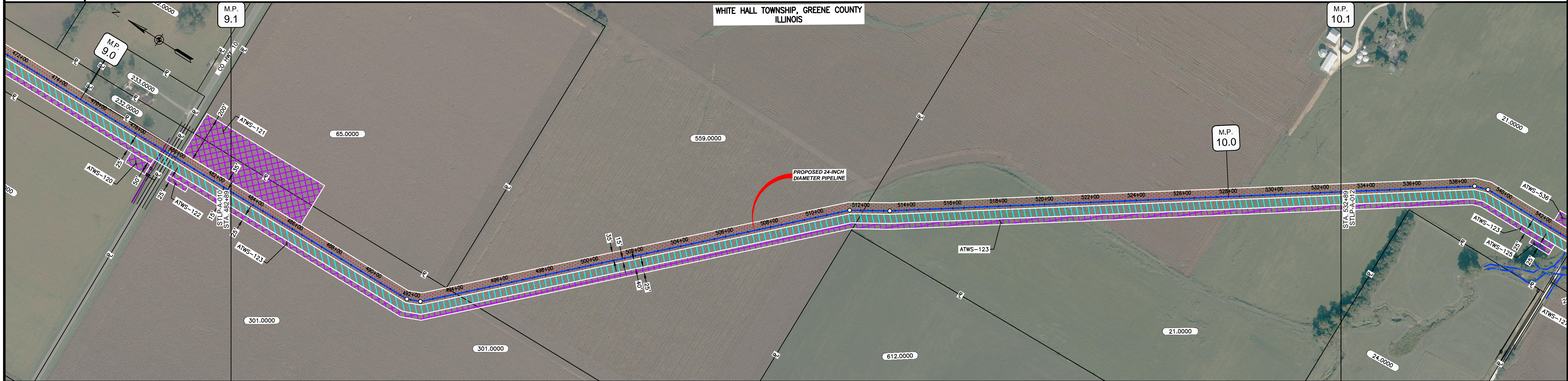


OWNERSHIP / FOOTAGE	482+89	301.0000	1115'	484+04	559.0000	1806'	510+12	21.0000	2077'	532+89
STATIONING				484+04 PROPERTY LINE			510+12 PROPERTY LINE			532+89



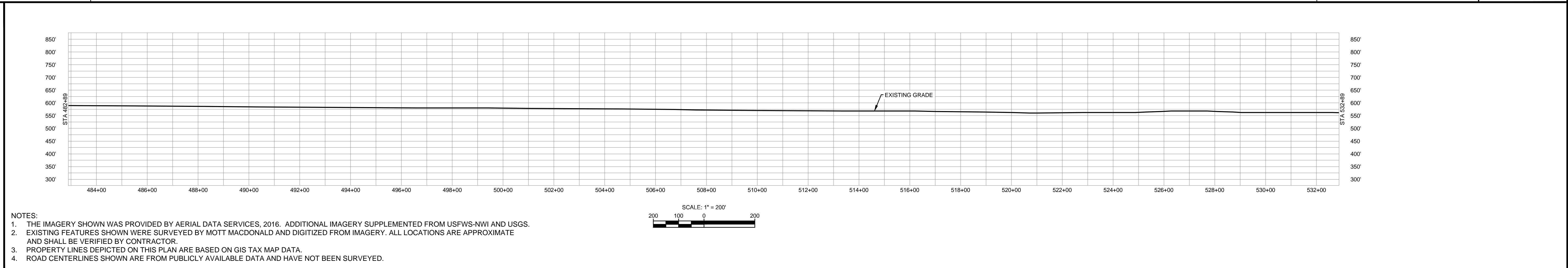
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG													
MATERIAL & COATING	5000'													
DESIGN FACTOR	0.72													
CONSTRUCTION METHOD	OPEN CUT													
PIPELINE COVER	5'													
SOILS	51A	47A	51A	68A	51A	51B	86C2	675C2	86C2	675C2	86B	675C2	675B	675C2
LAND USE														

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

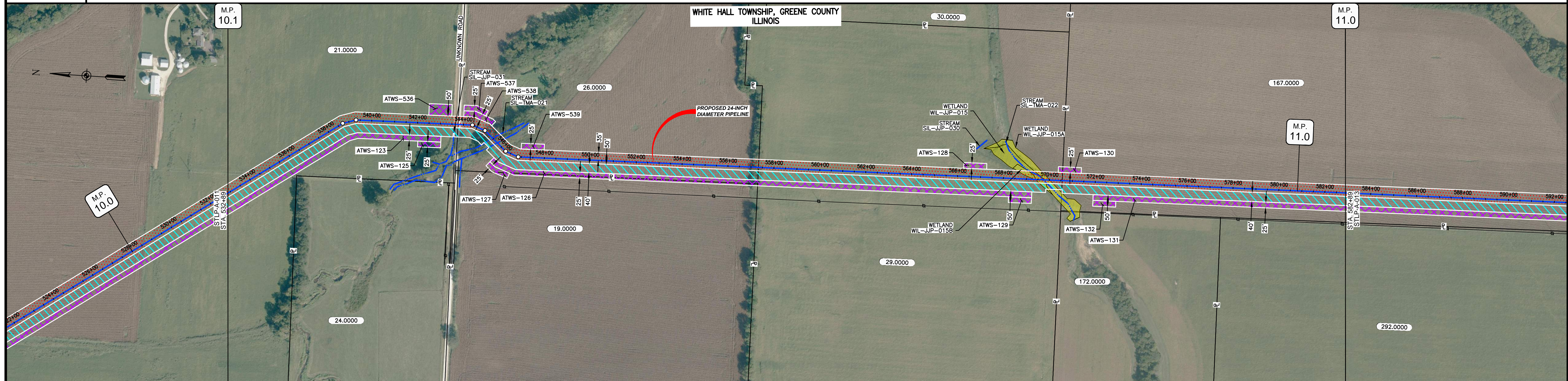
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS			SCALE PLAN:		PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN:	SCALE PROFILE H:	SCALE PROFILE V:	PREPARED FOR	ALIGNMENT SHEET		
1	5000	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				SB	1/2017	1" = 200'	1" = 200'	1" = 200'	<b>Spire STL Pipeline</b> <b>M M</b> <b>MOTT MACDONALD</b>	PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 482+89 TO STA. 532+89		
																	SCALE	DRAWING NO.	REVISION
																1" = 200'	STLP-A-011	1	



OWNERSHIP / FOOTAGE	21.0000 1087'	26.0000 1357'	29.0000 1323'	167.0000 1233'	
STATIONING	532+89 534+04 OVERHEAD LINE (NOT SURVEYED) 536+72 E.L. < 1656+07-RT 538+10 E.L. < 1651+07-RT	543+76 545+75 CENTERLINE OF UNKNOWN ROAD 547+76 PROPERTY LINE 549+82 E.L. < 2102+22-RT 549+82 E.L. < 2102+22-RT 549+74 EDGE OF STREAM SIL-TMA-021 549+74 EDGE OF STREAM SIL-TMA-021 549+82 E.L. < 2102+22-RT 549+82 E.L. < 2102+22-RT	557+33 557+33 PROPERTY LINE	571+95 569+55 ENTER WIND W/LP-015B 569+73 CENTERLINE OF STREAM SIL-TMA-022 569+79 EXT. WIND W/LP-015B 570+01 EXT. WIND W/LP-015A 570+56 PROPERTY LINE	582+89



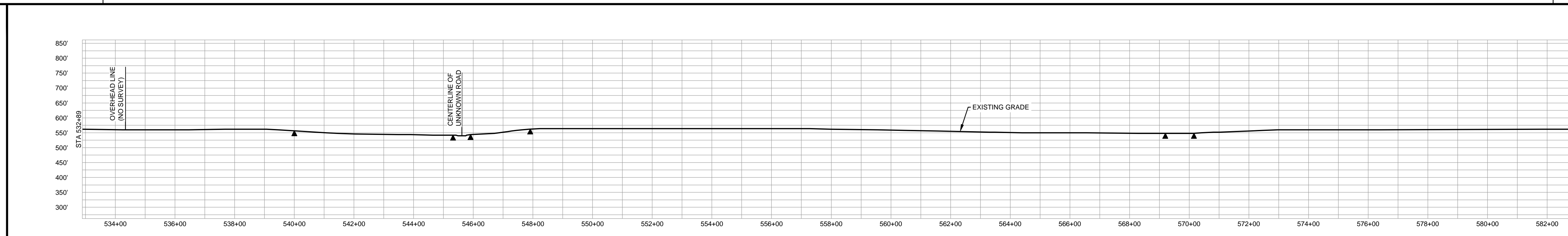
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG																				
MATERIAL & COATING	<table border="1"> <tr> <td>532+89</td> <td>1048'</td> <td>1</td> <td>80'</td> <td>2</td> <td>534+17</td> <td>3872'</td> <td>1</td> <td>582+89</td> </tr> </table>												532+89	1048'	1	80'	2	534+17	3872'	1	582+89
532+89	1048'	1	80'	2	534+17	3872'	1	582+89													
DESIGN FACTOR	0.72			0.6			0.72														
CONSTRUCTION METHOD	OPEN CUT			OPEN CUT (FLUMED)			OPEN CUT			OPEN CUT (FLUMED)											
PIPELINE COVER	5'			3'			5'			5'											
SOILS	675C2			3074A			280C2			675B, 61A, 51B, 86C2											
LAND USE																					

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

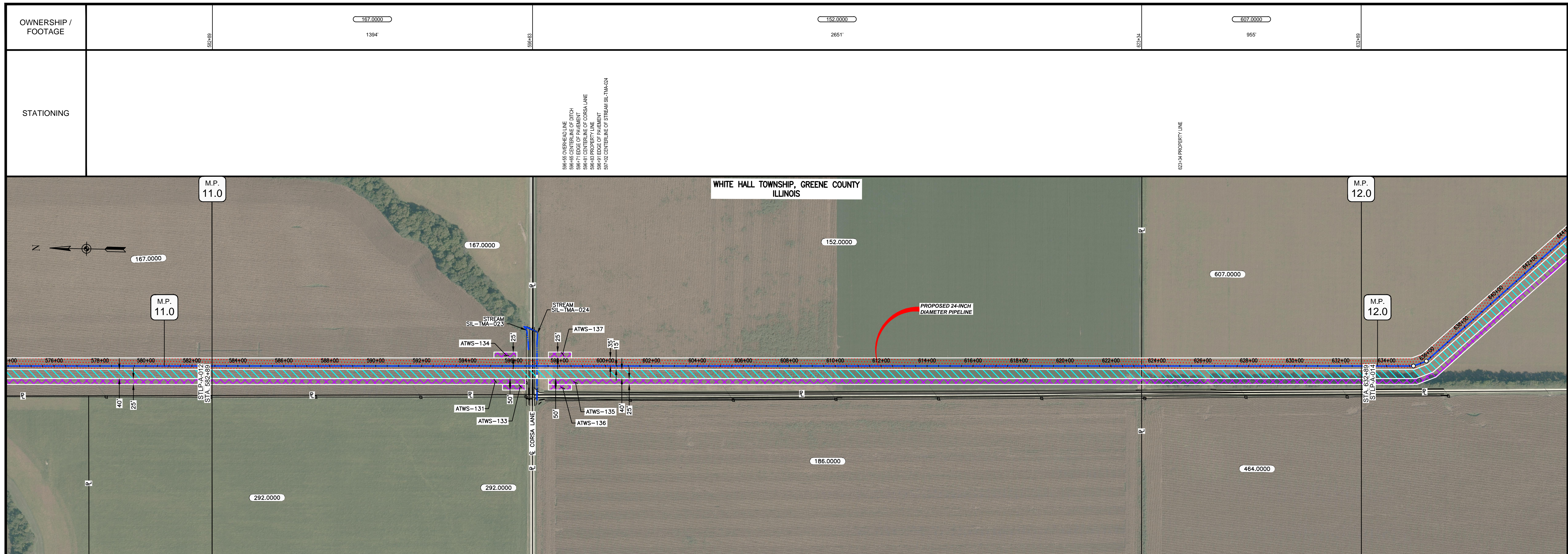
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



- NOTES:
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  - 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.
  - ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS			REVISIONS				APPROVALS			SCALE PLAN: 1"=200' SCALE PROFILE H: 1"=200' SCALE PROFILE V: 1"=200'	PREPARED FOR <b>Spire STL Pipeline</b>	SPIRE STL PIPELINE PROJECT ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 532+89 TO STA. 582+89
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE			
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				SB	1/2017			
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017			
											ENG. APPROVAL	DATE			
											DGG	1/2017			
											P.M. APPROVAL	DATE			
											JEV	1/2017			
													SCALE	DRAWING NO.	REVISION
													1"=200'	STLP-A-012	1





OWNERSHIP / FOOTAGE	1394'	2651'	955'										
STATIONING	576+00	600+00	634+00										
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG												
MATERIAL & COATING	<table border="1"> <tr> <td>51B</td> <td>51A</td> <td>51B</td> <td>86C2</td> <td>51B</td> <td>47A</td> <td>68A</td> <td>47A</td> <td>68A</td> <td>51A</td> </tr> </table>			51B	51A	51B	86C2	51B	47A	68A	47A	68A	51A
51B	51A	51B	86C2	51B	47A	68A	47A	68A	51A				
DESIGN FACTOR	0.72		0.6										
CONSTRUCTION METHOD	OPEN CUT		OPEN CUT (FLUMED)										
PIPELINE COVER	5'												
SOILS													
LAND USE													

