

## **CITY COUNCIL CONFERENCE**

### **MUNICIPAL BUILDING CONFERENCE ROOM 201 WEST GRAY, NORMAN, OK**

**MAY 10, 2016**

**5:00 P.M.**

1. DISCUSSION REGARDING CHANGE ORDER NO. TWO TO CONTRACT K-1314-136 BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND ARCHER WESTERN CONSTRUCTION, L.L.C., INCREASING THE CONTRACT AMOUNT BY \$98,546.78 FOR A REVISED CONTRACT AMOUNT OF \$48,921,096.78 AND EXTENDING THE CONTRACT BY 32 CALENDAR DAYS FOR THE WATER RECLAMATION FACILITY PHASE 2 IMPROVEMENTS.
2. DISCUSSION REGARDING CHANGE ORDER NO. ONE TO CONTRACT K-1516-80 BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND CENTRAL CONTRACTING SERVICES, INC., INCREASING THE CONTRACT AMOUNT BY \$296,350 FOR A REVISED CONTRACT AMOUNT OF \$1,767,030 AND ADDING 90 CALENDAR DAYS TO THE CONTRACT FOR THE BERRY ROAD WATERLINE REPLACEMENT PROJECT, PHASE 3.
3. PRESENTATION FROM RAFTELIS FINANCIAL CONSULTANTS, INC., OF THE CITY OF NORMAN WATER AND WASTEWATER CONNECTION CHARGE STUDY.

ITEM 1



# City of Norman, OK

Municipal Building  
Council Chambers  
201 West Gray  
Norman, OK 73069

## Master

**File Number: K-1314-136 CO#2**

**File ID:** K-1314-136 CO#2      **Type:** Contract      **Status:** Consent Item

**Version:** 1      **Reference:** Item 23      **In Control:** City Council

**Department:** Utilities Department      **Cost:** \$98,546.78      **File Created:** 04/15/2016

**File Name:** Change Order #2 to Water Reclamation Facilities Phase 2 Improvements      **Final Action:**

**Title:** CHANGE ORDER NO. TWO TO CONTRACT K-1314-136: BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND ARCHER WESTERN CONSTRUCTION, L.L.C. INCREASING THE CONTRACT AMOUNT BY \$98,546.78 FOR A REVISED CONTRACT AMOUNT OF \$48,921,096.78 AND EXTENDING THE CONTRACT BY 32 CALENDAR DAYS FOR THE WATER RECLAMATION FACILITY PHASE 2 IMPROVEMENTS.

**Notes:** ACTION NEEDED: Acting as the Norman Utilities Authority, motion to approve or reject Change Order No. Two to Contract K-1314-136 with Archer Western Construction, L.L.C., increasing the contract amount by \$98,546.78 for a revised contract amount of \$48,921,096.78 and extending the contract by 32 calendar days; authorize the execution thereof, and appropriate \$74,743.98 from the North Park TIF Fund Balance (057-0000-253.20-00) to Project No. UT0098, UNP Legacy Park and Trail, Construction (057-9518-431.51-01).

ACTION TAKEN: \_\_\_\_\_

**Agenda Date:** 05/10/2016

**Agenda Number:** 23

**Attachments:** Change Order No. 2 signed, Change Order No. 2 Backup

**Project Manager:** Mark Daniels, Utilities Engineer

**Entered by:** mark.daniels@normanok.gov

**Effective Date:**

### History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
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### Text of Legislative File K-1314-136 CO#2

Body

**BACKGROUND:** The Wastewater Master Plan (WWMP), adopted by the Norman Utilities Authority (NUA) in 2001, recommended that additional facilities treating an average daily design flow (ADF) of 21.5 million gallons per day (MGD) would ultimately be needed to serve the area approved for urban development under the 2025 Land Use and Transportation Plan. The WWMP recommended expansion of the South Water Reclamation Facility (WRF) from 12 to 17 MGD and construction of a new North WRF with an ultimate ADF of 4.5 MGD.

More recently, staff recommended and the NUA agreed that the South WRF would be rehabilitated and expanded first and the North WRF would be designed and constructed in the future when the capacity of the recently expanded Lift Station D was consumed. Based on this premise, Norman voters approved a rate

increase in October 2013, in part for expanded treatment capacity at the South WRF.

**Regulatory Requirements:** Our Oklahoma Pollutant Discharge Elimination System (OPDES) permit for the South WRF issued by Oklahoma Department of Environmental Quality (DEQ), required construction of new disinfection facilities and compliance with final discharge limits by July 1, 2013. On September 12, 2014, the NUA and DEQ agreed to Consent Order 13-077 which includes the following schedule:

- Complete construction of disinfection facilities by January 1, 2016;
- Attain compliance with final limits for Fecal Coliform by July 1, 2016;
- Complete construction of all facilities by January 1, 2017;
- Attain compliance with final limits for Total Suspended Solids by July 1, 2017.

**Engineering Services:** On March 8, 2011, the NUA approved Contract K-1011-148 authorizing Garver Engineering, Inc. (Garver), to proceed with the Engineering Report (ER) and Surveying Phases. The ER was finalized and submitted to the DEQ on November 18, 2011; the DEQ approved the ER on June 27, 2013. On June 12, 2012, the NUA approved Amendment No. 1 authorizing Garver to proceed with the Final Design and Bidding phases. The plans and specifications for the improvements were submitted to the DEQ on August 1, 2013; the DEQ approved the plans and specifications on November 26, 2013. On April 22, 2014, the NUA approved Amendment No. 2 authorizing Garver to proceed with the construction phase services including construction administration, full-time construction observation, preparation of operation and maintenance manuals, equipment start-up and staff training, and implementation of the supervisory control and data acquisition (SCADA) system.

**Construction:** Bids for the WRF Phase 2 Improvements were received from three pre-qualified contractors on March 27, 2014. Archer Western Construction, LLC (Archer Western) with regional offices in Irving, Texas was the low bidder. On April 22, 2014, the NUA awarded the bid and approved Contract K-1314-136 with Archer Western in the amount of \$48,822,550. Approved funding for the WRF Phase 2 Improvements is 40.7% from the Sewer Excise Tax (SET) Fund and 59.3% from the Wastewater, or Water Reclamation Fund (WRF). The project funding is augmented by a State Revolving Fund (SRF) loan from the Oklahoma Water Resources Board (OWRB) for up to \$50,300,000. Future revenues from the Wastewater Fund and the Sewer Excise Tax Fund are dedicated to pay back the SRF loan.

The WRF Phase 2 Improvements will add Disinfection Facilities, expand the average daily design flow from 12 to 17 MGD and rehabilitate many existing processes. Archer Western began construction of the improvements on June 2, 2014. The work was broken into two phases with the Disinfection Facilities to be completed by November 24, 2015 (Early Completion) and all work to be complete by November 18, 2016 (Final Completion). The Disinfection Facilities were substantially complete and placed into operation on October 29, 2015 prior to the DEQ deadline of January 1, 2016 and these facilities currently allow the NUA to meet proposed discharge limitations. The most recent construction payment through March 2016 was for a total amount of \$35,427,667 or 73% of the contract amount; 71% of the contract time had been consumed.

**DISCUSSION:** The approved construction contract amount of \$48,822,550 included a Change Order Allowance of \$500,000 or about 1% of the contract amount. Change Order No. 1 (CO#1) approved by the NUA September 8, 2015 included several Contract Modification Requests (CMR's) and a time extension for Final Completion of forty-seven (47) calendar days to January 4, 2017. The CMR's to date total \$392,451.18, leaving a balance of \$107,548.82 in the Change Order Allowance set forth in the contract documents.

As detailed in proposed CO#2; additional CMR's totaling 206,095.60 have been submitted and approved by NUA staff and Garver. The CMR's to date now total \$598,546.78 consuming the \$500,000 Change Order Allowance and increasing the original contract amount by \$98,546.78 from \$48,822,550 to \$48,921,096.78; this is an increase of about 0.2%. The CMR's are detailed in CO#2 and can be divided into groups as follows:

**Owner-Directed CMR's:** Modifications requested by the NUA are generally to remedy maintenance situations or add needed improvements not originally included in the project scope; these CMR's do not change the contract time and they total \$166,741.12.

