

STAFF REPORT

DATE: January 25, 2022
TO: Ty Lasher, City Manager
FROM: Anne Stephens, Public Works Director
RE: Oliver Lift Station Engineering Services

Proposal Focus:

Our Mission

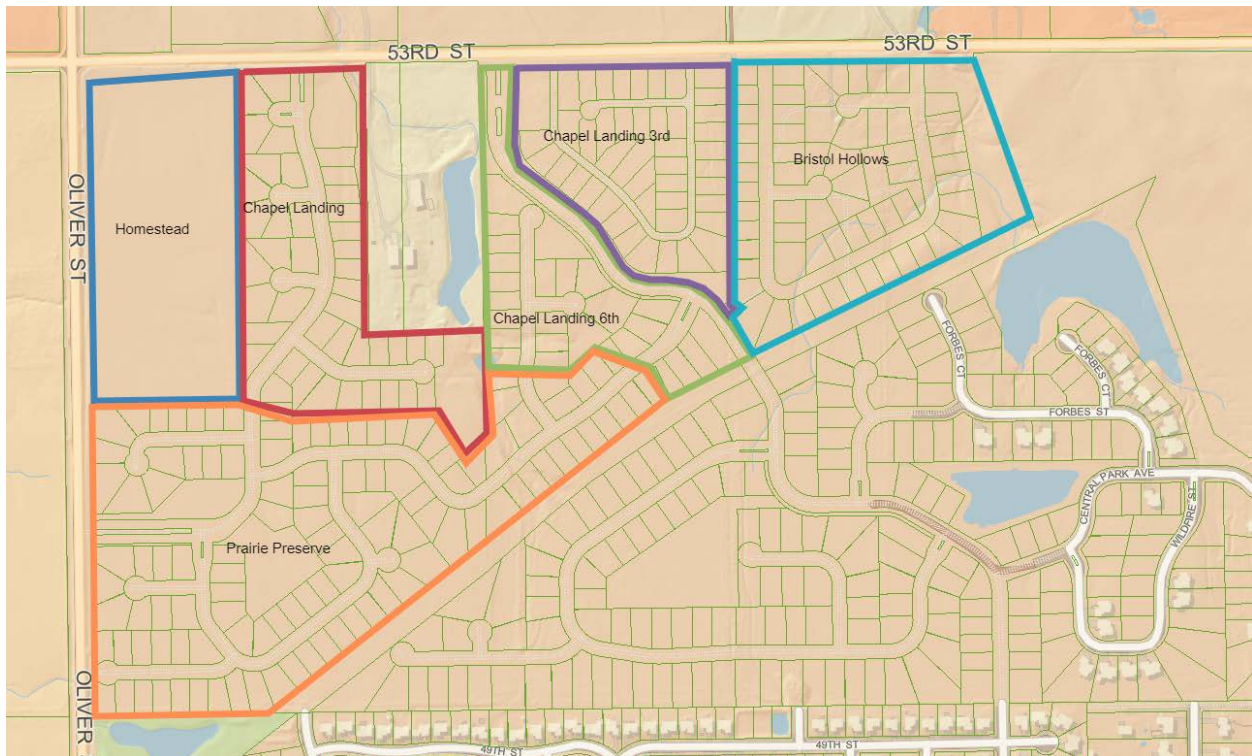
- Attractive growth and safe living – Encourage attractive neighborhoods and new developments.

Our Values

- Working Together – Departments working together as one team. Staff working with residents, HOA's and neighborhoods. Citizens working with each other.

Current Situation:

During the platting of the Homestead Senior Living at the southeast corner of 53rd and Oliver, the Engineer submitted a plan for sanitary sewer service. This sanitary sewer was also intended to serve the remaining portion of Chapel Landing north of the pipeline easement and south of 53rd Street.



The original sanitary sewer concept showed a gravity sewer line connecting to the sanitary sewer in Chapel Landing 3rd, then continuing on to the west – through the middle of the Kilgore property at a

slightly less than minimal slope. Slightly less than minimal slopes have been allowed by both the City of Bel Aire as well as KDHE in the past with the understanding that some additional maintenance (i.e. cleaning) will likely be necessary throughout the life of the sewer line. When the design plans were put together, it was realized that the distance across the Kilgore property was longer than the maximum distance between manholes acceptable by KDHE. Additionally, the City does not have equipment to be able to clean that long of a distance, so unfortunately, the design team needed to consider a lift station that would serve both Homestead and adjacent portion of Chapel Landing.

