

REPAVING IN PRESCOTT FROM  
47<sup>TH</sup> TO 48<sup>TH</sup> STREET  
PROJECT 540616  
BID NO/ 13-147

CITY OF LINCOLN, NEBRASKA

**INLAND  
INSURANCE COMPANY**

P.O. Box 80468  
Lincoln, Nebraska 68501  
Phone • 1-800-755-2666  
FAX • 402-435-3274

**UNIVERSAL  
SURETY COMPANY**

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**BID BOND**

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KNOW ALL MEN BY THESE PRESENTS: That we,

**Dobson Brothers Construction Company, P.O. Box 81409, Lincoln, NE 68501-0409**

as Principal, hereinafter called the Principal, and **INLAND INSURANCE COMPANY**  
a corporation duly organized under the laws of the State of **NEBRASKA**, as Surety, hereinafter called the Surety, are held and firmly bound unto

**City of Lincoln, Nebraska, , ,**

as Obligee, hereinafter called the Obligee, in the sum of

\*\*\*\*\***Five (5%) Percent of the Amount of the Bid**\*\*\*\*\*

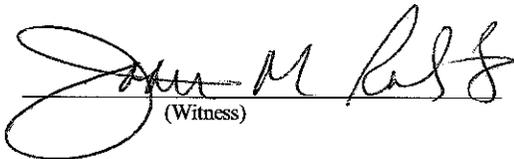
lawful money of the United States of America, for the payment of which sum of money well and truly to be made, the said Principal and Surety bind themselves, their and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

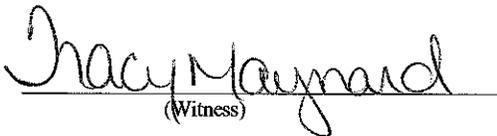
WHEREAS, the Principal has submitted a bid for:

**Repaving Project 540616, In Prescott from 47th to 48th Street**

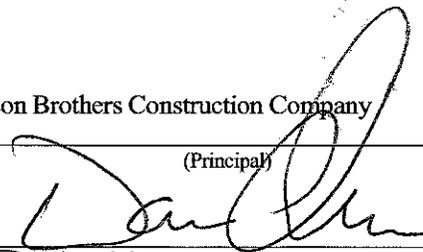
NOW THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed, Sealed and Dated, this **15th Day of May, 2013**

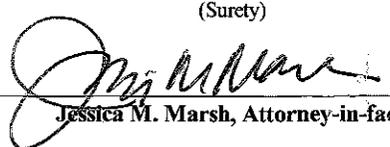
  
(Witness)

  
(Witness)

Dobson Brothers Construction Company  
\_\_\_\_\_  
(Principal) (Seal)

By   
**PRESIDENT** (Name) (Title)

**INLAND INSURANCE COMPANY**  
\_\_\_\_\_  
(Surety) (Seal)

By   
**Jessica M. Marsh, Attorney-in-fact**

13-147

# INLAND INSURANCE COMPANY

Lincoln, Nebraska

## POWER OF ATTORNEY

### KNOW ALL MEN BY THESE PRESENTS:

That the **INLAND INSURANCE COMPANY**, a corporation of the State of Nebraska having its principal office in the City of Lincoln, Nebraska, pursuant to the following Bylaw, which was adopted by the Board of Directors of the said Company on July 23, 1981, to wit:

"Article V-Section 6. **RESIDENT OFFICERS AND ATTORNEYS-IN-FACT.** The President or any Vice President, acting with any Secretary or Assistant Secretary, shall have the authority to appoint Resident Vice Presidents and Attorneys-In-Fact, with the power and authority to sign, execute, acknowledge and deliver on its behalf, as Surety; Any and all undertakings of suretyship and to affix thereto the corporate seal of the corporation. The President or any Vice President, acting with any Secretary or Assistant Secretary, shall also have the authority to remove and revoke the authority of any such appointee at any time."

does hereby make, constitute and appoint

Leon J. Harre or Curtis L. Hartter or Jessica M. Marsh  
or Tara Martin, all of Lincoln, Nebraska or Cheryl A. Brown, Roca, Nebraska

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on its behalf, as Surety:  
Any and all undertakings of suretyship

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its offices in Lincoln, Nebraska, in their own persons.

The following Resolution was adopted at the Regular Meeting of the Board of Directors of the **INLAND INSURANCE COMPANY**, held on July 23, 1981:

"RESOLVED, That the signatures of officers of the Company and the seal of the Company may be affixed by facsimile to any Power of Attorney executed in accordance with Article V-Section 6 of the Company Bylaws: and that any such Power of Attorney bearing such facsimile signatures, including the facsimile signature of a certifying Assistant Secretary and facsimile seal shall be valid and binding upon the Company with respect to any bond, undertaking or contract of suretyship to which it is attached."

All authority hereby conferred shall remain in full force and effect until terminated by the Company.

IN WITNESS WHEREOF, **INLAND INSURANCE COMPANY** has caused these presents to be signed by its President and its corporate seal to be hereunto affixed this 19th day of March, 20 13.

INLAND INSURANCE COMPANY

Secretary/Treasurer

By

President



State of Nebraska }  
County of Lancaster } ss.

On this 19th day of March, 20 13, before me personally came Curtis L. Hartter, to me known, who being by me duly sworn, did depose and say that (s)he resides in the County of Lancaster, State of Nebraska; that (s)he is the President of the **INLAND INSURANCE COMPANY**, the corporation described in and which executed the above instrument; that (s)he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that (s)he signed (his) (her) name by like order; and that Bylaw, Article V-Section 6, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.



My Commission Expires February 16, 2014.

Notary Public

I, Cheryl A. Brown, Assistant Secretary of **INLAND INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said **INLAND INSURANCE COMPANY**, which is still in full force and effect.

Signed and sealed at the City of Lincoln, Nebraska this 15th day of May, 20 13.

  
Assistant Secretary

# UNIVERSAL SURETY COMPANY

P.O. Box 80468 Lincoln, Nebraska 68501-0468

PHONE 1-800-755-2666

FAX 402-435-3274

## BID BOND

KNOW ALL MEN BY THESE PRESENTS: That we,

Constructors, Inc., 1815 "Y" Street, Lincoln, NE 68501-

as Principal, and UNIVERSAL SURETY COMPANY, a Nebraska corporation, as Surety, are held and firmly bound unto the

City of Lincoln, City Treasurer, , Lincoln, NE 68508

as Obligee, in the sum of

\*\*\*\*\*Five (5%) Percent of the Amount of the Bid \*\*\*\*\*

lawful money of the United States of America, for the payment of which sum of money well and truly to be made, the said Principal and Surety bind themselves, their and each of their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

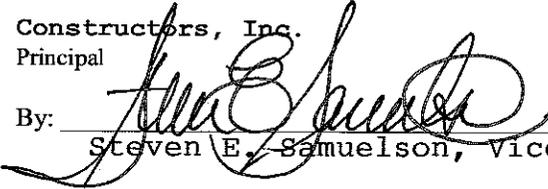
THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Obligee shall make any award to the Principal for:

Repaving Project 540616 in Prescott from 47th to 48th Street, Bid No.  
13-147, City of Lincoln Nebraska

According to the terms of the proposal or bid made by the Principal therefore, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond with Surety approved by the Obligee; or if the Principal shall, in case of failure so to do, pay to the Obligee the damages which the Obligee may suffer by reason of such failure not exceeding the penalty of this bond, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Signed, Sealed and Dated, this 15th Day of May, 2013

Constructors, Inc.  
Principal

By: 

Steven E. Samuelson, Vice President

UNIVERSAL SURETY COMPANY

By: 

Jessica M. Marsh, Attorney-in-fact

# UNIVERSAL SURETY COMPANY

Lincoln, Nebraska

## POWER OF ATTORNEY

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does hereby make, constitute and appoint

Leon J. Harre or Curtis L. Hartter or Jessica M. Marsh  
or Tara Martin, all of Lincoln, Nebraska or Cheryl A. Brown, Roca, Nebraska

its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver for and on its behalf, as Surety:  
Any and all undertakings of suretyship

And the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Company, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its offices in Lincoln, Nebraska, in their own persons.

The following Resolution was adopted at the Regular Meeting of the Board of Directors of the **UNIVERSAL SURETY COMPANY**, held on July 23, 1981:

"RESOLVED, That the signatures of officers of the Company and the seal of the Company may be affixed by facsimile to any Power of Attorney executed in accordance with Article V-Section 6 of the Company Bylaws: and that any such Power of Attorney bearing such facsimile signatures, including the facsimile signature of a certifying Assistant Secretary and facsimile seal shall be valid and binding upon the Company with respect to any bond, undertaking or contract of suretyship to which it is attached."

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UNIVERSAL SURETY COMPANY

Secretary/Treasurer

By

President



State of Nebraska

ss.

County of Lancaster

On this 19th day of March, 20 13, before me personally came Curtis L. Hartter, to me known, who being by me duly sworn, did depose and say that (s)he resides in the County of Lancaster, State of Nebraska; that (s)he is the President of the **UNIVERSAL SURETY COMPANY**, the corporation described in and which executed the above instrument; that (s)he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; that (s)he signed (his) (her) name by like order; and that Bylaw, Article V-Section 6, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.



My Commission Expires February 16, 2014.

Notary Public

I, Cheryl A. Brown, Assistant Secretary of **UNIVERSAL SURETY COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said **UNIVERSAL SURETY COMPANY**, which is still in full force and effect.

Signed and sealed at the City of Lincoln, Nebraska this 15th day of May, 20 13.

Assistant Secretary



**ADDENDUM No. 1  
TO SPEC. 13-147**

**Prescott Avenue, 47<sup>th</sup> to 48<sup>th</sup> Street**

**Paving Project No. 540616**

Bid opening date is, Wednesday, May 15, 2013 at 12:00 NOON.

**TO ALL PROSPECTIVE BIDDERS:**

The contract documents for the above project are hereby amended as follows:

1. The following questions have been received:

**Question:** Page 3 of the Special Provisions states that 45 calendar days are allowed for completion of the project. It also states that the start date shall be on or before June 30, 2013 and the work shall be complete by October 15, 2013. Is it possible that the 45 day allowance is in error? It would seem that the allowance of 45 calendar days to complete the amount and type of work to be more than a little optimistic.

**Response:** We have looked at the items of work required to complete this project and feel that 45 days is a sufficient amount of time to complete this project in a business area.

**Advertise 1 time  
Friday, April 26, 2013**

**City of Lincoln/Lancaster County  
Purchasing Division  
NOTICE TO BIDDERS**

Sealed bids will be received by the Purchasing Agent of the City of Lincoln/Lancaster County, Nebraska **BY ELECTRONIC BID PROCESS** until: **12:00 pm, Wednesday, May 15, 2013** for providing the following:

**Repaving Project 540616 in Prescott from  
47<sup>th</sup> to 48<sup>th</sup> Street  
Bid No. 13-147**

Bidders must be registered on the City/County's E-Bid site in order to respond to the above Bid. To Register go to: [lincoln.ne.gov](http://lincoln.ne.gov) (type: e-bid - in search box, then click "Supplier Registration")

Once registered, vendors will receive e-mail bid notification, first acknowledging registration, then approval of registration. Upon e-mail notification of registration approval, you may go to the E-Bid site to respond to this bid. Questions concerning this bid process may be directed to City/County Purchasing at (402) 441-8314 or (402) 441-7416 or [vmejer@lincoln.ne.gov](mailto:vmejer@lincoln.ne.gov)

# City of Lincoln/Lancaster County (Lincoln Purchasing) Supplier Response

Bid Information		Contact Information		Ship to Information
Bid Creator	Vince Mejer Purchasing Agent	Address	Purchasing\City & County 440 S. 8th St. Lincoln, NE 68508	Address
Email	vmejer@lincoln.ne.gov	Contact	Vince Mejer Purchasing Agent	Contact
Phone	1 (402) 441-8314	Department		Department
Fax	1 (402) 441-6513	Building		Building
Bid Number	13-147 Addendum 1	Floor/Room		Floor/Room
Title	Repaving Project 540616 in Prescott from 47th to 48th Street (PW/U - Eng. Services)	Telephone	1 (402) 441-8314	Telephone
Bid Type	Bid	Fax	1 (402) 441-6513	Fax
Issue Date	04/26/2013	Email	vmejer@lincoln.ne.gov	Email
Close Date	5/15/2013 12:00:00 PM CT			
Need by Date				

## Supplier Information

Company	Constructors Inc.
Address	1815 Y Street  Lincoln, NE 68508
Contact	Eric Anderson
Department	
Building	
Floor/Room	
Telephone	1 (402) 434-1764
Fax	1 (402) 441-4176
Email	EricA@Constructorslincoln.com
Submitted	5/15/2013 11:34:26 AM CT
Total	\$369,427.25

Signature \_\_\_\_\_

## Supplier Notes

## Bid Notes

If you need assistance in preparing your bid, 1) Click the "Help" button in the upper right hand corner of any screen; 2) Contact our office at 402-441-7417 to set up a training session in Purchasing or assistance over the phone.

## Bid Activities

Date	Name	Description
5/15/2013 12:00:00 PM	General Contractor Listing	General Contractors - Call 402-441-7416 or e-mail purchasing@lincoln.ne.gov to be added to this list.
5/15/2013 12:00:00 PM	Sub-Contractor Listing	Sub-Contractors - Call 402-441-7416 or e-mail purchasing@lincoln.ne.gov to be added to this list.

## Bid Messages

Please review the following and respond where necessary

#	Name	Note	Response
1	Standard Specifications for Municipal Construction	I acknowledge reading and understanding the current City of Lincoln Standard Specifications for Municipal Construction and Lincoln Standard Plans (including General Provisions and Requirements, and Material and Construction Specifications) View at:  <a href="http://www.lincoln.ne.gov/city/pworks/engine/dconst/standard/stndspect/index.htm">http://www.lincoln.ne.gov/city/pworks/engine/dconst/standard/stndspect/index.htm</a>	Yes
2	NDOR Standard Specs for Hwy Construction	I acknowledge reading and understanding the current Nebraska Department of Road's Standard Specifications for Highway Construction Supplemental Specifications to the Standard Specifications for Highway Construction, view at: <a href="http://www.dor.state.ne.us/ref-man/">http://www.dor.state.ne.us/ref-man/</a>	Yes
3	Form of Contract Agreement	I acknowledge reading and understanding the Contract Agreement Forms.	Yes
4	Form of Bonds	I acknowledge that a Performance Bond and a Payment Bond each in the amount of 100% of the Contract amount will be required with the signed contract upon award of this job.	Yes
5	Special Provisions/Traffic Control Provisions	I acknowledge reading and understanding the Special Provisions and/or Traffic Control Provisions.	Yes
6	Instructions to Bidders	I acknowledge reading and understanding the Instructions to Bidders.	Yes
7	Insurance Requirements	I acknowledge reading and understanding the Insurance Requirements.	Yes
8	Specifications	I acknowledge reading and understanding the Specifications.	Yes
9	Plan, Profile & Detail Sheets	I acknowledge reading and understanding the Plan, Profile & Detail Sheets included with this bid.	Yes
10	Tax Exempt Certificate Forms	Materials being purchased in this bid are tax exempt and unit prices are reflected as such. A Purchasing Agent Appointment form and a Exempt Sales Certificate form shall be issued with contract documents. (Note: State Tax Law does not provide for sales tax exemption for proprietary functions for government, thereby Water projects are taxable.)	Yes
11	Bid Bond Submission - City	I acknowledge and understand that my bid will not be considered unless a bid bond or certified check in the sum of five percent (5%) of the total amount of the bid is made payable to the order of the City Treasurer as a guarantee of good faith prior to the bid opening. The bid security may be scanned and attached to the 'Response Attachments' section of your response or faxed to the Purchasing Office (402)441-6513. The original bond/check must then be received in the Purchasing Office, 440 S. 8th Street, Ste. 200, Lincoln, NE 68508 within three (3) days of bid closing. YOU MUST INDICATE YOUR METHOD OF BID BOND	I have scanned and attached my bid bond.

