

Exhibit R. Highway 1 Leonard Road Site Roadway Transportation Infrastructure Map





Highway 1 Leonard Road Site Roadway Infrastructure Map

Highway 1 Leonard Road Site Caddo Parish, LA







Caddo Parish

LEGEND

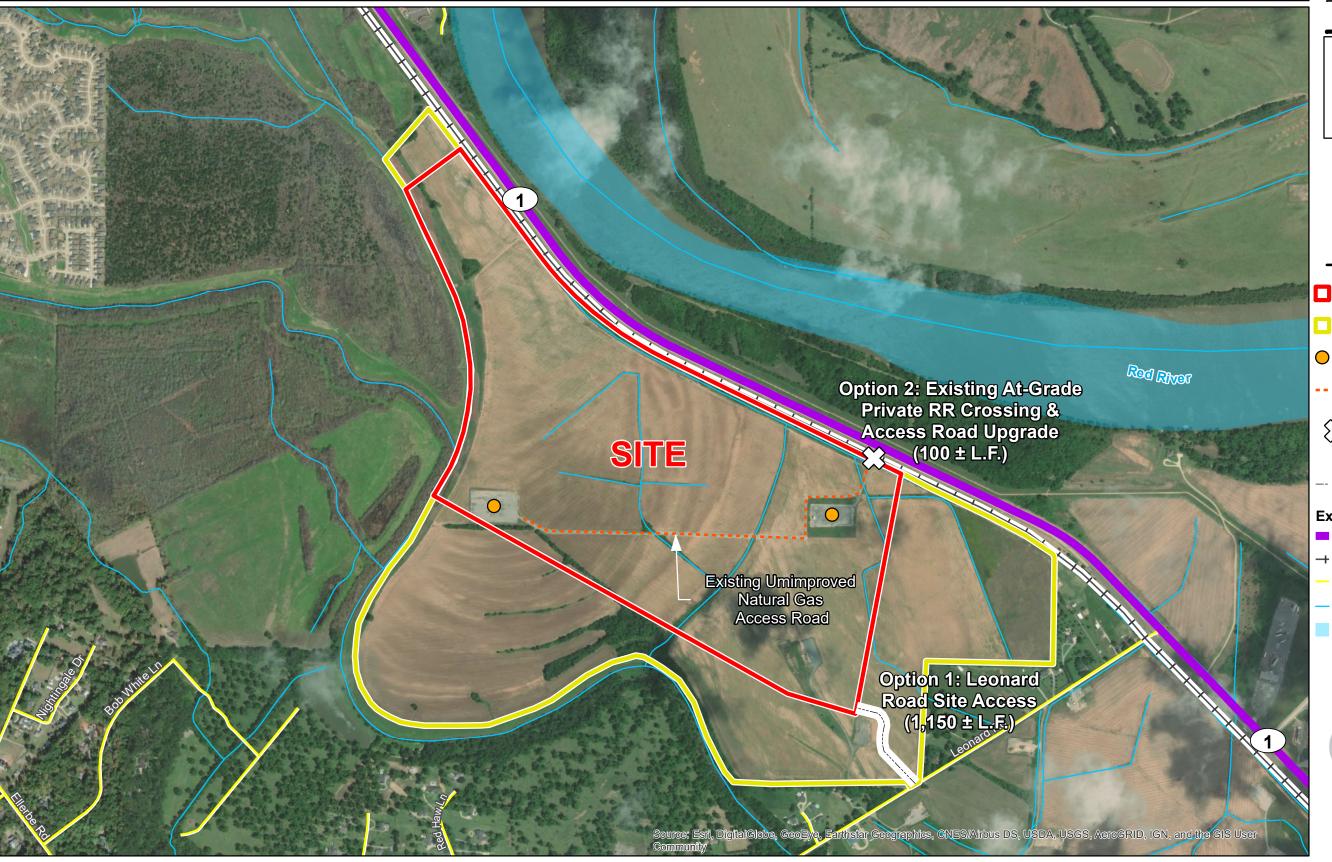
- Site Boundary
- Additional Landowner Property
- Natural Gas Wells
- **Existing Unimproved** Natural Gas Access Road
- Existing At-Grade Crossing
- **Conceptual Site Access** Roadway

Existing Roadway

- 4-Lane State Highway
- + Railroad
- Local Roads
- Stream
- Waterbody



Date:	10/7/2020
Project Number:	216269
Drawn By:	KPH
Checked By:	EEB



- 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 Bureau at ftp://ftp2.census.gov/geo/tiger/TIGER2013.
- 3. 2015 aerial imagery from ESRI Online Basemaps and may not reflect current ground conditions.
- 4. Option 1 access road upgrade accounts from LA-1 up to the site boundary.