After reviewing the undeveloped/available land within the current City limits, and the current potential for sewer service and opening up more land for development, we requested that a regional lift station be considered in addition to the localized lift station that would serve only Homestead and Chapel Landing.

Goals:

- To work with the Developer to grow the City in an attractive, safe manner that is consistent with City standards.

Discussion:

The City has worked with Baughman Company, the Engineer for both Homestead and Chapel Landing to investigate both lift station options. As mentioned above, the localized lift station would serve Homestead and Chapel Landing, which encompasses approximately 31.5 acres. This lift station would be located in the northeast corner of the Homestead property and a forcemain would take the sewage from the lift station to the west and empty into a manhole in Chapel Landing 3rd. (See attached drawing). The localized lift station option is estimated to cost \$890,630.00 and would be financed through

The regional lift station would serve approximately 191.5 acres and be located approximately ¼ mile north of 53rd Street on the east side of Oliver. Baughman has already had preliminary discussions with the landowner and they are willing to consider locating the lift station on their land. No specific discussions regarding compensation or exact location have occurred at this point. (See attached drawing).

Financials:

The localized lift station option is estimated to cost \$890,630.00 and would be financed through a bond and spread as special assessments against the benefitting lots within the Homestead and Chapel Landing developments.

The regional lift station option is estimated to cost \$1,684,125.00.

Following consultation with the owners of both Homestead and the portion of Chapel Landing to be served by this lift station, Baughman proposes that the Homestead and Chapel Landing be responsible for approximately \$890,630.00 of the cost for the regional option and the City pick up the rest – which would be assessed as a benefit fee when new subdivisions within the service area wished to connect to the lift station. Assuming a 2% interest rate, the City's portion of the debt service is estimated to be between \$55,000 and \$60,000 a year. The City's sewer fund will pay this annual debt service.

Staff estimate that the localized lift station would cost approximately \$1700 a year to operate at full build out, where the regional lift station would cost approximately \$4500 a year to operate at full build out.

Since Baughman Company is currently working with the Developers of both Homestead and Chapel Landing, the City reached out to them requesting Engineering fees for Design and Construction Observation for the lift station. Their fees are as follows:

Localized Pump Station

Engineering Design Fees	\$61,800
Construction Administration/Inspection N.T.E.	\$40,500
Total	\$102,300

Regional Pump Station

Engineering Design Fees	\$94,500
Construction Administration/Inspection N.T.E.	\$62,000
Total	\$156,500

Recommendation:

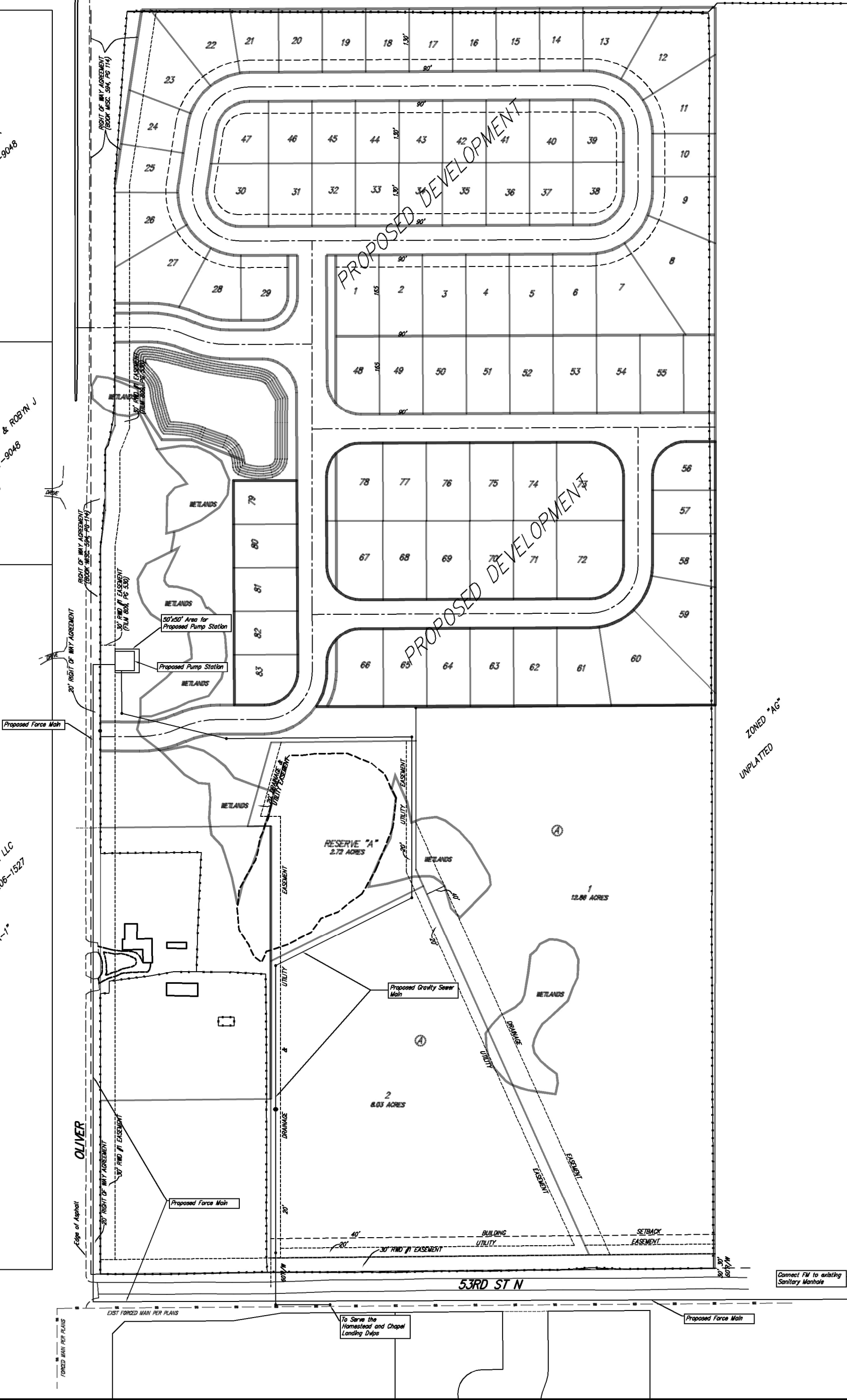
Since each lift station added to the sewer system requires additional on-going maintenance and upkeep (energy, daily checks, generator tests, cleaning, etc.), staff prefer the regional lift station approach.

