

JOINT PUBLIC NOTICE

November 15, 2016

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT
CORPS OF ENGINEERS
REGULATORY FUNCTIONS BRANCH
P.O. BOX 60267
NEW ORLEANS, LA 70160

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL
QUALITY
OFFICE OF ENVIRONMENTAL
SERVICES
P.O. BOX 4313
BATON ROUGE, LA 70821-4313

STATE OF LOUISIANA
DEPARTMENT OF NATURAL
RESOURCES
OFFICE OF COASTAL MANAGEMENT
P.O. BOX 44487
BATON ROUGE, LA 70804-4487

Phone (225) 342-3099

Fax (225) 342-9439

COE REVIEWER:

James W. Little, Jr.

COE NUMBER:

MVN- 2015- 01007- WII

Phone (225) 219-3225

Fax (225) 325-8125

DEQ REVIEWER:

E Hill

WQC NUMBER:

161110- 01

Phone (225) 342-6862

Fax (225) 342-9439

Email andi.zachary@la.gov

OCM REVIEWER:

Andi Zachary

CUP NUMBER:

P20160631

NAME: **BOARDWALK LOUISIANA MIDSTREAM, LLC**
c/o PROVIDENCE ENGINEERING AND ENVIR
1201 MAIN STREET
BATON ROUGE, LA 70802
Attn: Regina Staten

LOCATION: **Assumption Parish, LA;** POB - proposed freshwater pipeline at existing pump station @ Lat. 30-00-42.22N / Long. -91-08-01.33W; POB - proposed brine return pipeline at existing manifold @ Lat. 30-00-41.07N / Long. -91-07-57.19W; POE - proposed freshwater pipeline and proposed brine return pipeline at proposed Brine Well #2 @ Lat. 30-00-10.99N / Long. -91-07-30.65W; Proposed Brine Well #1 @ Lat. 30-00-16.43N / Long. -91-07-28.94W (see plats for additional coordinates); Section 41, T12S-R13E; Section 46, T12S-R13E; near Belle Rose, LA. Proposed activities within the existing ring levee are located with a Fastland.

DESCRIPTION: Proposed installation of two brine wells, one 12 inch freshwater line ($\pm 5,400$ feet in length), one 12 inch brine return line ($\pm 5,300$ feet in length), overhead powerline/communication lines, and access roads. Additionally, twenty-four concrete sleepers will be installed to support portions of the pipelines that will not be buried, seven corrugated steel pipes (± 574 feet in length) will be installed beneath the road bed for drainage, and ninety-six rig support piles will be needed for the two well pads. Approximately 1,725 cubic yards of native material will be excavated and placed on site, approximately 132,507 cubic yards of sand material, approximately 4,734 cubic yards of rock material and approximately 2 cubic yards of concrete will be required for project construction. Approximately 1.13 acres of upland habitat, approximately 0.35 acres of non-vegetated waterbottoms, and approximately 12.04 acres of vegetated wetlands may be impacted as a result of this proposed activity.

NOTICE the Louisiana Department of Natural Resources, Office of Coastal Management (OCM) has received the above application for a Coastal Use Permit (CUP) in accordance with the State and Local Coastal Resources Management Act of 1978, as amended, (Louisiana R.S. 49:214.21-214.41), and the rules and regulations of the Coastal Resources Program. Applications for the proposed work may be inspected at 617 North 3rd Street, Room 1078, Baton Rouge, LA or on the OCM web page at:

<http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=591>. Copies may be obtained upon payment of cost of copying. Written comments, including suggestions for modifications or objections to the proposed work and stating the reasons thereof, are being solicited from the public. Comments must be received within 25 days of the date of publication of this notice. Comments should be uploaded to our electronic record, but may be mailed, faxed or emailed to the designated OCM Reviewer. All comments must contain the appropriate application number and the commenter's full name and contact information.

Application also has been made to the Louisiana Department of Environmental Quality, Office of Environmental Services for a Water Quality Certification in accordance with La. R.S. 30.2074(A)(93), and Section 401 of the Clean Water Act (P.L. 95-217). Additional information is on file with the above office, and may be inspected at any time between 8:00 a.m. and 4:30 p.m. weekdays. Copies may be obtained upon payment of cost of copying. Comments concerning the application can be filed with the Office of Environmental Services within 20 days of this notice to the following address: Office of Environmental Services, P. O. Box 4313, Baton Rouge, LA 70821-4313.

The public comment period for Coastal Use Permit and Water Quality Certification applications begins on the date of publication of notice in the official journal (The Advocate), in accordance with LAC 43:I. 723(C)(5)(c). OCM will provide this date on request.

Additionally, interested parties are hereby notified that application has been received by the District Engineer for a Department of the Army permit to authorize the following pursuant to Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344) and/or Section 10 of the River and Harbor Act of 1899 (33 USC 403). The notice and notice policies of the Corps of Engineers - New Orleans District can be found on their webpage at: <http://www.mvn.usace.army.mil/ops/regulatory/publicnotices.asp>.

Any person may request, in writing, within the comment period specified in this notice, that a State or Federal public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing and must contain the name and contact information of the requester.

Attached Plats: 1) P20160631 Notice Plats 11/14/2016

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 submitted 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 forwarded to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. Individuals or parties may request an extension of time in which to comment on the proposed work by writing, faxing, 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. 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.

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. A copy of this public notice has been sent to the State Archeologist and State Historic Preservation Officer to solicit input regarding potential impacts to cultural resources.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the U.S. Departments of Interior or Commerce, nor affect any habitat designated as critical to the survival and recovery of any endangered species.

Based on the South Louisiana Standard Local Operating Procedure for Endangered Species (SLOPES), as signed on October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans District and the U.S. Fish and Wildlife Service, the proposed project was evaluated under the determination key on 16 November 2016 and it has been determined that the 12.04 acres of wetlands and 0.35 acres of non-vegetated water bottoms to be impacted would result in a "No Effect" for any of the species within the list.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal may result in the destruction or alteration of N/A 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, 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.

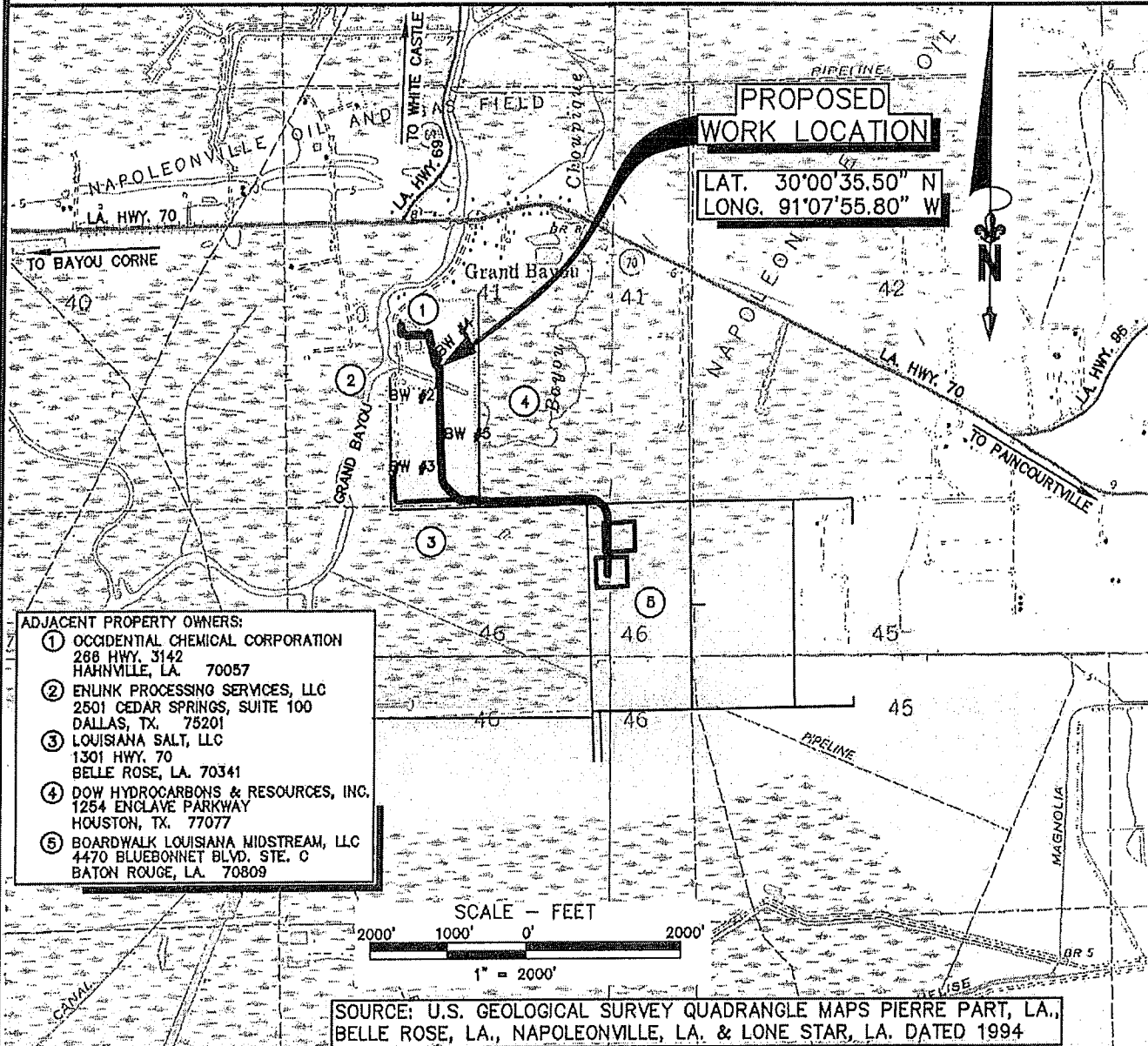
The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver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

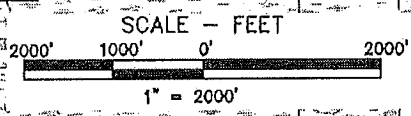
Darrell S. Barbara
Chief, Western Evaluation Section
Regulatory Branch

Enclosure

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

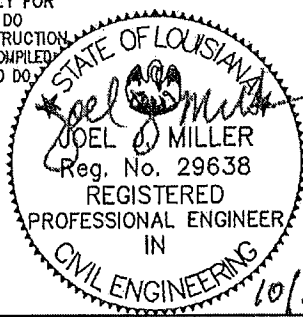


- ADJACENT PROPERTY OWNERS:**
- ① OCCIDENTAL CHEMICAL CORPORATION
288 HWY. 3142
HAHNVILLE, LA. 70057
 - ② ENLINK PROCESSING SERVICES, LLC
2501 CEDAR SPRINGS, SUITE 100
DALLAS, TX. 75201
 - ③ LOUISIANA SALT, LLC
1301 HWY. 70
BELLE ROSE, LA. 70341
 - ④ DOW HYDROCARBONS & RESOURCES, INC.
1254 ENCLAVE PARKWAY
HOUSTON, TX. 77077
 - ⑤ BOARDWALK LOUISIANA MIDSTREAM, LLC
4470 BLUEBONNET BLVD. STE. C
BATON ROUGE, LA. 70809



SOURCE: U.S. GEOLOGICAL SURVEY QUADRANGLE MAPS PIERRE PART, LA., BELLE ROSE, LA., NAPOLEONVILLE, LA. & LONE STAR, LA. DATED 1994

NOTE:
THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.
* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.



THIS DRAWING WAS PREPARED SOLELY FOR USE BY BOARDWALK LOUISIANA MIDSTREAM, LLC, IN CONJUNCTION WITH THE SPECIFIC PROJECT DESIGNATED IN THE TITLE BLOCK. USE FOR ANY OTHER PURPOSE, OR USE BY ANY OTHER PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER ENGINEERS & ASSOCIATES.

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PREPARED BY:



Miller Engineers & Associates, Inc.

BOARDWALK
LOUISIANA MIDSTREAM, LLC

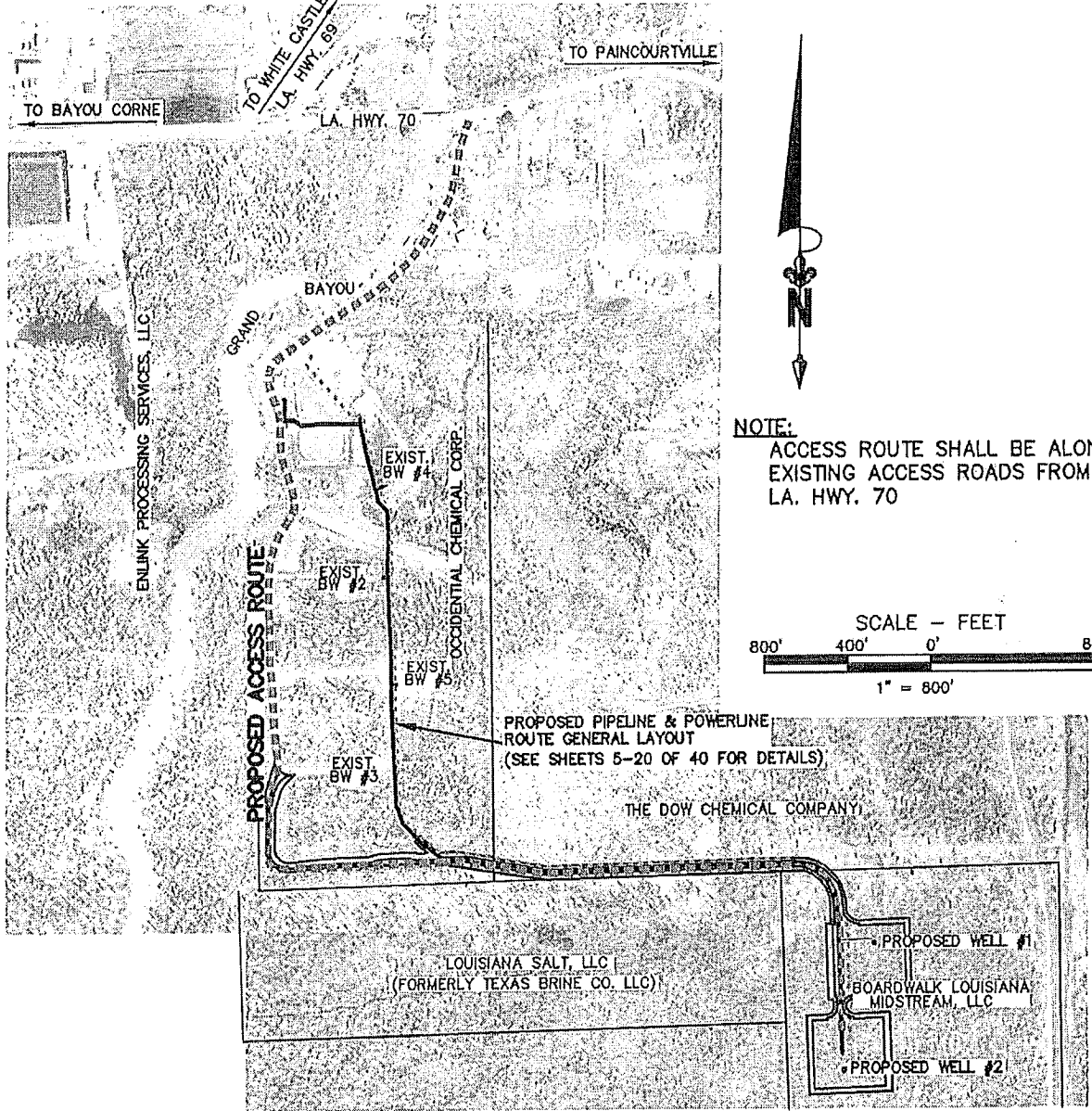
PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

VICINITY MAP
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 1 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|-------------------------------|-------|-------|-------|
| 1 | 10-27-16 | TO SHOW WELL LOCATION CHANGES | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



NOTE:
ACCESS ROUTE SHALL BE ALONG
EXISTING ACCESS ROADS FROM
LA. HWY. 70

SCALE - FEET
800' 400' 0' 800'
1" = 800'

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL
NOTES AND REFERENCES.

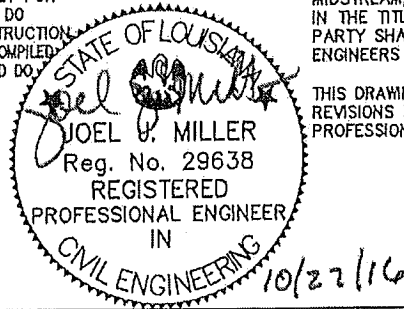
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PREPARED BY:



Miller Engineers & Associates, Inc.



| | | |
|---|--|---------------------------------------|
| | | BOARDWALK LOUISIANA MIDSTREAM, LLC |
| PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES | | |
| PROPOSED ACCESS ROUTE ASSUMPTION PARISH, LOUISIANA | | |
| M.E. & A. DWG. NO. 13773, SHEET 2 OF 40 | | |

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|-------------------------------|-------|-------|-------|
| 1 | 10-27-16 | TO SHOW WELL LOCATION CHANGES | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

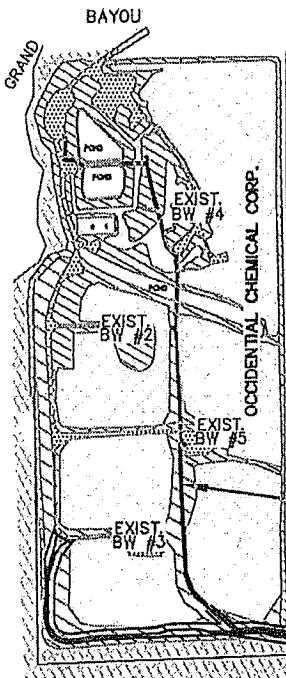
TO BAYOU CORNE







TO WHITE CASTLE
LA. HWY. 69
L.A. HWY. 70

TO PAINCOURVILLE



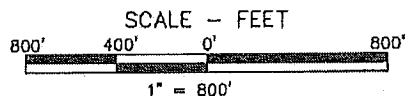
ENLINK PROCESSING SERVICES, LLC



-  DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES) (TOTAL PROJECT) (WITHIN FASTLAND)
-  DENOTES HERBACEOUS WETLANDS (±0.92 ACRES) (TOTAL PROJECT) (OUTSIDE FASTLAND)
-  DENOTES HERBACEOUS WETLANDS (±2.02 ACRES) (TOTAL PROJECT) (WITHIN FASTLAND)
-  DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±9.10 ACRES) (TOTAL PROJECT) (OUTSIDE FASTLAND)
-  DENOTES NON WETLANDS (±1.13 ACRES) (TOTAL PROJECT) (WITHIN FASTLAND)
-  DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (0.35 AC.) (TOTAL)

PROJECT TOTAL WETLAND IMPACTS = 12.04 ACRES

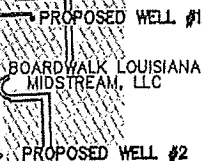
NOTE:
SEE SHEET 38 OF 40 FOR FRESHWATER DITCH
PROFILE AND DETAIL.



PROPOSED WORK AREA
AND IMPACTS GENERAL LAYOUT
(SEE SHEET 5-20 OF 40 FOR DETAILS)

THE DOW CHEMICAL COMPANY

LOUISIANA SALT, LLC
(FORMERLY TEXAS BRINE, CO. LLC)



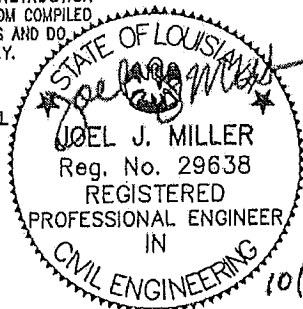
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* SEE SHEET 40 OF 40 FOR GENERAL
NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
**WORK AREA FOOTPRINTS
AND IMPACTS**
ASSUMPTION PARISH, LOUISIANA
M.E. & A. DWG. NO. 13773, SHEET 3 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 10-27-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN AND OUTSIDE FASTLAND | REK | JJM | JJM |
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN AND OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | ADDED NOTE | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA

SECTION 41 & 46, T12S-R13E

TO BAYOU CORNE

TO WHITE CASTLE
LA. HWY. 69

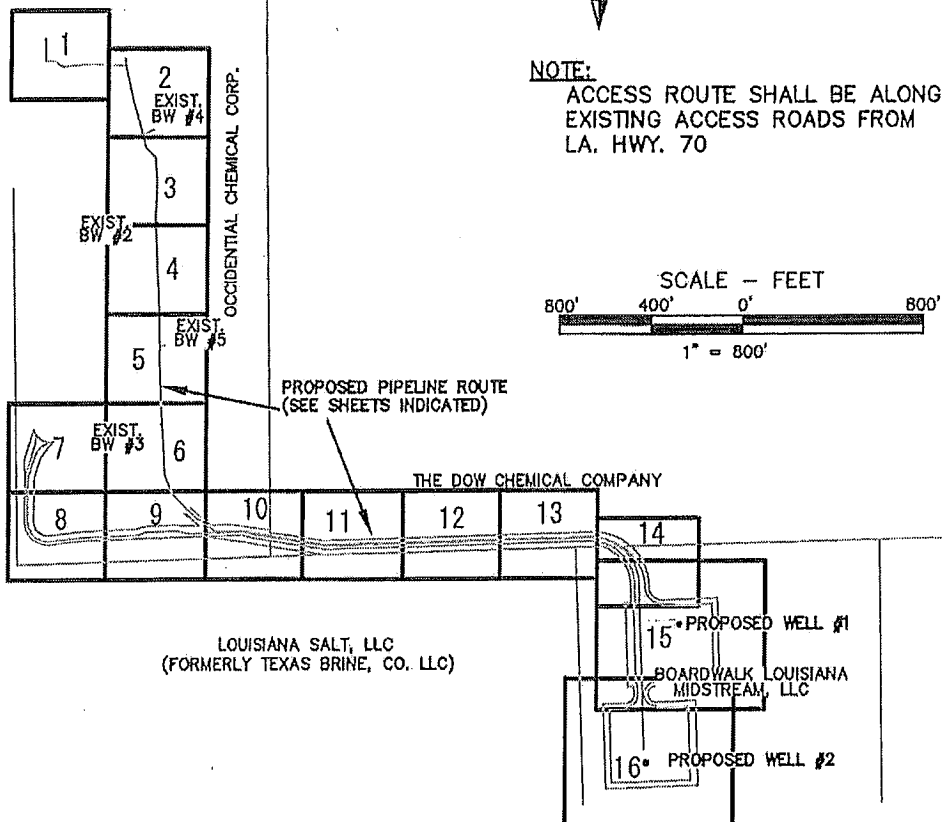
TO PAINCOURVILLE

LA. HWY. 70

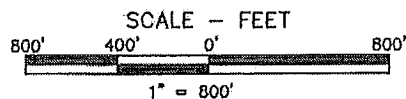


ENLINK PROCESSING SERVICES, LLC

GRAND BAYOU



NOTE:
ACCESS ROUTE SHALL BE ALONG
EXISTING ACCESS ROADS FROM
LA. HWY. 70



NOTE:

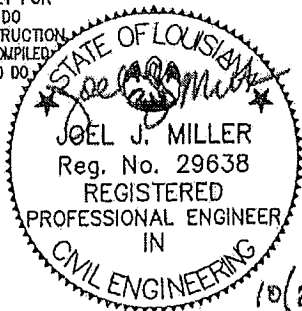
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

