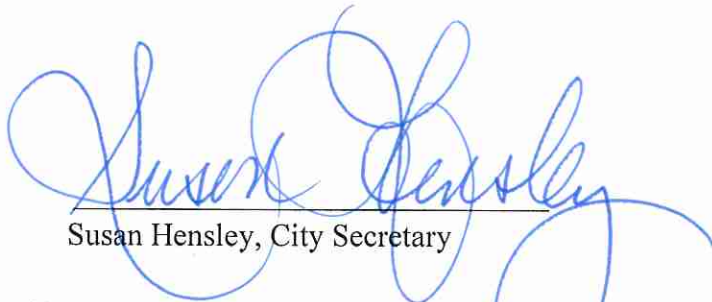


NOTICE OF MEETING

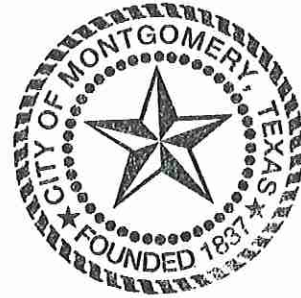
Montgomery Capital Improvement Advisory Committee

Notice is hereby given that the Montgomery Capital Improvement Advisory Committee, will hold a meeting at 1:00 p.m. on Friday, October 7, 2016 at Montgomery City Hall, 101 Old Plantersville Road, in Montgomery, Texas for the purpose of considering the following:

1. Call to Order
2. Approval of minutes from Organizational Meeting held on September 2, 2016.
3. Discussion and possible action regarding the following:
 - a) Land Use Assumptions:
 - b) Capital Improvement Plan:
 - c) Filing of Committee's written comments on Land Use Assumptions and Capital Improvements Plan; and
 - d) City Council Public Hearing to be held on October 25, 2016.
4. Discussion and possible action regarding Committee Meeting schedule.
5. Adjourn



Susan Hensley, City Secretary



I certify that the attached notice of meeting was posted on the bulletin board at City of Montgomery City Hall, 101 Old Plantersville Road, Montgomery, Texas, on the 3rd day of October, 2016 at 4:10 o'clock p.m. I further certify that the following news media was notified of this meeting as stated above: The Courier

This facility is wheelchair accessible and accessible parking spaces are available. Please contact the City Secretary's office at 936-597-6434 for further information or for special accommodations.

MINUTES OF ORGANIZATIONAL MEETING

September 2, 2016

MONTGOMERY CAPITAL IMPROVEMENT ADVISORY COMMITTEE

CALL TO ORDER

The City Secretary, Susan Hensley, declared a quorum was present, and called the meeting to order at 2:00 p.m.

Present: Nelson Cox Committee Member
 Jeffrey Waddell Committee Member
 Randy Burleigh Committee Member
 Jennifer Brown Committee Member
 Chris Cheatham Committee Member

Absent:

Also Present: Jack Yates City Administrator
 Ed Shackelford City Engineer
 Glynn Fleming City Engineer
 Rebecca Huss City Council Member
 Susan Hensley City Secretary

CONSIDERATION AND POSSIBLE ACTION:

2. **Election of Officers: Chairperson, Vice-Chairperson and Secretary.**

Mr. Cheatham moved to nominate Mr. Cox to serve as the Chairperson. Mr. Waddell seconded the motion, the motion carried with four ayes, and 1 nay vote by Mr. Cox. (4-1)

Chairman Cox nominated Mr. Burleigh as Vice Chairperson. Mr. Waddell seconded the motion, the motion carried unanimously. (5-0)

Mr. Waddell nominated Ms. Brown as Secretary. Chairman Cox seconded the motion, the motion carried unanimously. (5-0)

3. **Consider and possible action regarding adoption of Bylaws.**

Mr. Burleigh noted that in the Resolution, Items Cii and Ciii were duplicate items. Ms. Hensley advised that the Resolution had been adopted by City Council. Mr.

Shackelford said that that main point was the Committee was subject to all the rules and regulations associated with the Open Meetings Act.

After discussion, Mr. Burleigh moved to adopt the Bylaws as written in City of Montgomery Resolution No. 2016-06. Mr. Cheatham seconded the motion, the motion carried unanimously. (5-0)

4. **Introduction of purpose, rights and responsibilities of the Committee by Mr. Glynn Fleming, Jones & Carter.**

Mr. Fleming advised that each Committee member had been issued a copy of the Local Government Code, Chapter 395 - Financing Capital Improvements Required by New Development in Municipalities, Counties, and Certain Other Local Governments. Mr. Fleming said that this will serve as the blueprint in implementing the Impact Fees of the next 12-16 months. A copy of the presentation materials are attached heretofore as Exhibit "A."

Mr. Fleming advised that the Committee will file semiannual reports to City Council that will detain the progress of the Committee and their accomplishments, and what they have left to do. Mr. Fleming advised that City Council might also ask the Committee to look at other issues under the guise of the Committee.

Mr. Fleming advised that in the initial phase as the Committee moves through the Capital Improvements Plan, as they head toward the implementation of the Impact Fees, the Committee will be asked to deliver a handful of assessments to City Council.

Mr. Fleming said that during this initial meeting today, they will talk through the draft Impact Fee Report. The Committee will take the report and review it and make comments on their thoughts, which will eventually be presented to City Council in draft form for them to review. Mr. Fleming said that report will be due a minimum of five (5) days prior to the City Council Public Hearing. At the Public Hearing, City Council will receive and review the Committee's written comments, along with the public's comments.

Following the City Council Public Hearing, the information and comments from the Committee and the public will be compiled by Mr. Fleming. Then a revised Final Draft of the Impact Fee Report will be prepared. Mr. Fleming said that there will be another City Council Public Hearing, with 30 days advanced notice, where the public will have

the opportunity to comment on the proposed Impact Fees. Mr. Fleming said at that point the City Council will have a written ordinance before them to consider, and if they act favorably, the Impact Fees will be adopted.

Mr. Fleming advised that even after the Impact Fees have been adopted and are in place, the City can't actually impose them on new development for a period of twelve (12) months.

Mr. Shackelford advised that the Impact Fee Checklist, which was handed out at the meeting will have dates filled into the blanks when they get the schedule.

Mr. Burleigh stated that he had read that they could not impose impact fees on the School District, unless the Trustees meet with the City, and they have some type of side agreement. Mr. Burleigh asked if that meeting needed to be held up front. Mr. Shackelford said that the school have gotten very adept at trying to arguing their way out of paying impact fees. Mr. Shackelford said that they need to check with the attorney and see if they can institute a capital recovery fee for schools. Mr. Shackelford said that they are not wanting to make a profit off of the schools, but they are wanting them to pay for capacity that they will consume out of the water and sewer plants.

A copy of the draft City of Montgomery Water and Wastewater Impact Fee Analysis, prepared by Jones & Carter (*dated September 2016*), and Impact Fee Checklist are attached heretofore as Exhibit "B."

5. Report on the City's Water and Sewer Infrastructure.

Mr. Fleming presented a report on the City's water and sewer infrastructure. The Committee held a brief discussion. Mr. Fleming advised that there were extra copies of the City's Master Plans for both water and sewer available to the Committee, which provide detailed information on both of the utilities.

6. Report and discussion on the following:

- a) **Land Use Assumptions:**
- b) **Capital Improvement Plan: and**
- c) **Impact Fees.**

Mr. Fleming made the presentation, of which, a copy of the presentation is included in Exhibit "A."

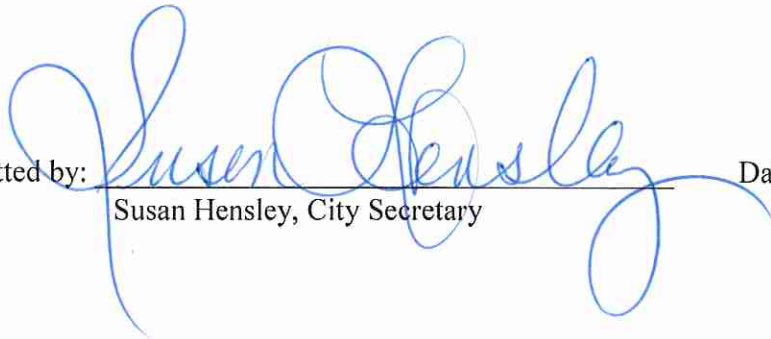
7. **Discussion and possible action regarding Committee Meeting schedule.**

After discussion, the Committee agreed to schedule the next meeting to be held on Friday, October 7, 2016 at 1:00 p.m.

