



Spire STL Pipeline Project

October Supplement

FERC Docket Nos. CP17-40-000 and CP17-40-001

October 2017

Public



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Preface

Spire STL Pipeline, LLC (“Spire”) is submitting this Supplement to its Amendment Certification application (filed April 21, 2017; Federal Energy Regulatory Commission (“FERC”) Docket Nos. CP17-40-000 and CP17-40-001) to provide updated information on the proposed Spire STL Pipeline Project (“Project”) located in Scott, Greene, and Jersey Counties, Illinois, and St. Charles and St. Louis Counties, Missouri. Minor centerline and workspace adjustments are proposed that were derived from factors such as the results of biological and cultural resource surveys, adjustments based on rectified property boundaries, and landowner preferences. Overall, these changes resulted in minimal changes to the Project’s overall footprint.

A list of each adjustment by milepost with a justification for each is enclosed. In addition, a description of the information included with this filing is provided below.

Resource Report 1– General Project Description

- Appendix 1-B, Construction Alignment Sheets, have been updated to reflect the minor centerline and workspace adjustments as well as environmental survey data not previously filed. A complete set of alignment sheets is included.
- Appendix 1-C, Agency Correspondence, includes correspondence not previously filed with the FERC. A summary of new correspondence by agency is included below. Correspondence containing privileged information is included under separate cover.
 - United States Army Corps of Engineers: Submittal of updated Section 408 package, coordination regarding wetland mitigation, and courtesy copies of FERC filing and Notice of Schedule.
 - United States Fish and Wildlife Service: Reporting and coordination on species-specific surveys including revised Bald Eagle Nest Search Locations, concurrence with the survey reports for Eastern Prairie Fringed Orchid, Mead’s Milkweed, and Large Ground-plum, and FERC Notice of Schedule.
 - National Oceanic and Atmospheric Administration: FERC Notice of Schedule.
 - United States Environmental Protection Agency: Courtesy copies of FERC filing and Notice of Schedule.
 - United States Department of Agriculture: FERC Notice of Schedule.
 - National Park Service: FERC Notice of Schedule.
 - Illinois Department of Natural Resources: Response to Joint Permit Application addendum, courtesy copies of FERC filing and Notice of Schedule.
 - Illinois Department of Agriculture: FERC Notice of Schedule.
 - Illinois Historic Preservation Agency: Coordination and reporting on cultural resource surveys, courtesy copies of FERC filing and Notice of Schedule.



- Illinois Environmental Protection Agency: Coordination and courtesy copies of FERC filing and Notice of Schedule.
 - Missouri Department of Natural Resources: Coordination regarding impact mitigation, and courtesy copies of FERC filing and Notice of Schedule.
 - Missouri State Historic Preservation Office: Coordination and reporting on cultural resource surveys, including concurrence with Phase I Addendum I, Phase I Addendum II, and Phase II Site 23SC2219 reports.
 - Missouri Department of Conservation: Coordination and reporting regarding species-specific surveys including revised Bald Eagle Nest Search Locations, confirmation of no further concerns or comments, and courtesy copies of FERC filing and Notice of Schedule.
 - Scott County, Illinois: FERC Notice of Schedule.
 - Greene County, Illinois: FERC Notice of Schedule.
 - Jersey County, Illinois: Coordination regarding local permits and FERC Notice of Schedule.
 - St. Charles, County, Missouri: Coordination regarding local permits and FERC Notice of Schedule.
 - St. Louis County, Missouri: Coordination regarding local permits and FERC Notice of Schedule.
 - Native American Tribes: Communication with Cherokee Nation, Delaware Nation, Forest County Potawatomi, and Shawnee Tribe regarding correspondence requests, submittal of Phase I Addendum and Phase II Reports to tribes where requested, and FERC Notice of Schedule.
- Revised sheets for the proposed Chain of Rocks Station are included in Appendix 1-F, Typical Facility Plot Plans.

Resource Report 2 – Water Use and Quality

- Table 2.2-1, Incomplete Environmental Survey Status, was updated based on environmental surveys completed through July 2017.
- Appendix 2-D, Site-Specific Waterbody Drawings, includes revised drawings based on minor changes to the Project alignment.



Resource Report 3 – Fish, Wildlife, and Vegetation

- Appendix 3-B, Species Specific Reports for Rare, Threatened and Endangered Species, includes the survey report for Decurrent false aster. This appendix contains privileged information and is included under separate cover.

Resource Report 4 – Cultural Resources

- Table 4.3-1, Incomplete Cultural Resource Survey Status, was updated based on cultural resource surveys completed through August 2017.
- Appendix 4-A, Illinois Cultural Resources Report, includes the Phase I Addendum III survey report. This appendix contains privileged information and is included under separate cover.
- Appendix 4-B, Missouri Cultural Resources Report, includes the Phase I Addendum III survey report. This appendix contains privileged information and is included under separate cover.

Resource Report 6 – Geology

- Appendix 6-B, Geotechnical Investigations Report, includes the report memos for the Coldwater Creek and Spanish Lake Park HDDs. This concludes geotechnical investigations for the Project. This appendix contains privileged information and is included under separate cover.



List of Centerline and Workspace Adjustments

Milepost(s)	Description of Change	Justification ^{1, 2, 3}	Drawing Number	Environmental Impacts
24-Inch Pipeline				
0.0R-0.7R	Route modification/ Workspace modification/Rex Facility modification	Route and associated workspace modified based off of parcel rectification. PAR-001 removed (public road)	STLP-A-001, STLP-STGN-001	No additional environmental concerns
1.0	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-002	No additional environmental concerns
1.2-1.3	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification. Workspace shifted 20' ± to west to keep ATWS off of parcel IL-SC-010.00	STLP-A-002	No additional environmental concerns
1.8R	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-003.1	No additional environmental concerns
2.1R-2.2R	Workspace modification	Workspace modified based off of rectification of Road ROW. Shifted workspace 7' ± to abut Road ROW	STLP-A-003.2	No additional environmental concerns
2.2R-2.9	Route modification/Workspace modification	This reroute is based on landowner request, it shifts the pipe closer to the eastern property line while maintaining the minimum PIR from the nearby church ⁴	STLP-A-003.2, STLP-A-003.3, STLP-A-004	Pending survey completion. Results in 3 additional stream impacts [SIL-TMA-005 (intermittent), SIL-JJP-009 (ephemeral), SIL-JJP-007 (ephemeral)] and new crossing location on UNT to Little Sandy Creek [SIL-CDK-033/ SIL-JJP-005 (perennial)]. Overall impact reduction in wetland, but addition of 0.03 acres PFO (SIL-TMA-003). Forest impacts decrease by less than one-quarter acre.
3.0-3.1	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 11' ± to abut Road ROW	STLP-A-004	No additional environmental concerns
4.0-4.2	Route modification/Workspace modification	Minor route shift to accommodate meeting up with the adjusted property line location	STLP-A-005	Less than one-tenth acre decrease in forest impact
4.2-4.3	Workspace modification	Workspace modified based off of parcel rectification, parcel was shifted 7' ± to the East	STLP-A-005	Overall impact reduction to streams, but two additional streams crossed [SIL-TMA-019 (ephemeral), SIL-JJP-024 (ephemeral)]
4.4	Workspace modification	Based on additional survey there is no resource that would be impacted that was once considered to be located at this location	STLP-A-005	No additional environmental concerns
4.5-4.6	Workspace modification	Workspace modified based off of parcel rectification, parcel was shifted 12' ± to the West	STLP-A-006	Increased wetland impact [WIL-JJP-009 (PEM)]
5.1-6.8	Route modification/Workspace modification	Route and associated workspace modified based off of rectified Road ROW, workspace shifted 13' to the West	STLP-A-006, STLP-A-007, STLP-A-008	Slight increase in wetland impact [WIL-TMA-005 (PEM)]
5.8	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-007	No additional environmental concerns.
6.8-6.9	Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-008	No additional environmental concerns
7.2	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-008	No additional environmental concerns
7.3	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 8' ± to abut Road ROW	STLP-A-009	No additional environmental concerns
7.8	Workspace modification	Workspace modified based off of Road ROW	STLP-A-009	No additional environmental concerns
9.0-9.1	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-010	No additional environmental concerns
9.1	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 8' ± to abut Road ROW	STLP-A-010	No additional environmental concerns
9.1-9.2	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-011	No additional environmental concerns
9.3-9.7	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-011	No additional environmental concerns
10.3	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 6' ± to abut Road ROW	STLP-A-012	No additional environmental concerns
10.8	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-012	No additional environmental concerns
12.0-13.1	Workspace modification	Workspace modified based off of parcel rectification and updated survey information	STLP-A-014, STLP-A-015	Slight decrease in wetland impact [WIL-JJP-107 (PEM)]



