



Memo

To: Clay Pearson, City Manager

From: Jennifer Lee, Sr. Project Manager

CC: Trent Epperson, Deputy City Manager
Robert D. Upton, P.E., Director of Engineering & Public Works
Skipper Jones, Assistant Director of Capital Projects
Eric Hammond, Assistant Director of Public Works
David Van Riper, Assistant Director of Public Works

14 October 2021
To: Mayor and City Council members
Memo detailing the upcoming construction contract award for drainage improvements in West Lea. Bids exceed available budget and are reflective of the current inflationary climate. Additional funds have been identified to move the project forward meeting the City's drainage criteria.
-Trent

Date: October 14, 2021

Re: Pre-Award Memo for Construction of the West Lea Subdivision Drainage Improvements Project

Purpose

This memo provides information on the West Lea Subdivision Drainage Improvements project's bid phase and the forthcoming proposed award of a contract for construction to Reliance Construction Services and a contract for Material Testing services to Ninyo & Moore. The bids were opened on July 27, 2021 and the contractor has agreed to extend the hold of his bid until the October 25th and beyond if necessary. The project includes work within Brazoria Drainage District 4 Right of Way and therefore includes an Interlocal Agreement with Brazoria Drainage District 4 (BDD4). Finally, the project will require a contract for Construction Materials Testing which will also be presented to Council on the October 25, 2021 agenda. The construction will exceed the project budget, so staff is also requesting a fund transfer and an appropriation to address the budget shortfall.

Background

The design phase began in August 2019 and the project began advertising for bids on June 30, 2021 and bid in late July 2021. The project is part of the approved 2019 Drainage Bond Package. The West Lea subdivision (bounded by Manvel Road/FM1128, Bailey Road, BDD4 Ditch No. B122-00-00, and Mary's Creek) has a history of repeated flooding. With the issuance of the December 2020 Flood Insurance Rate maps (FIRM), approximately half of the subdivision is within the 100-year floodplain. The existing roadside ditches and trees are limiting what improvements can be made to deal with short duration, intense rainfall events. The subdivision is currently serviced by an inadequately sized open ditch system with undersized culvert piping and poorly aligned culverts and poor conveyance to the BDD4 receiving ditch and subsequent discharge into Mary's Creek. The system does not meet current minimum City engineering design standards for managing a 3-year storm resulting in increased frequency of nuisance and occasional residential flooding. The project will bring this drainage system up to City's 3-year storm system standards with the goal to reduce the frequency of flooding from intense short-duration rainfall events.

The project will improve internal collection capacity and conveyance within the subdivision and the conveyance out to Mary's Creek. The existing drainage system consists of a roadside ditch along Manvel Road/FM1128 on the west, roadside ditches within the subdivision and the outfall segment within the BDD4 Ditch No. B122-00-00. All drainage for this subdivision flows to Mary's Creek and approximately 90% of the subdivision drains to the BDD4's Ditch running north and south along the east side of subdivision which acts

as temporary detention prior to out-falling into Mary's Creek. Improvements within the collection system require the improvements to the BDD4's conveyance/outfall structure in order to maintain a zero impact on the receiving stream's (Mary's Creek) water surface elevation. While the City's project is mainly focused on improvements within the subdivision, BDD4 is widening Mary's Creek channel and will install all project related material within its Ditch No. B122-00-00.

To accomplish these improvements in the outfall ditch, the City is partnering with BDD4 to construct the improvements that include widening the ditch into more of a detention basin and installation of an outfall pipe that is a component of the subdivision improvements. The City provided additional easements along Mary's Creek, BDD4 conducted the acquisition work for the ditch, and BDD4 will construct those improvements within the ditch east of the subdivision. The work will improve the capacity for removal of stormwater from the subdivision's internal collection system and provide additional detention capacity during intense rainfall events.

The work that BDD4 will perform within their easement requires the cut, cap and removal of a 100+/- feet segment of the abandoned Enterprise pipeline in conflict with the flow line of the new outfall piping. The contract for this work will reside with BDD4 which will make the payment to Enterprise in the amount of \$64,311.