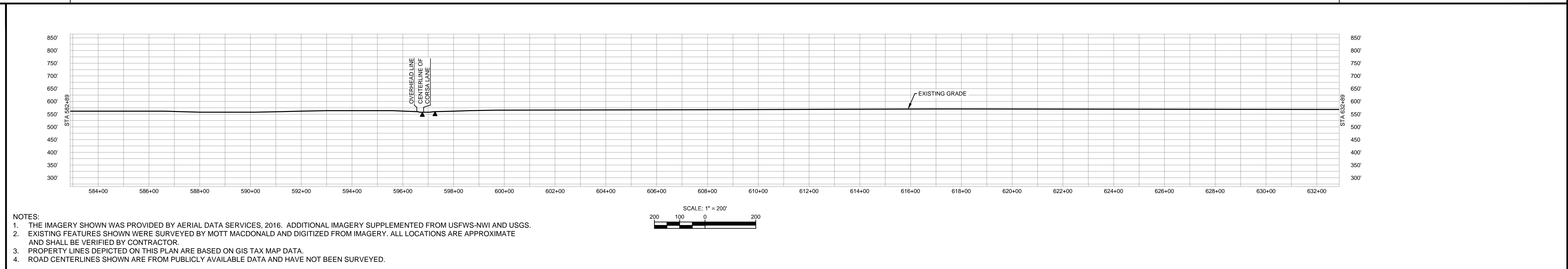
THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



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 4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL		REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1"=200'		PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 582+89 TO STA. 632+89		
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				SB	1/2017	SCALE PROFILE H: 1"=200'				
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1"=200'				
											ENG. APPROVAL	DATE	CLIENT APPROVAL				
											DGG	1/2017	DATE				
											P.M. APPROVAL	DATE					
											JEV	1/2017					



OWNERSHIP / FOOTAGE		607.0000	4123'	595.0000	877'
STATIONING		632+89		674+12	682+89



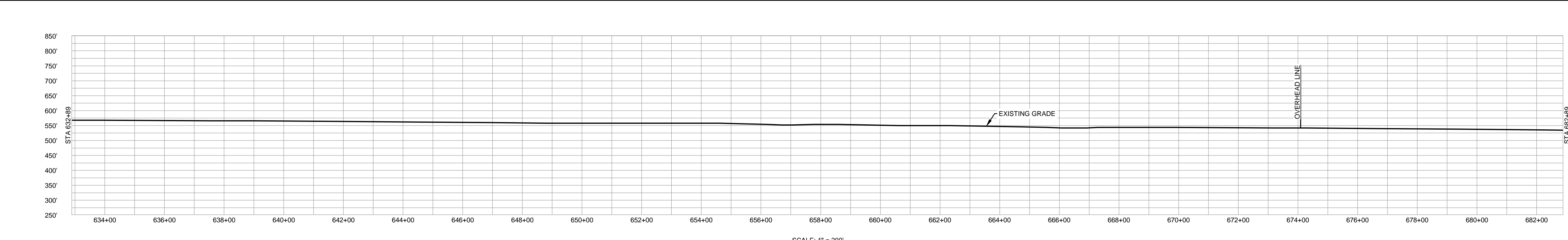
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG															
MATERIAL & COATING	5000'															
DESIGN FACTOR	0.72															
CONSTRUCTION METHOD	OPEN CUT															
PIPELINE COVER	5'															
SOILS	51A	68A	51B	675B	51B	675B	675C2	51B	675C2	280D	675C2	675B	47A	675B	47A	675B
LAND USE																

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



NOTES:

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MATERIAL		REFERENCE DRAWINGS		REVISIONS				APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT					
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN:	SCALE PROFILE H:	SCALE PROFILE V:	SCALE	DRAWING NO.	REVISION
1	5000	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				SB	1/2017	1"=200'	1"=200'	1"=200'	1"=200'	STLP-A-014	1

PREPARED BY: **M M**  
MOTT MACDONALD

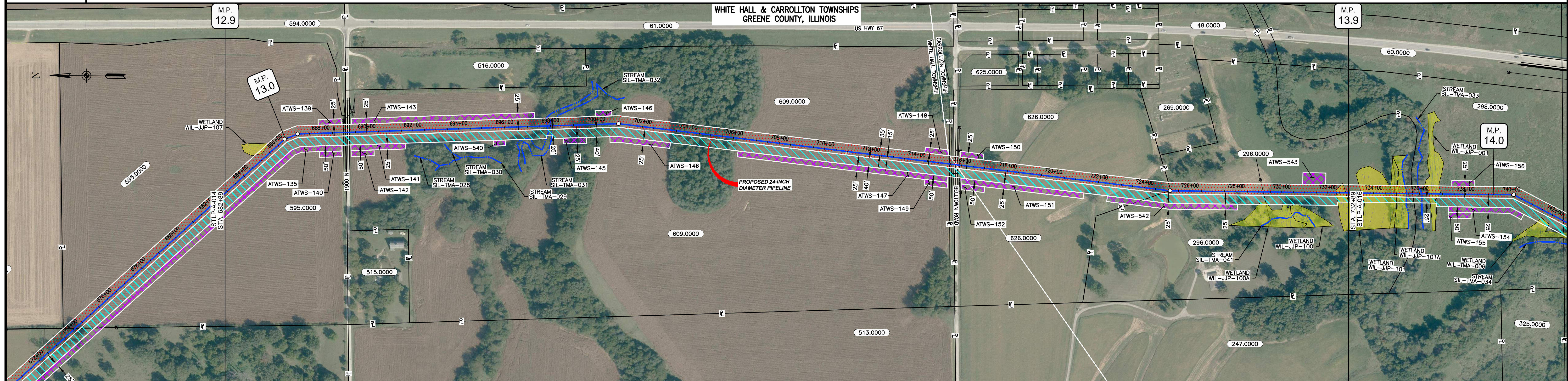
SCALE: 1"=200'

DRAWING NO.: STLP-A-014

REVISION: 1



OWNERSHIP / FOOTAGE	595.0000	609.0000	1850 N	628.0000	296.0000
	620'	2637'	21'	945'	777'
STATIONING	682+89	688+00	715+87	725+12	732+89



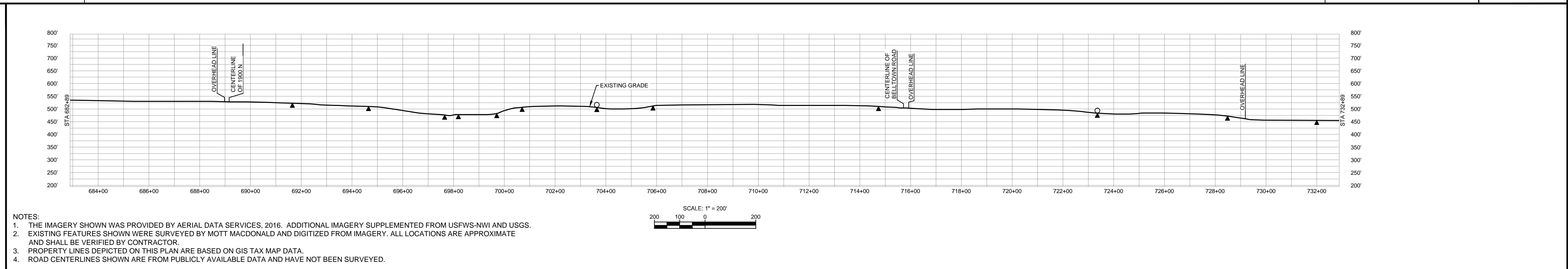
MATERIAL & COATING	581'	80'	2579'	80'	1680'
DESIGN FACTOR	0.72	0.6	0.72	0.6	0.72
CONSTRUCTION METHOD	OPEN CUT		OPEN CUT (FLUMED)	OPEN CUT	
PIPELINE COVER	5'		3'	5'	3'
SOILS	675B	280B	280D	3451A	8F2
LAND USE	280D2	280B	8F2	280B	280D2

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



NOTES:

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- PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.
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MATERIAL		REFERENCE DRAWINGS		REVISIONS				APPROVALS				
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE
1	4840	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				SB	1/2017
2	160	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017

APPROVALS		CLIENT APPROVAL	
DRAWN BY	DATE	DATE	DATE
SB	1/2017		
EB	1/2017		
DGG	1/2017		
JEV	1/2017		

SCALE PLAN: 1" = 200'  
SCALE PROFILE H: 1" = 200'  
SCALE PROFILE V: 1" = 200'

PREPARED FOR: **Spire STL Pipeline**

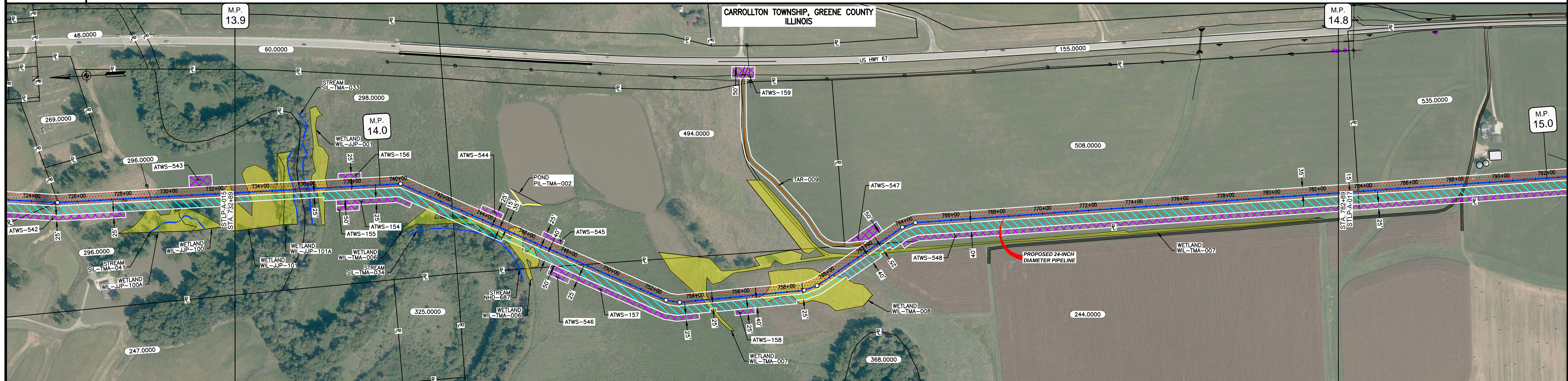
PREPARED BY: **M MOTT MACDONALD**

SPIRE STL PIPELINE PROJECT  
ALIGNMENT SHEET  
PROPOSED 24-INCH DIAMETER PIPELINE  
GREENE COUNTY, ILLINOIS  
STA. 682+89 TO STA. 732+89

SCALE	DRAWING NO.	REVISION
1"=200'	STLP-A-015	1



OWNERSHIP / FOOTAGE	280'	685'	630'	1374'	2031'
STATIONING	732+89	735+89	742+54	746+84	754+58



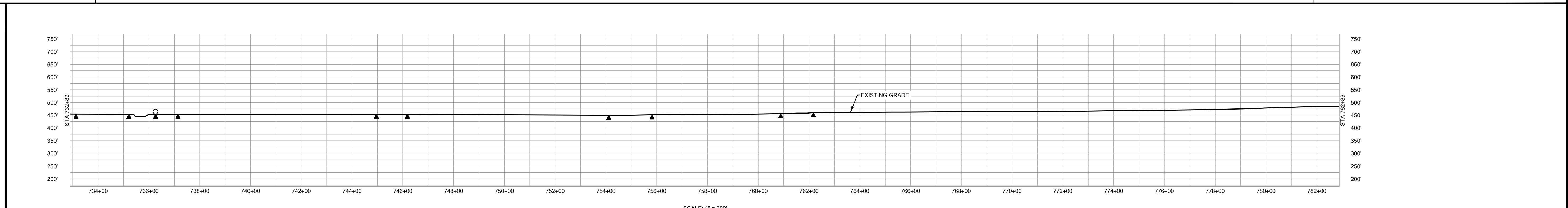
CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG					
MATERIAL & COATING	5000'					
DESIGN FACTOR	0.72					
CONSTRUCTION METHOD	OPEN CUT	OPEN CUT (FLUMED)	OPEN CUT			
PIPELINE COVER	7' 3' 7' 5'					
SOILS	3451A 675C2 47A 51B 675C2					
LAND USE						

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



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MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS				PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	5000	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				AK	1/2017			1"=200'	STLP-A-016	1

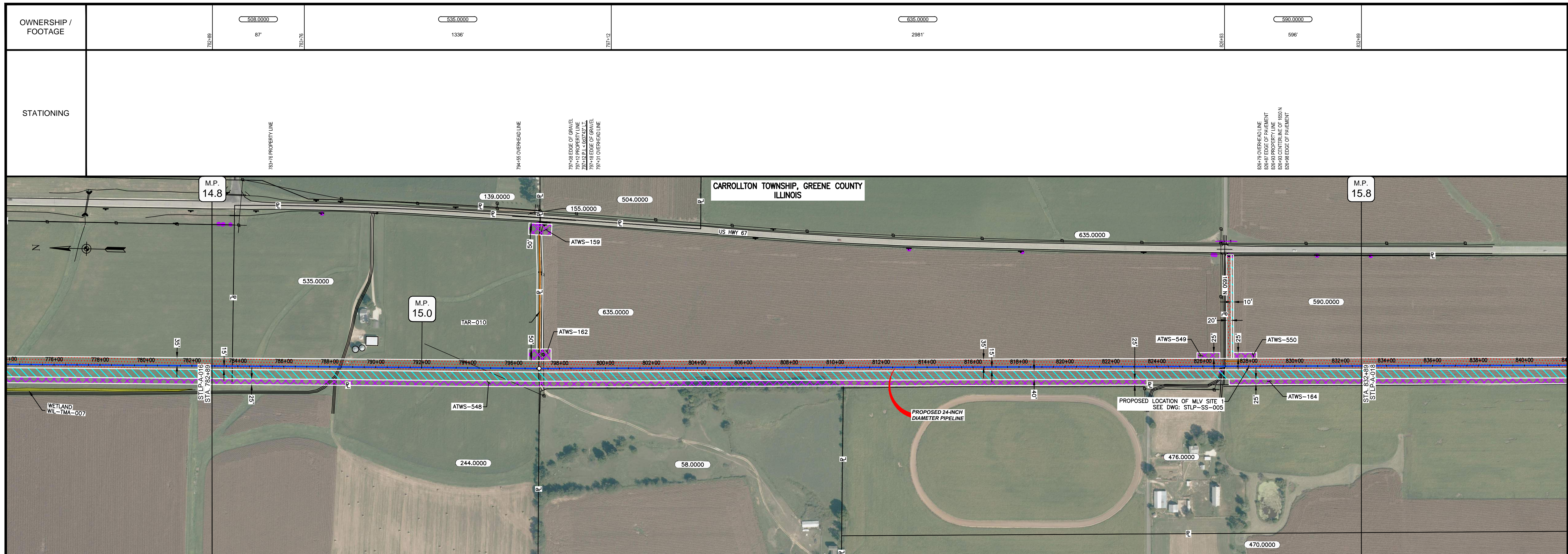
PREPARED BY: **M M MOTT MACDONALD**

SCALE: 1"=200'