Milepost(s)	Description of Change	Justification ^{1, 2, 3}	Drawing Number	Environmental Impacts
24-Inch Pipeline (Continued)				
13.0-13.1	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 8' ± to abut Road ROW	STLP-A-015	No additional environmental concerns
13.5	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 8' ± to abut Road ROW	STLP-A-015	No additional environmental concerns
14.3	Workspace modification	Modified workspace based off of final pipeline location	STLP-A-016	No additional environmental concerns
14.3	Access Road modification	Access Road and associated workspace modified based off of parcel rectification	STLP-A-016	No additional environmental concerns
14.8-16.1	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification, parcel was shifted 8' ± to the West	STLP-A-017, STLP-A-018	Increase in forest impact less than one-quarter acre
17.1	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 15' ± to abut Road ROW	STLP-A-020	No additional environmental concerns
17.5-17.9	Route modification/Workspace modification	This reroute relocates the line east to avoid a future pond site per landowner request. Also on this reroute, in the area across the creek, extending approximately 100' on either side, we will install the pipe at 7' depth and use .500" wall thickness pipe. ⁴	STLP-A-020, STLP-A-021	Slight increase in stream impact [SIL-TMA-036 (perennial)]
18.1	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-021	No additional environmental concerns
19.5-19.7	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-022, STLP-A-023	No additional environmental concerns
20.3-20.4	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 7' ± to abut Road ROW	STLP-A-023	No additional environmental concerns
21.6-21.8	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification. Parcel shifted 11' ± to the West	STLP-A-024, STLP-A-025	No additional environmental concerns
22.3-22.9	Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-027	Slight decrease in stream impact [SIL-TMA-078 (intermittent)]
22.6R	Workspace modification	Workspace modified based off of rectified Road ROW, workspace shifted 11' ± to the North	STLP-A-027	No additional environmental concerns
23.4-23.5	Workspace modification	Workspace was modified per updated survey information	STLP-A-028	No additional environmental concerns
24.4	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 5' ± to abut Road ROW	STLP-A-029	No additional environmental concerns
24.9R	Access Road/Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-029, STLP-AR-001	No additional environmental concerns
25.3R	Workspace modification	Workspace was modified per updated survey information	STLP-A-030	No additional environmental concerns
25.7R	Workspace modification	Workspace was modified per updated survey information	STLP-A-030	No additional environmental concerns
25.8R	Workspace modification	Workspace was modified per updated survey information	STLP-A-030	No additional environmental concerns
26.0 - 26.2	Workspace modification	Workspace was modified per updated survey information	STLP-A-030, STLP-A-031, STLP-AR-002	No additional environmental concerns
27.2-27.4	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-032	No additional environmental concerns
27.9-29.4	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-033, STLP-A-034	No additional environmental concerns
28.4	Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-033	No additional environmental concerns
28.9	Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-034	No additional environmental concerns
29.6	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-035	No additional environmental concerns
30.4-30.5	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification. Parcel shifted 11' ± to the East	STLP-A-035, STLP-A-036	No additional environmental concerns
31.9	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 15' ± to abut Road ROW	STLP-A-037	No additional environmental concerns
32.0	Workspace modification	Workspace was modified per updated survey information	STLP-A-037	No additional environmental concerns
33.9	Workspace modification	Workspace was modified per updated survey information	STLP-A-039	No additional environmental concerns
34.7	Access Road/Workspace modification	Access road and associated workspace modified based off of Landowners request	STLP-A-040	No additional environmental concerns
35.1R	Route modification/Workspace modification	Adjusted PI for constructability and adjust associated workspace	STLP-A-040	No additional environmental concerns



Milepost(s)	Description of Change	Justification ^{1, 2, 3}	Drawing Number	Environmental Impacts
24-Inch Pipeline (Continued)				
36.6R	Access Road/Workspace modification	Access road and associated workspace modified based off of parcel rectification	STLP-A-042, STLP-AR-003	No additional environmental concerns
37.1R-37.4	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-042, STLP-A-043	Decreased impact to wetland [WIL-JJP-116 (PEM)]
37.1R-37.4	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification. Parcel shifted 19' to the East	STLP-A-042, STLP-A-043	Decreased impact to wetland [WIL-JJP-116 (PEM)]
38.0-38.1	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 10' ± to abut Road ROW	STLP-A-043	No additional environmental concerns
38.0-38.4	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-043, STLP-A-044	No additional environmental concerns
38.1-39.6	Route modification/Workspace modification	Route and associated workspace modified based off of rectified Road ROW	STLP-A-044, STLP-A-045	No additional environmental concerns
38.5-38.6	Route modification/Workspace modification	Shifted crossing of Daugherty Road to east; modified associated workspaces	STLP-A-044	No additional environmental concerns
39.7	Workspace modification	Workspace was modified per updated survey information	STLP-A-046	No additional environmental concerns
40.3	Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-046, STLP-A-047	No additional environmental concerns
40.5-40.6R	Workspace modification	Workspace modified based off of final pipeline location	STLP-A-047, STLP-AR-004	No additional environmental concerns
41.8R-41.9R	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-048	No additional environmental concerns
41.9R	Workspace modification	Workspace modified based off of final pipeline location	STLP-A-048	No additional environmental concerns
42.0R-42.3	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-048, STLP-A-049	No additional environmental concerns
42.3-42.4	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 20' ± to abut Road ROW	STLP-A-049	No additional environmental concerns
42.6R - 42.7R	Workspace modification	Workspace modified based off of final pipeline location	STLP-A-049	No additional environmental concerns
43.5	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-050	No additional environmental concerns
43.7R-45.0	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification and Nustar Easement Rectification. Workspace shifted 22' ± to the West	STLP-A-050, STLP-A-051, STLP-AR-005	Increased wetland impact [(WIL-DFW-002 (PEM))]
46.6-46.7	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 6' ± to abut Road ROW	STLP-A-053, STLP-AR-006, STLP-HDD-003	No additional environmental concerns
47.6R-47.7R	Workspace modification	Workspace modified based off of rectified Road ROW	STLP-A-054, STLP-A-055	No additional environmental concerns
47.9R	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-055	No additional environmental concerns
49.0	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 7' ± to abut Road ROW	STLP-A-056	No additional environmental concerns
49.3-50.1R2	Route modification/Workspace modification	This reroute is based on landowner request and relocates the line south to avoid wetland impacts and a ditch ⁴	STLP-A-056, STLP-A-057, STLP-A-058	Pending survey completion. Avoids wetland [WMO-JJP-012 (PEM)] to reduce wetland impacts significantly
50.4-50.5	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-058	No additional environmental concerns
51.0-51.3	Access Road/Workspace modification	Access road and associated workspace modified based off of parcel rectification. Workspace shifted 10-20' @ the St. Louis, Keokuk & Northwestern RR & 7' ± at the road crossing at MP 51.3	STLP-A-059, STLP-A-060	No additional environmental concerns
51.7-51.8	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 14' ± to abut Road ROW	STLP-A-060	No additional environmental concerns
52.5R-54.5	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification and Railroad Easement Rectification. Workspace shifted 30' ± to the South West	STLP-A-061, STLP-A-062, STLP-A-063	Reduced wetland impact [WMO-JJP-007 (PEM)]
54.7-56.4R2	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification and Railroad easement rectification. Workspace shifted 40' ± to the South West	STLP-A-063, STLP-A-064, STLP-A-065	Net reduction in wetland impacts [reduction at WMO-TMA-006 (PEM), WMO-TMA-005 (PUB), and WMO-JJP-002 (PEM), slight increase at WMO-TMA-005A (PEM)].
55.7R2-55.8R2	Workspace modification	Workspace modified based off of parcel rectification and Railroad easement rectification	STLP-A-064	Overall reduced wetland impacts [WMO-TMA-005 (PUB)] with slight increase in impact to WMO-TMA-005A (PEM)
56.6	Workspace modification	Workspace modified based off of parcel rectification	STLP-A-066	No additional environmental concerns