SUBMISSION IN BOX TO RIGHT!

- |    |                              |  |                 |
|----|------------------------------|--|-----------------|
| 12 | Unit Pricing Rules           | I acknowledge the Excel spreadsheet is attached to this bid in the Response Attachment Section. The unit price of the Excel Spreadsheet takes precedence over the total submitted in Line Items.   | Yes             |
| 13 | Project Dates                | The Contractor agrees that the Work in this Contract shall begin as soon after the Notice to Proceed as is necessary for the Contractor to complete the Work within the number of calendar days allowed and prior to the stated completion date. The completion date shall be 45 calendar days after the beginning of construction, or completed no later than October 15, 2013. | Yes             |
| 14 | Employee Class Act EO        | I acknowledge reading and understanding the Employee Classification Act, Executive Order 83319.  | Yes             |
| 15 | Employee Class Act Affidavit | I acknowledge if awarded the contract I will abide by the law, notarize and attach the Employee Classification Act Affidavit to my contract.   | Yes             |
| 16 | Contact                      | Name of person submitting this bid:  | steve samuelson |
| 17 | Electronic Signature         | Please check here for your electronic signature.   | Yes             |
| 18 | Agreement to Addendum No. 1  | Respondent hereby certifies that the change set forth in this addendum has been incorporated in their proposal and is part of their bid. <br>Reason: See Bid Attachments section for Addendum information.   | Yes             |

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## Line Items

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#	Qty	UOM	Description	Response
1	1	Lump Sum	Repaving Project 540616 in Prescott from 47th to 48th Street – Total Lump Sum of Bid	\$369,427.25

Item Notes: Fill out the itemized Excel spreadsheet attached below. Attach completed spreadsheet on the 'Response Attachments' of your response.

Supplier Notes:

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Response Total: \$369,427.25

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13-147

Line No.	Pay Item No.	Description	Quantity	Unit	Unit Price	Amount
01	01.00001	Mobilization	1.0000	LS	\$35,000.00	\$35,000.00
02	01.01001	Const Staking	1.0000	LS	\$10,000.00	\$10,000.00
03	01.04001	Pavt & Sidewalk Rem	755.0000	CY	\$25.00	\$18,875.00
04	01.05001	Sawing, Type "A"	157.0000	LF	\$4.25	\$667.25
05	01.06001	Sawing, Type "B"	87.0000	LF	\$5.00	\$435.00
06	01.07001	Sawing, Type "C"	202.0000	LF	\$3.50	\$707.00
07	04.09109	PCC Pavt w/ Int Curb, 9"	2,065.0000	SY	\$54.75	\$113,058.75
08	04.09304	Conc Sidewalk, 4"	9,593.0000	SF	\$4.10	\$39,331.30
09	04.09306	Conc Sidewalk, 6"	420.0000	SF	\$6.15	\$2,583.00
10	04.09406	Conc Driveway, 6"	723.0000	SF	\$5.55	\$4,012.65
11	04.09601	Combined Curb & Gutter	41.0000	LF	\$25.00	\$1,025.00
12	04.11001	Detectable Warning Panels	72.0000	SF	\$35.00	\$2,520.00
13	05.07007	Conc Base, LB-3500, 7"	21.0000	SY	\$50.00	\$1,050.00
14	06.06004	Asphaltic Concrete, Type 4	5.0000	TON	\$165.00	\$825.00
15	50.00015	Remove Steel Railing	1.0000	LS	\$1,950.00	\$1,950.00
16	50.00040	Colored Stenciled Concrete, 9"	70.0000	SY	\$93.50	\$6,545.00
17	50.00045	Colored Stenciled Concrete, 4"	1,120.0000	SF	\$9.45	\$10,584.00
18	50.00045	Light Sandblasted Concrete Sidewalk	207.0000	SF	\$12.25	\$2,535.75
19	13.04512	Grvd Liquid Polyurea Mkg - Type I, 12" W	129.0000	LF	\$13.00	\$1,677.00
20	13.05504	Grvd Liquid Polyurea Mkg - Type II, 4" Y	619.0000	LF	\$2.50	\$1,547.50
21	13.05504	Grvd Liquid Polyurea Mkg - Type II, 4" W	1,042.0000	LF	\$3.50	\$3,647.00
22	15.09001	Traffic Control for Const	1.0000	LS	\$8,500.00	\$8,500.00
23	21.03015	Rem Storm Sewer Pipe, 15"	86.0000	LF	\$10.50	\$903.00

24	21.03315	RCP Storm Sewer, CI III, 15"	102.0000	LF	\$50.00	\$5,100.00
25	21.08001	Storm Sewer Inlet, 72"	1.0000	EA	\$2,850.00	\$2,850.00
26	21.08003	Radius Storm Sewer Inlet, 72"	1.0000	EA	\$3,000.00	\$3,000.00
27	21.13002	Rem Ex Inlet	2.0000	EA	\$265.00	\$530.00
28	21.13004	Rem Ex Grate Inlet	1.0000	EA	\$160.00	\$160.00
29	20.06106	Directional Drilling for 6" Water Main	113.0000	LF	\$52.50	\$5,932.50
30	20.09001	Conc for Thrust Blocks & Anchorages	1.1000	CY	\$220.00	\$242.00
31	23.04004	Rem 4" Water Main	11.0000	LF	\$10.50	\$115.50
32	23.04006	Rem 6" Water Main	5.0000	LF	\$10.50	\$52.50
33	23.04101	Rem & Salvage Hydrant	1.0000	EA	\$425.00	\$425.00
34	23.07006	Water Main, 6"	160.0000	LF	\$46.35	\$7,416.00
35	23.07008	Water Main, 8"	323.0000	LF	\$52.65	\$17,005.95
36	23.07070	Anchoring Elbow, MJ, 6"	1.0000	EA	\$180.00	\$180.00
37	23.07071	Anchoring Coupling, MJ (L=12"), 6"	2.0000	EA	\$165.00	\$330.00
38	23.07072	Anchoring Coupling, MJ (L=18"), 6"	1.0000	EA	\$175.00	\$175.00
39	23.07080	Reducer, MJ, 6" X 4"	2.0000	EA	\$110.00	\$220.00
40	23.07101	Deg Bend, MJ, 6" X 90	1.0000	EA	\$135.00	\$135.00
41	23.07110	Deg Bend, MJ, 6" X 45	2.0000	EA	\$125.00	\$250.00
42	23.07201	Cross, MJ, 6" X 6"	1.0000	EA	\$250.00	\$250.00
43	23.07301	Tee, MJ, 6" X 6"	2.0000	EA	\$180.00	\$360.00
44	23.07604	Dual Purpose Sleeve, MJ (L=12"), 4"	2.0000	EA	\$190.00	\$380.00
45	23.07606	Dual Purpose Sleeve, MJ (L=12"), 6"	1.0000	EA	\$200.00	\$200.00
46	23.07706	Plug, MJ, 6"	1.0000	EA	\$90.00	\$90.00
47	23.07804	Retainer Glands, MJ, 4"	2.0000	EA	\$31.60	\$63.20
48	23.07806	Retainer Glands, MJ, 6"	19.0000	EA	\$36.85	\$700.15
49	23.07808	Retainer Glands, MJ, 8"	5.0000	EA	\$52.65	\$263.25
50	23.07904	Restraint Adaptor, MJ, 4"	2.0000	EA	\$110.00	\$220.00
51	23.07906	Restraint Adaptor, MJ 6"	6.0000	EA	\$135.00	\$810.00
52	23.08006	Gate Valve, MJ, 6"	4.0000	EA	\$840.00	\$3,360.00
53	23.08008	Gate Valve, MJ, 8"	1.0000	EA	\$1,580.00	\$1,580.00
54	23.08355	Hydrant, L=5.5'	1.0000	EA	\$2,525.00	\$2,525.00
55	23.10075	Copper Water Service Pipe, 0.75"	5.0000	LF	\$37.00	\$185.00

56	23.10901	Reconstruct Water Service	5.0000	EA	\$685.00	\$3,425.00
57	23.11001	Abandonment of Water Main	1.0000	LS	\$210.00	\$210.00
58	50.00001	Pothole Existing Water Services	5.0000	EA	\$265.00	\$1,325.00
59	24.01012	Rem Street Light Pole	4.0000	EA	\$70.00	\$280.00
60	24.01021	Rem Street Light Pole Foundation	4.0000	EA	\$895.00	\$3,580.00
61	24.03205	Conduit, 1/2", Trenched	4.0000	LF	\$21.25	\$85.00
62	24.03215	Conduit, 1 1/2", Trenched	641.0000	LF	\$7.00	\$4,487.00
63	24.06015	Riser, 1 1/2"	1.0000	EA	\$265.00	\$265.00
64	24.10003	Detector, 3 Turns Vehicle, Under Cover	2.0000	EA	\$165.00	\$330.00
65	50.00001	Pedestrian Light Pole	6.0000	EA	\$3,100.00	\$18,600.00
66	50.00001	Pedestrian Luminaire	6.0000	EA	\$1,300.00	\$7,800.00
67	50.00001	Pole, Street Light SL-A-C-35-6-3 Black	3.0000	EA	\$1,735.00	\$5,205.00
68	50.00001	Luminaire, 150W HPSV-SC Black	3.0000	EA	\$250.00	\$750.00
						<b>\$369,427.25</b>

REPAVING PROJECT 540616  
IN PRESCOTT FROM 47<sup>TH</sup> TO 48<sup>TH</sup> STREET  
BID NO. 13-147

FOR  
CITY OF LINCOLN  
CONTRACT AGREEMENT

THIS CONTRACT, made and entered into this 5TH day of JUNE, 2013 by and between CONSTRUCTORS, INC., hereinafter called the Contractor and the City of Lincoln

WITNESS, that:

WHEREAS, the City of Lincoln has caused to be prepared, in accordance with law, Specifications, Plans, and other Contract Documents for the Work herein described, and has approved and adopted said documents and has caused to be published an advertisement for and in connection with said Work, to wit:

REPAVING PROJECT 540616 IN PRESCOTT FROM 47<sup>TH</sup> TO 48<sup>TH</sup> STREET and

WHEREAS, the Contractor, in response to such advertisement, has submitted to the City of Lincoln, in the manner and at the time specified, a sealed Proposal in accordance with the terms of said advertisement; and,

WHEREAS, the City of Lincoln, in the manner prescribed by law, has publicly opened, read aloud, examined, and canvassed the Proposals submitted in response to such advertisement, and as a result of such canvass has determined and declared the Contractor to be the lowest and best bidder for the said Work for the sum or sums named in the Contractor's Proposal, a copy thereof being attached to and made a part of this Contract.

NOW, THEREFORE, in consideration of the sums to be paid to the Contractor and the agreements herein contained, the Contractor and the City of Lincoln have agreed and hereby agree as follows:

## CONTRACT AGREEMENT

The Contractor agrees to (a) furnish all tools, equipment, supplies, superintendence, transportation, and other construction accessories, services, and facilities; (b) furnish all materials, supplies, and equipment specified to be incorporated into and form a permanent part of the complete Work; (c) provide and perform all necessary labor in a substantial and workmanlike manner and in accordance with the provisions of the Contract Documents; and (d) execute, construct, and complete all Work included in and covered by the City of Lincoln's official award of this Contract to the Contractor, such award being based on the acceptance by the City of Lincoln of the Contractor's Proposal, or part thereto, as follows:

ALL OF THE PROPOSAL SUBMITTED BY CONSTRUCTORS, INC. IN CONNECTION WITH THE CITY OF LINCOLN REPAVING PROJECT 540616 IN PRESCOTT FROM 47<sup>TH</sup> TO 48<sup>TH</sup> STREET DATED MAY 15, 2013

---

The City of Lincoln agrees to pay to the Contractor for the performance of the work embraced in this Contract, and the Contractor agrees to accept as full compensation therefore, the sums and prices for all Work covered by and included in the Contract award and designated above, payment thereof to be made in the manner provided in the General Provisions and Requirements.

COMPLETION DATE – The Contractor agrees that the Work in this Contract shall begin as soon after the Notice to Proceed as is necessary for the Contractor to complete the Work within the number of calendar days allowed and prior to the stated completion date. The completion date shall be 45 calendar days or no later than OCTOBER 15, 2013

GUARANTEE – The guarantee periods as stated in Section VIII, Paragraph A of the City of Lincoln Standard Specifications for Municipal Construction shall be applicable to this project.

CONTRACT DOCUMENTS – The Contract Documents comprise the Contract, and consist of the following:

1. City of Lincoln Standard Specifications for Municipal Construction (2011 Edition)
2. Proposal Forms
3. Contract Agreement Forms
4. Commentary to Accompany Construction Bonds
5. Construction Performance Bond
6. Construction Payment Bond
7. Special Provisions
8. Lincoln Standard Plans (2011 Edition)
9. Standard Specifications for Highway Construction Nebraska Department of Roads (2007 Edition)
10. Plan and Profile Detail Sheets
11. Any executed Addenda or Change Orders
12. Any portion of this project used for **providing water service**, such as pipe for water mains, **are not tax exempt and are subject to sales and use tax.**
13. The **remainder** of this project, including items exclusively used for providing fire protection, such as fire hydrants, **are exempt from sales and use taxes.**
14. Sales tax exempt forms will be provided upon award of bid.

CONTRACT AGREEMENT

These Contract Agreements, together with the other Contract Documents herein above mentioned, form this Contract, and they are as fully a part of the Contract as if hereto attached or herein repeated.

The Contractor and City of Lincoln hereby agree that all the terms and conditions of this Contract shall, by these presents, be binding upon themselves, and their heirs, administrators, executors, legal and personal representatives, successors, and assigns.

IN WITNESS WHEREOF, the Contractor and City of Lincoln do hereby execute this Contract.

EXECUTION BY THE CITY

ATTEST:

\_\_\_\_\_  
(Seal)  
CITY CLERK

BY: \_\_\_\_\_  
MAYOR

APPROVED BY EXECUTIVE ORDER NO.