DRAWING NO.: STLP-A-016

REVISION: 1





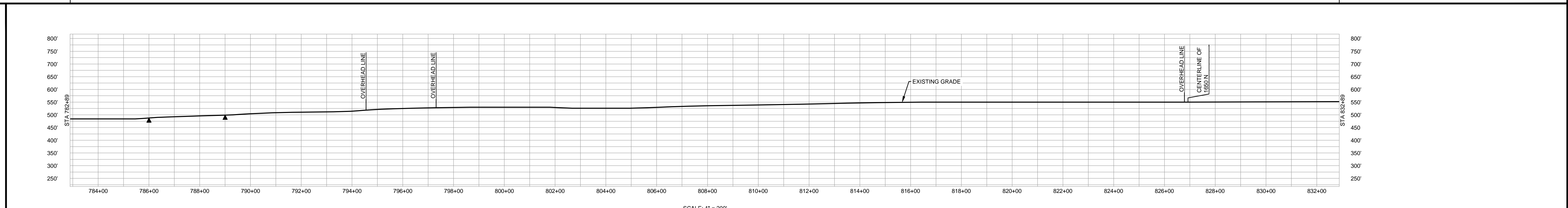
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG									
MATERIAL & COATING										
DESIGN FACTOR	0.72									
CONSTRUCTION METHOD	OPEN CUT									
PIPELINE COVER	5'	3'	5'	3'	5'	5'	5'	5'	5'	5'
SOILS	675C2	675B	675C2	675B	61A	257B	61A	257B	280C2	47A
LAND USE										

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



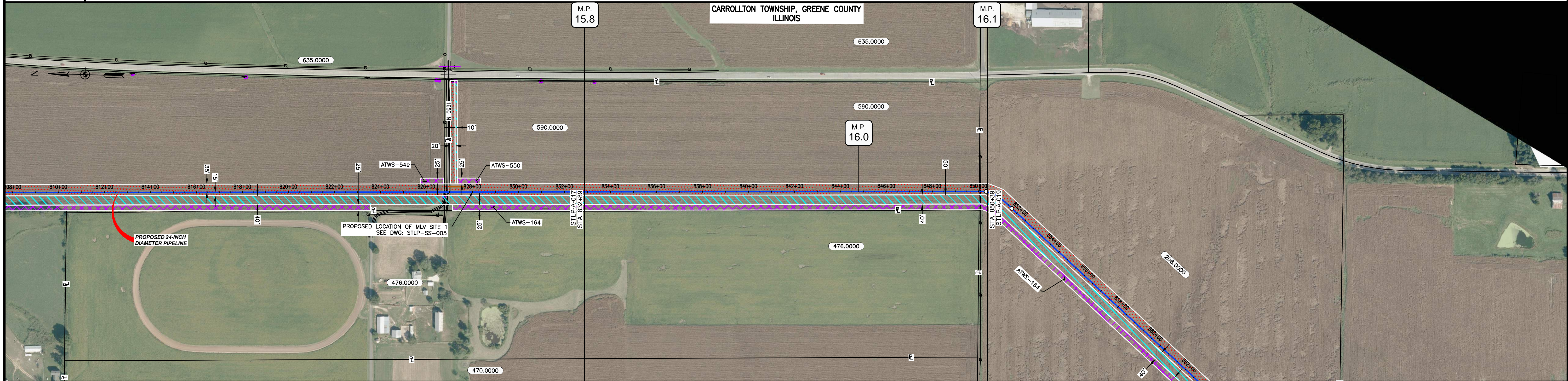
NOTES:

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MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS				PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1"=200'	SPIRE STL Pipeline	ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 782+89 TO STA. 832+89	SCALE	DRAWING NO.	REVISION
1	4860	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED	STLP-SS-005	24" PIPELINE MLV SITE 1	1	ISSUE FOR FERC	1/2017				AK	1/2017	SCALE PROFILE H: 1"=200'					
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1"=200'					
REF	60	SEE REFERENCED DETAIL DRAWING									ENG. APPROVAL	DATE	CLIENT APPROVAL					
											DGG	1/2017	DATE					
											P.M. APPROVAL	DATE						
											JEW	1/2017						



OWNERSHIP / FOOTAGE		590.0000	1715'	206.0000	35'
STATIONING					



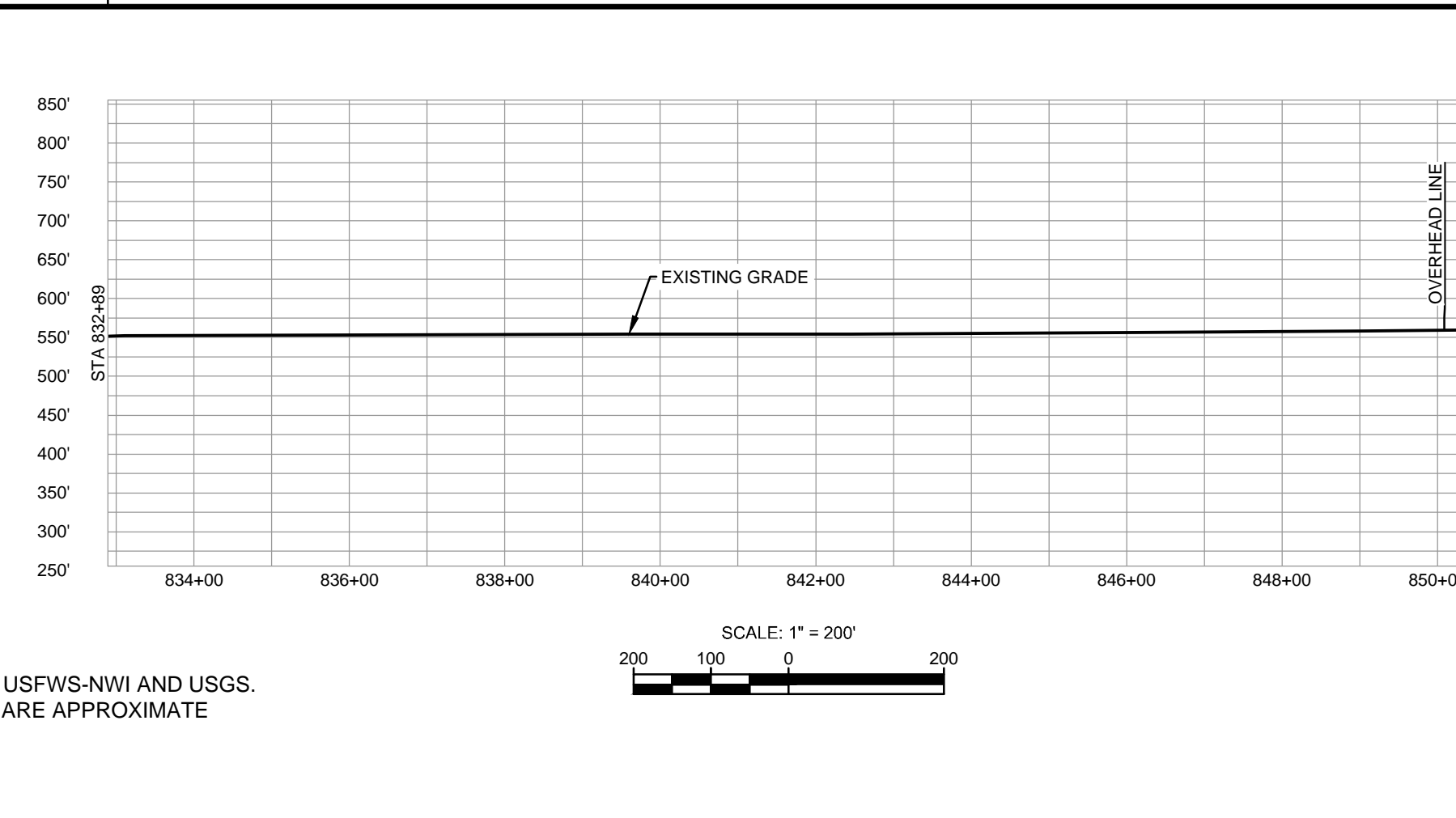
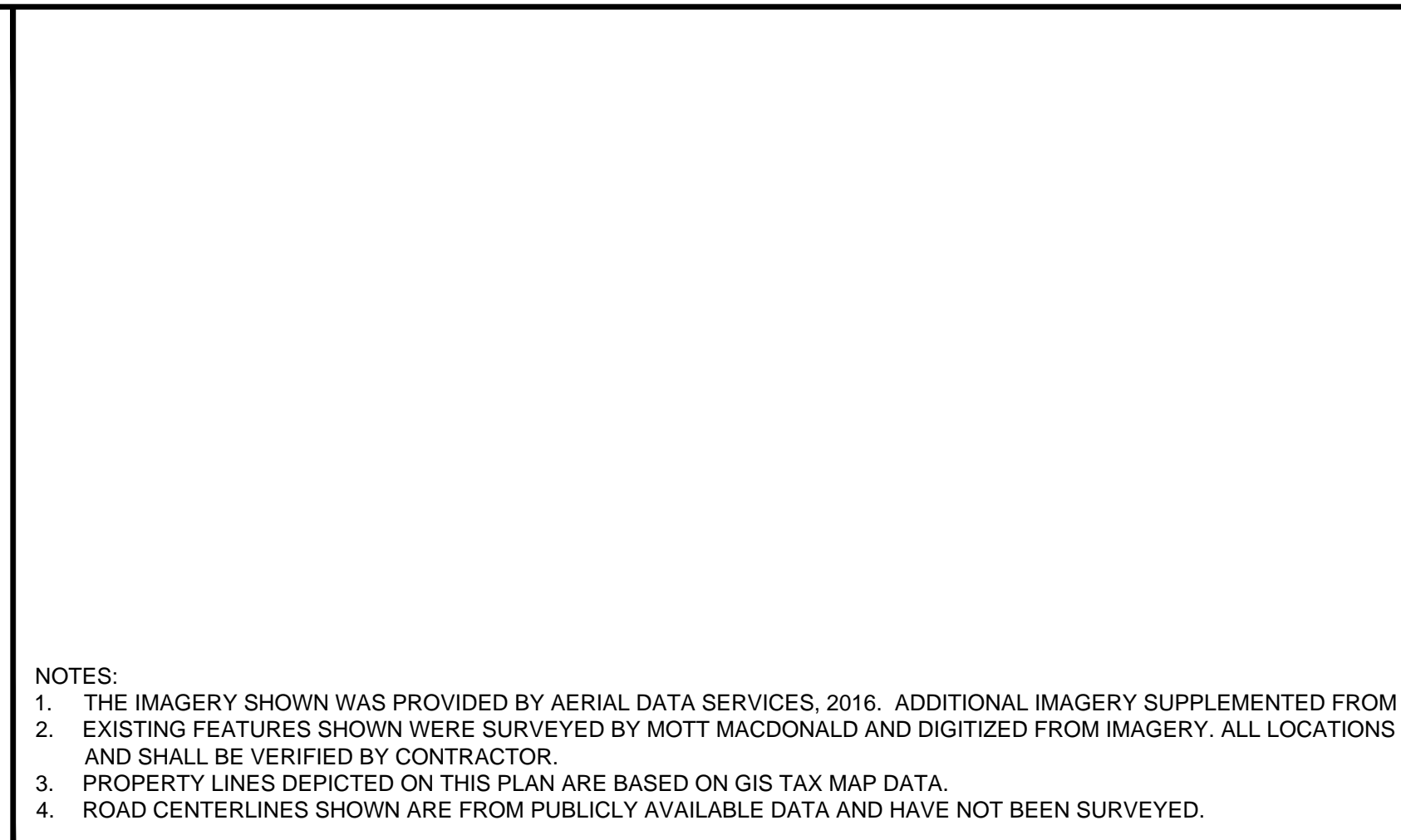
CLASS LOCATION/MAOP CLASS 1 / 1480 PSIG

MATERIAL & COATING	
DESIGN FACTOR	0.72
CONSTRUCTION METHOD	OPEN CUT
PIPELINE COVER	5'
SOILS	47A   257B   47A   51A
LAND USE	

