



Missouri Department of Natural Resources

Ali Trunzo

From: Carey, Daniel <daniel.carey@dnr.mo.gov>
Sent: Thursday, March 30, 2017 10:32 AM
To: Ali Trunzo
Cc: Lori Ferry
Subject: RE: Spire STL Pipeline - Coldwater Creek

Ali,

Thank you for coordinating changed pipeline plans with USACE FUSRAP and DNR.

Missouri DNR has no concerns regarding USACE's assessment of the proposed change.

Dan

From: Ali Trunzo [mailto:A.Trunzo@gaiconsultants.com]
Sent: Thursday, March 30, 2017 8:48 AM
To: Carey, Daniel
Cc: Lori Ferry
Subject: Spire STL Pipeline - Coldwater Creek

Dan,

GAI, on behalf of Spire STL Pipeline LLC (Spire), previously coordinated with you regarding the crossing of Coldwater Creek as part of the proposed Spire STL Pipeline Project, located in St. Charles and St. Louis Counties, Missouri. Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension").

The North County Extension proposes to cross Coldwater Creek via horizontal directional drill, as shown on the attached figure. The crossing location is approximately 0.3 miles downstream of the previously evaluated crossing location.

We coordinated with Jon Rankins, the USACE FUSRAP contact, regarding this proposed change, and he confirmed that there are no concerns with contaminants of concern and no utility support is required. A copy of this correspondence is attached.

Does Missouri DNR have any concerns with this assessment?

Thank you,

Ali

Alessandra M. Trunzo
Project Environmental Specialist

385 E. Waterfront Drive, Homestead, PA 15120-5005

Direct 412.399.5096 **Office** 412.476.2000 **Email** a.trunzo@gaiconsultants.com

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Ali Trunzo

From: Ali Trunzo
Sent: Thursday, March 30, 2017 9:48 AM
To: Ali Trunzo
Subject: FW: Spire STL Pipeline - Coldwater Creek
Attachments: 3-29-17 Email from J Rankins USACE.PDF; Hwy_67_Coldwater_Creek_HDD_Map_2017_03_23.pdf

From: Ali Trunzo
Sent: Thursday, March 30, 2017 9:48 AM
To: 'Carey, Daniel' <daniel.carey@dnr.mo.gov>
Cc: Lori Ferry <L.Ferry@gaiconsultants.com>
Subject: Spire STL Pipeline - Coldwater Creek

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Ali

Alessandra M. Trunzo
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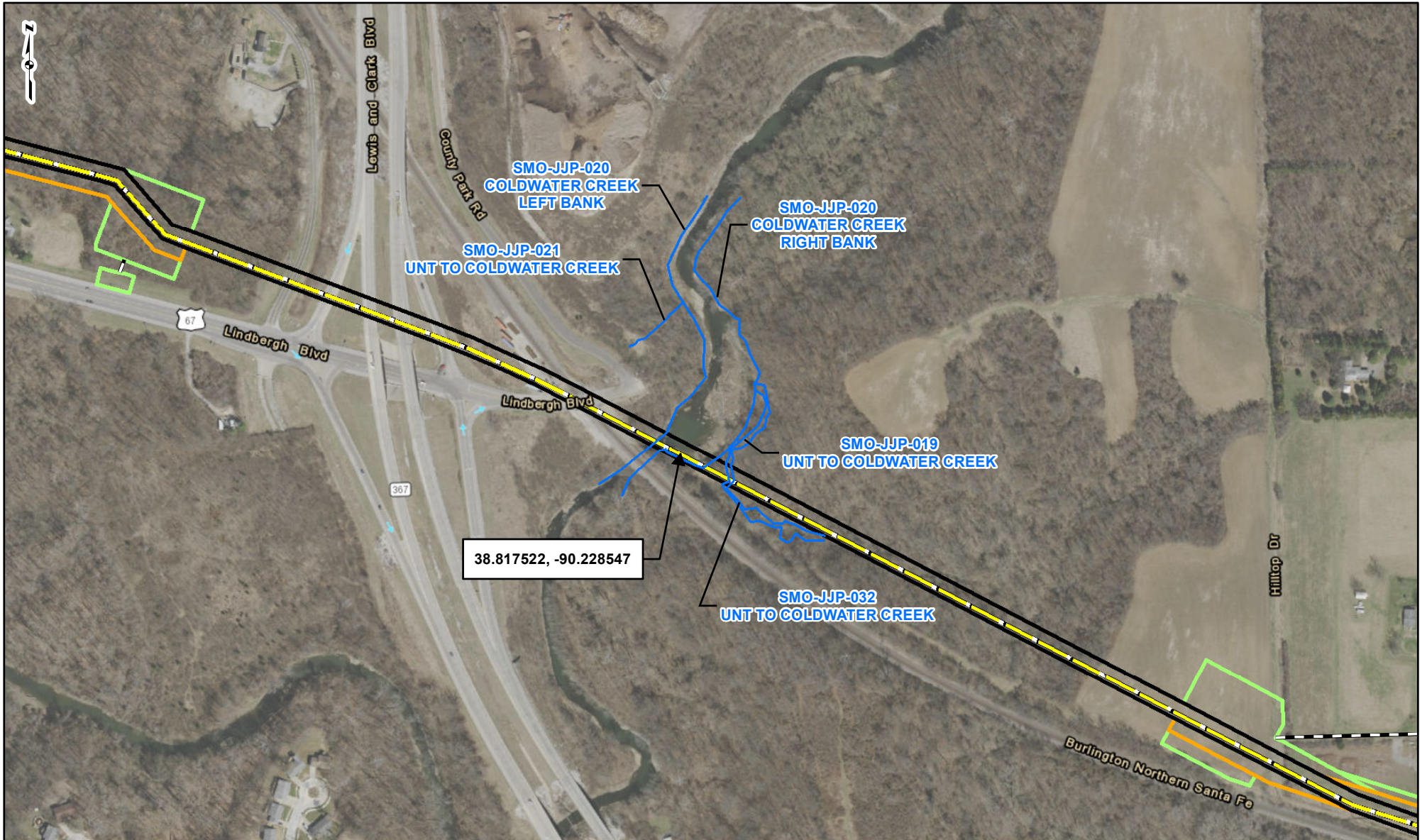
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REFERENCE:
 ESRI WORLD IMAGERY AND
 TRANSPORTATION, NAIP, USDA
 FSA, 2014, ACCESSED 03/2017.

DRAFT

LEGEND

- NORTH COUNTY EXTENSION
- ACCESS ROAD
- DELINEATED STREAM
- PERMANENT LIMIT OF DISTURBANCE
- TEMPORARY LIMIT OF DISTURBANCE
- ADDITIONAL TEMPORARY WORKSPACE

0 200 400 800 Feet

**HIGHWAY 67/
 COLDWATER CREEK HDD**

**SPIRE STL
 PIPELINE
 PROJECT**

DRAWN BY: PMH DATE: 3/23/2017
 CHECKED: APPROVED:

Ali Trunzo

From: Rankins, Jonathan E CIV USARMY CEMVS (US) <Jonathan.E.Rankins@usace.army.mil>
Sent: Wednesday, March 29, 2017 6:39 PM
To: Ali Trunzo
Cc: Lori Ferry; Prebianca, Jacob A CIV CEMVS CEMVD (US)
Subject: RE: Spire STL Pipeline - Coldwater Creek

No utility support required

-----Original Message-----

From: Ali Trunzo [mailto:A.Trunzo@gaiconsultants.com]
Sent: Wednesday, March 29, 2017 4:42 PM
To: Rankins, Jonathan E CIV USARMY CEMVS (US) <Jonathan.E.Rankins@usace.army.mil>
Cc: Lori Ferry <L.Ferry@gaiconsultants.com>; Prebianca, Jacob A CIV CEMVS CEMVD (US) <Jacob.A.Prebianca@usace.army.mil>
Subject: [Non-DoD Source] RE: Spire STL Pipeline - Coldwater Creek

Jon,

Thank you for evaluating this area. To clarify, would utility support still not be required for this crossing?

Ali

-----Original Message-----

From: Rankins, Jonathan E CIV USARMY CEMVS (US) [mailto:Jonathan.E.Rankins@usace.army.mil]
Sent: Wednesday, March 29, 2017 5:06 PM
To: Ali Trunzo <A.Trunzo@gaiconsultants.com>; Prebianca, Jacob A CIV CEMVS CEMVD (US) <Jacob.A.Prebianca@usace.army.mil>
Cc: Lori Ferry <L.Ferry@gaiconsultants.com>
Subject: RE: Spire STL Pipeline - Coldwater Creek

No concerns regarding FUSRAP COC's at this new location. We have historic sample data in this area that indicates background levels of COC's.

JR

-----Original Message-----

From: Ali Trunzo [mailto:A.Trunzo@gaiconsultants.com]
Sent: Wednesday, March 29, 2017 9:58 AM
To: Prebianca, Jacob A CIV CEMVS CEMVD (US) <Jacob.A.Prebianca@usace.army.mil>
Cc: Rankins, Jonathan E CIV USARMY CEMVS (US) <Jonathan.E.Rankins@usace.army.mil>; Lori Ferry <L.Ferry@gaiconsultants.com>
Subject: [Non-DoD Source] Spire STL Pipeline - Coldwater Creek

Jacob,

GAI, on behalf of Spire STL Pipeline LLC (Spire), previously coordinated with you regarding the crossing of Coldwater Creek as part of the proposed Spire STL Pipeline Project, located in St. Charles and St. Louis Counties, Missouri. Spire no

longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension").

The North County Extension proposes to cross Coldwater Creek via horizontal directional drill, as shown on the attached figure. The crossing location is approximately 0.3 miles downstream of the previously evaluated crossing location.

Are there any concerns regarding contamination with this proposed crossing?

Thank you,

Ali

Alessandra M. Trunzo
Project Environmental Specialist

385 E. Waterfront Drive, Homestead, PA 15120-5005

Direct 412.399.5096 Office 412.476.2000 Email a.trunzo@gaiconsultants.com <mailto:a.trunzo@gaiconsultants.com>

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GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Mr. Mike Irwin
Water Protection Program Section 401
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Mr. Irwin:

In June 2016, Spire Pipeline LLC ("Spire") initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project ("Project") which consisted of approximately 59 miles of new, greenfield 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline") originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new, greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC

interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75 feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act ("NEPA") process began (initiation of FERC Pre-filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) - File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

On behalf of Spire, we'd like to take this opportunity to invite the Missouri Department of Natural Resources to provide comments regarding the Project as it will be amended. We appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.

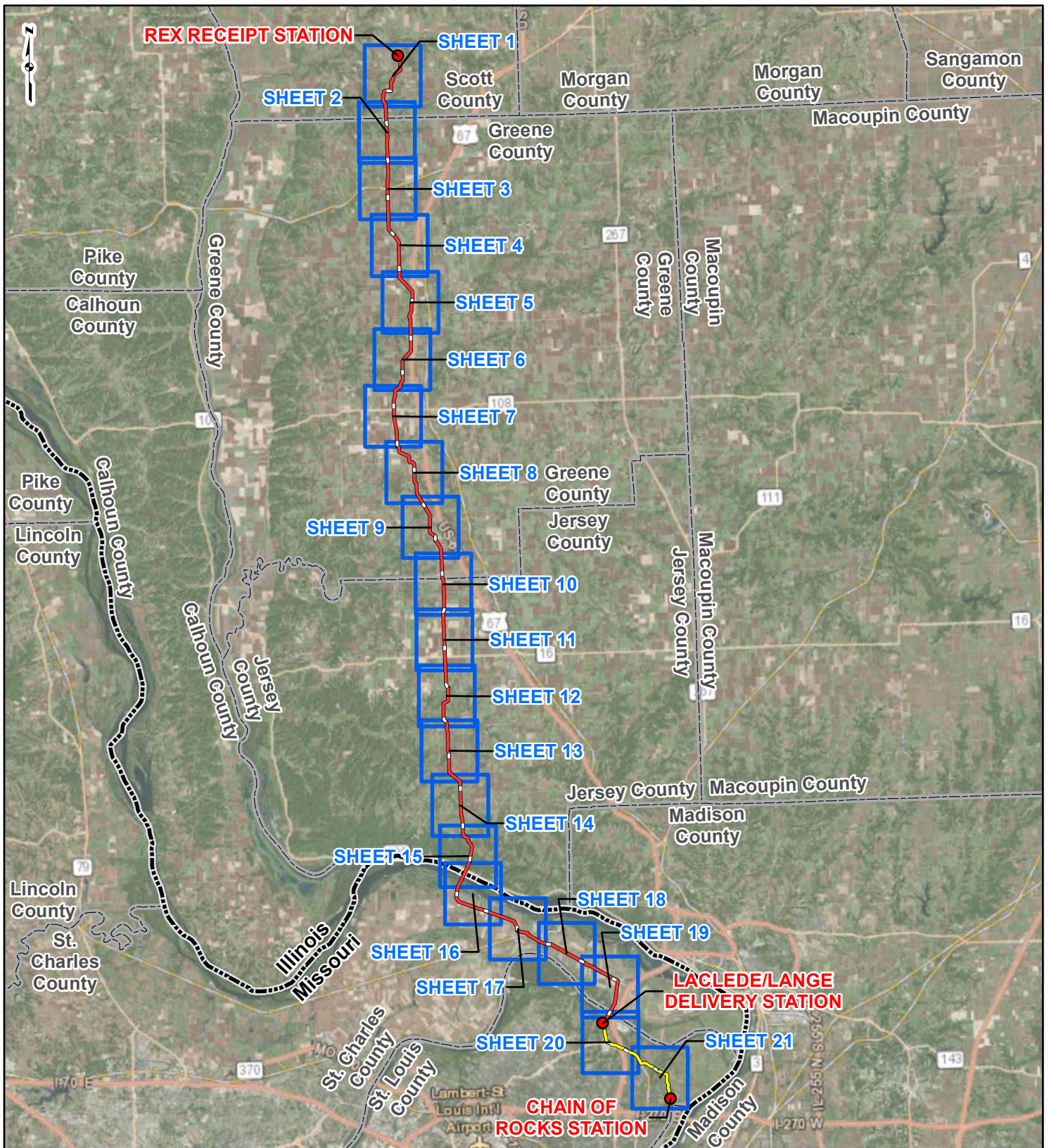


Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

ATTACHMENT
USGS TOPOGRAPHIC MAP (FIGURE 1)



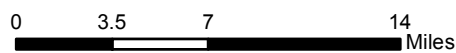
PROJECT LOCATION



SCOTT, GREENE AND JERSEY COUNTIES, ILLINOIS AND ST. CHARLES AND ST. LOUIS COUNTIES, MISSOURI

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- SHEET INDEX
- COUNTY BOUNDARY
- STATE BOUNDARY



**FIGURE 1
LOCATION MAP
SHEET INDEX**



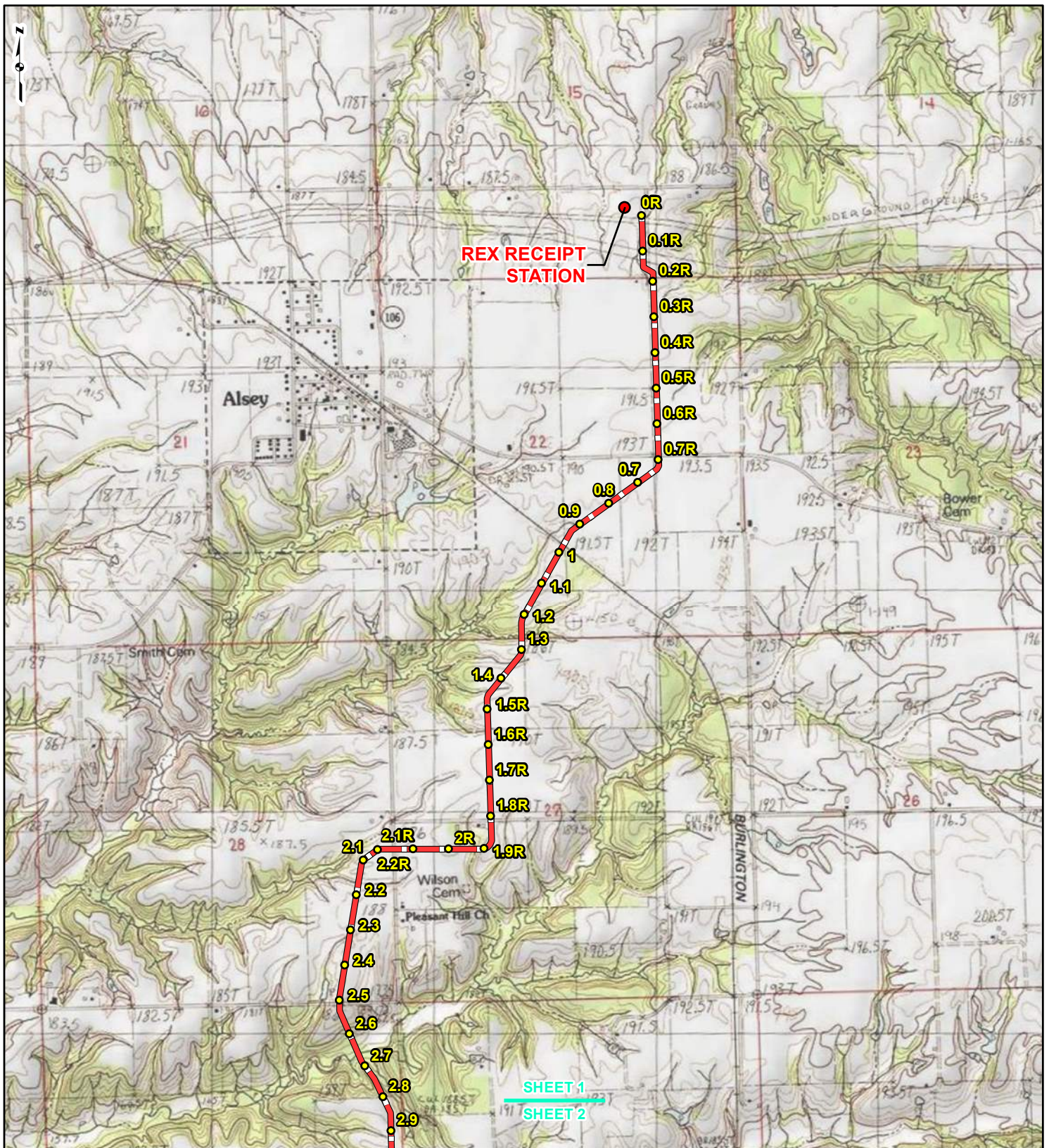
**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH
CHECKED: SWW

DATE: 3/28/2017
APPROVED: LMF

REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2015, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE MILEPOST	— EXTENSION
○ NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

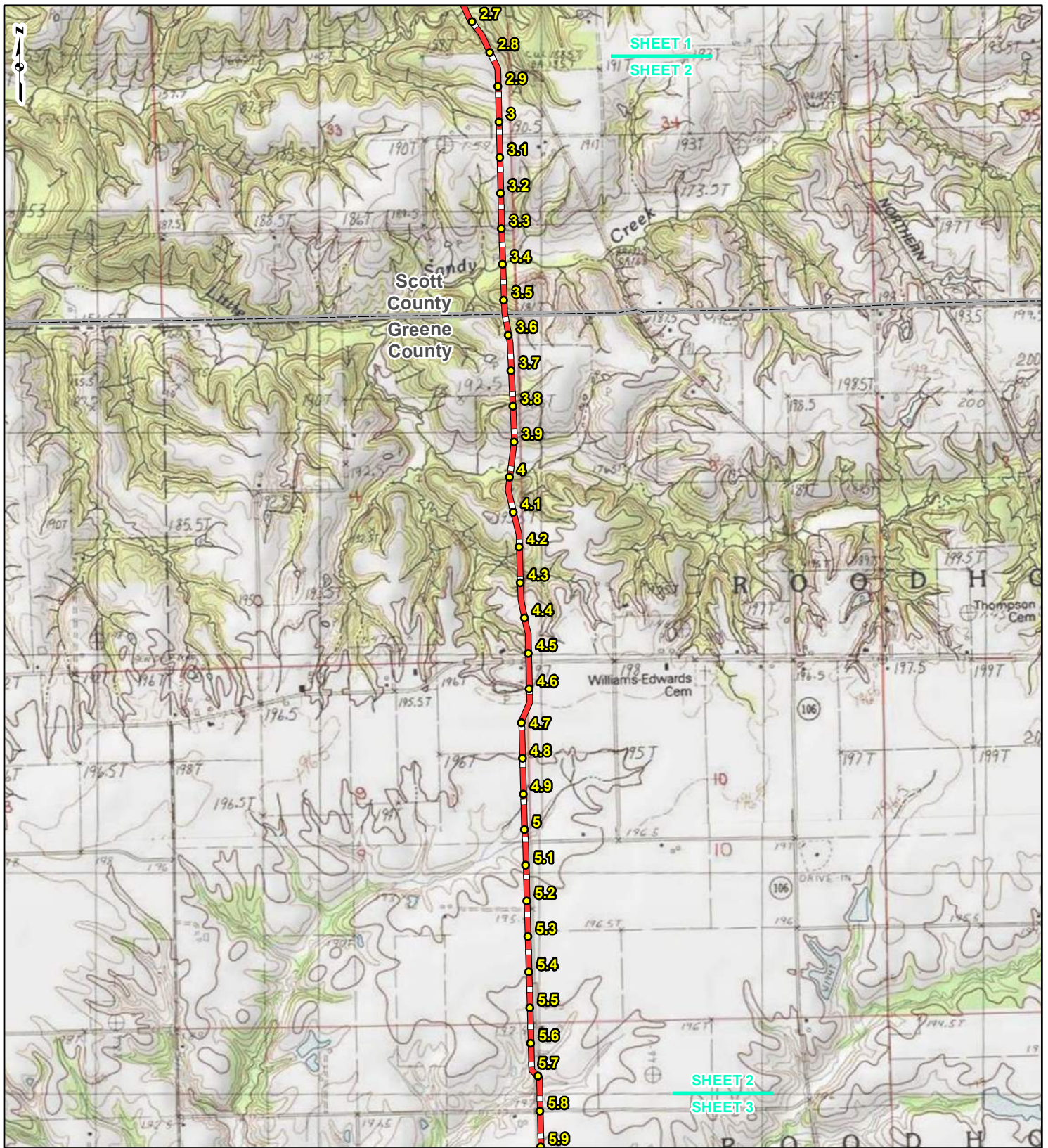
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**FIGURE 1
LOCATION MAP
SHEET 1 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSA (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

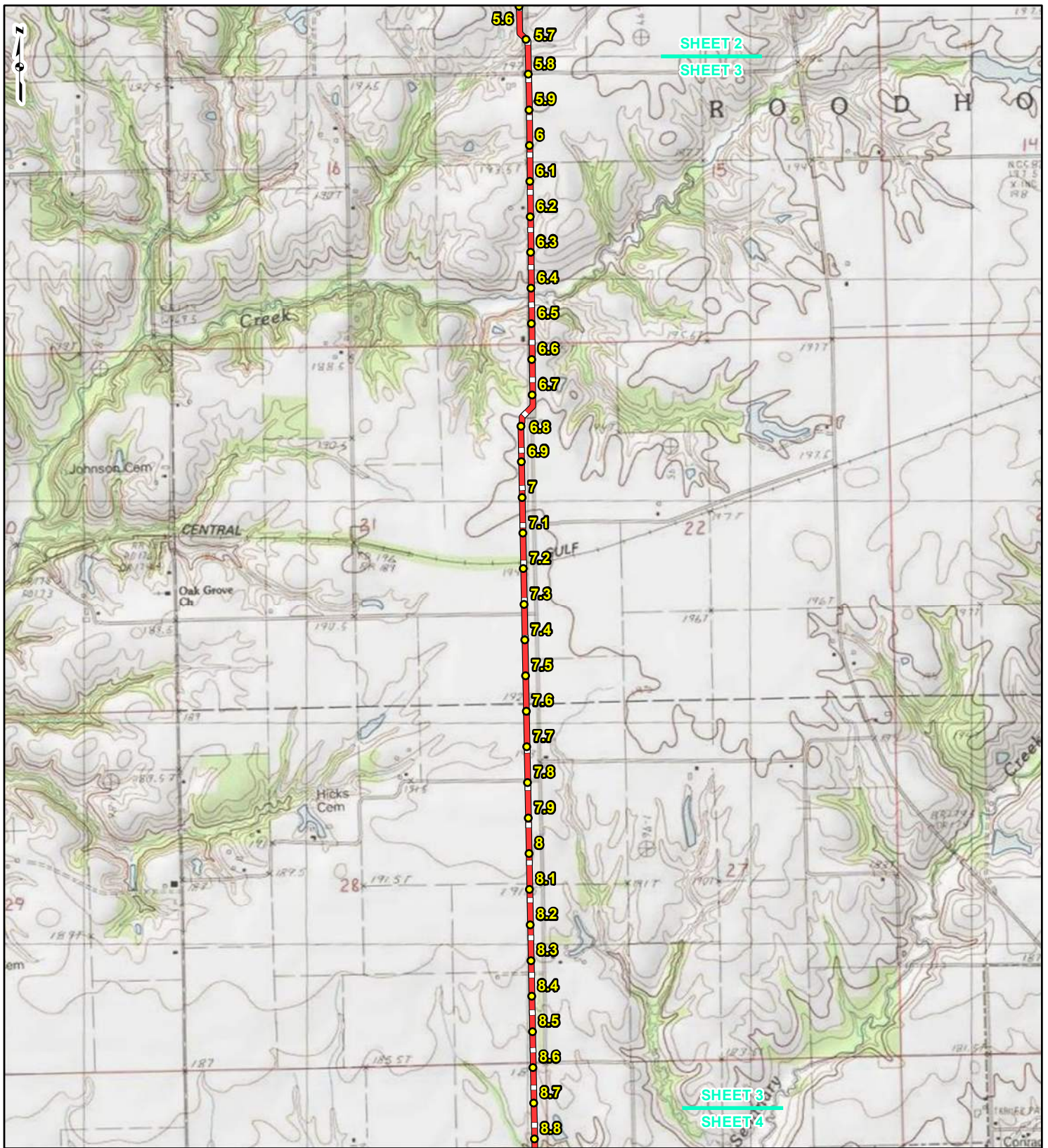
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**FIGURE 1
LOCATION MAP
SHEET 2 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

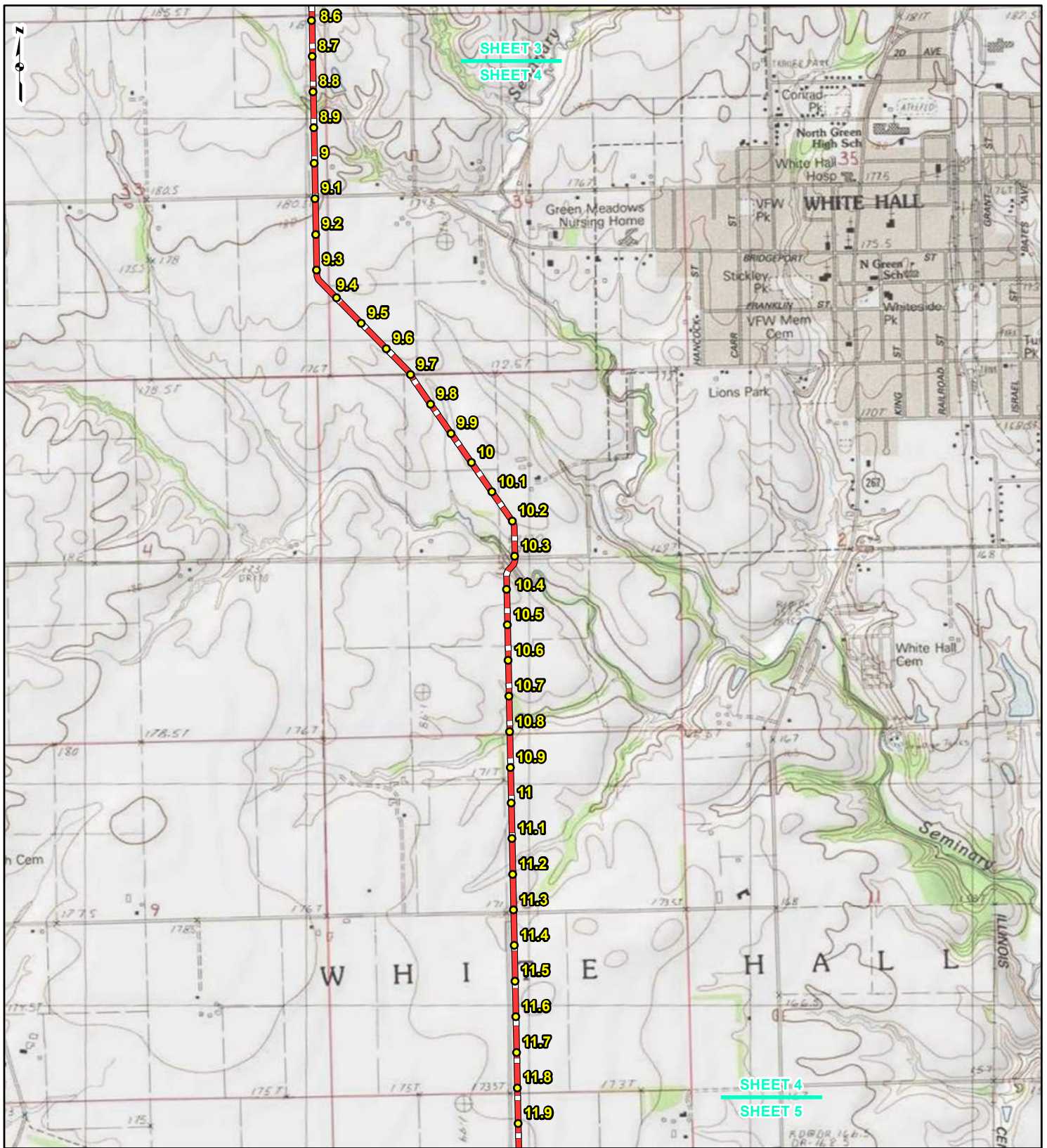
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FIGURE 1
LOCATION MAP
SHEET 3 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1995), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

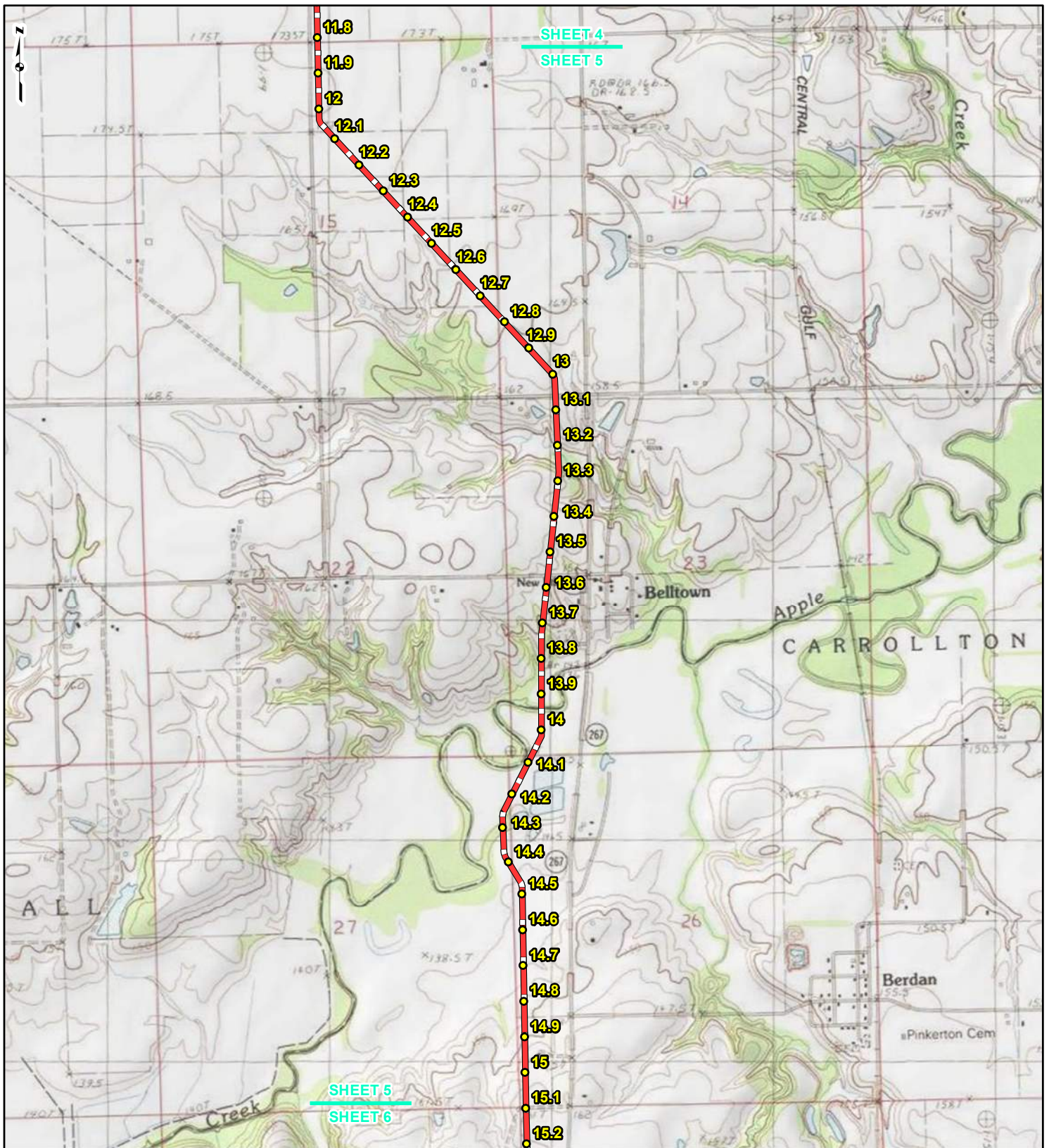
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**FIGURE 1
LOCATION MAP
SHEET 4 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	□ COUNTY BOUNDARY
	□ STATE BOUNDARY

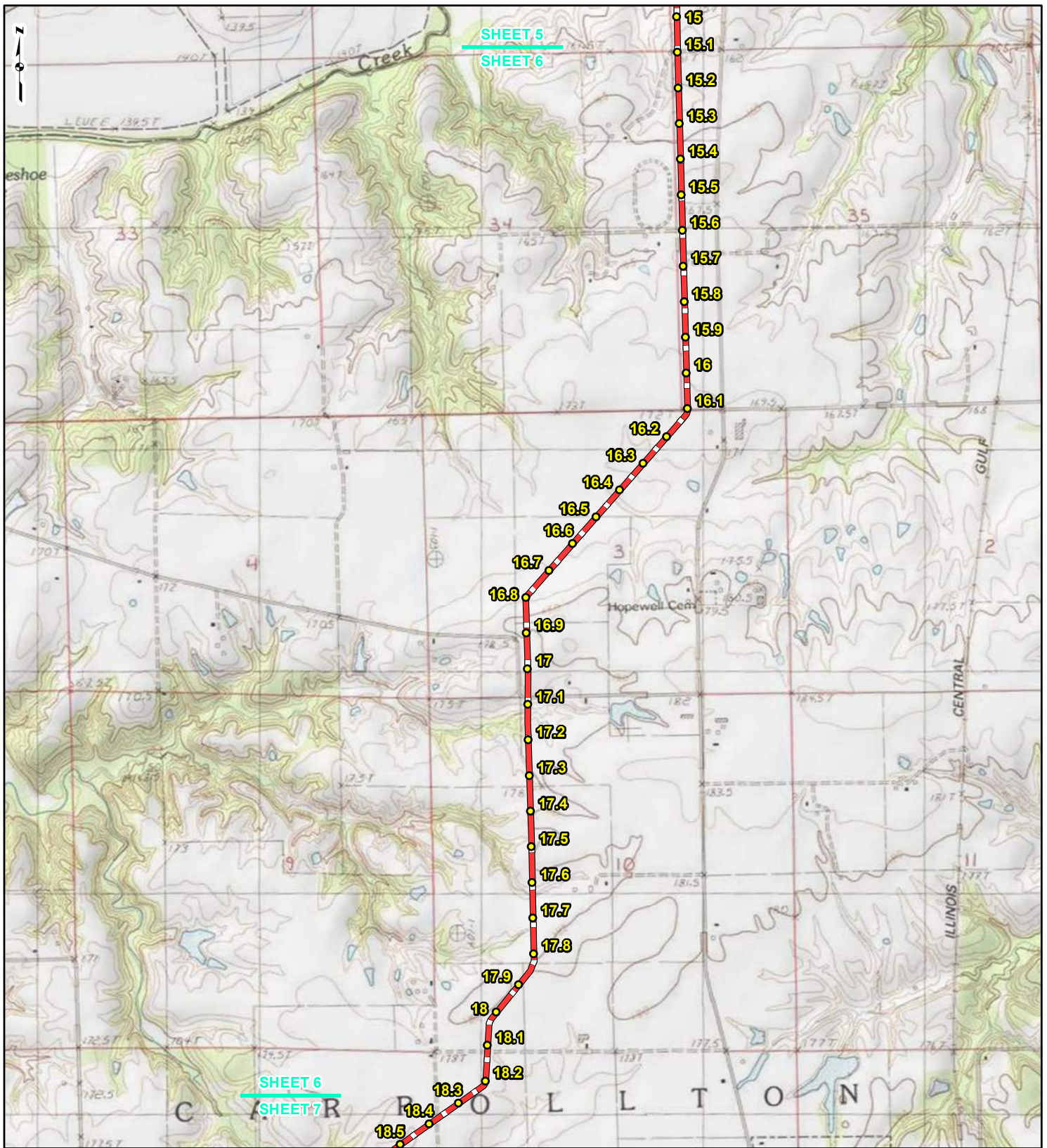
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**FIGURE 1
LOCATION MAP
SHEET 5 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● NORTH COUNTY	— EXTENSION
● EXTENSION	▭ COUNTY BOUNDARY
● MILEPOST	▭ STATE BOUNDARY

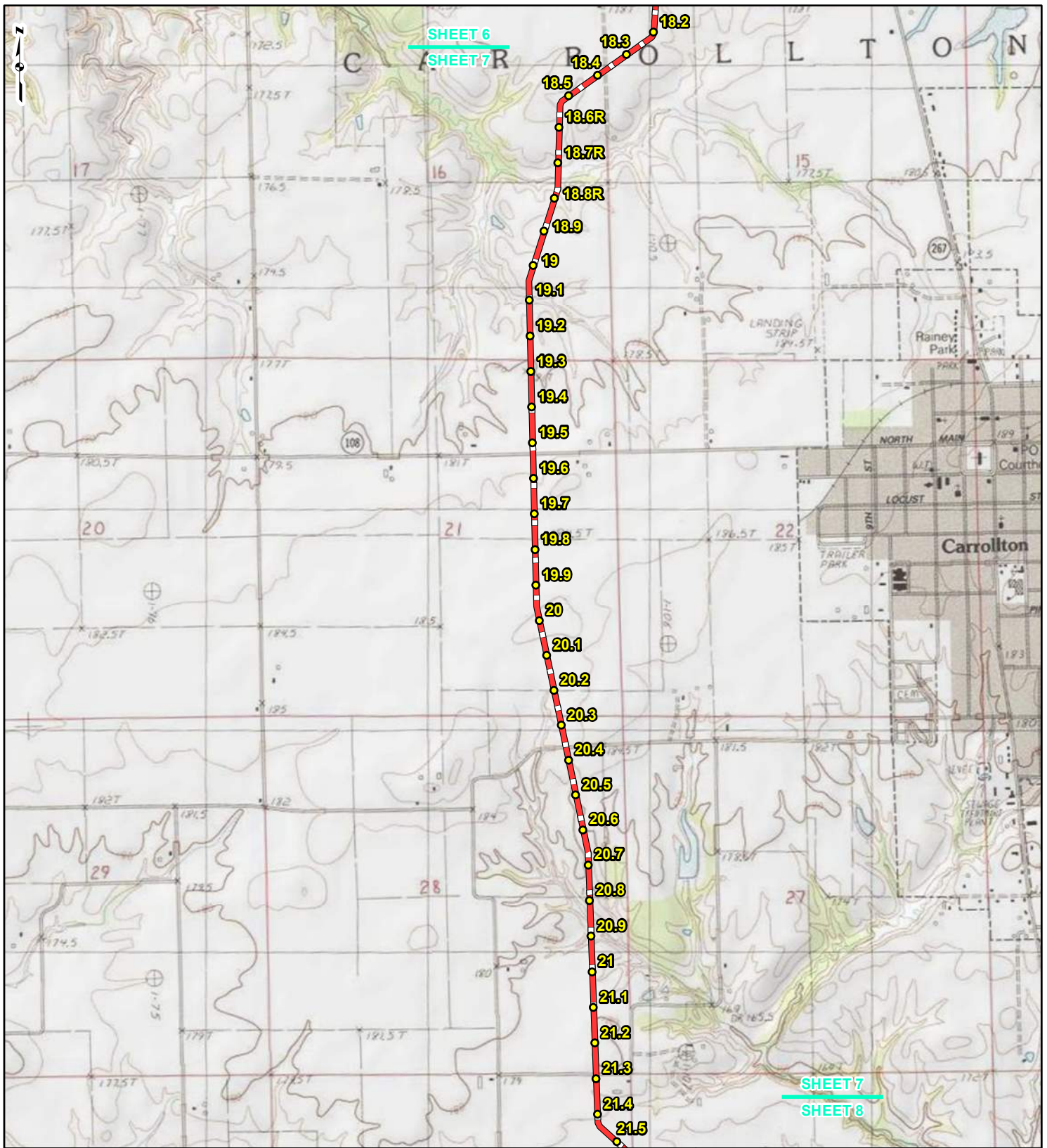
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FIGURE 1
LOCATION MAP
SHEET 6 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

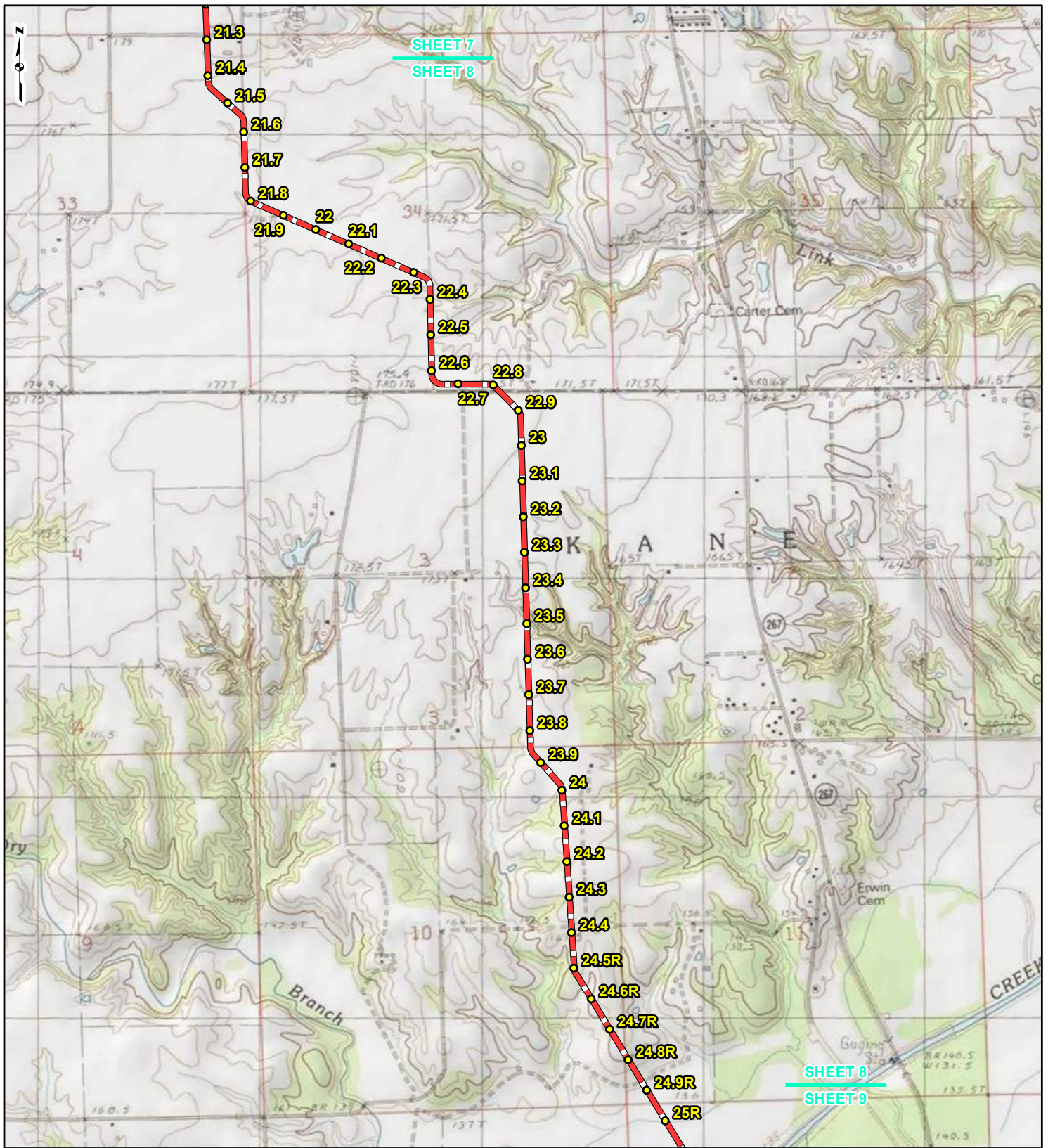
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**FIGURE 1
LOCATION MAP
SHEET 7 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

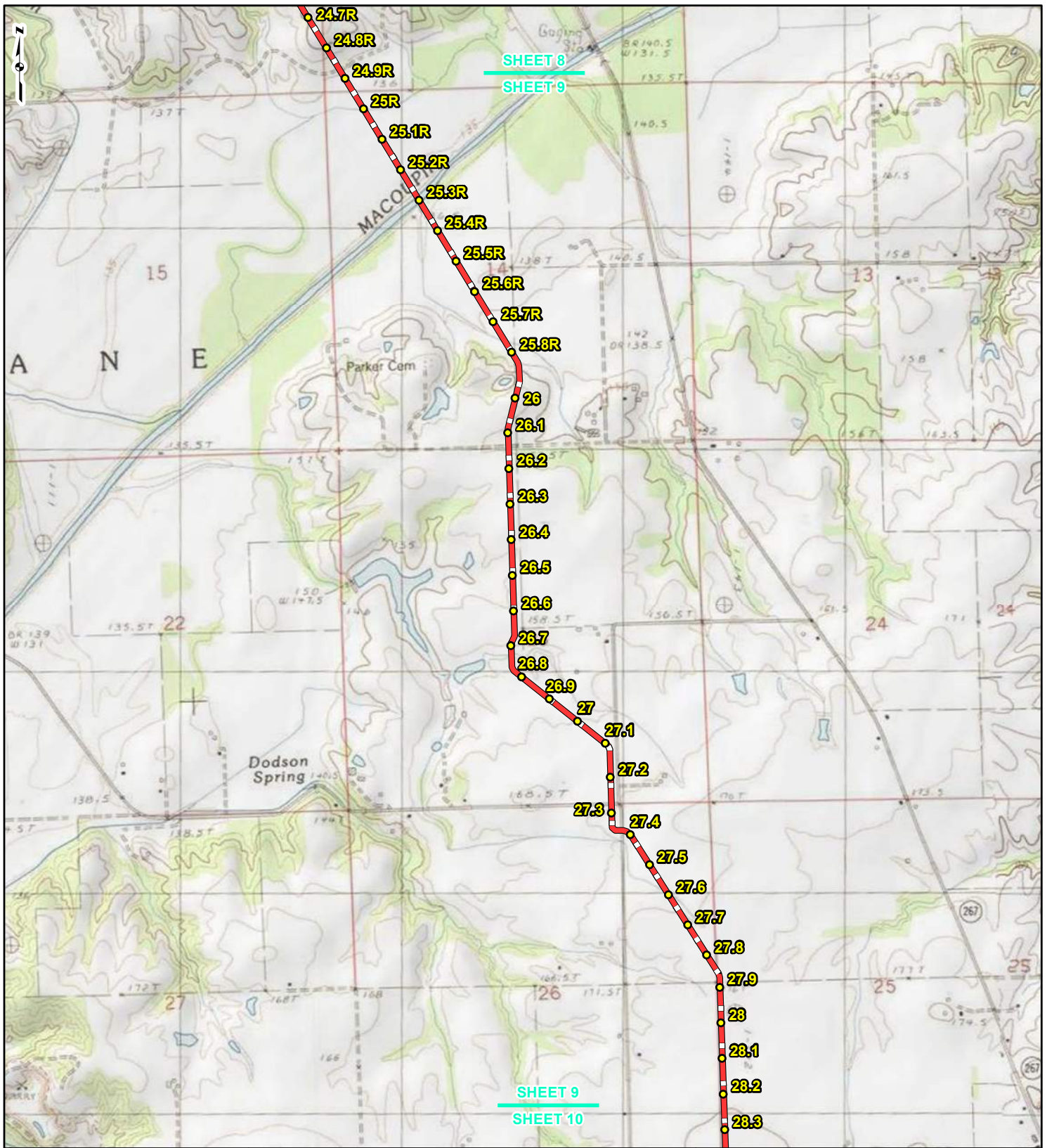
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**FIGURE 1
LOCATION MAP
SHEET 8 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

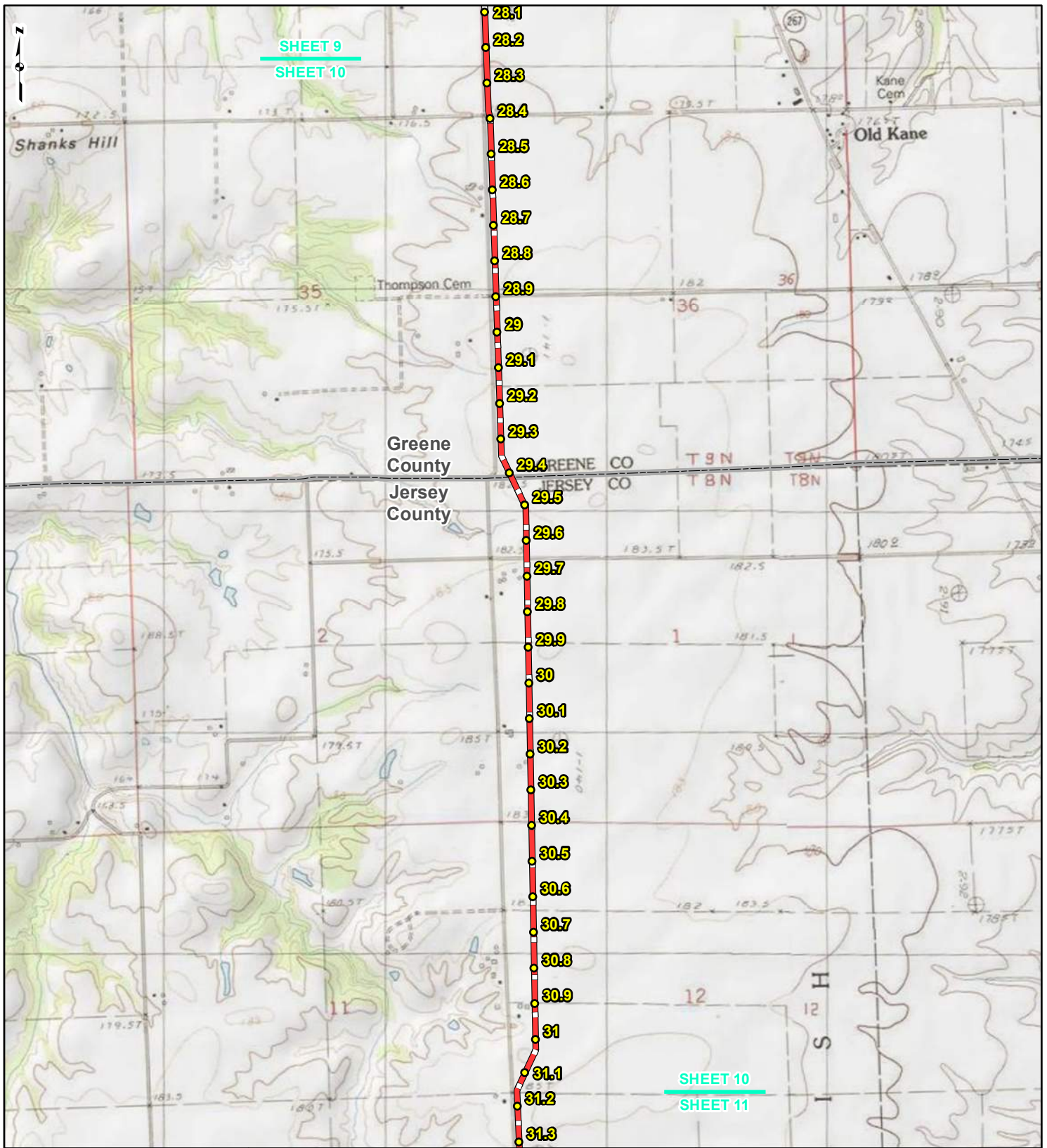
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**FIGURE 1
LOCATION MAP
SHEET 9 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

