

# **MEMORANDUM OF UNDERSTANDING (MOU) FOR CONTRIBUTIONS OF WASTEWATER FLOWS THROUGH DYKES BRANCH INTERCEPTOR SEWER**

**THIS MEMORANDUM OF UNDERSTANDING (“MOU”)** is made and entered into on \_\_\_\_\_, 20\_\_\_\_ by and between the City of Kansas City, Missouri (“KCMO”), through its Water Services Department (“WSD”), and Johnson County, Kansas (“JCW”).

**WHEREAS**, on September 20, 1996, KCMO and JCW (collectively, the “Parties”) entered into a Cooperative Agreement For Sewer Service in order to implement, to the maximum extent practicable, the cooperative use of their existing sewerage systems and any sewerage facilities to be constructed in the future (the “Cooperative Agreement”); and

**WHEREAS**, the Cooperative Agreement was amended by the parties on December 31, 1998, August 2, 1999, October 20, 2006, December 14, 2006, September 12, 2016, and August 21, 2017; and

**WHEREAS**, on September 13, 2018, KCMO and JCW entered into a new Cooperative Agreement for Sewer Service that replaced and superseded the 1996 Agreement; and

**WHEREAS**, on September 20, 2021, the Parties executed a First Amendment to the Agreement which provided a temporary provision to address the startup of the reconstructed Tomahawk Creek Wastewater Treatment Plant; and

**WHEREAS**, this Memorandum of Understanding sets forth data and reasonable assumptions related to the sharing of costs for the design and construction of the Dykes Branch Relief Sewer project that both Parties deem accurate and agree upon.

NOW, THEREFORE, BE IT AGREED UPON BETWEEN KCMO and JCW that:

1. The KCMO EPA Consent Decree requires the upgrade and expansion of the Dykes Branch sewer in the form of a relief sewer project.
2. Historic documentation for agreements dating back to October 7, 1957 outline previous contributions made by both entities for capacity within the Dykes Branch sewer main.
3. This MOU is intended to provide the approach for developing the cost-share arrangement for the Dykes Branch relief sewer project. The technical analysis this agreement is based on is documented below and has been reviewed and agreed upon by both parties.

4. Each party has reviewed and confirmed the data utilized as the basis for the cost-share arrangement and methodology as documented below.
5. Preliminary hydraulic model simulations were analyzed for immediate, near-term and future conditions. KCMO has developed final hydraulic model simulations based on flow monitoring conducted in 2022 by KCMO, and the most recent data provided by JCW (January 10, 2022) simulating flow contributions from JCW interconnect sites. Both parties have reviewed and confirmed agreement with the information presented prior to finalizing this memorandum as a basis for the cost share agreement.
6. The cost share agreement is based on each party's share of the peak design flow contributions to the Relief Sewer segments as indicated in the table below.
7. Based on the flow contributions by JCW and KCMO resulting in the need to upsize line segments along the Dykes Branch interceptor, a breakdown of the cost share has been developed and agreed upon by both parties. The methodology to be used as the basis for the cost share will include peak flow contributions, during the 5-year, 24-hour NOAA Atlas 14 design storm for Region 3, quartile 1, 50<sup>th</sup>-percentile, from each party at each relief sewer segment (Reference Figure 1 and Table 1). The information included herein reflects information consistent with the model runs analyzed in October 2024 using the updated Blue River South (BRS) FY23 basin model and the proposed future conditions 2025 Johnson County Wastewater (JCW) inflows provided by HDR in August 2022.
8. The Calculation of Capital Cost Sharing Dykes Branch Relief Sewer Memorandum ("Cost Sharing Memorandum"), attached as Attachment 1, is based upon the improvements related to four (4) segments as shown below in Figure 1.
  - a. Segment 1 consists of approximately 2,600 linear feet of 36-inch diameter sanitary sewer from Manhole SAN-001 to manhole SAN-012 (see Figure 2 below).
  - b. Segment 2 consists of approximately 240 linear feet of 24-inch diameter sanitary sewer and 850 linear feet of 42-inch diameter sanitary sewer from manhole SAN-024 to manhole SAN-012 and from manhole SAN-012 to manhole SAN-015 (see Figure 3 below).
  - c. Segment 3 consists of approximately 690 linear feet of 42-inch diameter sanitary sewer from manhole SAN-015 to manhole SAN-018 (see Figure 4 below).
  - d. Segment 4 consists of approximately 1,175 linear feet of 42-inch diameter sanitary sewer from manhole SAN-018 to manhole SAN-023 (see Figure 5 below).