- CMR 23-R2 substitutes more durable fiberglass reinforced doors in lieu of painted hollow metal doors

at UV Disinfection Facility (8 doors) and in the Solids Loading Bay (1 door); this CMR also installs, for safety reasons, one window between the electrical room and the blower room at the UV Disinfection Facility for a total cost of \$29,258.65.

- CMR 27-R1 will demolish existing non-conforming painted steel handrail around the perimeter of Primary Clarifier Nos. 3 and 4 and replace it with aluminum handrail conforming to ADA requirements at a cost of \$51,039.88.
- CMR 28-R2 will install four additional pole lights around the perimeter of the UV Disinfection Facility and one additional building wall light, with associated wiring and conduit, at a total cost of \$58,811.14.
- CMR 29 will install thermostat controls and electrical wiring encapsulated within aluminum clad insulation for heating above ground exterior piping between Blended Sludge Storage Tank and Blended Sludge Pump Station at a cost of \$4,849.95.
- CMR 30 will improve the existing 700-foot long asphalt road to the Outfall Structure at the Canadian River at a cost of \$20,286.
- CMR-32 will install aluminum odor control covers over the influent splitter box for Primary Clarifier Nos. 3 and 4 at a cost of \$2,495.50.

Contractor Requested CMR's: Modifications requested by the contractor generally to remedy unforeseen conditions encountered and were not originally included in the project; these CMR's do not change the contract time and they total \$39,354.48.

- CMR 31-R1 will install three additional ceiling mount, pipe supports for 36-inch diameter discharge piping in the basement of the RAS/WAS Pump Station at a cost of \$22,220.53.
- CMR 34 will relocate the proposed electrical control panels, disconnects, existing electrical conduit and wiring out of classified hazardous areas at existing Waste Activated Sludge (WAS) Storage Basin at a cost of \$7,309.79.
- CMR 36 will install a new 8-inch drain line in the Centrifuge Room of Main Control Building to accommodate the drainage from the two new centrifuges; the work involves saw-cutting the floor and removing concrete to allow installation of new piping; installing steel reinforcement and repairing the concrete floor; and relocating the existing manhole outside building to match the new drain line alignment at a cost of \$9,824.16.

Contract Time Extensions: Proposed CO#2 also extends Final Completion by thirty-two (32) calendar days from January 4, 2017 to February 5, 2017. As noted previously, DEQ Consent Order 13-077 currently requires all work to be complete by January 1, 2017.

- CMR 25-R1 will approve a contract time extension of twenty-four (24) calendar days for Substantial and Final Completion by acknowledging the impact on new construction resulting from historic, abnormal rainfall in May and June 2015. However, for said 24-day period, Contractor agrees to be responsible for fines of up to \$575 per day for failure to meet construction completion deadline of January 1, 2017, if fines are levied by the DEQ relative to Task H of Consent Order 13-077.
- CMR 33: Approve contract time extension of eight (8) calendar days for Substantial and Final Completion due to weather related delays between the contract start date of June 2, 2014 and December 31, 2015. This is in addition to contract time extensions granted relative to CMR 22 (CO#1) and CMR 25-R1 (above).

At this time, the FYE16 construction budget for the Water Reclamation Facility Phase 2 Improvements (WW0065) includes contingency funds totaling \$2,483,975 including \$1,546,977 in the Water Reclamation Fund (WRF) and \$936,998 in the Sewer Excise Tax (SET). As per the funding split for the project, 40.7% or \$40,109.00 of CO#2 will be funded by SET construction account 322-9047-432.61-01 and 59.3% or \$58,437.78 will be funded by WRF construction account 032-9047-432.61-01.

**RECOMMENDATION:** Recommend the NUA approve Change Order No. 2 with Archer Western Construction, LLC increasing the contract amount for the Water Reclamation Facility Phase 2 Improvements by \$98,546.78 to a total of \$48,921,096.76 and extending the Final Completion date by 32 calendar days to February 5, 2017.

CHANGE ORDER SUMMARY  
NORMAN UTILITIES AUTHORITY  
CITY OF NORMAN  
CLEVELAND COUNTY, OKLAHOMA

DATE: April 14, 2016  
CHANGE ORDER NO.: Two (2)  
CONTRACT NO.: Contract K-1314-136  
PROJECT: Norman WRF Phase 2 Improvements  
CONTRACTOR: Archer Western Construction, LLC  
1411 Greenway Drive  
Irving, TX 75038

<u>Contract Time</u>	<u>Early Completion (UV)</u>	<u>Final Completion</u>
ORIGINAL:	<u>540</u> Calendar Days	<u>900</u> Calendar Days
PREVIOUS CHANGE ORDERS:	<u>5</u> Calendar Days	<u>47</u> Calendar Days
THIS CHANGE ORDER:	<u>0</u> Calendar Days	<u>32</u> Calendar Days
REVISED AMOUNT:	<u>545</u> Calendar Days	<u>979</u> Calendar Days

ORIGINAL START DATE:	<u>June 2, 2014</u>	<u>June 2, 2014</u>
ORIGINAL COMPLETION DATE:	<u>November 24, 2015</u>	<u>November 18, 2016</u>
PREVIOUS COMPLETION DATE:	<u>November 29, 2015</u>	<u>January 4, 2017</u>
NEW COMPLETION DATE:	<u>November 29, 2015</u>	<u>February 5, 2017</u>

**Contract Amount**

ORIGINAL CONTRACT W/O ALLOWANCE:	<u>\$48,322,550.00</u>
CHANGE ALLOWANCE:	<u>\$500,000.00</u>
ORIGINAL CONTRACT:	<u>\$48,822,550.00</u>
PREVIOUS CHANGES:	<u>\$392,451.18</u>
THIS CHANGE:	<u>\$206,095.60</u>
TOTAL CHANGES:	<u>\$598,546.78</u>
THIS CHANGE ORDER:	<u>\$98,546.78</u>
REVISED CONTRACT:	<u>\$48,921,096.78</u>

<u>Item Description</u>	<u>\$ Increase</u>	<u>\$ Decrease</u>
CMR 23-R2: Substitute more durable fiberglass reinforced doors in lieu of hollow metal doors at UV Disinfection Facility (8) and replace one door in the Solids Loading Bay; Furnish and install one window between the electrical room and the blower room at the UV Disinfection Facility with no change to contract time.	\$29,258.65	\$0.00
CMR 25-R1: Approve contract time extension of 24 calendar days for Substantial and Final Completion acknowledging the impact on new construction resulting from historic, abnormal rainfall in May and June 2015. However, Contractor agrees to be responsible for fines of up to \$575 per day (for said 24-day period) for failure to meet construction completion deadline of January 1, 2017, if levied by the DEQ relative to Task H of Consent Order 13-077.	\$0.00	\$0.00
CMR 27-R1: Demo existing non-conforming handrail around perimeter of Primary Clarifier Nos. 3 and 4; furnish and install replacement aluminum handrail with no change to contract time.	\$51,039.88	\$0.00
CMR 28-R2: Furnish and install additional lighting (four pole lights and one wall light) with associated wiring and conduit at UV Disinfection Facility with no change to contract time.	\$58,811.14	\$0.00
CMR 29: Add heat trace and insulation on piping between Blended Sludge Storage and Blended Sludge Pump Station with no change to contract time.	\$4,849.95	\$0.00
CMR 30: Improve quality of existing 700-foot long asphalt road to Outfall Structure at Canadian River; increase asphalt thickness to 3 inches and widen to 12 feet with no change to contract time.	\$20,286.00	\$0.00
CMR 31-R1: Furnish and install additional pipe supports for discharge piping in RAS/WAS Pump Station with no change to contract time.	\$22,220.53	\$0.00
CMR-32: Furnish and install aluminum odor control covers over influent splitter box for Primary Clarifier Nos. 3 and 4 with no change to contract time.	\$2,495.50	\$0.00
CMR 33: Approve contract time extension of 8 calendar days for Substantial and Final Completion due to weather related delays between contract start date of June 2, 2014 and December 31, 2015. This is in addition to contract time extensions granted under CMR 22 and CMR 25-R1.	\$0.00	\$0.00
CMR 34: Relocate local control panel, disconnect and existing electrical conduit and wiring out of classified areas at existing Waste Activated Sludge (WAS) Storage Basin with no change to contract time.	\$7,309.79	\$0.00
CMR 36: Relocate 8-inch drain line in Centrifuge Room of Main Control Building to accommodate drainage from two new centrifuges; sawcut floor and remove concrete to allow installation of new piping; install steel reinforcement and repair concrete floor; relocate existing manhole outside building to fit new drain line; all with no change to contract time.	\$9,824.16	\$0.00