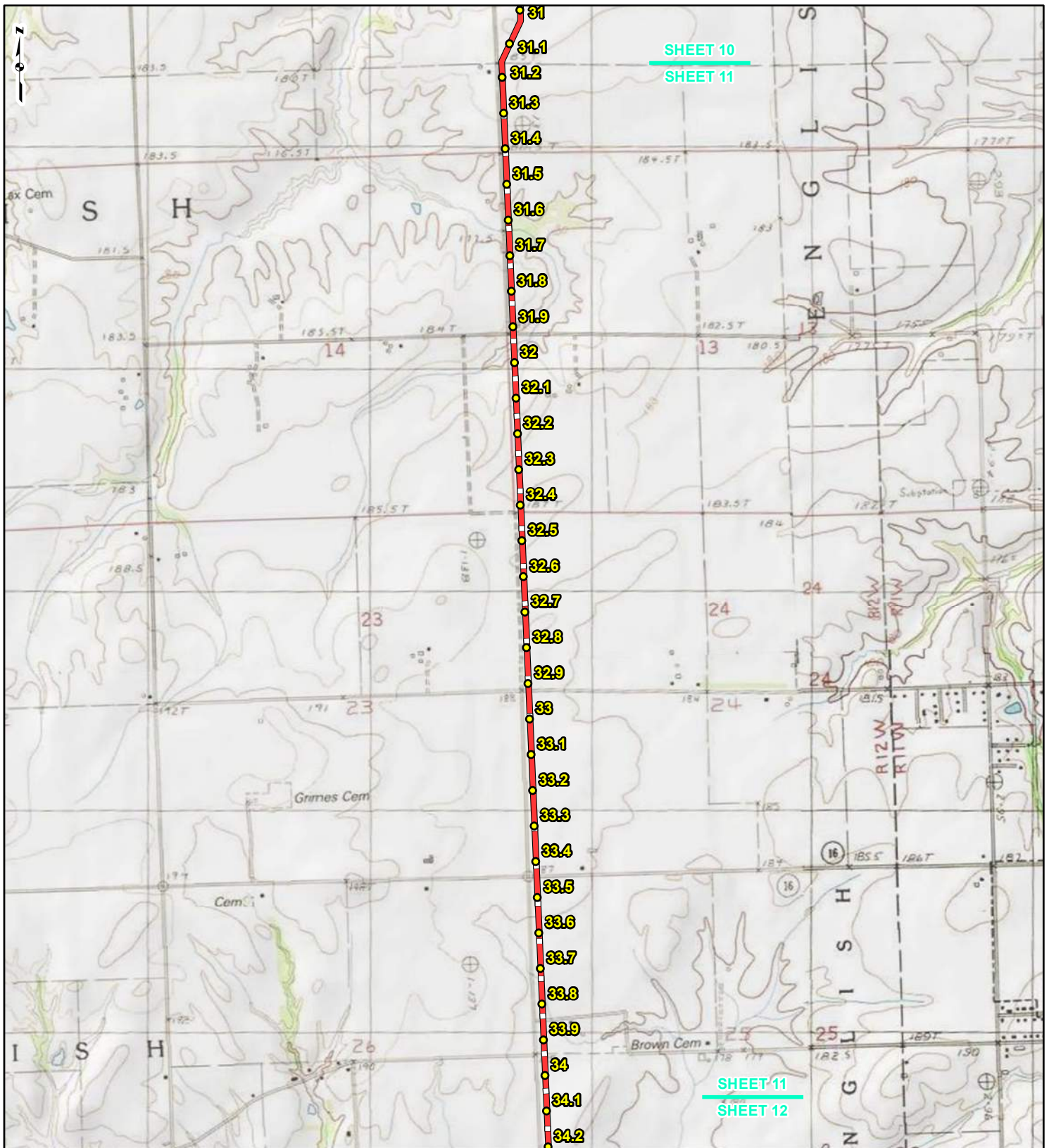
**FIGURE 1
LOCATION MAP
SHEET 10 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

gai consultants

DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

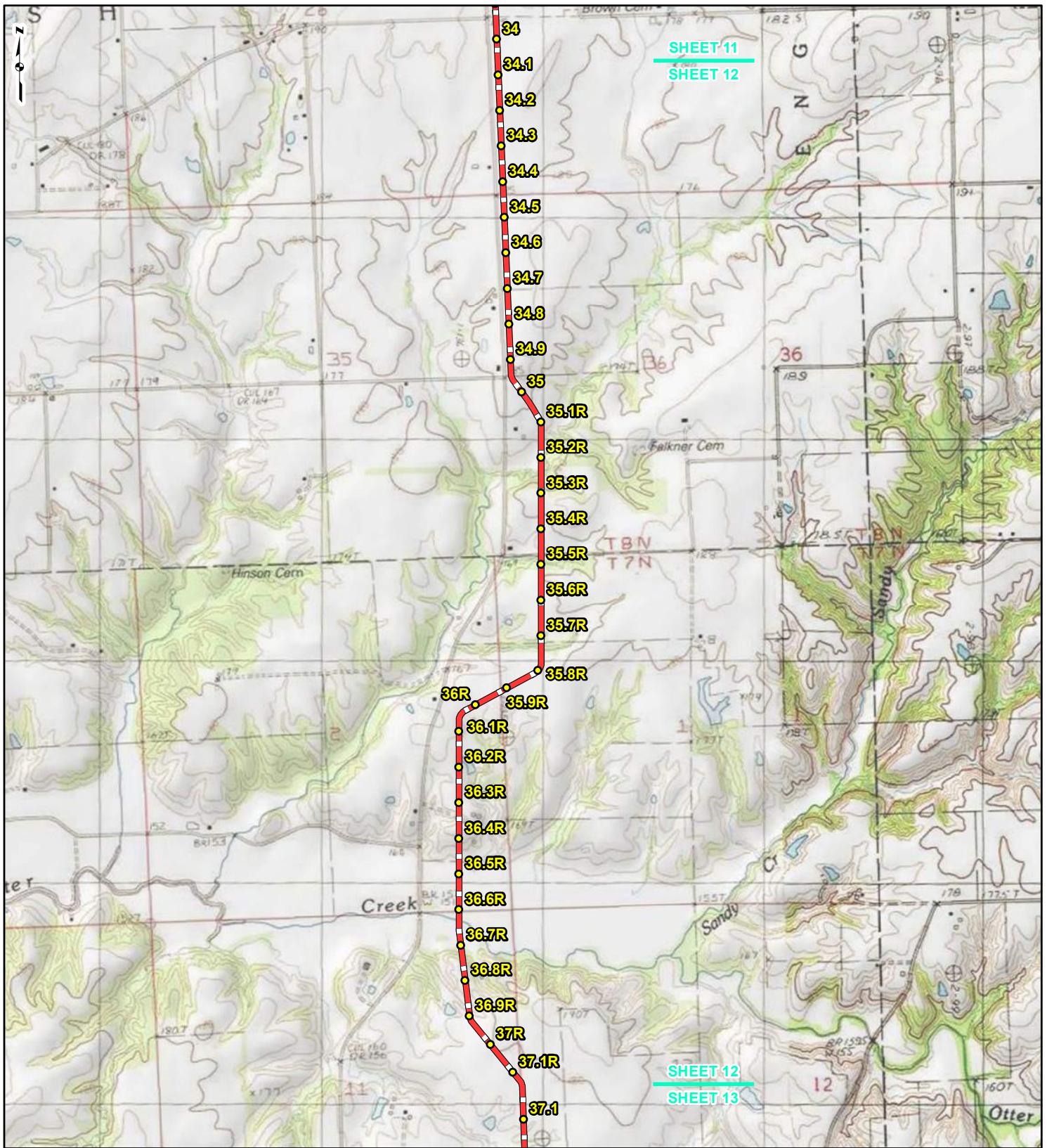
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 11 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 11
SHEET 12

SHEET 12
SHEET 13



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

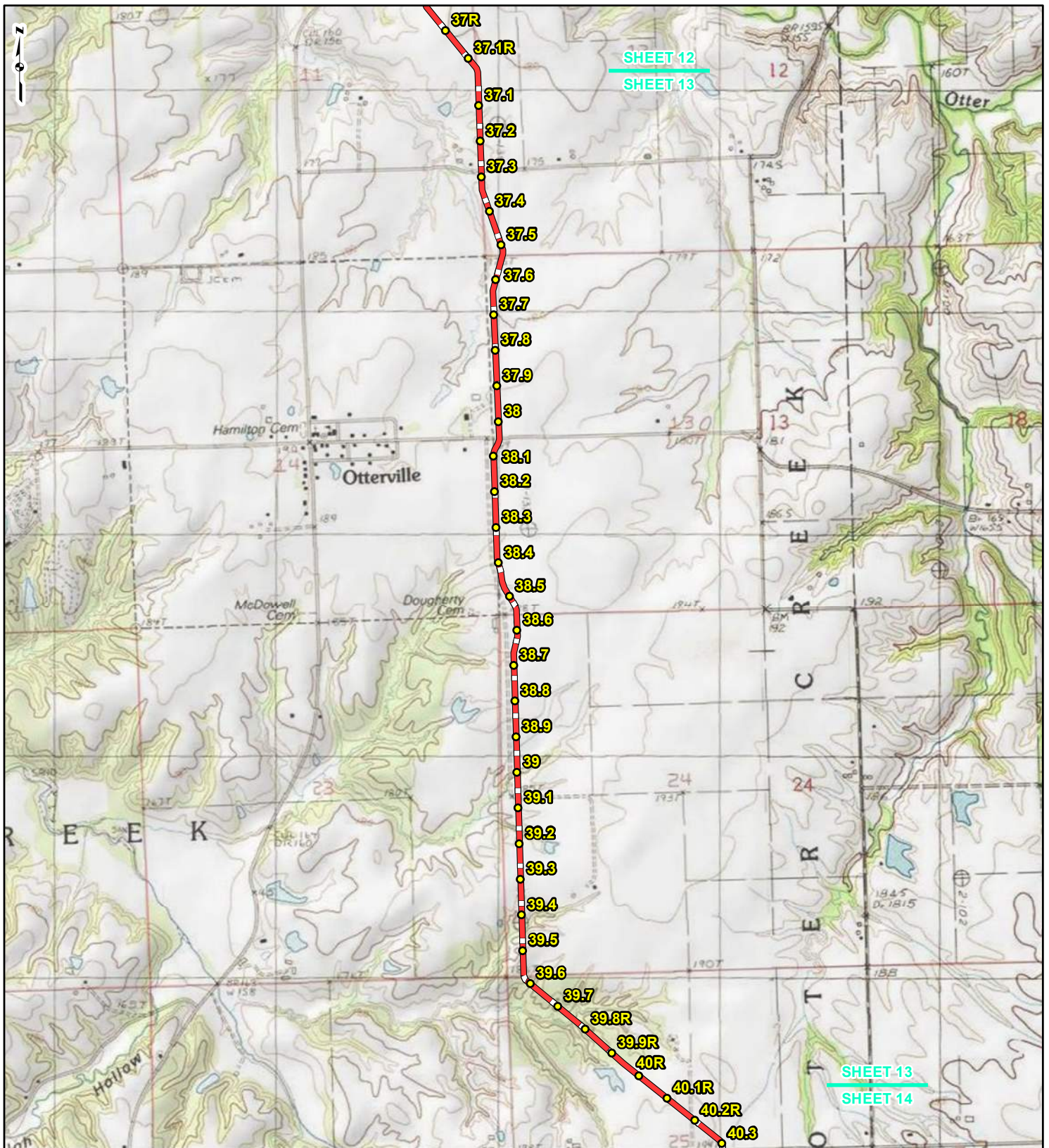
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 12 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

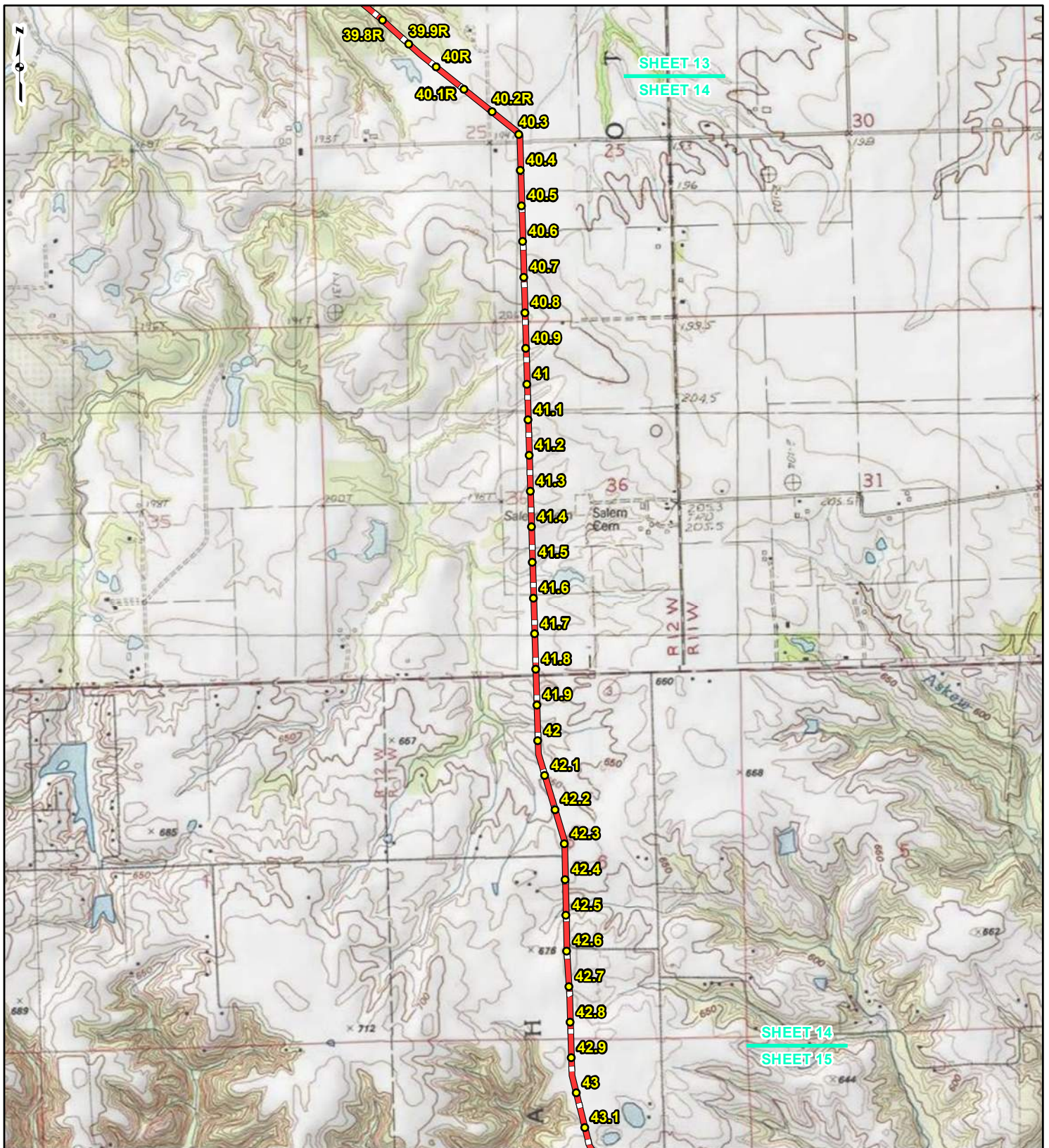
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 13 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

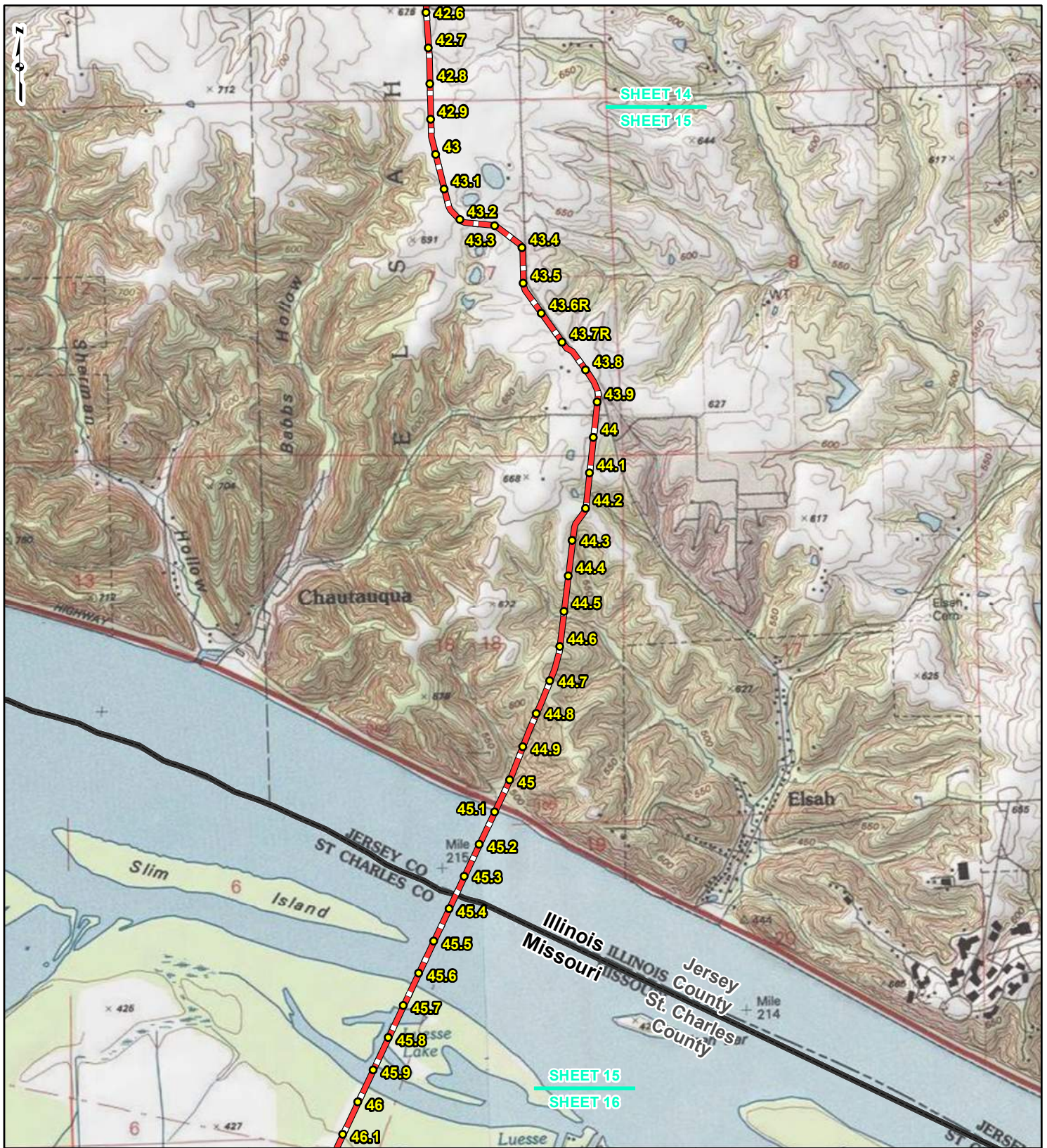
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 14 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

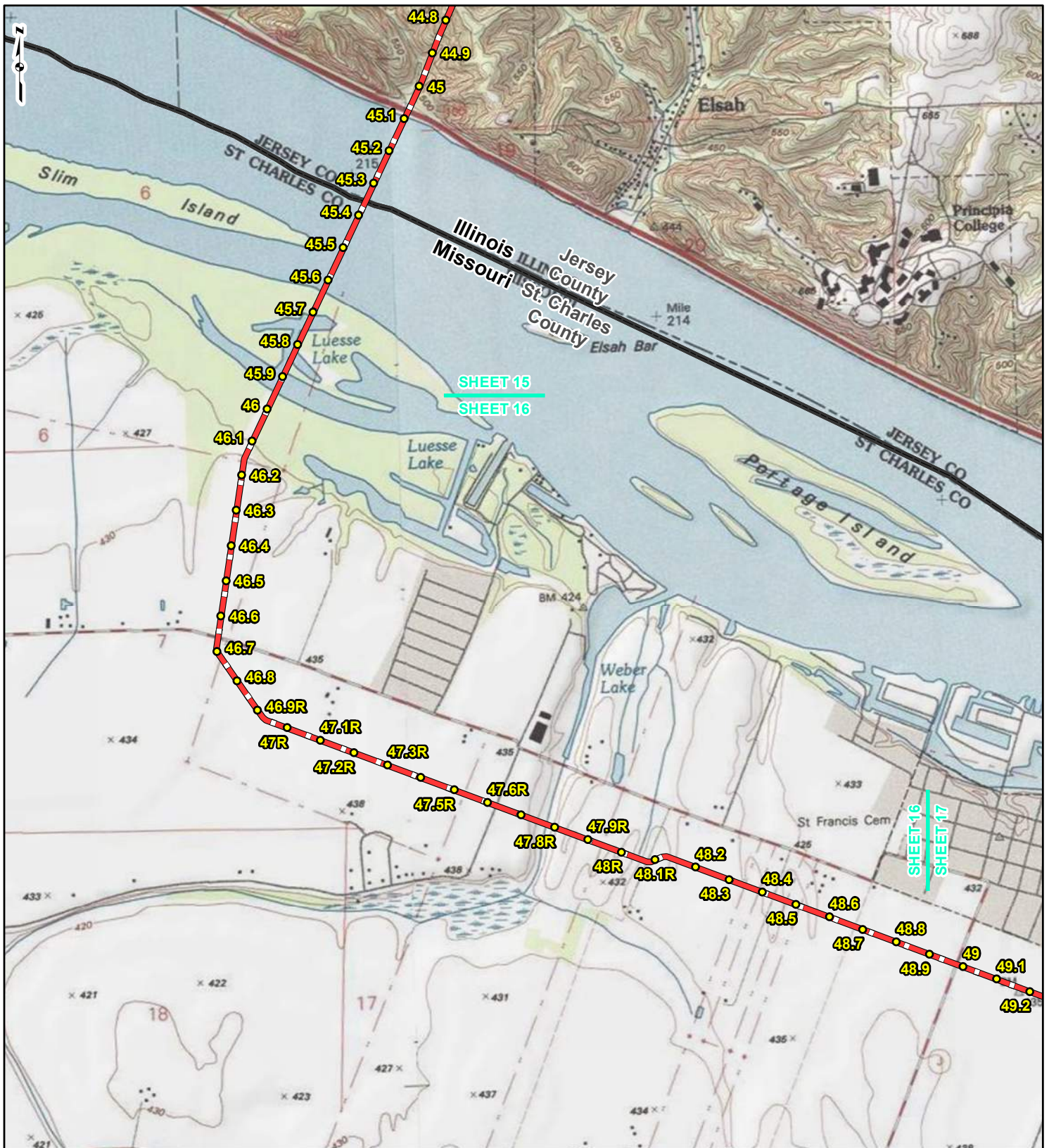
FIGURE 1
LOCATION MAP
SHEET 15 OF 21

SPIRE STL PIPELINE PROJECT

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 15
SHEET 16

SHEET 16
SHEET 17



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

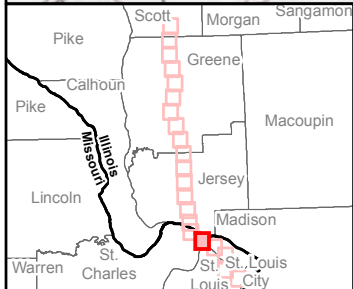
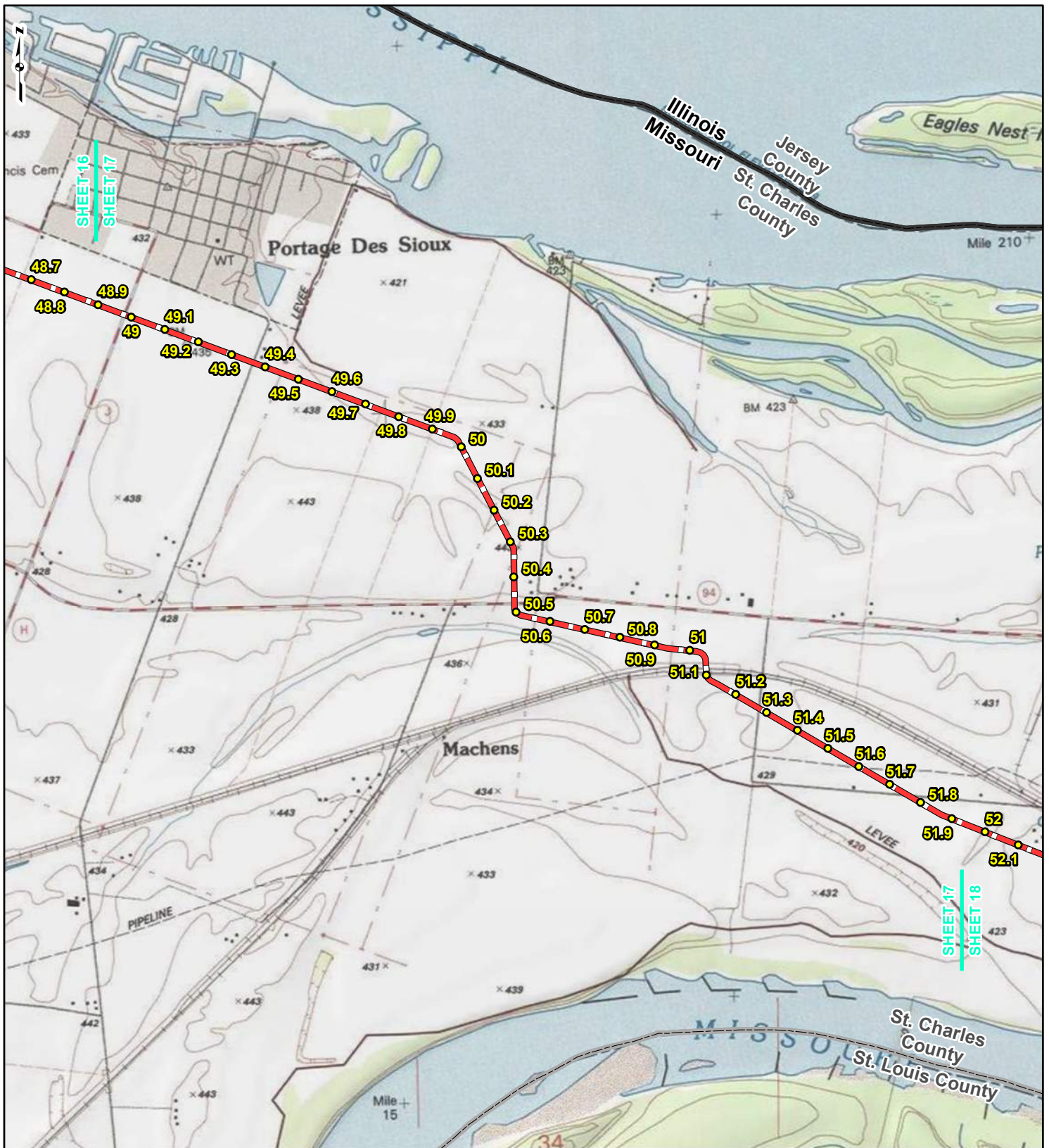
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 16 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

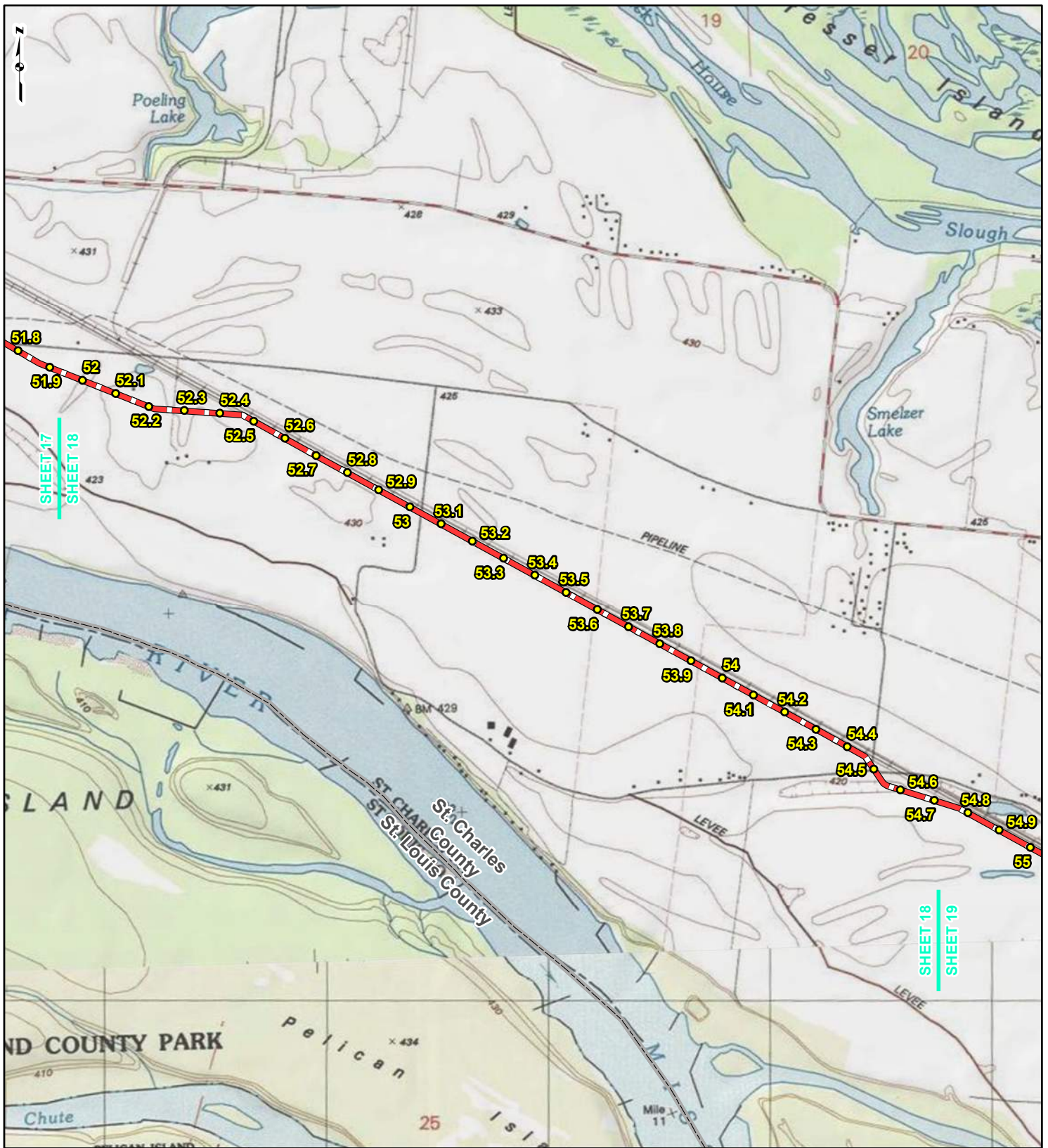
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 17 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

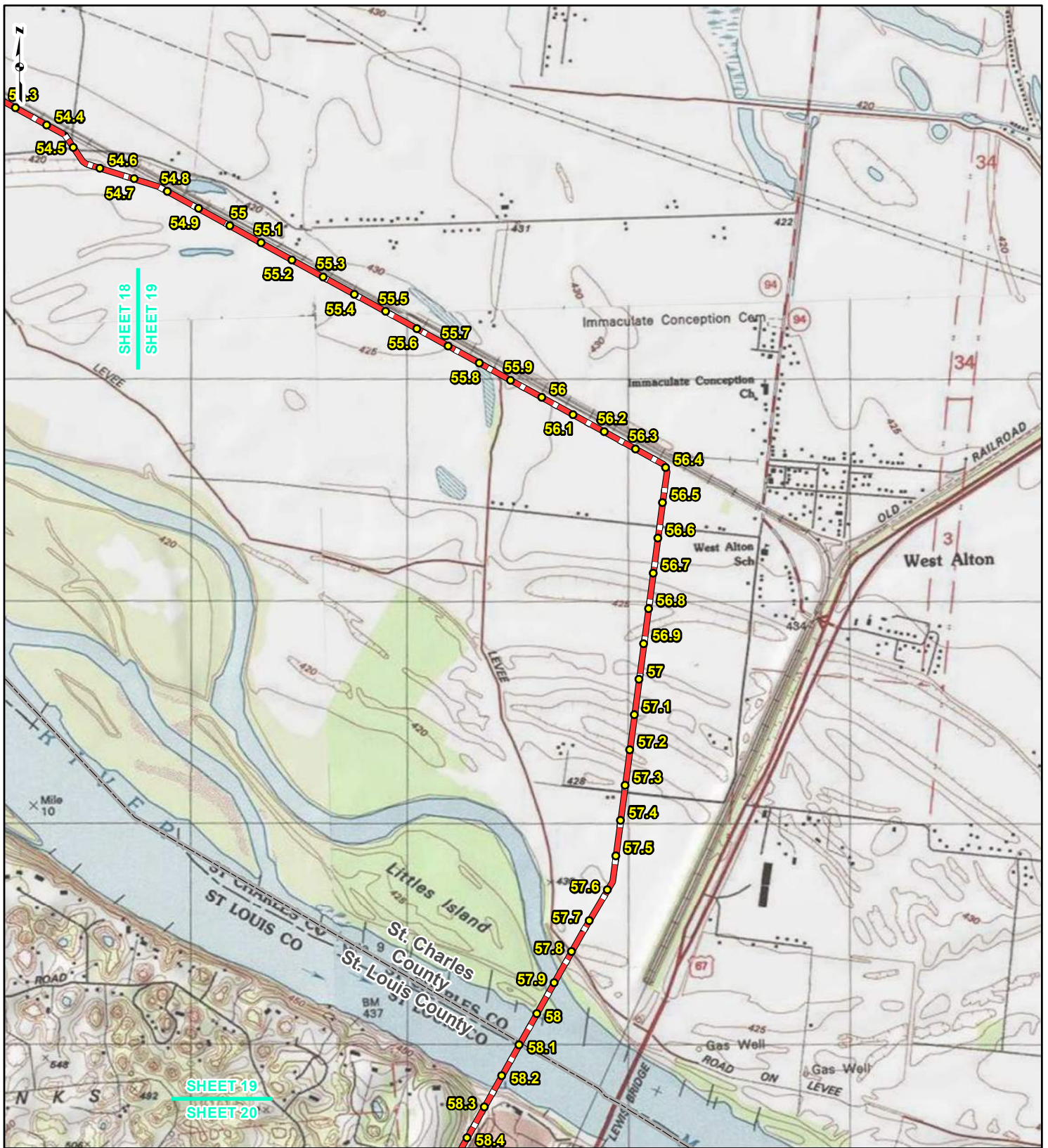
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 18 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
● NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

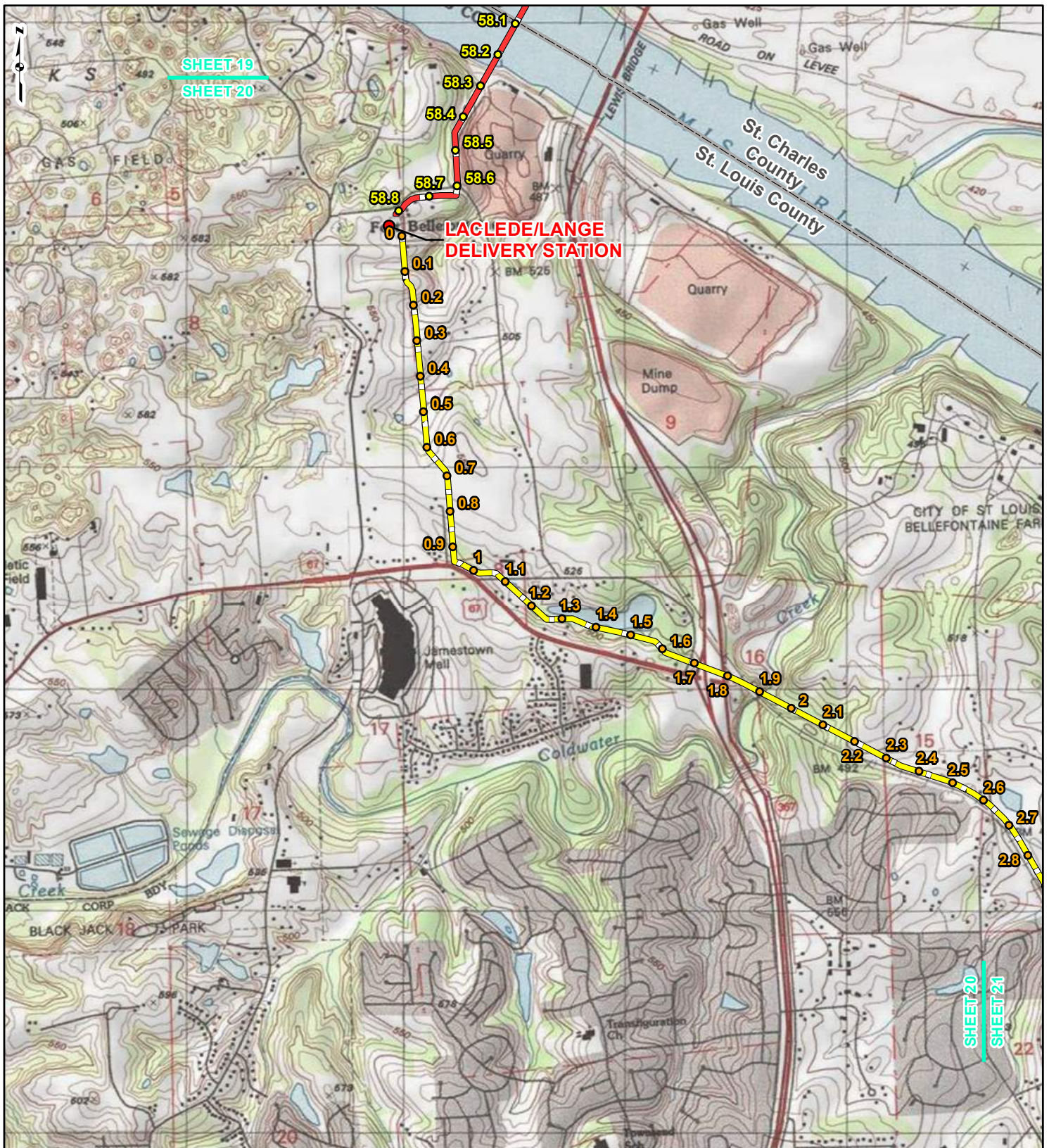
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 19 OF 21

SPIRE STL PIPELINE PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



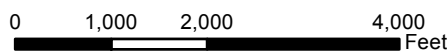
SHEET 19
SHEET 20

SHEET 20
SHEET 21

**LACLEDE/LANGE
DELIVERY STATION**

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY
- 24-INCH PIPELINE EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY



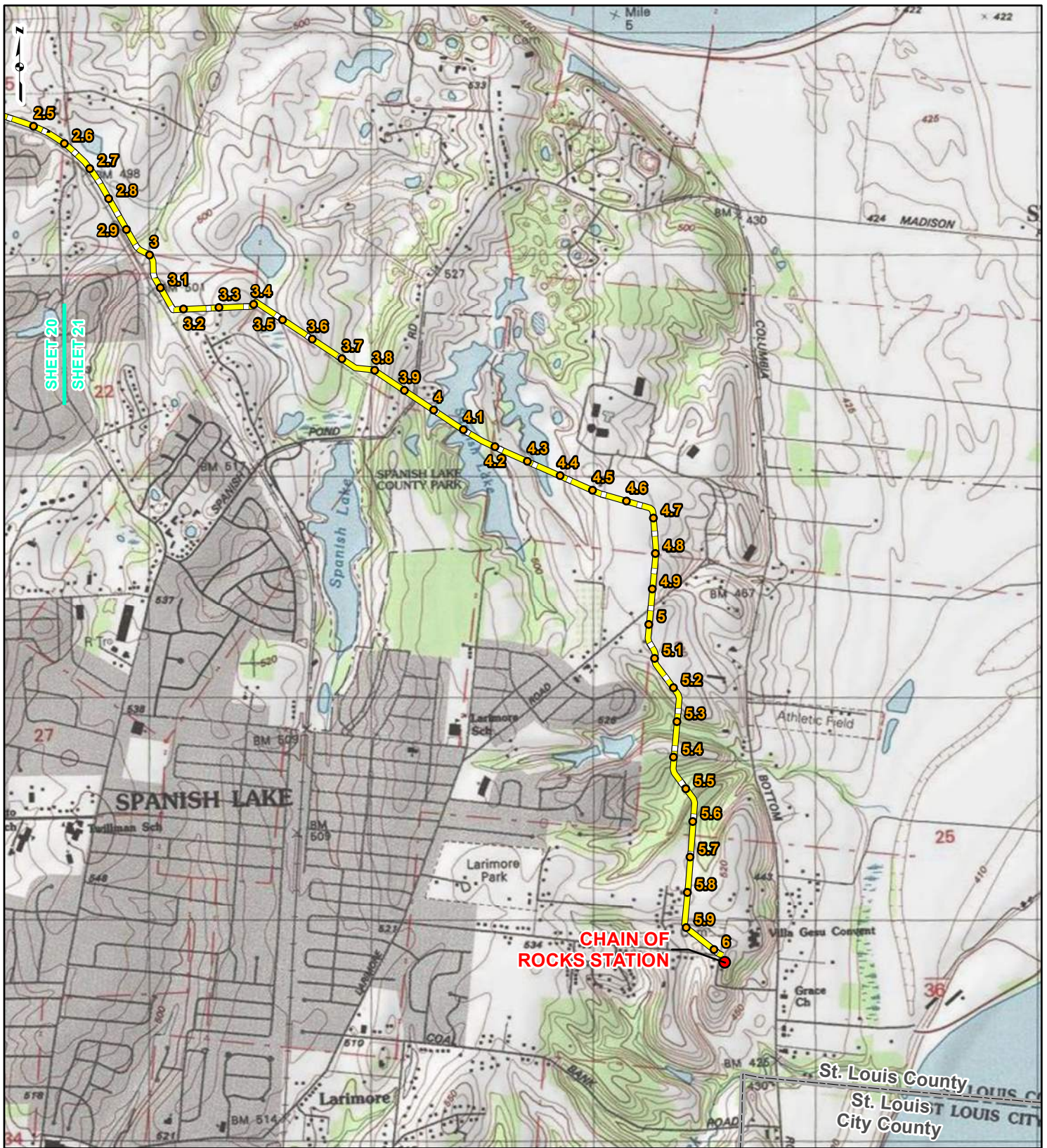
**FIGURE 1
LOCATION MAP
SHEET 20 OF 21**

**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ELSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE EXTENSION	— 24-INCH PIPELINE EXTENSION
● NORTH COUNTY MILEPOST	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 21 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Ms. Sara Parker Pauley
Director
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Ms. Parker Pauley:

In June 2016, Spire Pipeline LLC ("Spire") initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project ("Project") which consisted of approximately 59 miles of new, greenfield 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline") originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in to interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new, greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC

interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75 feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act ("NEPA") process began (initiation of FERC Pre-filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) - File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

On behalf of Spire, we'd like to take this opportunity to invite the Missouri Department of Natural Resources to provide comments regarding the Project as it will be amended. We appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.



Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Mr. Paul Mueller
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Mr. Mueller:

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with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

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- December 2017 (Anticipated) - FERC Decision on Application.

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If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.



Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

Ali Trunzo

From: Ali Trunzo
Sent: Friday, February 03, 2017 12:59 PM
To: Ali Trunzo
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

From: Ali Trunzo
Sent: Friday, February 03, 2017 12:58 PM
To: 'Tomlin, Ken' <ken.tomlin@dnr.mo.gov>
Cc: Jaafari, Maher <maher.jaafari@dnr.mo.gov>; Tiffany Anders <T.Anders@gaiconsultants.com>; Baker, Everett <Everett.Baker@dnr.mo.gov>
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Ken,

Thank you for the input. We spoke with Mr. Mark Warner of Portage des Sioux today, and he confirmed that the city does not have any local regulations or zoning ordinances regarding the half-mile buffer protection area.

Thank you,

Ali

From: Tomlin, Ken [<mailto:ken.tomlin@dnr.mo.gov>]
Sent: Friday, February 03, 2017 10:50 AM
To: Ali Trunzo <A.Trunzo@gaiconsultants.com>; Baker, Everett <Everett.Baker@dnr.mo.gov>
Cc: Jaafari, Maher <maher.jaafari@dnr.mo.gov>; Tiffany Anders <T.Anders@gaiconsultants.com>
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Ms. Trunzo – from a regulatory perspective, the ½-mile buffer protection area around a public water well is not an enforceable standard at the state level. Local governments are encouraged to manage these areas to prevent contamination to their raw water source and many implement local ordinances or zoning regulations to protect these areas; however, such activities are largely at the discretion of the well owner. Portage des Sioux would need to be contacted to determine whether there are any local regulatory protections in place. I believe Mr. Jaafari is out of the office today, but he may offer additional recommendations in the coming days. Please let me know if I may be of any additional assistance and thank you for your inquiry –

Sincerely,
Ken

Kenneth P. Tomlin

Source Water Assessment and Protection Coordinator
Water Protection Program – Public Drinking Water Branch
PO Box 176, Jefferson City, MO 65102-0176
Office Phone: (573) 526-0269
Office Fax: (573) 751-3110



Ali Trunzo

From: Carey, Daniel <daniel.carey@dnr.mo.gov>
Sent: Friday, February 03, 2017 11:49 AM
To: Ali Trunzo
Subject: Spire STL Pipeline - Coldwater Creek

Ms. Trunzo,

Our office is in receipt of some email correspondence between GAI and United States Army Corps of Engineers (USACE, Jacob Prebianca and Jonathon Rankins) regarding pipeline work near Coldwater Creek. We concur with USACE's assessment regarding the pipeline work area.

If the location or scope of GAI work near Coldwater Creek changes, we recommend GAI update and again consult with USACE before proceeding.

Thanks,
Daniel Carey
Missouri Department of Natural Resources
FUSRAP Project Oversight
(314) 877-3047 Office
(314) 265-4272 Cell

Ali Trunzo

From: Tomlin, Ken <ken.tomlin@dnr.mo.gov>
Sent: Friday, February 03, 2017 10:50 AM
To: Ali Trunzo; Baker, Everett
Cc: Jaafari, Maher; Tiffany Anders
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Ms. Trunzo – from a regulatory perspective, the ½-mile buffer protection area around a public water well is not an enforceable standard at the state level. Local governments are encouraged to manage these areas to prevent contamination to their raw water source and many implement local ordinances or zoning regulations to protect these areas; however, such activities are largely at the discretion of the well owner. Portage des Sioux would need to be contacted to determine whether there are any local regulatory protections in place. I believe Mr. Jaafari is out of the office today, but he may offer additional recommendations in the coming days. Please let me know if I may be of any additional assistance and thank you for your inquiry –

Sincerely,
Ken

Kenneth P. Tomlin

Source Water Assessment and Protection Coordinator
Water Protection Program – Public Drinking Water Branch
PO Box 176, Jefferson City, MO 65102-0176
Office Phone: (573) 526-0269
Office Fax: (573) 751-3110



Promoting, Protecting and Enjoying our Natural Resources. Learn more at dnr.mo.gov.

From: Ali Trunzo [mailto:A.Trunzo@gaiconsultants.com]
Sent: Thursday, February 02, 2017 4:00 PM
To: Tomlin, Ken; Baker, Everett
Cc: Jaafari, Maher; Tiffany Anders
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Ken and Everett,

We wanted to circle back with you regarding the public water well at the Portage Des Sioux plant. Have you heard anything further if there are concerns with the pipeline crossing the 0.5-mile buffer?

Additionally we spoke with Eric Gilstrap yesterday to clarify the status of agency coordination and permitting currently in progress for this Project.

Thank you,

Ali

Alessandra M. Trunzo

Ali Trunzo

From: Ali Trunzo
Sent: Friday, February 03, 2017 9:18 AM
To: Ali Trunzo
Subject: FW: Spire STL Pipeline - Coldwater Creek
Attachments: Attachment_USACE Correspondence.pdf

From: Ali Trunzo
Sent: Friday, February 03, 2017 9:18 AM
To: 'eric.gilstrap@dnr.mo.gov' <eric.gilstrap@dnr.mo.gov>
Subject: Spire STL Pipeline - Coldwater Creek

Eric,

Attached is the record of correspondence with the US Army Corps of Engineers FUSRAP program regarding the crossing of Coldwater Creek for the Spire STL Pipeline Project in St. Louis County, Missouri. The USACE determined that there is no contamination or pathway for future contamination at the proposed crossing. Please let us know if MDNR has concerns.

Thank you again for your assistance on this Project.

Ali

Alessandra M. Trunzo
Project Environmental Specialist

385 E. Waterfront Drive, Homestead, PA 15120-5005

Direct 412.399.5096 **Office** 412.476.2000 **Email** a.trunzo@gaiconsultants.com

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GAI Consultants provides local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets.

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Ali Trunzo

From: Lori Ferry
Sent: Wednesday, October 12, 2016 12:38 PM
To: Ali Trunzo
Subject: FW: Spire STL Pipeline

-----Original Message-----

From: Rankins, Jonathan E MVS [mailto:Jonathan.E.Rankins@usace.army.mil]
Sent: Wednesday, October 12, 2016 11:37 AM
To: Lori Ferry <L.Ferry@gaiconsultants.com>
Subject: RE: Spire STL Pipeline

Correct, there is not contamination or pathway for future contamination at that location.

-----Original Message-----

From: Lori Ferry [mailto:L.Ferry@gaiconsultants.com]
Sent: Wednesday, October 12, 2016 11:34 AM
To: Rankins, Jonathan E MVS <Jonathan.E.Rankins@usace.army.mil>
Subject: [EXTERNAL] RE: Spire STL Pipeline

Hi Jon,

We received the email below. Thank you for looking into this so quickly.

Just to confirm, there is no utility support needed because there is an unlikely chance of the contamination being an issue at our proposed crossing location? Just wanted to verify the determination.

We will continue to coordinate with your offices if this proposed crossing location changes.

Thank you again,
Lori Ferry

-----Original Message-----

From: Prebianca, Jacob MVS [mailto:Jacob.A.Prebianca@usace.army.mil]
Sent: Wednesday, October 12, 2016 11:22 AM
To: Jayme Fuller <J.Fuller@gaiconsultants.com>
Cc: Lori Ferry <L.Ferry@gaiconsultants.com>; Ali Trunzo <A.Trunzo@gaiconsultants.com>; Rankins, Jonathan E MVS <Jonathan.E.Rankins@usace.army.mil>
Subject: RE: Spire STL Pipeline

Jayme,

The USACE radiation safety officer Jon Rankins has reviewed this location and determined that no utility support is required. Please contact Jon with any further questions regarding this determination.

Jon Rankins
Jonathan.E.Rankins@usace.army.mil
O:314-260-3933
M:314-399-5505

Thanks,
Jacob Prebianca

Project Engineer
USACE FUSRAP
O 314-731-7661
C 314-422-8954

-----Original Message-----

From: Jayme Fuller [mailto:J.Fuller@gaiconsultants.com]
Sent: Thursday, September 29, 2016 3:31 PM
To: Prebianca, Jacob MVS <Jacob.A.Prebianca@usace.army.mil>
Cc: Lori Ferry <L.Ferry@gaiconsultants.com>; Ali Trunzo <A.Trunzo@gaiconsultants.com>
Subject: [EXTERNAL] Spire STL Pipeline

Hi Jacob,

Per our discussion earlier this week, I have attached a figure outlining the new proposed crossing of Coldwater Creek. The crossing will be offset from the existing crossing and Spire would like to open cut the crossing rather than bore under as originally proposed. I have asked the engineers to estimate soil disturbance calculations for the crossing within the mapped floodplain and across the creek. They are estimating 780 cubic yards of soil disturbance in this area (see the attached sketch).

Spire would like to have this area sampled as soon as possible so they can have an understanding of what they will be getting into prior to construction. Construction is not planned until 2018 however, because this project is regulated by FERC, we have to list and understand all potential impacts associated with the project early on in the process.

Please let me know when your team may be able to sample this location, if is needed at all.

Thanks!

Jayme L. Fuller, Environmental Manager

GAI Consultants, Inc.

Charleston Office | 300 Summers Street, Suite 1100, Charleston WV 25301

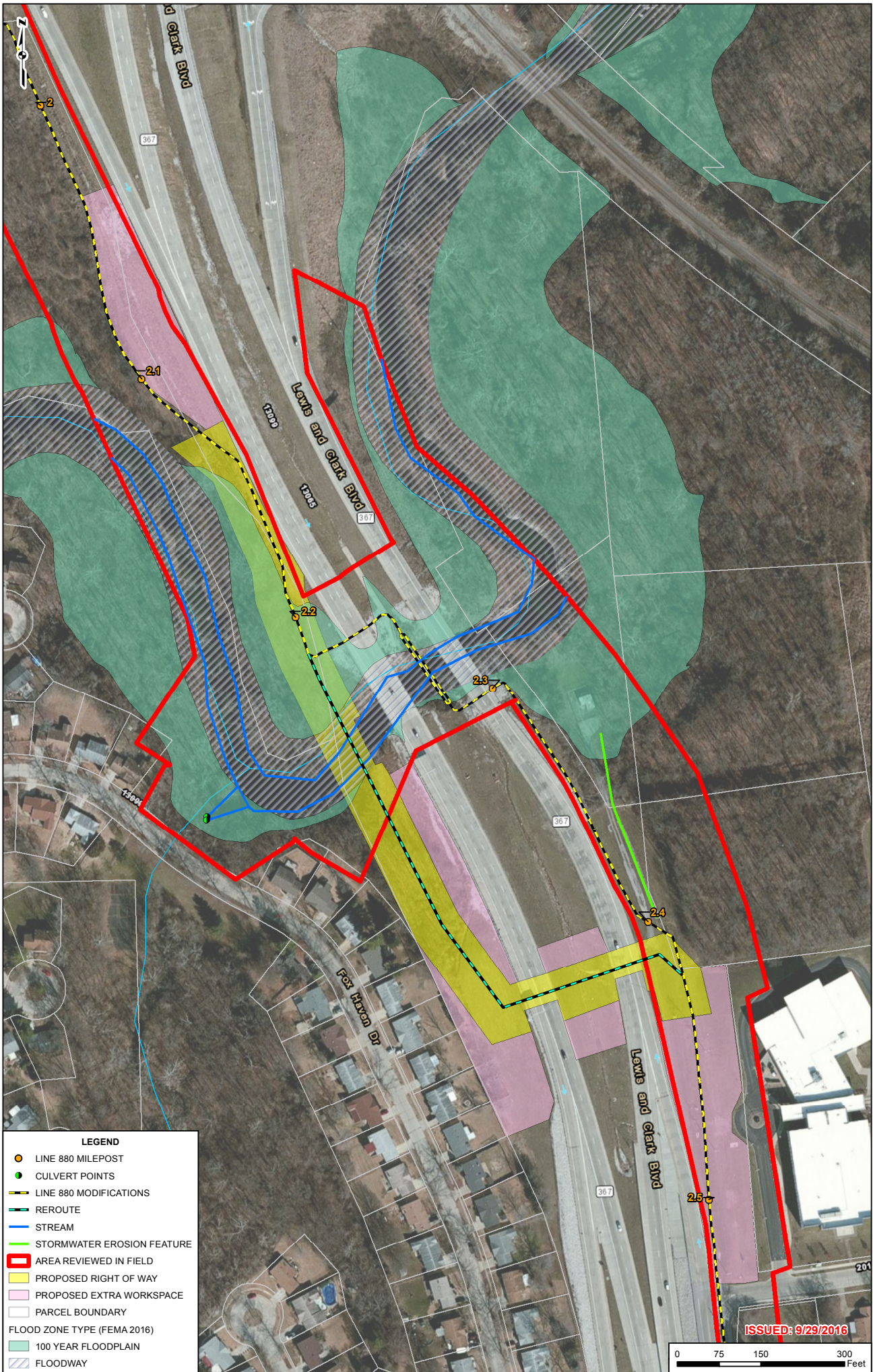
Indianapolis Office | 6420 Castleway West, Indianapolis, IN 46250

1-234-203-0763 | C 614.499.6258 | <BlockedBlockedhttp://www.facebook.com/gaiconsultants>
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<BlockedBlockedhttps://www.linkedin.com/company/gai-consultants-inc.>

<BlockedBlockedhttp://gaiconsultants.com/corporate_blog/index.php>

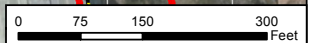
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LEGEND

- LINE 880 MILEPOST
- CULVERT POINTS
- LINE 880 MODIFICATIONS
- REROUTE
- STREAM
- STORMWATER EROSION FEATURE
- ▭ AREA REVIEWED IN FIELD
- ▭ PROPOSED RIGHT OF WAY
- ▭ PROPOSED EXTRA WORKSPACE
- ▭ PARCEL BOUNDARY
- FLOOD ZONE TYPE (FEMA 2016)
- ▭ 100 YEAR FLOODPLAIN
- ▭ FLOODWAY

ISSUED: 9/29/2016





Project Name	<u>Spire STL Pipeline</u>	Page	<u>1</u>	Of	<u>3</u>
Project #	<u>372453</u>				
	<u>Line 880 – Coldwater Creek</u>	Sheet #	<u>1</u>		
Subject	<u>Soils Removal Calculation</u>				
Calculated By	<u>Tyler Olynciw</u>	Date	<u>9/28/2016</u>		
Checked By	<u>Dave Goncalves</u>	Date	<u>9/28/2016</u>		

Dave
9/28/16

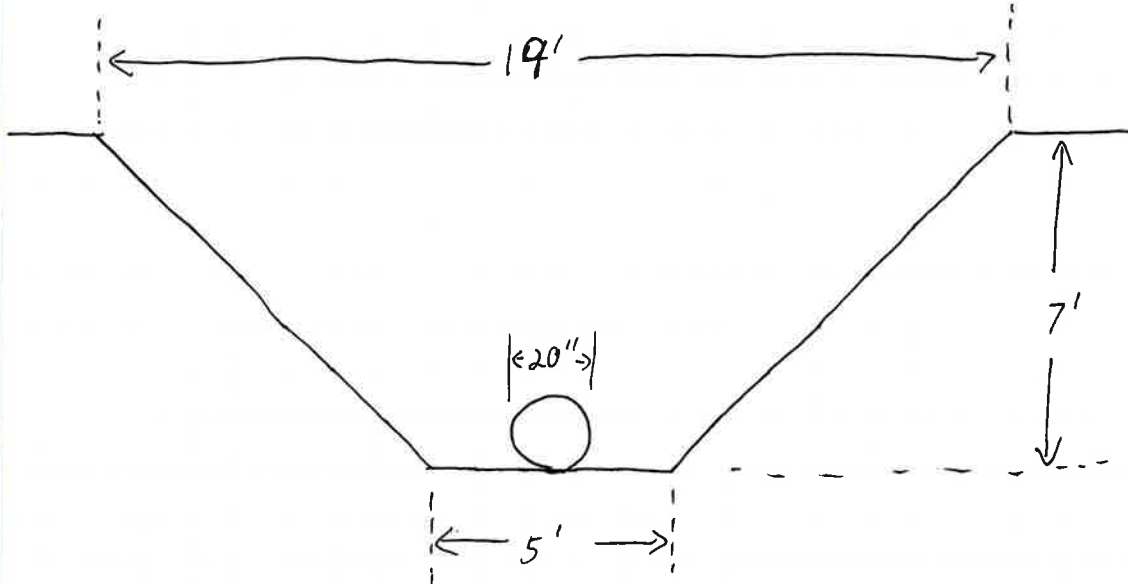
Coldwater Creek Soils Removal Calculation

Revision

1. Calculation of soils needing to be removed within the 100 year flood plain of Coldwater Creek.
– Tyler Olynciw
- 2.



Trench Dimensions'



bottom width depth side width depth

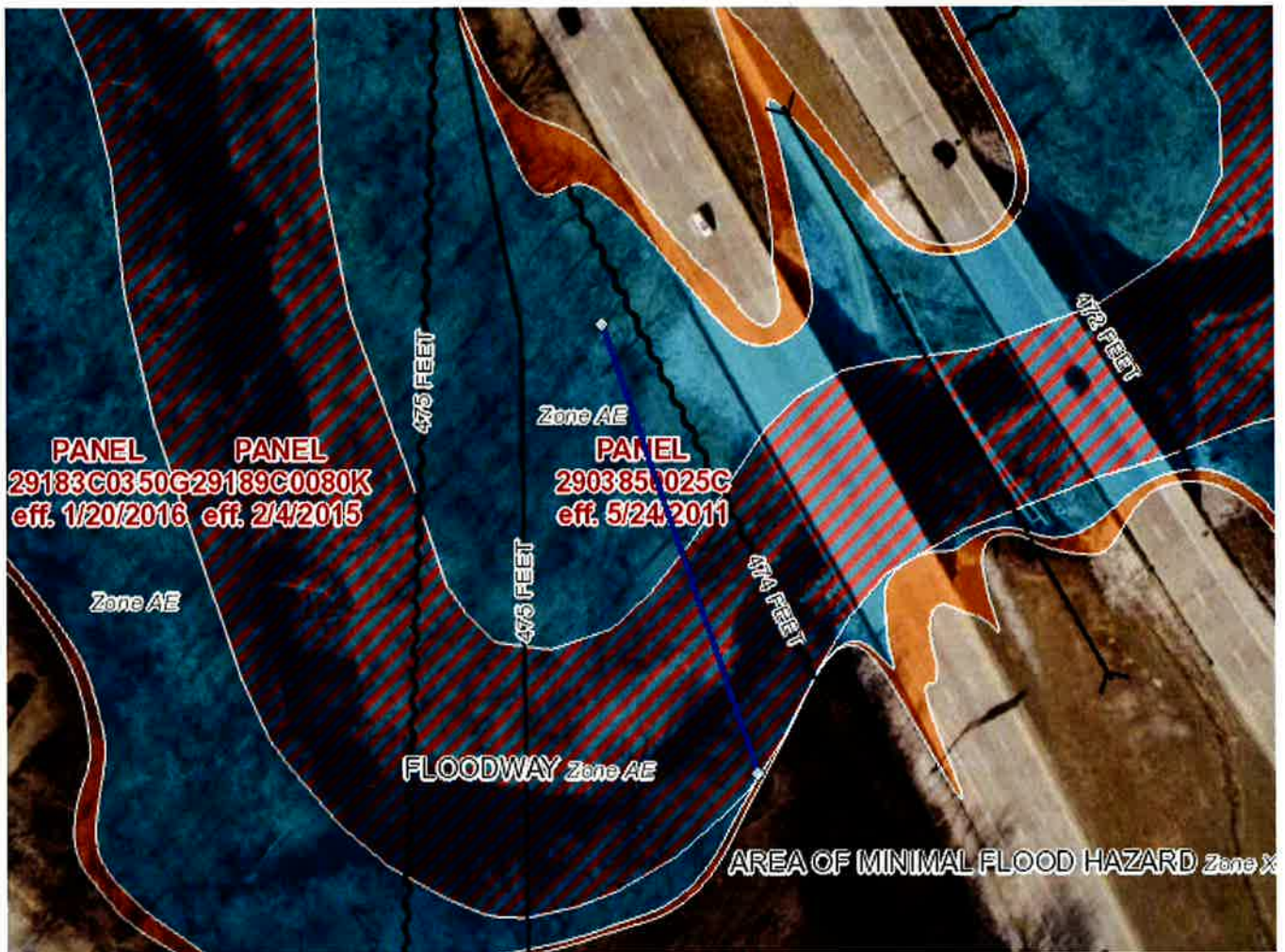
$$5' \times 7' + 7' \times 7' = 84 \text{ feet}^2$$

$$84 \text{ feet} \times 250 \text{ feet long} = 21,000 \text{ feet}^3 \text{ of dirt}$$

$$= 780 \text{ cy}^3$$

Assumptions

1. Trench dimensions based on previous project experience & compliance with OSHA requirements.
2. Length of Crossing based on soils removal within the FEMA 100-year flood plain. (see attached)



Ali Trunzo

From: Ali Trunzo
Sent: Thursday, February 02, 2017 5:01 PM
To: Ali Trunzo
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

From: Ali Trunzo
Sent: Thursday, February 02, 2017 5:00 PM
To: 'ken.tomlin@dnr.mo.gov' <ken.tomlin@dnr.mo.gov>; 'Everett.Baker@dnr.mo.gov' <Everett.Baker@dnr.mo.gov>
Cc: 'maher.jaafari@dnr.mo.gov' <maher.jaafari@dnr.mo.gov>; Tiffany Anders <T.Anders@gaiconsultants.com>
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Ken and Everett,

We wanted to circle back with you regarding the public water well at the Portage Des Sioux plant. Have you heard anything further if there are concerns with the pipeline crossing the 0.5-mile buffer?

