

# JOINT PUBLIC NOTICE

January 27, 2020

United States Army  
Corps of Engineers  
New Orleans District  
Regulatory Branch, ODR-E  
Room 280  
7400 Leake Avenue  
New Orleans, Louisiana 70118

(504) 862-1564

[Stephanie.L.Castaing@usace.army.mil](mailto:Stephanie.L.Castaing@usace.army.mil)

Project Manager  
Stephanie Castaing  
Permit Application Number  
MVN-2019-0343-EPP

State of Louisiana  
Department of Environmental Quality  
ATTN: Water Quality Certifications

Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

(225) 219-3225

Project Manager  
Elizabeth Hill  
WQC Application Number  
WQC 200109-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [X] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, Water Quality Certifications, for a Water Quality Certification (WQC) in accordance with statutory authority contained in LRS30:2047 A(3), and provisions of Section 401 of the Clean Water Act (P.L.95-17).

## **NEW 12" DIAMETER HYDROGEN PIPELINE IN ST. CHARLES, JEFFERSON, AND PLAQUEMINES PARISHES.**

**NAME OF APPLICANT:** Phillips 66, c/o Morris P. Hebert, Inc., Attention: Timothy Robertson, 8724 Jefferson Highway, Baton Rouge, Louisiana 70809.

**LOCATION OF WORK:** Project site is located in St. Charles, Jefferson, and Plaquemines Parishes, in Louisiana, as shown on the attached drawings.

POB: Latitude: 29.921364 Longitude: -90.348911

POE: Latitude: 29.684492 Longitude: -89.9802

Hydrologic Unit Codes: 08090301, East Central Louisiana Coastal

**CHARACTER OF WORK:** Clear, grade, excavate and fill for a new 12" diameter hydrogen pipeline from an existing Luling facility to the Alliance Refinery, to include the installation of four (4) valve and meter sites and intermediate platform valve site. The pipeline will be installed via open cut and horizontal directional drills, and bores under roadways, waterways and levees. The project as proposed would directly impact 60.8 acres (permanently) and 108.3 acres (temporarily) of jurisdictional wetlands and 208.8 acres of other waters. The applicant proposed to contract with an approved mitigation bank in order to offset the adverse impact to jurisdictional wetlands.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **20 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above. Individuals or parties may request an extension of time in which to comment on the proposed work by writing or e-mailing the Corps of Engineers Project Manager listed above. Any request must be specific and substantively supportive of the requested extension, and received by this office prior to the end of the initial comment period. The Section Chief will review the request and the requestor will be promptly notified of the decision to grant or deny the request. If granted, the time extension will be continuous to the initial comment period and, inclusive of the initial comment period, will not exceed a total of 30 calendar days.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

### **Corps of Engineers Permit Criteria**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

The New Orleans District has determined that the proposed project is not likely to adversely affect the West Indian Manatee (*Trichechus manatus*) based on the Standard Local Operating Procedure for Endangered Species of Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, Ecological Services Office, with the inclusion of the Standard Manatee Conditions for In-Water Activities.

Our initial finding is that the proposed work would not affect any species, nor affect any habitat designated as critical to the survival and recovery of such species, listed as endangered by the U.S. Department of Commerce.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of 377.9 acres of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, Water Quality Certifications, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

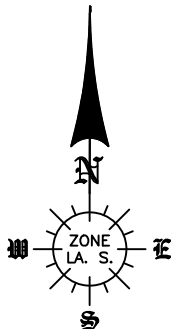
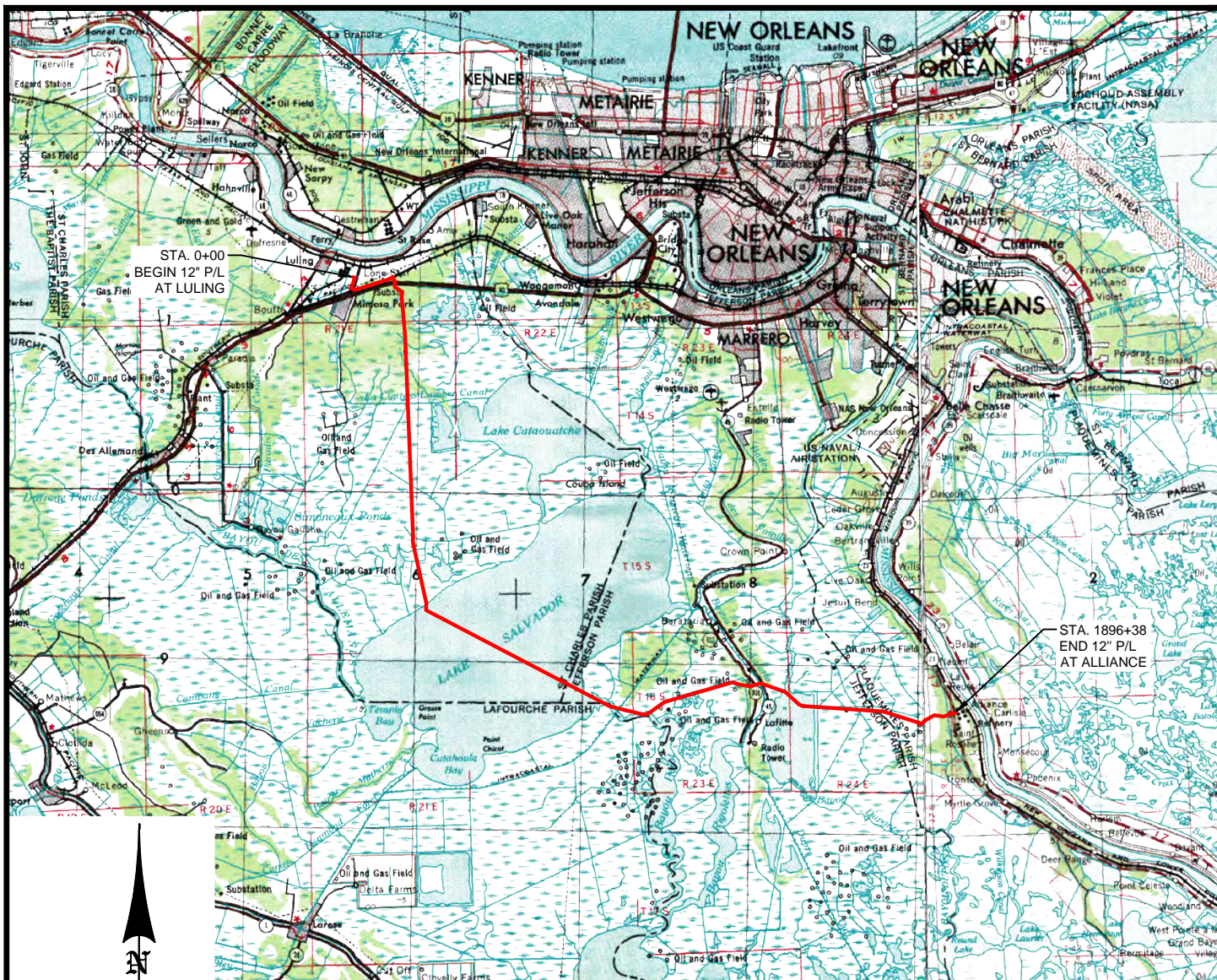
The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

Michael V. Farabee  
Chief, Eastern Evaluation Section

Enclosure





## VICINITY MAP

GRAPHIC SCALE



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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



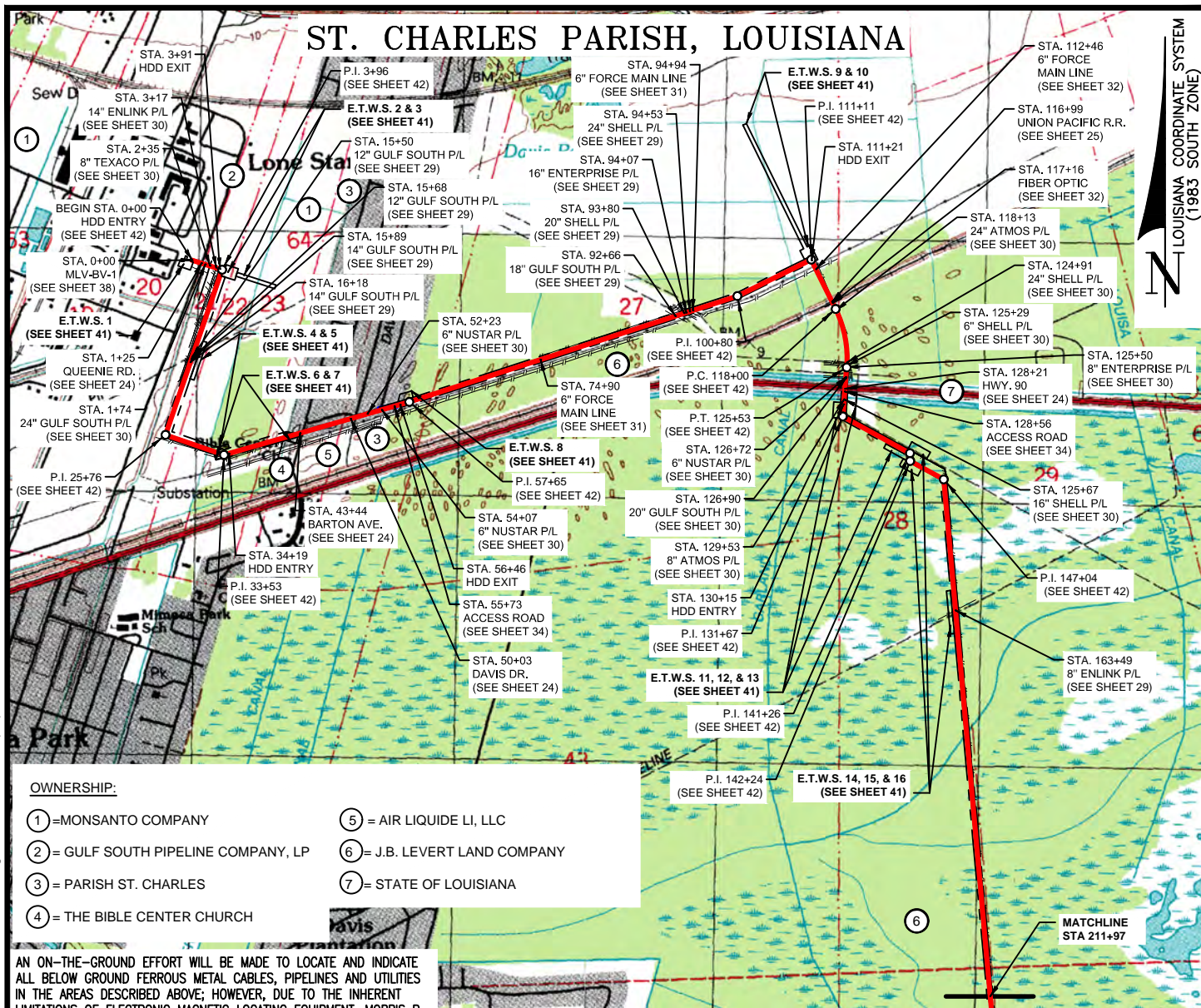
**Phillips 66**  
Pipeline LLC

VICINITY MAP  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
STA. 0+00 TO STA. 1896+38

**mph**  
*Morris P. Hebert, Inc.*  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	1
CHKD./APPD. BY:	GML	SCALE:	1" = 6 MILES
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0001A2.DWG			



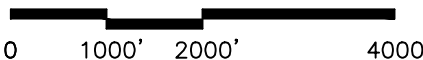


OWNERSHIP:

- ① = MONSANTO COMPANY  
② = GULF SOUTH PIPELINE COMPANY, LP  
③ = PARISH ST. CHARLES  
④ = THE BIBLE CENTER CHURCH  
⑤ = AIR LIQUIDE LI, LLC  
⑥ = J.B. LEVERT LAND COMPANY  
⑦ = STATE OF LOUISIANA

AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

GRAPHIC SCALE



THIS PLAT WAS PREPARED FOR PERMITTING PURPOSES ONLY, AND IS NOT A PROPERTY BOUNDARY SURVEY AND AS SUCH DOES NOT COMPLY WITH THE MOST RECENT "STANDARDS OF PRACTICE FOR PROPERTY BOUNDARY SURVEYS" AS ADOPTED BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

2	10/29/19	MPH
NO.	DATE	REV. BY:

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**Phillips 66  
Pipeline LLC**



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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

PLAN VIEW NO. 1  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES PARISH, LOUISIANA  
STA. 0+00 TO STA. 211+97

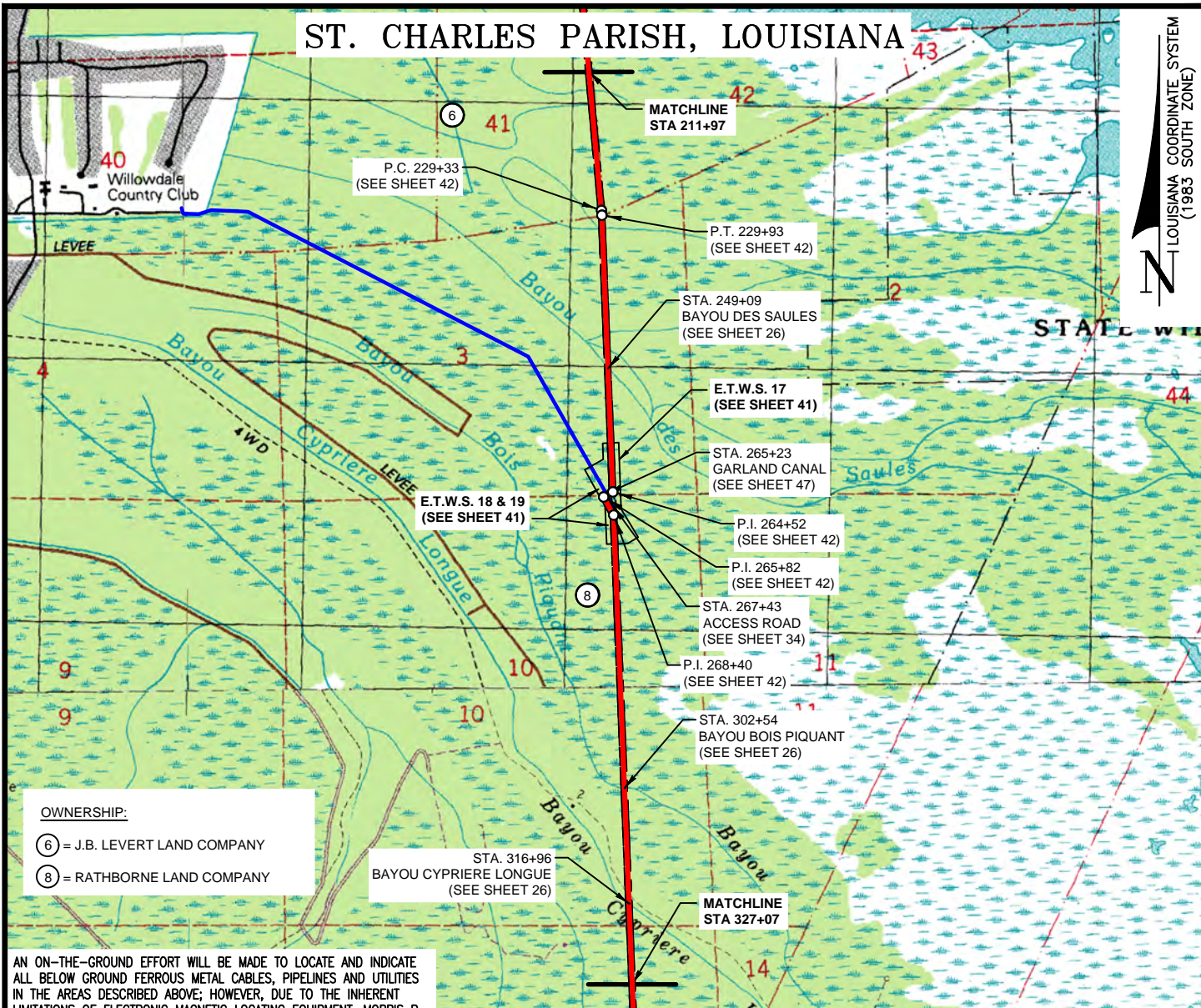
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UPDATED BY: MPH	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00

MPH CAD FILE: 13312COE0002A2.DWG



# ST. CHARLES PARISH, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



## OWNERSHIP:

- ⑥ = J.B. LEVERT LAND COMPANY
- ⑧ = RATHBORNE LAND COMPANY

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## GRAPHIC SCALE

0 1000' 2000' 4000'

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NO.	DATE	REV. BY:
2	10/29/19	MPH

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Pipeline LLC

PLAN VIEW NO. 2  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES PARISH, LOUISIANA  
STA. 211+97 TO STA. 327+07

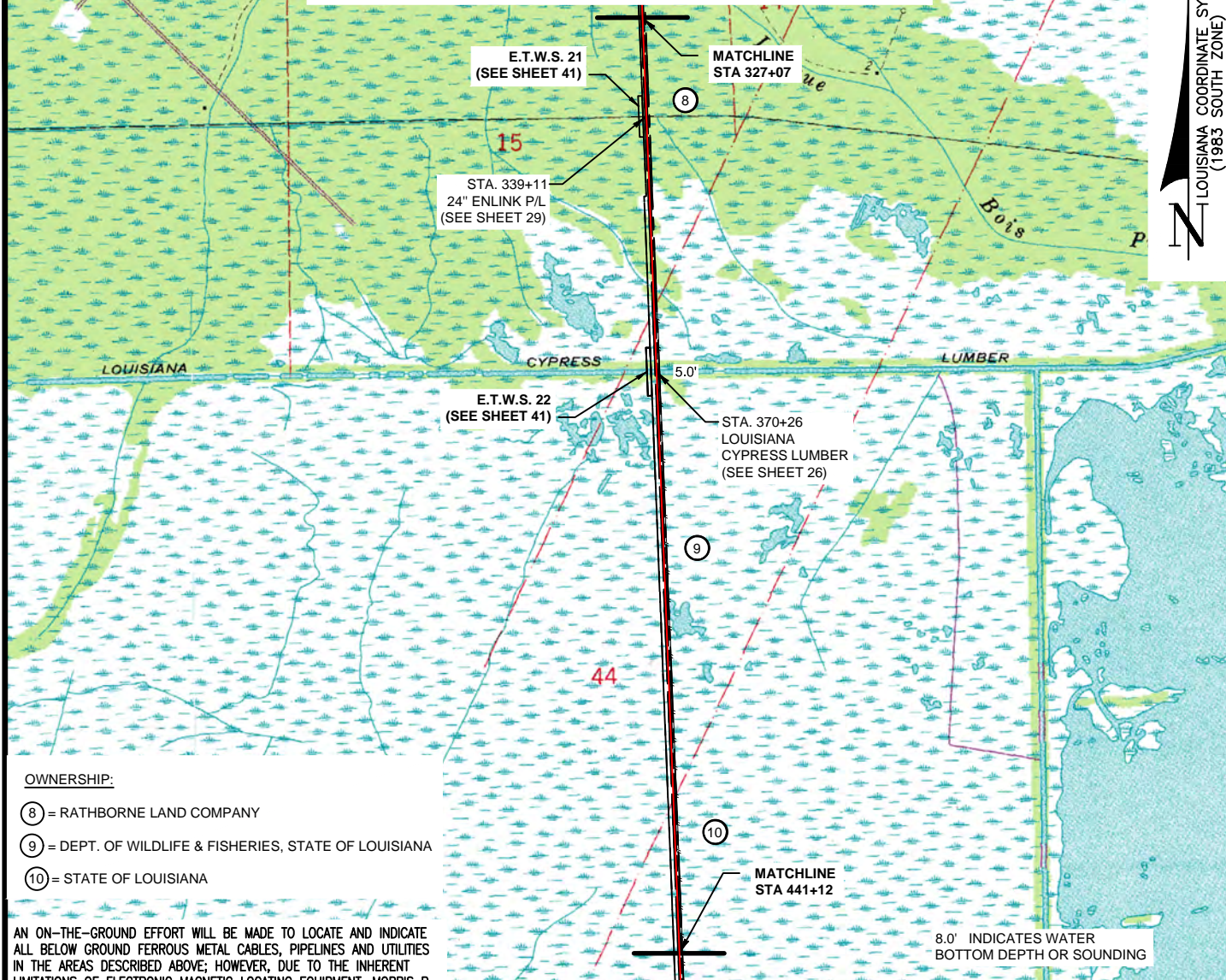
**mph**  
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DRAWN BY:	MPH	SHEET:	3
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UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0003A2.DWG			



# ST. CHARLES PARISH, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



## OWNERSHIP:

- ⑧ = RATHBORNE LAND COMPANY
- ⑨ = DEPT. OF WILDLIFE & FISHERIES, STATE OF LOUISIANA
- ⑩ = STATE OF LOUISIANA

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## GRAPHIC SCALE

0 1000' 2000' 4000'

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NO.	DATE	REV. BY:
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REVISION



Phillips 66  
Pipeline LLC

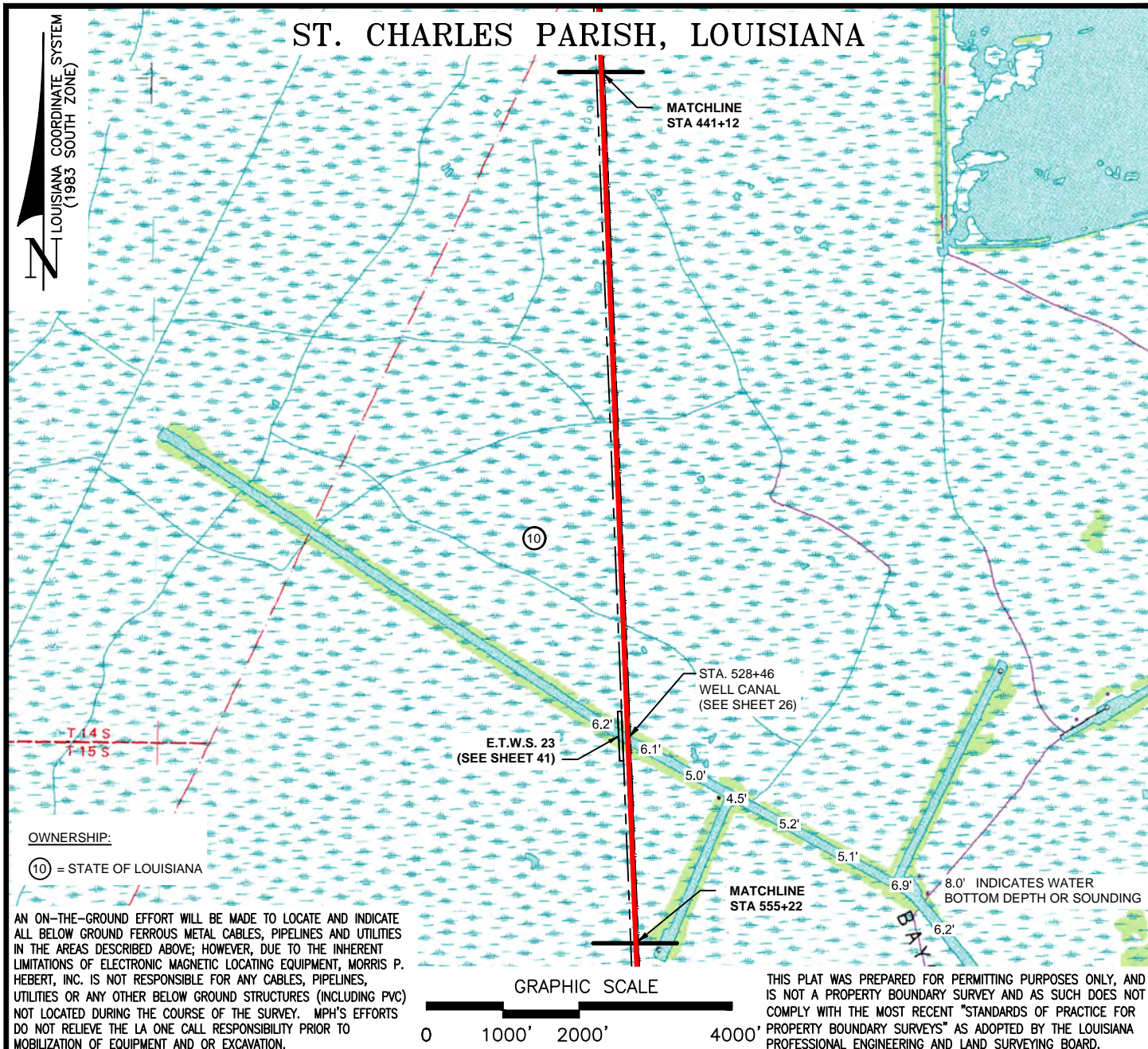
PLAN VIEW NO. 3  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES PARISH, LOUISIANA  
STA. 327+07 TO STA. 441+12

**mph**  
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UPDATED BY:	MPH	DATE:	3/11/19
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 GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	REVISION
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**Phillips 66 Pipeline LLC**

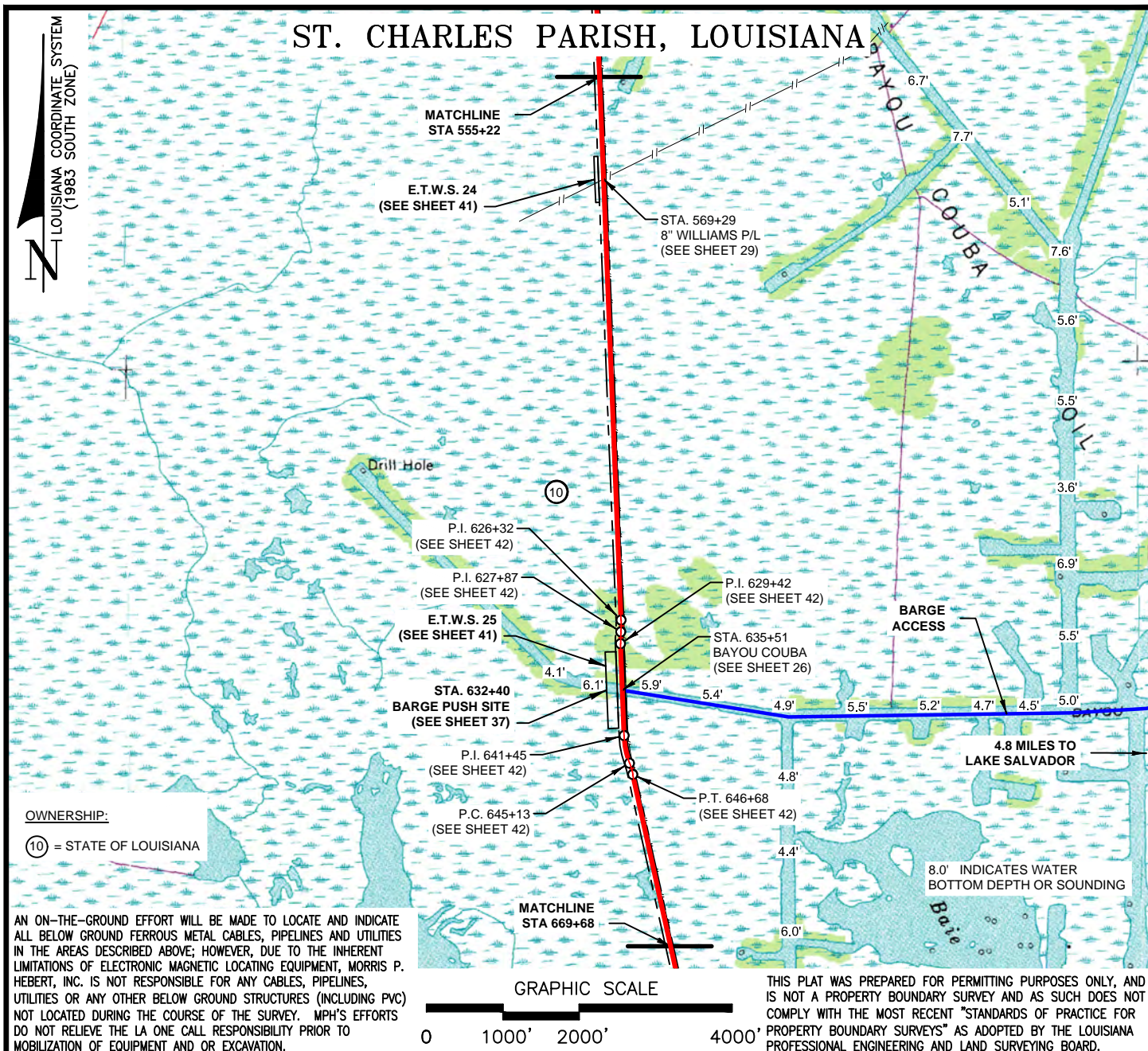
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 PROPOSED 12" HYDROGEN PIPELINE  
 LULING TO ALLIANCE  
 ST. CHARLES PARISH, LOUISIANA  
 STA. 441+12 TO STA. 555+22**

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 TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	5
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UPDATED BY:	MPH	DATE:	3/11/19
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NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISION
REVISED ROUTE



**Phillips 66**  
Pipeline LLC

PLAN VIEW NO. 5  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES PARISH, LOUISIANA  
STA. 555+22 TO STA. 669+68