8. **Adjourn**

Mr. Cheatham moved to adjourn the meeting at 3:32 p.m. Mr. Burleigh seconded the motion, the motion carried unanimously. (5-0)

Submitted by:



Susan Hensley, City Secretary

Date Approved: _____

Nelson Cox, Chairman



8701 New Trails Drive, Suite 200
The Woodlands, Texas 77381-4241
Tel: 281.363.4039
Fax: 281.363.3459
www.jonescarter.com

October 4, 2016

Capital Improvement Advisory Committee
City of Montgomery
101 Old Plantersville Road
Montgomery, Texas 77316

Re: Committee Meeting: October 7, 2016
City of Montgomery

Dear Committee Members

Recall at your previous meeting we discussed the adoption of system wide land use assumptions in lieu of utilizing multiple service areas and presented to you a draft copy of the Water and Wastewater Impact Fee Analysis which will be delivered on your behalf to the City Council. Included in this report are the design assumptions and proposed capital projects which fall within the State mandated planning period of 10-years, as well as proposed impact fee calculations. The primary goals of our upcoming meeting on Friday are as follows:

- Address questions stemming from your initial meeting,
- Utilize this feedback to assist in finalizing the draft Analysis, and
- Compile your comments on both land use assumptions and the capital improvements plan into a singular written form.

The draft Analysis, summary of land use assumptions, capital improvements plan, and your written comments must be delivered to the City Council on or before October 18th. On October 25th the City Council will convene a Public Hearing on the land use assumptions and capital improvements plan relating to the possible adoption of Impact Fees. During this hearing, any member of the public may appear and present evidence for or against the proposed land use assumptions and capital improvements plan. Following this hearing, and relying on your comments as well as those received from the public, the Council may determine to adopt or reject a resolution approving the land use assumptions and capital improvements plan.

Per your request and as additional aid for Friday's meeting, enclosed with this memo is a brief checklist delineating the impact fee adoption process and excerpts from the Water and Sanitary Sewer System Analysis and Master Plan reports featuring detailed summaries of projects appearing in the capital improvements plan.

We look forward to meeting with everyone on Friday. Thank you for the opportunity to serve the City of Montgomery, and as always, please contact Glynn Fleming or myself if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ed Shackelford', written over a light blue circular stamp.

Ed Shackelford, P.E.
Engineer for the City



City of Montgomery
Page 2
October 4, 2016

P:\PROJECTS\W5841 - City of Montgomery\W5841-0900-00 General Consultation\2016\CIAC Reports\10.7.2016\CIAC Meeting.docx

Enclosures: Impact Fee Checklist
 Water System Analysis and Master Plan Excerpts
 Sanitary Sewer System Analysis and Master Plan Excerpts

cc/enc.: The Honorable Mayor and City Council – City of Montgomery
 Mr. Jack Yates – City of Montgomery, City Administrator
 Ms. Susan Hensley – City of Montgomery, City Secretary
 Mr. Larry Foerster – Darden, Fowler & Creighton, LLP, City Attorney

Ch. 395 Impact Fee Checklist

Date	Event	Timing	Section of LGC	Notes
A.	Land use assumptions (LUA) developed	Before F	§ 395.014	1
B.	Capital improvements plan (CIP) developed; impact fee (IF) calculated	Before F	§ 395.0411	2; 3
C.	Capital improvements advisory committee (Committee) appointed; procedural rules adopted	On or before D	§ 395.058	4: 5
D.	Resolution setting hearing on LUA & CIP adopted	On or after C	§ 395.042	6
E.	Notice of hearing on LUA & CIP published and mailed to certain persons	Before the 30 th day before G	§ 395.044	7
F.	LUA & CIP made public	On or before E	§ 395.043	
G.	Hearing on LUA & CIP held	See D, E	§ 395.042	8
H.	Ordinance approving LUA & CIP adopted	Within 30 days of G	§ 395.045	
I.	Resolution setting hearing on IF adopted	On H	§ 395.047	6
J.	Notice of hearing on IF published, mailed to certain persons if necessary	Before the 30 th day before L	§ 395.049	9
K.	Committee files written comments on IF	Before the 5 th business day before L	§ 395.050	
L.	Hearing on IF held	See I, J, K	§ 395.047	8
M.	Ordinance imposing IF adopted	Within 30 days of L	§ 395.051	10

Periodic Update of Land Use Assumptions and Capital Improvements Plan

N.	Updated LUA developed	At least every five years after H	§ 395.052	
O.	Updated CIP developed	At least every five years after H	§ 395.052	
P.	Order setting hearing on updated LUA & CIP	Within 60 days of the later of N or O	§ 395.053	
Q.	Notice of hearing on updated LUA & CIP published, mailed to certain persons if necessary	Before the 30 th day before T	§ 395.055	11
R.	Updated LUA & CIP made public	On or before Q	§ 395.054	12
S.	Committee files written comments on updated LUA & CIP	Before the 5 th business day before T	§ 395.056	
T.	Hearing on updated LUA & CIP	See P, Q, R	§ 395.056	
U.	Ordinance approving amendments to LUA, CIP & IF adopted	Within 30 days of T	§ 395.057	

4 WATER IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The City commissioned Jones|Carter to complete a Water System Analysis and Master Plan utilizing Bentley WaterGEMS (v8i) in 2015. The purpose of the water master plan is to provide the City with a logical strategy for upgrading and expanding its water distribution system to accommodate future growth and for addressing existing system deficiencies.

Eight projects are determined eligible for recoverable costs through impact fees over the next 10 years. The total cost of these projects is **\$6,799,000**. The projected total recoverable costs through impact fees is **\$4,350,142**. After the credit calculation and 50% reduction is completed (see section 6), **\$2,175,071** is recoverable through impact fees within the next 10 years.

A. PROJECT DESCRIPTIONS⁽¹⁾

1. WATER PLANT No. 2 GST BACKFILL

Installation of additional piping, valves and electrical controls to fill the ground storage tank (GST) at Water Plant No. 2 from Water Well No. 4 (Catahoula) by backfilling from the existing distribution system.

Estimated Project Cost **\$136,000**

2. BUFFALO SPRINGS BRIDGE CROSSING

Installation of approximately 700 linear-feet of 12-inch waterline across the Buffalo Springs Bridge.

Estimated Project Cost **\$90,000**

3. DOWNTOWN & SH-105 IMPROVEMENTS

Provide a better path for water from Water Plant No. 3 to Water Plant No. 2, including eliminating variations in existing line diameter.

Estimated Project Cost **\$722,000**

4. LONE STAR PARKWAY TO TOWN CREEK APARTMENTS IMPROVEMENTS

Provide a waterline loop along Lone Star Parkway to the future extension of Emma's Way on the west side of the City to facilitate future growth and demand, and a future elevated storage tank.

Estimated Project Cost **\$834,000**

5. LONE STAR PARKWAY FROM FM 149 TO SH-105 WATERLINE

Provide a waterline loop along Lone Star Parkway and Buffalo Springs Drive through the central area of future development to serve the northeast areas and Lone Star Parkway.

Estimated Project Cost **\$712,000**

6. ELEVATED STORAGE TANK

Provide elevated storage to stabilize the water system and provide increased capacities and pressure.

Estimated Project Cost **\$2,726,000**

⁽¹⁾ Projects are fully described with accompanying exhibits and cost estimates in the 2015 Water System Analysis and Master Plan.