Additionally we spoke with Eric Gilstrap yesterday to clarify the status of agency coordination and permitting currently in progress for this Project.

Thank you,

Ali

Alessandra M. Trunzo
D 412.399.5096 Email a.trunzo@gaiconsultants.com



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From: Tomlin, Ken [<mailto:ken.tomlin@dnr.mo.gov>]
Sent: Tuesday, January 24, 2017 4:38 PM
To: Tiffany Anders <T.Anders@gaiconsultants.com>
Cc: Vitello, Diane <Diane.Vitello@dnr.mo.gov>
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

FYI

From: Tomlin, Ken
Sent: Tuesday, January 24, 2017 4:13 PM
To: Lepper, Erin
Cc: Vitello, Diane; Jaafari, Maher
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

A small map...

telephone log



gai consultants

Date: 2/1/2017

Project / Admin. No.: E160438.00

Call From: Ali Trunzo

Company: GAI Consultants

Phone No.: 412.399.5096

Call To: Eric Gilstrap

Company: MDNR

Phone No.: 314-416-2960

Subject: Spire STL – Follow up

cc:

Summary of Discussion, Decisions, and Commitments:

Called Mr. Gilstrap to discuss his January 25, 2017 email summarizing permitting considerations for the Project. Provided an update on the Project, including:

1. Spire is in coordination with the USACE regarding the Coldwater Creek crossing and the USACE confirmed there are no concerns with contamination. Spire has also applied for and received individual 401 Water Quality Certification from MDNR for this crossing.
 - a. Mr. Gilstrap would like to circulate the USACE's response on this crossing. Contamination has been discovered at surprising locations on the creek, and for MDNR and Spire's sake, MDNR is currently recommending a monitor on site during construction. MDNR would like to review the USACE findings and determine their recommendations.
2. Spire has submitted applications to the USACE under NWP-12. With the exception of Coldwater Creek, other crossings meet the conditions of the automatic 401 water quality certification.
3. Spire will obtain the necessary hydrostatic discharge and land disturbance permits prior to construction.
4. Spire is coordinating with David Meyer of the USACE.
5. Spire is awaiting information from MDNR regarding the Project's proximity to the public water well at Portage Des Sioux.
 - a. Mr. Gilstrap confirmed to reach out to Everett Baker and Ken Tomlin for an update.

At Mr. Gilstrap's request, discussed which aspects of the Project are new vs existing. For the new HDD crossing of the Mississippi River, Mr. Gilstrap expressed concern that if the pipe would be drag chained into place that the disturbance could affect a surface water downstream at the Chain of Rocks treatment facility for St. Louis and recommended notifying the water authority. Clarified that the crossing would be constructed via HDD, with positive geotechnical study results, therefore no in-river disturbance was proposed.

Ali Trunzo

Subject: FW: Natural Gas Pipeline Project
Attachments: 201701250954.pdf

From: Gilstrap, Eric [<mailto:eric.gilstrap@dnr.mo.gov>]

Sent: Wednesday, January 25, 2017 11:59 AM

To: Tiffany Anders <T.Anders@gaiconsultants.com>

Cc: Jaafari, Maher <maher.jaafari@dnr.mo.gov>; Baker, Everett <Everett.Baker@dnr.mo.gov>; Franklin, Dorothy <dorothy.franklin@dnr.mo.gov>; Stout, Robert <robert.stout@dnr.mo.gov>; Wieberg, Chris <chris.wieberg@dnr.mo.gov>; Bax, Stacia <stacia.bax@dnr.mo.gov>

Subject: FW: Natural Gas Pipeline Project

Ms. Anders,

I work with Everett and Maher at Missouri Department of Natural Resources. They mentioned you are currently gathering information.

Here are some contact names and numbers regarding various topics you might find applicable to you. I apologize if this is redundant, or different from, any information you may have already obtained. If the information is different, there may be something I misunderstood. If the latter please let me know or feel free to discuss the matter with other contacts you may already be working with in the Department.

1. As the pipeline crosses Coldwater Creek in North St. Louis County, there will be a need for coordination with a Corps of Engineers project office related to environmental cleanups. You can find further information here: <http://www.mvs.usace.army.mil/Missions/Centers-of-Expertise/Formerly-Utilized-Sites-Remedial-Action-Program/> or you can contact Jo Anne Wade or Jonathan Rankins directly at (314) 260-3905. Concerns related to contamination most likely wouldn't cause a re-routing or any other similar drastic impact. The impact would most likely be the some or all of the following: some additional planning and communication, possibly some additional sampling/field support/removal of materials by the Corps, being aware of or wanting to attend some of their public meetings regarding remediation work being done in the creek. Another contact on this topic would be Dan Carey, with MoDNR, at (314) 877-3047.
2. Regarding 401 water quality certifications, the contact with Water Pollution Control is Stacia Bax or Mike Irwin: (573) 526-4586.
3. Regarding permitting for discharges related to hydrostatic testing of pipelines, Stacia can also provide advice regarding whether to go through her or one of the regions. An example of this permit can be found here: <http://dnr.mo.gov/env/wpp/permits/issued/docs/G670000.pdf>
4. Obtainment of a land disturbance permit MIGHT be need to address some of the work. An example of a permit that is most likely to be applicable to this situation would be found here: <http://dnr.mo.gov/env/wpp/permits/issued/docs/R100000.pdf> Please also contact Stacia if you have questions.
5. Forms to apply for one of the above mentioned permits can be found here: <http://dnr.mo.gov/forms/780-0795-f.pdf>
6. Local Corps of Engineers contacts regarding impacts access to local streams and waterways would be Samantha Hollenberg of Jennifer Skiles: 'Hollenberg, Samantha L CIV (US)' <Samantha.L.Hollenberg@usace.army.mil>; 'Jennifer.L.Skiles@usace.army.mil'

Best wishes,
Eric

Eric Gilstrap, P.E.

From: Baker, Everett
Sent: Tuesday, January 24, 2017 11:31 AM
To: Franklin, Dorothy
Cc: Jaafari, Maher
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

I am forwarding this email train to you to make you aware of a proposed construction project in your region. Maher was first contacted in October but was going to be out of the office and asked me if I would help. I made some preliminary comments and talked to Ms. Matthews on the telephone. At that time they were proposing a pipeline that would extend deeply into St Charles County and cross the Missouri River south of I-70 but said the plan was somewhat tentative. Since then I received a telephone call and email from a Ms. Anders with a new proposed and hopefully firmer plan (attached) so Maher and I decided that it was time to involve the region. I do not know where the company is on applying for land disturbance, 404 or 401 permits but it is probably time to remind them these permits have to be obtained. Do you know of any other permits that might be required?

From a drinking water standpoint the well a Portage Des Sioux looks to be the only well that will be impacted unless there are some public wells that I have missed. If there are please let us know. The pipeline will probably have little impact on the Portage Des Sioux well but I would feel more confident with more information. Could you have someone look in the region's files and see if you have more information on the construction of this well? I am most interested in the depth of soil over the aquifer and in the depth of the protective outer casing of the well. If you do not have more information on the well perhaps one of your staff could contact the system to see if they have more information. We would certainly appreciate any other comments that you may have concerning the proposed project.

From: Jaafari, Maher
Sent: Monday, January 23, 2017 3:36 PM
To: Baker, Everett
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

I'll call you tomorrow after 8:30. Thanks

From: Baker, Everett
Sent: Monday, January 23, 2017 10:27 AM
To: Jaafari, Maher
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

I received a call from Ms. Anders concerning this issue. They are going to dig within 1,400 feet of the Portage de Sioux water supply well. The well is an alluvial well with a total depth of 116 feet and a yield of 250 gpm. The public water system supply map and data sheet tells me that the well has a casing depth of 106 feet which must be the inner casing depth and not the protective outer casing. I assume the grouted outer casing is around 20 feet in depth. I have no data on whether there are any protective clay or soil layers between the surface and the well formation or of the hydraulic gradient of the groundwater in the area. The pipeline people tell me that they will install a cover over the pipeline of 7 feet which means they will be digging a trench that is around 10 feet deep. I do not think that the pipeline trench will

THE DIVISION OF HEALTH
OF MISSOURI

October 26, 1966

*W. J. Miller
10/27/66
H. Harrison*

Environmental Services

Honorable Vincent M. Eilers
Mayor of Portage Des Sioux
Portage Des Sioux, Missouri

Dear Mayor Eilers:

Enclosed herewith is a Report on Plans and Specifications for
New Public Water Supply Facilities, Portage Des Sioux, Missouri,
which I believe is self-explanatory.

By the direction of J. P. Russell, M.D., Director, Section of
Hospital and Technical Services.

Very truly yours,

Robert S. Miller, P.E.
Chief, Water Supply

RSM-DDS:d1

cc: City Clerk
R. M. Harrison and Associates
✓ District Health Office No. 3

Enclosure

RSM-Engman

RECEIVED

OCT 28 1966

DISTRICT HEALTH OFFICE No. 3

THE DIVISION OF HEALTH OF MISSOURI

REPORT ON PLANS AND SPECIFICATIONS FOR NEW PUBLIC WATER SUPPLY FACILITIES PORTAGE DES SOUX, MISSOURI October 26, 1966

INTRODUCTION

Plans and specifications for new public water supply facilities for Portage Des Souix, Missouri, were submitted for review and approval by R. M. Harrison and Associates, Consulting Engineers, St. Louis, Missouri.

BRIEF DESCRIPTION

In general, the plans and specifications provide for the construction of a gravel wall well as a source of supply, water treatment facilities, and the necessary distribution system for a complete waterworks system.

A gravel wall well approximately 90 feet deep will serve as the source of supply. The 8-inch well casing will extend approximately 80 feet below ground level. The annular space between the drill hole and casing will be sealed with cement grout to a depth of at least 20 feet below ground level. The well will be equipped with a submersible type pump with a capacity of 70 gallons per minute. Additional well appurtenances will include a water level depth gauge, sampling tap, and breather pipe. Water will discharge from the well through a forced draft aerator, then to a steel sedimentation basin which will provide a total detention time of approximately 2 hours. Chlorine for disinfection purposes and a solution for pH control will be applied to the aerator effluent line. A centrifugal type pump with a capacity of 50 gallons per minute will take suction from the sedimentation basin and discharge the water through two pressure sand filters. Each filter will be 60 inches in diameter and have a sidewall height of 60 inches. Filter media will include 24 inches of sand with an effective size of 0.50 mm to 0.55 mm and a uniformity coefficient of not greater than 1.65. Also included is the necessary supporting gravel and underdrain system. Additional filter appurtenances include pressure gauges for determining the loss of head, access manholes, air release valves, and sampling taps as included in the plans and specifications. Water will discharge from the pressure sand filters to a zeolite softener. The softener will be 54 inches in diameter and will have a sidewall height of 7 feet. Additional facilities will include the necessary valves, fittings, brine pumping facilities, rate of flow gauges, metering devices, controls, and other appurtenances as included in the plans and specifications.

Finished water storage facilities will include an elevated storage reservoir with a capacity of 50,000 gallons. The reservoir will be constructed and painted in accordance with American Water Works Association standard specifications.

The distribution system will include 21,700 lineal feet of 4-inch AC pipe, 5000 lineal feet of 6-inch AC pipe, 150 meters and service connections, along with the necessary valves, fittings, hydrants and other appurtenances

THE DIVISION OF HEALTH
OF MISSOURI

Portage Des Sioux

-2-

October 26, 1966

as included in the plans and specifications. An alternate for cast iron pipe in lieu of the AC pipe is included in the bid proposal.

After completion of construction and prior to placing into service, all of the facilities will be disinfected.

COMMENTS

This approval of the plans and specifications is given with the understanding that the gravel wall well will be constructed initially and the chemical and bacteriological quality of the water determined prior to the construction of the other water supply facilities.

APPROVAL OF PLANS

The plans and specifications described above were examined as to sanitary features of design which may affect the operation of the sanitary works, including size, capacities of the units, and factors which may affect the efficiency and ease of operation. Approval of the plans and specifications as regards these points is hereby given.

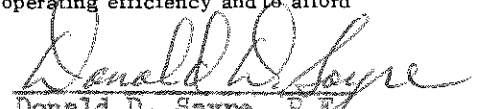
Approval of these plans and specifications is given with the understanding that final inspection and approval of the completed works shall be made by the Division of Health before same is accepted and placed in operation. This approval terminates two years from the date appearing on this report unless construction is begun on the described work prior to that date or unless extension of the approval is secured in writing from the Division of Health.

In the examination of plans and specifications, the Division of Health does not examine the structural features of design or efficiency of mechanical equipment. This approval does not include approval of these features.

The Division of Health reserves the right to withdraw the approval of these plans and specifications at any time it is found that additional treatment or alterations are necessary to assure reasonable operating efficiency and to afford adequate protection to public health.

OCT 28 1966

DISTRICT HEALTH OFFICE No. 2


Donald D. Sayre, P.E.
Assistant Chief
Water Supply

SUPPLY Portage des Sioux

WELL DATA:

	Well No. 1	Well No.	Well No.	Well No.	Well No.	Well No.
Date Drilled.....	1967					
Local Designation.....	AG Treated Pond					
Type.....	Alluvial					
Total Depth.....	116'					
Depth and Size of Casing.....	106' - 8"					
Casing Material.....	Steel					
Size Hole Below Casing Point.....						
Static Water Level.....	17'					
Draw Down and Yield.....	10' @ 500 gpm					
Water-Bearing Strata.....	Mo. River Alluv.					
Top Seal (Method).....	Split Ring					
Bottom Seal.....	P. Grout					
Pump Type.....	Subm. Turbine					
Manufacturer.....	Peerless					
Capacity.....	120 gpm					
Pump Setting.....	55'					
Meter.....	Yes					
Size and Length of Screen.....	8" - 10'					
Type of Standby Power.....						
Surface Drainage.....						
Date Abandoned.....						
Date Plugged.....						

Portage des Sioux

	Well No. 1	Well No. 2	Well No. 3	Well No. 4	Well No. 5	Well No. 6
Approximate Elevation.....						
Type.....	<i>Alluvial</i>					
Depth.....	<i>116'</i>					
Depth and Size of Casing.....	<i>106'-8"</i>	<i>-12"</i>	<i>(incl. 10 ft. screen, 8" diam.)</i>			
Material.....	<i>Stl.</i>					
Static Water Level.....	<i>17'</i>					
Draw Down.....	<i>10' @ 500 gpm</i>					
Yield.....	<i>800-1000 gpm (estimated)</i>					
Water-Bearing Strata.....	<i>Miss. R. Alluvium</i>					
Thickness.....						
Depth.....						
Top Seal.....	<i>Split ring</i>					
Bottom Seal.....	<i>grout</i>					
Pit.....	<i>—</i>					
Drain or Ejector.....	<i>—</i>					
Outlet of Drain.....	<i>—</i>					
Pump Type.....	<i>Subm. Turb.</i>					
Manufacturer.....	<i>Peerless</i>					
Power.....	<i>3 HP</i>					
Capacity.....	<i>120 gpm 120 gpm</i>					
Surface Drainage.....	<i>1967</i>					

Source of Contamination.....

SKETCH:

DEFECTS:

PUBLIC WATER SUPPLY RECORD

FORM E 2.02

CITY Portage des Sioux TREATMENT Aeration-Filtration-Softening-Chlorination
 Population 370 Per Cent Population Available _____
 Date Constructed Completed Oct. 1967 Per Cent Population Served _____
 Approximate Cost _____ Design Engineer Harrison & Assoc. - St. Louis
 Railroad Supplied _____ Superintendent _____
 Number of Connections _____ Operator _____
 Average Consumption _____ Mayor _____
 Maximum Consumption _____ City Clerk _____
 Per Cent Metered _____ City H. O. _____
 Approved _____ Owner _____

Last Completed City Valuation _____
 Bonded Indebtedness: Water _____ Sewers _____ Others _____

Private or City Officials _____

SOURCE: Ground Water Mississippi River alluvium

SOURCE: Surface Water _____ Sewers Above Source _____

SOURCE: Impounded Supply:

	Drainage Area	Capacity	Water Area	Max. Depth
1				
2				
3				

Used for Recreational Purposes _____

 Propagation of Fish _____ Supervision _____

CHEMICAL TREATMENT:

	Chemical Used	How Applied	Where Applied	Max. Dose	Min. Dose	Ave. Dose
1						
2						
3						
4						
5						

DISINFECTANT:

Agent *Hypochlorite*

How Applied *liquid*

Where Applied *after aerator, and at plant discharge*

Control

PUMPS:

		Name	Power	Type	Capacity
1	Low Service				
2	Low Service				
3	Low Service				
4	High Service	<i>Peerless</i>	<i>5 HP elec.</i>	<i>centrifugal</i>	<i>rated 50 gpm</i>
5	High Service				
6	High Service				
7	Wash Water				

STORAGE: Purified Water:

	Type	Capacity	Construction	Covered	Surface Drain	Outlets
1	<i>Elevated</i>	<i>50,000</i>	<i>Steel</i>			
2						
3						
4						

Possible Contamination

LABORATORY TESTS: Chemical:

Alk. _____ Hardness _____ Chlorine _____ pH _____ Turbidity _____

LABORATORY TESTS: Bacteriological:

Presumptive _____ Partially Confirmed _____ Confirmed _____ Total Count _____

RECORDS:

SOURCE: Miscellaneous:

INTAKE: Description:

10' Screen 30" hole sandpacked to 8"

AERATION: Description:

Forced draft - 11 trays 68.75 sq. ft. tray area

MIXING CHAMBERS:

	Type	Capacity	Detention	Velocity ft./sec.	Provision for Draining
1					
2					

SEDIMENTATION BASINS:

	Construction	Capacity	Detention	Dimensions	Cleaning
1	Steel		1 hr.		drain near bottom
2					
3					

FILTERS:

Number *Two - pressure sand* Loss of Head Gauge *on influent and effluent lines*

Size _____ Rate Controller _____

Valves _____ Rate of Flow Gauge _____

Capacity *50 gpm total*

Normal Rate *50 gpm*

Wash Water Tank _____ Wash Water Pump _____

Gravel _____ Sand _____

Underdrain System _____

IMPROVEMENTS:

PLANT OPERATION: Description, Difficulties:

SAMPLES: Provision for Collection:

CROSS CONNECTIONS:

INSPECTIONS: Date, Name:

REPORTS: Date, Name:

Ali Trunzo

Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project
Attachments: pipe_wells.pdf

From: Tomlin, Ken [<mailto:ken.tomlin@dnr.mo.gov>]
Sent: Tuesday, January 24, 2017 4:38 PM
To: Tiffany Anders <T.Anders@gaiconsultants.com>
Cc: Vitello, Diane <Diane.Vitello@dnr.mo.gov>
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

FYI

From: Tomlin, Ken
Sent: Tuesday, January 24, 2017 4:13 PM
To: Lepper, Erin
Cc: Vitello, Diane; Jaafari, Maher
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

[A small map...](#)

From: Lepper, Erin
Sent: Tuesday, January 24, 2017 1:12 PM
To: Tomlin, Ken
Cc: Vitello, Diane
Subject: Fwd: Drinking Water Concerns - Natural Gas Pipeline Project

Sent from my iPhone

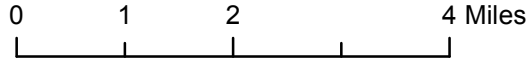
Begin forwarded message:

From: "Franklin, Dorothy" <dorothy.franklin@dnr.mo.gov>
To: "Lepper, Erin" <Erin.Lepper@dnr.mo.gov>
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

Erin,

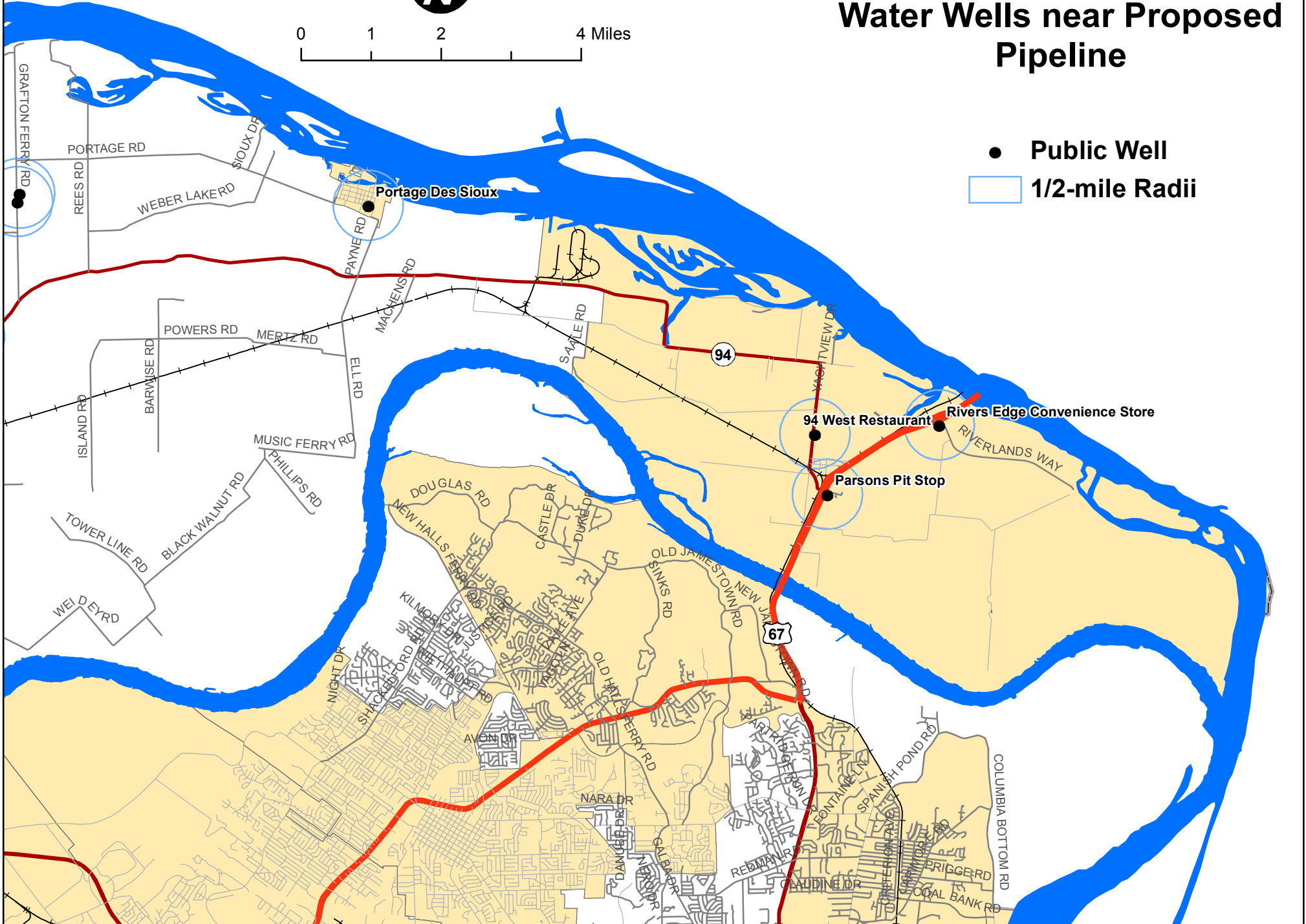
Usually these projects get sent through multiple departments to look for possible impacts of the project. I'm not sure if this particular pipeline is being routed yet for review or not since the request below to SLRO came from drinking water program and Everett Baker. I'm not sure now who is handling these but assume it is someone from the Director's office still so thought we might want to make sure their request is getting circulated everywhere it should be.

*Dorothy Franklin
St. Louis Regional Office Director
Missouri Department of Natural Resources
7545 S. Lindbergh, Suite 210
St. Louis, MO 63125
PH(314)416-2960
FAX(314)416-2970*



Active/Emergency Public Water Wells near Proposed Pipeline

- Public Well
- 1/2-mile Radii



Ali Trunzo

Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Begin forwarded message:

From: "Tomlin, Ken" <ken.tomlin@dnr.mo.gov>
Sent: Tuesday, January 24, 2017
To: "Tiffany Anders" <T.Anders@gaiconsultants.com>
Cc: "Vitello, Diane" <Diane.Vitello@dnr.mo.gov>
Subject: **FW: Drinking Water Concerns - Natural Gas Pipeline Project**

Ms. Anders – in case this has not been forwarded to you. There will be a follow-up e-mail with additional information also. Please let me know if questions and thanks-
Ken

Kenneth P. Tomlin

Source Water Assessment and Protection Coordinator
Water Protection Program – Public Drinking Water Branch
PO Box 176, Jefferson City, MO 65102-0176
Office Phone: (573) 526-0269
Office Fax: (573) 751-3110



Promoting, Protecting and Enjoying our Natural Resources. Learn more at dnr.mo.gov.

From: Tomlin, Ken
Sent: Tuesday, January 24, 2017 4:12 PM
To: Lepper, Erin
Cc: Vitello, Diane; Jaafari, Maher; Baker, Everett
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

FYI – Please forward as appropriate.

Attached is a copy of the well log for the Portage des Sioux well. The log shows up to five feet of a silty/clay layer on the surface that overlies sand (drillers are required to report layers in increments of five feet, so the silty clay may be less than five feet thick). I've also attached the assessment report for this well. There are other wells in close proximity to the route.

I'll see if I can dig up well logs and related info for these other wells in a follow-up e-mail. Thanks,
Ken

From: Lepper, Erin
Sent: Tuesday, January 24, 2017 1:12 PM
To: Tomlin, Ken

Cc: Vitello, Diane

Subject: Fwd: Drinking Water Concerns - Natural Gas Pipeline Project

Sent from my iPhone

Begin forwarded message:

From: "Franklin, Dorothy" <dorothy.franklin@dnr.mo.gov>
To: "Lepper, Erin" <Erin.Lepper@dnr.mo.gov>
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

Erin,

Usually these projects get sent through multiple departments to look for possible impacts of the project. I'm not sure if this particular pipeline is being routed yet for review or not since the request below to SLRO came from drinking water program and Everett Baker. I'm not sure now who is handling these but assume it is someone from the Director's office still so thought we might want to make sure their request is getting circulated everywhere it should be.

*Dorothy Franklin
St. Louis Regional Office Director
Missouri Department of Natural Resources
7545 S. Lindbergh, Suite 210
St. Louis, MO 63125
PH(314)416-2960
FAX(314)416-2970*

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Breathe Safe, Stop Vehicle Idling.



Learn more at dnr.mo.gov/pub2354.pdf

From: Baker, Everett
Sent: Tuesday, January 24, 2017 11:31 AM
To: Franklin, Dorothy
Cc: Jaafari, Maher
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

I am forwarding this email train to you to make you aware of a proposed construction project in your region. Maher was first contacted in October but was going to be out of the office and asked me if I would help. I made some preliminary comments and talked to Ms. Matthews on the telephone. At that time they were proposing a pipeline that would extend deeply into St Charles County and cross the Missouri River south of I-70 but said the plan was somewhat tentative. Since then I received a telephone call and email from a Ms. Anders with a new proposed and hopefully firmer plan (attached) so Maher and I decided that it was time to involve the region. I do not know where the

company is on applying for land disturbance, 404 or 401 permits but it is probably time to remind them these permits have to be obtained. Do you know of any other permits that might be required?

From a drinking water standpoint the well a Portage Des Sioux looks to be the only well that will be impacted unless there are some public wells that I have missed. If there are please let us know. The pipeline will probably have little impact on the Portage Des Sioux well but I would feel more confident with more information. Could you have someone look in the region's files and see if you have more information on the construction of this well? I am most interested in the depth of soil over the aquifer and in the depth of the protective outer casing of the well. If you do not have more information on the well perhaps one of your staff could contact the system to see if they have more information. We would certainly appreciate any other comments that you may have concerning the proposed project.

From: Jaafari, Maher
Sent: Monday, January 23, 2017 3:36 PM
To: Baker, Everett
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

I'll call you tomorrow after 8:30. Thanks

From: Baker, Everett
Sent: Monday, January 23, 2017 10:27 AM
To: Jaafari, Maher
Subject: FW: Drinking Water Concerns - Natural Gas Pipeline Project

I received a call from Ms. Anders concerning this issue. They are going to dig within 1,400 feet of the Portage de Sioux water supply well. The well is an alluvial well with a total depth of 116 feet and a yield of 250 gpm. The public water system supply map and data sheet tells me that the well has a casing depth of 106 feet which must be the inner casing depth and not the protective outer casing. I assume the grouted outer casing is around 20 feet in depth. I have no data on whether there are any protective clay or soil layers between the surface and the well formation or of the hydraulic gradient of the groundwater in the area. The pipeline people tell me that they will install a cover over the pipeline of 7 feet which means they will be digging a trench that is around 10 feet deep. I do not think that the pipeline trench will affect the yield of the well but it could leave it more vulnerable to contamination. It is hard to say without more information on the well. Ms. Anders does need us to reply to her.

From: Tiffany Anders [<mailto:T.Anders@gaiconsultants.com>]
Sent: Tuesday, January 17, 2017 11:38 AM
To: Baker, Everett
Cc: Jaafari, Maher
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Mr. Baker,

I am following up on my colleague's email and your response back in October regarding the proposed natural gas pipeline in St. Charles and St. Louis Counties. I also recently spoke with the Wellhead Protection Program's Kyle Rollins who said Ken Tomlin may be the local MDNR contact; I have reached out to Mr. Tomlin by phone and have been

unable to reach him. In the meantime, I also wanted to circle back to you now that we have more information from the pipeline company, Spire.

The attached figure displays Spire's currently proposed pipeline location at the Mississippi River and Missouri River; these river crossings are planned to be constructed by horizontal directional drill (HDD) method. No water supply intakes were located within 3 miles downstream of the river HDD crossings. However, the Mississippi River HDD location is currently proposed 2.5 miles upstream of the Portage Des Sioux Water Plant. MDNR public data suggests this Water Plant includes an active water well. Additionally, as the proposed pipeline route heads east-southeast from the Mississippi River HDD crossing, pipeline construction methods will be a typical depth to cover of five feet in ag fields where the construction workspace passes about 1,450 feet south of the Water Plant. This is within the MDNR's standard 0.5-mile buffer zone of a public water source.

At this time, GAI on behalf of Spire, would like to know if there are any public water concerns with the locations of either HDD drill or the within the 0.5 mile buffer of the Water Plant. Based on our research at this time, MDNR information suggests alluvial recharge at the Mississippi River typically occurs with high flows stages of the river where groundwater moves from bedrock to the alluvium. Given the distance and depth (well below river bottom) of the HDDs and shallow construction at the 0.5 mile buffer of the Water Plant, are there any MDNR crossing restrictions for these areas as currently proposed?

Thank you for your time. I look forward to hearing back from and will be available by phone or email.

Best,
Tiffany

Tiffany Anders
Project Environmental Specialist

GAI Consultants
2800 Post Oak Boulevard, Suite 4100, Houston, TX 77056

D 346.231.7172 | M 281.382.0427 | gaiconsultants.com |      



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From: Baker, Everett [<mailto:Everett.Baker@dnr.mo.gov>]
Sent: Monday, October 24, 2016 11:17 AM
To: Jaafari, Maher <maher.jaafari@dnr.mo.gov>; Erin Matthews <erin.matthews@gaiconsultants.com>
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

I can only speak to the concerns the department may have concerning public drinking water systems. Other environmental concerns about the pipe line and crossings must be answered by other programs within the department. As with any construction project our biggest concern is its proximity to water supply sources and facilities. The city of St.

Charles has wells in the Missouri/Mississippi River alluvium in the general vicinity of where the pipe line seems to be crossing the Missouri River. A water supply line from St. Louis to St. Charles crosses the Missouri River near St. Charles and provides over half of the water used by St. Charles. For exact locations you should talk to the city of St. Charles. St. Charles County PWSD #2 also has wells in the Missouri River Alluvium. The wells are located south of St. Charles on the west side of the river near the Weldon Springs Conservation Area. Again for more exact location you should contact the water district.

We do not have specific concerns about horizontal directional drilling of river crossings other than the holes dug to drill or access the new crossing. If HDD is used to construct part of the pipeline the mud used during drilling can plug portions of the alluvial aquifer and affect well yield. Again this depends on proximity.

From: Jaafari, Maher
Sent: Wednesday, October 19, 2016 11:50 AM
To: 'Erin Matthews'
Cc: Baker, Everett; Jaafari, Maher
Subject: RE: Drinking Water Concerns - Natural Gas Pipeline Project

Erin,

I'm reviewing your request and I'll let you know as soon as possible. However, I'll be out of the office for a week. Therefore, I copied Mr. Everett Baker who can provide you with an answer while I'm out of the office. Please let me know if you have more question.

Thank you

Maher Jaafari, P.E., Chief
Infrastructure Permits and Engineering Section
Public Drinking Water Branch
Water Protection Program
Missouri Department of Natural Resources
(573) 751-1127

From: Erin Matthews [<mailto:erin.matthews@gaiconsultants.com>]
Sent: Tuesday, October 18, 2016 12:04 PM
To: Jaafari, Maher
Subject: Drinking Water Concerns - Natural Gas Pipeline Project

Hello,

I am working on a FERC filing for a proposed natural gas pipeline project that is anticipated to cross the Mississippi River in St. Charles County and the Missouri River in St. Louis County via horizontal directional drills (HDD). I've noticed that the Mississippi and Missouri Rivers are designated as drinking water supply streams and I've located one water well for the Portage Des Sioux Public Water Treatment Facility 2.5-miles downstream of the Project's crossing of the Mississippi River. No public source water areas were located downstream of the Project's crossing of the Missouri River. The HDD contingency plan is currently being drafted and we are continuing our coordination for applicable state and federal permits for the Project, however does the public water supply department typically have additional concerns with the HDDs under the rivers?

Thanks for your assistance,

Erin M. Matthews
Project Environmental Specialist

GAI Consultants, Inc.
385 East Waterfront Drive, Homestead, PA 15120-5005

T 412.476.2000 | **D** 412.399.5251 | **M** 724.322.2731 | gaiconsultants.com |

Erin M. Matthews Project Environmental Specialist 385 East Waterfront Drive Homestead, PA 15120-5005 412.476.2000	Erin M. Matthews Project Environmental Specialist 385 East Waterfront Drive Homestead, PA 15120-5005 412.476.2000	Erin M. Matthews Project Environmental Specialist 385 East Waterfront Drive Homestead, PA 15120-5005 412.476.2000	Erin M. Matthews Project Environmental Specialist 385 East Waterfront Drive Homestead, PA 15120-5005 412.476.2000
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* Please update your records with my new direct telephone number

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telephone log



gai consultants

Date: 01/23/2017

Project / Admin. No.: E160438.00

Call From: Tiffany Anders

Company: GAI Consultants

Phone No.: 346.231.7172

Call To: Everett Baker, Public Drinking Water Program

Company: Missouri Department of Natural Resources

Phone No.: 573.751.1300

Subject: Portage Des Sioux Water Plant and HDD Crossings

cc: Lori Ferry

Summary of Discussion, Decisions, and Commitments:

Ms. Anders spoke with Ms. Everett Baker of MDNR Public Drinking Water Program to confirm if he and Mr. Mahar Jaafari received our email communication follow-up on January 17, 2017 regarding the location of Spire's HDD crossings and construction within the 0.5-mile buffer of the Portage Des Sioux water plant. Mr. Baker confirmed he saw the email and we are to await response from Mr. Jaafari. Mr. Baker's initial impressions after reviewing the email were that HDD crossings were far enough away from public water sources, however, he was going to take a closer look at the Portage Des Sioux water plant location and potential for recharge impacts.



Missouri State Historic Preservation Office



April 21, 2017

Ms. Judith Deel
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, Missouri 65101

**Re: Spire STL Pipeline Project; St. Charles and St. Louis Counties, Missouri
Submittal of Technical Report - Phase II Archaeological Testing at Site 23SC2219
SHPO Log #: 061-MLT-16**

Dear Ms. Deel:

On behalf of Spire STL Pipeline LLC ("Spire"), a wholly-owned subsidiary of Spire Inc., GAI Consultants, Inc. ("GAI") is submitting for your review and comment the enclosed report on Phase II Archaeological Testing at Site 23SC2219, located within the proposed Spire STL Pipeline Project ("Project") in St. Charles County, Missouri.

Spire is seeking authorization from the Federal Energy Regulatory Commission pursuant to Section 7(c) of the Natural Gas Act to construct and operate the proposed Project, located in Scott, Greene, and Jersey Counties, Illinois, and in St. Charles and St. Louis Counties, Missouri. The total length of the Project pipelines will be approximately 104 kilometers (km) (65 miles [mi]), of which 31.43 km (19.53 mi) are in Missouri.

Site 23SC2219 was identified during GAI's Phase I survey of the Project in 2016, and was further investigated during supplemental Phase I work in 2017. The results of Phase I investigations of the site are included in a Phase I report (Scuoteguazza et al. 2017a), which has been reviewed by your office (review letter dated March 23, 2017), and in a Phase I addendum report (Scuoteguazza et al. 2017b), which will be submitted for your review in April 2017. Based on the results of Phase I survey Site 23SC2219 consists of the remains of a multicomponent Middle Archaic to Mississippian period occupation on a low terrace above the Mississippi River floodplain, with maximum dimensions of 134 x 515 meters (m) (441 x 1688 feet [ft]).

Subsequent to completion of Phase I studies, Spire revised the Project Limit of Disturbance (LOD) to cross the narrow, central portion of the site. At Spire's request, GAI conducted Phase II testing of Site 23SC2219 in March 2017. The Phase II Area of Potential Effect (APE) consisted of the generally 27.4-m (90-ft) wide pipeline LOD, expanding to a maximum of 50 m (165 ft) in an area of additional temporary workspace adjacent to Weber Lake Road. Proposed Project impacts within the APE will include excavation of an approximately 2.1-m (7-ft) wide pipe trench to a depth of approximately 3.0 m (10 ft) below ground surface along the pipeline centerline, as well as topsoil stripping in the agricultural field, vehicular traffic and equipment laydown, and road boring within the additional temporary workspace adjacent to Weber Lake Road.

Based on the results of Phase II testing, the portion of Site 23SC2219 located within the Project APE has moderate integrity and a low research potential. It is concluded that archaeological investigations conducted to date have exhausted the site's information potential within the Phase II Project APE. Portions of the site outside the Project APE could provide additional important information and may be eligible for listing in the National Register of Historic Places, under Criterion D. However, no further work is recommended for the site within the Phase II APE.

GAI, on behalf of Spire, is requesting your review and concurrence of the attached technical report presenting the Phase II archaeological testing results and recommendations for Site 23SC2219 within the Project APE.

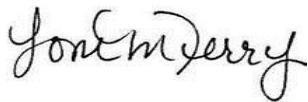
We look forward to continuing to work with you on this Project. Please contact Mr. Eric Scuoteguazza at 412.399.5188 or e.scuoteguazza@gaiconsultants.com, if there are questions regarding this report.

Sincerely,

GAI Consultants, Inc.



Eric P. Scuoteguazza, M.A., M.B.A., RPA
Senior Manager, Cultural Resources



Lori M. Ferry
Environmental Project Manager

EPS:LMF/djz

Attachment: Technical Report Phase II Archaeological Testing at Site 23SC2219, Spire STL Pipeline Project, St. Charles and St. Louis Counties, Missouri

References

Scuoteguazza, E. P., R. B. Duncan, J. Glenn, A. Hood, M. Mooney, S. Pugh-Rose, E. Tidlow, and E. Williams
2017a *Technical Report, Phase I Archaeological Survey, Spire STL Pipeline Project, St. Charles and St. Louis Counties, Missouri*. Prepared by GAI Consultants, Inc., Aurora, Illinois, for Spire, Inc.

Scuoteguazza, E. P., L. Arco, A. Hood, S. Pugh-Rose, and S. Williams
2017b *Technical Report – Addendum I, Phase I Archaeological Survey, Spire STL Pipeline Project, St. Charles and St. Louis Counties, Missouri*. Prepared by GAI Consultants, Inc., Aurora, Illinois, for Spire, Inc.



April 21, 2017

Ms. Judith Deel
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, Missouri 65101

**Re: Spire STL Pipeline Project; St. Charles and St. Louis Counties, Missouri
Submittal of Architectural and Historical Resources Addendum Reconnaissance Survey
Report**

SHPO Log #: 061-MLT-16

Dear Ms. Deel:

Spire STL Pipeline LLC ("Spire"), a wholly owned subsidiary of Spire Inc., is seeking authorization from FERC pursuant to Section 7(c) of the Natural Gas Act to construct and operate the proposed Spire STL Pipeline Project (Project) located in Scott, Greene, and Jersey Counties, Illinois, and St. Charles and St. Louis Counties, Missouri.

The proposed Project will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with Laclede Gas Company ("LGC"). The second segment of new, greenfield pipeline (referred to as the "North County Extension"), will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable Mississippi River Transmission, LLC ("Enable MRT") and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day. No compression will be required. The Project also includes the construction of three new metering and regulating stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The APE for the survey accounts for areas of physical disturbance (direct impacts), as well as potential visual impacts (indirect impacts) introduced by the proposed Project. The direct APE for architectural studies is defined related to the construction right-of-way, aboveground facilities, and access roads. The indirect impact APE is defined as the viewshed from the proposed construction right-of-way, aboveground pipeline facilities, and access roads related to the Project.

GAI previously identified 54 architectural and historical resources for the Spire STL Pipeline Project, summarized in a report submitted to the MOSHPO on January 26, 2017. The addendum survey resulted in the identification of 12 additional architectural and historical resources in St. Louis County, Missouri. Of the 12 newly identified architectural and historical resources, one (GAI-65/Villa Gesu Covenant) is recommended eligible for NRHP listing under Criteria C. No impacts to the resource

related to the proposed Project are anticipated. The remaining identified architectural and historical resources lack sufficient integrity and/or significance to be recommended eligible for NRHP listing.

GAI, on behalf of Spire, is requesting your review and concurrence of the attached report presenting the architectural results and recommendations for the Project.

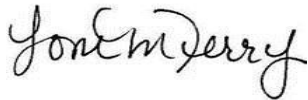
We look forward to continuing to work with you on this Project. Please contact Eric Scuoteguazza at (412) 399-5188 or e.scuoteguazza@gaiconsultants.com, if there are questions regarding this report.

Sincerely,

GAI Consultants, Inc.



Eric P. Scuoteguazza, M.A., M.B.A., RPA
Senior Manager, Cultural Resources



Lori M. Ferry
Environmental Project Manager

EPS/LMF

Attachment: Architectural and Historical Resources Reconnaissance Report; Spire STL Pipeline Project; St. Charles and St. Louis Counties, Missouri



April 21, 2017

Ms. Judith Deel
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, Missouri 65101

**Re: Submittal of Technical Report - Addendum I
Phase I Archaeological Survey
SHPO Log #: 061-MLT-16
Spire STL Pipeline Project
St. Charles and St. Louis Counties, Missouri**

Dear Ms. Deel:

Spire STL Pipeline LLC ("Spire"), a wholly owned subsidiary of Spire Inc., is seeking authorization from the Federal Energy Regulatory Commission pursuant to Section 7(c) of the Natural Gas Act to construct and operate the proposed Spire STL Pipeline Project ("Project") located in Scott, Greene, and Jersey Counties, Illinois, and St. Charles and St. Louis Counties, Missouri. The total length of the Project pipelines will be approximately 65 miles, of which 19.53 miles are in Missouri.

GAI Consultants, Inc. ("GAI") conducted a supplemental Phase I archaeological survey in February and March 2017 to survey (1) alternative Project alignments surveyed to avoid impacts to archaeological sites that may meet the requirements for listing in the National Register of Historic Places ("NRHP"); (2) parcels where survey permission has been granted since the initial Phase I field session concluded in December 2016, and; (3) the 6-mile-long alignment of the proposed North County Extension pipeline. The Area of Potential Effect ("APE") for the supplemental archaeological investigations was defined as the area of ground disturbance anticipated for the construction activities. For the purposes of the supplemental Phase I archaeological survey, the APE consisted of a 300-foot-wide study corridor centered on the proposed pipeline route for both the 24-inch pipeline and the North County Extension, a 100-foot-wide study corridor for proposed access roads, and the footprint of the workspace needed for staging areas, cathodic protection groundbeds, and horizontal directional drill ("HDD") bore pits/pull-back areas.

The total APE for the Missouri portion of the Project was 317.15 hectares (783.7 acres). Of this, 51.48 hectares (127.2 acres) was surveyed during the supplemental Phase I investigation in February and March 2017, 183.35 hectares (453.08 acres) was previously surveyed, and 65.5 hectares (161.87 acres) was not surveyed due to land access restrictions or avoidance via HDD.

In total, five archaeological sites and nine isolated finds were identified during supplemental Phase I survey of the Missouri APE. Sites 23SC2218 and 23SC2219 may meet the requirements for listing in the NRHP. Based on current Project design plans, Site 23SC2218 is located outside the construction right-of-way and will not be impacted by the proposed Project. Therefore, GAI recommends no further work at Site 23SC2218. A Phase II eligibility evaluation was conducted at Site 23SC2219 in March 2017, the results of which will be submitted to the Missouri State Historic Preservation Office under separate cover. The remaining sites (23SC2213, 23SL2403, and 23SL524) are recommended Not Eligible, and no further work is recommended. The nine isolated finds are all recommended Not Eligible for the NRHP. Two sites that may meet the requirements for NRHP listing (Sites 23SC2215 and 23SC2216) identified during the initial Phase I survey for the Project are not located within the construction right-of-way and will not be impacted.

GAI, on behalf of Spire, is requesting your review and concurrence of the attached addendum technical report presenting the archaeological results and recommendations for the Project.

We look forward to continuing to work with you on this Project. Please contact Mr. Eric Scuoteguazza at 412.399.5188 or e.scuoteguazza@gaiconsultants.com, if there are questions regarding this report.

Sincerely,

GAI Consultants, Inc.



Eric P. Scuoteguazza, M.A., M.B.A., RPA
Senior Manager, Cultural Resources



Lori M. Ferry
Environmental Project Manager

EPS:LMF/gmg

Attachments: Attachment 1 (Technical Report - Addendum I, Phase I Archaeological Survey) and Attachment 2 (Section 106 Survey Memo)



April 10, 2016

Ms. Judith Deel
Compliance Coordinator
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, Missouri 65101

**Re: Unanticipated Discoveries Plan for Cultural Resources
Spire STL Pipeline LLC
Spire STL Pipeline
St. Charles and St. Louis Counties, Missouri**

Dear Ms. Deel:

Spire STL Pipeline LLC ("Spire") is in the planning stages of the Spire STL Pipeline ("Project"), located in Scott, Greene, and Jersey Counties in Illinois and in St. Charles and St. Louis Counties in Missouri. Spire retained GAI Consultants, Inc. to conduct required cultural resources studies. Construction and operation of the proposed Project will be regulated by the Federal Energy Regulatory Commission ("Commission") among other regulatory agencies.

On October 28, 2016, Spire had provided the Missouri State Historic Preservation Office with the Project's Unanticipated Discoveries Plan for Cultural Resources in Missouri. Spire has revised the Unanticipated Discoveries Plan for Cultural Resources in Missouri, based on the Commission's and Missouri State Historic Preservation Office's comments to the previous submission. I have enclosed a copy of that revised plan for your review and for your files.

Thank you for your consideration of this matter. If you have any questions regarding this submission, please feel free to contact me at 412.399.5188, or by e-mail at e.scuoteguazza@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.

A handwritten signature in blue ink that reads 'Eric Scuoteguazza'.

Eric Scuoteguazza
Senior Cultural Resources Manager

Attachment: Unanticipated Discoveries Plan for Cultural Resources in Missouri

April 10, 2017
Project E160438.00

ATTACHMENT:
UNANTICIPATED DISCOVERIES PLAN FOR CULTURAL RESOURCES IN MISSOURI



Spire STL Pipeline Project

Unanticipated Discoveries Plan for Cultural Resources in
Missouri

FERC Docket No. CP17-40-000

January 2017

Public



Table of Contents

Unanticipated Discoveries Plan for Cultural Resources in Missouri	1
1.1 References.....	4



Acronyms and Abbreviations

FERC	Federal Energy Regulatory Commission
MDNR	Missouri Department of Natural Resources
MO SHPO	Missouri State Historic Preservation Office
NHPA	National Historic Preservation Association
NRHP	National Register of Historic Places
Project	Spire STL Pipeline Project
SHPO	State Historic Preservation Office
Spire	Spire STL Pipeline LLC
UDP	Unanticipated Discoveries Plan



Unanticipated Discoveries Plan for Cultural Resources in Missouri

This Unanticipated Discoveries Plan (“UDP”) details the procedures that will be implemented by Spire STL Pipeline LLC (“Spire”) and its contractors to handle the unanticipated discovery of cultural resources that may be encountered during construction of the proposed Spire STL Pipeline Project (“Project”). This plan was developed in accordance with 36CFR800.13 (Post-Review Discovery clause), 36CFR Part 61 Professional Qualifications Standards, as well as the following regulations:

- The Missouri Department of Natural Resources’ (MDNR) *Guidelines for Archaeological Survey and Reports* (MDNR No Date); and
- Missouri Revised Statute 194.400 through 194.410 (Unmarked Human Burial Sites)

All construction work force members have the responsibility to monitor construction sites for potential archaeological remains throughout construction. Archaeological remains consist of man-made objects or features greater than 50 years of age. These remains include, but are not limited to, items such as artifacts (e.g., stone flakes, stone tools, ceramics, glass, architectural material), fire pits, building foundations, and human remains. If, during the course of construction, potential archaeological remains are identified, the Environmental or Chief Inspector will immediately halt work in the vicinity (minimum of 25 feet) of the potential find. The Environmental Inspector will notify the Spire Environmental Project Manager. Work in the immediate area of the discovery will not resume until treatment of the discovery has been completed.