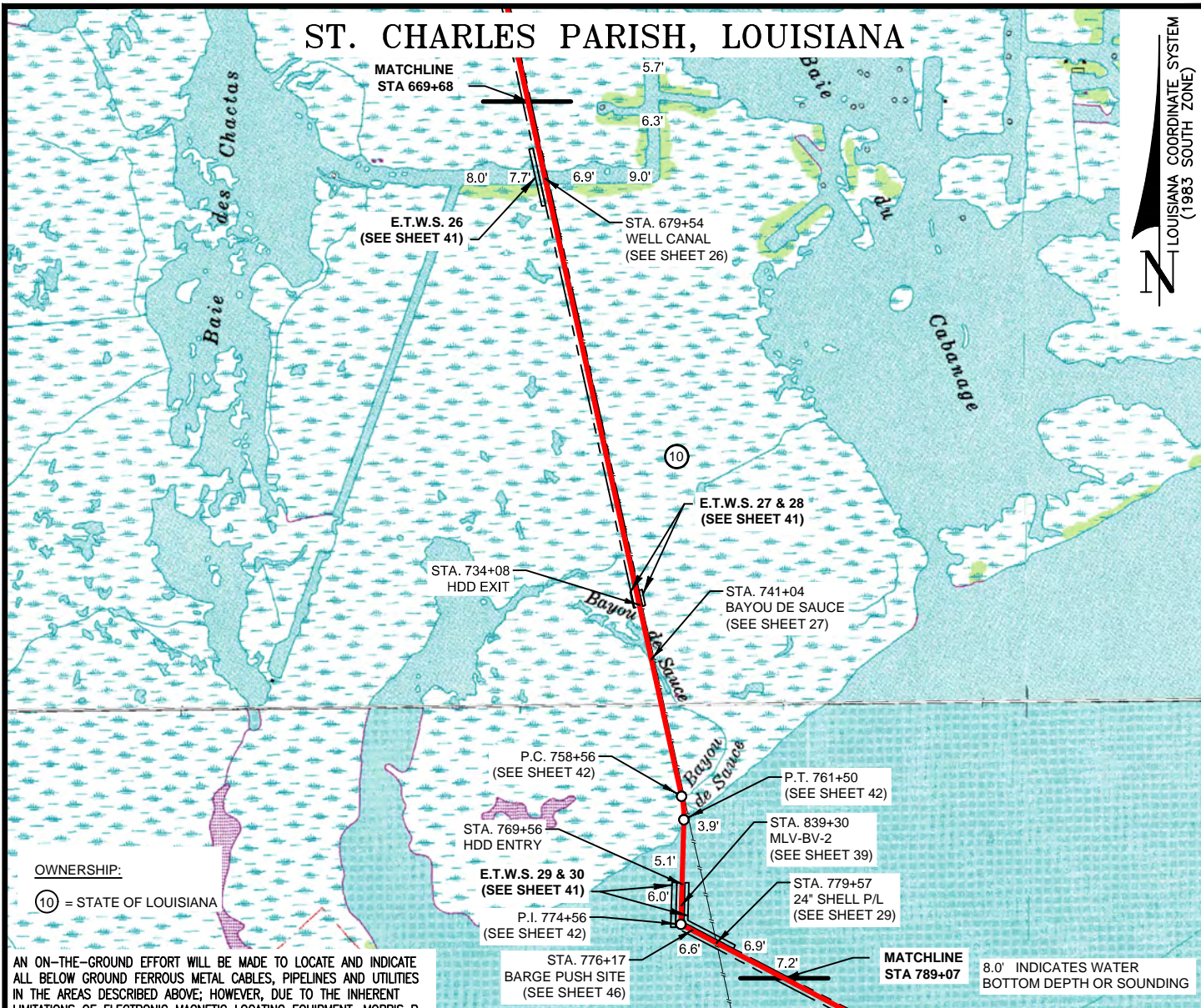
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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY: MPH	SHEET: 6
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UPDATED BY: MPH	DATE: 3/22/19
DATA BASE: 13312	JOB NO. 13312-00
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# ST. CHARLES PARISH, LOUISIANA



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 GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	REVISION
2	10/29/19	MPH	REVISED ROUTE



**Phillips 66 Pipeline LLC**

**PLAN VIEW NO. 6  
 PROPOSED 12" HYDROGEN PIPELINE  
 LULING TO ALLIANCE  
 ST. CHARLES PARISH, LOUISIANA  
 STA. 669+68 TO STA. 789+07**

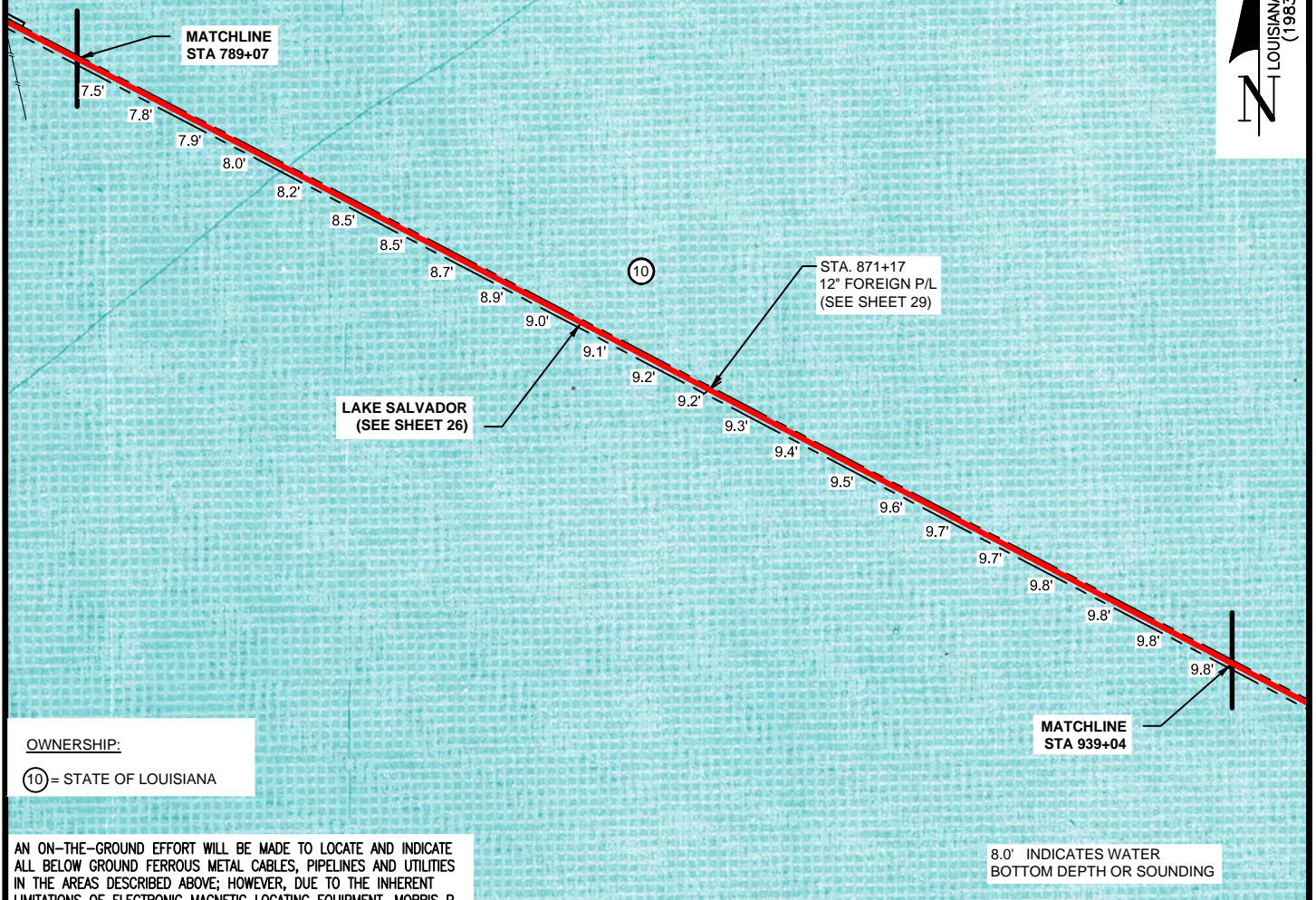
**mph**  
**Morris P. Hebert, Inc.**  
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 TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	7
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DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0007A2.DWG			



# ST. CHARLES PARISH, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



OWNERSHIP:

⑩ = STATE OF LOUISIANA

AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

GRAPHIC SCALE

0 1000' 2000' 4000'

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NO.	DATE	REV. BY:
1	07/19/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

PLAN VIEW NO. 7  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES PARISH, LOUISIANA  
STA. 789+07 TO STA. 939+04

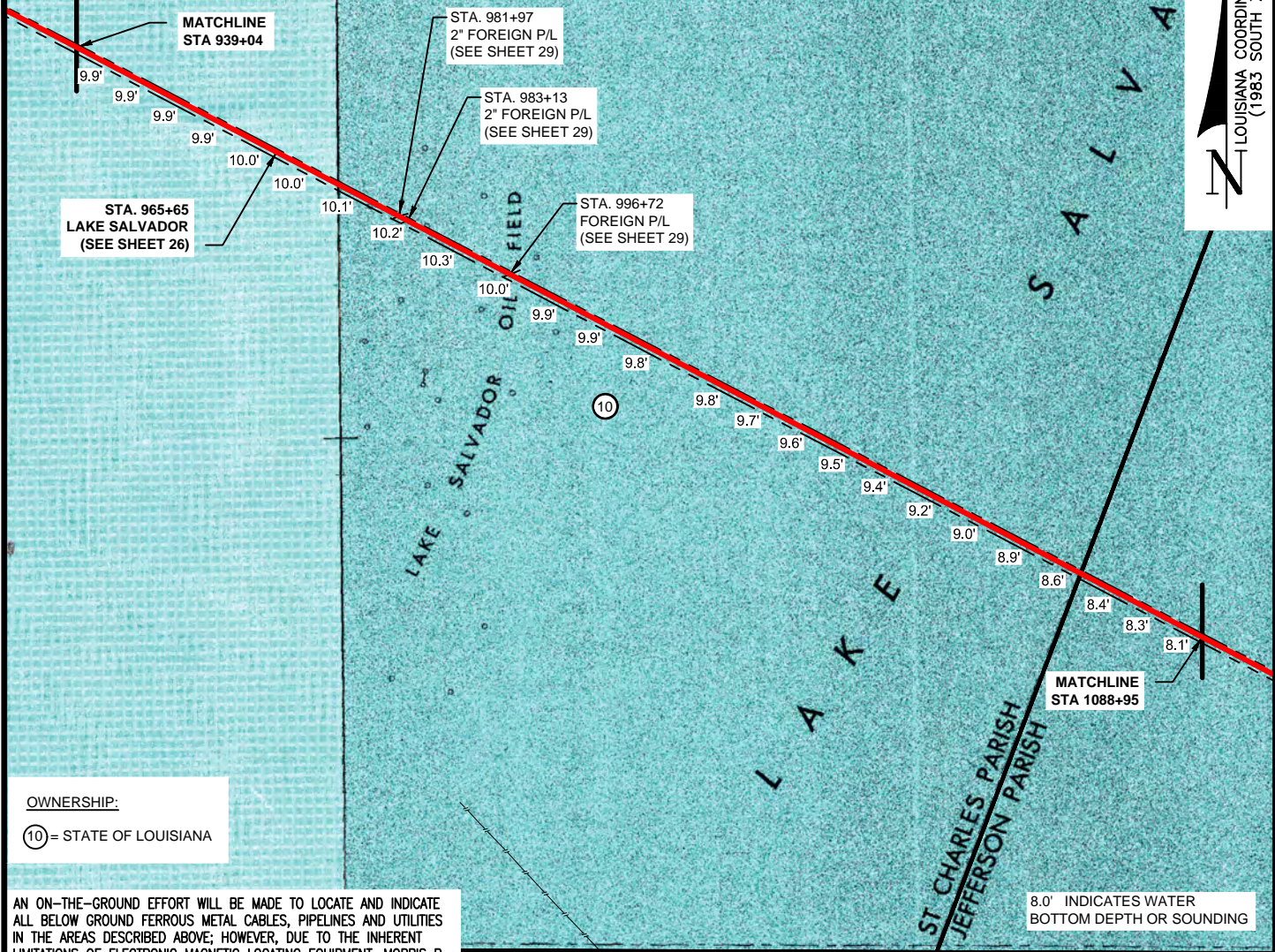
**mph**  
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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	8
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UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0008A2.DWG			



# ST. CHARLES & JEFFERSON PARISHES, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



## OWNERSHIP:

⑩ = STATE OF LOUISIANA

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## GRAPHIC SCALE

0 1000' 2000' 4000'

THIS PLAT WAS PREPARED FOR PERMITTING PURPOSES ONLY, AND IS NOT A PROPERTY BOUNDARY SURVEY AND AS SUCH DOES NOT COMPLY WITH THE MOST RECENT "STANDARDS OF PRACTICE FOR PROPERTY BOUNDARY SURVEYS" AS ADOPTED BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

8.0' INDICATES WATER BOTTOM DEPTH OR SOUNDING

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

PLAN VIEW NO. 8  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
ST. CHARLES & JEFFERSON PARISHES, LOUISIANA  
STA. 939+04 TO STA. 1088+95

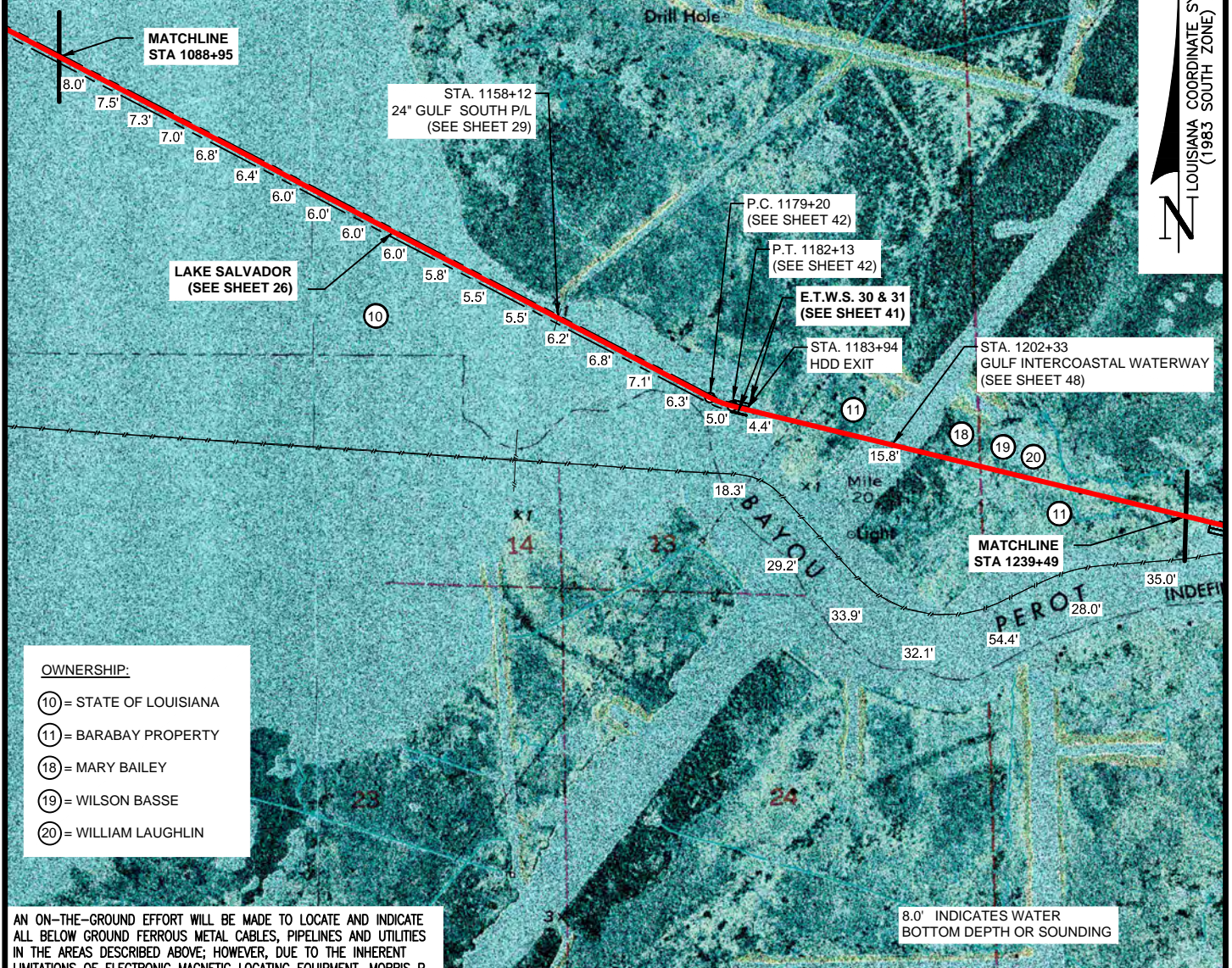
**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	9
CHKD./APPD. BY:	GML	SCALE:	1" = 2000'
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0009A2.DWG			



# JEFFERSON PARISH, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



## OWNERSHIP:

- ⑩ = STATE OF LOUISIANA
- ⑪ = BARABAY PROPERTY
- ⑱ = MARY BAILEY
- ⑲ = WILSON BASSE
- ⑳ = WILLIAM LAUGHLIN

AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

## GRAPHIC SCALE

0 1000' 2000' 4000'

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

PLAN VIEW NO. 9  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
JEFFERSON PARISH, LOUISIANA  
STA. 1088+95 TO STA. 1239+49

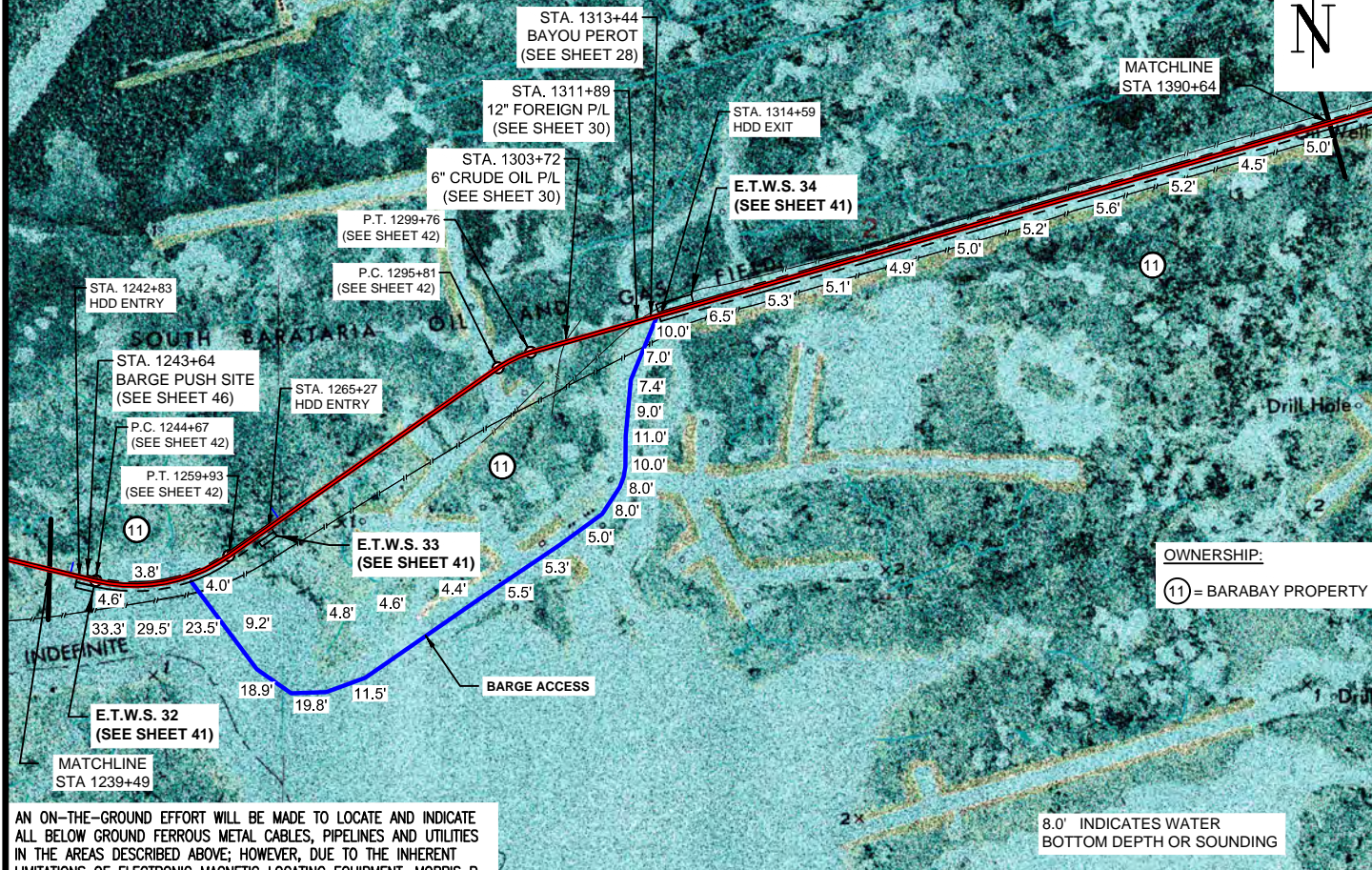
**mph**  
Morris P. Hebert, Inc.  
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P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	10
CHKD./APPD. BY:	GML	SCALE:	1" = 2000'
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0010A2.DWG			



# JEFFERSON PARISH, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

GRAPHIC SCALE

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NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

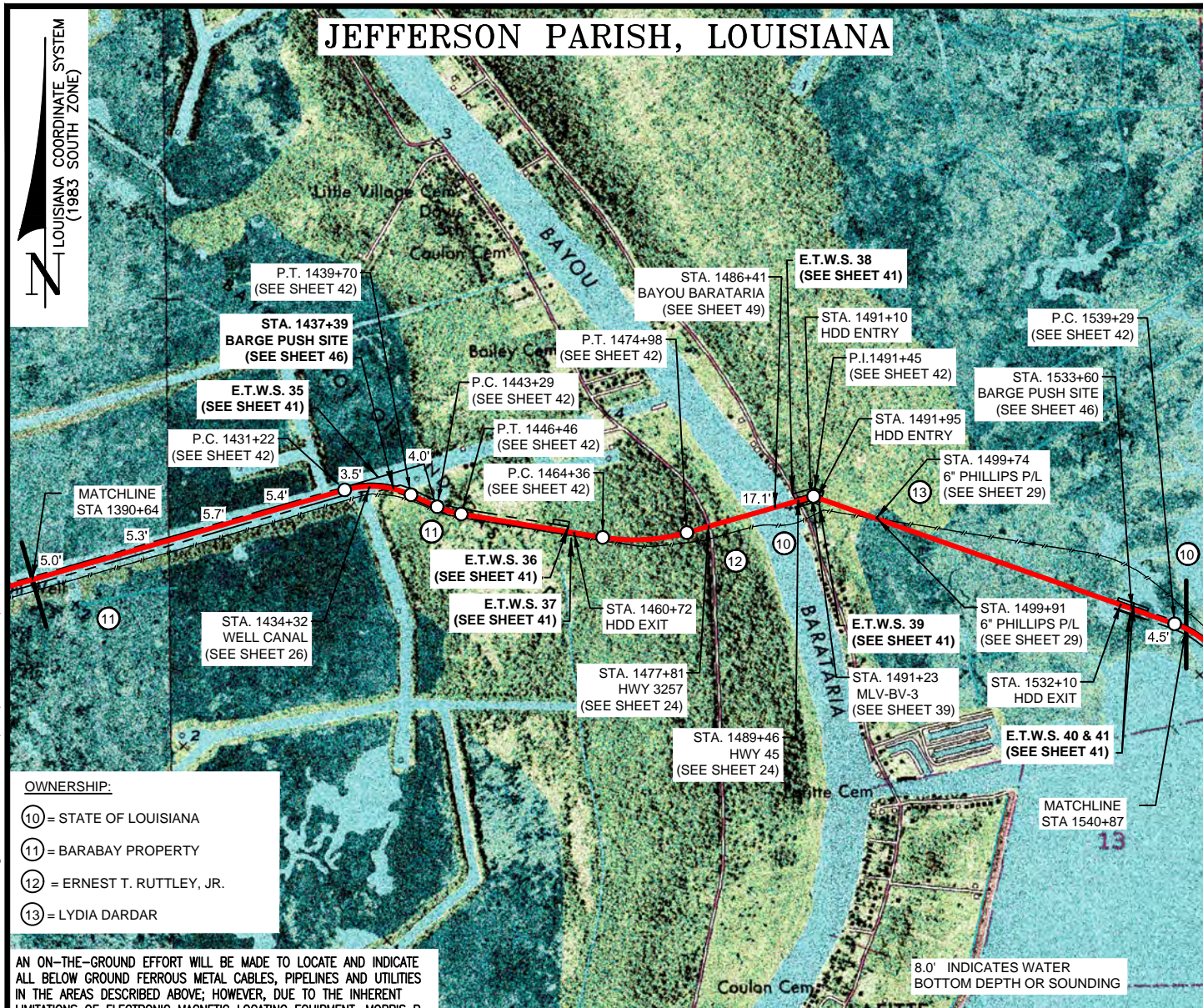
PLAN VIEW NO. 10  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
JEFFERSON PARISH, LOUISIANA  
STA. 1239+49 TO STA. 1390+64

**mph**  
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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	11
CHKD./APPD. BY:	GML	SCALE:	1" = 2000'
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0011A2.DWG			



P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0012A2.dwg PLOT DATE: 10/30/19 1:30:24pm



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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISION
REVISED ROUTE



**Phillips 66  
Pipeline LLC**

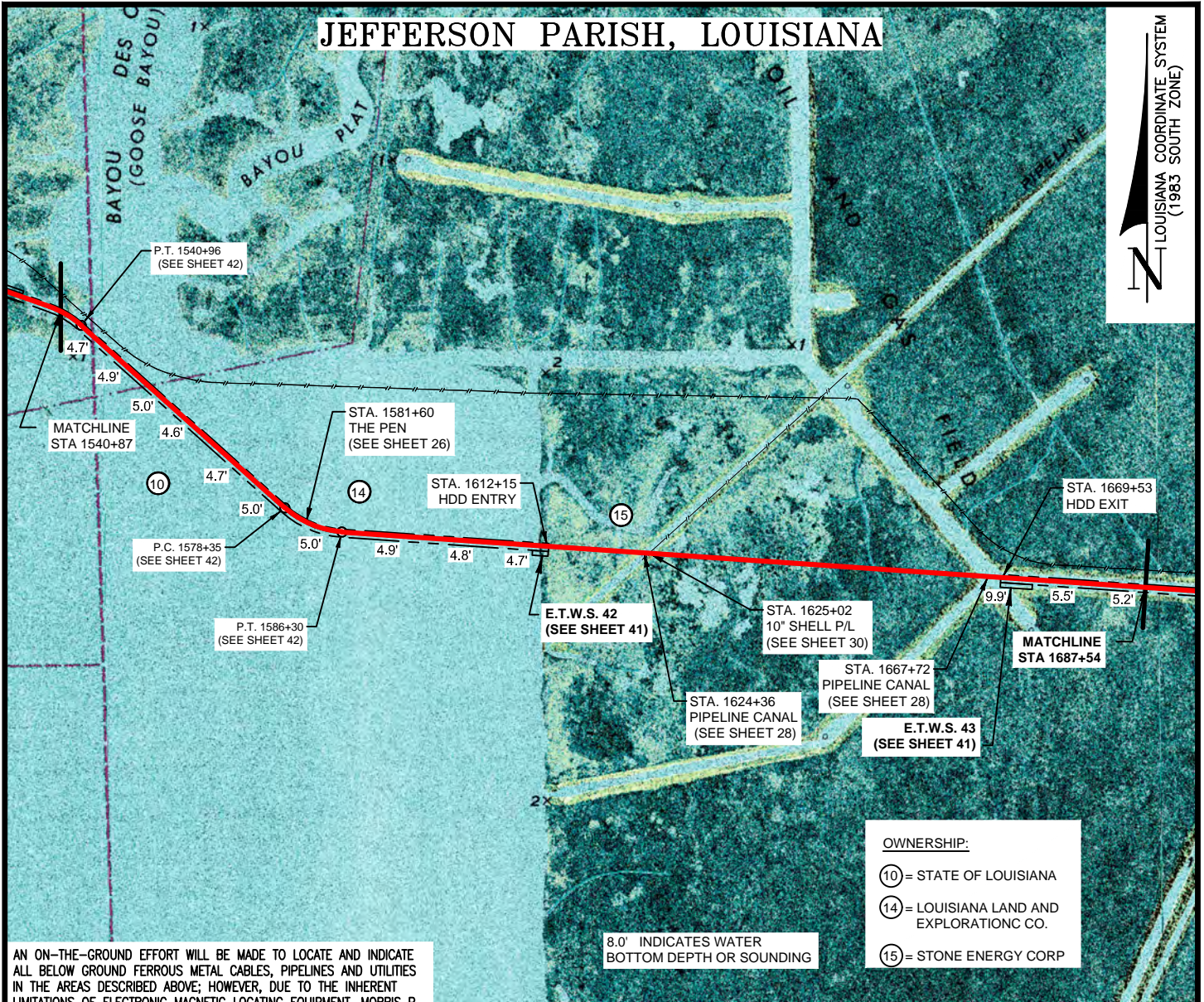
**PLAN VIEW NO. 11  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
JEFFERSON PARISH, LOUISIANA  
STA. 1390+64 TO STA. 1540+87**

