Agenda Item: 8.

MEMORANDUM

TO: Projects, Programs and Operations Subcommittee

FROM: Martin P. Cleveland, Construction Engineer

SUBJECT: Nebraska Department of Roads Agreement for

R-613 Levee Pump Station near Station 171+53R,

Standby Power Generator Set

DATE: September 5, 2012

In 2011, the Nebraska Department of Roads (NDOR) asked Omaha Public Power District to (OPPD) sever the power line that serves the R-613 pump station in order to

build the Highway 34 embankment near the Missouri River and R-613 Levee. See

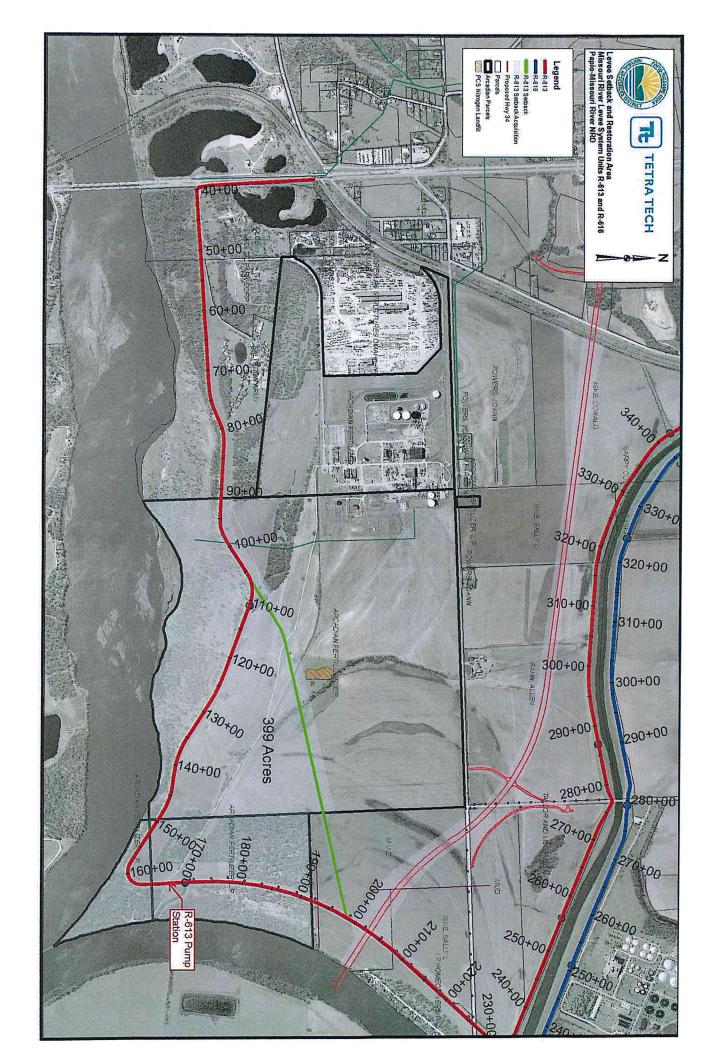
enclosed location map.

The R-613 pump station was designed to pump cooling water discharged from the Arcadian Chemical Corporation plant. Under normal conditions when the plant was operating, the water flowed through a drainage structure under the R-613 levee and into the Missouri River. During Missouri River flood events the 20,000 gpm capacity pump station would lift the water over the R-613 levee. The pump station was powered via electricity from OPPD power line. The Arcadian Chemical plant (now owned by PCS-Nitrogen) has not operated for over 10 years.

The NDOR has evaluated options for restoring power to the R-613 pump station and determined the lowest cost alternative was to replace OPPD power with a standby power generator set (engine and generator). Restoration of power line would cost over \$100,000 whereas a standby power generator set plus concrete pad to place the generator on and transport trailer would cost \$57,766, as per recently received bids (see attached bid specifications and bid summary). The generator set trailer will allow the generator set to be used elsewhere by the District and allow for easy relocation, if the pump station is moved in the future due to potential R-613 levee upgrading/set back. It is recommended that the lowest and best bid of \$57,766 by NMC Power Systems be approved for the generator set, trailer and concrete pad.