Dated: \_\_\_\_\_

CITY OF LINCOLN, NEBRASKA

EXECUTION BY CONTRACTOR

IF A CORPORATION

\_\_\_\_\_  
(Name of Corporation)

ATTEST:

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Address)

By: \_\_\_\_\_  
(Duly Authorized Official)

\_\_\_\_\_  
(Legal Title of Official)

IF OTHER TYPE ORGANIZATION

\_\_\_\_\_  
(Name and Type of Organization)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Member)

\_\_\_\_\_  
(Member)

\_\_\_\_\_  
(Member)

IF AN INDIVIDUAL

By: \_\_\_\_\_  
(Name)

 <p><b>CITY OF LINCOLN NEBRASKA</b></p>	<h2>Bid Approval Form</h2>	DESIGN FIRM: [Select Firm or Blank] [Add Firm or Delete]	
		DESIGN MANAGER: [Design Manager Name]	
		Division: ES - Design/Construction	DATE RECEIVED: [Date Received]
<b>PROJECT NAME:</b> Repaving in Prescott from 47 <sup>th</sup> to 48th		<b>PROJECT DESCRIPTION:</b>	
PROJECT NUMBER: 540616	CITY PROJECT MANAGER: Lionberger, Holly	<input type="checkbox"/> Grading <input type="checkbox"/> Water <input type="checkbox"/> Traffic Signals <input type="checkbox"/> Signing	<input type="checkbox"/> Storm Drainage <input checked="" type="checkbox"/> Paving <input type="checkbox"/> Landscaping <input type="checkbox"/> Erosion Control
		<input type="checkbox"/> Waste Water <input type="checkbox"/> Lighting <input type="checkbox"/> Markings <input type="checkbox"/> Misc:	
Construction Dollars on Original Project Request Form:		dated:	01/02/03
Amount of funds in Report 10 at the time :		23,041	dated: 01/02/03
Cost Estimate in APPIA:		296,512	bid opening : 05/15/13
<b>Company Name</b>	<b>Bid Amount</b>	<b>Comments</b>	
Constructors, Inc.	\$369,427.25		
DobsonBros. Construction	\$384,534.70		
[Company Name]			
[Company Name]			
[Company Name]		#270,323.83 is for streets	
[Company Name]		#56,451.05 is for water	
[Company Name]		#42,652.38 is for Urban Development	
[Company Name]			
[Company Name]			
[Company Name]			
		540610 has \$85,262 available a multi-year funding resolution will be completed for when money is added to the account Sept. 1 <sup>st</sup> to fund the balance	
<b>O.K. to Award Approval by:</b> 05/29/2013 <i>Holly Lionberger</i>			
<b>Division Approval by:</b> 05/29/13 <i>Thomas D. Bluffen</i>			
<b>City Engineer Approval by:</b>			



## BID TABULATION SUMMARY

Estimate ID: Repaving Project 540616 in Prescott from 47th to 4  
Estimate Name: Repaving Project 540616 in Prescott from 47th to 4  
Bid Opening Date: 05/15/2013  
Initiated By: Mary Lowe

Rank	Contractor	Total	% Over Low Bid
1	CONSTRUCTORS, INC.	\$369,427.25	0.00
2	DOBSON BROTHERS CONSTRUCTION CO.	\$384,534.70	4.09



**BID TABULATION DETAILS**

Estimate ID: Repaving Project 540616 in Prescott from 47th to 4  
 Estimate Name: Repaving Project 540616 in Prescott from 47th to 4  
 Bid Opening Date: 05/15/2013

----- Low Bidder -----	----- 2nd Bidder -----	----- 3rd Bidder -----
CONSTRUCTORS, INC. 1815 'Y' STREET LINCOLN, NE, 68508	DOBSON BROTHERS CONSTRUCTION CO. P. O. BOX 81409 LINCOLN, NE, 68501	

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
<b>Base Bid</b>							
01	01.00001	Mobilization	1.0000	LS	\$35,000.0000	\$22,000.0000	\$22,000.0000
02	01.01001	Const Staking	1.0000	LS	\$10,000.0000	\$3,500.0000	\$3,500.0000
03	01.04001	Pavt & Sidewalk Rem	755.0000	CY	\$25.0000	\$22.5000	\$22.5000
04	01.05001	Sawing, Type "A"	157.0000	LF	\$4.2500	\$4.5000	\$4.5000
					\$667.25	\$706.50	\$706.50

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
05	01.06001	Sawing, Type "B"	87.0000	LF	\$5.0000	\$4.5000	
					\$435.00	\$391.50	
06	01.07001	Sawing, Type "C"	202.0000	LF	\$3.5000	\$4.5000	
					\$707.00	\$909.00	
07	04.09109	PCC Pavt w/ Int Curb, 9"	2065.0000	SY	\$54.7500	\$60.0000	
					\$113,058.75	\$123,900.00	
08	04.09304	Conc Sidewalk, 4"	9593.0000	SF	\$4.1000	\$6.4500	
					\$39,331.30	\$61,874.85	
09	04.09306	Conc Sidewalk, 6"	420.0000	SF	\$6.1500	\$8.5000	
					\$2,583.00	\$3,570.00	
10	04.09406	Conc Driveway, 6"	723.0000	SF	\$5.5500	\$7.7500	
					\$4,012.65	\$5,603.25	
11	04.09601	Combined Curb & Gutter	41.0000	LF	\$25.0000	\$30.0000	
					\$1,025.00	\$1,230.00	

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
12	04.11001	Detectable Warning Panels	72.0000	SF	\$35.0000	\$32.0000	\$2,304.00
13	05.07007	Conc Base, LB-3500, 7"	21.0000	SY	\$50.0000	\$65.0000	\$1,365.00
14	06.06004	Asphaltic Concrete, Type 4	5.0000	TON	\$165.0000	\$200.0000	\$1,000.00
15	50.00015	Remove Steel Railing	1.0000	LS	\$1,950.0000	\$150.0000	\$150.00
16	50.00040	Colored Stenciled Concrete, 9"	70.0000	SY	\$93.5000	\$85.0000	\$5,950.00
17	50.00045	Colored Stenciled Concrete, 4"	1120.0000	SF	\$9.4500	\$8.0000	\$8,960.00
18	50.00045	Light Sandblasted Concrete Sidewalk	207.0000	SF	\$12.2500	\$19.2500	\$3,984.75

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
19	13.04512	Grvd Liquid Polyurea Mkg - Type I, 12" W					
			129.0000	LF	\$13.0000	\$12.5000	
					\$1,677.00	\$1,612.50	
20	13.05504	Grvd Liquid Polyurea Mkg - Type II, 4" Y					
			619.0000	LF	\$2.5000	\$1.9500	
					\$1,547.50	\$1,207.05	
21	13.05504	Grvd Liquid Polyurea Mkg - Type II, 4" W					
			1042.0000	LF	\$3.5000	\$3.0000	
					\$3,647.00	\$3,126.00	
22	15.09001	Traffic Control for Const					
			1.0000	LS	\$8,500.0000	\$6,000.0000	
					\$8,500.00	\$6,000.00	
23	21.03015	Rem Storm Sewer Pipe, 15"					
			86.0000	LF	\$10.5000	\$15.0000	
					\$903.00	\$1,290.00	
24	21.03315	RCP Storm Sewer, CI III, 15"					
			102.0000	LF	\$50.0000	\$45.0000	
					\$5,100.00	\$4,590.00	
25	21.08001	Storm Sewer Inlet, 72"					
			1.0000	EA	\$2,850.0000	\$2,800.0000	
					\$2,850.00	\$2,800.00	

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
26	21.08003	Radius Storm Sewer Inlet, 72"	1.0000	EA	\$3,000.0000	\$3,000.0000	\$3,000.0000
27	21.13002	Rem Ex Inlet	2.0000	EA	\$265.0000	\$150.0000	\$300.00
28	21.13004	Rem Ex Grate Inlet	1.0000	EA	\$160.0000	\$135.0000	\$135.00
29	20.06106	Directional Drilling for 6" Water Main	113.0000	LF	\$52.5000	\$33.1000	\$3,740.30
30	20.09001	Conc for Thrust Blocks & Anchorages	1.1000	CY	\$220.0000	\$1,130.0000	\$1,243.00
31	23.04004	Rem 4" Water Main	11.0000	LF	\$10.5000	\$44.0000	\$484.00
32	23.04006	Rem 6" Water Main	5.0000	LF	\$10.5000	\$36.0000	\$180.00

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
33	23.04101	Rem & Salvage Hydrant	1.0000	EA	\$425.0000	\$725.0000	\$725.0000
34	23.07006	Water Main, 6"	160.0000	LF	\$46.3500	\$41.0000	\$41.0000
35	23.07008	Water Main, 8"	323.0000	LF	\$7,416.00	\$6,560.00	\$6,560.00
36	23.07070	Anchoring Elbow, MJ, 6"	1.0000	EA	\$52.6500	\$45.5000	\$45.5000
37	23.07071	Anchoring Coupling, MJ (L=12"), 6"	2.0000	EA	\$17,005.95	\$14,696.50	\$14,696.50
38	23.07072	Anchoring Coupling, MJ (L=18"), 6"	1.0000	EA	\$180.0000	\$335.0000	\$335.0000
39	23.07080	Reducer, MJ, 6" X 4"	2.0000	EA	\$165.0000	\$325.0000	\$325.0000
					\$330.00	\$650.00	\$650.00
					\$175.0000	\$325.0000	\$325.0000
					\$175.00	\$325.00	\$325.00
					\$110.0000	\$145.0000	\$145.0000
					\$220.00	\$290.00	\$290.00

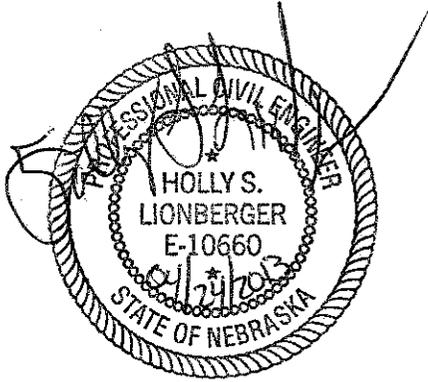
Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
40	23.07101	Deg Bend, MJ, 6" X 90	1.0000	EA	\$135.0000	\$375.0000	\$375.0000
41	23.07110	Deg Bend, MJ, 6" X 45	2.0000	EA	\$125.0000	\$395.0000	\$790.0000
42	23.07201	Cross, MJ, 6" X 6"	1.0000	EA	\$250.0000	\$550.0000	\$550.0000
43	23.07301	Tee, MJ, 6" X 6"	2.0000	EA	\$180.0000	\$400.0000	\$800.0000
44	23.07604	Dual Purpose Sleeve, MJ (L=12"), 4"	2.0000	EA	\$190.0000	\$515.0000	\$1,030.0000
45	23.07606	Dual Purpose Sleeve, MJ (L=12"), 6"	1.0000	EA	\$200.0000	\$535.0000	\$535.0000
46	23.07706	Plug, MJ, 6"	1.0000	EA	\$90.0000	\$125.0000	\$125.0000

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
47	23.07804	Retainer Glands, MJ, 4"	2.0000	EA	\$31.6000	\$68.0000	
					\$63.20	\$136.00	
48	23.07806	Retainer Glands, MJ, 6"	19.0000	EA	\$36.8500	\$63.0000	
					\$700.15	\$1,197.00	
49	23.07808	Retainer Glands, MJ, 8"	5.0000	EA	\$52.6500	\$82.0000	
					\$263.25	\$410.00	
50	23.07904	Restraint Adaptor, MJ, 4"	2.0000	EA	\$110.0000	\$225.0000	
					\$220.00	\$450.00	
51	23.07906	Restraint Adaptor, MJ 6"	6.0000	EA	\$135.0000	\$250.0000	
					\$810.00	\$1,500.00	
52	23.08006	Gate Valve, MJ, 6"	4.0000	EA	\$840.0000	\$1,150.0000	
					\$3,360.00	\$4,600.00	
53	23.08008	Gate Valve, MJ, 8"	1.0000	EA	\$1,580.0000	\$1,560.0000	
					\$1,580.00	\$1,560.00	

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
54	23.08355	Hydrant, L=5.5'	1.0000	EA	\$2,525.0000	\$3,660.0000	
					\$2,525.00	\$3,660.00	
55	23.10075	Copper Water Service Pipe, 0.75"	5.0000	LF	\$37.0000	\$115.0000	
					\$185.00	\$575.00	
56	23.10901	Reconstruct Water Service	5.0000	EA	\$685.0000	\$715.0000	
					\$3,425.00	\$3,575.00	
57	23.11001	Abandonment of Water Main	1.0000	LS	\$210.0000	\$665.0000	
					\$210.00	\$665.00	
58	50.00001	Pothole Existing Water Services	5.0000	EA	\$265.0000	\$290.0000	
					\$1,325.00	\$1,450.00	
59	24.01012	Rem Street Light Pole	4.0000	EA	\$70.0000	\$65.0000	
					\$280.00	\$260.00	
60	24.01021	Rem Street Light Pole Foundation	4.0000	EA	\$895.0000	\$1,500.0000	
					\$3,580.00	\$6,000.00	

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
61	24.03205	Conduit, 1/2", Trenched					
		4.0000 LF			\$21,250.00	\$21,000.00	\$84.00
62	24.03215	Conduit, 1 1/2", Trenched					
		641.0000 LF			\$7,000.00	\$7,000.00	\$4,487.00
63	24.06015	Riser, 1 1/2"					
		1.0000 EA			\$265,000.00	\$255,000.00	\$255.00
64	24.10003	Detector, 3 Turns Vehicle, Under Cover					
		2.0000 EA			\$165,000.00	\$160,000.00	\$320.00
65	50.00001	Pedestrian Light Pole					
		6.0000 EA			\$3,100,000.00	\$3,000,000.00	\$18,000.00
66	50.00001	Pedestrian Luminaire					
		6.0000 EA			\$1,300,000.00	\$1,275,000.00	\$7,650.00
67	50.00001	Pole, Street Light SL-A-C-35-6-3 Black					
		3.0000 EA			\$1,735,000.00	\$1,700,000.00	\$5,100.00

Line No.	Pay Item No.	Item Description	Quantity	Unit Measure	Low Bidder Price Per Unit/Total Amount	2nd Bidder Price Per Unit/Total Amount	3rd Bidder Price Per Unit/Total Amount
68	50.00001	Luminaire, 150W HPSV-SC Black					
			3.0000	EA	\$250.0000	\$240.0000	
					\$750.00	\$720.00	
					\$369,427.25	\$384,534.70	\$0.00
					Total:		



**SPECIAL PROVISIONS  
CITY OF LINCOLN, NEBRASKA**

**City of Lincoln, NE (2013)  
Paving C.I.P. #540616  
Prescott Ave., 47<sup>th</sup> St. to 48<sup>th</sup> St.**

SPECIAL PROVISIONS  
CITY OF LINCOLN, NEBRASKA

Prescott Ave., 47<sup>th</sup> St. to 48<sup>th</sup> St.  
Project 540616

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SPECIAL PROVISIONS  
CITY OF LINCOLN, NEBRASKA

Prescott Ave., 47<sup>th</sup> St. to 48<sup>th</sup> St.  
Project 540616

## **GENERAL PROVISIONS AND REQUIREMENTS**

These Special Provisions amend or supplement the City of Lincoln Standard Specifications for Municipal Construction, 2011 Edition, and other provisions of the Contract Documents as indicated herein. All provisions that are not so amended or supplemented remain in full force and effect.

The following are modifications or additions to parts of the General Provisions and Requirements, of the City of Lincoln Standard Specifications For Municipal Construction:

## **CONTRACT TIME AND LIQUIDATED DAMAGE**

The Contractor will be allowed 45 calendar days to complete all work for this project. The Contractor shall have until October 15, 2013 to complete all work for this project including but not limited to the items listed as follows:

- All pavement and utility construction complete;
- All sidewalk and retaining wall construction to provide continuous pedestrian facilities;
- Construction of all median surfacing;
- All permanent roadway lighting complete and operational;
- All permanent pavement markings and signage complete;
- All driveway construction completed to allow access to adjacent properties;
- All traffic signals complete and fully operational;
- The necessary pull boxes and conduit work complete;
- All required erosion control items installed;
- All sodding and seeding completed.

