# Exhibit I. T.O. Allen Industrial Park South Potable Water Infrastructure Upgrade Letter & Map





## T.O. Allen Industrial Park South Potable Water Infrastructure Upgrade Letter & Map

CSRS

CSRS, INC.

6767 Perkins Road, Suite 200 Baton Rouge, Louisiana 70808

> Phone: (225) 769-0546 Fax: (225) 767-0060

December 22, 2016

Mr. Zach Hager One Acadiana 804 E. St. Mary Blvd. Lafayette, LA 70503

Re. Allen Estates South Site Potable Water System Cost Estimate CSRS Job No. 214002

Dear Mr. Hager:

According to correspondence with local utility officials the Allen Estates South site located along Highway 90 in Jefferson Davis Parish, Louisiana has access to an existing potable/process water line to service the site; however, the existing pressure and capacity may not meet the requirements for fire protection.

A 3" potable water line operated by Jefferson Davis Water Commission #1 (JDWC) exists adjacent to the site on the south side of Highway 90 and may be available for water access. The option (option 1) to tie-in to the JDWC 3" water line south of the site would not require any additional infrastructure upgrades, but will require the construction of a new water distribution line to the proposed site pad location. The cost of the 3" distribution line will vary depending on the location of the site pad, but can be roughly estimated at \$30 per linear foot. The water utility official affirmed that the 3" water line has capacity that meets LED requirements, however, the water main size does not provide adequate pressure for fire protection.

An alternative option (option 2) for water access is to upgrade the existing 3" line to an 8" line by tying-in to JDWC's 8" water line located on the west side of Louisiana Highway 101. This option would require removing approximately 10,570 linear feet of the 3" water line and replacing it with a new 8" water main. The construction cost of removing the 3" line and installing a new 8" water line from the site to Highway 101 is estimated to be \$780,000.00.

A third option (option 3) for water access is the construction of a new well. The source of well water for the Allen Estates South site is the Chicot Aquifer. Water drawn from this aquifer may be "hard" water due to relatively high concentrations of calcium carbonate and could require lime softening treatment. Additional treatment could increase the cost of upgrading the infrastructure. The construction cost of a well capable of providing 250,000 GPD flow requirements, including storage tanks, pumps, and piping systems to provide fire protection is estimated to be \$1,400,000.00 to \$4,320,000.00, depending on the hardness of the water in the Chicot Aquifer.

Please note this estimate does not include engineering, required rights of way, environmental impacts, or operation and maintenance costs. This cost estimate was prepared with the best information available at the time of certification. The actual costs can vary based on the availability of material, site conditions and labor availability. This plan can be executed within a reasonable timetable of 180 days or less based on preliminary engineering judgment.

Thank you for the opportunity to assist you in this project. Should you have any questions or require additional information, feel free to contact me.

Sincerely,

CSRS. Inc.

Taylor M. Gravois, PE, PLS

# Allen Estates South Site Potable Water Infrastructure Upgrade Letter & Map



Allen Estates South Site
Potable Water Rough Order of Magnitude Cost Estimate

	Rough Order of Magnitude Cost Estimate - Proposed Tie-In with Remove & Replace - Option 2						
Item No.	Description	Unit	Est. Quantity	Unit Price	Extension		
1	Tap Existing 8" Water Main w/8" Tapping Sleeve & Valve	Each	1	\$5,250.00	\$5,250.00		
2	8" C900 PVC Water Main	PVC Water Main L.F. 10,570 \$50.00					
3	Remove and Replace Asphalt or Concrete Street or Drive		45	\$60.00	\$2,700.00		
4	Fire Hydrant	Each	11	\$5,750.00	\$63,250.00		
5	Ductile Iron Fittings (MJ)	Ton	4.10 \$8,550.00 2 \$1,750.00		\$35,055.00		
6	8" Gate Valves w/Box	Each			\$3,500.00		
				Subtotal 1:	\$638,255.00		
	20% Contingency:				x 1.20		
Rough Order of Magnitude (ROM) <sub>2</sub> :					\$770,000.00		