**mph**  
**Morris P. Hebert, Inc.**  
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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	12
CHKD./APPD. BY:	GML	SCALE:	1" = 2000'
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0012A2.DWG			



# JEFFERSON PARISH, LOUISIANA



GRAPHIC SCALE

0 1000' 2000' 4000'

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NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

PLAN VIEW NO. 12  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
JEFFERSON PARISH, LOUISIANA  
STA. 1540+87 TO STA. 1687+54

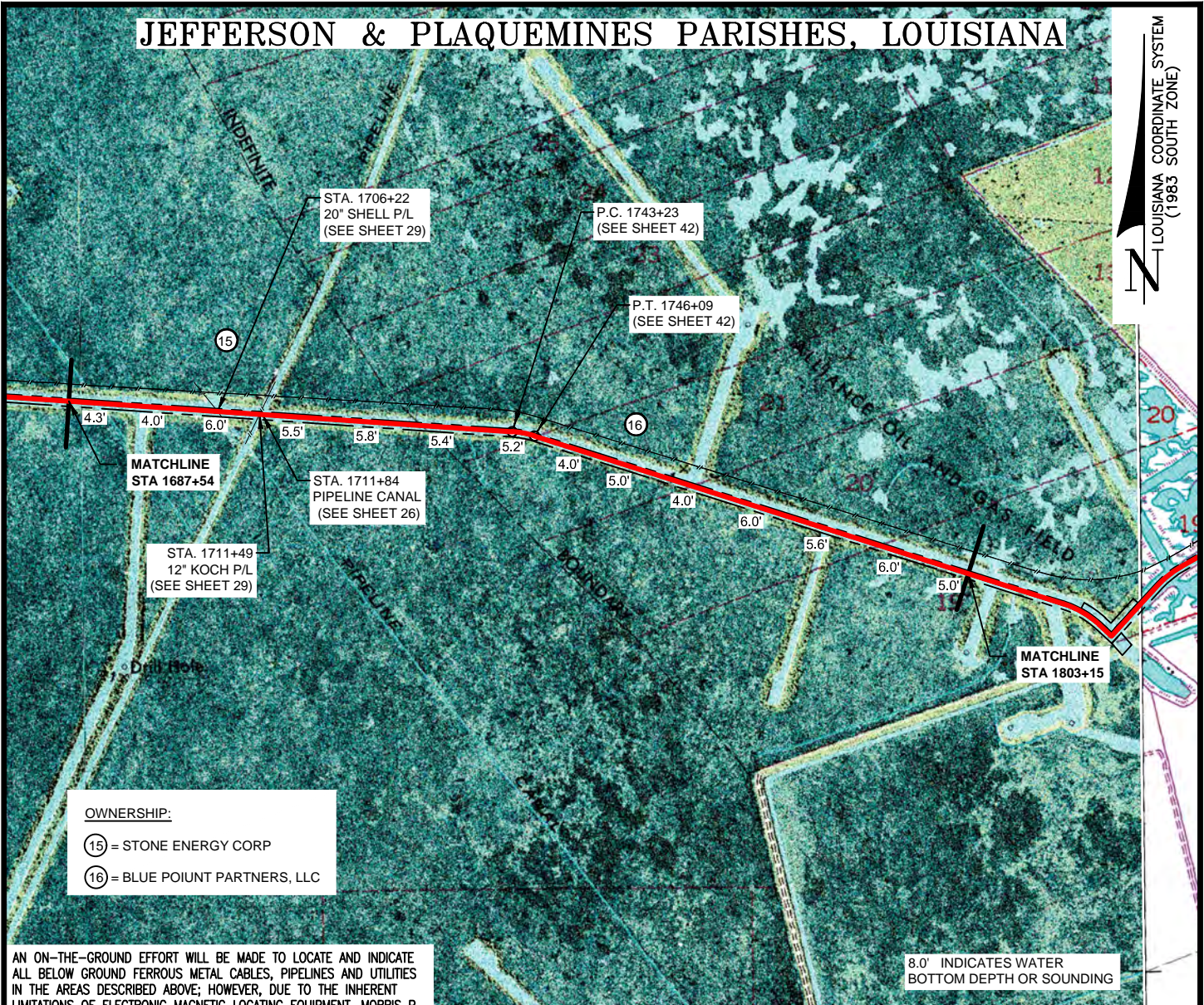
**mph**  
Morris P. Hebert, Inc.  
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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	13
CHKD./APPD. BY:	GML	SCALE:	1" = 2000'
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0013A2.DWG			



# JEFFERSON & PLAQUEMINES PARISHES, LOUISIANA

LOUISIANA COORDINATE SYSTEM  
(1983 SOUTH ZONE)



## OWNERSHIP:

- (15) = STONE ENERGY CORP
- (16) = BLUE POINT PARTNERS, LLC

AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

## GRAPHIC SCALE

0 1000' 2000' 4000'

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

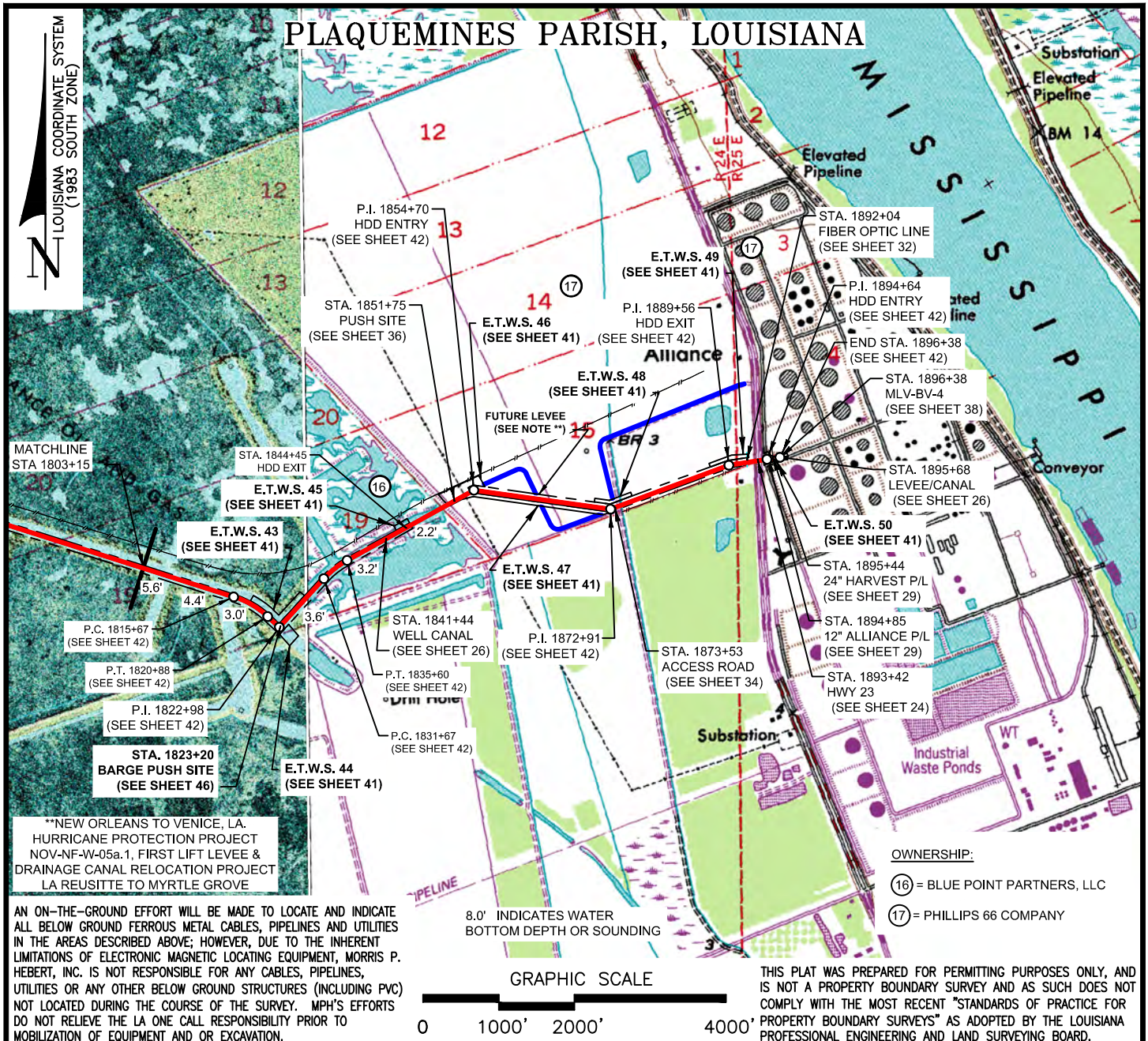
PLAN VIEW NO. 13  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
JEFFERSON & PLAQUEMINES PARISHES, LOUISIANA  
STA. 1687+54 TO STA. 1803+15

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY: MPH	SHEET: 14
CHKD./APPD. BY: GML	SCALE: 1" = 2000'
UPDATED BY: MPH	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0014A2.DWG	



P:\01-Survey\_Projects\Phillips 66\13312 COE0015A2.dwg PLOT DATE: 11/18/19 12:02:31pm



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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
3	11/18/19	MPH

REVISION
REVISED ROUTE



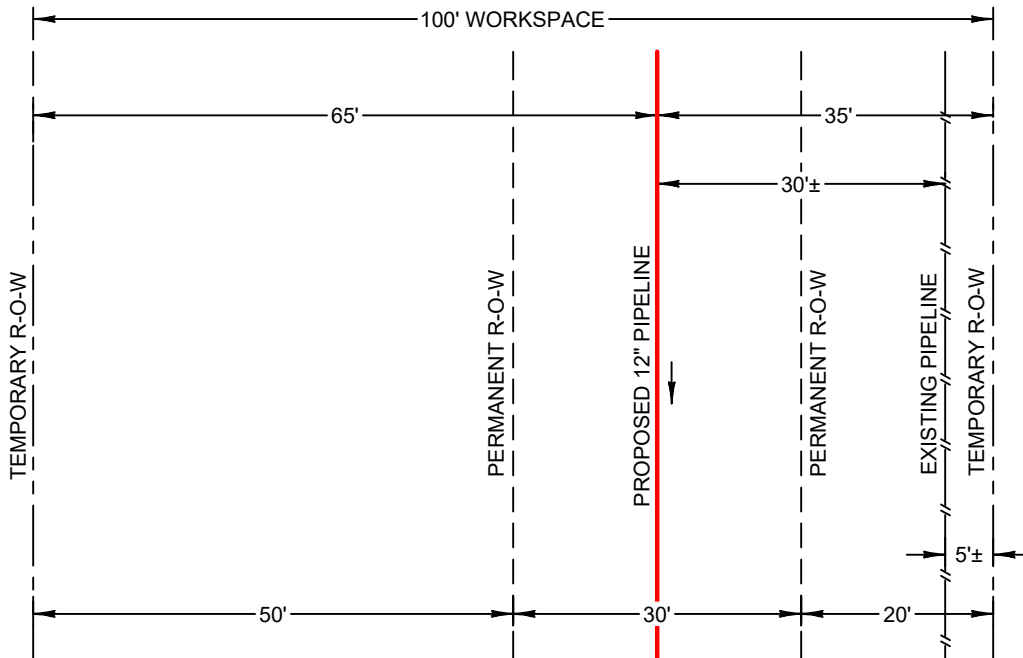
Phillips 66  
Pipeline LLC

PLAN VIEW NO. 14  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE  
PLAQUEMINES PARISH, LOUISIANA  
STA. 1803+15 TO STA. 1896+38

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	15
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UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0015A2.DWG			





**PLAN**  
NOT TO SCALE

**DETAIL FOR:**

STA. 4+11 TO STA. 42+78 (SHEET 2)  
 STA. 348+86 TO STA. 735+10 (SHEETS 4-7)  
 STA. 769+36 TO STA. 1183+75 (SHEETS 7-10)  
 STA. 1242+64 TO STA. 1265+07 (SHEET 11)

**DETAIL FOR:**

STA. 1314+39 TO STA. 1460+92 (SHEETS 11-12)  
 STA. 1532+10 TO STA. 1611+35 (SHEETS 12-13)  
 STA. 1669+13 TO STA. 1845+70 (SHEETS 13-15)  
 STA. 1854+20 TO STA. 1892+25 (SHEET 15)

130,213 FT. OR 24.66 MILES TOTAL LENGTH OF PIPELINE IN 100' WORKSPACE

298.93 TOTAL ACRES TO BE EFFECTED IN 100' WORKSPACE AREA

**NOTES:**

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 GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

2	10/29/19	MPH
NO.	DATE	REV. BY:

REVISED ROUTE  
REVISION



**Phillips 66  
Pipeline LLC**

**TYPICAL 100' WORKSPACE DETAIL  
IN MARSH & UPLANDS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



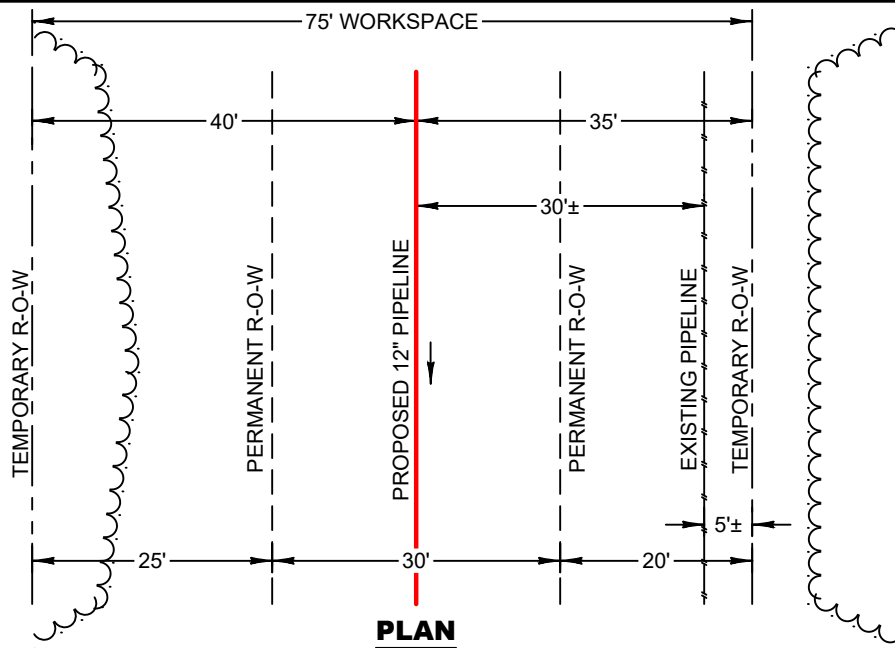
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UPDATED BY:	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0016A2.DWG	



P:\01-Survey\_Projects\Phillips 66\13312 COE\0017A2.dwg PLOT DATE: 11/1/19 9:20:25am

FORESTED  
WETLANDS

**NOTE:**  
TIMBER AND OTHER WOODY  
VEGETATION ASSOCIATED WITH  
ROW CONSTRUCTION WILL EITHER  
BE CUT AND HAULED TO A  
NON-WETLAND DISPOSAL SITE OR  
CUT, CHIPPED AND BROADCAST  
WITHIN THE PIPELINE ROW TO A  
HEIGHT NOT TO EXCEED 4 INCHES.  
THERE WILL BE NO STACKING OF  
CHIPS, STOCKPILING, WINDROWING,  
AND/OR BURNING OF ANY WOODY  
VEGETATION.

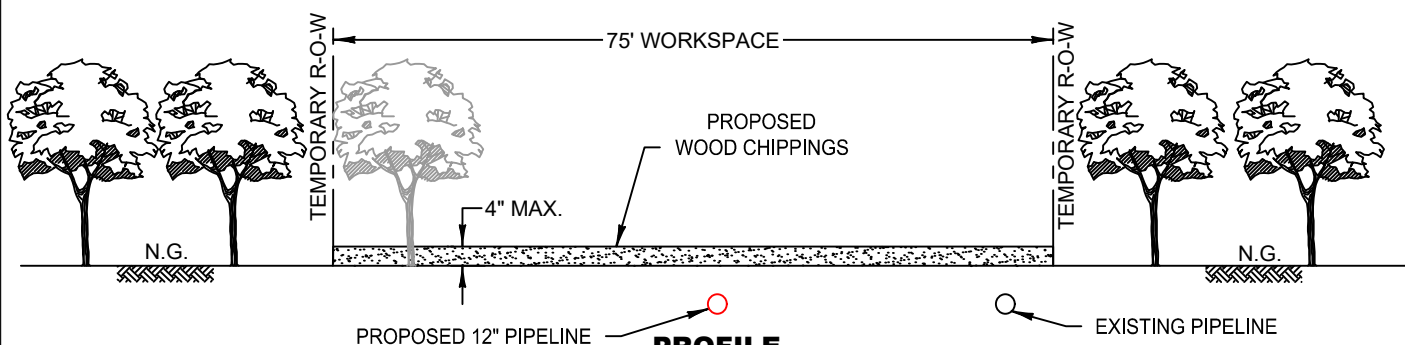


**PLAN**  
NOT TO SCALE

**DETAIL FOR:**  
STA. 55+55 TO STA. 111+56 (SHEET 2)  
STA. 128+56 TO STA. 345+80 (SHEET 2-4)

27,653 FT. OR 5.24 MILES TOTAL LENGTH OF PIPELINE IN 75' WORKSPACE

47.61 TOTAL ACRES TO BE EFFECTED IN 75' WORKSPACE AREA



**PROFILE**  
NOT TO SCALE

**NOTES:**

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UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE  
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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

TYPICAL 75' WORKSPACE DETAIL  
IN FORESTED WETLANDS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



*Morris P. Hebert, Inc.*

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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY: MPH

SHEET: 17

CHKD./APPD. BY: GML

SCALE: NONE

UPDATED BY:

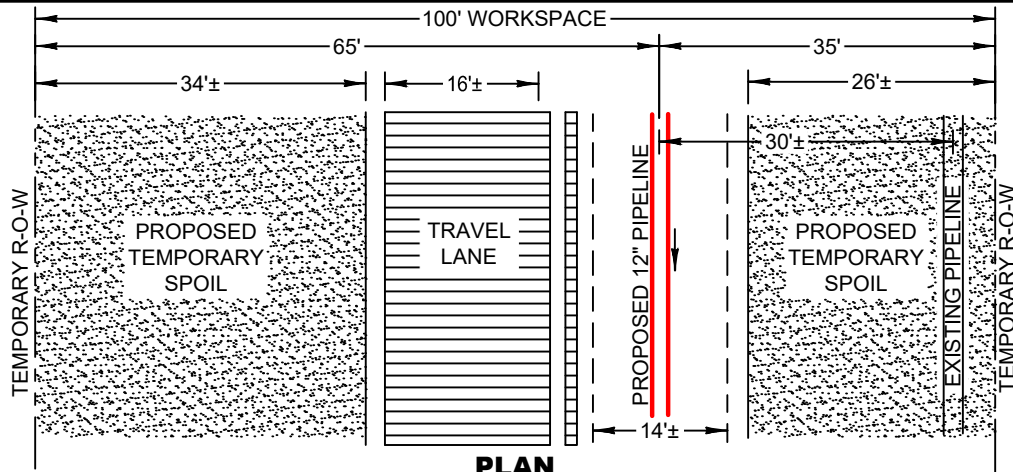
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DATA BASE: 13312

JOB NO. 13312-00

MPH CAD FILE: 13312COE0017A2.DWG





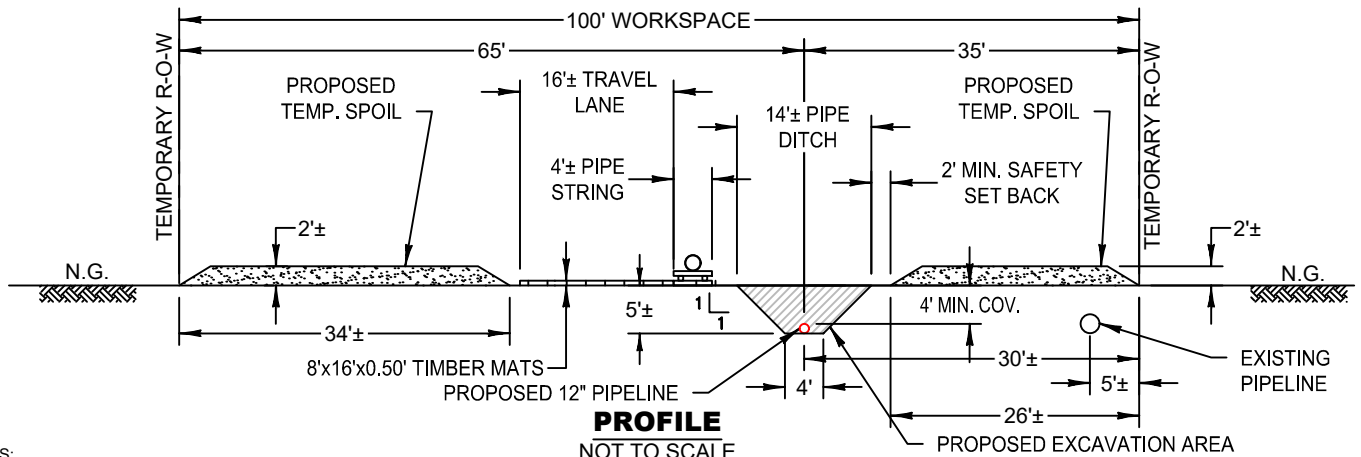
**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 4+11 TO STA. 34+19 (SHEET 2)  
STA. 1854+70 TO STA. 1889+56 (SHEET 15)

443 CU. YDS. IN OTHER WATERS  
10,670 CU. YDS. IN UPLANDS  
11,113 TOTAL CU. YDS. OF EXCAVATION IN LAND LAY (OPEN CUT)

DETAIL FOR:  
STA. 1894+64 TO STA. 1896+38 (SHEET 15)

0.08 ACRES IN OTHER WATERS  
2.06 ACRES IN UPLANDS  
2.14 TOTAL ACRES OF EXCAVATION IN LAND LAY (OPEN CUT)



**PROFILE**  
NOT TO SCALE

NOTES:  
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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	MPH	REVISION
2	10/29/19			



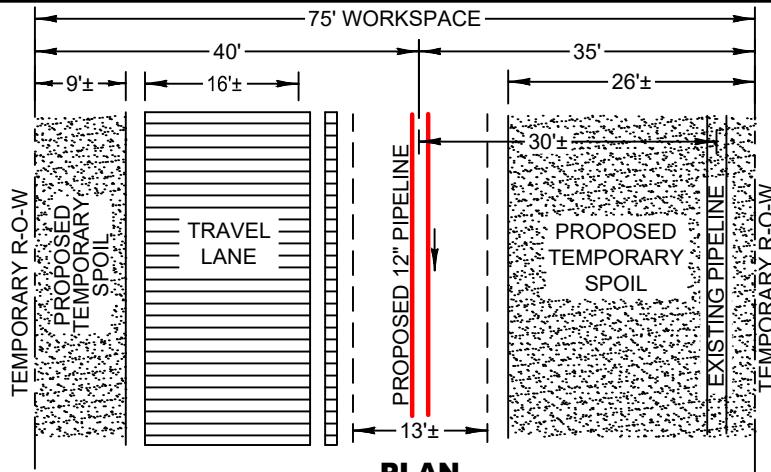
**Phillips 66**  
**Pipeline LLC**

**TYPICAL LAND LAY (OPEN CUT) DETAIL  
IN UPLANDS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	18
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
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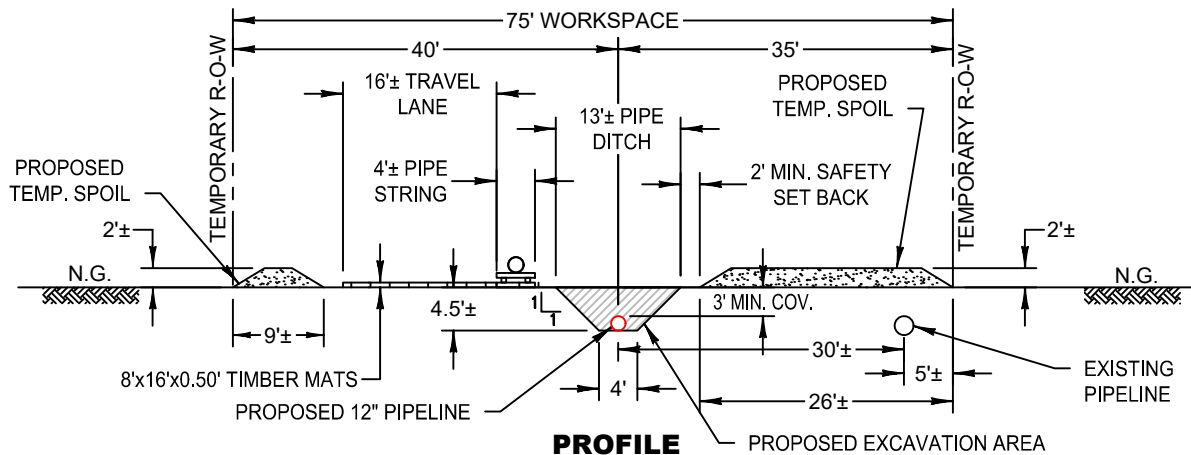
**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 56+46 TO STA. 111+21 (SHEET 2)  
STA. 130+15 TO STA. 141+03 (SHEET 2)

126 CU. YDS. IN OTHER WATERS  
9,443 CU. YDS. IN FORESTED WETLANDS  
9,569 TOTAL CU. YDS. OF EXCAVATION IN LAND LAY (OPEN CUT)

DETAIL FOR:  
STA. 1489+18 TO STA. 1491+10 (SHEET 12)

0.02 ACRES IN OTHER WATERS  
2.00 ACRES IN FORESTED WETLANDS  
2.02 TOTAL ACRES OF EXCAVATION IN LAND LAY (OPEN CUT)



**PROFILE**  
NOT TO SCALE

NOTES:  
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FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.  
GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISION
REVISED ROUTE



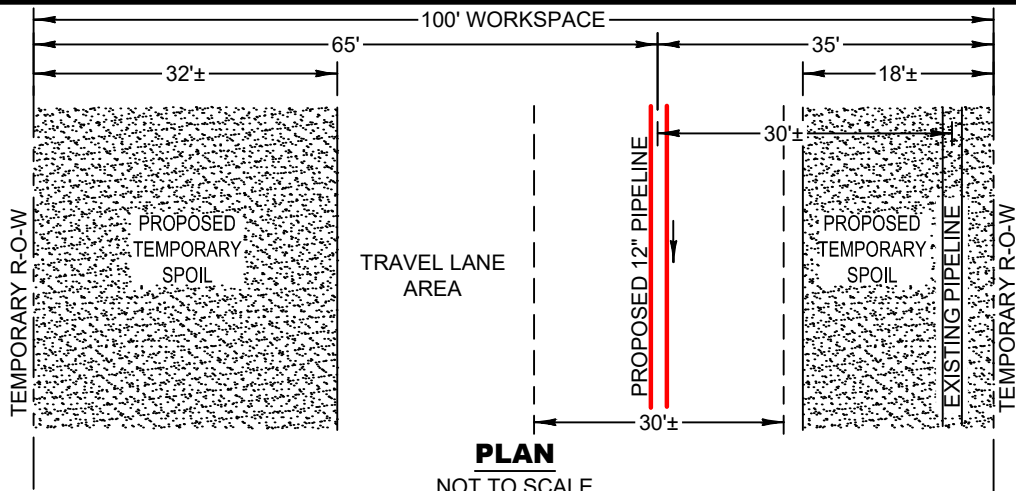
**Phillips 66**  
**Pipeline LLC**

TYPICAL LAND LAY (OPEN CUT) DETAIL  
IN FORESTED WETLANDS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY: MPH	SHEET: 19
CHKD./APPD. BY: GML	SCALE: NONE
UPDATED BY:	DATE: 4/10/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0019A2.DWG	