The completion dates are based upon the Contractor receiving a notice to proceed with the project on or before June 30, 2013.

## **INCENTIVES**

Contractor's completion of all items of Work for the project prior to the final completion date detailed above, considering approved time extension(s), shall result in providing Contractor with incentive payments in the amount of \$1,000 per calendar day for each full day the work is completed prior to the final completion date up to a maximum amount of \$10,000 in incentive pay.

## **SALES AND USES TAX**

SPECIAL PROVISIONS  
CITY OF LINCOLN, NEBRASKA

Prescott Ave., 47<sup>th</sup> St. to 48<sup>th</sup> St.  
Project 540616

This language modifies and clarifies the General Conditions and Requirements.

Any portion of this project used for providing water service, such as pipe and fittings for water mains, is subject to sales and use taxes. The remainder of this project is exempt from sales and use taxes.

No one shall issue the Purchasing Agent Appointment (PAA) certificate forms except the Purchasing Agent. When the contractor requests these forms they need to inform the Purchasing Agent what materials they are buying and for which project (identify with project description and number).

#### **LAWN SPRINKLER SYSTEM**

The Contractor shall locate, protect and repair at his expense any portion of a lawn sprinkler system that is damaged by his work operations. No direct payment will be made for the above described work, as it shall be considered subsidiary to the items for which direct payment is made.

When lawn sprinklers need to be relocated as a result of the work, it shall be approved by the Project Manager and paid as an 'extra work item'.

#### **SUBLETTING OR ASSIGNING THE CONTRACT**

The following Special Provisions shall be considered in addition to Section VII, Part M, of the General Conditions of the current City Standard Specifications.

The Contractor shall perform with his own organization contract work amounting to not less than 50 percent of the total contract amount.

No portion of the contract shall be subcontracted, assigned, or otherwise disposed of except with the written consent of the City Engineer. Requests for permission to sublet, assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by a showing that the organization which will perform the work is particularly experienced and equipped for such work. The Contractor shall give assurance that the minimum wage for labor as stated in his proposal shall apply to labor performed on all work subcontracted, assigned or otherwise disposed of in any way. Consent to subcontract, assign or otherwise dispose of any portion of the contract shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract.

In the event the Contractor permits work under this contract to be performed by forces other than by his own organization without obtaining prior written consent of the

SPECIAL PROVISIONS  
CITY OF LINCOLN, NEBRASKA

Prescott Ave., 47<sup>th</sup> St. to 48<sup>th</sup> St.  
Project 540616

Engineer, such work shall be considered unauthorized and will not be paid for under the provisions of the contract.

**TREE PROTECTION**

The Contractor is to protect all trees that are not required to be removed in this project. Any form of protection chosen by the Contractor, such as fences, ropes, etc., shall be furnished, erected, and maintained by the Contractor. Any trees that appear to have significant root damage caused by the excavation necessary to widen the street or any tree that needs trimmed in or from the public right-of-way, shall be coordinated with the Project Manager or his representative who shall contact the City Arborist to verify any necessary actions in saving, trimming, or removing the damaged tree.

**MAILBOXES**

Remove and replacing mailboxes shall be considered subsidiary to items for which payments are made. Ornamental mailboxes shall remain in place and the curb shall be hand formed in the area of the ornamental mailbox.

**PUBLIC INFORMATION SIGNS**

The Contractor shall pick up at the Department of Public Works Engineering Services Office and shall erect and maintain public information signs. The signs shall be erected and in place only during the time of construction. At the completion of construction, the signs shall be moved to the next construction site. The signs shall be picked up at the beginning of the contract and returned at the completion of the contract to a location designated by the Engineer. All necessary precautions shall be taken in the transportation and erection of the signs to protect them from damage other than normal wear. No direct payment will be made for the above work, it being considered subsidiary to the items for which direct payment is made.

The Contractor shall erect and maintain temporary "No Parking" signs, supplied by the City. No direct payment will be made for the above work, it is considered subsidiary to the items for which direct payment is made.

**STANDARD MONUMENT BOX EXTENSION**

The Contractor shall install PVC extensions, supplied by the City, over Survey Monument Boxes, during the Asphaltic Concrete placement to ensure access after the lay down operation is complete. No direct payment will be made for the above described work. It shall be considered subsidiary to the items for which direct payment is made.

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**STATUS OF UTILITIES**

The following information is current as of February 1, 2013. The Contractor should request a utility status update at the project pre-construction conference, and/or prior to starting work.

The following utilities are known to exist within the Project limits, and may be relocated or reconstructed in coordination with this Project. The Contractor shall take into consideration the associated durations of utility relocations or reconstructions, and these associated durations should be considered in the baseline schedule, and prosecution of the Work. The Contractor shall conduct ongoing coordination meetings with all utility owners to facilitate these relocations.

***City of Lincoln***

City of Lincoln Wastewater Department – The Lincoln Wastewater Department has existing wastewater Manholes, pipes and services within the limits of the project. The contractor shall coordinate with City of Lincoln Wastewater Department on the exact location of the existing wastewater Manholes, pipes and services.

Contact: Jim Stolley, Utility Supervisor  
Phone: (402) 441-6858  
Cell: (402) 432-8701

Lincoln Water System – The Lincoln Water System has existing water mains and services within the limits of the project. All necessary adjustments for water services/water mains shall be completed as part of the project as shown on the plans.

Contact: Steve Owen, Superintendent of Water Distribution  
Phone: (402) 441-5925

City of Lincoln Watershed Management – Watershed Management has existing storm sewer facilities within the limits of the project. All necessary adjustment for storm sewer facilities shall be completed as part of the project as shown on the plans.

Contact: Ben Higgins  
Phone: (402) 441-7589

***Private Utilities***

Black Hills Energy – Black Hills Energy has existing utilities in the area. The contractor shall coordinate with Black Hills Energy on the exact location of existing and proposed utilities.

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Contact: Randy Kreifels  
Phone: (402) 437-1715

Lincoln Electric System (LES) – Lincoln Electric System (LES) has existing utilities in the area. The contractor shall coordinate with Lincoln Electric Systems (LES) on the exact location of existing and proposed utilities.

Construction Contact: Dana Daniel  
Phone: (402) 467-7529  
Cell: 402-432-0991

Engineering Contact: Allen Cameron  
Phone: (402) 467-7603  
Cell: 402-560-7603

Time Warner Cable – Time Warner Cable (TWC) has existing utilities in the area. The contractor shall coordinate with TWC on the exact location of existing and proposed utilities.

Contact: Lou Kipper  
Phone: (402) 421-0393

Windstream Communications – Windstream Communications has existing utilities in the area. The contractor shall coordinate with Windstream Communications on the exact location of existing and proposed utilities.

Contact: William Lange  
Phone: (402) 436-4553

**STATUS OF RIGHT OF WAY**

All work for this project is to be performed within the existing public right-of-way. There was no right-of-way or easement acquisition for this project.

**END-OF-SECTION**

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## **PORTLAND CEMENT CONCRETE PAVEMENT**

The following are modifications or additions to parts of Chapter 4 – Portland Cement Concrete Pavement, of the City of Lincoln Standard Specifications For Municipal Construction:

### **HIGH EARLY STRENGTH PORTLAND CEMENT CONCRETE PAVEMENT**

The Contractor shall provide High Early Strength Portland Cement Concrete for use at roadways and drives as directed by the Engineer to facilitate access to adjacent properties or opening of roadways. High Early Strength Portland Cement Concrete for roadways and drives shall be City of Lincoln L5500 Concrete.

The Contractor, at his option, may elect to use the High Early Strength Concrete at other locations to facilitate his operations, subject to approval of the Engineer. Additional payment will not be made over and above the unit price bid for Concrete Pavement for use of High Early Strength Concrete under these circumstances.

To facilitate construction of the project, the Engineer may direct the Contractor to use High Early Strength Concrete at certain locations where needed. The Contractor shall receive an additional payment of \$13.00 per cubic yard over the bid price for concrete pavement or concrete base for use of High Early Strength Portland Cement Concrete Pavement or Base that is authorized by the Engineer, based upon the in-place quantity of the concrete which is constructed. The in-place quantity of the concrete shall be measured in the field and concrete tickets shall be provided to the Engineer.

### **COLORED, STENCILED PCC PAVEMENT AND SIDEWALK**

#### Description

This work shall consist of constructing Colored, Stenciled Pavement and Sidewalk in accordance with the details shown in the plans and at locations designated by the Engineer. Extent of integrally colored or color-hardened portland cement concrete paving with stenciled pattern and sealer treatment is shown on drawings. Colored, Stenciled Concrete Pavement and Sidewalk shall be City of Lincoln L3500. **Colors, textures and patterns for this Work are to match the existing decorative concrete at the 48<sup>th</sup> and Prescott intersection.**

#### Quality Assurance

Installer shall provide a qualified foreman or supervisor who has a minimum of three years experience with surfaced colored concrete that is stenciled with a pattern, and who has successfully completed at least five stencil patterned concrete installations of high quality and similar in scope to that required.

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The concrete is cast-in-place, on the job site, by trained and experienced workmen.

Provide field samples of surface colors and stenciled patterns specified for engineer approval prior to beginning work, 48 inches by 48 inches in size illustrating paving finishes.

Products

*Concrete Materials*

- Acceptable manufacturer: L.M. Scofield (800 800 9900).
- Or equal, if and as specifically approved by Contract Administrator by Addendum during bidding period.

Concrete construction materials including reinforcing, concrete and related materials are specified in Chapter 3 "Portland Cement Concrete (PCC)."

*Proportioning and Design of Mixes*

Design mixes to provide normal weight concrete with the following properties, unless otherwise indicated on drawings and schedules:

- Prepare design mix such that ratio of coarse aggregate to fine aggregate is as specified in Chapter 3 "Portland Cement Concrete (PCC)."
- Parking lots, drives and walks shall have a 28 day F'c = 3,500 psi.
- Use air-entraining admixture in all exterior concrete.
- Use accelerating admixtures containing no calcium chloride in cold weather only when approved by testing laboratory.
- Use set retarding admixtures during hot weather only when approved by testing laboratory.
- Use of calcium chloride is prohibited.

*Color*

Dry-shake color hardener: L.M. Scofield Color Hardener. Grade shall be Heavy Duty Grade.

Colors:

- Russet Brown (A-24).
- La Crescenta Brown (A-25).
- Or equal, if and as specifically approved by Engineer by Addendum during bidding period.

Stencil Selection

*Stencil*

- Mat type stenciling tool for patterning freshly placed concrete.

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- Pattern: 'Decorative Concrete Impressions, LLC', "Flanders Weave" at walks; "Running Bond" at crosswalks. Refer to drawings for layout.

*Cure Agent*

- Membrane and sealer cure.
- Curing sealing compound meeting ASTM C309.
- Sonnebon Cure N Seal 25
- Or equal, if and as specifically approved by Engineer by Addendum during bidding period.

*Sealants*

- Foam Expansion Joint Filler: Polyethylene closed-cell expansion-joint filler. Provide Sonoflex F by Sonneborn or equal.
- Joint Sealer: Polyurethane self-leveling sealant, ASTM C 920, Type S, Grade P, Class 25, Use T at all expansion and contraction joints.

Execution

*Subbase Preparation*

For subbase preparation see Chapter 2 "Earthwork."

*Concrete*

For concrete placement, finishing, curing, surface repairs, and quality control testing during construction see Chapter 4 "Portland Cement Concrete (PCC) Pavement."

While concrete is still in its plastic state, apply the stencil pattern to the surface of the concrete. Properly apply stencils into the surface to achieve the required effect, with uniformity of pattern and depth.

Apply Color Hardener at rate recommended by manufacturer, evenly to the surface of the fresh concrete by the dry-shake method. Applied in two or more shakes, floated after each shake and troweled only after the final floating.

The surface of the slab shall be sealed using an approved cure and seal compound.

*Joints*

Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.

Expansion Joints: If spacing not indicated, construct expansion joints at 40 foot maximum intervals and at points of contact between slabs and vertical surfaces such as columns, foundation walls, stoops and elsewhere as indicated.

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Provide foam expansion joint fillers and sealant at all expansion joints.

Contraction (Control) Joints: Use saw cuts 1/8 inch wide by 1/4 slab depth or inserts 1/4 inch wide by 1/4 of slab depth.

If joint spacing not indicated, lay out joints to form square panels. When this is not practical, rectangular panels can be used if the long dimension is no more than 1.25 times the short side. In 4" slabs, the long side should not exceed 10 feet.

Spacing: Not to exceed 30 x slab thickness or 10 feet, whichever is less.

Opening to Traffic

Repairs completed with L5500 Concrete may be opened to traffic when concrete has attained 3000 psi.

Measurement and Payment

Colored, Stenciled PCC Pavement, as called for in the proposal, constructed in conformance with these Specifications and accepted by the Contract Administrator, shall be measured and paid for at the contract unit price bid per square yard (SY) for 9" COLORED STENCILED CONCRETE PAVEMENT. Such payment shall be full compensation for all subgrade preparation, form work, placing concrete, vibrating, finishing, jointing, sealing, curing, protection, headers, integral curbs if required, materials, equipment, tools, labor and incidentals necessary to complete the work.

Colored, Stenciled Concrete Sidewalk, 4", as called for in the proposal, constructed in conformance with these Specifications and accepted by the Engineer, shall be measured and paid for at the contract unit price bid per square foot (SF) for 4" COLORED STENCILED CONCRETE SIDEWALK. Such payment shall be full compensation for all preparation of subgrade, forming, jointing, finishing, curing, sawing, sealing, backfilling, cleanup, materials, equipment, tools, labor and incidentals necessary to complete the work.

**INTEGRAL COLORED, SAND BLASTED CONCRETE SIDEWALK**

Integral colored, lightly sand blasted concrete paving areas are shown on the drawings. These areas include the following materials and are to be bid under the item LIGHT SANDBLASTED CONCRETE SIDEWALK.

- Colored Concrete
- Sand blast concrete texture

The concrete for the 4" colored concrete shall meet the requirements of Chapter 3 "Portland Cement Concrete (PCC)." of the City of Lincoln Standard Specifications for

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Municipal Construction. Chapter 3 shall be modified to include integral colored concrete. No crushed limestone aggregate is to be used for this application. The integral color shall be selected by the Architect as provided by Canexes Colors, or equal. The color shall be supplied and mixed according to the manufacturer's requirements. The Contractor shall submit material data sheets and provide a 12" x 12" sample panel of the approved color.

Integral colored concrete to receive the sand exposed texture by surface retarder. The final texture shall be a medium to coarse finish. A 4' x 4' mock-up area shall be prepared for approval. If acceptable, the mock-up area may be included in the final work. Separate payment shall not be made for the sandblast texture.

Integral colored sand blasted paving areas installed according to this Provision shall be paid by the Contract Unit Price Bid per Square Foot (SF) and shall be full compensation for submittals, colored concrete, sand blast texturing, pavement jointing, materials, equipment, tools, disposal, labor, and all other incidentals.

Colored sand textured concrete to be sealed with the specified curing and sealing compound.