Rough Order of Magnitude Cost Estimate - Proposed Water Well without Lime Softening - Option 3 (a)						
Item No.	Description	Unit	Est. Quantity	Unit Price	Extension	
1	200 gpm (250,000 gpd) Water Well with piping, electrical, controls and pneumatic tank	LS	1	\$600,000.00	\$600,000.00	
2	350,000 Ground Storage Tank w/Booster Pump, rechlorination, electrical & Controls	LS	1	\$500,000.00	\$500,000.00	
		Subtotal <sub>1</sub> :		\$1,100,000.00		
			20%	6 Contingency:	x 1.20	
	Rough Order of Magnitude (ROM) <sub>2</sub> :					

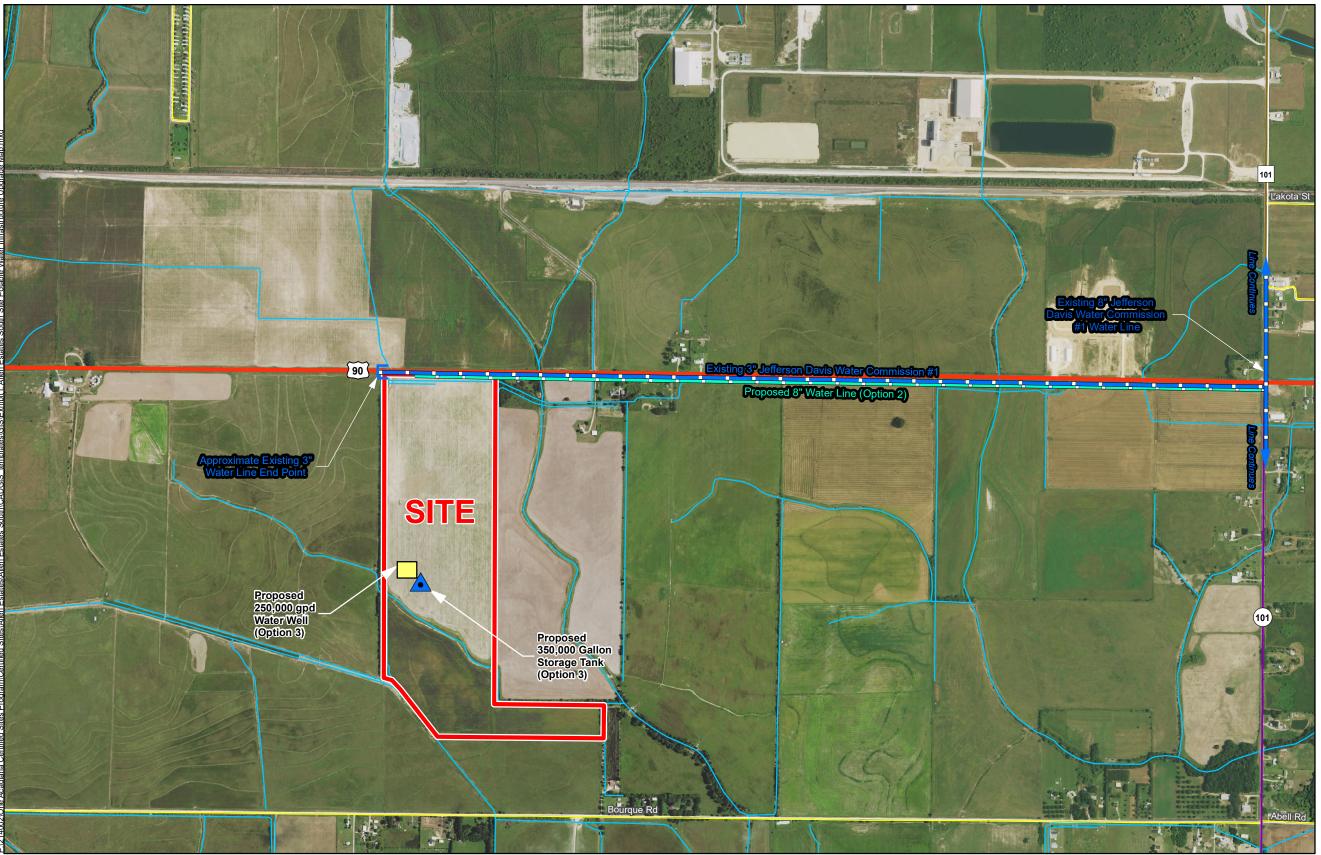


#### Rough Order of Magnitude Cost Estimate - Proposed Water Well with Lime Softening - Option 3 (b)

Item No.	Description	Unit	Est. Quantity	Unit Price	Extension
1	200 gpm (250,000 gpd) Water Well with piping, electrical, controls and pneumatic tank	LS	1	\$600,000.00	\$600,000.00
2	350,000 Ground Storage Tank w/Booster Pump, rechlorination, electrical & Controls	LS	1	\$500,000.00	\$500,000.00
3	0.5 MGD Lime Softening Water Treatment Plant₃	LS	1	\$2,500,000.00	\$2,500,000.00
				Subtotal <sub>1</sub> :	\$3,600,000.00
			200	% Contingency:	x 1.20
			207	o contingency.	X 1.20
	\$4,320,000.00				

- 1.) Does not include costs for engineering, permitting, right of way acquisitions, wetland mitigation or general project management.
- 2.) This cost estimate was prepared with the best information available at the time of certification. Actual costs can vary based on availability of material, site conditions, labor, final engineering design, and regulatory approvals.
- 3.) Proposed treatment due to high calcium carbonate content in the Chicot aquifer.

## T.O. Allen Industrial Park South Potable Water Infrastructure Upgrade Map



#### General Notes:

- 1. No attempt has been made by CSRS, Inc. to verify site boundary, title, actual legal ownership, deed restrictions, servitudes, easements, or other burdens on the property, other than that furnished by the client or his representative.
- 2. Transportation data from 2013 TIGER datasets via U.S. Census gov/geo/tiger/TIGER2013.

  3. Utility information from visual inspection and/or the individual utility operators. Exact field location has not been determined by survey. The lines shown are an approximate representation only and may have been offset for depiction purposes.

  4. 2015 aerial imagery from USDA-APFO National Agricultural Inventory Project (NAIP) and may not reflect current ground conditions.