The Spire Environmental Project Manager will notify the Missouri State Historic Preservation Office (“MO SHPO”) and the Federal Energy Regulatory Commission (“FERC”), and will hire an archaeological consultant who will evaluate the site and provide an immediate verbal recommendation to Spire, the FERC, and the MO SHPO regarding the eligibility status of the site, in accordance with state and federal guidelines. Spire’s Environmental Manager will continue to consult with the FERC and MO SHPO, as per the requirements of Section 106 of the National Historic Preservation Act of 1966 (“NHPA”). If the discovery is determined to be Native American in origin, FERC will contact tribal representatives that requested to be consulting parties. Communications, such as consultation, transmittals, and reports, may be provided via e-mail, as appropriate and acceptable to each agency. Contact information for the various agencies is listed below:



Environmental Inspector

To be determined

Chief Inspector

To be determined

Spire Environmental Project Manager

Russell English
Spire, Inc.
700 Market Street
St. Louis, Missouri 63101
314-956-5221
russell.english@SpireEnergy.com

Spire Project Manager

Russell English
Spire, Inc.
700 Market Street
St. Louis, Missouri 63101
314-956-5221
russell.english@SpireEnergy.com

MO SHPO

Ms. Judith Deel, Compliance Coordinator
Missouri Department of Natural Resources
State Historic Preservation Office
P.O. Box 176
Jefferson City, Missouri 65102-0176
573-751-7862
judith.deel@dnr.mo.gov

MDNR

Ms. Heather Gibb
Missouri Department of Natural Resources
State Historic Preservation Office
P.O. Box 176
Jefferson City, Missouri 65102-0176
573-751-4589
heather.gibb@dnr.mo.gov

FERC

Laurie Boros, Archaeologist
Federal Energy Regulatory Commission
888 1st Street NE
Room 1A
Washington, D.C. 20426
202-502-8046
laurie.boros@ferc.gov

St Charles County Police Department

101 Sheriff Dierker Court
O'Fallon, Missouri 63366
636-949-3000

St Louis County Police Department

7900 Forsyth Blvd
St. Louis, Missouri 63105
636-529-8210



If the unanticipated discovery is determined to be ineligible for inclusion in the National Register of Historic Places (“NRHP”), Spire will proceed with construction following written concurrence from the MO SHPO and approval from FERC. If the site is determined to be potentially eligible for inclusion in the NRHP, additional work, such as a Determination of Eligibility or Data Recovery, will be performed as required/approved by the MO SHPO and FERC. Further construction work at the site will be suspended until all criteria of Section 106 of the NHPA and other related federal and state regulations have been successfully completed. Construction activities will be kept a minimum of 25 feet from the site (dependent on the site type, location, construction design, and agency consultation) and separated from the site by temporary fencing.

In the event that human remains are discovered during construction, the Environmental or Chief Inspector will immediately halt work and notify the Spire Environmental Project Manager, the local law enforcement agency, and the MO SHPO. The Environmental Inspector will ensure that human remains are protected from further damage, intrusion, or removal until proper examinations can be performed. Provision for security to protect suspected burials from vandalism will be taken, including monitoring of the area. Discovery of human remains should not be made public, including but not limited to, conversations with local residents, posting on social media, or communication with news outlets. Construction activities including vehicle traffic will be kept a minimum of 25 feet from the remains (dependent on the location, construction design, and agency consultation) and separated by temporary fencing. If remains are found not to be of recent origin, the Spire Environmental Project Manager will contact the MO SHPO and FERC to ensure that relevant laws are followed. As soon as a determination has been made that the human remains are Native American, Spire will contact appropriate tribal representatives for the region in which the remains were found. If the remains are not Native American and not associated with a crime scene, guidance in *National Register Bulletin 41: Guidelines for Evaluating and Registering Cemeteries and Burial Places* (Potter and Boland 1992) will be taken into account. A reasonable attempt will be made to identify the next of kin. Spire’s Environmental Manager will notify FERC of the situation and will continue to keep FERC informed as to the progress of further consultation. Spire will attempt to redesign the Project to avoid impact to the human remains. Only if avoidance is not possible will Spire proceed with removal of the human remains.

If the unanticipated discovery of human remains is determined by the MO SHPO and FERC to be ineligible for inclusion in the NRHP, Spire will proceed with coordinating the proper removal of the remains through cooperation from the local police, the medical examiner, the MO SHPO, and FERC. Only after the human remains have been properly removed from the site should construction of the pipeline facilities in the site area be resumed.

Under no circumstances should human remains be removed from the site without completing all permitting and coordination processes with the local police, the medical examiner, the MO SHPO, Native American representatives as appropriate, and FERC. Further work at the site will be suspended until all criteria of Section 106 of the NHPA and other related state and federal regulations have been successfully completed.



1.1 References

Potter E.W. and B.M. Boland. 1992. *National Register Bulletin 41: Guidelines for Evaluating and Registering Cemeteries and Burial Places*. U.S. Department of the Interior, National Park Service. Washington, D.C.

Missouri Department of Natural Resources (MDNR). No Date. *Guidelines for Archaeological Survey and Reports*. Missouri Department of Natural Resources, State Historic Preservation Office, St. Louis. Accessed electronically, September 2016, <http://dnr.mo.gov/shpo/sectionrev.htm>.



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Ms. Judith Deel
Compliance Coordinator
Missouri State Historic Preservation Office
1101 Riverside Drive
Jefferson City, MO 65101

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Ms. Deel:

In June 2016, Spire Pipeline LLC ("Spire") initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project ("Project") which consisted of approximately 59 miles of new, greenfield 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline") originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in to interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new, greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC

interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75 feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act ("NEPA") process began (initiation of FERC Pre-filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) - File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

On behalf of Spire, we'd like to take this opportunity to invite the Missouri State Historic Preservation Office to provide comments regarding the Project as it will be amended. We appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.

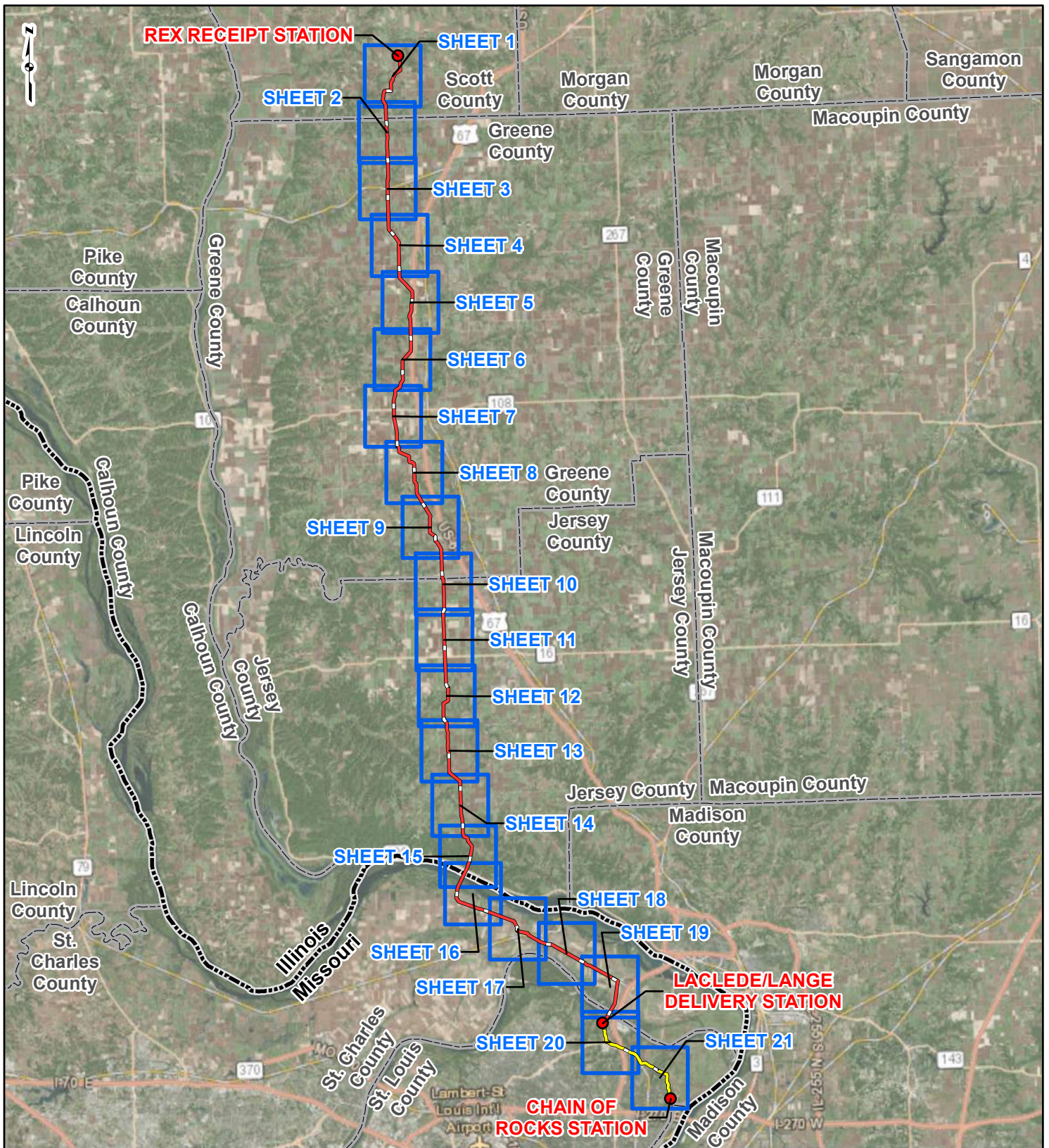


Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

ATTACHMENT
USGS TOPOGRAPHIC MAP (FIGURE 1)



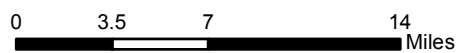
PROJECT LOCATION



SCOTT, GREENE AND JERSEY COUNTIES, ILLINOIS AND ST. CHARLES AND ST. LOUIS COUNTIES, MISSOURI

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- SHEET INDEX
- COUNTY BOUNDARY
- STATE BOUNDARY



**FIGURE 1
LOCATION MAP
SHEET INDEX**



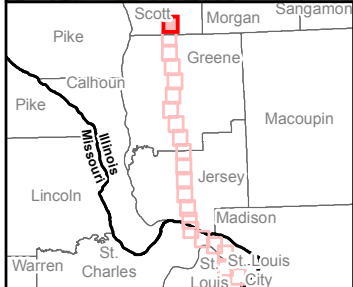
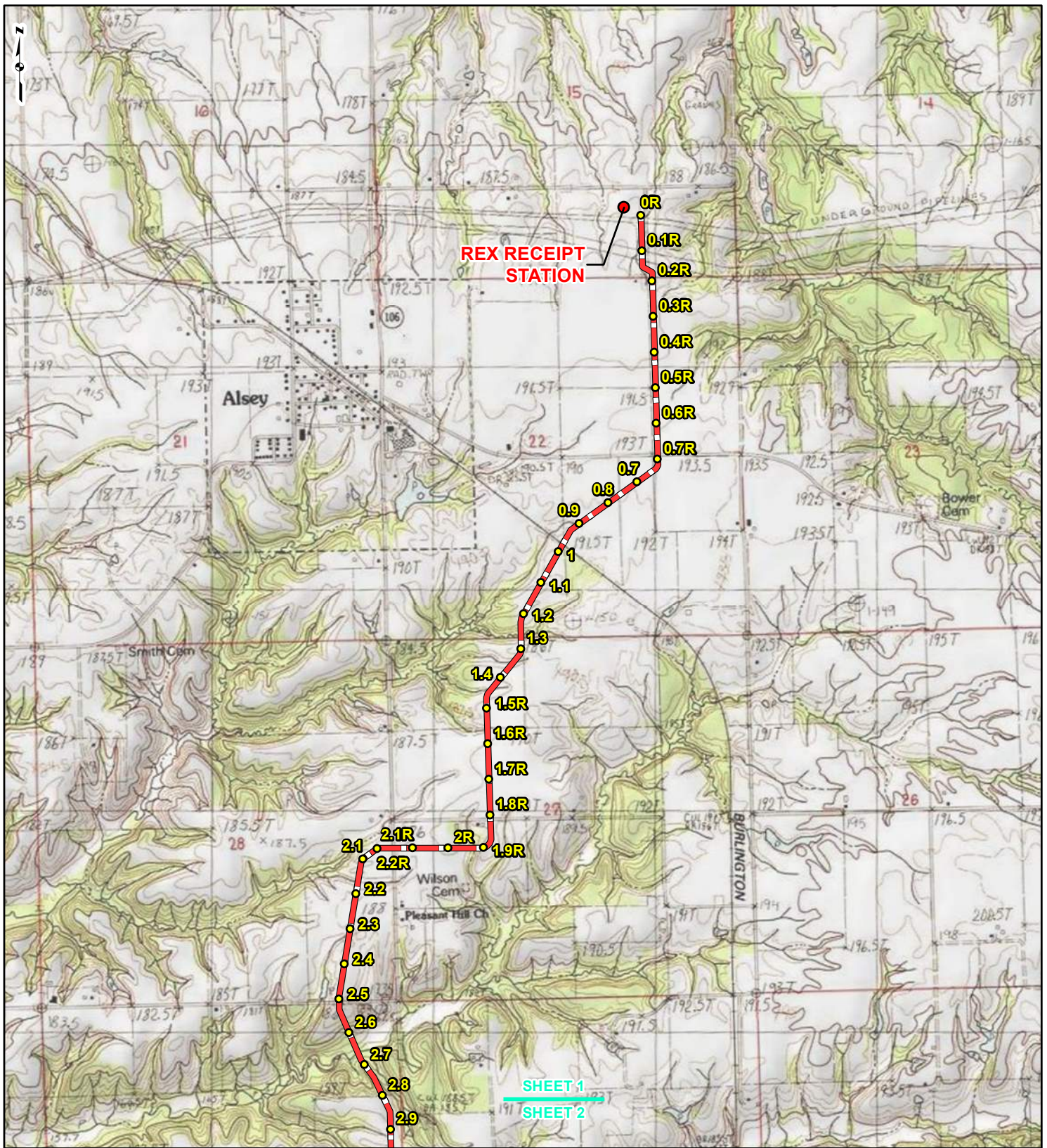
**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH
CHECKED: SWW

DATE: 3/28/2017
APPROVED: LMF

REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2015, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE MILEPOST	— EXTENSION
○ NORTH COUNTY	□ COUNTY BOUNDARY
● EXTENSION MILEPOST	□ STATE BOUNDARY

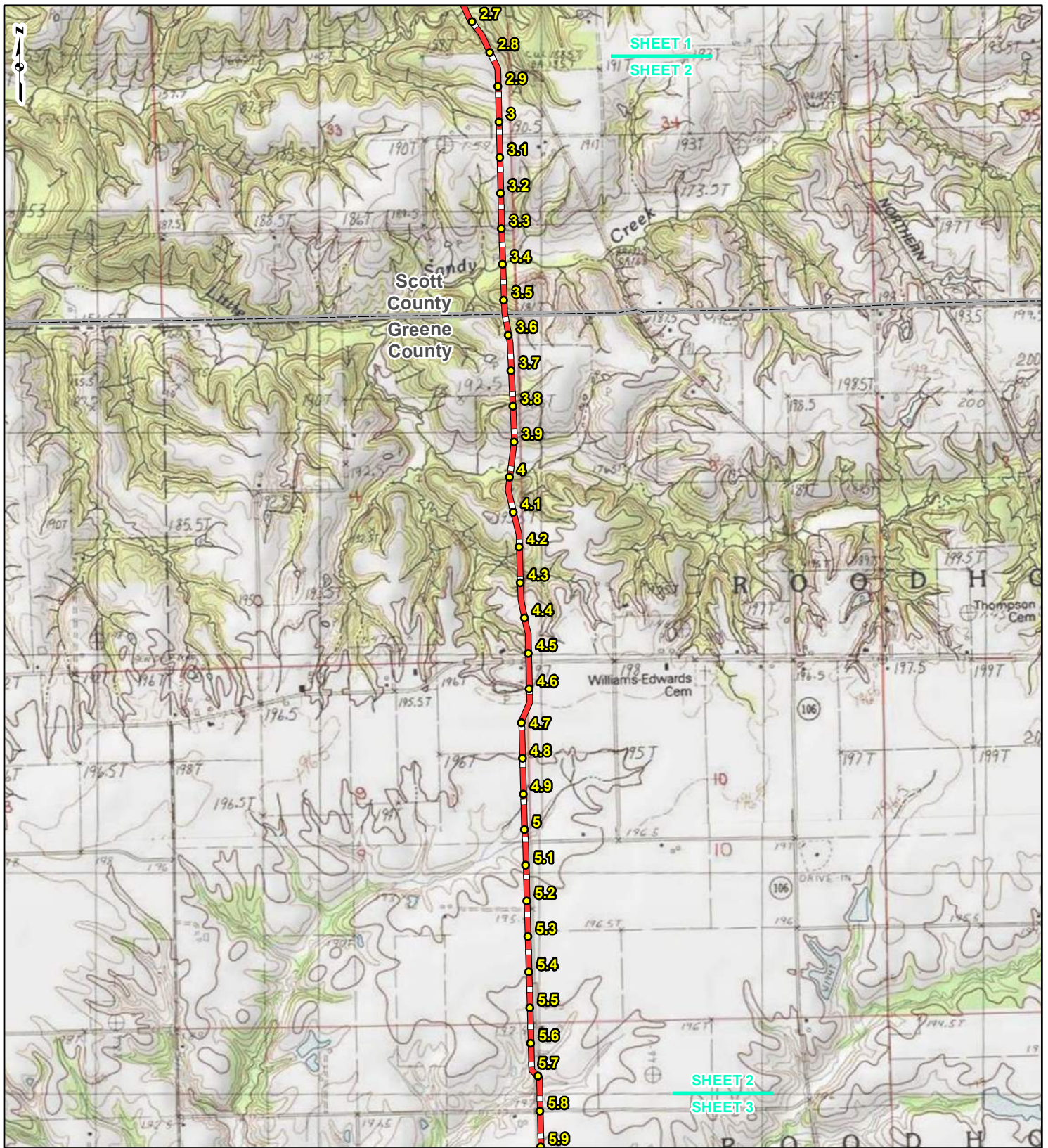
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**FIGURE 1
LOCATION MAP
SHEET 1 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSA (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	□ COUNTY BOUNDARY
	□ STATE BOUNDARY

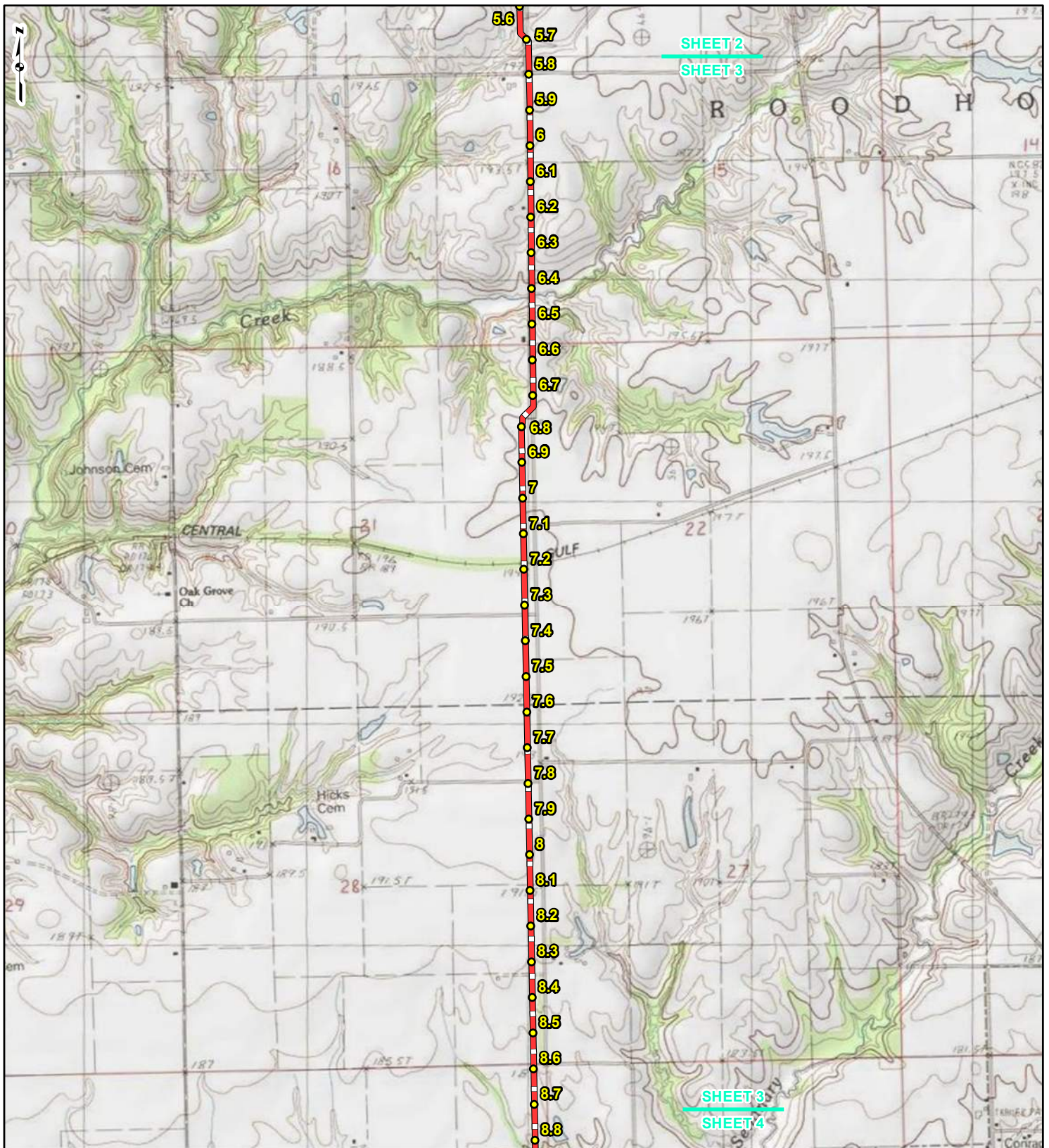
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**FIGURE 1
LOCATION MAP
SHEET 2 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTerville (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

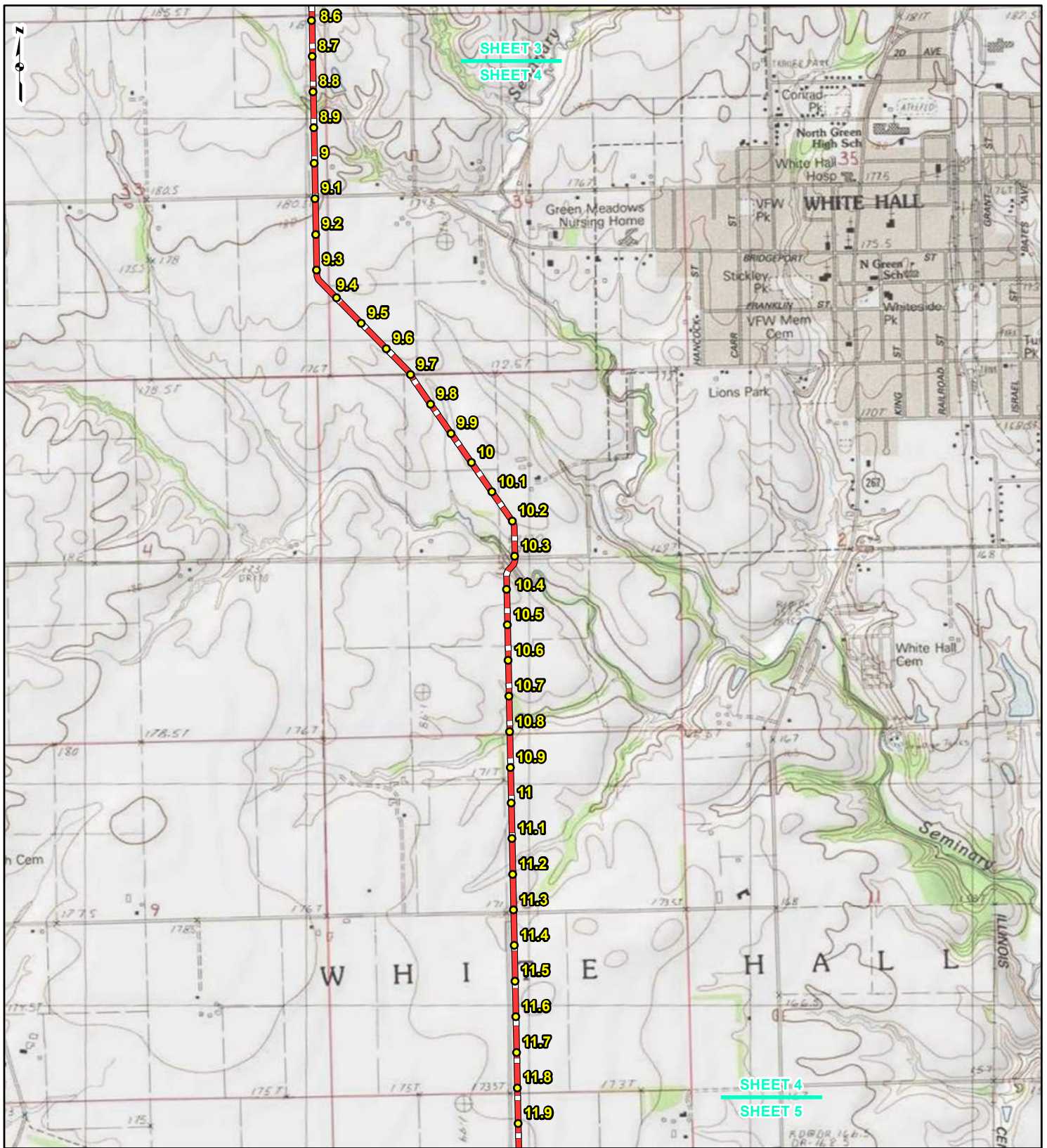
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FIGURE 1
LOCATION MAP
SHEET 3 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1995), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 3
SHEET 4

SHEET 4
SHEET 5



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
● NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

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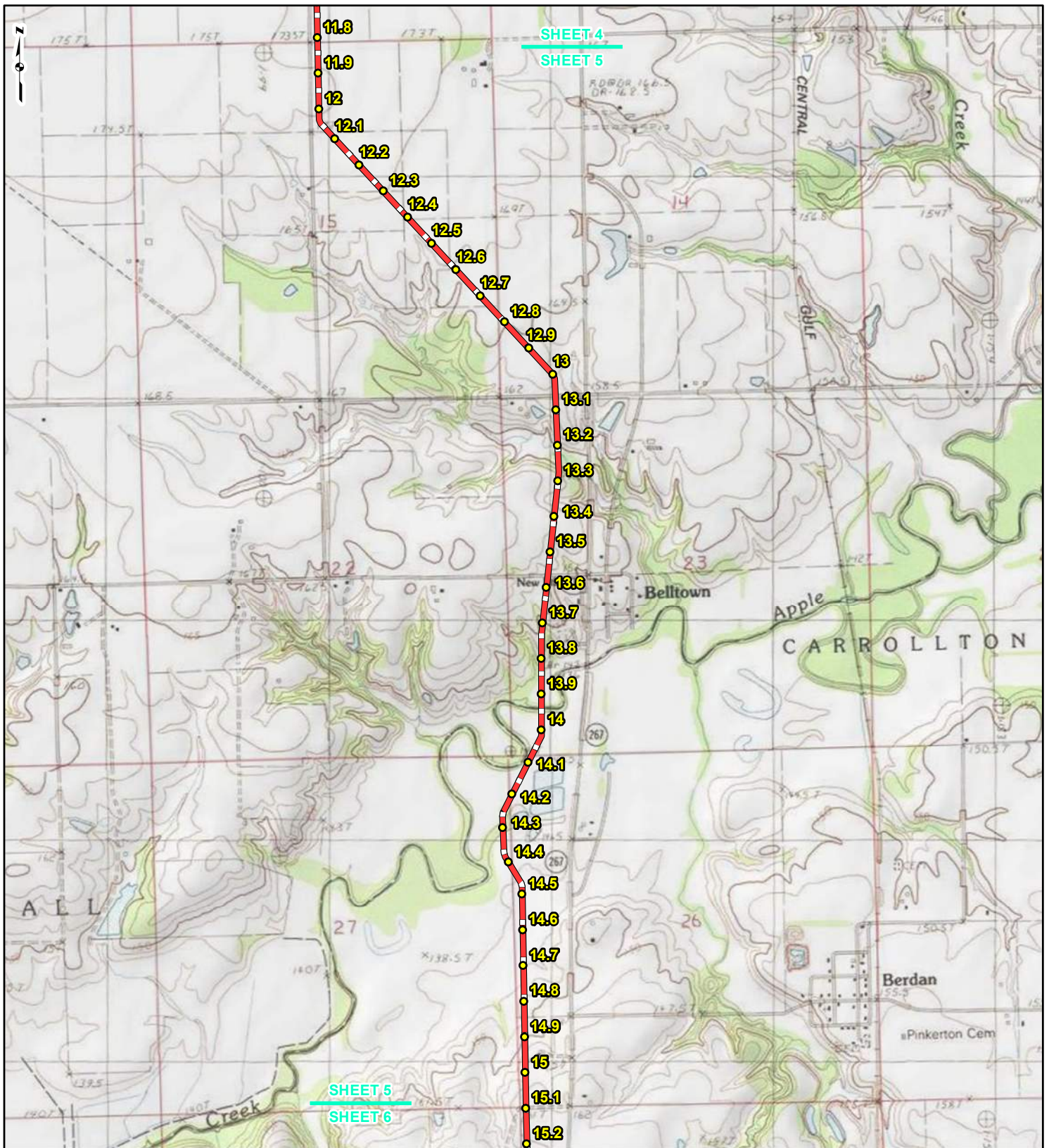
**FIGURE 1
LOCATION MAP
SHEET 4 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

gai consultants

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.





LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

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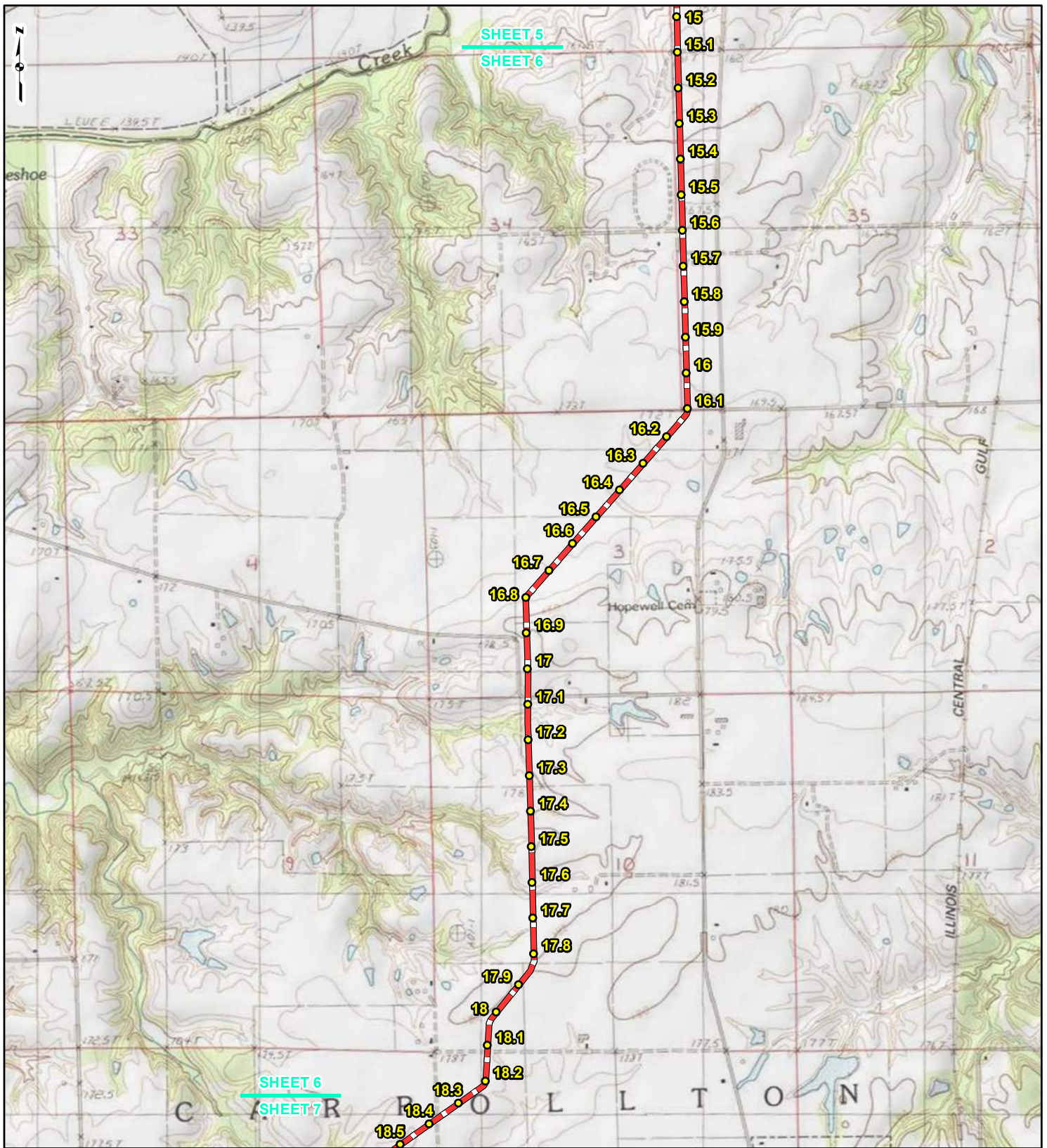
**FIGURE 1
LOCATION MAP
SHEET 5 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● NORTH COUNTY	— EXTENSION
● EXTENSION	▭ COUNTY BOUNDARY
● MILEPOST	▭ STATE BOUNDARY

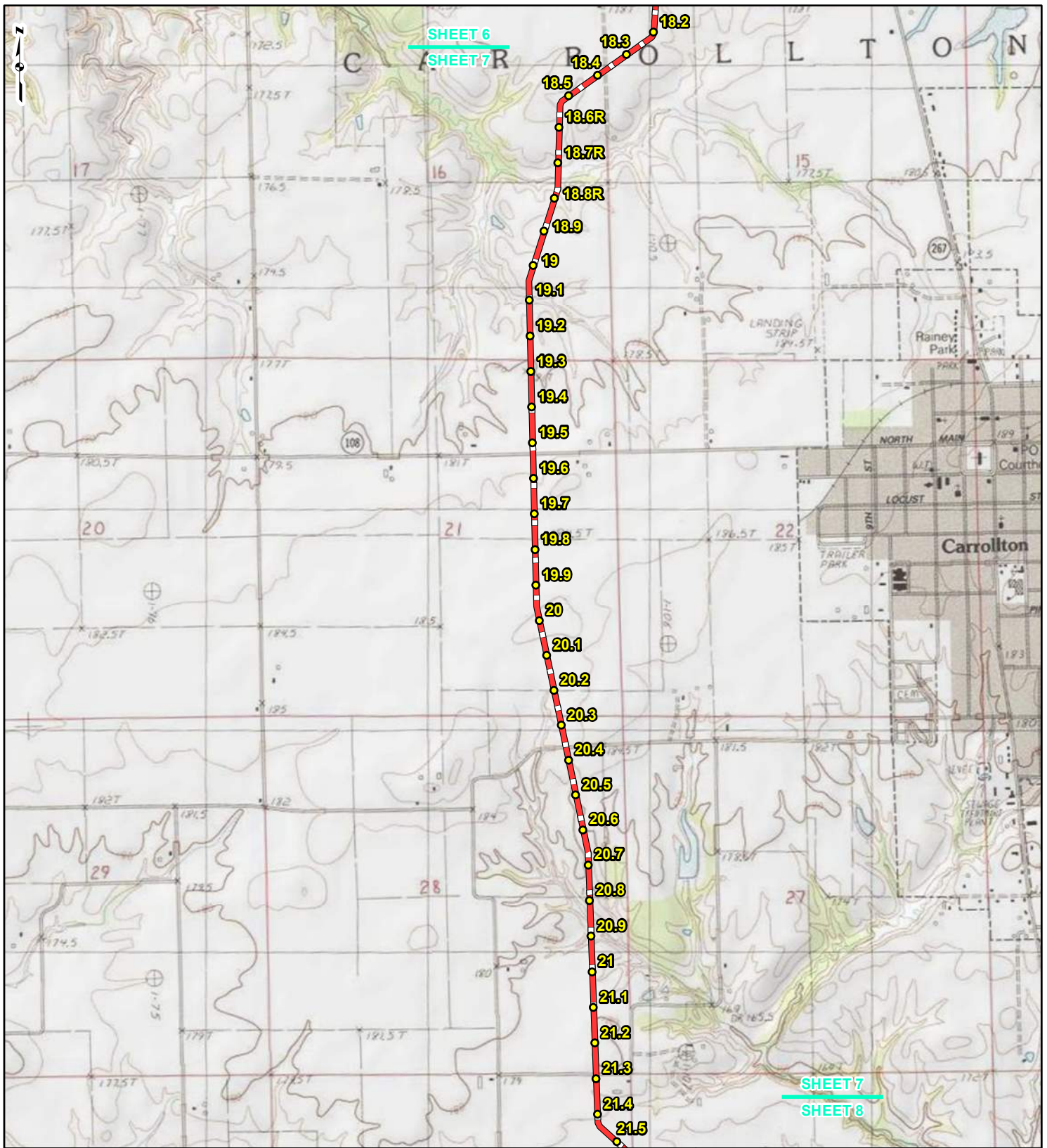
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FIGURE 1
LOCATION MAP
SHEET 6 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

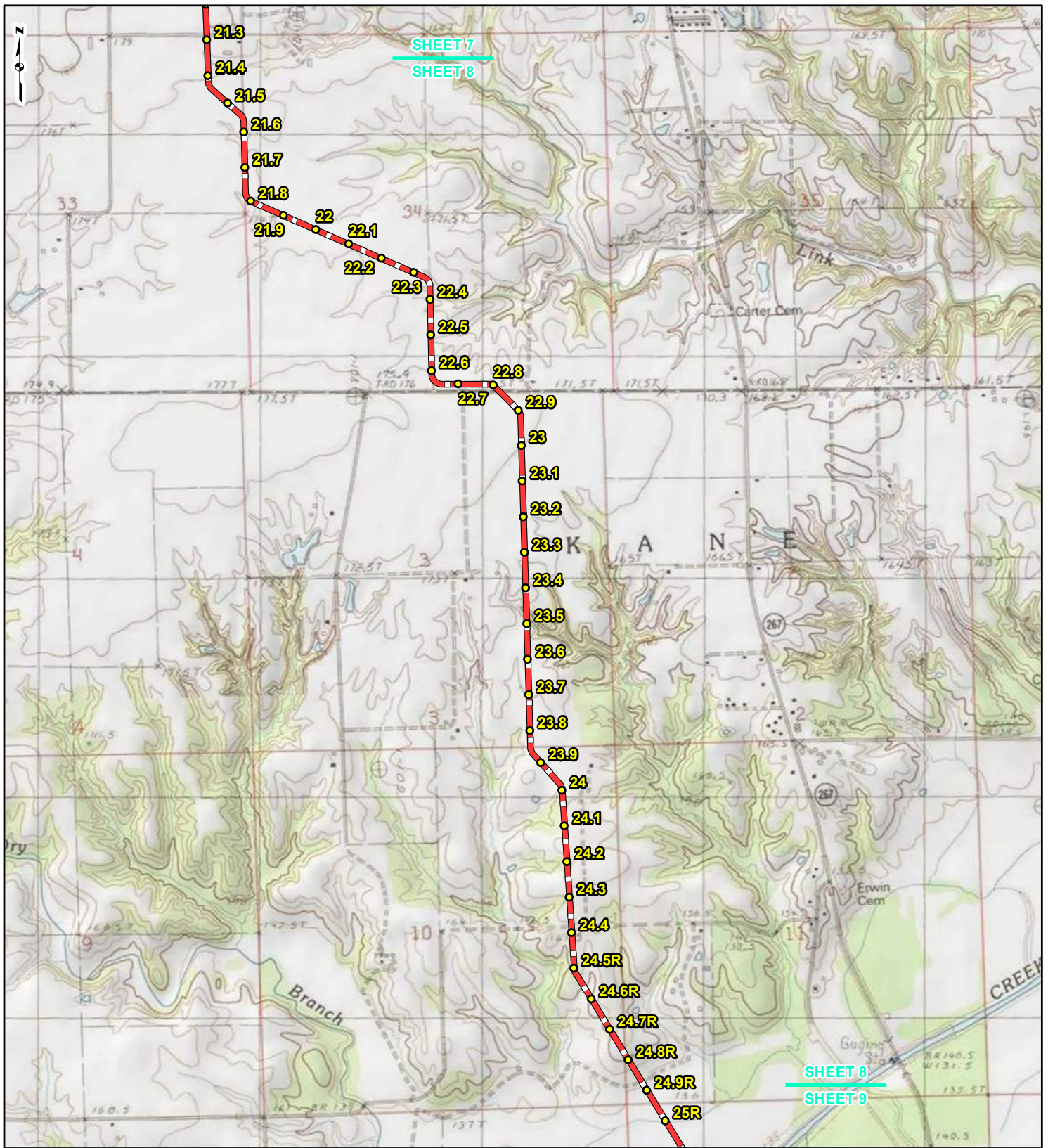
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**FIGURE 1
LOCATION MAP
SHEET 7 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

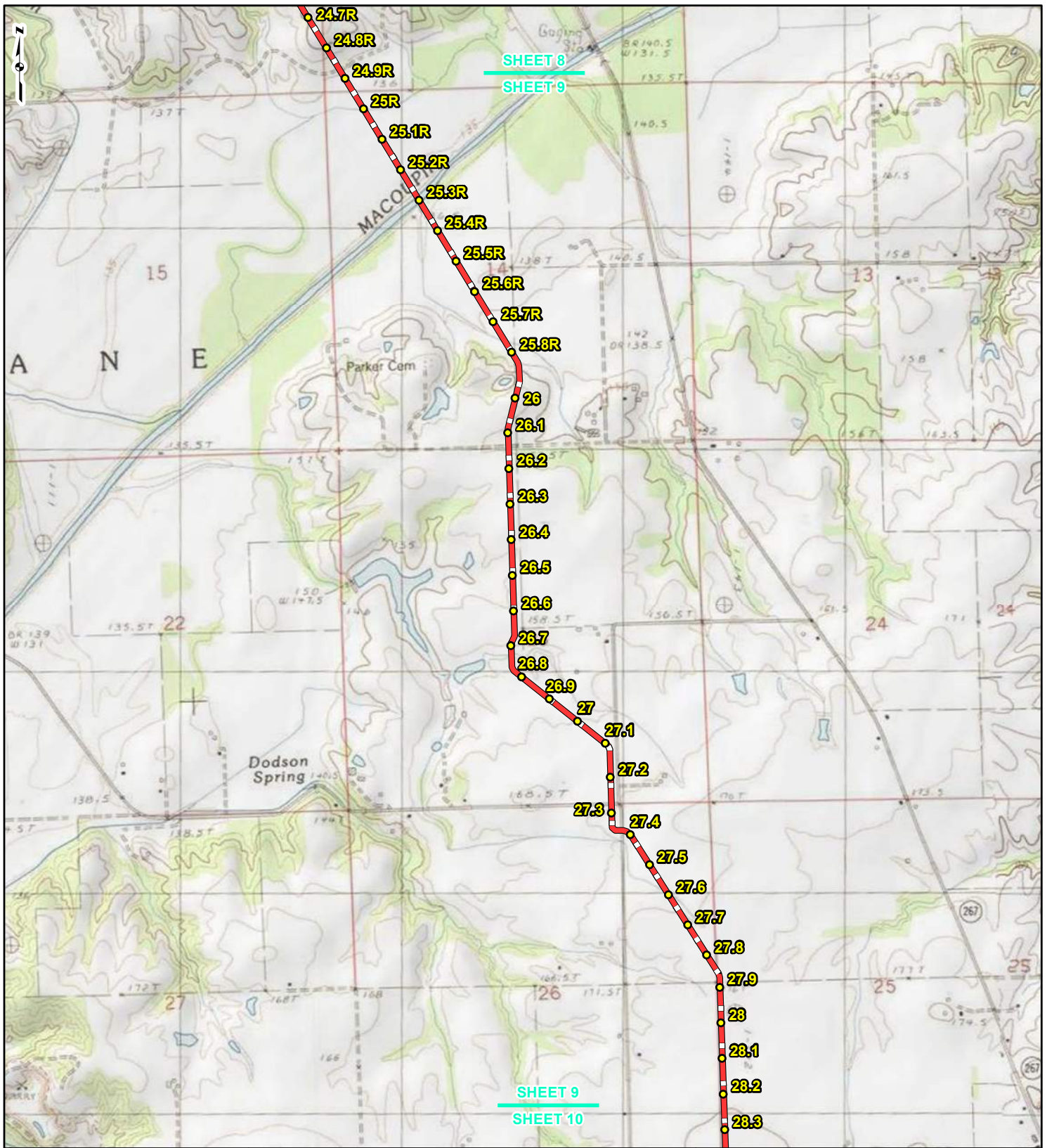
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**FIGURE 1
LOCATION MAP
SHEET 8 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

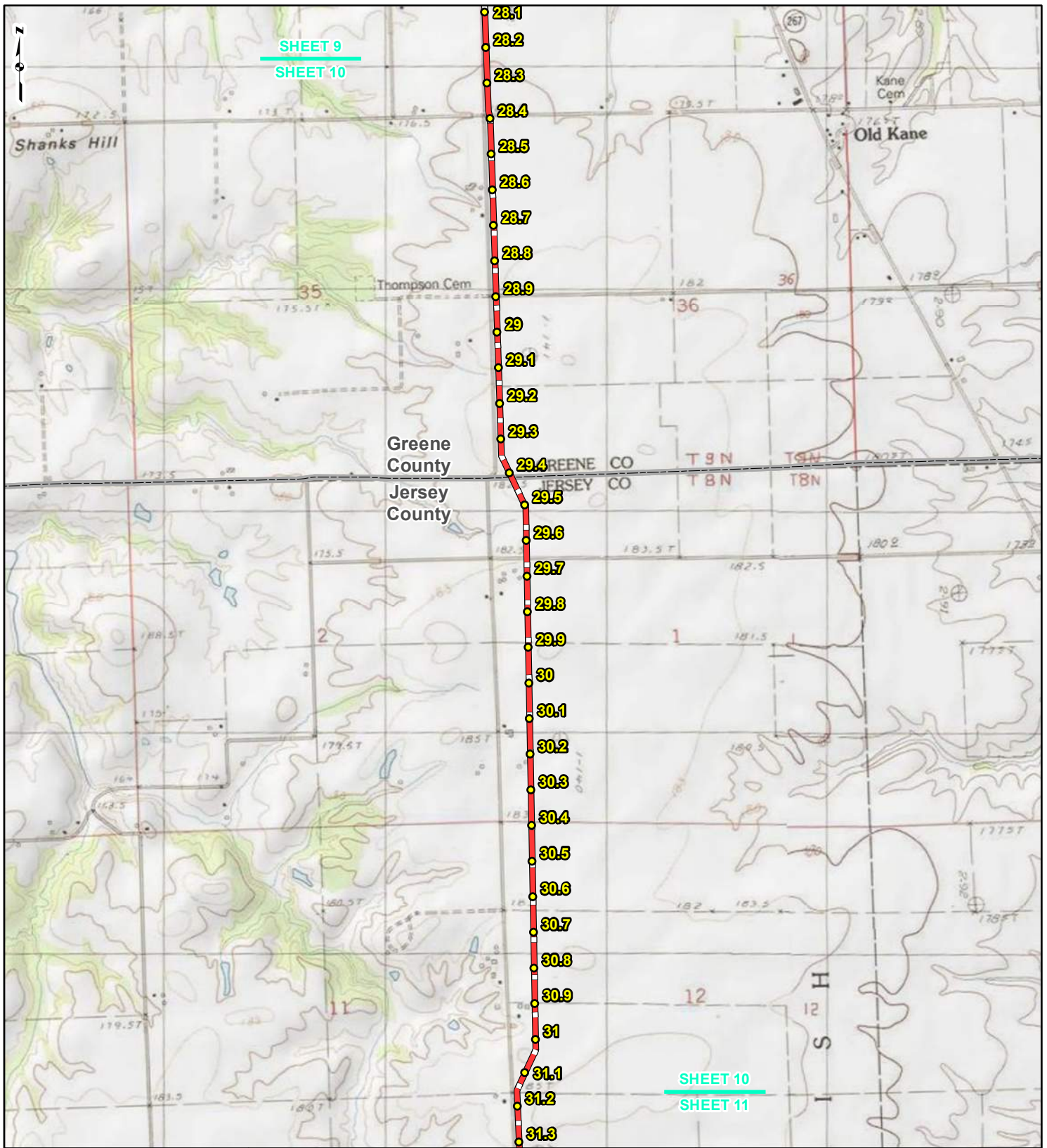
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 9 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 9
SHEET 10

SHEET 10
SHEET 11



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

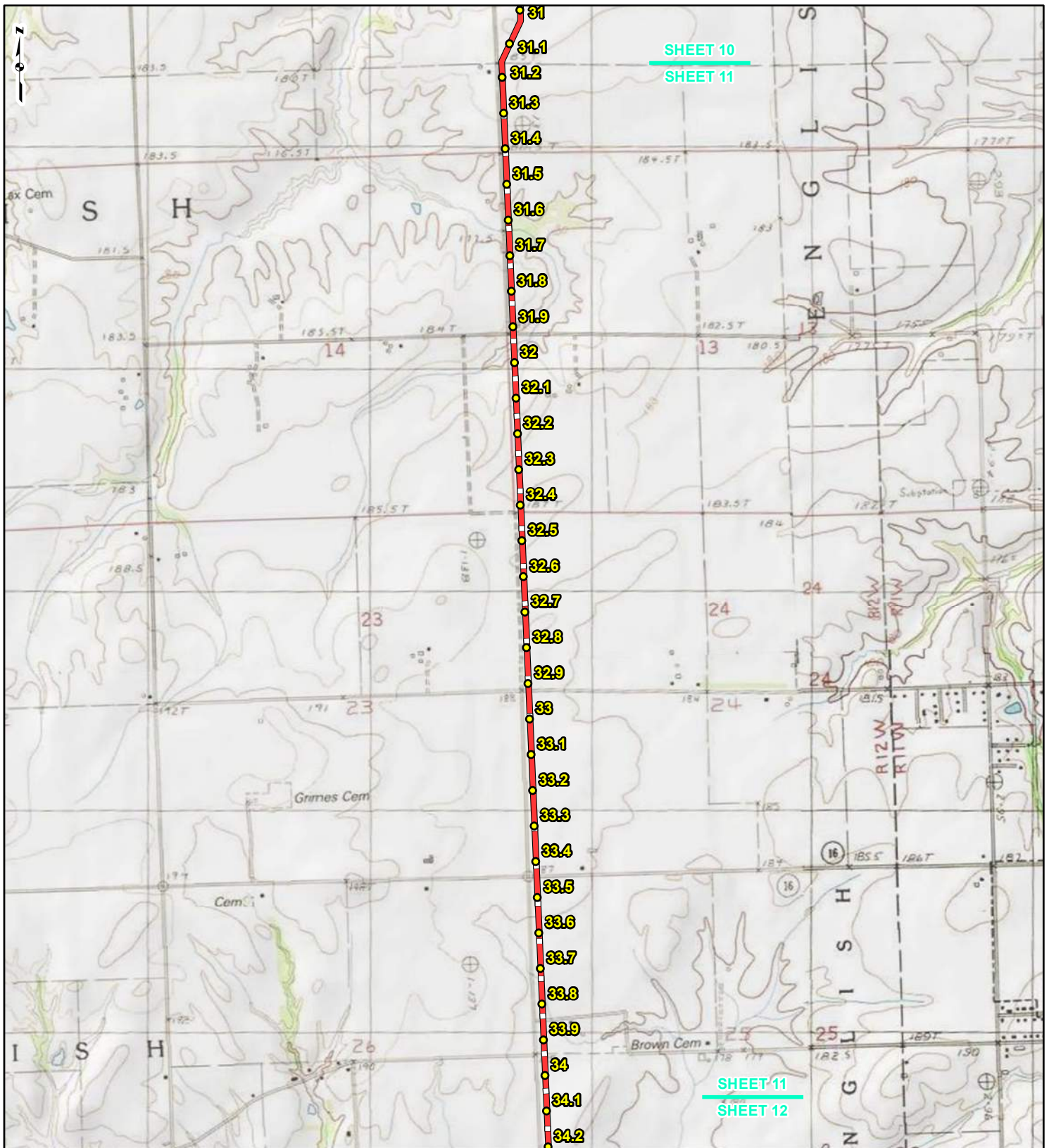
FIGURE 1
LOCATION MAP
SHEET 10 OF 21

SPIRE STL PIPELINE PROJECT

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

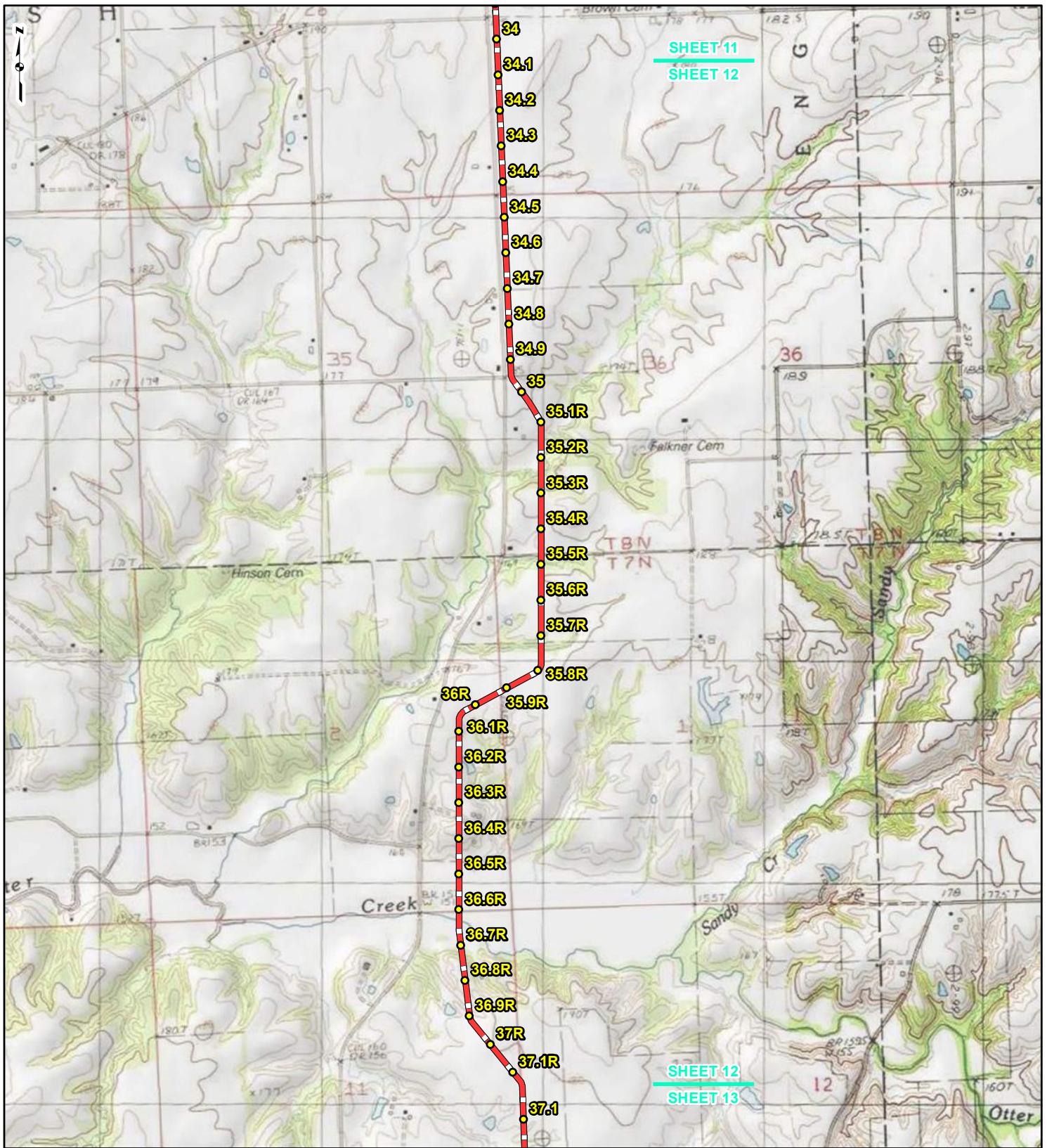
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 11 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 11
SHEET 12