Enclosed is a proposed NDOR agreement which allows for the NDOR reimbursement of cost of purchasing a new standby power generator set, concrete pad and trailer by the District. The District is responsible for generator operation/maintenance costs.

It is Management's recommendation that the Subcommittee recommend to the Board of Directors that the General Manager be authorized to accept the lowest and best bid of \$57,766 by NMC Power Systems and execute the proposed agreement with the Nebraska Department of Roads providing for the purchase and installation of a Standby Generator Set, concrete pad and trailer for the District's Missouri River R-613 Levee Pumping Station subject to changes deemed necessary by the General Manager and approval as to form by District's Legal Counsel.



AGR43 Revised 2-26-07

AGREEMENT

STATE OF NEBRASKA, DEPARTMENT OF ROADS PAPIO MISSOURI NATURAL RESOURCE DISTRICT PROJECT NO. NH-34-7(118) CONTROL NO. 22176 ELECTRICAL RELOCATION MISSOURI RIVER BRIDGE APPROACH - BELLEVUE

THIS AGREEMENT, made and entered into by and between Papio Missouri River Natural Resource District hereinafter referred to as the "Utility" and the State of Nebraska, Department of Roads, hereinafter referred to as the "State".

WITNESSETH:

WHEREAS, the State has plans for the PLANS Information, new construction roadway with grading culverts and surfacing.

WHEREAS, said construction will be undertaken under the project designation NH-34-7(118), and

WHEREAS, the Utility owns and operates a Flood Gate Levee facility along and adjacent to a portion of this project, some of which is resting outside of the limits of the old highway right of way and on private property, and

WHEREAS, because of the widened right of way which the State has acquired for the new construction, and because of the construction itself, it becomes necessary for the Utility to adjust some, if not all, of its facility along this project, and

WHEREAS, the Utility is willing to rehabilitate its facility where necessary in accordance with the conditions hereinafter provided in this agreement, and

WHEREAS, the State is willing to reimburse the Utility for its nonbetterment costs to rehabilitate its facilities when the Utility facility is presently located outside of the old public right-of-way and on private property, and

WHEREAS, the State is willing to pay the Utility for eligible nonbetterment expenses incurred in connection with the rehabilitation of its facilities as provided by Federal-Aid Policy Guide 23 CFR 645A, "Utility Relocations, Adjustments and Reimbursement", and Federal-Aid Policy Guide, 23 CFR 645B, "Accommodation of Utilities" issued by the Federal Highway Administration.

NOW THEREFORE, in consideration of these facts, the parties hereto agree as follows: <u>SECTION 1.</u> The Utility hereby agrees to furnish, or cause to be furnished, all of the tools, labor, equipment and materials necessary for the rehabilitation of its facility as made necessary by construction. <u>SECTION 2.</u> Prints of the construction plans for this project, showing the location of the poles referred in the above tabular form, have been forwarded to the Utility and are by this reference hereby made a part of this agreement.

SECTION 3. The description of work to be performed and the estimate of costs prepared by the Utility have been approved by the State and are hereby made a part of this agreement. These items are attached as Exhibit "B". The total amount of this estimate is \$57,766.00 of which \$57.766.00 is the share of the cost chargeable to the State. It is expressly understood that notwithstanding this estimate the State will reimburse the Utility for 100% of its actual nonbetterment expenses less any credits for salvaged or junked materials.

SECTION 4. The Utility agrees, as a part of the above described estimate to advise the State as to the method which will be used in accumulating the actual costs. If this method is prescribed by a Federal or State regulatory body, a statement to that effect shall be made by the Utility. If the accounting method is not prescribed by an agency of the State or Federal Government, it shall be described in the Utility's estimate and be approved as a part of this agreement.

SECTION 5. The Utility may submit progress billings for the portions of its rehabilitation that have been completed. The Utility agrees not to submit progress billings for amounts less than \$2,500.00. The State will make progress payments, based upon satisfactory prosecution of work, for 95 percent of the amount billed. The State will limit its payments to 95 percent of the approved estimate referenced in Section 3 of this agreement pending the results of the final cost audit. The State will make every effort to pay the Utility within thirty days of receipt of the Utility's invoice.