SUBMITTED BY  
CONTRACTOR:

  
\_\_\_\_\_  
Archer Western Construction, LLC

Date: 4-26-2016

RECOMMENDED BY  
CONSULTING ENGINEER:

  
\_\_\_\_\_  
Garver

Date: 4/26/16

APPROVED AS TO  
FORM AND LEGALITY:

\_\_\_\_\_  
City Attorney

Date: \_\_\_\_\_

ACCEPTED BY  
NORMAN UTILITIES AUTHORITY:

\_\_\_\_\_  
Chairman

Date: \_\_\_\_\_

## ITEM 2



# City of Norman, OK

Municipal Building  
Council Chambers  
201 West Gray  
Norman, OK 73069

## Master

**File Number: K-1516-80 CHG#1**

**File ID:** K-1516-80 CHG#1      **Type:** Contract      **Status:** Consent Item

**Version:** 1      **Reference:** Item 24      **In Control:** City Council

**Department:** Utilities Department      **Cost:** \$296,350.00      **File Created:** 04/22/2016

**File Name:** CO#1 to Berry Road WL Replacement, Phase 3      **Final Action:**

**Title:** CHANGE ORDER NO. ONE TO CONTRACT K-1516-80: BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND CENTRAL CONTRACTING SERVICES, INC., INCREASING THE CONTRACT AMOUNT BY \$296,350 FOR A REVISED CONTRACT AMOUNT OF \$1,767,030 AND ADDING 90 CALENDAR DAYS TO THE CONTRACT FOR THE BERRY ROAD WATERLINE REPLACEMENT PROJECT, PHASE 3, AND BUDGET TRANSFER BETWEEN PROJECT ACCOUNTS.

**Notes:** ACTION NEEDED: Acting as the Norman Utilities Authority, motion to approve or reject Change Order No. One to Contract K-1516-80 with Central Contracting Services, Inc., increasing the contract amount by \$296,350 for a revised contract price of \$1,767,030; authorize the execution thereof, and transfer \$296,350 from Project WA0184, Segment D Waterline, Construction (031-9360-46261-01) to Project WA0305, Berry Road Water Line Replacement, Construction (031-9521-462.61-01).

ACTION TAKEN: \_\_\_\_\_

**Agenda Date:** 05/10/2016

**Agenda Number:** 24

**Attachments:** Text File Berry CO.pdf, Berry Road 3 WL CO#1 Map, Berry Road 3 WL CO#1, Central P.O. 274925 w CO#1

**Project Manager:** Mark Daniels, Utilities Engineer

**Entered by:** mark.daniels@normanok.gov

**Effective Date:**

### History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
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### Text of Legislative File K-1516-80 CHG#1

Body

**BACKGROUND:** For many years, the Norman Utilities Authority (NUA) contemplated replacement of the 14-inch cast iron (ductile iron pipe, or DIP) waterline along Berry Road from Robinson to Lindsey. This waterline was installed in the early 1940's and is in very poor condition resulting in lost water from numerous repairs, damage to the overlying roadway and inconveniences to the traveling public and the surrounding neighborhood. Similarly, the University of Oklahoma (OU) owns a 14-inch cast iron waterline generally along the east side of Berry Road from Robinson to Lindsey and then east along the north side of Lindsey to Chautauqua.

Staff coordinated with OU to allow the replacement waterlines to be constructed parallel and directly adjacent to each other and bid as one project to reduce inconvenience to the public and achieve some cost savings through reduced excavation and reduced width of pavement repairs. The waterline improvements will be managed and paid by each entity under separate contract with the same contractor.

The Berry Waterline Replacement project (WA/WB0305) is expected to include about 11,000 linear feet (LF) of 16-inch waterline along the west side of Berry Road from Robinson to Lindsey and approximately 3,000 LF of 24-inch waterline east along Lindsey from Berry to Chautauqua where it will connect to the existing 16-inch Lindsey Waterline project completed in 2005.

On May 10, 2011, the NUA approved Amendment No. 1 to Contract K-0910-61 in the amount of \$172,000 authorizing Poe & Associates (Poe) to perform surveying, design and limited construction management services for the Berry Waterline Replacement project.

On March 10, 2015, the NUA approved Contract K-1415-70 in the amount of \$1,334,675 with Central Contracting Services, Inc. for the construction of the Berry Road Waterline Replacement, Phase 1. The Phase 1 project included the 24-inch along Lindsey from Berry to Chautauqua as a continuation of the Segment D Waterline. The Phase 1 construction was complete on August 24, 2015 at a cost of \$1,334,675.

On September 22, 2015, the NUA approved Contract K-1516-43 with McKee Utility Contractors, Inc. in the amount of \$1,206,023.50 for the construction of the Berry Road Waterline Replacement, Phase 2. The Phase 2 project includes the 16-inch waterline from Avondale to just north of Main Street. On January 26, 2016, the NUA and the City of Norman (City) approved Amendment No. 1 to the contract including the City as a party to the contract and also approved Change Order No. 1 (CO#1) expanding road repairs to the full west lane of Berry Road; CO#1 increased the contract amount by \$410,205 for a revised contract amount of \$1,616,228.50. The Phase 2 construction is essentially complete with only final cleanup remaining.

On February 23, 2016, the NUA and the City of Norman jointly approved Contract K-1516-80 in the amount of \$1,470,680 with Central Contracting Services, Inc. (Central) for the construction of the Berry Road Waterline Replacement, Phase 3. The Phase 3 construction will include about 5,300 LF of 16-inch waterline from Main Street to Robinson Street and will also generally replace one lane of Berry Road. The cost of the roadway replacement will generally be split equally among the NUA, the City of Norman and OU; however, the NUA will also replace a larger area of roadway north of Denison Drive that was previously damaged due to a waterline break. The project is scheduled to begin May 2, 2016 and continue through October 29, 2016. Again, Central will also replace about 5,300 LF of 16-inch line for OU under separate contract.

**DISCUSSION:** Over the past few months, the Utilities Department and Public Works Department have developed a plan to replace deteriorated waterlines along Main Street in conjunction with planned concrete panel replacements on Main between Berry Road and Park Avenue (Contract K-1516-112 to be considered by Council on April 26, 2016).

Proposed Change Order No. 1 will add replacement of approximately 1,800 feet of deteriorated 12-inch DIP waterline with 16-inch polyvinyl chloride (PVC) waterline along the south side of Main Street between Berry Road and Flood Avenue. CO#1 will also increase contract time by ninety (90) calendar days to allow completion of the additional work; the revised completion date will be December 27, 2016.

Attachment 1 of CO#1 provides a detailed cost breakdown of the proposed new work. CO#1 is funded entirely by the NUA. The NUA will provide new funds in the amount of \$296,350 increasing the NUA share from \$1,248,745 to \$1,545,095; the City of Norman share of the Berry Road project will remain at \$221,935 for a total of \$1,767,030. The southern lane of Main Street will be replaced in coordination with A-Tech Paving under proposed Contract K-1516-112.

The Fiscal Year Ending (FYE) 2016 budget for the Berry Road Waterline Replacement bond project has an unencumbered balance of \$158,094 in Construction (account 031-9521-462.61-01; project WB0305). However, the waterline replacement along Main Street was not specifically listed as a project in the 2006 Water Bond issuance. Therefore, it is recommended that \$296,350 be transferred from the Segment D Waterline

Construction (account 031-9360-462.61-01; project WA0184) into Berry Road Waterline Replacement Construction (account 031-9521-462.61-01; project WA0305).