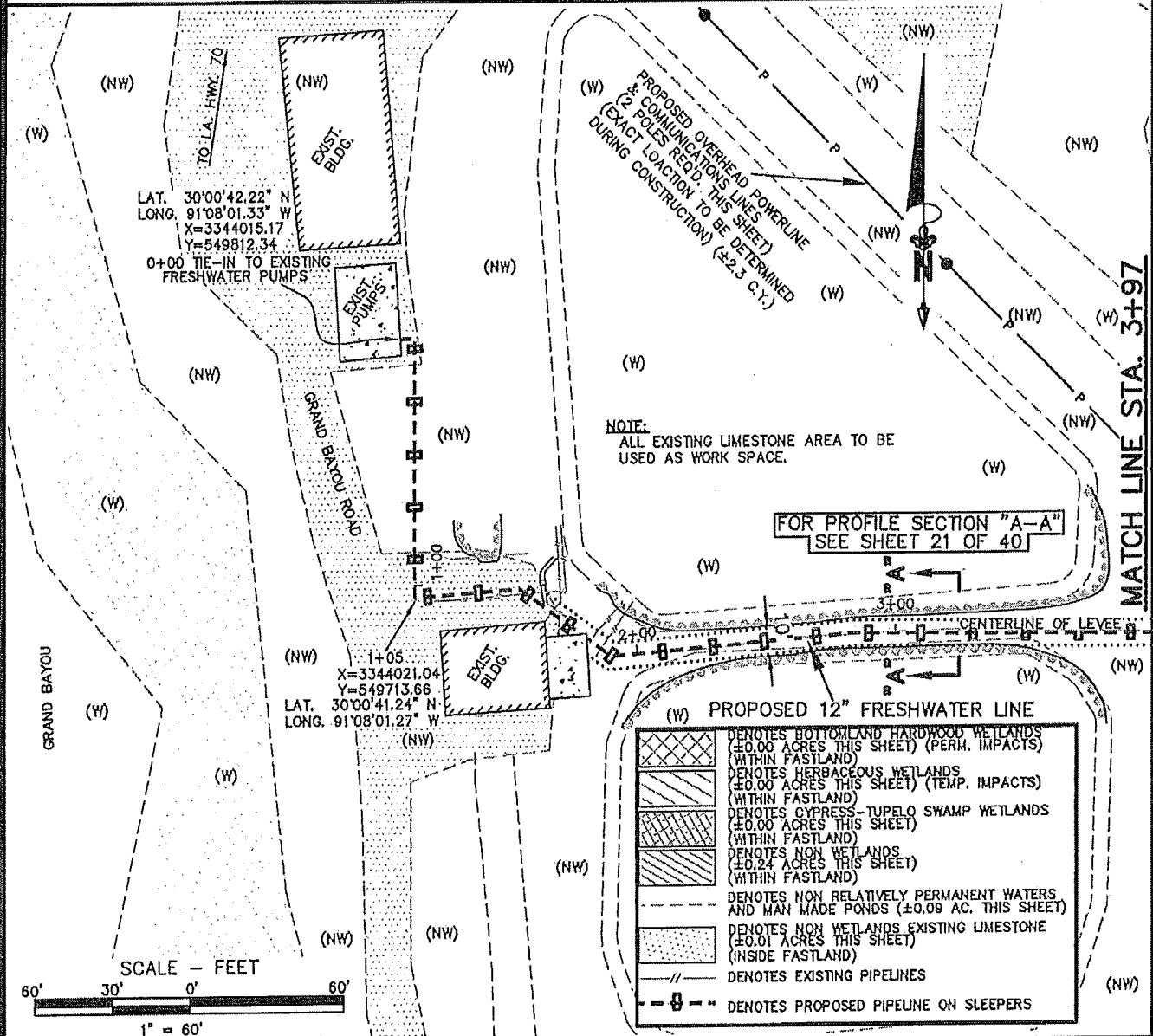
**GENERAL LAYOUT
SHEET INDEX**

ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 4 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|-------------------------------|-------|-------|-------|
| 1 | 10-27-16 | TO SHOW WELL LOCATION CHANGES | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES. PREPARED BY:



Miller Engineers & Associates, Inc.

STATE OF LOUISIANA
Joel J. Miller
JOEL J. MILLER
Reg. No. 29638
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/14/16

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BOARDWALK
LOUISIANA MIDSTREAM, LLC

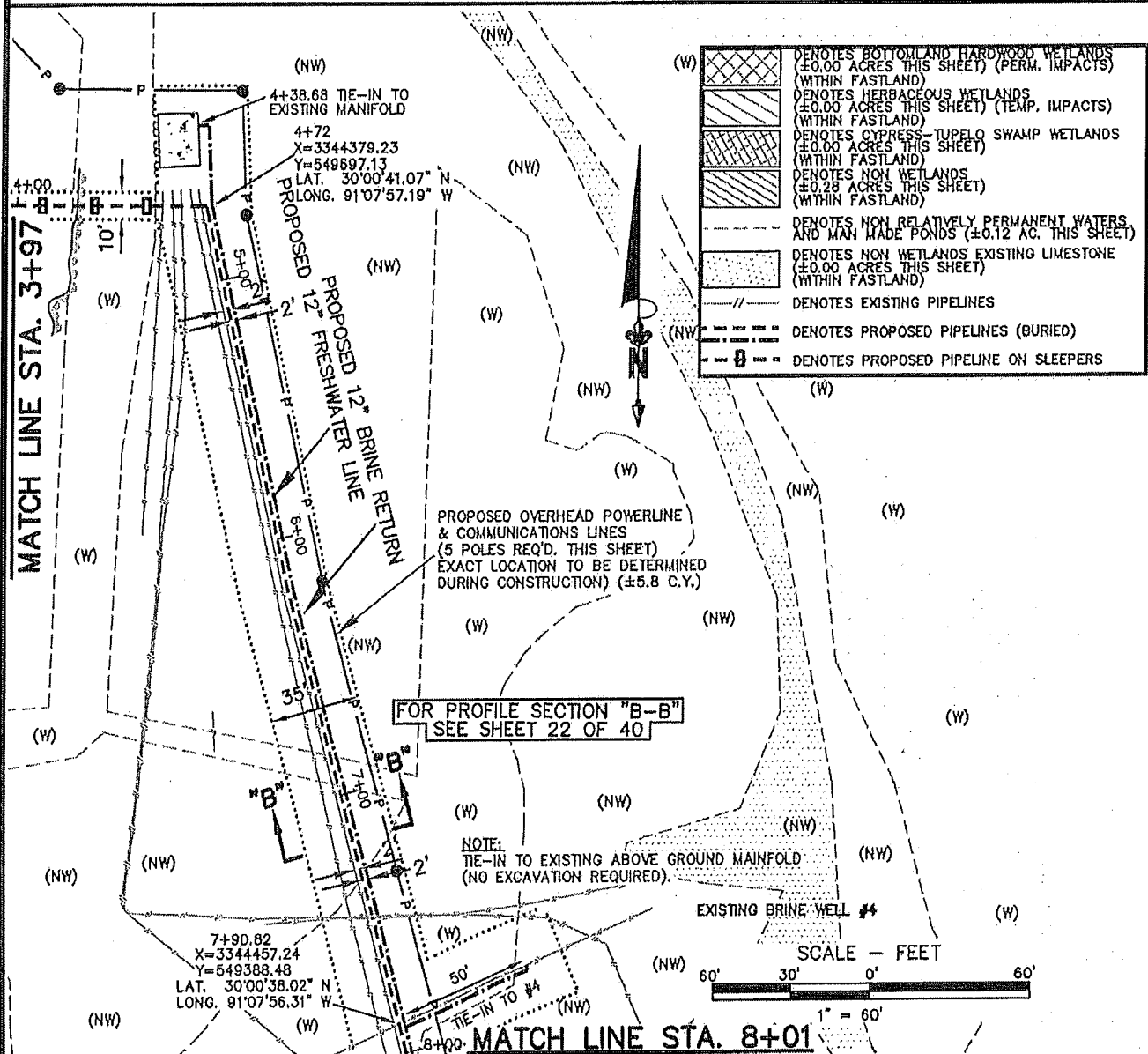
PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

GENERAL LAYOUT
SHEET 1 OF 16
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 5 OF 40

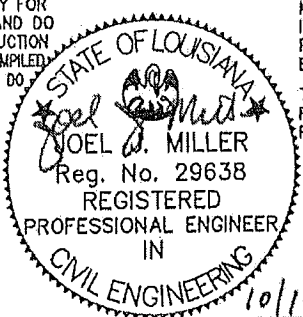
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|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES, PREPARED BY:



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Miller Engineers & Associates, Inc.

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

GENERAL LAYOUT
SHEET 2 OF 16

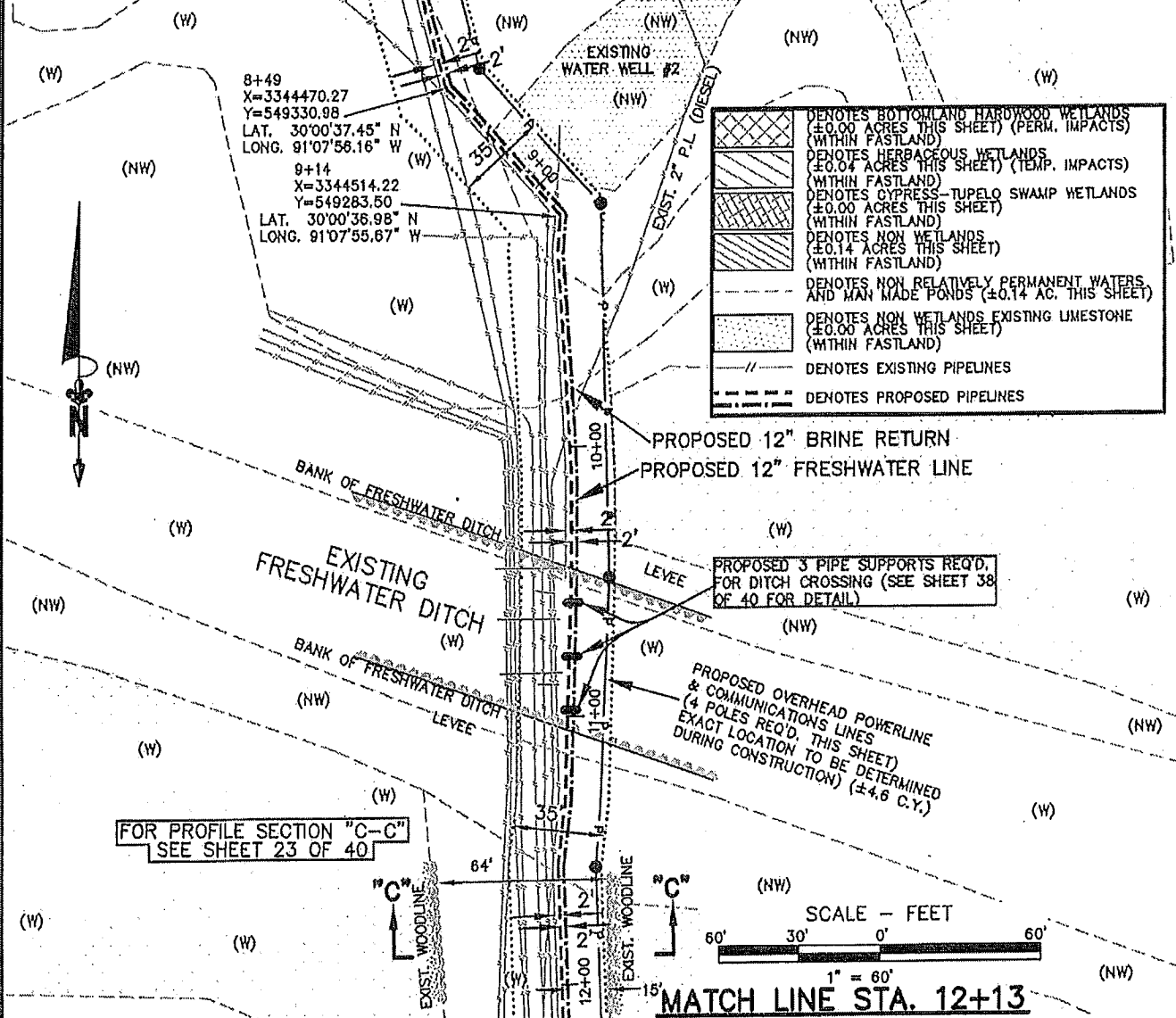
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DHC. NO. 13773, SHEET 6 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 8+01



NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:

Miller Engineers & Associates, Inc.

STATE OF LOUISIANA
Joel J. Miller
JOEL J. MILLER
Reg. No. 29638
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/14/16

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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

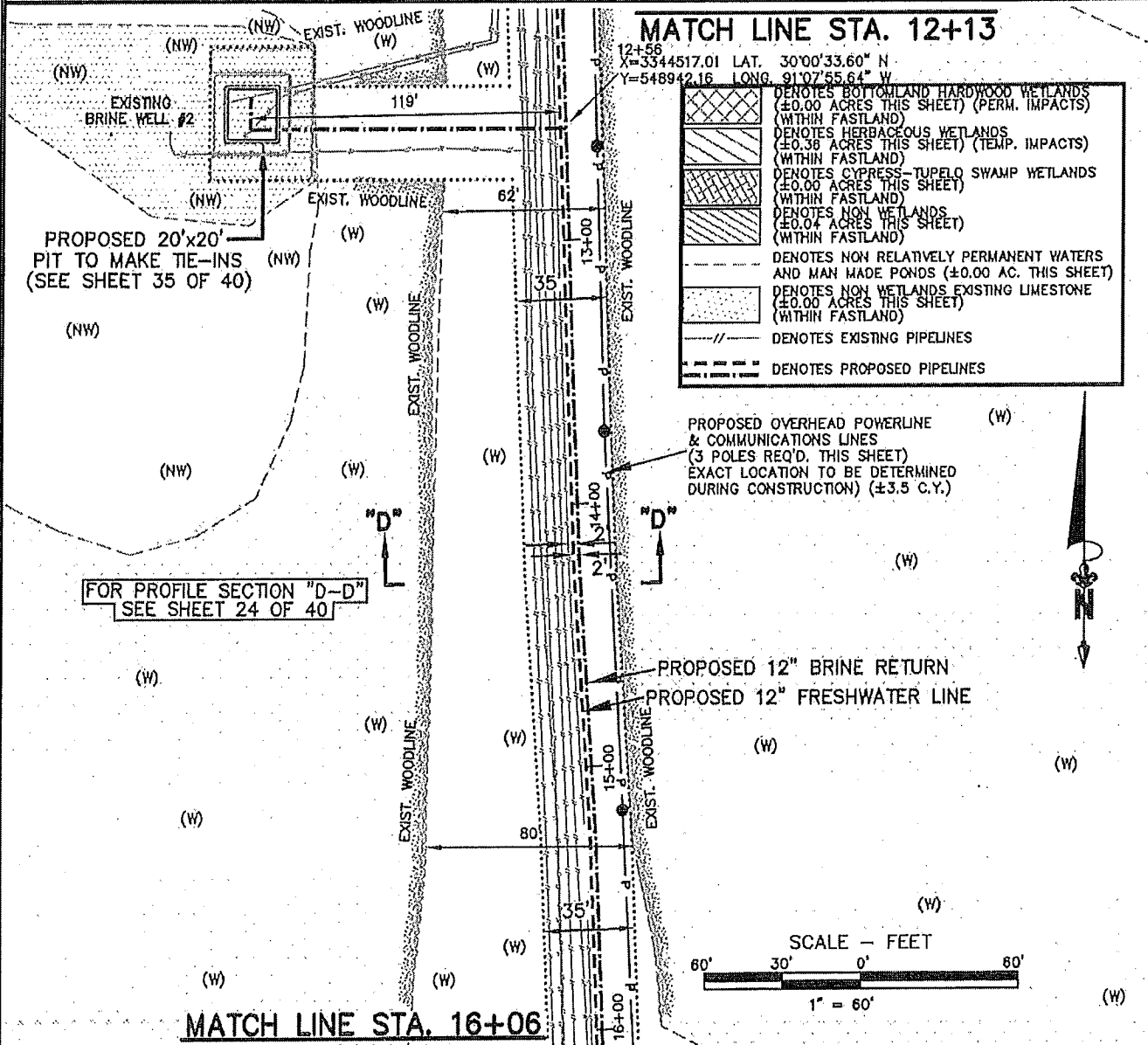
GENERAL LAYOUT
SHEET 3 OF 16

ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 7 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



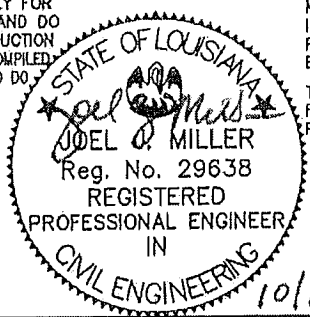
NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**GENERAL LAYOUT
SHEET 4 OF 16**

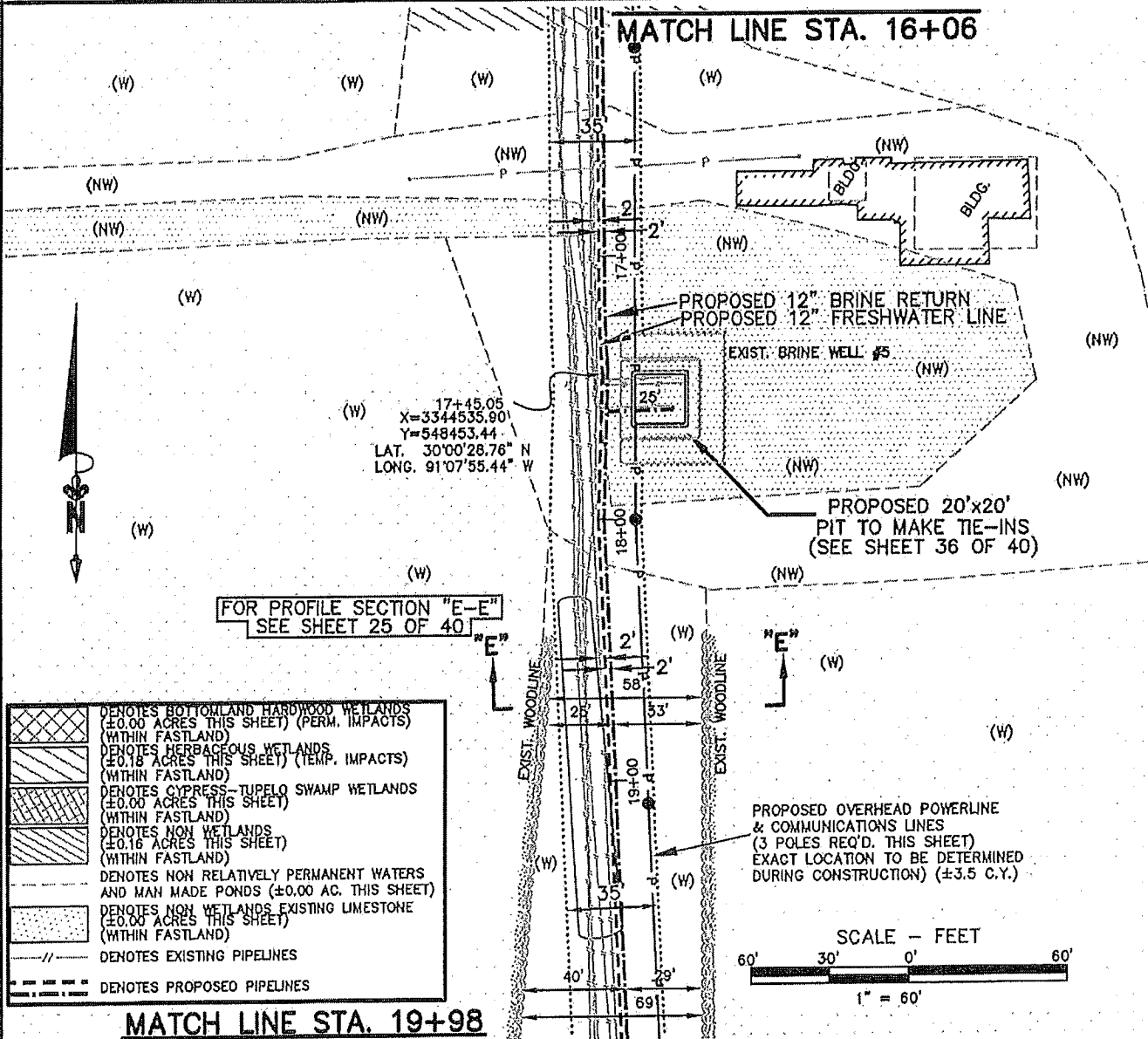
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 8 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 16+06



17+45.05
X=3344535.90
Y=548453.44
LAT. 30°00'28.76" N
LONG. 91°07'55.44" W

FOR PROFILE SECTION "E-E"
SEE SHEET 25 OF 40

- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.16 ACRES THIS SHEET) (TEMP. IMPACTS) (WITHIN FASTLAND)
- DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON WETLANDS (±0.16 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET)
- DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES EXISTING PIPELINES
- DENOTES PROPOSED PIPELINES

MATCH LINE STA. 19+98

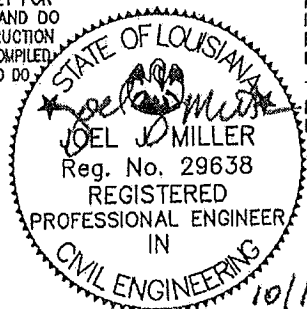
NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**GENERAL LAYOUT
SHEET 5 OF 16**

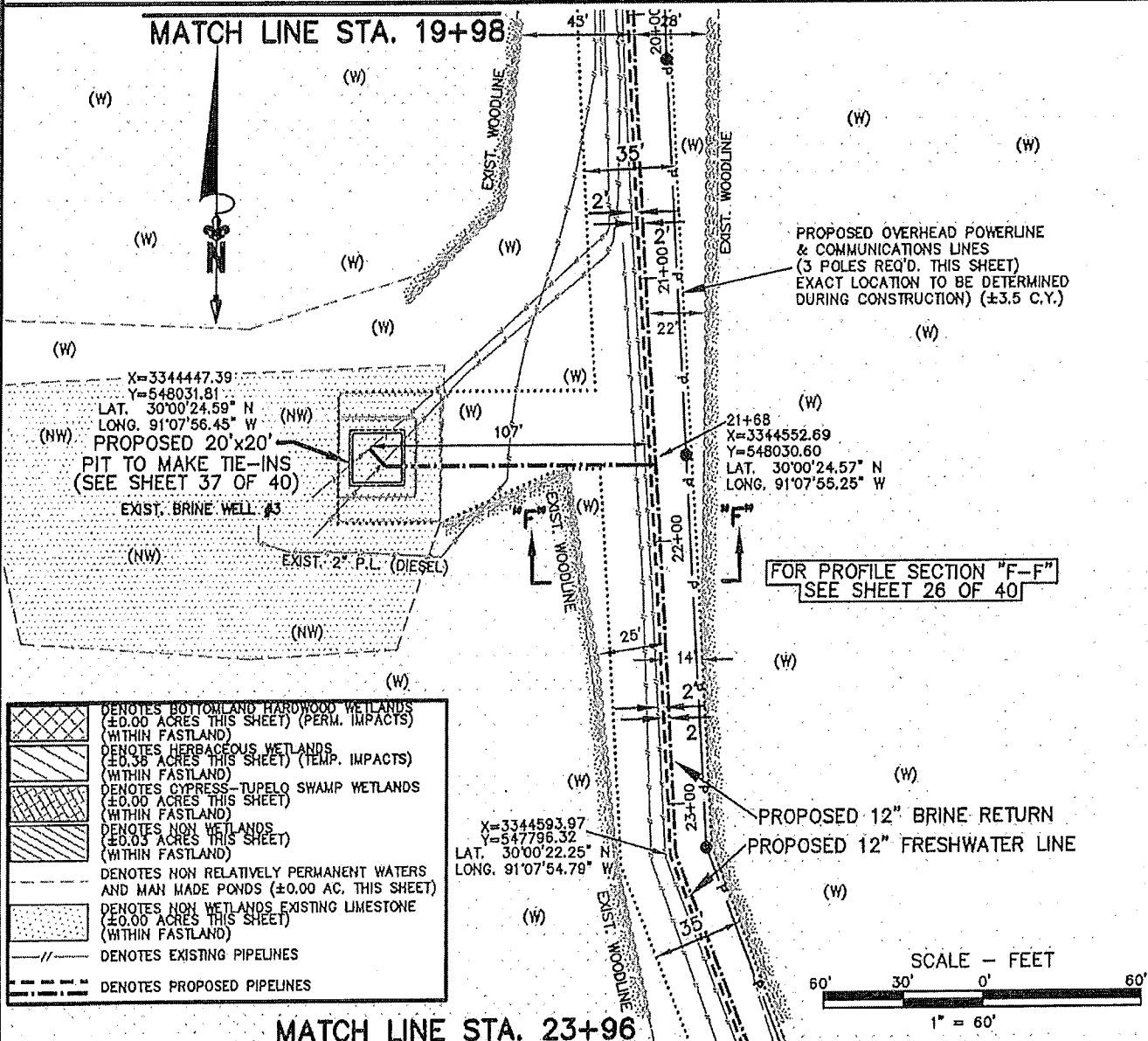
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 9 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 19+98

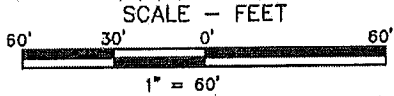


X=3344447.39
Y=548031.81
LAT. 30°00'24.59" N
LONG. 91°07'56.45" W
PROPOSED 20'x20'
PIT TO MAKE TIE-INS
(SEE SHEET 37 OF 40)
EXIST. BRINE WELL #3

PROPOSED OVERHEAD POWERLINE
& COMMUNICATIONS LINES
(3 POLES REQ'D. THIS SHEET)
EXACT LOCATION TO BE DETERMINED
DURING CONSTRUCTION (±3.5 C.Y.)

