



Strand Associates, Inc.*
1525 Bull Lea Road, Suite 100
Lexington, KY 40511
(P) 859-225-8500
(F) 859-225-8501

December 21, 2016

Tiffany Rank, P.E.
Lexington-Fayette Urban County Government
301 Lisle Industrial Avenue
Lexington, KY 40511

Re: Town Branch Primary Digester Complex Improvements

Dear Tiffany:

This letter documents the proposed change in project scope for making improvements to your existing facilities to comply with NFPA 820 (Standard for Fire Protection in Wastewater Treatment and Collection Facilities, published by National Fire Protection Association). NFPA 820 was first authored in 1990 and updated several times with the latest version dated 2016. Anaerobic Digesters and related structures and equipment are included in Chapter 4, Table 4.2 of NFPA 820 with specific recommendations for best design practices. NFPA 820 has not been adopted in Kentucky, but is used by design professionals as a guide for designing wastewater facilities. We have discussed this pending change and our compliance approach in several meetings.

The existing anaerobic primary digester complex does not meet the standards promoted by NFPA 820. During this complete upgrade to the Primary Digester Complex, we recommend LFUCG make certain improvements to bring your facilities into conformance with NFPA 820 recommendations. These improvements include:

- Locating the HVAC air supply equipment outside of the hazard classification areas.
- Closing up doors and windows to separate nonhazardous areas from hazardous classified areas.
- Extending the northwest entrance into the building to be outside of the 10-foot external digester radius.
- Isolating the three digester gas handling equipment rooms from other spaces through structural barriers and providing separate access for these rooms.
- Eliminating roof penetrations within 10 feet of any digester.
- One additional consequence of these changes is to relocate the sludge hot water heaters (boilers) to the existing Engine/Blower building.

Our construction cost opinion for these changes increases the capital costs from about \$9.4M to \$10.4M.

In addition to the higher construction costs, we are requesting an amendment to our engineering agreement for the additional design scope. The following table summarizes the requested scope change amendment. Details are attached with this letter.

Tiffany Rank, P.E.
Lexington-Fayette Urban County Government
Page 2
December 21, 2016

Task	Change to Strand Contract	Change to Magna Contract	Change to Cornerstore Contract	Total Change
Code review, compliance strategy, and meetings	\$9,700	\$0	\$0	\$9,700
Relocate Boilers to Engine/blower Building	\$22,200	\$0	\$0	\$22,200
NFPA 820 Structural Design changes	\$0	\$0	\$57,643	\$57,643
Additional Structural Design	\$0	\$0	\$35,570	\$35,570
Additional subconsultant interaction	\$6,000	\$0	\$0	\$6,000
Total Change	\$37,900	\$0	\$93,213	\$131,113

Thank you for your consideration of these improvements and amendment. We are available to meet and discuss these recommendations further. We will continue design of the elements that are not impacted by these changes in scope. We can have the improvements designed and ready for bidding ten weeks after approval of the amendment.

Sincerely,

STRAND ASSOCIATES, INC.®

Michael L. Davis, P.E.

Mark A. Sneve, P.E.

Attachment