THOMSON LC
5137 E 61ST ST N
KECHI, KS 67067-9002
ZONED "RR"

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OLIVER
KS 67067-9048
ZONED "A-1"

DANIEL W & ROBIN J
OLIVER
KS 67067-9048
ZONED "A-1"

REAL ESTATE LLC
STRATFORD
KS 67206-1527
ZONED "A-1"



ZONED "AG"
UNPLATTED

Connect FM to existing
Sanitary Manhole

To Serve the
Homestead and Chapel
Landing Dumps

Proposed Force Main

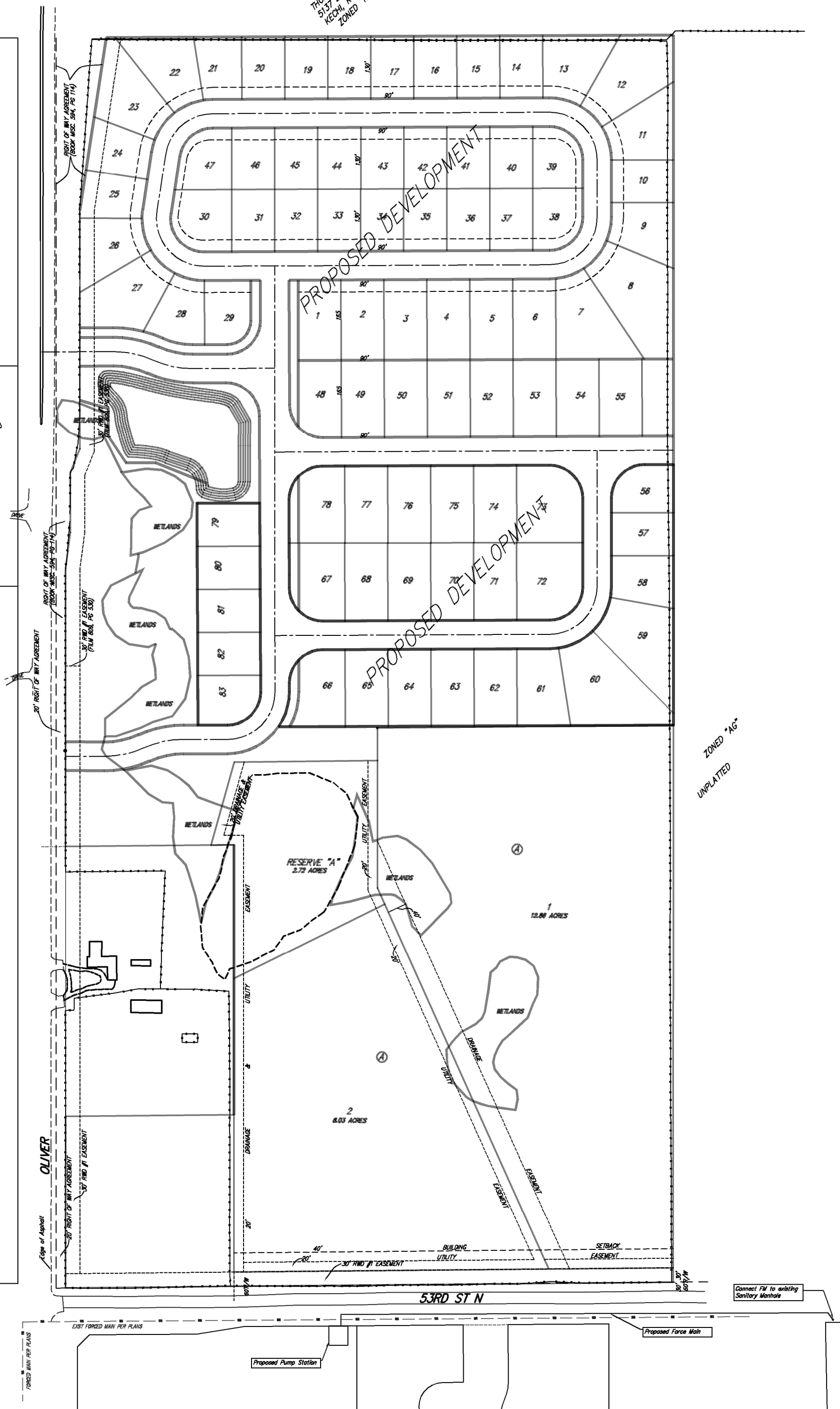
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ENN J ETUX
OLIVER
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"A-1"