Figure 1: Flow Segments for Cost Share Breakdown through Dykes Branch Relief Sewer

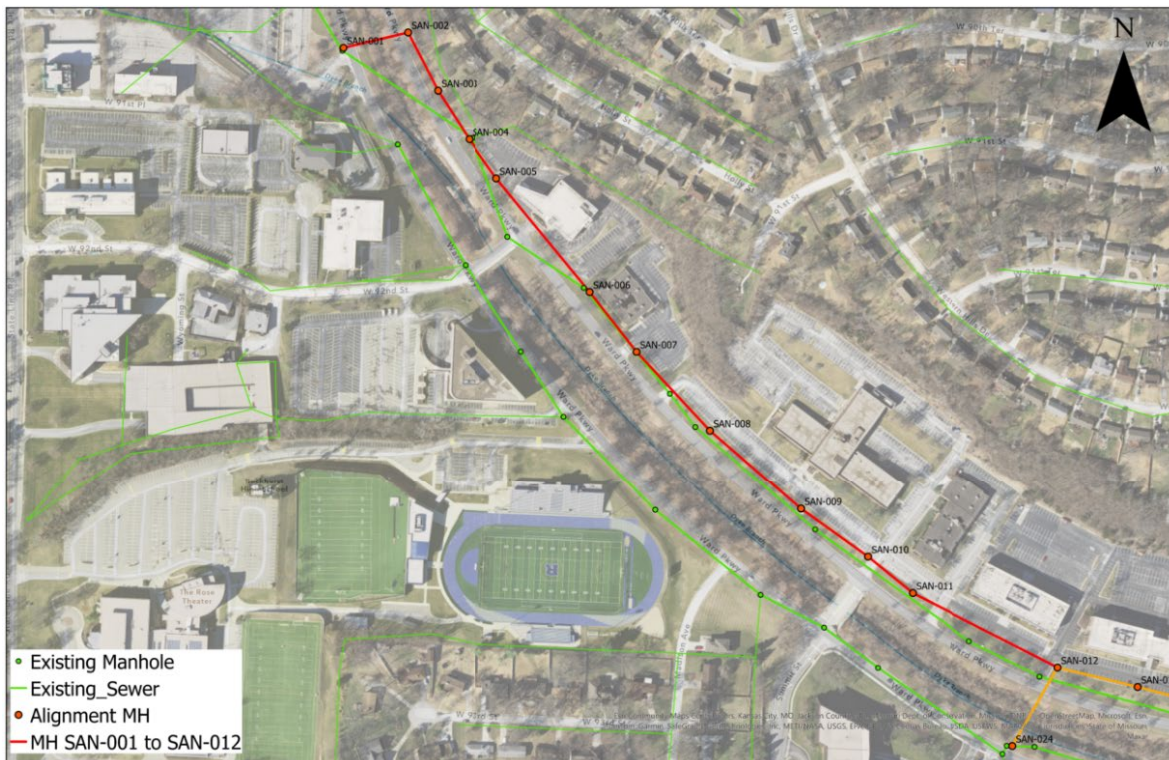


Figure 2: Dykes Branch Segment 1



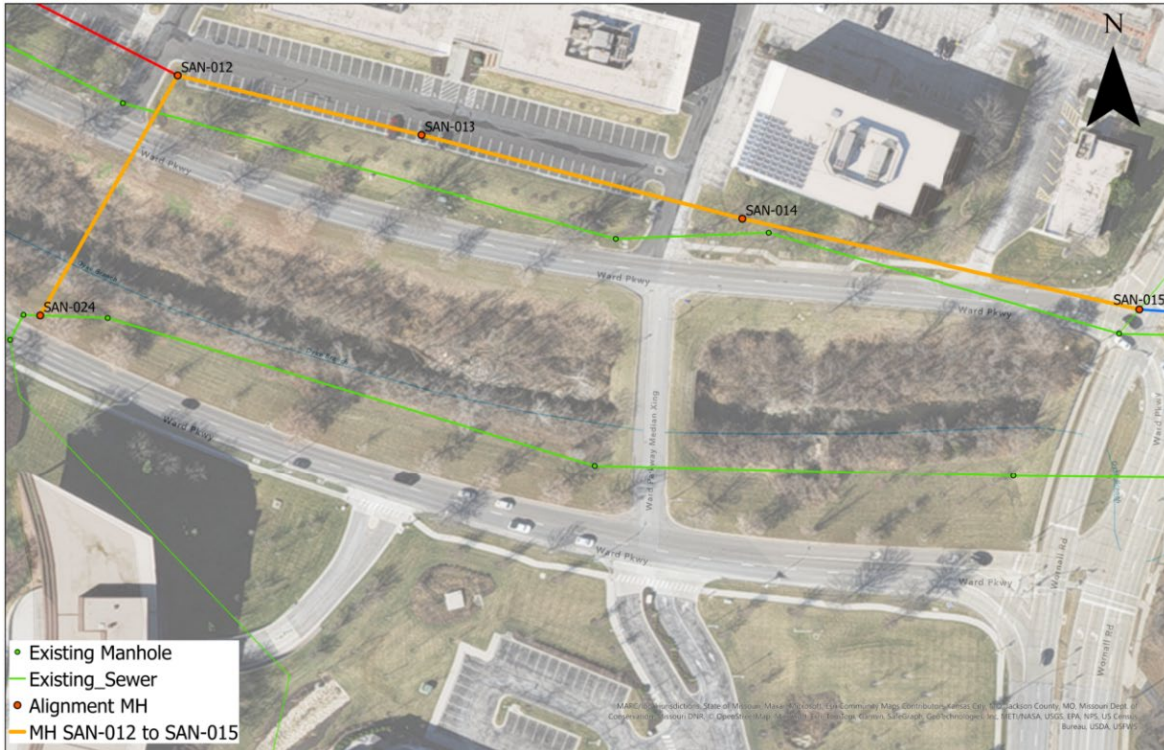


Figure 3: Dykes Branch Segment 2



Figure 4: Dykes Branch Segment 3

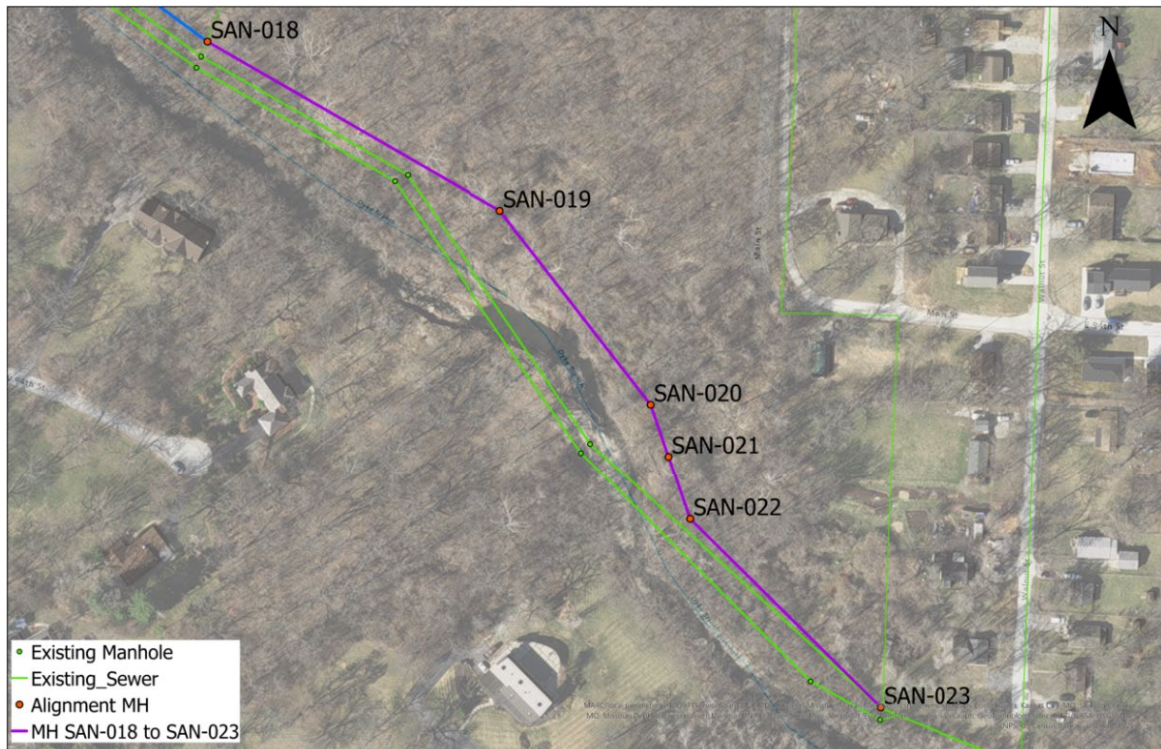


Figure 5: Dykes Branch Segment 4

9. Based on the breakdown of segments noted above, the peak flow contribution tributary to JCW and KCMO have been identified using the hydraulic model during a 5-year, 24-hour peak wet weather event and are documented in Table 1 below.

Table 1: Flow Contributions Throughout Dykes Branch Relief Sewer during the 5-Year, 24-Hour Peak Wet Weather Flow

Project Segment	Total Flow (MGD)	JCW Flow (MGD)	JCW Flow (%)	KC Water Flow (%)
Segment 1: MH SAN-001 to SAN-012	25.8	23.5	91%	9%
Segment 2:MH SAN-012 to SAN-015	29.6	25.7	87%	13%
Segment 3:MH SAN-015 to SAN-018	31.6	25.7	81%	19%
Segment 4: MH SAN-018 to SAN-023	35.2	25.7	73%	27%