Milepost(s)	Description of Change	Justification ^{1, 2, 3}	Drawing Number	Environmental Impacts
24-Inch Pipeline (Continued)				
56.9	Workspace modification	HDD pullback workspace modified based off of parcel rectification	STLP-HDD-005A	No additional environmental concerns
57.3	Workspace modification	Workspace modified based off of Road ROW. Shifted workspace 14' ± to abut Road ROW	STLP-A-066	No additional environmental concerns
58.4-58.8R2	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification. Workspace shifted 40' ± to the East	STLP-A-068, STLP-AR-007	Less than one-tenth acre increase in forest impact
North County Extension				
0.9 -1.1	Route modification/Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-1001, STLP-A-1002	No additional environmental concerns
2.3-3.8	Workspace modification	Workspace was modified per updated survey information	STLP-A-1003, STLP-HDD-1003	Slight net increase in wetland impact [reduction at WMO-JJP-119 (PEM), increase at WMO-DFW-002 (PEM)]. Avoids two stream impacts [SMO-TMA-019 (ephemeral), SMO-TMA-018 (ephemeral)]. Less than three-quarter acre increase in forest impact.
4.4-4.5	Workspace modification	Adjustment to HDD design based on updated survey information	STLP-A-1005	No additional environmental concerns
4.8-4.9	Route modification/ Workspace modification	Route and associated workspace modified based off of parcel rectification	STLP-A-1006	No additional environmental concerns
5.8-6.0	Route modification/ Workspace modification	Adjusted for constructability and adjust associated workspace	STLP-A-1007, STLP-SS-003	Avoids two stream impacts [SMO-DFW-015 (perennial), SMO-JJP-007 (intermittent)]
Aboveground Facilities				
Laclede/Lange Delivery Station	Increase in permanent easement from 4 to 5 acres	Spire will be purchasing 5' acres in fee ⁴	STLP-A-068	No additional environmental concerns
Laclede/Lange Delivery Station	ATWS was added on the eastern boundary of the Site	This will provide the necessary workspace to perform work on an existing valve near the property line	STLP-A-068	No additional environmental concerns

Notes:

- ¹ Unless otherwise noted Parcel Rectifications were shifts less than 5 feet.
- ² Unless otherwise noted Road ROW Rectifications were shifted less than 5 feet.
- ³ Areas where parcel rectification has occurred are reflected on the plat maps presented to landowners during easement negotiations.
- ⁴ Route and workspace modifications are being presented to landowners during easement negotiations.



TABLES



Table 2.2-1. Incomplete Environmental Survey Status

Facility/County, State	Approximate MP In	Approximate MP Out	Reason for Incomplete Survey ¹	Survey Needed	Comments
24-Inch Pipeline					
Scott County, Illinois	2.5R2	2.6R2	Pending Survey (crop restrictions; survey after harvest) ²	Centerline	-
Greene and Jersey Counties, Illinois	32.4	33.8	Pending Survey Permission	Centerline	-
Jersey County, Illinois	34.4	34.7	Pending Survey Permission	Centerline	-
St. Charles County, Missouri	49.3	50.1R2	Pending Survey (crop restrictions; survey after harvest) ²	Centerline	-
St. Charles County, Missouri	56.9	57.1	Survey Complete	HDD Pullback Extension	No features identified
North County Extension					
St. Louis County, Missouri	2.0	2.3	Survey Complete	Centerline	Filing with USACE in October 2017; data to be included in Implementation Plan
St. Louis County, Missouri	2.7	3.9	Survey Complete	Centerline/ATWS/ HDD Pullback	Filing with USACE in October 2017; data to be included in Implementation Plan
St. Louis County, Missouri	3.3	3.7	Pending Survey Permission	Permanent Easement	-
Total Survey Remaining (in miles)	2.9				

Notes:

- ¹ Pending Survey Permission - landowners at parcels have not granted survey permission at this time; pending survey-area has been granted permission after harvest.
- ² Survey anticipated in October 2017.



Table 4.3-1. Incomplete Cultural Resource Survey Status

Facility/County, State	Approximate MP In	Approximate MP Out	Reason for Incomplete Survey ¹	Survey Need	Comments
24-Inch Pipeline					
Scott County, Illinois	2.4R2	2.7R2	Pending Survey (crop restrictions; survey after harvest)	Centerline	-
Greene County, Illinois	9.1	9.2	Pending Survey (crop restrictions; survey after harvest)	ATWS	-
Jersey County, Illinois	32.4	32.9	Pending Survey Permission	Centerline	-
Jersey County, Illinois	40.2R	40.3	Pending Survey Permission	Centerline	-
Jersey County, Illinois	43.9	43.9	Pending Survey Permission	Staging Area	-
Jersey County, Illinois	43.9	45.1	Survey Complete	Centerline, ATWS, and Access Road	Filed with SHPO in September 2017; data included in Phase I Addendum III Report
St. Charles County, Missouri	48.6	48.7	Pending Survey Permission	Centerline	
St. Charles County, Missouri	49.3	50.1R2	Pending Survey (crop restrictions; survey after harvest)	Centerline	-
St. Charles County, Missouri	56.9	57.1	Pending Survey (crop restrictions; survey after harvest)	HDD Pullback Extension	-



Table 4.3-1. Incomplete Cultural Resource Survey Status (Continued)

Facility/County, State	Approximate MP In	Approximate MP Out	Reason for Incomplete Survey ¹	Survey Need	Comments
North County Extension					
St. Louis County, Missouri	2.0	2.3	Survey Complete	Centerline	Filed with SHPO in September 2017; Data included in Phase I Addendum III Report
St. Louis County, Missouri	2.7	3.9	Survey Complete	Centerline (sporadic testing between MP 3.0 and 3.2), Centerline (outside construction ROW), and ATWS	Filed with SHPO in September 2017; Data included in Phase I Addendum III Report.
Total Survey Remaining (in miles)	2.0				

Notes:

- ¹ Pending Survey Permission - landowners at parcels have not granted cultural resources survey permission at this time; Pending Survey Data – area has been surveyed recently and survey data is currently being processed; Pending Survey – area has been granted permission after harvest.
- ² Total survey miles remaining includes areas "pending survey permission" and "pending survey"; the total does not include "pending survey data" mileage for which survey is already complete at.