The Segment D Waterline Construction account has an unencumbered balance of \$3,582,925 and is budgeted to complete approximately 11,000 LF of 24-inch waterline from Lindsey Street and Chautauqua Avenue to Jenkins Avenue and State Highway 9; this project is on hold while negotiations continue with OU and others concerning the most acceptable route for the last phase of the project.

**RECOMMENDATION:** It is recommended that the NUA approve Change Order No. 1 to Contract K-1516-80 with Central Contracting Services, Inc. increasing the contract amount by \$296,350 from \$1,470,680 to \$1,767,030 and approving a 90 calendar day time extension for the Berry Road Waterline Relocation Project, Phase 3.

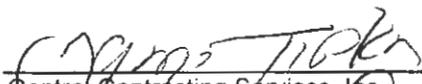
It is also recommended the NUA transfer funds in the amount of \$296,350 from Segment D Waterline Construction (account 031-9360-462.61-01; project WA0184) to Berry Road Waterline Replacement Construction (account 031-9521-462.61-01; project WA0305).

NORMAN UTILITIES AUTHORITY  
 CITY OF NORMAN  
 CLEVELAND COUNTY, OKLAHOMA

DATE: April 21, 2016  
 CHANGE ORDER NO.: One (1)  
 CONTRACT NO.: Contract # K-1516-80  
 PROJECT: Berry Road Waterline Phase 3  
 CONTRACTOR: Central Contracting Services, Inc.  
17301 S. Sunnyslane Ave  
Norman, OK 73071

	<u>Contract Time</u>		<u>Contract Amount</u>
ORIGINAL:	<u>180</u>	calendar days	<u>\$1,470,680.00</u>
PREVIOUS CHANGE ORDERS:	<u>0</u>	calendar days	<u>\$0.00</u>
THIS CHANGE ORDER:	<u>90</u>	calendar days	<u>\$296,350.00</u>
REVISED AMOUNT:	<u>270</u>	calendar days	<u>\$1,767,030.00</u>
ORIGINAL START DATE:	<u>April 1, 2016</u>		
ORIGINAL COMPLETION DATE:	<u>September 28, 2016</u>		
PREVIOUS COMPLETION DATE:	<u>September 28, 2016</u>		
NEW COMPLETION DATE:	<u>December 27, 2016</u>		

DESCRIPTION:	\$ Increase	\$ Decrease
Add replacement of approximately 1,800 feet of deteriorated 12-inch DIP waterline and appurtenances with 16-inch PVC waterline along the south side of Main Street between Berry Road and Flood Avenue in coordination with concrete panel replacements along Main Street by the Public Works Department under separate project. Increase contract time by ninety (90) calendar days to complete the additional work. See Attachment 1 for detailed cost breakdown.	296,350.00	0.00

SUBMITTED BY  
 CONTRACTOR:  Date: 042116  
 Central Contracting Services, Inc.

RECOMMENDED BY  
 ENGINEER:  Date: 0421-16  
 Mark Daniels, P.E., Norman Utilities Authority

ACCEPTED BY  
 NORMAN UTILITIES AUTHORITY: \_\_\_\_\_ Date: \_\_\_\_\_  
 City Attorney

ACCEPTED BY  
 NORMAN UTILITIES AUTHORITY: \_\_\_\_\_ Date: \_\_\_\_\_  
 Cindy Rosenthal, Norman Utilities Authority

Attachment 1

Item 1: Add replacement of approximately 1,800 feet of deteriorated 12-inch DIP waterline and appurtenances with 16-inch PVC waterline along the south side of Main Street between Berry Road and Flood Avenue in coordination with concrete panel replacements along Main Street by the Public Works Department under separate project. Increase contract time by ninety (90) calendar days to complete the additional work.

Bid Item	Description	Unit	Quantity	Unit Price	Total Price
Additions					
2	Open Cut 16" C905 PVC DR-18, Complete	LF	1,800	\$75.00	\$135,000.00
4	Open Cut 12" C900 PVC DR-18, Complete	LF	200	\$45.00	\$9,000.00
5	Open Cut 8" C900 PVC DR-18, Complete	LF	200	\$40.00	\$8,000.00
6	Open Cut 6" C900 PVC DR-18, Complete	LF	400	\$35.00	\$14,000.00
9	Connect 16-inch PVC to Existing 16-inch Waterline	EA	2	\$3,000.00	\$6,000.00
11	Connect 8-inch PVC Pipe to Existing 8-inch Waterline	EA	4	\$1,000.00	\$4,000.00
12	Connect 6-inch PVC Pipe to Existing 6-inch Waterline	EA	1	\$1,000.00	\$1,000.00
14	16-Inch Butterfly Valves	EA	2	\$2,500.00	\$5,000.00
15	12-Inch Resilient Seated Gate Valves	EA	1	\$2,000.00	\$2,000.00
16	8-Inch Resilient Seated Gate Valves	EA	4	\$1,000.00	\$4,000.00
17	6-Inch Resilient Seated Gate Valves	EA	2	\$900.00	\$1,800.00
18	Single Short Water Service Connection	EA	13	\$300.00	\$3,900.00
20	Fire Hydrant Assembly	EA	5	\$2,500.00	\$12,500.00
21	Remove Fire Hydrant Assembly	EA	3	\$200.00	\$600.00
22	2" Air Release Valve & Vault, Complete	EA	1	\$2,500.00	\$2,500.00
23	Temporary Blow-Off	EA	3	\$1,500.00	\$4,500.00
27	16-inch x 16-inch x 12-inch Tee	EA	1	\$1,200.00	\$1,200.00
28	16-inch x 16-inch x 8-inch Tee	EA	1	\$1,100.00	\$1,100.00
29	16-inch x 16-inch x 6-inch Tee	EA	1	\$1,000.00	\$1,000.00
34	16-inch 11.25 Degree Bend	EA	2	\$900.00	\$1,800.00
35	16-inch 45 Degree Bend	EA	4	\$900.00	\$3,600.00
36	12-inch 45 Degree Bend	EA	2	\$700.00	\$1,400.00
37	8-inch 45 Degree Bend	EA	4	\$400.00	\$1,600.00
38	6-inch 45 Degree Bend	EA	6	\$400.00	\$2,400.00
45	Drive	SY	200	\$65.00	\$13,000.00
47	Removal and Replacement of Concrete Curb & Gutter	SY	1,750	\$12.00	\$21,000.00
48	Removal and Replacement of Existing Handicap Ramp	EA	3	\$100.00	\$300.00
49	Removal and Replacement of Existing Sidewalk	SY	900	\$36.00	\$32,400.00
57	ODOT Type "A" Aggregate	TN	1,750	\$1.00	\$1,750.00
				Price =	\$296,350.00



## ITEM 3



# CITY OF NORMAN, OK WATER AND WASTEWATER CONNECTION CHARGE STUDY

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City Council Meeting

Presented by Raftelis Financial Consultants, Inc.