**END-OF-SECTION**

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**TRAFFIC CONTROL**

The following are modifications or additions to parts of Chapter 15, Traffic Control, of the City of Lincoln Standard Specifications For Municipal Construction:

**SPECIAL TRAFFIC CONTROL PROVISIONS**

This project can be constructed under total closure to through traffic.

The Contractor will perform his construction activities so that residents and businesses will have as much direct access as possible. Pavement and driveway removals within the project limits shall be scheduled so that individual residential and business driveways are not out of service for more than seven (7) days. **Access shall be maintained to businesses at all times.** If the Engineer determines that the Contractor is unable to meet this requirement, additional pavement removals may be suspended until this requirement can be met. No calendar day extensions will be approved based on delays caused by this requirement.

**END-OF-SECTION**

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**SPECIAL STREET REHABILITATION PROVISIONS**

The following are modifications or additions to parts of the City of Lincoln Standard Specifications For Municipal Construction:

**Power Grinding**

Street Preparation

The power grinding of the street shall not take place until all of the concrete work is complete on that section. Material generated by power grinding shall be disposed of at the City Maintenance yard at 23<sup>rd</sup> & Baldwin Avenue, as directed by the Engineer. The power grinder shall have a self-loader with a minimum cutting width of six feet (6).

The interface between the surfaced planed area and the concrete gutter pan shall be cleaned of all old asphalt and maintained to provide a smooth, straight, and vertical surface.

Cleaning

Prior to the application of asphaltic materials, the surface on which the asphalt is to be placed shall be thoroughly cleaned as necessary to remove all mud, matted earth, dust and other foreign materials as approved by the Engineer. Power brooming shall be conducted in such a manner as to keep dust and debris under control and cause a minimum of disturbance to surrounding areas. Material cleaned from the surface shall be removed and disposed of by the Contractor.

Equipment and Payment

Bid prices called for in the proposal for such equipment to be fully operational shall include the operator, fuel, oil, tools, and all parts necessary for complete operation. The use of this equipment shall be paid for per hour as bid.

**Manhole and Valve Box Adjustment**

When adjusting manhole or valve boxes in streets the ring and cover shall be no lower than 3/8" below finish street elevation. If it is determined a manhole or valve box does not meet this requirement, the contractor will be required to use the cities Typical Utility Adjustment Detail.

**Removal and Replacement Items**

Removal items are not necessarily of the same size and shape as the new construction: removal shall include whatever materials occupy the space which the new construction is intended to occupy. All removal and replacement items shall be paid for under the units identified in the bidding schedule and paid for at the unit price bid for each appropriate

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item. Such payment shall compensation for removal of the existing items and their disposal; preparation of new subgrades; constructing the replacement items; materials, equipment, tools, labor and incidentals necessary to complete the removal and replacement of each item called for in the bidding schedule.

The clean-up of the streets to their original condition and the park spacing shall be subsidiary to the price for removal and replacement. All earth fill shall be select material and furnished by the Contractor as subsidiary to the items for which direct payment is made. Any area disturbed beyond three feet behind the existing curb and gutter or widen curb area shall be sodded at the Contractor's expense.

### **Portland Cement Concrete Pavement**

#### Description

This work shall consist of removing and replacing pavement of any material or thickness and replacing it with Portland Cement Concrete Pavement in accordance with the details shown in the plans and at locations designated by the Engineer. The work shall include removing and disposing of pavement; furnishing, placing, and curing concrete; sealing all joints; and repairing all damaged curb, median surfacing and walk.

#### Removal and Preparation of Repair Site

The Engineer shall designate the sections to be removed.

Sections shall be removed to the lines designated by the Engineer, including reinforcement that interferes with the operations. The repair section shall be removed with minimum disturbance of the underlying foundation course and abutting surfacing. Damaged curb, walk, median surfacing and median curb shall be replaced as shown on the typical section of the plan.

If the slab or any of the above abutting surfaces is damaged by the Contractor's failure to use appropriate removal techniques, the surface shall be repaired at the Contractor's expense.

Any loosened foundation course material shall be removed and replaced with concrete. The foundation course shall be moistened by sprinkling prior to placing concrete. A form shall be used at the pavement edge to provide the same surface elevation and edge alignment as the existing pavement. The form shall be supported and braced in position in a manner that is approved by the Engineer

#### Opening to Traffic

Repairs completed with L5500 Concrete may be opened to traffic at the end of the 24 hour curing period.

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Measurement and Payment

Concrete pavement, will be measured for payment by the square yard, complete, in place, and accepted by the Engineer.

The quantity of completed and accepted work, measured as provided herein, shall be paid for at the contract unit price per square yard for the item "REMOVE & REPLACE 9" CONCRETE PAVEMENT, L3500" OR REMOVE & REPLACE 9" CONCRETE PAVEMENT, L5500". This price shall be full compensation for furnishing, preparing, transporting, delivering and placing all materials; all jointing, all, curing and sealing; removing and disposing of old pavement and steel as specified herein; and for all labor, equipment, tools, and incidentals necessary to complete the work.

**Concrete Base Repair**

Description - This work shall consist of removing and replacing pavement in accordance with the details shown in the plans and at locations designated by the Engineer.

Concrete Base Repair - All areas of concrete base failure shall be replaced with L3500 Concrete, as directed by the Engineer. When pouring back the new concrete base, the Contractor shall be required to use a vibrating screed that shall operate over the entire width of the base and shall achieve uniform consolidation. All small or irregular areas shall be vibrated by methods approved by the Engineer.

Concrete base repair shall be measured for payment in square yards, complete, in place and accepted by the Engineer. The quantity of completed and accepted work shall be paid for at the contract unit price per square yard for the item "REMOVE & REPLACE 8" CONCRETE BASE, LB3500" or "REMOVE & REPLACE 8" CONCRETE BASE, LB5500". This price shall be full compensation for furnishing, preparing, transporting, delivering and placing all materials; all curing, removing and disposing of old pavement and steel as specified herein; and for all labor, equipment, tools, and incidentals necessary to complete the work.

**Curb Removal and Replacement**

The replacement of curb shall be accomplished with a slip-form curb machine side mount only, using string line as grade, unless permission is obtained from the Engineer to hand form the curb. Removals shall be disposed of at a site approved by the Project Manager. The curb removal and replacement shall be done prior to laying the asphalt.

Concrete curb shall be measured for payment by the lineal foot, complete, in place and accepted by the Engineer. The quantity of completed and accepted work shall be paid for at the contract unit price per linear foot for the item "REMOVE REPLACE 24" CURB & GUTTER". This price shall be full compensation for furnishing, preparing, transporting,

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delivering and placing all materials; all curing, removing and disposing of old curb as specified herein; and for all labor, equipment, tools and incidentals necessary to complete the work.

**Concrete Driveway, Walk, and Median Surfacing Removal and Replacement**

Removals shall be disposed of at a site approved by the Project Manager. One-inch expansion joints shall be placed at all locations where the walk or driveway or curb abut.

Concrete driveway, walk and median repair shall be measured for payment in square foot complete, in place and accepted by the Engineer. The quantity of completed and accepted work shall be paid for at the contract unit price per square foot for the item "REMOVE REPLACE 6" DRIVE, WALK, L3500", "REMOVE REPLACE 6" DRIVE, WALK, L5500", "REMOVE REPLACE 5" DRIVE, WALK, L3500", or "REMOVE REPLACE 4" WALK, L3500". This price shall be full compensation for furnishing, preparing, transporting, delivering, and placing all materials; all curing, removing, and disposing of old walk, driveway and median surfacing as specified herein; and for all labor, equipment, tools, and incidentals necessary to complete the work.

**END-OF-SECTION**

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 6

ASPHALTIC CONCRETE CONSTRUCTION

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## CHAPTER 6

### ASPHALTIC CONCRETE CONSTRUCTION

#### 6.00 GENERAL

This Work shall be defined as the construction of a completely new pavement structure or reconstruction of an existing pavement including earthwork, appurtenances, and all related construction required to connect to existing pavement around the limits of construction.

Patching shall be defined as pavement replacement of areas requiring small quantities of asphaltic concrete per placement such as utility crossing repair or larger quantity placements such as longitudinal cuts for utility work not requiring curb to curb asphalt replacement, and for other similar situations.

Asphaltic Concrete Pavement shall be defined as Class 1, an asphaltic concrete wearing surface placed on a Portland Cement Concrete (PCC) base or Class 2, an asphaltic concrete wearing surface placed on an asphaltic concrete base. The pavement structure shall be designed in accordance with The City of Lincoln Standard Plans. The wearing surface and asphaltic concrete base shall be of a type or types of asphaltic concrete as shown on the plans and which meet the Mix Design and Aggregate Criteria requirements describe below unless otherwise specified.

The thickness of the wearing surface or overlay shall be as shown on the plans or approved by the City's Project Manager. The base shall be of a thickness as shown on the plans. Lift thickness of the first asphaltic concrete base lift shall be between 3 inches and 5 inches after compaction to required density. All subsequent asphaltic concrete base lifts shall be between 1 1/2 and 3 inches in thickness after compaction to required density. PCC base shall meet the requirements of Chapters 3 and 5 of these Standard Specifications.

Asphaltic Concrete shall consist of an intimate mixture of naturally occurring mineral aggregates of required gradations and asphalt binder content as hereinafter specified. Unless otherwise specified or approved by the City Engineer, neither industrial nor manufacturing byproducts will be allowed in the mixture. Reclaimed Asphalt Pavement (RAP) shall be allowed as described later in these Standard Specifications.

Asphaltic Concrete mixtures shall be classified as:

- Type 1 (for use as surface course on arterial streets)
- Type 2 (for use as surface course on non-arterial streets)
- Type 3 (for use as surface and base on streets and parking lots)
- Type 4 (for use in patching as defined above)

The factor of 141 pounds per cubic foot shall be used to compute asphaltic concrete quantities of all types for design purposes.

## 6.01 MATERIALS

### A. ASPHALT BINDER

The suppliers for asphalt binder used in City of Lincoln projects shall be certified by the Nebraska Department of Roads (NDOR) to supply Performance Graded Binder in Nebraska.

The asphalt binder for all mixes shall conform to the requirements of AASHTO M 320 for Performance Graded Asphalt Binder and must meet all requirements for use on NDOR projects. The PG Binder shall meet or exceed both the upper and lower temperature targets of the PG Binder grades as shown in Table 6.02 A of these Standard Specifications unless directed otherwise by the City Engineer.

In addition, unless otherwise specified or directed by the City Engineer, the PG Binder shall be a binder which incorporates a blend of base asphalt and elastomeric modifiers of styrene-butadiene (SB), styrene-butadiene-styrene (SBS) or styrene-butadiene-rubber (SBR).

The composite material shall be thoroughly blended at the asphalt refinery or terminal prior to being loaded into the transport vehicle. The polymer modified binder shall be heat and storage stable and shall not separate when handled and stored per the suppliers storage and handling recommendations.

A Material Certification from the PG Binder Supplier shall be submitted prior to construction. The Material Certification must state that acid has not been used. The Material Certification must also state that the material has not been air blown or oxidized.

When moisture susceptibility testing indicates the need for an anti-stripping additive, it shall be added by the PG Binder Supplier. The Contractor shall be compensated for the cost of the anti-stripping additive at the invoice price of the additive. The bill of lading or delivery ticket shall state the binder grade, specific gravity, and the percentage of anti-strip additive.

**6.01 MATERIALS (Continued)**

**B. TACK COATS**

**1. Rapid-Curing Cut-Back Asphalts**

The rapid-curing cut-back asphalts to be used as tack coats shall conform to the requirements of AASHTO M 81, Cut-Back Asphalt (Rapid-Curing Type).

This Specification covers liquid petroleum products, produced by fluxing an asphaltic base with suitable petroleum distillates.

**2. Emulsified Asphalts**

Emulsified asphalts shall conform to the following Specifications:

- ASTM Designation D 977 - Standard Spec. for Emulsified Asphalts
- ASTM Designation D 2397 - Standard Spec. for Cationic Emulsified Asphalts
- ASTM Designation D 140 - Standard Practice for Sampling Bituminous Materials
- ASTM Designation D 244 - Standard Testing Emulsified Asphalts

Emulsified asphalts covered by these Standard Specifications shall be diluted in the distributor with sufficient potable water to reduce the asphalt residue in the mixture to approximately thirty percent (30%). Emulsified asphalt shall be homogeneous within the thirty (30) days after delivery. If separation of the emulsified asphalt has not been caused by freezing, thorough mixing shall be used to achieve a homogeneous mixture.

**C. MINERAL AGGREGATES**

**1. General**

Mineral aggregates for asphaltic concrete shall conform to the following requirements except where modified herein:

- ASTM Designation D 692 - Standard Specification for Coarse Aggregate for Bituminous Paving Mixture
- ASTM Designation D 1073 - Standard Specification for Fine Aggregate for Bituminous Paving Mixture
- ASTM Designation D 242 - Standard Specification for Mineral Filler for Bituminous Paving Mixture

**6.01 MATERIALS (Continued)**

**C. MINERAL AGGREGATES (Continued)**

**1. General (Continued)**

Mineral aggregates shall be crushed rock, broken stone, crushed gravel, sand-gravel, coarse sand, fine sand or a mixture of these materials composed of clean, hard, durable, and non-coated particles, free from injurious quantities of clay, dust, soft or flaky particles, loams, shale, alkali, organic matter, or other deleterious material. Chat or coal sand will not be allowed in any mix.

Crushed rock shall be crushed limestone, granite, quartzite, or other ledge rock approved for the intended purpose by the City Engineer and shall not contain deleterious substances in a quantity exceeding three and one-half percent (3.5%) of any combination of shale, clay lumps, coal, or soft particles with shale and clay lumps not to exceed one and one-half percent (1.5%).

The absorption of water by crushed rock for use in asphaltic concrete shall not exceed three and two-tenths percent (3.2%) by weight.

The mineral aggregate from different sources of supply shall not be mixed or stored in the same pile, nor used alternately in the same class of construction or mixed without permission from the City's Project Manager. All fractions of a crushed rock gradation shall be produced from the same type of material.

The chemical and physical characteristics of the fraction passing the # 4 sieve shall be substantially the same as those of the material which may be produced in the laboratory from the fraction which is retained on the # 4 sieve.

Mineral aggregates shall have a soundness loss of not more than 12 percent by weight at the end of 5 cycles using sodium sulfate solution.

Mineral aggregates shall be tested prior to use and shall conform to the above requirements based on the following test designations.

- ASTM C 127 - Specific Gravity & Absorption of Coarse Aggregates
- ASTM D 75 - Standard Practice for Sampling Aggregates
- ASTM C 136 - Standard Test Method for Sieve Analysis of Fine & Coarse Aggregates
- ASTM D 546 - Standard Test Method for Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures
- ASTM C 128 - Specific Gravity & Absorption of Fine Aggregates
- ASTM C 131 - Standard Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion Impact in the Los Angeles Machine
- ASTM C 88 - Standard Test Method for Soundness of Aggregate
- ASTM D 693 - Standard Spec. for Crushed Aggregate for Macadam Pavements

**6.01 MATERIALS (Continued)**

**C. MINERAL AGGREGATES (Continued)**

**2. Mineral Fillers**

Mineral filler shall consist of pulverized soil, pulverized crushed rock, broken stone, gravel, sand-gravel, sand, or a mixture of these materials that conforms to the following requirements:

**TABLE 6.01 A - MINERAL FILLER REQUIREMENTS**

<b>Criteria</b>	<b>Minimum</b>	<b>Maximum</b>
Total Percent Passing the #50 (300 μm) Sieve	95	100
Total Percent Passing the #200 (75 μm) Sieve	80	100
Plasticity Index non-soil material passing #200 (75 μm)	0	3
Plasticity Index for Soil	0	6

**D. RECLAIMED ASPHALT PAVEMENT (RAP)**

Reclaimed Asphalt Pavement (RAP) may come from the job site or the Contractor's stockpile. In either case, the Contractor will be responsible for testing the RAP prior to use. Tests shall include at a minimum, AC content and gradation. Test results shall be reported to the City's Project Manager for approval prior to use.