10. JCW's construction cost share contribution is limited to the construction costs of the relief sewers, abandonment of the existing sewers, related restoration, professional engineering design and construction phase services, property easements, and administration time. Separate storm sewer, water line replacements or street improvements undertaken by KCMO are not included as part of JCW's cost share.
11. JCW will pay 85% of the total professional engineering design and construction phase services, and property easements as documented in the Cost Sharing Memorandum using a weighted average of JCW flow percentage for each segment based on the length of the segments.
12. JCW has had the opportunity to review and provide input on the preliminary design at 60%, and 90% design.
13. KCMO agrees to obtain all necessary property easements for the construction of the relief sewers. The actual cost of easement acquisition will be included with the actual construction costs to be shared by the parties. JCW understands and agrees that these easements are necessary for the construction and maintenance of the relief sewers, and will remain the property of KCMO, and that KCMO will have all rights, title, and interest granted therein, and that JCW shall have no interest therein.
14. JCW will reimburse KCMO for their share of the total project cost upon final completion of the work based on a) the flow percentages calculated in Table 1 and b) the actual construction costs of the completed project, including the actual professional engineering and construction phase services, property easement acquisition and construction costs as documented in the Cost Sharing Memorandum.
15. JCW will make one payment to KCMO within ninety (90) days following receipt of written notification of final completion of construction.
16. JCW will continue to provide payment to KCMO for flows sent through the metered interconnect sites based on the volumetric charge determined in the cost-of-service study as agreed to in the September 13, 2018 Cooperative Agreement for Sewer Service between the Parties still in effect.
17. KCMO and JCW also agree that JCW will microsurface the northbound State Line Road lanes affected by JCW's State Line Road Pump Station and Force Main project per KCMO Public Works' requirements, and JCW's contractor will pay the traffic control fee.