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

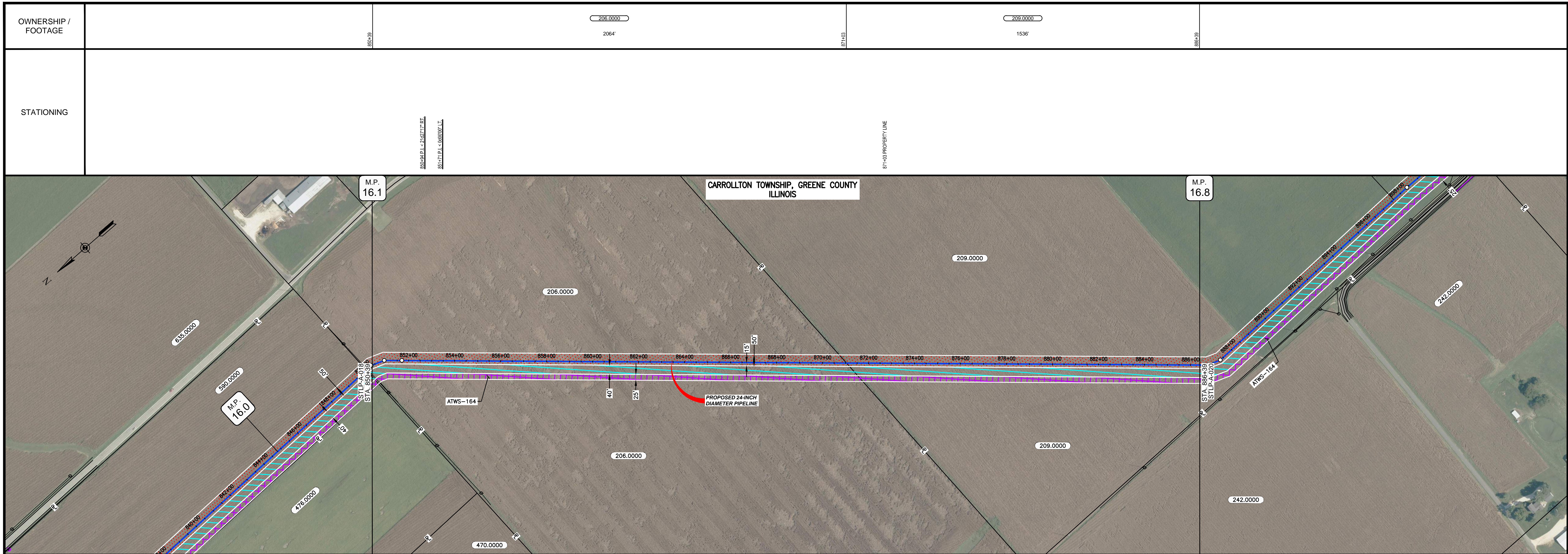
ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



- NOTES:
1. THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2016. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-NWI 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. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL		REFERENCE DRAWINGS		REVISIONS				APPROVALS			SCALE PLAN		PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1"=200'	PREPARED BY	ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 832+89 TO STA. 850+39		
1	1750	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				AK	1/2017	SCALE PROFILE H: 1"=200'				
												SCALE PROFILE V: 1"=200'		DRAWING NO.	REVISION		
											EB	1/2017			STLP-A-018	1	
											DGG	1/2017					
											JEW	1/2017					





CLASS LOCATION/MAOP CLASS I / 1480 PSIG

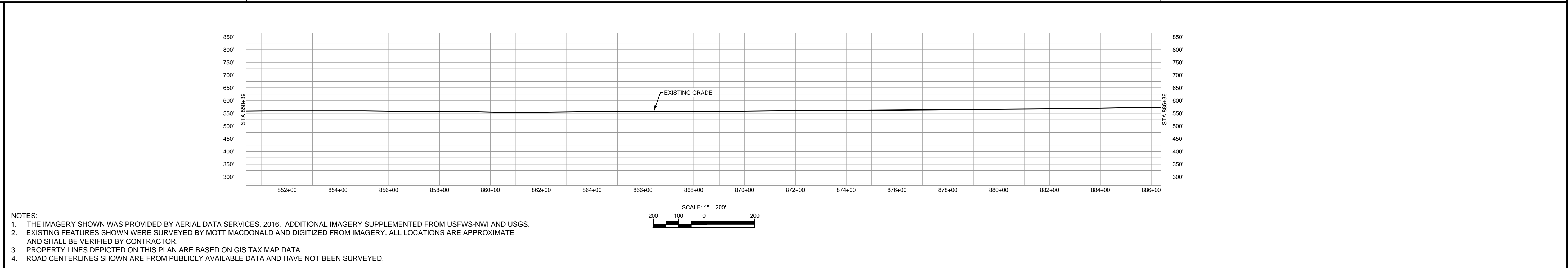
MATERIAL & COATING	
DESIGN FACTOR	0.72
CONSTRUCTION METHOD	OPEN CUT
PIPELINE COVER	5'
SOILS	51A, 51B, 51A, 47A, 61A, 47A, 257B, 47A, 257B, 47A, 257B
LAND USE	

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

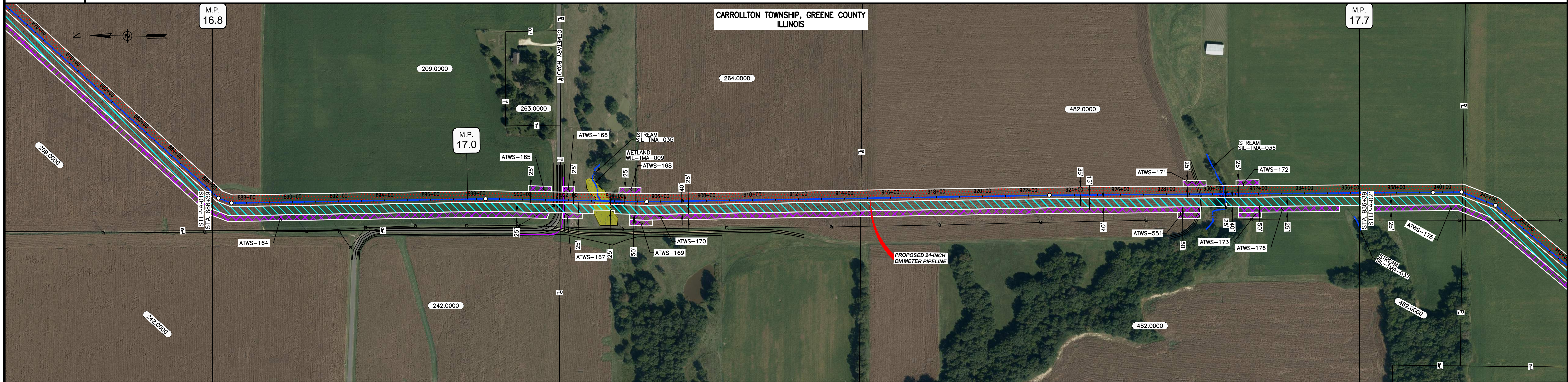
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1"=200'	MOTT MACDONALD	ALIGNMENT SHEET		
1	3600	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				AK	1/2017	SCALE PROFILE H: 1"=200'		MOTT MACDONALD	PROPOSED 24-INCH DIAMETER PIPELINE	
											EB	1/2017	SCALE PROFILE V: 1"=200'	GREENE COUNTY, ILLINOIS			
											ENG. APPROVAL	DATE	CLIENT APPROVAL		STA. 850+39 TO STA. 886+39		
											DGG	1/2017	DATE		SCALE	DRAWING NO.	REVISION
											P.M. APPROVAL	DATE		1"=200'	STLP-A-019	1	
											JEV	1/2017					



OWNERSHIP / FOOTAGE	886+39	209.0000	1525'	814+44	264.0000	1307'	914+71	482.0000	2168'	936+39
STATIONING	886+39	886+39	887+39	888+39	889+39	890+39	891+39	892+39	893+39	894+39



CLASS LOCATION/MAOP CLASS I / 1480 PSIG

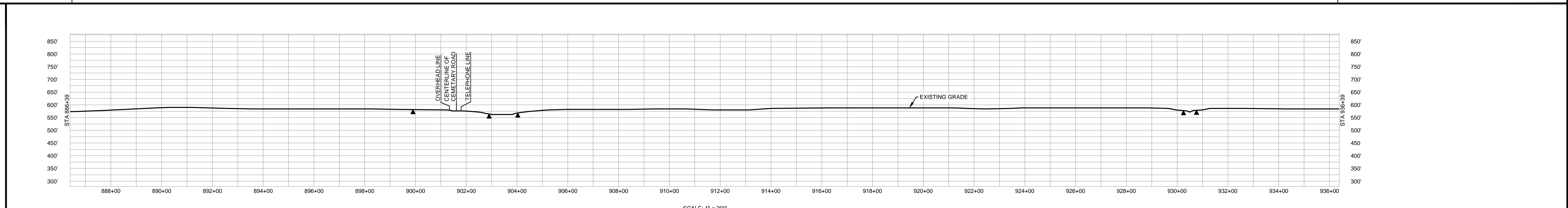
MATERIAL & COATING	886+39	936+39																											
DESIGN FACTOR	0.72	0.6	0.72																										
CONSTRUCTION METHOD		OPEN CUT	OPEN CUT (FLUMED)	OPEN CUT																									
PIPELINE COVER		5'																											
SOILS	257B	280C2	280B	675C2	280C2	257B	675C2	280C2	280D2	8F2	280D2	280C2	280B	280C2	280B	280D2	17A	280C2	280D2	280C2	280B	280D2	280B	280D2	280B	280D2	17A	51A	280C2
LAND USE																													

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



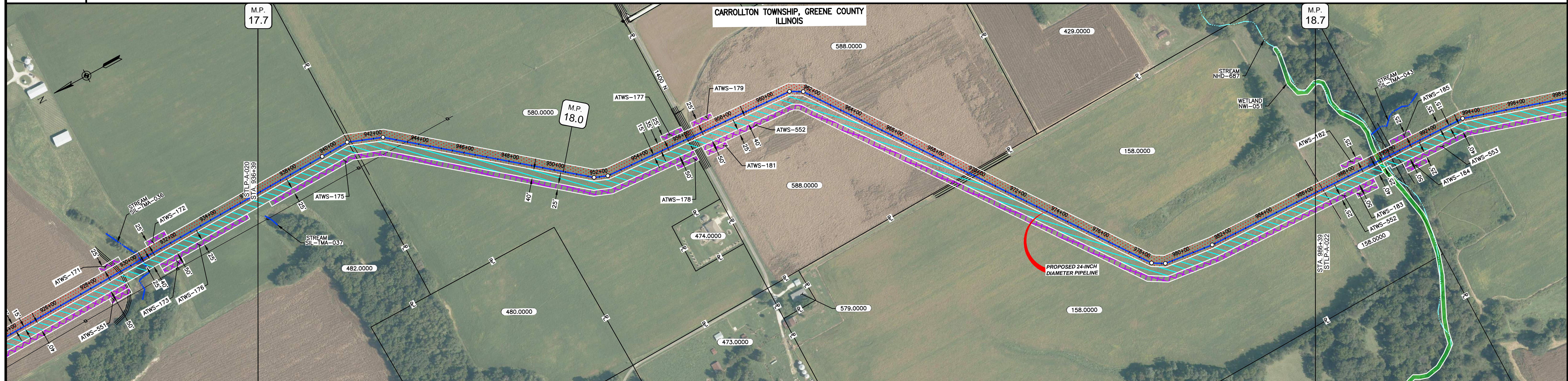
NOTES:

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- ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				AK	1/2017			1"=200'	STLP-A-020	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017					
											DGG	1/2017					
											JEV	1/2017					



OWNERSHIP / FOOTAGE	482.0000 449'	580.0000 1531'	588.0000 1353'	158.0000 1667'	
STATIONING	936+39 940+00 944+00 948+00 952+00 956+00 960+00 964+00 968+00 972+00 976+00 980+00 984+00 986+39	936+39 940+00 944+00 948+00 952+00 956+00 960+00 964+00 968+00 972+00 976+00 980+00 984+00 986+39	936+39 940+00 944+00 948+00 952+00 956+00 960+00 964+00 968+00 972+00 976+00 980+00 984+00 986+39	936+39 940+00 944+00 948+00 952+00 956+00 960+00 964+00 968+00 972+00 976+00 980+00 984+00 986+39	936+39 940+00 944+00 948+00 952+00 956+00 960+00 964+00 968+00 972+00 976+00 980+00 984+00 986+39



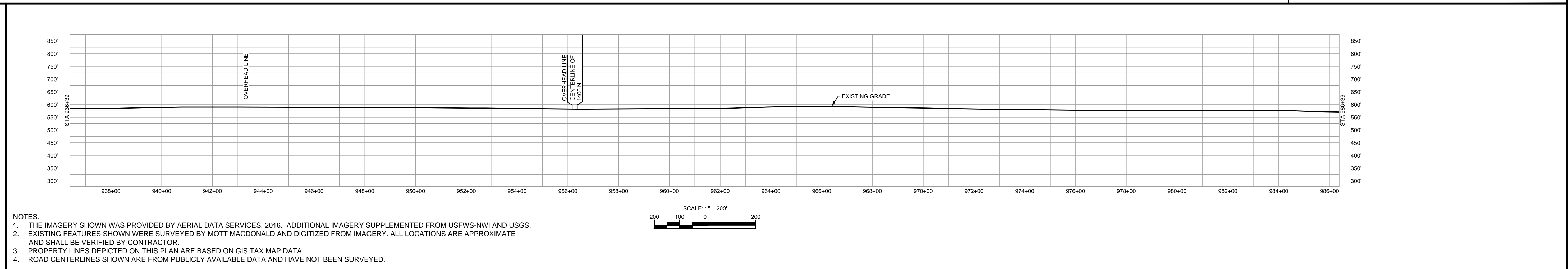
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG										
MATERIAL & COATING	OPEN CUT										
DESIGN FACTOR	0.72		0.6				0.72				
CONSTRUCTION METHOD	OPEN CUT										
PIPELINE COVER	5'										
SOILS	280C2	257B	61A	47A	257B	280B	280C2	280B	280C2	280B	280C2
LAND USE											