APPENDICES



Appendix 1-B
Construction Alignment Sheets



Appendix 1-C
Agency Correspondence

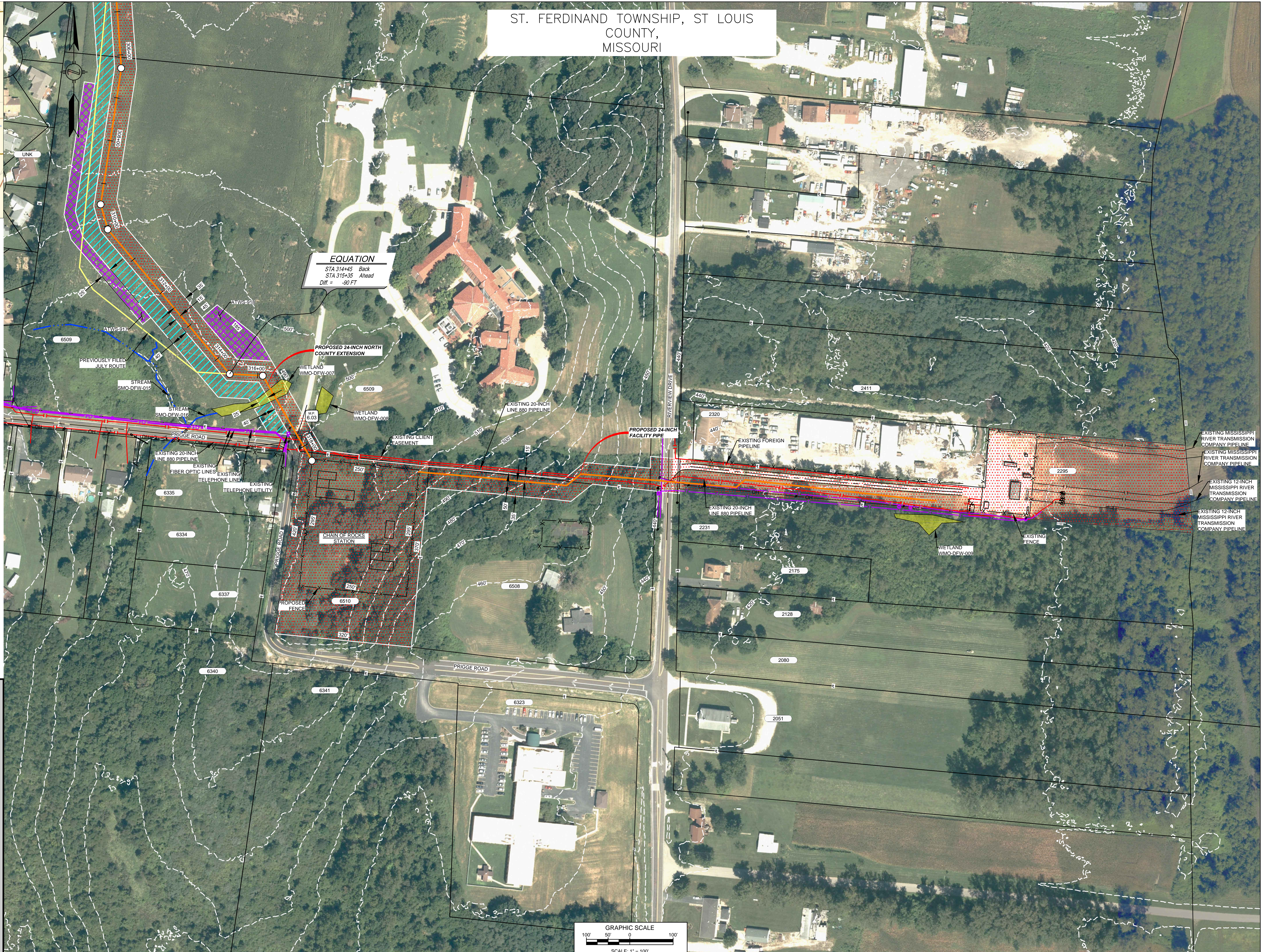


Appendix 1-F Typical Facility Plot Plans

ST. FERDINAND TOWNSHIP, ST LOUIS COUNTY, MISSOURI



LOCATION MAP
N.T.S.



EQUATION
STA 314+45 Back
STA 315+35 Ahead
Diff. = -90 FT

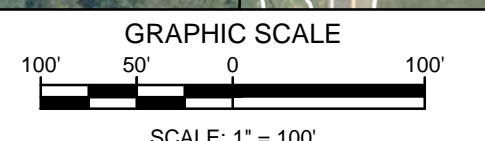
PROPOSED 24-INCH NORTH COUNTY EXTENSION

PROPOSED 24-INCH FACILITY PIPE

CHAIN OF ROCKS STATION

LEGEND

- EXISTING PERMANENT EASEMENT
- PROPOSED PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE (ATWS)
- PROPOSED STAGING AREA
- ACCESS ROAD
- PROPOSED 24-INCH DIAMETER NORTH COUNTY EXTENSION
- EXISTING GAS PIPELINE
- EXISTING FOREIGN PIPELINE
- OVERHEAD POWER LINE
- EXISTING FIBER OPTIC LINE
- MMID
- PROPERTY LINE
- MUNICIPAL LINE
- WETLAND (DESKTOP)
- WETLAND (DELINEATED)
- 5' OF STREAM (DESKTOP)
- 5' OF STREAM (DELINEATED)
- PROPOSED FENCE
- UTILITY POLE
- STORM SEWER



REFERENCE DRAWINGS				REVISIONS				REVISIONS				APPROVALS										
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	ENG. APPROVAL	DATE	CLIENT APPROVAL	DATE	
STLP-A-1007	ALIGNMENT SHEET	STL-M-200-0302	CHAIN OF ROCKS STATION	1	ISSUE FOR FERC	01/2017	GJH	EB	DGG	4	FERC SUPPLEMENTAL FILING	10/2017	EB	RJP	DGG	EB	10/2017	DGG	10/2017			
STL-M-200-0300	CHAIN OF ROCKS STATION	STL-M-200-0303	CHAIN OF ROCKS STATION (EAST)	2	AMENDMENT TO FERC	04/2017	KSS	RJP	DGG								RJP	10/2017	JEW	10/2017		
STL-M-200-0301	CHAIN OF ROCKS STATION (WEST)			3	FERC SUPPLEMENTAL FILING	07/2017	GJH	EB	DGG													