**E. NON-WOVEN PAVEMENT OVERLAY FABRIC**

Non-woven overlay fabric shall be furnished by an ISO approved manufacturer of polypropylene or polyester geo-synthetic fabric and shall be needle punched and heat treated on one side and shall conform to the following requirements:

<b>PROPERTY</b>	<b>MINIMUM</b>	<b>ASTM</b>
Mass, oz./sq. yd.	4.1	D 3776
Tensile Strength, lb.	102	D 4642
Elongation at Break, %	50	D 1682
Mullen Burst Strength, lb.	200	D 3786
Asphalt Retention, gal./sq. yd.	0.21	D 6140

Acceptance shall be based upon manufacturer's certification of conformity.

**6.02 ASPHALTIC CONCRETE MIXTURES**

**A. GENERAL**

Asphaltic concrete mixtures shall be designed by the Contractor to meet the Mix Design Criteria for the appropriate mix types as shown in these Standard Specifications.

Unless otherwise specified or approved by the City Engineer, Asphaltic Concrete for Type 1 Mix shall meet or exceed all of the requirements for "Superpave-SPH" as described in these Standard Specifications.

Unless otherwise specified or approved by the City Engineer, Asphaltic Concrete for Mix Types 2 and 3 shall meet or exceed all of the requirements for "Superpave-SPR" as described in these Standard Specifications.

Unless otherwise specified or approved by the City Engineer, Asphaltic Concrete for Type 4 Mix shall meet or exceed all of the requirements of the Asphaltic Concrete Mix Requirements Summary table shown below and all other applicable requirements of this specification.

**TABLE 6.02 A - ASPHALTIC CONCRETE MIX REQUIREMENTS SUMMARY**

Type (Use)	* Mix Requirements	AC Grade	Aggregate Blend		
			% RAP (Max.)	Virgin Agg.	Gradation Requirements
1 Surface Course Arterial Streets	SPH (Superpave)  5.1% Min. AC by weight of mix	PG 70-34	25%	Limestone 90% Max.	½" Band (Superpave)
2 Surface Course Non-Arterial Streets	SPR (Superpave)  5.0% Min. AC by weight of mix	PG 64-34	35%	Limestone 95% Max.	SPR Band (Superpave)
** 3 Surface and Base Lifts, Parking Lots, and Temporary Pavement	SPR (Superpave)  5.0% Min. AC by weight of mix	PG 64-34	50%	Limestone 95% Max.	SPR Band (Superpave)
*** 4 Patching	5.0% Min. AC by weight of mix	****	50%	Limestone 95% Max.  ***** Crushed 80% Min.	% Passing ¾" - 100% Min. #200 - 10% Max.

- \* % AC shall be determined by ignition oven results.
- \*\* Type 3 mixtures will not require mix design verification testing by the City but Contractor's mix design data must be approved by the City Engineer prior to use.
- \*\*\* Type 4 mix for patching must be approved by the City Engineer prior to use.
- \*\*\*\* PG 64-22 if less than 25% RAP in mix.
- \*\*\*\*\* Indicates aggregates crushing by mechanical means.

## 6.02 ASPHALTIC CONCRETE MIXTURES (Continued)

### B. SUPERPAVE VOLUMETRIC MIX DESIGN

The Contractor will be required to define properties using a gyratory compactor that has met the Superpave evaluation test procedures, according to the gyration levels indicated for the mix type specified.

The mix formula shall be determined by the Contractor from a mix design for each mixture. A volumetric mixture design in accordance with the latest edition of the Asphalt Institute Publication, SP-2 will be required. However, the mixture for the Superpave specimens and maximum specific gravity mixture shall be short-term aged for two hours. Mixing and compaction temperatures shall be in accordance with the latest NDOR specifications.

The following test procedures shall apply:

- AASHTO R 30 - Practice for Short and Long-Term aging of Hot Mix Asphalt
- AASHTO T 84 - Specific Gravity and Absorption of Fine Aggregate
- AASHTO T 85 - Specific Gravity and Absorption of Coarse Aggregate
- AASHTO PP 19 - Practice for Volumetric Analysis of Compacted Hot Mix Asphalt
- AASHTO T 312 - Method for Preparing and Determining the Density of Hot Mix Asphalt Specimens by Means of the Superpave Gyratory Compactor
- AASHTO T 209 - Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- AASHTO T 283 - Resistance of Compacted Bituminous Mixture to Moisture induced Damage

The optimum binder content shall be the binder content that produces required air voids, at Ndes, in the plant produced mix. The design shall have at least four points, including a minimum of two points above and one point below the optimum. The amount of un-compacted mixture shall be determined in accordance with AASHTO T 209.

Each Superpave mixture shall be tested by the Contractor for moisture susceptibility in accordance with AASHTO T 283. The loose mixture shall be short-term aged for two hours in accordance with AASHTO R30. The 6-inch specimens shall be compacted in accordance with AASHTO T 312 to 7 percent air voids at 95-mm in height and evaluated to determine if the minimum Tensile Strength Ratio (TSR) of 80 percent has been met. If the mixture has not met the minimum TSR value, the Contractor shall have the option of modifying the mixture, as approved by the City Engineer, and retesting to verify that the minimum TSR of 80 percent has been achieved or by having an approved liquid anti-stripping additive added to the PG Binder, by the PG Binder Supplier, at a dosage rate, such that the mix will meet the minimum TSR of 80 percent.

All data shall be submitted with the mix design for approval. During production, the Contractor may be required by the City's Project Manager, to provide and test additional specimens of the plant produced asphaltic concrete for moisture susceptibility. A TSR test result of less than 80 percent will require mixture modification(s) and a sample from subsequent lots will be tested by the Contractor until a TSR value of at least 80 percent is achieved.

Changes in the types or sources of aggregates or binder may require a new job mix formula, mix design, and moisture susceptibility test. If required, the new proposed job mix formula shall be in accordance with the requirements as stated above and submitted 5 working days prior to use for approval.

## 6.02 ASPHALTIC CONCRETE MIXTURES (Continued)

### B. SUPERPAVE VOLUMETRIC MIX DESIGN (Continued)

#### 1. MATERIALS SAMPLING AND TESTING

At the beginning of each year and at least 14 days before production of asphaltic concrete, the Contractor shall submit, in writing, a tentative job mix formula and material samples as described below, for approval, to the City Engineer. The job mix formula shall identify the mineral aggregates and mineral filler, if needed, with the value of the percent passing each specified sieve for the individual and blended materials.

A 65 pound bag of each of the individual mineral aggregates and RAP, if used, shall also be submitted to the City Engineer at this time. Each sample shall be marked to clearly indicate the type of material, name of the producer, and the pit location.

The Contractor shall submit, to the City Engineer, three proportioned 10,000-gram samples of the blended aggregates and a 1 gallon sample of the asphalt binder to be used in the mixture. Whenever RAP is used, it shall be processed through an ignition oven and then combined proportionally with the virgin aggregate in one of the 10,000-gram samples. The remaining two 10,000-gram samples shall be made up of the unprocessed RAP combined proportionally with the virgin aggregate. Submitted with these samples shall be a copy of the mix design values obtained from tests performed by the Contractor. This mix design shall include at a minimum, the following information:

- The bulk specific gravity (Gsb) of the blended aggregate (The specific gravity shall be determined for the combined blend from the unwashed portion of the - #4 and the + #4 material in accordance with AASHTO T 84 & T 85 respectively)
- The target asphalt binder content by total mix
- The supplier, grade, and specific gravity of the PG Binder
- The maximum specific gravity of the combined mixture (Rice)
- The average bulk specific gravity and air voids at N initial (Nini), N design (Ndes), and N maximum (Nmax) of the compacted gyratory specimens
- Voids in the Mineral Aggregate (VMA) and Voids filled with Asphalt (VFA) at Ndes
- Fine Aggregate Angularity (FAA), Coarse Aggregate Angularity (CAA), Flat and Elongated Particles and Clay Content of the aggregate blend

#### 2. MIX DESIGN CRITERIA

The design criteria for each mixture shall be determined from the following Tables.

The optimum binder content shall be the binder content that produces 4.0% air voids at Ndes for SPH mixes and 3.0% at Ndes for SPR mixes in the plant produced mix. Binder content shall be determined by ignition oven.

6.02 ASPHALTIC CONCRETE MIXTURES (Continued)

B. SUPERPAVE VOLUMETRIC MIX DESIGN (Continued)

2. MIX DESIGN CRITERIA (Continued)

**TABLE 6.02 B - MINIMUM BINDER REQUIREMENTS**

Mix Type	Minimum Binder Content (% by wt. of mix)
SPH	5.1%
SPR	5.0%

**TABLE 6.02 C - GYRATORY COMPACTION EFFORT**

Asphaltic Concrete Type	Nini	Ndes	Nmax
SPR	7	65	100
SPH	8	95	150

Average Design High Air Temperature = < 39 degrees C (102° F)

**TABLE 6.02 D - GYRATORY COMPACTION TEMPERATURE**

Mix Type	% RAP	COMPACTION TEMP. ° F
SPR	0-35	280 ± 5
	36-50	290 ± 5
SPH	0-35	300 ± 5

**TABLE 6.02 E - VOIDS IN MINERAL AGGREGATE \***

Nominal Maximum Aggregate Size	Recommended VMA, Percent (Criteria at Ndes)
SPR	12.0
½ (0.500) inch	14.0

\* For Design purposes only.

**TABLE 6.02 F - VOIDS FILLED WITH ASPHALT \***

Asphaltic Concrete Type	Recommended VFA, Percent
SPR	70 - 80
SPH	65 - 75

\* For Design purposes only.

3. AGGREGATE BLEND CRITERIA

a. Coarse Aggregate Angularity (CAA)

The coarse aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type shown in Table 6.02 G.

**TABLE 6.02 G - COARSE AGGREGATE ANGULARITY (ASTM D 5821)**

Asphaltic Concrete Type	CAA (minimum)
SPR	83
SPH	95/90*

\* Denotes two faced crushed requirements

**6.02 ASPHALTIC CONCRETE MIXTURES (Continued)**

**B. SUPERPAVE VOLUMETRIC MIX DESIGN (Continued)**

**3. AGGREGATE BLEND CRITERIA (Continued)**

**a. Coarse Aggregate Angularity (CAA) (Continued)**

Aggregate obtained from the residue of the ignition process shall not be used for the determination of CAA for mix design approval except when RAP material is specified and must be combined with the proportioned amount of virgin aggregate as defined by the mix design.

**b. Fine Aggregate Angularity (FAA)**

The fine aggregate angularity value of the blended aggregate material shall meet or exceed the minimum values for the appropriate asphaltic concrete type shown in Table 6.02 H.

The specific gravity for calculation of the FAA shall be based on a combined aggregate sample of material passing the No. 8 sieve and retained on the No. 100 sieve.

**TABLE 6.02 H - FINE AGGREGATE ANGULARITY  
(AASHTO T 304 METHOD A)**

Asphaltic Concrete Type	FAA (minimum)
SPR	43.0
SPH	45.0

Aggregate obtained from the residue of the ignition process shall not be used for the determination of FAA for mix design approval except when RAP material is specified and must be combined with the proportioned amount of virgin aggregate as defined by the mix design.

**c. Flat and elongated particles**

The coarse aggregate shall not contain flat and elongated particles exceeding the maximum value for the appropriate asphaltic concrete type shown in Table 6.02 I.

**TABLE 6.02 I - FLAT AND ELONGATED PARTICLES\* (ASTM D 4791)**

Asphaltic Concrete Type	Percent, Maximum
SPR	10
SPH	10

\* Criterion based on a 5:1 maximum to minimum ratio

**d. Clay Content**

The Clay Content of the blended aggregate material shall be such that the Sand Equivalent Minimum value for the appropriate asphaltic concrete type as shown in Table 6.02 J shall be met or exceeded.

6.02 ASPHALTIC CONCRETE MIXTURES (Continued)

B. SUPERPAVE VOLUMETRIC MIX DESIGN (Continued)

3. AGGREGATE BLEND CRITERIA (Continued)

d. Clay Content (Continued)

**TABLE 6.02 J – SAND EQUIVALENT CRITERIA (AASHTO T 176)**

Asphaltic Concrete Type	Sand Equivalent, Minimum
SPR	45
SPH	45

e. Gradation

The blended aggregate shall conform to the gradation requirements specified below for the appropriate nominal size.

The dust to binder ratio is the ratio of the percentage by weight of aggregate finer than the No. 200 sieve to the asphalt content expressed as a percent by weight of total mix.

The dust to binder ratio shall be between 0.7 and 1.7. This shall be verified during mix design approval and production sample testing.

**TABLE 6.02 K - GRADATION CONTROL POINTS FOR 0.500 (½) INCH NOMINAL SIZE**

Sieve	Control Points (percent passing)	
	Minimum	Maximum
3/4 inch	100.0	
½ inch	90.0	100.0
3/8 inch		90.0
No. 8	28.0	58.0
No. 16		
No. 30		
No. 50		
No. 200	2.0	10.0

**TABLE 6.02 L - GRADATION CONTROL POINTS FOR SPR**

Sieve	Control Points (percent passing)	
	Minimum	Maximum
3/4 inch		
3/8 inch	81.0	96.0
No. 8	46.0	56.0
No. 50	12.0	21.0
No. 200	4.0	9.0

**6.02 ASPHALTIC CONCRETE MIXTURES (Continued)**

**C. PRODUCTION SAMPLING AND TESTING**

During production, asphaltic concrete shall be sampled and tested for acceptance by the City's Project Manager on a lot basis. A minimum of one sample shall be required for each lot of asphaltic concrete. A lot is defined as each 500 tons or fraction thereof of each day's production. The location of the required samples shall be determined by the City's Project Manager.

Tests shall include the following:

- AASHTO T 209 - Maximum specific gravity of the mix (Rice)
- ASTM C 136 - Standard Test Method for Sieve analysis of Fine and Coarse Aggregate
- AASHTO T312 - Method for Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyrotory Compactor
- AASHTO T 166 - Bulk Specific Gravity of compacted Bituminous Mixtures using saturated surface-dry specimens
- AASHTO T 138 - Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the ignition method

**TABLE 6.02 M - ASPHALTIC CONCRETE PRODUCTION TOLERANCES**

Test	Mix Type	
	SPH	SPR
AC	5.1% Min. (None)	5.0% Min. (None)
Air Voids	4% (+/- 1%)	3% (+/- 1%)
FAA (cold feed)	45 Min. (-0.50)	43 Min. (-0.20)
FAA (ignition oven)	45 Min (-1.00)	43 Min. (-0.50)

If at the end of the day's production, the tolerances in Table 6.02 M are exceeded, the Contractor will not be allowed to resume production until corrective adjustments are made to the mix design.

