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SANDER ENGINEERING CORPORATION

CONSULTING ENGINEERS - SURVEYORS
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February 13, 2025

Mr. Jody Hooks
Director of Public Works
City of League City
1701 W League city Parkway
League City, Texas 77573

Re: Butler Road Lift Station Emergency Bypass and Repairs

22-052

Dear Mr. Hooks,

As requested by your office, Sander Engineering Corporation ("SEC") assisted with the assessment, bypass pumping requirements, and emergency repair options to address the manhole collapse and resulting sinkhole at the Butler Road Lift Station. The cause of the sink hole appears to be the failure of an existing (original) fiberglass manhole immediately upstream of the wet well and within the site paving. The manhole failure and loss of the surrounding soils remained unnoticed until soil along the north side of station collapsed, producing a visible sinkhole. Further investigation revealed that the manhole riser and cone had collapsed, and a large void had formed under the pavement. Immediate repairs were necessary to maintain lift station operations and to prevent additional damage to critical components of the lift station, i.e., control panel, service pole, ATS, and the backup generator.

Your office contacted SEC to assist with determination of the bypass options, required bypass capacity, assessment of the incoming gravity sewers, and assessment of the failure. SEC staff determined the bypass requirements, made several visits to the site, provided repair recommendations, and coordinated the repairs with city staff and Wagner Construction.

Our recommendations, based on the available information and the existing conditions, are to:


- 1) Reuse the existing 42-inch incoming gravity sewer which was rehabilitated with a cured-in-place liner sometime in the recent past. A video of the sewer line was obtained that shows that the line appears to be structurally sound. Wagner was requested to cut and square off the end of the sewer and install a short section of new sewer to the new manhole.
- 2) "Doghouse" a concrete manhole over the existing manhole base. The existing base appears to be stable and solid. Wagner will need to drill and epoxy rebar into the base to form and tie the proposed manhole to the base.
- 3) Wagner may need to replace the short section of gravity sewer from the manhole to the wet well. This will be assessed as they progress.
- 4) Backfill the voided area and fill voids under pavement with flowable fill.
- 5) Pour new concrete pavement and repair fencing.

Our understanding is the estimated total cost for the emergency repairs is \$420,000.

Wagner Construction has submitted an invoice for partial payment in the amount of \$71,281.20, which includes costs associated with saw cutting, shoring, bypass pumping and dewatering. SEC has observed the work during our site visits and recommends payment of \$71,281.20.

Should you have any questions or require additional information, don't hesitate to contact us.

Thank you


Erik D. Miller, P.E.
Vice President