SHEET 12
SHEET 13



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY
- EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

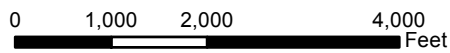
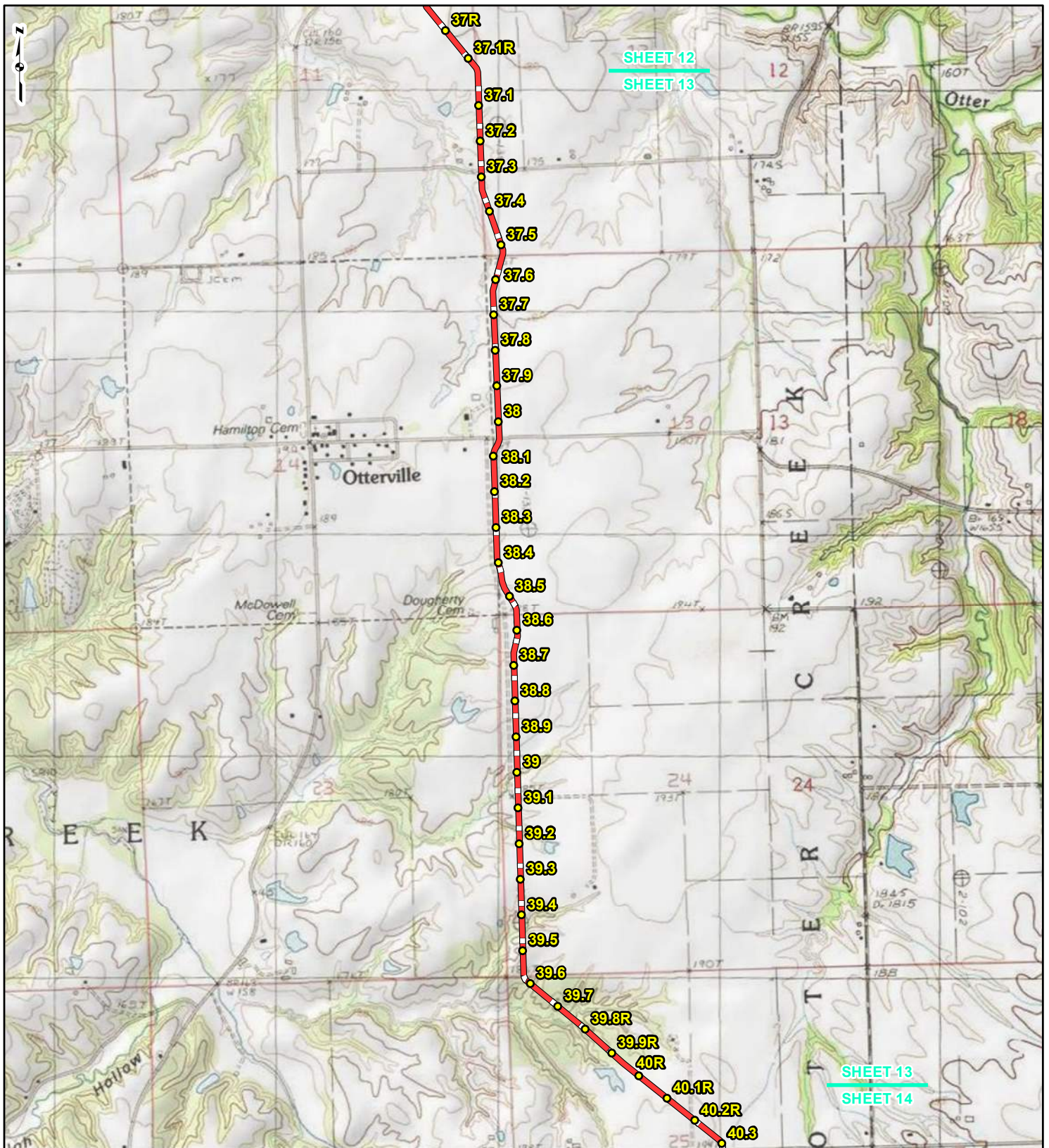


FIGURE 1
LOCATION MAP
SHEET 12 OF 21



DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

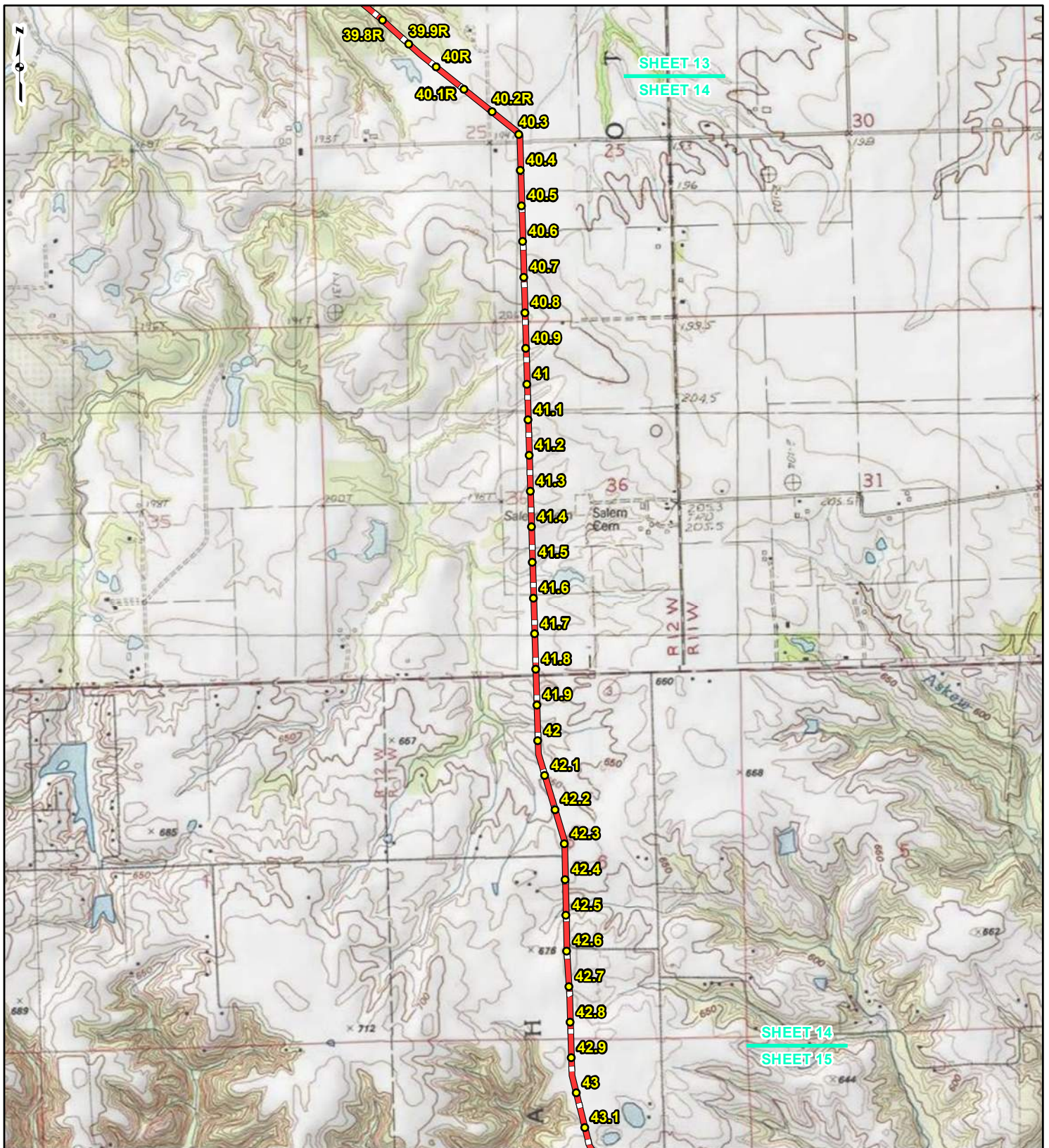
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 13 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

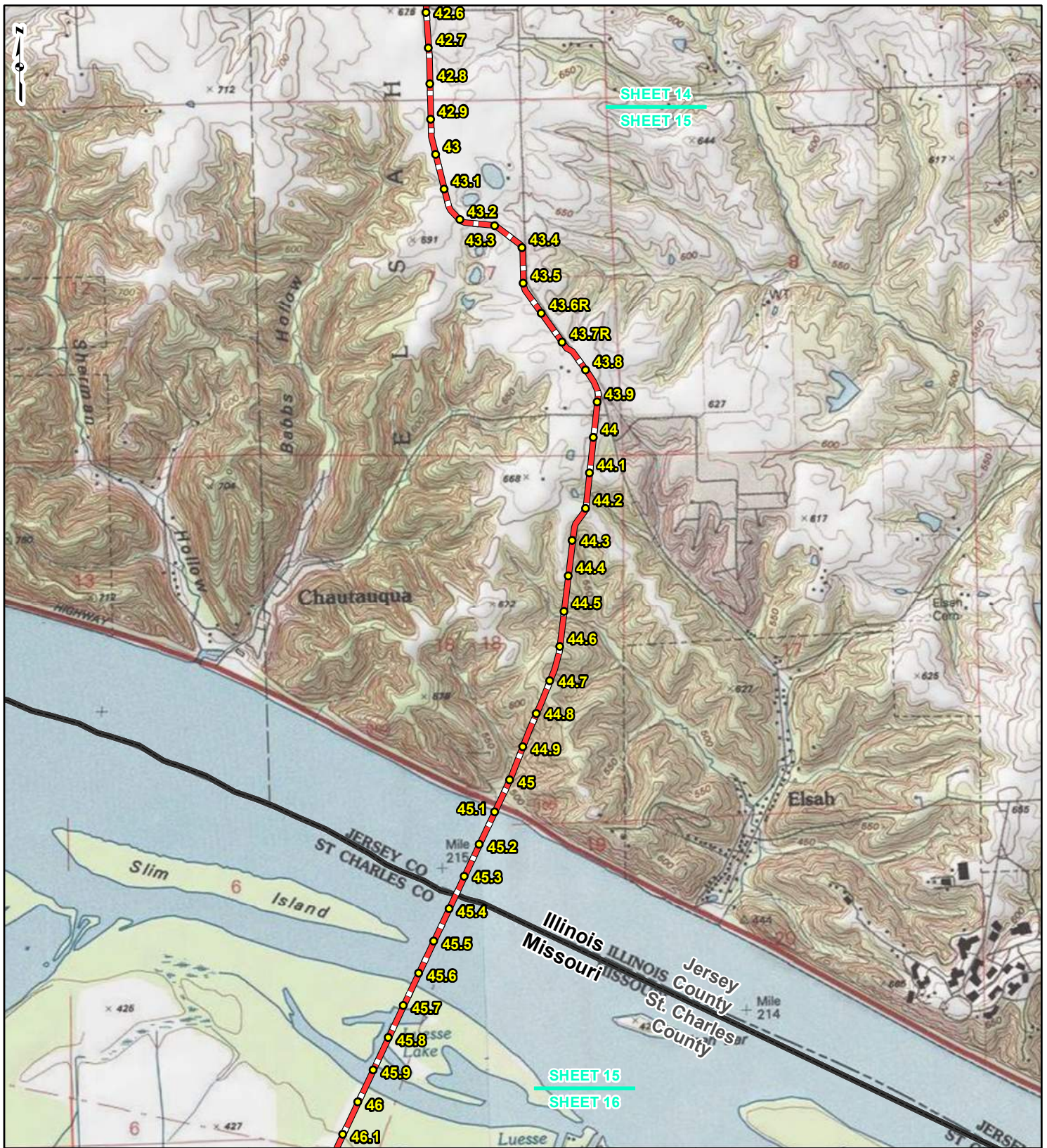
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 14 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

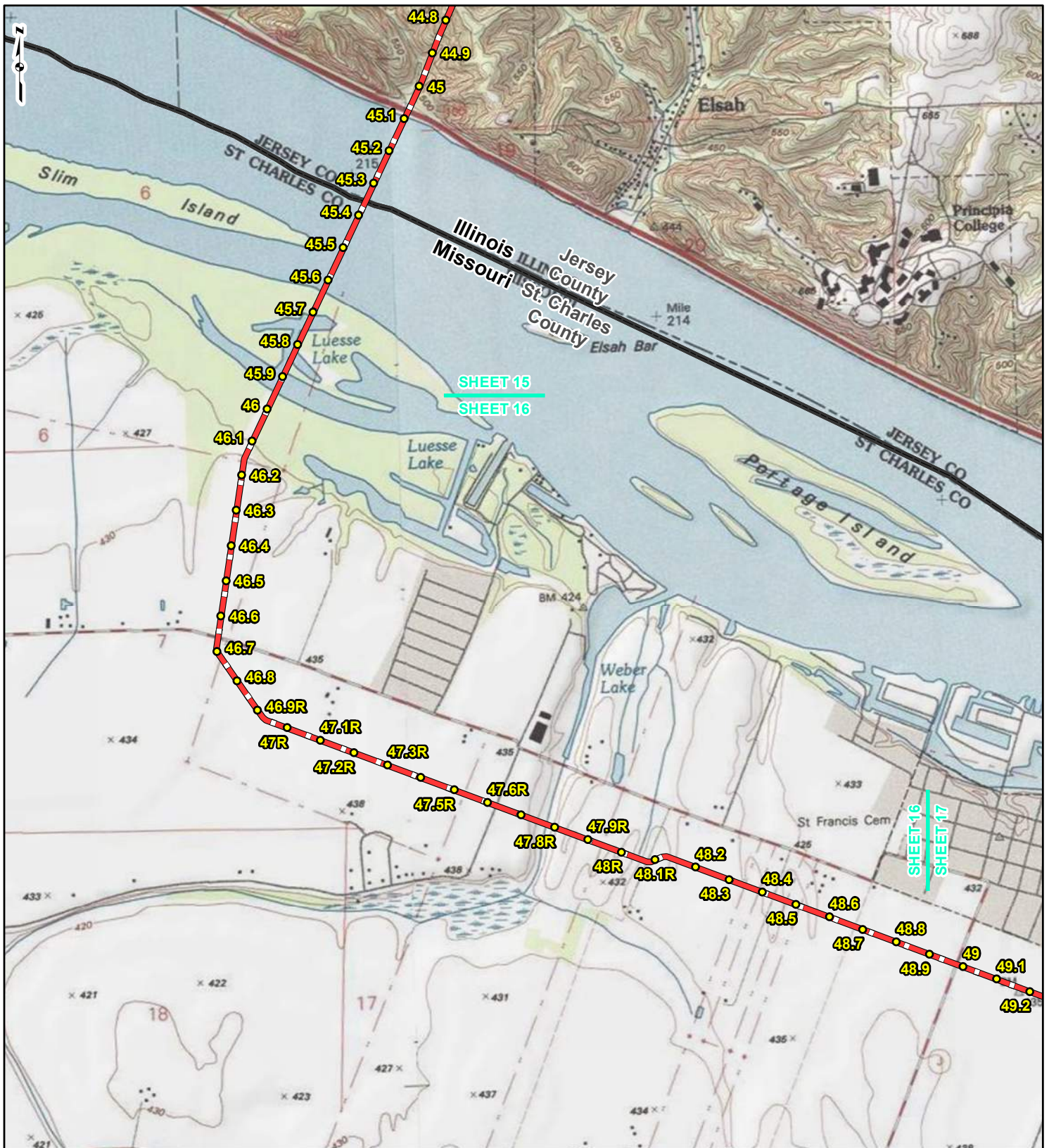
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 15 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 15
SHEET 16

SHEET 16
SHEET 17





LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

0 1,000 2,000 4,000
Feet

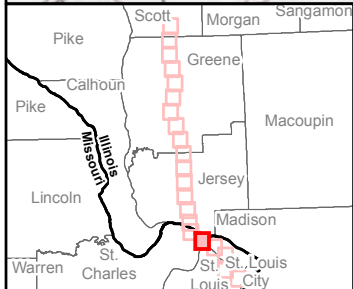
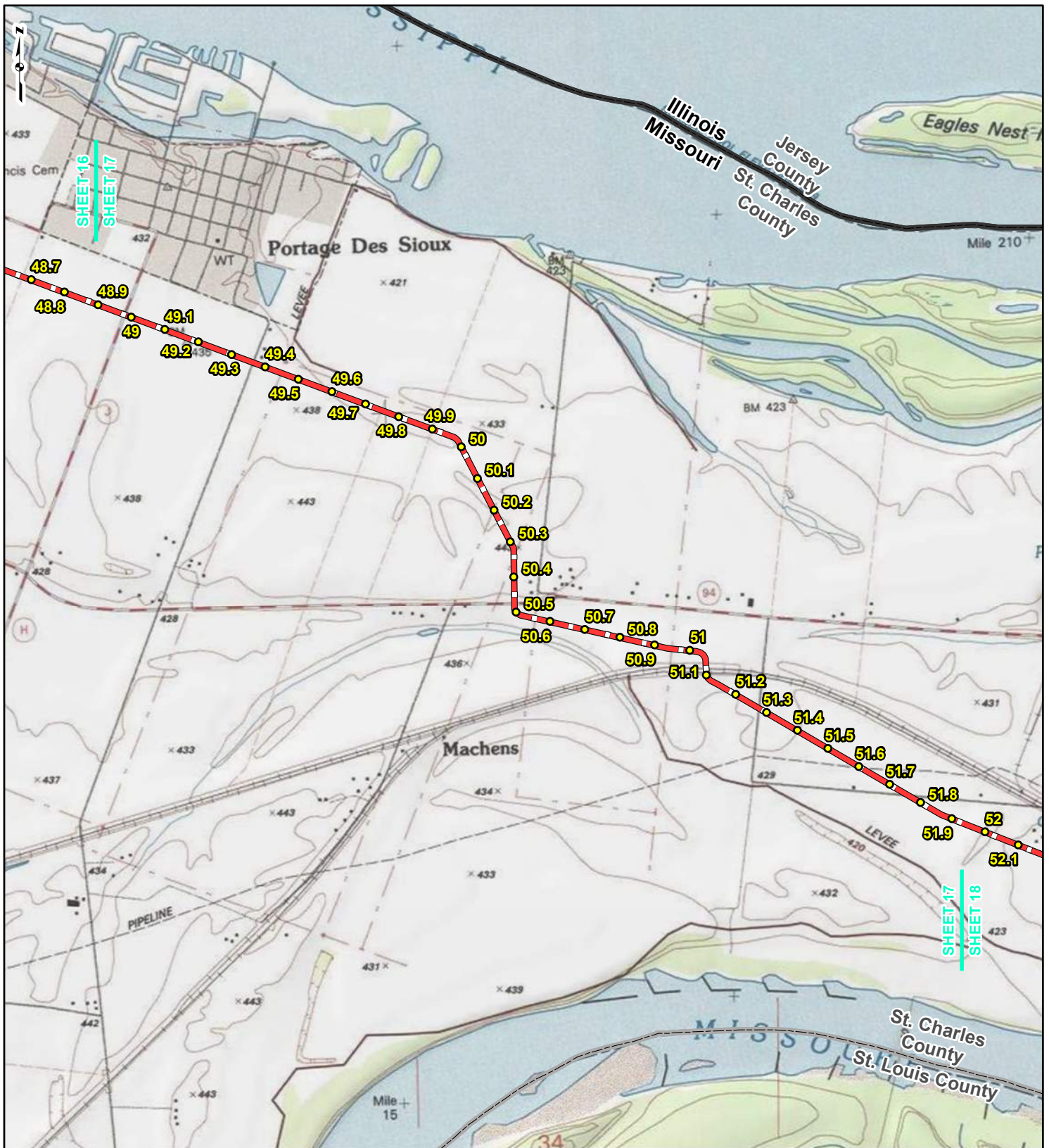
FIGURE 1
LOCATION MAP
SHEET 16 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

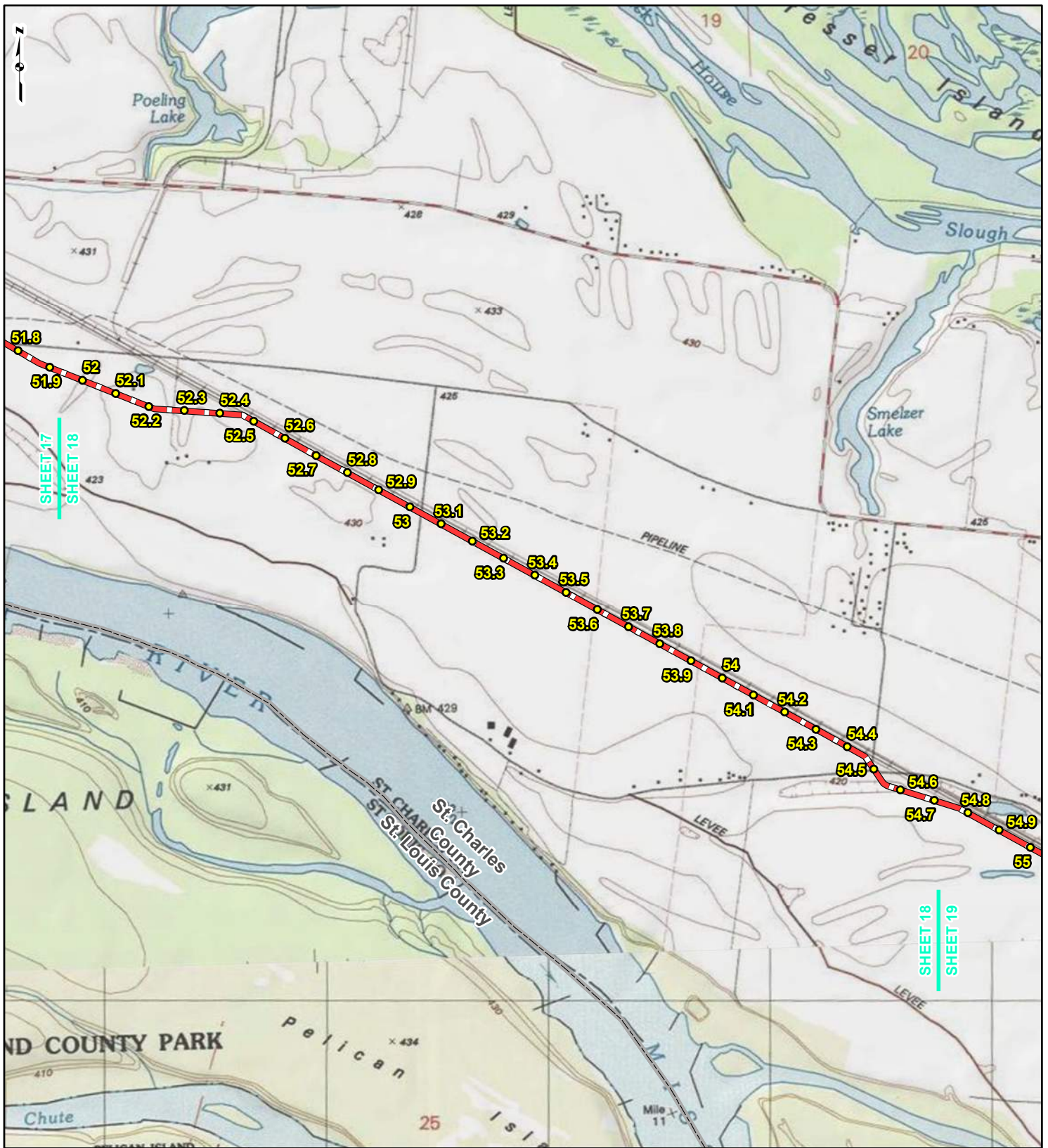
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 17 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

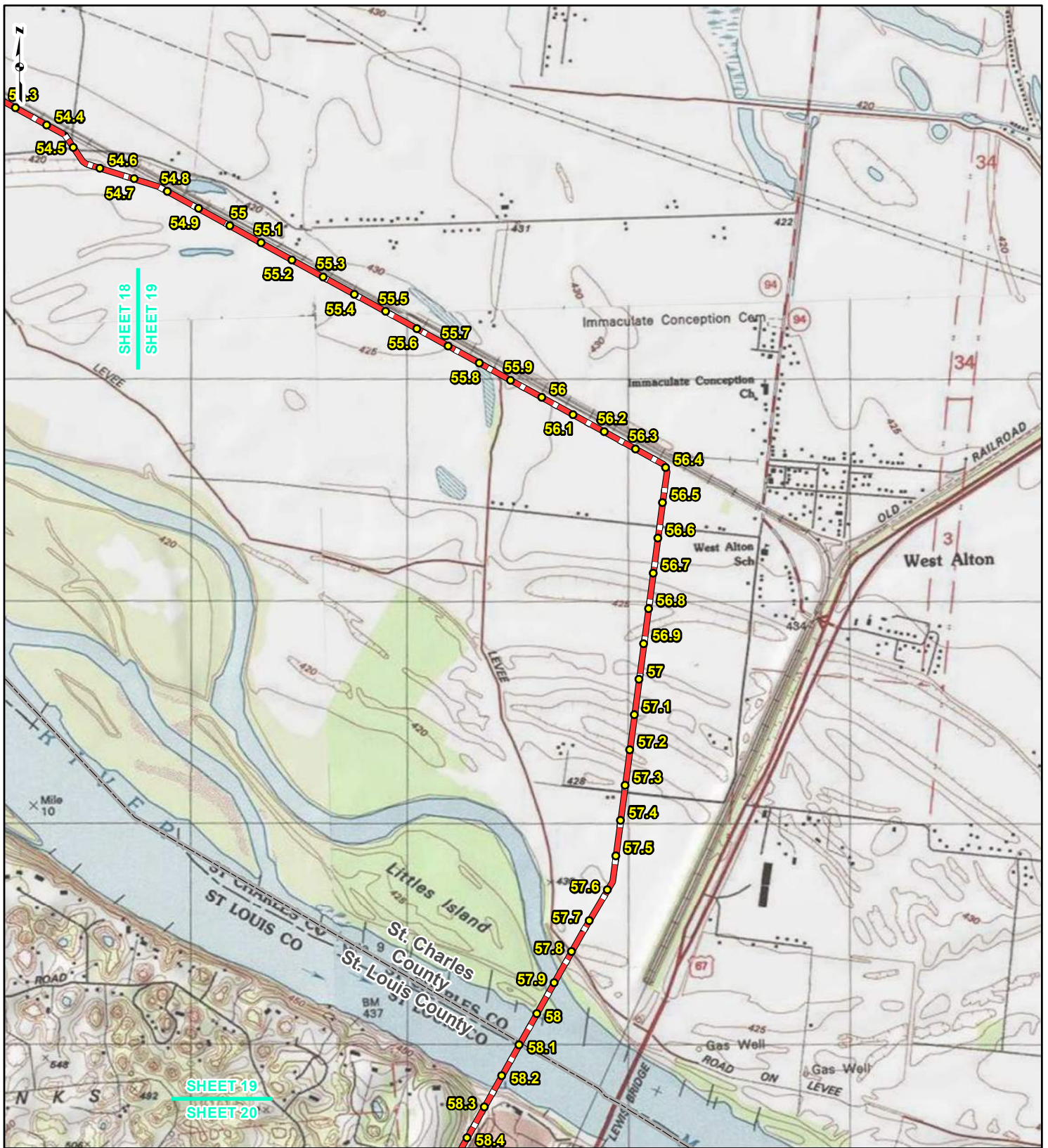
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 18 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

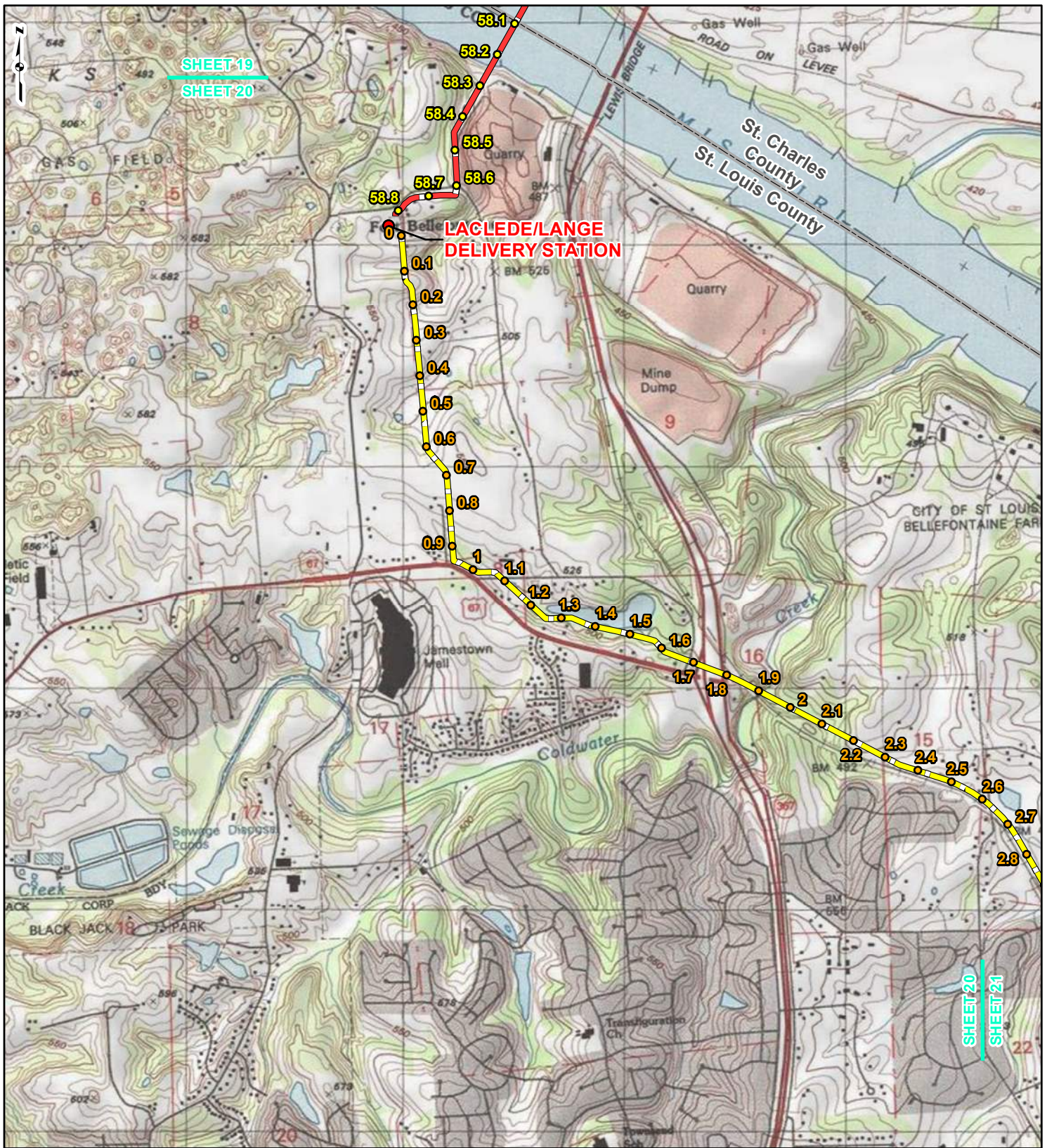
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 19 OF 21

SPIRE STL PIPELINE PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE MILEPOST	— 24-INCH PIPELINE EXTENSION
● NORTH COUNTY MILEPOST	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

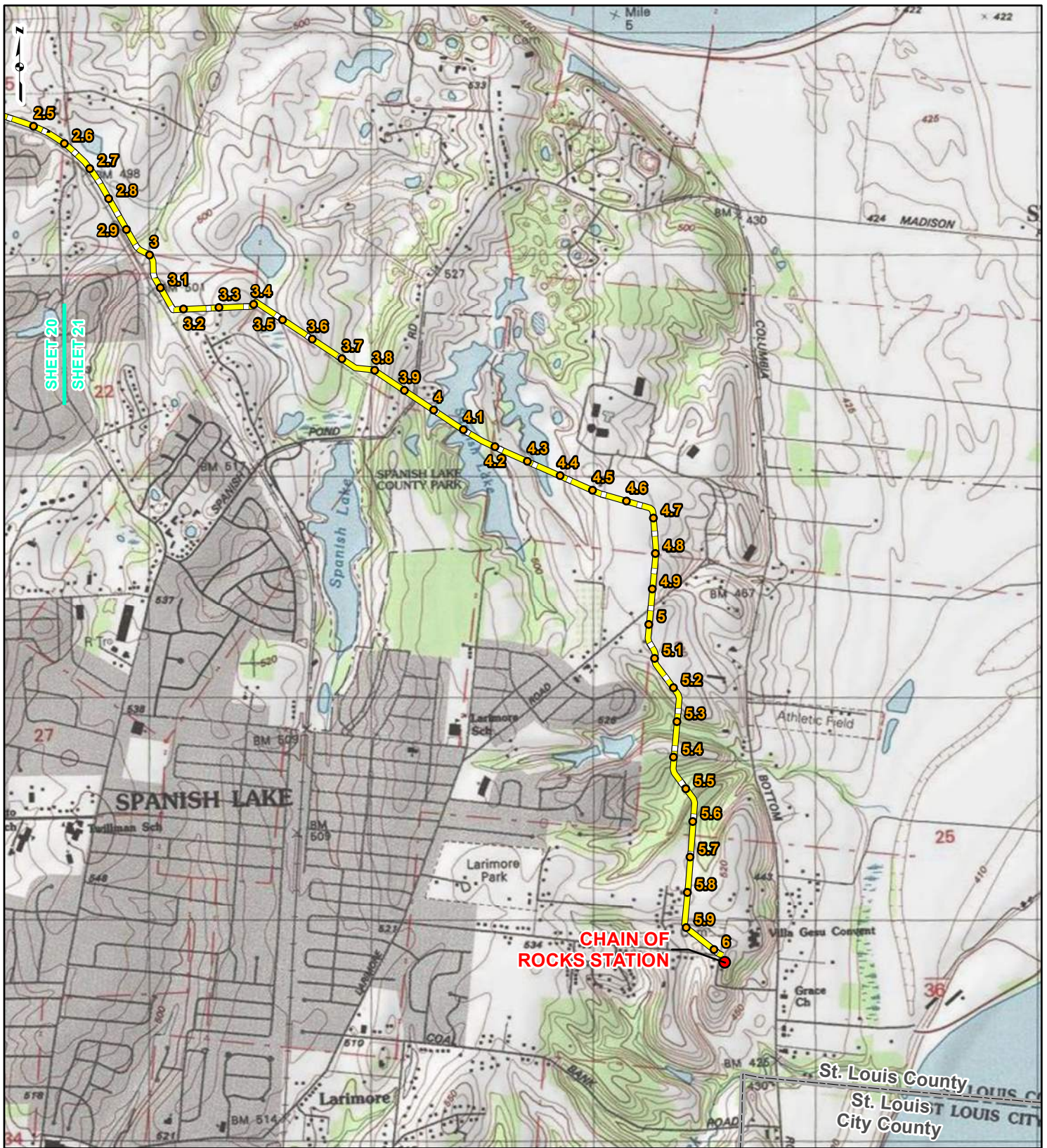
**FIGURE 1
LOCATION MAP
SHEET 20 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

spire

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE EXTENSION	— 24-INCH PIPELINE EXTENSION
● NORTH COUNTY MILEPOST	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 21 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



Missouri Department of

dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

March 23, 2017

Eric P. Scuoteguazza
GAI Consultants, Inc.
1444 Farnsworth Avenue, Suite 303
Aurora, Illinois 60505

Re: Spire STL Pipeline Project (FERC) St. Charles & St. Louis Counties, Missouri

Dear Mr. Scuoteguazza:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR Part 800, which requires identification and evaluation of cultural resources.

We have reviewed the January 2017 draft reports entitled detailing the results of the Phase I archaeological survey and historic architectural survey. Based on this review we have the following comments:

- Please be consistent with the site descriptions by including in all transects; the percentage of visibility; if shovel tests were conducted and, if so, how many and what the results were (plow zone, intact, to what depth); if the site boundaries extend outside of the right-of-way, at least estimate how much additional site area might be beyond project boundaries.
- Figures 1.2 and 6.1 are referenced for each site. Please include the sheet number. It would also be most useful to include a map showing the site in relation to the project in the site description section.
- The maps attached to the site forms must use the official trinomial, not the field designation.
- Artifact illustrations and/or photographs should be included in the site descriptions and with the site forms.
- 23SC2213 – how far outside of the right of way might this site extend? If only a small portion, then the recommendation for not eligible may be defended.
- 23SC2218 – states that this site exhibits intact integrity. Was this determined by shovel tests? If so, how deep? Was there intact cultural material below the plow zone?
- 23SC2219 – it is more appropriate to state the historic component does not have the potential to contribute to the possible eligibility of the site.
- 23SC2215 - states that this site exhibits intact integrity. Was this determined by shovel tests? If so, how deep? Was there intact cultural material below the plow zone? Provide documentation to support the statement that there is a potential for deeply buried deposits.
- 23SC2211 – Was shovel testing conducted to determine evidence or presence of features?
- 23SC5 – Were additional historic records reviewed to determine if the mapped location of the trail is accurate? What changes or alterations to the landform have occurred?
- 23SL157 – it is more accurate to state that there is no evidence of the site within the project area, and that there will be no effect.
- 23SL158 - it is more accurate to state that there is no evidence of the site within the project area, and that there will be no effect.
- GAI-02 – will require additional context before a determination of eligibility can be made.



Recycled paper

- GAI-03 – More and better photographs are needed for this farmstead, as well as a more detailed explanation for why the recommendation is for not eligible.
- GI-09 and GAI-33 – More and better photographs, as well as more documentation of the surrounding subdivision will be required in order to determine if these properties are eligible or not.

We look forward to the opportunity to review a revised draft of these documents. If you have any questions, please write Judith Deel at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call 573/751-7862. Please be sure to include the SHPO Log Number (061-MLT-16) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE



Toni M. Prawl, Ph.D.
Director and Deputy State
Historic Preservation Officer

TMP:jd

c Laurie Boros, FERC



Missouri Department of Conservation



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Ms. Audrey Beres
Policy Coordinator
Missouri Department of Conservation
2901 West Truman Boulevard
Jefferson City, Missouri 65109

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
St. Charles and St. Louis Counties, Missouri**

Dear Ms. Beres:

In June 2016, Spire Pipeline LLC (Spire) initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project (Project) which consisted of approximately 59 miles of new, greenfield, 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline"), originating at an interconnection with the Rockies Express Pipeline LLC (REX) pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company (LGC) (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project) (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield, 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with the FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC interconnect through the northern portion of St. Louis County and terminate at a new interconnect

with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75-feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act (NEPA) process began (initiation of FERC Pre-Filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) – File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

Missouri

Approximately 13.5 miles of the 24-inch pipeline will be located in Missouri and traverse St. Louis and St. Charles Counties. Approximately six miles of the new 24-inch diameter North County Extension will be located in St. Louis County, Missouri. Two metering and regulating stations are proposed in St. Louis County, Missouri.

The Project facilities are shown on the attached United States Geological Survey ("USGS") Topographic Map (Figure 1). In addition, Spire has proposed the use/development of new and/or existing access roads throughout the Project area. Temporary staging areas will also be utilized to accommodate equipment staging and stockpiling of materials along the proposed corridor during construction.

Site Description

Missouri

The Missouri portion of the Project is located in St. Charles and St. Louis Counties, Missouri, and is depicted on the attached portions of the Grafton (1979), Elsah (1979), Alton (1979), Florissant (1979), and Columbia Bottom (1979), Missouri, USGS 7.5-minute series topographic maps (Figure 1).

The 24-inch pipeline is greenfield and crosses a primarily agricultural landscape. The North County Extension crosses agricultural, forested, and residential lands. The Project is located within the Marais Temps Clair-Mississippi River [USGS Hydrologic Unit Code (HUC) #071100090401], Outlet Missouri River (HUC #103002000804), Coldwater Creek (HUC #103002000803), and Maline Creek-Mississippi River (HUC #071401010401) watersheds.

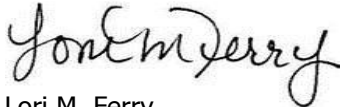
On behalf of Spire we'd like to take this opportunity to invite the Missouri Department of Conservation to provide comments regarding the Project as it will be amended. We

appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255, or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

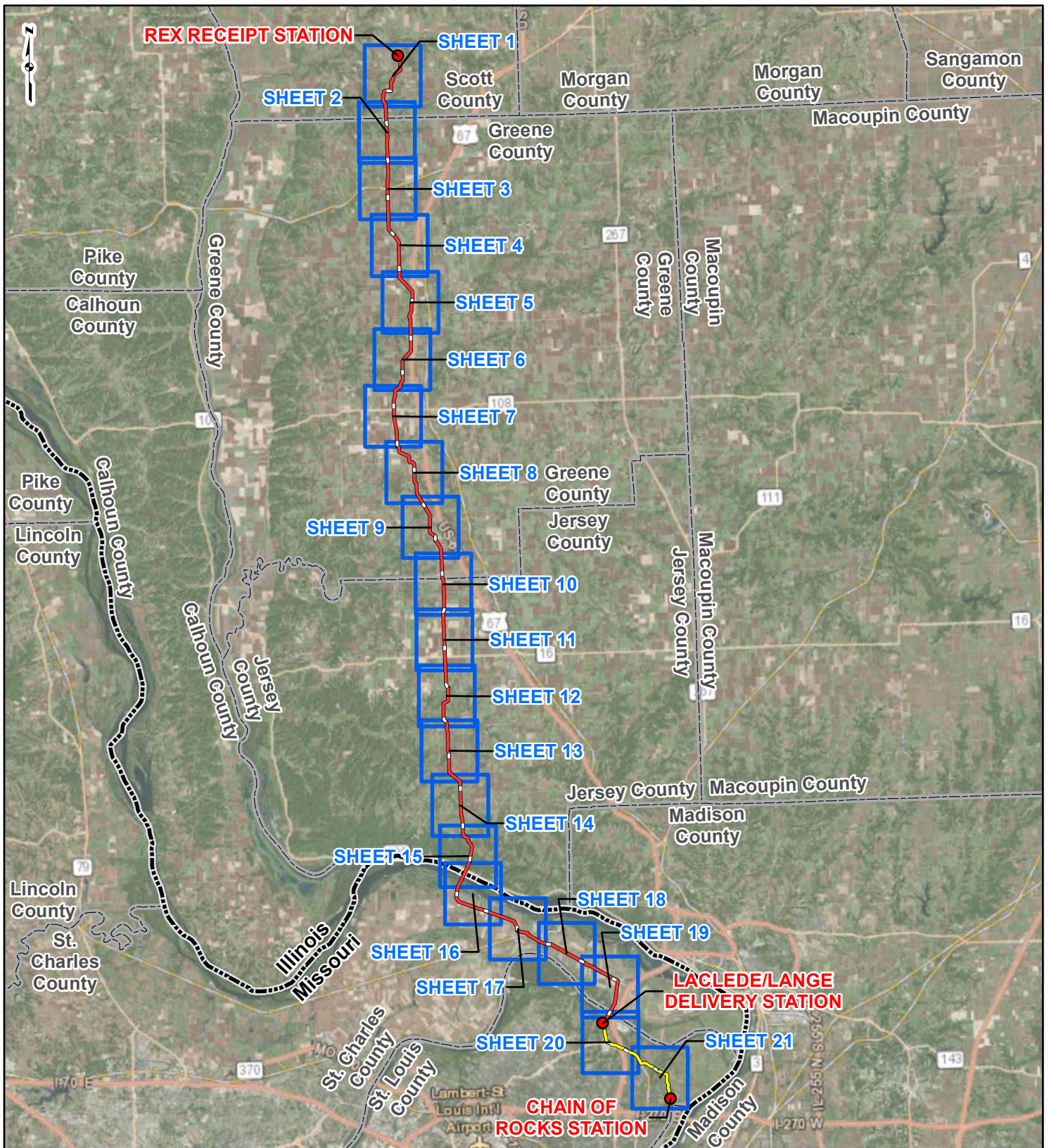
GAI Consultants, Inc.

A handwritten signature in black ink that reads "Lori M. Ferry". The signature is written in a cursive, flowing style.

Lori M. Ferry
Environmental Manager

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

ATTACHMENT
USGS TOPOGRAPHIC MAP (FIGURE 1)



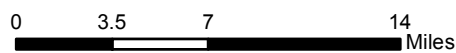
PROJECT LOCATION



SCOTT, GREENE AND JERSEY COUNTIES, ILLINOIS AND ST. CHARLES AND ST. LOUIS COUNTIES, MISSOURI

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- SHEET INDEX
- COUNTY BOUNDARY
- STATE BOUNDARY



**FIGURE 1
LOCATION MAP
SHEET INDEX**



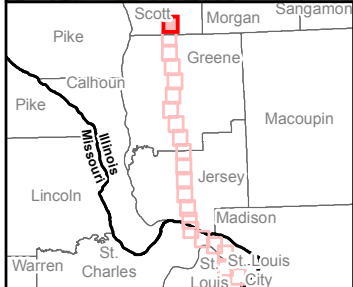
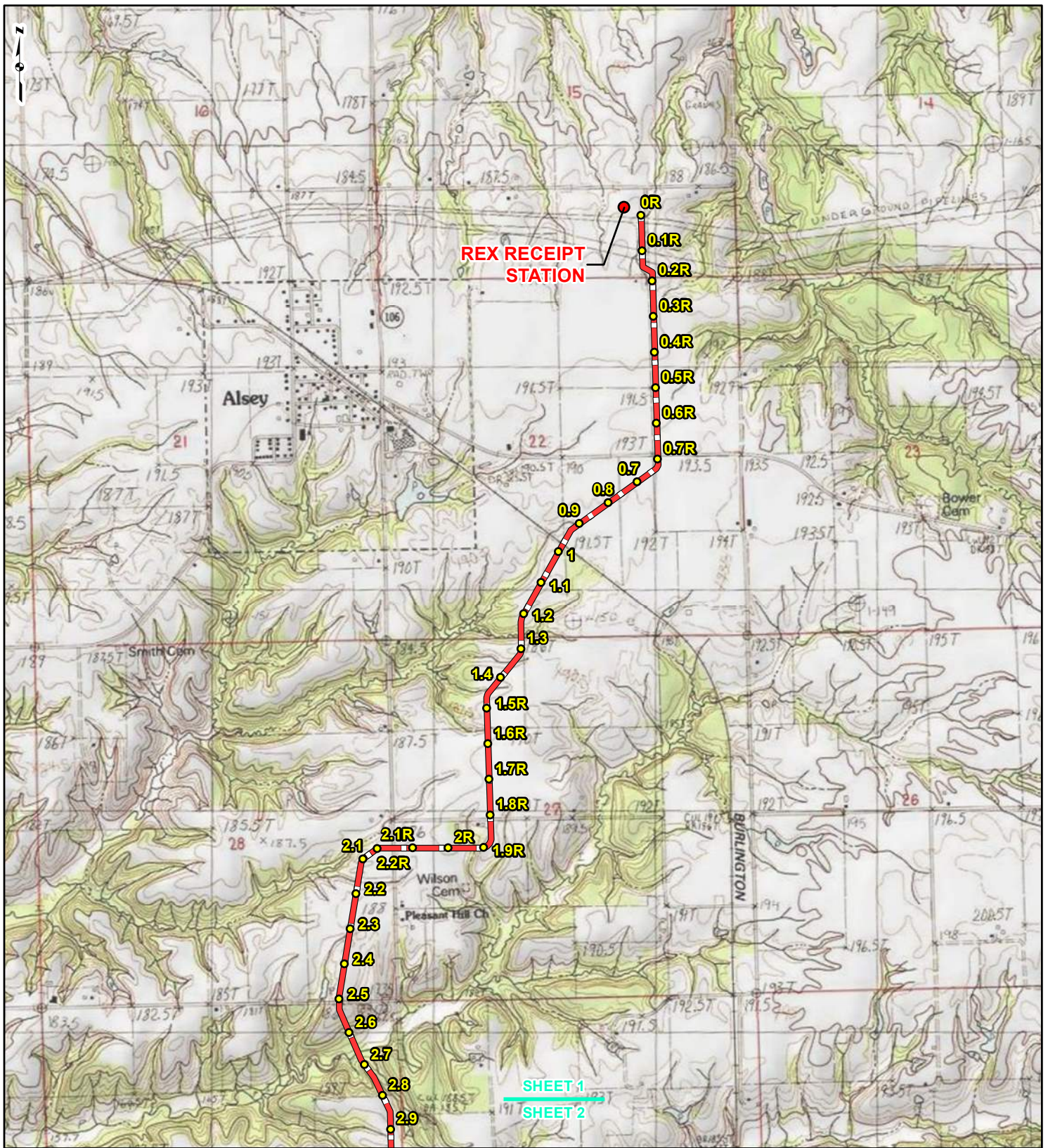
**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH
CHECKED: SWW

DATE: 3/28/2017
APPROVED: LMF

REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2015, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE MILEPOST	— EXTENSION
○ NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

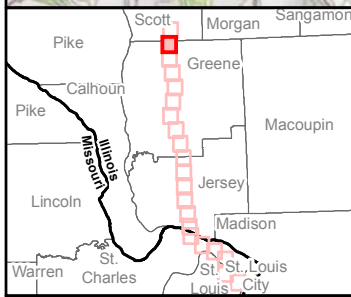
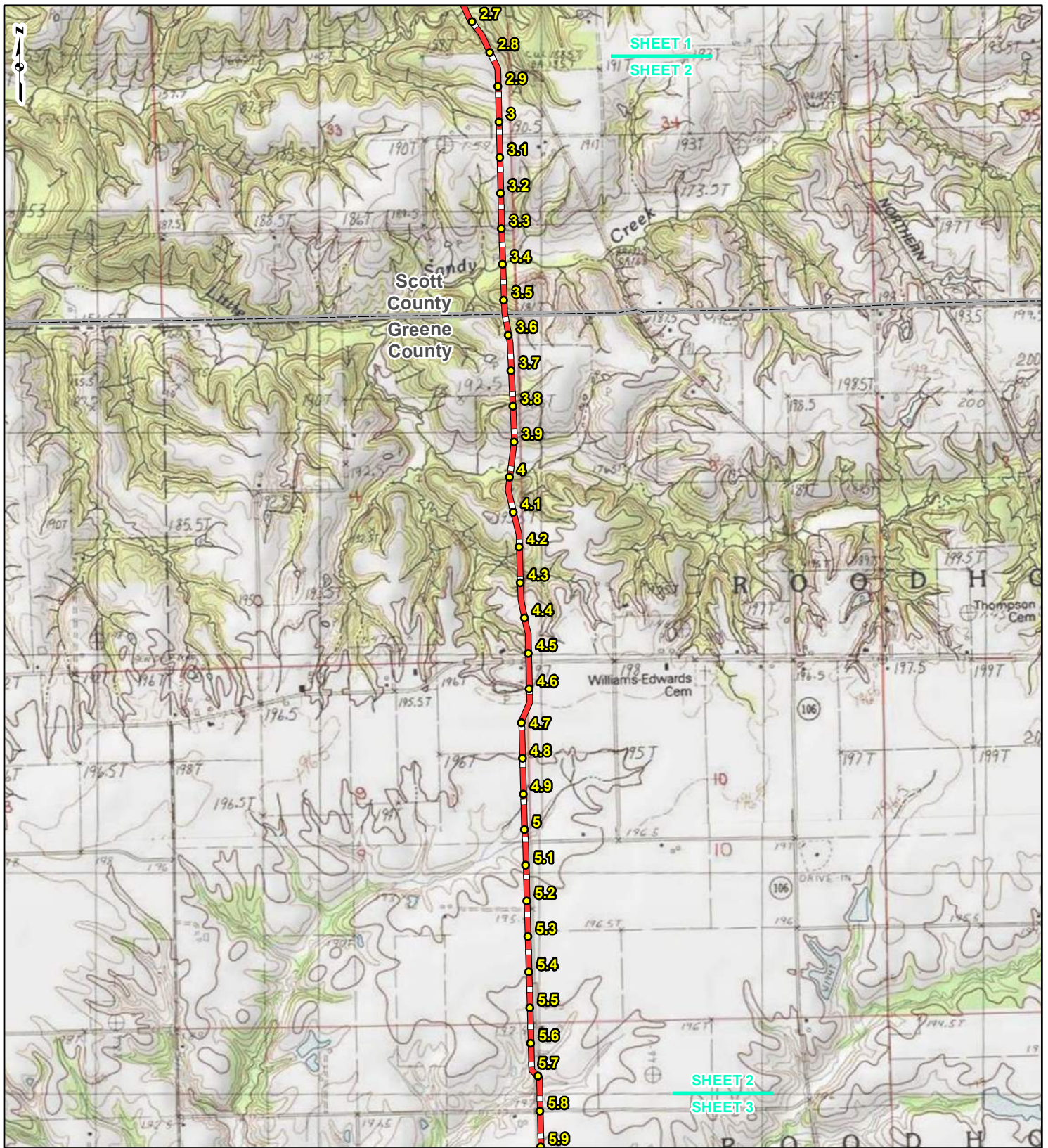
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 1 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSA (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

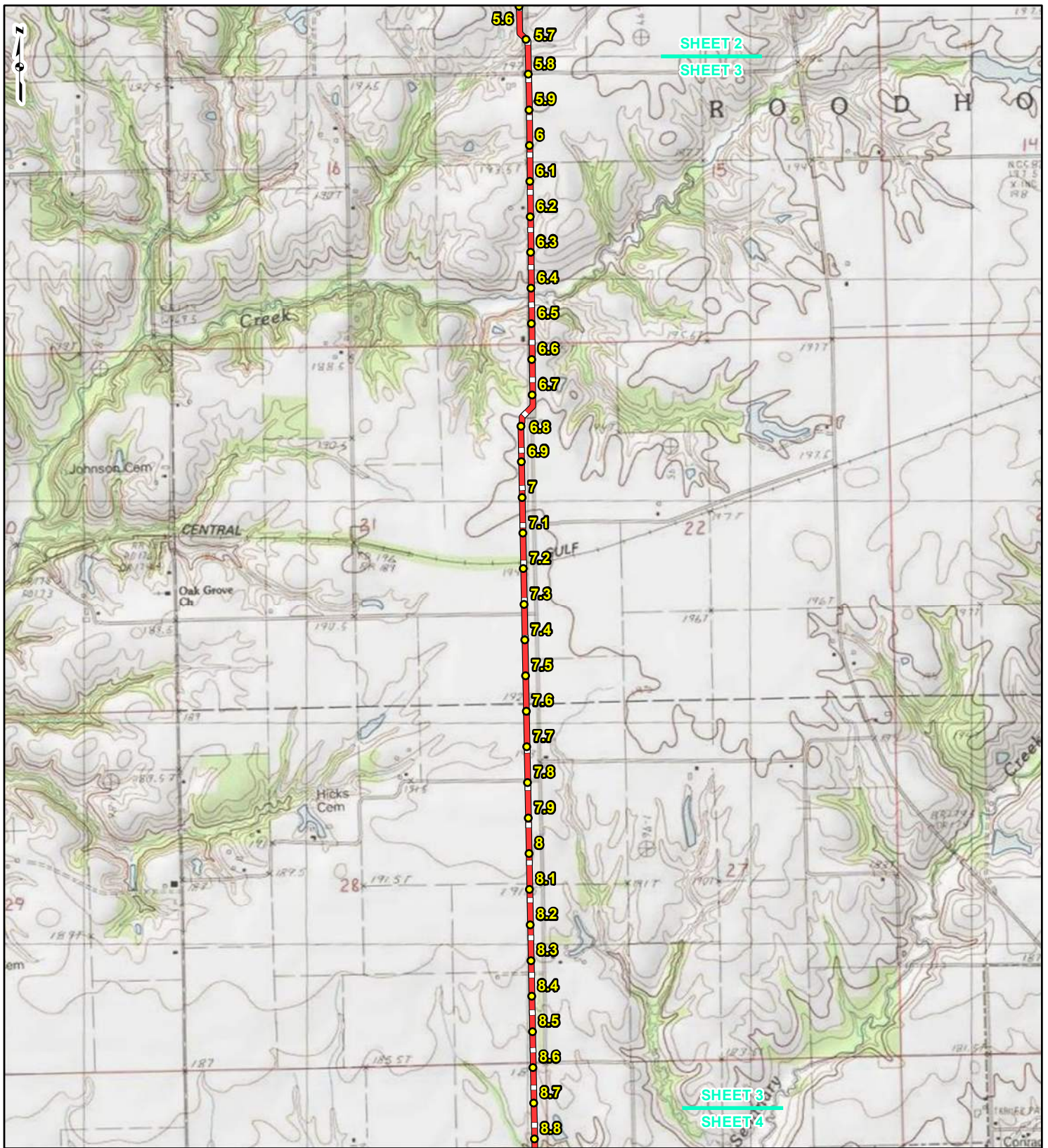
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**FIGURE 1
LOCATION MAP
SHEET 2 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	▬ 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	▬ NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▬ COUNTY BOUNDARY
	▬ STATE BOUNDARY

