

McDonald & Associates, Inc

DATE: March 6, 2015

SUBJECT: Concrete Installed Quantity Testing

COPIES: Michael Eglinski – City of Lawrence Auditor, Bob McDonald and Warren Hudson – McDonald & Associates

Based on questions by the City of Lawrence concerning the testing of installed concrete, McDonald and Associates is providing additional information supporting the methodology and audit process. There were two steps approved by the City Auditor to conduct related testing under section III of the Audit Program. These sections stated the following steps:

- Select a sample of infrastructure items for testing. Unless there is an overriding reason to do otherwise, the items sampled should be judgmentally selected based on value.
- Conduct the testing on the sampled items and determine that the sample was adequate to reach a conclusion. If not discuss with the City Auditor and determine the next step.

Note: Other items were tested in addition to concrete (landscaping, lights, and tennis courts). There were no deficiencies noted.

The City provided the auditor several bundles of delivery tickets—the total reviewed was 481 delivery tickets totaling 7171 cubic yards of delivered concrete. The point of the judgmental sample was to ensure the audit could rely on the oversight provided by City Public Works. In addition to City employee logs there were various testing firms reviewing installed concrete with roughly 100 core samples. The items sampled were within 2% of the quantities installed for the Exhibit I line items examined. In addition, the audit contacted Thomas Fritzel at Bliss Sports II and obtained delivery ticket information for the entire project of 17,398 cubic yards compared to Exhibit I estimated quantities of 16,800 cubic yards.

The calculation assumptions made were based on the line items examined—the audit's focus was to gain reasonable assurance of installed quantities and determined reliance on the City's oversight. Given the result further testing was not considered necessary.