Mix adjustments at the plant are authorized within the limits shown in Table 6.02 N without redesigning the initially approved mix.

The adjustment must produce a mix with the percent air voids and all other properties as stated in these Standard Specifications.

All adjustments must be reported to the City Engineer.

The adjustment values in Table 6.02 N will be the tolerances allowed for changes indicated by production or mix design test results, but cannot deviate from Superpave gradation criteria.

**6.02 ASPHALTIC CONCRETE MIXTURES (Continued)**

**C. PRODUCTION SAMPLING AND TESTING (Continued)**

**TABLE 6.02 N - AGGREGATE ADJUSTMENT TOLERANCE**

Aggregate Adjustments	
Sieve Size	Adjustment Range
1 inch, 3/4 inch, 1/2 inch, 3/8 inch, No. 4	± 6%
No. 8, No. 16, No. 30, No. 50	± 4%
No. 200	± 2%

**6.03 EQUIPMENT**

**A. GENERAL**

All equipment, tools and machinery shall be adequate for the purpose for which it is to be used, and shall be maintained in satisfactory working condition at all times. The equipment shall be at the Work site sufficiently in advance of construction operations to be thoroughly examined and approved by the City's Project Manager. The Contractor shall furnish the necessary accessories, equipment data, and assistance required by the City's Project Manager for making tests and calibrations on equipment.

The Contractor shall furnish the necessary accessories and personnel and shall perform calibrations on the equipment. Copies of the calibration data shall be provided to the City's Project Manager before production of Asphaltic Concrete. In the event problems are encountered during the calibrations, the Contractor shall arrange for a trained technician or company representative of the company from which the equipment was obtained to make the necessary repairs and/or adjustments to the equipment. Calibrations shall be made as often as is deemed necessary by the City's Project Manager to ensure accuracy of the equipment.

In the event that a Contractor elects to obtain asphaltic concrete from a commercial plant not under his direct control, he shall reach agreement with the commercial producer to perform the above functions in the same manner as though the plant was under his direct control. The Contractor shall also reach agreement with the producer to furnish or shall arrange to have furnished an approved building for use by the City Engineer if deemed necessary by the City's Project Manager.

## 6.03 EQUIPMENT (Continued)

### B. MIXING PLANT

#### 1. General

The equipment that is used for heating, proportioning, and mixing the aggregates and asphalt cement shall be able to produce a uniform mixture.

The dryers shall be able to dry and heat all aggregates to the required temperatures with positive control. Aggregates shall be agitated continuously during the process of heating. Damage to the asphalt cement in dryer-drum type mixing plants shall be avoided.

Salvaged bituminous material shall not be exposed to open flame.

Continuous temperature and time readings of the asphaltic materials shall be electronically recorded whenever the plant is operated. A copy of the temperature reading shall be made available to the City's Project Manager. Temperature and time displays shall be easily accessible. Temperature and time sensors will be provided at the following locations:

- a. Inside the asphaltic concrete mixture discharge chute.
- b. Inside the surge bin.
- c. Inside the asphalt cement storage tank.

During storage, the asphalt cement temperature shall be maintained between 250F and 350F or at the storage temperature range recommended by the binder supplier. All plants shall be equipped with a circulating system for asphalt cement which is designed to assure proper and continuous circulation during the operating period. Storage tanks shall have sufficient capacity to provide for continuous operation. The tanks shall be situated and constructed to allow the volume of the asphalt cement to be safely and accurately determined at any time.

If the plant is equipped with a surge bin for the temporary storage of asphaltic concrete, the asphaltic concrete taken from the surge bin will not differ significantly from the material taken directly from the plant. The first material entering the bin will be the first material removed. The surge bin shall be completely emptied at the end of each operating day unless insulated or heated.

All plants shall be equipped with a continuously operated dust collector. The collected material may be wasted or returned to the mix.

Mineral filler bins shall be protected from moisture.

#### 2. Pug-mill Plants

##### a. General

Pug-mill plants shall include cold aggregate feeders, oversize screens, storage bins for dried aggregate, ingredient proportioning devices, and all other equipment necessary to produce the specified mixture. The pug-mill blades shall have a minimum clearance of 3/4 inch from all fixed and moving parts. The mixer shall be equipped with a discharge hopper holding approximately 1 ton of hot mixture and capable of intermittent discharge.

## 6.03 EQUIPMENT (Continued)

### B. MIXING PLANT (Continued)

#### 2. Pugmill Plants (Continued)

##### b. Batch Plants

Batch plants shall have an accurate time lock to control the operations during a complete mixing cycle. They shall lock the scale box gate after the charging of the mixer until the closing of the mixer gate at the completion of the cycle. They shall lock the bituminous material bucket throughout the dry mixing period and shall lock the mixer gate throughout the dry and wet mixing periods.

The dry mixing period is defined as the time between the opening of the scale box gate and the addition of bituminous material. The wet mixing period is the interval of time between the addition of bituminous material and the opening of the mixer gate.

The control of the timing shall be flexible and capable of being set at 5-second intervals or less throughout a total cycle of not less than 3 minutes. A mechanical batch counter shall be installed as a part of the timing device and shall be designed and constructed to register only upon the release of the bituminous material. It shall not register any dry batches or any material wasted through the bins. The timing device shall have a suitable case with a locking door that shall always be kept closed and locked except when adjustments or repairs are required.

All batch plants shall be equipped with an asphalt cement volume meter or a heated or insulated asphalt bucket with scales.

Scale hoppers and scales for proportioning aggregates and asphalt to the batch plant's mixer shall be accurate within 0.5 percent; and they shall be sensitive within 0.2 percent or 2 pounds, whichever is greater, throughout the range of use.

##### c. Continuous Type

Plants shall be equipped with a pump synchronized to the feeding mechanism so that the required percentage of asphalt cement is applied continuously and uniformly. The feeding system shall be synchronized to the rest of the plant.

#### 3. Dryer-Drum Plants

These plants shall include cold aggregate feeders, vibratory screening units for removing oversize material from both virgin and reclaimed material, proportioning devices for controlling the quantity of each ingredient in the mixture, and any other equipment necessary to produce the mixture as specified.

Plants shall be equipped with a pump synchronized to the feeding mechanism so that the required percentage of asphalt cement is applied continuously and uniformly. The feeding system shall be synchronized to the rest of the plant.

## 6.03 EQUIPMENT (Continued)

### C. TRUCK SCALES

Truck scales shall be furnished by the Contractor for weighing loaded trucks at the plant site, and shall be installed on adequate foundations and in accordance with the manufacturer's recommendations. The scales shall have sufficient capacity to weigh the maximum axle, combination of axles or gross load used and shall be accurate to one-half percent (0.5%) of the total axle load or total load.

Scales shall be properly calibrated by the Contractor in the presence of the City's Project Manager unless the scales have current Nebraska Department of Agriculture inspection approval or unless calibration and adjustment by a recognized scale company service crew has been performed during the current season, and attested to by the City's Project Manager. The scales shall be periodically cross-checked for accuracy during the course of the Work by checking the net weight of loads of the material being produced on commercial scales in the vicinity of the project which have current agriculture inspection approval. The Contractor shall furnish at least ten (10) 50 pound weights for checking the accuracy of the scales. If the scale is not capable of weighing all axles at one time, the approaches shall be extended so the entire hauling unit will be level during weighing. Chuck holes, ruts or high spots in the approaches which develop during hauling operations shall be immediately repaired as directed by the City's Project Manager.

All weighing shall be done with the hauling unit stationary, level, and out of gear. Suitable protection shall be provided against wind currents that may affect the accuracy of the scales. The platform of the scale shall be kept clean and free from accumulations of materials, as directed by the City's Project Manager.

Serially numbered duplicated scale tickets shall be furnished to accompany each truck load of material to the unloading point. Scale tickets shall reflect the date, time, load number, total weight, tare weight, project number, mix type, destination, and net weight.

### D. DISTRIBUTORS

Whenever the use of a distributor is required, that piece of equipment shall be manufactured expressly for the purpose of applying heated asphaltic materials by pressure spray applications. Improvised equipment, such as converted road oilers, will not be acceptable. The distributor shall be so designed as to permit the application of heated asphaltic material in a uniform spray without atomization at the rate, temperature, and pressure required. The distributor shall be equipped with a tachometer registering revolutions per minute and so located as to be visible to the driver in order that the driver may maintain the constant speed required for the specified rate of application. The distributor shall be mounted on a motor truck or trailer, equipped with pneumatic tires. The pump shall be equipped with a meter registering the number of gallons (liters) per minute passing through the nozzle and this meter must be visible to the operator. The distributor shall be equipped with an accurate thermometer which indicates the temperature of the asphaltic materials at all times. The distributor shall be equipped with a full circulating spray bar and shall be provided with hand nozzles to permit application to areas not accessible to the spray bar. The distributor shall be equipped with a drip tray or other suitable means of preventing the dripping of material after the flow has been shut off.

## 6.03 EQUIPMENT (Continued)

### E. ASPHALT SPREADER AND FINISHER

The mechanical asphalt spreader and finisher shall be self-propelled and shall be designed and equipped to spread upon the prepared surface without segregation of the mixture, a tamped and finished wearing surface of asphaltic concrete free from hollows and humps.

The machine shall be equipped with a hopper to receive the asphaltic concrete as it is dumped from the trucks and shall be designed so as to prevent the mixture from being deposited directly on the base or previously laid courses. The hopper shall have a suitable device to distribute the mix evenly across the full width of the screed. The machine shall be equipped with means of adjusting the thickness of the mat, and the transverse and longitudinal grade. It shall be equipped with a tamping or vibrating screed which shall be operated during the lay-down process to compact the applied material to a uniform density. No part of the machine shall travel on the freshly laid material. There shall be auxiliary attachments for the machine so that it may be adjusted to lay widths as approved by the City's Project Manager.

### F. ROLLERS

The number and type of rollers furnished shall be adequate to produce the specified density and a satisfactory surface.

Wheels of all rollers shall be smooth and free from openings or projections which would mar the surface of the Work. They shall be equipped with suitable devices necessary to prevent adhesion of bituminous material to the tires and wheels. The rollers shall be equipped with water tanks for wheel sprinkling devices that extend the full width of each roller, and drip pans designed so as to prevent oil, grease, gas or diesel oil from spilling or dripping onto the asphaltic concrete surface.

## 6.03 EQUIPMENT (Continued)

### G. SURFACE MILLING MACHINE

The milling shall be done with a commercially manufactured machine able to perform this work to the City's Project Manager's satisfaction. The milling machine shall be self-propelled and shall have sufficient power, traction, and stability to maintain an accurate depth of cut. Pavement removal by scarifying, motor grading or heating will not be allowed as milling.

The milling machine shall be equipped with automatic controls for establishing profile grades at each edge of the machine. The reference shall be the existing pavement or taut reference lines erected and maintained by the Contractor true to line and grade. A single reference may be used if the machine can maintain the designated transverse slope.

When referenced from existing pavement, the cold milling machine shall be controlled by a self-contained grade reference system provided by the machine's manufacturer for that purpose. The sensing point shall react to compensate for 25 percent of the actual change in elevation due to a hump or dip that is 3 feet (900 mm) or less in length. The self-contained grade reference system shall be used at or near the centerline of the roadway. On the adjacent pass with the milling machine, a joint matching shoe may be used.

Broken, missing, or worn teeth shall be replaced if the machine is unable to maintain the surface texture requirements.

The machine shall be equipped with a loading elevator to remove the milled material from the roadway surface.

The machine shall be equipped with means to effectively control dust generated by the cutting operation.

### H. TRUCKS

Numbered trucks having tight, clean, smooth beds shall be used for transporting the freshly prepared asphaltic concrete to the site of the Work. The beds shall be sprayed, when necessary, to prevent the asphaltic concrete mixture from adhering to the bed, with a minimum quantity of approved lubricant. The equipment used and the frequency of spraying shall be determined by the City's Project Manager.

All trucks shall be equipped with a suitable waterproof canvas cover to protect the material as required by the City's Project Manager. Any truck that causes excessive segregation of materials by the action of its spring suspension or other contributing factors, or that causes undue delays, shall not be used for transporting the asphaltic concrete mixtures. All truck beds shall be so constructed that they may be insulated, when necessary. All truck boxes shall be equipped with box vibrators.

## 6.04 CONSTRUCTION METHODS

### A. SUBGRADE

Subgrade shall be prepared as described in Chapter 2 of these Standard Specifications.

### B. CLEANING

Prior to the application of asphaltic materials on existing base, the surface on which the asphalt is to be placed shall be thoroughly cleaned by means of mechanical sweepers, street flushers, shovels, scrapers, and hand brooms as is necessary to remove all mud, matted earth, dust and other foreign materials. Power sweeping shall be conducted in such a manner as to keep dust and debris under control and cause a minimum of disturbance to surrounding areas. Material cleaned from the surface shall be removed and disposed of by the Contractor.

The cost of cleaning the existing surfaces to which asphalt is to be applied shall be considered subsidiary to other items for which payment is made.

### C. SURFACE MILLING

Surface milling, where required, shall consist of removing and salvaging existing surfacing material to a depth and width as shown in the plans or as directed by the City's Project Manager. The Contractor shall remove all pavement millings which result from the performance of this work and dispose or transport them to locations as provided in the Contract or as approved by the City's Project Manager.

The interface between the surface milled area and the concrete gutter pan shall be cleaned of all old asphalt and maintained to provide a smooth, straight, and vertical surface.

The Contractor shall be responsible for location and protection of all manholes, valve boxes, and all other appurtenances, some of which may be below the surface of the street, and to protect equipment from the danger of striking same. Claims for any and all damages arising from hitting these appurtenances shall be the Contractor's responsibility. The Contractor shall have access to applicable records; however, the Contractor shall not rely upon these records to reveal all such hidden appurtenances.

The Contractor shall be held responsible for all appurtenances in the pavement surface which have been damaged or disturbed by the Contractor. The cost of repairing or replacing these damaged appurtenances shall be made at the Contractor's expense.

#### 1. BASIS OF PAYMENT

SURFACE MILLING, completed in conformance with the plans and Standard Specifications and accepted by the City's Project Manager, shall be measured and paid for at the contract unit price bid per square yard. Such payment shall be full compensation for all surface preparation, milling, removal of materials, labor, tools, equipment, clean up and incidentals necessary to complete the Work.

### D. CORRECTION OF PAVEMENT FAILURES

After the surface milling and cleaning have been accomplished, the City's Project Manager shall examine the pavement structure to which the asphaltic concrete is to be applied. Any pavement failures shall be repaired as designated by the City's Project Manager. The cost of repairing pavement failures shall be measured and paid for at the appropriate unit prices or shall be accomplished as an Extra Work Item.

## 6.04 CONSTRUCTION METHODS (Continued)

### E. TACKING

This Work shall consist of the application of asphaltic materials to previously prepared bases or existing surfaces.

After the surface is completely cleaned and dry it shall have a tack coat of rapid curing cut-back asphalt or emulsified asphalt applied sufficiently in advance of the laying operation to break or cure prior to the application of the surface coat.

Traffic shall not be permitted on the tack coat without the permission of the City's Project Manager, and the asphalt surface course shall be applied as soon as the tack breaks and the water has evaporated. The rate of application generally should be from 0.05 to 0.2 gallons per square yard, with the rate of application to be approved by the City's Project Manager. Tack or asphaltic cement shall be applied by hand to all vertical edges.