- 5. Proposed potable water upgrade shown is for representational purposes only, depicting the intent of the cost estimate provided with this exhibit to meet LED minimum requirements, and is subject to revision.



#### One Acadiana





Site Boundary (142.59 Ac. ±)

#### **Existing Potable Water Infrastructure**

Existing 3" Jefferson Davis Water Commission #1 Water Line

#### **Proposed Potable Water Infrastructure**

Proposed 8" Water Line

#### **Existing Roadway**

- US Highway
- Urban State Highway
- Rural State Highway
- Local Roads
- Stream



Date:	1/18/2017
Project Number:	214002
Drawn By:	TMK
Checked By:	JAY



Scale 1:14,000

### Water Utility Provider Questionnaire (page 1 of 2)

Site Name: Allen Estates

CSRS Project ID: 214002





Site Map 1

Site Map 2

Date: 11 29/14	
Provider Name: Jeff Davis Water Comm #	I
Address:	
5171 aguillard Rd	
City.	
Lake Arthur, LA	
State: Louisiana	
Is notable or process water What is the	distance (fo

Zip Code:	
Zip Code: 70549 Name:	
Name:	
David m. Trake	1 Ocentury tel. net
Phone:	
137 587- 22	76
Email:	
dtrahan Idwe	1 @ Century tel. net
Title:	51 1 1191
Operations ma	ngaer

Is potable or process water	What is the distance	'	The second second second	What is the size (incl	nes in	
currently available at this site?	process water distrib	ution line to serv	ice this site?	diameter) of the near	rest line?	
Yes No	120'	(feet)	- 2	3	(inches)	
What are the pressures of the			Static: 55			
Source of potable or process w	ater (lake, well, other	source) grou	md water	/ Elevated	Tank	
	What is the total potable/process capacity of the existing water system in millions of gallons per day (MGD)?					
What is the current average daily use of the existing water system in millions of gallons per day (MGD)?						
What is the peak demand on the existing water system in millions of gallons per day (MGD)?						
What is the excess capacity of the existing water system in millions of gallons per day (MGD)?						
Capacity of closest elevated pota	able water storage tank	(gallons):				
Distance to closest elevated potable		):	Distance to approp	priate booster station (mile	es): 7	
Is or will there be adequate press		combat fires?	O Yes	<b>N</b> o		

Is a plan underway to improve services at or near this site within the next year? If so, please provide anticipated upgrades, location, and time for implementation.

NA

1.54 North