\_\_\_\_\_  
Kenneth Morgan  
Director of Water Services

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

\_\_\_\_\_  
General Manager, Johnson County Wastewater

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

Approved as to form:

\_\_\_\_\_  
Assistant City Attorney, KCMO



**ATTACHMENT 1**

**CALCULATION OF CAPITAL COST SHARING  
DYKES BRANCH RELIEF SEWER MEMORANDUM**



**DRAFT**  
**CALCULATION OF**  
**CAPITAL COST SHARING**

**CITY OF KANSAS CITY – JOHNSON COUNTY**

**DYKES BRANCH RELIEF SEWER**

**MEMORANDUM**

**DRAFT with Estimated Cost**  
**March 2025**

*The DRAFT CALCULATION OF CAPITAL COST SHARING was based on the actual design phase services contract amount at the time of development, the base bid plus allowance from Kissick Construction Company, Inc., construction phase services based on the amendment for Lamp Rynearson, Inc., and a desktop analysis of the estimated easement acquisition costs. Following final construction completion, the dollar amounts provided herein will be updated to reflect the final project costs incurred by KCMO.*

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## APPENDIX

- *Copy of the Cooperative Agreement for Sewer Service between the City of Kansas City, Missouri and Johnson County, Kansas (September 13, 2018)*
- *Copy of the First Amendment to the Cooperative Agreement (September 20, 2021)*
- *Copy of the Memorandum of Understanding (MOU) for Contributions of Wastewater Flows Through Dykes Branch Interceptor Sewer*
- *Copy of the Dykes Branch Relief Sewer – Design Contract with Lamp Rynerson, Inc.*
- *Copy of the Dykes Branch Relief Sewer – Construction Contract with Kissick Construction Company*
- *Copy of easements required for the Dykes Branch Relief Sewer*

## I. INTRODUCTION

The City of Kansas City, Missouri and Johnson County, Kansas have agreed to construct certain capital improvements in the City of Kansas City, Missouri wastewater collection system as documented in a MEMORANDUM OF UNDERSTANDING dated \_\_\_\_\_. The MEMORANDUM OF UNDERSTANDING also sets forth the manner in which the costs of these improvements are to be shared between the two parties. This document identifies and documents the engineering and construction costs incurred for implementation of the capital improvements and Johnson County's portion of the total project cost.

## II. TERMS OF THE MEMORANDUM OF UNDERSTANDING:

From the MEMORANDUM OF UNDERSTANDING dated \_\_\_\_\_, the City of Kansas City, Missouri (KCMO) and Johnson County Wastewater (JCW) have agreed to share in the expenses for the design and construction of the Dykes Branch Relief Sewer project. Refer to the MEMORANDUM OF UNDERSTANDING for the definitions, clarifications, and payment provisions.

## III. COSTS OF CONSTRUCTED IMPROVEMENTS:

A summary of the total project cost associated with the improvements, including the design professional engineering contract and construction phase services amendment(s), the construction cost, and the cost of property easements for the Dykes Branch Relief Sewer Improvements that are sized to convey the 5-year, 24-hour NOAA Atlas 14, Region 3, 1<sup>st</sup> Quartile, 50<sup>th</sup>-Percentile design storm is shown in Table 1.

