RESOLUTION AWARDING BID FOR 192ND STREET AND HIGHWAY 370 TRAFFIC SIGNAL,
PROJECT C-77 (17-18)
FOR THE PUBLIC WORKS DEPARTMENT

WHEREAS, pursuant to Neb. Rev. Stat. §23-104(6), the County has the power to do all acts in relation to the concerns of the County necessary to the exercise of its corporate powers; and,

WHEREAS, pursuant to Neb. Rev. Stat. §23-103, the powers of the County as a body are exercised by the County Board; and,

WHEREAS, bids for 192nd Street and Highway 370 Traffic Signal, Project C-77 (17-18) have been solicited, made, opened and reviewed pursuant to applicable Nebraska State Statutes; and,

WHEREAS, based on those proceedings, and after a public hearing, this Board has duly deliberated and considered the bids received; and,

WHEREAS, this Board desires to proceed forthwith in order to expedite and facilitate service to the citizens of Sarpy County.

NOW, THEREFORE, be it resolved by this Board of County Commissioners that:

1. The low bid of Watts Electric Company for the 192nd Street and Highway 370 Traffic Signal, Project C-77 (17-18) for Three Hundred and Ten Thousand Sixty Nine Dollars and Forty Three Cents ($310,069.43) is accepted, ratified, and confirmed.

2. This Board's Chairman, Clerk, and Attorney are hereby authorized and directed to execute such ancillary documents as may be required to evidence the contract and take any and all steps necessary or required in order to carry out the terms of such contract after said documents have been reviewed by the Attorney, Fiscal Administrator, and County Administrator.

The above resolution was approved by a vote of the Sarpy County Board of Commissioners at a public meeting duly held in accordance with applicable law on the 22nd day of May, 2018.

Sarpy County Board Chairman

Sarpy County Clerk

ATTEST:

[Signature]
MEMO

To: Sarpy County Board of Commissioners

From: Beth Garber

Re: Award Bid – Traffic Signal at 192nd St. and Highway 370

On May 3, 2018, three (3) bids were opened for the 192nd Street and Highway 370 Traffic Signal, Project C-77 (17-18) for the Public Works Department. After review, it is recommended the bid be awarded to the low bidder, Watts Electric Company for $310,069.43. The Engineer’s estimate for the project was $267,803.13 and the bids ranged from the low bid to $380,319.05. The estimated contract performance time is 75 days.

Please contact me with any questions at bgarber@sarpy.com.

May 16, 2018

Beth Garber

cc: Dan Hoins
Scott Bovick
Brian Hanson
Deb Houghtaling
Denny Wilson
MEMORANDUM

To: Sarpy County Board of Commissioners
From: Dennis L. Wilson, P.E., PhD, County Engineer
Subject: C-77(17-18) 192nd St and Hwy 370 Traffic Signal
Date: May 15, 2018

On May 3, 2018 @ 10:00am three(3) bids were opened at the Sarpy County Administration Conference Room for the above referenced project.

The Sarpy County Engineer recommends the bid be awarded to Watts Electric Company in the amount of $310,069.43. This bid is 14% over the engineers estimate. Sarpy County Public Works is confident this bid is reasonable, and that market conditions may not result in better bids if the bids were rejected and bid at a later date.

The Engineers Estimate: $267,049.82

That would equate to each entity paying and additional $14,356.48.

DLW/bjh
CONTRACT AGREEMENT

THIS CONTRACT is made and entered into by and between Sarpy County, Nebraska hereinafter called County, and Watts Electric Company hereinafter called Contractor.

In consideration of the following mutual agreements and covenants, it is understood and agreed by the parties hereto that:

1. The Contractor does hereby agree to undertake and construct Sarpy County Project C-77 (17-18), 192nd Street and Highway 370 Traffic Signal Installation. Also referred to hereinafter as work, in accordance with terms and provisions hereof and subject to the quality provisions in the accepted Proposal of Contractor for the sum of Three Hundred and Ten Thousand Sixty Nine Dollars and Forty Three Cents ($310,069.43) under penalty of Performance, Payment and Guarantee Bond.

2. The Contractor shall conform with the applicable plans and specifications, applicable Special Provisions and any applicable change order or addenda pertaining thereto or to this Contract, all of which by reference thereto are made a part hereof. Applicable notice to bidders, Instruction to bidders, Bid Proposal of Contractor, Resolution awarding this Contract, the Performance, Payment and Guarantee Bond and all proceedings by the governing body of the County relating to the aforesaid work are made a part hereto by reference thereto.

3. The County agrees to pay the Contractor in accordance with the provisions of the specifications, the accepted Proposal of the Contractor and the provisions of this Contract.

4. All provisions of each document and item referred to in Paragraph 2 above shall be strictly complied with the same as if rewritten herein, and in the event of conflict among the provisions of said documents, the provisions most favorable to the County shall govern, and substitution or change shall be made except upon written direction, the form of which shall be written “Change Order” of the County; and substitution or change shall in no manner be construed to release either party from any specified or implied obligation of this Contract except as specifically provided for in the Change Order.

5. The Contractor warrants that it has neither employed nor retained any company or person, other than bona fide employee working for Contractor to solicit or secure this Contract, and that Contractor has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission percentage, brokerage fee, gift or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, County shall have the right to annul this Contract without liability, or in its discretion, to deduct from the Contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

6. County and Contractor promise and agree to comply with all Federal and State laws and County ordinances, and such other rules and regulations as may apply to this Contract, including but not limited to: the Americans with Disabilities Act of 1990 (29 U.S.C.A. 12101, et seq.); the Rehabilitation Act of 1973 (29 U.S.C.A. 701, et seq.); and the Drug Free Workplace Act of 1988 (41 U.S.C.A. 701, et seq.). Furthermore, pursuant to Neb. Rev. Stat. 73-102 Reissue 1990), County and Contractor declare, promise, and warrant that they have and will continue to comply fully with the Title VI of the Civil Rights Act of 1964 as amended (42 U.S.C.A. 1985, et seq.); and the
Nebraska Fair Employment Practice Act, Neb. Rev. Stat. 48-1101, et seq., (Reissue 1993), in that there shall be no discrimination against any person who is employed in the performance of this Contract, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

7. The Contractor shall indemnify and save harmless Sarpy County, its officers, employees, agents and representatives from all claims, suits or actions of every kind and character made upon or brought against the said Sarpy County, its officers, employees, agents and representatives for on or account of any injuries or damages received or sustained by any party or parties by or from the acts or omissions of the said Contractor or its servants, agents, representatives and subcontractors, in doing the work herein contracted for or by or in consequence of any negligence in guarding the same or any improper material used in its construction or by or on account of any act or omission of said Contractor or its servants, agents, representatives and subcontractor or its servants, agents, representatives and subcontractors arising out of any manner connected with the performance of this Contract, and also from all claims or damage for infringement of any patent in fulfilling this Contract.

8. The Contractor agrees to comply with the residency verification requirements of Neb. Rev. Stat. §4-108 through §4-114. The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at www.das.state.ne.us.

2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor’s lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. Sect. 4-108.

9. **Insurance Requirements**

The Contractor shall not begin work under this Agreement until all insurance certificates have been filed with the Sarpy County Clerk.

The following insurance coverages shall be kept in force during the life of the Agreement and shall be primary with respect to any insurance or self-insurance programs covering the County, its commissioners/supervisors, officials, agents, representatives and employees. These insurance
coverages shall specifically state, or be endorsed to state, that thirty (30) days notice shall be
given to the County in the event of cancellation of, or material change in, any of the coverages.

a. **Worker’s Compensation and Employers Liability Insurance**

   The minimal acceptable limits shall be the statutory limits as required by the State of
   Nebraska for Coverage A, Workers’ Compensation and $500,000 each accident for
   Coverage B, Employers Liability.

b. **Commercial General Liability Insurance**

   Coverage should include broad form coverage written on a commercial general liability
   form and written on an occurrence basis. The coverage must protect against claims for
   damages resulting from bodily injury, including death, personal injury and property
   damage.

   The minimum acceptable limits of liability shall be $1,000,000 each occurrence. If the
   coverage contains a general aggregate, such limit shall not be less than $2,000,000. The
   products/completed operations limit shall not be less than $2,000,000. The County shall
   be named as an additional insured on the insurance coverage required under this
   section.

c. **Automobile Liability Insurance**

   Coverage shall be against claims for damages resulting from bodily injury, including death
   and property damage, which may arise from the operations of any owned, hired or non-
   owned automobile. The minimum acceptable limit of liability shall be $1,000,000
   Combined Single Limit for each accident. The County is to be named as an additional
   insured on the insurance coverage required under this section.

d. **Certificate of Insurance**

   The Contractor shall furnish the County with a certificate(s) of insurance evidencing the
   coverage required in this section. If the certificate(s) is shown to expire prior to
   completion of all the terms of this Agreement, the Contractor shall furnish a certificate(s)
   of insurance evidencing renewal of its coverage to the County. The County is to be
   included as an additional insured on the insurance coverage required under this section.

   The Contractor shall require each and every Subcontractor performing work under this
   Agreement to maintain the same coverages required of the Contractor in this Section,
   and upon the request of the County, shall furnish the County with a certificate(s) of
   insurance evidencing the Subcontractor’s insurance coverages required in this section.

e. **Property Insurance**

   During the term of the Contract all responsibility for maintenance of property insurance
   on the work remains solely with the Contractor, who shall, as a minimum requirement,
   obtain a builder’s “all risk” or equivalent policy form with sufficient limits to cover the
   total value of the Project, including all the cost of the material, equipment and/or
machinery involved under this Contract. This property insurance shall cover portions of the work and materials stored off-site, on-site and in transit.

f. Insurance Company

All insurance coverages herein required of the Contractor shall be written by an insurance company or companies transacting business as an admitted insurer in the State of Nebraska or under the Nebraska Surplus Lines Insurance Act. All insurance companies must possess a minimum A.M. Best Insurance Company rating of A-. Upon request by the County, the Contractor shall furnish evidence that the insurance company or companies being used by the Contractor meet the minimum requirements listed in this section.

Upon request by the County, the Contractor shall furnish the County with complete and accurate copies of the insurance policies required within this section. If at any time during the life of this Contract, the Contractor’s insurance coverages and limits do not meet or exceed the minimum insurance requirements presented in this section, the Contractor is required to notify the County of any deviations from the minimum requirements presented in this section.

10. The Contractor shall pay to the Unemployment Compensation Fund of the State of Nebraska unemployment contributions and interest due under the laws of the State of Nebraska on wages paid to individuals employed in the performance of this Contract, and shall submit to Sarpy County written clearance from the Commissioner of Labor of the State of Nebraska certifying that all payments due of contributions and interest which may have arisen under this Contract have been paid by the Contractor or his subcontractor, to the State of Nebraska Unemployment Compensation Fund. Payment of the final five percent (5%) of the total amount of the Contract shall be withheld until this provision have been complied with as required by Section 48-657 R.R.S. 1943, as amended.

11. The Contractor shall not, in performance of this Agreement, discriminate or permit discrimination against any person because of race, sex, age or political or religious options or affiliations in violation of federal or state laws or local ordinances and further the Contractor shall comply with Sarpy County ordinances pertaining to civil rights and human relations.

12. The Contractor shall procure a policy or policies of insurance which shall guarantee payment of compensation according to the Workmen’s Compensation Laws of Nebraska for all workmen injured in the scope of employment; and further agrees to keep said policy or policies in full force by the Contractor throughout the term of this Contract. Certificates of insurance or copies of policies if required by any department of the County, shall be filed by the Contractor with Sarpy County.

13. Except as may otherwise be required by applicable law payment of any balance due to the Contractor under this Contract shall be made by the County to the Contractor upon completion of the Contractor’s work and obligations in accordance with the Contract, upon acceptance thereof by the County, and upon submission of certificate by the Contractor in accordance to above. No payment by the County shall in any way constitute any waiver of any rights of Sarpy County.
14. Pursuant to Neb. Rev. Stat. 23-3113, the Parties hereto declare and affirm that no officer, member, or other employee of the County, and no member of its governing body, and no other public official of the County who exercises any functions or responsibilities in the review or approval of the undertaking described in this Contract, or the performing of services pursuant to this Contract shall participate in any decision relating to this contract which affects his or her personal interest, or any corporation, partnership, or association in which he or she is directly or indirectly interested; nor shall any employee of the County, nor any member of its governing body, have any interest, direct or indirect, in this Contract or the proceeds thereof.

15. Neither County nor Contractor shall engage the services of any person or persons presently in the employ of the other for work covered by this Contract without the express written consent of the employer of such person or persons.

16. Each party declares, represents, warrants and acknowledges that it is not an agent for the other now, nor will it be in the future. Each party is an independent Contractor, and neither party is or will become the employee of the other as a result of the relationship created by this Contract.

17. It is understood and agreed by the parties hereto that is any part, term, condition or provision of this Contract is held to be illegal or in conflict with any law of this State or of the United States, the validity of the remaining parts, terms, conditions, or provisions shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if the Contract did not contain the particular part, term, condition, or provisions held to be invalid.

18. This Contract and documents incorporated herein by reference contain the entire Contract between the Parties, and there are no other written or oral promises, agreement or warrants which may affect it.

19. The Contractor acknowledges that it is, and will, remain fully obligated under the provisions of this Contract, regardless of any delegation of duties or assignment or benefits hereunder. Contractor further acknowledges and promises that the provisions of this Contract shall be made binding on any Subcontractor(s) it may retain. Contractor shall require that all Subcontractors hold County harmless from any and all claims and causes of action resulting from actions or activities of Subcontractor. Contractor shall require that all Subcontractors comply with any and all applicable State and Federal laws and that Subcontractor(s) obtain any and all necessary permits or licenses necessary to conduct work under this Contract.

20. Contractor may not subcontract or assign any portion of Contract without prior written approval from the County.

21. Contractor expressly guarantees all work and materials as described herein.
This Contract cannot be amended except by written agreement of both parties. Notice to the Parties shall be given in writing to the agents of each party named below:

County: Ms. Deb Houghtaling  
Sarpy County Board Business Office  
1210 Golden Gate Dr., Suite 1250  
Papillion, NE 68046

Contractor: Toni Watts  
Watts Electric Company  
13351 Dovers St.  
Waverly, NE 68462

IN WITNESS WHEREOF, the parties hereto have caused these instruments to be executed in THREE original counterparts, this as of this 22nd day of May, 2018.