FOR PROFILE SECTION "F-F"
SEE SHEET 26 OF 40

- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.35 ACRES THIS SHEET) (TEMP. IMPACTS) (WITHIN FASTLAND)
- DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON WETLANDS (±0.05 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET)
- DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES EXISTING PIPELINES
- DENOTES PROPOSED PIPELINES



MATCH LINE STA. 23+96

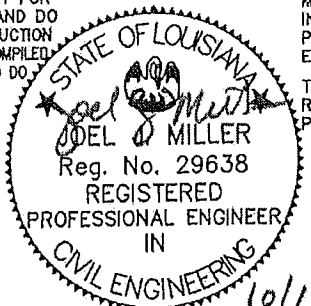
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

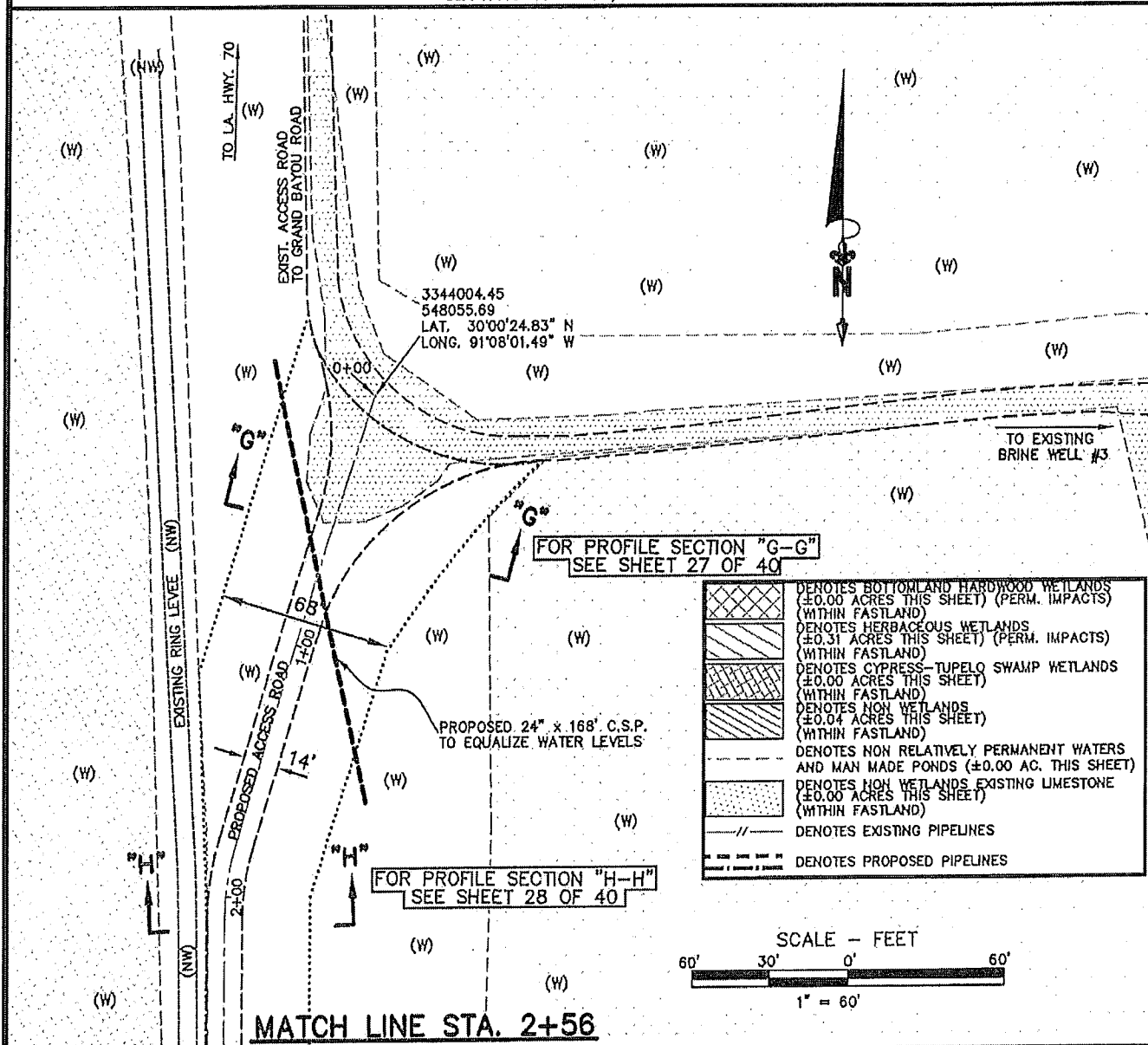
GENERAL LAYOUT
SHEET 6 OF 16

ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 10 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

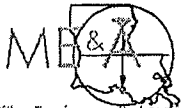


| | |
|--|---|
| | DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND) |
| | DENOTES HERBACEOUS WETLANDS (±0.31 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND) |
| | DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND) |
| | DENOTES NON WETLANDS (±0.04 ACRES THIS SHEET) (WITHIN FASTLAND) |
| | DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET) |
| | DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND) |
| | DENOTES EXISTING PIPELINES |
| | DENOTES PROPOSED PIPELINES |

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**GENERAL LAYOUT
SHEET 7 OF 16**

ASSUMPTION PARISH, LOUISIANA

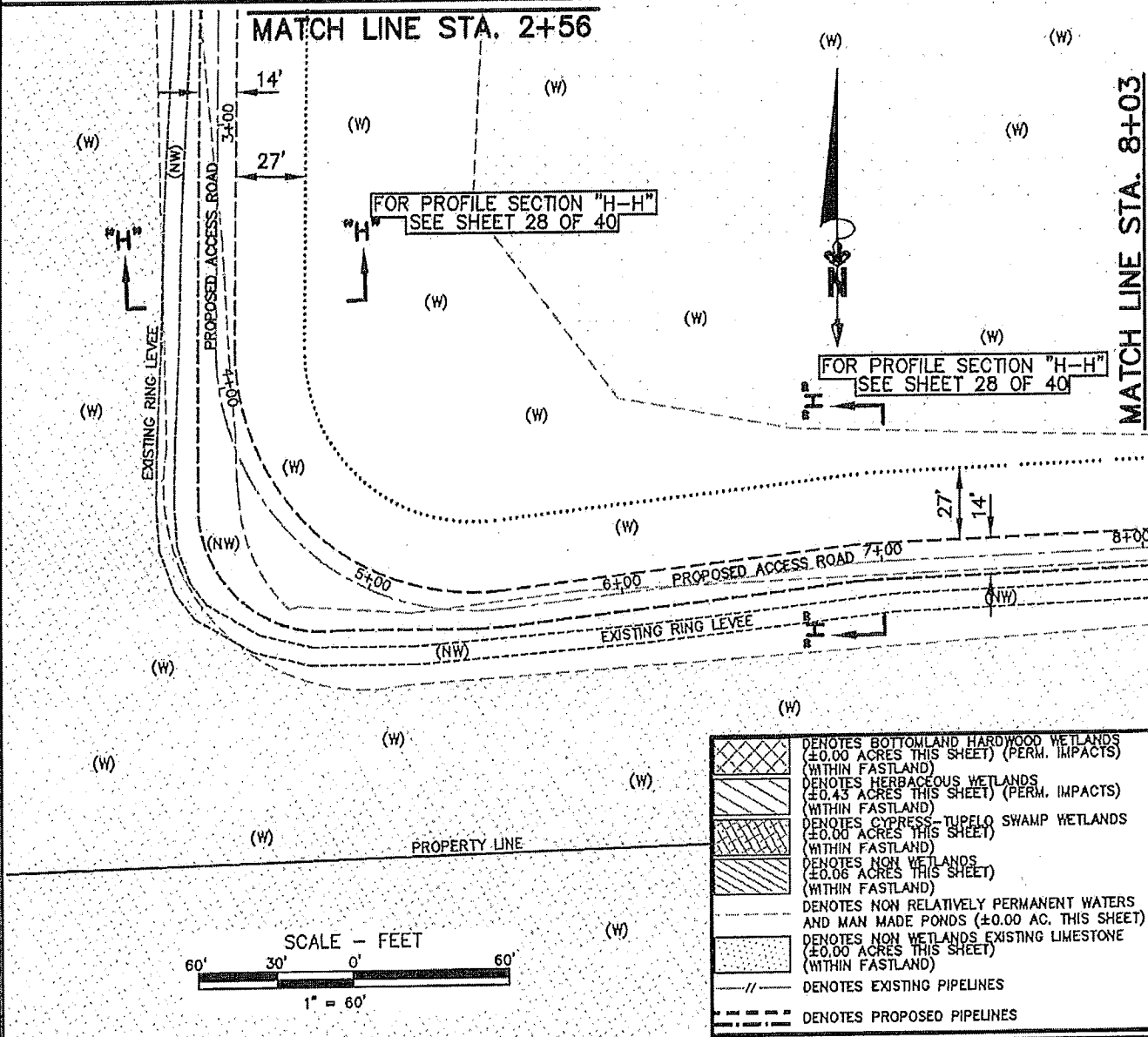
M.E. & A. DWG. NO. 13773, SHEET 11 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 2 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 1 | 6-17-16 | TO SHOW IMPACT CHANGES | REK | JJM | JJM |

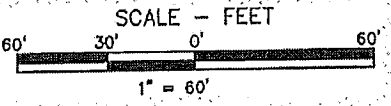
ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 2+56

MATCH LINE STA. 8+03



- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.43 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES CYPRESS-TUPPELO SWAMP WETLANDS (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON WETLANDS (±0.06 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET)
- DENOTES NON WETLANDS EXISTING LIMESTONE (WITHIN FASTLAND)
- DENOTES EXISTING PIPELINES
- DENOTES PROPOSED PIPELINES



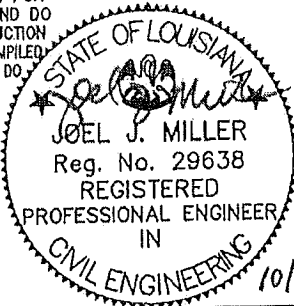
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**GENERAL LAYOUT
SHEET 8 OF 16**

ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 12 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 2 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 1 | 6-17-16 | TO SHOW IMPACT CHANGES | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 23+96

PROPOSED OVERHEAD POWERLINE & COMMUNICATIONS LINES (2 POLES REQ'D. THIS SHEET) EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION (±2.3 C.Y.)

X=3344593.97
Y=547796.32
LAT. 30°00'22.25" N
LONG. 91°07'54.78" W

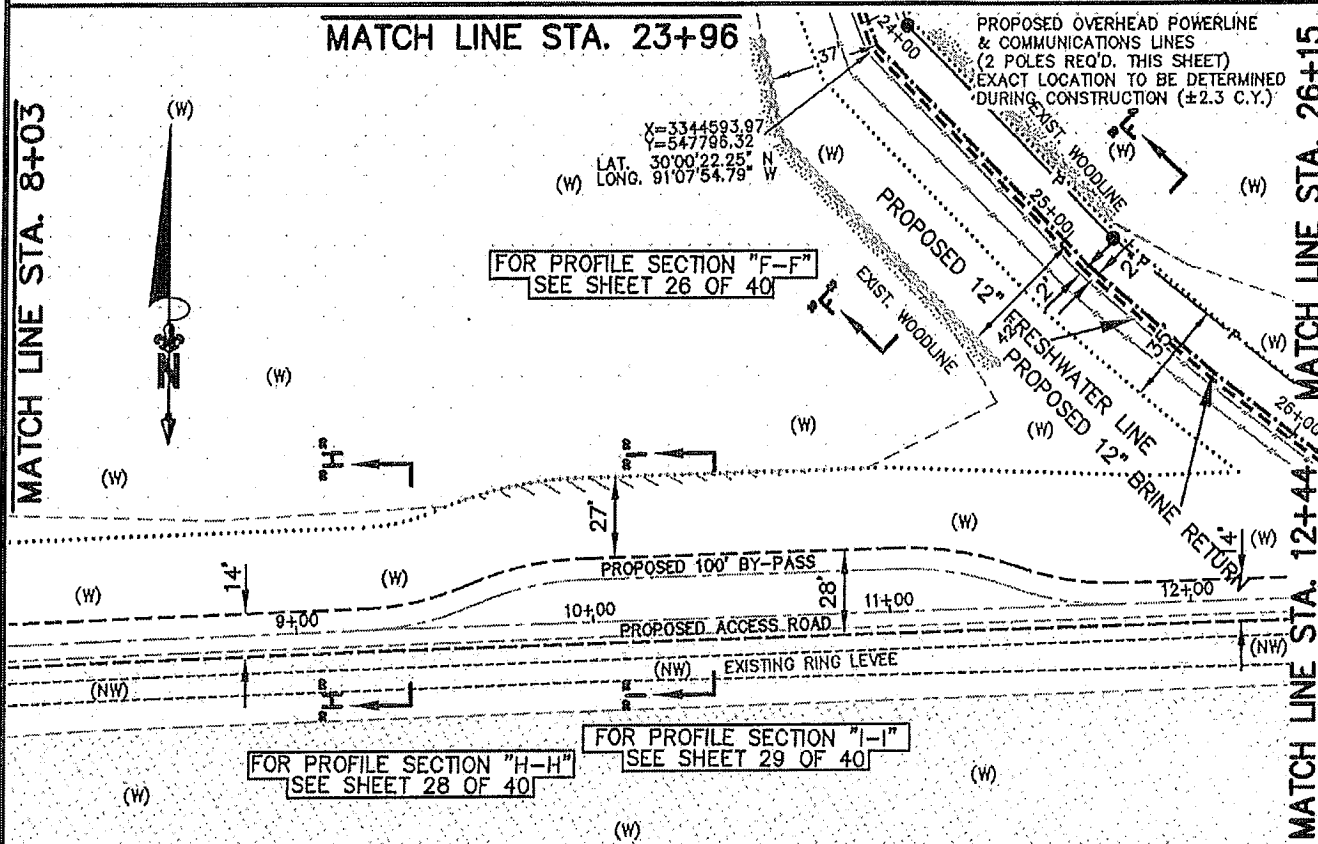
FOR PROFILE SECTION "F-F"
SEE SHEET 26 OF 40

FOR PROFILE SECTION "H-H"
SEE SHEET 28 OF 40

FOR PROFILE SECTION "I-I"
SEE SHEET 29 OF 40

MATCH LINE STA. 26+15
MATCH LINE STA. 12+44

MATCH LINE STA. 8+03

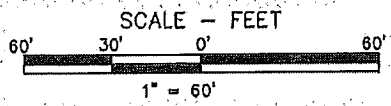


PROPERTY LINE

PROPERTY LINE

- DENOTES HERBACEOUS WETLANDS (±0.45 ACRES THIS SHEET)(PERM. IMPACTS)
- DENOTES NON WETLANDS (±0.02 ACRES THIS SHEET)(PERM. IMPACTS)

- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.12 ACRES THIS SHEET) (TEMP. IMPACTS) (WITHIN FASTLAND)
- DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET)
- DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET)
- DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES EXISTING PIPELINES
- DENOTES PROPOSED PIPELINES



NOTE:
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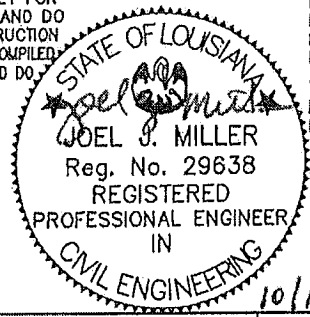
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:



Miller Engineers & Associates, Inc.



10/14/16

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**GENERAL LAYOUT
SHEET 9 OF 16**

ASSUMPTION PARISH, LOUISIANA

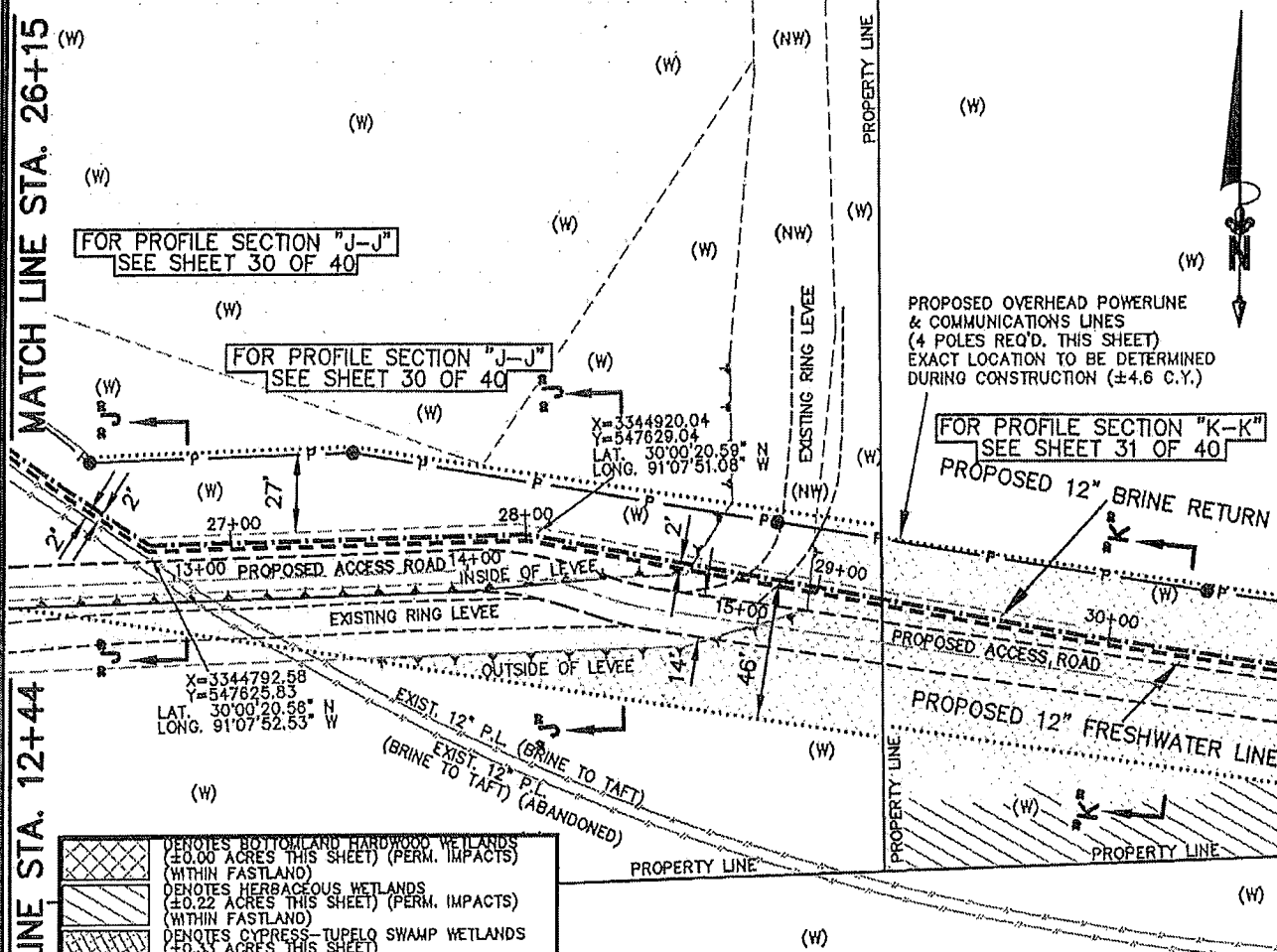
M.E. & A. DWG. NO. 13773, SHEET 13 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 1 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 26+15

MATCH LINE STA. 16+90 MATCH LINE STA. 30+71



FOR PROFILE SECTION "J-J"
SEE SHEET 30 OF 40

FOR PROFILE SECTION "J-J"
SEE SHEET 30 OF 40

PROPOSED OVERHEAD POWERLINE & COMMUNICATIONS LINES
(4 POLES REQ'D. THIS SHEET)
EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION (±4.6 C.Y.)