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100

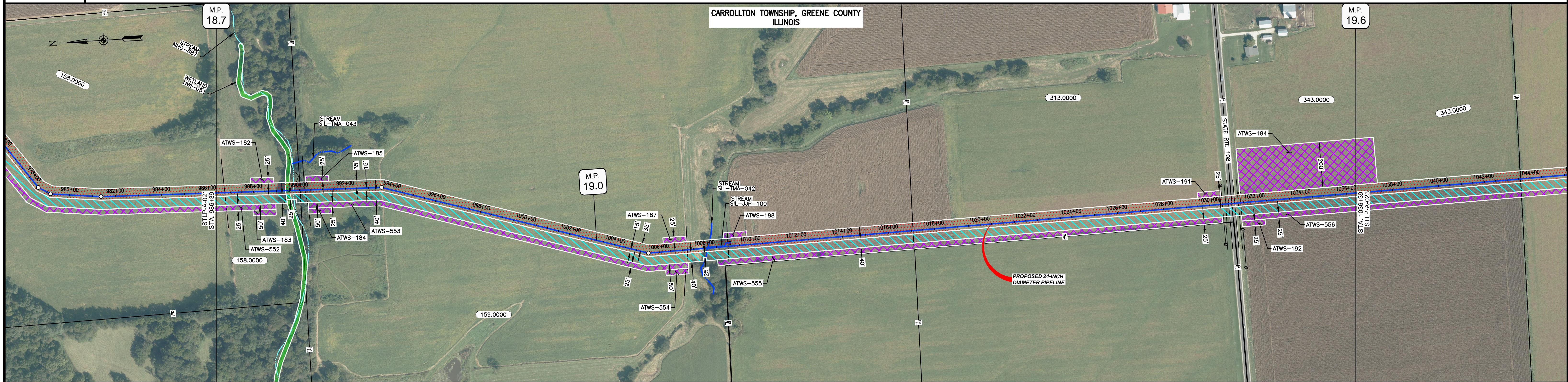


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MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				SG	1/2017			1" = 200'	STLP-A-021	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017					
											DGG	1/2017					
											JEW	1/2017					



OWNERSHIP / FOOTAGE	364'	2705'	1391'	540'
STATIONING	896+39 896+75 FENCE 896+45 CENTER W/AD NW/651 896+54 CENTERLINE OF DITCH 896+60 EXT W/AD NW/651 896+75 CENTERLINE OF STREAM W/AD87 896+80 PROPERTY LINE 896+85 FENCE 924+39 P.L. 154+132.21 1002+53 P.L. 184+001.11 1007+42 FENCE 1008+11 CENTERLINE OF STREAM SIL-TMA-42 1008+00 FENCE 1017+48 PROPERTY LINE 1030+47 OVERHEAD LINE 1030+72 CENTERLINE OF DITCH 1030+98 CENTERLINE OF STATE RTE 108 1030+99 PROPERTY LINE 1031+11 EDGE OF PAVEMENT 1031+27 CENTERLINE OF DITCH 1031+57 OVERHEAD LINE			



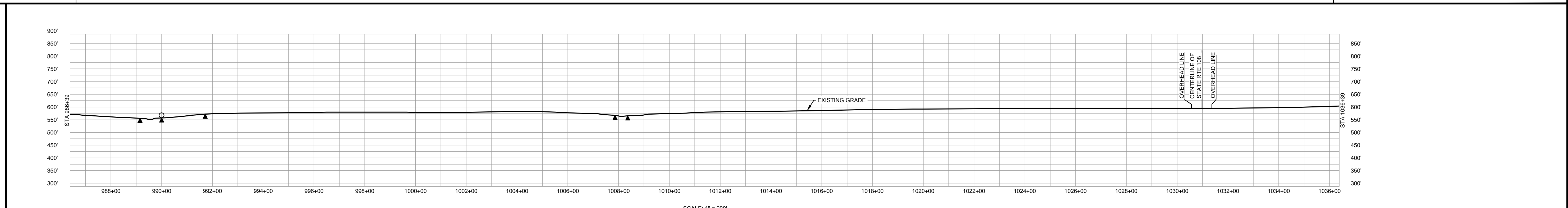
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG																
MATERIAL & COATING																	
DESIGN FACTOR	0.72																
CONSTRUCTION METHOD	OPEN CUT	OPEN CUT (FLUMED)	OPEN CUT				OPEN CUT (FLUMED)	OPEN CUT									
PIPELINE COVER	5'		3'		5'			3'									
SOILS	280C2	280D	3451A	280D	675B	61A	675B	280C2	675B	675C2	280D	675C2	675B	280D	61A	51A	51B
LAND USE																	

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOAK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100

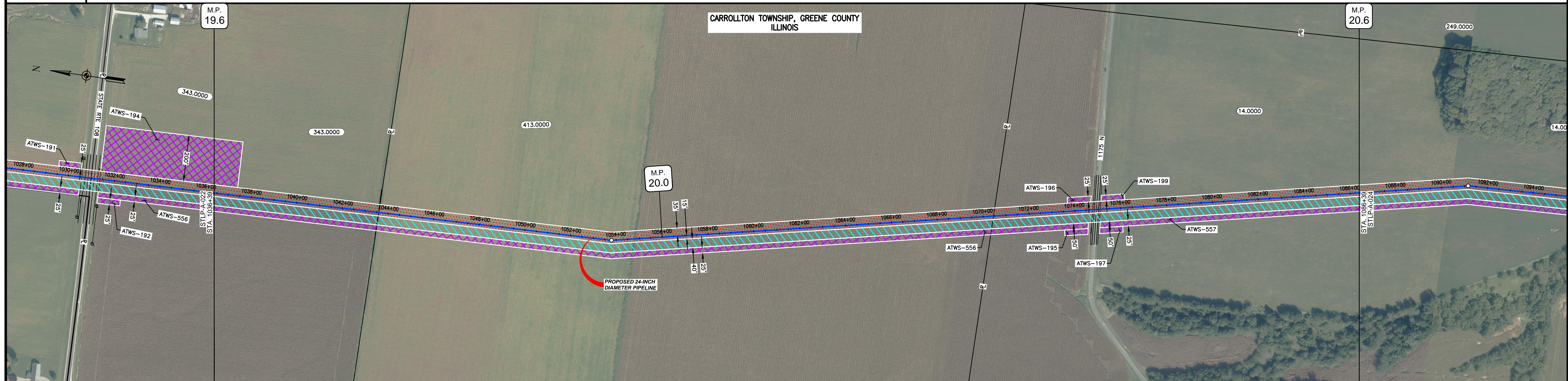


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  2. EXISTING FEATURES SHOWN WERE SURVEYED BY MOTT MACDONALD AND DIGITIZED FROM IMAGERY. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.
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  4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT				
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN:	SCALE PROFILE H:	SCALE PROFILE V:	SCALE	DRAWING NO.	REVISION	
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				SG	1/2017	1" = 200'	1" = 200'	1" = 200'	1" = 200'	STLP-A-022	1	
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017							
											ENG. APPROVAL	DATE							
											DGG	1/2017							
											P.M. APPROVAL	DATE							
											JEV	1/2017							



OWNERSHIP / FOOTAGE	343.0000 720'	413.0000 2686'	14.0000 1594'
STATIONING	1038+39	1041+99 1041+99 PROPERTY LINE	1070+45 1070+45 PROPERTY LINE



CLASS LOCATION/MAOP CLASS I / 1480 PSIG

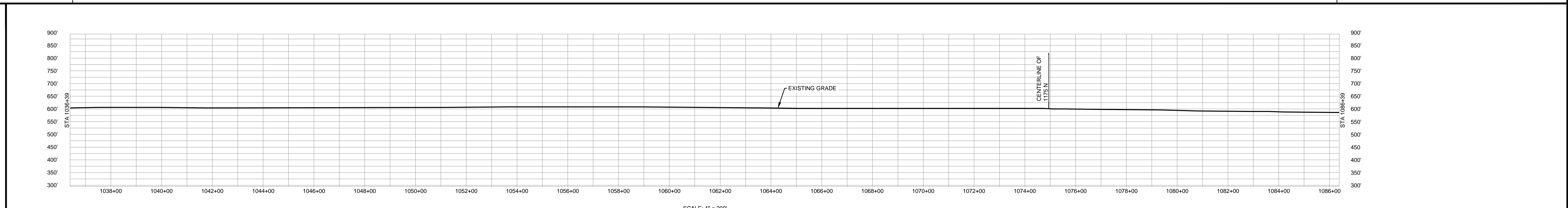
MATERIAL & COATING	1038+39	1074+50	1076+30	1086+39
DESIGN FACTOR	0.72		0.6	0.72
CONSTRUCTION METHOD	OPEN CUT			
PIPELINE COVER	5'			
SOILS	51B	68A	51A	51B, 675B, 51B, 675B, 279C2
LAND USE				

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100

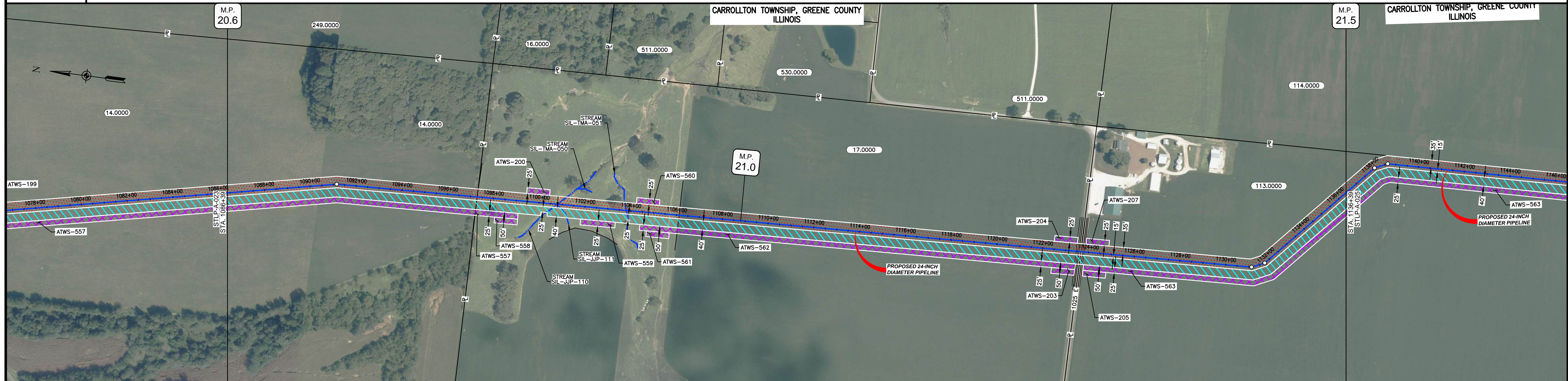


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  2. EXISTING FEATURES SHOWN WERE SURVEYED BY MOTT MACDONALD AND DIGITIZED FROM IMAGERY. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.
  3. PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.
  4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL		REFERENCE DRAWINGS		REVISIONS				APPROVALS			SCALE PLAN		PREPARED FOR		SPIRE STL PIPELINE PROJECT				
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN	SCALE PROFILE H	SCALE PROFILE V	PREPARED BY	SCALE	DRAWING NO.	REVISION
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				SG	1/2017	1" = 200'	1" = 200'	1" = 200'	MOTT MACDONALD	1" = 200'	STLP-A-023	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017							



OWNERSHIP / FOOTAGE	14.0000 1090'	17.0000 2638'	113.0000 1272'
STATIONING	1086+39 1092+29 1098+19 1104+09 1110+19 1116+29 1122+39 1128+49 1134+59	1094+00 1098+00 1102+00 1106+00 1110+00 1114+00 1118+00 1122+00 1126+00 1130+00 1134+00	1086+39 1092+29 1098+19 1104+09 1110+19 1116+29 1122+39 1128+49 1134+59



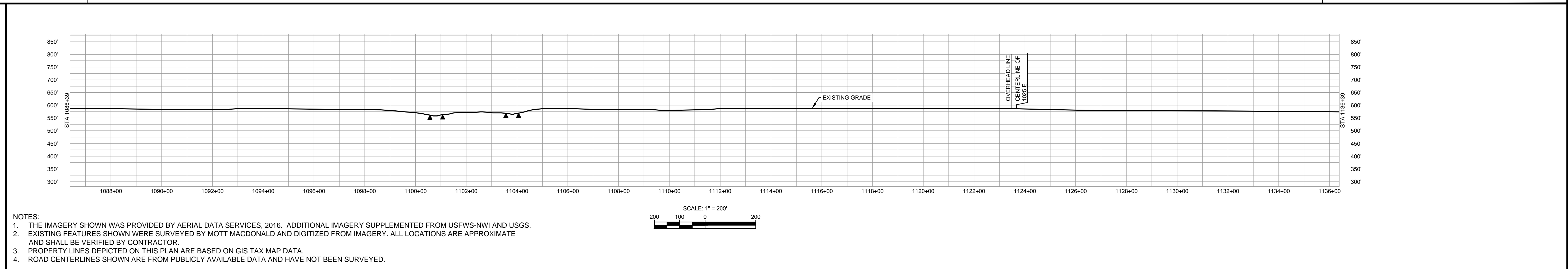
CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG													
MATERIAL & COATING														
DESIGN FACTOR	0.72													
CONSTRUCTION METHOD	OPEN CUT													
PIPELINE COVER	5'													
SOILS	279C2	279D2	8D2	279D2	279B	61A	279B	279C2	675B	47A	675B	68A	61A	257B
LAND USE														