7. OLD PLANTERSVILLE ROAD WATERLINE

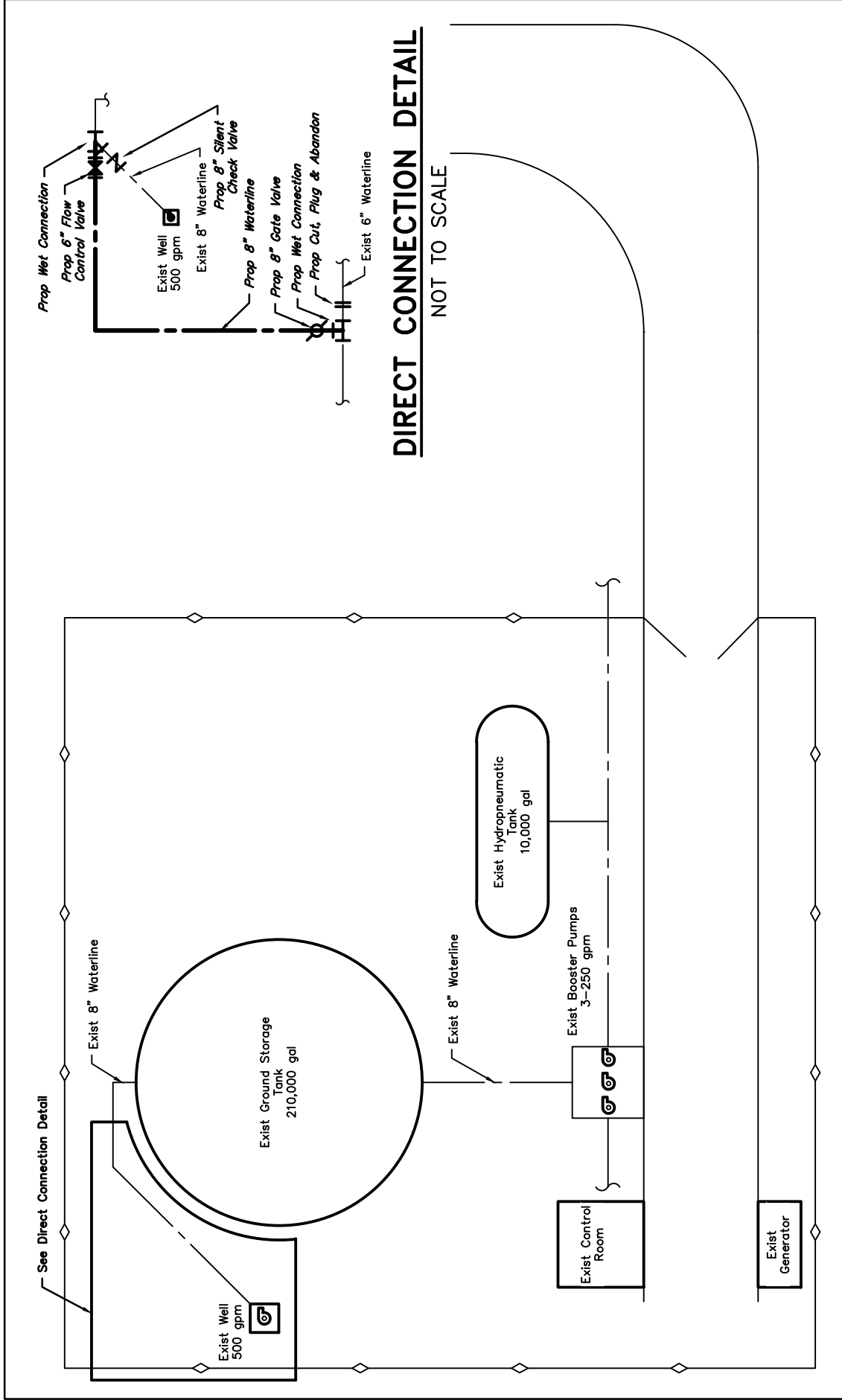
Provide a 12-inch waterline loop to better manage pressure variations and deliver adequate fire flow capacity to the southwest portion of the City.

Estimated Project Cost **\$695,000**

8. WATER PLANT No. 3 IMPROVEMENTS

Installation of additional plant infrastructure to improve water quality and pressure.

Estimated Project Cost **\$884,000**



WATER PLANT No. 2 OVERALL LAYOUT

NOT TO SCALE

City of Montgomery

**WATER PLANT No. 2
BACKFILL
CONNECTION**

**ATTACHMENT B1
 COST ESTIMATE
 FOR CONSTRUCTION OF
 CAPITAL PROJECT No. 1
 WATER PLANT NO. 2 BACKFILL CONNECTION
 FOR
 CITY OF MONTGOMERY
 November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 5,000	\$ 5,000
2.	8-inch (8") Ductile Iron Pipe	L.F.	60	150	9,000
3.	Pipe Supports	L.S.	1	5,000	5,000
4.	8-inch (8") Wet Connection	EA.	2	2,000	4,000
5.	8-inch (8") Silent Check Valve	EA.	1	4,000	4,000
6.	Flow Control Valve Station	EA.	1	25,000	25,000
7.	8-inch (8") Cut, Plug & Abandon	EA.	2	3,000	6,000
8.	Coatings	L.S.	1	3,000	3,000
9.	Electrical Controls	L.S.	1	25,000	25,000
10.	Remove and Replace Chain Link Fence	L.F.	40	25	1,000
11.	Clearing and Grubbing	L.S.	1	1,000	1,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	1,000	1,000
				Subtotal	\$ 89,000
Sub-Total All Items					89,000
Contingencies (25%)					22,000
Engineering					25,000
TOTAL					\$ 136,000

NOTES :

- ⁽¹⁾ All Totals have been rounded to the nearest \$1,000.
- ⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- ⁽³⁾ The Electrical Controls are to limits the flow into the GST and ensure it only happens when the system pressure is above 40 psi and during non-peak demand hours.
- ⁽⁴⁾ This estimate is based on the assumption there is adequate piping to the water plant site to provide the required flow to the ground storage tank.
- ⁽⁵⁾ This estimate does not include inflation.



Kyle Kaspar 11/5/15

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VICINITY MAP

Scale: 1 inch equals 2 miles

LEGEND

- █ Capital Project (CP)
- Waterline
- MCAD Parcels

*Aerial Imagery flown January 2014



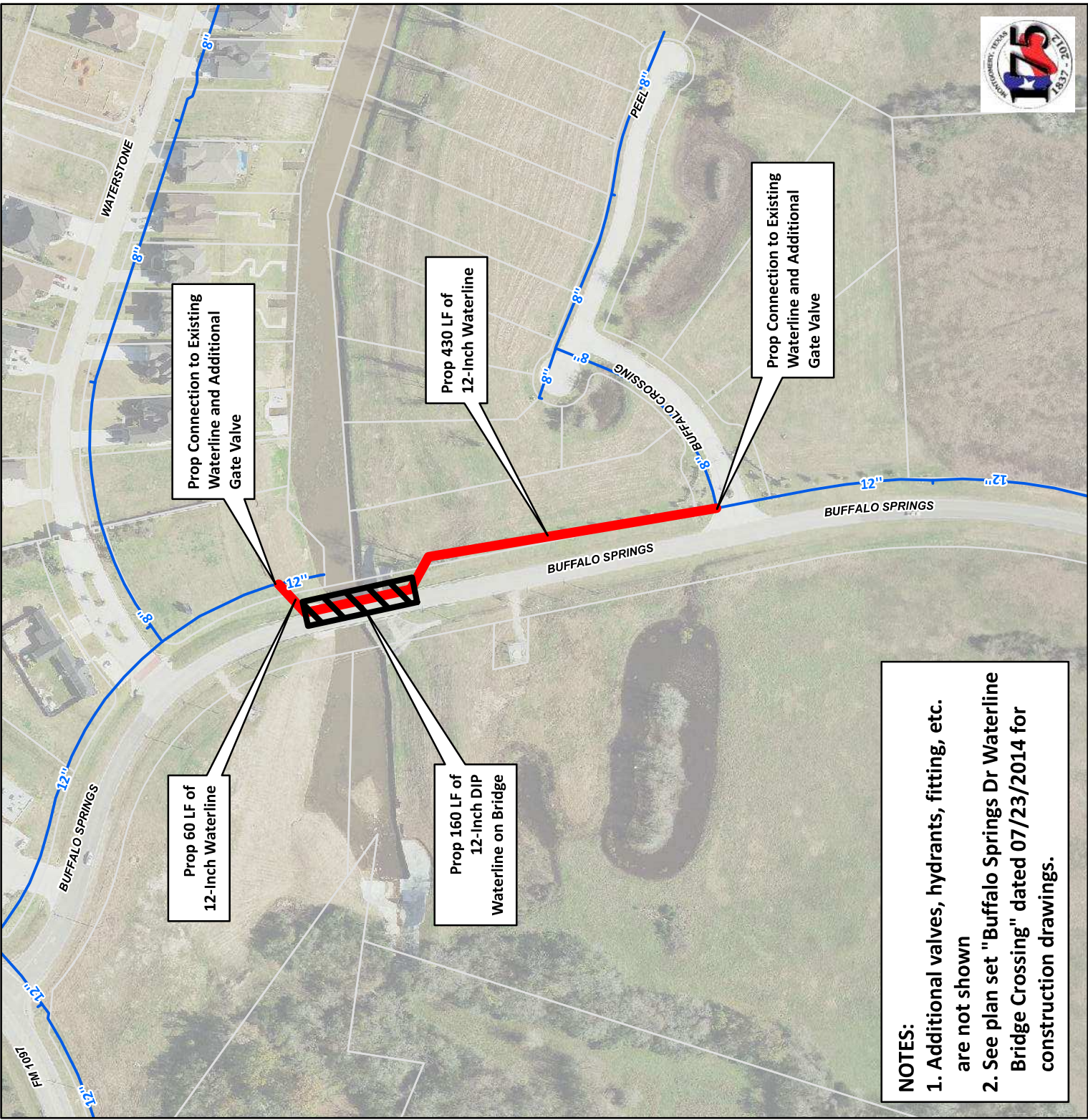
CAPITAL PROJECT No. 2



1 inch equals 200 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
 Vertical Datum: NAVD 1988 - 2001 Adjustment



Prop Connection to Existing Waterline and Additional Gate Valve

Prop 430 LF of 12-Inch Waterline

Prop Connection to Existing Waterline and Additional Gate Valve

Prop 60 LF of 12-inch Waterline

Prop 160 LF of 12-inch DIP Waterline on Bridge

NOTES:

1. Additional valves, hydrants, fitting, etc. are not shown
2. See plan set "Buffalo Springs Dr Waterline Bridge Crossing" dated 07/23/2014 for construction drawings.