SECTION 6. If the Utility wants to let a construction contract, the Utility shall do the following:

- A. Comply with State public bidding statutes. If the Utility solicits bids from a list of known contractors, the list must be submitted to the State for concurrence prior to the soliciting of bids.
- Submit the bid proposal, plans and construction schedule to the State for approval prior to letting a contract.
- C. Require the contractor to abide by the provisions of the Nebraska Fair Employment Practices Act as provided by Neb.Rev.Stat. §48-1101 through 48-1126 (Reissue 2004), as amended, and all regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49 CFR, Parts 21 and 27 as set forth in Exhibit "A" attached hereto and made a part of this agreement.

D. Submit a copy of the bids received and the Utility's recommendation of award to the

State for concurrence prior to any award.

E. Require any contractor or subcontractor engaged under this agreement to fully

comply with the provisions of the Nebraska Employment Security Law as provided

by Neb.Rev.Stat. §48-601 through 48-671 (Reissue 2004), as amended, and the

same are incorporated herein by this reference.

SECTION 7. It is agreed and understood by the parties hereto that Federal-Aid Policy Guide

23 CFR 645A, "Utility Relocations, Adjustments and Reimbursement", and Federal-Aid Policy

Guide, 23 CFR 645B, "Accommodation of Utilities" issued by the U.S. Department of

Transportation, Federal Highway Administration, as supplemented, revised or updated

heretofore, is hereby expressly made a part of and incorporated into this agreement by this

reference.

SECTION 8. In consideration of the payment as mentioned in Section 4 of this agreement the

Utility agrees to relinquish or subordinate sufficient property rights or interests that it may have

in property upon which it has an easement or similar right that will be occupied by the proposed

highway improvement as are necessary for the construction, operation and maintenance of the

highway facility.

SECTION 9. All traffic controls must comply with the latest edition of the Manual on Uniform

Traffic Control Devices (MUTCD). If the State furnishes the Utility a traffic control plan, the

Utility must comply with the plan. The State has the right to shut down a Utility work area not in

compliance with the Manual on Uniform Traffic Control Devices.

SECTION 10. The Utility shall comply with the regulations relative to nondiscrimination in

federally-assisted programs of the Department of Transportation, Title 49 CFR, Parts 21 and 27,

as set forth in Exhibit "A" attached hereto and hereby made a part of this agreement.

SECTION 11. The Utility agrees that it and any contractor or subcontractor engaged under this

agreement will fully comply with the provisions of the Nebraska Employment Security Law as

provided by Neb.Rev.Stat. §48-601 through 48-671 (Reissue 2004).

SECTION 12. The Utility agrees that the billing will be prepared and submitted in a manner to

allow comparison with the approved estimate.

Papio Missouri Natural Resource District - 3 -

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed					
by their proper officials thereunto duly auth	norized as o	of the dates b	elow indica	ted.	
EXECUTED by the	this	day of		_, 20	
ATTEST:					
	***************************************	*******************************	***		
EXECUTED by the State this	_ day of		_, 20		
		F NEBRASH MENT OF R			
Hallaha Francisco	-				-
Utilities Engineer	Planning	and Project I	Developme	nt Engineer	
AGR5-DL					

NONDISCRIMINATION CLAUSES

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

- (1) <u>Compliance with Regulations</u>: The Contractor will comply with the Regulations of the Department of Transportation relative to nondiscrimination in federally assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, Parts 21 and 27, hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) Nondiscrimination: The contractor, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the basis of disability, race, color, sex, religion or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix "A," "B," and "C" of Part 21 of the Regulations.
- (3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the ground of handicap, race, color or national origin.
- (4) Information and Reports: The contractor will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State Highway Department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State Highway Department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) <u>Sanctions for Noncompliance</u>: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the State Highway Department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including but not limited to,
 - (a) withholding of payments to the contractor under the contract until the contractor complies, and/or
 - (b) cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The contractor will include the provisions of paragraph (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, order, or instructions issued pursuant thereto. The contractor will take such action with respect to any subcontract or procurement as the State Highway Department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the State to enter into such litigation to protect the interests of the State, and in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Exhibit "B"

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT 8901 SOUTH 154TH STREET OMAHA, NE 68138 402-444-6222

REQUEST FOR BID ON

One - R-613 Levee Pump Station Generator Set

The Papio-Missouri River Natural Resources District hereby requests a price quotation for one, described, R-613 Levee Pump Station Generator Set. Please indicate any deviations from below specifications, conditions attached to the price quotation and delivery date of the quoted system. Manufacturer's specifications and literature shall be furnished with the bid. The sealed bids shall be labeled as "Sealed Bid – R-613 Generator Set" and submitted to the above office by 2:00 p.m. on August 31 2012.