County of Sarpy, Nebraska  
A Body Politic and Corporate  
CHAIRMAN: _________________________  
ATTEST: ____________________________

CLERK: ____________________________  
APPROVED AS TO FORM:  
COUNTY ATTORNEY/DEPUTY  
ATTEST: ____________________________

SECRETARY/WITNESS  
_____________________________
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<th>Responding Supplier</th>
<th>City</th>
<th>State</th>
<th>Response Submitted</th>
<th>Lines Responded</th>
<th>Response Total</th>
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<td>Waverly</td>
<td>NE</td>
<td>5/3/2018 09:08:01 AM (CT)</td>
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<td>$310,069.43</td>
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Please note: Lines Responded and Response Total only includes responses to specification. No alternate response data is included.
## Bid Information

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<tbody>
<tr>
<td>Bid Creator</td>
<td>Beth Garber</td>
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<tr>
<td>Email</td>
<td><a href="mailto:bgarber@sarpy.com">bgarber@sarpy.com</a></td>
</tr>
<tr>
<td>Phone</td>
<td>(402) 593-4476 x</td>
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<td>Bid Number</td>
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<td>Close Date</td>
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<td>Company</td>
<td>Watts Electric Company</td>
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<tr>
<td>Address</td>
<td>13351 Dovers St Waverly, NE 68462</td>
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<tr>
<td>Contact Department Building</td>
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<tr>
<td>Telephone</td>
<td>(402) 786-2270</td>
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<tr>
<td>Fax</td>
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| Total                      | $310,069.43                                                            

## Contact Information

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<tr>
<td>Address</td>
<td>1210 Golden Gate Dr. Papillion, NE 68046</td>
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<tr>
<td>Contact</td>
<td>Beth Garber Purchaser</td>
</tr>
<tr>
<td>Department</td>
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<tr>
<td>Telephone</td>
<td>(402) 593-4476 x</td>
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<tr>
<td>Fax</td>
<td></td>
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<tr>
<td>Email</td>
<td><a href="mailto:bgarber@sarpy.com">bgarber@sarpy.com</a></td>
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## Ship to Information

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<td>15100 S. 84th St Papillion, NE 68046</td>
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<tr>
<td>Contact</td>
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<tr>
<td>Department</td>
<td></td>
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<tr>
<td>Telephone</td>
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<tr>
<td>Fax</td>
<td></td>
</tr>
<tr>
<td>Email</td>
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By submitting your response, you certify that you are authorized to represent and bind your company.

**Signature** Toni J. Watts-McDonald

Email toniw@gowatts.com

### Supplier Notes

- POLE SHOP DRAWINGS - 25-30 BUSINESS DAYS
- POLE FABRICATION AFTER APPROVAL - 16-18 WEEKS

### Bid Notes

- Every request for interpretation or correction should be in writing, submitted on the eBid platform or by emailing bgarber@sarpy.com.

### Bid Activities

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<td>Every request for interpretation or correction should be in writing, submitted on the eBid platform or by emailing <a href="mailto:bgarber@sarpy.com">bgarber@sarpy.com</a>.</td>
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### Bid Messages
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<th>Name</th>
<th>Note</th>
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<td>1</td>
<td>General Information</td>
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<td>(No Response Required)</td>
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<tr>
<td>2</td>
<td>Standard Terms and Conditions</td>
<td>I acknowledge reading and understanding the Standard Terms and Conditions.</td>
<td>Acknowledged</td>
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<td>3</td>
<td>Bid Bond</td>
<td>Please note if bid bond is included as an attachment or has been mailed in a sealed envelope to the Sarpy County Clerk's Office.</td>
<td>Attached</td>
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<td>4</td>
<td>Contractor Start Date</td>
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<td>As Soon As Poles Can Be Delivered</td>
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<td>5</td>
<td>Company Information</td>
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<td>6</td>
<td>Company Information - Years in Business</td>
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<td>10</td>
<td>Reference #1 - Contact Name</td>
<td>Ben Cosier - City of Lincoln</td>
<td></td>
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<td>11</td>
<td>Reference #1 - Email</td>
<td><a href="mailto:bcosier@lincoln.ne.gov">bcosier@lincoln.ne.gov</a></td>
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<tr>
<td>12</td>
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<td>(402) 441-7561</td>
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<td>13</td>
<td>Reference #2 - Company Name</td>
<td>Lincoln Electric System</td>
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<td>14</td>
<td>Reference #2 - Contact Name</td>
<td>Rod Heninger</td>
<td></td>
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<td>15</td>
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<td>16</td>
<td>Reference #2 - Phone Number</td>
<td>(402) 467-7561</td>
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<td>17</td>
<td>Reference #3 - Company Name</td>
<td>Nebraska Department of Transportation</td>
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<td>Reference #3 - Contact Name</td>
<td>Joe Kuehn</td>
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<td>19</td>
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<td><a href="mailto:joe.kuehn@nebraska.gov">joe.kuehn@nebraska.gov</a></td>
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<td>EA</td>
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<td>12/C #14 AWG Traffic Signal Cable $5.41</td>
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<td>Service Cable $3.26</td>
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<td>Adjust Pull Box to Grade, Type PB-1 $485.00</td>
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<td>Relocate Pull Box, Type PB-1 $846.00</td>
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<td>LF</td>
<td>Street Lighting Cable No. 6 BARE</td>
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SPECIFICATIONS
192nd Street and Highway 370
Traffic Signal

Project C-77 (17-18)

For the

Public Works Department
SARPY COUNTY, NEBRASKA

PROPOSALS DUE: May 3, 2018
10:00 a.m.
General Information

Notice to Contractors

Notice to Vendors

Sarpy County is seeking proposals for Traffic Signal Installation at 192nd Street and Highway 370 for the Sarpy County Public Works Department. The successful Contractor will enter into a Contract for the specified services.

Official bidding criteria must be obtained through the online procurement system. Vendors that obtain specifications from any other internet site are responsible for obtaining any addenda that may be added at a later time.

Bids received after the above stated time and date will not be considered.

Bid opening will be a public opening to be held in the Sarpy County Courthouse at the time and date listed in the Bid Information.

All bids submitted shall be valid for a period of ninety (90) days following the final date for submission of bids.

Sarpy County will not be liable for costs incurred by Vendors for proposal preparation, printing, demonstration, or any other costs associated with or incurred in reliance on proposal creation. All such costs shall be the responsibility of the Vendor.

The bids shall include all charges and applicable taxes, F.O.B. Destination, freight prepaid, Sarpy County, Nebraska. The Vendor need not include sales tax in the bid. Sarpy County will, upon request, furnish the successful Vendor with a completed State of Nebraska Tax Exempt Form 13 upon acceptance of the successful Vendor's proposal.

The Sarpy County Board of Commissioners reserves the right to reject any or all bids and to waive minor informalities.

In the event of conflict between unit price and extended price, unit price shall prevail.

Procedures for Evaluation and Awarding of Bid

Evaluation will be done by Beth Garber, Sarpy County Purchaser, along with personnel from other departments. After evaluation the Purchaser will make a recommendation to the County Board of Commissioners for award. This recommendation and pending award will be made at a public meeting of the Board of Commissioners. Agendas are available each Friday afternoon on our internet site www.sarpy.com. The Commissioners award the bid by majority vote.
The following factors will be used to consider the award of the bid, where applicable:

a) Compliance with all requirements.
b) Price.
c) The ability, capability, and skills of the Vendor to perform.
d) The character, integrity, reputation, judgment, experience, and efficiency of the Vendor.
e) The quality of previous performance.
f) Whether the Vendor can perform within the time specified.
g) The previous and existing compliance of the supplier with laws.
h) The life-cost of the personal property or services in relation to the purchase price and specified use.
i) The performance of the personal property or service taking into consideration any commonly accepted tests and standards of product, service, usability and user requirements.
j) The energy efficiency ratio as stated by the supplier.
k) The life-cycle costs between alternatives for all classes of equipment, the evidence of expected life, the repair and maintenance costs, and the energy consumption on a per year basis.
l) Such other information as may be secured having a bearing on the decision.

Terms and Conditions

1. Bid Bond

Each bid must be accompanied in a SEPARATE SEALED ENVELOPE by a cashier's check on a bank whose deposits are insured by the Federal Deposit Insurance Corporation or a bid bond in the amount of five percent (5%) of the bid price and must be payable without condition to the Sarpy County Treasurer, to protect Sarpy County against failure to deliver materials as bid. The selected Vendor’s security will be retained until satisfactory delivery of performance bond and all contract documents are signed and received. All other Vendor’s security will be retained for 30 days after bid award. If cashier's check or bid bond as herein set forth is not received with the proposal, the proposal may not be considered.

2. Performance Bond

The successful Vendor shall be required to furnish a performance bond, and said bond shall be in the amount of 100% of the total amount of the bid, written by a surety licensed to do business in the State of Nebraska. Said performance bond shall be provided to the Sarpy County Clerk within ten (10) days after execution of the contract documents and bid award. Bond may be secured through the Vendor’s usual sources.

3. Information, Discussion and Disclosures

Any information provided by Sarpy County to any Vendor prior to the release of this Request for Proposal ("RFP"), verbally or in writing, is considered preliminary and is not binding on Sarpy County.

The Vendor must not make available nor discuss any cost information contained in the sealed copy of the proposal to or with any employee of Sarpy County from the date of issuance of this
RFP until the contract award has been announced, unless allowed by the Sarpy County Purchasing Department in writing for the purpose of clarification or evaluation.

No interpretation of the meaning of the specifications, or other bidding documents, or correction of any ambiguity, inconsistency, or error therein will be made orally to any Vendor.

Every request for such interpretation or correction should be in writing through the online bid system or by email to Beth Garber, bgarber@sarpy.com. Sarpy County prefers all questions be submitted through the electronic bidding program. Requests must be received by date and time listed in the bid information in order for Sarpy County to have time to issue an addendum. Requests received after deadline may not be considered. In case Sarpy County finds it expedient to supplement, modify, or interpret any portion of the bidding documents prior to the proposed bid date, such procedure will be accomplished by the issuance of written addenda to the RFP which will be mailed or delivered to all prospective Vendors at the respective addresses furnished for such purpose.

4. Addenda

All addenda will become part of this RFP and must be responded to by each Vendor.

All addenda must be acknowledged in writing in the bid submitted by the Vendor.

This RFP, any subsequent addenda, and any written responses to questions take precedence over any information previously provided.

5. Confidentiality of Documents

Sarpy County considers all information, documentation and other materials requested to be submitted in response to this proposal to be of a non-confidential and/or non-proprietary nature and therefore shall be subject to public disclosure under Neb. Rev. Stat. § 84-712.05(3).

Vendors are hereby notified that Sarpy County strictly adheres to all statutes, court decisions, and opinions of the Nebraska Attorney General with respect to disclosure of RFP information.

Any “proprietary, trade secret, or confidential commercial or financial” information must be clearly identified at the time of bid/proposal submission. **Pricing information is not considered financial information and therefore is not considered Confidential.** Please note: even if Vendor believes pricing information is confidential and includes it as such, this information will be read aloud and entered into record during the public bid opening. For all other appropriately identified proprietary, trade secret, or confidential commercial or financial information, the Vendor will be required to fully defend, in all forums, Sarpy County’s refusal to produce such information; otherwise, Sarpy County will make such information public, upon request.

6. Non-Discrimination Clause

seq., in that there shall be no discrimination against any employee who is employed in the performance of this Contract, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

7. **Conflict of Interest Clause**

Pursuant to Neb Rev. Stat. §23-3113, the parties hereto declare and affirm that no officer, member, or employee of the County, and no member of its governing body, and no other public official of the County who exercises any functions or responsibilities in the review or approval of the undertaking described in this Contract, or the performing of services pursuant to this Contract, shall participate in any decision relating to this Contract which affects his or her personal interest, or any corporation, partnership, or association in which he or she is directly or indirectly interested; nor shall any employee of the County, nor any member of its governing body, have any interest, direct or indirect, in this Contract or the proceeds thereof.

8. **Payment Terms**

The successful Contractor shall submit an itemized invoice for payment. Sarpy County will make payment to the successful Contractor within thirty (30) days after receipt of invoice and satisfactory services in accordance with the Contract and Special Provisions.

9. **Supplemental Terms and Conditions/Modifications**

Any supplemental terms, conditions, modifications, or waiver of these terms and conditions must be in writing and signed by the Sarpy County Board Chairman and the Vendor.

10. **Term**

The Contract will be for the period identified within the bid information. The cost for the option years will be provided in writing to the County sixty (60) days prior to the expiration date of the current contract year. Any cost changes for the option years is the responsibility of the Vendor. If Sarpy County does not receive any notification of price changes, the prices are to remain the same.

11. **Renewal**

The Contract shall automatically renew for each option year unless the County notifies Vendor in writing thirty (30) days prior to expiration of current contract period of the intent not to renew.

12. **Termination**

Either party may terminate the Contract with ninety (90) days' written notice to the other.

13. **Residency Verification**

The Vendor agrees to comply with the residency verification requirements of Neb. Rev. Stat. §4-108 through §4-114. The Vendor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically
performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Vendor is an individual or sole proprietorship, the following applies:

The Vendor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at www.das.state.ne.us.

a) If the Vendor indicates on such attestation form that he or she is a qualified alien, the Vendor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Vendor’s lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

b) The Vendor understands and agrees that lawful presence in the United States is required and the Vendor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. Sect. 4-108.

14. Breach

Should Vendor breach, violate, or abrogate any term, condition, clause or provision of this agreement, the County shall notify Vendor in writing that such an action has occurred. If satisfactory provision does not occur within ten (10) days from such written notice the County may, at its option, terminate this agreement and obtain an alternate provider to provide all required materials. This provision shall not preclude the pursuit of other remedies for breach of contract as allowed by law.

15. Assignment

The Vendor may not assign this Contract without the prior written consent of the County.

16. Subcontracting

Vendor may not subcontract the work to be performed, without prior written consent of the County. If such consent is granted, Vendor will retain responsibility for all work associated with the Contract. The Vendor must identify any subcontractors it intends to use in the execution of this Contract. The Vendor must identify subcontractors in writing within the proposal.

17. Independent Contractor

The Vendor shall in the performance of the Contract at all times be an independent contractor and not an employee or agent of the County. The Vendor, its officers, employees and agents shall at no time represent the Vendor to be other than an independent contractor or represent themselves to be other than employees of the Vendor.
18. Indemnity

The Vendor shall indemnify and save harmless Sarpy County, its officers, employees and agents from all loss, claims, suits or actions of every kind and character made upon or brought against Sarpy County, its officers, employees, or agents, for or sustained by any party or parties as a result of any act, error, omission or negligence of said Vendor or its servants, agents, and subcontractors; and also from all claims of damage in fulfilling this Contract.

19. Deviations

Once the bid has been accepted by Sarpy County, no deviations from the specifications will be accepted without prior written approval of Sarpy County.

20. Insurance

The Contractor shall comply with the indemnification and save harmless provisions of the Contract.

21. Guarantee

a. Terms

The Contractor hereby expressly guarantees the work and materials described herein for the full period of **two (2) years** from the date of approval and acceptance by the County, and said Contractor binds itself and heirs and assigns for the entire expense of maintaining same in good condition (except normal wear and tear not occasioned by improper methods/materials); and for all repairs or reconstruction which may, from any imperfection in the said work or materials become necessary within the terms of this guarantee. To the extent Contractor was originally responsible for the work or materials (including Supervision) under the Contract documents, the Contractor further agrees to correct and repair promptly during that time all failures of any description and all settlements and shall deliver the work or materials in all respects in good condition and repair.

b. Failure to Make Repairs

If at any time within the period of guarantee after the completion and acceptance of the work herein contracted for, the work shall, in the judgment of the County, require such repairs or reconstruction as above set out, County shall notify the Contractor. Should the Contractor refuse or neglect to begin to make such repairs within five (5) days from the date of serving such notice, the County shall have the right to cause such repairs or reconstruction to be made in such a manner as County shall deem best, and the cost thereof shall be paid by the Contractor and Contractor’s sureties or deducted from the reserve fund.

c. Expiration of Guarantee Period

It shall be the duty of the Contractor to notify the County, in writing, within thirty (30) days prior to the expiration of the guarantee period to inspect the work, and unless the Contractor shall furnish such notice, the obligation to maintain the said improvement in proper
condition shall continue in force until thirty (30) days after such notice is sent by the Contractor to the County.

d. Compliance with Laws

The Contractor shall comply with all Federal and State Laws and County ordinances applicable to work.

e. Onsite Storage:

Sarpy County will not pay the Contractor for stored material(s) on the job site. It will be the responsibility of the Contractor to store materials for the contracted job elsewhere. If the Contractor chooses to store the material(s) on the job site it will be done at their own expense.
COUNTY PROVISIONS

1. County Board
   The County Board of Sarpy County, Nebraska shall, in conjunction with the Engineer, be the final arbiter in all controversies concerning the fulfillment of this Contract. No changes in any of the details of the Plans and Specifications shall be made without approval of the Board. The Board shall approve final acceptance of the work and payment of the Contractor.