PREPARED FOR
Spire STL Pipeline

PREPARED BY
MOTT MACDONALD

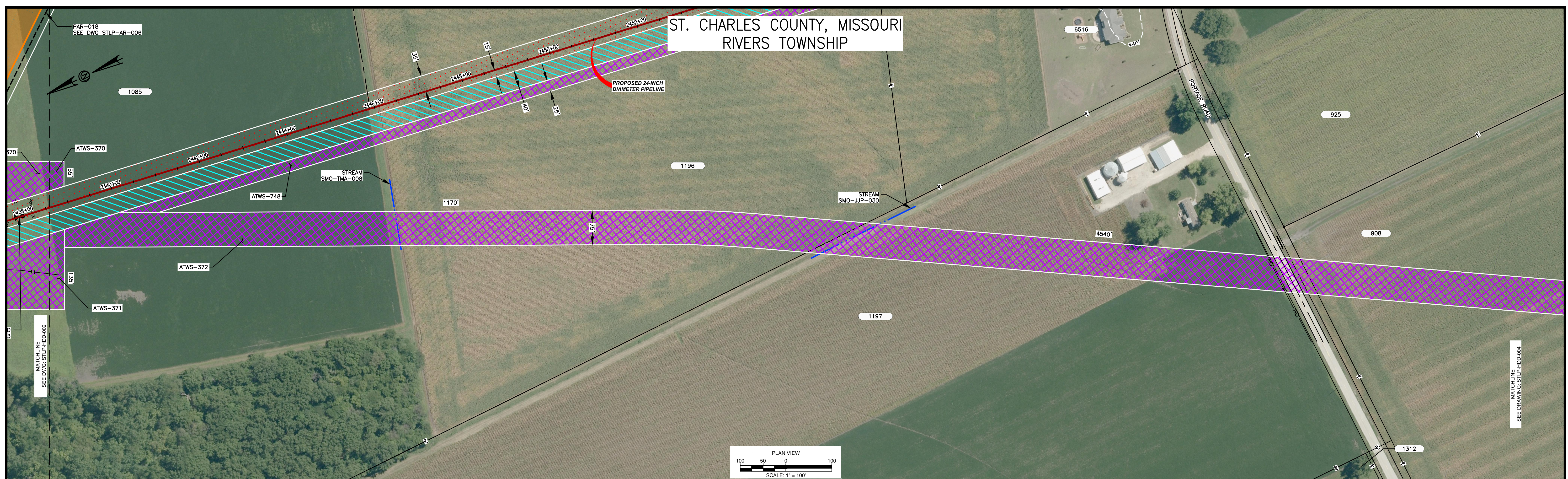
SCALE: 1"=100'
STLP-SS-003

SPIRE STL PIPELINE PROJECT
CHAIN OF ROCKS STATION
SITE LAYOUT
ST LOUIS COUNTY, MISSOURI



Appendix 2-D
Site-Specific Waterbody Drawings

ST. CHARLES COUNTY, MISSOURI
RIVERS TOWNSHIP



- HDD NOTES:**
- ALL DIMENSIONS AND ELEVATIONS ARE IN FEET, UNLESS OTHERWISE SPECIFIED.
 - ALL CHAINAGES ARE HORIZONTAL.
 - CONTRACTOR SHALL DETERMINE FINAL LOCATIONS AND DIMENSIONS OF ALL PITS NECESSARY TO ACCOMMODATE THEIR MEANS AND METHODS.
 - CONTRACTOR SHALL DETERMINE DIAMETER, GRADE, WALL THICKNESS AND ADDITIONAL LENGTH OF TEMPORARY CONDUCTOR CASINGS THAN THOSE SHOWN ON THE DRAWINGS. ANY INSTALLED TEMPORARY CONDUCTOR CASING SHALL BE FULLY REMOVED UPON COMPLETION OF PULLBACK OPERATIONS.
 - THE MINIMUM ALLOWABLE DRILLING RADIUS SHALL BE 1,750 FEET BASED ON A 3-JOINT AVERAGE.
 - EXISTING UTILITY LOCATIONS AND DEPTHS, INCLUDING PRIVATE SERVICES, ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION OPERATIONS.

- HDD OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH ALL PERMIT REQUIREMENTS.
- DOWNHOLE ANNULAR DRILLING FLUID PRESSURES SHALL BE MONITORED AT ALL TIMES DURING THE PILOT BORE DRILLING PROCESS. LOCATION OF MONITORING SHALL BE AS CLOSE TO THE DRILL BIT AS POSSIBLE.
- PILOT BORE SHALL BE CONTINUOUSLY TRACKED AT ALL TIMES. NO BLIND SECTIONS SHALL BE PERMITTED, EVEN WHEN THE DRILL BIT IS UNDER WATER.
- UPON HDD COMPLETION AND EXTRACTION OF TEMPORARY CASING PIPE (IF APPLICABLE), CONTRACTOR SHALL PLACE A UNIFORM CEMENT BASED GROUT WITHIN THE NEAREST 200 FEET OF THE ANNULAR SPACE OF THE HDD BORE BETWEEN THE PRODUCT PIPE AND THE UNDISTURBED EARTH AT EACH HDD ENTRY AND EXIT LOCATIONS. GROUT DELIVERY METHOD SHALL BE FROM MULTIPLE POINTS WITHIN THE ANNULAR SPACE. CONTRACTOR SHALL MONITOR AND CONTROL GROUT PRESSURES TO WITHIN LIMITS FOR THE ENCOUNTERED GEOTECHNICAL MATERIALS.

- IF THE CONTRACTOR ENCOUNTERS AN OBSTRUCTION THAT PREVENTS THE INSTALLATION ACCORDING TO THE PROJECT SPECIFICATIONS, THE CONTRACTOR SHALL PLACE A CEMENT BASED GROUT WITHIN THE BORE. WORK SHALL NOT RESUME UNTIL REVISED PLANS AND PROCEDURES HAVE BEEN SUBMITTED TO AND ACCEPTED BY THE OWNER.
- CONTRACTOR SHALL USE A GYROSCOPIC GUIDANCE SYSTEM TO COMPLETE THE PILOT BORE INSTALLATION.
- THE PILOT BORE WILL BE EITHER 10.625" OR 12.25" IN DIAMETER. THE FINAL REAMED HOLE DIAMETER IS ANTICIPATED TO BE 36". THE NUMBER OF REAMING PASSES WILL BE DETERMINED BY THE CONTRACTOR SELECTED FOR THE WORK.
- CONTRACTOR SHALL MONITOR PRECIPITATION AND RIVER LEVEL ELEVATIONS AND BE PREPARED TO REMOVE EQUIPMENT PRIOR TO A FORECASTED FLOOD EVENT.

MISSISSIPPI HDD PLAN VIEW

PILOT BORE DRILLING TOLERANCES SHALL BE AS FOLLOWS:

ITEM	TOLERANCE
PILOT ENTRY ANGLE	INCREASE ANGLE UP TO 1 (STEEPER), BUT NO DECREASE IN ANGLE ALLOWED.
PILOT ENTRY LOCATION	AS STAKED BY OWNER. NO CHANGES WITHOUT OWNER APPROVAL
PILOT EXIT ANGLE	DECREASE ANGLE UP TO 2° (FLATTER), BUT NO INCREASES IN EXIT ANGLE ALLOWED.
PILOT EXIT LOCATION	UP TO TEN (10) FEET SHORTER OR LONGER.
PILOT DEPTH	UP TO THREE (3) FEET SHALLOWER DEPTH ALLOWED. UP TO TEN (10) FEET INCREASE IN PIPE DESIGN DEPTH (DEEPER) ALLOWED.
PILOT ALIGNMENT	UP TO TEN (10) FEET LEFT OR RIGHT OF THE OWNER SURVEY CENTERLINE BUT NOT WITHIN FIVE (5) FEET OF THE RIGHT-OF-WAY/EASEMENT BOUNDARY OR ANY BELOW GRADE UTILITY OR STRUCTURE.

Soil Stratigraphic Legend:

- ML (Medium Sand)
- CH (Clay)
- CL (Clay)
- SP (Silt)
- SW (Sand with clay)
- GP (Gravelly sand)
- LIMESTONE
- SM (Siltstone)

Rock Stratigraphic Legend:

- LIMESTONE
- MUDSTONE
- SHALE
- CONCRETE
- GP (Gravelly sand)

