximately 2080 lbs. (5695') of conductor. Cable shall be shipped in an upright <u>vertical</u> position. Any cable laying flat on the flanges will be rejected. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	MERLIN
PRYSMIAN/GENERAL CABLE	MERLIN
NEXANS	MERLIN
CME	MERLIN
NEHRING	MERLIN

Specification reviewed by:	

1-065-110 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CONDUCTOR, 4/0 AAAC 6201

Description:

Bare aluminum 7-strand (Class AA - 6 around 1) all aluminum alloy 6201-T81 conductor #4/0 AWG (246.9 kcmil) equivalent; Code Word ALLIANCE.

Performance Standards:

Minimum ultimate tensile strength: 8,400 lbs.

Outside Diameter: 0.563"

Ampacity: 260 amps, 75°C rise over 25°C; sun, no wind

AC Resistance per 1000' @ 20°C: .0832 ohms

Delivery Standards:

Conductor to be wound and shipped on wooden non-returnable reels, each containing approximately 1400 lbs. (6040') of conductor. Cable shall be shipped in an upright <u>vertical</u> position. Any cable laying flat on the flanges will be rejected. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	ALLIANCE
PRYSMIAN/GENERAL CABLE	ALLIANCE
NEXANS	ALLIANCE
CME	ALLIANCE
NEHRING	ALLIANCE

Specification reviewed by:	

1-065-120 Revision Date: April 30, 2020 Revised By: Glenn Andersen

CONDUCTOR, 1/0 AAAC 6201, HAND COIL

Description:

Bare aluminum 7-strand (Class AA - 6 around 1) all aluminum alloy 6201-T81 conductor #1/0 AWG (123.3 kcmil) equivalent; Code Word AZUSA.

Performance Standards:

Minimum ultimate tensile strength: 4,000 lbs.

Outside Diameter: 0.398"

Ampacity: 160 amps, 75°C rise over 25°C; sun, no wind

AC Resistance per 1000' @ 20°C: .166 ohms

Delivery Standards:

Conductor to be wound and shipped in hand coils, each containing approximately 200 lbs. (1,730') of conductor. Coils will be palletized and shipped for forklift access.

Types Accepted:

Manufacturer	Product
ALCOA	AZUSA
ALCAN	AZUSA
KAISER	AZUSA
SOUTHWIRE	AZUSA
REYNOLDS	AZUSA
CME	AZUSA

Specification reviewed by:	
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1-065-130 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CONDUCTOR, 1/0 AAAC 6201

Description:

Bare aluminum 7-strand (Class AA - 6 around 1) all aluminum alloy 6201-T81 conductor #1/0 AWG (123.3 kcmil) equivalent; Code Word AZUSA.

Performance Standards:

Minimum ultimate tensile strength: 4,000 lbs.

Outside Diameter: 0.398"

Ampacity: 160 amps, 75°C rise over 25°C; sun, no wind

AC Resistance per 1000' @ 20°C: .166 ohms

Delivery Standards:

Conductor to be wound and shipped on wooden non-returnable reels, each containing approximately 1400 lbs. (12,100') of conductor. Cable shall be shipped in an upright <u>vertical</u> position on the flanges. Reels shall be secured to a 4-way pallet for unloading and storage. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	AZUSA
PRYSMIAN/GENERAL CABLE	AZUSA
NEXANS	AZUSA
CME	AZUSA
NEHRING	AZUSA

Specification reviewed by:	
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1-065-140 Revision Date: April 30, 2020 Revised By: Glenn Andersen

CONDUCTOR, #2 AAAC 6201

Description:

Bare aluminum 7-strand (Class AA - 6 around 1) all aluminum alloy 6201-T81 conductor #2 (77.47 kcmil) equivalent; Code Word AMES.

Performance Standards:

Minimum ultimate tensile strength: 2,775 lbs.

Outside Diameter: 0.316"

Ampacity: 115 amps, 75°C rise over 25°C; sun, no wind

AC Resistance per 1000' @ 20°C: 0.265 ohms

Delivery Standards:

Conductor to be wound and shipped in coils, each containing approximately 200 lbs. (2,750') of conductor with an inside diameter between 19" and 21". Coils will be palletized and shipped for forklift access.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	AMES
GENERAL CABLE	AMES
NEXANS	AMES
CME	AMES
NEHRING	AMES

Specification reviewed by:	
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1-065-085 Revision Date: May 4, 2020 Revised By: Glenn Andersen

CONDUCTOR, 477 MCM, AAC, H.D.