**ATTACHMENT B2
COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 2
BUFFALO SPRINGS WATERLINE BRIDGE CROSSING
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 5,000	\$ 5,000
2.	Remove and Dispose of Existing 12-inch (12") Waterline	L.F.	60	15	1,000
3.	12-inch (12") Waterline (Open Cut)	L.F.	479	50	24,000
4.	12-inch (12") DIP Waterline Mounted on Bridge	L.F.	161	100	16,000
5.	Air Release Valve	Ea.	1	2,000	2,000
6.	12-Inch (12") Gate Valve & Box	Ea.	2	2,000	4,000
7.	Fire Hydrant Assembly	Ea.	2	4,000	8,000
8.	Wet Connection to Existing 12-Inch Waterline	Ea.	2	1,000	2,000
9.	Trench Safety System	L.F.	479	2	1,000
10.	Site Restoration	L.S.	1	3,000	3,000
11.	Traffic Control	L.S.	1	2,000	2,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	1,000	1,000
				Subtotal	\$ 69,000
Sub-Total All Items					69,000
Contingencies (10%)					7,000
Engineering					14,000
TOTAL					\$ 90,000

NOTES :

⁽¹⁾ All Totals have been rounded to the nearest \$1,000.

⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.

⁽³⁾ Engineering estimate includes advertising, bidding, construction administration, construction inspection, and materials testing.

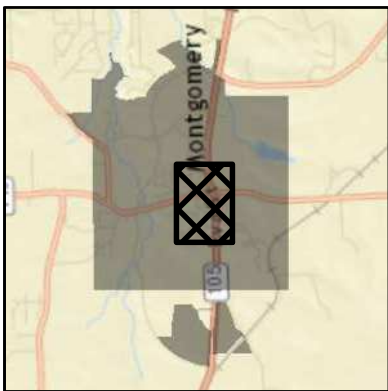
⁽⁴⁾ This estimate does not include inflation.



Kyle H. Kaspar 11/5/15

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VICINITY MAP
Scale: 1 inch equals 2 miles

LEGEND

- █ Capital Project (CP)
- Waterline
- WP Boundary
- MCAD Parcels

*Aerial Imagery flown January 2014



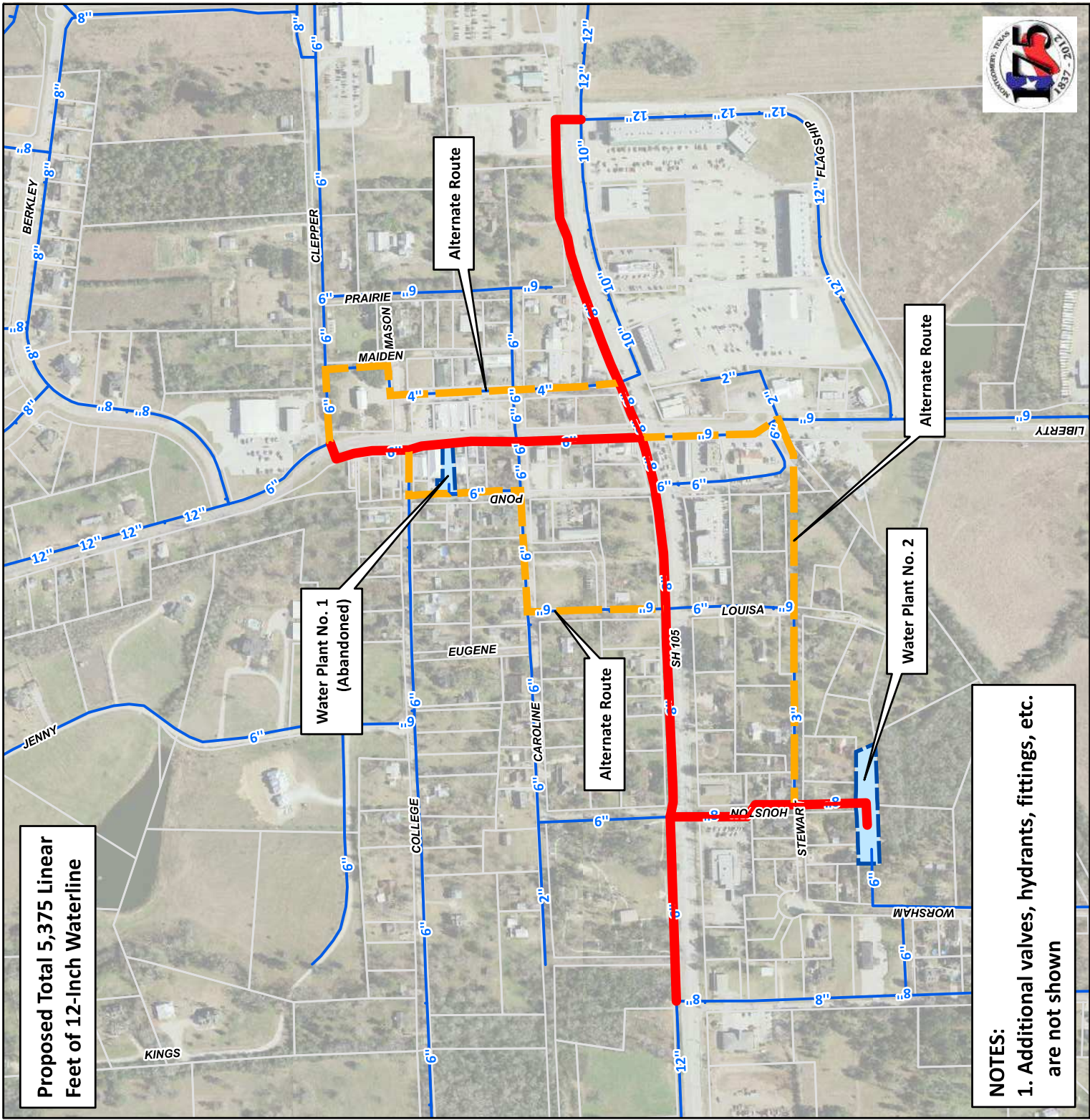
CAPITAL PROJECT No. 3



1 inch equals 500 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
Vertical Datum: NAVD 1988 + 2001 Adjustment



Proposed Total 5,375 Linear Feet of 12-Inch Waterline

NOTES:
1. Additional valves, hydrants, fittings, etc. are not shown

**ATTACHMENT B3
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 3
HIGHWAY 105 & FM 149 WATERLINE REPLACEMENT
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 31,000	\$ 31,000
2.	Abandon or Remove Existing Waterline	L.F.	2,000	5	10,000
3.	12-inch (12") Waterline (Open Cut)	L.F.	1,680	50	84,000
4.	12-inch (12") Waterline (Trenchless Construction)	L.F.	2,000	75	150,000
5.	12-inch (12") Waterline (Trenchless with 20-Inch Steel Casing)	L.F.	320	150	48,000
6.	12-Inch (12") Gate Valve & Box	Ea.	20	2,000	40,000
7.	Fire Hydrant Assembly	Ea.	11	4,000	42,000
8.	Connection to Existing Waterline	Ea.	20	1,000	20,000
9.	Trench Safety System	L.F.	1,680	1	2,000
10.	Site Restoration (including Pavement)	L.S.	1	40,000	40,000
11.	Traffic Control	L.S.	1	25,000	25,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	10,000	10,000
				Subtotal	\$ 502,000
Sub-Total All Items					502,000
Contingencies (25%)					126,000
Engineering (15%)					94,000
TOTAL					\$ 722,000

NOTES :

- ⁽¹⁾ All Totals have been rounded to the nearest \$1,000.
- ⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- ⁽³⁾ This estimate does not include inflation.
- ⁽⁴⁾ This estimate does not include costs for easements or easement acquisition.