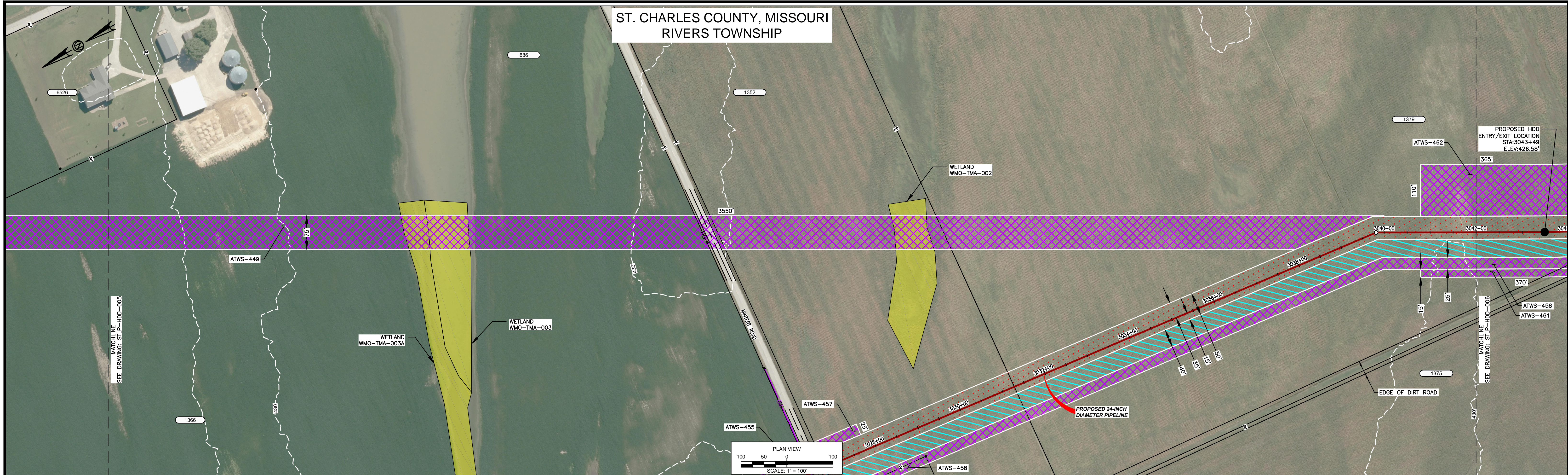
LEGEND

- PROPOSED PERMANENT EASEMENT (Red hatched)
- EXISTING PERMANENT EASEMENT (Blue hatched)
- TEMPORARY WORKSPACE (Green hatched)
- ADDITIONAL TEMPORARY WORKSPACE (Purple hatched)
- PROPOSED STAGING AREA (Green hatched)
- ACCESS ROAD (Dashed line)
- USACE EASEMENT (Orange hatched)
- PROPOSED 24-INCH DIAMETER PIPELINE (Red line with circles)
- PROPERTY LINE (Dashed line)
- MMID (X X X X)
- EXISTING GAS PIPELINE (Red line with T)
- EXISTING FOREIGN PIPELINE (Dashed line)
- EXISTING OVERHEAD LINE (Green line with OH)
- ROAD CENTERLINE (Dashed line)
- STREAM (DELINEATED) (Blue line with circles)
- STREAM (DESKTOP) (Blue line)
- WETLAND (DESKTOP) (Green arrow)
- WETLAND (DELINEATED) (Green arrow)

- NOTES:**
- THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2016. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-AWI AND USGS.
 - EXISTING FEATURES SHOWN WERE SURVEYED BY MOTT MACDONALD AND DIGITIZED FROM IMAGERY. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.
 - PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.
 - BASE FLOOD ELEVATION LINE SHOWN FOR 100 YEAR FLOOD PLAIN LIMIT WAS PULLED FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM). THE ELEVATION OF 438 FEET WAS DETERMINED USING MAP NUMBERS 29189C0090K AND 17083C0278D.

REFERENCE DRAWINGS				REVISIONS				REVISIONS				APPROVALS				PREPARED FOR Spire STL Pipeline	PREPARED BY MOTT MACDONALD	SPIRE STL PIPELINE PROJECT HDD PROFILE OVERVIEW MISSISSIPPI RIVER MAINLINE ST. CHARLES COUNTY, MISSOURI				
DWG NO.	TITLE	DWG NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	NO.	REVISIONS	DATE	DRAWN	CK	APPR				DRAWN BY	DATE	ENG. APPROVAL	DATE
STLP-A-053	ALIGNMENT SHEET	STLP-HDD-004	HDD PROFILE OVERVIEW	1	ISSUE FOR FERC	01/2017	RJR	EB	RJP	4	FERC SUPPLEMENTAL FILING	10/2017	RJP	MWF	DGG	D.R.G.	10/2017	D.G.G.	10/2017			
STLP-AR-006	ACCESS ROAD SITE PLAN - PAR-018			2	AMENDMENT TO FERC	04/2017	RJR	EB	RJP										P.M. APPROVAL			
STLP-HDD-002	HDD PROFILE OVERVIEW			3	FERC SUPPLEMENTAL FILING	07/2017	RJR	EB	RJR								M.A.P.	10/2017	J.E.W.	10/2017		

ST. CHARLES COUNTY, MISSOURI
RIVERS TOWNSHIP



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MISSOURI RIVER HDD PLAN VIEW

PILOT BORE DRILLING TOLERANCES SHALL BE AS FOLLOWS:	
ITEM	TOLERANCE
PILOT ENTRY ANGLE	INCREASE ANGLE UP TO 1 (STEEPER), BUT NO DECREASE IN ANGLE ALLOWED.
PILOT ENTRY LOCATION	AS STAKED BY OWNER. NO CHANGES WITHOUT OWNER APPROVAL
PILOT EXIT ANGLE	DECREASE ANGLE UP TO 2° (FLATTER), BUT NO INCREASES IN EXIT ANGLE ALLOWED.
PILOT EXIT LOCATION	UP TO TEN (10) FEET SHORTER OR LONGER.
PILOT DEPTH	UP TO THREE (3) FEET SHALLOWER DEPTH ALLOWED. UP TO TEN (10) FEET INCREASE IN PIPE DESIGN DEPTH (DEEPER) ALLOWED.
PILOT ALIGNMENT	UP TO TEN (10) FEET LEFT OR RIGHT OF THE OWNER SURVEY CENTERLINE BUT NOT WITHIN FIVE (5) FEET OF THE RIGHT-OF-WAY/EASEMENT BOUNDARY OR ANY BELOW GRADE UTILITY OR STRUCTURE.

Soil Stratigraphic Legend:

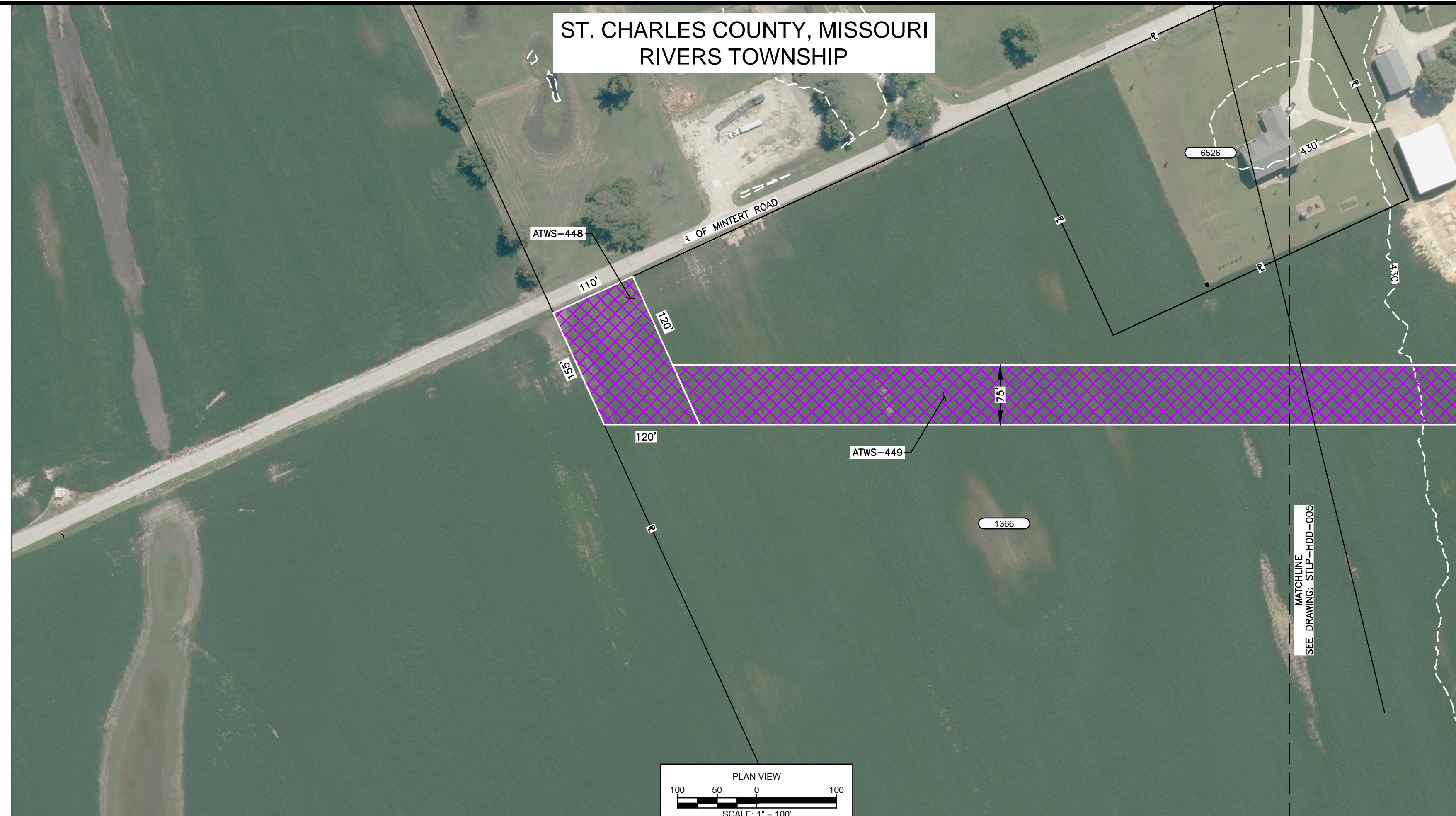
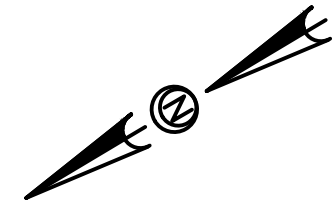
ML	CH	CL	SP
SW	GP	LIMESTONE	SM
LIMESTONE	MUDSTONE	SHALE	
CONCRETE	GP		