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

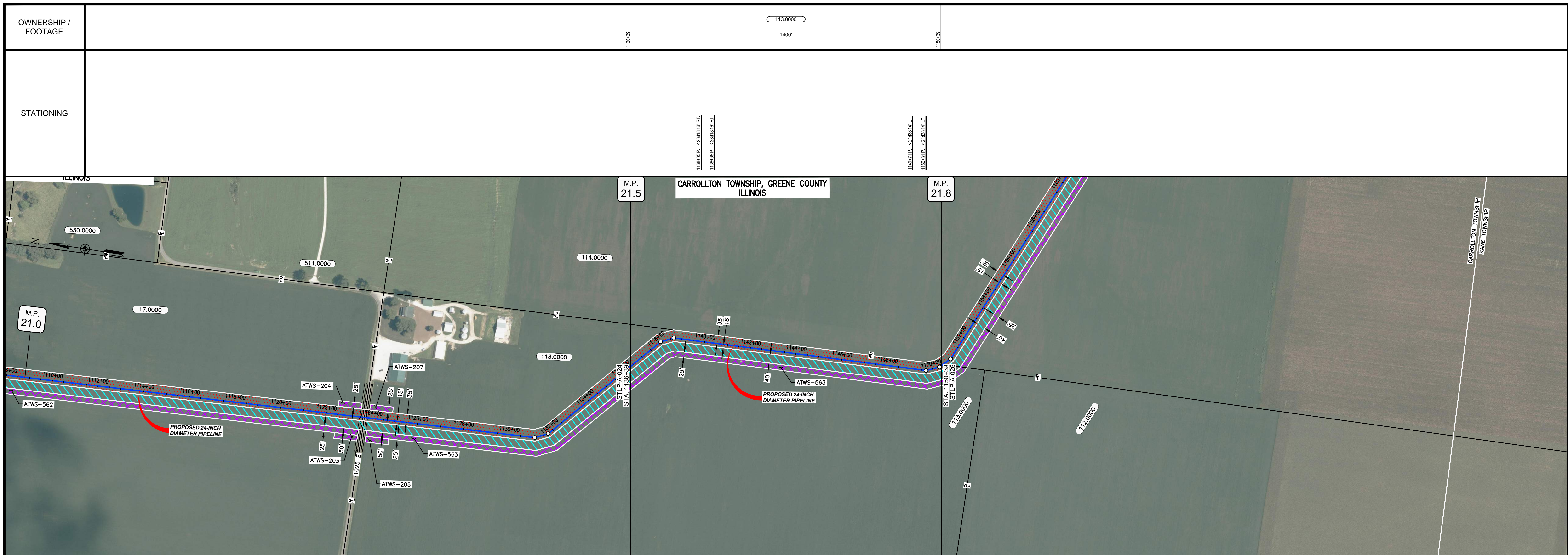
ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS				SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				SG	1/2017			1" = 200'	STLP-A-024	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017					
											DGG	1/2017					
											JEW	1/2017					



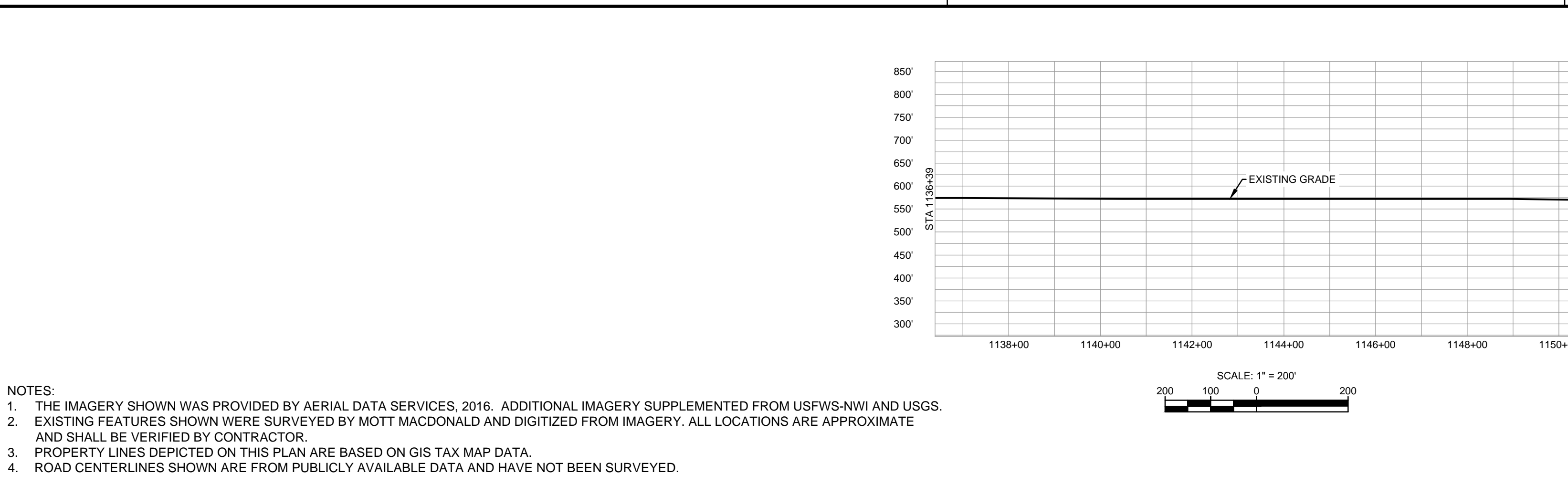


CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG
MATERIAL & COATING	
DESIGN FACTOR	0.72
CONSTRUCTION METHOD	OPEN CUT
PIPELINE COVER	5'
SOILS	25B, 47A, 25B, 68A, 47A, 68A
LAND USE	

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PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



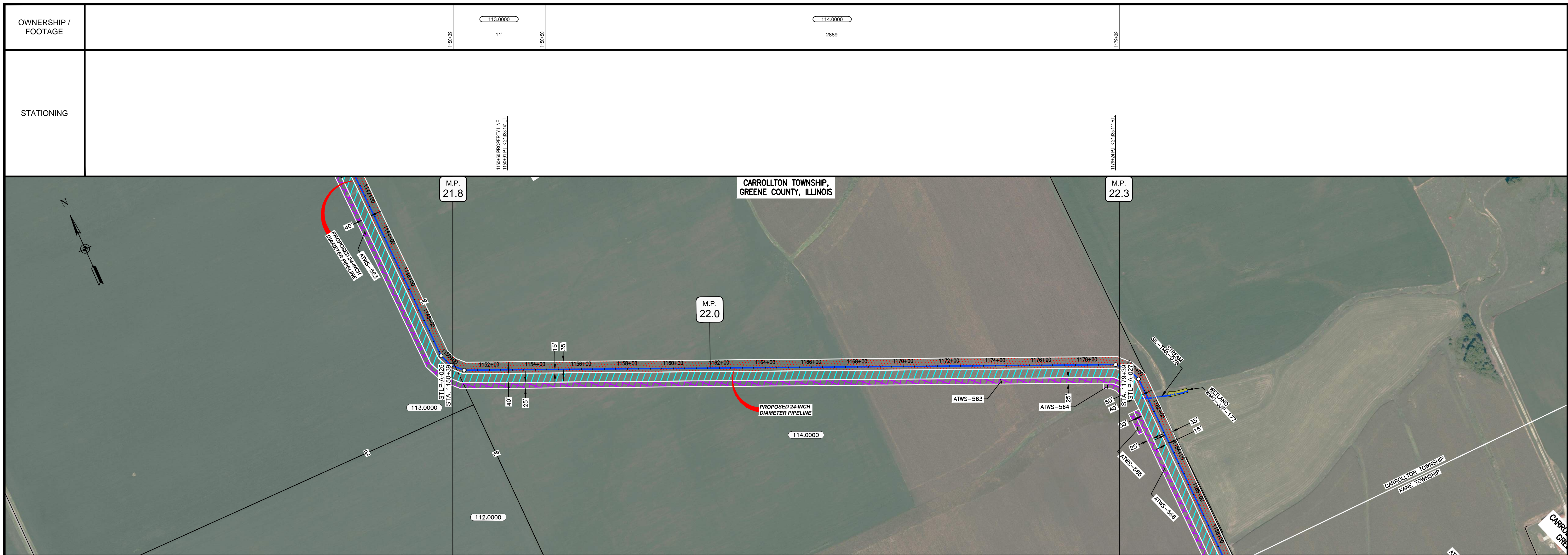
NOTES:  
 1. THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2016. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-NWI AND USGS.  
 2. EXISTING FEATURES SHOWN WERE SURVEYED BY MOTT MACDONALD AND DIGITIZED FROM IMAGERY. ALL LOCATIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR.  
 3. PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.  
 4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS				PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	1400	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				SG	1/2017			1" = 200'	STLP-A-025	1

PREPARED BY: **M M**  
**MOTT MACDONALD**

SCALE: 1" = 200'  
 DRAWING NO.: STLP-A-025  
 REVISION: 1





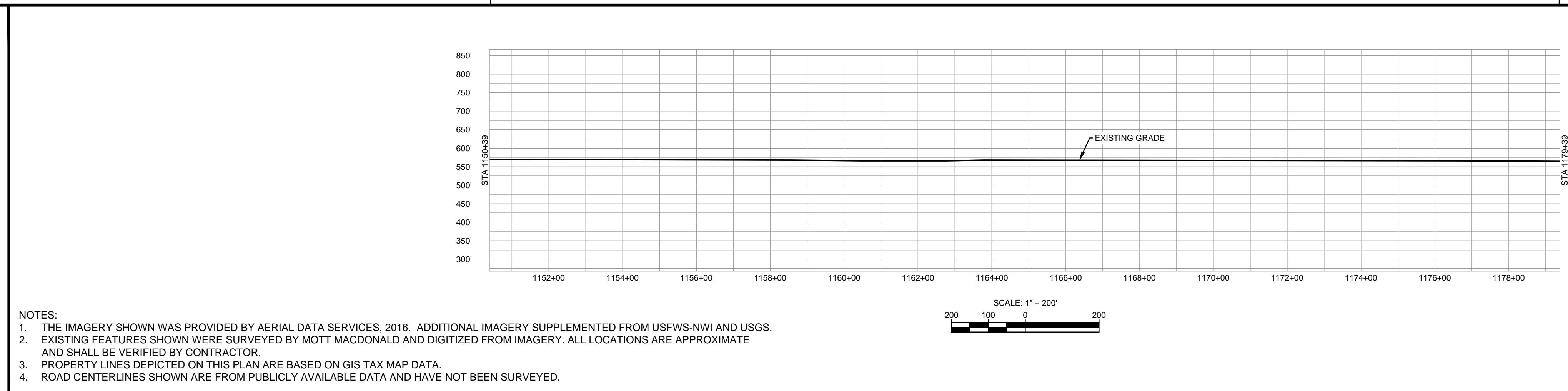
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG						
MATERIAL & COATING	2900'						
DESIGN FACTOR	0.72						
CONSTRUCTION METHOD	OPEN CUT						
PIPELINE COVER	5'						
SOILS	68A	51A	51B	47A	61A	675C2	
LAND USE							

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5-15%	300	300
15 - 30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



NOTES:  
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 3. PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.  
 4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL		REFERENCE DRAWINGS		REVISIONS				APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT						
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	SCALE PROFILE H: 1" = 200'	SCALE PROFILE V: 1" = 200'	PREPARED BY	SCALE	DRAWING NO.	REVISION
1	2900	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				AK	1/2017				MOTT MACDONALD	1" = 200'	STLP-A-026	1



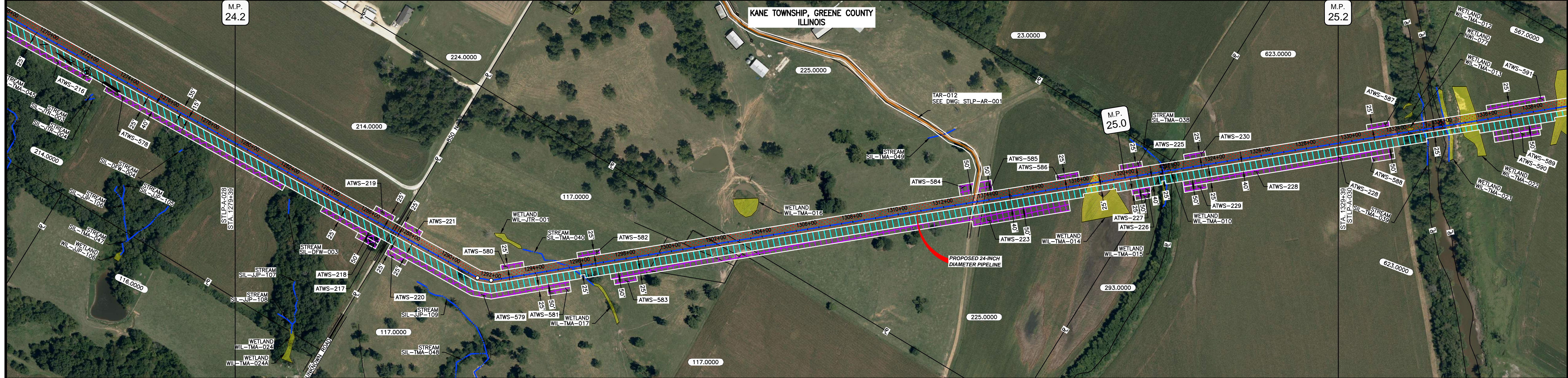








OWNERSHIP / FOOTAGE		214.0000	117.0000	225.0000	293.0000	623.0000
		791'	1557'	1883'	27'	742'
STATIONING		1279+39	1297+39	1309+87	1321+70	1329+39
		1281+17 CENTERLINE OF DITCH	1281+18 CENTERLINE OF UNKNOWN ROAD	1281+30 PROPERTY LINE	1281+42 FENCE	1281+45 E.L. 128882 CAL T.
		1281+45 E.L. 128882 CAL T.	1281+45 E.L. 128882 CAL T.	1295+57 CENTERLINE OF STREAM SIL-TMA-00	1298+44 FENCE	1300+02 FENCE
		1300+00 FENCE	1302+87 PROPERTY LINE	1311+28 EDGE OF GRAVEL	1311+46 EDGE OF GRAVEL	1311+70 FENCE
		1318+40 ENTER W/AD W/L-TMA-014	1318+46 EXIT W/AD W/L-TMA-014	1321+70 CENTERLINE OF STREAM SIL-TMA-038	1321+70 PROPERTY LINE	1321+70 PROPERTY LINE
		1321+70 ENTER W/AD W/L-TMA-010	1321+70 EXIT W/AD W/L-TMA-010	1321+70 ENTER W/AD W/L-TMA-010	1321+70 EXIT W/AD W/L-TMA-010	1321+70 ENTER W/AD W/L-TMA-010