Kyle H. Kaspar 11/5/15



VICINITY MAP
Scale: 1 inch equals 2 miles

LEGEND

- Capital Project (CP)
- Waterline
- WP Boundary
- City Limits
- MCAD Parcels

*Aerial Imagery flown January 2014



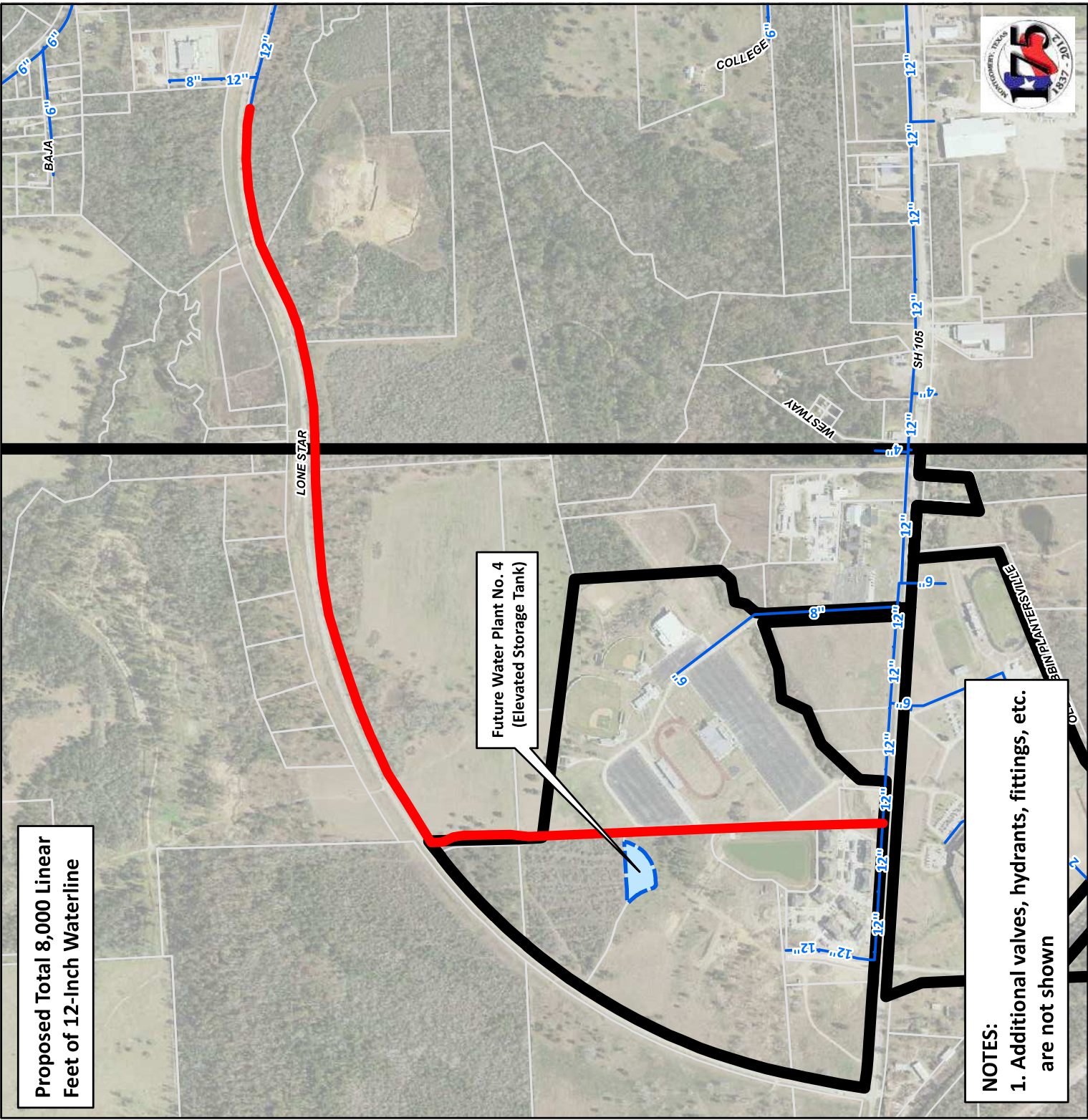
CAPITAL PROJECT No. 4



1 inch equals 900 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
Vertical Datum: NAVD 1988 - 2001 Adjustment



Proposed Total 8,000 Linear Feet of 12-Inch Waterline

Future Water Plant No. 4 (Elevated Storage Tank)

NOTES:
1. Additional valves, hydrants, fittings, etc. are not shown

**ATTACHMENT B4
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 4
LONE STAR PARKWAY WEST 12-INCH WATERLINE
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 33,000	\$ 33,000
2.	12-inch (12") Waterline (Open Cut)	L.F.	7,610	50	381,000
3.	12-inch (12") Waterline (Trenchless Construction)	L.F.	240	75	18,000
4.	12-inch (12") Waterline (Trenchless with 20-Inch Steel Casing)	L.F.	150	150	23,000
5.	12-Inch (12") Gate Valve & Box	Ea.	8	2,000	16,000
6.	Fire Hydrant Assembly	Ea.	16	4,000	64,000
7.	Connection to Existing Waterline	Ea.	2	1,000	2,000
8.	Trench Safety System	L.F.	7,610	1	8,000
9.	Site Restoration (including Pavement)	L.S.	1	15,000	15,000
10.	Traffic Control	L.S.	1	15,000	15,000
11.	Storm Water Pollution Prevention Plan	L.S.	1	5,000	5,000
				Subtotal	\$ 580,000
Sub-Total All Items					580,000
Contingencies (25%)					145,000
Engineering (15%)					109,000
TOTAL					\$ 834,000

NOTES :

⁽¹⁾ All Totals have been rounded to the nearest \$1,000.

⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry Jones | Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.

⁽³⁾ This estimate does not include inflation.

⁽⁴⁾ This estimate does not include costs for easements or easement acquisition.



Kyle H. Kaspar 11/5/15



VICINITY MAP
Scale: 1 inch equals 20 miles

LEGEND

- █ Capital Project (CP)
- █ Waterline
- WP Boundary
- MCAD Parcels

*Aerial Imagery flown January 2014



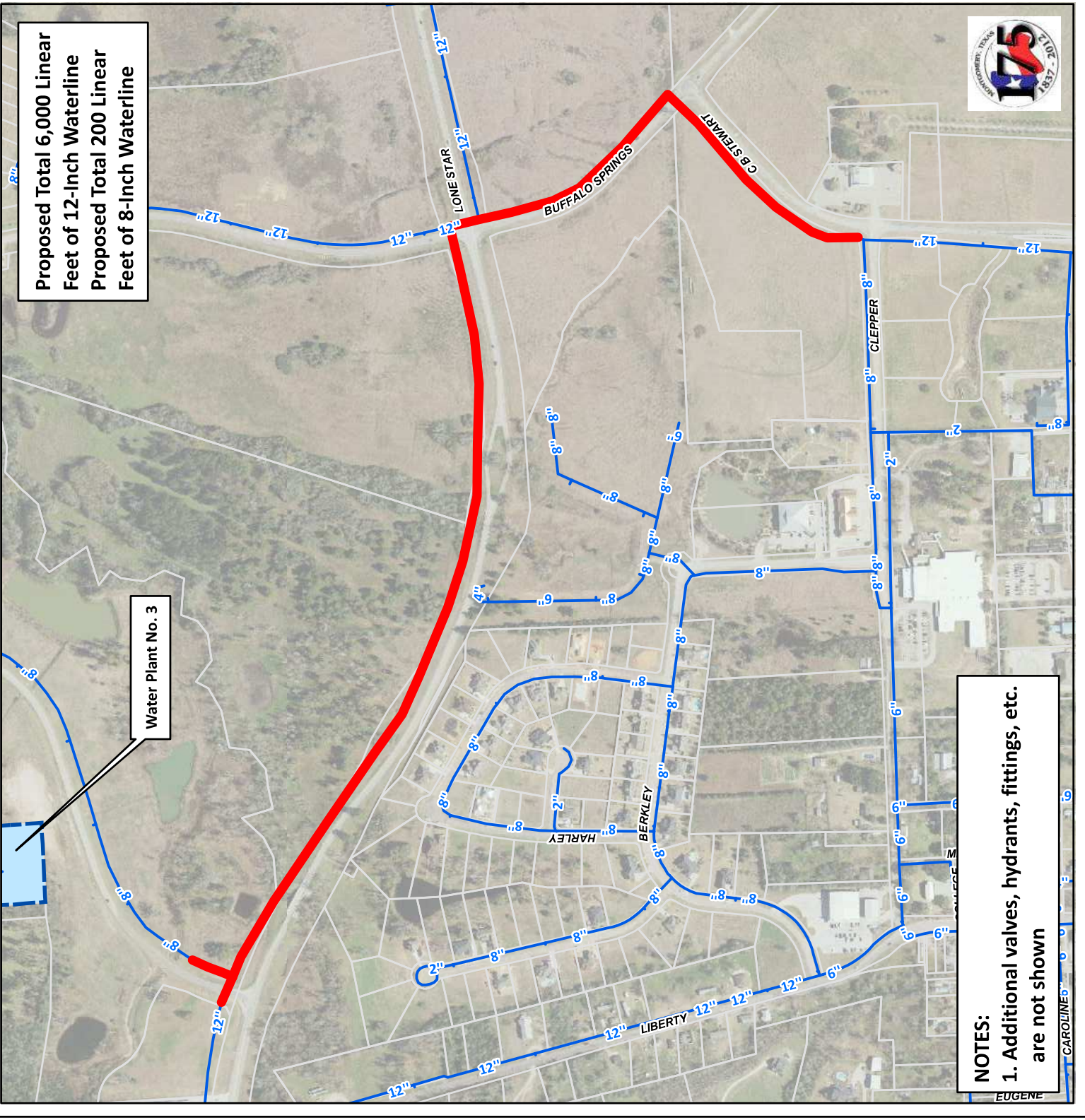
CAPITAL PROJECT No. 5



1 inch equals 600 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
Vertical Datum: NAVD 1988 + 2001 Adjustment