MR. DANIEL W & ROBYN J
OLIVER
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REAL ESTATE LLC
STRATFORD
ITA, KS 67206-1527
ZONED "A-1"



Homestead / Chapel Landing

Bel Aire, Sedgwick County, Kansas

SANITARY SEWER PUMP STATION OPTION 1

Cost Estimate:

Item	Quantity	Unit	Unit Price	Amount
Pump Station Unit	1	LS	\$450,000.00	\$450,000.00
Connect to Existing MH / Dissipator	1	EA	\$2,500.00	\$2,500.00
4" PVC - FM	1300	LF	\$32.00	\$41,600.00
4" Directional Drill	100	LF	\$150.00	\$15,000.00
Dewatering	1	LS	\$15,000.00	\$15,000.00
Seeding and Erosion Control	1	LS	\$3,000.00	\$3,000.00
Site Clearing and Restoration	1	LS	\$18,000.00	\$18,000.00
3 Phase Electrical Extension	1	LS	\$125,000.00	\$125,000.00
Gas Service Extension	1	LS	\$15,000.00	\$15,000.00
Subtotal				\$685,100.00
+ 30% Design, Insp., & Administration				\$205,530.00
Total				\$890,630.00

Total Amount

\$891,000

Bel Aire NW Regional Pump Station

Bel Aire, Sedgwick County, Kansas

PUMP STATION / SANITARY SEWER MAIN PETITION

Cost Estimate:

Item	Quantity	Unit	Unit Price	Amount
Pump Station Unit	1	LS	\$550,000.00	\$550,000.00
10"/12" SS Main - Gravity	2300	LF	\$50.00	\$115,000.00
24" Steel Casing - Jack & Bore	230	LF	\$750.00	\$172,500.00
Manhole 5'	8	EA	\$6,000.00	\$48,000.00
MH Stub	6	EA	\$1,000.00	\$6,000.00
Connect to Existing MH	1	EA	\$3,500.00	\$3,500.00
6" PVC - FM	3000	LF	\$40.00	\$120,000.00
6" Directional Drill	150	LF	\$150.00	\$22,500.00
Flowable Fill	60	LF	\$80.00	\$4,800.00
Dewatering	1	LS	\$15,000.00	\$15,000.00
Seeding and Erosion Control	1	LS	\$20,000.00	\$20,000.00
Site Clearing and Restoration	1	LS	\$60,000.00	\$60,000.00
3 Phase Electrical Extension	1	LS	\$150,000.00	\$150,000.00
Gas Service Extension	1	LS	\$30,000.00	\$30,000.00
Easements Acquisition	1	LS	\$30,000.00	\$30,000.00
Subtotal				\$1,347,300.00
+ 25% Design, Insp., & Administration				\$336,825.00
Total				\$1,684,125.00

Total Amount

\$1,685,000