CLASS LOCATION/MAOP CLASS I / 1480 PSIG

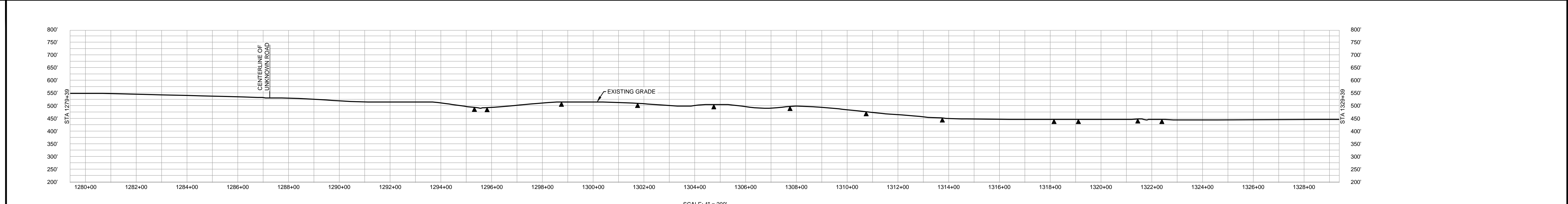
MATERIAL & COATING		1279+39	1288+73	1287+59	1329+39
DESIGN FACTOR		0.72	0.6	0.72	
CONSTRUCTION METHOD		OPEN CUT		OPEN CUT (FLUMED)	OPEN CUT
PIPELINE COVER		5'		3'	5'
SOILS		280B	280C2	280B	8D
LAND USE		280B	280B	8D2	3331A
				3451A	5'

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EACH LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOAK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

SLOPE	ILLINOIS	
	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

SLOPE	MISSOURI	
	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100

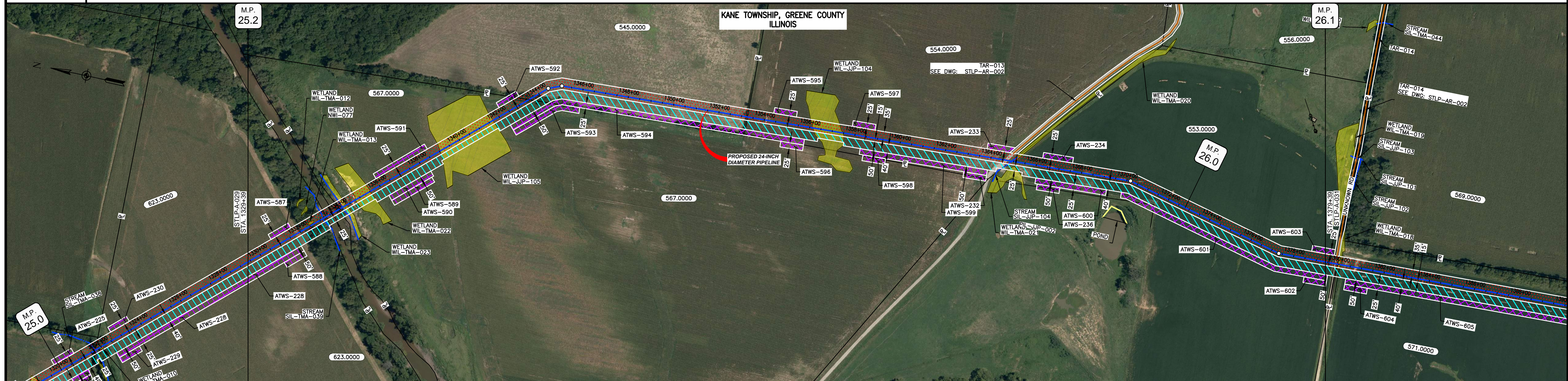


NOTES:  
1. THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2016. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-NWI AND USGS.  
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3. PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.  
4. ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT	
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	PREPARED BY <b>M M</b> MOTT MACDONALD	ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER MAINLINE GREENE COUNTY, ILLINOIS STA. 1279+39 TO STA. 1329+39
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED	STLP-AR-001	ACCESS ROAD SITE PLAN - TAR-012	1	ISSUE FOR PERC	1/2017				AK	1/2017	SCALE PROFILE H: 1" = 200'		
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1" = 200'		
											ENG. APPROVAL	DATE	CLIENT APPROVAL		
											DGG	1/2017	DATE		
											P.M. APPROVAL	DATE	DATE		
											JEV	1/2017			
													SCALE	DRAWING NO.	REVISION
													1" = 200'	STLP-A-029	1



OWNERSHIP / FOOTAGE	623.0000	65	567.0000	976	545.0000	1165	554.0000	1448
STATIONING	1329+39	1330+31	1330+96	1340+50	1350+26	1364+31	1370+39	



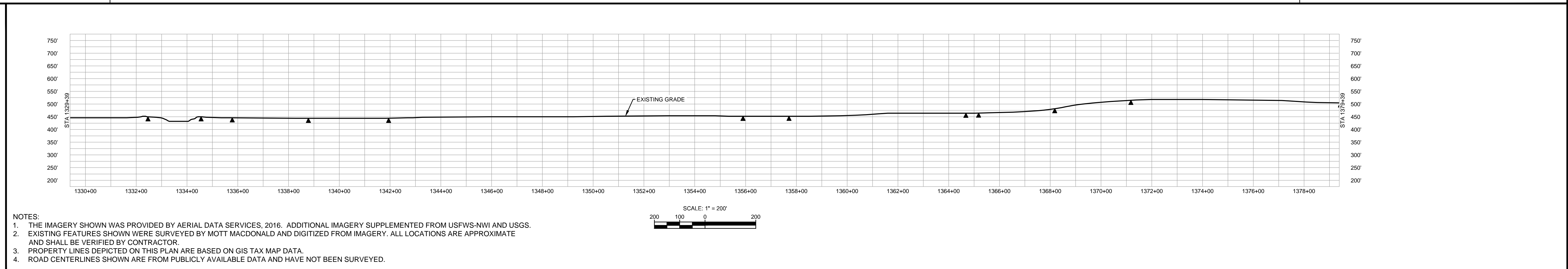
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG														
MATERIAL & COATING	5000'														
DESIGN FACTOR	0.72														
CONSTRUCTION METHOD	OPEN CUT	OPEN CUT (FLUMED)	OPEN CUT										OPEN CUT (FLUMED)	OPEN CUT	
PIPELINE COVER	5'		7'	3'	5'	3'		5'							
SOILS	3451A	3070A	W	3070A	7148A	7102B	7148A	7102B	3451A	7148A	3451A	8D2	280D2	675B	675C2
LAND USE															

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	SCALE PROFILE H: 1" = 200'	SCALE PROFILE V: 1" = 200'
1	5000	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED	STLP-AR-002	ACCESS ROAD SITE PLAN - TAR-013 & TAR-014	1	ISSUE FOR PERC	1/2017				AK	1/2017			

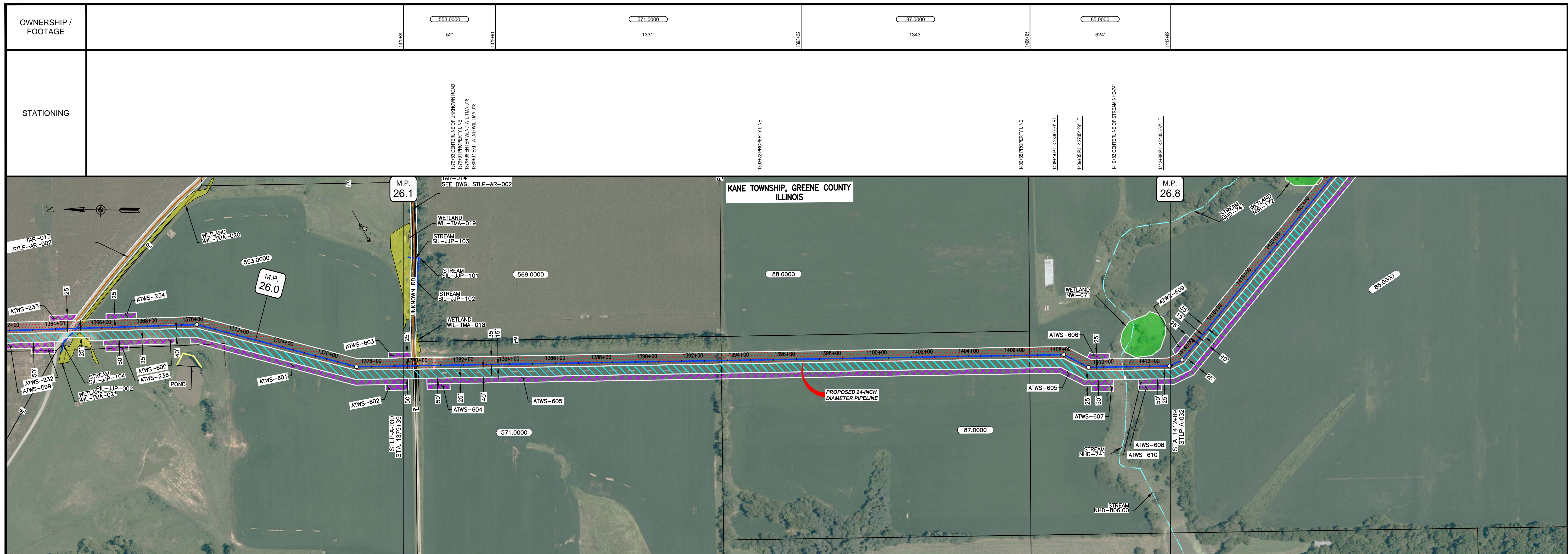
PREPARED FOR  
**Spire STL Pipeline**

PREPARED BY  
**M M MOTT MACDONALD**

CLIENT APPROVAL  
DATE

SCALE: 1" = 200'  
DRAWING NO.: STLP-A-030  
REVISION: 1





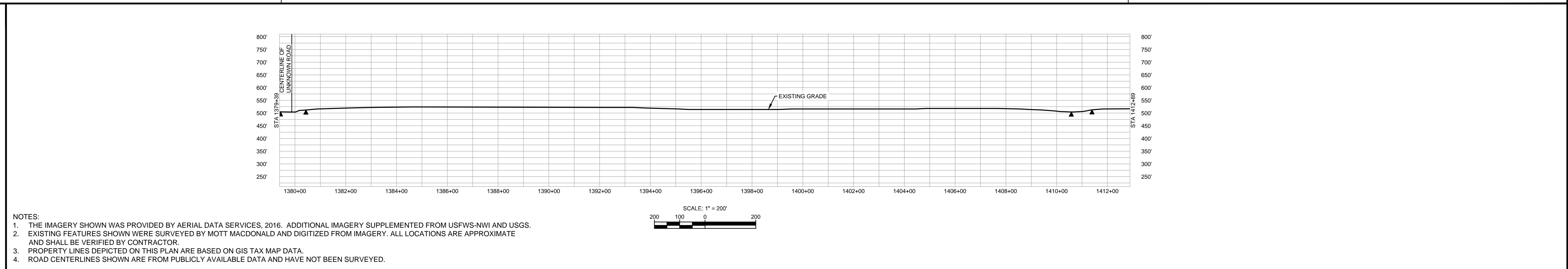
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG	
MATERIAL & COATING		
DESIGN FACTOR	0.72	0.72
CONSTRUCTION METHOD	OPEN CUT	
PIPELINE COVER	OPEN CUT (FLUMED) OPEN CUT	
SOILS	675C2 257B 51A 61A 675B	DATA NOT AVAILABLE 675C2 257B
LAND USE		

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOAK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

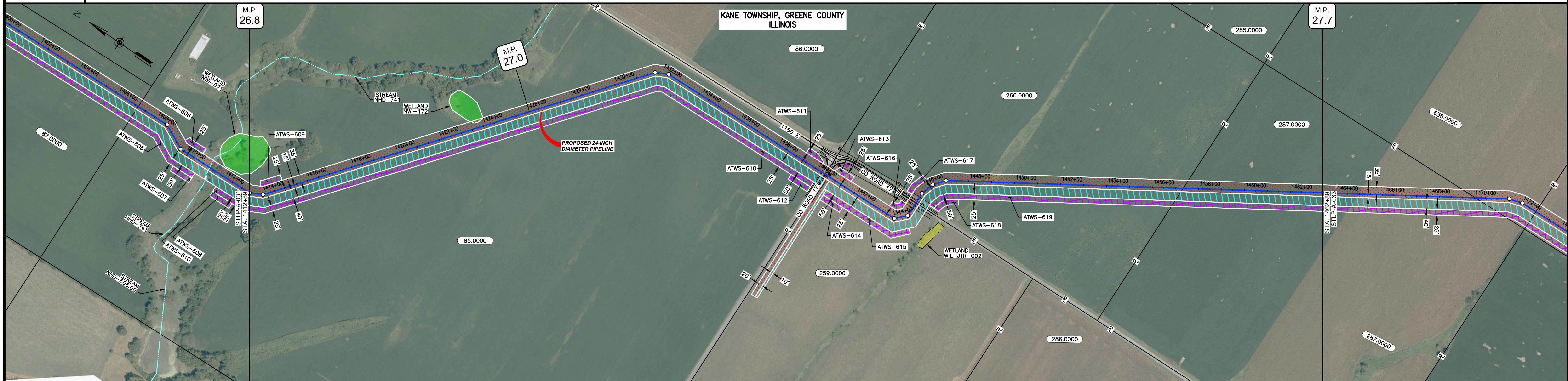
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS				SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	PREPARED BY	SCALE	DRAWING NO.	REVISION
1	3270	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED	STLP-AR-002	ACCESS ROAD SITE PLAN - TAR-013 & TAR-014	1	ISSUE FOR FER	1/2017				JC	1/2017		M	1" = 200'	STLP-A-031	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017		M			
											DGG	1/2017					
											JEW	1/2017					



