




Lexington-Fayette Urban County Government  
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL QUALITY

Jim Gray  
Mayor

Dowell Hoskins-Squier  
Commissioner

## Memorandum

To: Urban County Council  
Martha Allen, Council Clerk

From: Courtney Thacher   
Administrative Specialist Principle for Remedial Measures Program

Date: January, 21 2016

Re: Change Order No. 2 for West Hickman Main Trunk A RMP Project

This memorandum is to notify the Urban County Council of Change Order No. 2 for the West Hickman Main Trunk A Remedial Measures Project. Per CAO Policy No. 15R the Remedial Measures Program Manger is allowed to approve change orders of less than 5% of the cumulative contract award. Change Order No. 2 is does not increase the contract amount but does increase the contract time by 97 calendar days.

Should you have any questions, please contact me at 425-2439.

pc: Vernon Azevedo, P.E., Remedial Measures Program Manager  
Dowell Hoskins-Squier, Commissioner  
Charles Martin, P.E., Director of Water Quality  
Mark Fischer, P.E., Project Manager  
File

**SANITARY SEWERS REMEDIAL MEASURES PLAN CONTRACT CHANGE ORDER FORM**

Project Name: West Hickman Trunk Sewer A  
Contractor: Garney Companies, Inc.  
Contract Number: \_\_\_\_\_  
RMP Project ID: WH2  
Change Order ID Number: 2  
Applicable Tier: 1

**CHANGE ORDER DETAILS**

Contract Amount	<u>\$3,870,564.03</u>	Contract Time	<u>348 c days</u>
Original Contract Amount:	<u>\$3,797,218.00</u>	Original Contract Time	<u>270 c days</u>
Change in Contract Amount	<u>\$0</u>	Change in Contract Time	<u>97 c days</u>
New Contract Amount:	<u>\$3,870,564.03</u>	New Contract Time	<u>445 c days</u>

**JUSTIFICATION FOR CHANGE ORDER**

See attached.

**REQUIRED SIGNATURES**

Tier 1 Vernon Acevedo 1-21-16  
Remedial Measures Plan or Construction Manager Date

Tier 2 \_\_\_\_\_  
Remedial Measures Plan or Construction Manager Date

\_\_\_\_\_  
Director of the Division of Water Quality Date

\_\_\_\_\_  
Director of the Division of Purchasing Date

**URBAN COUNTY COUNCIL NOTIFICATION**

Carla King 1/21/16  
Employee Submitting Notification Date

**Change Order No. 2**  
**Remedial Measures Plan (RMP)**  
**Division of Water Quality**  
**Lexington-Fayette Urban County Government (LFUCG)**

Date of Issuance: 2 Dec 2015	Effective Date: 2 Dec 2015
Owner: Lexington-Fayette Urban County Government (LFUCG)	Owner's Bid No.: 103-2014
Contractor: Garney Companies, Inc.	Contractor's Project No.: 3207
Engineer: ICA Engineering, Inc.	Engineer's Project No.: 1311100
Project: West Hickman Trunk Sewer - A	Contract Name:

The Contract is modified as follows upon execution of this Change Order:

This change order, Change Order No. 2 (CO#2), extends the project completion time necessitated by the mitigation of sewer defects as installed in the original Scope of Work by the Contractor.

Item No. 1 – The Contract Time is extended 97 calendar days to allow for the Contractor's mitigation of defects in the sewer line installed by the Contractor as part of the Scope of Work. The Contract Time extensions in this item, Item No. 1, total 97 calendar days. The Scope of Work of the sewer line mitigation required by the Owner and agreed to by the Contractor is detailed in the attached Memorandum of Understanding (MOU). The MOU is attached and its inclusion in this CO#2 makes it a part of the Contract Documents and the Scope of Work as amended.