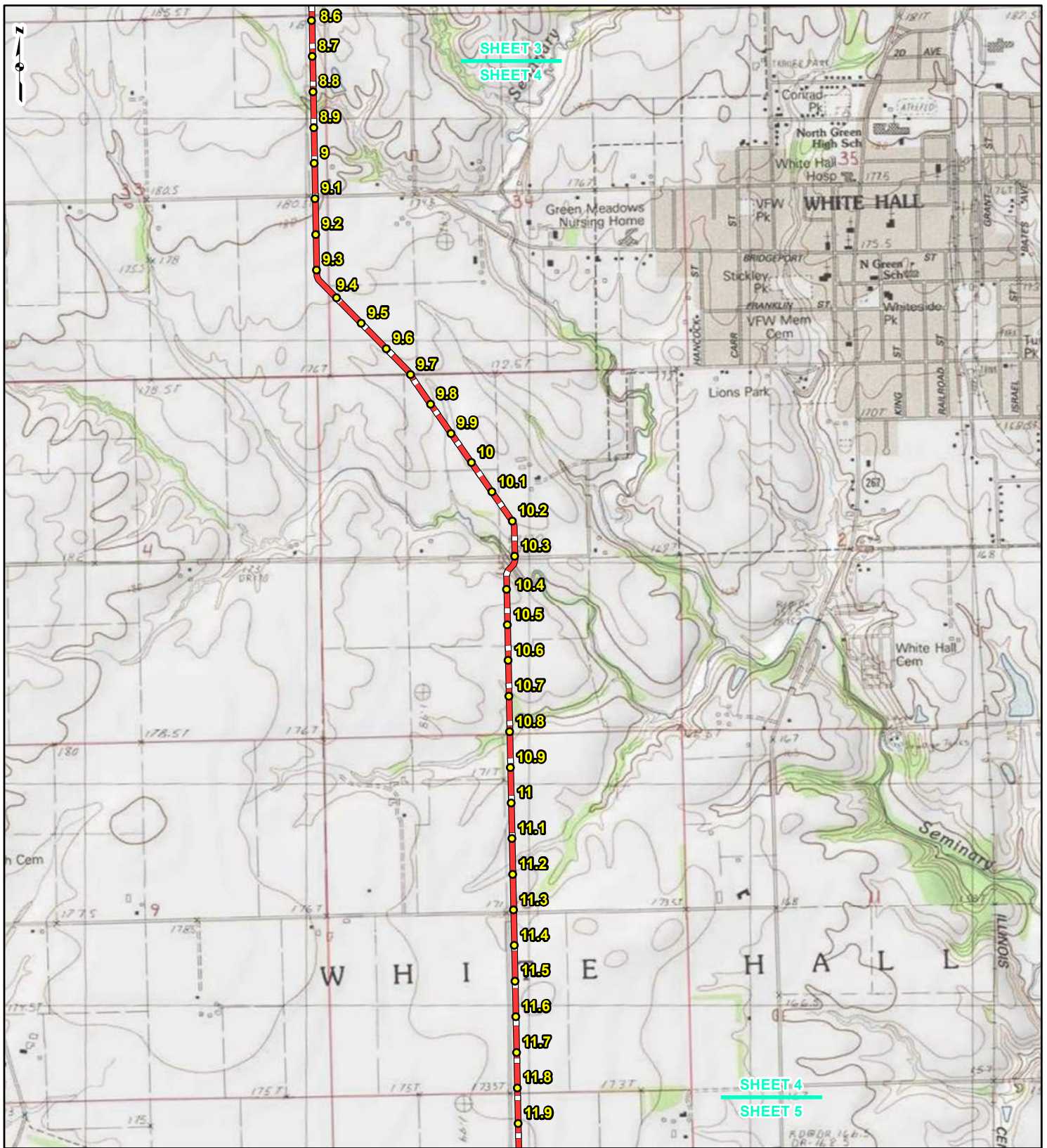
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**FIGURE 1
LOCATION MAP
SHEET 3 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1995), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
● NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

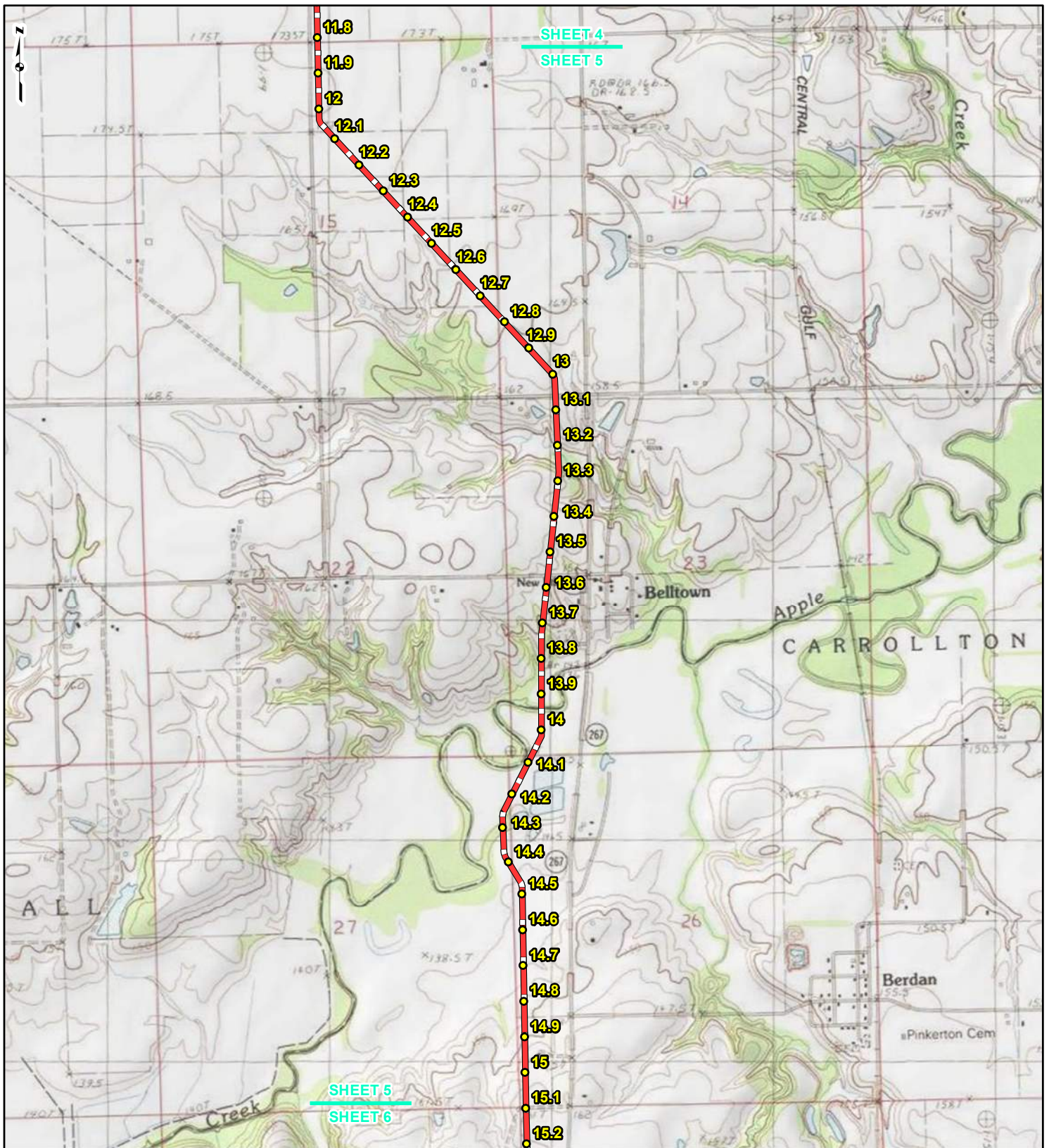
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 4 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- COUNTY BOUNDARY
- STATE BOUNDARY

0 1,000 2,000 4,000 Feet

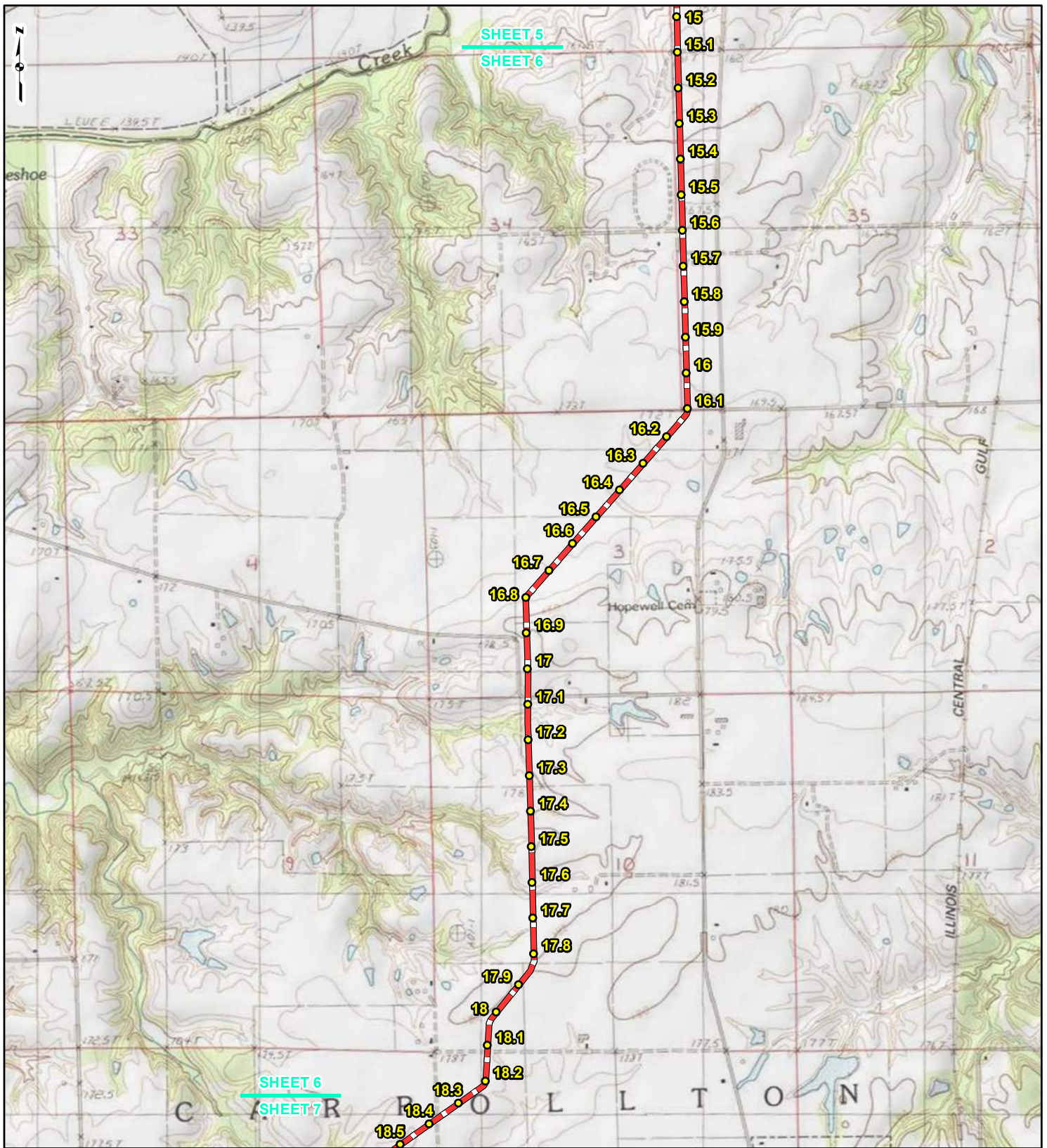
FIGURE 1
LOCATION MAP
SHEET 5 OF 21

SPIRE STL PIPELINE PROJECT

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

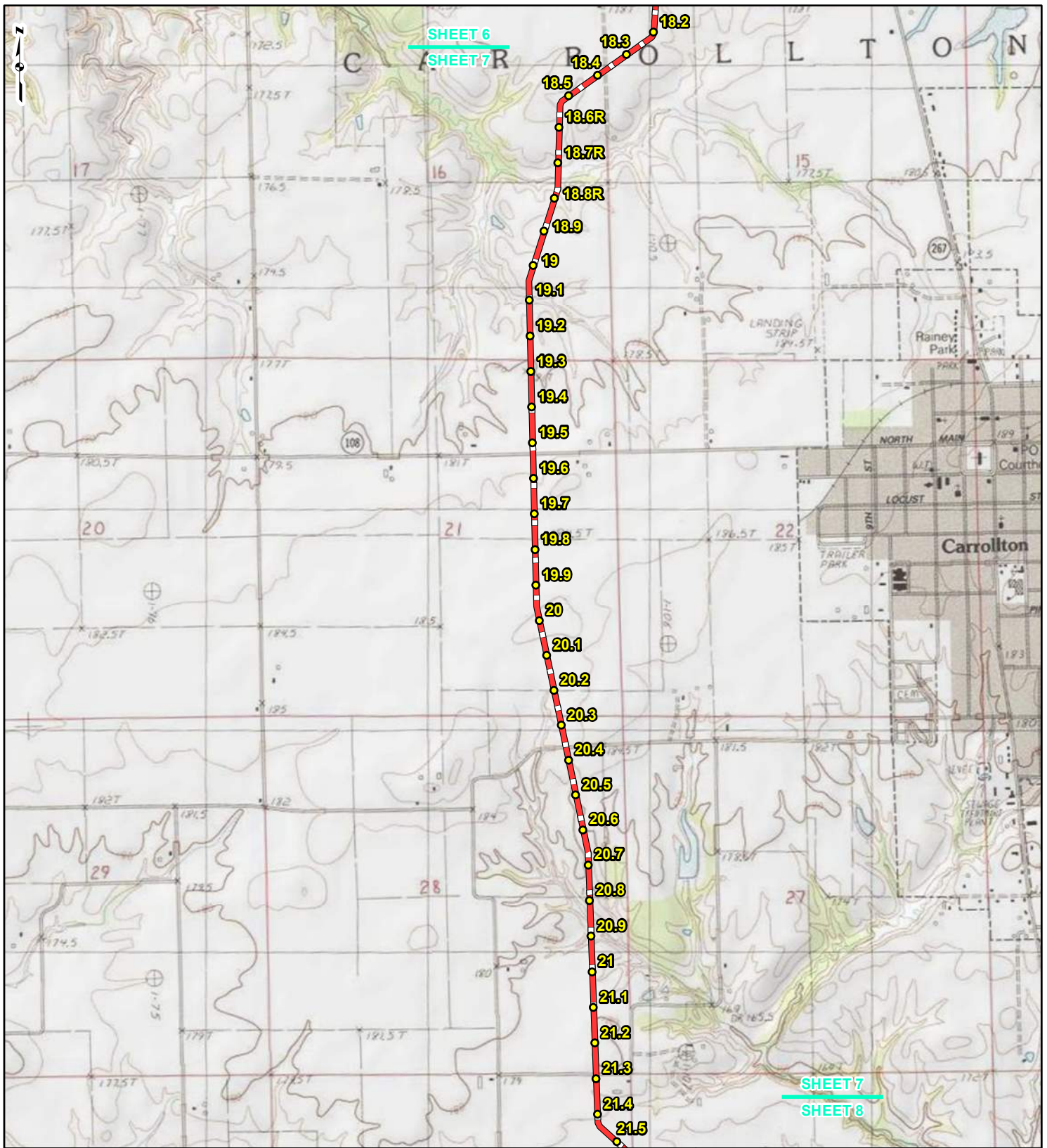
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 6 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

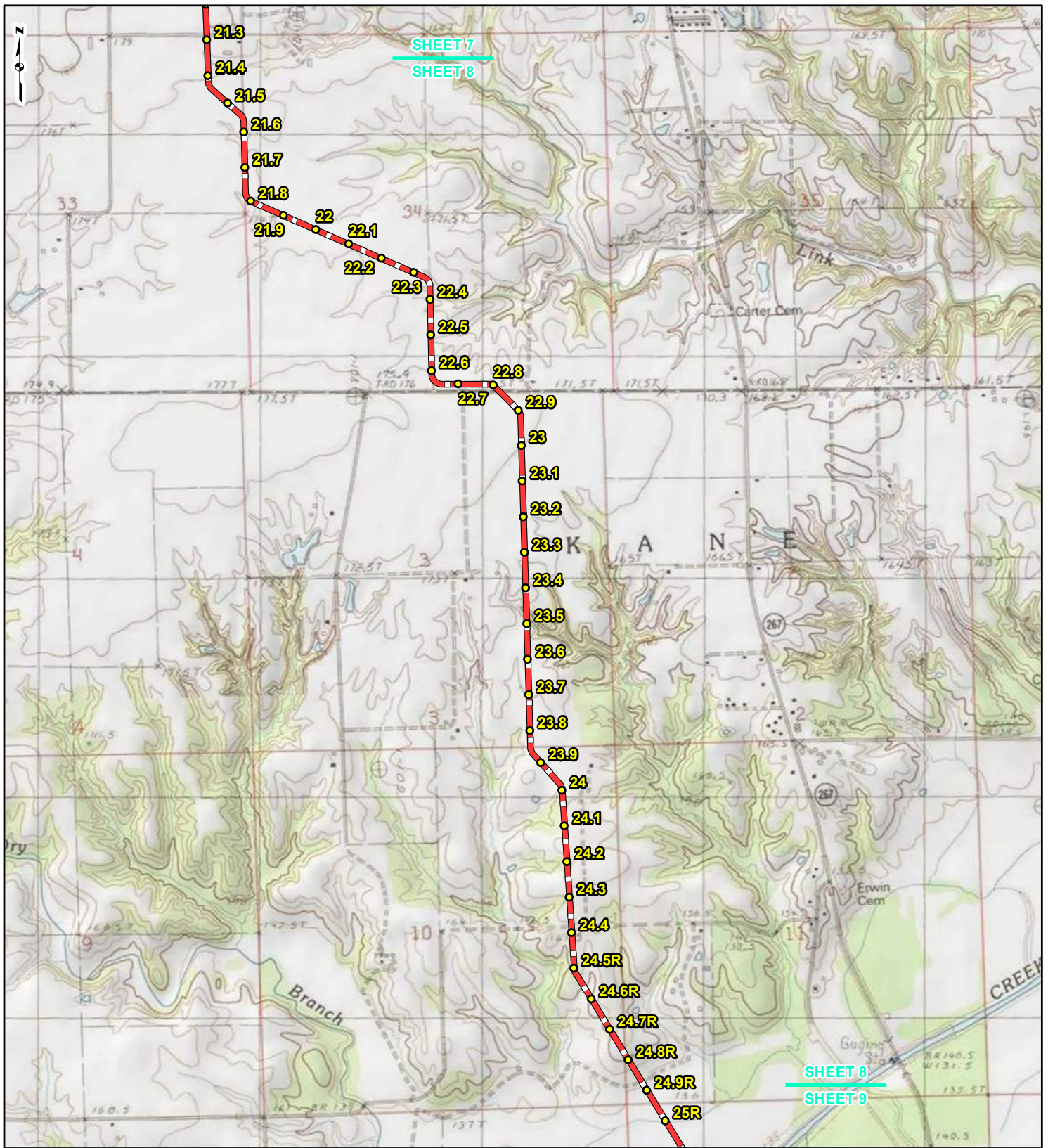
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 7 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

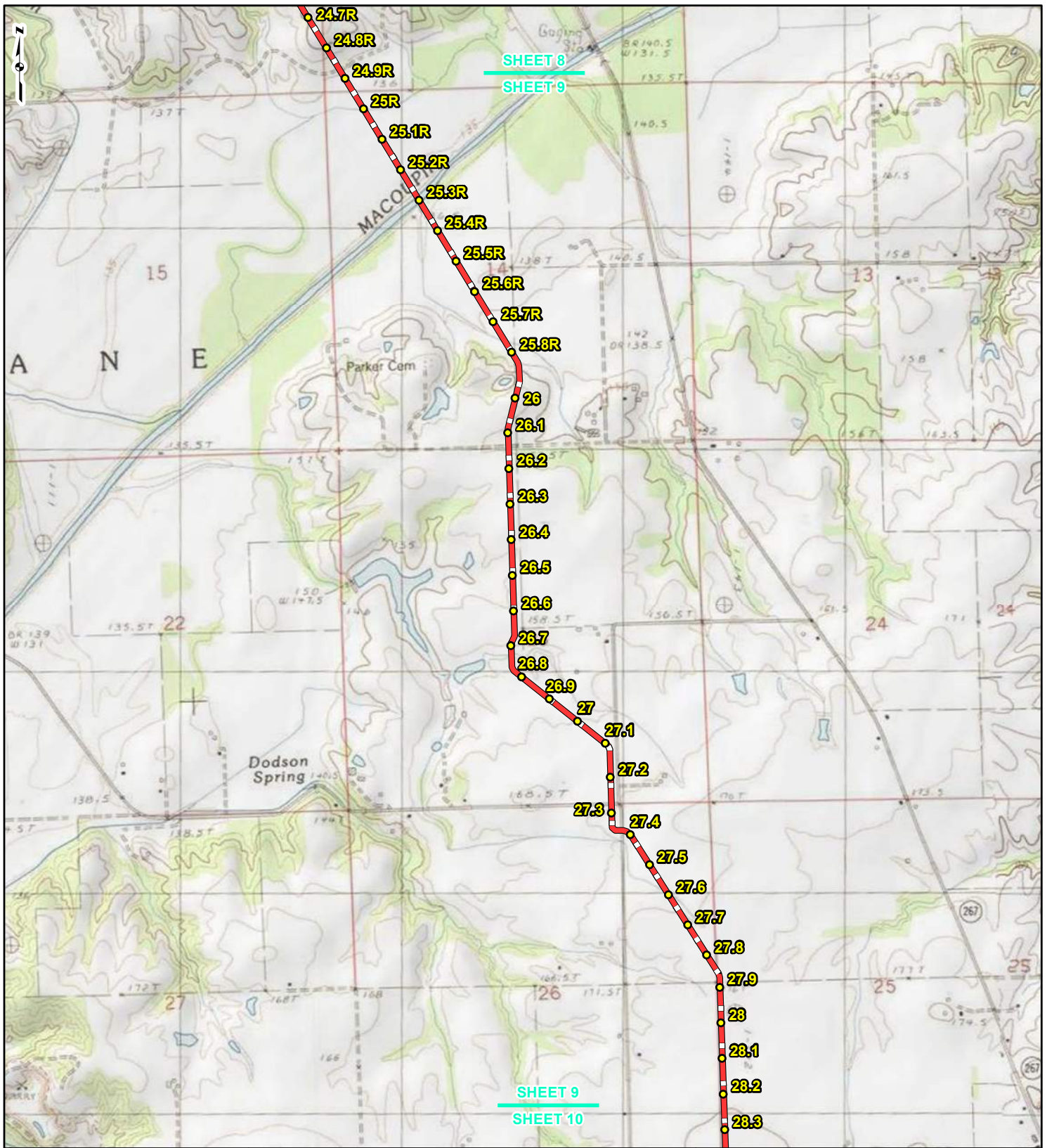
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 8 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

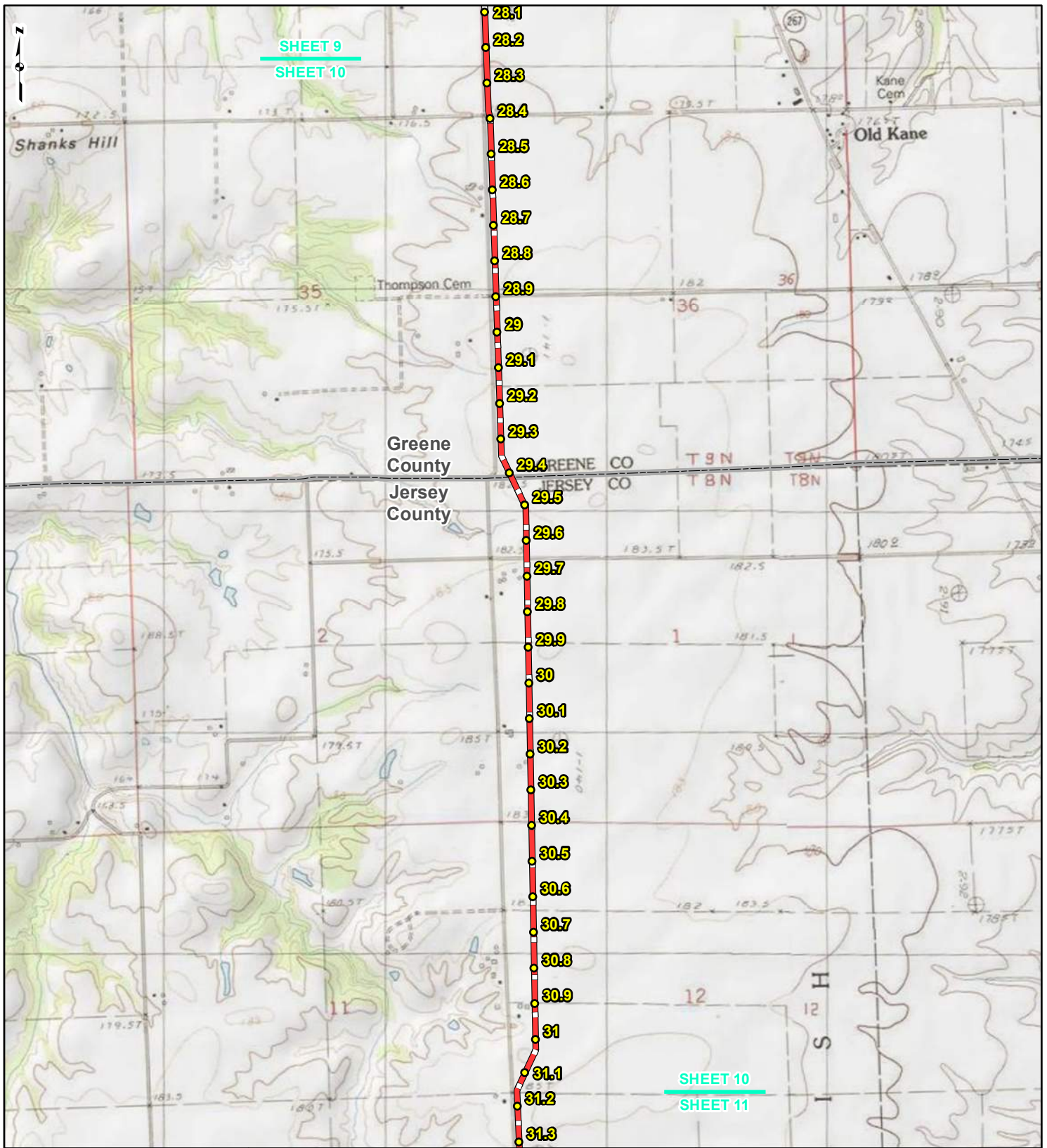
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**FIGURE 1
LOCATION MAP
SHEET 9 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

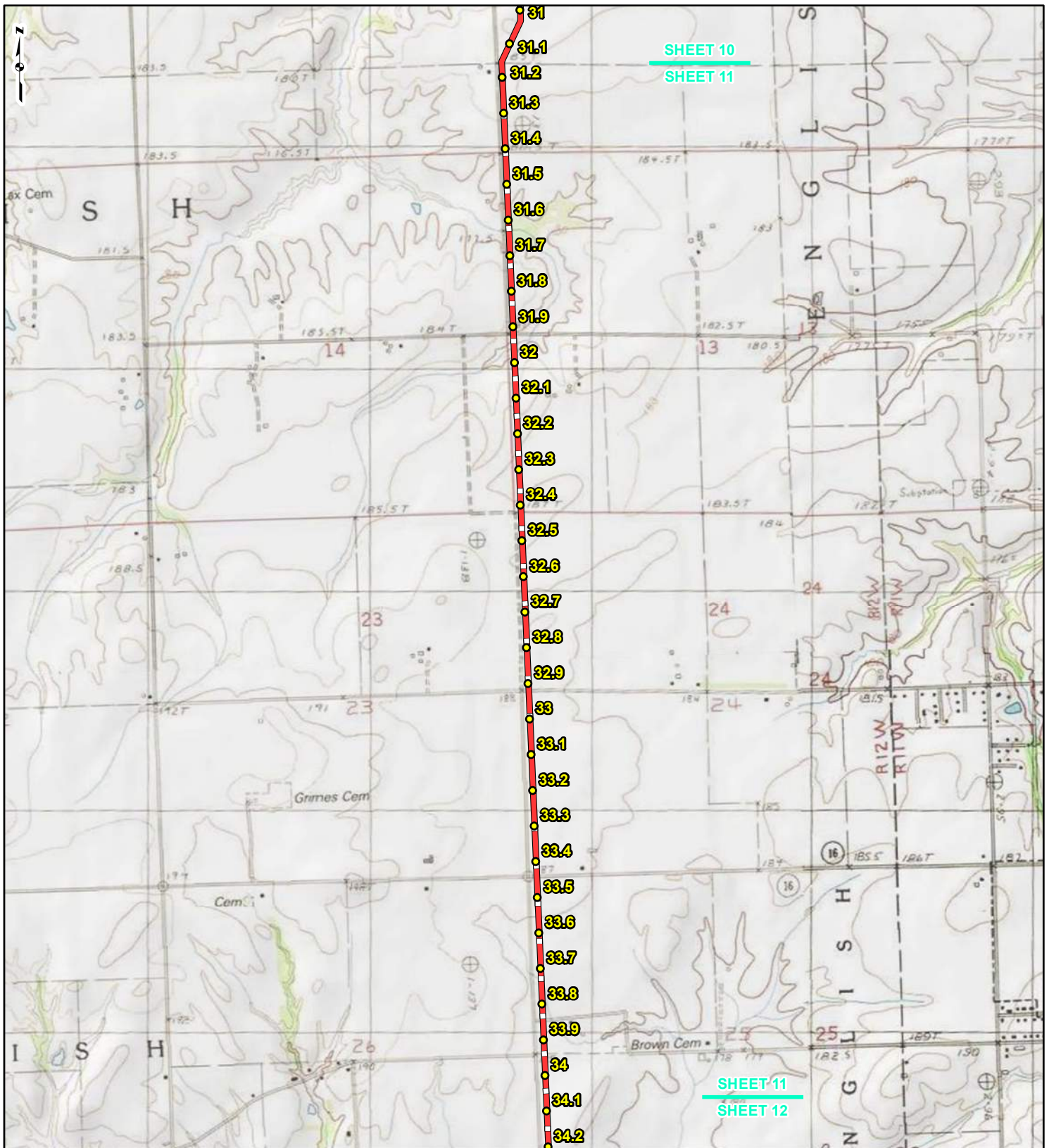
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 10 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.

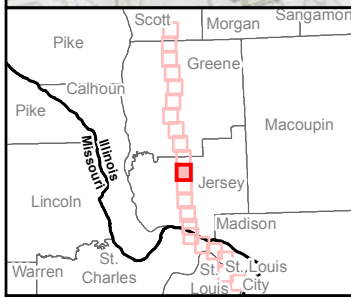


SHEET 10

SHEET 11

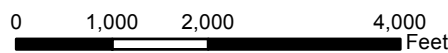
SHEET 11

SHEET 12



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY



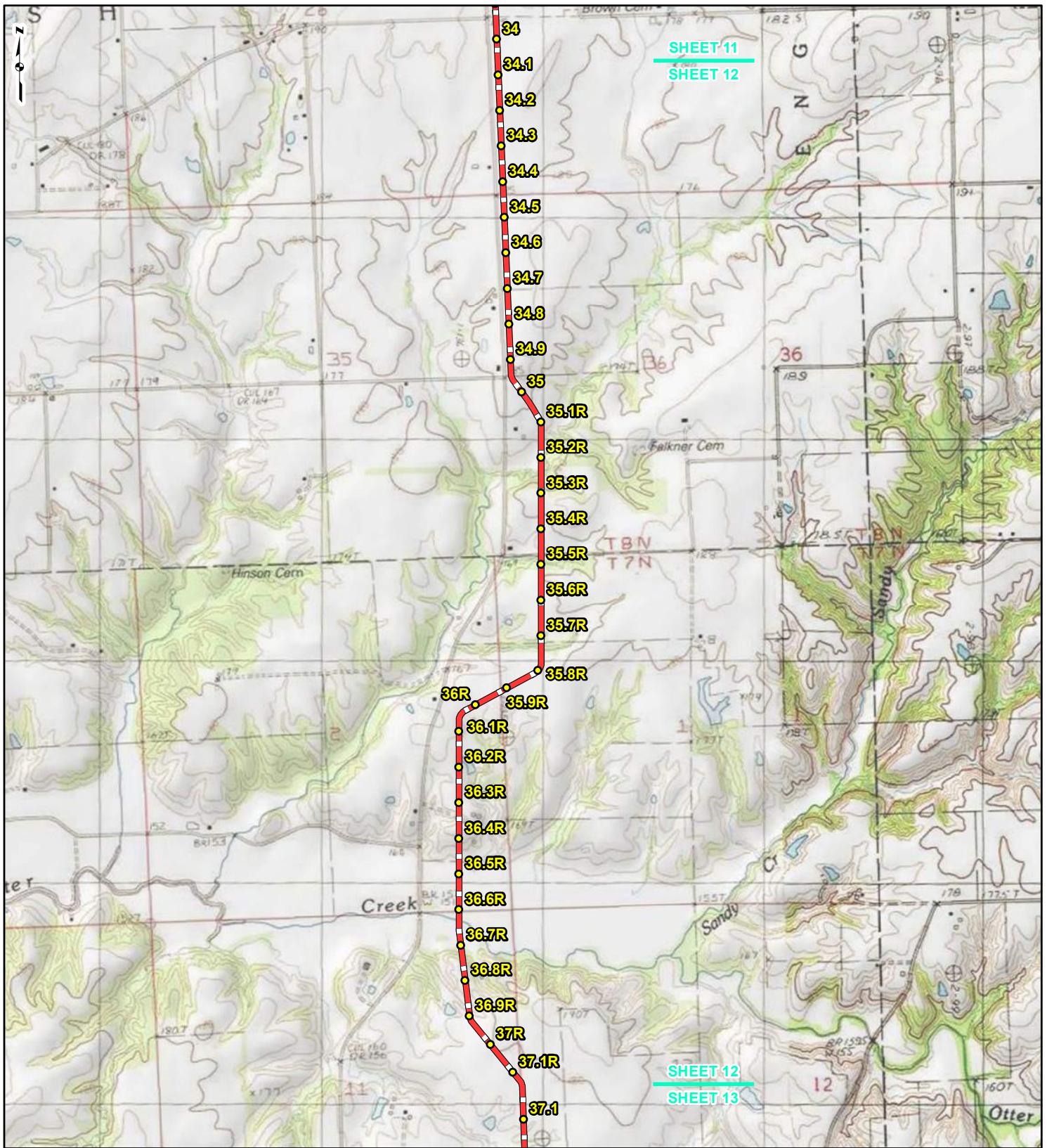
**FIGURE 1
LOCATION MAP
SHEET 11 OF 21**

**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 11
SHEET 12

SHEET 12
SHEET 13



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

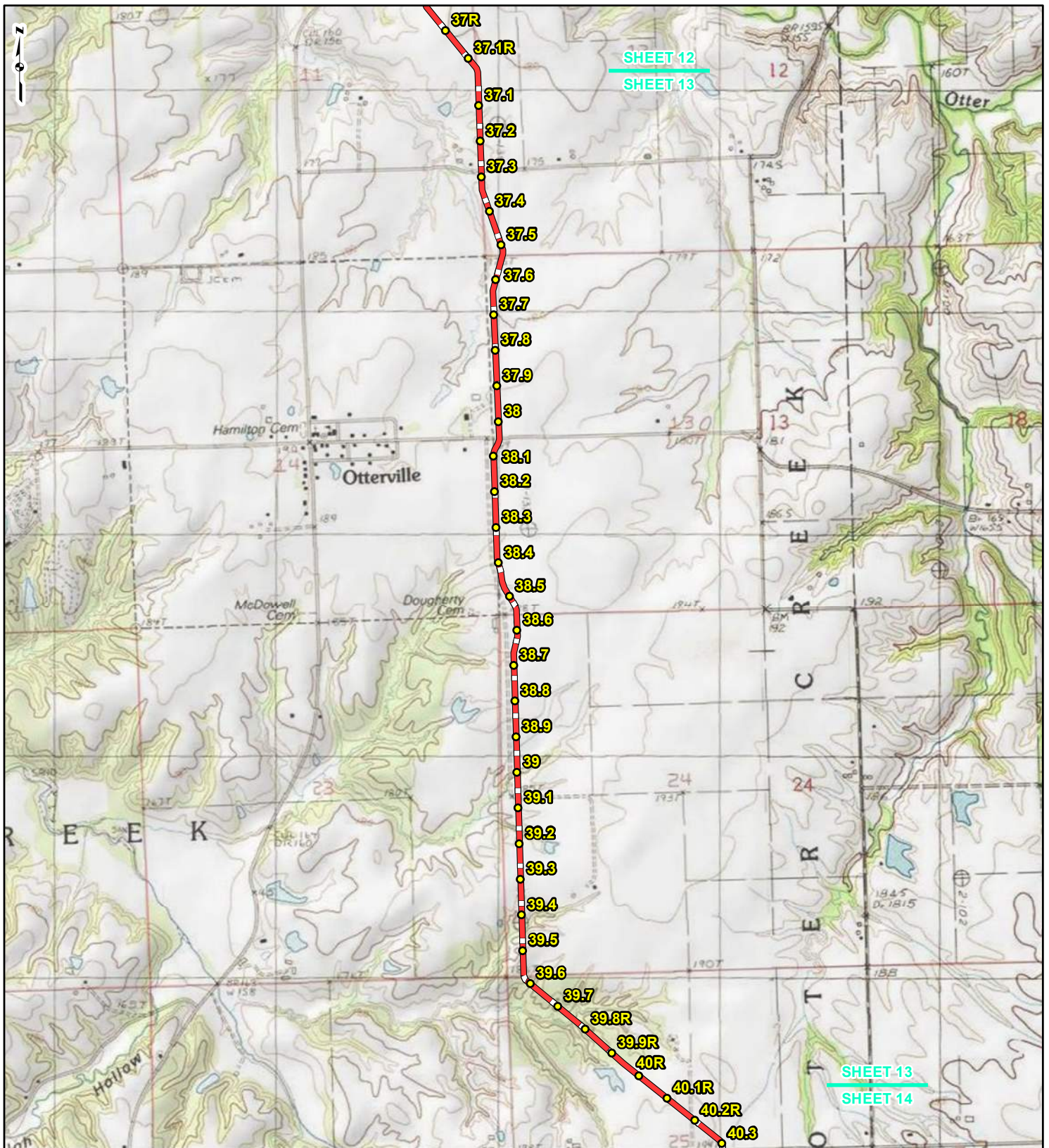
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 12 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

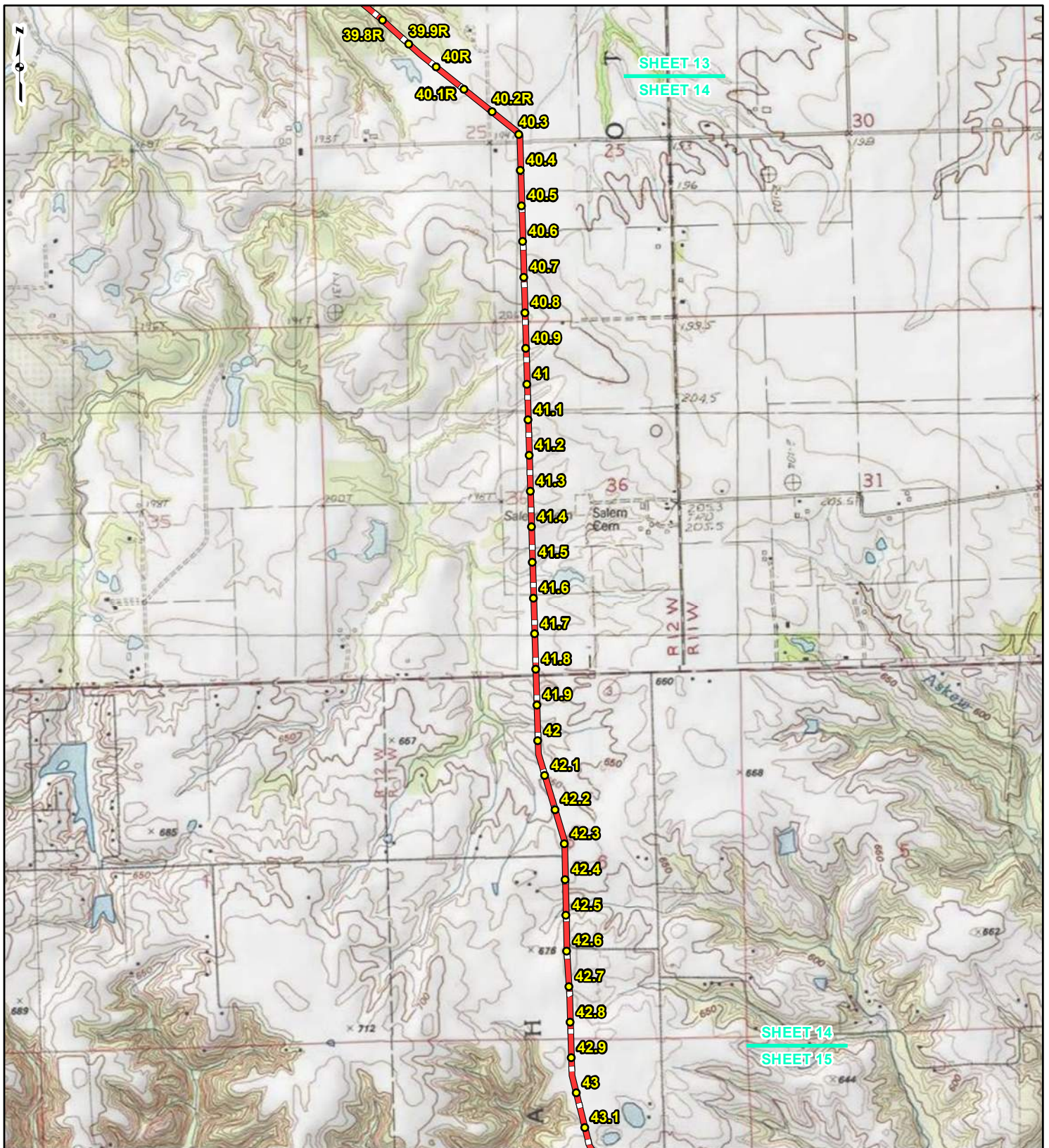
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 13 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 13
SHEET 14

SHEET 14
SHEET 15



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

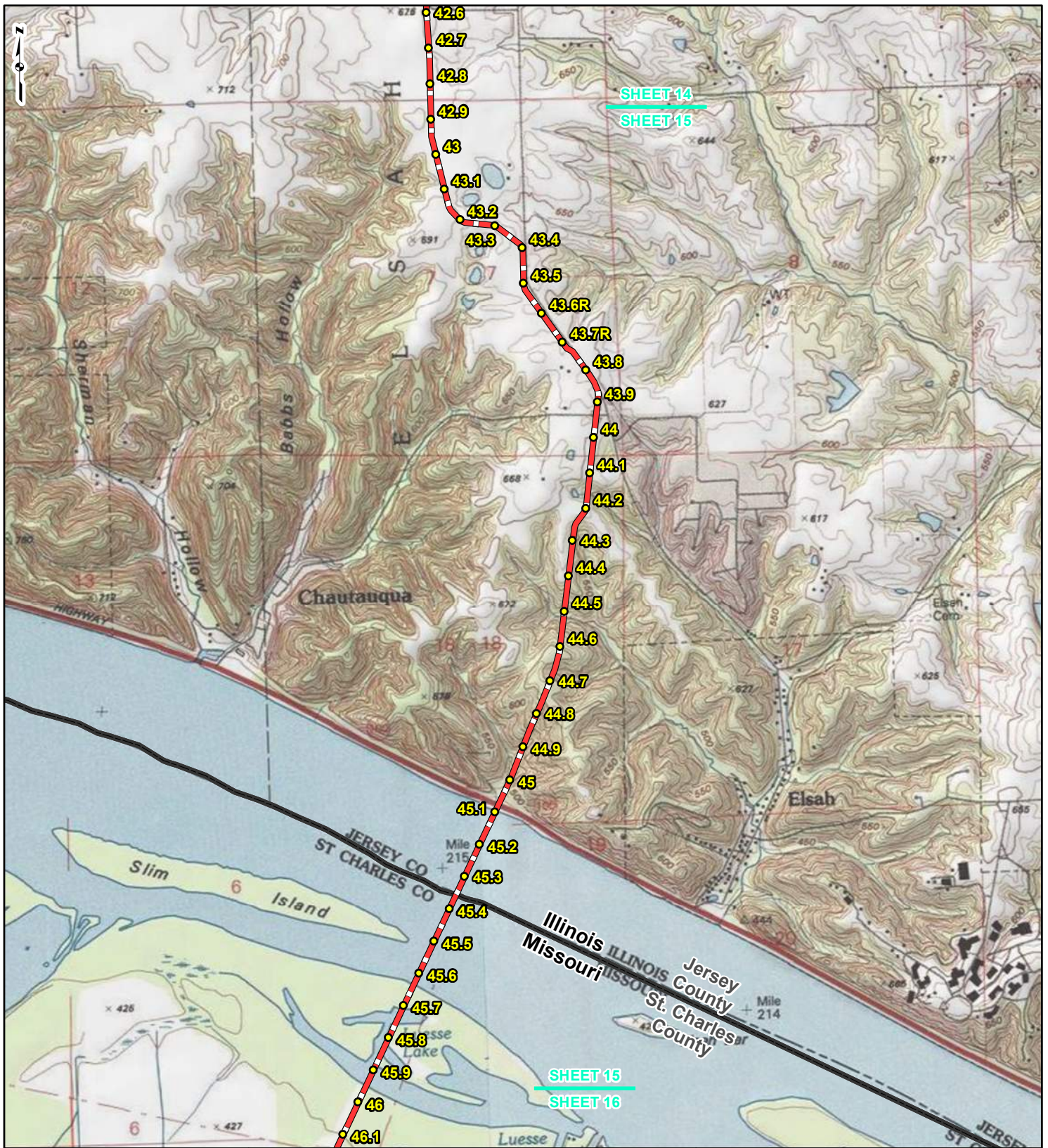
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Feet

FIGURE 1
LOCATION MAP
SHEET 14 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE NORTH COUNTY
- 24-INCH PIPELINE EXTENSION
- NORTH COUNTY MILEPOST
- EXTENSION MILEPOST
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

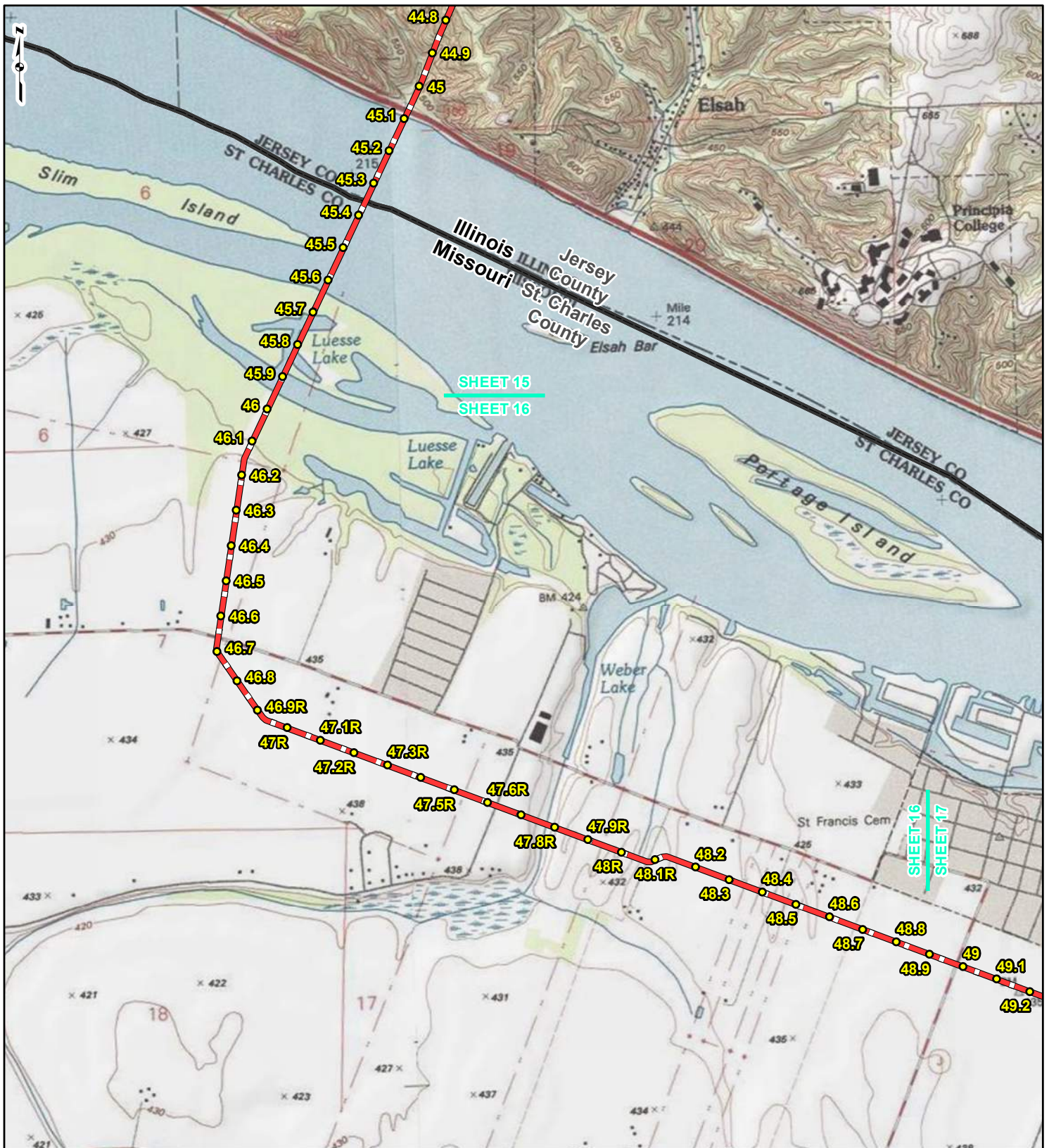
FIGURE 1
LOCATION MAP
SHEET 15 OF 21

SPIRE STL PIPELINE PROJECT

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DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 15
SHEET 16

SHEET 16
SHEET 17



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

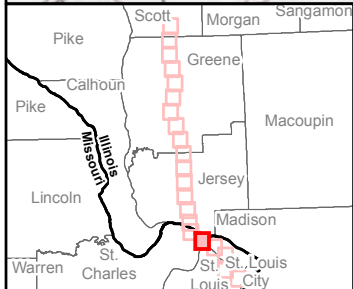
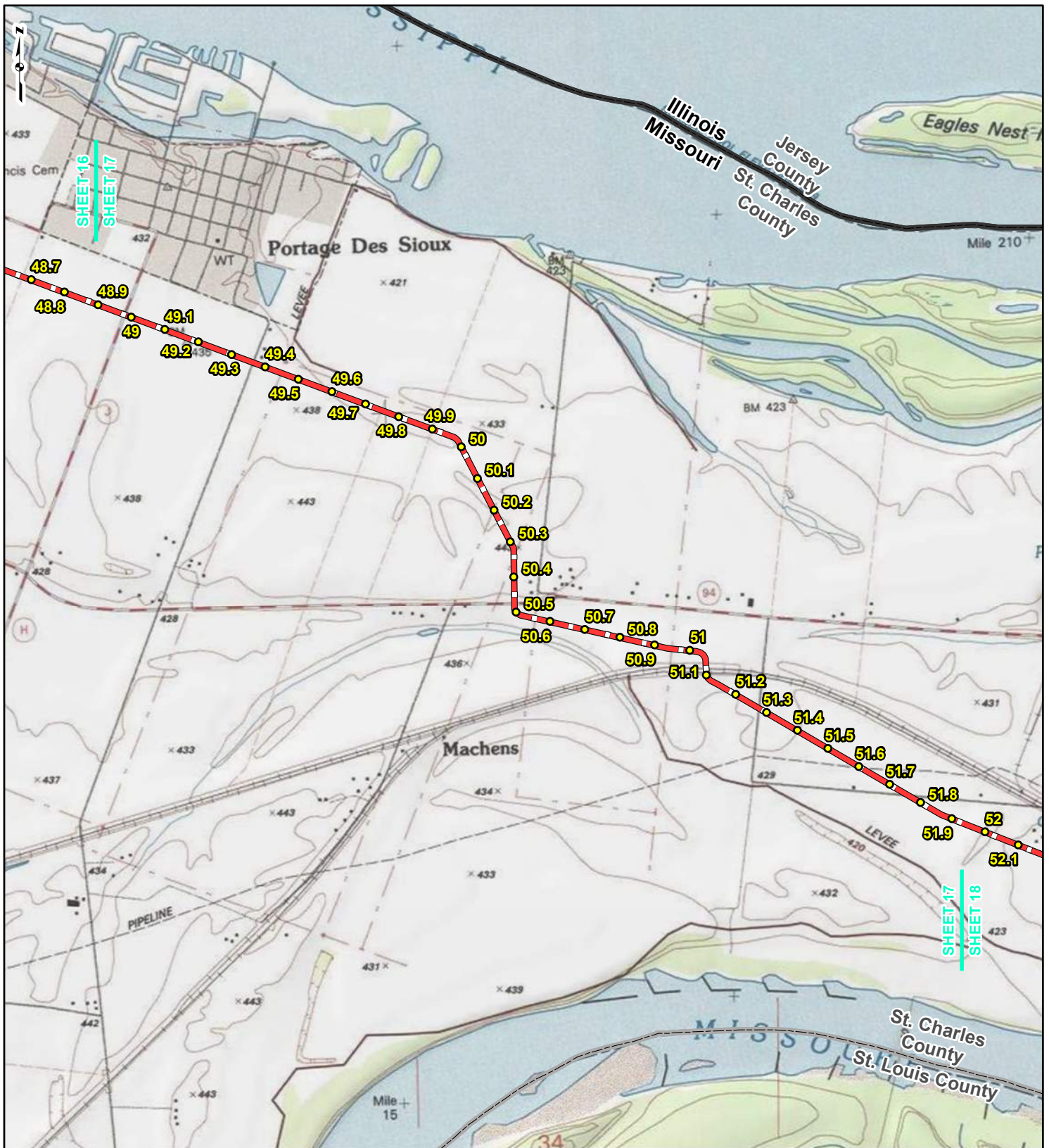
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 16 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