May 10, 2016

# AGENDA

- Project Objectives
- Industry Standard Fee Calculation Methodologies
- Connection Charge Study Results
- Survey of Comparable Communities



# PROJECT OBJECTIVES

- Update the City's water and wastewater connection charges
  - Industry standard methodologies
  - Maximum allowed by Oklahoma law
- Develop water and wastewater capital financing plans featuring a mix of funding sources, including:
  - connection charges
  - rate revenues
  - external debt financing
  - wastewater excise tax on new development
- Survey the connection charges of comparable communities

# **Industry Standard Calculation Methods**

# EQUITY BUY-IN METHOD

- Frequently used when utilities have capacity in their existing system to serve new customers
- New customers 'buy-in' to the existing infrastructure
- Connection Charge = 
$$\frac{\text{Replacement Cost New of System (\$)}}{\text{Total System Capacity (\# of 3/4" Connections)}}$$



# INCREMENTAL METHOD

- Frequently used when utilities must, in the near term, add capacity to serve new customers
- New customers pay for their portion of the added infrastructure
- Connection Charge =  $\frac{(\text{Growth-Related Capital} + \text{Debt Interest}) (\$)}{\text{Incremental Capacity Additions (\# of 3/4" Connections)}}$



# HYBRID METHOD

- Frequently used when utilities have capacity to serve new customers in the near-term, but must add capacity over the long term.
- New customers pay for a share of both existing and new capacity
- Connection Charge =  
$$\frac{(\text{Replacement Cost New of System} + \text{Growth-Related Capital} + \text{Debt Interest}) (\$)}{(\text{Total System Capacity} + \text{Incremental Capacity Additions}) (\# \text{ of } 3/4" \text{ Connections})}$$



+



# CALCULATION METHODS USED FOR NORMAN

- Water Utility:
  - Incremental Method
  - 7 million gallons per day (MGD) of peak capacity required to serve growth
- Wastewater Utility:
  - Incremental Method
  - 3.1 MGD available for growth in existing WRF. However, this capacity requires upgrades
  - Treatment plant upgrades mandated by regulations
    - » Costs proportionally shared between new and existing customers

# Connection Charge Calculations - Water

# WATER CONNECTION CHARGE

- Incremental Approach
- Major planned growth-related capital projects:
  - Reactivate arsenic wells and 3 MGD groundwater treatment plant: \$19.0 Million
  - Additional connection to OKC: \$14.4 Million
  - Water line enlargements: \$11.5 Million
  - 2 new groundwater wells and supply lines: \$2.7 Million
- Growth-related costs total \$49.2 Million out of total \$232 Million capital improvement plan (CIP)
- 7.0 MGD in capacity to be added for new development = 18,366 new 3/4" equivalent connections to be served

# WATER CONNECTION CHARGE

Description	Capacity Additions	Calculation
Uninflated Growth-Related CIP FY 2016 - FY 2025		\$49,219,050
Plus: NPV of Borrowing Cost - Future Debt		<u>10,922,957</u>
Total Cost for Connection Fee Calculation		\$60,142,007
Incremental Peak Day Capacity (MGD)	7.0	
Estimated 5/8" & 3/4" Meter Average Day Water Use (gpd)	201	
Estimated Max Day Peaking Factor (1)	<u>1.9</u>	
Estimated 5/8" & 3/4" Meter Peak Day Water Use (gpd)	381	
Incremental Capacity (7.0 MGD Peak Day Capacity/381 gpd)		<u>18,366</u>
<b>3/4" Connection Charge (\$60,142,007/18,366)</b>		<b>\$3,275</b>

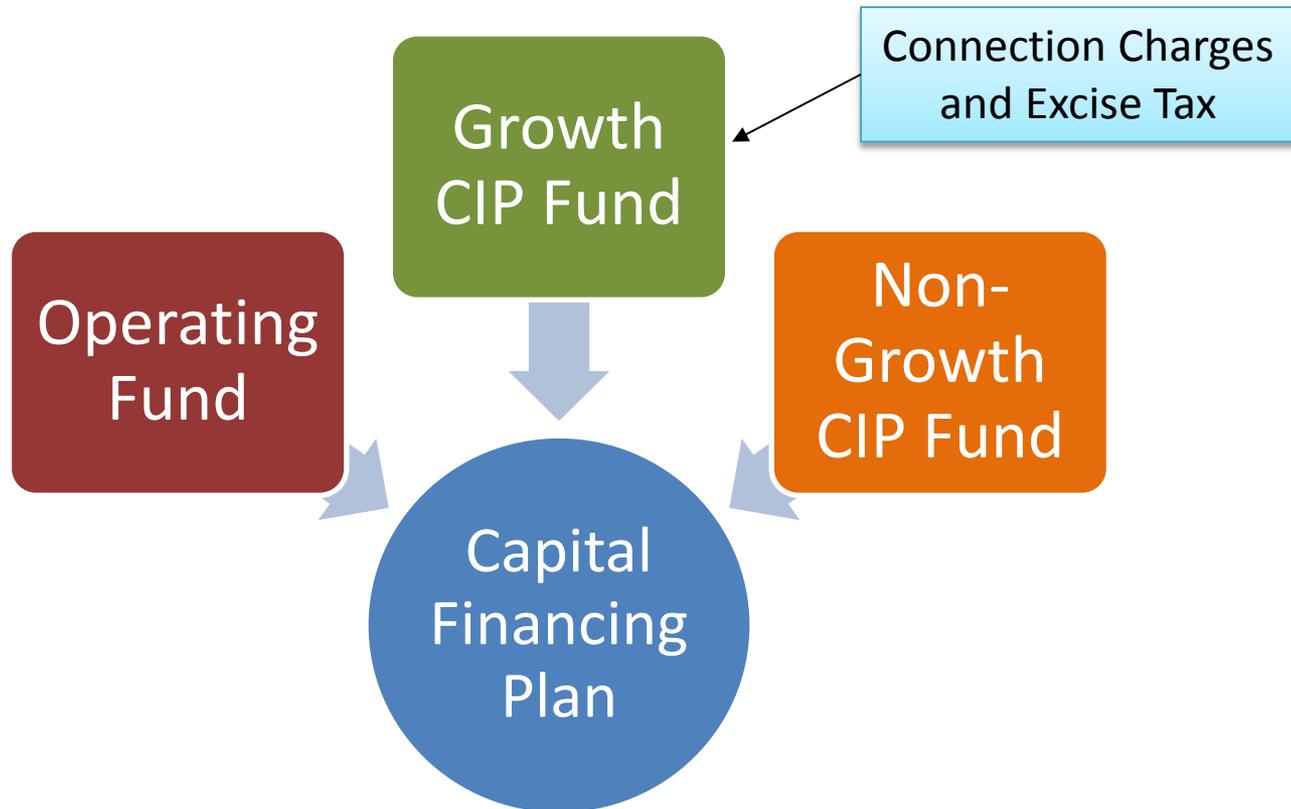
# WATER CONNECTION CHARGE

- Maximum connection charges to be effective on July 1, 2017, increase according to installed meter size
- Connection charge schedule based on the meter flow equivalencies used in AWWA Manual of Water Supply Practices M6
  - Larger meters = greater instantaneous flow requirements

Meter Size	AWWA Flow Equivalency	Existing (Effective 8/1/16)	Maximum (Effective 7/1/17)
3/4"	1.00	\$1,000	\$3,275
1"	2.67	1,667	8,744
1.5"	3.33	3,333	10,906
2"	10.67	6,667	34,944
3"	21.33	14,667	69,856
4"	33.33	28,000	109,156
6"	66.67	57,667	218,344

# 10-YEAR CAPITAL FINANCING STRATEGY

- 10-year financing plans for operational activities, growth CIP, and non-growth CIP
  - Sources of Funds: Rate Revenue, Debt Financing, Connection Charges and Excise Tax



# WATER CAPITAL FINANCING PLAN

- Over the 10-year planning horizon:
  - Growth-related projects: \$58 Million, Non-Growth: \$210 Million
  - Water rate increases every other year, starting in FY 2018

Fiscal Year	Growth-Related CIP (\$MM Inflated)	Debt Financing for Growth (\$MM)	Non-Growth CIP (\$MM Inflated)	Debt Financing for Non-Growth (\$MM)	% Increase in Rate Revenue
FY 2016	\$0.17	\$0.00	\$21.22	\$0.00	0%
FY 2017	0.47		26.73	35.00	
FY 2018	2.17		10.73		22%
FY 2019	1.67		6.64		
FY 2020			6.72		22%
FY 2021	17.74	37.00	16.93	90.00	
FY 2022	9.67		50.24		10%
FY 2023	15.93		50.37		
FY 2024	8.30	10.00	10.40		3%
FY 2025	<u>2.29</u>		<u>10.47</u>		
Total	\$58.41	\$47.00	\$210.46	\$125.00	

# SINGLE FAMILY WATER BILL IMPACTS

- Estimated monthly usage: 4,000 gallons
- Increase of \$14.69 per month over 10 years