2. Retained Percentage
   Sarpy County shall retain five percent (5%) of estimated amounts earned for partial payments. Upon final payment of the project, all retained monies shall be paid in full.

3. Provisions and Technical Specifications
   All materials and all work shall conform to the current City of Omaha "Standard Specifications for Public Works Construction", 2014 Edition and any current or revisions or amendments thereto, which will be referenced as the “Standard Specifications,” except as modified by these project specifications. The project specifications shall govern where any conflict occurs with the Standard Specifications. Also referenced is the Nebraska Department of Roads “Standard Specifications for Highway Construction”, 2011 Edition, which will be referenced as “NDOT Standard Specifications”.

4. Field Conditions
   The Contractor shall have carefully examined the construction work sites to establish the field conditions prior to completing the bid. Contractor will not be entitled to additional compensation if it subsequently finds that conditions require methods or equipment other than what the Contractor originally anticipated.

5. Preconstruction Meeting
   Contractor shall schedule and run a preconstruction meeting at least 48 hours prior to beginning construction. Representatives from Sarpy County Public Works, the Contractor, and any Subcontractors, shall be invited to discuss upcoming construction activities. Contact information for all representatives is provided in this document. The meeting shall take place at the Sarpy County Public Works building.

   Sarpy County Public Works – Bill Herr, 402-537-6906, herrb@sarpy.com

   SID 299 Aspen Creek – Brett Wawers, Lamp Rynearson & Associates, 402-496-2498

   NDOT – Brent Froning – 402-479-4594, brent.froning@nebraska.gov

   OPPD - Joe Ostblom, 402-636-3513, jostblom@oppd.com

   Cox Communication – Tim Hahn, 402-510-3666, Timothy.Hahn@cox.com

   CenturyLink – Jack Dodendorf, 402-320-3421, jack.dodendorf@centurylink.com

   Black Hills Energy - Kent Roberts, 402-935-4876, kent.roberts@blackhillscorp.com; Evan Martin, 402-221-2362, Evan.Martin@blackhillscorp.com
6. **Period of Performance and Working Days**
Sarpy County and the Contractor shall agree on an expected start date, likely to be no earlier than May 25, 2018. Working days will begin to be tabulated beginning on the expected start date. The estimated contract period of performance is 75 days.

Working days shall refer to all days when the temperature is above forty (40) degrees and rising and which are suitable for the construction of this project, except Sundays and Holidays. If work is not completed by the end of the construction season as agreed upon by the Engineer, the project shall be placed into a Winter shutdown until the weather becomes suitable for construction. Contractor shall maintain the project site throughout the Winter shutdown. This may include tasks such as snow plowing within 24 hours of a snow event, grading any areas of road that have become rutted/potholed, maintaining signage or traffic control devices that may need to be reset, etc.

7. **Taxes**
Sarpy County will, upon request, furnish the successful Contractor with a completed State of Nebraska Tax Exempt Form 13 upon acceptance of the successful Contractor’s proposal.

8. **Liquidated Damages**
The time of completion is of the essence of the Contract because the County will be subject to additional financing and administrative expense if the work is not completed within the time period specified in the Agreement.

Therefore the Contractor shall reimburse the County at the rate of **$1000 per day** for each additional working day required to complete the work as defined above. The time allowed for completion of this Contract shall not be extended except upon written application, by the Contractor, requesting such extensions and explaining fully the necessity for such extension. Such extension will be considered only because of strikes, unavailability of properly ordered materials, or other causes beyond the Contractor’s control.

Company warrants that pursuant to Neb Rev. Stat. 48-2101, et seq. (1994 Cum. Supp.) it has registered as a Contractor with the State of Nebraska, and that it and any and all subcontractors have obtained any and all necessary licenses and permits required by federal law, state law and/or county ordinances for the work described herein.

9. **Deviations**
Once the bid has been accepted by Sarpy County, no deviations from the specifications will be accepted without prior written approval of Sarpy County.

10. **Exceptions**
These specifications are minimum acceptable specifications. You may bid other than what is specified if it is of higher specification than what is requested. Contractor must list any exceptions to the bid specifications on the exceptions/clarifications/comments page provided.

11. **Company Information:**
Contractor will provide the following company information on the bid form:
   a. Years in business;
b. Number of employees; and,
c. Total sales for last three (3) years.

12. References:
Each Contractor must include with their proposal a list of no less than three (3) references that have purchased the specified product or service within the last two (2) years. The list must include the name of the company, and the name and phone number of a contact person for each company.

13. Equipment/Safety
The Contractor shall be responsible for providing all equipment required to protect its employees, the public, surrounding areas, equipment and vehicles including but not limited to the placement of barricades, tarps, plastic flag tape and other safety/traffic control. The cost of such equipment is considered subsidiary to the project and will not be paid for as a separate bid item.

14. Cleaning
The Contractor shall keep the premises clean of all rubbish and debris generated by the work involved and shall leave the premises neat and clean.

15. Maintenance of Traffic/Barricading
All signing, pavement marking, barricading and traffic control devices shall conform to the State of Nebraska Supplement to the Manual on Uniform Traffic Control Devices, 2011 and the Manual on Uniform Traffic Control Devices, current edition. No lane closures will be allowed without prior authorization from the Engineer.

Control of traffic and protection of the pavement is the responsibility of the Contractor until such time as the work is formally accepted by the County. Any damage to the pavement prior to such acceptance shall be remedied by the Contractor at Contractor’s expense.

16. Damage to Property:
If any damage occurs to property during the performance of the contract, it shall be the responsibility of the contractor to make repairs and/or replacements.

17. Access
Contractor is responsible for contacting all landowners prior to entering property. Contractor shall complete all work and store all materials and equipment at a safe location within the Right-of-Way. Contractor shall not enter private property without first acquiring permission.

18. Erosion Control
No Grading Permit Required, but Erosion measures shall be followed

19. Maintenance of Erosion Control
Standard Specifications, the Contractor shall be responsible for supplying, installing, maintaining, and removing all Temporary Erosion and Sediment Controls. All sediment removal and cleaning shall be subsidiary to the appropriate Temporary Erosion and Sediment Control bid item and will not be paid for separately.
20. **Notice to Stake**
   The Contractor shall notify the Engineer at least 48 hours prior to the expected time to begin construction to request line and grade stakes as required.

21. **Traffic Control**
   The Contractor shall conduct his operations in such a manner as to provide access to all adjacent properties at all times. The roads to be improved shall be closed to through traffic for the duration of the project. The Contractor shall place and maintain proper barricades, lights, signs and other required safeguards around obstructions in or adjacent to existing streets and as necessary to provide advance warning. All barricades, lights, and warning signs shall conform to the Omaha Public Works "Barricading Standards, Specifications, Methods and Materials" and the "Manual on Uniform Traffic Control Devices."

22. **Mud and Construction Debris**
   The Contractor shall take the necessary precautions to keep mud and debris from being deposited onto existing pavement during construction operations. Should mud and debris become deposited upon such existing pavement, the Contractor shall promptly remove it at no additional cost to the County.

23. **Restarting Construction**
   The Contractor must notify Sarpy County personnel 24 hours prior to starting or restarting construction work if work sequence is interrupted due to any cause whatsoever, to allow for construction observation on this project. Bill Herr (Phone 402-537-6906), Email: herrb@sarpy.com).

24. **Road Restrictions Or Closures**
   The Contractor must notify Sarpy County personnel 48 hours prior to road closures: Bill Herr (Phone 402-537-6906), Email herrb@sarpy.com).

25. **Required Submittals**
   Submittals shall be provided to the Engineer as described in Exhibit G of the Nebraska Department of Transportation Standard Specifications.
KNOW ALL MEN BY THESE PRESENTS, THAT WE

_____________________________________________________________________________________

As principal, and _________________________________________________________________

_____________________________________________________________________________

as Surety, are held and firmly bound to the County of Sarpy, Nebraska, in the penal sum of

_____________________________________________________________________________

to be paid to the COUNTY OF SARPY its successors or assigns, for which payment to be well and truly
made, we bind ourselves and each of us, and each of our heirs, executors, administrators, successors and
assigns, jointly and severally, firmly by these Presents.

Dated this _____ day of____________, 2018

The conditions of this obligation are such that:

WHEREAS, by even date herewith, the said principal has entered into a Contract with the said County of
Sarpy, Nebraska to perform the labor and furnish the material for

______________________________________________________________________________________

______________________________________________________________________________________

_________________________________________________  _____________

NOW THEREFORE, the conditions of this obligation are such that if the said principal shall duly perform
and observe all of the stipulations and agreements in said Contract on his part to be performed and
observed, then and in that event, this obligation shall be void and of no effect, but otherwise shall be and
remain in full force and effect. It is expressly agreed that any alterations which may be made therein by
agreement between the said principal and the said County of Sarpy, Nebraska in the terms of said
Contract, or the nature of the work to be done thereunder, or the giving of any extension of time for
performing the said Contract, or of any of the stipulations therein contained, and on the part of the said
principal to be performed, or any other forbearance, shall not in any way release the said surety form this
liability under the above written bond.

It is further expressly agreed and understood that this bond shall stand as surety for the payment of all
accounts and claims that may be due by reason of laborers or mechanics wages for labor that shall be
performed, and for all material which is actually used in performing said Contract.

It is further expressly agreed and understand that this bond shall stand as maintenance surety for the
period of two (2) years on faulty materials and workmanship only. Nothing herein shall be construed to
cover wear and tear occasioned by action of the elements; excepting insofar as such wear and tear
discloses the use of improper materials or construction methods.

In testimony whereof, the said parties hereto have hereunto set their hands this ____ day of
________________________, 2018, and said Surety has caused these presents to be sealed with its Corporate Seal, and duly attested by the signature of its attorney-in-fact, and their authority is attached hereto and made a part thereof.

_____________________________  
Principal

_____________________________  
Witness

_____________________________  
Witness

_____________________________  
President

_____________________________  
Surety

_____________________________  
By:

_____________________________  
Attorney-In-Fact
EXCEPTIONS/CLARIFICATIONS/COMMENTS

1. __________________________________________________________________________

2. __________________________________________________________________________

3. __________________________________________________________________________

4. __________________________________________________________________________

5. __________________________________________________________________________

6. __________________________________________________________________________

7. __________________________________________________________________________

8. __________________________________________________________________________

9. __________________________________________________________________________

10. __________________________________________________________________________
Sarpy County, Nebraska  
Bid Form  
192nd Street and Highway 370  
Traffic Signal Installation  
Project C-77 (17-18)

The undersigned, having carefully examined the Plans and Specifications, and having examined the project areas, hereby submit our proposal.

**Attached hereto is a Bid Bond in the amount of 5%** of the amount bid made payable to the Sarpy County Treasurer, which is agreed shall be forfeited should the undersigned fail to perform or fail to furnish bond and securities in accordance with the proposal.

For furnishing all materials, labor, equipment, tools, together with appurtenances and accessories required to prepare, construct, erect and install the proposed improvements, complete and ready for operation, our bid as follows:

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<th>ITEM</th>
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<th>QUANTITY</th>
<th>UNIT PRICE</th>
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<td>Fiber Ethernet Switch</td>
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<td>Remove Street Lighting Unit</td>
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<td>41</td>
<td>Street Lighting Cable No. 6 BARE</td>
<td>LF</td>
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</table>

Grand Total

*Prices are to be F.O.B. - Sarpy County, Nebraska*
CONTRACTOR: ________________________________

CONTRACTOR START DATE: ________________________________

If notified of acceptance of this proposal and Contract award within sixty (60) days after date stated for receipt of bids, the undersigned agrees to execute a Contract, provide insurance certificates and performance bonds for the above named work and the above stated consideration in the form required within ten (10) days of such proposal acceptance notification; to commence the work within five (5) days of the Contractor’s Notice to Proceed. **Substantial Completion shall occur within 75 working days of the commencement of work as described above to avoid accrual of liquidated damages.** Final Completion shall be within thirty (30) calendar days of Substantial Completion.

Total bid shall be the basis for establishing the amount of the Performance Bond in this Contract. The Total Bid is based on the quantities shown in the Proposal Form and on the dimensions shown in the Plans where specific quantities are not itemized, and is subject to additions or reductions according to the actual construction quantities as determined by the Engineer. Any such change orders shall be made by and become a part of the Engineers Certified Progress Statement(s) of work in progress as well as final completed construction (Project Completion Report(s)).

The undersigned has carefully checked the bid blank quantities against the Plans and Specifications before preparing this Proposal and accepts the said quantities and amounts, as correctly listing the complete work to be done in accordance with the Plans and Specifications.

The County Board reserves the right to waive informalities and irregularities and to award bids which furnish the material and construction that, in their opinion, will serve in the best interest of the County or to reject any/or all bids.

The undersigned also agrees that the time of commencement, rate of progress and time of completion of the work of the Contract are ESSENTIAL CONDITIONS of the Contract and that the County may retain a sum of one thousand dollars ($1000.00) per calendar day from the sum due under the Contract for each calendar day that the Contract is not completed as described above.

**Company Information:**

Years in business: ________________________________

# of employees: ________________________________

Total sales last 3 years: ________________________________

References:
CONTRACTOR: ___________________________________

I certify that this bid is submitted in accordance with the specifications issued by Sarpy County. I affirm that the original Specifications have not been altered in any way. Any alteration of the original Specifications, outside of an alternate bid, may be considered grounds for refusal of the bid.

The undersigned acknowledged receipt of the following addenda (if applicable):

Addendum #1  __________ 
Addendum #2  ________________

Company Name: ____________________________  Company Representative (Please print)

Authorized Signature: ______________________  Telephone Number: ______________________

Address: ____________________________  Fax Number: ____________________________

City, State & Zip: ____________________________  E-Mail Address: ____________________________

*NOTE: Sarpy County is tax exempt and will provide the proper form upon request
EXHIBIT A
CONTRACT AGREEMENT

THIS CONTRACT is made and entered into in DUPLICATE by and between Sarpy County, Nebraska hereinafter called County, and _______________ hereinafter called Contractor.

In consideration of the following mutual agreements and covenants, it is understood and agreed by the parties hereto that:

1. **The Contractor does hereby agree to undertake and construct Sarpy County Project C-77 (17-18), 192nd Street and Highway 370 Traffic Signal Installation**
   Also referred to hereinafter as work, in accordance with terms and provisions hereof and subject to the quality provisions in the accepted Proposal of Contractor for the sum of $________________________ (written) under penalty of Performance, Payment and Guarantee Bond.

2. The Contractor shall conform with the applicable plans and specifications, applicable Special Provisions and any applicable change order or addenda pertaining thereto or to this Contract, all of which by reference thereto are made a part hereof. Applicable notice to bidders, Instruction to bidders, Bid Proposal of Contractor, Resolution awarding this Contract, the Performance, Payment and Guarantee Bond and all proceedings by the governing body of the County relating to the aforesaid work are made a part hereto by reference thereto.

3. The County agrees to pay the Contractor in accordance with the provisions of the specifications, the accepted Proposal of the Contractor and the provisions of this Contract.

4. All provisions of each document and item referred to in Paragraph 2 above shall be strictly complied with the same as if rewritten herein, and in the event of conflict among the provisions of said documents, the provisions most favorable to the County shall govern, and substitution or change shall be made except upon written direction, the form of which shall be written “Change Order” of the County; and substitution or change shall in no manner be construed to release either party from any specified or implied obligation of this Contract except as specifically provided for in the Change Order.