**TABLE 1**  
**Summary of Contracts and Total Costs**

<b>Dykes Branch Relief Sewer</b>		<b>Cost</b>
6/19/2023	Design Professional Engineering Contract	\$1,230,000
10/25/2024	Construction Phase Services Amendment	\$753,500
10/25/2024	Construction Contract	\$6,980,000
12/03/2024	Property Easements (estimated)	\$120,000
<b>TOTAL PROJECT COST*</b>		<b>\$9,083,500</b>
*Costs presented in the table are based on the actual design phase services contract amount at the time of development, the base bid plus allowance from Kissick Construction Company, Inc., construction phase services based on the amendment for Lamp Rynearson, Inc., and a desktop analysis of the estimated easement acquisition costs. Following final construction completion, the dollar amounts provided herein will be updated to reflect the final project costs incurred by KCMO.		

Table 2 below delineates the total construction costs for the four (4) segments as described in the MEMORANDUM OF UNDERSTANDING.

**TABLE 2**  
**Dykes Branch Relief Sewer, Construction Cost by Segment**

<b>Segment 1: MH SAN-001 to SAN-012</b>			
<b>Item</b>	<b>Description</b>	<b>Length</b>	<b>Cost</b>
1	Installation of 36" Sewer Main	2,600	\$ 3,148,397.42
	<b>TOTAL</b>		<b>\$ 3,148,397.42</b>
<b>Segment 2: MH SAN-012 to SAN-015</b>			
<b>Item</b>	<b>Description</b>	<b>Length</b>	<b>Cost</b>
1	Installation of 24" Sewer Main	240	\$ 216,141.79
2	Installation of 42" Sewer Main	850	\$ 1,352,783.02
	<b>TOTAL</b>		<b>\$ 1,568,924.81</b>
<b>Segment 3: MH SAN-015 to SAN-018</b>			
<b>Item</b>	<b>Description</b>	<b>Length</b>	<b>Cost</b>
1	Installation of 42" Sewer Main	690	\$ 851,631.71
	<b>TOTAL</b>		<b>\$ 851,631.71</b>
<b>Segment 4: MH SAN-018 to SAN-023</b>			
<b>Item</b>	<b>Description</b>	<b>Length</b>	<b>Cost</b>
1	Installation of 42" Sewer Main	1,175	\$ 1,411,046.06
	<b>TOTAL</b>		<b>\$ 1,411,046.06</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>		<b>5,555</b>	<b>\$6,980,000</b>
*Cost includes construction costs of relief sewers, abandonment of the existing sewers, and related restoration.			



#### IV. SUMMARY OF SHARED TOTAL PROJECT COST:

A summary of the total project cost with cost-sharing percentages and proportionate costs, based on the MEMORANDUM OF UNDERSTANDING, is shown in Table 3.

**TABLE 3**  
**Summary of Cost Sharing Percentage and Calculated Cost Share**

Project Portion	JCW (%)	JCW Cost (\$)	KC Water (%)	KC Water Cost (\$)
Segment 1: MH SAN-001 to SAN-012	91%	\$2,865,042	9%	\$283,356
Segment 2: MH SAN-012 to SAN-015	87%	\$1,364,965	13%	\$203,960
Segment 3: MH SAN-015 to SAN-018	81%	\$689,822	19%	\$161,810
Segment 4: MH SAN-018 to SAN-023	73%	\$1,030,064	27%	\$380,982
Easements	85%	\$102,199	15%	\$17,801
Engineering and Construction Phase Services	85%	\$1,689,260	15%	\$294,240
<b>TOTAL</b>		<b>\$7,741,351</b>		<b>\$1,342,149</b>
*Costs presented in the table are based on the actual design phase services contract amount at the time of development, the base bid plus allowance from Kissick Construction Company, Inc., construction phase services based on the amendment for Lamp Rynearson, Inc., and a desktop analysis of the estimated easement acquisition costs. Following final construction completion, the dollar amounts provided herein will be updated to reflect the final project costs incurred by KCMO.				

The total project cost is **\$9,083,500**. Johnson County's share of the total project cost is **\$7,741,351**.