Fiscal Year	Proposed Rate Increase	Monthly Bill
FY 2016	<b>0%</b>	\$21.40
FY 2017		21.40
FY 2018	<b>22%</b>	26.11
FY 2019		26.11
FY 2020	<b>22%</b>	31.85
FY 2021		31.85
FY 2022	<b>10%</b>	35.04
FY 2023		35.04
FY 2024	<b>3%</b>	36.09
FY 2025		\$36.09

# **Connection Charge Calculations – Wastewater**

# WASTEWATER CONNECTION CHARGE

- Incremental Approach
- Major Capital Project:
  - Biological Nutrient Removal in South WRF
  - \$13.8 Million out of a total project cost of \$75.7 Million
  - Allocated between growth (18%) and non-growth (82%)
- 3.1 MGD available in South Water Reclamation Facility for new development = 19,255 new 3/4" equivalent connections

# WASTEWATER CONNECTION CHARGE

Description	Capacity Additions	Calculation
Uninflated Growth-Related CIP 2015 - 2025		\$13,803,895
Plus: NPV of Borrowing Cost - Future Debt		<u>4,172,824</u>
Total Cost for Connection Fee Calculation		\$17,976,719
Capacity in WRF Available for Growth (MGD)	3.1	
Estimated 5/8" & 3/4" Wastewater Discharges (gpd)	<u>161</u>	
Incremental Capacity (3.1 MGD/161 gpd)		<u>19,255</u>
<b>3/4" Connection Charge (\$17,976,719/19,250)</b>		<b>\$934</b>

# WASTEWATER CONNECTION CHARGE

- Maximum connection charges to be effective on July 1, 2017, increase according to installed meter size

Meter Size	AWWA Flow Equivalency	Existing (Effective 8/1/16)	Maximum (Effective 7/1/17)
3/4"	1.00	\$275	\$934
1"	2.67	550	2,494
1.5"	3.33	1,100	3,110
2"	10.67	1,925	9,966
3"	21.33	4,625	19,922
4"	33.33	7,988	31,130
6"	66.67	18,381	62,270

# WASTEWATER EXCISE TAX

- Tax serves as a ‘buy-in’ to the existing infrastructure
  - Voter approval required to modify or remove
  - No change to the excise tax as a result of this process
- **Assessment Method:**
  - **Residential Construction**
    - » \$850 for homes up to 1,200 sq. ft.
    - » \$2.00 per sq. ft. over 1,200 sq. ft.
  - **Non-Residential Construction**
    - » \$115 per employee
    - » \$4.00 per gallon per day per employee, if estimated wastewater flow is greater than 30 gallons per day per employee

# WASTEWATER CAPITAL FINANCING PLAN

- Over the 10-year planning horizon:
  - Biological Nutrient Removal at South WRF: \$17 Million
  - Non-Growth: \$151 Million
  - Increase in wastewater rates every other year, starting in FY 2018

Fiscal Year	Growth-Related CIP (\$MM Inflated)	Debt Financing for Growth (\$MM)	Non-Growth CIP (\$MM Inflated)	Debt Financing for Non-Growth	% Increase in Rate Revenue
FY 2016	\$0.00	\$0.00	\$29.71	\$0.00	0%
FY 2017			2.89		
FY 2018			3.41		10%
FY 2019			8.11		
FY 2020	0.90		8.85		10%
FY 2021	0.90		9.12		
FY 2022	7.32	15.00	38.05	80.00	10%
FY 2023	7.54		39.19		
FY 2024			5.56		10%
FY 2025			5.73		
Total	\$16.62	\$15.00	\$150.61	\$80.00	

# SINGLE FAMILY WASTEWATER BILL IMPACTS

- Assumed Average Winter Consumption: 4,000 gallons
- Increase of \$9.65 per month over 10 years

Fiscal Year	Proposed Rate Increase	Monthly Bill
FY 2016	<b>0%</b>	\$20.80
FY 2017		20.80
FY 2018	<b>10%</b>	22.88
FY 2019		22.88
FY 2020	<b>10%</b>	25.17
FY 2021		25.17
FY 2022	<b>10%</b>	27.68
FY 2023		27.68
FY 2024	<b>10%</b>	30.45
FY 2025		\$30.45

# SINGLE FAMILY COMBINED BILL IMPACTS

- Increase of \$24.34 per month over 10 years

Fiscal Year	Monthly Water Bill	Monthly Wastewater Bill	Combined Monthly Bills
FY 2016	\$21.40	\$20.80	\$42.20
FY 2017	21.40	20.80	42.20
FY 2018	26.11	22.88	48.99
FY 2019	26.11	22.88	48.99
FY 2020	31.85	25.17	57.02
FY 2021	31.85	25.17	57.02
FY 2022	35.04	27.68	62.72
FY 2023	35.04	27.68	62.72
FY 2024	36.09	30.45	66.54
FY 2025	\$36.09	\$30.45	\$66.54

# COMMUNITY SURVEY

# COMPARISON COMMUNITIES

- Broken Arrow, OK
- Denton, TX
- Edmond, OK
- Lawrence, KS
- Lawton, OK
- Midwest City, OK
- Moore, OK
- Oklahoma City, OK
- Stillwater, OK

# SURVEY METHODOLOGY

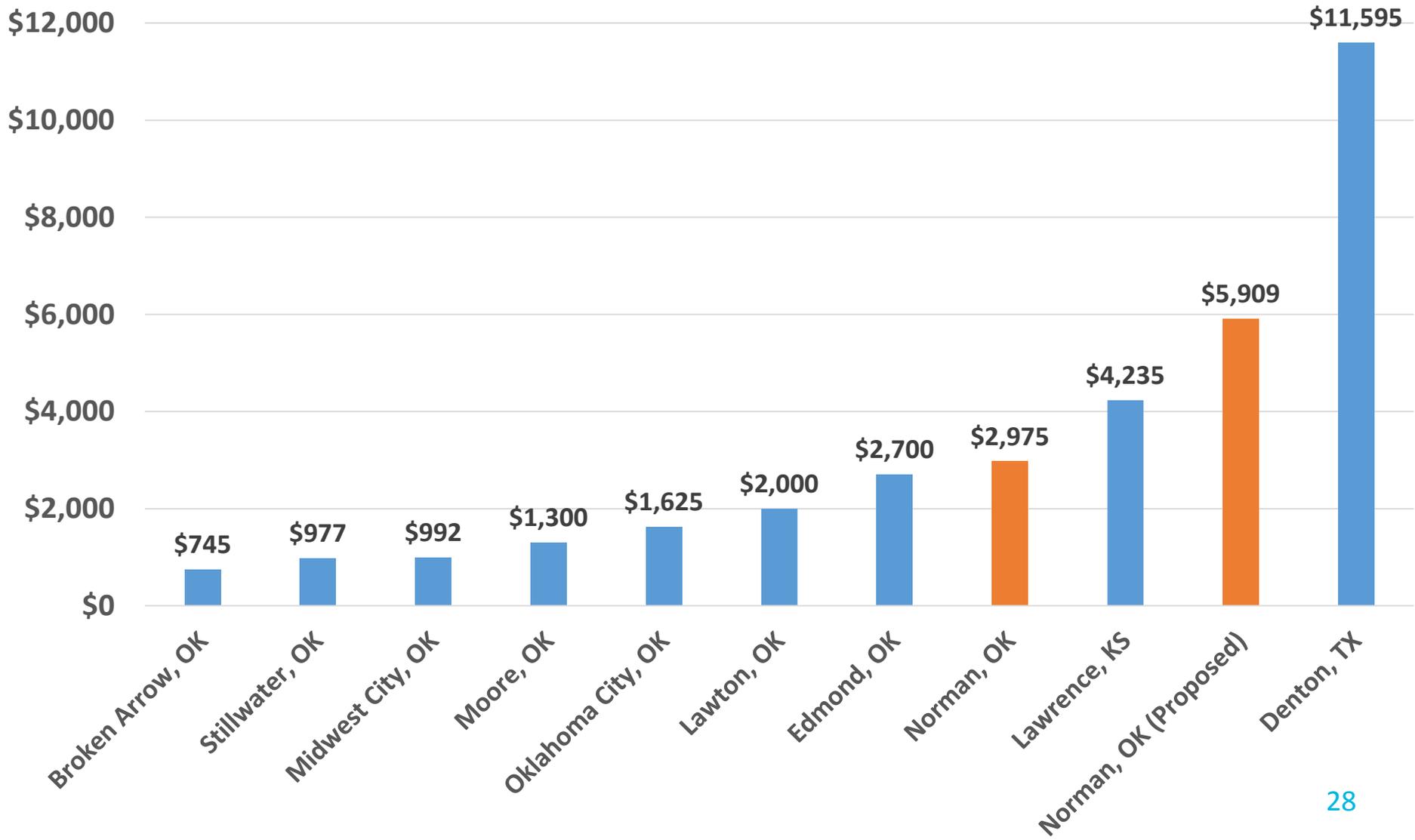
- **Total charge for both water and wastewater utilities**
  - **Meter & Installation Cost** – Cost to add a meter and tap into water/sewer lines
  - **Connection Charge** – Cost to build the existing/new water and wastewater infrastructure
  - **Excise Tax** – A tax related to new customers of water and wastewater systems
- **Single Family Residential Profile:**
  - 3/4" water meter
  - 1,500 sq. ft.
- **Multi-Family Residential Profile:**
  - 1" water meter
  - 6,000 sq. ft.
  - 4 units
- **Commercial Building Profile:**
  - 2" water meter
  - 10,000 sq. ft.
  - 30 employees