Attachments: *Memorandum of Understanding between the Lexington-Fayette Urban County Government and Garney Companies, Inc.*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ <u>3,797,218.00</u>	Original Contract Times: Substantial Completion: <u>270 calendar days</u> Ready for Final Payment: <u>14 May 2015</u> dates
[Increase] [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u>--</u> : \$ <u>73,346.03</u>	[Increase] [Decrease] from previously approved Change Orders No. <u>1</u> to No. <u>--</u> : Substantial Completion: <u>78 calendar days</u> Ready for Final Payment: <u>31 July 2015</u> days
Contract Price prior to this Change Order: \$ <u>3,870,564.03</u>	Contract Times prior to this Change Order: Substantial Completion: <u>348 calendar days</u> Ready for Final Payment: <u>31 July 2015</u> dates
[Increase] [Decrease] of this Change Order: \$ <u>no change</u>	[Increase] [Decrease] of this Change Order: Substantial Completion: <u>97 calendar days</u> Ready for Final Payment: <u>5 November 2015</u> days
Contract Price incorporating this Change Order: \$ <u>3,870,564.03</u>	Contract Times with all approved Change Orders: Substantial Completion: <u>445 calendar days</u> Ready for Final Payment: <u>5 November 2015</u> dates

RECOMMENDED (Engineer):  
 By:   
 Title: Rivercrest Engineering for ICA Engineering, Inc.  
 Date: 12/2/15

ACCEPTED (Contractor):  
 By:   
 Title: Stephen P. Ford, Vice President  
 Date: 12/7/2015

ACCEPTED (Owner: LFUCG)  
 By:   
 Title: Remedial Measures Program Manager  
 Date: 1-21-16

APPROVED by Funding Agency (If applicable):  
 By: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_



Lexington-Fayette Urban County Government  
DEPARTMENT OF ENVIRONMENTAL QUALITY AND PUBLIC WORKS

Jim Gray  
Mayor

David L. Holmes  
Commissioner

September 3, 2015 – Revised November 30, 2015

**Memo To:** Stephen P. Ford  
Vice President  
Garney Companies, Inc.

**From:** Vernon Azevedo, PE  
Remedial Measures Program Manager  
Lexington-Fayette Urban County Government / Division of Water Quality

**Subject:** Memorandum of Understanding and Agreement  
West Hickman Trunk Sewer A  
Remediation of Construction Defects

This Memorandum of Understanding and Agreement (MOUA) documents the facts and resolution of needs regarding defects identified in the 48-inch (in) and 54-in reinforced concrete pipe (RCP) sanitary sewers and structures/manholes installed as part of the West Hickman Trunk Sewer A project (Project).

**STATEMENTS OF FACT:**

**A. Background**

1. Lexington Fayette Urban County Government (LFUCG) owns, and through its Division of Water Quality (DWQ) maintains, and operates the Publicly Owned Treatment Works (POTW) in Fayette County, Kentucky.

ICA Engineering, Inc., (ICA) Paducah, Kentucky, and its subcontractor, Rivercrest Engineering, Inc. (Rivercrest), Paducah, Kentucky serves, under contract with LFUCG, as Engineer of Record (EOR) for the West Hickman Trunk A Sewer project with respect to both Design and Services During Construction.

On July 17, 2014, Garney Companies, Inc. (Garney) entered into an agreement with LFUCG to install gravity sanitary sewers and appurtenances related to the Project.

A Notice to Proceed for construction was issued for the Project on August 11, 2014.

In April of 2015, during construction of the Project, leaks within portions of the installed RCP trunk sewer were identified, observed, and documented.

DWQ, ICA/Rivercrest, and Garney agree and concur that construction materials (RCP and concrete structures/manholes) delivered to the Project site were found to be non-compliant with respect to the Contract Documents. DWQ's Resident Project Representative (RPR), with the concurrence of Garney, rejected a portion of the RCP and concrete structures/manholes delivered to the job.

**B. Notice of Defects (Copies of referenced letters are attached to this MOUA)**

1. On April 23, 2015, a Notice of Defects letter was issued to Garney by ICA/Rivercrest referencing documented joint and pinhole leaks; misaligned pipe joints; damaged, rolled, or dislodged joint gaskets; open joints; longitudinally cracked pipes; interior rust staining of the concrete pipe; spalled concrete; broken and/or damaged spigots; and the presence of #9 gravel in and around open and misaligned joints inside the installed 48-in and 54-in RCP sewers. In accordance with the Contract General Conditions Section 00700, Paragraphs 13.03.D and 13.06, ICA/Rivercrest requested that Garney investigate the causes and extent of the defects, present to ICA/Rivercrest and DWQ acceptable corrective measures to the installed work, and to present an acceptable plan of action to eliminate the causes of the defects from remaining work.
2. On May 18, 2015, Garney submitted a response to the April 23, 2015 Notice of Defects letter. This response included results from a closed circuit television (CCTV) inspection performed by Garney, through its subcontractor, Pipe Check, LLC, and recommendations from Mr. George Kurz, PE. A summary of the CCTV inspection was provided and is summarized as follows:
  - a. Joint leaks were identified and documented in the installed 48-in and 54-in RCP sewer at 49 joints.
  - b. Hairline cracks were identified in the installed 48-in and 54-in RCP sewer at two locations.