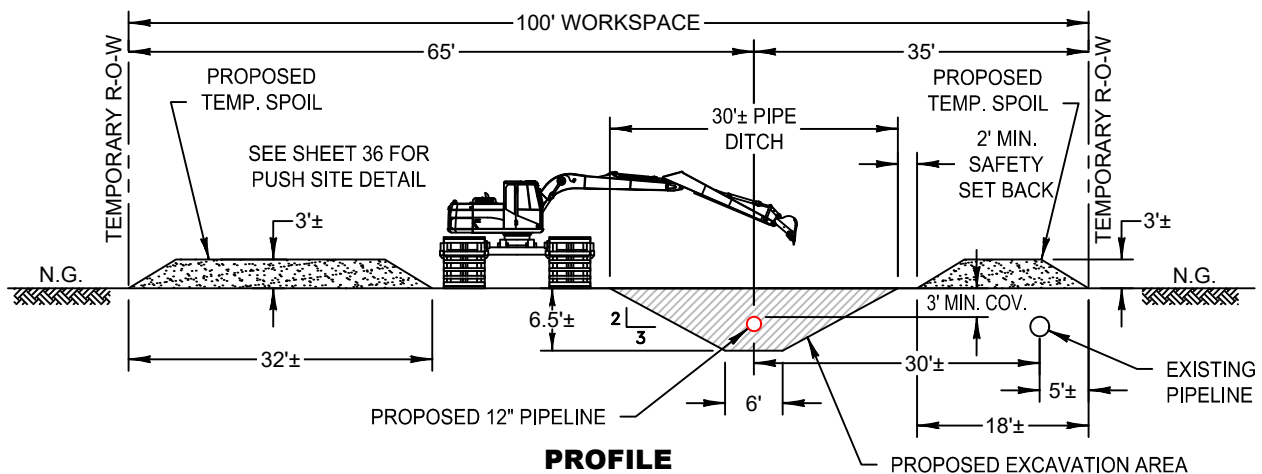


DETAIL FOR:  
STA. 348+83 TO STA. 740+77 (SHEETS 4-7)

DETAIL FOR:  
STA. 1443+62 TO STA. 1467+420 (SHEETS 11-12)

0 CU. YDS. IN OTHER WATERS  
177,255 CU. YDS. IN HERBACEOUS WETLANDS  
177,255 TOTAL CU. YDS. OF EXCAVATION IN PUSH AREAS

0 ACRES IN OTHER WATERS  
28.17 ACRES IN HERBACEOUS WETLANDS  
28.17 TOTAL ACRES OF EXCAVATION IN PUSH AREAS



**PROFILE**  
NOT TO SCALE

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2	10/29/19	MPH

REVISED ROUTE  
REVISION



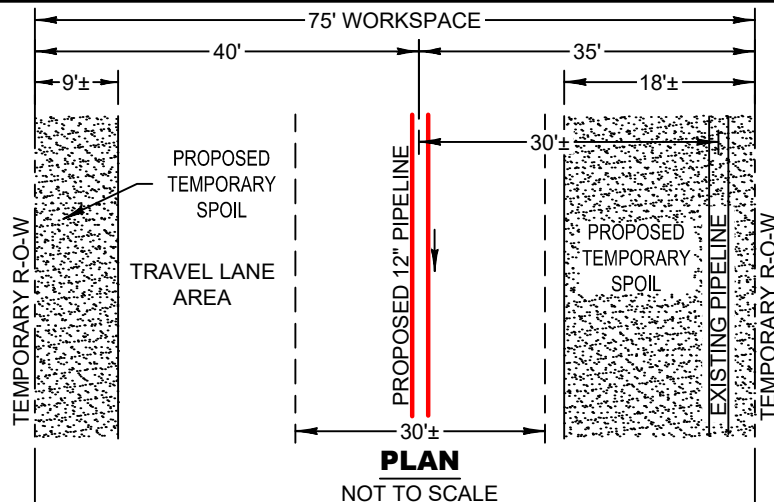
**Phillips 66**  
**Pipeline LLC**

**TYPICAL PUSH DITCH DETAIL  
IN MARSH  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	20
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
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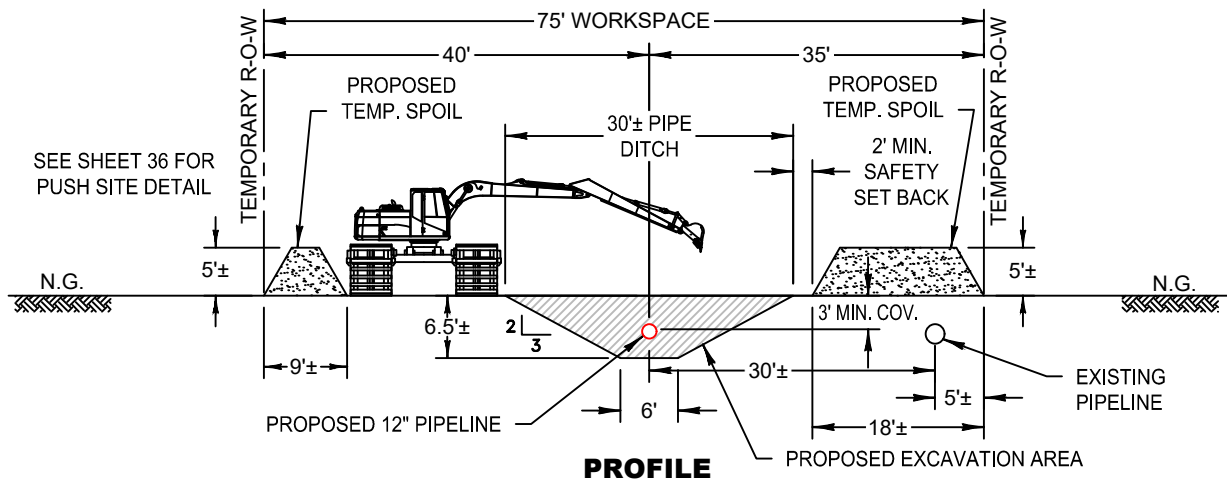




DETAIL FOR:  
STA. 152+21 TO STA. 350+97 (SHEETS 2-4)

555 CU. YDS. IN OTHER WATERS  
84,305 CU. YDS. IN FORESTED WETLANDS  
84,860 TOTAL CU. YDS. OF EXCAVATION IN PUSH AREAS

0.15 ACRES IN OTHER WATERS  
13.34 ACRES IN FORESTED WETLANDS  
13.49 TOTAL ACRES OF EXCAVATION IN PUSH AREAS



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2	10/29/19	MPH	REVISION



Phillips 66  
Pipeline LLC

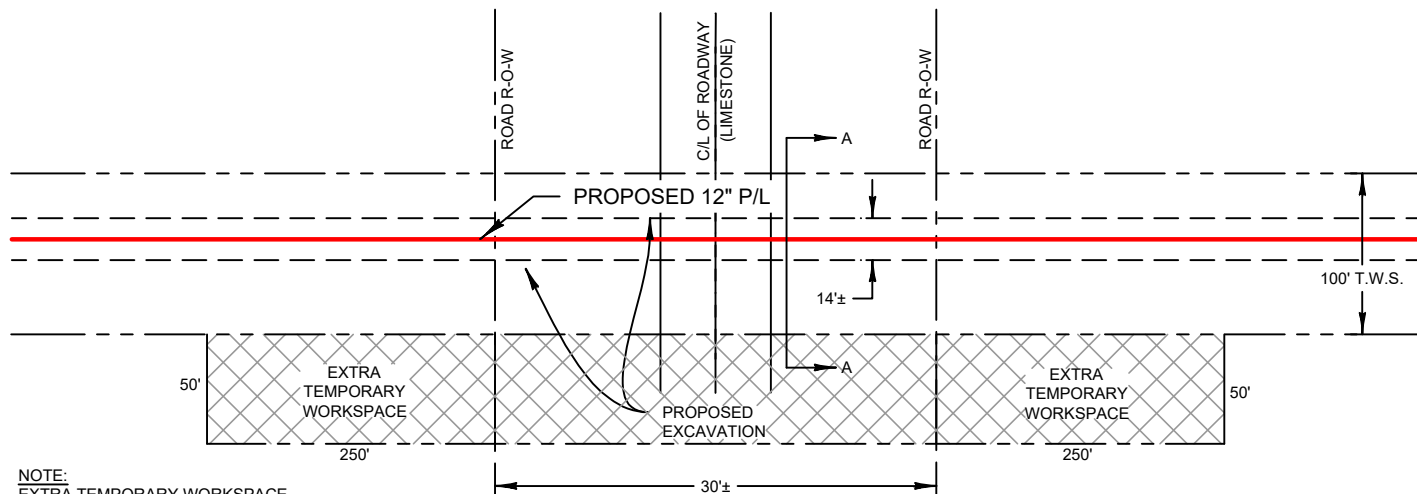
TYPICAL PUSH DITCH DETAIL  
IN FORESTED WETLANDS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY:	MPH	SHEET:	21
CHKD./APPD. BY:	GML	SCALE:	NONE
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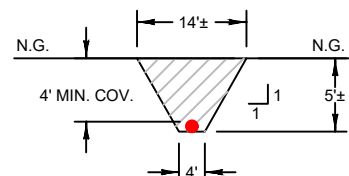


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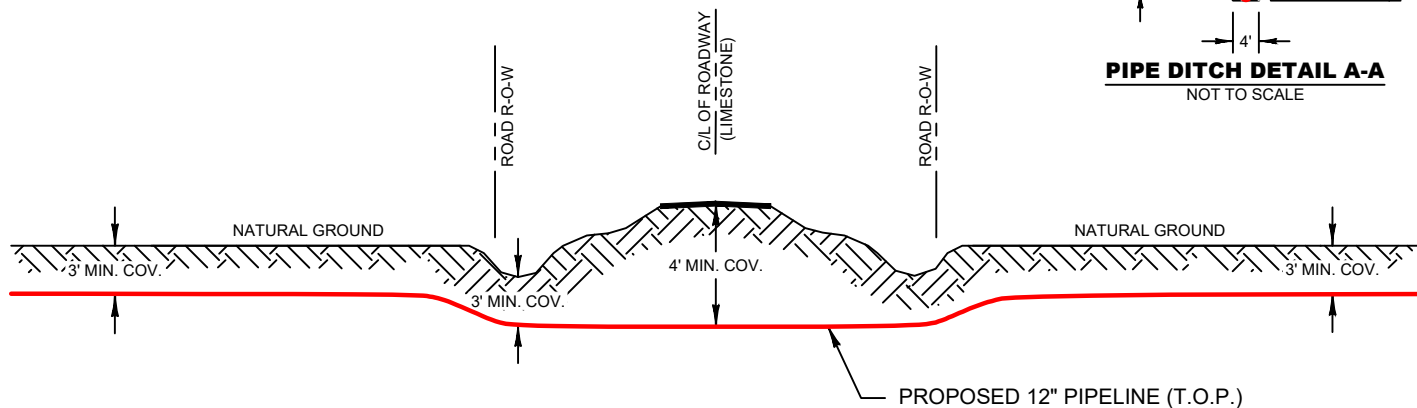


NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR PROPOSED TEMPORARY  
SPOIL FROM PROPOSED EXCAVATION.

**PLAN**  
NOT TO SCALE



**PIPE DITCH DETAIL A-A**  
NOT TO SCALE



**PROFILE**  
NOT TO SCALE

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1	07/19/19	MPH	REVISED ROUTE



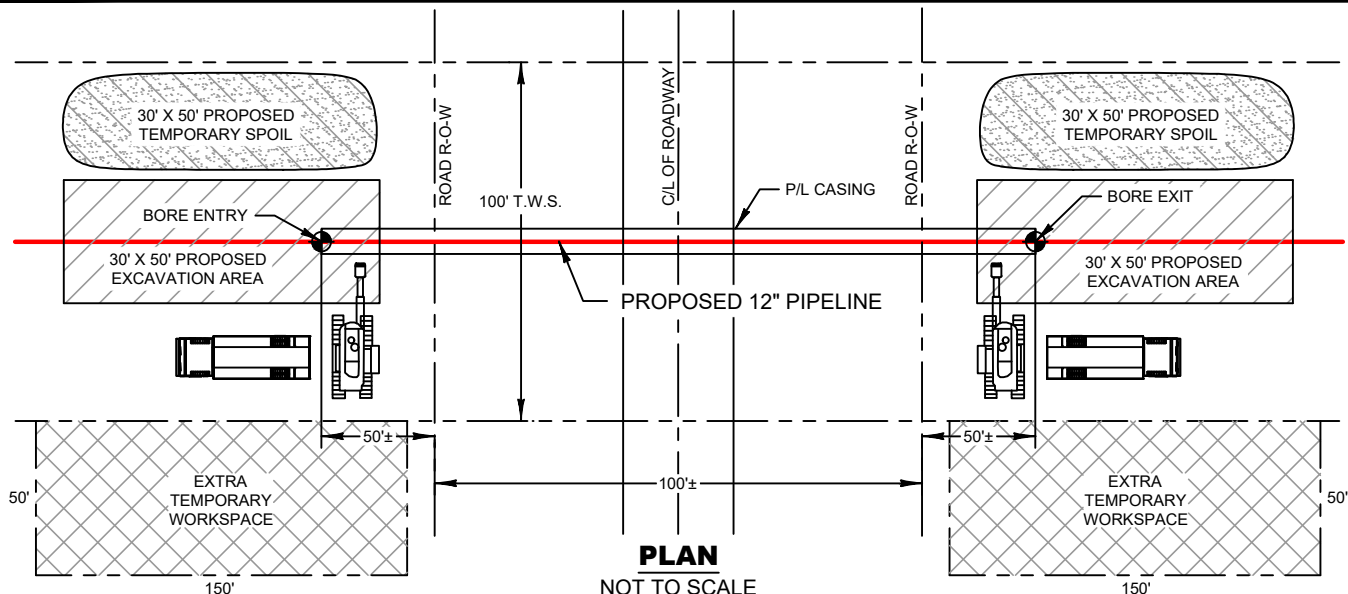
**Phillips 66**  
**Pipeline LLC**

**TYPICAL ROADWAY CROSSING DETAIL**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**

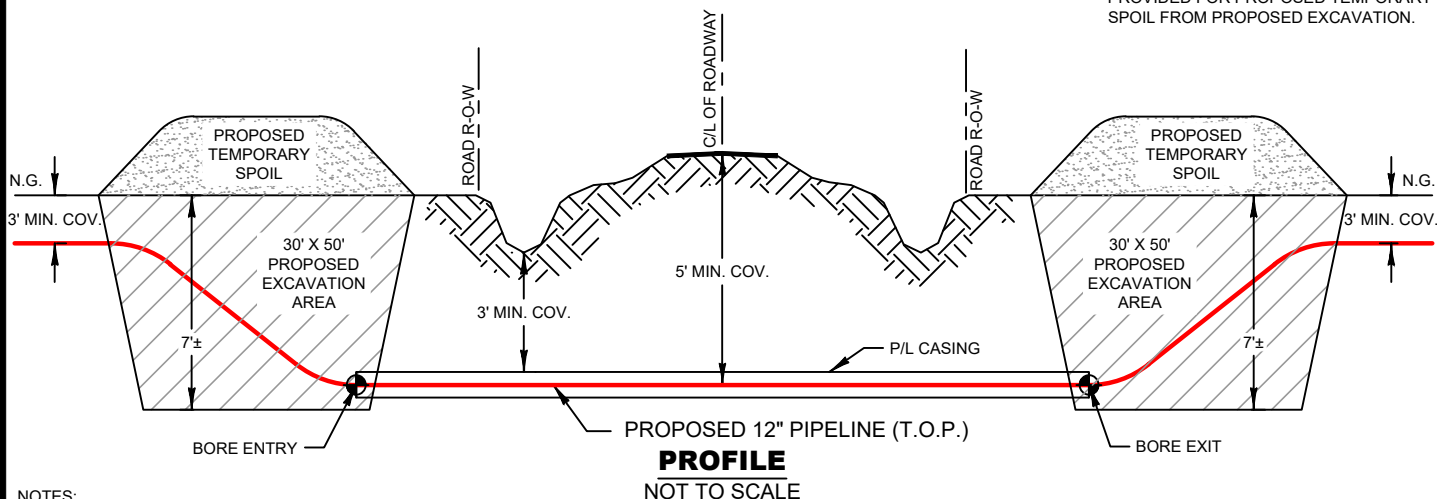


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UPDATED BY:		DATE:	4/10/19
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NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR PROPOSED TEMPORARY  
SPOIL FROM PROPOSED EXCAVATION.



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NO.	DATE	REV. BY:	REVISION
1	07/19/19	MPH	



**Phillips 66  
Pipeline LLC**

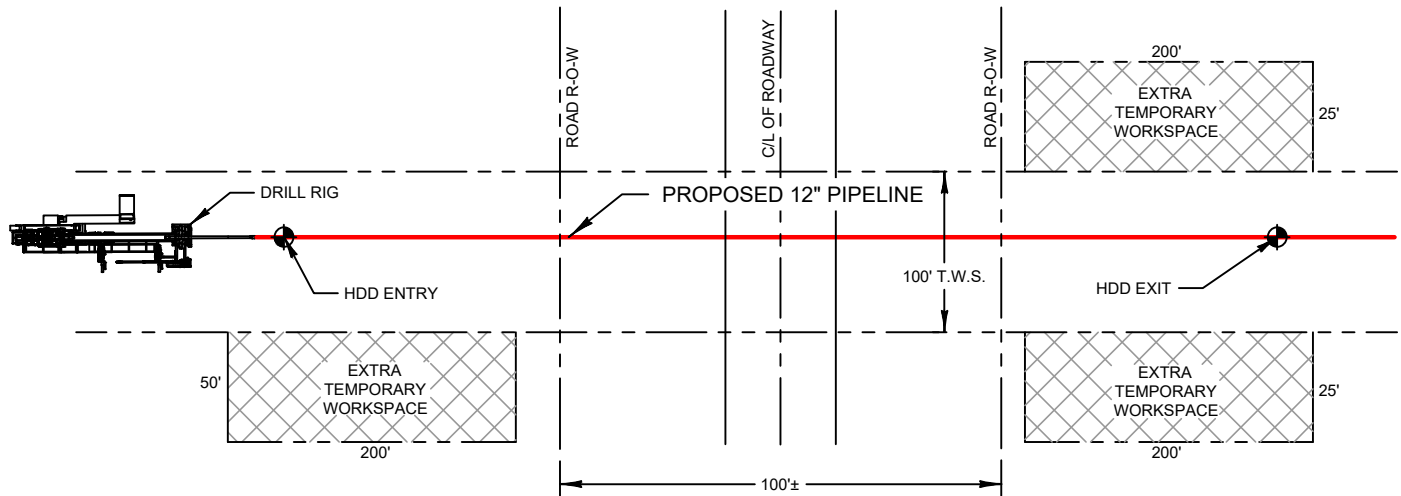
**TYPICAL ROADWAY BORE DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



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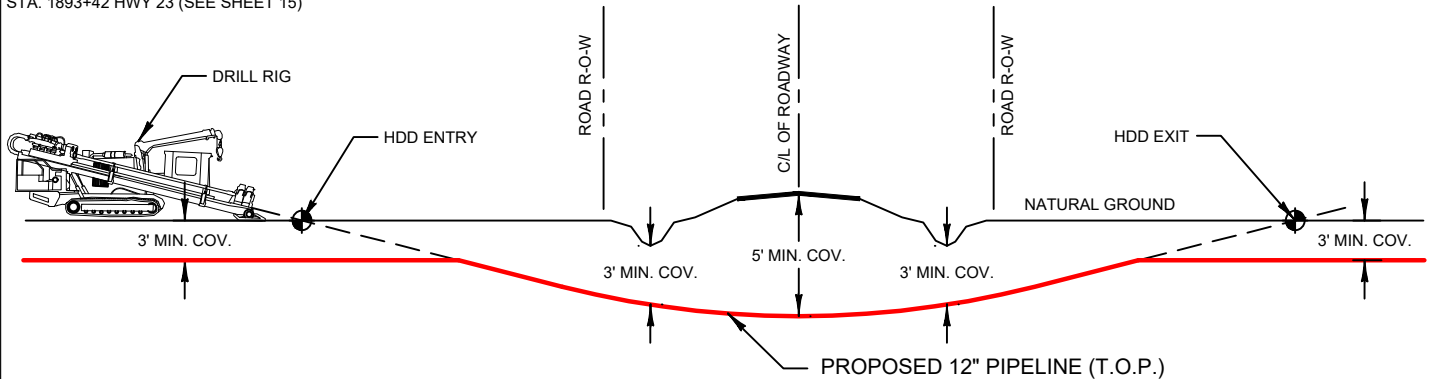
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**PLAN**  
NOT TO SCALE

**NOTE:**  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR DRILL RIG & EQUIPMENT.

**DETAIL FOR:**  
STA. 1+25 QUEENIE RD. (SEE SHEET 2)  
STA. 43+44 BARTON AVE. (SEE SHEET 2)  
STA. 53+03 DAVIS DR. (SEE SHEET 2)  
STA. 128+21 HWY. 90 (SEE SHEET 2)  
STA. 1477+81 HWY. 3257 (SEE SHEET 12)  
STA. 1489+46 HWY. 45 (SEE SHEET 12)  
STA. 1873+53 ACCESS ROAD/LEVEE (SEE SHEET 15)  
STA. 1893+42 HWY 23 (SEE SHEET 15)



**PROFILE**  
NOT TO SCALE

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NO.	DATE	REV. BY:	REVISED ROUTE
2	10/29/19	MPH	REVISION



**Phillips 66**  
**Pipeline LLC**

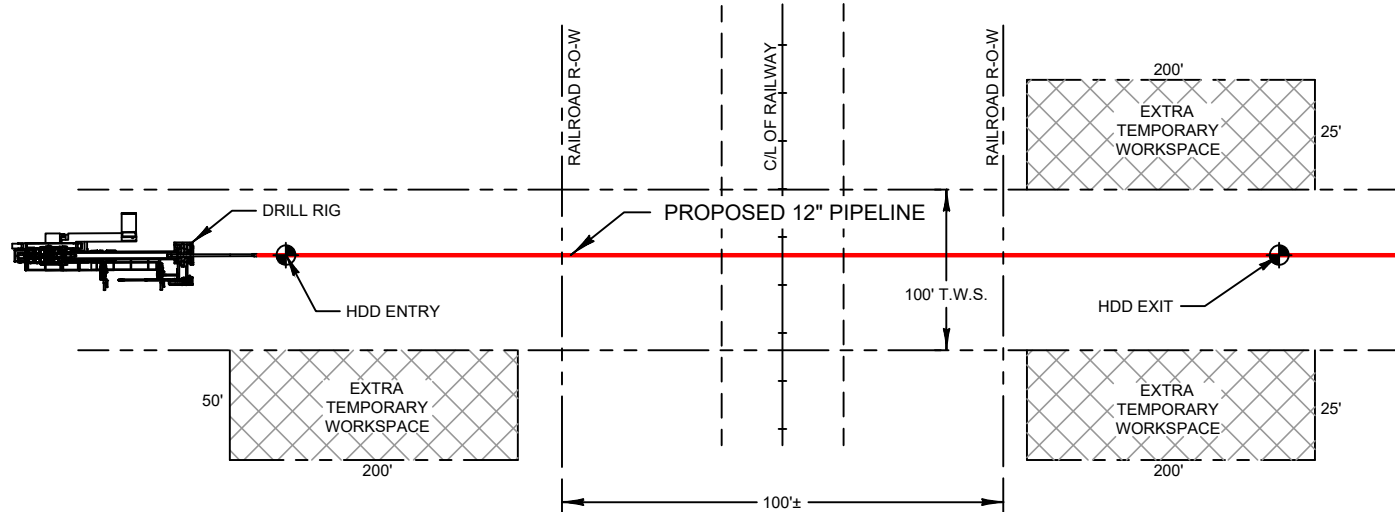
**TYPICAL ROADWAY HORIZONTAL  
DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



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CHKD./APPD. BY:	GML	SCALE:	NONE
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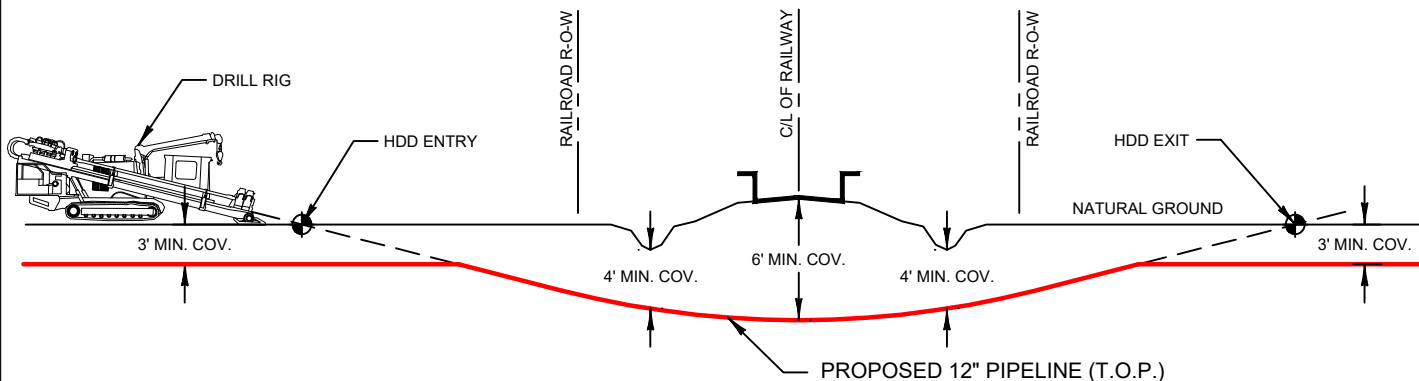
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**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 116+99 UNION PACIFIC RAILROAD (SEE SHEET 2)

NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR DRILL RIG & EQUIPMENT.



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NOT TO SCALE

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2	10/29/19	MPH	REVISED ROUTE



**Phillips 66**  
**Pipeline LLC**

**TYPICAL RAILWAY HORIZONTAL  
DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**

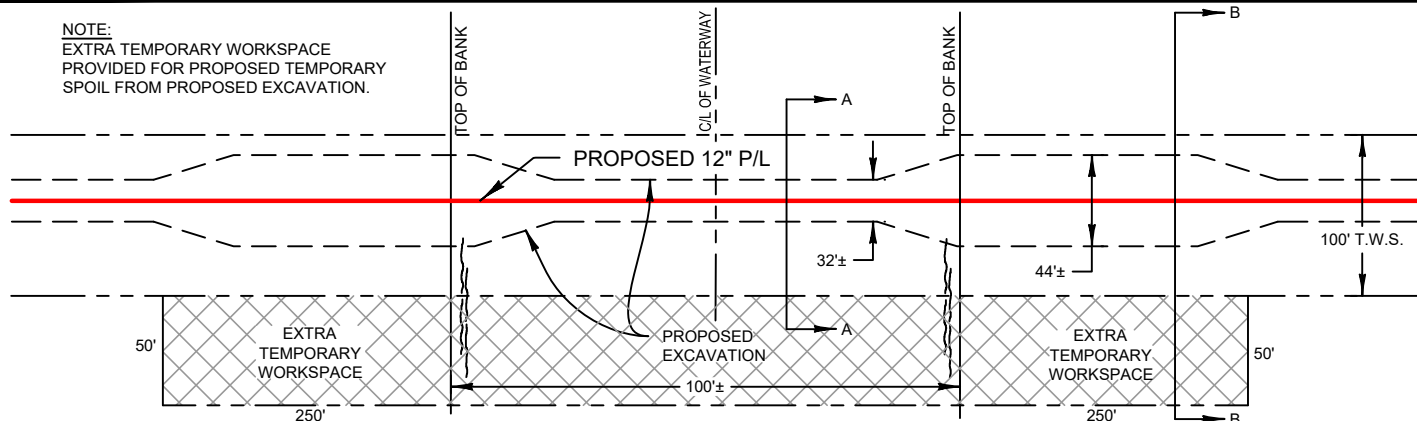


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NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR PROPOSED TEMPORARY  
SPOIL FROM PROPOSED EXCAVATION.



**PLAN**  
NOT TO SCALE

DETAIL FOR:

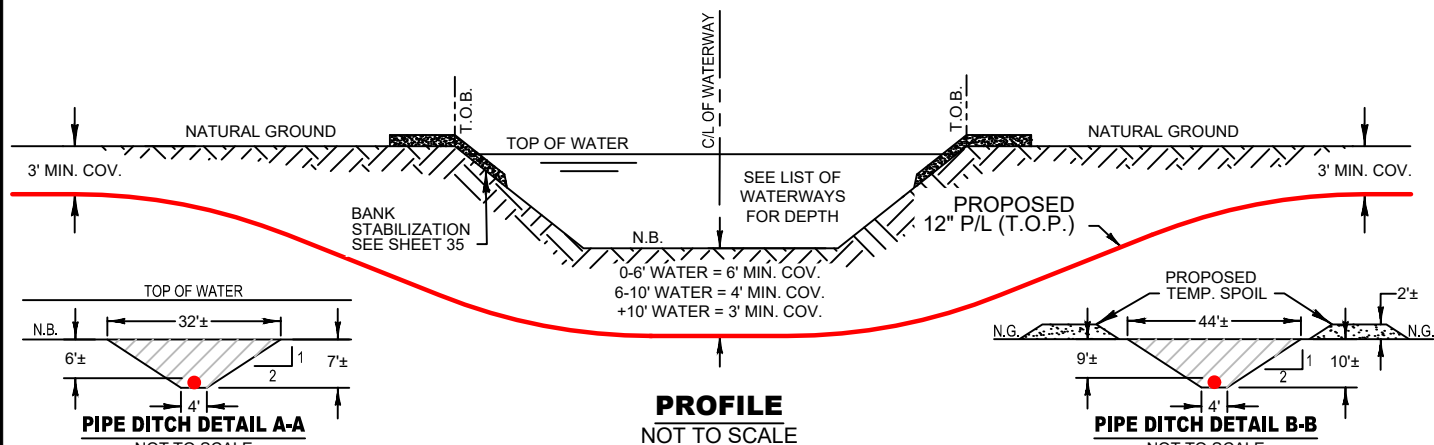
STA. 249+09 BAYOU DES SAULES (3.0' DEEP)(SEE SHEET 3)  
STA. 302+54 BAYOU BOIS PIQUANT (3.0' DEEP)(SEE SHEET 3)  
STA. 316+96 BAYOU CYPRIERE LONGUE (3.0' DEEP)(SEE SHEET 3)  
STA. 370+26 LOUISIANA CYPRESS LUMBER (5.0' DEEP)(SEE SHEET 4)  
STA. 528+46 WELL CANAL (6.2' DEEP)(SEE SHEET 5)  
STA. 635+51 BAYOU COUBA (6.1' DEEP)(SEE SHEET 6)  
STA. 679+54 WELL CANAL (7.7' DEEP)(SEE SHEET 7)

LEGEND:

0-6' WATER = 6' MIN. COV.  
6-10' WATER = 4' MIN. COV.  
+10' WATER = 3' MIN. COV.