5. The Contractor warrants that it has neither employed nor retained any company or person, other than bona fide employee working for Contractor to solicit or secure this Contract, and that Contractor has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission percentage, brokerage fee, gift or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, County shall have the right to annul this Contract without liability, or in its discretion, to deduct from the Contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

6. County and Contractor promise and agree to comply with all Federal and State laws and County ordinances, and such other rules and regulations as may apply to this Contract, including but not limited to: the Americans with Disabilities Act of 1990 (29 U.S.C.A. 12101, et seq.); the Rehabilitation Act of 1973 (29 U.S.C.A. 701, et seq.); and the Drug Free Workplace Act of 1988 (41
Furthermore, pursuant to Neb. Rev. Stat. 73-102 Reissue 1990), County and Contractor declare, promise, and warrant that they have and will continue to comply fully with the Title VI of the Civil Rights Act of 1964 as amended (42 U.S.C.A. 1985, et seq.); and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. 48-1101, et seq., (Reissue 1993), in that there shall be no discrimination against any person who is employed in the performance of this Contract, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

7. The Contractor shall indemnify and save harmless Sarpy County, its officers, employees, agents and representatives from all claims, suits or actions of every kind and character made upon or brought against the said Sarpy County, its officers, employees, agents and representatives for on or account of any injuries or damages received or sustained by any party or parties by or from the acts or omissions of the said Contractor or its servants, agents, representatives and subcontractors, in doing the work herein contracted for or by or in consequence of any negligence in guarding the same or any improper material used in its construction or by or on account of any act or omission of said Contractor or its servants, agents, representatives and subcontractor or its servants, agents, representatives and subcontractors arising out of any manner connected with the performance of this Contract, and also from all claims or damage for infringement of any patent in fulfilling this Contract.

8. The Contractor agrees to comply with the residency verification requirements of Neb. Rev. Stat. §4-108 through §4-114. The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at www.das.state.ne.us.

2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor’s lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. Sect. 4-108.

9. **Insurance Requirements**

The Contractor shall not begin work under this Agreement until all insurance certificates have
been filed with the Sarpy County Clerk.

The following insurance coverages shall be kept in force during the life of the Agreement and shall be primary with respect to any insurance or self-insurance programs covering the County, its commissioners/supervisors, officials, agents, representatives and employees. These insurance coverages shall specifically state, or be endorsed to state, that thirty (30) days notice shall be given to the County in the event of cancellation of, or material change in, any of the coverages.

a. **Worker’s Compensation and Employers Liability Insurance**

The minimal acceptable limits shall be the statutory limits as required by the State of Nebraska for Coverage A, Workers’ Compensation and $500,000 each accident for Coverage B, Employers Liability.

b. **Commercial General Liability Insurance**

Coverage should include broad form coverage written on a commercial general liability form and written on an occurrence basis. The coverage must protect against claims for damages resulting from bodily injury, including death, personal injury and property damage.

The minimum acceptable limits of liability shall be $1,000,000 each occurrence. If the coverage contains a general aggregate, such limit shall not be less than $2,000,000. The products/completed operations limit shall not be less than $2,000,000. The County shall be named as an additional insured on the insurance coverage required under this section.

c. **Automobile Liability Insurance**

Coverage shall be against claims for damages resulting from bodily injury, including death and property damage, which may arise from the operations of any owned, hired or non-owned automobile. The minimum acceptable limit of liability shall be $1,000,000 Combined Single Limit for each accident. The County is to be named as an additional insured on the insurance coverage required under this section.

d. **Certificate of Insurance**

The Contractor shall furnish the County with a certificate(s) of insurance evidencing the coverage required in this section. If the certificate(s) is shown to expire prior to completion of all the terms of this Agreement, the Contractor shall furnish a certificate(s) of insurance evidencing renewal of its coverage to the County. The County is to be included as an additional insured on the insurance coverage required under this section.

The Contractor shall require each and every Subcontractor performing work under this Agreement to maintain the same coverages required of the Contractor in this Section, and upon the request of the County, shall furnish the County with a certificate(s) of
insurance evidencing the Subcontractor’s insurance coverages required in this section.

e. **Property Insurance**

During the term of the Contract all responsibility for maintenance of property insurance on the work remains solely with the Contractor, who shall, as a minimum requirement, obtain a builder’s “all risk” or equivalent policy form with sufficient limits to cover the total value of the Project, including all the cost of the material, equipment and/or machinery involved under this Contract. This property insurance shall cover portions of the work and materials stored off-site, on-site and in transit.

f. **Insurance Company**

All insurance coverages herein required of the Contractor shall be written by an insurance company or companies transacting business as an admitted insurer in the State of Nebraska or under the Nebraska Surplus Lines Insurance Act. All insurance companies must possess a minimum A.M. Best Insurance Company rating of A-. Upon request by the County, the Contractor shall furnish evidence that the insurance company or companies being used by the Contractor meet the minimum requirements listed in this section.

Upon request by the County, the Contractor shall furnish the County with complete and accurate copies of the insurance policies required within this section. If at any time during the life of this Contract, the Contractor’s insurance coverages and limits do not meet or exceed the minimum insurance requirements presented in this section, the Contractor is required to notify the County of any deviations from the minimum requirements presented in this section.

10. The Contractor shall pay to the Unemployment Compensation Fund of the State of Nebraska unemployment contributions and interest due under the laws of the State of Nebraska on wages paid to individuals employed in the performance of this Contract, and shall submit to Sarpy County written clearance from the Commissioner of Labor of the State of Nebraska certifying that all payments due of contributions and interest which may have arisen under this Contract have been paid by the Contractor or his subcontractor, to the State of Nebraska Unemployment Compensation Fund. Payment of the final five percent (5%) of the total amount of the Contract shall be withheld until this provision have been complied with as required by Section 48-657 R.R.S. 1943, as amended.

11. The Contractor shall not, in performance of this Agreement, discriminate or permit discrimination against any person because of race, sex, age or political or religious options or affiliations in violation of federal or state laws or local ordinances and further the Contractor shall comply with Sarpy County ordinances pertaining to civil rights and human relations.

12. The Contractor shall procure a policy or policies of insurance which shall guarantee payment of compensation according to the Workmen’s Compensation Laws of Nebraska for all workmen injured in the scope of employment; and further agrees to keep said policy or policies in full force by the Contractor throughout the term of this Contract. Certificates of insurance or copies of
policies if required by any department of the County, shall be filed by the Contractor with Sarpy County.

13. Except as may otherwise be required by applicable law payment of any balance due to the Contractor under this Contract shall be made by the County to the Contractor upon completion of the Contractor’s work and obligations in accordance with the Contract, upon acceptance thereof by the County, and upon submission of certificate by the Contractor in accordance to above. No payment by the County shall in any way constitute any waiver of any rights of Sarpy County.

14. Pursuant to Neb. Rev. Stat. 23-3113, the Parties hereto declare and affirm that no officer, member, or other employee of the County, and no member of its governing body, and no other public official of the County who exercises any functions or responsibilities in the review or approval of the undertaking described in this Contract, or the performing of services pursuant to this Contract shall participate in any decision relating to this contract which affects his or her personal interest, or any corporation, partnership, or association in which he or she is directly or indirectly interested; nor shall any employee of the County, nor any member of its governing body, have any interest, direct or indirect, in this Contract or the proceeds thereof.

15. Neither County nor Contractor shall engage the services of any person or persons presently in the employ of the other for work covered by this Contract without the express written consent of the employer of such person or persons.

16. Each party declares, represents, warrants and acknowledges that it is not an agent for the other now, nor will it be in the future. Each party is an independent Contractor, and neither party is or will become the employee of the other as a result of the relationship created by this Contract.

17. It is understood and agreed by the parties hereto that is any part, term, condition or provision of this Contract is held to be illegal or in conflict with any law of this State or of the United States, the validity of the remaining parts, terms, conditions, or provisions shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if the Contract did not contain the particular part, term, condition, or provisions held to be invalid.

18. This Contract and documents incorporated herein by reference contain the entire Contract between the Parties, and there are no other written or oral promises, agreement or warrants which may affect it.

19. The Contractor acknowledges that it is, and will, remain fully obligated under the provisions of this Contract, regardless of any delegation of duties or assignment or benefits hereunder. Contractor further acknowledges and promises that the provisions of this Contract shall be made binding on any Subcontractor(s) it may retain. Contractor shall require that all Subcontractors hold County harmless from any and all claims and causes of action resulting from actions or activities of Subcontractor. Contractor shall require that all Subcontractors comply with any and all applicable State and Federal laws and that Subcontractor(s) obtain any and all necessary permits or licenses necessary to conduct work under this Contract.

20. Contractor **may not** subcontract or assign any portion of Contract without prior written approval
from the County.

21. Contractor expressly guarantees all work and materials as described herein.
This Contract cannot be amended except by written agreement of both parties. Notice to the Parties shall be given in writing to the agents of each party named below:

County: Ms. Deb Houghtaling
Sarpy County Board Business Office
1210 Golden Gate Dr., Suite 1250
Papillion, NE 68046

Contractor: ______________________
______________________________
______________________________
______________________________

IN WITNESS WHEREOF, the parties hereto have caused these instruments to be executed in THREE original counterparts, this as of this ___ day of __________, 2018.

County of Sarpy, Nebraska
(SEAL)
A Body Politic and Corporate

CHAIRMAN: ______________________

ATTEST: __________________________

CLERK: __________________________

APPROVED AS TO FORM:

______________________________
COUNTY ATTORNEY/DEPUTY

______________________________
CONTRACTOR: ____________________

ATTEST:

______________________________
SECRETARY/WITNESS

______________________________
PRESIDENT: _____________________
SPECIAL PROVISION

TRAFFIC SIGNAL CONTROLLER 332L CABINET

Section 411 in the Standard Specifications for Highway Construction is amended to include the following:

Material Requirements

The Model 332L Signal Controller Cabinet and all equipment shall comply with The State of California Department of Transportation TEES (Traffic Electrical Equipment Specifications) dated March 12, 2009 and all Errata publications to present date later with the following exceptions:

- The cabinet shall be furnished with one EDI Model 2010ECLip Monitor Unit (CMU).
- The output file #1 shall incorporate a 16 channel Red Monitoring Programming Board wired for Red Circuit Monitoring on all vehicle and pedestrian phases. The Red Monitoring Programming Board shall utilize a 20 pin ribbon cable for connectivity to the Red Monitor interface on the 2010ECLip CMU. The Red Monitoring Programming Board shall be installed on the rear panel of the Output file #1. The Red Monitoring Programming Board shall be accessible for programming without removing the rear panel. Channel programming selects between the Load switch output and AC+. Channel programming shall be accomplished utilizing male jumper plugs. A clear plastic cover shall be installed to protect any contact being made with the Red Monitoring Programming Board.
- The cabinet shall be furnished with a C2P Modem Interconnect Harness connected to a PCB1B ten circuit connector. The PCB1B connector shall be mounted on the input panel and connected to TB1. See attached drawing.
- The Power Distribution assembly shall be a PDA #2L.
- The cabinet shall be furnished with a full complement of Model 204 Flashers and Flash Relays.
- The cabinet shall be furnished with a full complement of Model 200 Switch Packs.
- The cabinet shall be furnished with at least six (6) Model 222 Vehicle Detector Amplifiers and two (2) Model 232 Magnetic Vehicle Detector Amplifiers to provide an operable system.
• A 19" rack mount Pull Out Drawer Assembly shall be included and installed above the input file #1. The Drawer shall be capable of supporting a minimum of 50 lbs.
• All plates, brackets, frames, wiring and other components pertaining to the cabinet shall be assembled at the factory.
• Cabinet and all equipment shall be listed on the current Caltrans QPL dated March 14, 2013 or later.
• Controller unit support shelves in rack (1 unit rack space above pull out drawer).

Contractor must warrant the average life expectancy supplies hereunder to be not less than that stated in the manufacturer’s price list and agree to replace, without cost, all supplies failing to meet this requirement, except where the reduced life is due to conditions beyond the control of the contractor. Defective parts or those damaged in shipment must be replaced by the contractor at no charge to the State of Nebraska. The manufacturer’s standard warranty shall apply and be in effect for at least one year from the date the equipment was placed in service.

SPECIAL PROVISION

TRAFFIC SIGNAL CONTROLLER, TYPE TC-2070E

Section 411 in the Standard Specifications for Highway Construction is amended to include the following:

Material Requirements

The Model 2070E Traffic Signal Controller shall comply with The State of California Department of Transportation TEES (Traffic Electrical Equipment Specification) dated March 12, 2009 and all Errata publications to present date.

The 2070E shall include one each of the following modules:
• Model 2070-2A – Field I/O Module
• Model 2070 – 3B – Front Panel-Display B (8 x 40).
• Model 2070 – 4 – Power Supply
• Model 2070-7A- Serial Comm Card
• Model 2070-1C – CPU with Linux operating system and Intelight MaxTime local software loaded.

Equipment shall be listed on the current Caltrans QPL dated February 6, 2015 or later. With the following exception:
• Intelight Model 2070-1C – CPU with Linux operating system and Intelight Max-Time local software loaded.

Contractor must warrant the average life expectancy supplies hereunder to be not less than that stated in the manufacturer’s price list and agree to replace, without cost, all
supplies failing to meet this requirement, except where the reduced life is due to conditions beyond the control of the contractor. Defective parts or those damaged in shipment must be replaced by the contractor at no charge to the State of Nebraska. The manufacturer's standard warranty shall apply and be in effect for at least one year from the date the equipment was placed in service.

SPECIAL PROVISION

VEHICLE DETECTOR, TYPE RADAR

Section 410 in the Standard Specifications for Highway Construction is amended to include the following:

Description
Furnish and install all components required to detect stopped and moving vehicles on all approaches as shown. Includes cable, interface to 332 cabinet, and programming.

Approved detectors include Wavetronix Matrix and MS SEDCO Intersector. Others will be considered after a satisfactory demonstration.

This work includes setup and verification of detection in the zones shown on the plan.

Basis of Payment

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Detector, Type Radar</td>
<td>Each (ea.)</td>
</tr>
</tbody>
</table>

SPECIAL PROVISION

UNINTERRUPTIBLE POWER SUPPLY

Section 411 in the Standard Specifications for Highway Construction is amended to include the following:

Description
Furnish and install an Uninterruptible Power Supply (UPS) system to provide conditioned power and battery backup power to the traffic signal controller. This work also includes the concrete pedestal and all necessary labor, material, tools, and equipment to properly install the UPS and have it in working order. Use Alpha Technologies products to meet the requirements detailed below.

Material Requirement
1. General
a. 120VAC, 60 Hz system.
b. Battery power shall provide 2 hours full operation (700 watt load), followed by 4 hours of flashing operation (350 watt load) minimum.
c. Operating temperature range, -37°C to +74°C
d. Manufacturer Warranty: minimum two year full replacement of all components starting on the date that the system is placed into operation.

2. Basic Components
   a. Manual Utility/Generator switch
      i. Manual UPS bypass switch
      ii. Automatic transfer relay (max. 65 ms response time)
      iii. UPS
      iv. Batteries
      v. Battery charger (may be a function of the UPS)
      vi. Enclosure

3. UPS
   a. Minimum 1100VA, 850 watt
      i. Pure sine wave output
      ii. Supply clean 100VAC to 130VAC to the signal controller cabinet with utility, battery, or generator power.
      iii. IP addressable communication port. Include MS Windows compatible software or built-in browser interface for alarm, status and log access.
      iv. Real time status available on UPS display and PC connection.
      v. Downloadable time/date stamped event log.
   b. Battery status monitor.
   c. Programmable contact closure, 1 minimum.