October 7, 2020

Ms. Liz Pierre North Louisiana Economic Partnership 333 Texas Street, #411 Shreveport, Louisiana 71101

RE: Highway 1 Leonard Road Site, Caddo Parish Roadway Transportation Infrastructure Map CSRS Project No 216269

Dear Ms. Pierre,

According to our research, the Highway 1 Leonard Road Site (site) in Caddo Parish, Louisiana is immediately adjacent to Louisiana Highway 1 (LA-1) and has potential road access from Leonard Road. LA-1 is a 4-lane divided state highway and Leonard Road is a 2-lane parish owned road. There are currently two options to provide industrial road access to the site.

In order to provide adequate industrial road access from LA-1, the first option is to construct an access road from Leonard Road to the site. The certified site boundary does not directly connect to Leonard Road, however the property owner owns a section of land that could provide a roadway corridor into the certified site boundary. The proposed access road would be approximately $1,150 \pm 1$ linear feet to reach the site. The two alternatives for upgrading the access road are portland cement concrete and asphalt. Discussions with the Department of Transportation & Development say that any access to Leonard Road will have to be approved by the Parish, and Leonard Road may have to be upgraded in order to accommodate the development. The cost to construct the proposed access road is estimated be \$480,000. The cost to upgrade the road with asphalt is estimated be \$230,000.

The second option is to upgrade the existing access road and the existing private at-grade crossing over a Union Pacific Railroad. The existing crossing along LA-1 provides access into the site for the existing natural gas well pads. There are two alternatives for upgrading the access road, portland cement concrete and asphalt. The upgraded access road will account for 100 ± 1 linear feet from LA-1 to the start of the site boundary. According to discussions with the Department of Transportation & Development (DOTD), permits will be required from the Union Pacific Railroad to widen and upgrade any existing railroad crossing or to add a new crossing prior to DOTD granting an access permit. The existing access will have to be upgraded to current standards, which will include widening the access and paving it with full-depth pavement. A comprehensive internal review from Union Pacific Railroad will be required to confirm operational feasibility once a user of the site is identified and a site plan is developed, and any upgrades to service the site would have to first be approved by Union Pacific Railroad and follow their design guidelines. The cost to upgrade the road with portland cement concrete and the existing atgrade crossing is estimated be \$1,028,000. The cost to upgrade the road with asphalt and the existing at-grade crossing is estimated be \$836,000.

Additionally, according to preliminary discussions with the Department of Transportation & Development, a Traffic Impact Study (TIS) will be required for this development. The TIS will need to show justification for a second access on LA-1 and will need to show the length of all required turn lanes. The TIS will need to show what the proposed

usage is for the lots, and what the anticipated traffic volumes will be. The TIS will also need to address any proposed improvements to the LA-1/Leonard Road intersection, including a traffic signal/roundabout study to determine whether or not the intersection will meet warrants for a signal.

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.

TAYLOR M. GRAVOIS REG. No. 33928 REGISTERED PROFESSIONAL ENGINEER

Respectfully,

CSRS, Inc.

Taylor Gravois, PE, PLS



Highway 1 Leonard Road Site
Roadway Cost Estimate - Option 1: Leonard Road Site Access
Job No. 216269

Rough Order of Magnitude Cost Estimate Alternative A - Portland Cement Concrete								
Item No.	Description	Unit	Est. Quantity	ι	Unit Price		Extension	
1	Excavation	CU.YD	1,644	\$	13.29	\$	21,849.56	
2	Class II Base Course (12" Thick)	S.Y.	3,715	\$	25.00	\$	92,875.00	
3	Portland Cement Concrete Pavement (8" Thick)	S.Y.	2,972	\$	90.51	\$	268,995.72	
4	Plastic Pavement Striping	L.F.	1,150	\$	2.37	\$	2,725.50	
5	Clearing and Grubbing 50' R/W	Acre	3	\$	5,000.00	\$	13,150.00	
					Subtotal:	\$	399,595.78	
20% Contingency:						x 1.20		
Rough Order of Magnitude (ROM):					\$	480,000.00		