DETAIL FOR:

STA. 965+65 LAKE SALVADOR (9.5' DEEP)(SEE SHEETS 7, 8, 9 & 10)  
STA. 1434+32 WELL CANAL (5.0' DEEP)(SEE SHEET 12)  
STA. 1581+60 THE PEN (5.0' DEEP)(SEE SHEET 13)  
STA. 1711+84 PIPELINE CANAL (5.5' DEEP)(SEE SHEET 14)  
STA. 1841+44 WELL CANAL (5.0' DEEP)(SEE SHEET 15)  
STA. 1895+68 LEVEE/CANAL (3.0' DEEP)(SEE SHEET 15)



**PROFILE**  
NOT TO SCALE

NOTES:  
NOT TO SCALE

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2	10/29/19	MPH

REVISED ROUTE  
REVISION



Phillips 66  
Pipeline LLC

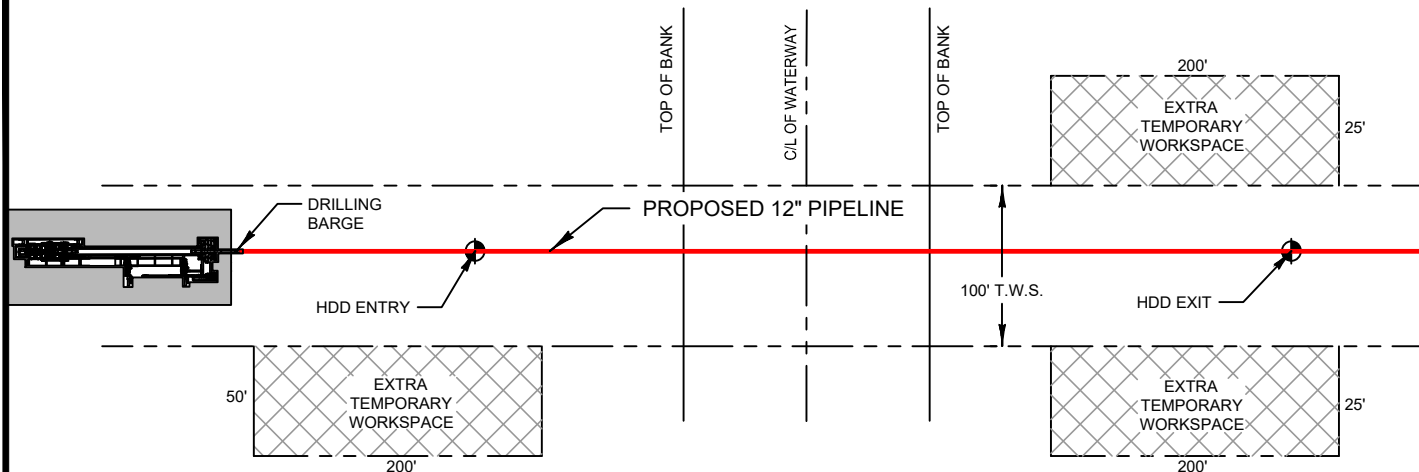
TYPICAL WATERWAY CROSSING DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	26
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
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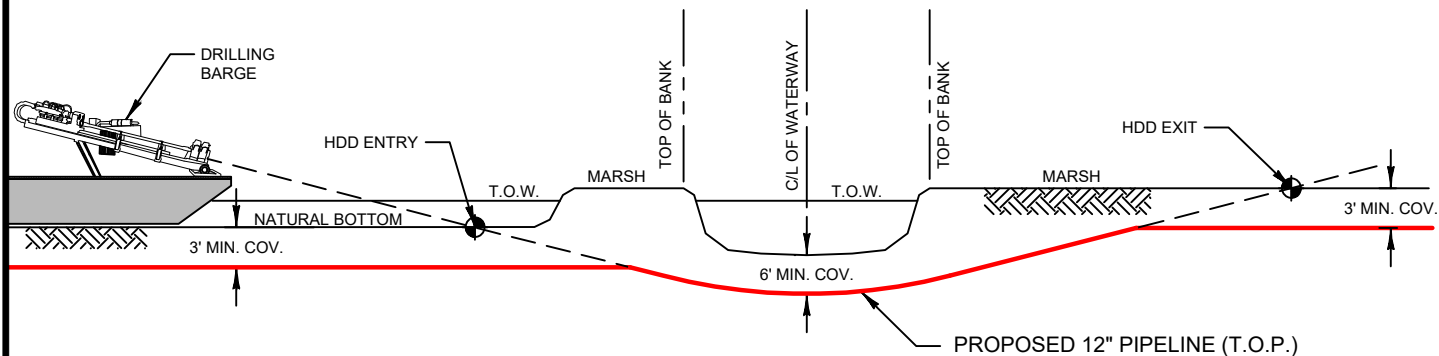
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**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 741+04 BAYOU DE SAUCE (SEE SHEET 7)

NOTE:  
EXTRA TEMPORARY WORKSPACE PROVIDED  
FOR DRILLING BARGE & EQUIPMENT.



**PROFILE**  
NOT TO SCALE

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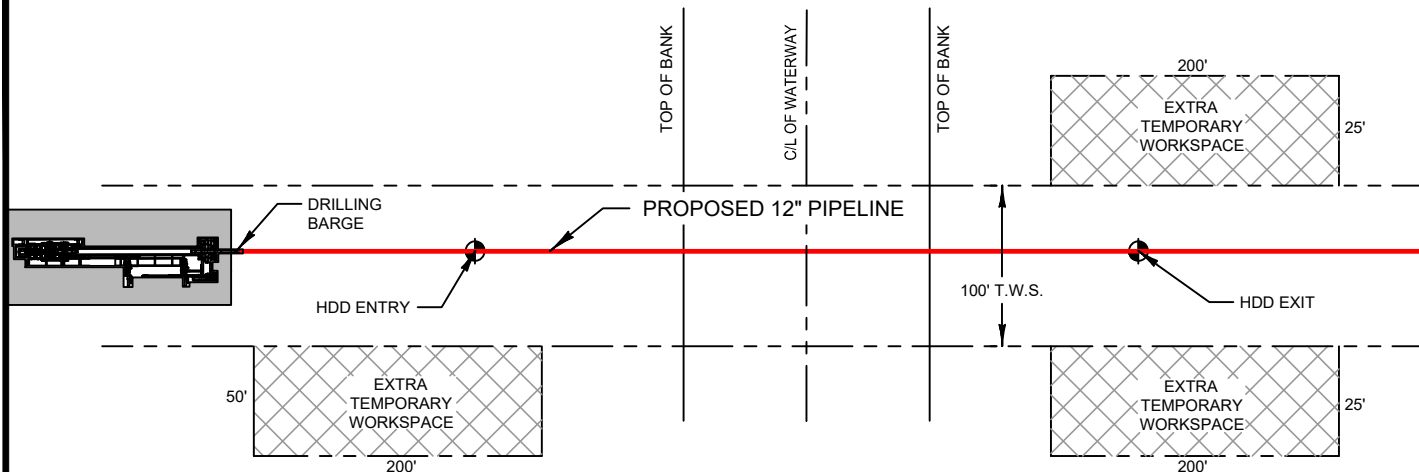
**Phillips 66**  
**Pipeline LLC**

**TYPICAL WATERWAY HORIZONTAL  
DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
(WATER TO LAND)  
LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	27
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/22/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0027A2.DWG			

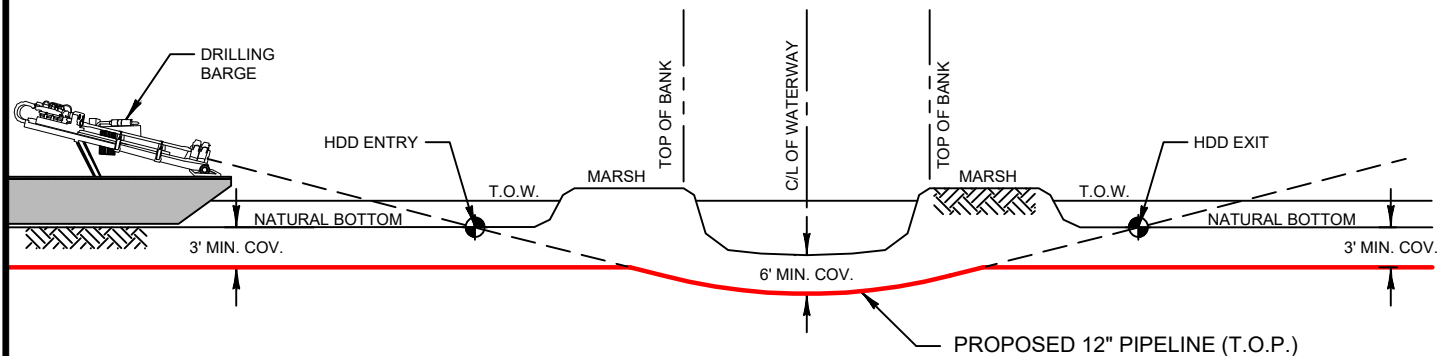
P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0028A2.dwg PLOT DATE: 11/1/19 9:27:25am



**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 1313+44 BAYOU PEROT (SEE SHEET 11)  
STA. 1624+36 PIPELINE CANAL (SEE SHEET 13)  
STA. 1667+72 PIPELINE CANAL (SEE SHEET 13)

NOTE:  
EXTRA TEMPORARY WORKSPACE PROVIDED  
FOR DRILLING BARGE & EQUIPMENT.



**PROFILE**  
NOT TO SCALE

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	REVISION
2	10/29/19	MPH	REVISED ROUTE



**Phillips 66**  
**Pipeline LLC**

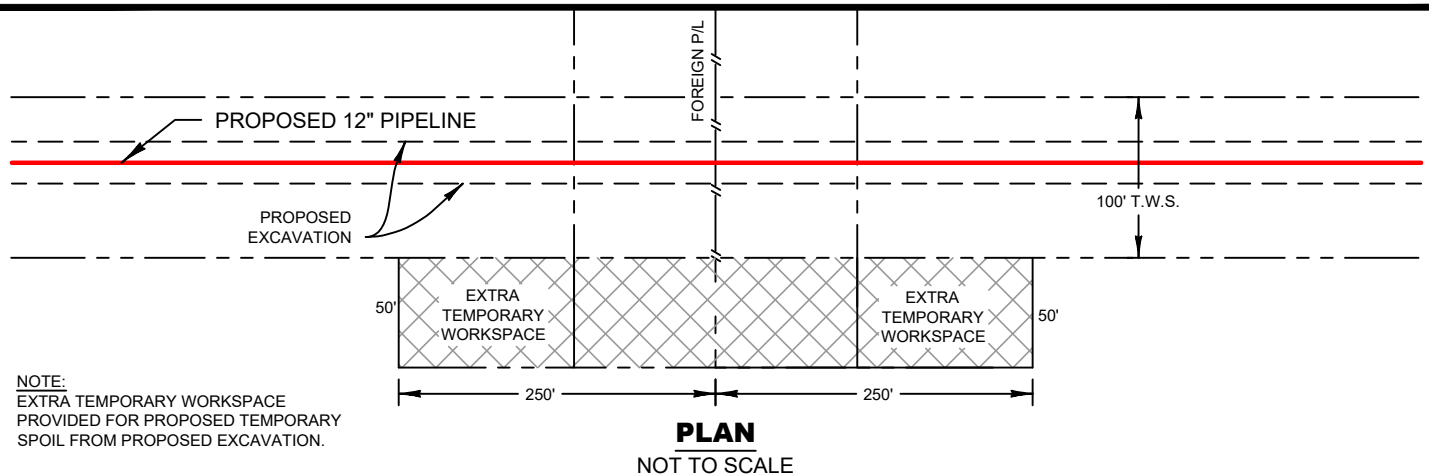
TYPICAL WATERWAY HORIZONTAL  
DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
(WATER TO WATER)  
LULING TO ALLIANCE



DRAWN BY:	MPH	SHEET:	28
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/22/19
DATA BASE:	13312	JOB NO.	13312-00
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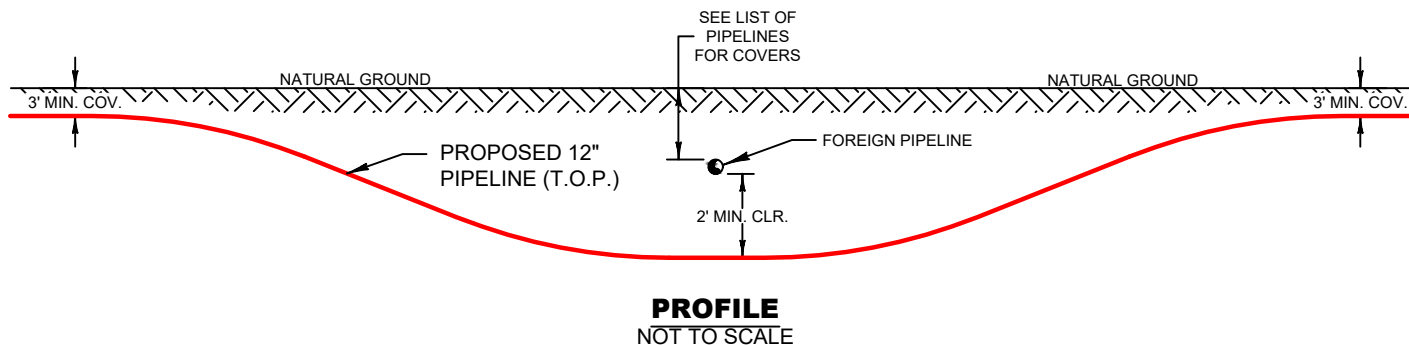


P:\01-Survey\_Projects\Phillips 66\13312 COE\Permits\COE\13312COE0029A2.dwg PLOT DATE: 11/1/19 9:27:48am



DETAIL FOR:  
STA. 15+50 12" GULF SOUTH P/L (2.6' COV.)(SEE SHEET 2)  
STA. 15+68 12" GULF SOUTH P/L (1.6' COV.)(SEE SHEET 2)  
STA. 15+89 14" GULF SOUTH P/L (3.6' COV.)(SEE SHEET 2)  
STA. 16+18 14" GULF SOUTH P/L (3.3' COV.)(SEE SHEET 2)  
STA. 92+66 18" GULF SOUTH P/L (2.6' COV.)(SEE SHEET 2)  
STA. 93+80 20" SHELL P/L (3.8' COV.)(SEE SHEET 2)  
STA. 94+07 16" ENTERPRISE P/L (5.5' COV.)(SEE SHEET 2)  
STA. 94+53 24" SHELL P/L (4.1' COV.)(SEE SHEET 2)  
STA. 163+49 8" ENLINK P/L (8.0' COV.)(SEE SHEET 2)  
STA. 339+11 24" ENLINK P/L (6.8' COV.)(SEE SHEET 4)  
STA. 569+29 8" WILLIAMS P/L (9.3' COV.)(SEE SHEET 6)

DETAIL FOR:  
STA. 779+57 24" SHELL P/L (6.0' COV.)(SEE SHEET 7)  
STA. 871+17 12" FOREIGN P/L (2.7' COV.)(SEE SHEET 8)  
STA. 981+97 2" FOREIGN P/L (0.4' COV.)(SEE SHEET 9)  
STA. 983+13 2" FOREIGN P/L (0.4' COV.)(SEE SHEET 9)  
STA. 996+72 FOREIGN P/L (4.5' COV.)(SEE SHEET 9)  
STA. 1158+12 24" GULF SOUTH P/L (7.8' COV.)(SEE SHEET 10)  
STA. 1499+74 6" PHILLIPS P/L (6.0' COV.)(SEE SHEET 12)  
STA. 1499+61 6" PHILLIPS P/L (5.6' COV.)(SEE SHEET 12)  
STA. 1706+22 20" SHELL P/L (9.9' COV.)(SEE SHEET 14)  
STA. 1711+49 12" KOCH P/L (8.9' COV.)(SEE SHEET 14)  
STA. 1894+85 12" ALLIANCE P/L (2.5' COV.)(SEE SHEET 15)  
STA. 1895+44 24" HARVEST P/L (5.3' COV.)(SEE SHEET 15)



NOTES:  
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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.			REVISED ROUTE	
DATE			REVISION	
REV. BY:				



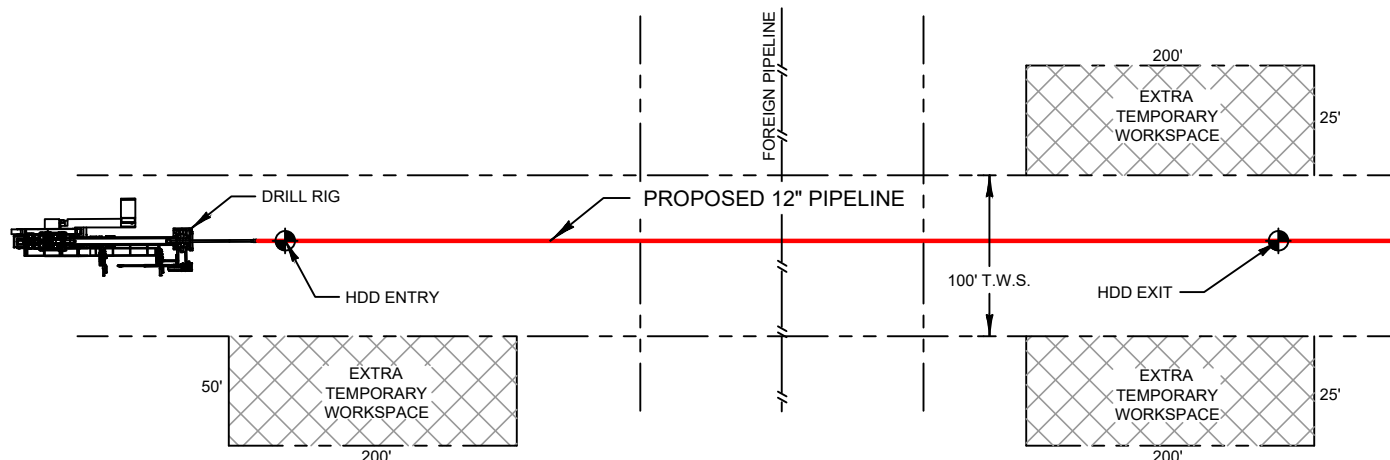
Phillips 66  
Pipeline LLC

TYPICAL FOREIGN PIPELINE  
CROSSING DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	29
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:	MPH	DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
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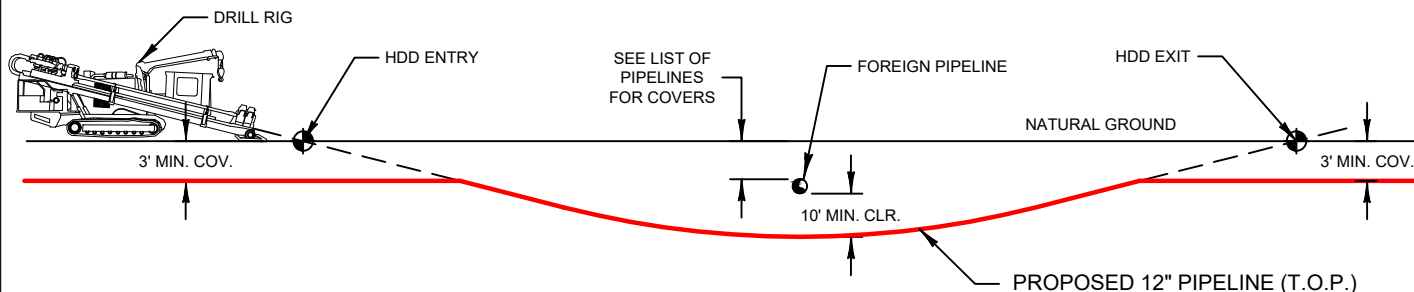
NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR DRILL RIG & EQUIPMENT.

### PLAN

NOT TO SCALE

DETAIL FOR:  
STA. 1+74 24" GULF SOUTH P/L (3.3' COV.)(SEE SHEET 2)  
STA. 2+35 8" TEXACO P/L (4.4' COV.)(SEE SHEET 2)  
STA. 3+17 14" ENLINK P/L (4.8' COV.)(SEE SHEET 2)  
STA. 52+23 6" NUSTAR P/L (5.4' COV.)(SEE SHEET 2)  
STA. 54+07 6" NUSTAR P/L (4.5' COV.)(SEE SHEET 2)  
STA. 118+13 24" ATMOS P/L (3.3' COV.)(SEE SHEET 2)  
STA. 124+91 24" SHELL P/L (4.0' COV.)(SEE SHEET 2)  
STA. 125+29 6" SHELL P/L (4.9' COV.)(SEE SHEET 2)

DETAIL FOR:  
STA. 125+50 8" ENTERPRISE P/L (4.6' COV.)(SEE SHEET 2)  
STA. 125+67 16" SHELL P/L (5.1' COV.)(SEE SHEET 2)  
STA. 126+72 6" NUSTAR P/L (4.0' COV.)(SEE SHEET 2)  
STA. 126+90 20" GULF SOUTH P/L (2.8' COV.)(SEE SHEET 2)  
STA. 129+53 8" ATMOS P/L (2.0' COV.)(SEE SHEET 2)  
STA. 1303+72 6" CRUDE OIL P/L (0.8 COV.)(SEE SHEET 11)  
STA. 1311+89 12" FOREIGN P/L (3.9' COV.)(SEE SHEET 11)  
STA. 1625+02 10" SHELL P/L (7.5' COV.)(SEE SHEET 13)



### PROFILE

NOT TO SCALE

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:
2	10/29/19	MPH

REVISED ROUTE  
REVISION



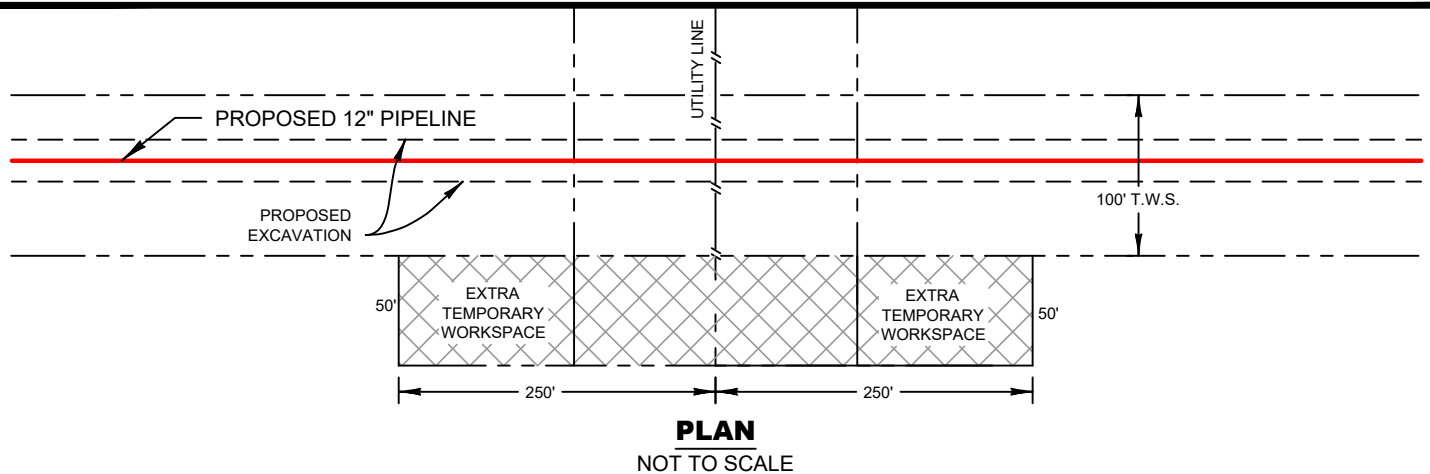
Phillips 66  
Pipeline LLC

TYPICAL FOREIGN PIPELINE  
HORIZONTAL DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

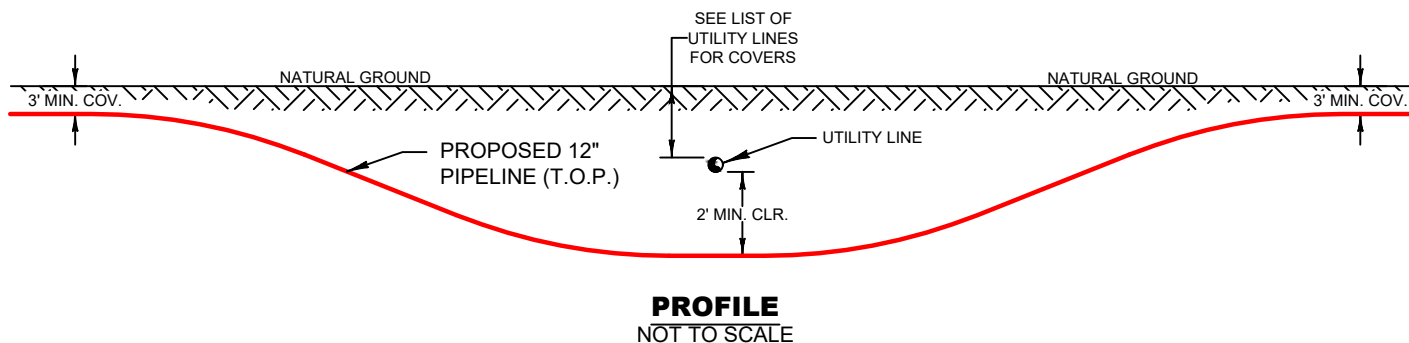
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UPDATED BY:		DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0030A2.DWG			





DETAIL FOR:  
STA. 74+90 6" FORCE MAIN LINE (4.3' COV.)(SEE SHEET 2)  
STA. 94+94 6" FORCE MAIN LINE (4.7' COV.)(SEE SHEET 2)

NOTE:  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR PROPOSED TEMPORARY  
SPOIL FROM PROPOSED EXCAVATION.



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NO.	DATE	REV. BY:	REVISION
2	10/29/19	MPH	REVISED ROUTE



**Phillips 66  
Pipeline LLC**

**TYPICAL UTILITY LINES  
CROSSING DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**

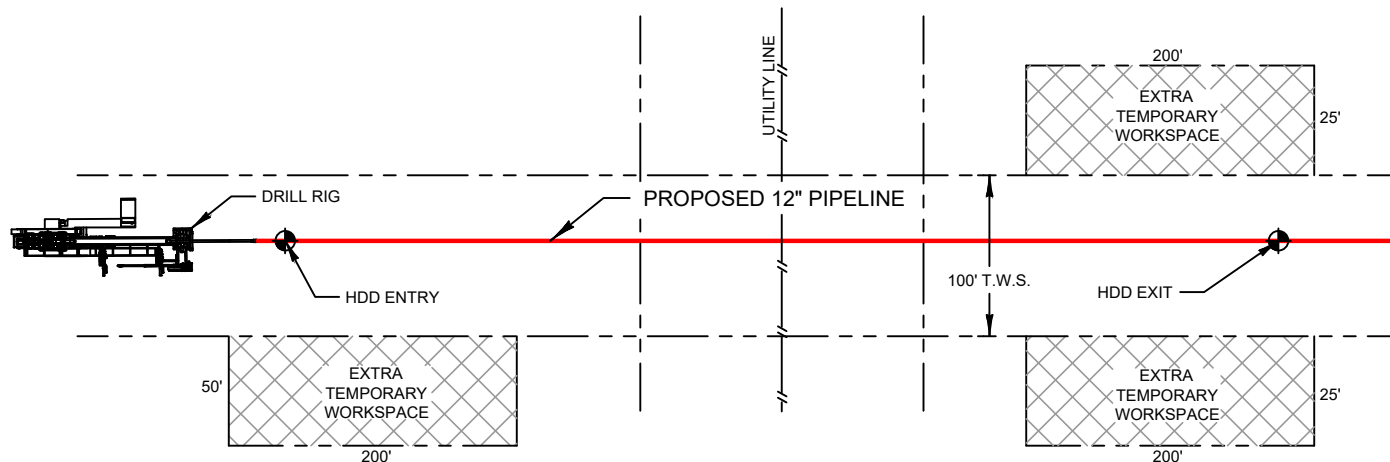


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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

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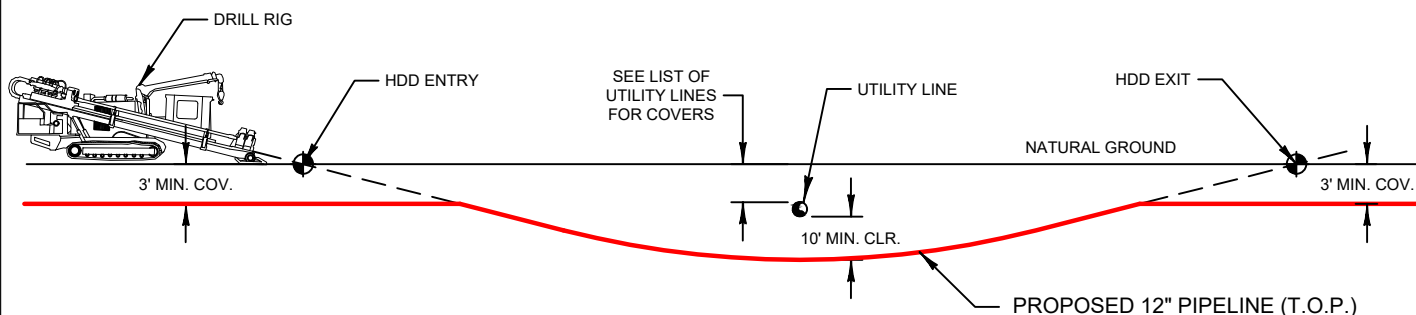
P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0032A2.dwg PLOT DATE: 11/1/19 9:28:52am



**PLAN**  
NOT TO SCALE

**DETAIL FOR:**  
STA. 112+46+47 6" FORCE MAIN LINE (4.9' COV.)(SEE SHEET 2)  
STA. 117+16 FIBER OPTIC (3.0' COV.)(SEE SHEET 2)  
STA. 1892+04 FIBER OPTIC (3.0' COV.)(SEE SHEET 15)

**NOTE:**  
EXTRA TEMPORARY WORKSPACE  
PROVIDED FOR DRILL RIG & EQUIPMENT.



**PROFILE**  
NOT TO SCALE

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NO.	DATE	REV. BY:
2	10/29/19	MPH

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REVISION



**Phillips 66**  
**Pipeline LLC**

**TYPICAL UTILITY LINES  
HORIZONTAL DIRECTIONAL DRILL DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	32
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	4/10/19
DATA BASE:	13312	JOB NO.	13312-00
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# FOREIGN PIPELINE CROSSING NOTES:

## ACREAGE

APPROXIMATELY 0.002 ACRES OF NON-VEGETATED WATER BOTTOMS TO BE AFFECTED FOR EACH OF THE 25 FOREIGN PIPELINE CROSSINGS. A TOTAL OF 0.05 ACRES OF NON-VEGETATED WATER BOTTOMS TO BE AFFECTED.