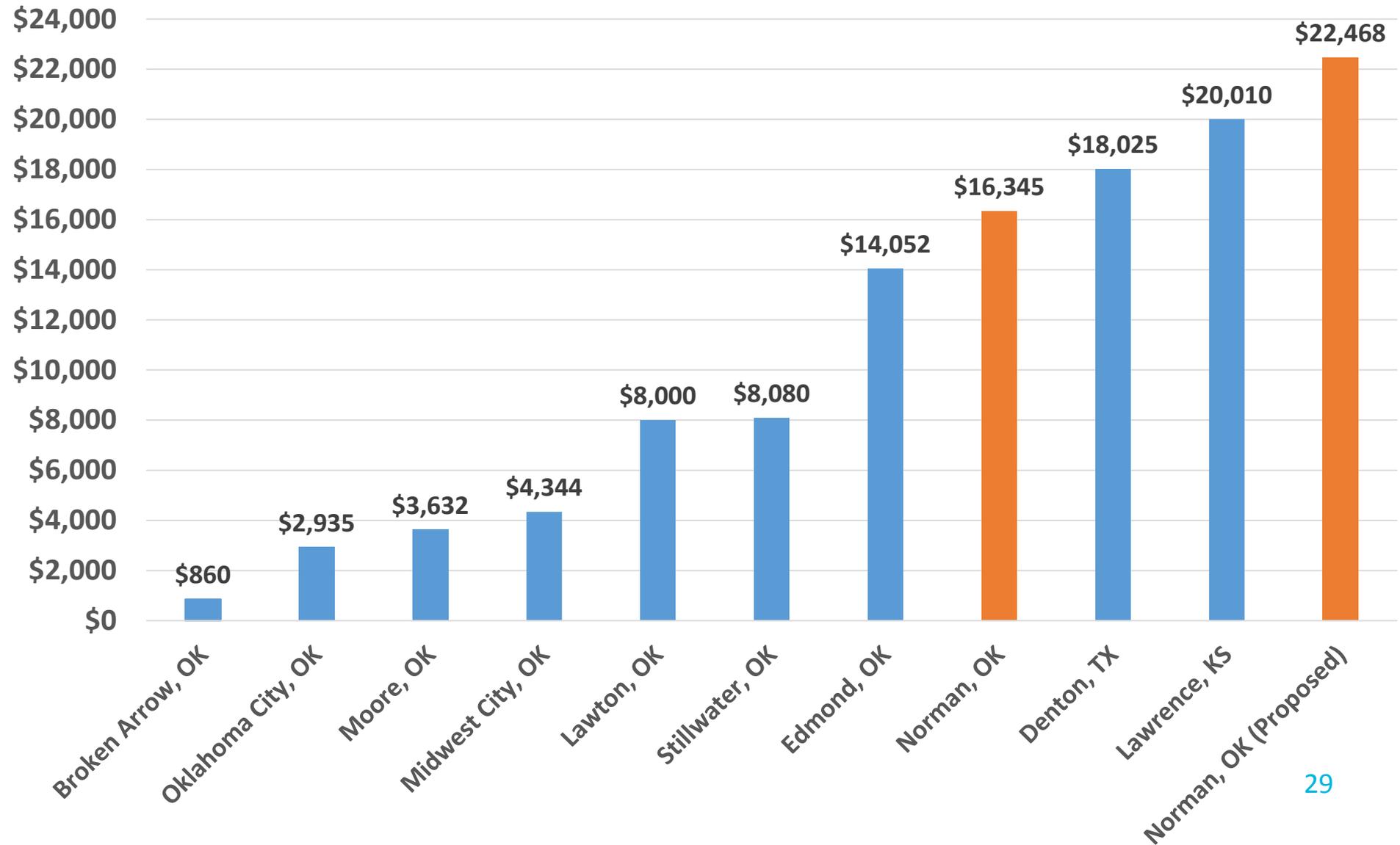
# CONNECTION CHARGES – SINGLE FAMILY RESIDENTIAL

City	Water			Sewer				Combined
	Meter & Install Cost	Connection Fee	Total Water Fees	Install Cost	Connection Fee	Excise Tax	Total Sewer Fees	Water and Sewer
Denton, TX	\$2,445	\$4,650	\$7,095	\$2,300	\$2,200	\$0	\$4,500	<b>\$11,595</b>
<b>Norman, OK (proposed)</b>	\$250	\$3,275	\$3,525	\$0	\$934	\$1,450	\$2,384	<b>\$5,909</b>
Lawrence, KS	\$435	\$1,570	\$2,005	\$0	\$2,230	\$0	\$2,230	<b>\$4,235</b>
<b>Norman, OK</b>	\$250	\$1,000	\$1,250	\$0	\$275	\$1,450	\$1,725	<b>\$2,975</b>
Edmond, OK	\$542	\$1,106	\$1,648	\$25	\$1,027	\$0	\$1,052	<b>\$2,700</b>
Lawton, OK	\$0	\$1,000	\$1,000	\$0	\$1,000	\$0	\$1,000	<b>\$2,000</b>
Oklahoma City, OK	\$425	\$1,000	\$1,425	\$0	\$200	\$0	\$200	<b>\$1,625</b>
Moore, OK	\$600	\$0	\$600	\$0	\$700	\$0	\$700	<b>\$1,300</b>
Midwest City, OK	\$917	\$0	\$917	\$75	\$0	\$0	\$75	<b>\$992</b>
Stillwater, OK	\$227	\$150	\$377	\$0	\$600	\$0	\$600	<b>\$977</b>
Broken Arrow, OK	\$700	\$0	\$700	\$45	\$0	\$0	\$45	<b>\$745</b>