LEGEND

[Red hatched box]	PROPOSED PERMANENT EASEMENT	[Red line with circle]	PROPOSED 24-INCH DIAMETER PIPELINE	[Blue dashed line]	STREAM (DELINEATED)
[Green hatched box]	EXISTING PERMANENT EASEMENT	[Black line with circle]	PROPERTY LINE	[Blue solid line]	STREAM (DESKTOP)
[Blue hatched box]	TEMPORARY WORKSPACE	[Circle with X]	MMID	[Green hatched box]	WETLAND (DESKTOP)
[Purple hatched box]	ADDITIONAL TEMPORARY WORKSPACE	[Red line with X]	EXISTING GAS PIPELINE	[Green solid box]	WETLAND (DELINEATED)
[Green dashed box]	PROPOSED STAGING AREA	[Red line with dash]	EXISTING FOREIGN PIPELINE	[Green dashed line]	
[Black dashed line]	ACCESS ROAD	[Green line with OH]	EXISTING OVERHEAD LINE	[Black dashed line]	
[Orange box]	USACE EASEMENT	[Black dashed line]	ROAD CENTERLINE		

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REFERENCE DRAWINGS		REFERENCE DRAWINGS		REVISIONS								APPROVALS				PREPARED FOR		PREPARED BY		SPIRE STL PIPELINE PROJECT						
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	ENG. APPROVAL	DATE	CLIENT APPROVAL	DATE	STLP-HDD-005	MOTT MACDONALD	HDD PROFILE OVERVIEW	MISSOURI RIVER MAINLINE	ST. CHARLES & ST. LOUIS COUNTIES, MISSOURI
STLP-A-066	ALIGNMENT SHEET			1	ISSUE FOR FERC	01/2017	RJR	EB	RJP	4	FERC SUPPLEMENTAL FILING	10/2017	RJP	MWF	DGG	R.J.P.	10/2017	D.G.G.	10/2017							
STLP-A-067	ALIGNMENT SHEET			2	HDD PROFILE OVERVIEW	04/2017	RJR	EB	RJP																	
				3	FERC SUPPLEMENTAL FILING	07/2017	RJR	EB	RJP								M.A.P.	10/2017	J.E.W.	10/2017						



HDD NOTES:

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3. CONTRACTOR SHALL DETERMINE FINAL LOCATIONS AND DIMENSIONS OF ALL PITS NECESSARY TO ACCOMMODATE THEIR MEANS AND METHODS.
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12. CONTRACTOR SHALL USE THE DRILL AND INTERSECT INSTALLATION STRATEGY TO COMPLETE THIS INSTALLATION.
13. THE PILOT BORE WILL BE EITHER 10.625" OR 12.25" IN DIAMETER. THE FINAL REAMED HOLE DIAMETER IS ANTICIPATED TO BE 36". THE NUMBER OF REAMING PASSES WILL BE DETERMINED BY THE CONTRACTOR SELECTED FOR THE WORK.
14. CONTRACTOR SHALL USE A GYROSCOPIC GUIDANCE SYSTEM TO COMPLETE THE PILOT BORE INSTALLATION.
15. CONTRACTOR SHALL MONITOR PRECIPITATION AND RIVER LEVEL ELEVATIONS AND BE PREPARED TO REMOVE EQUIPMENT PRIOR TO A FORECASTED FLOOD EVENT

MISSOURI RIVER HDD PLAN VIEW

PILOT BORE DRILLING TOLERANCES SHALL BE AS FOLLOWS:	
ITEM	TOLERANCE
PILOT ENTRY ANGLE	INCREASE ANGLE UP TO 1° (STEEPER), BUT NO DECREASE IN ANGLE ALLOWED.
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Soil Stratigraphic Legend:

- ML (vertical lines)
- CH (diagonal lines /)
- CL (diagonal lines \)
- SP (dotted pattern)
- SW (horizontal lines)
- GP (diagonal lines /)
- LIMESTONE (vertical lines)
- SM (horizontal lines)

Rock Stratigraphic Legend:

- LIMESTONE (vertical lines)
- MUDSTONE (diagonal lines /)
- SHALE (horizontal lines)
- CONCRETE (dotted pattern)
- GP (diagonal lines /)