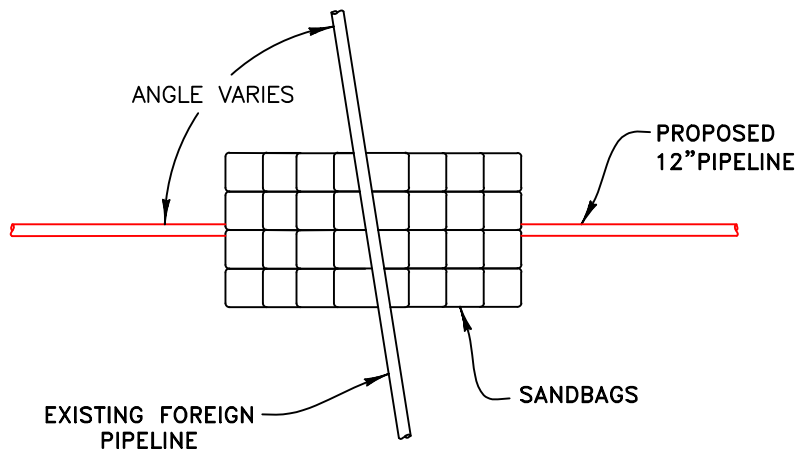
## CUT

FOR EACH OF THE 25 FOREIGN PIPELINE CROSSINGS, APPROXIMATELY 5 CU. YDS. OF NON-VEGETATED WATER BOTOTM MATERIAL TO BE DISPLACED BY DREDGING. TOTAL NON-VEGETATED WATER BOTTOM MATERIAL TO BE DISPLACED BY DREDGING IS APPROX. 125 CU. YDS.

## FILL

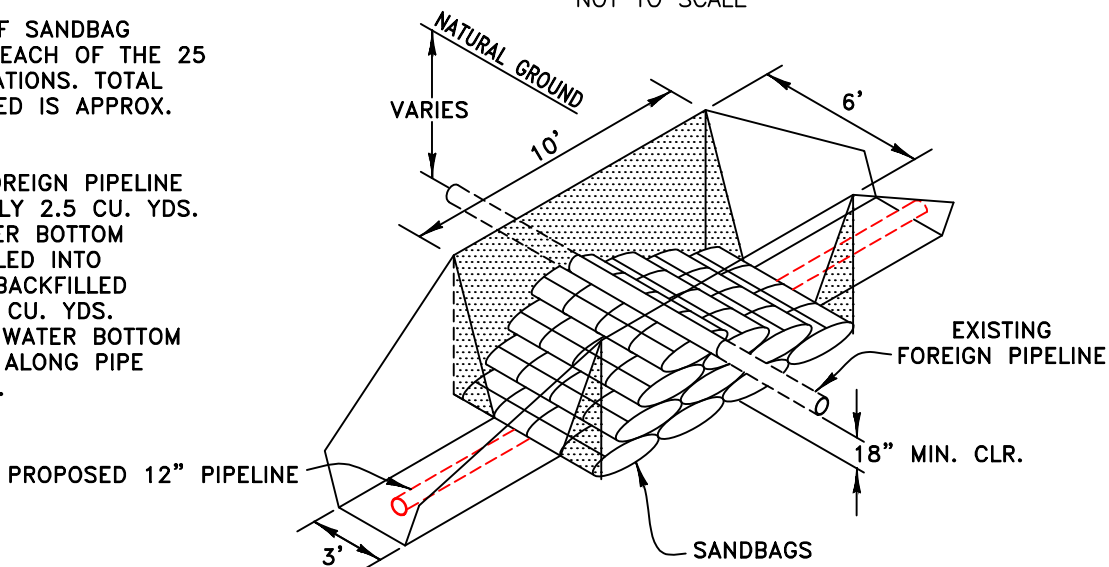
APPROX. 2.5 CU. YDS. OF SANDBAG MATERIAL REQUIRED FOR EACH OF THE 25 SANDBAG BRACE INSTALLATIONS. TOTAL SANDBAG MATERIAL NEEDED IS APPROX. 63 CU. YDS.

FOR EACH OF THE 25 FOREIGN PIPELINE CROSSINGS, APPROXIMATELY 2.5 CU. YDS. OF NON-VEGETATED WATER BOTTOM MATERIAL TO BE BACKFILLED INTO PIPELINE DITCH. TOTAL BACKFILLED MATERIAL IS APPROX. 63 CU. YDS. EXCESS NON-VEGETATED WATER BOTTOM MATERIAL TO BE SPREAD ALONG PIPE DITCH WHERE NECESSARY.



PLAN

NOT TO SCALE



PROFILE

NOT TO SCALE

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1	07/19/19	MPH
NO.	DATE	REV. BY:

REVISED ROUTE  
REVISION



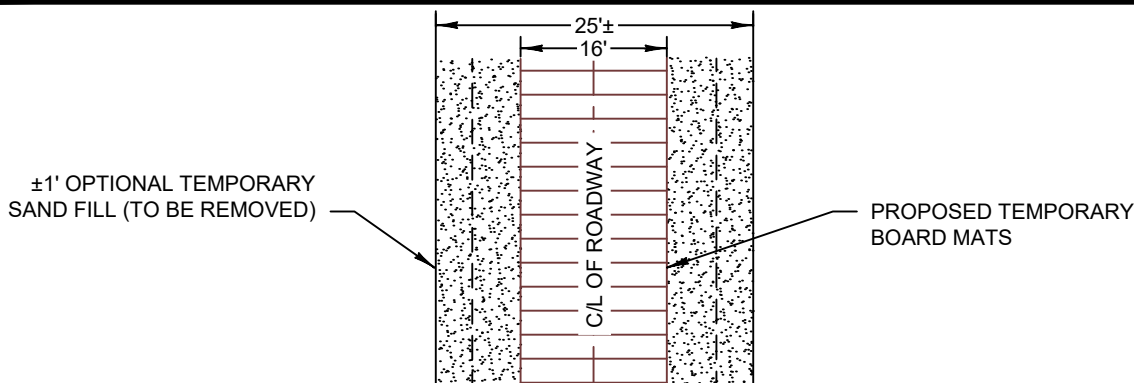
Phillips 66  
Pipeline LLC

TYPICAL SANDBAG DETAIL  
FOR FOREIGN PIPELINE CROSSINGS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY:	MPH	SHEET:	33
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0033A2.DWG			

P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0034A2.dwg PLOT DATE: 11/1/19 9:29:32am



**PLAN**  
NOT TO SCALE

**DETAIL FOR DIRT ROADS:**

STA. 55+73 DIRT ROAD (SEE SHEET 2 OFF OF REX ST.).....±232'  
STA. 128+56 DIRT ROAD (SEE SHEET 2 OFF OF HWY. 90).....±400'  
STA. 267+43 DIRT/LEVEE ROAD (SEE SHEET 3 OFF OF MICHAEL DRIVE).....±6,982'  
STA. 1873+53 DIRT ROAD (SEE SHEET 15 WEST OF HWY. 23).....±5,365'

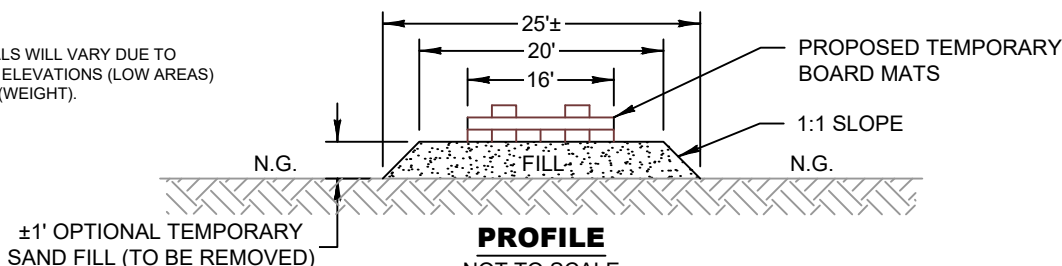
±12,979 OR 2.46 MILES OF TOTAL POTENTIAL BOARD MATS FOR TEMP. ACCESS DIRT RDS.

7,692 TOTAL CU. YDS. OF POTENTIAL BOARD MATS FOR TEMP. ACCESS DIRT RDS.

4.77 TOTAL ACRES OF POTENTIAL BOARD MATS FOR TEMP. ACCESS DIRT RDS.

12,018 TOTAL CU. YDS. OF POTENTIAL SAND FOR TEMP. ACCESS DIRT RDS.

**NOTES:**  
BOARD MAT TOTALS WILL VARY DUE TO  
WEATHER (RAIN), ELEVATIONS (LOW AREAS)  
AND EQUIPMENT (WEIGHT).



**PROFILE**  
NOT TO SCALE

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NO.	DATE	REV. BY:	REVISED ROUTE	
			REVISION	



**Phillips 66  
Pipeline LLC**

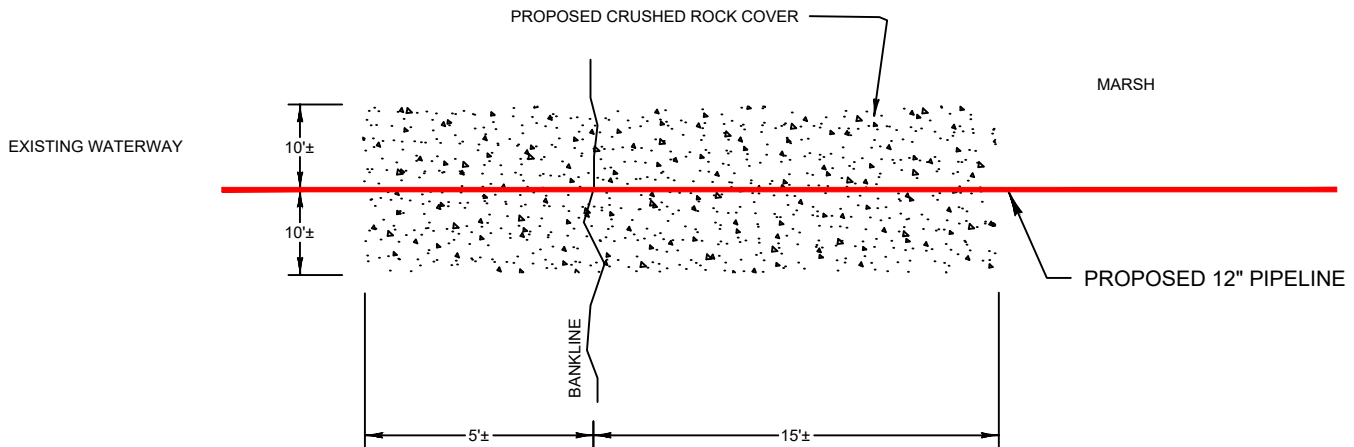
**TYPICAL TEMPORARY ACCESS ROAD DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	34
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0034A2.DWG			

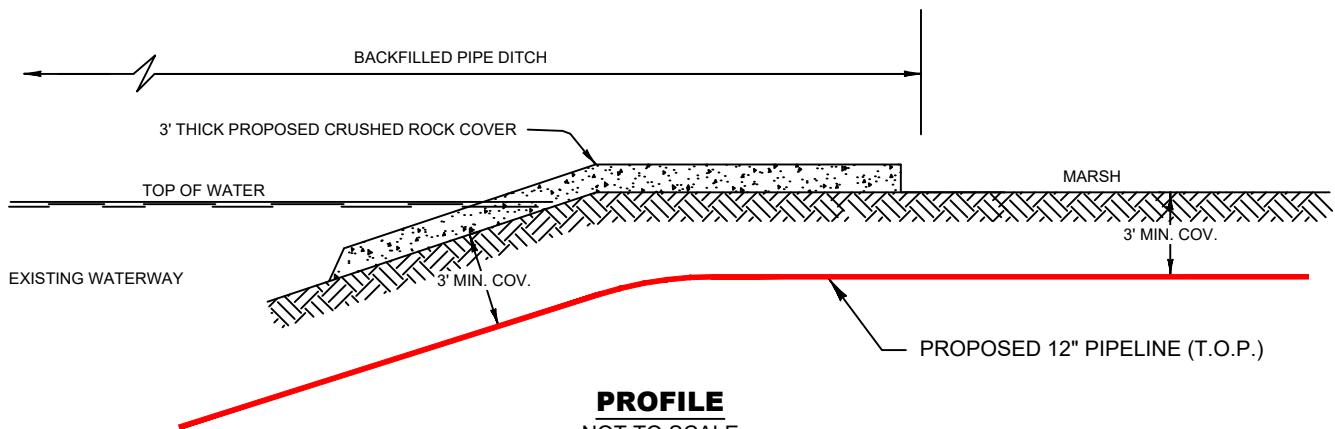


P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0035A2.dwg PLOT DATE: 11/1/19 9:30:18am



**PLAN**  
NOT TO SCALE

APPROX. 45 CU. YDS. (EACH BANK) OF PROPOSED CRUSHED ROCK MATERIAL REQUIRED FOR EACH OF THE 17 WATERWAY CROSSINGS TO BE PLACED OVER BACKFILLED PIPE DITCH TO PROVIDE STABILIZATION ALONG DISTURBED BANKLINE. TOTAL PROPOSED CRUSHED ROCK MATERIAL NEEDED IS APPROX. 1,530 CU. YDS.



**PROFILE**  
NOT TO SCALE

**NOTES:**

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1	07/19/19	MPH

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REVISION



**Phillips 66**  
**Pipeline LLC**

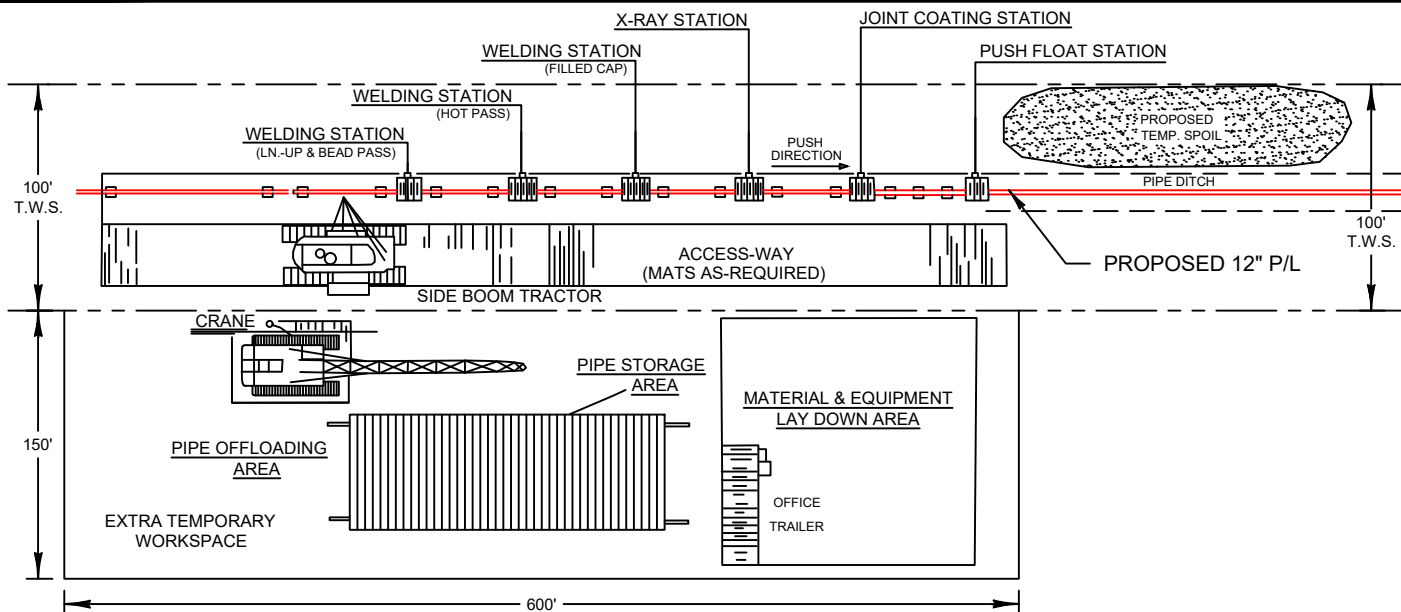
**TYPICAL BANK STABILIZATION**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**



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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	35
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0035A2.DWG			

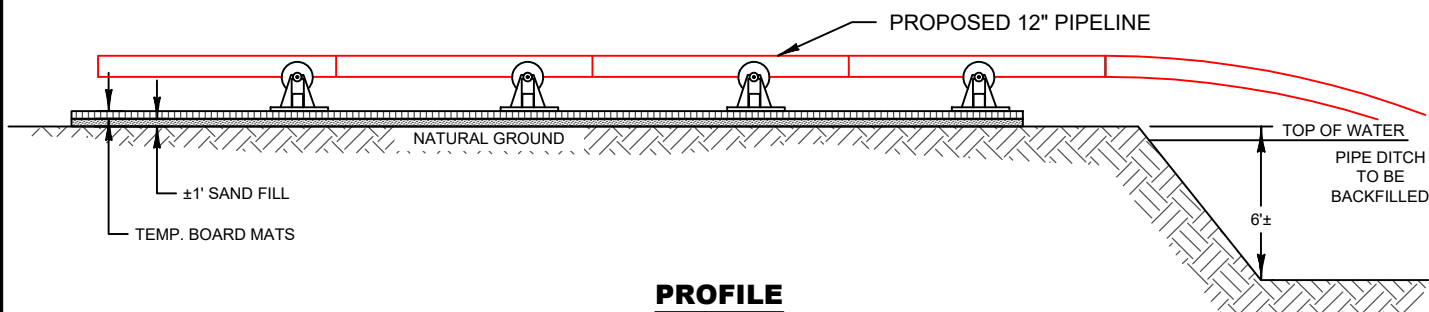
P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0036A2.dwg PLOT DATE: 11/1/19 9:30:33am



**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 1851+75 PUSH SITE (SEE SHEET 15)

5,556 TOTAL CU. YDS. OF POTENTIAL BOARD MATS FOR TEMPORARY PUSH SITE  
3.44 TOTAL ACRES OF POTENTIAL BOARD MATS FOR TEMPORARY PUSH SITE  
5,556 TOTAL CU. YDS. OF POTENTIAL SAND FOR TEMPORARY PUSH SITE



**PROFILE**  
NOT TO SCALE

#### NOTES:

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**Phillips 66**  
**Pipeline LLC**

**TYPICAL PUSH SITE WORKSPACE DETAIL**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**



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TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY: MPH

SHEET: 36

CHKD./APPD. BY: GML

SCALE: NONE

UPDATED BY:

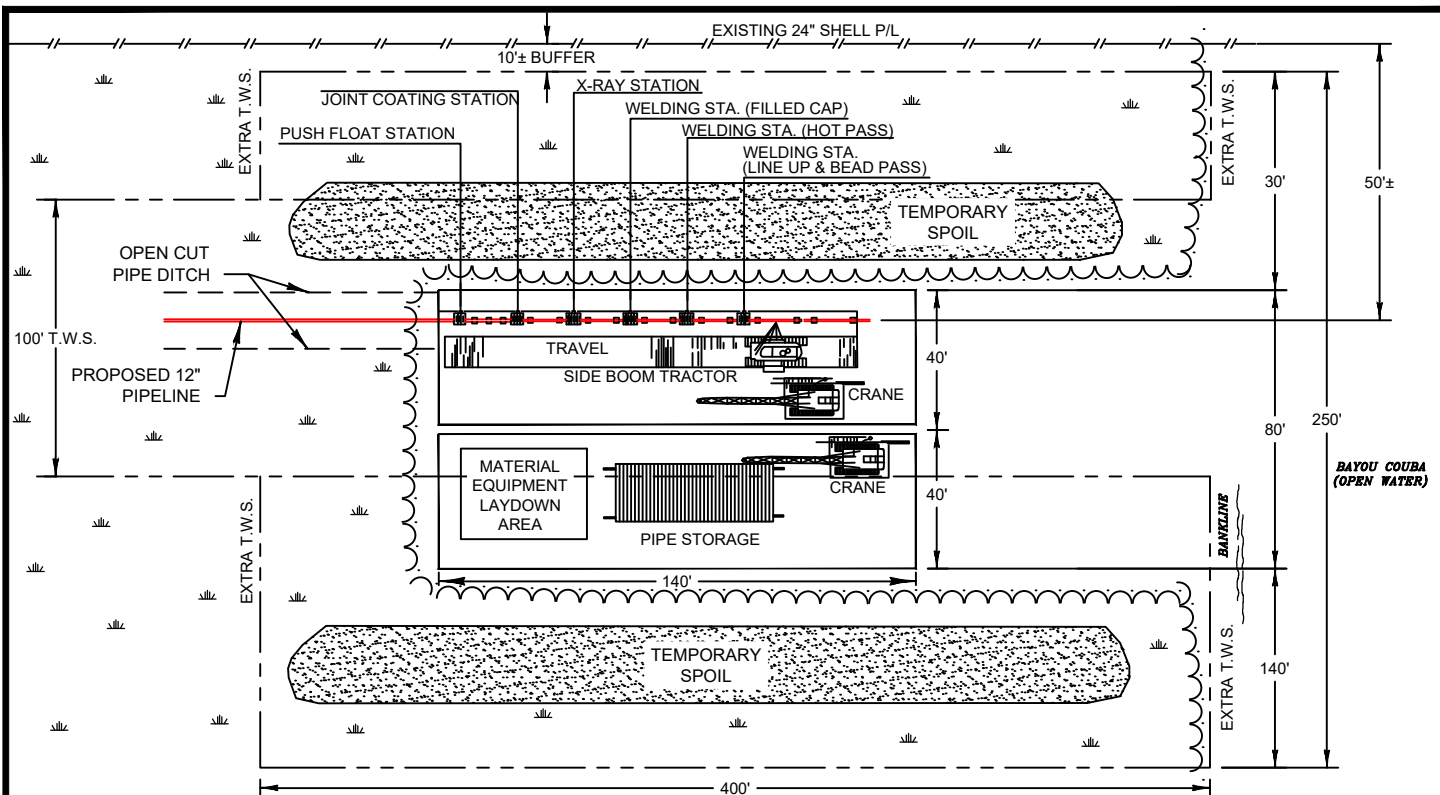
DATE: 3/22/19

DATA BASE: 13312

JOB NO. 13312-00

MPH CAD FILE: 13312COE0036A2.DWG



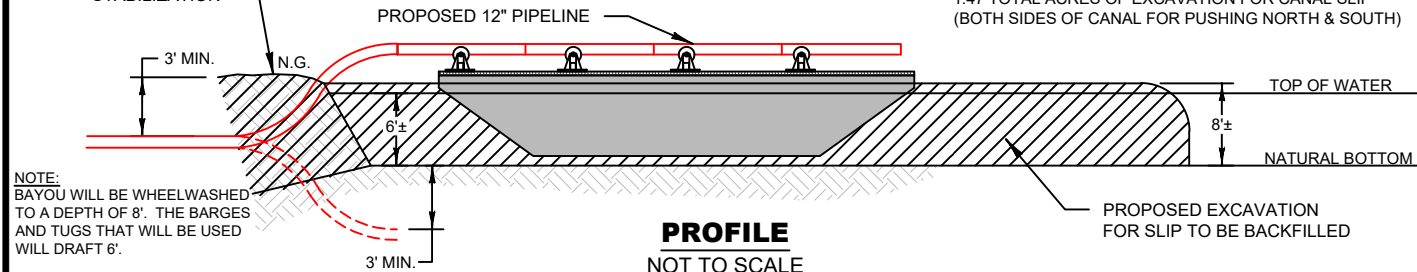


**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 632+40 BAYOU COUBA (SHEET 6)

18,963 TOTAL CU. YDS. OF EXCAVATION FOR CANAL SLIP  
1.47 TOTAL ACRES OF EXCAVATION FOR CANAL SLIP  
(BOTH SIDES OF CANAL FOR PUSHING NORTH & SOUTH)

PROPOSED PIPE DITCH  
TO BE BACKFILLED &  
PROPOSED BANK  
STABILIZATION



**PROFILE**  
NOT TO SCALE

NOTE:  
BAYOU WILL BE WHEELWASHED  
TO A DEPTH OF 8'. THE BARGES  
AND TUGS THAT WILL BE USED  
WILL DRAFT 6'.