4. Batteries
   a. Sealed, no maintenance, with quick connectors.

5. Enclosure
   a. House all components of the UPS system in a single door cabinet attached to the side of the 332 traffic signal cabinet. Enclosure features include:
      i. NEMA 3R rated.
      ii. Minimum 0.125 inch thick natural or anodized aluminum.
      iii. Stainless steel hardware.
      iv. Maximum Size 26 in. wide, 56 in. tall, 18 in. deep.
      v. Hinged door with Corbin number 2 lock or padlock latch.
      vi. Thermostat controlled ventilation fan.
      vii. Louvered vent with filter.
      viii. Thermostat controlled heater or battery heat mats.

Construction Methods
1. Build the concrete pedestal as shown on the plan.
2. Place the UPS enclosure on the concrete pedestal and attach the enclosure to the traffic signal controller cabinet.
3. Install bushings/grommets in all openings between the controller cabinet and the UPS enclosure to protect wiring.
4. Install other components per the manufacturer’s instructions.
5. Connect UPS output to the power service terminal in the controller cabinet.
6. Connect the utility power service to the UPS.

Method of Measurement
Uninterruptible Power Supply shall be measured by the each.

Basis of Payment
1. Pay Item Pay Unit
   Uninterruptible Power Supply Each (ea)

2. Payment is full compensation for all labor, equipment, and materials required to complete the work described above.
SPECIAL PROVISION

UNMETERED SERVICE SPECIFICATION

Section 411 in the Standard Specifications for Highway Construction is amended to include the following:

GENERAL REQUIREMENTS
These specifications supplement the OPPD General Wiring and Metering Specifications Manual. Wiring and metering must conform to the requirements of this manual. Those responsible for the wiring should be familiar with these requirements before proceeding with the work. Updated versions of the manual are available on OPPD's website at www.oppd.com. To contact the OPPD Metering Services Department, in Omaha call 552-5934.

OPPD Representative Robert Adams
Telephone Number 402-636-3333
Service Request Number 53192
Design Number 54119
Work Order Number 628867
Service Information A 120/240

UNMETERED SERVICE SPECIFICATION
Underground Dip < 60 amp –
Service will be available at the OPPD pedestal at the base of the transformer pole (8NN25518) located on the NE corner of 192nd St. & Hwy 370. The customer is to install underground service conductors to the above pole with 30 feet of coiled conductor above conduit termination on the south side of the pole. The customer must leave an adequate length of conductor for OPPD to make connections to the OPPD secondary conductors. The minimum size of the conductors must comply with NEC article 230-31. The customer's conduit is to be terminated a minimum of 1 foot above grade. The customer's conduit must have an NEC approved bushing and it must be sealed with duct seal or other NEC approved material. OPPD will install power mold and make connections to OPPD secondary.
SPECIAL PROVISION

REMOVE LIGHTING UNIT

When the two existing lighting units EP-1 and EP-2 are no longer required as determined by the engineer, the contractor will remove the lighting unit by disassembling the luminaire from the mast arm, the mast arm from the pole and the pole from its transformer base and the transformer base from its power foundation.

The contractor shall remove the power installed foundation. All voids resulting from the removal of the foundation shall be filled with clean soil and compacted to the density requirements of the surrounding soil. Any debris resulting from the removal operation shall be removed from the project. Abandon existing unused conduit and cable in place.

All components of the two removed lighting units with the exception of the luminaires, shall be stored on site at a location approved by the project manager for pick-up by OPPD forces. Contact Mr. Bert Adams at (402) 636-3333 two days prior to required pick-up. It will be the contractor's responsibility to protect the salvaged material until picked up by OPPD forces.

The two luminaires shall be salvaged and provided with a new 400 watt HPS lamp.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

The item "Remove Lighting Unit" will be measured and paid for as a complete unit for each lighting unit removed, accepted by the engineer. This work shall include, but not be limited to the following: Removing, salvaging, preparing, storing, and stockpiling of the existing lighting units; removing the existing power foundations; all necessary excavation, backfilling and disposal of surplus materials; for the disconnecting and reconnection of existing feeders and for all materials, labor, tools and incidentals necessary to complete the work.
FIBER OPTIC CABLE, ACCESSORIES, AND HARDWARE

GENERAL

A. This section consists of the material requirements, construction details, testing, methods of measurement, and basis of payment necessary to complete installation of Fiber Optic Cable, Accessories and Hardware, as described in the Contract Documents.

B. Contractor shall supply new materials only.

C. The Engineer shall authorize any changes in location in writing before performing the installation. No additional compensation shall be provided for additional work associated with or resulting from unauthorized changes to the Contract Documents.

D. The single-mode fiber optic cable, accessories, and hardware shall meet the latest applicable standard specifications by American National Standards Institute (ANSI), Electronic Industries Association (EIA), Telecommunications Industries Association (TIA) and Underwriters Laboratory (UL).

E. Components, accessories, and hardware must be compatible.

F. All Manufacturer's manuals, instructions, and warranties shall be transferred to NDOT.

G. Required Submittals: In addition to submissions required under each pay item, Contractor shall provide shop drawings or catalog cuts for each material prescribed including manufacturer name and model number.

H. All material shall be stored in an environment between -40°C to +70°C. Material shall operate in an environment of -40°C to +70°C and relative humidity of 0% to 95% (non-condensing) without the assistance of fan-forced cooling.

I. All materials shall be kept in manufacturers packaging until installation. Contractor shall prevent dust, water, and other pollutants from contaminating any fiber optic connection point at all times.

1.0 12 SM FIBER OPTIC CABLE

1.1 DESCRIPTION

A. Fiber Optic Cable shall be Single-mode Fiber Optic Outside Plant (OSP) Cable – Dielectric Loose Tube.

B. All Fiber Optic Cable used on this project shall be from one manufacturer.
1.2 MATERIAL

A. Fiber optic, single-mode, graded loose tube dielectric cable constructed with industry standard 2.5 mm buffer tubes stranded around a central strength member.

B. The buffer tubes shall be compatible with standard hardware and shall have 12 fibers per tube, the fibers shall not adhere to the inside of the buffer tube, each buffer tube and fiber shall be distinguishable by means of color coding in accordance with TIA/EIA-598-B, "Optical Fiber Cable Color Coding" and be colored with ultraviolet (UV) curable ink.

C. The central member shall consist of a dielectric, glass reinforced plastic rod. Each buffer shall be water blocked material embedded in the inside wall of the buffer tube for water-blocking protection. The water blocking material shall be non-nutritive to fungus, electrically non-conductive, and homogeneous.

This material will preclude the need for other water-blocking materials such as gels, yarns, foams, or tapes; the buffer-tube shall be gel-free.

D. Water swellable yarn(s) shall be applied longitudinally along the central member during stranding, water blocking elements shall be applied uniformly throughout the buffer tube.

E. The cables shall be designed for point-to-point applications as well as mid-span access, and shall be stranded around the dielectric central member using the reverse oscillation, or "S-Z", stranding process.


G. The fiber shall be fully capable of handling existing and legacy single-mode applications which traditionally operate in the 1310 nm and 1550 nm regions and shall also be designed to operate the full-spectrum from 1260 nm to 1625 nm for optical transmission.

H. The fiber shall be designed to provide optimum performance from 1260 nm to 1625 nm intended for 16-channel Course Wavelength Division Multiplexing applications.

I. Cables shall be sheathed with medium density polyethylene (MDPE). The minimum nominal jacket thickness shall be 1.3 mm. Jacketing material shall be applied directly over cable core and water swellable tape. The polyethylene shall contain carbon black to provide ultraviolet light protection and shall not promote the growth of fungus.

J. The MDPE jacket material shall be as defined by ASTM D1248, Type II, Class C, Category 4 and Grades J4, E7 and E8.
K. The jacket or sheath shall be free of holes, splits, and blisters.

L. The cable jacket shall contain no metal elements and shall be of a consistent thickness.

M. Cable jackets shall be marked with the manufacturer's name, month and year of manufacturer, sequential meter or foot markings, a telecommunication handset symbol as required by Section 350G of the National Electrical Safety Code (NESC), fiber count, and fiber type. The actual length of the cable shall be within -0/+1% of the length markings. The print color shall be white, with the exception that cable jackets containing one or more coextruded white stripes, which shall be printed in light blue. The height of the marking shall be approximately 2.5 mm.

N. The maximum pulling tension shall be 2700 N (600 lbf) during installation (short term) and 890 N (200 lbf) long term installed.

O. The minimum bend radius shall be 15 times the cable outside diameter while under tension and 10 times the cable outside diameter installed.

P. The shipping, storage, and operating temperature range shall be -40°C to +70°C. The installation temperature range shall be -30°C to +70°C.

1.3 CONSTRUCTION

A. General

1. Remove fiber optic cable from the reel in a manner acceptable to the Manufacturer and Engineer.
2. Visually inspect all Fiber Optic Cable prior to installation. Report any defects to Engineer.
3. Do not twist or bend the fiber optic cable in excess of the limits recommended by the manufacturer.
4. As the cable is fed into the duct and conduit system, the Contractor shall use a manufacturer approved water-based cable lubricant for all fiber optic cable installations.
5. Protect at all times all proposed cables, cable ends, and any exposed portions of fiber optic cable from damage including water intrusion.

B. Cable Installation

1. All fiber optic cable shall be installed in ducts or conduits according to contract documents.
2. A suitable cable feeding method shall be used between the cable reel and the face of the duct and conduit to protect the cable and guide it into the duct.
3. Dynamometers and breakaway pulling swings shall be used to ensure that the pulling line tension does not exceed 2700 N (600 lbf).

4. The mechanical stress placed on a cable during installation shall not be such that the cable is twisted or stretched. A pulling eye and swivel shall be attached to the cable and used to install the cable through the duct conduit system to prevent the cable from twisting.

5. The figure-eight configuration should be used to prevent kinking or twisting when the cable must be unreel or backfed. Cables shall not be forced around sharp corners or allowed to be kinked or crushed.

6. Minimum bending radius during installation shall not be less than twenty (20) times the outside diameter of the cable or as recommended by the manufacturer, whichever is greater.

7. Pulling of the cable shall be hand assisted.

8. NDOT approved installation methods include Pulling, High Air Speed Blowing, Air-Assist, Push/Pull Installation, and Air Blown Cable. Installation shall comply with all manufacturers' recommendations for cable installation including pulling tensions and bending radii.

9. The cable shall be carefully inspected for jacket defects. If defects are noticed, the pulling operation shall be stopped immediately and the Engineer notified. The Engineer shall make a determination of acceptability or shall reject the cable.

10. If cable ends are not capped while exposed to the environment, the contractor shall cut off a minimum of three (3) feet of each cable end before splicing.

11. The fiber cable shall be installed in continuous runs as marked on the plans. End of reel splices not shown in the plans shall be pre-approved by the Engineer and are subsidiary to the cost of the installation of the cable. No splices shall be allowed unless indicated by the plans or approved by the NDOT.

12. Seal all conduit openings using sealing compound at the junction boxes, pull boxes, poles, cabinets, and building entrances after cable installation.

C. Facilities Protection

1. In the event it is suspected that cable damage has occurred prior to final acceptance, Contractor shall test the cable with an OTDR within seventy-two (72) hours after notification and submit a copy of the OTDR test to the Engineer upon completion.

2. Contractor shall replace or repair, as directed by the Engineer, any damage occurring before final acceptance at no additional cost to the NDOT. Perform any repairs or replacements within seventy-two (72) hours unless otherwise approved by the Engineer.

3. Contractor shall repair or replace any defect in the installed cable at no additional cost to the NDOT. Consider a defect to be any condition resulting in a negative or adverse effect on current or future operations of
the completed fiber optic communication system as determined by the Engineer.

4. Any existing wiring that is damaged during fiber optic cable installation shall be replaced or repaired, as directed by the Engineer, at no additional cost to the NDOT.

D. Slack Coils

1. Sufficient slack shall be left at each end of the cable to allow proper cable splicing and termination.
2. Additional slack shall be left in pull boxes for existing or projected signal cabinets at lengths indicated in plans.
3. Storage of slack cable in cabinets and pull boxes shall be neatly coiled. The slack coils shall be bound at a minimum of three (3) points around the coil perimeter. Secure and support cables at intervals not exceeding 30 inches (760 mm) and not more than 6 inches (150 mm) from cabinets, boxes, fittings, outlets, racks, frames and terminals.
4. For storage purposes, the minimum bending radius shall not be less than ten (10) times the outside diameter of the cable or as recommended by the manufacturer, whichever is greater.

E. Cable Identification

1. Place tags on all fiber optic cable identifying the owner and direction of the cable.
2. Tags shall clearly identify where each individual cable run originated and where it ends (pull box to pull box, pull box to cabinet, pull box to building, etc.).

2.0 TRACE WIRE

2.1 DESCRIPTION

A. A trace wire is required in any conduit that does not contain copper conductors.

2.2 MATERIAL

A. The trace wire shall be #10-14AWG copper THHN/THWN/USE or a detectable pull tape that incorporates a #22AWG insulated copper wire.

3.0 TERMINATED FIBER CONNECTOR

3.1 DESCRIPTION

B. Fiber Connectors shall consist of a pigtail with terminated end.
3.2 MATERIAL

A. All fiber connectors shall be factory installed connectors. Field terminated connectors shall not be allowed.

B. Connectors shall be single-mode UPC/ST as indicated on the plans and have a typical insertion loss of 0.20 dB or less, a maximum loss of 0.50 dB or less, with typical reflectance of -55 dB.

3.3 CONSTRUCTION

A. Fusion Splices

1. Fusion splices shall be used to splice Fiber Optic Cable to Terminated Fiber Connector pigtails for each connector shown in the plans.
2. Splices shall be allowed only in Fiber Connector Housings as indicated on the plans.
3. Maximum attenuation per splice as estimated by the fusion splicers shall not exceed 0.02 dB. Any splice exceeding 0.02 dB at the time of splicing shall be re-spliced.
4. Splice shall provide three axis core alignment using light injection and loss measurement techniques.
5. No mechanical splices of fiber cable will be allowed.

3.4 FIBER OPTIC ACCEPTANCE TESTING

A. The Contractor shall not perform testing without being observed by NDOT unless granted permission to do so in writing.

B. Post installation, one hundred percent (100%) of the terminated fiber shall be tested with an Optical Time Domain Reflectometer (OTDR) at 1310 nm and 1550 nm; in addition an Optical Loss Test Set (OLTS) shall be used to test the fiber. The contractor shall provide the Engineer with up to two copies of any software required for viewing electronic files of the OLTS and OTDR traces.

C. Each and every tube will be tested. Contractor shall test one strand per tube that doesn’t have a terminated strand.

D. All test equipment shall be factory certified within the last year. The Contractor shall provide copies of the certification 10 days prior to testing.
E. Test results will be recorded on a form supplied by the Contractor, with data compiled in PDF format through the meter manufacturer's software. No additional alteration using software from the Contractor beyond the meter manufacturer's software will be allowed. The Contractor shall submit test results in a format approved by the Engineer. Completed test forms on each terminated fiber shall be submitted to the Engineer. Contractor shall also provide bi-directional native test (electronic version) with no alterations and meter software for viewing of fiber traces. At a minimum, test results shall show the following:

1. Cable and fiber identification (as approved by NDOT).
2. Operator name.
3. Date and Time.
4. Setup and test parameters including wavelength, pulse width, range, scale and ambient temperature.
5. Test results for OTDR test averaged for total fiber trace, splice loss/gain (dB), connector loss (dB), all events greater than 0.05 dB, measured length from cable markings and total length from OTDR.
6. Test results for attenuation test including measured cable length (cable marking) total length (from OTDR test) number of splices (from as-built) and total link attenuation versus allowed attenuation.