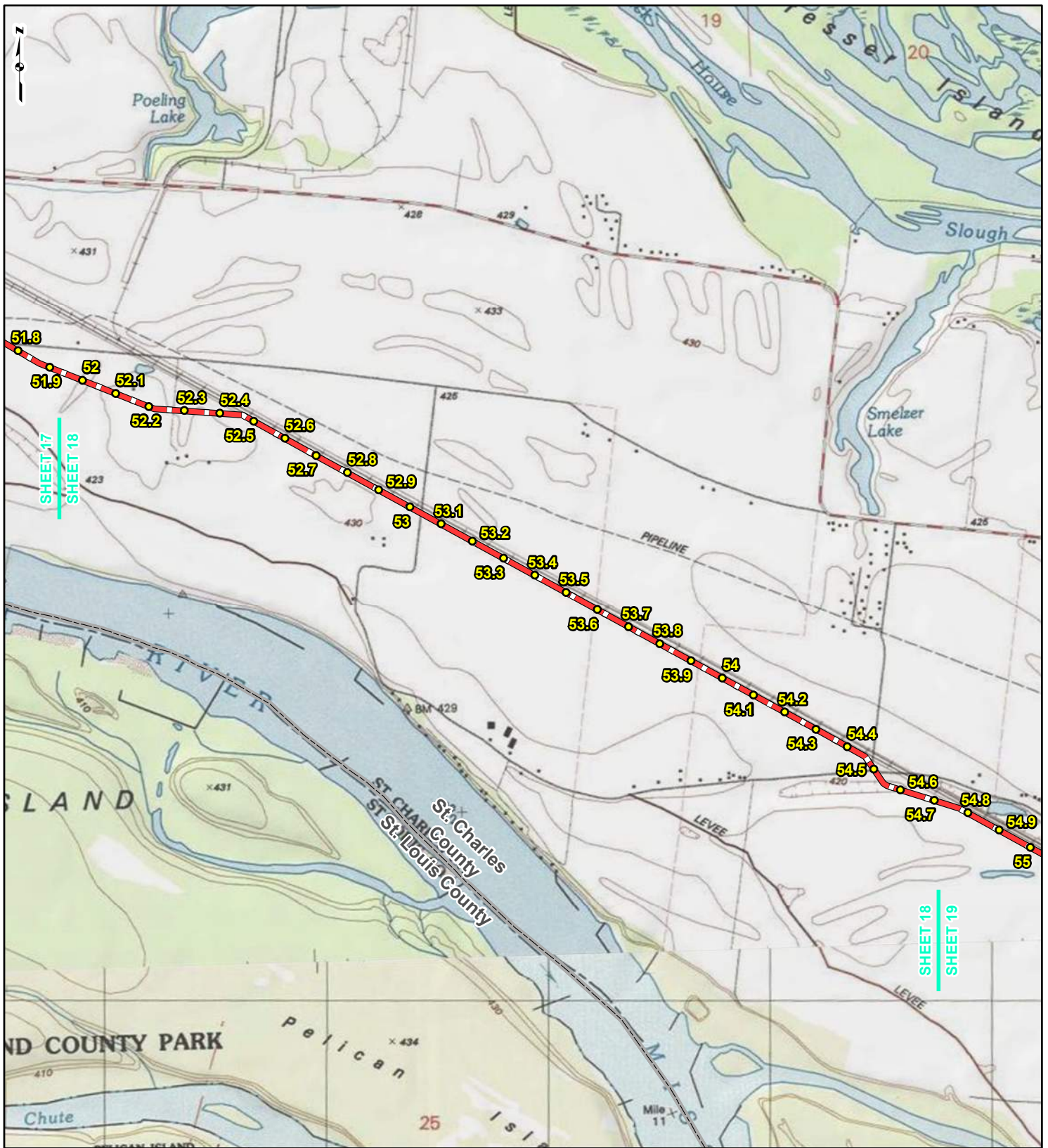
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 17 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

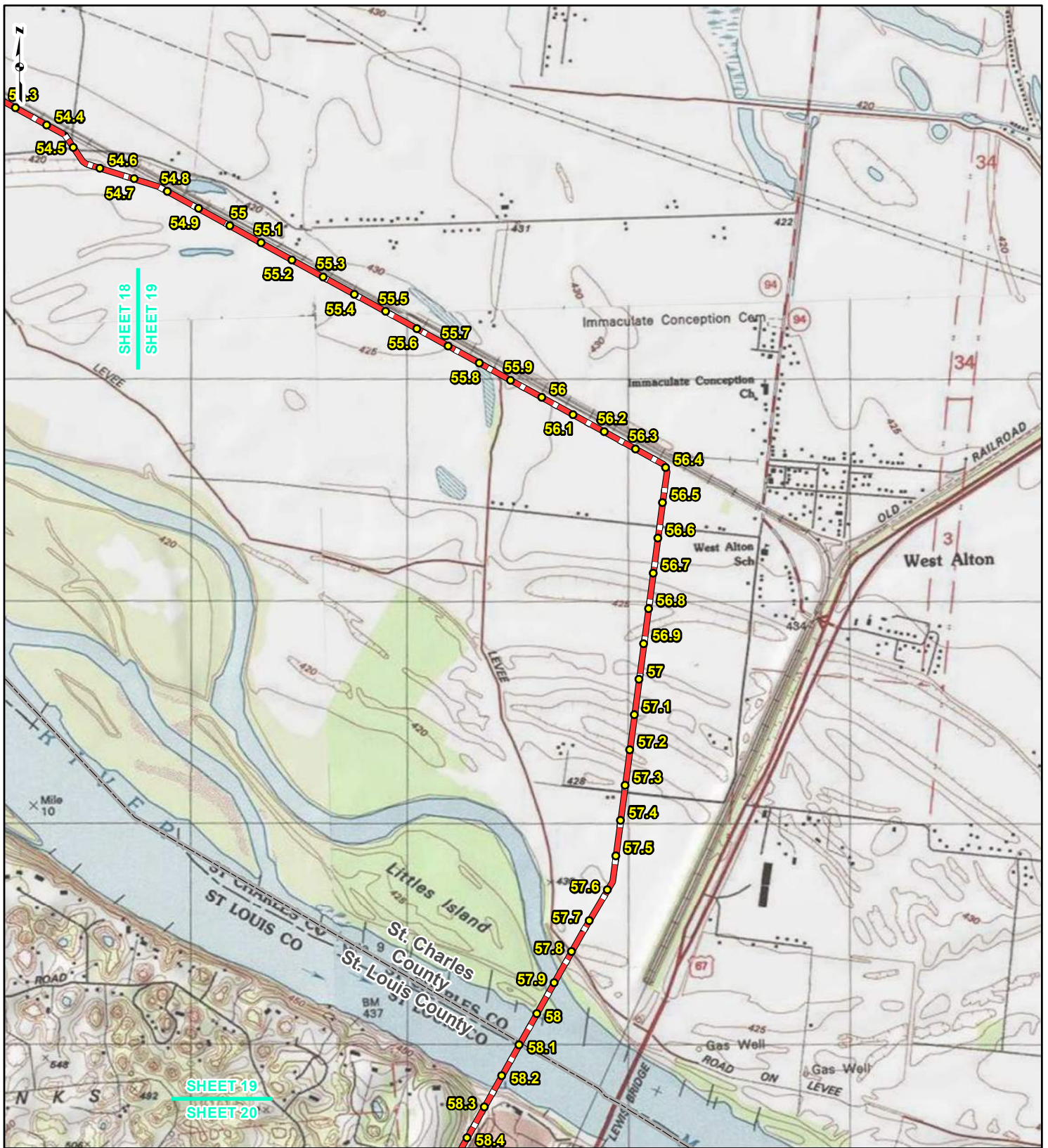
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Feet

FIGURE 1
LOCATION MAP
SHEET 18 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
● NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

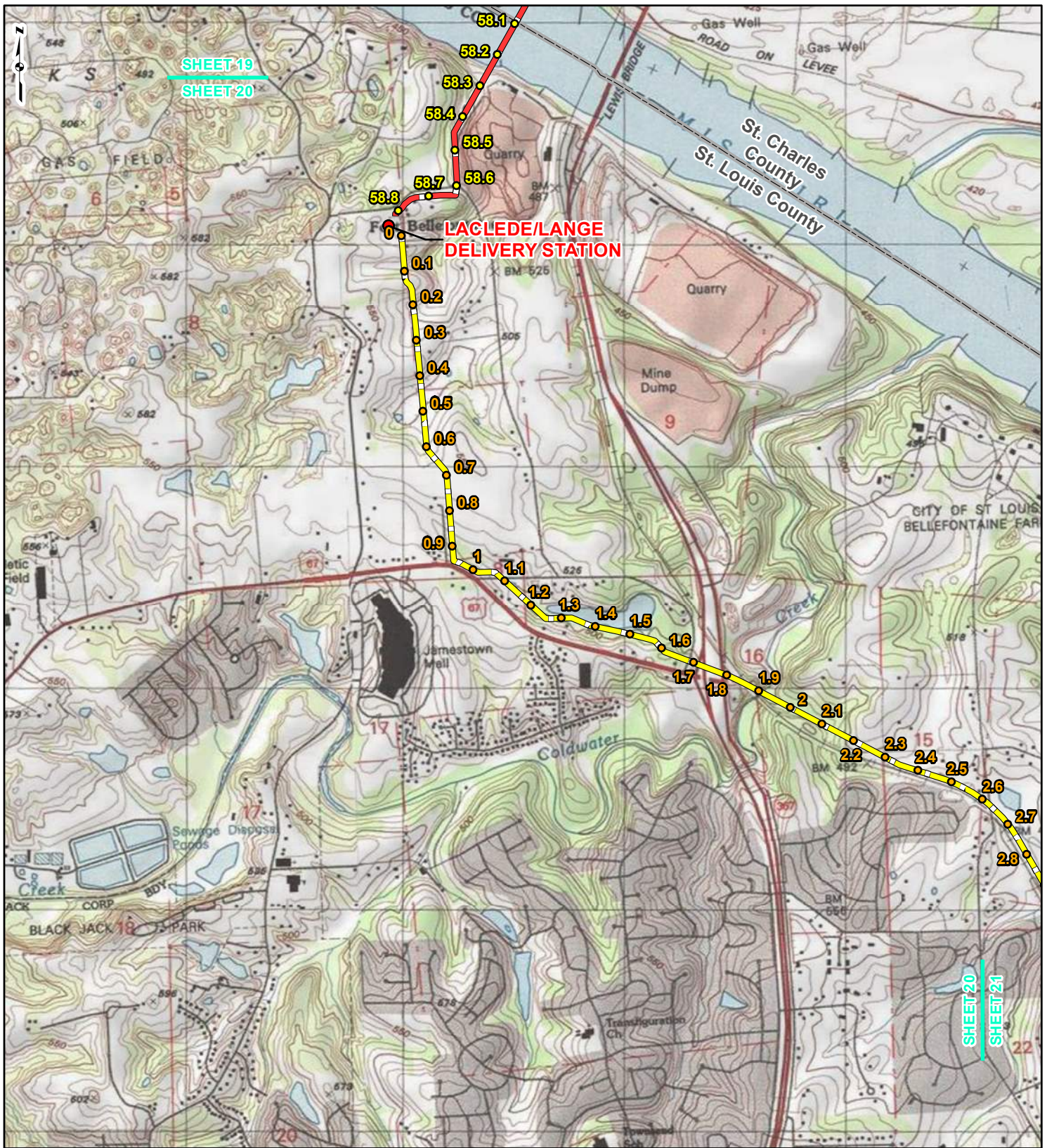
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 19 OF 21

SPIRE STL PIPELINE PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



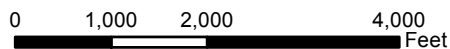
SHEET 19
SHEET 20

SHEET 20
SHEET 21

**LACLEDE/LANGE
DELIVERY STATION**

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE NORTH COUNTY
- 24-INCH PIPELINE EXTENSION
- NORTH COUNTY MILEPOST
- EXTENSION MILEPOST
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY
- ▬ 24-INCH PIPELINE NORTH COUNTY
- ▬ 24-INCH PIPELINE EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY



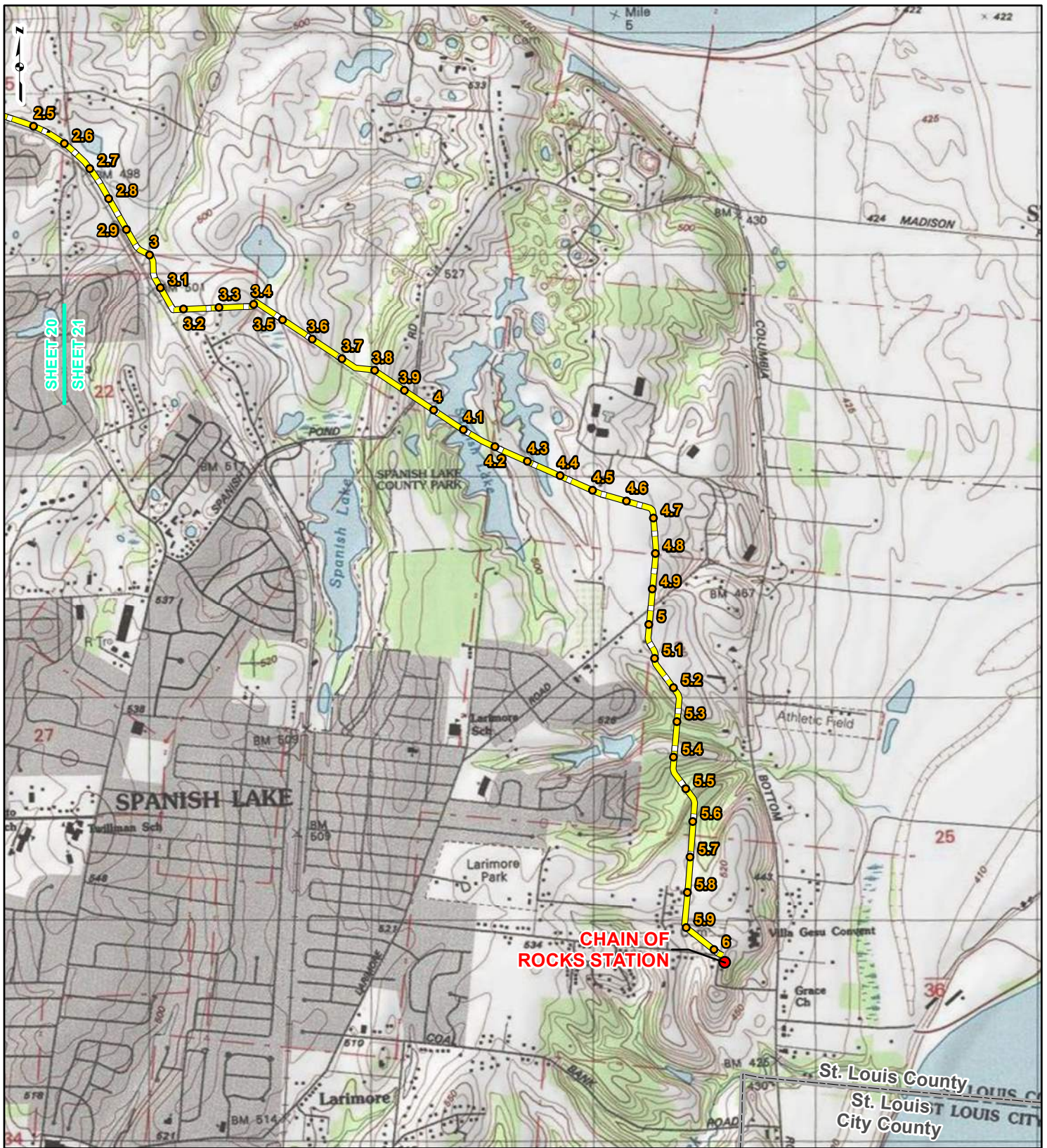
**FIGURE 1
LOCATION MAP
SHEET 20 OF 21**

**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE MILEPOST	— 24-INCH PIPELINE EXTENSION
● NORTH COUNTY MILEPOST	▭ COUNTY BOUNDARY
● EXTENSION MILEPOST	▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 21 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Mr. Gary Calvert
Manager of Pools 24, 25 and 26 - Upper Mississippi Conservation Area
Missouri Department of Conservation
3333 North Highway 79
Elsberry, MO 63343-201

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Mr. Calvert:

In June 2016, Spire Pipeline LLC ("Spire") initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project ("Project") which consisted of approximately 59 miles of new, greenfield 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline") originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in to interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new, greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC

interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75 feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act ("NEPA") process began (initiation of FERC Pre-filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) - File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

On behalf of Spire, we'd like to take this opportunity to invite the Missouri Department of Conservation to provide comments regarding the Project as it will be amended. We appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.

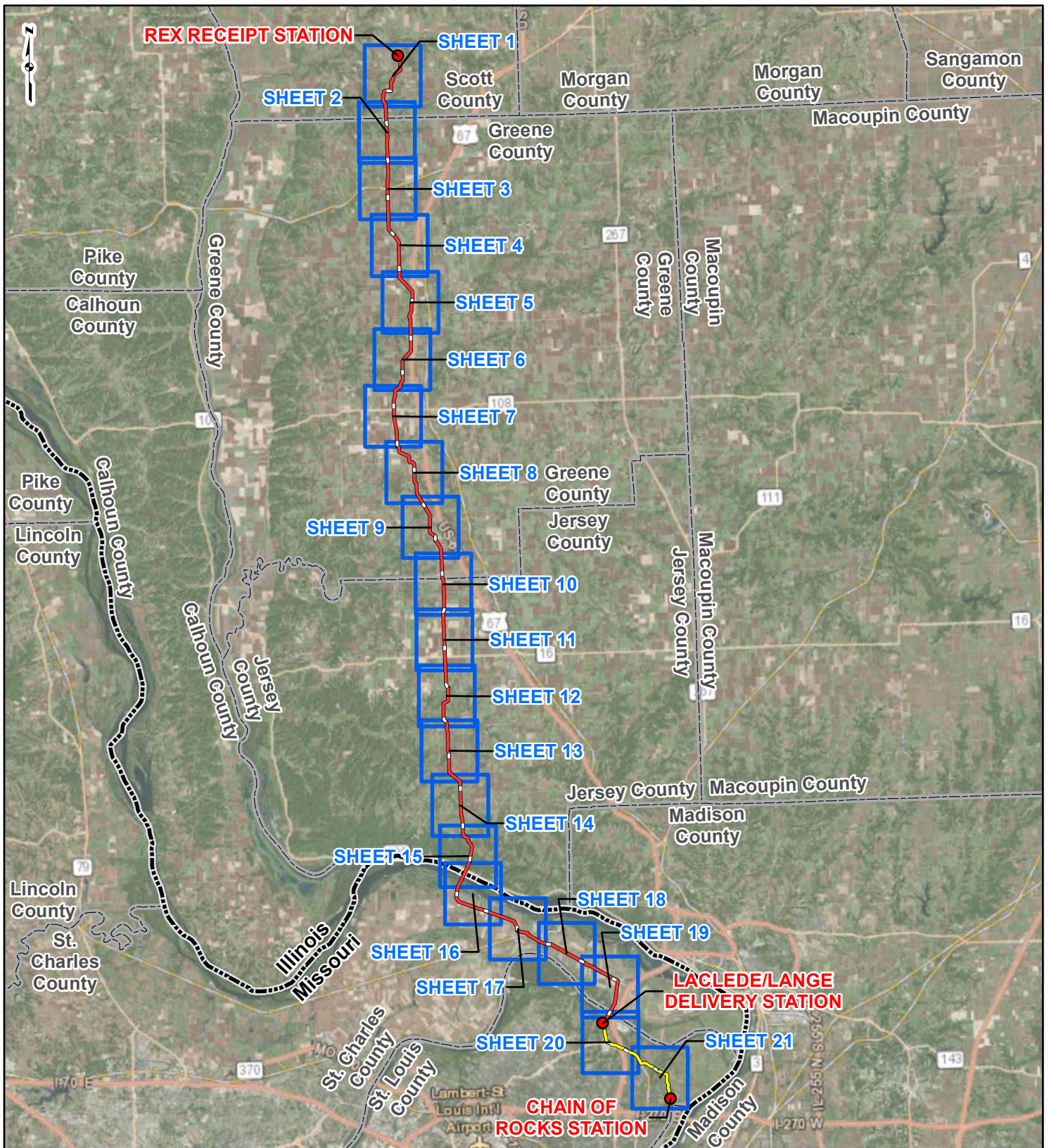


Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

ATTACHMENT
USGS TOPOGRAPHIC MAP (FIGURE 1)



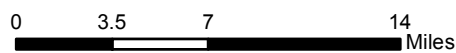
PROJECT LOCATION



SCOTT, GREENE AND JERSEY COUNTIES, ILLINOIS AND ST. CHARLES AND ST. LOUIS COUNTIES, MISSOURI

LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE
- NORTH COUNTY EXTENSION
- SHEET INDEX
- COUNTY BOUNDARY
- STATE BOUNDARY



**FIGURE 1
LOCATION MAP
SHEET INDEX**



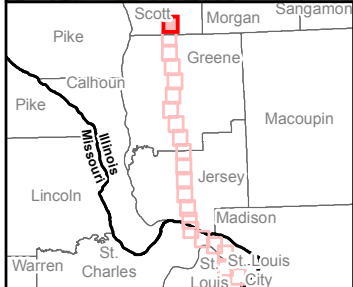
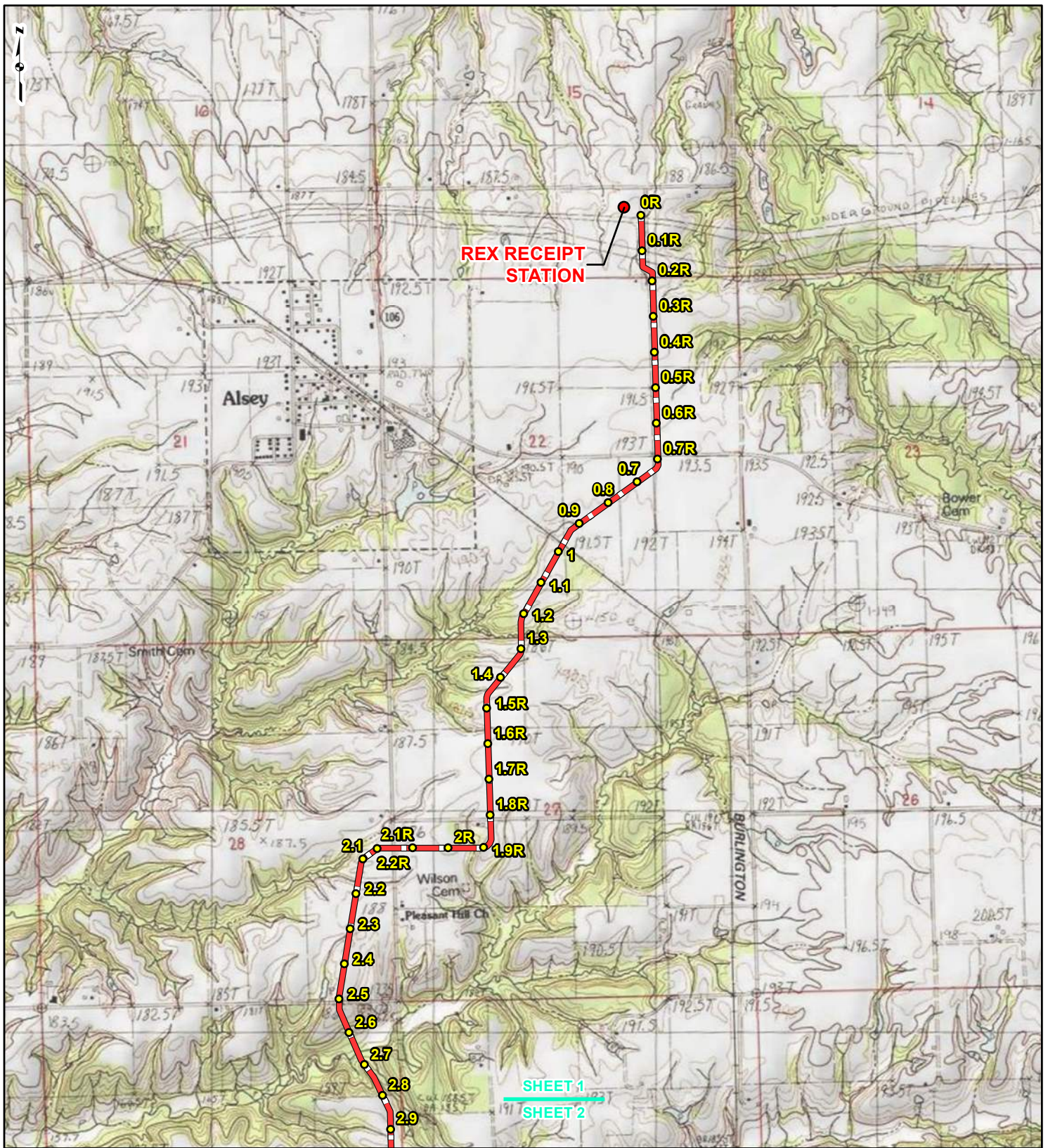
**SPIRE STL
PIPELINE
PROJECT**



DRAWN BY: PMH
CHECKED: SWW

DATE: 3/28/2017
APPROVED: LMF

REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2015, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

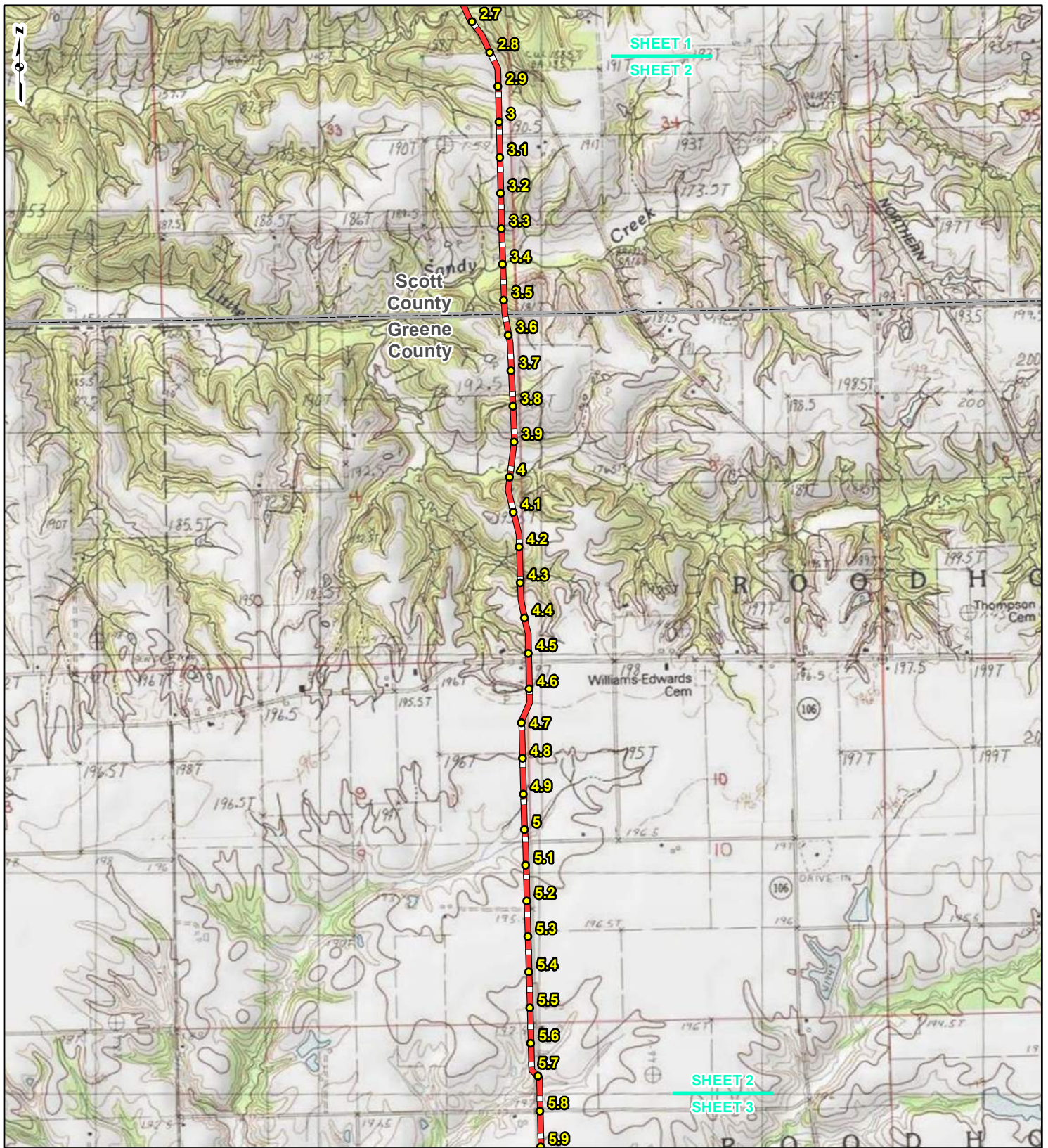
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 1 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSA (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	□ COUNTY BOUNDARY
● STATE BOUNDARY	□ STATE BOUNDARY

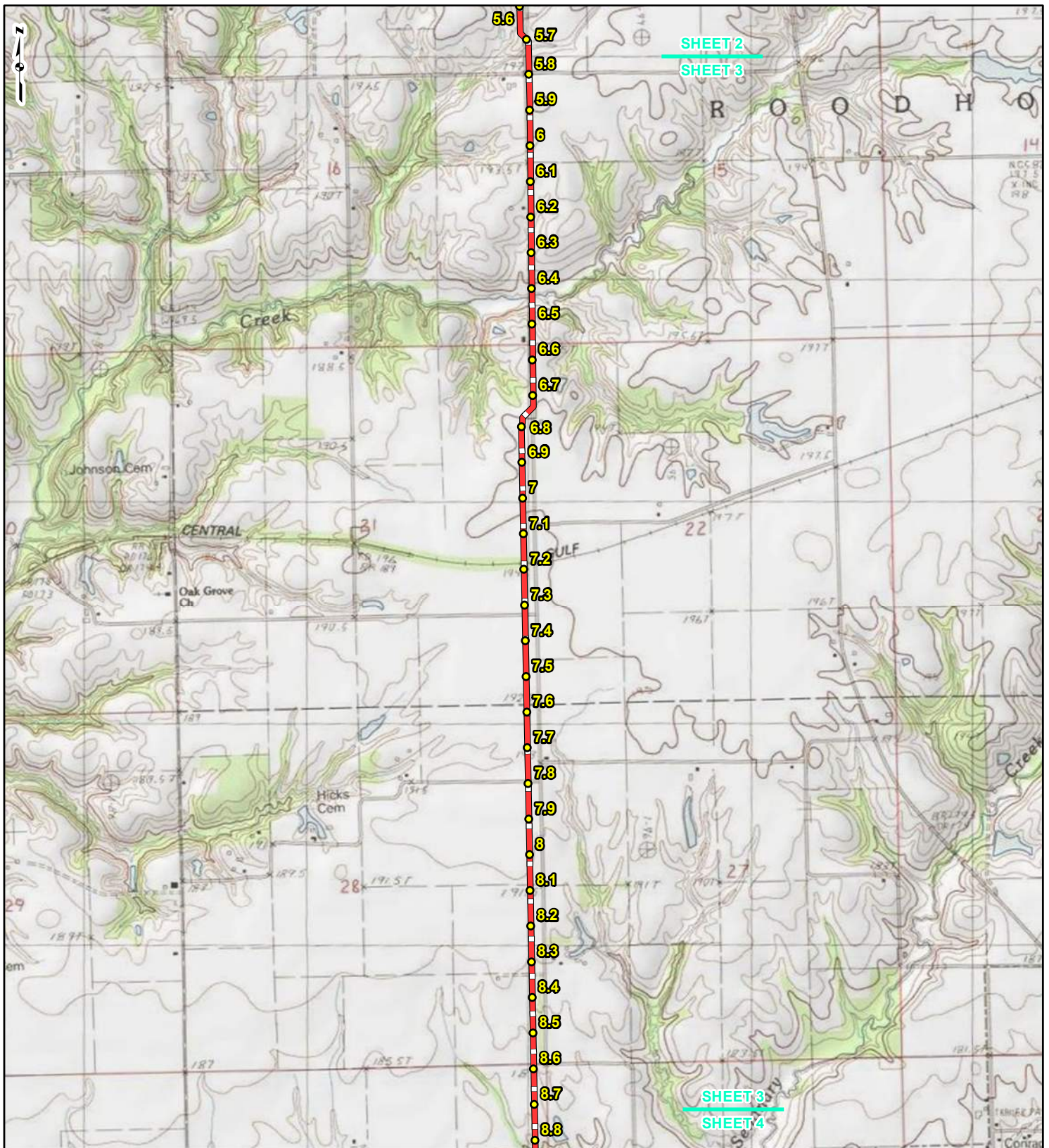
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 2 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

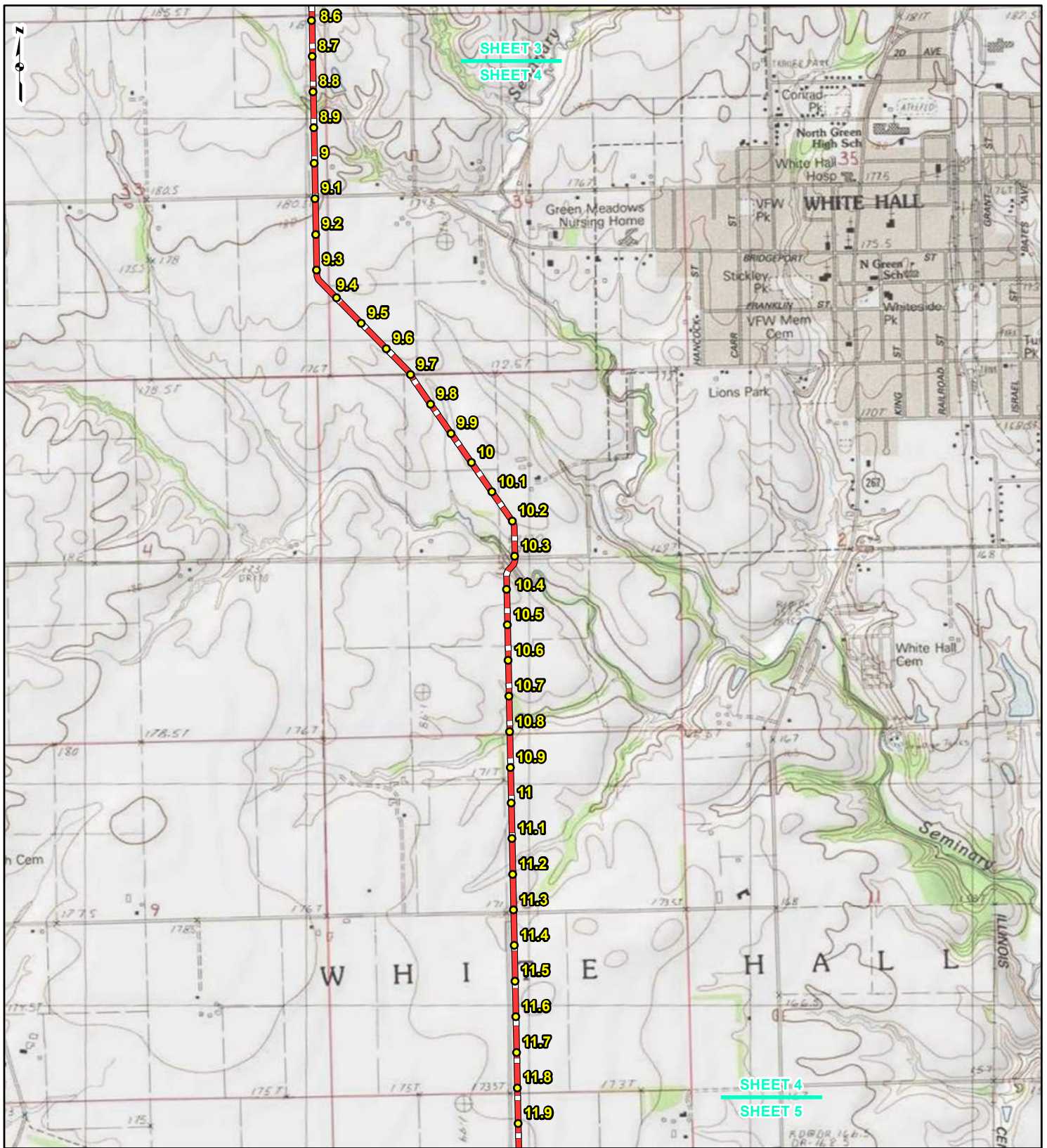
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 3 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSA (1995), FLORISSANT (1995), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
● NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

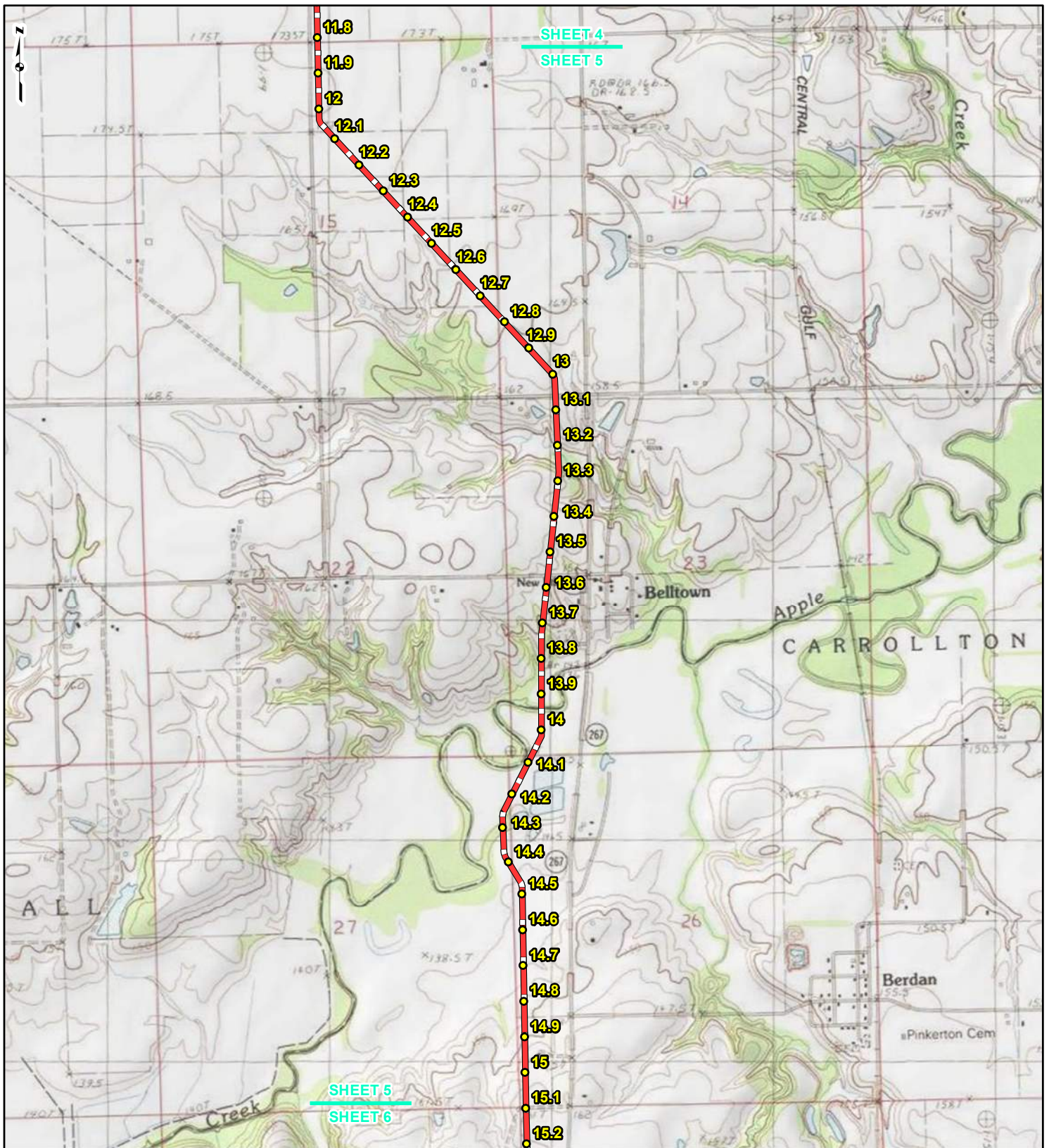
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 4 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

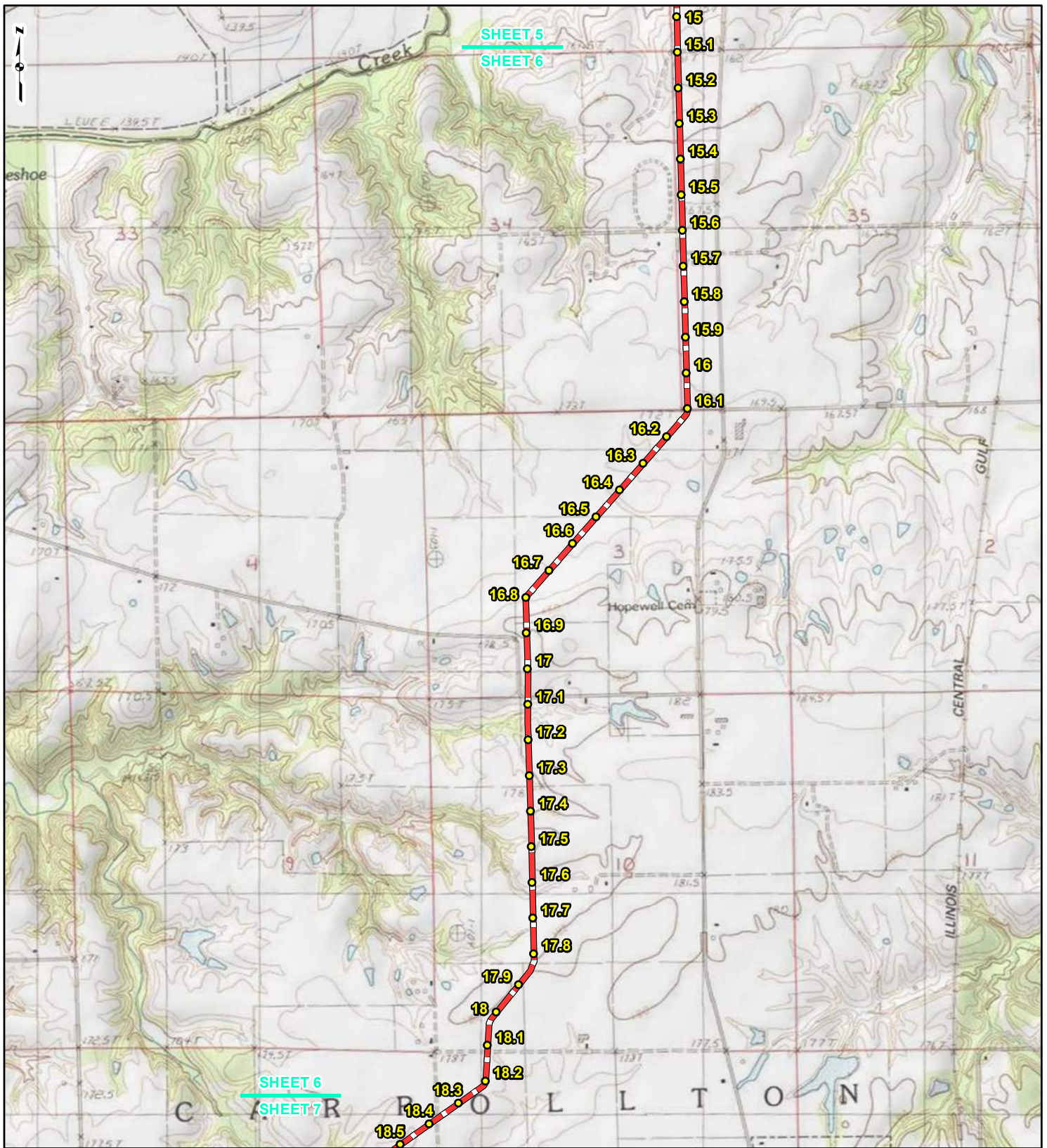
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 5 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● NORTH COUNTY	— EXTENSION
● EXTENSION	▭ COUNTY BOUNDARY
● MILEPOST	▭ STATE BOUNDARY

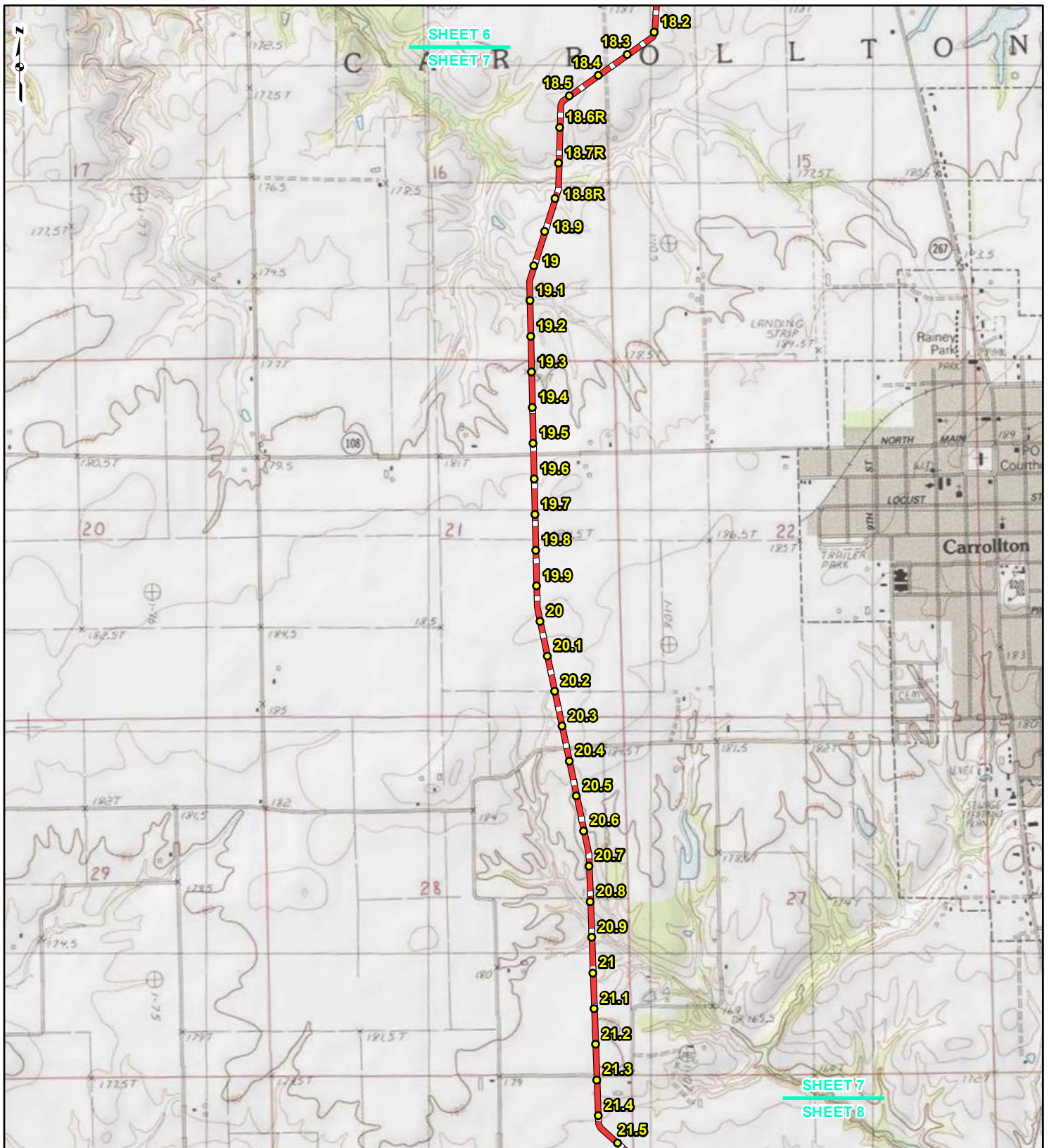
0 1,000 2,000 4,000
Feet

FIGURE 1
LOCATION MAP
SHEET 6 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

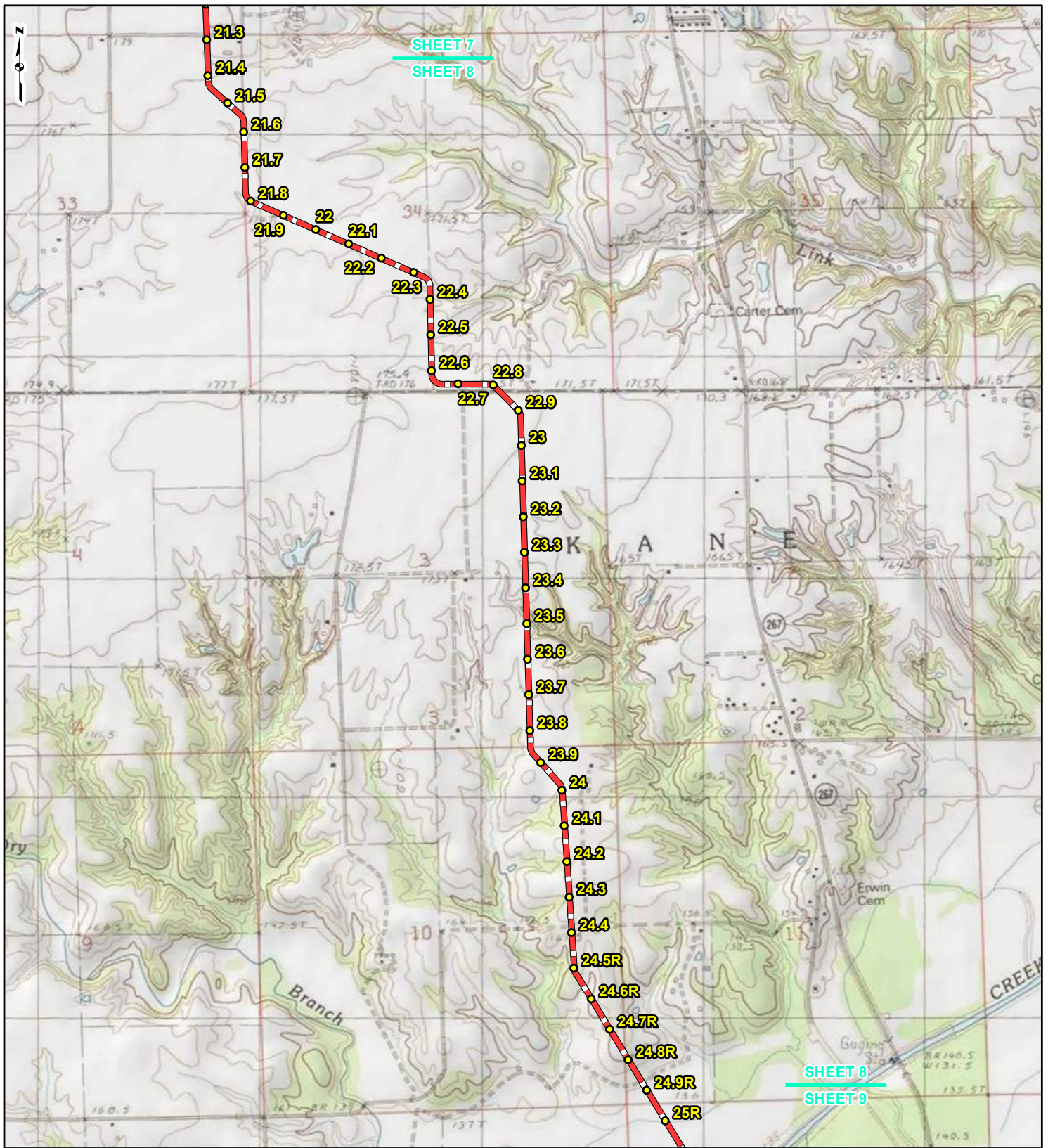
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 7 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
○ NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
○ MILEPOST	▭ STATE BOUNDARY

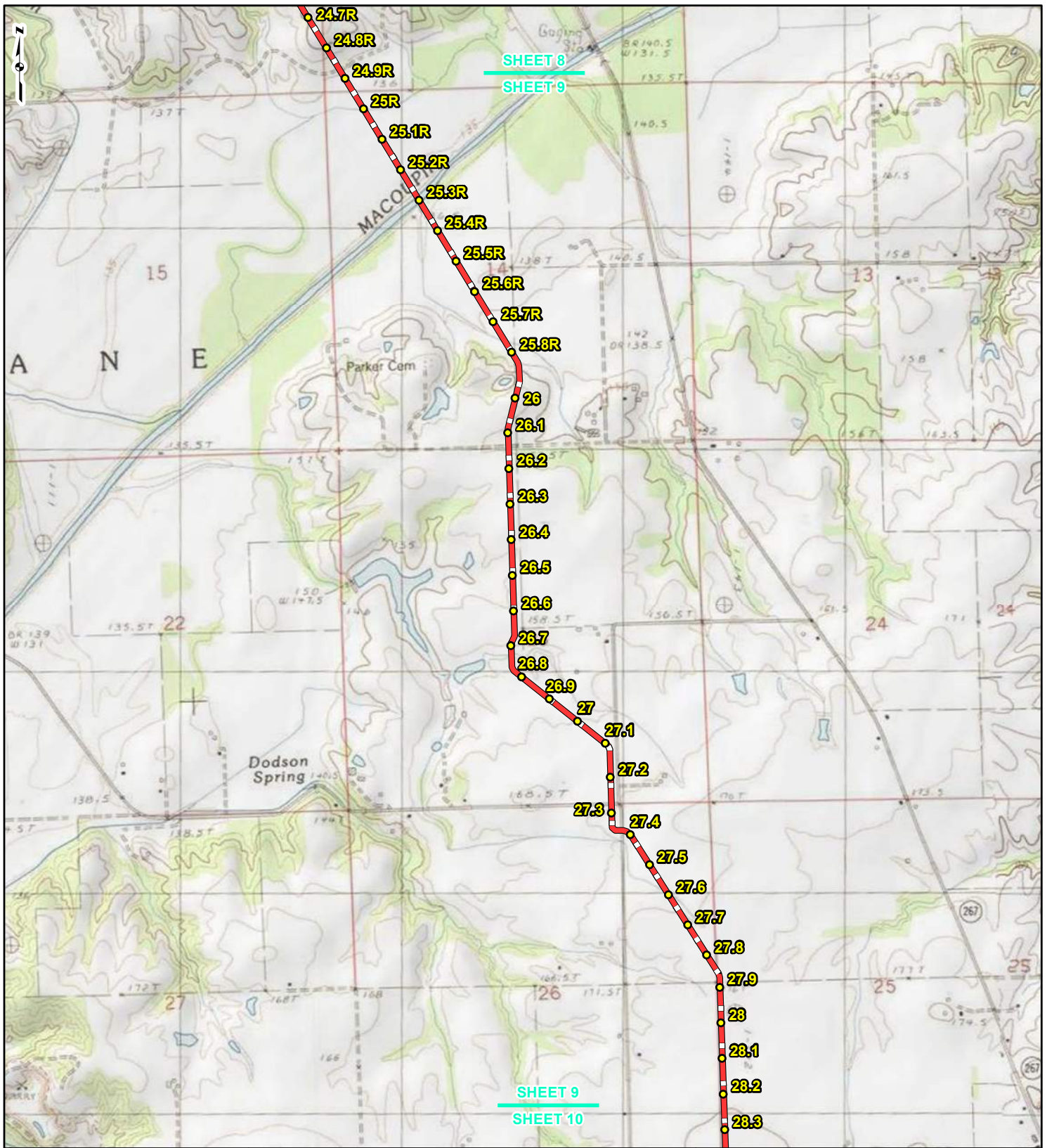
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 8 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