The site will be open for showing at the specified location (see attached map), Friday August 24: 2012 at 10:00a m

All bids shall be valid for a period of sixty (60) days following the final date for submission.

excise taxes),	F.O.B., Omaha, NE \$ 57,766.00
Complete for	the 2012, R-613 Levee Pump Station Generator Set
Plus	Make <u>Caterpillar</u> Model <u>D150-8</u> Deliver Date <u>8 WEEKS</u> Price <u># 46,471.00</u>
Alternate A:	Deliver Date 2 WEEKS
(Concrete)	Price #3641.00
Alternate B:	Make FELLING CUSTOM - CAT
(Trailer)	Model F7-10 Deliver Date 10 weeks Price \$7654.00

Total price, <u>including alternates</u> (without sales and Federal

Warranty Specifications:

Generator - 2 years Factory Rull Concrete - 5 years defect free Trailer - 1 year Factory Rull

Exceptions or Substitutes (Reference line item number):

- none-

* note: Electric brakes were not specified for trailer * are required by Nebraka Dot regulations. Outled with electric brakes.

Dealer Name NMC POWER SYSTEMS - CATERPILLAR

Address 11002 SAPP BROS DRIVE OMAHA NE 68138

Name GARY KLUTHE Telephone 402-891-7598



August 30th, 2012

Papio-Missouri River National Resources District 8901 South 154th Street Omaha NF 68138

QUOTE: GJK00123

PROJECT: R-613 Levee Pump Station Generator Set

Thank you for considering Caterpillar and NMC Power Systems for your electric power generation needs! Our proposal includes the following:

Omaha, NE 68138

11002 Sapp Bros, Dr.

 (1) New Caterpillar D150-8 -150kW Diesel Generator Designed and configured to meet or exceed all required specifications for Emergency Standby Power Supply to R-613 Levee Pump House pumps and all peripheral electrical loads.

4918 F St. Omaha, NE 68117

10808 S. 156th St.

Cat C6.6 liter Acert industrial engine, 217 HP, naturally aspirated Wide rigid structural skid base 1077 gal, Subbase Diesel Fuel Tank (supplies min. of 24 run hours @ 100% load) EPA Certified Tier-3 Emergency-Standby Rating - 150kW/135kVa @ 0.8 PF

Omaha, NE 68136

2705 N. 10th St.

Gering, NE 69341

3501 S. Jeffers St.

North Platte, NE 69101

10501 S. US Hwy. 281

Doniphan, NE 68832

10608 Sapp Bros. Dr. Omaha, NE 68138

Unit Wired 480/277V, 3-Phase, 4-Wire, 60 Hz @ 1800 RPM

Electronic Governor

12 Lead Reconnectable Alternator

Coolant Water Heater R150 Excitation

Automatic Voltage Regulator

EMCDP4.1 Control Panel, Dust-Proof, Generator mounted

Emergency Stop

Critical-type Exhaust Silencer/Muffler 200a Main 3-pole circuit breaker

Local Alarm Horn and fuel rupture alarm

Low Fuel Alarm

UL, EPA and CSA Listed and Certified

10A Smart Battery Charger - frame-mounted in enclosure **HD CAT Battery, Battery Rack and Cables**

Columbus, NE 68601

622 23rd St.