F. OTDR testing shall use a launch and receiving cables minimum 1000 meters or greater than the dead zone for the OTDR used for this test.

G. Contractor shall verify prior to submittal that all test results satisfy the requirements of the Contract Documents.
1. The fiber optic cable shall have a maximum attenuation of 0.4 dB/km at 1310 nm and 0.3 dB/km at 1550 nm when measured with an OLTS.
2. Each connector shall have an averaged loss value of 0.25 dB or less when measured bi-directionally with an OTDR at 1310 nm and 1550 nm.
3. Each splice shall have an averaged loss value of 0.08 dB or less when measured bi-directionally with an OTDR at 1310 nm and 1550 nm.

H. All fiber connectors shall be cleaned and checked for dirt, scratches or chips before installed in adapters and testing. All dust covers shall be installed after testing is complete.

I. Remove malfunctioning units, replace with new units, and retest as specified above.

4.0 FIBER CONNECTOR HOUSING
4.1 DESCRIPTION

A. Shall be a single panel and rack mounted housing. Housing shall provide termination capabilities, splice protection, and associated fiber optic cable and terminated fiber connector storage.

B. Shall be the same manufacturer as Connector Adapter Panel.

C. Fiber Connector Housing manufacturer shall be Corning, Commscope, or approved equal.

D. Fiber Connector Housing shall occupy sufficient rack space in traffic signal controller cabinet to accommodate the number of connector panels specified in the plans.

4.2 MATERIAL

A. Rack mounted termination/splice housings shall provide for termination capabilities, splice protection, and associated fiber/pigtail storage.

B. Rack mount housing shall be intended for fiber terminations, it shall have built in splice tray, fiber management, and cross-connect for up to 12 fibers.

C. Top and bottom cable entry grommets for incoming fiber optic cable and duplex fiber jumper.

D. Manufactured of metal.

E. Housing shall have a hinged front door, jumper bend limiters, and labels for identifying fiber terminations.

5.0 CONNECTOR ADAPTER PANEL

5.1 DESCRIPTION

A. Connector Adapter Panel shall be 6 Duplex ST.

B. Connector Adapter Panel shall be the same manufacturer as Fiber Connector Housing.

5.2 MATERIAL

A. Adapter panels shall provide inter-connect or cross-connect capability in housing and provide a secure way to mate two connectors.
B. The panel shall be manufactured of metal.

C. The fiber adapter shall have a ceramic alignment and composite housing.

D. The fiber adapter shall be for single-mode UPC (OS2) fiber connectors, and be Blue in color.

E. The adapter panel shall be able to accommodate fiber counts of 12 connectors.

6.0 DUPLEX FIBER JUMPER

6.1 DESCRIPTION
A. Duplex Fiber Jumper shall connect Connector Adapter Panel to Fiber Ethernet Switch or Fiber Ethernet Transceiver as shown in the plans. Duplex fiber jumpers shall be subsidiary to the associated Connector Adapter Panel.

6.2 MATERIAL
A. The fiber jumper shall be configurable with standard ST terminations, and shall be available in 3.0 nm and Yellow in color.

B. The fiber shall be fully capable of handling existing and legacy single-mode applications which traditionally operate in the 1310 nm and 1550 nm regions and shall also be designed to operate the full-spectrum from 1260 nm to 1625 nm for optical transmission.

C. This fiber jumper shall be designed to provide optimum performance from 1260 nm to 1625 nm intended for 16-channel Course Wavelength Division Multiplexing applications.

D. The fiber jumper shall be available in 1.6 nm cordage, have pull-proof connector design and have distinctive color coding for positive identification.

E. Jumper shall be a factory terminated assembly with a standard length of 1 meter.

7.0 FIBER ETHERNET SWITCH

7.1 GENERAL
A. Part 6 addresses a Two Port Fiber Optic Gigabit Ethernet Managed Switch.

B. Manufacturer shall be Comnet, Comtrol, RuggedCom or approved equal.
7.2 DESCRIPTION

A. The device shall provide a minimum of 6 (six) combo 10/100/1000T(X) RJ-45 ports and a minimum of 3 (three) 100/1000FX single mode ST ports.

B. The device shall support transmission utilizing Category 6 cable or better. The module shall support the Ethernet data IEEE 802.3 protocol using Auto-negotiating and Auto-MDI/MDI-X features.

C. The device shall require no in-field electrical or optical adjustments or in-line attenuators to ease installation. The device shall provide power, link speed, and fiber port status indicating LED’s for monitoring proper system operation. The device shall provide automatic re-settable solid-state current limiters on each module to reduce the chance of a single point failure of the system. The device shall have dual redundant power supply connections to minimize single point failure. The device shall provide a serial connection for local management of the device. The device shall have a lifetime warranty.

D. The following IEEE Networking Standards shall be supported:

1. IEEE 802.3 10Base-T Ethernet
2. IEEE 802.3u 100Base-TX Fast Ethernet
3. IEEE 802.3ab 1000Base-TX
4. IEEE 802.3x Flow Control and Back-pressure
5. IEEE 802.1p class of service
6. IEEE 802.1Q VLAN and GVRP
7. IEEE 802.1D Spanning Tree Protocol
8. IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
9. IEEE802.3ad LACP
10. IEEE802.1x Port-based Network Access Control

E. NEMA TS2-1998

F. Switching Performance

1. Switch Technology: Store and Forward Technology.
2. System Throughput: 14,880pps for 10M Ethernet; 148,800pps for 100M Fast Ethernet; 1,488,100 for Gigabit Ethernet
3. Transfer Packet Size: 64 bytes to 9000 bytes (with VLAN Tag)
4. MAC Address: 8K MAC
5. Packet Buffer: 1Mbits

G. Management
1. Configuration: Web, HTTPS, SSH, TFTP/Web Update for firmware and configuration backup/restore, DHCP client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, SNMP v1, v2c, v3, Traps and RMON1.
2. SNMP MIN: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
3. Port Trunk: Up to 8 Static Trunks and 802.3 ad LACP
4. VLAN: IEEE802.1Q VLAN, GVRP. Up to 4096 VLAN groups.
5. Quality of Service: Four priority queues per port. IEEE802.1p COS and Layer 3 TOS/DiffServ.
6. IGMP Snooping: IGMP Snooping v2/v3 for multicast filtering and IGMP Query
7. Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or all packets, and Egress filtering for all packets.
8. Port Security: Assign authorized MAC to specific port
9. IP Security: IP security to prevent unauthorized access
10. 802.1x: Port-based Network Access Control
11. NDCP Server: Can assign 255 IP address, support IP and MAC binding
12. System Log: Supports both Local mode and Server mode

H. Network Redundancy

1. Rapid spanning Tree Protocol: IEEE802.1w
2. Compatible with Legacy STP: IEEE802.1D
3. Failure Recovery within 30ms for 250 units of connection
4. Dual Homing: Multiple uplink paths to upper switches

7.3 DATA SPECIFICATIONS

A. Data Interface: Ethernet IEEE802.3
B. Data Rate: up to 1000 Mbps
C. Data Inputs/Outputs: Minimum of 6
D. Operation mode: Half or Full Duplex
7.4 OPTICAL SPECIFICATIONS
A. Number of Optical ports: minimum of 3 (three)
B. Number of Fibers Required: 2 (two)
C. Optical Wavelength: 1310 or 1550 nm
D. Optical Power Budget: Device dependent
E. Maximum Distance: up to 120 km (70 mi) single-mode

7.5 CONNECTORS
A. Optical: ST
B. Power: Screw Clamp Terminal Strip
C. Data: RJ-45
D. Console: RJ-45 Serial communication

7.6 ELECTRICAL SPECIFICATIONS
B. Voltage Regulation: solid-state, Independent on each board.
C. Circuit Board: UL 94 flame rated and meets all IPC standards.

7.7 EXAMINATION
A. All optical connectors shall be covered with dust caps and remain on the switch until installing cable connectors to switch.

7.8 PREPARATION
A. Rack Mounting shall be used. Existing equipment in the cabinet shall not be moved for switch except where approved by the engineer.

7.9 PATCH CORD
A. Factory-made, four-pair cables; terminated with eight-position modular RJ-45 plug at each end.
B. Shall have 24AWG copper alloy polycarbonate stranded conductors, PVC non-plenum UL 94 V-0 jacket material. The cable shall be unshielded Category 6.

C. Patch Cords shall be used to connect switch to traffic control devices inside the specified cabinet.

D. Contractor shall supply 2 (two) 6 ft. and 2 (two) 3 ft. patch cables to interconnect equipment within the cabinet.

8.0 **METHOD OF MEASUREMENT**

A. Fiber Optic Cable shall be measured in linear feet from center to center of the pull boxes, vaults and cabinet and include prescribed coils for each fiber count shown in the plans.

B. Terminated Fiber Connectors, Fiber Connector Housings, Connector Adapter Panels, and Fiber Ethernet Switches be measured by the each.

C. Fiber Optic Acceptance Testing shall be subsidiary to Terminated Fiber Connectors.

9.0 **BASIS OF PAYMENT**

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
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<tbody>
<tr>
<td>12 SM Fiber Optic Cable</td>
<td>Linear Foot (LF)</td>
</tr>
<tr>
<td>Terminated Fiber Connector</td>
<td>Each (ea)</td>
</tr>
<tr>
<td>Fiber Connector Housing</td>
<td>Each (ea)</td>
</tr>
<tr>
<td>Connector Adapter Panel</td>
<td>Each (ea)</td>
</tr>
<tr>
<td>Fiber Ethernet Switch</td>
<td>Each (ea)</td>
</tr>
</tbody>
</table>

Payment is full compensation for all work prescribed in this Section.
STATE OF NEBRASKA
DEPARTMENT OF TRANSPORTATION
PLANS FOR CONSTRUCTION
N-370 / 192ND STREET
INTERSECTION
SARPY COUNTY
GENERAL NOTES

1. The location of all aerial and underground utility facilities are not indicated on these plans. Underground utilities other than shown or not will be located and flagged by the utilities upon request of the contractor. No excavation will be permitted in the area of underground utilities until all such facilities have been located and verified to the satisfaction of all parties. The contractor shall be responsible for protection of all underground and aerial utilities and constructions.

2. All surface materials that are disturbed by excavation and backfilling operations shall be replaced and restored in kind equal to or exceeding the original condition, including sodding and seeding.

3. Inspections will be performed by Department of Transportation personnel. Inspection by other state or local agencies is not required.

4. Linear measurements are taken between pole base and pull box centers and do not include allowances for mast arm lengths, vertical rises or splices.

5. Lighting conduit and traffic signal conduit may be laid in the same trench.

6. Light poles, lighting conduit, pavement marking, and signs are shown for reference only.

7. Signal poles and controllers shall not be located in ditches or depressions subject to water ponding.

8. All pole foundations and controller pedestals shall be fitted with a minimum of one spare 2-inch conduit bend.


10. Signal heads shall be mounted plumb and level.

11. Signal head lenses and LED modules shall be placed according to the manufacturer's recommendations stamped on the lens.

12. Traffic signal cable shall not be broken and spliced between the controller cabinet and the pole. Detector lead-in cable shall not be broken and spliced between the controller cabinet and the pull box containing the detector leads. Splices outside of the pole and the detector boxes shall be preapproved by the MOOT Traffic Engineering Division. If approved, splices shall only be made in cabinets, pull boxes, junction boxes, pole bases, and signal heads. Splices are not allowed in earth, conduit, mast arms, or exposed aerially. All splices shall meet the specification for Secondary Electrical Connections in Section 401.06 of the STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

13. Before pulling cable the Contractor shall place bells or bushings on all conduit ends.

14. Contact Robert Adams, OPPD, (402) 636-3333, to schedule power service work.

15. Luminaires shall be salvaged and stored until they may be installed on the new CMP poles. The salvaging and storage procedures shall not damage the luminaries to the point where they become unsuitable. If they are damaged by the engineer to not be made unsuitable by cause, the contractor shall replace the assembly at their cost. The replacement shall be determined suitable by the engineer.

SHEET QUANTITIES

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ea.</td>
<td>Remove Pull Box</td>
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</table>

TRAFFIC SIGNAL PLAN

NEBRASKA DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION

PROJECT NO. SHEET NO. C-77<17-18

TRAFFIC SIGNAL NOTES AND REMOVALS
WIRING DIAGRAM

NO SPLICES

Service cable shall not be broken and spliced between the service disconnect and the controller cabinet. Traffic signal cable shall not be broken and spliced between the controller cabinet and the pole. Detector lead-in cable shall not be broken and spliced between the controller cabinet and the pull box containing the detector leads. Splices outside of the poles and the detector boxes shall be preapproved by the NDOR District 2 Electronics Staff, call Don Wood at (402) 331-8584. If approved, splices shall only be made in cabinets, pull boxes, junction boxes, pole bases, and signal heads. Splices are not allowed in earth, conduit, mast arms, or exposed aerially. All splices shall meet the specifications for Secondary Electrical Connections in Section 401.06 of the STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>ITEM</th>
<th>REMARKS</th>
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</thead>
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<tr>
<td>1268 L.F.</td>
<td>1-1 MM Fiber Optic Cable</td>
<td>See Special Provision</td>
</tr>
<tr>
<td>1268 L.F.</td>
<td>Trace Wire</td>
<td>See Special Provision. #10-14AWG copper THHN/THWN/USE or Detectable Pull Tape with #22AWG Insulated Copper Wire.</td>
</tr>
<tr>
<td>1158'</td>
<td>2&quot; Conduit in Trench</td>
<td>See Special Provision: 1-4 Fiber Optic Cable</td>
</tr>
<tr>
<td>2 ea.</td>
<td>Pull Box, Type PB-FOR27</td>
<td>See Special Provision</td>
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</table>
SHEET QUANTITIES

<table>
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<th>ITEM</th>
<th>REMARKS</th>
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</thead>
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<tr>
<td>168 L.F.</td>
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<td>See Special Provision</td>
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<tr>
<td>1 ea.</td>
<td>Pull Box, Type PB-FOR27</td>
<td>See Special Provision</td>
</tr>
<tr>
<td>12 ea.</td>
<td>Terminated Fiber Connector</td>
<td>See Special Provision</td>
</tr>
<tr>
<td>26 L.F.</td>
<td>Trace Wire</td>
<td>See Special Provision. #10-14AWG copper THHN/THWN/USE or Detectable Pull Tape with #22AWG insulated Copper Wire.</td>
</tr>
<tr>
<td>1 ea.</td>
<td>Connector Adaptor Panel</td>
<td>See Special Provision</td>
</tr>
<tr>
<td>30 LF</td>
<td>Fiber Optic Cable</td>
<td>See Special Provision #125-54AWG copper THHN/THWN/USE or Detectable Pull Tape with #22AWG insulated Copper Wire.</td>
</tr>
</tbody>
</table>

Existing Pull Box, Type PB-1

Sta. 116+46, Lt. 78' In Existing Signal Cabinet

2 ea. 3" Conduit in Trench with #22AWG insulated Copper Wire.
POLE SPECIFICATIONS

1. TRAFFIC SIGNAL POLES SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO M-314, 1988 EDITION. NEBRASKA DEPARTMENT OF TRANSPORTATION TRAFFIC ENGR. DIV., TRAFFIC SIGNALS SIXTH EDITION 2013; INCLUDING ALL CURRENT INTERIM REVISIONS. CATEGORY I, WITHOUT GALLOPING AND DEBRIS AND MOISTURE.