To define the roles and responsibilities of this partnership, Staff have created an Inter-local Agreement with BDD4. The agreement requires BDD4 to purchase and install the pipe and backfill material within their Drainage Easement (B122-00-00) and the City to reimburse the cost of those materials. The District will utilize their Annual Storm Box Culvert purchasing contract, awarded in July 2021, to secure these materials under a unit price contract bid earlier in the year and for larger quantities creating economies of scale. Under this agreement the City will reimburse BDD4 for the cost of this pipe and box culvert and the backfill material. In total the estimated reimbursable costs associated with this Inter-local Agreement will be \$856,690. The actual reimbursement will be based on invoices received for these materials. The Inter-local Agreement will be presented to Council along with the contract for construction and a contract for Materials Testing on the October 25 Agenda.

The elements of the work to be reimbursed are as follows:

Material Cost:

- Concrete box culverts- 443' @ \$543. Per ft - \$240,549.
- 48" HP Storm pipe- 5,385' @ \$53. Per ft- \$376,950.
- Cement stabilized sand- 8k tons @ \$21.86 per ton delivered- \$174,880.
- Total materials: **\$792,379.**

Enterprise pipeline Removal Estimate: **\$64,311.**

Total Reimbursable Costs associated with the **Inter-local Agreement \$856,690.**

Project Scope, Bid and Costs

The scope of West Lea Subdivision Drainage project includes modifying ditch flow-lines, widening roadside ditches and increasing culvert pipe sizes within the subdivision to collect and convey runoff to the Drainage District's detention facility immediately east of the subdivision. Improvements include the removal of existing undersized piping, installation of approximately 10,500 LF of up-sized piping, re-grading, widening, and re-shaping approximately 40,500 LF of roadside ditch, utility adjustments, replacement of street light conduit, the removal and replacement of driveway culverts, upsizing of culverts, tree removal and protection, sidewalk and pavement repair, and site restoration. The project will also make improvements to the drainage ditch

along the subdivision's eastern perimeter to Mary's Creek and improvements to the roadside ditch along Manvel Road (FM1128) in coordination with BDD4 and TxDOT.

The final cost estimate provided during the Design Phase was produced in February 2021, just prior to the winter storm that month. The Engineer's cost estimate rose 23% between February and May as a result of COVID impacts to the supply chain and the winter storm. The engineer revised his estimate again in June to \$6,011,950.00, but at the time of bid in late July, material costs had risen approximately another 10%.

Bid Results

Name	Response Total	Response Total Not including BDD4 Cash Allowance
Reliance Construction Services	\$6,612,673.92	\$5,656,673.92
Nerie Construction, LLC	\$6,803,770.98	\$5,847,770.98
DL Glover, Inc.	\$7,090,859.00	\$6,134,869.00
Mar-Con Services, LLC	\$8,138,367.59	\$7,182,367.59
Conrad Construction Co, LTD.	\$9,150,859.00	\$8,194,859.00
Triple B Services, LLP	\$9,196,372.00	\$8,240,372.00

The project utilized the Lowest Responsible Bidder (Local Gov't Code Chapter 271), subchapter (B) process. Bids were opened on July 27, 2021. Six contractors submitted bids ranging from \$6,612,673.92 to \$9,196,372.00. Reliance Construction Services was the apparent lowest responsible bidder, submitting the low bid of \$6,612,673.92. The low bid for the project (\$6,612,673.92) includes a \$956,000 material Allowance for material that will be installed in the BDD4 ditch which will instead be purchased through the Inter-Local Agreement with BDD4 as noted above. This will reduce the proposed Awarded Contract amount to \$5,656,673.92.

Reliance Construction Services has worked with the City recently on the Veterans Lift Station Abandonment project and they have completed several projects with the City which Staff have confirmed were completed satisfactorily. IDS Engineers, the engineer of record, has contacted the references provided and received exceptionally positive feedback on their performance of similar size and scope projects. The Engineer has reviewed the bids and has provided a Recommendation to Award to Reliance Construction Services.

However, this proposed construction contract plus the Construction Materials Testing (CMT) contract and the BDD4 interlocal agreement will exceed the available budget.