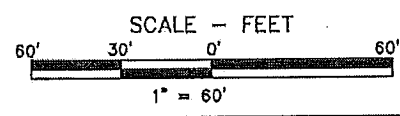
FOR PROFILE SECTION "K-K"
SEE SHEET 31 OF 40

X=3344792.58
Y=547625.83
LAT. 30°00'20.36" N
LONG. 91°07'52.53" W

X=3344920.04
Y=547625.04
LAT. 30°00'20.59" N
LONG. 91°07'51.08" W

- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.22 ACRES THIS SHEET) (PERM. IMPACTS) (WITHIN FASTLAND)
- DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.33 ACRES THIS SHEET) (OUTSIDE FASTLAND)
- DENOTES NON WETLANDS (±0.13 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET)
- DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (WITHIN FASTLAND)
- DENOTES EXISTING PIPELINES
- DENOTES PROPOSED PIPELINES

NOTE:
THE FORESTED WETLANDS WILL BE PERMANENTLY IMPACTED AS A RESULT OF THE PROPOSED PROJECT. THE TREES WILL BE REMOVED BY CHIPPING AND THE CHIPPING WILL BE HAULED OFF SITE TO AN UPLAND AREA.



NOTE:
THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPALED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.
* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:

STATE OF LOUISIANA
Joel J. Miller
JOEL J. MILLER
Reg. No. 29638
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

THIS DRAWING WAS PREPARED SOLELY FOR USE BY BOARDWALK LOUISIANA MIDSTREAM, LLC, IN CONJUNCTION WITH THE SPECIFIC PROJECT DESIGNATED IN THE TITLE BLOCK. USE FOR ANY OTHER PURPOSE, OR USE BY ANY OTHER PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER ENGINEERS & ASSOCIATES.

THIS DRAWING IS THE PROPERTY OF MILLER ENGINEERS & ASSOC., INC. AND ANY REVISIONS MADE WITHOUT THE WRITTEN AUTHORIZATION OF THE SUPERVISING PROFESSIONAL WILL VOID THE SEAL WHICH HE HAS PLACED HERE ON.



Miller Engineers & Associates, Inc.

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
GENERAL LAYOUT
SHEET 10 OF 16
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | TO SHOW HATCHING DARKER & ADDED NOTE | REK | JJM | JJM |
| 1 | 6-17-16 | TO SHOW IMPACT CHANGES | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 14 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

| | |
|--|--|
| | DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES HERBACEOUS WETLANDS (±0.16 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.43 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET) |
| | DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES EXISTING PIPELINES |
| | DENOTES PROPOSED PIPELINES |



MATCH LINE STA. 30+71

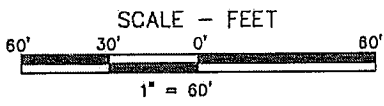
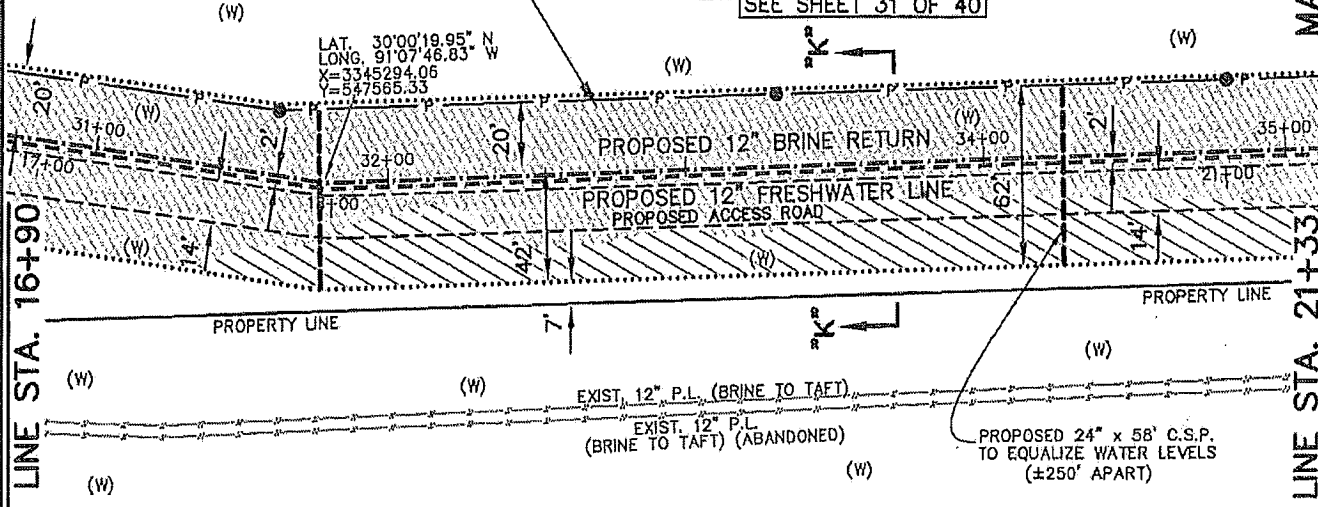
MATCH LINE STA. 16+90

MATCH LINE STA. 35+13

MATCH LINE STA. 21+33

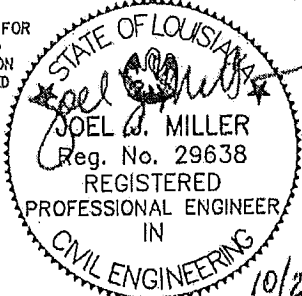
PROPOSED OVERHEAD POWERLINE & COMMUNICATIONS LINES (3 POLES REQ'D. THIS SHEET)
EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION (±3.5 C.Y.)

FOR PROFILE SECTION "K-K"
SEE SHEET 31 OF 40



NOTE:
THE FORESTED WETLANDS WILL BE PERMANENTLY IMPACTED AS A RESULT OF THE PROPOSED PROJECT. THE TREES WILL BE REMOVED BY CHIPPING AND THE CHIPPING WILL BE HAULED OFF SITE TO AN UPLAND AREA.

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:



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Miller Engineers & Associates, Inc.

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
**GENERAL LAYOUT
SHEET 11 OF 16**
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 10-27-16 | TO SHOW ADDITIONAL CROSS DRAINS | REK | JJM | JJM |
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | TO SHOW HATCHING DARKER & ADDED NOTE | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 15 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

| | |
|--|--|
| | DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES HERBACEOUS WETLANDS (±0.28 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.43 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET) |
| | DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES EXISTING PIPELINES |
| | DENOTES PROPOSED PIPELINES |



MATCH LINE STA. 35+13

MATCH LINE STA. 21+33

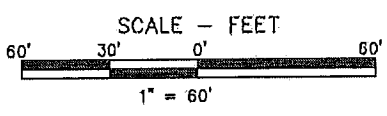
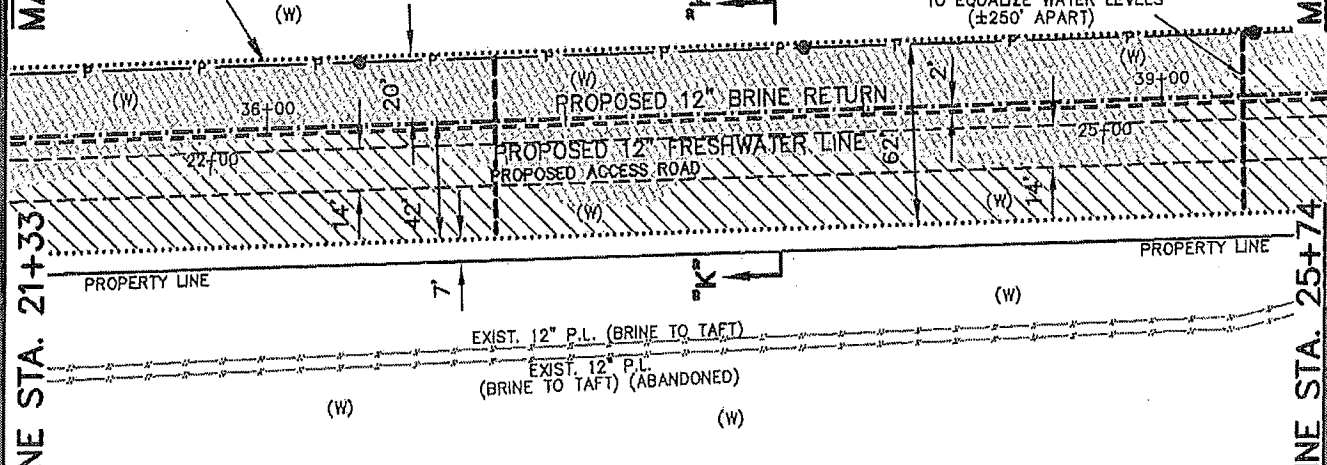
MATCH LINE STA. 25+74

MATCH LINE STA. 39+55

PROPOSED OVERHEAD POWERLINE & COMMUNICATIONS LINES (3 POLES REQ'D. THIS SHEET) EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION) (±3.5 C.Y.)

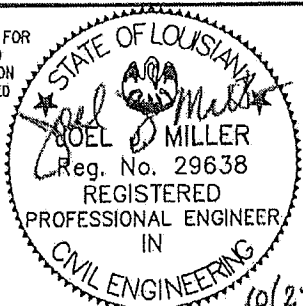
FOR PROFILE SECTION "K-K"
SEE SHEET 31 OF 40

(W) PROPOSED 24" x 58' C.S.P. TO EQUALIZE WATER LEVELS (±250' APART)



NOTE:
THE FORESTED WETLANDS WILL BE PERMANENTLY IMPACTED AS A RESULT OF THE PROPOSED PROJECT. THE TREES WILL BE REMOVED BY CHIPPING AND THE CHIPPING WILL BE HAULED OFF SITE TO AN UPLAND AREA.

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.



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Miller Engineers & Associates, Inc.

BOARDWALK LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES
GENERAL LAYOUT SHEET 12 OF 16
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 10-27-16 | TO SHOW ADDITIONAL CROSS DRAINS | REK | JJM | JJM |
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | TO SHOW HATCHING DARKER & ADDED NOTE | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 16 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

| | |
|--|--|
| | DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES HERBACEOUS WETLANDS (±0.42 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.29 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET) |
| | DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES EXISTING PIPELINES |
| | DENOTES PROPOSED PIPELINES |



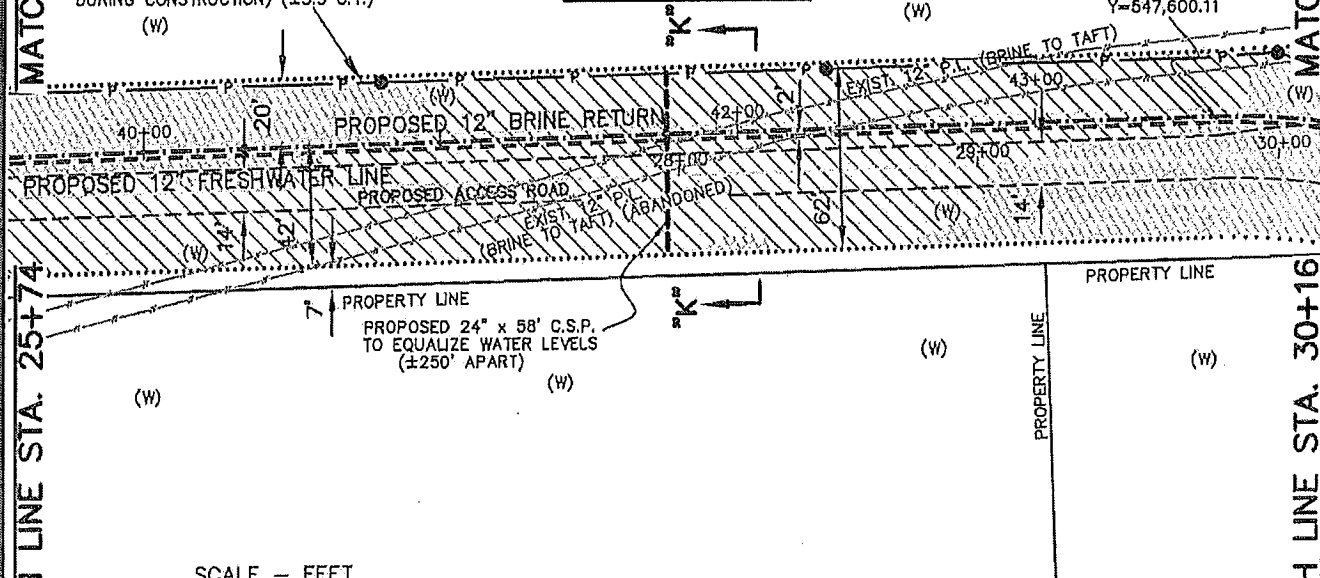
MATCH LINE STA. 39+55

MATCH LINE STA. 43+96

PROPOSED OVERHEAD POWERLINE & COMMUNICATIONS LINES (3 POLES REQ'D. THIS SHEET) (EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION) (±3.5 C.Y.) (W)

FOR PROFILE SECTION "K-K"
SEE SHEET 31 OF 40

(W)
LAT. 30°00'20.28" N
LONG. 91°07'33.39" W
X=3,346,475.51
Y=547,600.11



NOTE:
THE FORESTED WETLANDS WILL BE PERMANENTLY IMPACTED AS A RESULT OF THE PROPOSED PROJECT. THE TREES WILL BE REMOVED BY CHIPPING AND THE CHIPPING WILL BE HAULED OFF SITE TO AN UPLAND AREA.

MATCH LINE STA. 25+74

MATCH LINE STA. 30+16

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:

STATE OF LOUISIANA
JOEL W. MILLER
Reg. No. 29638
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

10/22/16

THIS DRAWING WAS PREPARED SOLELY FOR USE BY BOARDWALK LOUISIANA MIDSTREAM, LLC, IN CONJUNCTION WITH THE SPECIFIC PROJECT DESIGNATED IN THE TITLE BLOCK. USE FOR ANY OTHER PURPOSE, OR USE BY ANY OTHER PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER ENGINEERS & ASSOCIATES.

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Miller Engineers & Associates, Inc.

BOARDWALK LOUISIANA MIDSTREAM, LLC

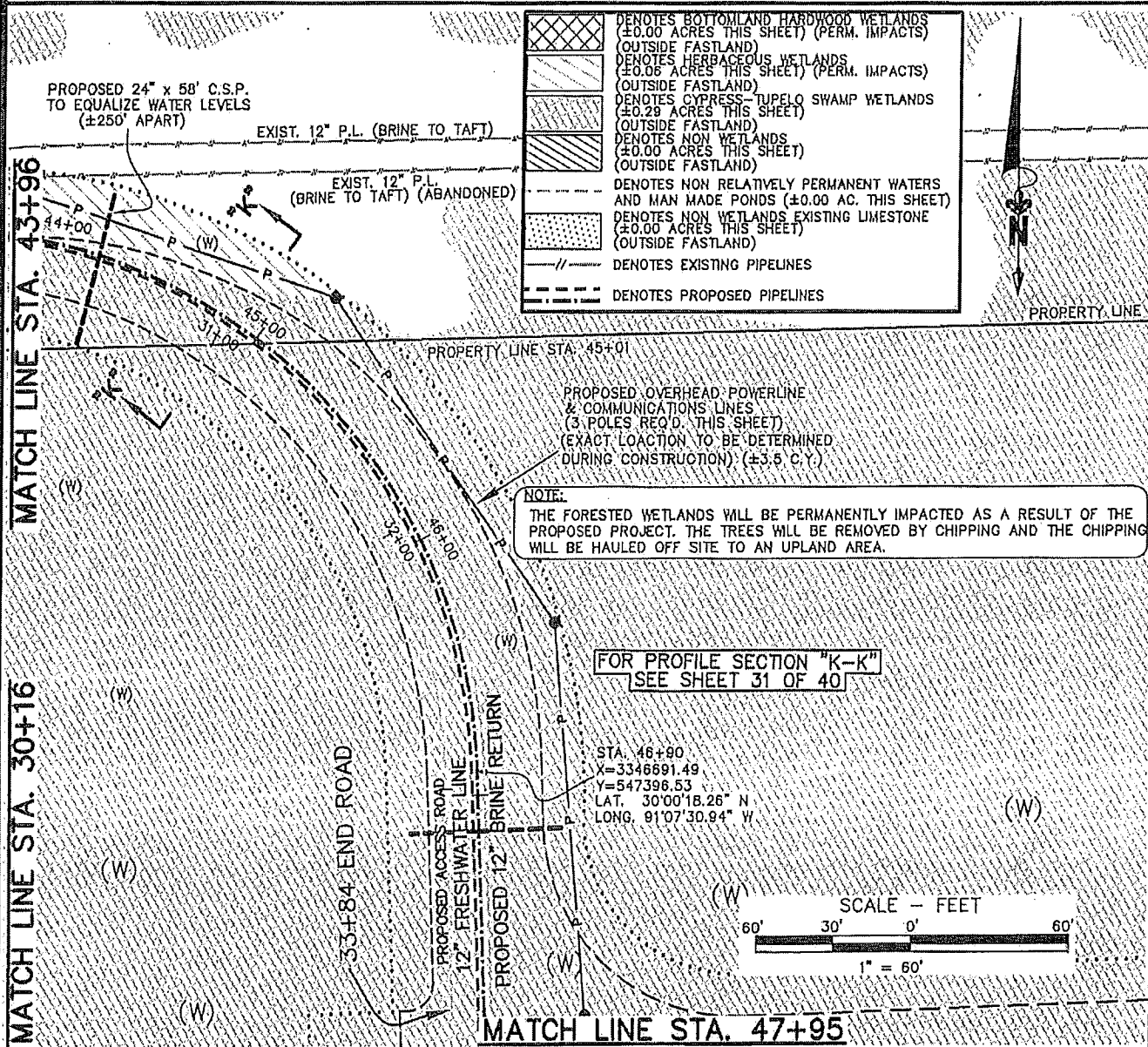
PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES

GENERAL LAYOUT SHEET 13 OF 16
ASSUMPTION PARISH, LOUISIANA

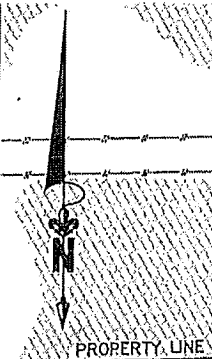
M.E. & A. DWG. NO. 13773, SHEET 17 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 10-27-16 | TO SHOW ADDITIONAL CROSS DRAINS | REK | JJM | JJM |
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | TO SHOW HATCHING DARKER & ADDED NOTE. | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



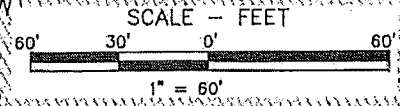
| | |
|--|--|
| | DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES HERBACEOUS WETLANDS (±0.06 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND) |
| | DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±0.29 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES NON RELATIVELY PERMANENT WATERS AND MAN MADE PONDS (±0.00 AC. THIS SHEET) |
| | DENOTES NON WETLANDS EXISTING LIMESTONE (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND) |
| | DENOTES EXISTING PIPELINES |
| | DENOTES PROPOSED PIPELINES |



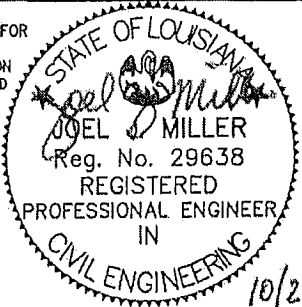
NOTE:
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FOR PROFILE SECTION "K-K"
SEE SHEET 31 OF 40

STA. 46+90
X=3346691.49
Y=547396.53
LAT. 30°00'18.26" N
LONG. 91°07'30.94" W



NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

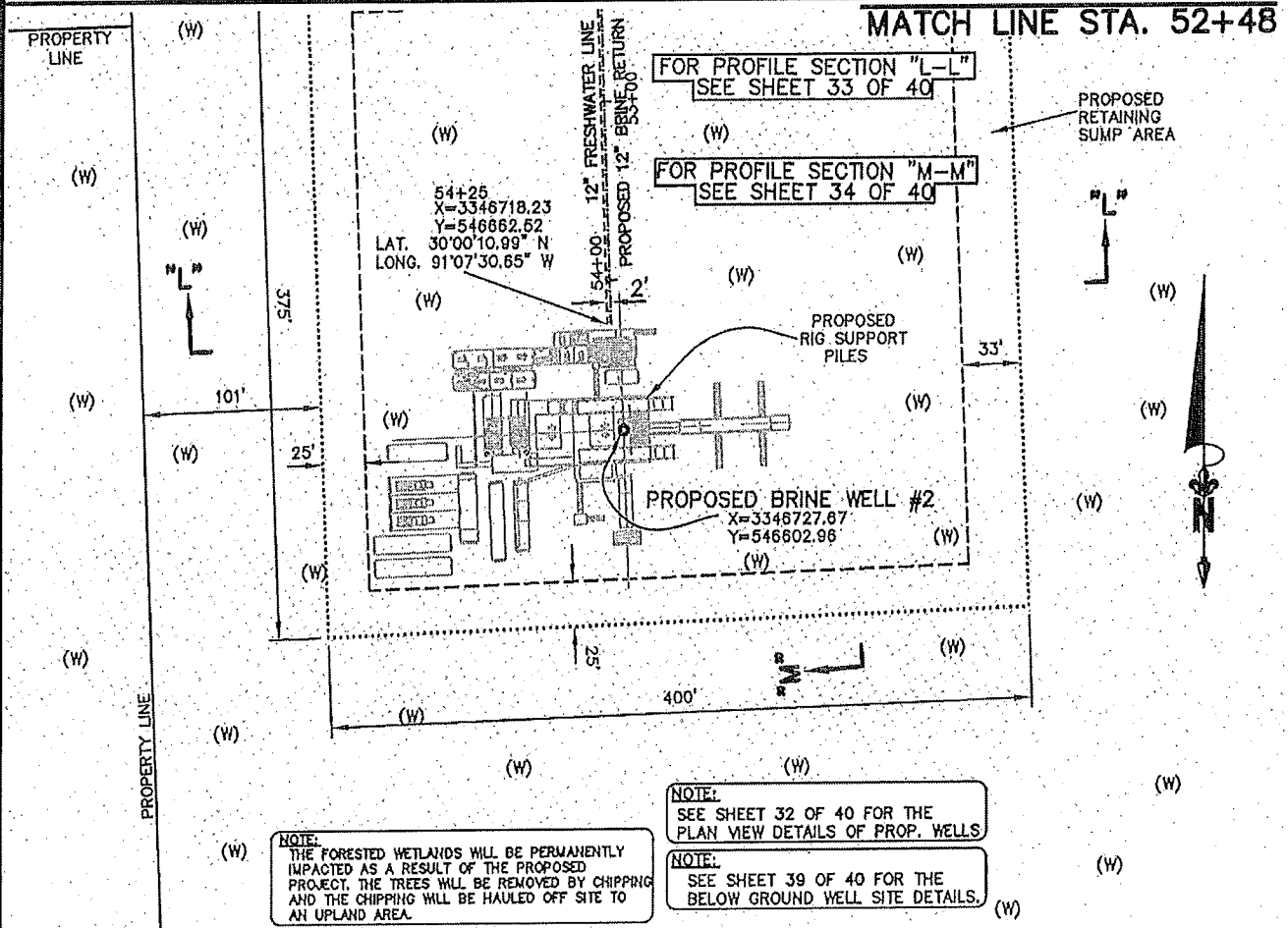
PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
GENERAL LAYOUT
SHEET 14 OF 16
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 10-27-16 | TO SHOW ADDITIONAL CROSS DRAINS | REK | JJM | JJM |
| 3 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE FASTLAND | REK | JJM | JJM |
| 2 | 8-8-16 | TO SHOW HATCHING DARKER & ADDED NOTE | REK | JJM | JJM |