2. POLE SHAFTS SHALL BE 20 FT. IN LENGTH.

3. ALL HAND HOLES SHALL HAVE A MINIMUM OPENING OF 3.0 FT. SQUARE FOUNDATION ONLY.

4. MAST ARM POLE FOUNDATIONS SHALL BE DESIGNED BY THE CONTRACTOR TO AASHTO STANDARDS SEE NOTE 3.

5. ALL SIGNAL AND LUMINAIRE MAST ARMS, POLE SHAFTS, AND LUMINAIRE EXTENSIONS SHALL BE SUPPLIED WITH 1" RUBBER GROMMETS.

6. POLE SHAFTS, LUMINAIRE EXTENSIONS, AND LUMINAIRE ARMS SHALL BE SUPPLIED WITH ADDITIONAL 1" RUBBER GROMMETS INLET HOLES SHALL BE DRILLED BY THE CONTRACTOR; NO GROUNDING GROMMETS FOR CABLE INLETS, SIGNAL MAST ARMS, AND LIGHTING POLE, TYPE CMP-S-L SHAFT EXTENSION, AND LUMINAIRE ARM SPAN IS.

7. HAND HOLES ON 5.50" BOLT CIRCLE.

8. FOUNDATION SHALL BE FLUSH WITH SURROUNDING CONCRETE.

9. ebenfalls Grundreinigung, Bodenhölzer und Flächen

10. MAST ARM FOUNDATION REINFORCEMENT BAR USAGE

<table>
<thead>
<tr>
<th>BAR NO.</th>
<th>BARS PER DESIGN</th>
<th>SIDE FOUNDATION ONLY</th>
<th>VERTICAL BARS</th>
<th>ROUND FOUNDATION ONLY</th>
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</thead>
<tbody>
<tr>
<td>F-501</td>
<td>PER DESIGN</td>
<td>-</td>
<td>PER DESIGN</td>
<td>-</td>
</tr>
<tr>
<td>F-502</td>
<td>PER DESIGN</td>
<td>PER DESIGN/PER DESIGN</td>
<td>VERTICAL BARS</td>
<td>ROUND FOUNDATION ONLY</td>
</tr>
<tr>
<td>F-503</td>
<td>PER DESIGN</td>
<td>-</td>
<td>-</td>
<td>ROUND FOUNDATION ONLY</td>
</tr>
</tbody>
</table>

POLE FOUNDATIONS

1. HAND HOLES SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO REQUIREMENTS.

2. GROUND BOLT FOR ACCOMMODATION OF #4, #6 AND #8 BARS.

3. PROVISION WILL BE ALLOWED ON THE HAND HOLE FRAME.

4. ANCHOR BOLT CIRCLE CENTERED ON FOUNDATION.

5. GROMMET SEE NOTE 5.

6. 4-H.S. HEX HEAD BOLTS.

7. 4-1"-BUNC TAPPED WITH CLEARANCE FORastos NEW AND LOCK WASHERS.

8. W/HEX NUTS AND LOCK WASHER.

9. 4-H.S. HEX HEAD BOLTS.

10. GROUND ROD THRU CONDUIT ACCORDANCE WITH AASHTO REQUIREMENTS.

11. ANCHOR BOLTS MINIMUM DIAMETER 1/4" x .75" x 8 FT. DEEP.

12. FOUNDATION SHALL BE FLUSH WITH SURROUNDING CONCRETE.

13. REINFORCEMENT BARS ARE TO BE USED IN ACCORDANCE WITH AASHTO M-314.

14. THE POLE SHAFT, LUMINAIRE EXTENSION, LUMINAIRE ARM, AND SIGNAL SHAFT SHALL BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AASHTO M-314.

15. THE GROUND ROD SHOULD BE PLACED BEFORE THE FOUNDATION IS BUILT.

16. THE POLE SHAFT, LUMINAIRE EXTENSION, LUMINAIRE ARM, AND SIGNAL SHAFT SHALL BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AASHTO M-314.

17. FOUNDATION SHALL BE FLUSH WITH SURROUNDING CONCRETE.

18. THE POLE SHAFT, LUMINAIRE EXTENSION, LUMINAIRE ARM, AND SIGNAL SHAFT SHALL BE DESIGNED AND CONSTRUCTED TO COMPLY WITH AASHTO M-314.

19. GROUND ROD THRU CONDUIT ACCORDANCE WITH AASHTO REQUIREMENTS.

20. ANCHOR BOLT CIRCLE CENTERED ON FOUNDATION.

21. GROMMET SEE NOTE 5.

22. 4-H.S. HEX HEAD BOLTS.

23. GROUND BOLT FOR ACCOMMODATION OF #4, #6 AND #8 BARS.

24. ANCHOR BOLT CIRCLE CENTERED ON FOUNDATION.
**Pedestal Pole, Type PP-"H"**

**Details C**
- **Signal Pole & Anchor Bolt Design Requirements**

In order to provide the correct tension to anchor bolts, the contractor will be required to have on hand the following items:
- One Standard Combination Wrench Set Only One Size to Be Used, 3/8" - 1 1/4".
- A Torque Multiplier (Plate Reaction Style) With the Following Minimum Requirements:
  - Gear Ratio: 60:1
  - Torque Ratio: 52:1
  - Output Capacity: 5000 ft.-lb.

**Foundation Flush With Surrounding Concrete, Side Walk Or A Minimum of 2" Projection If In Earth**

**TABLE**

<table>
<thead>
<tr>
<th>Description</th>
<th>SI Qu/Ft (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;-4 Sec. Signal With Backplates</td>
<td>11.50 7</td>
</tr>
<tr>
<td>30&quot; x 36&quot; Signal Arm Mounted Sign</td>
<td>7.50 7</td>
</tr>
<tr>
<td>12&quot;-3 Sec. Signal With Backplates</td>
<td>8.70 60</td>
</tr>
<tr>
<td>16&quot; Pedestrian Signal</td>
<td>2.00 25</td>
</tr>
<tr>
<td>Luminaire</td>
<td>3.30 60</td>
</tr>
</tbody>
</table>

**Turn-Of-The-Nut Method**

1. Lubricate the bolt threads and nut threads with a high-pressure lubricant. Use a 3/8" to 1" drive socket wrench, with an appropriate combination wrench, and a ratcheting extension. Ensure the nut and bolt are turned in the same direction.

2. After threading the anchor bolt and nut, mark the location of the nut using a marker or chalk. Use a Star pattern, ensuring that all markings are clearly visible.

3. Using the torque multiplier, apply full effort of a workman to the end of the wrench to "snug tighten" the nut. After the anchor bolt hold-down nuts are snug tightened, all leveling nuts should be retightened to the snug tight position to ensure full contact has been maintained with the bottom of the base plate.

4. Mark the location of one corner of the nut on the base plate.

5. Using the torque multiplier and the mark placed on the base plate, tighten the nut onto the anchor bolt by giving the nut 1/6th of a turn (this is equal to turning the nut onto the anchor bolt a distance equal to the length of one flat or bolt, the next corner of the nut is even with the mark on the base plate).

6. After the top nuts are fully tightened, all leveling nuts should be rest Chuned to align with the top nuts. The bolt full contact has been maintained with the bottom of the base plate.

7. Converting bolt nuts shall be tightened by the same turn-of-the-nut method as designed for anchor bolts with the exception that the bolt head must be held stationary while applying the torque. Turn-of-the-nut requirements for connecting bolts shall be in the section of the standard specifications.

**Mana Arm Design Loading**

**Mast Arm Pole Loading Chart**

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
<th>T SA SL 12</th>
<th>Monitoring Nuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2&quot; x 4&quot; Mason, with Backplates</td>
<td>11.50 118</td>
<td>8</td>
</tr>
<tr>
<td>B</td>
<td>30&quot; x 4&quot; Signal Arm Mounted Sign</td>
<td>1.50 7</td>
<td>7</td>
</tr>
<tr>
<td>C</td>
<td>30&quot; x 4&quot; Signal, with Backplates</td>
<td>8.70 60</td>
<td>60</td>
</tr>
<tr>
<td>D</td>
<td>20&quot; x 4&quot; Signal, with Backplates</td>
<td>2.00 25</td>
<td>25</td>
</tr>
<tr>
<td>E</td>
<td>16&quot; x 4&quot; Signal, with Backplates</td>
<td>3.30 60</td>
<td>60</td>
</tr>
<tr>
<td>F</td>
<td>16&quot; Pedestrian Signal</td>
<td>2.00 25</td>
<td>25</td>
</tr>
<tr>
<td>G</td>
<td>Luminaire</td>
<td>3.30 60</td>
<td>60</td>
</tr>
</tbody>
</table>

**Mast Arm Design Loading**

The Nebraska Department of Transportation Traffic Engineering Division is responsible for the design and implementation of traffic signal poles. This page includes details on the design requirements, loading charts, and installation techniques for traffic signal poles, ensuring proper tensioning of anchor bolts and connecting bolts. The specifications include the use of a torque multiplier, alignment of nuts, and the implementation of proper tensioning methods. The project number C-77C17-193 is referenced, and the sheet number is 12.
NOTES:

1. ACCESS DOORS, BARS AND/OR WIRE, ARE SUBORDINATE TO THE ITEM "PULL BOX, TYPE FOR-27".
2. FILL MATERIAL SHALL BE DRAIN, OR CROUCHED RIVER COMPOSED OF CLEAN, DURABLE AND UNCOATED PARTICLES. FILL MATERIAL SHALL EXTEND A MINIMUM OF 12 INCHES BELOW THE BOTTOM OF THE ENCLOSURE AND 4 INCHES BEYOND THE OUTER WALL OF THE ENCLOSURE.
3. FULL BOX SHALL BE INSTALLED SO THAT THE COVER IS FLUSH WITH THE SURFACE WHEN CONSTRUCTING IN A SIDEWALK OR DRIVEWAY. PULL BOX COVER SHALL BE APPEARENTLY 1 INCH ABOVE THE FINISHED SURFACE OF THE ENCLOSURE. ENCLOSURE CONSTRUCTION IN AN EARTH ENVELOPE OR NON-PAVED SURFACE.
4. PROLONGED EXPOSURE OF THE PULL BOX AND COVER TO SUNLIGHT, COMMON ICE MELTING CHEMICALS OR FERTILIZERS SHALL NOT CAUSE SIGNIFICANT DAMAGE TO THE PULL BOX OR COVER, OR IMPAIR ITS FUNCTION.
5. CONDUIT TERMINATIONS IN PULL BOX SHALL BE FITTED WITH BELL OR FLARED ENDS.
6. CONDUIT ENTIRELY BETWEEN 4 AND 6 INCHES ABOVE THE ENCLOSURE RESTING. ANY CONDUIT SHALL PENETRATE THE ENCLOSURE SIDE WALLS.
7. FULL BOXES OF TYPE FOR-27 SHALL BE CONSTRUCTED OF EPoxy OR POLYESTER RESIN MORTAR WITH WOVEN GLASS FIBER.
8. CONDUIT MATERIALS SHALL NOT SUPPORT COMBUSTION WHEN TESTED IN ACCORDANCE WITH ASTM D-635: STANDARD TEST METHOD FOR RATE OF BURNING AND SMOKE PRODUCTION AND TIME OF BURNING OF PLASTICS IN A HORIZONTAL POSITION.
9. WATER ABSORPTION SHALL NOT EXCEED TWO PERCENT OF THE ORIGINAL WEIGHT OF MATERIAL UNDER ASTMD-570: STANDARD TEST METHOD FOR WATER ABSORPTION OF PLASTICS.
10. THE PULL BOX WALLS SHALL NOT DEFLECT MORE THAN 0.024 INCHES PER FOOT OF LENGTH OF BOX WHEN INSTALLED AND SUBJECT TO AN ASTM C-857 TIER 2 LOAD.
11. THE PULL BOX WALLS SHALL NOT DEFLECT MORE THAN 0.024 INCHES PER FOOT OF LENGTH OF BOX WHEN INSTALLED AND SUBJECT TO AN ASTM C-857 TIER 2 LOAD.
12. PULL BOX COVERS SHALL BE OF HEAVY-DUTY CONSTRUCTION TO WITHSTAND THE STRUCTURAL REQUIREMENTS OF THE SPECIFICATIONS. COVERS SHALL FIT SUFFICIENTLY TIGHT TO PREVENT THE ENTANCE OF RUN-OFF WATER. COVERS SHALL BE ENGAGED WITH AN AUTO-STOP MECHANISM. THE MANUFACTURER'S NAME AND THE LOGO "FIBER OPTICS" ON EACH COVER SHALL BE EMBOSSED. COVERS SHALL BE FITTED WITH A DESIGN "LIFT PIN" AND HAVE A MINIMUM 0.50 COEFFICIENT OF FRICTION SKID RESISTANT SURFACE. LED BOLTS SHALL NOT BE INSTALLED.

PULL BOX PB-TOR27

NOT TO SCALE
WORK BEYOND THE SHOULDER

CULVERT PROTECTION
WHEN GUARDRAIL IS REMOVED AND/OR EXCAVATION IS LESS THAN 15 FEET FROM SHOULDER

SHOULDER TAPER

SEE NOTE 12)

ROAD WORK

END

ONE LANE CLOSED WITH FLAGGER - URBAN

WORK IN CENTER OF ROAD WITH LOW TRAFFIC VOLUMES

LEGEND

1. SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. FLAGGER AHEAD SYMBOL SIGN W20-7A-4B SHALL BE USED WHEN A FLAGGER IS PRESENT, AND SPEED LIMIT 35 MPH APPLICABLE.
3. ALL SIGNS SHALL BE REPLACED IN A CLEAN CONDITION AND RENEWED AT INTERVALS AS REQUIRED BY THE ADMINISTRATION OF ROADS OF THE STATE OF NEBRASKA, AND MAINTAINED BY THE DEPARTMENT OF ROADS OR APPROPRIATE FREQUENT_ AREA.
4. ON HIGHWAY WORK, A SPEED LIMIT NO. 1.1 MPH APPLICABLE.
5. WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED.
6. VEHICLES OR EQUIPMENT SHALL NOT BE PAVED TO AS TO BE SEEN FROM TRAFFIC CONTROLS.
7. FLATLITIES MAY BE USED ONLY TO CALL ATTENTION TO WORKING AREA.
8. TYPICAL TRAFFIC CONTROL PLAN FOR SHORT-DURATION OPERATIONS 60 MINUTES OR LESS, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH AN ACTIVATED HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS ARE USED, AND THE WORK DOES NOT ENCROACH ONTO THE OPEN TRAVEL LANE.
9. ON HIGHWAY WORK, VEHICLES OR EQUIPMENT SHALL NOT BE ENCROACHED ONTO THE OPEN TRAVEL LANE.
10. REFER TO STANDARD PLAN NO. 920 FOR GENERAL INFORMATION NOT SHOWN.
11. ON DIVIDED ROADWAYS WITH MEDIANS, ADVANCE SIGNS SHALL ALSO BE INSTALLED IN THE MEDIAN.
12. WORK ON SHOULDERS

NOTES

1. SPEED LIMITS ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. FLATLITY AHEAD SYMBOL SIGN W20-7A-4B SHALL BE USED WHEN A FLAGGER IS PRESENT, AND SPEED LIMIT 35 MPH APPLICABLE.
3. ALL SIGNS SHALL BE REPLACED IN A CLEAN CONDITION AND RENEWED AT INTERVALS AS REQUIRED BY THE ADMINISTRATION OF ROADS OF THE STATE OF NEBRASKA, AND MAINTAINED BY THE DEPARTMENT OF ROADS OR APPROPRIATE FREQUENT ARE.
4. ON HIGHWAY WORK, A SPEED LIMIT NO. 1.1 MPH APPLICABLE.
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6. VEHICLES OR EQUIPMENT SHALL NOT BE PAVED TO AS TO BE SEEN FROM TRAFFIC CONTROLS.
7. FLATLITIES MAY BE USED ONLY TO CALL ATTENTION TO WORKING AREA.
8. TYPICAL TRAFFIC CONTROL PLAN FOR SHORT-DURATION OPERATIONS 60 MINUTES OR LESS, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH AN ACTIVATED HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR STROBE LIGHTS ARE USED, AND THE WORK DOES NOT ENCROACH ONTO THE OPEN TRAVEL LANE.
9. ON HIGHWAY WORK, VEHICLES OR EQUIPMENT SHALL NOT BE ENCROACHED ONTO THE OPEN TRAVEL LANE.
10. REFER TO STANDARD PLAN NO. 920 FOR GENERAL INFORMATION NOT SHOWN.
11. ON DIVIDED ROADWAYS WITH MEDIANS, ADVANCE SIGNS SHALL ALSO BE INSTALLED IN THE MEDIAN.
12. WORK ON SHOULDERS

TYPICAL TRAFFIC CONTROL PLAN

TYPICAL TRAFFIC CONTROL PLAN

NOTES

1. SPEED LIMITS ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. FLATLITY AHEAD SYMBOL SIGN W20-7A-4B SHALL BE USED WHEN A FLAGGER IS PRESENT, AND SPEED LIMIT 35 MPH APPLICABLE.
3. ALL SIGNS SHALL BE REPLACED IN A CLEAN CONDITION AND RENEWED AT INTERVALS AS REQUIRED BY THE ADMINISTRATION OF ROADS OF THE STATE OF NEBRASKA, AND MAINTAINED BY THE DEPARTMENT OF ROADS OR APPROPRIATE FREQUENT ARE.
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NOTES

The locations of all aerial and underground utility facilities may not be indicated in these plans. Underground utilities, except reflected on or not to be located and flagged by the owner of the property of the Contractor.