Proposed Total 6,000 Linear Feet of 12-Inch Waterline
Proposed Total 200 Linear Feet of 8-Inch Waterline

Water Plant No. 3

NOTES:
1. Additional valves, hydrants, fittings, etc. are not shown



**ATTACHMENT B5
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 5
LONE STAR PARKWAY EAST 12-INCH WATERLINE
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 30,000	\$ 30,000
2.	8-inch (8") PVC Waterline (Open Cut)		200	40	8,000
3.	12-inch (12") PVC Waterline (Open Cut)	L.F.	5,280	50	264,000
4.	12-inch (12") PVC Waterline (Trenchless)	L.F.	200	75	15,000
5.	12-inch (12") PVC Waterline (Trenchless with 20-Inch Steel Casing)	L.F.	520	150	78,000
6.	12-Inch (12") Gate Valve	Ea.	7	2,000	14,000
7.	Fire Hydrant Assembly	Ea.	11	4,000	44,000
8.	Connection to Existing Waterline	Ea.	2	1,000	2,000
9.	Trench Safety System	L.F.	5,280	1	5,000
10.	Site Restoration (including Pavement)	L.S.	1	15,000	15,000
11.	Traffic Control	L.S.	1	15,000	15,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	5,000	5,000
				Subtotal	\$ 495,000
				Sub-Total All Items	495,000
				Contingencies (25%)	124,000
				Engineering (15%)	93,000
				TOTAL	\$ 712,000

NOTES :

- ⁽¹⁾ All Totals have been rounded to the nearest \$1,000.
- ⁽²⁾ This estimate my best judgment as a design professional familiar with the construction industry Jones | Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- ⁽³⁾ This estimate does not include inflation.
- ⁽⁴⁾ This estimate does not include costs for easements or easement acquisition.







KH 11/5/15



VICINITY MAP
Scale: 1 inch equals 20 miles

LEGEND

-  Waterline
-  WP Boundary
-  City Limits
-  Capital Project (CP)

*Aerial Imagery flown January 2014



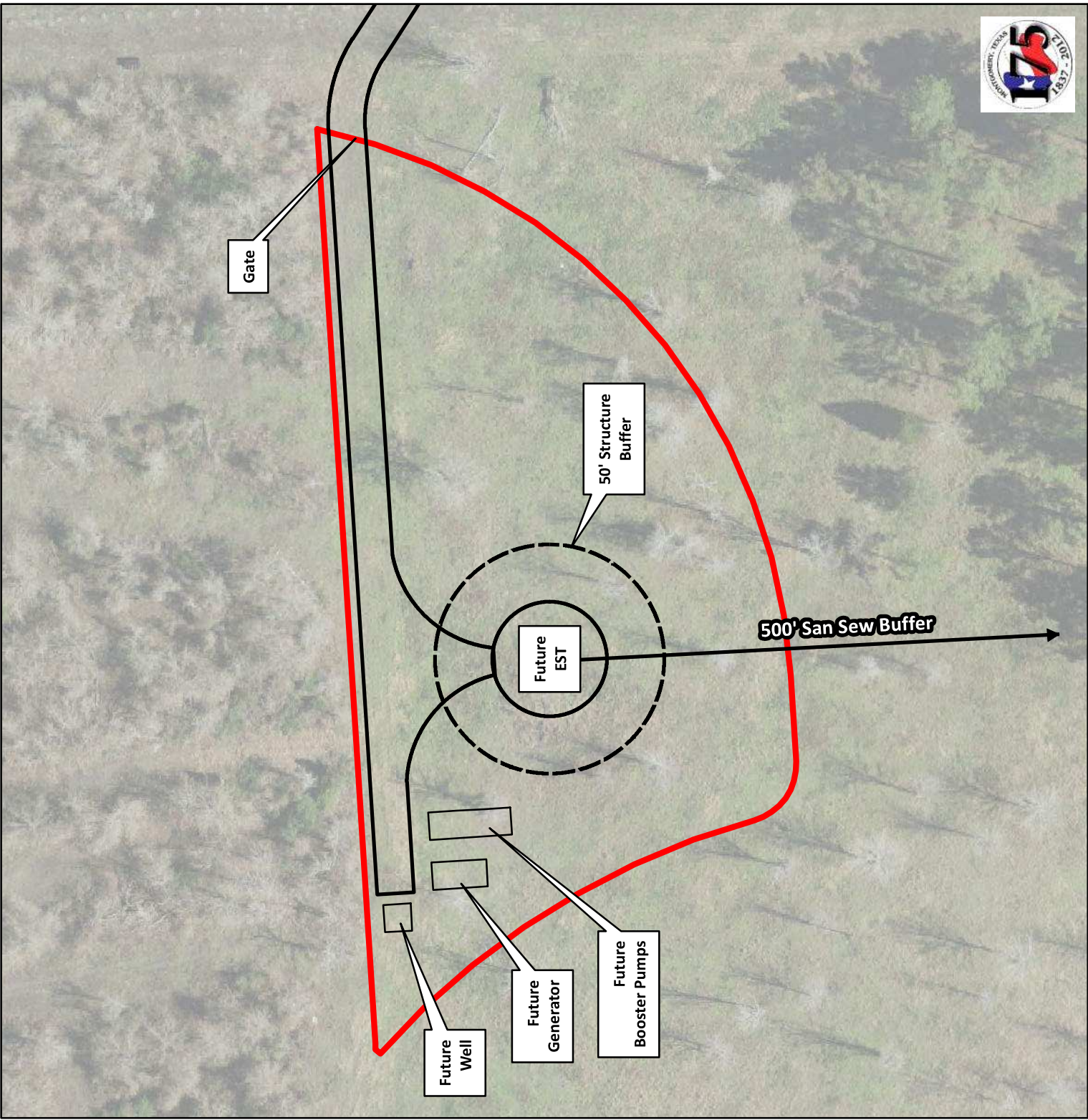
CAPITAL PROJECT No. 6



1 inch equals 60 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
Vertical Datum: NAVD 1988 - 2001 Adjustment



**ATTACHMENT B6
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 6
WATER PLANT No. 4
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up	L.S.	1	\$ 135,000	\$ 135,000
2.	Concrete Access Road	L.S.	1	10,000	10,000
3.	One (1) 500,000-gallon Composite Elevated Storage Tank, Including Protective Coatings	L.S.	1	1,200,000	1,200,000
4.	Plant Piping, Valves, Fittings, Thrust Blocks, and Pipe Supports (Incl. Tank Tie-in)	L.S.	1	250,000	250,000
5.	Electrical Work	L.S.	1	175,000	175,000
6.	Provide and Install Tank Mixer, Including Accessories	L.S.	1	50,000	50,000
7.	Site Work, Including Drainage	L.S.	1	40,000	40,000
8.	Hydro-mulch All Disturbed Areas	L.S.	1	3,000	3,000
9.	Protective Coatings for All Facilities (Excluding EST)	L.S.	1	20,000	20,000
10.	Pollution Prevention	L.S.	1	3,000	3,000
11.	Traffic Control	L.S.	1	5,000	5,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	5,000	5,000
Subtotal					\$ 1,896,000
Sub-Total All Items					1,896,000
Contingencies (25%)					474,000
Engineering (15%)					356,000
TOTAL					\$ 2,726,000

NOTES :

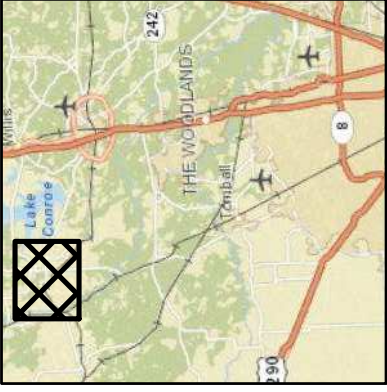
⁽¹⁾ All Totals have been rounded to the nearest \$1,000.

⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.

⁽³⁾ This estimate does not include inflation.