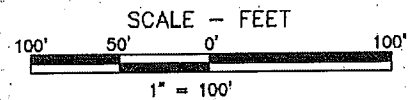
M.E. & A. DWG. NO. 13773, SHEET 18 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

MATCH LINE STA. 52+48



- DENOTES BOTTOMLAND HARDWOOD WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND)
- DENOTES HERBACEOUS WETLANDS (±0.00 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND)
- DENOTES CYPRESS-TUPELO SWAMP WETLANDS (±3.16 ACRES THIS SHEET) (PERM. IMPACTS) (OUTSIDE FASTLAND)
- DENOTES NON WETLANDS (±0.00 ACRES THIS SHEET) (OUTSIDE FASTLAND)



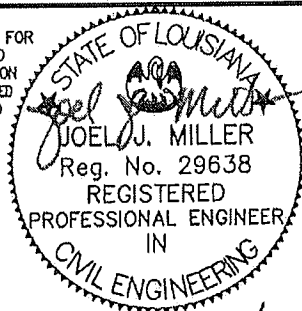
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

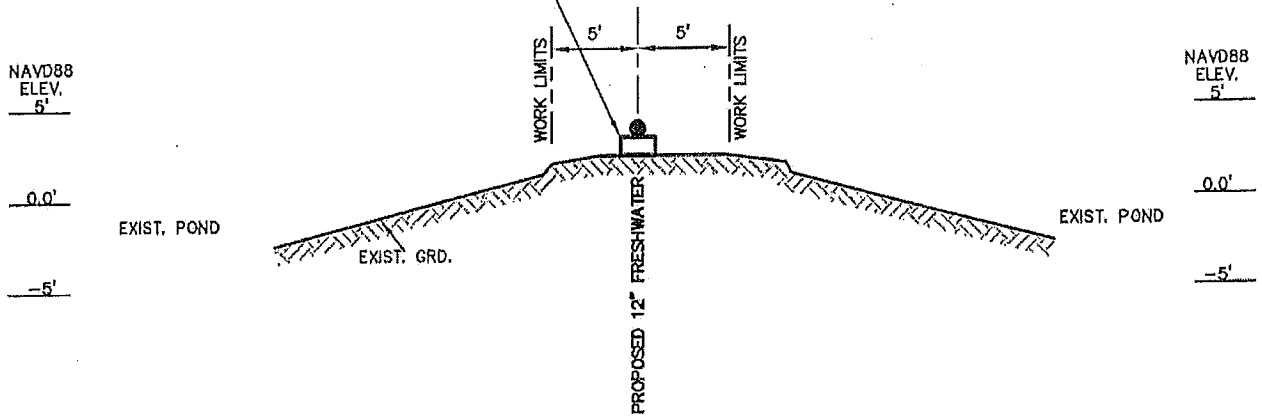
GENERAL LAYOUT
SHEET 16 OF 16
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 20 OF 40

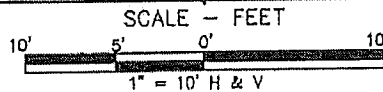
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|---|-------|-------|-------|
| 3 | 10-21-16 | TO SHOW WELL PAD DIMENSION CHANGES | REK | JJM | JJM |
| 2 | 10-10-16 | CHANGED IMPACT LEGEND TO DIFFERENTIATE BETWEEN IN & OUTSIDE OF FASTLAND | REK | JJM | JJM |

10/25/16

NOTE:
 12" PIPING TO BE STRAPPED ON TO 1' x 1' x 2' CONCRETE
 SLEEPERS @ 20' O.C. SPACING FROM STA. 0+00 TO STA. 4+72
 (NO EXCAVATION OR EMBANKMENT REQ'D. ON THIS SECTION)



SECTION "A-A" (0+00 TO 4+72)



NOTE:
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 ACQUISITION OF REGULATORY PERMITS AND DO
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 PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED
 DATA ACQUIRED FROM ASSESSOR RECORDS AND DO
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 PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER
 ENGINEERS & ASSOCIATES.

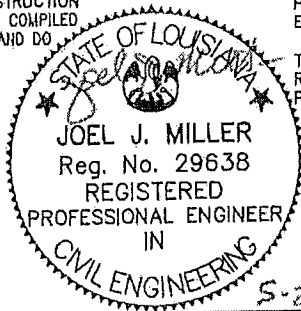
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 PROFESSIONAL WILL VOID THE SEAL WHICH HE HAS PLACED HERE ON.

* SEE SHEET 40 OF 40 FOR GENERAL
 NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.

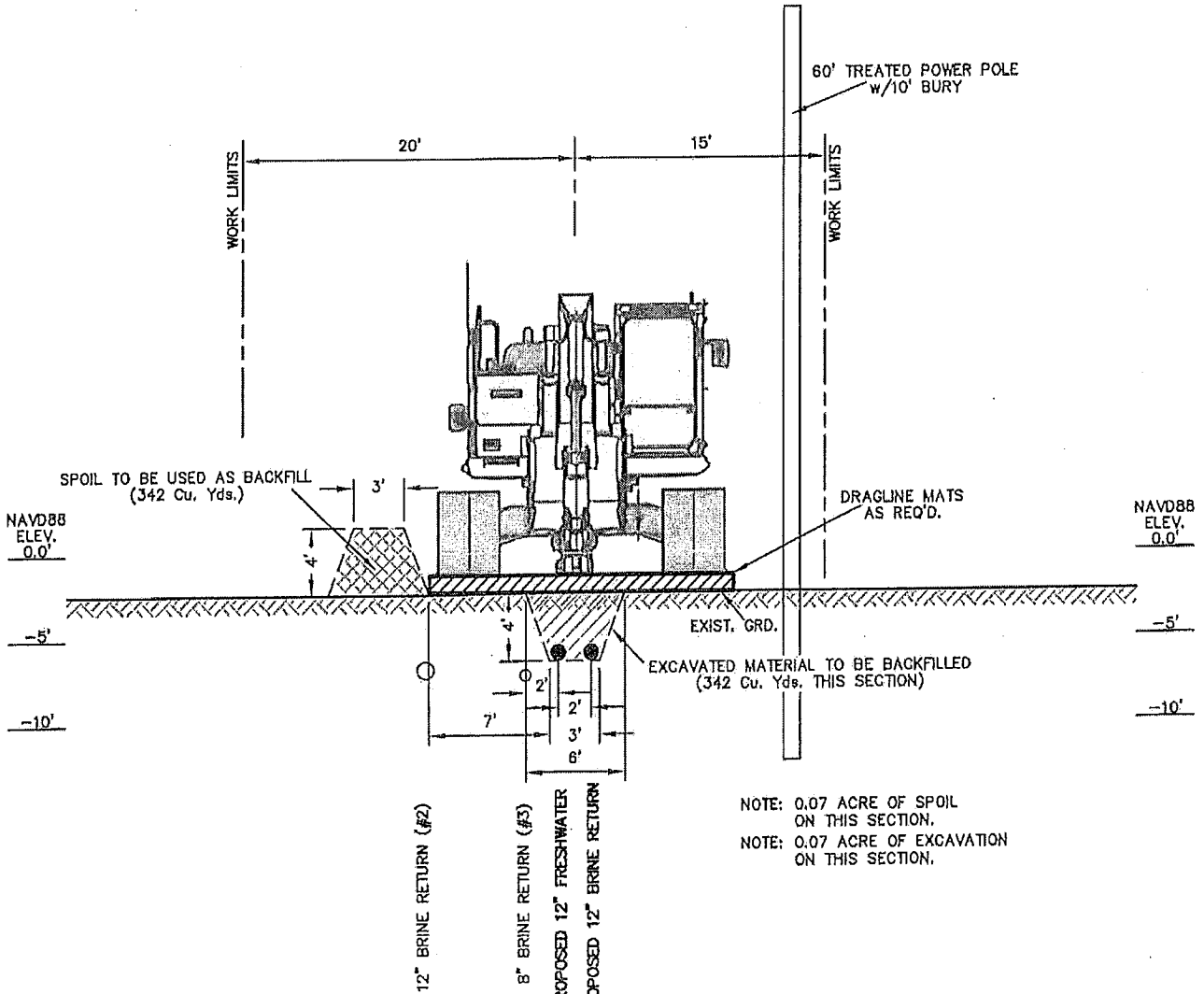


BOARDWALK
 LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
 PROPOSED BRINE WELL PADS, ACCESS ROADS
 AND 12" PIPELINES
TYPICAL CROSS SEC. "A-A"
FOR PROPOSED 12" PIPING
 ASSUMPTION PARISH, LOUISIANA

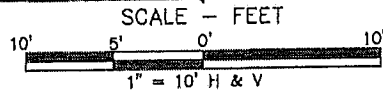
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 21 OF 40



NOTE: 0.07 ACRE OF SPOIL ON THIS SECTION.
 NOTE: 0.07 ACRE OF EXCAVATION ON THIS SECTION.

SECTION "B-B" (4+72 TO 9+85)



NOTE:
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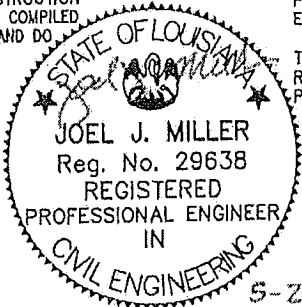
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.

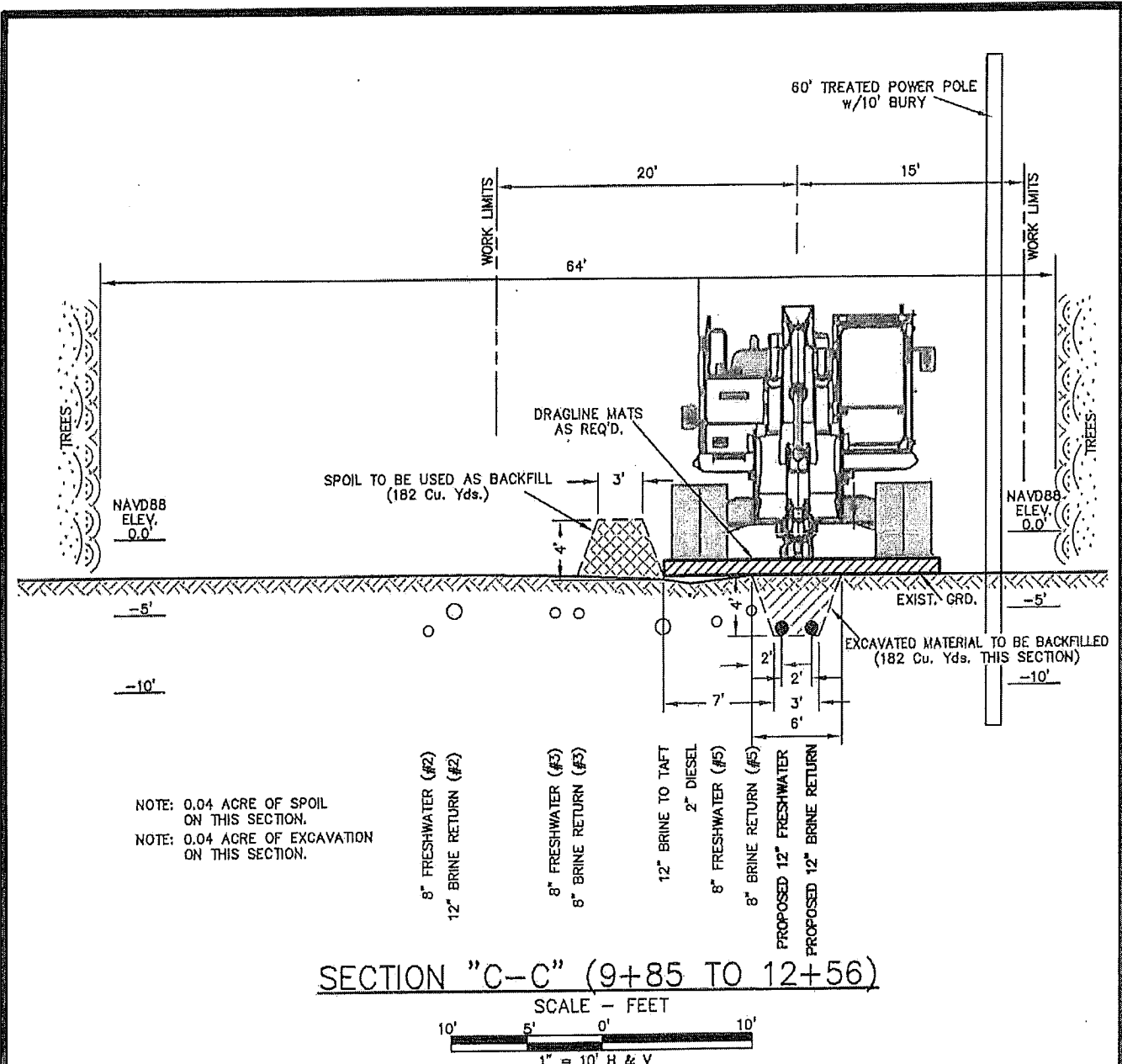


BOARDWALK
 LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
 PROPOSED BRINE WELL PADS, ACCESS ROADS
 AND 12" PIPELINES
TYPICAL CROSS SEC. "B-B"
FOR PROPOSED 12" PIPING
 ASSUMPTION PARISH, LOUISIANA

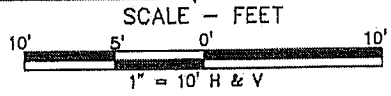
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 22 OF 40



NOTE: 0.04 ACRE OF SPOIL ON THIS SECTION.
 NOTE: 0.04 ACRE OF EXCAVATION ON THIS SECTION.

SECTION "C-C" (9+85 TO 12+56)



NOTE:
 THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.

THIS DRAWING WAS PREPARED SOLELY FOR USE BY BOARDWALK LOUISIANA MIDSTREAM, LLC, IN CONJUNCTION WITH THE SPECIFIC PROJECT DESIGNATED IN THE TITLE BLOCK. USE FOR ANY OTHER PURPOSE, OR USE BY ANY OTHER PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER ENGINEERS & ASSOCIATES.

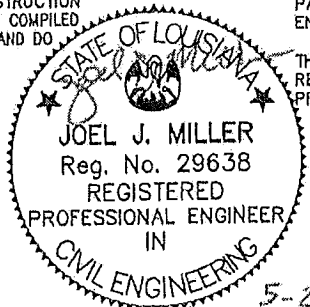
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.

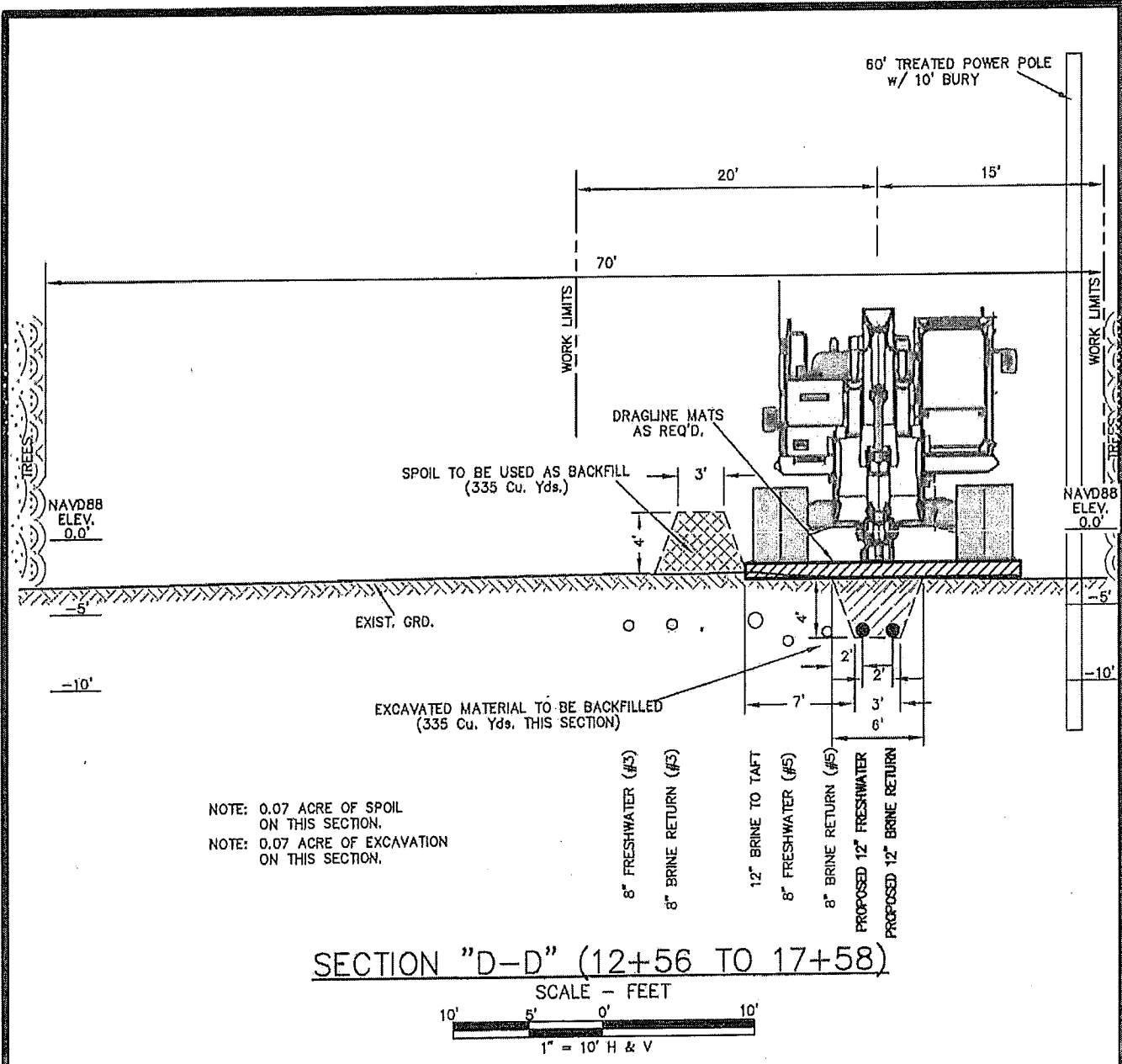


BOARDWALK
 LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
 PROPOSED BRINE WELL PADS, ACCESS ROADS
 AND 12" PIPELINES
TYPICAL CROSS SEC. "C-C"
FOR PROPOSED 12" PIPING
 ASSUMPTION PARISH, LOUISIANA

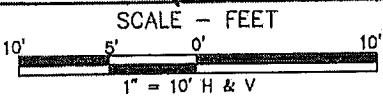
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 23 OF 40



NOTE: 0.07 ACRE OF SPOIL ON THIS SECTION.
 NOTE: 0.07 ACRE OF EXCAVATION ON THIS SECTION.

SECTION "D-D" (12+56 TO 17+58)



NOTE:
 THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.

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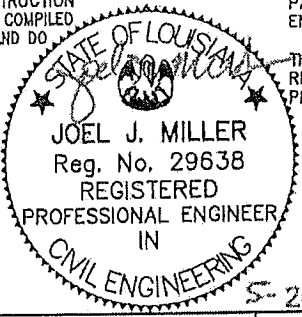
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.

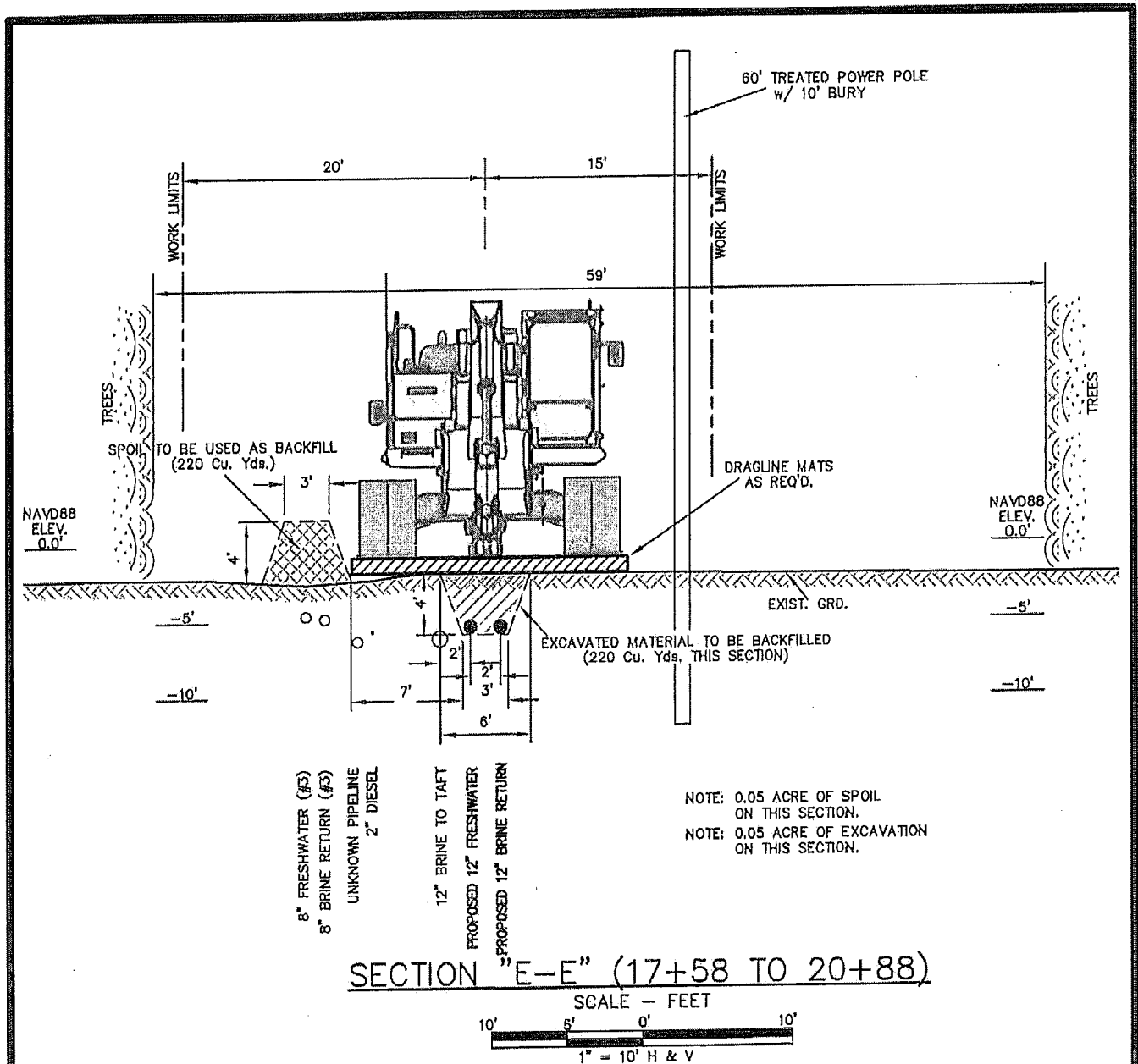


BOARDWALK LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES
TYPICAL CROSS SEC. "D-D"
FOR PROPOSED 12" PIPING
 ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

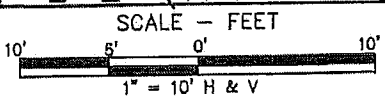
M.E. & A. DWG. NO. 13773, SHEET 24 OF 40



8" FRESHWATER (#5)
 8" BRINE RETURN (#5)
 UNKNOWN PIPELINE
 2" DIESEL
 12" BRINE TO TAFT
 PROPOSED 12" FRESHWATER
 PROPOSED 12" BRINE RETURN

NOTE: 0.05 ACRE OF SPOIL ON THIS SECTION.
 NOTE: 0.05 ACRE OF EXCAVATION ON THIS SECTION.