Kurz recommended as a remediation plan the following:

- a. Pressure testing of every joint for conformance with the Contract specifications.
- b. Installation of an internal joint seal at all joints that fail pressure testing.

Kurz further stated that "if there are irregularities in the dimensions of the bell or spigot or surface deformities, then the gasket may not be held as tightly and be prone to slippage towards the end of the spigot when subjected to external pressure".

Garney stated that the leaks were caused by gaskets that were not fully compressed, which allowed leakage under normalized groundwater conditions. Garney's response included a recommended remediation procedure and solution as follows,

- a. Retest every joint of pipe per specification Section 02532-3.05C
- b. Install a "NPC" internal joint seal (proprietary brand) in each joint that fails the test.

With respect to the identified cracking, Garney's response indicated its opinion that the hairline cracking within the RCP would be addressed by "autogenous healing" within the RCP upon continued exposure to moisture and air.

Garney further stated that "the remainder of the pipe on-site to be used for this project will be measured and gauged to insure that the pipe meets the requirements of ASTM C443M-11. The pipe also will be inspected for longitudinal and circumferential cracks. Any pipe joints not meeting these requirements will be replaced".

3. Following meetings held between representatives of ICA/Rivercrest, DWQ and Garney on May 20, 2015 and June 17, 2015, a response letter was issued to Garney on June 24, 2015 stating
  - a. DWQ and ICA/Rivercrest rejected Garney's proposal to pressure test every joint of RCP pipe per Section 02532-3.05C of the Contract Documents and to install a NPC internal joint seal at each RCP pipe joint that does not pass the pressure test.
  - b. DWQ and ICA/Rivercrest were advised in meetings on May 20, 2015, and June 17, 2015, that a significant percentage of the RCP pipe, supplied by Sherman Dixie and currently stored on site, was non-compliant with the Project specifications. DWQ and ICA/Rivercrest concurred with statements made by Garney that it considers a significant percentage of the installed RCP pipe likewise to be non-compliant with the Project specifications with respect to the pipe bells and spigots.
  - c. DWQ and ICA/Rivercrest requested that Garney submit a revised plan of corrective action for removal and replacement of all of the non-compliant defective Work in accordance with Section 00700, Paragraph 13.06.A of the Contract Documents.
  - d. Garney was advised that DWQ prefers the installation of a cured-in-place pipe (CIPP) liner within the RCP pipe versus requiring the inspection, removal, and replacement of each defective section of the installed RCP pipe.
  - e. DWQ and ICA/Rivercrest requested that Garney submit, no later than July 8, 2015, a detailed plan and schedule of corrective action(s) to be submitted.
  
4. On July 6, 2015, Garney submitted a letter response proposing to install a "WEKO" internal joint seal (proprietary brand) at every joint of the previously installed and to be installed 48-in and 54-in RCP sewer. Installation of the WEKO joint seals at every pipe joint would be per the following manufacturers recommended specifications:
  - a. The host RCP sewer will be dewatered.
  - b. Each joint shall be cleaned and grouted with a fast-set, hydraulic cement.
  - c. Each joint will be "sealed" or fitted with a WEKO joint seal
  - d. Each joint will be pressure tested to maintain a pressure of 10 psi until the entire circumference of the seal (both sides) can be "soaped" and visually inspected for leaks.

- e. All work is to be completed by certified technicians employed by Miller Pipeline, Indianapolis, Indiana.
- f. All joint seals and installation shall be guaranteed for a period of five (5) years.
- g. Garney shall provide, at a time and date to be determined by DWQ and within the five-year warranty period, a CCTV inspection of the pipe installed under this Contract. Such CCTV inspection shall include all mobilization/demobilization and other costs associated with the CCTV inspection.