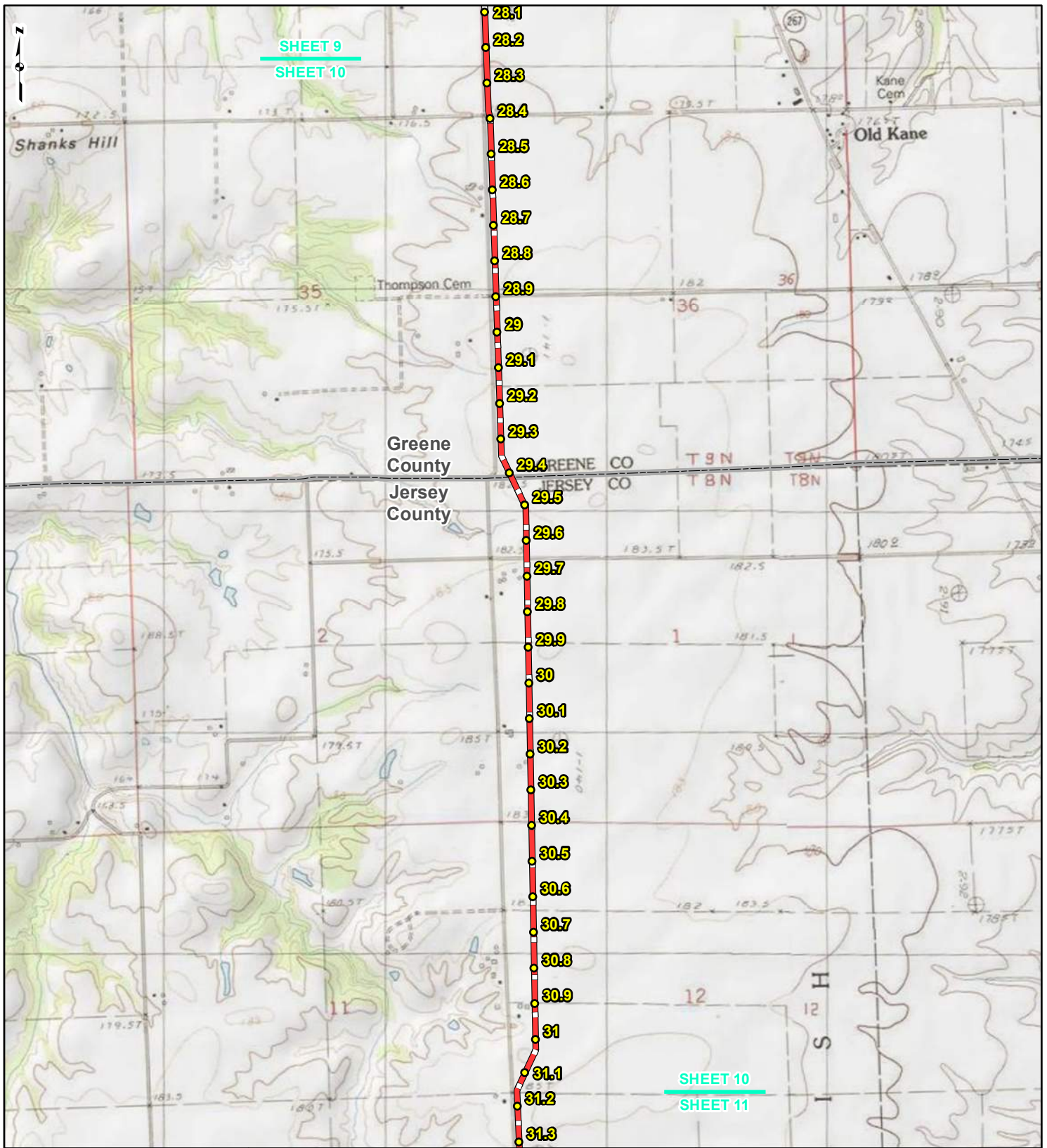
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**FIGURE 1
LOCATION MAP
SHEET 9 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 9
SHEET 10

SHEET 10
SHEET 11



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

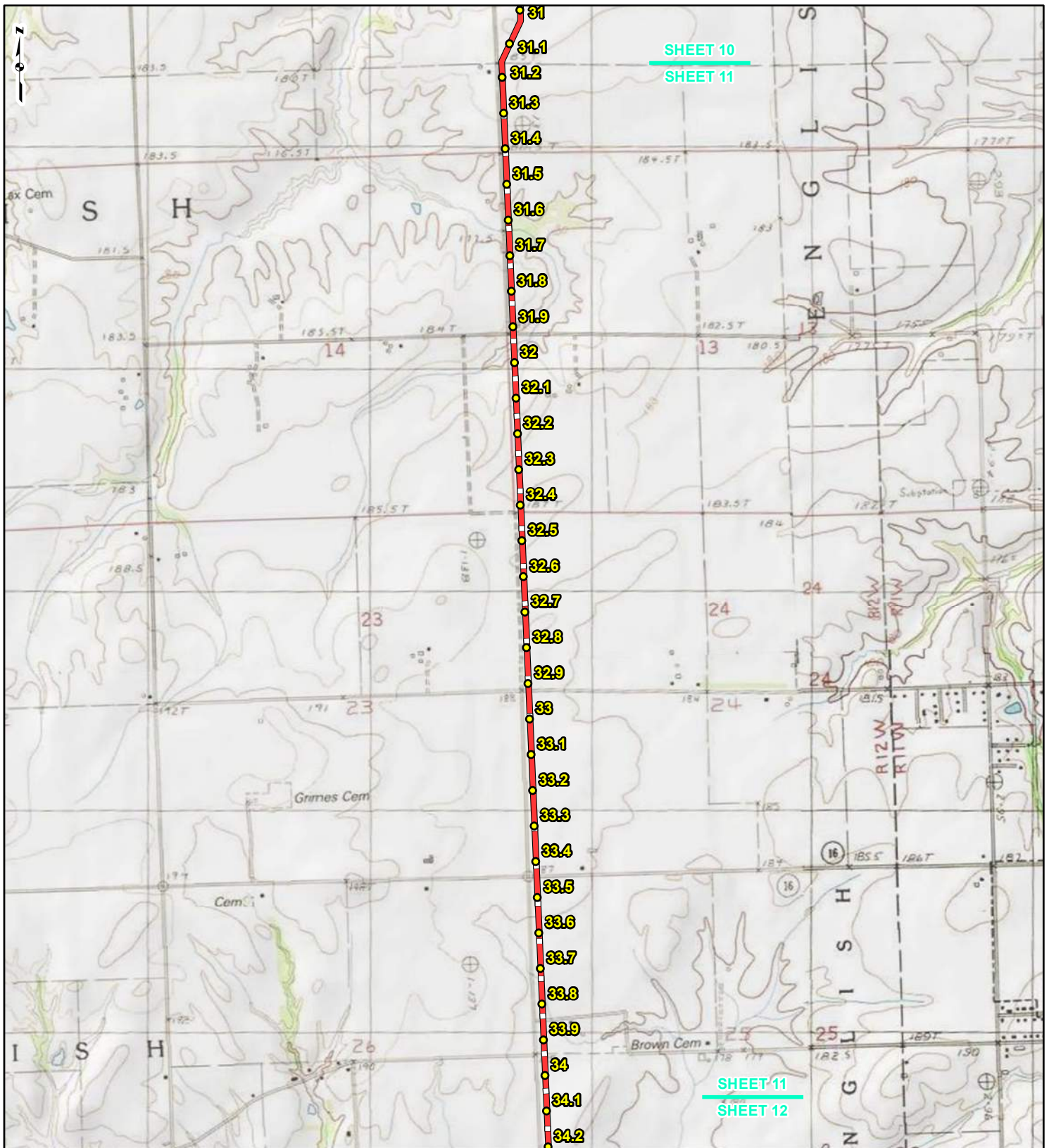
**FIGURE 1
LOCATION MAP
SHEET 10 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

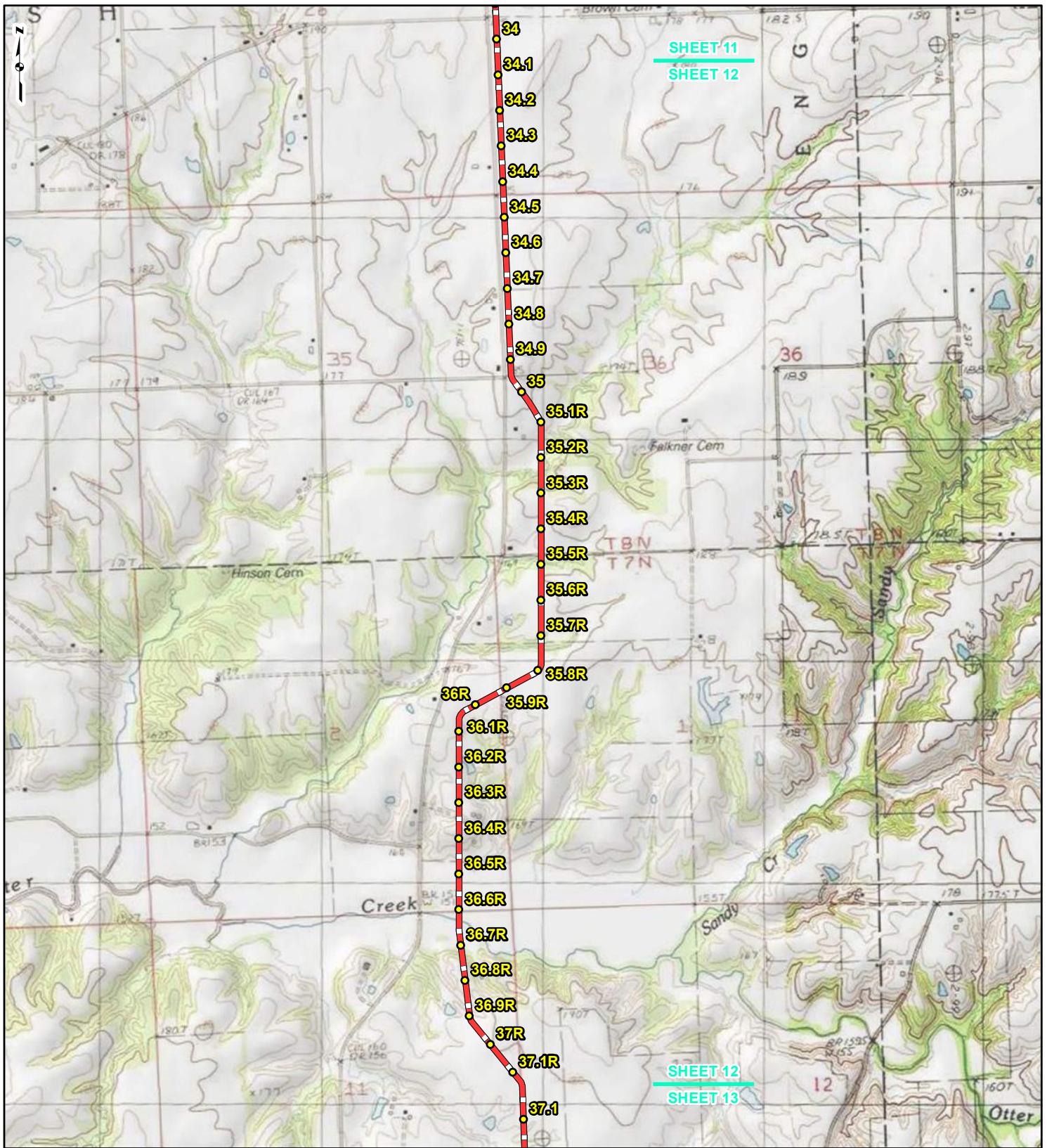
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 11 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), EL SAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 11
SHEET 12

SHEET 12
SHEET 13



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

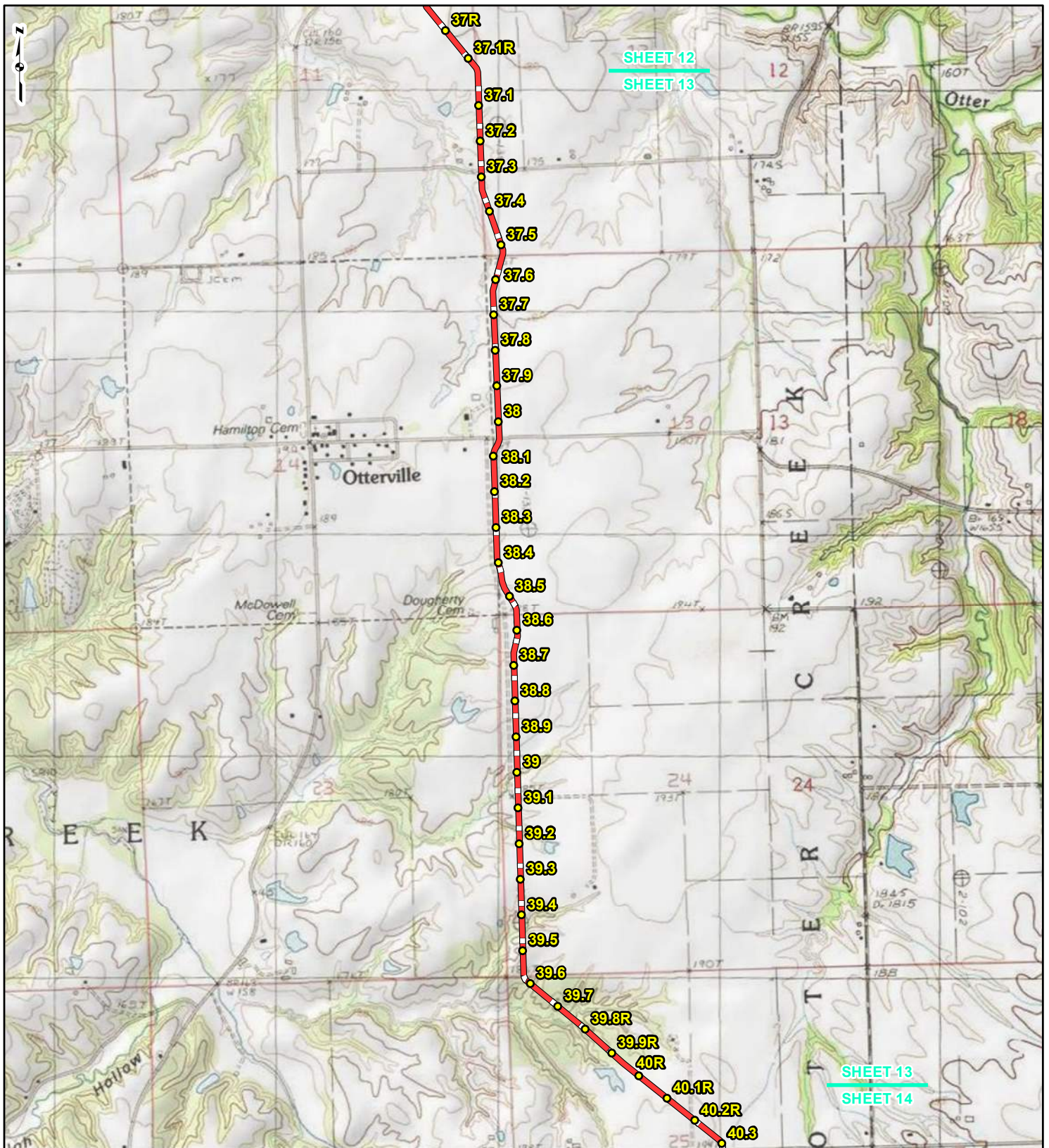
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 12 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE MILEPOST	— NORTH COUNTY EXTENSION
● NORTH COUNTY EXTENSION MILEPOST	▭ COUNTY BOUNDARY
	▭ STATE BOUNDARY

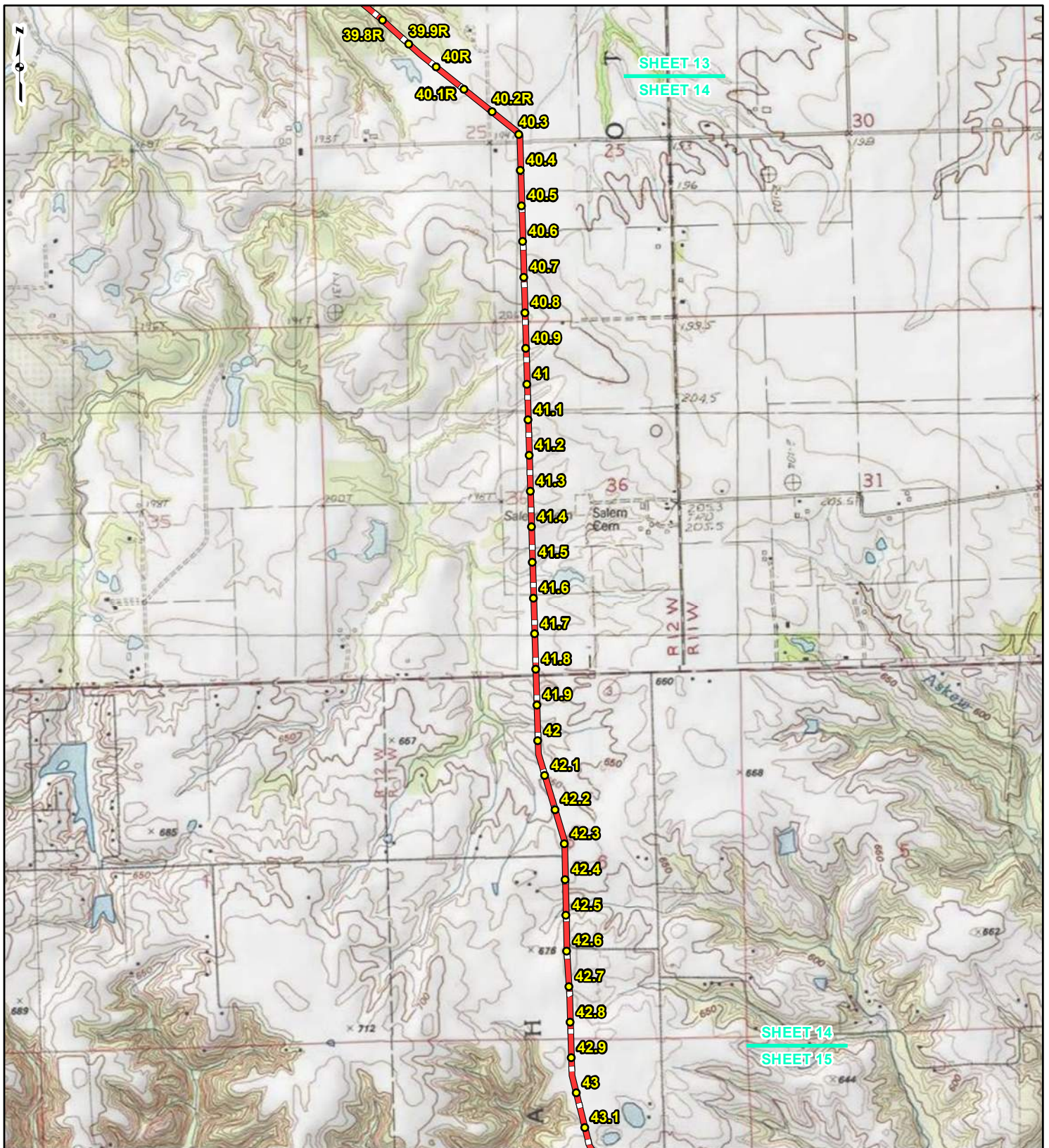
0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 13 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

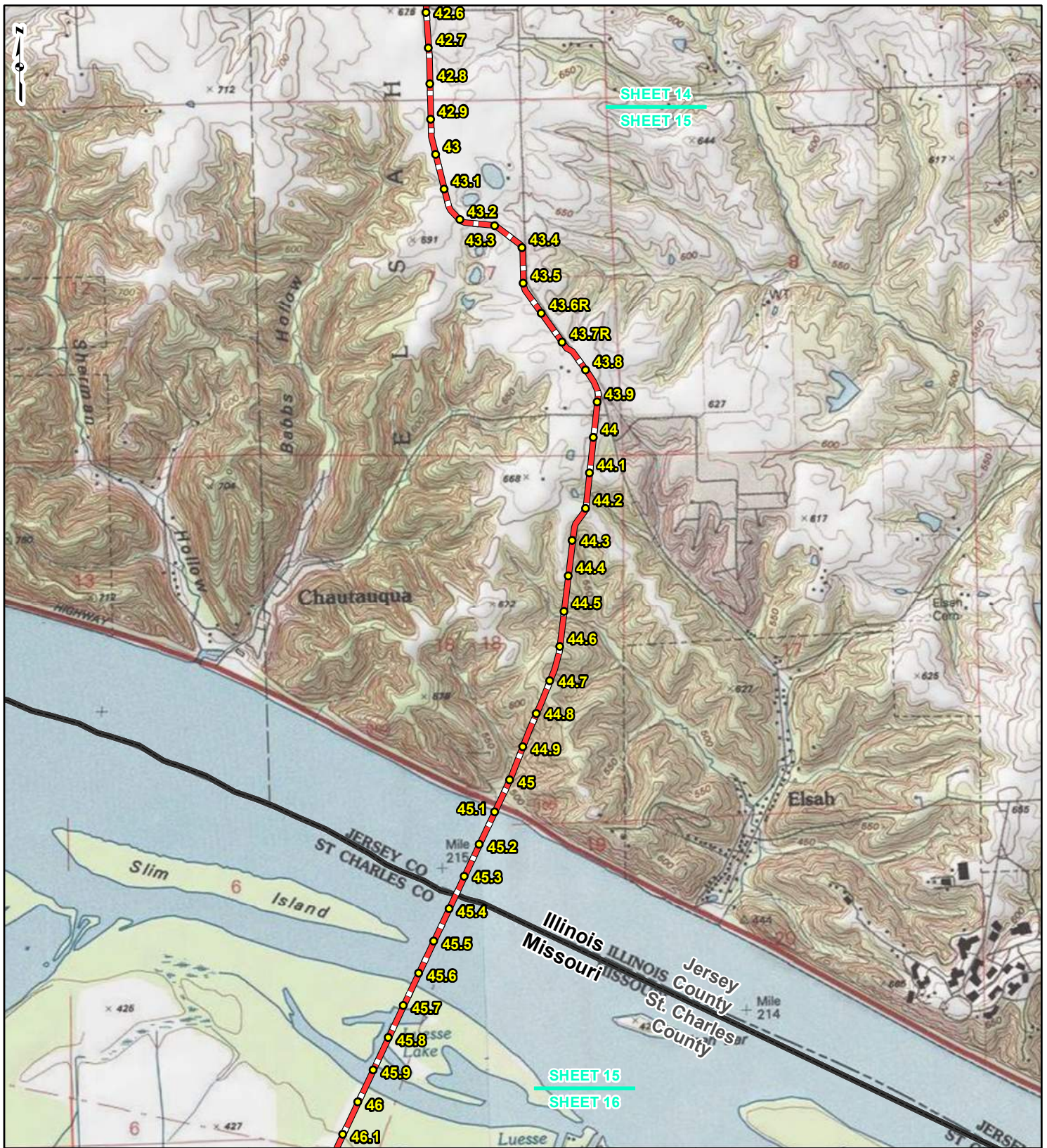
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Feet

FIGURE 1
LOCATION MAP
SHEET 14 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE
- MILEPOST
- NORTH COUNTY
- EXTENSION
- MILEPOST
- 24-INCH PIPELINE
- NORTH COUNTY
- EXTENSION
- COUNTY BOUNDARY
- STATE BOUNDARY

0 1,000 2,000 4,000 Feet

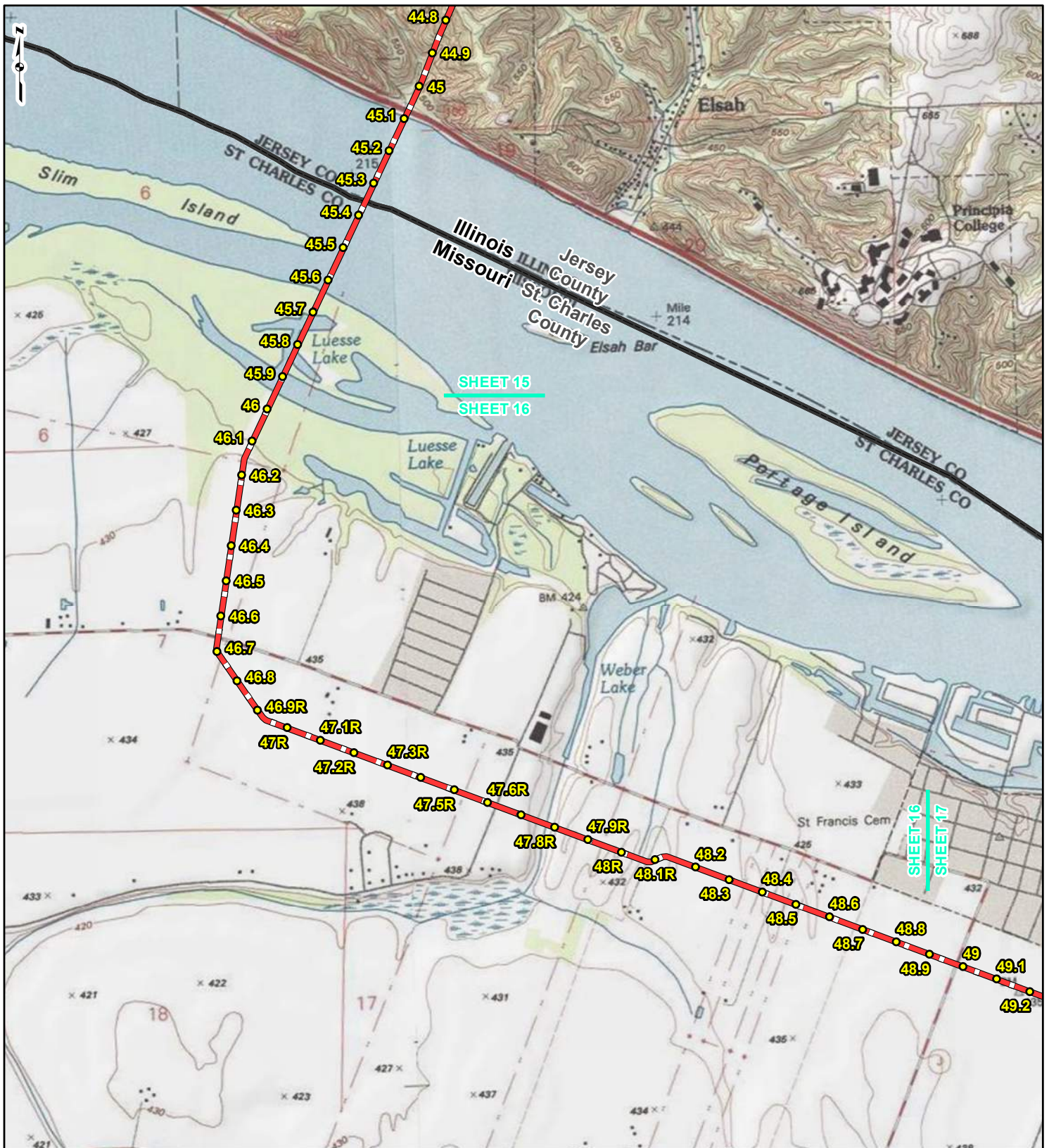
FIGURE 1
LOCATION MAP
SHEET 15 OF 21

SPIRE STL PIPELINE PROJECT

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 15
SHEET 16

SHEET 16
SHEET 17



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

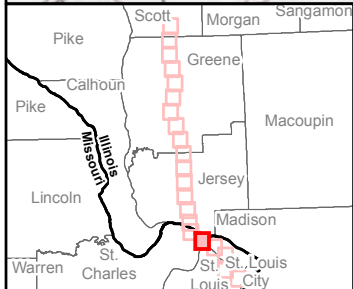
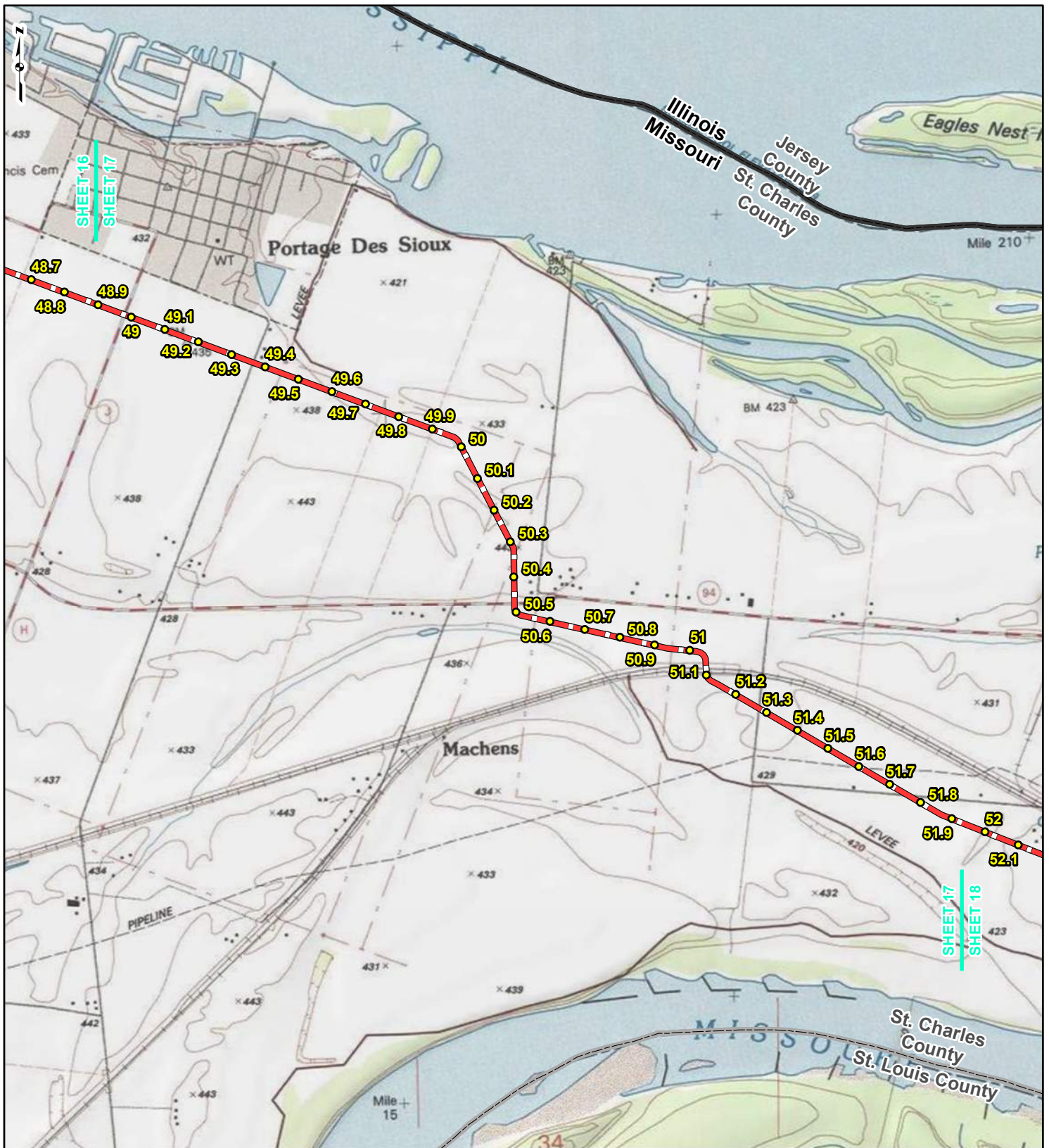
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Feet

FIGURE 1
LOCATION MAP
SHEET 16 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

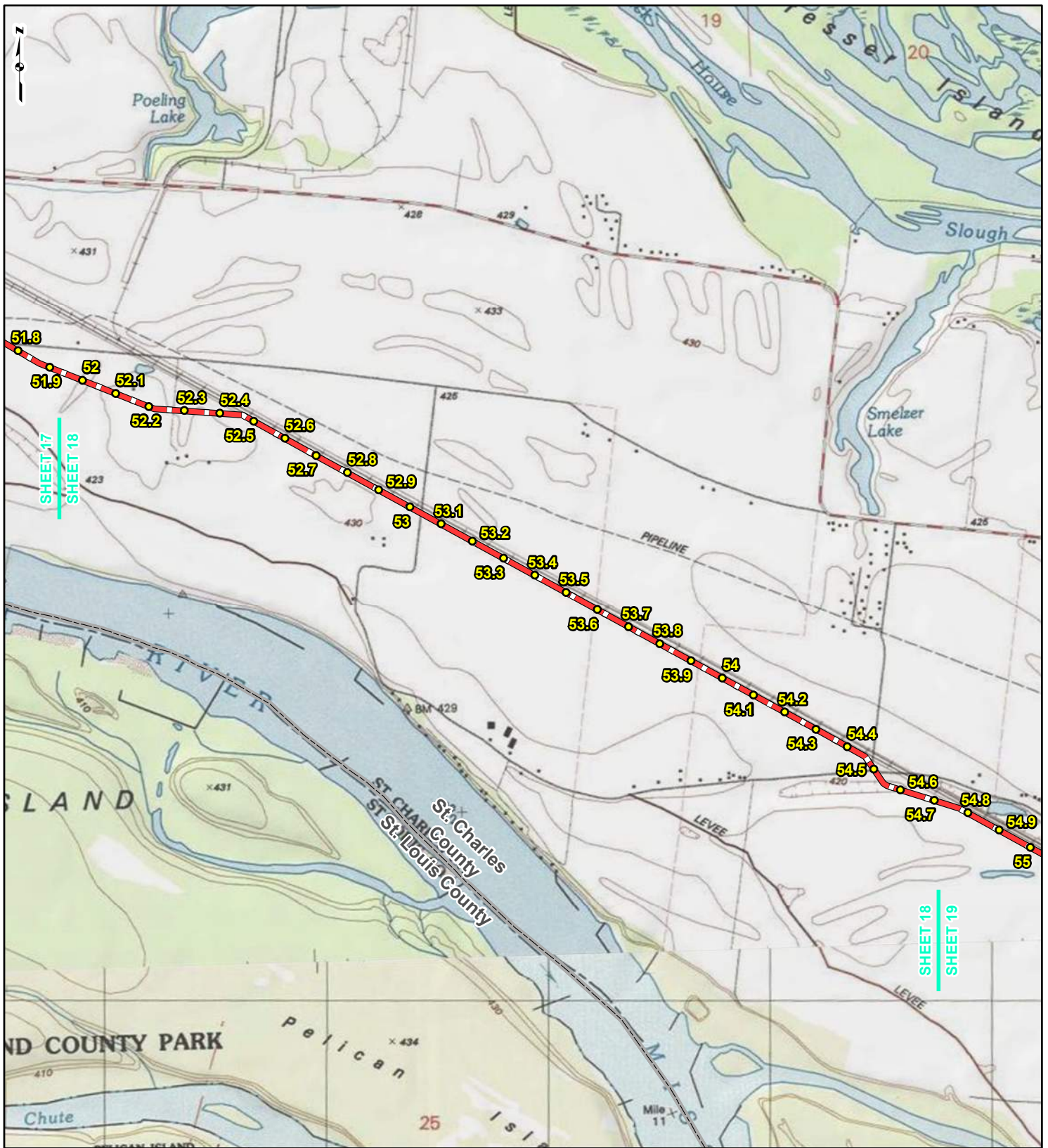
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Feet

FIGURE 1
LOCATION MAP
SHEET 17 OF 21

SPIRE STL
PIPELINE
PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

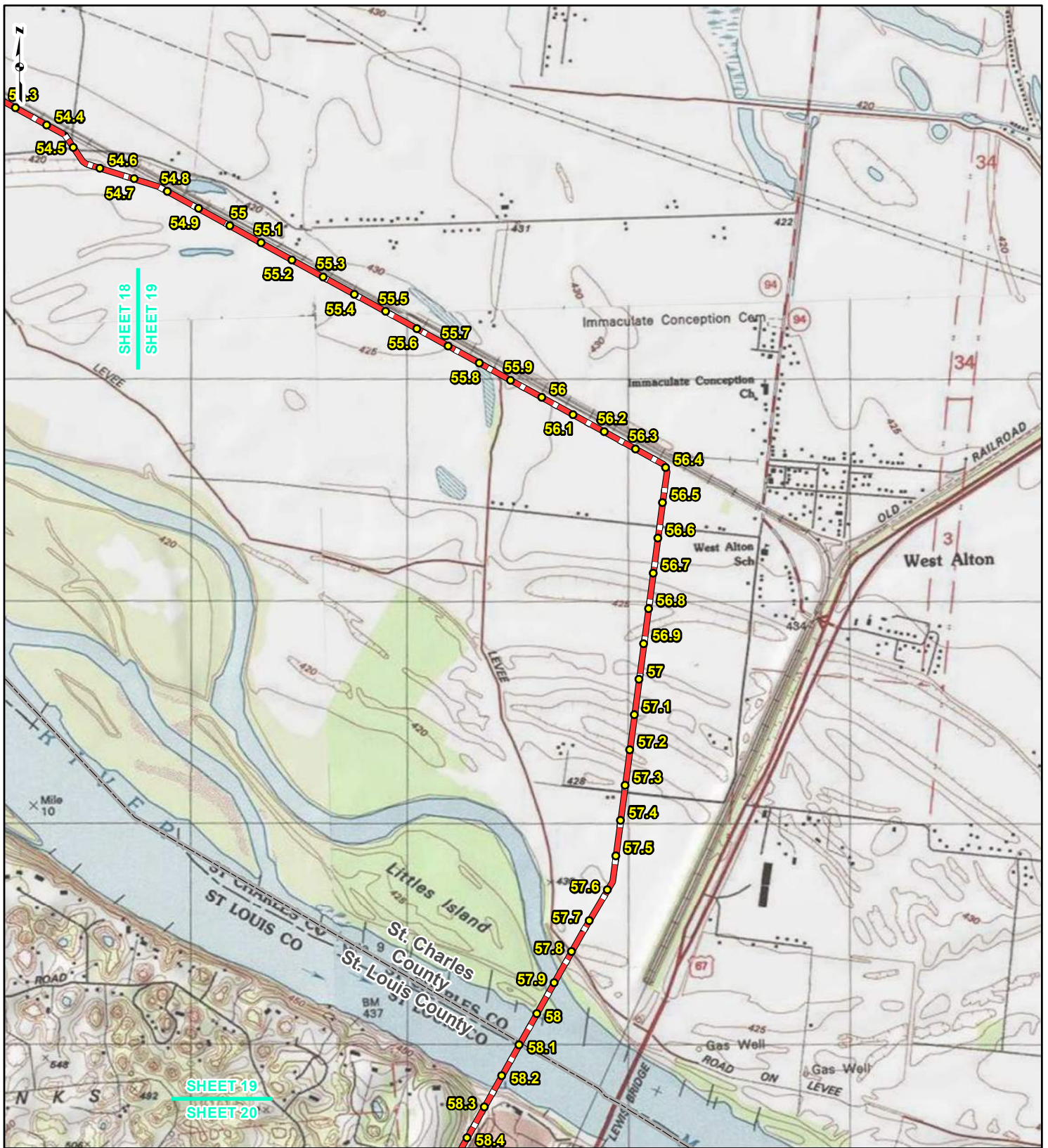
0 1,000 2,000 4,000
Feet

**FIGURE 1
LOCATION MAP
SHEET 18 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE
● 24-INCH PIPELINE	— NORTH COUNTY
● MILEPOST	— EXTENSION
— NORTH COUNTY	▭ COUNTY BOUNDARY
● EXTENSION	▭ STATE BOUNDARY
● MILEPOST	

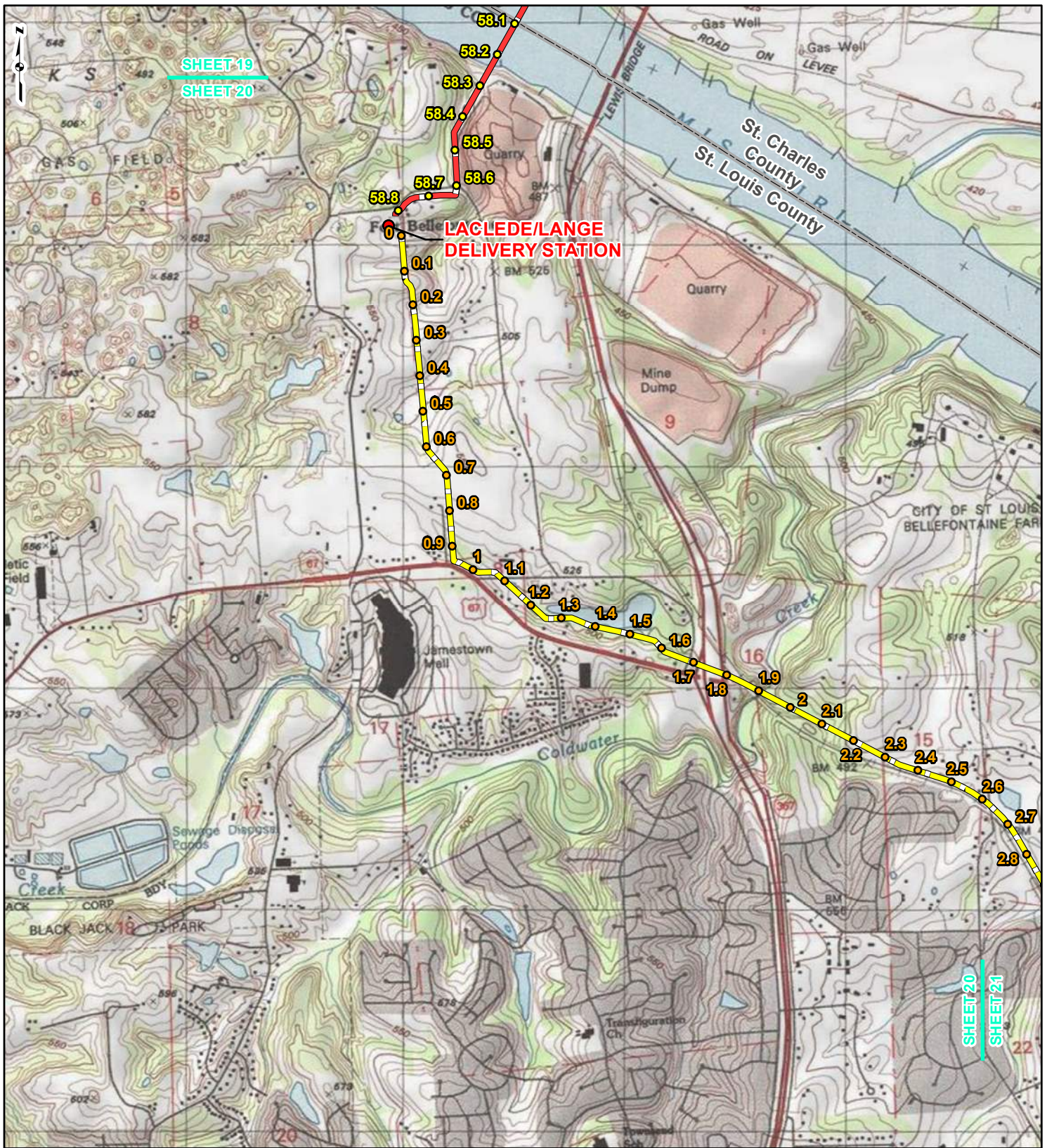
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Feet

FIGURE 1
LOCATION MAP
SHEET 19 OF 21

SPIRE STL PIPELINE PROJECT

DRAWN BY: PMH DATE: 3/28/2017
 CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLOISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



SHEET 19
SHEET 20

**LACLEDE/LANGE
DELIVERY STATION**

SHEET 20
SHEET 21



LEGEND

- PROPOSED FACILITIES
- 24-INCH PIPELINE MILEPOST
- NORTH COUNTY EXTENSION MILEPOST
- 24-INCH PIPELINE NORTH COUNTY
- EXTENSION
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

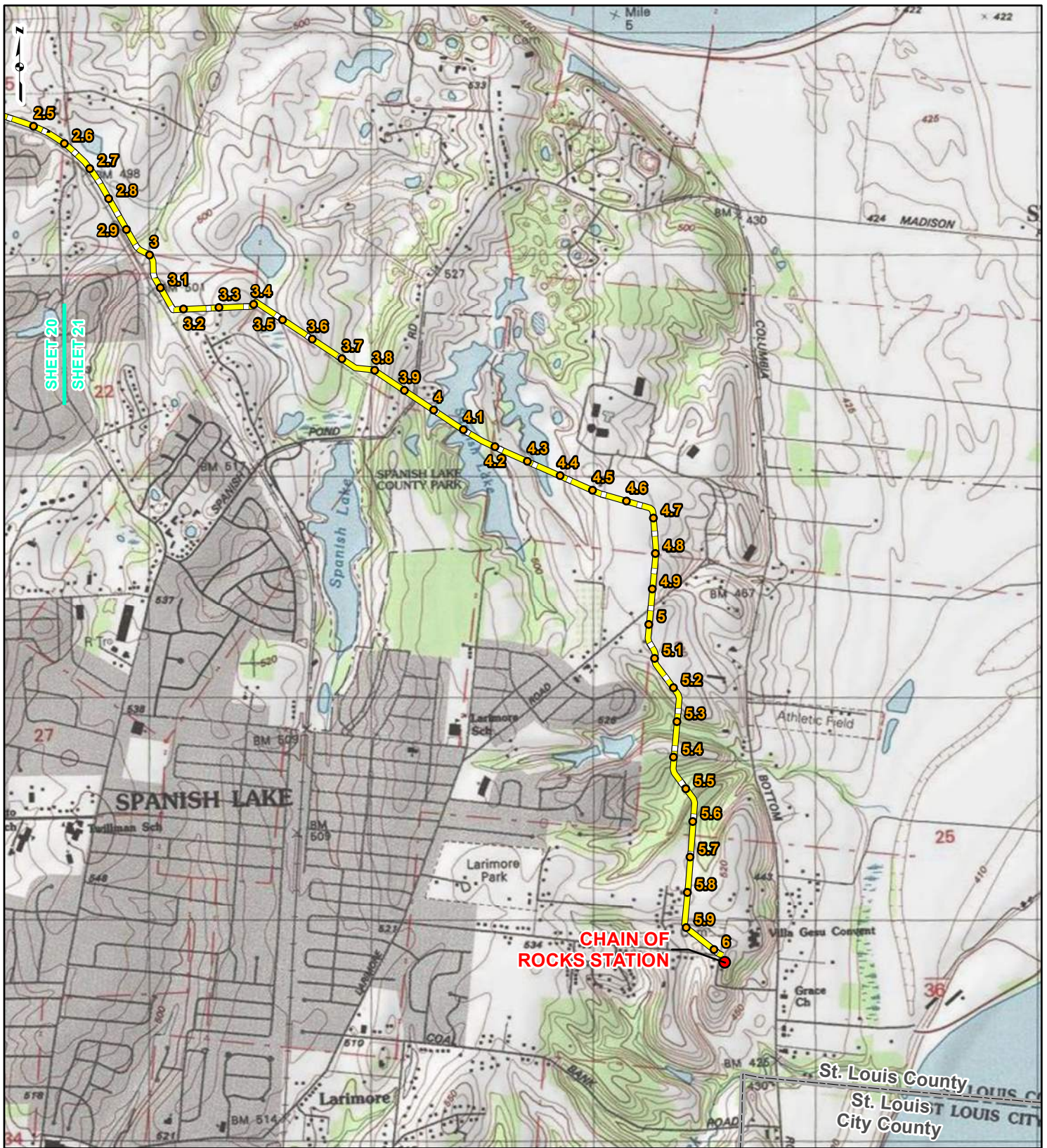
**FIGURE 1
LOCATION MAP
SHEET 20 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

gai consultants **spire**

DRAWN BY: PMH DATE: 3/28/2017
CHECKED: SWW APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ELSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



LEGEND

● PROPOSED FACILITIES	— 24-INCH PIPELINE NORTH COUNTY
● 24-INCH PIPELINE EXTENSION	— 24-INCH PIPELINE EXTENSION
● NORTH COUNTY MILEPOST	□ COUNTY BOUNDARY
● EXTENSION MILEPOST	□ STATE BOUNDARY

0 1,000 2,000 4,000 Feet

**FIGURE 1
LOCATION MAP
SHEET 21 OF 21**

**SPIRE STL
PIPELINE
PROJECT**

DRAWN BY: PMH	DATE: 3/28/2017
CHECKED: SWW	APPROVED: LMF

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: ALSEY (1983), ALTON (1994), BOYER CREEK (1983), CARROLLTON (1983), COLUMBIA BOTTOM (1999), ELSAH (1995), FLORISSANT (1999), GRAFTON (1995), JERSEYVILLE NORTH (1983), JERSEYVILLE SOUTH (1983), OTTERTVILLE (1983) AND ROODHOUSE WEST (1983), ILLINOIS AND MISSOURI, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND I-CUBED, ACCESSED 03/2017.



GAI Consultants, Inc.-Chicago Office
2300 Cabot Drive, Suite 395
Lisle, Illinois 60532

T 630.605.5255

March 28, 2017

Mr. Raenhard Wesselschmidt
Wildlife Management Biologist
Missouri Department of Conservation - Wildlife
2360 Hwy D
St. Charles, MO 63304

**Re: Supplemental Information (Docket No. CP17-40)
Spire STL Pipeline LLC
Spire STL Pipeline Project
Scott, Greene, and Jersey Counties, Illinois
and St. Charles and St. Louis Counties, Missouri**

Dear Mr. Wesselschmidt:

In June 2016, Spire Pipeline LLC ("Spire") initiated consultation with your office regarding their intent to construct, own, and operate the proposed Spire STL Pipeline Project ("Project") which consisted of approximately 59 miles of new, greenfield 24-inch-diameter steel pipeline (referred to as the "24-inch pipeline") originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey counties in Illinois before crossing the Mississippi River and extending east into St. Charles County, Missouri, crossing the Missouri River and tying into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") (referred to as "Line 880"). Line 880 consisted of approximately seven miles of existing 20-inch-diameter steel pipeline. As part of the proposed Project, Spire was planning on modifying Line 880 before placing it in to interstate service. The Project also included the construction of minor aboveground metering and regulating ("M&R") stations. On January 26, 2017, Spire filed an application with the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity for the Project (Docket No. CP17-40-000).

On March 15, 2017, Spire filed a "Preliminary Notification of Preferred Route Change" with FERC, indicating that the Spire no longer plans to modify the existing Line 880 as part of the Project. Instead, Spire intends to construct a new, greenfield 24-inch pipeline (referred to as the "North County Extension") which will extend the 24-inch pipeline portion of the Project to a proposed interconnect with Enable Mississippi River Transmission ("Enable MRT"). Spire plans to file an amended application with FERC in April 2017. GAI Consultants, Inc. ("GAI"), on behalf of Spire, is submitting supplemental information to assist with your review of the Project as amended. An updated description of the proposed Project facilities and location map (Figure 1) are provided herein.

Amended Project Description

The amended Project as proposed will consist of approximately 65 miles of new, greenfield, 24-inch-diameter steel pipeline in two segments. The first segment (referred to as the "24-inch pipeline" portion of the Project) will originate at a new interconnect with the REX pipeline in Scott County, Illinois and extend approximately 59 miles through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east through St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River into St. Louis County, Missouri, and terminates at a new interconnect with LGC. The second segment of new, greenfield pipeline, North County Extension, will consist of a 24-inch-diameter steel pipeline which will extend approximately six miles from the LGC

interconnect through the northern portion of St. Louis County and terminate at a new interconnect with Enable MRT and LGC. The total length of the Project pipeline will be approximately 65 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project also includes the construction of three new M&R stations that provide interconnects with (1) REX in Illinois, (2) LGC in Missouri, and (3) Enable MRT and LGC in Missouri.

The acquisition and modifications to LGC's existing Line 880 is no longer proposed as part of the Project.

Spire anticipates a typical 90-foot temporary construction right-of-way width, and a 50-foot permanent easement. The construction right-of-way is anticipated to be reduced to 75 feet at streams and wetlands. An additional 25 feet of temporary work space will be required through agricultural areas, and additional temporary work space will be required to facilitate construction in certain areas, such as crossings of roads, railroads, streams, and wetlands.

The updated Project schedule includes the following target dates:

- July 22, 2016 - National Environmental Policy Act ("NEPA") process began (initiation of FERC Pre-filing process);
- August 2016 through March 2017 (Anticipated) - Biological and Cultural Resource Surveys;
- January 26, 2017 - Application Filed with FERC;
- April 2017 (Anticipated) - File Amended Application with FERC;
- September 2017 (Anticipated) - Draft NEPA Document Published; and
- December 2017 (Anticipated) - FERC Decision on Application.

Construction is anticipated to commence in January 2018.

On behalf of Spire, we'd like to take this opportunity to invite the Missouri Department of Conservation - Wildlife to provide comments regarding the Project as it will be amended. We appreciate your continued involvement and cooperation in the review of this important Project.

If you have any questions or would like additional information, please feel free to contact me at 630.605.5255 or by e-mail at L.Ferry@gaiconsultants.com.

Sincerely,

GAI Consultants, Inc.



Lori M. Ferry
Environmental Manager

LMF/ka

Attachment: United States Geological Survey (USGS) Topographic Map (Figure 1)

telephone log



gai consultants

Date: 03/23/2017

Project / Admin. No.: E160438.00

Call From: Tiffany Anders

Company: GAI Consultants

Phone No.: 346.231.7172

Call To: Gary Calvert, MDOC Upper Mississippi Conservation Area

Company: Missouri Department of Conservation

Phone No.: 573-898-5905

Subject: Hunting at MDOC Upper Mississippi Conservation Area

cc: Lori Ferry

Summary of Discussion, Decisions, and Commitments:

Ms. Anders spoke with Mr Calvert regarding hunting at the Upper Mississippi Conservation Area. Mr. Calvert confirmed that the Upper Mississippi Conservation Areas are open to hunting, including waterfowl, turkey, and deer hunting. Hunting seasons at the Upper Mississippi Conservation Areas are open according to statewide regulations, with the exception of Dresser Island which is more restrictive. Missouri's 2016/2017 hunting seasons are available online at the MDOC website, however, they vary from year-to-year but generally are within a week or so. Ms. Anders stated that Spire will check back for hunting season dates as they become available and as they pertain to Spire's construction planning in the vicinity of the Upper Mississippi Conservation Area.

Ali Trunzo

From: Lori Ferry
Sent: Friday, March 10, 2017 4:34 PM
To: Ali Trunzo
Subject: FW: Spire STL Pipeline-Bald Eagle Report

From: Lori Ferry
Sent: Friday, March 10, 2017 3:19 PM
To: 'audrey.beres@mdc.mo.gov' <audrey.beres@mdc.mo.gov>
Subject: Spire STL Pipeline-Bald Eagle Report

Hi Audrey,





I have attached courtesy copy of Spire's Bald Eagle Survey report. This information was also filed with FERC and USFWS today.

Hardcopies should be following in your office on Monday.

If you have any questions, please do not hesitate to contact me.

Thanks and have a great weekend,
Lori

Lori Ferry
Environmental Manager-Energy Business Unit

GAI Consultants
Chicago Office | 1444 Farnsworth Avenue, Suite 303 Aurora, Illinois 60505
T 331.301.2002 M 630.605.5255 | gaiconsultants.com |    
l.ferry@gaiconsultants.com

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Missouri Department of Agriculture