Kyle H. Kaspar 11/5/15



VICINITY MAP

Scale: 1 inch equals 20 miles

LEGEND

-  Capital Project (CP)
-  Waterline
-  City Limits
-  MCAD Parcels

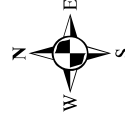
*Aerial Imagery flown January 2014



JONES CARTER

Texas Board of Professional Engineers Registration No. F-439

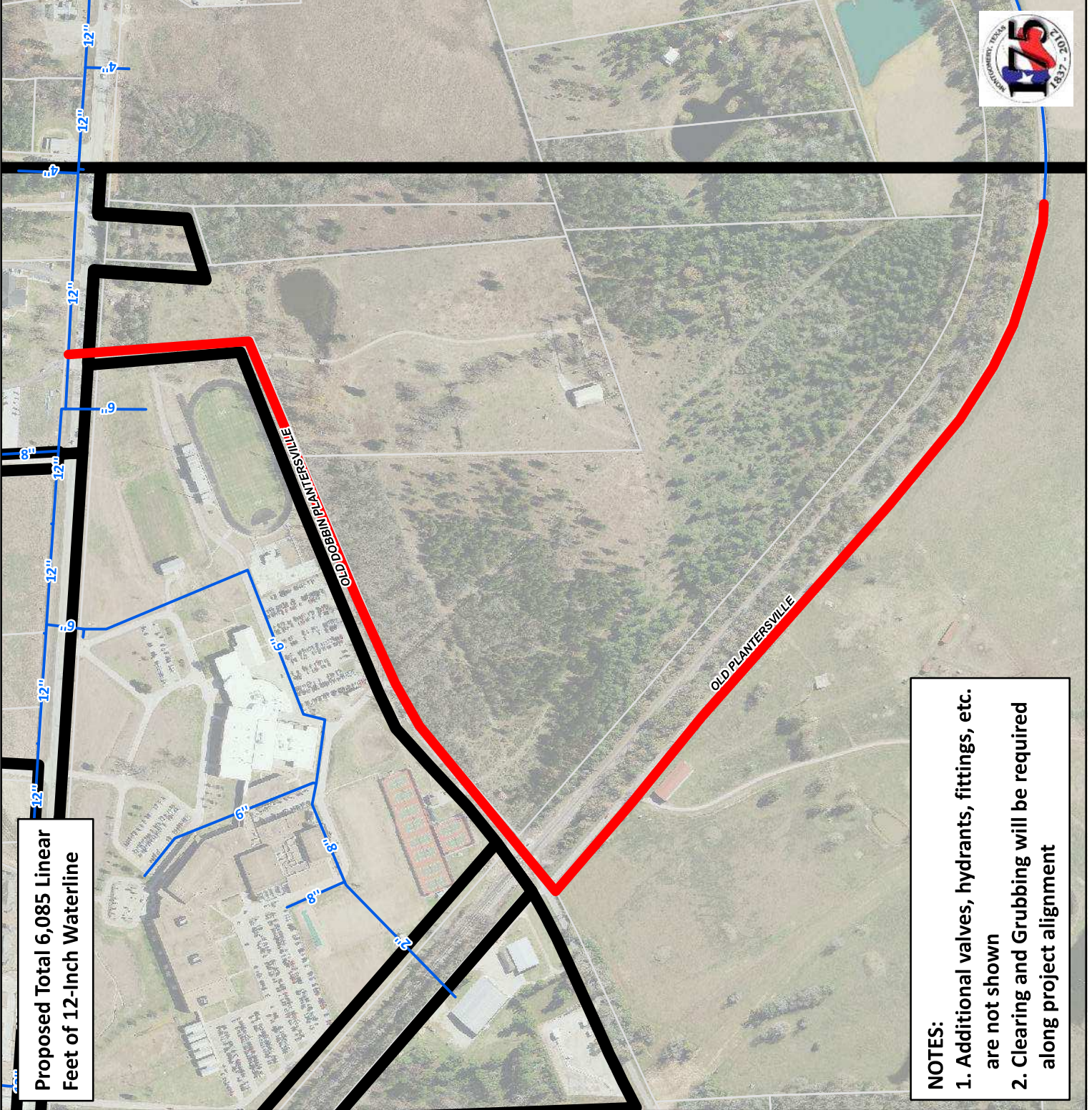
CAPITAL PROJECT No. 7



1 inch equals 500 feet

Disclaimer:
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Coordinate System: NAD 83 TX 5 CENTRAL 4204 FEET
Vertical Datum: NAVD 1988 - 2001 Adjustment



Proposed Total 6,085 Linear Feet of 12-Inch Waterline

NOTES:
1. Additional valves, hydrants, fittings, etc. are not shown
2. Clearing and Grubbing will be required along project alignment

**ATTACHMENT B7
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No. 7
OLD PLANTERSVILLE ROAD WATERLINE
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and Set-up, including Bonds and Insurance	L.S.	1	\$ 30,000	\$ 30,000
2.	12-inch (12") PVC Waterline (Open Cut)	L.F.	5,645	50	282,000
3.	12-inch (12") PVC Waterline (Trenchless)	L.F.	100	75	8,000
4.	12-inch (12") PVC Waterline (Trenchless with 20-Inch Steel Casing)	L.F.	340	150	51,000
5.	12-Inch (12") Gate Valve	Ea.	5	2,000	10,000
6.	Fire Hydrant Assembly	Ea.	12	4,000	48,000
7.	Connection to Existing Waterline	Ea.	2	1,000	2,000
8.	Trench Safety System	L.F.	5,645	1	6,000
9.	Clearing and Grubbing (20-feet along Alignment)	Ac.	2.6	10,000	26,000
10.	Site Restoration (including Pavement)	L.S.	1	10,000	10,000
11.	Traffic Control	L.S.	1	5,000	5,000
12.	Storm Water Pollution Prevention Plan	L.S.	1	5,000	5,000
				Subtotal	\$ 483,000
				Sub-Total All Items	483,000
				Contingencies (25%)	121,000
				Engineering (15%)	91,000
				TOTAL	\$ 695,000

NOTES :

- ⁽¹⁾ All Totals have been rounded to the nearest \$1,000.
- ⁽²⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.
- ⁽³⁾ This estimate does not include inflation.
- ⁽⁴⁾ This estimate does not include costs for easements or easement acquisition.



Kyle H. Kaspar 11/5/15

**ATTACHMENT B9
PRELIMINARY COST ESTIMATE
FOR CONSTRUCTION OF
CAPITAL PROJECT No 8
WATER PLANT NO. 3 EXPANSION (COOLING TOWER ADDITION & GST REPLACEMENT)
FOR
CITY OF MONTGOMERY
November 2015**

Item No.	Description	Unit	Quantity	Unit Price	Total ⁽¹⁾
1.	Move-in and set-up, including bonds and insurance	L.S.	1	\$ 35,000	\$ 35,000
2.	Closed Circuit Cooling Tower (1 tower at 600 gpm)	L.S.	1	130,000	130,000 ⁽²⁾
3.	Demolition of Existing GST including Foundation	L.S.	1	50,000	50,000
4.	10,000 gallon Hydropneumatic Tank	L.S.	1	70,000	70,000
5.	210,000 gallon Galvanized Bolted Steel GST	L.S.	1	190,000	190,000
6.	Electrical Work	L.S.	1	60,000	60,000
7.	Plant Piping	L.S.	1	50,000	50,000
8.	Protective Coatings for all Facilities	L.S.	1	15,000	15,000
9.	Miscellaneous Equipment	L.S.	1	5,000	5,000
10.	Site Restoration (including Pavement)	L.S.	1	5,000	5,000
11.	Storm Water Pollution Prevention Plan	L.S.	1	5,000	5,000
				Subtotal	\$ 615,000
Sub-Total All Items					615,000
Contingencies (25%)					154,000
Engineering					115,000
TOTAL					\$ 884,000

NOTES :

⁽¹⁾ All Totals have been rounded to the nearest \$1,000.

⁽²⁾ The cost shown is for one (1) cooling tower and pplate and frame heat exchanger skid, esigned to cool the remainder of the Catahoula Water well capacity (600 gpm) at 110°F to 90°F. Cooling tower is open design, constructioned of HDPE and heat exchanger constructed of titanium plates.

⁽³⁾ This estimate represents my best judgment as a design professional familiar with the construction industry. Jones|Carter has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market conditions. Accordingly, we cannot and do not guarantee that bids will not vary from this cost estimate.

⁽⁴⁾ This estimate does not include inflation.



11-5-15

5 WASTEWATER IMPACT FEE CAPITAL IMPROVEMENTS PLAN

In 2015, the City commissioned Jones|Carter to complete a Wastewater System Analysis and Master Plan. Eight wastewater projects are determined eligible for recoverable costs through impact fee over the next 10 years. The total cost of these projects is **\$12,195,000**. The projected total recoverable through impact fees is **\$9,703,115**. After the credit calculation and 50% reduction (see section 7) is completed, **\$4,851,558** is recoverable through impact fees within the next 10 years.

A. PROJECT DESCRIPTIONS⁽²⁾

1. LIFT STATION No. 3 EXPANSION

Replacement of existing lift station pumps and wet well, which are undersized and operating beyond design capacity.

Estimated Project Cost **\$860,000**

2. LIFT STATION No. 4 EXPANSION

Replacement of existing lift station pumps and wet well, which are undersized and operating beyond design capacity.

Estimated Project Cost **\$650,000**

3. TOWN CREEK WASTEWATER TREATMENT PLANT (WWTP) REPLACEMENT

Demolition of existing WWTP and construction of new plant to serve ultimate demand of 0.59 MGD.