Description:

Bare 447 kcmil, 19-strand, Class AA, EC1350-H19 hard drawn, aluminum conductor. Code word: COSMOS.

Performance Standards:

Minimum ultimate tensile strength: 8,000 lbs.

Outside Diameter: 0.793"

Ampacity: 440 amps, 75°C rise over 25°C; sun, no wind

AC Resistance per 1000' @ 25°C: .0373 ohms

Material: Aluminum alloy 1350

ASTM B-231: Aluminum Conductors, Concentric Lay Standard ASTM B-230: Aluminum Wire 1350-H19 for Electrical Purposes

Delivery Standards:

To be shipped on non-returnable reels, each reel containing approximately 1900 lbs. (4525') of conductor. Cable shall be shipped in an upright <u>vertical</u> position. Any cable laying flat on the flanges will be rejected. It is preferred that cable should be delivered on open bed trailers suitable for unloading from either side.

Types Accepted:

Manufacturer	Product
SOUTHWIRE	COSMOS
PRYSMIAN/GENERAL CABLE	COSMOS
NEXANS	COSMOS
CME	COSMOS
NEHRING	COSMOS

Specification reviewed by:	

BID PROPOSAL- (ATTACHMENT A)

(Please read information listed below carefully.)

Listed below are the items of Cable / Conductor currently in PWC inventory which will be considered a part of this contract. Additionally, listed below are the projected Cable / Conductor quantities for the first year of the contract. Delivery shall be F.O.B. Public Works Commission Warehouse Facility, 1097Public Works Drive, Fayetteville, NC 28301.

Please note that Bidder shall list a price for any item or items below or indicate **No BID** for items that a bid price is not provided. PWC reserves the right to increase or decrease the quantities shown during the period of performance.

Bidder shall provide shipping/delivery costs if not included in the unit cost.

	CABLE & CONDUCTOR PROPOSAL							
Item #	PWC Stock #	Description	UOM	Footage per Reel	Total Reels	Avg Unit Cost Footag	Contract ge	TTL Contract Cost
1	1065090	CONDUCTOR, 954 MCM AAC H.D.	FT	4130	5		20650	\$
2	1065260	CABLE, TRIPLEX, #2 AL	FT	1800	17		30600	\$
3	1065265	CABLE, TRIPLEX, #6 AL	FT	2200	17		37400	\$
4	1065510	CABLE, 1/0 ALCN EPR 25KV, 1/C	FT	5000	36		180000	\$
5	1065522	CABLE, 750 MCM AL EPR 25KV, 1/C, CN	FT	1500	33		49500	\$
6	1065580	CABLE, URD TRIPLEX, 4/0 AL	FT	1000	33		33000	\$
7	1065585	CABLE, URD TRIPLEX, 2 AL	FT	1000	7		7000	\$
8	1065590	CABLE, URD TRIPLEX, 6 AL	FT	1000	46		46000	\$
9	1065606	CABLE, URD TRIPLEX, 350 MCM, AL	FT	1000	12		12000	\$
10	1065100	CONDUCTOR, 336 MCM ACSR 18/1	FT	5695	3		17085	\$
11	1065110	CONDUCTOR, 4/0 AAAC 6201	FT	6040	3		18120	\$
12	1065120	CONDUCTOR, 1/0 AAAC 6201, HAND COIL	FT	1730	1		1730	\$ -
13	1065130	CONDUCTOR, 1/0 AAAC 6201	FT	12100	1		12100	\$
14	1065140	CONDUCTOR, #2 AAAC 6201	FT	2750	6		16500	\$
15	1065085	CONDUCTOR, 477 MCM, AAC H.D.	FT	4525	6		27150	\$

Item # 1 1065090 CONDUCTOR, 954 MCM AAC H.D.

Manufacturer:	
Product Description:	
Exception to Specifications:	
Warranty:	
	BIDDER INFORMATION
Name of Company	
Phone No.	Fax No.
	d Business EnterpriseYesNo
Bid Submitted By:	
	(Name Printed Out)
	(Signature)
Title:	
Date:	

Item # 2 1065260 CABLE, TRIPLEX, #2 AL.