Rough Order of Magnitude Cost Estimate Alternative B - Asphalt								
Item No.	Description	Unit	Est. Quantity	Unit Price			Extension	
1	Excavation	CU.YD	1,317	\$	13.29	\$	17,505.99	
2	Class II Base Course (12" Thick)	S.Y.	3,715	\$	25.00	\$	92,875.00	
3	Asphalt Concrete (4" Thick)	TONS	654	\$	100.00	\$	65,384.00	
4	Plastic Pavement Striping	L.F.	1,150	\$	2.37	\$	2,725.50	
5	Clearing and Grubbing 50' R/W	Acre	3	\$	5,000.00	\$	13,150.00	
					Subtotal:	\$	191,640.49	
20% Contingency:						x 1.20		
Rough Order of Magnitude (ROM): \$					\$	230,000.00		

Footnotes:

- 1.) Does not include costs for engineering, permitting, right of way acquisition or general project management.
- 2.) This cost estimate was prepared with the best information available at the time of certification and is to be used for preliminary planning purposes.
- 3.) Actual costs can vary based on availability of material, site conditions, and labor.
- 4.) Design is based on typical 12' travel lane width.
- 5.) This cost doesn't include subsurface drainage, fill, and any utility relocations.
- 6.) Unit costs based on LA DOTD Weighted Unit Prices for 2nd Quarter 2020.
- 7.) Does not include any design criteria, permits, or approval from DOTD.



Highway 1 Leonard Road Site

Roadway Cost Estimate - Option 2: Existing At-Grade Private RR Crossing & Access Road Upgrade Job No. 216269

Rough Order of Magnitude Cost Estimate Alternative A - Portland Cement Concrete								
Item	Description	Unit	Est.	Unit Price			Extension	
No.	Description	Oilit	Quantity	•	Offic Price			
1	Removal of Surface & Base	S.Y.	115	\$	5.00	\$	574.00	
2	Class II Base Course (12" Thick)	S.Y.	324	\$	25.00	\$	8,093.75	
3	Portland Cement Concrete Pavement (8" Thick)	S.Y.	2,335	\$	90.51	\$	211,368.00	
4	Plastic Pavement Striping	L.F.	100	\$	2.37	\$	237.00	
5	Clearing and Grubbing 50' R/W	Acre	1	\$	5,000.00	\$	5,000.00	
6	At-Grade Railroad Crossing Upgrade	Each	1	\$ 6	530,000.00	\$	630,000.00	
					Subtotal:	\$	855,272.75	
20% Contingency:							x 1.20	
Rough Order of Magnitude (ROM):					\$	1,028,000.00		

Rough Order of Magnitude Cost Estimate Alternative B - Asphalt								
Item No.	Description	Unit	Est. Quantity	Unit Price			Extension	
1	Removal of Surface & Base	S.Y.	115	\$	5.00	\$	574.00	
2	Class II Base Course (12" Thick)	S.Y.	324	\$	25.00	\$	8,093.75	
3	Asphalt Concrete (4" Thick)	TONS	514	\$	100.00	\$	51,370.00	
4	Plastic Pavement Striping	L.F.	100	\$	2.37	\$	237.00	
5	Clearing and Grubbing 50' R/W	Acre	1	\$	5,000.00	\$	5,000.00	
6	At-Grade Railroad Crossing Upgrade	Each	1	\$ 6	30,000.00	\$	630,000.00	
					Subtotal:	\$	695,274.75	
20% Contingency:							x 1.20	
Rough Order of Magnitude (ROM):					\$	836,000.00		

Footnotes:

- 1.) Does not include costs for engineering, permitting, right of way acquisition or general project management.
- 2.) This cost estimate was prepared with the best information available at the time of certification and is to be used for preliminary planning purposes.
- 3.) Actual costs can vary based on availability of material, site conditions, and labor.
- 4.) Design is based on typical 12' travel lane width.
- 5.) This cost doesn't include subsurface drainage, fill, and any utility relocations.
- 6.) Unit costs based on LA DOTD Weighted Unit Prices for 2nd Quarter 2020.
- 7.) The access road upgrade for this option accounts from LA-1 up to the site boundary.
- 8.) Does not include any design criteria, permits, or approval from Union Pacific and DOTD.
- 9.) At-Grade Railroad Crossing upgrade includes removal of trees/brush, existing crossing and ballast; includes new ties, surface, ballast, line track, and automatic flashing light signals with gates.