SECTION "E-E" (17+58 TO 20+88)



NOTE:
 THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.

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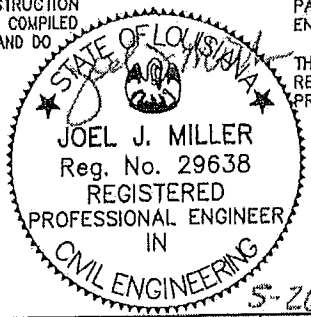
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.

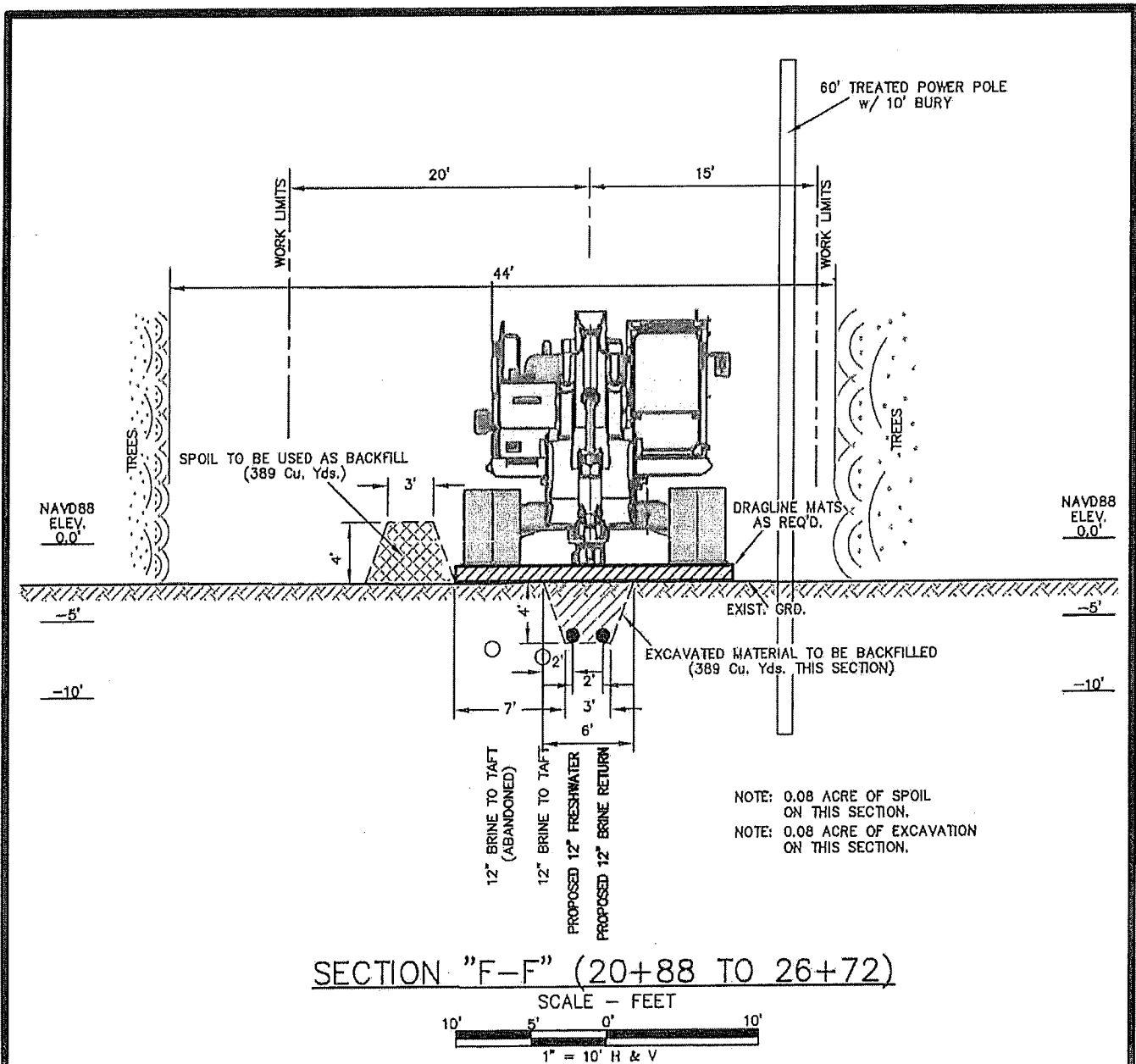


BOARDWALK
 LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
 PROPOSED BRINE WELL PADS, ACCESS ROADS
 AND 12" PIPELINES
TYPICAL CROSS SEC. "E-E"
FOR PROPOSED 12" PIPING
 ASSUMPTION PARISH, LOUISIANA

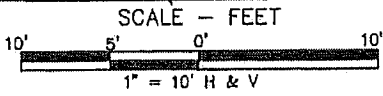
M.E. & A. DWG. NO. 13773, SHEET 25 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWNGS | REK | JJM | JJM |



NOTE: 0.08 ACRE OF SPOIL ON THIS SECTION.
 NOTE: 0.08 ACRE OF EXCAVATION ON THIS SECTION.

SECTION "F-F" (20+88 TO 26+72)



NOTE:
 THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.

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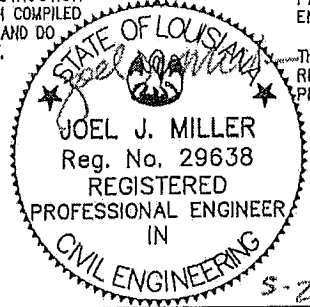
* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

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PREPARED BY:



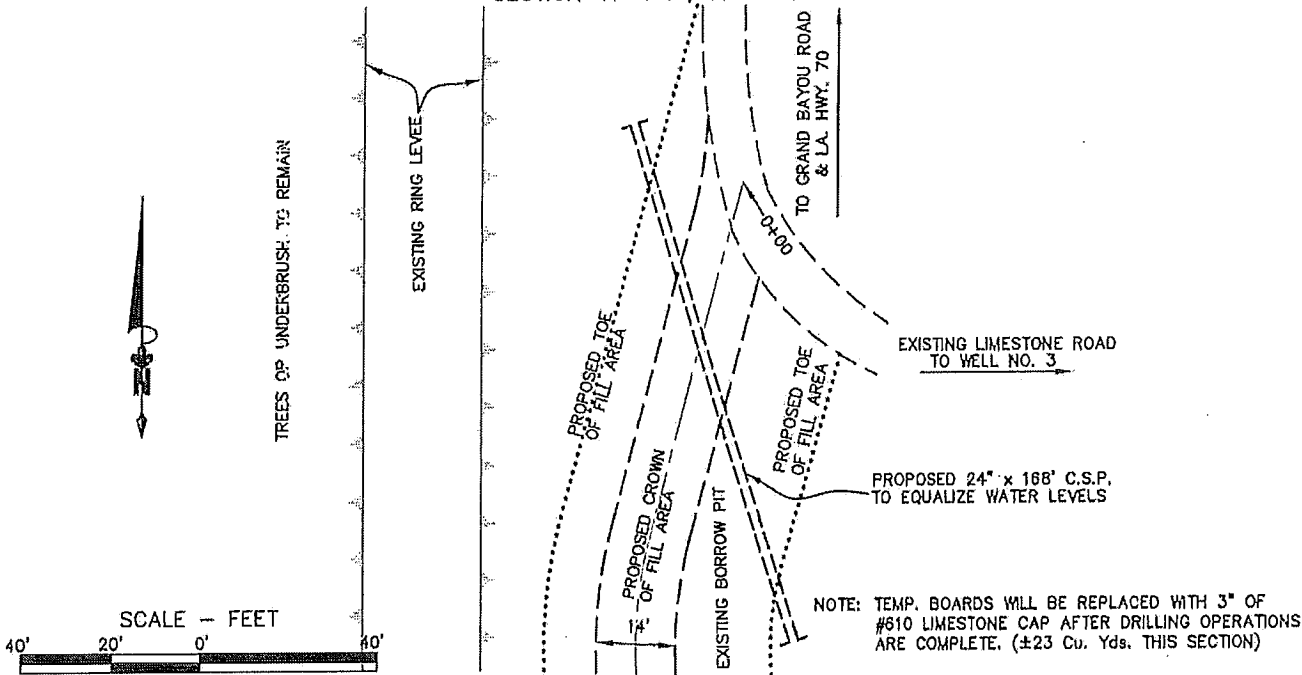
Miller Engineers & Associates, Inc.



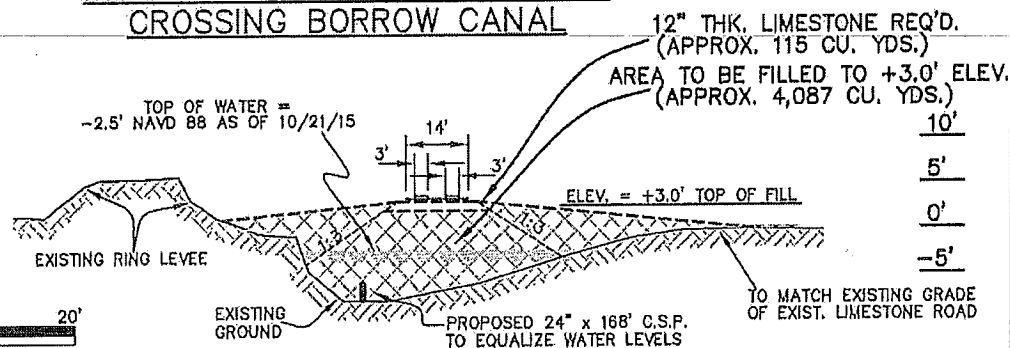
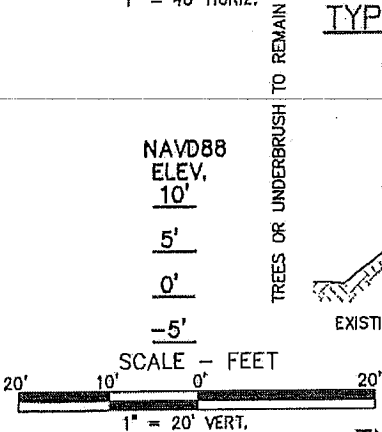
| | |
|---|--|
| | BOARDWALK LOUISIANA MIDSTREAM, LLC |
| PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES | |
| TYPICAL CROSS SEC. "F-F" FOR PROPOSED 12" PIPING | |
| ASSUMPTION PARISH, LOUISIANA | |
| M.E. & A. DWG. NO. 13773, SHEET 26 OF 40 | |

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



TYPICAL SECTION "G-G" (0+00-1+79)
PROPOSED ACCESS ROAD PLAN
CROSSING BORROW CANAL



TYPICAL SECTION "G-G" (0+00-1+79)
PROPOSED ACCESS ROAD PROFILE
CROSSING BORROW CANAL

NOTE:
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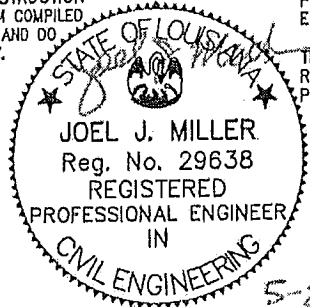
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



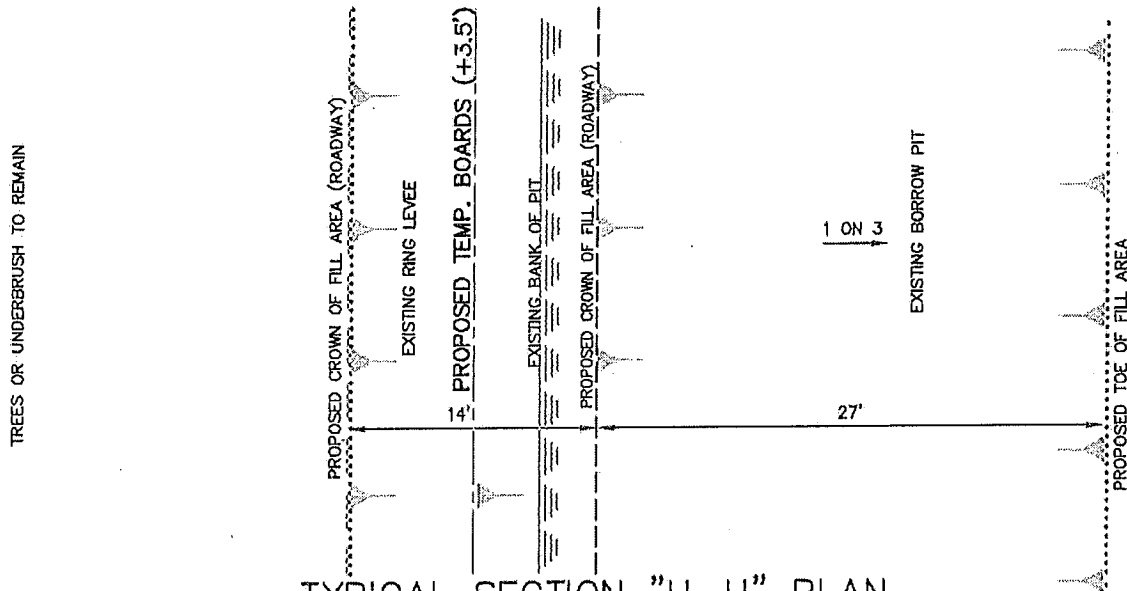
BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
TYPICAL CROSS SEC. "G-G"
FOR PROPOSED ACCESS ROAD
ASSUMPTION PARISH, LOUISIANA

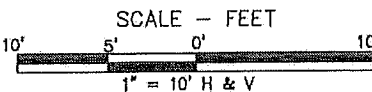
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPO. |
|------|---------|-----------------|-------|-------|-------|
| D | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 27 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



TYPICAL SECTION "H-H" PLAN
(1+79 TO 9+24) & (11+76 TO 12+95)



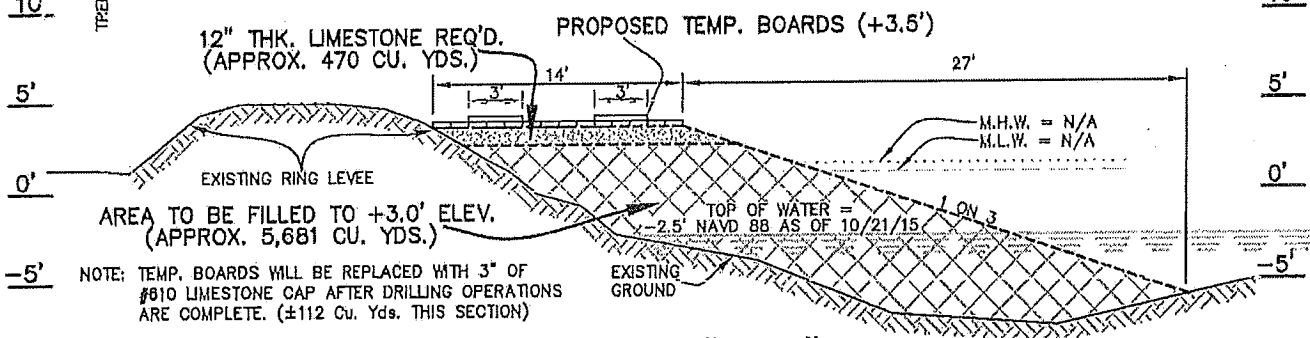
TREES TO REMAIN

±13' LIMITS OF EXISTING TIMBER
(NOT TO BE DISTURBED)

NOTE:
AREA WITHIN THE RING
LEVEE IS UNDER PUMP.

NAVD88
ELEV.
10'

NAVD88
ELEV.
10'



TYPICAL SECTION "H-H" PROFILE

NOTE:
THESE DRAWING WERE PREPARED SOLELY FOR
ACQUISITION OF REGULATORY PERMITS AND DO
NOT REPRESENT ENGINEERING OR CONSTRUCTION
PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED
DATA ACQUIRED FROM ASSESSOR RECORDS AND DO
NOT REPRESENT A BOUNDARY SURVEY.

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MIDSTREAM, LLC, IN CONJUNCTION WITH THE SPECIFIC PROJECT DESIGNATED
IN THE TITLE BLOCK. USE FOR ANY OTHER PURPOSE, OR USE BY ANY OTHER
PARTY SHALL BE AT USER'S SOLE RISK WITHOUT ANY LIABILITY TO MILLER
ENGINEERS & ASSOCIATES.

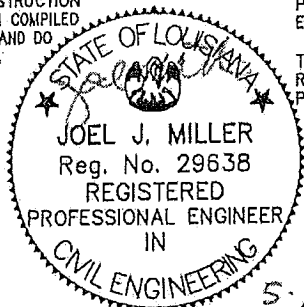
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* SEE SHEET 40 OF 40 FOR GENERAL
NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



5-26-16

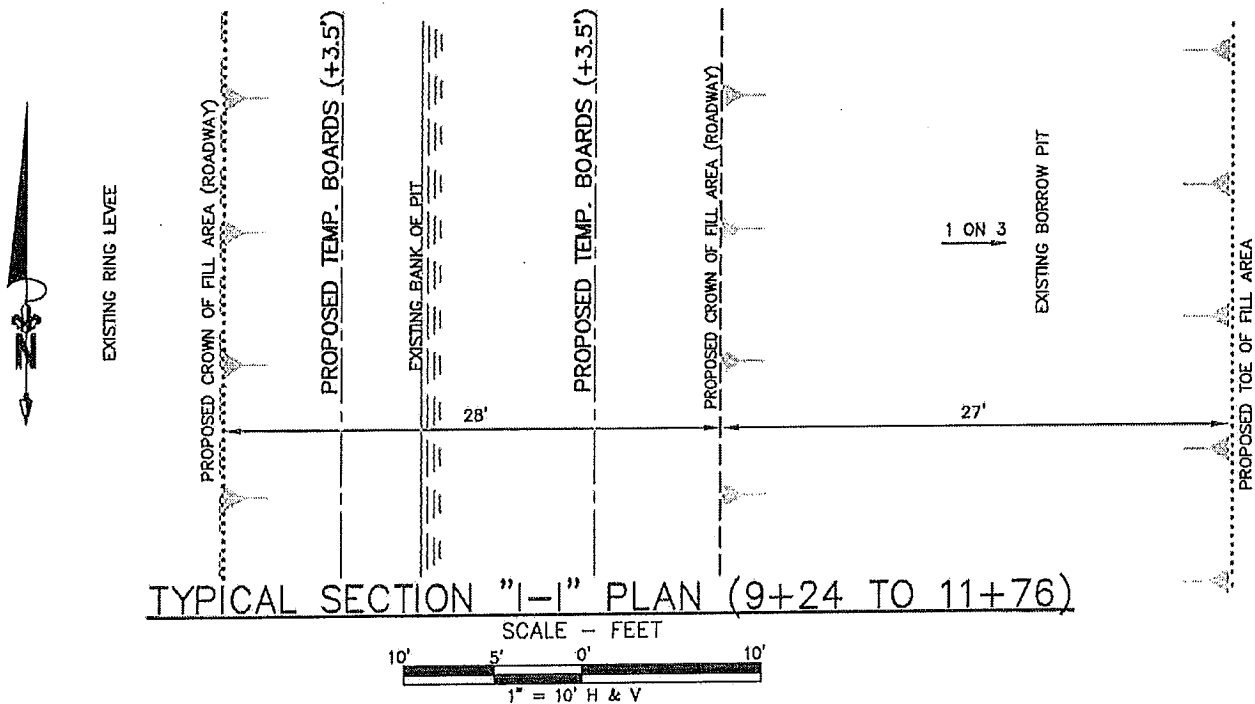
BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
TYPICAL CROSS SEC. "H-H"
FOR PROPOSED ACCESS ROAD
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

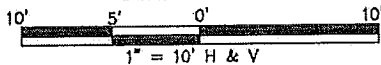
M.E. & A. DWG. NO. 13773, SHEET 28 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



TYPICAL SECTION "1-1" PLAN (9+24 TO 11+76)

SCALE - FEET

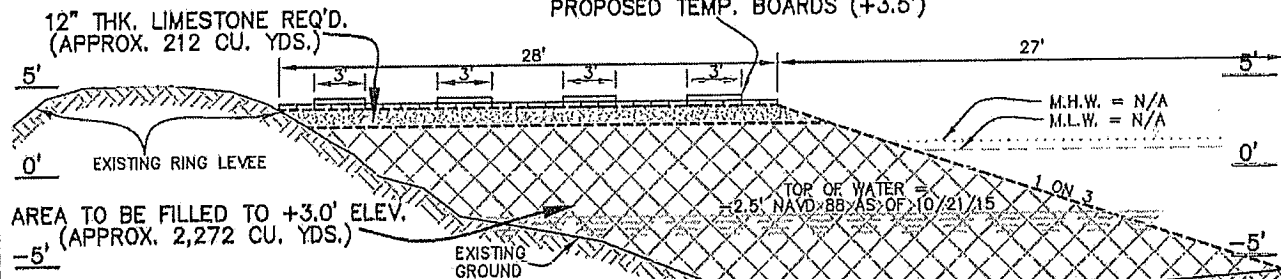


NOTE: TEMP. BOARDS WILL BE REPLACED WITH 3" OF #610 LIMESTONE CAP AFTER DRILLING OPERATIONS ARE COMPLETE. (±65 Cu. Yds. THIS SECTION)

NOTE: AREA WITHIN THE RING LEVEE IS UNDER PUMP.

NAVD88
ELEV.
10'

NAVD88
ELEV.
10'



TYPICAL SECTION "1-1" PROFILE

NOTE: THESE DRAWING WERE PREPARED SOLELY FOR ACQUISITION OF REGULATORY PERMITS AND DO NOT REPRESENT ENGINEERING OR CONSTRUCTION PLANS. PROPERTY LINES SHOWN ARE FROM COMPILED DATA ACQUIRED FROM ASSESSOR RECORDS AND DO NOT REPRESENT A BOUNDARY SURVEY.