Staff considered re-bidding the construction after the bids came in so much higher than the budget, but because construction material cost and fuel cost have continued to rise since this project bid it was concluded the project may yield an even higher cost. As the design was progressed, the offsite work involving the BDD4 ditch expanded and required the pipeline relocation, which were not in the initial construction estimates. Additionally, due to the fact that several homes in the neighborhood have a history of repetitive loss and concerns related to drainage have been expressed by the residents on several occasions the recommendation is to move forward with the current bids. During the past year, the City staff has participated in several HOA meetings to understand the drainage concerns and to work with the residents to design a

system that will not dramatically impact the subdivision's "feel". The residents have donated easement for the completion of the work and have made other provisions to accommodate the new drainage system as a result of the HOA meetings. It is because of the effort by staff and the residents to collectively come up with a design that is functional with minimal impact to the community, staff is recommending the approval of the project even though the cost is now over the estimated construction budget.

Budget Info

Funding Sources	Series	To Date	Future	Total Budget
General Revenue - Cash				-
Certificates of Obligation				-
General Obligation Bonds	2020	600,000		600,000
General Obligation Bonds	2021	1,000,000		1,000,000
General Obligation Bonds	TBS2022	3,992,000		3,992,000
General Obligation Bonds *	TBS2022	950,000		950,000
W/S Revenue Bonds				-
Impact Fee - Debt				-
Other Funding Sources (Transfer from DR2201)*		490,062		490,062
Other Funding Sources (Fund Balance from 506)*		395,344		395,344
Total Funding Sources		7,427,406	-	7,427,406

Expenditures	To Date	Future	Total
PER			-
Land			-
Design	563,630		563,630
Construction		6,513,364	6,513,364
Construction Management/Inspection			-
Construction Materials Testing		99,380	99,380
FF&E			-
Total Expenditures	563,630	6,612,744	7,176,374

Project Contingency	3%	250,000
Project Balance		1,032

*Pending Council approval

To address the budget shortfall, staff identified three available sources of funding:

- \$395,344 is available in Fund 506 Fund Balance
- \$490,062 was identified in the Southeast Quadrant of Old Townsite Drainage Infrastructure project (DR2201) that is no longer needed due to PEDC and the City having a reimbursement agreement in place for this project associated with the Sullivan Brothers development.
- \$950,000 was identified the Hickory Slough Regional Detention Pond (DR1905) project The Hickory Slough regional detention project is a joint project with BDD4 that cannot be constructed until the completion and acceptance by TxDOT of the McHard Road project, as it expands one of the roadway's detention ponds. Based on current timing, that project will not be able to start until FY23 allowing the available funds to be used on the West Lea project with Council approval.

The funding shortfall and effort to identify additional funding has delayed Staff's request to award the contract for construction. The Bid Documents required the contractor to hold his bid for up to ninety days from the Bid Date. As previously mentioned, the contractor has agreed to hold the bid prices until November 23, 2021 allowing for an award in the October 25, 2021 Council meeting.

Schedule Info:

	Base Line	Current
Design Start	August-19	August-19
Bid Start	June-20	June-21
Construction Start	November-21	
Construction Completion	March-23	

Recommendation

Three items will be recommended at the October 25th City Council meeting:

- 1) Staff will recommend award of Construction Material Testing contract to Ninyo and Moore in the amount of \$99,380.
- 2) Staff will recommend approving an Interlocal Agreement with BDD4 in the amount of \$856,690.
- 3) Staff will recommend that Council at the October 25th meeting approve to transfer \$490,062 from DR2201 to DR1904, an additional appropriation of \$395,344 from Fund 506 Fund Balance, and an additional appropriation of \$950,000 from DR1905 to DR1904 and to award the contract for construction to Reliance Construction Services without the cash allowances of \$956,000, in the amount of \$5,656,673.92.

Previous Memos 06.20.19, 10.08.20, 03.18.21

Project Location Map

WEST LEA VICINITY MAP



CITY OF PEARLAND West Lea



This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

1 inch = 300 feet

DECEMBER 2018
GIS DEPARTMENT



ENTERPRISE PIPELINE