### **C. SUBSEQUENT ACTIONS**

On August 13, 2015, structures/manholes identified as 0A, 1C, 5A, 6A, and WH1\_6 were determined by the RPR and ICA/Rivercrest to be non-compliant with the Contract specifications and were rejected. Contrary to the decision of ICA/Rivercrest, Garney elected to have these structures delivered and installed.

On August 24, 2015, Garney acknowledged that structures/manholes 0A, 1C, 5A and 6A, were rejected and proposed to ICA/Rivercrest and DWQ that those structures, as previously inspected and now delivered would be installed. Garney agreed that should these structures/manholes fail the vacuum test, the structures/manholes would be "rehabilitated" with "Spray Roq" at no cost to DWQ.

Additionally, on August 24, 2015, Garney proposed a proprietary repair identified as "Warren Environmental Epoxy/Carbon Fiber Repair" for the circumferential cracks in the 54-in pipe at station 22+85 (beneath West Hickman Creek) and in the 48-in pipe at station 38+11. ICA/Rivercrest approved the repair approach on August 28, 2015, per the questions/answers stated in the approval email. Note is made that Garney's response to the specified pressure required for cleaning the circumferential crack was vague and indefinite.

On September 24, 2015, Garney was directed and agreed to repair 2 additional circumferential cracks, identified during CCTV inspections at 100 feet and 110 feet downstream of manhole 5A, in accordance with the previously noted and approved "Warren Environmental Epoxy/Carbon Fiber Repair" procedures.

### **D. AGREEMENT**

By execution of this MOUA, DWQ agrees to the following:

- DWQ agrees to the July 6, 2015, proposal by Garney related to the installation and warranty of WEKO internal joint seals per the terms of B.4 of this MOUA.
- DWQ agrees to waive all liquidated damages claims against Garney so long as Garney makes orderly and continuous progress to achieve Substantial Completion, as defined in the Contract Documents, no later than October 8, 2015. Weather delays will be considered for additional time.

- DWQ agrees to satisfy all extra and additional costs for this project as it relates to Resident Project Representation (RPR) and as specified in the Contract Documents.
- All other terms, conditions, specifications as enumerated in the Contract Documents shall remain unchanged and in full effect.

Garney agrees to the following:

- Garney agrees to have the WEKO internal seals installed per terms outlined in B.4 of this MOUA at its sole cost and without compensation by LFUCG. All related costs associated with this effort likewise shall be satisfied by Garney.
- Garney and WEKO agree to a five-year warranty for the installed seals and repair of the circumferential cracks in the RCP sewer.
- Garney agrees to repair each of the identified circumferential cracks (4), per the terms outlined in Section I, at its sole cost and without compensation by LFUCG. All related costs associated with this effort likewise shall be satisfied by Garney.
- Garney agrees to satisfy all costs relating to demobilization of materials and equipment from the Rockbridge Road parking lot and temporary restoration of the park and park trail prior to and including the week of June 29, 2015, and all related remobilization costs.
- All other terms, conditions, specifications as enumerated in the Contract Documents shall remain unchanged and in full effect.



**E. Acknowledgment**

I, as representative of the Garney Companies, Inc., concur and agree with the terms and conditions of this MOUA.

Signed: 

Title: STEPHEN P. FORD  
VICE PRESIDENT

Date: 11/30/2015

I, as representative of the Lexington-Fayette Urban County Government (LFUCG), Division of Water Quality (DWQ), concur and agree with the terms and conditions of this MOUA.

Signed: 

Title: Remedial Measures Program Manager

Date: 12-2-15

- cc: Charles Martin, Director of the Division of Water Quality (DWQ)  
Mark Fischer, DWQ Project Manager  
Todd Slatin, LFUCG Director of the Division of Purchasing  
Brian Marcum, LFUCG – Division of Purchasing  
Shawn P. Washer – ICA Engineering  
Charles D. McCann II – Rivercrest Engineering  
Eddie Mesta, Integrated Engineering (IE)  
Jason McCoy, Resident Project Representative (RPR) IE  
Jeff Seal, Garney Construction  
Gary Goff, Garney Construction  
Zack Bloomfield, Garney Construction  
Jon Schubarth, Hazen and Sawyer