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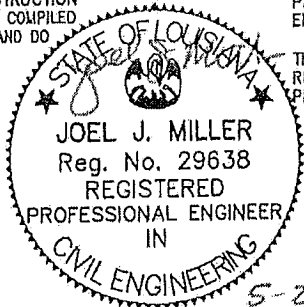
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



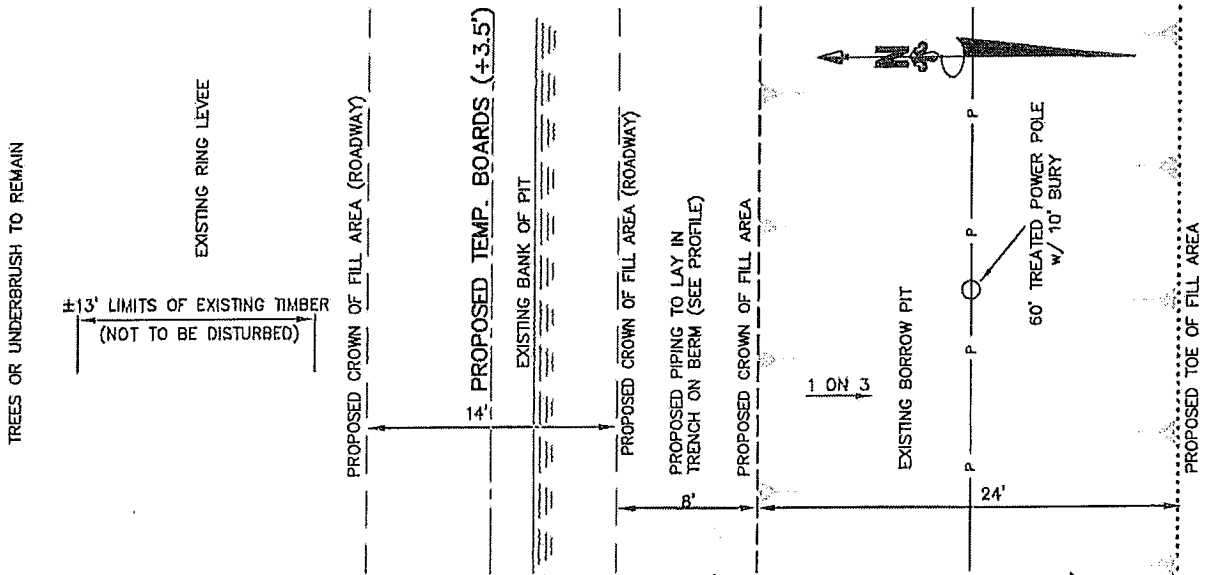
Miller Engineers & Associates, Inc.



| | |
|---|--|
| BOARDWALK LOUISIANA MIDSTREAM, LLC | |
| PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES TYPICAL CROSS SEC. "1-1" FOR PROPOSED BY-PASS ASSUMPTION PARISH, LOUISIANA | |
| M.E. & A. DWG. NO. 13773, SHEET 29 OF 40 | |

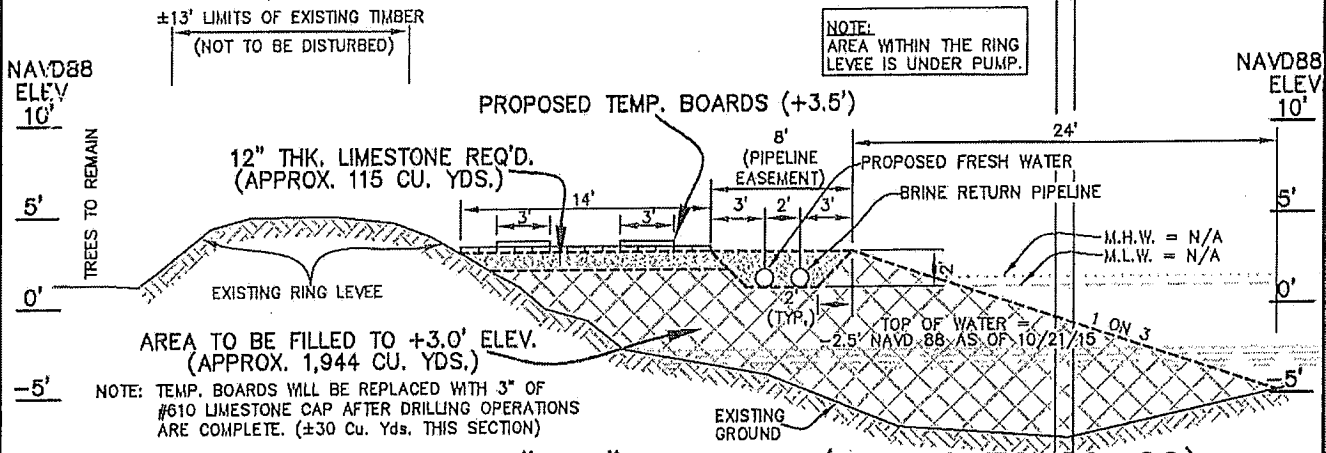
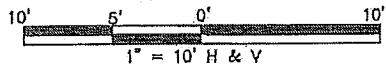
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



TYPICAL SECTION "J-J" PLAN (26+72 TO 29+00)

SCALE - FEET



TYPICAL SECTION "J-J" PROFILE (26+72 TO 29+00)

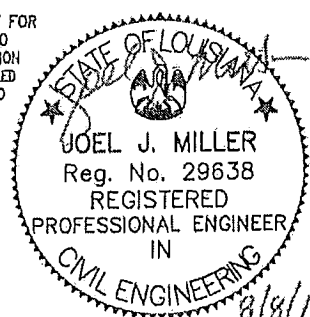
NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, L.L.C.

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

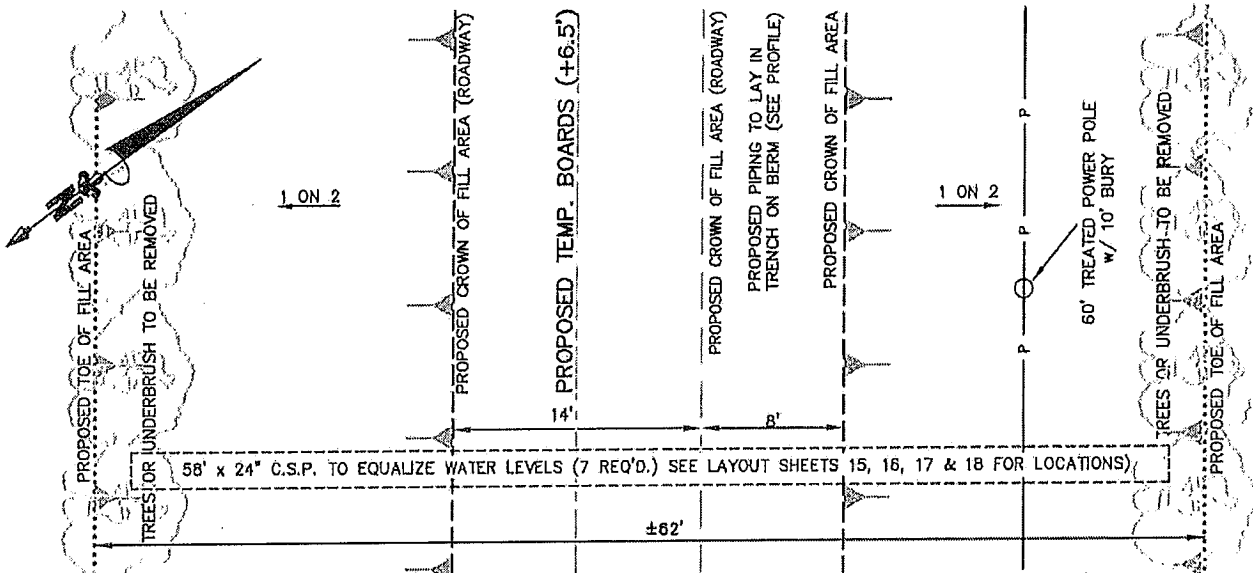
TYPICAL CROSS SEC. "J-J"
FOR PROPOSED ACCESS ROAD

ASSUMPTION PARISH, LOUISIANA

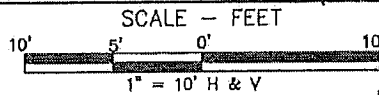
M.E. & A. DWG. NO. 13773, SHEET 30 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|------------------------------------|-------|-------|-------|
| 1 | 8-8-16 | ADDED DIMENSION FOR WIDTH OF SLOPE | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

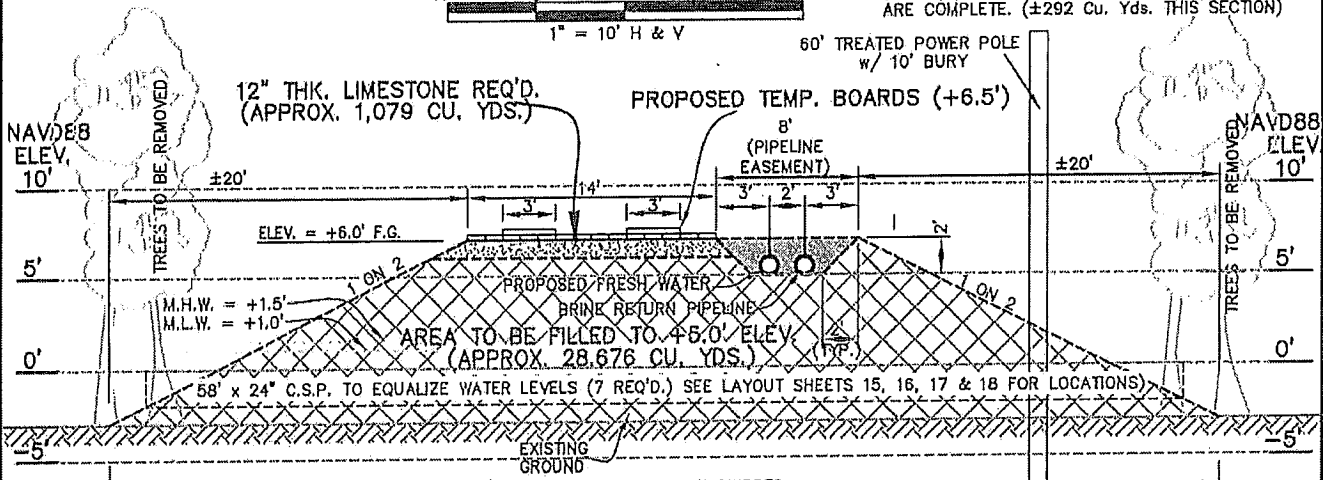
ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



TYPICAL SECTION "K-K" PLAN (29+00 TO 47+80)



NOTE: TEMP. BOARDS WILL BE REPLACED WITH 3" OF #610 LIMESTONE CAP AFTER DRILLING OPERATIONS ARE COMPLETE. (±292 Cu. Yds. THIS SECTION)



TYPICAL SECTION "K-K" PROFILE (29+00 TO 47+80)

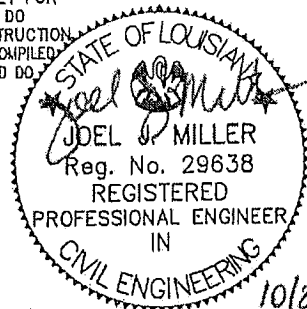
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



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BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

TYPICAL CROSS SEC. "K-K"
FOR PROPOSED ACCESS ROAD
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 31 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|---|-------|-------|-------|
| 1 | 10-27-16 | TO SHOW DIMENSION CORRECTION IN PLAN VIEW | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

PROPERTY LINE



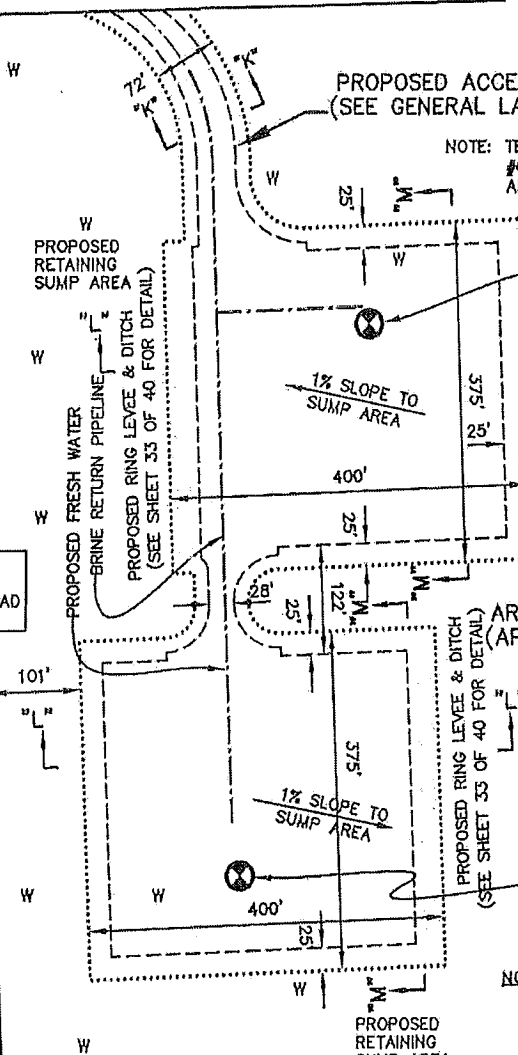
LEGEND:

| | | |
|-------|-------|----------------------|
| W | | WET AREAS |
| NW | | NON-WET AREAS |
| --- | --- | CROWN OF ACCESS ROAD |
| | | TOE OF FILL |

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE



PROPOSED ACCESS ROAD
(SEE GENERAL LAYOUT SHEETS)

NOTE: TEMP. BOARDS WILL BE REPLACED WITH 3" OF #610 LIMESTONE CAP AFTER DRILLING OPERATIONS ARE COMPLETE. (±2,221 Cu. Yds. THIS SECTION)

PROPOSED BRINE WELL #1

X=3346868.00
Y=547212.00
LAT. 30°00'16.43" N
LONG. 91°07'28.94" W

AREA TO BE FILLED TO +6.0'
(APPROX. 89,847 CU. YDS.)
(7.33 ACRES)

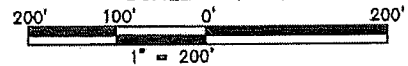
PROPOSED BRINE WELL #2

X=3346727.87
Y=546602.96
LAT. 30°00'10.40" N
LONG. 91°07'30.54" W

NOTE:

1. DITCHES ON PROPOSED PADS SHALL SLOPE TO A RETAINING SUMP AREA AND ANY RUN OFF SHALL BE REMOVED FROM SITE.
2. CLOSED LOOP MUD SYSTEM WILL BE EMPLOYED FOR DRILLING OPERATIONS.
3. FILL MATERIAL SHOWN ABOVE INDICATES WELL PADS & ROAD BETWEEN PADS ONLY.

SCALE - FEET



NOTE: APPROX. (7.33) ACRES OF WETLAND IMPACTED ON THIS SHEET.

NOTE:

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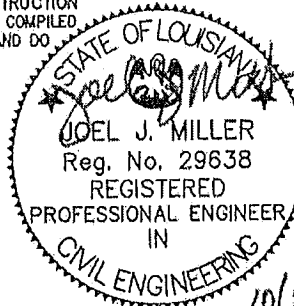
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES. PREPARED BY:



Miller Engineers & Associates, Inc.



BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

PLAN VIEW FOR
PROPOSED WELL PADS

ASSUMPTION PARISH, LOUISIANA

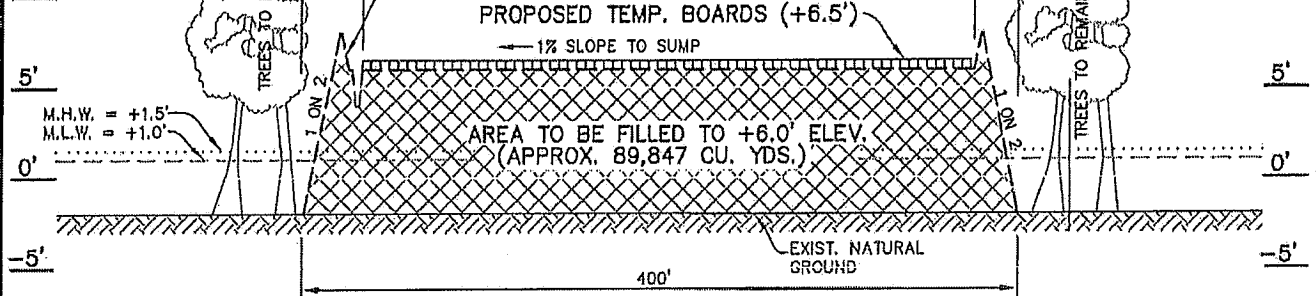
M.E. & A. DWG. NO. 13773, SHEET 32 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 2 | 10-27-16 | TO SHOW CALCULATION CHANGES AND ADDED NOTE | REK | JJM | JJM |
| 1 | 10-21-16 | TO SHOW WELL PAD DIMENSION CHANGES | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

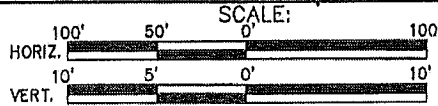
NAVD88
ELEV.
10'

NAVD88
ELEV.
10'



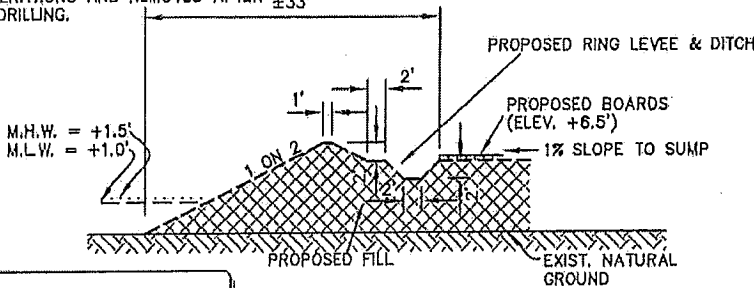
NOTE:
APPROX. 2,221 CU. YDS OF #610 LIMESTONE
REQ'D. FOR PADS AFTER DRILLING
OPERATIONS ARE COMPLETE.

TYPICAL SECTION "L-L"
PROPOSED WELL PADS (LOOKING NORTH)



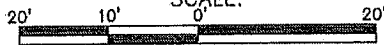
NOTES:

1. DITCHES ON PROPOSED PAD SHALL SLOPE TO A RETAINING SUMP AREA AND ANY RUN OFF SHALL BE REMOVED FROM SITE.
2. SUMP, DITCHES & RING LEVEE ARE TEMPORARY FOR DRILLING OPERATIONS AND REMOVED AFTER ±33' COMPLETION OF DRILLING.



NOTE:
THE 96 RIG SUPPORT PILES ARE NOT SHOWN ON PROFILE VIEWS DUE TO EACH PAD HAS A DIFFERENT RIG ORIENTATION.

DETAIL



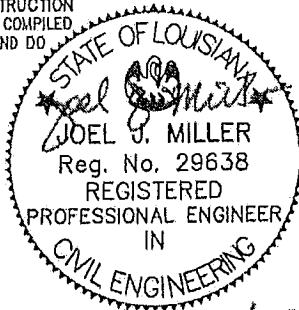
NOTE:

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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.
PREPARED BY:



10/25/16

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

TYPICAL SEC. "L-L"
PROPOSED WELL PADS

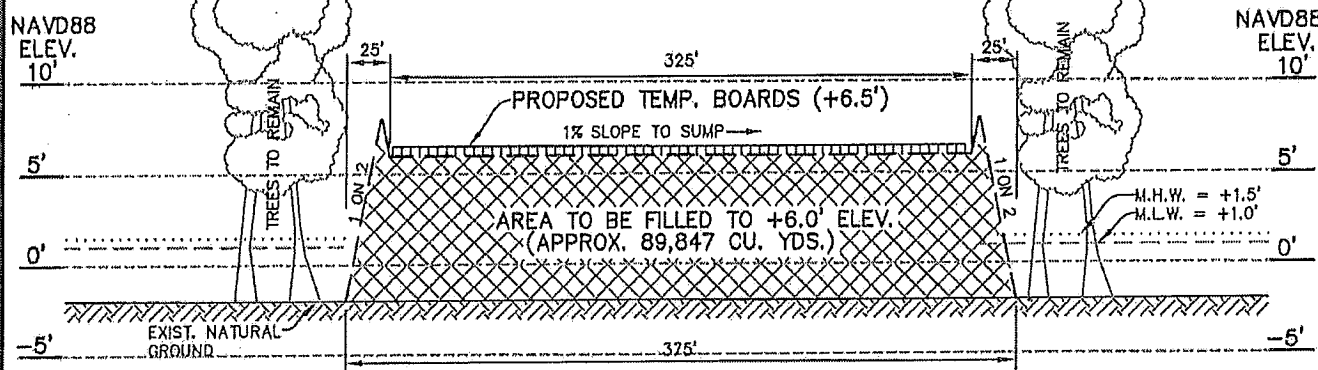
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 33 OF 40

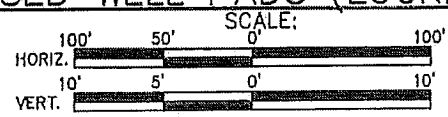
Miller Engineers & Associates, Inc.

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|------------------------------------|-------|-------|-------|
| 1 | 10-21-16 | TO SHOW WELL PAD DIMENSION CHANGES | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWNGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



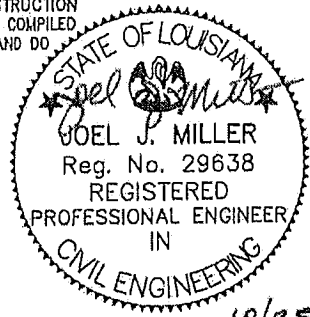
TYPICAL SECTION "M-M"
PROPOSED WELL PADS (LOOKING WEST)



NOTE:
APPROX. 2,221 CU. YDS OF #610 LIMESTONE
REQ'D. FOR PADS AFTER DRILLING
OPERATIONS ARE COMPLETE.

NOTE:
THE 96 RIG SUPPORT PILES ARE NOT SHOWN
ON PROFILE VIEWS DUE TO EACH PAD HAS
A DIFFERENT RIG ORIENTATION.

NOTE:
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* SEE SHEET 40 OF 40 FOR GENERAL
NOTES AND REFERENCES.
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10/25/16

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES.