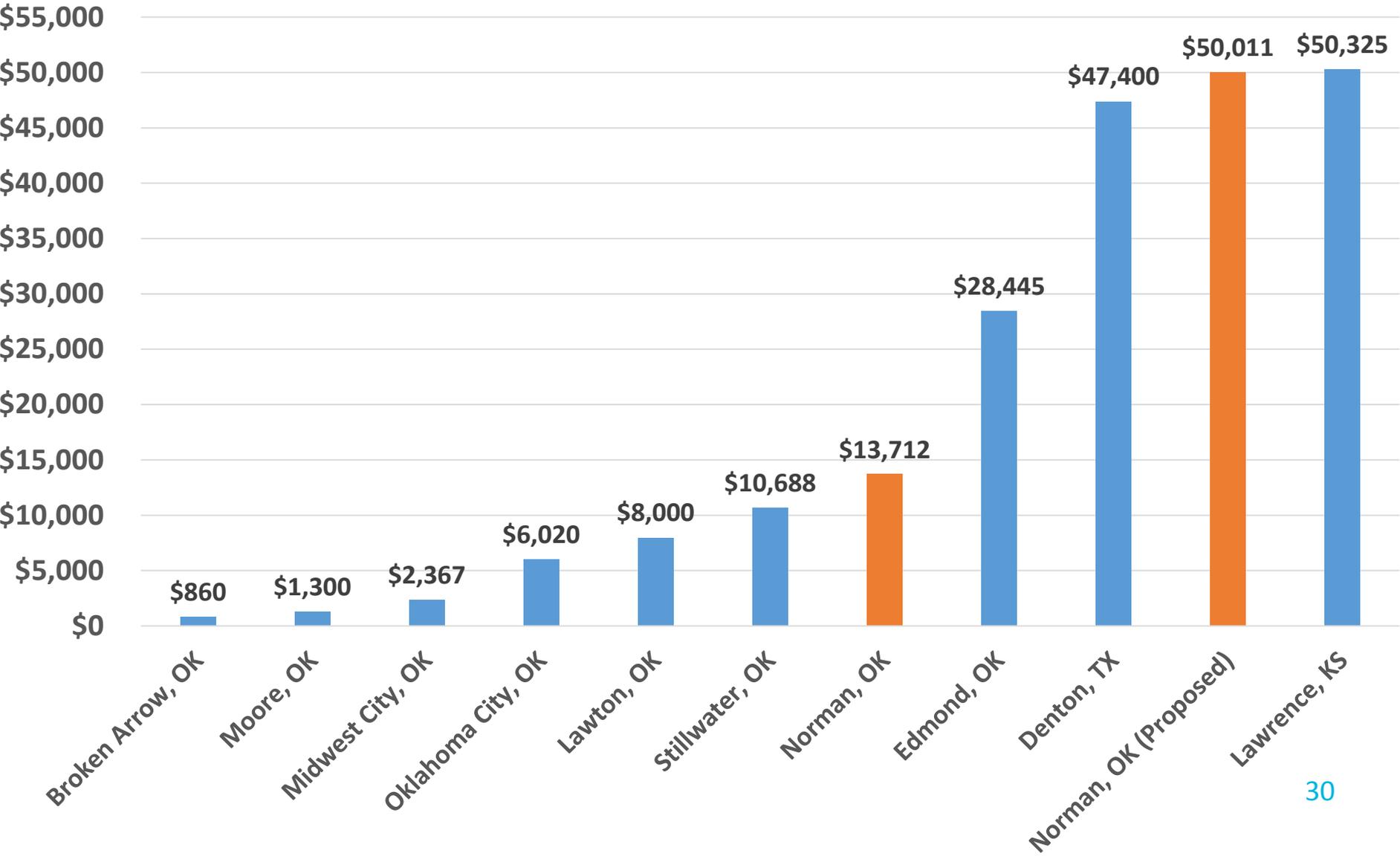
# CONNECTION CHARGES – SINGLE FAMILY RESIDENTIAL



# CONNECTION CHARGES – MULTI-FAMILY RESIDENTIAL

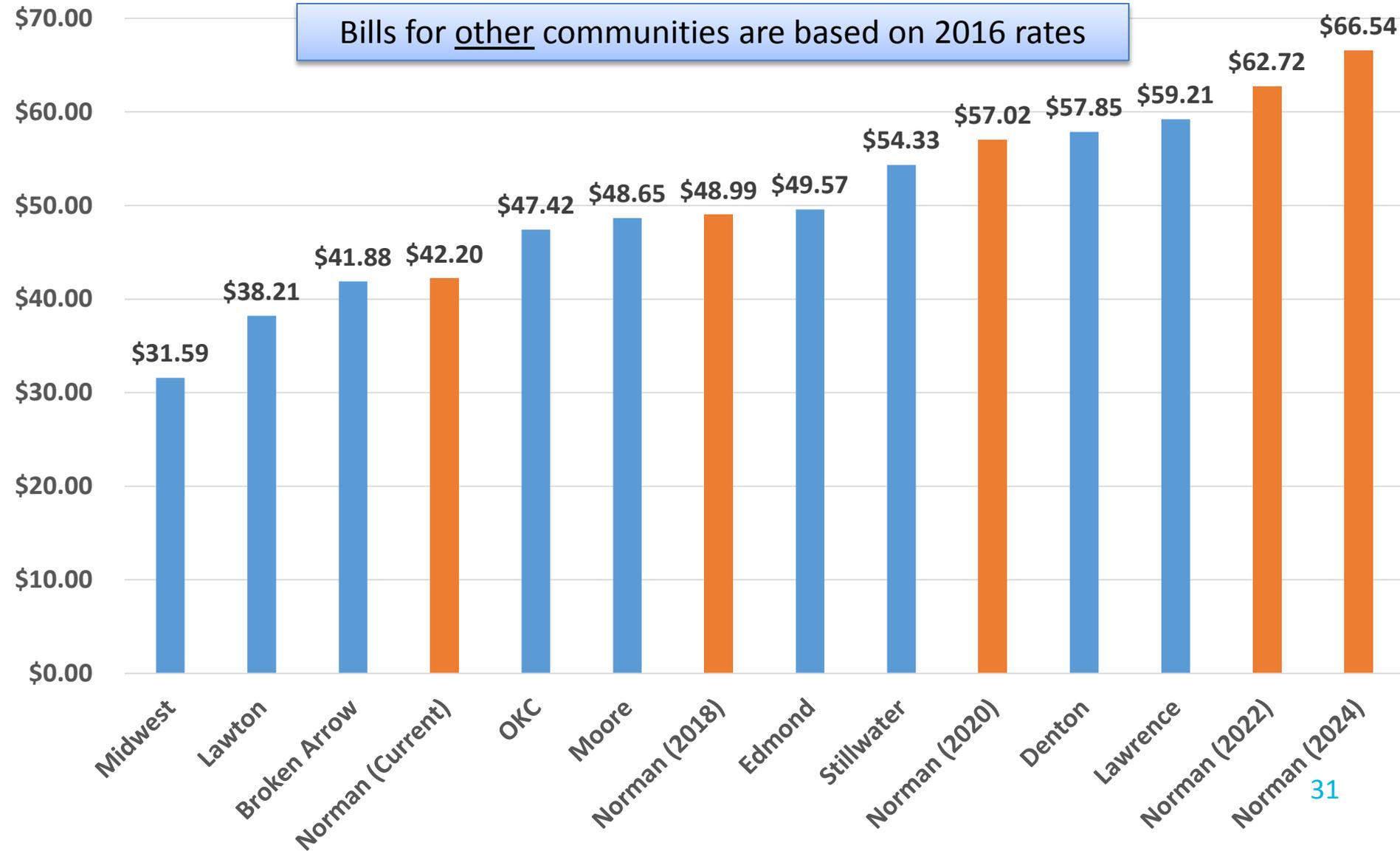


# CONNECTION CHARGES – COMMERCIAL BUILDING



# COMBINED RESIDENTIAL MONTHLY BILLS – 4,000 GALLONS

Bills for other communities are based on 2016 rates



# SURVEY CONCLUSIONS

- **Difficult to draw definitive conclusions, regarding the impact of these fees on development**
- **Variety of other reasons to live, work and build in Norman:**
  - Proximity to work, school, amenities
  - Quality of life
- **Other communities may not be recovering the full cost of infrastructure through their connection charges**
  - Ratepayers subsidize growth-related infrastructure

# Questions?

*RFC is a Registered Municipal Advisor with the MSRB and SEC under the Dodd-Frank Act and is fully qualified and capable of providing advice related to all aspects of utility financial and capital planning, including the size, timing, and terms of future debt issues. Any opinions, information or recommendations included in this presentation, related to the size, timing, and terms of a future debt issue may be relied upon only for its intended purpose. This information is not intended as a recommendation to undertake a specific course of action related to the issuance of debt, or to indicate that a particular set of assumptions for the size, timing and terms of issuing debt will be available at the time debt is actually issued.*