2514 S. 13th St. Norfolk, NE 68701 1717 Chiefs Way

Exterior Weatherproof - Sound Attenuated Enclosure

Convenience outlet package Lockable entrance

Vibration Isolation

925 280th Rd. Seward, NE 68434

Wayne, NE 68787

930 West O St. Lincoln, NE 68528

SYSTEM INCLUDES:

- Startup Services with Load Bank field-testing
- Two hours owner Training
- 2 Hours continuous resistive load bank testing per provided specifications
- Initial Fuel Tank Fill
- 2 YEAR FULL GENERATOR SET FACTORY WARRANTY

401 NW 56th St. Lincoln, NE 68528

5601 NE 22nd St. Des Moines, IA 50313

11332 265th St. Mason City, IA 50401



All Inclusive Installation and Electrical Work:

Mount/wire docking station box, connection to power supply via manual transfer switch, add cam-lok color-coded "quick twist lock" connections each end of cables, add existing interior/exterior security pole lights, and internal fan loads' connections to generator circuit source including all labor. Results are full120 & 480 3ph electrical power supplied to lift station pump house building, pumps and interior/exterior security lights via Caterpillar generator with utilization of existing manual transfer switch — which must be manually energized to start up generator system. Optional generator trailer to be placed on new concrete pad, north od existing pump house, connected to docking station connections by means of 35ft minimum cabling length and all necessary Cam-lok connections.

11002 Sapp Bros. Dr. Omaha, NE 68138

4918 F St. Omaha, NE 68117

Place, mount and fasten generator set to concrete pad.

FT-10 Generator Trailer

Drop deck 60" x 200" overall
All axle Electric Brakes
Pintle-style Eye adjustable hitch
DOT 10,000 capacity
DOT LED Sealed Lights package, 7 pole RV connections
2 rear stabilizer jacks, front 7k drop-leg jack

10608 Sapp Bros. Dr. Omaha, NE 68138

10808 S. 156th St. Omaha, NE 68136

2705 N. 10th St. Gering, NE 69341

3501 S. Jeffers St. North Platte, NE 69101

Concrete Pad – L6 Composition, Excavated, poured on-site

Composition per bid specifications

16ft x 8ft x 1ft, installed on North side of Pump House
beginning 6-12" north of ventilation grates. 1-2 day completion.

10501 S. US Hwy. 281 Doniphan, NE 68832

FOB: Levee R-613 project site TOTAL PROJECT PRICE: \$57,766.00 plus applicable sales tax

622 23rd St. Columbus, NE 68601

Clarification/Notes

Please refer to attached equipment specification sheets

- (1)Trailer quoted per Nebraska DOT with electric brakes.
- (2) Generator EPA rated as Tier-3 Emissions Certified.

2514 S. 13th St. Norfolk, NE 68701

1717 Chiefs Way Wayne, NE 68787

925 280th Rd. Seward, NE 68434

COMMISSIONING

Start up will be performed by a factory trained and experienced start up technician. This includes; delivery to site, generator startup and programming, load bank and associated testing, training for owner's representatives.

930 West O St. Lincoln, NE 68528

The above price <u>does not</u> include the following: fuel tank fill after testing or routine fills, applicable taxes, extended warranties.

401 NW 56th St. Lincoln, NE 68528

5601 NE 22nd St. Des Moines, IA 50313

11332 265th St. Mason City, IA 50401



Thank you for the opportunity to provide our world-class Caterpillar products!. Please contact me with any questions.

Best regards,

NMC POWER SYSTEMS-Your Caterpillar Dealer

Gary Kluthe

(402) 891-7598 -Direct (402) 650-4247-Cell



11002 Sapp Bros. Dr. Omaha, NE 68138

4918 F St. Omaha, NE 68117

10608 Sapp Bros. Dr. Omaha, NE 68138

NOTES, TERMS AND CONDITIONS

10808 S. 156th St. Omaha, NE 68136

This quotation is valid for a firm; written order for the equipment described herein and is valid for 30 days from the original date of quotation.

2705 N. 10th St. Gering, NE 69341

This project may be impacted by commodity surcharges.

3501 S. Jeffers St. North Platte, NE 69101

Generators, transfer switches and switchgear will be invoiced at the time of delivery.

10501 S. US Hwy. 281 Doniphan, NE 68832

Payment terms are net 30 days from the date of invoice and are subject to the approval of our credit department at the time an order is placed. NMC Power Systems does not approve or acknowledge any other terms with express written confirmation.