No excavation will be permitted in the area of underground utility facilities until all such facilities have been located and identified to the satisfaction of all parties. The excavation work will be accomplished with extreme care in order to avoid any possibility of damage to the utility facilities.

DESCRIPTION OF EXISTING FACILITIES

The following descriptions are for information only. Accuracy or completeness is not guaranteed. The contractor should verify essential data before ordering materials or beginning work.

The two existing lighting units EP-1 and EP-2 to be removed consist of a 400 Watt Cobra Head Luminaire attached to a 12 ft. most arm 45 ft. above the roadway. All two units were installed using a power driven foundation and breakaway transformer base. The existing circuit to the poles is single phase 240 volt 2-wire w/ground. Existing conductors are No. 6 USE and No. 6 bare ground.

There is a regasified type lighting controller attached to existing lighting unit EP-C fed by overhead conductors.

NOTES:


SCHEDULE OF WIRING MATERIALS

WIRE & CABLE
THE ELECTRICAL, MECHANICAL AND PHYSICAL PROPERTIES OF THE CONDUCTORS LISTED IN THE FOLLOWING SCHEDULE ESTABLISH THE MINIMUM ACCEPTABLE REQUIREMENTS FOR EACH OF THE LISTED APPLICATIONS. CONDUCTORS WHICH HAVE PROPERTIES THAT EXCEED THESE MINIMUM REQUIREMENTS MAY BE FURNISHED, AT THE CONTRACTOR'S OPTION, WITH THE ENGINEER'S APPROVAL. NO ADJUSTMENT IN THE CONTRACT PRICE WILL BE ALLOWED.

UNLESS INDICATED OTHERWISE ALL CONDUCTORS SHALL BE SINGLE CONDUCTOR, STRANDED COPPER U.L. LISTED, 600V. WITH SIZE OF CONDUCTOR AND TYPE AND COLOR OF INSULATION AS LISTED BELOW.

ONE PHASE CONDUCTOR MUST, AT THE TIME OF INSTALLATION, BE PERMANENTLY IDENTIFIED AS THE LINE 2 RED CONDUCTOR AT EACH END AND AT EVERY POINT WHERE THE CONDUCTOR IS ACCESSIBLE, IDENTIFICATION WILL BE ACCOMPLISHED BY COLORING THE EXPOSED INSULATION WITH RED TAPE.

EQUIPMENT GROUND:
POLE:
BRANCH CIRCUIT FEEDERS, INCLUDING NEUTRALS:
COLOR CODES:
BARE OR INSULATED, NO. 6 AWG
NO. 12 COPPER
USE FOR DISTRIBUTION OF 240 VOLTS, 2 WIRE, 50/60Hz
"LINE 1" - BLACK
"LINE 2" - RED
"NEUTRAL" - WHITE OR GREY:
"INSULATED EQUIPMENT GROUND" - GREEN.

POLE WIRING SCHEMATIC

NO. 12 COPPER WIRE TO LUMINAIRE
INLINE FUSE
BUSS HEB-AA
LITTLEFUSE LEB-AA
TRON HEB-AA
OR APPROVED EQUAL
FUSEHOLDER AND DISCONNECT
SBC350-4LI
HOM AC MANUFACTURING CO. RXL-4
ILSCO UTILICO PE04-350-SS-DB
NSI INDUSTRIES ISP-350-4
POLARIS IPLWB 350-4P
OR APPROVED EQUAL
CONNECTIONS FOR NON-BREAKAWAY INSTALLATIONS

REFERENCE TO ALLOM WIRE ARRANGEMENT
CONNECTOR MANUFACTURING CO. SSBC350-4LI
HOM AC MANUFACTURING CO. RXL-4
ILSCO UTILICO PE04-350-SS-DB
NSI INDUSTRIES ISP-350-4
POLARIS IPLWB 350-4P
OR APPROVED EQUAL
"SECONDARY CONDUCTORS"
"RANGE TAKING PULLBOX OR COVER"
"SURFACE TYPE MECHANICAL CONNECTOR MEETING ANSI 119.1 REQUIREMENTS"
"URD CONNECTOR IN PULL BOX"
"ENTRANCE TO ALLOM HEAD SET SCREW CONNECTOR MANUFACTURING CO. SSBC350-4LI
HOM AC MANUFACTURING CO. RXL-4
ILSCO UTILICO PE04-350-SS-DB
NSI INDUSTRIES ISP-350-4
POLARIS IPLWB 350-4P
OR APPROVED EQUAL
"CONDUIT CARRYING THE CONDUCTORS"
"DIRECTIONAL TAG ATTACHED TO"
"ENTRANCE HOLES"
"EPDM WATERPROOF COVER"
"RUBBER PLUG"
### SIGNAL HEAD CONFIGURATIONS

**NOTES**
- Lamps for signal heads shall conform to the standard set by the Institute of Transportation Engineers (ITE). All lamps shall have a clear glass envelope and comply with the following:
  - Nominal Signal Lens Diameter
  - Initial Nominal Light Output
  - Nominal Light Distribution

**SYMBOLS**
- TS - Denotes "Traffic Signal" Assembly
- PS - Denotes "Pedestrian Signal" Assembly
- PS - Denotes Pedestrian Signal Assembly
- NUMERAL - Indicates number of signal heads per assembly
- SUFFIX "OP" indicates optically programmed signal assembly

### STANDARD SIGNAL FACE ARRANGEMENTS

**SYMBOLS**
- TS - Denotes "Traffic Signal" Assembly
- PS - Denotes Pedestrian Signal Assembly
- NUMERAL - Indicates number of signal heads per assembly
- SUFFIX "OP" indicates optically programmed signal assembly

**VERTICAL SIGNAL HEADS**

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**HORIZONTAL SIGNAL HEADS**

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**SIGNAL FACE ARRANGEMENT LEGEND**

- SOLID RED
- SOLID YELLOW
- SOLID GREEN
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

**ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:**

- TS-1
- TS-2
- TS-3

**DATE**

- Jan 27, 1977

**REVISIONS:**

- Rev. No. 1 - Jan 27, 1977
- Rev. No. 2 - Jan 27, 1977
- Rev. No. 3 - Jan 27, 1977

**NEBRASKA DEPARTMENT OF TRANSPORTATION**

**STANDARD PLAN NO. 910-R3**

**SIGNAL FACE CONFIGURATION**
GENERAL NOTES

1. PIPE COUPLINGS FOR SIGNAL BRACKETS SHALL BE EITHER 1 1/2 INCH OR 2 INCH DEpendingupON THE SIGNAL HEAD TO BE INSTALLED. SIGNAL BRACKETS SHALL BE FURNISHED BY THE MANUFACTURER OF THE SIGNAL HEADS.

2. UNLESS OTHERWISE SPECIFIED IN THE PLANS, ALL TRAFFIC SIGNALS MOUNTED ABOVE THE ROADWAY SHALL HAVE A HEIGHT OF 18'-0"-+ 6", ALL SIDE MOUNTED TRAFFIC SIGNALS A HEIGHT OF 10' AND PEDESTRIAN SIGNALS AT A HEIGHT OF 8' AS MEASURED TO THE BOTTOM OF THE SIGNAL HEAD HOUSING OR BACKPLATE.

3. THE TETHER CLAMPS USED ON SPAN WIRE INSTALLATIONS SHALL HOLD THE TETHER CLEAR OF THE SIGNAL BACKPLATES. CUTTING OR BENDING THE BACKPLATES TO CLEAR THE TETHER SHALL NOT BE ACCEPTED.

4. ONE-WAY AND TWO-WAY TRAFFIC SIGNAL HEADS INSTALLED ON SPAN WIRES SHALL BE EQUipped WITH A TETHER WIRE. THREE WAY AND FOUR WAY SIGNALS AND BEACONS SHALL NOT BE TETHERED.

5. SIGNAL HEADS SHALL BE HELD SECURELY IN POSITION BY USE OF SERRATED COUPLING OR OTHER HARDWARE RECOMMENDED BY THE SIGNAL MANUFACTURER. STUD STYLE HANGERS AND TETHER CLAMPS SHALL BE USED FOR SPAN WIRE MOUNTING.
PULL BOX DETAIL

**SECTION A-A**

- 4" REINFORCING BARS
- 4" MIN. ALL SIDES
- JOINT FILLER TO DEPTH OF ABUTTING CONCRETE
- SEAL COVER WITH FLEXIBLE SEALANT CALKING
- SMALL COVER WITH FLEXIBLE SEALANT CALKING
- 4" MIN. ALL SIDES

**SECTION A-B**

- 3" REINFORCING BARS AT 4" CENTERS
- 4" MIN. FROM OUTER SURFACE
- 4" MIN. INV. EXPANSION
- JOINT FILLER TO DEPTH OF ABUTTING CONCRETE
- SEAL COVER WITH FLEXIBLE SEALANT CALKING
- SMALL COVER WITH FLEXIBLE SEALANT CALKING
- 4" MIN. ALL SIDES

**SECTION A-C**

- 3" REINFORCING BARS AT 4" CENTERS
- 4" MIN. FROM OUTER SURFACE
- JOINT FILLER TO DEPTH OF ABUTTING CONCRETE
- SEAL COVER WITH FLEXIBLE SEALANT CALKING
- SMALL COVER WITH FLEXIBLE SEALANT CALKING
- 4" MIN. ALL SIDES

**SECTION A-D**

- JOINT FILLER TO DEPTH OF ABUTTING CONCRETE
- SEAL COVER WITH FLEXIBLE SEALANT CALKING
- SMALL COVER WITH FLEXIBLE SEALANT CALKING
- 4" MIN. ALL SIDES

**SECTION A-E**

- JOINT FILLER TO DEPTH OF ABUTTING CONCRETE
- SEAL COVER WITH FLEXIBLE SEALANT CALKING
- SMALL COVER WITH FLEXIBLE SEALANT CALKING
- 4" MIN. ALL SIDES

**GROUNDING CONNECTIONS FOR METAL FRAME AND COVER**

- FLEXIBLE GROUNDING CONDUCTOR
- NO. 6 AND NO. 8 STANDED COPPER
- FRAME GROUNDING LUG MAY BE WIRED OR BRAZED TO RING AND CONNECT

**APPENDIX DIMENSIONS**

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MEMO

To: Sarpy County Board of Commissioners

From: Beth Garber

Re: Permission to Bid 192nd St. & Hwy 370 Traffic Signal

On February 6, 2018, permission will be requested for 192nd Street and Highway 370 Traffic Signal, Project C-77 (17-18). The project is an Interlocal agreement between Sarpy County, NDOT, Gretna Public Schools, and Aspen Creek. Estimated costs are $267,000 with the County’s estimated total being $89,000. This project was added to the County’s 1 & 6 Year Road Program last week; however, this project is not in the current year budget. Denny Wilson has explained that the Nebraska Department of Transportation asked Sarpy County to take the lead on this project so that it may be completed by the fall of 2018 when the new Gretna school is scheduled to open on 192nd Street.

Please contact me with any questions at bgarber@sarpy.com.

January 26, 2018

Beth Garber

cc: Dan Hoins
    Scott Bovick
    Brian Hanson
    Deb Houghtaling
    Denny Wilson
SARPY COUNTY PURCHASING DEPARTMENT
BID REQUEST

Feb 6

On January 30, 2018, permission will be requested to solicit bids for the Project C-77(17-18), 192nd Street and Highway 370 Traffic Signal. The Purchasing Department will ensure that the required legal notices are published, open the bids in the presence of the bidders or their representatives, review the bids, solicit input from any affected department, and make a written recommendation to the County Board.

This purchase has been included as a line item in the current fiscal budget.

YES ______ NO X

It is reasonably expected that the purchase of this item will not cause the department's total budget to be exceeded.

YES (Won't cause over-expenditure)

NO X (May cause over-expenditure)

Budget comments:

This project will include an Inter-Local with NDOT, Gretna Public Schools (1/3), Aspen Creek (1/3) and Sarpy County (1/3). The total cost of the project is anticipated at $267,000.00, with reimbursement back to the county totaling $178,000.00. The NDOT will provide the construction engineering of this project at no cost to the other entities.

Justification for Purchase:

1/26/18
Date

Dennis Wilson
Department Head

1/31/18
Date

B. Gardner
Purchasing Agent/Purchaser

Date approved to advertise

Dates advertised
Publication(s):

Bid opening time and date
### WYSIWYG Content

**Sarpy County, Nebraska**
192nd Street & Highway 370
Traffic Signal
Project C-77 (17-18)
For the Public Works Department
Request for Proposals

Sarpy County, Nebraska is seeking proposals for 192nd Street & Highway 370 Traffic Signal, Project C-77 (17-18) for the Public Works Department. Bids will be accepted Monday through Friday 8:00 a.m. to 4:45 p.m., except holidays, until 10:00 a.m., Thursday, May 3, 2018. Bids can be submitted online using the Sarpy County Purchasing eBid online portal at https://sarpy.jonwave.net. Bids will be publicly opened and read aloud at 10:00 a.m., Thursday, May 3, 2018, in the Sarpy County Administration Conference Room, at the above address.

Bidding criteria must be received online or from the Sarpy County Purchasing Department by contacting Beth Garber at bgarber@sarpy.com. The Sarpy County Board of Commissioners reserves the right to reject any or all bids and to waive minor informalities.

Deb Houghtaling
Sarpy County Clerk
2088354; 4/04, 4/11, 4/18

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