The cost of supplying and applying tack coat will not be measured for payment. It shall be considered subsidiary for other items to which direct payment is made.

### F. NON-WOVEN PAVEMENT OVERLAY FABRIC PLACEMENT

Non-woven pavement overlay fabric and asphaltic cement sealant shall be placed at locations called for on the plans. This Work shall consist of the application of an asphalt sealant and the placement of a non-woven pavement overlay fabric over the entire prepared surface of the pavement to be surfaced or resurfaced with asphalt. Sealants are applied both to seal the existing surface and to provide a cement to adhere to the fabric. Emulsified asphalts are not acceptable for sealant.

Sealant and fabric shall be placed only when the ambient air temperature is 50°F or above. The pavement surface on which the sealant fabric is to be placed shall be dry and free of dirt, debris and other foreign matter. Joint and crack openings of 1/8 inch and larger shall be filled with a suitable material as directed by the City's Project Manager. The asphalt sealant shall be applied with distributor equipment at a rate of 0.25 to 0.30 gallons per square yard. The width of the asphalt sealant application shall be the fabric width plus 2 to 6 inches or the entire width of the pavement to be surfaced. Temperature of the sealant shall be not less than 280°F at the time of application to ensure a uniform spray pattern.

No drilling or skipping shall be permitted. Asphalt drools or spills shall be cleaned from the pavement surface to avoid flushing and possible fabric movement at these asphalt rich areas. Fabric lay-down equipment shall be used for placement of the fabric. Overlap of fabric joints shall be 1 to 3 inches.

Immediately after the placement, the fabric shall be embedded into the asphalt cement sealant with a pneumatic roller, unless otherwise directed by the City's Project Manager. The construction of the asphaltic concrete overlay shall follow closely the placement of the fabric. In the event the sealant bleeds through the fabric before the overlay is placed, the Contractor shall be required to spread a thin layer of sand or asphaltic concrete over the affected areas in order to prevent the fabric from being picked up by the construction equipment. The application of tack coat will not be required on the fabric prior to the placement of the asphaltic concrete unless a delay in the placement of the overlay results in the fabric becoming dry or dirty.

## 6.04 CONSTRUCTION METHODS (Continued)

### F. NON-WOVEN PAVEMENT OVERLAY FABRIC PLACEMENT (Continued)

#### 1. BASIS OF PAYMENT

Placement of the non-woven pavement overlay fabric shall be measured and paid for at the contract unit price bid per square yard for the item NON-WOVEN PAVEMENT OVERLAY FABRIC. Such payment shall be full compensation for cleaning and preparing the pavement surface, filling joint and crack openings; for furnishing, heating, and applying the asphalt sealant; for placement and rolling of the fabric; for furnishing and applying material for blotting the surface of the fabric as required; and for all equipment, labor, tools, and incidentals required to complete the Work.

### G. HAULING

Clean trucks fully fueled shall be weighed in the morning when starting up and then again in the early afternoon to obtain accurate tare weights. The City's Project Manager may also require re-weighing at any time to obtain new tare weights.

### H. JOINTING

Longitudinal and transverse joints shall be made in such a manner that well bonded and sealed joints are achieved. Joints between old and new pavement shall be made in such a manner as to insure a thorough and continuous bond between the old and new surface.

Cold joints shall be painted with a light application of asphalt cement before the adjacent material is placed. When placing surface course, a hot joint between lane placements shall be maintained as directed by the City's Project Manager.

Joints in the surface course shall be formed by any approved method that will produce a dense vertical joint; otherwise the previously laid surface course shall be cut back to its full depth so as to expose a fresh surface, after which the hot mixture shall be placed in contact with it and raked to proper depth and grade.

## 6.04 CONSTRUCTION METHODS (Continued)

### I. SPREADING

Asphaltic concrete used in the construction of sections having a uniform width as shown in the typical cross section of the plans, shall be spread and finished with an approved mechanical spreading and finishing machine. The operation of placing mixtures shall be continuous, as nearly as possible.

The asphaltic concrete mixture shall be dumped in the center of the hopper of the spreading machine. Care shall be exercised to avoid overloading and slopping over of the mixture on the base, pavement, or previously laid asphaltic concrete. The operating speed and depth of strike-off of the spreading and finishing machine shall be regulated so as to produce a well knit, uniform layer of the required compacted thickness.

The asphaltic concrete mixture shall be laid only upon a surface which is dry and free from frost.

When the asphaltic concrete mixture is placed in irregular or narrow sections, intersections, or other areas where it is impractical to spread and finish the mixture by methods previously specified, the Contractor may use other equipment or acceptable hand methods for spreading the mixtures, as approved by the City's Project Manager.

The cost of hauling, jointing and spreading the asphaltic concrete mixture shall be considered subsidiary to other items for which payment is made.

### J. COMPACTION

Immediately after spreading, the mixture shall be compacted thoroughly by rolling. The number, weight, types of rollers, sequence of rolling operations and compaction procedures shall be such that the required density and a satisfactory surface are attained consistently while the mixture is in a workable condition.

The initial rolling shall begin as soon as the material will bear the weight of the roller without displacing the material. The final compaction and finishing shall be performed by rollers while the material is still hot and responds to the action of the roller. Rolling shall not be carried on in such a manner or at such a time as will cause shoving or cracking. No additional rolling or compaction will be allowed after final compaction.

The asphaltic concrete shall be compacted to required density such that the completed surface is slightly above the surface of the concrete at the gutter pan joint. This compaction shall be attained without the roller coming into contact with the concrete gutter pan and shall be smooth, true and conform to the grade, cross section and contour required without any irregularities that exceed 1/8 inch when tested with a 10 foot straightedge.

All areas not accessible to the equipment specified shall be compacted and finished by other equipment and methods that will provide a satisfactory surface and the specified density. Any areas determined by the City's Project Manager to be defective, shall be immediately reworked to the satisfaction of the City's Project Manager.

No measurement or direct payment shall be made for the operation of rolling asphaltic concrete pavement. The cost thereof shall be considered subsidiary to other items for which direct payment is made.

**6.04 CONSTRUCTION METHODS (Continued)**

**K. ASPHALTIC CONCRETE CURB**

Asphaltic concrete curb shall be constructed of a mix as shown on the plans or approved by the City's Project Manager. The curb shall conform to the shape and dimensions that are shown on the plans.

Whenever possible the asphaltic concrete curb shall be shaped and compacted with a curb machine capable of constructing the curb true to line, grade, and cross section and to a density and with a surface texture which is satisfactory to the City's Project Manager.

Special precautions shall be taken to provide a proper bond between the surface course and the curb. The surface shall be thoroughly cleaned and tacked with hot asphalt cement. If performed during cool weather, the surface course shall be heated so that it is sufficiently plastic to form a bond with the hot asphaltic concrete curb.

**1. BASIS OF PAYMENT**

ASPHALTIC CONCRETE CURB shall be paid for at the contract unit price bid per linear foot.

**L. COLD WEATHER PLACEMENT**

Asphaltic concrete shall not be placed on frozen or frost covered sub-grade or base. The Cold Weather Placement table shown below shall be used by the City's Project Manager to restrict the routine placement of asphaltic concrete as a result of cold temperatures. Wind velocity, cloud cover, and other project specific conditions will be considered by the City's Project Manager if deviating from this Table.

**TABLE 6.04 A – COLD WEATHER PLACEMENT**

<b>Lift Thickness</b>	<b>Minimum Surface Temperature</b>
Less than 2 inches	45°F
2 to 3 inches	37°F
Greater than 3 inches	35°F

## 6.05 DENSITY CORE SAMPLES

### A. GENERAL

During the construction of asphaltic concrete pavement, the Contractor shall obtain core samples from each pavement lift for the determination of density. A minimum of one sample shall be required for each lot of asphaltic concrete. These samples shall be taken not later than two working days after the date of placement of the asphaltic concrete at locations designated by the Engineer. Cores shall be a minimum of 4 inches in diameter and shall be taken under direct supervision of the City's Project Manager and given to him/her immediately after removal from the pavement. The surfaces from which the samples have been taken shall be cleaned, dried, filled and compacted by the Contractor with hot asphaltic concrete mixture immediately after core removal. Density samples shall be tested in accordance with the Nebraska Standard Method of Tests for specific gravity of compressed bituminous mixtures, NDR T 166.

### B. COMPACTION REQUIREMENTS

Asphaltic concrete shall be compacted to a density of not less than ninety-two and one half percent (92.5%) of the void-less density for that mixture. The void-less density for each lot sample shall be tested in accordance with the Nebraska Standard method of test for Maximum Specific Gravity of Bituminous Paving Mixtures, NDR T 209. If any density test result indicates a compaction value of less than ninety-two and one half percent (92.5%) of the void-less density, two additional cores will be obtained from that lot by the Contractor at points designated by the City's Project Manager. These samples shall be taken and the surface restored as described above not later than seven days after the date of placement of the asphaltic concrete. The average density of the three samples shall be considered the density of the lot.

### C. OVERLAYS

Overlays shall be sampled and tested for density when the average thickness of the overlay is greater than 1 inch. The average overlay thickness shall be determined from the core samples located by the City's Project Manager as described above. The thickness of the samples shall be the average of four measurements made at four equally spaced locations on the perimeter of the sample. When the average thickness is 1 inch or less the testing of density for this layer shall be waived.

**6.06 BASIS OF PAYMENT**

Asphaltic concrete shall be paid for on a lot basis, as described above, at the contract unit price bid per ton for ASPHALTIC CONCRETE, TYPE \_\_\_ and subject to the payment tables for production density and air voids as described below. The amount of asphaltic concrete to be paid for shall be the net weight of the material actually incorporated into the work. Such payment shall be full compensation for all mixing, hauling, tack coats, spreading, compacting to required density, materials, equipment, tools, labor, and incidentals necessary to construct the asphaltic concrete surface course to the required thickness or as directed by the City's Project Manager.

**TABLE 6.06 A – DENSITY ACCEPTANCE SCHEDULE**

Average Density	Min. # Samples	% of Payment
92.5 and above	1	100
92.0 to 92.4	3	95
91.5 to 91.9	3	90
91.0 to 91.4	3	85
90.5 to 90.9	3	80
90.0 to 90.4	3	70
89.9 or less	3	40 or reject

**TABLE 6.06 B – AIR VOID ACCEPTANCE SCHEDULE \***

Air Voids Type 1 (SPH)	% of Payment
Less than 1.5	50 or reject
1.5 to 1.9	50
2.0 to 2.4	95
2.5 to 2.9	98
3.0 to 5.0	100
5.1 to 5.5	98
5.6 to 6.0	95
6.1 to 6.5	90
6.6 to 7.0	50
More than 7.0	50 or reject

\* Air Void Acceptance Schedule Table only applies to Type 1 Arterial surface course.

**TABLE 6.06 C – AC CONTENT ACCEPTANCE SCHEDULE**

% Below Minimum AC	% of Payment
0.2	80
0.3	70
0.4	60
Greater than 0.4	50 or reject

Addendum to Chapter 23 – Water Mains

Issued: June 1, 2012

1. Delete Section 23.03(B)(4)(c) – Retainer Glands and insert the following:

23.03(4)(c): All retainer glands shall utilize a wedge action principle or grip ring principle to fully restrain the fitting and pipe together. Wedge Action Retainer Glands shall be ductile iron with heat-treated ductile iron wedges and twist-off torque nut bolts. Ductile iron shall be per ASTM A536 grade 65-45-12. Wedges shall have a minimum hardness of 370 BHN. The gland shall allow for a minimum deflection of 3° and allow joint movement after installation. The gland shall be provided with torque limiting twist-off nuts with an additional fixed hex head to allow for removal and reinstallation of the gland. Twist-off torque nut bolts shall be coated or lubricated in a manner to prevent corrosion and premature twist-off of the torque limiting twist-off nuts. Additional requirements include:

Specification Item	Ductile Iron Pipe	PVC Pipe
Pressure Rating, 6" – 12" pipe:	350 psi	305 psi (DR 14)
Pressure Rating, 16" pipe:	350 psi	235 psi (DR 18)
Pressure Rating, 24" and larger:	250 psi	N/a
Color:	Black	Red
Acceptable Manufacturers:	EBAA Iron Megalug Series 1100 Ford Uni-Flange Series 1400 STAR Stargrip 3000 SIGMA One-Lok SLD TYLER UNION TUFGRIP	EBAA Iron Megalug Series 2000PV STAR PVC Stargrip 4000E9408985 TYLER UNION TUFGRIP PVC FORD Uni-Flange Series 1500

Acceptable manufacturers are required to meet all stated specifications requirements. Failure to meet requirements shall be cause for rejection.

2. Revise existing Section 23.07(F) - Tracer Wirer by adding the following paragraph:

All water main reconstructions (loops for conflicting utilities) as shown on LSP 301 shall have tracer installed when using PVC pipe. When reconstruction is performed on ductile iron pipe or cast iron pipe, tracer wire shall be terminated on both ends of the loop directly to the existing pipe using an exothermic welded connection, or a stainless steel Cathodi-Clamp™. Polyethylene encasement shall be (re)installed over the areas of the existing pipe where the tracer is terminated extending from a minimum of two (2) feet past the connection point of the new PVC pipe to a minimum of two (2) feet past the wire termination point on the existing water main.

3. Revise existing Section 23.10(A) - Water Service Construction or Reconstruction by adding the following paragraph:

Whenever a water service is reconstructed that provides fire protection (fire service), the Contractor shall obtain the necessary Underground Fire Sprinkler Permit through the City's Building and Safety Department, Bureau of Fire Prevention. The Contractor shall comply with the requirements of the permit and anticipate and arrange any necessary inspections of the fire service reconstruction.

4. Add new Section 23.03(B)(4)(d):

23.03(B)(4)(d): Mechanical Joint Restraint Adaptors for connection of MJ valves to MJ fittings and MJ fittings to MJ fittings shall be a bolt-through positive restraint mechanism meeting working pressure specifications of AWWA C153 for compact fittings and manufactured of ductile iron conforming to ASTM A536, 80-55-06. MJ adaptors shall connect standard mechanical joint fittings (AWWA C110 or C153) and valves at a linear distance not to exceed three (3) inches and without attachment to pipe. MJ adaptors shall be installed with standard styrene butadiene rubber (SBR) MJ gaskets conforming to the latest revision of AWWA C111 be supplied with an NSF 61, 7-mil. fusion bonded epoxy coating. The bolts and nuts shall be ASTM A193 Type 304 Stainless Steel. Acceptable manufacturer shall be Foster Adaptor.

**CONTRACTOR SUPPLIED MATERIALS**

The following Special Provision shall replace language in Chapter 23.03 Section N of the 2011 City of Lincoln Standard Specification for Municipal Construction:

**N. HYDRANT DRAIN MATERIAL**

Hydrant drain material shall be clean, washed, hard, durable, uncoated and uniformly graded Class "A" gravel as specified by the Nebraska Department of Roads. Gradation shall be as follows:

**TABLE 23.03 C – HYDRANT DRAIN MATERIAL GRADATIONS**

Sieve Size	% Passing	Tolerance
3/4"	100	0
3/8"	95	+/- 5
#4	78	+/- 4
#10	16	+/- 13
#200	3	+/- 3