622 23rd St. Columbus, NE 68601

2514 S. 13th St. Norfolk, NE 68701

1717 Chiefs Way Wayne, NE 68787

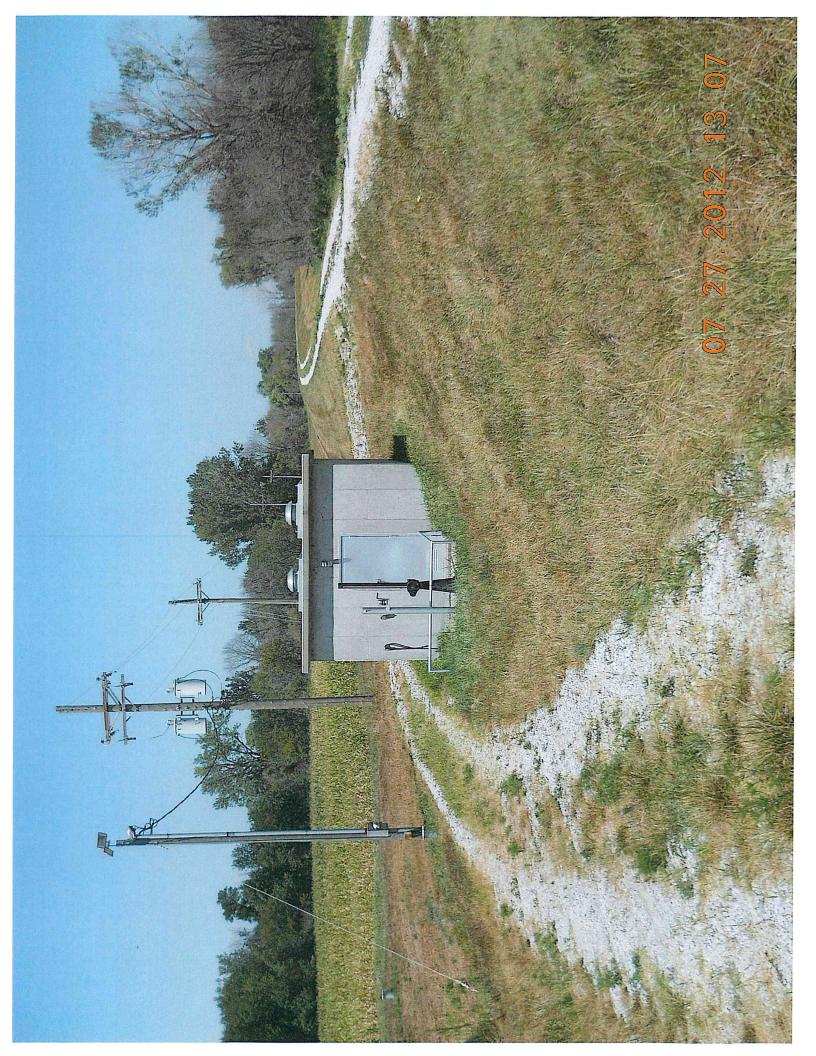
925 280th Rd. Seward, NE 68434

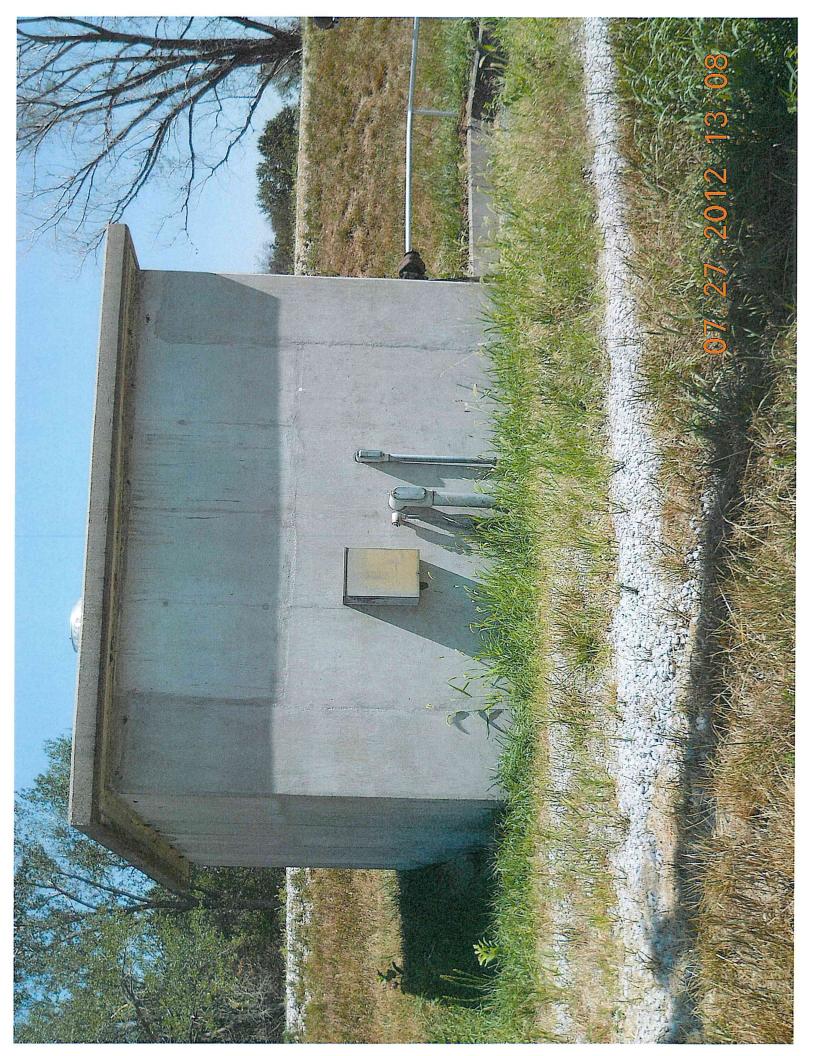
930 West O St. Lincoln, NE 68528

401 NW 56th St. Lincoln, NE 68528

5601 NE 22nd St. Des Moines, IA 50313

11332 265th St. Mason City, IA 50401





Bid Summary Form R-613 Levee Pump Station Generator Set

Opening: August 31, 2012 @ 2:00 p.m.

Dealer/Make	Cummins Central Power	NMC Power Systems
A. Total Price	\$72,798	\$57,766
B. Generator Price	\$68,423	\$46,471
C. Alternate A (Concrete)	\$4,375	\$3,641
D. Alternate B (Trailer)	N/A	\$7,654
E. Delivery Date	8 weeks	10 weeks
F. Warranty	2 years/6,000 hours – Genset/Prime Power	2 years – Generator 5 years defect – Concrete 1 year - Trailer
G. Generator Specified	Cummins 150 DSGAC	Caterpillar D150-8
H. EPA Tier Rating	4i	3

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT 8901 SOUTH 154TH STREET OMAHA, NE 68138 402-444-6222

REQUEST FOR BID ON One – R-613 Levee Pump Station Generator Set (Revised August 28, 2012)

The Papio-Missouri River Natural Resources District hereby requests a price quotation for one, described, R-613 Levee Pump Station Generator Set. Please indicate any deviations from below specifications, conditions