Manufacturer:	
Product Description:	
Exception to Specifications:	
Warranty:	
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Delivery:	
BIDDER INFORMATION	
Name of Company	
Address	
Phone NoFax No	
E-Mail Address	
Federal I.D. No	
SDBE, Minority or Woman Owned Business EnterpriseYesNo	
Bid Submitted By:	
(Name Printed Out)	
(Signature)	-
(Signature)	
Title:	
Date:	

Item # 3 1065265 CABLE, TRIPLEX, #6 AL

Manufacturer:	
Product Description:	
Exception to Specifications:	
Warranty:	
Delivery:	
BIDDER INFORMATION	
Name of Company	
Address	
Phone NoFax No	
E-Mail Address	
Federal I.D. No.	
SDBE, Minority or Woman Owned Business EnterpriseYe	
Bid Submitted By:	
(Name Printed Out)	
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Item # 4 1065510 CABLE, 1/0 ALCN EPR 25KV, 1/C

Manufacturer:	
Product Description:	
Exception to Specifications:	
Warranty:	
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Delivery:	
BIDDER INFORMATION	
Name of Company	
Address	
Phone NoFax No	
E-Mail Address	
Federal I.D. No	
SDBE, Minority or Woman Owned Business EnterpriseYesNo	
Bid Submitted By:	
(Name Printed Out)	
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Title:	
Date:	

Item # 5 1065522 CABLE, 750 MCM AL EPR 25KV, 1/C, CN

Manufacturer:
Product Description:
Exception to Specifications:
Warranty:
Delivery:
BIDDER INFORMATION
Name of Company
Address
Phone NoFax No
E-Mail Address
Federal I.D. No
SDBE, Minority or Woman Owned Business EnterpriseYesNo
Bid Submitted By:
(Name Printed Out)
(Signature)
Title:
Date:

Item # 6 1065580 CABLE, URD TRIPLEX, 4/0 AL

Manufacturer:
Product Description:
Exception to Specifications:
Warranty:
Delivery:
BIDDER INFORMATION
Name of Company
Address
Phone NoFax No
E-Mail Address_
Federal I.D. No.
SDBE, Minority or Woman Owned Business EnterpriseYesNo
Bid Submitted By:
(Name Printed Out)
(Signature)
Title:
Date:

Item # 7 1065585 CABLE, URD TRIPLEX, 2 AL

Manufacturer:			
Product Description:			
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Name of Company			
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Item # 8 1065590 CABLE, URD TRIPLEX, 6 AL

Manufacturer:	
Product Description:	
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Item # 9 1065606 CABLE, URD TRIPLEX, 350 MCM, AL

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DBE, Minority or Woman Owned Business EnterpriseYesNo	
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Item # 10 1065100 CONDUCTOR, 336 MCM ACSR 18/1

Manufacturer:
Product Description:
Exception to Specifications:
Warranty:
Delivery:
BIDDER INFORMATION
Name of Company
Address
Phone NoFax No
E-Mail Address_
Federal I.D. No
SDBE, Minority or Woman Owned Business EnterpriseYesNo
Bid Submitted By:
(Name Printed Out)
(Signature)
Title:
Date:

Item # 11 1065110 CONDUCTOR, 4/0 AAAC 6201

Manufacturer:	
Product Description:	
Trouble Description.	
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Warranty:	
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Name of Company	
Address	
Phone No.	
E-Mail Address	
Federal I.D. No	
SDBE, Minority or Woman Owned Business Enterpri	seNo
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	(Signature)
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Date:	

Item # 12 1065120 CONDUCTOR, 1/0 AAAC 6201, HAND COIL

Manufacturer:	
Product Description:	
Trouble Description.	
Exception to Specifications:	
Warranty:	
Delivery:	
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Name of Company	
Address	
Phone No.	
E-Mail Address	
Federal I.D. No	
SDBE, Minority or Woman Owned Business Enterpri	seNo
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Item # 13 1065130 CONDUCTOR, 1/0 AAAC 6201

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Item # 14 1065140 CONDUCTOR, #2 AAAC 6201

Manufacturer:	
Product Description:	
Exception to Specifications:	
Warranty:	
Delivery:	
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Name of Company	
Address	
	Fax No.
E-Mail Address	
Federal I.D. No	
SDBE, Minority or Woman Owned Business	EnterpriseNo
Bid Submitted By:	
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Item # 15 1065085 CONDUCTOR, 477 MCM, AAC H.D.

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Mail Address	
deral I.D. No	
OBE, Minority or Woman Owned Business EnterpriseYesNo)
d Submitted By:(Name Printed Out)	
(Signature)	
Title:	
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Date:	