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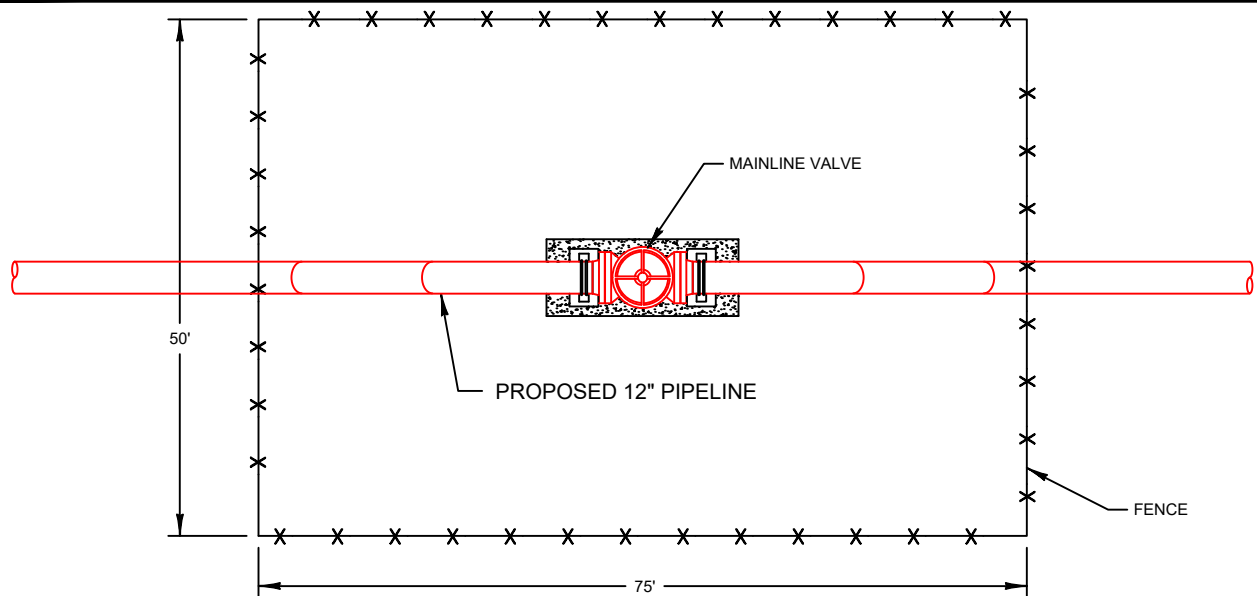


**Phillips 66**  
Pipeline LLC

**WATERWAY BARGE PUSH SITE DETAIL**  
(BOTH SIDES OF CANAL FOR PUSHING NORTH & SOUTH)  
**FOR BAYOU COUBA**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**

**mph**  
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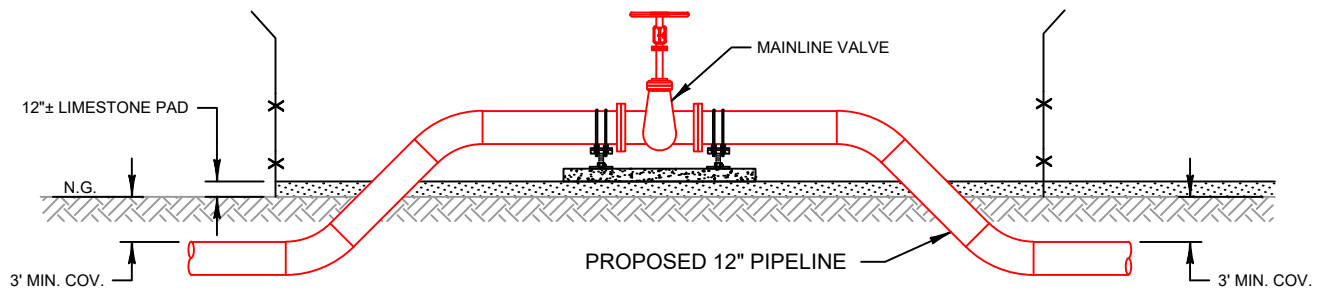
DRAWN BY: MPH	SHEET: 37
CHKD./APPD. BY: GML	SCALE: NONE
UPDATED BY:	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0037A2.DWG	



**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 0+00 MLV-BV-1 (50' X 75') (SHEET 2)  
STA. 1896+38 MLV-BV-4 (50' X 75') (SHEET 15)

278 TOTAL CU. YDS. OF LIMESTONE FOR PROPOSED VALVE SITES



**PROFILE**  
NOT TO SCALE

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TYPICAL VALVE DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY:	MPH	SHEET:	38
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0038A2.DWG			



PROPOSED PRECAST  
CONCRETE PLATFORM

OPEN WATER  
OR MARSH

MAINLINE VALVE

OPEN WATER  
OR MARSH

PROPOSED 4' X 192'  
WOODEN WALKWAY

HWY. 45

PROPOSED 12" PIPELINE

30'

30'

**PLAN**  
NOT TO SCALE

DETAIL FOR:  
STA. 839+30 MLV-BV-2 (SHEET 7) - NO WALKWAY NEEDED  
STA. 1491+23 MLV-BV-3 (SHEET 12) - 4' X 192' WALKWAY

MAINLINE VALVE

PROPOSED 12" PIPELINE

PROPOSED PRECAST  
CONCRETE PLATFORM

TOP OF WATER

3' MIN. COV.

3' MIN. COV.

**PROFILE**  
NOT TO SCALE

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TYPICAL VALVE PLATFORM DETAIL  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

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DRAWN BY:	MPH	SHEET:	39
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0039A2.DWG			

## LEGEND FOR PLAN VIEW

	CENTERLINE OF PROPOSED PIPELINE
	ACCESS ROUTE
	FOREIGN PIPELINE OR UTILITY LINE (AS LABELED)
	RIGHT OF WAY/ TEMPORARY WORKSPACE
	FENCE LINE
	CENTERLINE OF ROAD
	EXTRA TEMPORARY WORK SPACE
E.T.W.S.	EXTRA TEMPORARY WORK SPACE
STA.	STATION
P/L	PIPELINE
C/L	CENTERLINE
HWY.	HIGHWAY
R.R.	RAILROAD
SHT.	SHEET
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.C.	POINT OF CURVATURE
	OWNERSHIP
HDD	HORIZONTAL DIRECTIONAL DRILL
NAT.	NATURAL
$\Delta$	DELTA ANGLE
R	GENERAL SEGMENT CURVE RADIUS
L	LENGTH
C	GENERAL SEGMENT CURVE CHORD DIRECTION
LC	GENERAL SEGMENT CURVE CHORD LENGTH

## LEGEND FOR DETAIL/TYPICALS

	CENTERLINE OF PROPOSED PIPELINE
	PERMANENT R-O-W
	FOREIGN PIPELINE OR UTILITY LINE (AS LABELED)
	TEMPORARY R-O-W/EXTRA TEMPORARY WORKSPACE
	FENCE LINE
	TREELINE
	CENTERLINE OF ROAD
	BORE & HDD ENTRY/EXIT VALVE
	R-O-W
STA.	STATION
P/L	PIPELINE
C/L	CENTERLINE
HWY.	HIGHWAY
MIN.	MINIMUM
COV.	COVER
N.G.	NATURAL GROUND
HDD	HORIZONTAL DIRECTIONAL DRILL
TEMP.	TEMPORARY
T.W.S	TEMPORARY WORK SPACE
PROP.	PROPOSED

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LEGEND  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

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CHKD./APPD. BY: GML	SCALE: NONE
UPDATED BY:	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0040A2.DWG	



C.T.W.S.	SHEET NO.	SIZE	DESCRIPTION	Northing	Easting	Latitude	Longitude
1	2	150' X 196'	HDD ENTRY	518,370.19	3,592,723.90	N29°55'18.24"	W90°20'55.52"
2	2	200' X 150'	HDD EXIT	518,091.68	3,593,093.52	N29°55'15.43"	W90°20'51.35"
3	2	50' X 463'	BACKSTRING	518,214.95	3,593,429.56	N29°55'16.65"	W90°20'47.52"
4	2	50' X 500'	PIPELINE X-ING	517,170.16	3,592,845.82	N29°55'06.35"	W90°20'54.26"
5	2	50' X 137'	HDD ENTRY	516,081.44	3,593,154.74	N29°54'55.55"	W90°20'50.85"
6	2	12' X 103'	HDD ENTRY	515,950.07	3,593,083.27	N29°54'54.26"	W90°20'51.68"
7	2	86' X 141'	BARTON AVENUE	516,165.67	3,594,040.19	N29°54'56.31"	W90°20'70.78"
8	2	85' X 200'	HDD EXIT	516,716.11	3,595,406.43	N29°55'01.64"	W90°20'25.20"
9	2	50' X 1722'	BACKSTRING	519,353.55	3,600,060.68	N29°55'27.35"	W90°19'32.05"
10	2	150' X 200'	HDD EXIT	518,491.39	3,600,485.18	N29°55'18.77"	W90°19'27.31"
11	2	85' X 200'	HDD ENTRY	516,578.65	3,600,837.78	N29°54'59.81"	W90°19'23.50"
12	2	117' X 346'	ACCESS ROAD	516,605.51	3,601,012.88	N29°55'00.06"	W90°19'21.51"
13	2	60' X 330'	SOUTH OF HWY 90	516,027.44	3,601,573.45	N29°54'54.29"	W90°19'15.19"
14	2	100' X 263'	SOUTH OF HWY 90	515,833.73	3,601,760.57	N29°54'54.35"	W90°19'11.78"
15	2	100' X 263'	SOUTH OF HWY 90	516,039.87	3,601,873.46	N29°54'53.14"	W90°19'12.77"
16	2	50' X 542'	SOUTH OF HWY 90	514,021.42	3,602,255.88	N29°54'34.37"	W90°19'07.64"
17	3	275' X 1263'	LEVEE/CANAL	503,991.07	3,603,116.07	N29°52'55.00"	W90°18'58.88"
18	3	275' X 1263'	LEVEE/CANAL	504,106.95	3,602,898.25	N29°52'56.17"	W90°19'01.34"
19	3	297' X 589'	LEVEE/CANAL	503,556.02	3,602,995.69	N29°52'50.71"	W90°19'00.29"
20	4	50' X 500'	PIPELINE X-ING	496,614.59	3,603,276.71	N29°51'41.97"	W90°18'57.80"
21	4	50' X 585'	LOUISIANA CYPRESS LUMBER	493,505.66	3,603,374.76	N29°51'11.19"	W90°18'57.00"
22	5	50' X 648'	WELL CANAL	477,725.89	3,603,999.39	N29°48'34.92"	W90°18'51.50"
23	6	50' X 603'	PIPELINE X-ING	473,681.84	3,604,159.47	N29°47'54.88"	W90°18'50.09"
24	6	140' X 1002'	BARGE PUSH SITE	467,002.09	3,604,358.83	N29°46'48.74"	W90°18'48.50"
25	7	50' X 728'	WELL CANAL	462,706.25	3,605,243.66	N29°46'06.13"	W90°18'38.90"
26	7	10' X 200'	HDD EXIT	457,426.33	3,606,430.36	N29°45'13.76"	W90°18'25.97"
27	7	40' X 200'	HDD EXIT	457,453.29	3,606,552.42	N29°45'14.02"	W90°18'24.58"
28	7	60' X 560'	HDD ENTRY	453,616.97	3,606,947.07	N29°44'36.01"	W90°18'20.49"
29	7	50' X 1136'	PIPELINE X-ING	453,410.50	3,607,096.36	N29°44'33.95"	W90°18'18.82"
30	10	10' X 200'	HDD EXIT	434,409.30	3,643,234.95	N29°41'22.46"	W90°11'31.03"
31	10	40' X 200'	HDD EXIT	434,530.76	3,643,266.51	N29°41'23.66"	W90°11'30.66"
32	11	60' X 200'	HDD ENTRY	432,956.61	3,649,108.79	N29°41'07.50"	W90°10'24.60"
33	11	60' X 200'	HDD ENTRY	433,479.19	3,651,115.05	N29°41'12.47"	W90°10'01.80"
34	11	90' X 400'	HDD EXIT	436,054.95	3,655,562.45	N29°41'37.52"	W90°09'11.08"
35	12	462' X 1043'	BARGE PUSH SITE	439,284.23	3,667,396.13	N29°42'08.26"	W90°06'56.52"
36	12	10' X 200'	HDD EXIT	438,733.79	3,669,328.17	N29°42'02.61"	W90°06'34.68"
37	12	35' X 262'	(2) HDD ENTRY	438,996.51	3,672,459.74	N29°42'04.88"	W90°05'58.29"
38	12	65' X 409'	HDD ENTRY	439,111.63	3,672,393.04	N29°42'06.02"	W90°05'59.88"
39	12	10' X 400'	HDD ENTRY	437,596.34	3,676,431.58	N29°41'50.59"	W90°05'14.28"
40	12	40' X 400'	HDD EXIT	437,714.20	3,676,473.22	N29°41'51.75"	W90°05'13.79"
41	13	60' X 200'	HDD ENTRY	434,371.59	3,683,163.55	N29°41'17.94"	W90°03'58.35"
42	13	60' X 400'	HDD EXIT	433,960.20	3,689,147.73	N29°41'13.21"	W90°02'50.56"
43	15	80' X 839'	BARGE PUSH SITE	431,108.53	3,703,836.87	N29°40'43.32"	W90°00'04.41"
44	15	175' X 200'	BARGE PUSH SITE	430,900.42	3,703,970.59	N29°40'41.24"	W90°00'02.92"
45	15	69' X 200'	HDD EXIT	432,359.54	3,705,456.52	N29°40'55.51"	W89°59'45.88"
46	15	166' X 589'	PUSH SITE	432,804.92	3,706,245.88	N29°40'59.83"	W89°59'36.88"
47	15	50' X 2069'	ACCESS ROAD	432,631.55	3,707,267.43	N29°40'58.00"	W89°59'25.32"
48	15	50' X 494'	ACCESS ROAD	432,670.41	3,708,248.12	N29°40'58.27"	W89°59'14.20"
49	15	40' X 197'	HDD EXIT	433,154.36	3,709,967.47	N29°41'02.86"	W89°58'54.64"
50	15	180' X 338'	HDD ENTRY	433,188.93	3,710,334.54	N29°41'03.16"	W89°58'50.47"

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	REVISED ROUTE
2	10/29/19	MPH	REVISION



**Phillips 66**  
Pipeline LLC

EXTRA TEMPORARY WORKSPACE  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

**mph**  
Morris P. Hebert, Inc.  
SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	41
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0041A2.DWG			

Station	Northing	Easting	Latitude	Longitude	Station	Northing	Easting	Latitude	Longitude
0+00	518427.87	3592764.31'	N29°55' 18.81"	W90°20' 55.06"	1182+13	434501.12	3643155.58	N29°41' 23.38"	W90°11' 31.92"
3+96	518307.17	3593141.07	N29°55' 17.58"	W90°20' 50.79"	1244+67	433024.20	3649232.94	N29°41' 08.16"	W90°10' 23.19"
25+76	516241.56	3592431.82	N29°54' 57.20"	W90°20' 59.05"	1259+93	433297.00	3650687.84	N29°41' 10.71"	W90°10' 06.66"
33+53	515990.34	3593163.47	N29°54' 54.65"	W90°20' 50.76"	1295+81	435350.21	3653631.14	N29°41' 30.74"	W90°09' 33.06"
57+65	516652.16	3595482.95	N29°55' 01.00"	W90°20' 24.34"	1299+76	435519.46	3653986.66	N29°41' 32.38"	W90°09' 29.01"
100+80	517977.52	3599588.66	N29°55' 13.77"	W90°19' 37.55"	1431+22	439145.85	3666621.86	N29°42' 06.97"	W90°07' 05.32"
111+11	518433.08	3600513.90	N29°55' 18.19"	W90°19' 26.99"	1439+70	439084.55	3667450.14	N29°42' 06.28"	W90°06' 55.93"
118+00	517815.22	3600818.11	N29°55' 12.05"	W90°19' 23.60"	1443+29	438935.51	3667777.49	N29°42' 04.77"	W90°06' 52.24"
125+53	517084.36	3600957.58	N29°55' 04.80"	W90°19' 22.09"	1446+46	438843.67	3668079.27	N29°42' 03.83"	W90°06' 48.83"
131+67	516471.57	3600908.21	N29°54' 58.74"	W90°19' 22.71"	1464+36	438552.15	3669845.21	N29°42' 00.76"	W90°06' 28.84"
141+26	516011.07	3601749.09	N29°54' 54.11"	W90°19' 13.20"	1474+98	438612.83	3670896.80	N29°42' 01.24"	W90°06' 16.91"
142+24	515912.92	3601751.31	N29°54' 53.14"	W90°19' 13.19"	1491+45	439066.33	3672480.53	N29°42' 05.57"	W90°05' 58.90"
147+04	515682.56	3602171.49	N29°54' 50.82"	W90°19' 08.43"	1539+29	437472.74	3676991.64	N29°41' 49.31"	W90°05' 07.94"
229+33	507486.66	3602909.88	N29°53' 29.63"	W90°19' 00.87"	1540+96	437234.96	3677392.74	N29°41' 46.91"	W90°05' 03.43"
229+93	507426.45	3602913.78	N29°53' 29.03"	W90°19' 00.83"	1578+35	434941.71	3679952.10	N29°41' 23.93"	W90°04' 34.69"
264+52	503970.45	3603050.59	N29°52' 54.81"	W90°18' 54.81"	1586+30	434638.18	3680670.67	N29°41' 20.85"	W90°04' 26.58"
265+82	503907.52	3602936.83	N29°52' 54.19"	W90°19' 00.92"	1743+23	433561.91	3696326.71	N29°41' 08.46"	W90°01' 29.23"
268+40	503681.20	3603062.04	N29°52' 51.94"	W90°18' 59.52"	1746+09	433508.47	3696607.54	N29°41' 07.90"	W90°01' 26.05"
626+32	467917.88	3604477.70	N29°46' 57.79"	W90°18' 47.06"	1815+67	431402.86	3703239.67	N29°40' 46.30"	W90°00' 11.14"
627+87	467762.99	3604473.83	N29°46' 56.26"	W90°18' 47.12"	1820+88	431144.02	3703687.08	N29°40' 43.68"	W90°00' 06.10"
629+42	467608.15	3604469.95	N29°46' 54.73"	W90°18' 47.18"	1822+98	431002.56	3703841.52	N29°40' 42.27"	W90°00' 04.37"
641+45	466406.04	3604517.53	N29°46' 42.82"	W90°18' 46.76"	1831+67	431643.51	3704428.61	N29°40' 48.54"	W89°59' 57.63"
645+13	466045.89	3604587.94	N29°46' 39.25"	W90°18' 46.00"	1835+60	431885.06	3704736.33	N29°40' 50.90"	W89°59' 54.11"
646+68	465897.09	3604631.05	N29°46' 37.77"	W90°18' 45.52"	1854+70	432810.71	3706406.94	N29°40' 59.87"	W89°59' 35.05"
758+56	454972.54	3607044.04	N29°44' 49.42"	W90°18' 19.26"	1872+91	432560.52	3708210.49	N29°40' 57.18"	W89°59' 14.64"
761+50	454680.21	3607071.81	N29°44' 46.52"	W90°18' 18.97"	1889+56	433206.77	3709956.74	N29°41' 03.38"	W89°58' 54.76"

FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.  
GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

2	12/17/19	MPH	REVISED ROUTE
NO.	DATE	REV. BY:	REVISION



**Phillips 66**  
Pipeline LLC

COORDINATE LIST  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



P.O. BOX 3106 \* 116 VENTURE BLVD. \* HOUMA, LOUISIANA 70361 \* (985) 879-2731  
HOUMA, LA. \* HOUSTON, TX. \* SAN ANTONIO, TX. \* MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	42
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:	MPH	DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00

MPH CAD FILE: 13312COE0042A2.DWG



### CALCULATION CHART

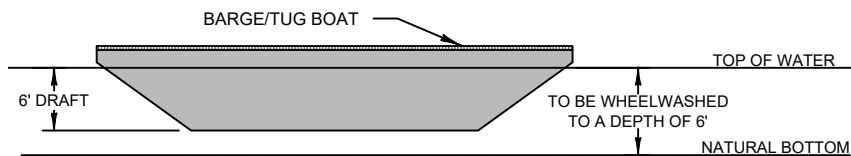
	WETLANDS	OTHER WATERS	UPLANDS	TOTALS
TEMPORARY EXCAVATION IN CU. YDS. (INCLUDES EXCAVATION FOR PUSH BARGE & WHEEL-WASHING)	289,966	74,075	10,670	374,711
TEMPORARY EXCAVATION IN ACRES (INCLUDES EXCAVATION FOR PUSH BARGE & WHEEL-WASHING)	44.98	48.78	2.06	95.82
TEMPORARY SPOIL IN CU. YDS. (INCLUDES SPOIL FOR PUSH BARGE & WHEEL-WASHING)	289,966	74,075	10,670	374,711
TEMPORARY SPOIL IN ACRES (INCLUDES SPOIL FOR PUSH BARGE & WHEEL-WASHING)	117.18	160.06	18.24	295.48
PROPOSED LIMESTONE FOR PROPOSED VALVE SITES IN CU. YDS.	-	-	649	649
POTENTIAL BOARD MATS FOR TEMPORARY ACCESS DIRT ROADS IN CU. YDS.	-	-	7,692	7,692
POTENTIAL BOARD MATS FOR TEMPORARY ACCESS DIRT ROADS IN ACRES	-	-	4.77	4.77
POTENTIAL SAND FOR TEMPORARY ACCESS DIRT ROADS IN CU. YDS.	-	-	12,018	12,018
POTENTIAL BOARD MATS FOR TEMPORARY PUSH SITES IN CU. YDS.	-	-	5,556	5,556
POTENTIAL BOARD MATS FOR TEMPORARY PUSH SITES IN ACRES	-	-	3.44	3.44
POTENTIAL SAND FOR TEMPORARY PUSH SITES IN CU. YDS.	-	-	5,556	5,556
POTENTIAL BOARD MATS FOR T.W.S. & EXTRA T.W.S. IN CU. YDS. (INCLUDES HDD & BORE SITES)	11,111	-	4,445	15,556
POTENTIAL BOARD MATS FOR T.W.S. & EXTRA T.W.S. IN ACRES (INCLUDES HDD & BORE SITES)	6.89	-	2.75	9.64
POTENTIAL SAND FOR T.W.S. & EXTRA T.W.S. IN CU. YDS. (INCLUDES HDD & BORE SITES)	11,111	-	4,445	15,556
PROPOSED SANDBAGS FOR FOREIGN PIPELINE CROSSINGS IN CU. YDS.	43	-	20	63
PROPOSED CRUSHED ROCK FOR BANK STABILIZATION IN CU. YDS.	1,440	-	90	1,530

UNITS ARE IN CUBIC YARDS & ACRES

### EQUIPMENT LIST

AIRBOAT
BACKHOE
BARGE MOUNTED BUCKET DREDGE
MARSH BUGGY
OTHER TRACKED OR WHEELED VEHICLES
HDD EQUIPMENT
SELF PROPELLED BARGES
CARGO BARGES
WORK BARGES
LAY BARGE
JETTING EQUIPMENT
TUG BOAT

NATURAL BOTTOMS OF ALL ACCESS ROUTES, TEMPORARY R.O.W. & EXTRA TEMPORARY WORKSPACE IN OPEN WATER WILL BE WHEEL-WASHED TO A DEPTH OF 6'. THE BARGES AND TUGS THAT WILL BE USED WILL DRAFT 6'.



### BARGE/TUG BOAT CROSS SECTION

NOT TO SCALE

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	MPH	REVISED ROUTE
2	11/22/19			REVISION



Phillips 66  
Pipeline LLC

CALCULATION CHART, EQUIPMENT LIST,  
& BARGE/TUG BOAT CROSS SECTION  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



Morris P. Hebert, Inc.

SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	43
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:	MPH	DATE:	4/06/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0043A2.DWG			

WETLAND IMPACTS						
	PERMANENT R-O-W PALUSTRINE EMERGENT (PEM)	TEMPORARY R-O-W PALUSTRINE EMERGENT (PEM)	PERMANENT R-O-W ESTUARINE EMERGENT (E2EM)	TEMPORARY R-O-W ESTUARINE EMERGENT (E2EM)	PERMANENT R-O-W PALUSTRINE SCRUB-SHRUB (PSS)	TEMPORARY R-O-W PALUSTRINE SCRUB-SHRUB (PSS)
ST. CHARLES	36.68	81.83	0.00	0.00	2.10	3.45
JEFFERSON	0.00	0.00	8.81	2.00	2.36	0.72
PLAQUEMINES	0.05	0.80	0.00	0.00	0.03	0.00
TOTAL	36.73	82.63	8.81	2.00	4.49	4.17
UNITS ARE IN ACRES						

WETLAND IMPACTS										
	PERMANENT R-O-W PALUSTRINE BOTTOMLAND HARDWOOD (PFO1)			TEMPORARY R-O-W PALUSTRINE BOTTOMLAND HARDWOOD (PFO1)			PERMANENT R-O-W PALUSTRINE BALD CYPRESS SWAMP (PFO2)	TEMPORARY R-O-W PALUSTRINE BALD CYPRESS SWAMP (PFO2)	OTHER WATERS (OW)	UPLANDS (U)
ST. CHARLES	0.06	0.26	2.45	0.24	0.47	3.70	5.76	12.01	77.56	17.51
JEFFERSON	0.15	0.24	1.01	0.00	0.29	1.27	0.83	1.42	101.74	0.15
PLAQUEMINES	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.00	29.54	13.60
TOTAL	0.21	0.50	3.46	0.26	0.76	5.01	6.59	13.43	208.84	31.26
UNITS ARE IN ACRES										

WORKSPACE			
ST. CHARLES	JEFFERSON	PLAQUEMINES	TOTAL
244.08 AC.	120.99 AC.	44.08 AC.	409.15 AC.

# LEGEND:

LOW QUALITY	MEDIUM QUALITY	HIGH QUALITY	NON WETLANDS
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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	REVISED ROUTE REVISION
2	11/22/19	MPH	



**Phillips 66**  
Pipeline LLC

WETLAND IMPACTS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY: MPH	SHEET: 44
CHKD./APPD. BY: GML	SCALE: NONE
UPDATED BY:	DATE: 3/11/19
DATA BASE: 13312	JOB NO. 13312-00
MPH CAD FILE: 13312COE0044A2.DWG	



P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0045A2.dwg PLOT DATE: 11/1/19 9:42:48am

#### GENERAL NOTES:

1. HYDROGEN PIPELINE SHALL COMPLY WITH ALL APPLICABLE STATE LAWS REGARDING THE NEED TO CONTACT THE LOUISIANA ONE-CALL SYSTEM (1-800-272-3020) TO LOCATE ANY BURIED CABLES & PIPELINES.
2. AN ON-THE-GROUND EFFORT WILL BE MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.
3. THIS PLAT WAS PREPARED FOR PERMITTING PURPOSES ONLY, AND IS NOT A PROPERTY BOUNDARY SURVEY AND AS SUCH DOES NOT COMPLY WITH THE MOST RECENT "STANDARDS OF PRACTICE FOR PROPERTY BOUNDARY SURVEYS" AS ADOPTED BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.
4. THESE DRAWINGS ARE TO BE USED EXCLUSIVELY FOR THE ACQUISITION OF REGULATORY PERMITS.

#### CZM NOTES:

1. ALL STRUCTURES, FACILITIES, WELL, AND PIPELINES/FLOWLINES OCCURRING IN OPEN WATER AREAS OR IN OILFIELD CANALS OR SLIPS SHALL BE REMOVED WITHIN 120 DAYS OF ABANDONMENT OF THE FACILITIES FOR THE HEREIN PERMITTED USE, UNLESS PRIOR WRITTEN APPROVAL TO LEAVE SUCH STRUCTURES IN PLACE IS RECEIVED FROM THE COASTAL MANAGEMENT DIVISION. THIS CONDITION DOES NOT PRECLUDE THE NECESSITY FOR REVISING THE CURRENT PERMIT OR OBTAINING A SEPARATE COASTAL USE PERMIT, SHOULD ONE BE REQUIRED, FOR SUCH REMOVAL ACTIVITIES.
2. AS-BUILT DRAWINGS SHALL BE SUBMITTED WITHIN 30 DAYS OF COMPLETION OF THIS PROJECT TO THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION, P.O. BOX 44487, BATON ROUGE, LA. 70804-4487.
3. STRUCTURES WILL BE MARKED/LIGHTED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.
4. IN ORDER TO ENSURE THE SAFETY OF ALL PARTIES, THE PERMITTEE SHALL CONTACT THE LOUISIANA ONE-CALL SYSTEM (1-800-272-3020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION (DIGGING, DREDGING, JETTING, ETC.) OR DEMOLITION ACTIVITY.

#### STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES NOTE:

DURING IN-WATER WORK IN AREAS THAT POTENTIALLY SUPPORT MANATEES, ALL PERSONNEL ASSOCIATED WITH THE PROJECT SHALL BE INSTRUCTED & AWARE OF THE POTENTIAL PRESENCE OF MANATEES, MANATEE SPEED ZONES, & THE NEED TO AVOID COLLISIONS WITH, & INJURY TO, MANATEE. ALL PERSONNEL SHALL BE ADVISED THAT THERE ARE CIVIL & CRIMINAL PENALTIES FOR HARMING, HARASSING, OR KILLING MANATEES WHICH ARE PROTECTED UNDER THE MARINE MAMMAL PROTECTION ACT OF 1972 & THE ENDANGERED SPECIES ACT OF 1973. ADDITIONALLY, PERSONNEL SHALL BE INSTRUCTED NOT TO ATTEMPT TO FEED OR OTHERWISE INTERACT WITH THE ANIMAL.

ALL ON-SITE PERSONNEL ARE RESPONSIBLE FOR OBSERVING WATER-RELATED ACTIVITIES FOR THE PRESENCE OF MANATEE(S). TO MINIMIZE POTENTIAL IMPACTS TO MANATEES IN AREAS OF THEIR POTENTIAL PRESENCE, THE PERMITTEE SHALL INSURE THE FOLLOWING ARE ADHERED TO:

- ALL WORK, EQUIPMENT, & VESSEL OPERATION SHALL CEASE IF A MANATEE IS SPOTTED WITHIN A 50-FOOT RADIUS (BUFFER ZONE) OF THE ACTIVE WORK AREA. ONCE THE MANATEE HAS LEFT THE BUFFER ZONE ON ITS OWN ACCORD (MANATEES MUST NOT BE HERDED OR HARASSED INTO LEAVING), OR AFTER 30 MINUTES HAVE PASSED WITHOUT ADDITIONAL SIGHTINGS OF MANATEE(S) IN THE BUFFER ZONE, IN-WATER WORK CAN RESUME UNDER CAREFUL OBSERVATION FOR MANATEE(S).
- IF A MANATEE(S) IS SIGHTED IN OR NEAR THE PROJECT AREA, ALL VESSELS ASSOCIATED WITH THE PROJECT SHALL OPERATE AT "NO WAKE/IDLE" SPEEDS WITHIN THE CONSTRUCTION AREA AND AT ALL TIMES WHILE IN WATERS WHERE THE DRAFT OF THE VESSEL PROVIDES LESS THAN A FOUR-FOOT CLEARANCE FROM THE BOTTOM. VESSELS SHALL FOLLOW ROUTES OF DEEP WATER WHENEVER POSSIBLE.
- IF USED, SILTATION OR TURBIDITY BARRIERS SHALL BE PROPERLY SECURED, MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, AND BE MONITORED TO AVOID MANATEE ENTRAPMENT OR IMPEDING THEIR MOVEMENT.
- TEMPORARY SIGNS CONCERNING MANATEES SHALL BE POSTED PRIOR TO & DURING ALL IN-WATER PROJECT ACTIVITIES & REMOVED UPON COMPLETION. EACH VESSEL INVOLVED IN CONSTRUCTION ACTIVITIES SHALL DISPLAY AT THE VESSEL, A TEMPORARY SIGN AT LEAST 8 1/2" X 11" READING LANGUAGE SIMILAR TO THE FOLLOWING: "CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA & WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A SECOND TEMPORARY SIGN MEASURING 8 1/2" X 11" SHALL BE POSTED AT A LOCATION PROMINENTLY VISIBLE TO ALL PERSONNEL ENGAGED IN WATER-RELATED ACTIVITIES & SHALL READ LANGUAGE SIMILAR TO THE FOLLOW: "CAUTION: MANATEE AREA/EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".
- COLLISIONS WITH, INJURY TO, OR SIGHTING OF MANATEES SHALL BE IMMEDIATELY REPORTED TO THE U.S. FISH & WILDLIFE SERVICE'S LOUISIANA ECOLOGICAL SERVICES OFFICE (337/291-3100) & THE LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES, NATURAL HERITAGE PROGRAM (225/765-2821). PLEASE PROVIDE THE NATURE OF THE CALL (I.E., REPORT OF AN INCIDENT, MANATEE SIGHTING, ETC.); TIME OF INCIDENT/SIGHTING; & THE APPROXIMATE LOCATION, INCLUDING THE LATITUDE & LONGITUDE COORDINATES, IF POSSIBLE.

**FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.**  
GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

1	07/19/19	MPH
NO.	DATE	REV. BY:

REVISED ROUTE  
REVISION

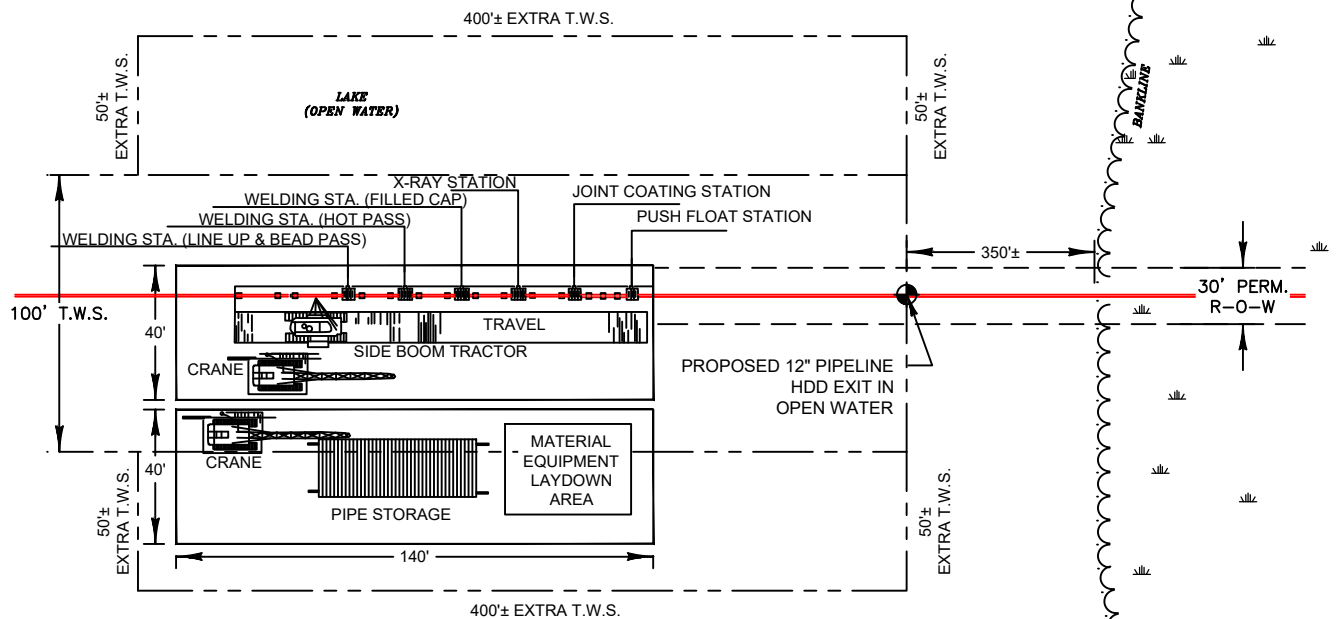


Phillips 66  
Pipeline LLC

GENERAL NOTES, CZM NOTES,  
& STANARD MANATEE CONDITIONS  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

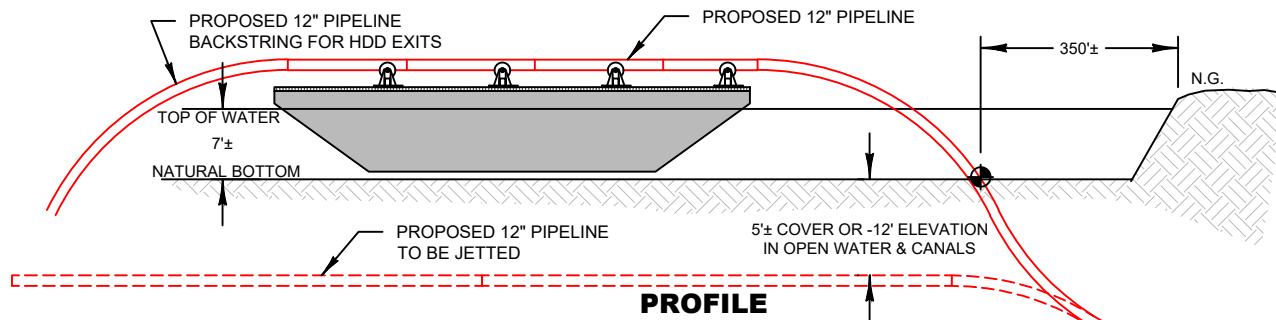


DRAWN BY:	MPH	SHEET:	45
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0045A2.DWG			



**PLAN**  
NOT TO SCALE

DETAIL FOR:  
 STA. 776+17 LAKE SALVADOR (SEE SHEET 7)  
 STA. 1244+67 BAYOU PEROT (SEE SHEET 11)  
 STA. 1437+39 WELL CANAL (SEE SHEET 12)  
 STA. 1533+60 THE PEN (SEE SHEET 12)  
 STA. 1823+20 WELL CANAL (SEE SHEET 15)



**PROFILE**  
NOT TO SCALE

NOTES:  
 THIS DRAWING WAS PREPARED FOR PERMIT PURPOSES ONLY, AND IS NOT A PROPERTY BOUNDARY SURVEY AND AS SUCH DOES NOT COMPLY WITH THE MOST RECENT "STANDARDS OF PRACTICE FOR PROPERTY BOUNDARY SURVEYS" AS ADOPTED BY THE LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD.

AN ON-THE-GROUND EFFORT WAS MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

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 GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR LICENSE NO. 4966

NO.	DATE	REV. BY:	MPH	REVISION



**Phillips 66**  
Pipeline LLC

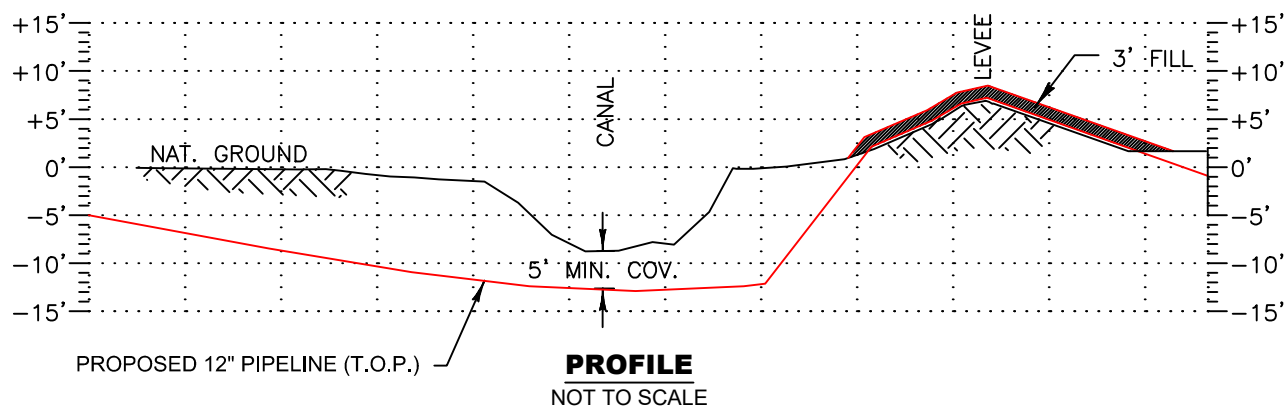
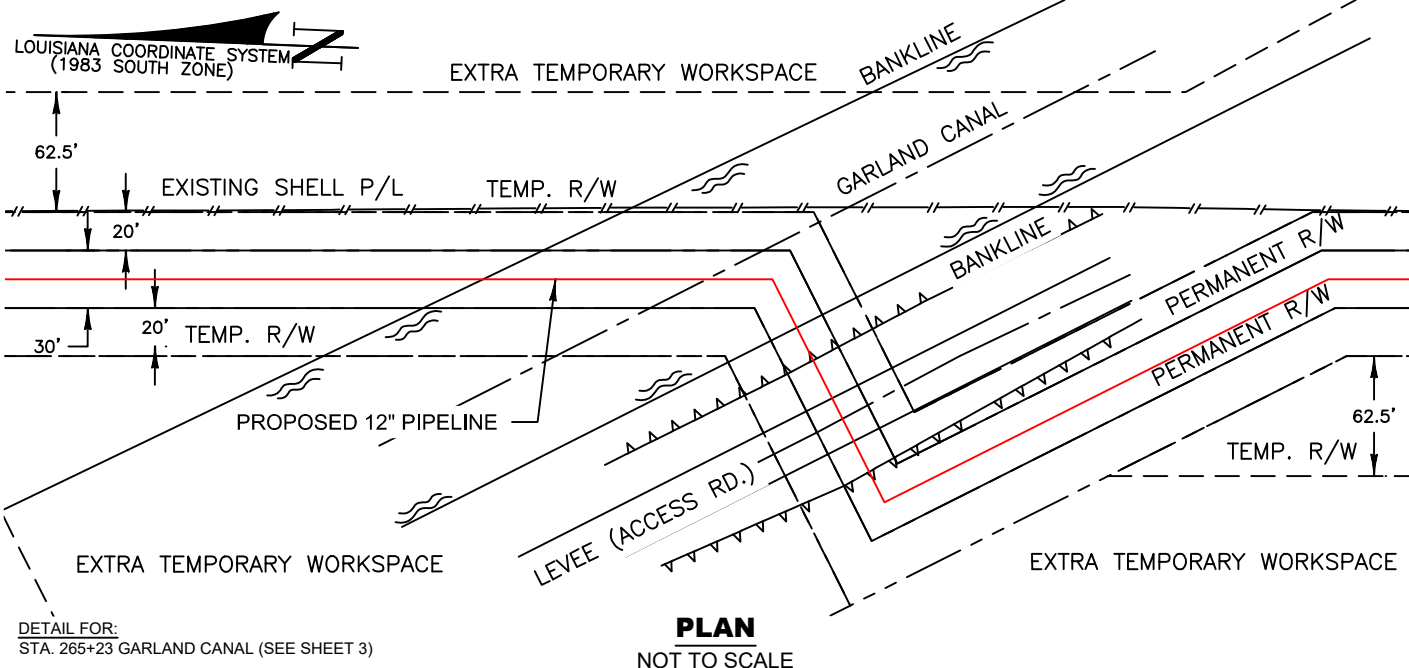
**WATERWAY BARGE PUSH SITE DETAIL  
 PROPOSED 12" HYDROGEN PIPELINE  
 LULING TO ALLIANCE**

**Morris P. Hebert, Inc.**  
 SURVEYING • ENGINEERING • ENVIRONMENTAL • GIS  
 P.O. BOX 3106 • 116 VENTURE BLVD. • HOUMA, LOUISIANA 70361 • (985) 879-2731  
 HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
 TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

DRAWN BY:	MPH	SHEET:	46
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0046A2.DWG			



P:\01-Survey\_Projects\Phillips 66\13312 H2 Pipeline\DWG\Permits\COE\13312COE0047A2.dwg PLOT DATE: 11/11/19 9:43:30am



#### NOTES:

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AN ON-THE-GROUND EFFORT WAS MADE TO LOCATE AND INDICATE ALL BELOW GROUND FERROUS METAL CABLES, PIPELINES AND UTILITIES IN THE AREAS DESCRIBED ABOVE; HOWEVER, DUE TO THE INHERENT LIMITATIONS OF ELECTRONIC MAGNETIC LOCATING EQUIPMENT, MORRIS P. HEBERT, INC. IS NOT RESPONSIBLE FOR ANY CABLES, PIPELINES, UTILITIES OR ANY OTHER BELOW GROUND STRUCTURES (INCLUDING PVC) NOT LOCATED DURING THE COURSE OF THE SURVEY. MPH'S EFFORTS DO NOT RELIEVE THE LA ONE CALL RESPONSIBILITY PRIOR TO MOBILIZATION OF EQUIPMENT AND OR EXCAVATION.

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GERARD M. LEGENDRE, P.L.S., LA. LAND SURVEYOR REG. NO. 4966

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2	10/29/19	MPH

REVISED ROUTE  
REVISION



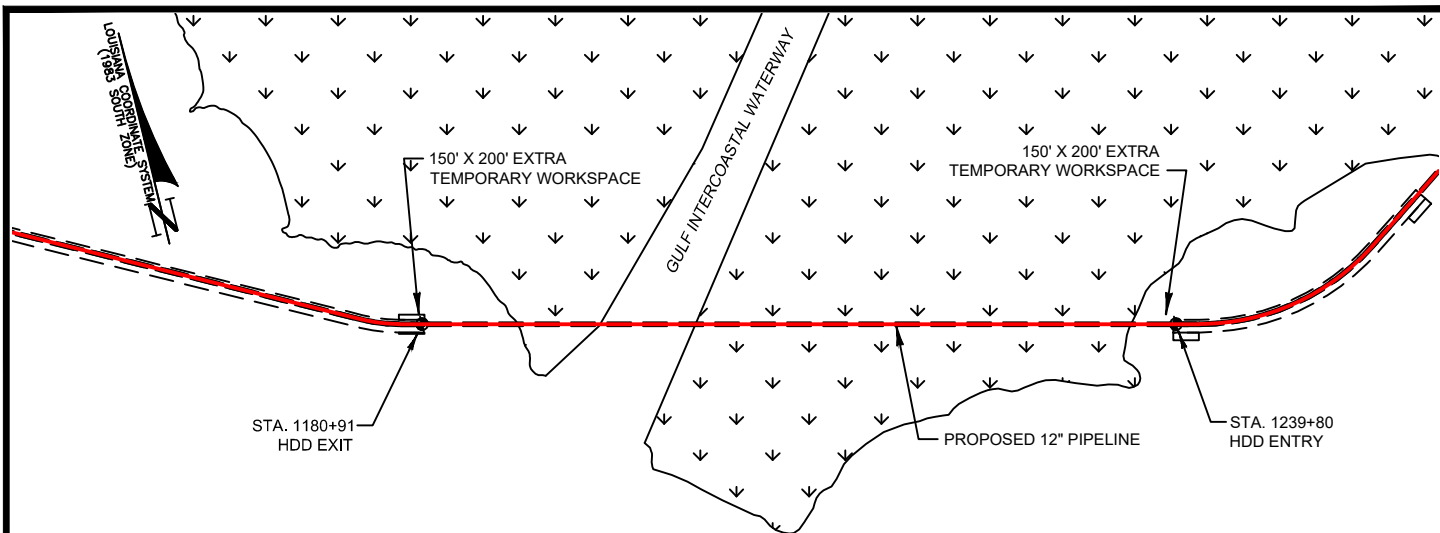
**Phillips 66**  
**Pipeline LLC**

**WATERWAY CROSSING FOR GARLAND CANAL**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**



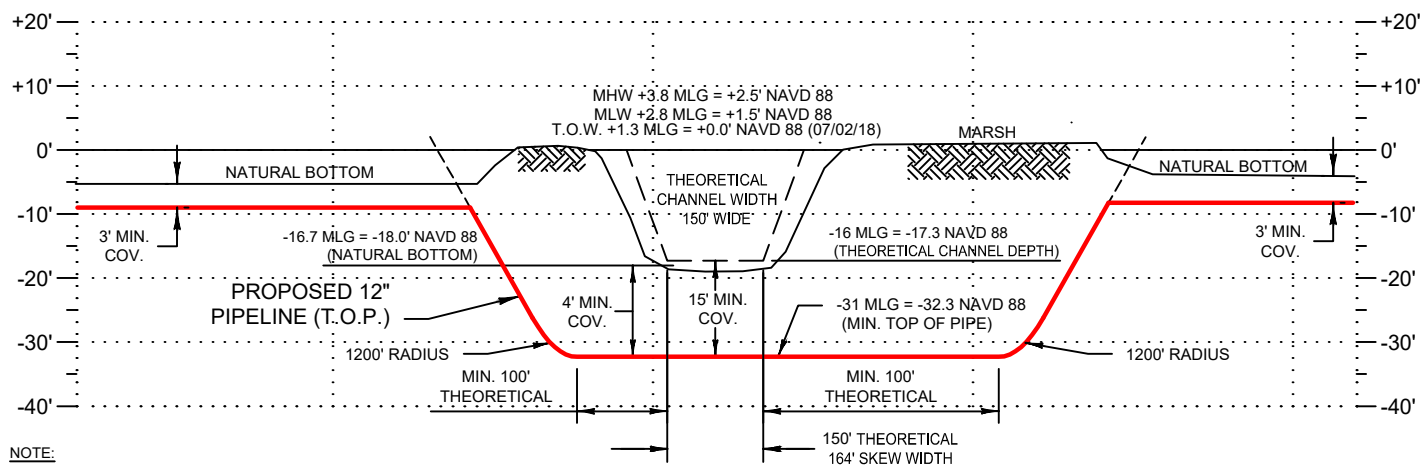
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DETAIL FOR:  
STA. 1202+33 GULF INTRACOASTAL WATERWAY (SEE SHEET 10)

**PLAN**  
NOT TO SCALE



NOTE:  
G.I.W.W. IS MAINTAINED BY THE CORPS OF ENGINEERS AT A DEPTH OF 12'.  
THE BARGES AND TUGS THAT WILL BE USED WILL DRAFT 6'.

**PROFILE**  
NOT TO SCALE

**NOTES:**

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WATERWAY CROSSING FOR G.I.W.W.  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE

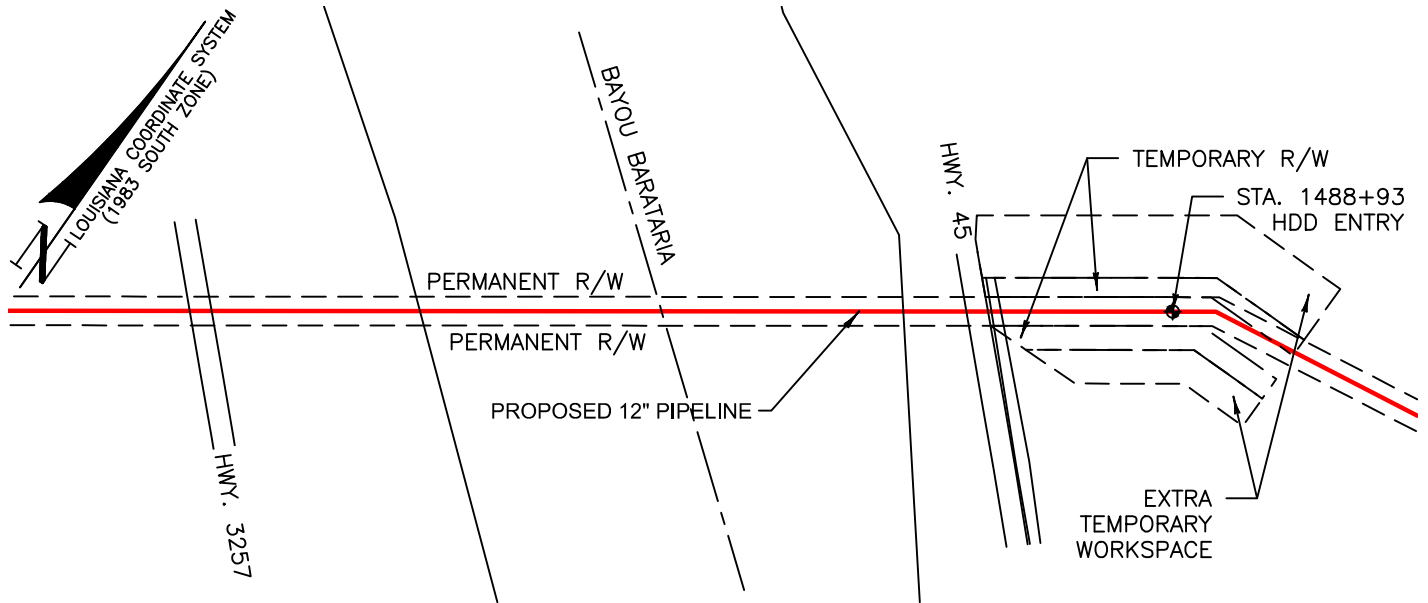


Morris P. Hebert, Inc.

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HOUMA, LA. • HOUSTON, TX. • SAN ANTONIO, TX. • MIDLAND, TX.  
TEXAS SURVEY FIRM REGISTRATION NUMBER: 10193786 (HOUMA OFFICE)

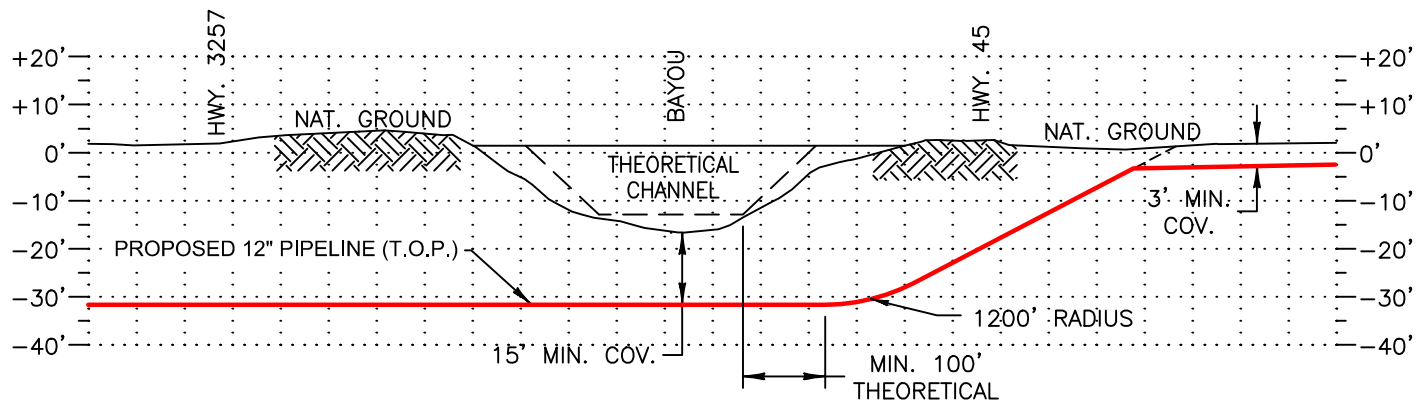
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UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0048A2.DWG			





DETAIL FOR:  
STA. 1486+41 BAYOU BARATARIA (SEE SHEET 12)

**PLAN**  
NOT TO SCALE



**PROFILE**  
NOT TO SCALE

**NOTES:**

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2	10/29/19	MPH	REVISED ROUTE



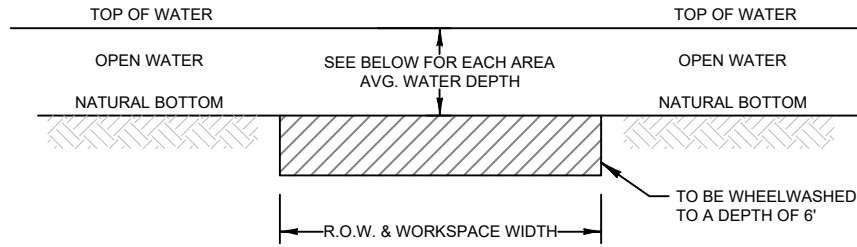
**Phillips 66**  
**Pipeline LLC**

**WATERWAY CROSSING FOR BAYOU BARATARIA**  
**PROPOSED 12" HYDROGEN PIPELINE**  
**LULING TO ALLIANCE**



DRAWN BY:	MPH	SHEET:	49
CHKD./APPD. BY:	GML	SCALE:	NONE
UPDATED BY:		DATE:	3/11/19
DATA BASE:	13312	JOB NO.	13312-00
MPH CAD FILE: 13312COE0049A2.DWG			

NATURAL BOTTOMS OF ALL ACCESS ROUTES, TEMPORARY R.O.W. & EXTRA TEMPORARY WORKSPACE IN OPEN WATER WILL BE WHEEL-WASHED TO A DEPTH OF 6'.



**WHEEL-WASHING DETAIL**  
NOT TO SCALE

### WHEEL-WASHING AREAS CALCULATIONS

DESCRIPTION	P.O.B. LATITUDE	P.O.B. LONGITUDE	P.O.E. LATITUDE	P.O.E. LONGITUDE	AVERAGE DEPTH	LENGTH X WIDTH X DEPTH	DISPLACED TEMP. CUBIC YARDS
ACCESS TO STA. 635+51 TO PUSH SITE	29°47'15.16"	90°14'18.92"	29°46'48.70"	90°18'46.97"	4.2' DEEP	24,365' X 10' X 1.8'	16,009 CU. YDS.
STA. 1242+63 E.T.W.S.	29°41'08.66"	90°10'25.44"	29°41'08.17"	90°10'23.24"	4.1' DEEP	200' X 130' X 1.9'	1,830 CU. YDS.
ACCESS TO STA. 1242+63 E.T.W.S.	29°41'05.11"	90°10'23.93"	29°41'07.08"	90°10'24.09"	4.0' DEEP	200' X 50' X 2.0'	741 CU. YDS.
STA. 1265+52 E.T.W.S.	29°41'13.81"	90°10'01.47"	29°41'12.69"	90°10'03.34"	4.1' DEEP	200' X 130' X 1.9'	1,830 CU. YDS.
ACCESS TO STA. 1262+45 E.T.W.S.	29°41'04.92"	90°10'01.74"	29°41'11.83"	90°10'02.27"	4.0' DEEP	700' X 50' X 2.0'	2,593 CU. YDS.
STA. 1313+44 BAYOU PEROT TO PUSH SITE	29°41'08.87"	90°09'32.44"	29°41'35.83"	90°09'14.05"	4.0' DEEP	3,500' X 50' X 2.0'	12,963 CU. YDS.
STA. 1531+60 E.T.W.S.	29°41'51.92"	90°05'16.14"	29°41'50.56"	90°05'11.88"	4.8' DEEP	400' X 120' X 1.2'	2,133 CU. YDS.
STA. 1607+40 THE PEN ACCESS	29°38'34.20"	90°05'45.34"	29°41'18.54"	90°04'02.79"	5.5' DEEP	19,263' X 50' X 0.5'	17,836 CU. YDS.
STA. 1612+35 E.T.W.S.	29°41'18.80"	90°03'57.14"	29°41'18.95"	90°03'59.40"	4.8' DEEP	200' X 120' X 1.2'	1,067 CU. YDS.
STA. 1667+96 WELL CANAL EAST OF THE PEN	29°40'46.84"	90°04'05.51"	29°41'14.26"	90°02'54.30"	5.5' DEEP	7,000' X 50' X 0.5'	6,481 CU. YDS.
STA. 1669+33 E.T.W.S.	29°41'14.30"	90°02'52.74"	29°41'13.98"	90°02'48.22"	4.8' DEEP	200' X 130' X 1.2'	1,156 CU. YDS.
STA. 1822+98 E.T.W.S. AT PI	29°40'45.43"	90°00'08.85"	29°40'46.11"	90°00'00.24"	4.8' DEEP	800' X 160' X 1.2'	5,689 CU. YDS.
STA. 1822+98 E.T.W.S. AT PI	29°40'41.99"	90°00'03.66"	29°40'40.49"	90°00'02.18"	4.8' DEEP	200' X 175' X 1.2'	1,556 CU. YDS.
STA. 1845+20 E.T.W.S.	29°40'54.47"	89°59'46.53"	29°40'55.41"	89°59'44.53"	4.8' DEEP	200' X 120' X 1.2'	1,067 CU. YDS.

APPROXIMATELY 72,951 TOTAL CUBIC YARDS (48.53 ACRES) OF WATER BOTTOM TO BE TEMPORARY DISPLACED DURING PROPOSED WHEEL-WASHING.

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**Phillips 66**  
**Pipeline LLC**

WHEEL-WASHING DETAIL,  
CALCULATIONS & COORDINATES  
PROPOSED 12" HYDROGEN PIPELINE  
LULING TO ALLIANCE



DRAWN BY: MPH	SHEET: 50
CHKD./APPD. BY: GML	SCALE: NONE
UPDATED BY: MPH	DATE: 3/22/19
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MPH CAD FILE: 13312COE0050A2.DWG	