attached to the price quotation and delivery date of the quoted system. Manufacturer's specifications and literature shall be furnished with the bid. The sealed bids shall be labeled as "Sealed Bid - R-613 Generator Set" and submitted to the above office by 2:00 p.m. on August 31, 2012.

The site will be open for showing at the specified location (see attached map), <u>Friday</u>, <u>August 24</u>, <u>2012 at 10:00a.m.</u>

All bids shall be valid for a period of sixty (60) days following the final date for submission.

i otai price, ir	icluding alternates	
(without sale	s and Federal	
excise taxes),	F.O.B., Omaha, NE \$	
Complete for	the 2012, R-613 Levee Pump Station Generate	or Set
Generator:	Make	
	Model	
	Deliver Date	
	Price	
Alternate A:	Deliver Date	
(Concrete)	Price	
Alternate B:	Make	
	Model	
	Deliver Date	
	Price	
The parties he 741.5(a), if ap	ereby incorporate the elements of 41 C.F.R. §§	60-1.4(a), 60-300.5, 60-250.5 and 60-

Warranty Specifications:	
Exceptions or Substitutes (Reference line item number	·):
Receipt of Addendums to Request for Bid Specification	ns:
Addendum No. 1: (Yes or No)	
Addendum No. 2: (Yes or No)	
Dealer Name	
Address	
Name	Telephone

<u>SPECIFICATIONS</u>

One - R-613 Levee Pump Station Generator Set and Supporting Equipment as Specified