Estimated Project Cost **\$6,922,135⁽³⁾**

4. LIFT STATION No. 3 FORCE MAIN RE-ROUTE

Installation of approximately 2,700 linear-feet of force main, and connection to an existing, abandoned 6-inch force main, allowing Lift Station 3 to pump directly to Lift Station 1.

Estimated Project Cost **\$200,000**

5. GSA 2C GRAVITY SYSTEM IMPROVEMENTS

Consists of increasing the diameter of approximately 3,670 linear-feet of 8-inch gravity sanitary sewer along North Liberty Street (FM 149) to 15-inch diameter gravity sanitary sewer.

Estimated Project Cost **\$600,000**

6. GSA 2S GRAVITY SYSTEM IMPROVEMENTS

Consists of increasing the diameter of approximately 4,060 linear-feet of 8-inch gravity sanitary sewer that directly flows into Lift Station 2, to a 15-inch diameter gravity sanitary sewer.

Estimated Project Cost **\$650,000**

7. LIFT STATION No. 1 EXPANSION

Replacement of existing lift station pumps, which are undersized and operating beyond design capacity.

Estimated Project Cost **\$860,000**

⁽²⁾ Projects are fully described in the 2015 Wastewater System Analysis and Master Plan.

⁽³⁾ Project cost represents demolition of existing facility and construction of phases one and two of ultimate three phase permit.

8. GSA 1 GRAVITY SYSTEM IMPROVEMENTS

Consists of increasing the diameter of the 10-inch gravity sanitary sewer along Lone Star Parkway to 21-inch gravity sanitary sewer.

Estimated Project Cost **\$1,250,000**



Capital Project No. 1 - Lift Station No. 3 Expansion

Capital Project No. 1 (CP 1) consists of the replacement of pumps at LS 3. LS 3's pumps are undersized and over capacity, receiving 0.24 MGD, while only being designed to pump 0.08 MGD.

Additional data needs to be collected to determine the actual flow coming to Lift Station No. 3 to confirm the size of pumps that need to be installed. Based on our collected data and the projected flow as described in Section 2.4 these pumps should be sized to handle 0.31 MGD or 861 gpm, firm capacity. Based on this information, LS 3 should require two (2) pumps of 861 gpm or three (3) pumps of 430 gpm.

The 6-foot diameter lift station may not be large enough for three (3) 430 gpm pumps. If this is the case, this lift station would have to be removed and replaced with a larger structure.

This project is estimated to cost \$860,000, with 25% contingencies and engineering.

Capital Project No. 2 - Lift Station No. 4 Expansion

Capital Project No. 2 (CP 2) consists of the replacement of pumps at LS 4. LS 4's pumps are undersized and over capacity, receiving 0.18 MGD, while only being designed to pump 0.06 MGD.

Additional data needs to be collected to determine the actual flow coming to Lift Station No. 4 to confirm the size of pumps that need to be installed. Based on our collected data and projected flow as described in Section 2.4 these pumps should be sized to handle 0.18 MGD ADF or 500 gpm, firm capacity. Based on this information, LS 4 should require two (2) pumps of 500 gpm or three (3) pumps of 250 gpm.

The 3-foot diameter lift station will not be large enough for three (3) 250 gpm pumps. This lift station will have to be removed and replaced with a larger structure to serve future wastewater flows.

This project is estimated to cost \$650,000, with 25% contingencies and engineering.

Capital Project No. 3 - Town Creek WWTP Replacement (0.59 MGD)

CP 3 consists of the demolition of the existing Town Creek WWTP and complete replacement of this WWTP with a larger WWTP. The size of the proposed replacement WWTP is estimated to need to serve 0.59 MGD ADF based on the projected flows.

CP 3 would allow the City to decommission LS 2 as it currently operates and install a new, more efficient lift station that will only need to serve the proposed Town Creek WWTP Replacement. CP 3 would also limit the improvements or expansion required at the Stewart Creek WWTP.



This proposed WWTP Replacement may require a larger footprint than the current Town Creek WWTP fenced site or owned property. Further investigation is required regarding the WWTP site, the flows it receives, and the land available to the City. The Town Creek WWTP is currently only permitted for 0.175 MGD. This permit would have to be revised to 0.59 MGD prior to construction and operation of CP 3. Additional research, planning, and engineering is required to confirm the feasibility of this project.

The total cost of CP No. 3 is estimated to cost \$9,500,000, with 25% contingencies and engineering.

Anticipated project costs falling within the 10-year planning window include demolition of the existing facility and construction of phases one and two of ultimate three phase permit, and are estimated to total \$6,922,135, with 25% contingencies and engineering.

Capital Project No. 4- Lift Station No. 3 Force Main Re-route

Capital Project No. 4 (CP 4) consists of the installation of approximately 2,700 linear feet of force main, and connection to an existing, abandoned 6-inch force main, for LS 3 to pump directly to LS 1.

Lift Station No. 3 currently pumps to GSA 2C via a 4-inch (4") force main. GSA 2C flows to LS 2, which then re-pumps this flow to GSA 1. There exists an abandoned (emergency) 6-inch (6") force main along the south ROW of SH 105 that runs approximately 4,000 LF from Flagship Road and SH 105 to Lift Station

No. 1. CP 10 proposes to re-utilize this force main and extend a new 6-inch (6") force main south and west along Flagship Road to LS 3. LS 3 is already over capacity and needs larger pumps and therefore a larger force main. By pumping directly to LS 1, LS 2 does not need the capacity for LS 3, and the City will save money from LS 2 operational costs. See CP 5 in Section J.2.2 for the proposed LS 3 pump improvements. See Exhibit IV for the proposed force main alignment.

This project is estimated to cost \$200,000, with 25% contingencies and engineering.

Capital Project No. 5 - GSA 2C Gravity System Improvements

Capital Project No. 5 (CP 5) consists of increasing the size of approximately 3,670 LF 8-inch (8") gravity sanitary sewer along North Liberty Street (FM 149) to 15-inch (15") diameter gravity sanitary sewer. This project is only necessary if CP 11 is not completed.

The existing 8-inch (8") gravity sanitary sewer along North Liberty Street (FM 149) does not currently have capacity for peak flows from LS 3 and cannot handle future flows. If LS 3 does not get re-routed, this line should be increased to 15-inch (15") diameter. The gravity sanitary sewer is currently under pavement for portions, and would need to either be abandoned in place, or removed and replaced.

The Texas Department of Transportation (TxDOT) has plans to widen FM 149, north of SH 105 in 2016. As the existing sanitary sewer is currently under pavement or immediately adjacent to pavement, the sewer would need to be relocated as part of the TxDOT road widening. CP 5 should be completed with the widening of FM 149.



This project is estimated to cost \$600,000 with 25% contingencies and engineering.

Capital Project No. 6 — GSA 2S Gravity System Improvements

Capital Project No. 6 (CP 6) consists of increasing the size of approximately 4,060 LF of 8-inch (8") gravity sanitary sewer in easements that directly flows into LS 2, to a 15-inch (15") gravity sanitary sewer. The existing 8-inch (8") gravity sanitary sewer within easements does not currently have capacity for peak flows from LS 4 and 5, and cannot handle future flows. The gravity sanitary sewer will need to be removed and replaced.

This project is estimated to cost \$650,000 with 25% contingencies and engineering.

Capital Project No. 7 — Lift Station No. 1 Expansion to 0.40 MGD

Capital Project No. 7 (CP 7) consists of the replacement of pumps at LS 1 which undersized and over capacity, currently receiving 0.38 MGD of flow daily, while only being designed to pump 0.26 MGD.

Additional data needs to be collected to confirm the actual flow coming to LS 1 to confirm the size of pumps that need to be installed. If CP 3 is completed, the Town Creek WWTP would be replaced to be able to treat 0.59 MGD. Based on the data we have collected these pumps should be sized to handle 0.40 MGD ADF or 1,111 gpm peak flow. Based on its size and the amount of flow it receives, LS 1 should have three (3) pumps 600 gpm pumps to meet TAC 30 §217 rules and regulations. LS 1 is currently served by two (2) 200 gpm pumps that currently operate significantly off their curve at around 700-750 gpm.

This project is estimated to cost \$860,000, with 25% contingencies and engineering.

Capital Project No. 8 - GSA 1 Gravity System Improvements

Capital Project No. 8 (CP 8) consists of increasing the size of the 10-inch (10") gravity sanitary sewer along Lone Star Parkway to 21-inch (21") gravity sanitary sewer.

The 10-inch (10") gravity sanitary sewer currently does not have capacity for future peak hour flow rates. The approximately 5,800 LF of 10-inch (10") gravity sanitary sewer would need to be removed and replaced, to increase its capacity.

This project is estimated to cost \$1,250,000 with 25% contingencies and engineering.