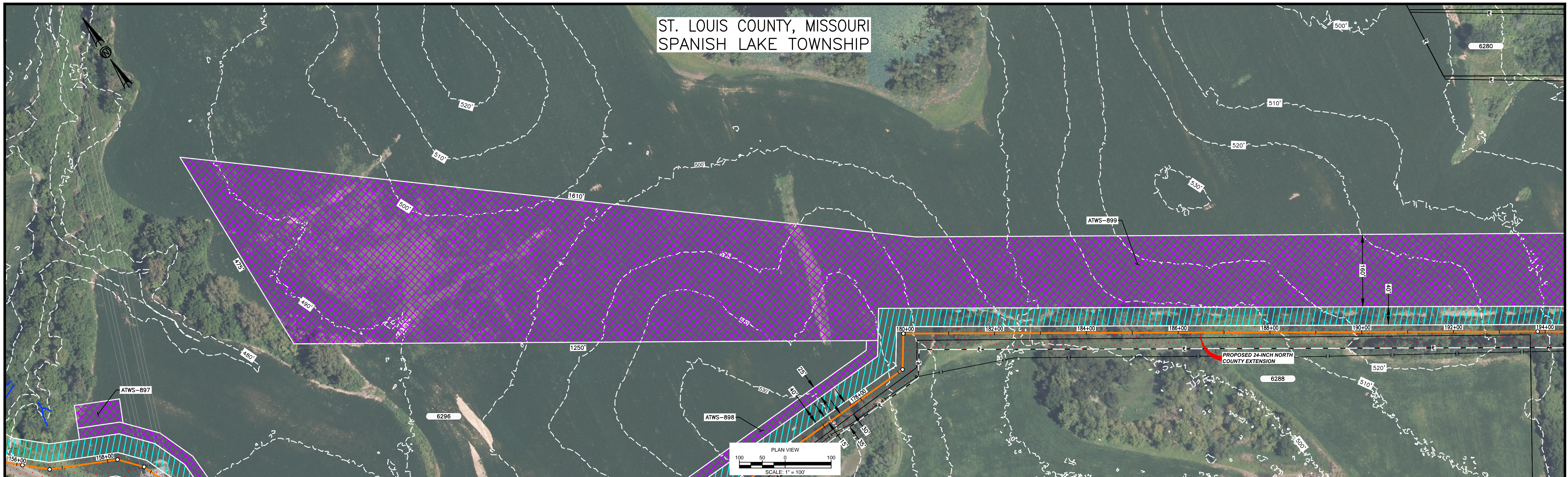
LEGEND

- PROPOSED PERMANENT EASEMENT (red hatched)
- EXISTING PERMANENT EASEMENT (blue hatched)
- TEMPORARY WORKSPACE (green hatched)
- ADDITIONAL TEMPORARY WORKSPACE (purple hatched)
- PROPOSED STAGING AREA (orange hatched)
- ACCESS ROAD (dashed line)
- USACE EASEMENT (orange box)
- PROPOSED 24-INCH DIAMETER PIPELINE (red line with circle)
- PROPERTY LINE (dashed line)
- MMID (X X X X)
- EXISTING GAS PIPELINE (red line with cross-ticks)
- EXISTING FOREIGN PIPELINE (red line with cross-ticks)
- EXISTING OVERHEAD LINE (green line with OH)
- ROAD CENTERLINE (dashed line)
- STREAM (DELINEATED) (blue dashed line)
- STREAM (DESKTOP) (blue solid line)
- WETLAND (DESKTOP) (green arrow)
- WETLAND (DELINEATED) (green arrow)

- NOTES:**
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 4. BASE FLOOD ELEVATION LINE SHOWN FOR 100 YEAR FLOOD PLAIN LIMIT WAS PULLED FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM). THE ELEVATION OF 438 FEET WAS DETERMINED USING MAP NUMBERS 29189C0090K AND 17083C0278D.

REFERENCE DRAWINGS		REFERENCE DRAWINGS		REVISIONS				REVISIONS				APPROVALS				PREPARED FOR		PREPARED BY		SPIRE STL PIPELINE PROJECT							
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	ENG. APPROVAL	DATE	CLIENT APPROVAL	DATE	Spire STL Pipeline		MOTT MACDONALD		HDD PROFILE OVERVIEW MISSOURI RIVER MAINLINE ST. CHARLES & ST. LOUIS COUNTIES, MISSOURI	
STLP-A-066	ALIGNMENT SHEET			3	FERC SUPPLEMENTAL FILING	07/2017	RJP	EB	RJP							R.J.P.	10/2017	D.G.G.	10/2017								
STLP-A-067	ALIGNMENT SHEET			4	FERC SUPPLEMENTAL FILING	10/2017	RJP	MWF	DGG							M.A.P.	10/2017	J.E.W.	10/2017			STLP-HDD-005A					

ST. LOUIS COUNTY, MISSOURI
SPANISH LAKE TOWNSHIP



- HDD NOTES:**
1. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET, UNLESS OTHERWISE SPECIFIED.
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14. CONTRACTOR SHALL MONITOR PRECIPITATION AND RIVER LEVEL ELEVATIONS AND BE PREPARED TO REMOVE EQUIPMENT PRIOR TO A FORECASTED FLOOD EVENT.

SPANISH LAKE PARK HDD PLAN VIEW

PILOT BORE DRILLING TOLERANCES SHALL BE AS FOLLOWS:	
ITEM	TOLERANCE
PILOT ENTRY ANGLE	INCREASE ANGLE UP TO 1 (STEEPER), BUT NO DECREASE IN ANGLE ALLOWED.
PILOT ENTRY LOCATION	AS STAKED BY OWNER. NO CHANGES WITHOUT OWNER APPROVAL
PILOT EXIT ANGLE	DECREASE ANGLE UP TO 2° (FLATTER), BUT NO INCREASES IN EXIT ANGLE ALLOWED.
PILOT EXIT LOCATION	UP TO TEN (10) FEET SHORTER OR LONGER.
PILOT DEPTH	UP TO THREE (3) FEET SHALLOWER DEPTH ALLOWED. UP TO TEN (10) FEET INCREASE IN PIPE DESIGN DEPTH (DEEPER) ALLOWED.
PILOT ALIGNMENT	UP TO TEN (10) FEET LEFT OR RIGHT OF THE OWNER SURVEY CENTERLINE BUT NOT WITHIN FIVE (5) FEET OF THE RIGHT-OF-WAY/EASEMENT BOUNDARY OR ANY BELOW GRADE UTILITY OR STRUCTURE.

Soil Stratigraphic Legend:

- ML: MUDSTONE
- CH: CLAY
- CL: CLAY
- SP: SAND
- SW: SAND WITH SILT
- GP: GRAVELLY SAND
- SM: SILT
- LIMESTONE: LIMESTONE
- MUDSTONE: MUDSTONE
- SHALE: SHALE
- CONCRETE: CONCRETE
- GP: GRAVELLY SAND

LEGEND

- PROPOSED PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY WORKSPACE
- ADDITIONAL TEMPORARY WORKSPACE
- PROPOSED STAGING AREA
- ACCESS ROAD
- USACE EASEMENT
- PROPOSED 24-INCH NORTH COUNTY EXTENSION
- PROPERTY LINE
- MMID
- EXISTING GAS PIPELINE
- EXISTING FOREIGN PIPELINE
- EXISTING OVERHEAD LINE
- ROAD CENTERLINE
- STREAM (DELINEATED)
- STREAM (DESKTOP)
- WETLAND (DESKTOP)
- WETLAND (DELINEATED)

- NOTES:**
1. THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2017. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-AWI AND USGS.
 2. EXISTING FEATURES SHOWN WERE SURVEYED BY MOTT MACDONALD AND DIGITIZED FROM IMAGERY. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.
 3. PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.
 4. BASE FLOOD ELEVATION LINE SHOWN FOR 100 YEAR FLOOD PLAIN LIMIT WAS PULLED FROM FEMA FLOOD INSURANCE RATE MAPS (FIRM). THE ELEVATION OF 438 FEET WAS DETERMINED USING MAP NUMBERS 29189C0080K AND 17083C0278D.

REFERENCE DRAWINGS		REFERENCE DRAWINGS		REVISIONS				REVISIONS				APPROVALS				PREPARED FOR		PREPARED BY		SPIRE STL PIPELINE PROJECT								
DWG. NO.	TITLE	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	ENG. APPROVAL	DATE	CLIENT APPROVAL	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
STLP-ESP-1007	ALIGNMENT SHEET			3	FERC SUPPLEMENTAL FILING	07/2017	JAM	RJP	DCG							JAM	10/2017	D.G.G.	10/2017									
STLP-ESP-1008	ALIGNMENT SHEET			4	FERC SUPPLEMENTAL FILING	10/2017	RJP	MWF	DGG							RJP	10/2017	J.E.W.	10/2017									

SPIRE STL PIPELINE PROJECT
 HDD PROFILE OVERVIEW
 SPANISH LAKE PARK NORTH COUNTY EXTENSION
 SPANISH LAKE TOWNSHIPS, ST. LOUIS, MISSOURI

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Appendix 3-B
Species Specific Reports for Rare, Threatened and
Endangered Species

CONTAINS PRIVILEGED INFORMATION
(UNDER SEPARATE COVER)



Appendix 4-A
Illinois Cultural Resources Report - Phase I Addendum III
CONTAINS PRIVILEGED INFORMATION
(UNDER SEPARATE COVER)



Appendix 4-B
Missouri Cultural Resources Report - Phase I Addendum III
CONTAINS PRIVILEGED INFORMATION
(UNDER SEPARATE COVER)



Appendix 6-B
Geotechnical Investigations Report
CONTAINS PRIVILEGED INFORMATION
(UNDER SEPARATE COVER)