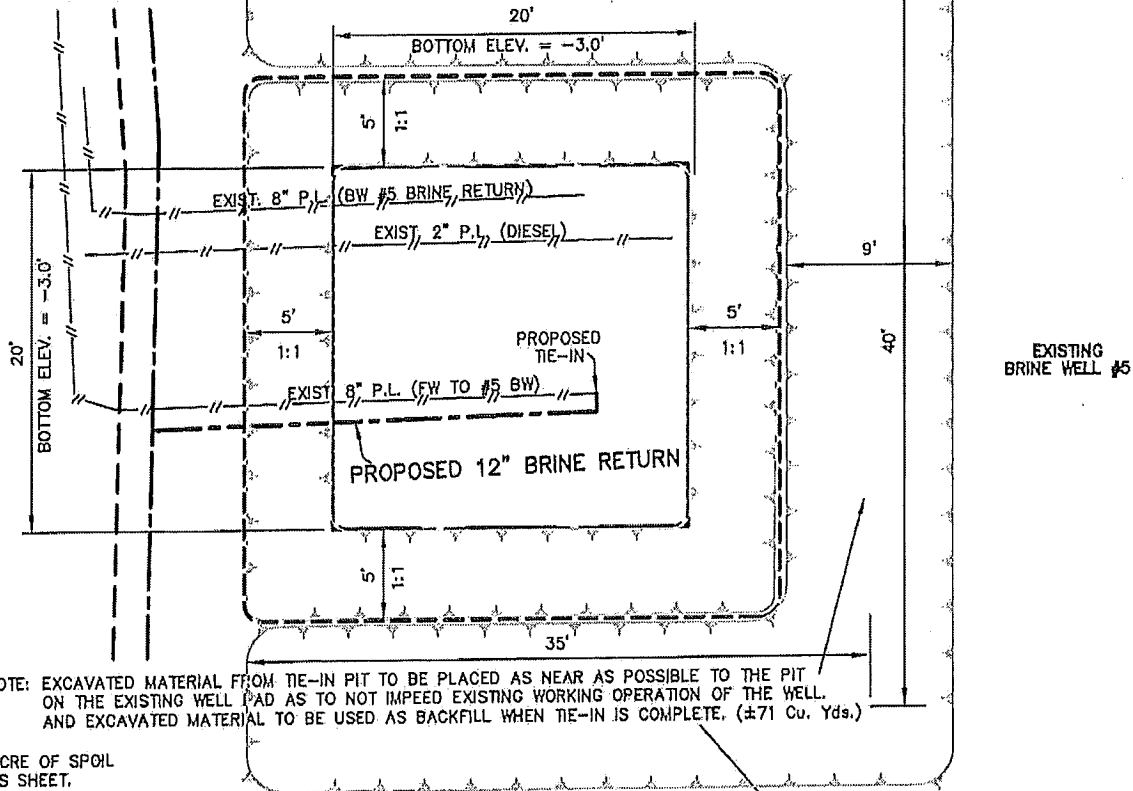
TYPICAL SEC. "M-M"
PROPOSED WELL PADS
ASSUMPTION PARISH, LOUISIANA

M.E. & A. DWG. NO. 13773, SHEET 34 OF 40

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|------------------------------------|-------|-------|-------|
| 1 | 10-21-18 | TO SHOW WELL PAD DIMENSION CHANGES | REK | JJM | JJM |
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

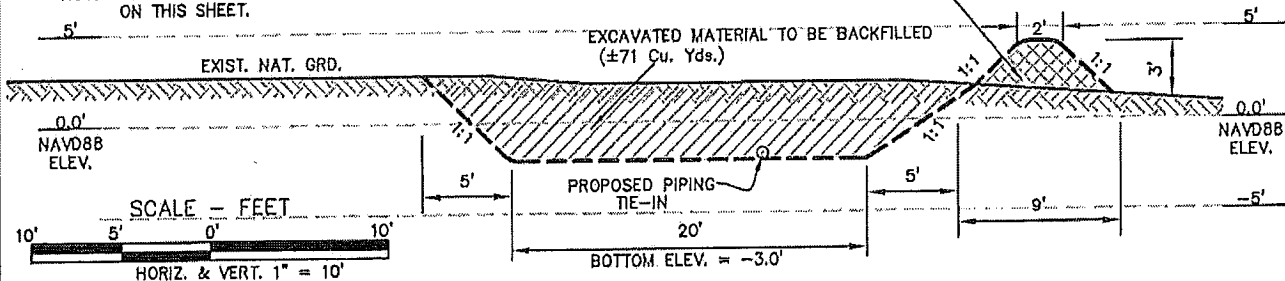
NOTE: EXCAVATED MATERIAL FROM TIE-IN PIT TO BE PLACED AS NEAR AS POSSIBLE TO THE PIT ON THE EXISTING WELL PAD AS TO NOT IMPEED EXISTING WORKING OPERATION OF THE WELL AND EXCAVATED MATERIAL TO BE USED AS BACKFILL WHEN TIE-IN IS COMPLETE. (±71 Cu. Yds.)



NOTE: EXCAVATED MATERIAL FROM TIE-IN PIT TO BE PLACED AS NEAR AS POSSIBLE TO THE PIT ON THE EXISTING WELL PAD AS TO NOT IMPEED EXISTING WORKING OPERATION OF THE WELL AND EXCAVATED MATERIAL TO BE USED AS BACKFILL WHEN TIE-IN IS COMPLETE. (±71 Cu. Yds.)

NOTE: 0.02 ACRE OF SPOIL ON THIS SHEET.

NOTE: 0.02 ACRE OF EXCAVATION ON THIS SHEET.



NOTE:
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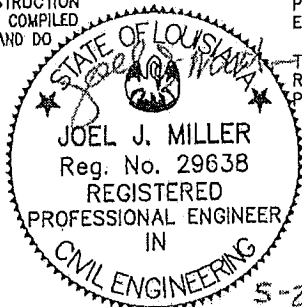
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

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5-26-16

BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES
**PLAN & PROFILE FOR
TIE-IN PIT @ EXIST. WELL 5**
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 36 OF 40

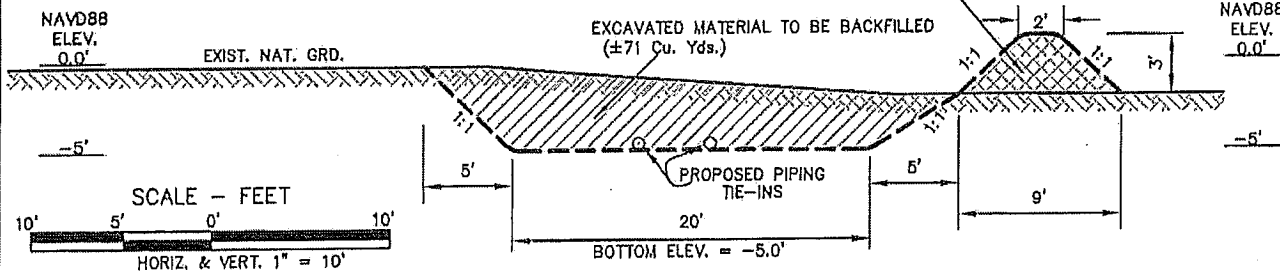
ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

NOTE: EXCAVATED MATERIAL FROM TIE-IN PIT TO BE PLACED AS NEAR AS POSSIBLE TO THE PIT ON THE EXISTING WELL PAD AS TO NOT IMPEED EXISTING WORKING OPERATION OF THE WELL AND EXCAVATED MATERIAL TO BE USED AS BACKFILL WHEN TIE-IN IS COMPLETE. (±71 Cu. Yds.)

NOTE: 0.02 ACRE OF SPOIL ON THIS SHEET.
NOTE: 0.02 ACRE OF EXCAVATION ON THIS SHEET.

EXISTING BRINE WELL #3

NOTE: EXCAVATED MATERIAL FROM TIE-IN PIT TO BE PLACED AS NEAR AS POSSIBLE TO THE PIT ON THE EXISTING WELL PAD AS TO NOT IMPEED EXISTING WORKING OPERATION OF THE WELL AND EXCAVATED MATERIAL TO BE USED AS BACKFILL WHEN TIE-IN IS COMPLETE. (±71 Cu. Yds.)



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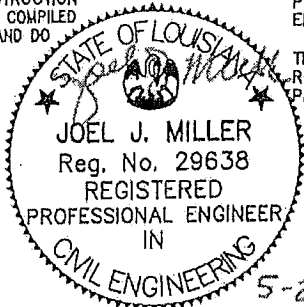
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

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BOARDWALK
LOUISIANA MIDSTREAM, LLC

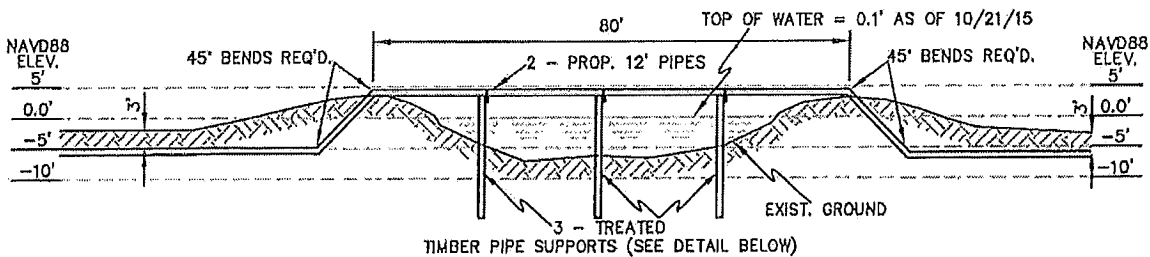
PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

PLAN & PROFILE FOR
TIE-IN PIT @ EXIST. WELL 3
ASSUMPTION PARISH, LOUISIANA

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

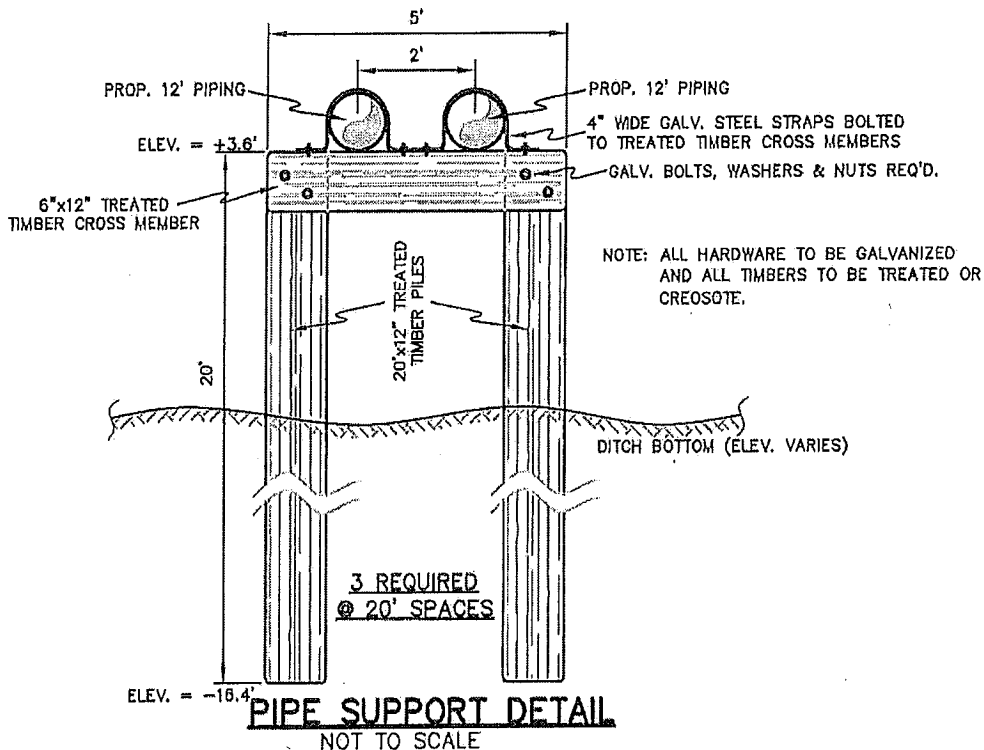
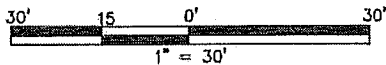
M.E. & A. DWG. NO. 13773, SHEET 37 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E



FRESHWATER DITCH PROFILE

SCALE - FEET



PIPE SUPPORT DETAIL
NOT TO SCALE

NOTE:
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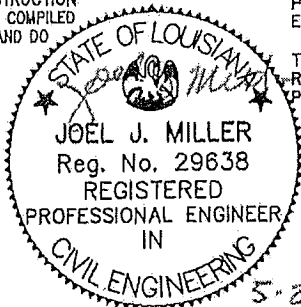
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* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



BOARDWALK
LOUISIANA MIDSTREAM, LLC

PERMIT APPLICATION FOR
PROPOSED BRINE WELL PADS, ACCESS ROADS
AND 12" PIPELINES

**FRESHWATER DITCH
PROFILE & DETAIL**
ASSUMPTION PARISH, LOUISIANA

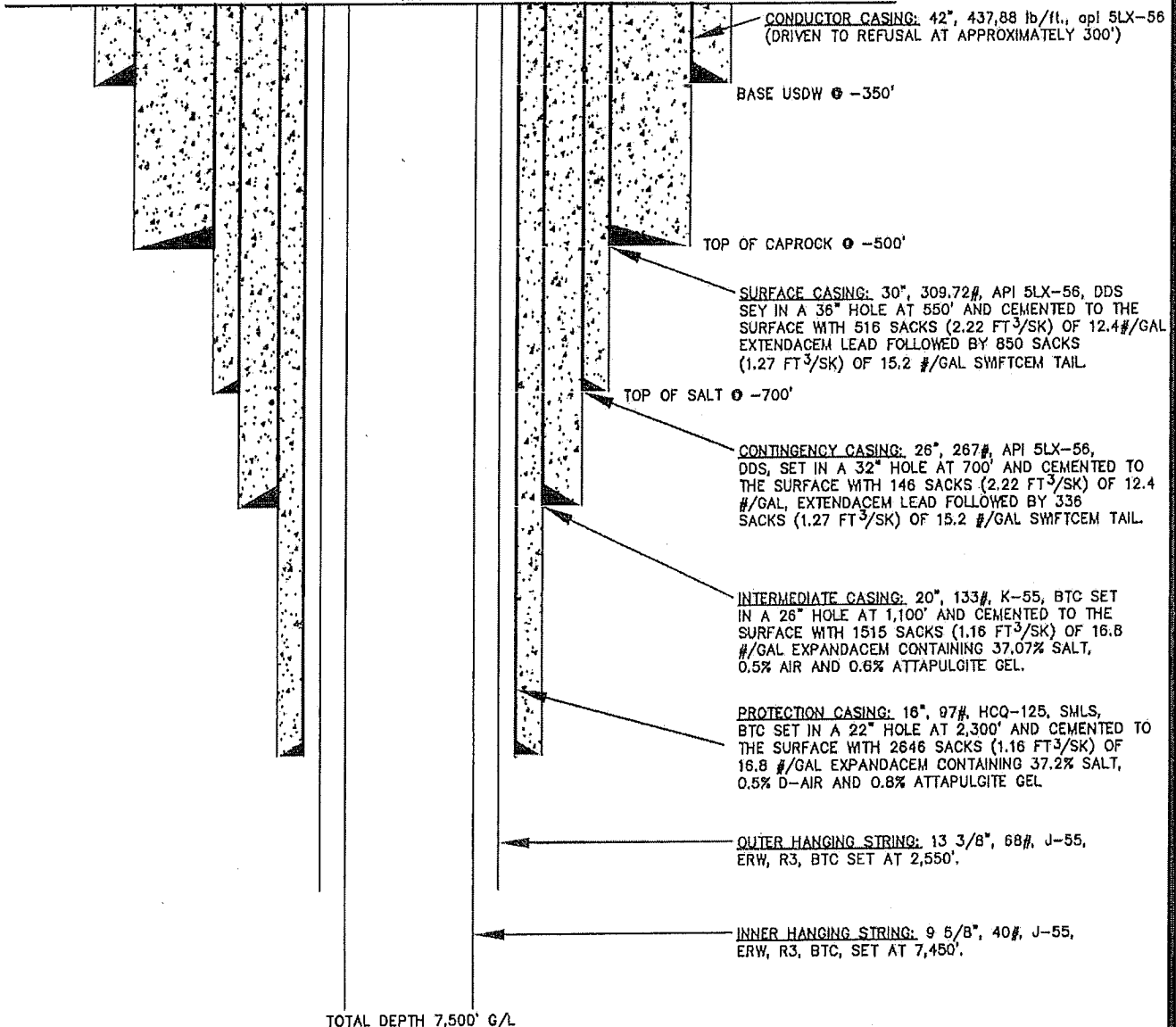
| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-10 | ISSUED DRAWINGS | REK | JJM | JJM |

M.E. & A. DWG. NO. 13773, SHEET 38 OF 40

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

NOTE: ALL DEPTHS REFERENCED TO GROUND LEVEL

SURFACE



CONDUCTOR CASING: 42", 437.88 lb/ft., api 5LX-56 (DRIVEN TO REFUSAL AT APPROXIMATELY 300')

BASE USDW @ -350'

TOP OF CAPROCK @ -500'

SURFACE CASING: 30", 309.72#, API 5LX-56, DDS SET IN A 36" HOLE AT 550' AND CEMENTED TO THE SURFACE WITH 516 SACKS (2.22 FT³/SK) OF 12.4#/GAL EXTENDACEM LEAD FOLLOWED BY 850 SACKS (1.27 FT³/SK) OF 15.2 #/GAL SWFTCEM TAIL

TOP OF SALT @ -700'

CONTINGENCY CASING: 26", 267#, API 5LX-56, DDS, SET IN A 32" HOLE AT 700' AND CEMENTED TO THE SURFACE WITH 146 SACKS (2.22 FT³/SK) OF 12.4 #/GAL, EXTENDACEM LEAD FOLLOWED BY 336 SACKS (1.27 FT³/SK) OF 15.2 #/GAL SWFTCEM TAIL

INTERMEDIATE CASING: 20", 133#, K-55, BTC SET IN A 26" HOLE AT 1,100' AND CEMENTED TO THE SURFACE WITH 1515 SACKS (1.16 FT³/SK) OF 16.8 #/GAL EXPANDACEM CONTAINING 37.07% SALT, 0.5% AIR AND 0.6% ATTAPULGITE GEL.

PROTECTION CASING: 16", 97#, HCQ-125, SMLS, BTC SET IN A 22" HOLE AT 2,300' AND CEMENTED TO THE SURFACE WITH 2646 SACKS (1.16 FT³/SK) OF 16.8 #/GAL EXPANDACEM CONTAINING 37.2% SALT, 0.5% D-AIR AND 0.8% ATTAPULGITE GEL

OUTER HANGING STRING: 13 3/8", 68#, J-55, ERW, R3, BTC SET AT 2,550'.

INNER HANGING STRING: 9 5/8", 40#, J-55, ERW, R3, BTC, SET AT 7,450'.

TOTAL DEPTH 7,500' G/L

NOTE:

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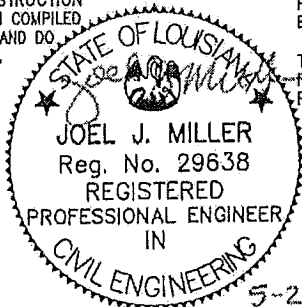
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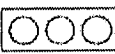
* SEE SHEET 40 OF 40 FOR GENERAL NOTES AND REFERENCES.

PREPARED BY:



Miller Engineers & Associates, Inc.



| | |
|---|--|
|  BOARDWALK LOUISIANA MIDSTREAM, LLC | |
| PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES | |
| BELOW GROUND DETAIL FOR BRINE WELLS B1 & B2 ASSUMPTION PARISH, LOUISIANA | |
| M.E. & A. DWG. NO. 13773, SHEET 39 OF 40 | |

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|---------|-----------------|-------|-------|-------|
| 0 | 5-24-16 | ISSUED DRAWINGS | REK | JJM | JJM |

ASSUMPTION PARISH, LOUISIANA
SECTION 41 & 46, T12S-R13E

NOTES:

NORTH ARROW AND GRID COORDINATES REFER TO THE LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NORTH AMERICAN DATUM OF 1983 & NAD 83). BASED ON RTK GPS OBSERVATIONS.

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 88). BASED ON RTK GPS OBSERVATIONS.

DISTANCES IN FEET BY HORIZONTAL MEASUREMENT.

PARISH, SECTION, TOWNSHIP, AND RANGE SCALED FROM REFERENCED U.S.C & G.S. QUADRANGLES, PIERRE PART, BELLE ROSE, NAPOLEONVILLE & LONE STAR, LA. 1984.

PROPOSED EXCAVATION LOCATIONS AND DIMENSIONS ARE APPROXIMATE BASED ON DATA PROVIDED BY ENERGY

SURVEY PARTY CHIEF: KEVIN PICHOFF

DATE OF SURVEY: OCTOBER 21, 2015 & NOVEMBER 5, 2015

GENERAL PERMITTING NOTES:

ONE 24 IN. CULVERT SHALL BE INSTALLED APPROXIMATELY EVERY 250 FT. WHEN CONSTRUCTING THE PROPOSED ACCESS ROAD THROUGH WETLANDS. PRIORITY FOR THE PLACEMENT OF THOSE CULVERTS SHOULD BE GIVEN TO NATURAL LOW AREAS AND DRAINAGES. THOSE CULVERTS SHALL BE MAINTAINED TO ENSURE THAT THE EXISTING FLOW OF SURFACE WATER IS UNCOMPROMISED.

SUMMARY OF CONSTRUCTION EQUIPMENT

| DESCRIPTION | QUANTITY |
|---|----------|
| AMPHIBIOUS TRACK EXCAVATOR (60' REACH) (FOR CHIPPING) | 1 |
| NON-AMPHIBIOUS TRACK EXCAVATOR (35' REACH) (FOR PIPELINE WORK) | 2 |
| AIRBOAT (SUPPORT FOR CHIPPING) | 1 |
| TANDEM & TRACTOR TRAILER DUMP TRUCKS (ACCESS RD & PAD FILL) | 6 |
| BULL DOZER/GRADER (ACCESS RD & PAD CONSTRUCTION) | 2 |
| LAND BASED DRILLING RIG | 1 |
| 1/2 TON & 3/4 TON CREW TRUCKS (CONSTRUCTION & DRILLING SUPPORT) | 3 |

SUMMARY OF ESTIMATED QUANTITIES

TOTAL SAND VOLUME = 132,507 CU. YDS. (FILL)
 TOTAL #610 LIMESTONE VOLUME = 4,734 CU. YDS. (FILL)
 TOTAL NATIVE MATERIAL EXCAVATED & BACKFILLED = 1,681 CU. YDS.
 EXCAVATIONS FROM POWER/COMMUNICATION POLES (TO BE SPREAD ON SITE) = 44.1 CU. YDS.
 (TOTAL NUMBER OF POLES REQ'D. 38)
 TEMPORARY EXCAVATION AREAS = 0.37 AC.
 TEMPORARY SPOIL DEPOSIT AREAS = 0.37 AC.
 PERMANENT WETLAND IMPACTS FROM FILL = 10.98 AC.
 PERMANENT FORESTED WETLAND IMPACTS = 9.10 AC.
 TEMPORARY HERBACEOUS WETLAND IMPACTS = 1.06 AC.
 PERMANENT HERBACEOUS WETLAND IMPACTS = 1.88 AC.
 TOTAL WETLANDS (PERM. & TEMP) IMPACTED = 12.04 AC.
 CONCRETE SLEEPERS (1' x 1' x 2') = 1.8 CU. YDS. (24 REQ'D.)
 TOTAL OF RIG SUPPORT PILES REQ'D. = 96
 24" CORRUGATED STEEL PIPE (GALV.) CROSS DRAINS = 574 LIN. FT. (7 REQ'D)

NOTE:

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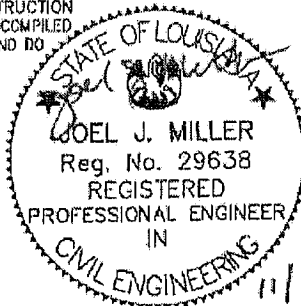
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PREPARED BY:



Miller Engineers & Associates, Inc.



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| BOARDWALK LOUISIANA MIDSTREAM, LLC |
| PERMIT APPLICATION FOR PROPOSED BRINE WELL PADS, ACCESS ROADS AND 12" PIPELINES GENERAL NOTES AND REFERENCES ASSUMPTION PARISH, LOUISIANA |
| M.E. & A. DWG. NO. 13773, SHEET 40 OF 40 |

| REV. | DATE | DESCRIPTION | DRAWN | CHKD. | APPD. |
|------|----------|--|-------|-------|-------|
| 4 | 11-14-16 | ADD NOTE & EDIT "SUMMARY OF QUANTITIES" | REK | JJM | JJM |
| 3 | 10-27-16 | TO CHANGE TOTAL CALCULATION QUANTITIES | REK | JJM | JJM |
| 2 | 10-21-16 | TO CHANGE QUANTITIES DUE TO WELL PAD CHANGES | REK | JJM | JJM |