- 1) One (1) New Portable Diesel Generator, Installed
 - a. Standby Rating 150kW/187kVa Standby Power minimum. Bidder must include detailed project load report on generator
 - b. 1800 rpm
 - c. Wired 277/480V, 60hz, 3-Phase, 4-Wire, 12-Lead reconnectable
 - d. Fuel system = Diesel
 - e. Fuel Tank = 24 hour sub base tank at 100% load (minimum)
 - f. Engine = Industrial In-Line 6 cylinder 230HP Standby/207HP Prime, C6.6L Acert. engine minimum
 - g. Coolant Drain & Heater
 - h. Isochronous ADEM Governor
 - i. R250 Self Excitation
 - j. EMCP 4.2 Control Panel 120 VAC
 - k. 200a In-line Breaker
 - 1. Stationary Emergency Stop & Remote Enclosure Mounted E-stop
 - m. Voltage/Speed Adjustable Potentiometer
 - n. Alarm Horn, both local and shutdown
 - o. Generator Running Relay, Jacket Water Heater
 - p. UL2200, EPA and CSA Listed, EPA Tier 3 or 4i rating; must adhere to current applicable EPA regulations
 - q. Heavy Duty Lead Acid Battery & 10amp NFPA Charger
 - r. Brackets Genset overhead lift, two point (lifting eyes) for lifting in place, in the roof of the generator set enclosure
- 2) Supporting Equipment
 - a. Exterior Sound Attenuated Weatherproof Enclosure for Generator Set
 - i. Critical Silencing Muffler to be installed inside of weatherproof enclosure with stainless steel exhaust pipe, stainless steel bonnet and stainless steel rain cap that extends through the roof
 - ii. Minimum sound level of 73dB at 23 feet away from unit
 - iii. Remote E-Stop Mounted externally
 - iv. Vibration Isolation-pad type
 - b. Startup performed by factory trained & experienced technician including:
 - i. delivery to site
 - ii. generator/panel startup and programming
 - iii. remote annunciator startup and programming

- iv. transfer switch startup and programming
- v. load bank and associated testing
- vi. training for owner's representatives
- 3) All Inclusive Installation/Electrical Work
 - a. NEMA 3R Mount/wire docking station box with color coded cam-lock format
 - b. Connection to power supply via manual transfer switch
 - c. Cam-lock color-coded quick twist lock connections at end of cables
 - d. Connection of Generator circuit to existing security pole light
 - e. Full electrical power supplied to lift station pump house building, pumps and exterior security light by Generator
 - f. 35 foot long generator connection cables
- 4) Startup Services
 - a. Load Bank field testing up to four (4) hours
 - b. One (1) hour owner training
 - c. Two (2) hours continuous load bank testing per specifications
 - d. Freight and delivery to job site
 - e. Installation, electrical labor and materials for full project scope
 - f. Two (2) year factory warranty
 - g. Two (2) sets of Operation and Maintenance Manuals
- 5) Shall meet, at minimum, all applicable standards in Guide Specification. (See attachment)
- 6) Alternate A: Concrete Pad for Generator Set
 - i. Dimensions = 16 foot long x 8 foot wide x 1 foot thick
 - ii. Location = R-613 pump station (see attached map)
 - iii. Pad construction to include related grading

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Mix Type	L6
Portland Cement Content, lbs. per cu. yd.	564 min.
Coarse Aggregate, % of Total Aggregate	30±3
Fine Aggregate, % of Total Aggregate	70±3
Maximum Water Cement Ration	0.45
Minimum 28-Day Compressive Strength, psi	3500
Air Content, %	6.5±1.0
Slump (Formed Pavement), inches	2.5±1.5
Slump (Slip-form Pavement), Inches	1.5±1.5
PCC Temperature during placement, Degrees F	70±20

- 7) Alternate B: Generator Transport Trailer
 - i. Drop deck 56" x 200" overall minimum
 - ii. Tandem axle or triple axle
 - iii. All axle surge brakes
 - iv. Pintle-style Eye adjustable hitch
 - v. D.O.T. approved turn, stop, marker and license plate LED sealed lights
 - vi. Jacks = 2 rear stabilizer & front 7k drop-leg
 - vii. Load Capacity = 5 ton (or adequate to haul specified generator)