OWNERSHIP / FOOTAGE	1412+89	2711'	259.0000	484'	260.0000	1200'	287.0000	605'	1462+89
STATIONING	<p>1414+89 P.L. 245579E RL 1414+89 P.L. 245579E RL 1431+89 P.L. 245579E RL 1431+89 P.L. 245579E RL 1438+00 CENTERLINE OF DITCH 1438+00 EDGE OF PAVEMENT 1438+00 PROPERTY LINE 1438+00 CENTERLINE OF DITCH 1438+10 CENTERLINE OF DITCH 1438+17 OVERHEAD LINE 1438+57 P.L. 458000W LT 1444+47 P.L. 458000W LT 1444+57 OVERHEAD LINE 1444+57 EDGE OF PAVEMENT 1444+57 PROPERTY LINE 1444+57 CENTERLINE OF CO ROAD 17 1444+58 PROPERTY LINE 1444+58 EDGE OF PAVEMENT 1444+58 CENTERLINE OF DITCH 1444+58 OVERHEAD LINE 1444+58 P.L. 458000W LT 1444+58 P.L. 458000W LT 1458+64 PROPERTY LINE</p>								



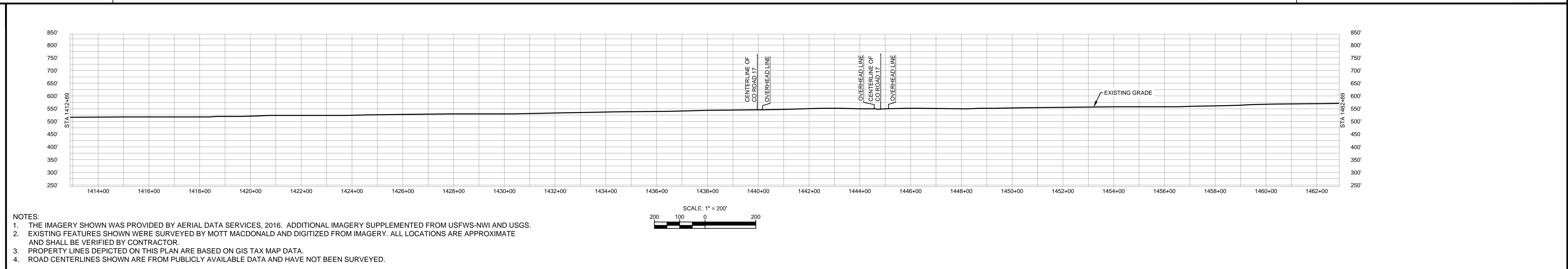
CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG										
MATERIAL & COATING											
DESIGN FACTOR	0.72										
CONSTRUCTION METHOD	OPEN CUT										
PIPELINE COVER	5'										
SOILS	257B	675C2	257B	675C2	257B	51B	675B	257B	61A	675B	51A
LAND USE											

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PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

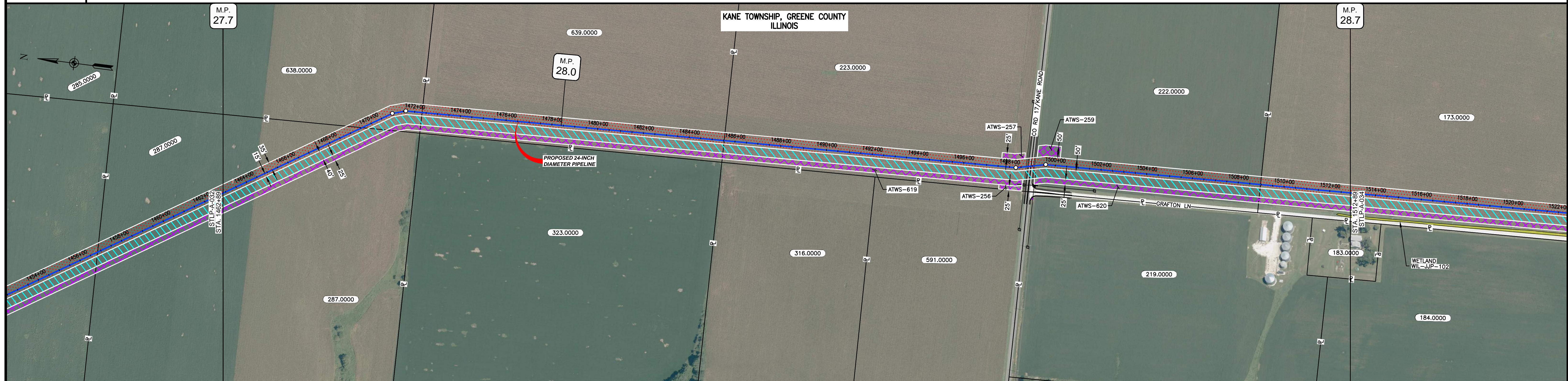
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



MATERIAL			REFERENCE DRAWINGS		REVISIONS				APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	PREPARED BY <b>M M</b> MOTT MACDONALD	ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE GREENE COUNTY, ILLINOIS STA. 1412+89 TO STA. 1462+89		
1	4840	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				JC	1/2017	SCALE PROFILE H: 1" = 200'				
2	160	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1" = 200'		SCALE	DRAWING NO.	REVISION
											DGG	1/2017	CLIENT APPROVAL		1" = 200'	STLP-A-032	1
											JEW	1/2017	DATE				



OWNERSHIP / FOOTAGE	287.0000	638.0000	639.0000	223.0000	222.0000	173.0000	
	666'	277'	1321'	1342'	1002'	392'	
STATIONING	1462+89	1468+45	1472+29	1485+53	1498+94	1508+97	1512+89

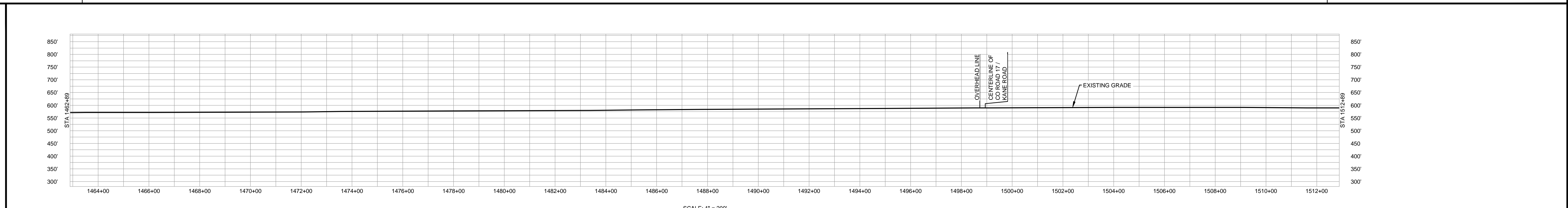


CLASS LOCATION/MAOP	CLASS I / 1480 PSIG		
MATERIAL & COATING	1462+89	1489+50	1512+89
DESIGN FACTOR	0.72	0.6	0.72
CONSTRUCTION METHOD	OPEN CUT		
PIPELINE COVER	5'		
SOILS	51A		68A
LAND USE			

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PERMANENT WATERBAR WITH COMPOST FILTER  
SOOK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100

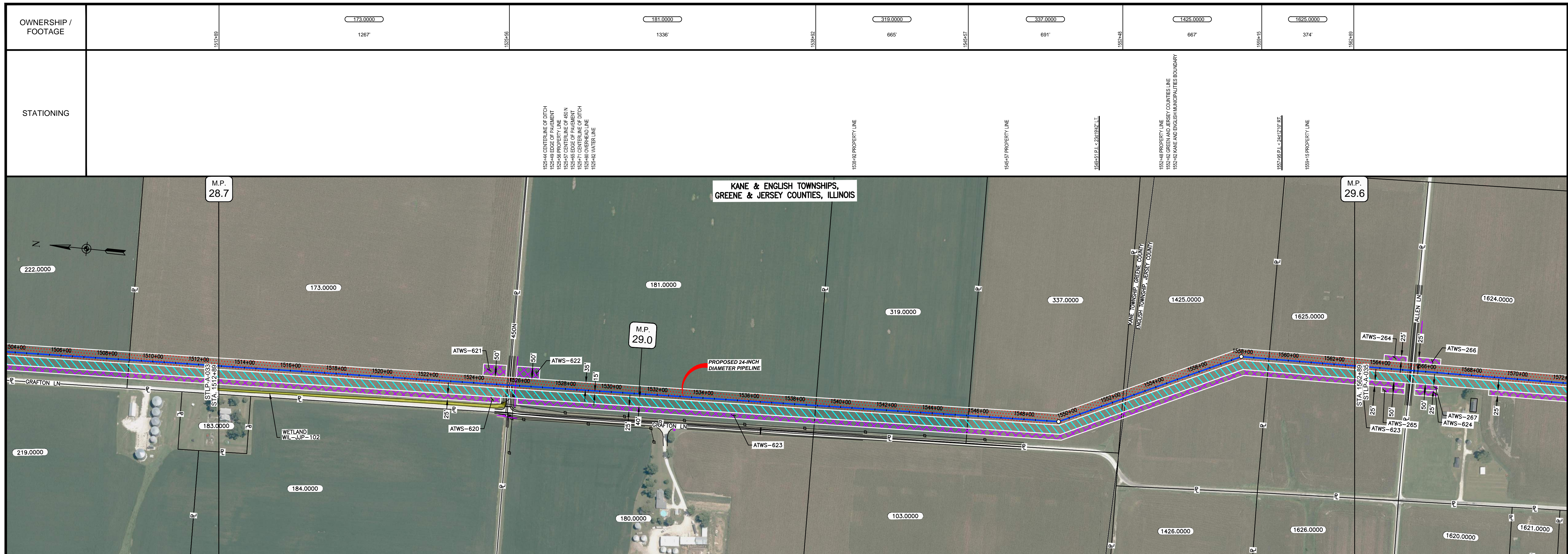


NOTES:

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MATERIAL		REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT			
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	MOTT MACDONALD	ALIGNMENT SHEET		
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				JC	1/2017	SCALE PROFILE H: 1" = 200'		MOTT MACDONALD	PROPOSED 24-INCH DIAMETER PIPELINE	
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1" = 200'			GREENE COUNTY, ILLINOIS	
											ENG. APPROVAL	DATE	CLIENT APPROVAL		STA. 1462+89 TO STA. 1512+89		
											DGG	1/2017	DATE		SCALE	DRAWING NO.	REVISION
											P.M. APPROVAL	DATE		1" = 200'	STLP-A-033	1	
											JEV	1/2017					





CLASS LOCATION/MAOP	CLASS I / 1480 PSIG																															
MATERIAL & COATING	<table border="1"> <tr> <td>1512+89</td> <td>1512+89</td> <td>1526+17</td> <td>1526+17</td> <td>1526+97</td> <td>1526+97</td> <td>1562+89</td> <td>1562+89</td> <td>1562+89</td> <td>1562+89</td> <td>1562+89</td> </tr> <tr> <td>1263'</td> <td>80'</td> <td>3657'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										1512+89	1512+89	1526+17	1526+17	1526+97	1526+97	1562+89	1562+89	1562+89	1562+89	1562+89	1263'	80'	3657'								
1512+89	1512+89	1526+17	1526+17	1526+97	1526+97	1562+89	1562+89	1562+89	1562+89	1562+89																						
1263'	80'	3657'																														
DESIGN FACTOR	0.72			0.6			0.72																									
CONSTRUCTION METHOD	OPEN CUT																															
PIPELINE COVER	5'																															
SOILS	68A		51A			68A		45A		68A																						
LAND USE																																

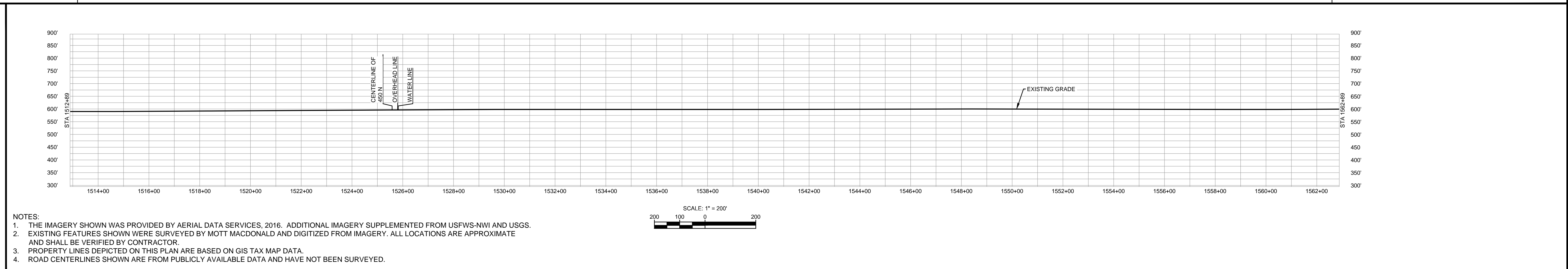
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PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



NOTES:

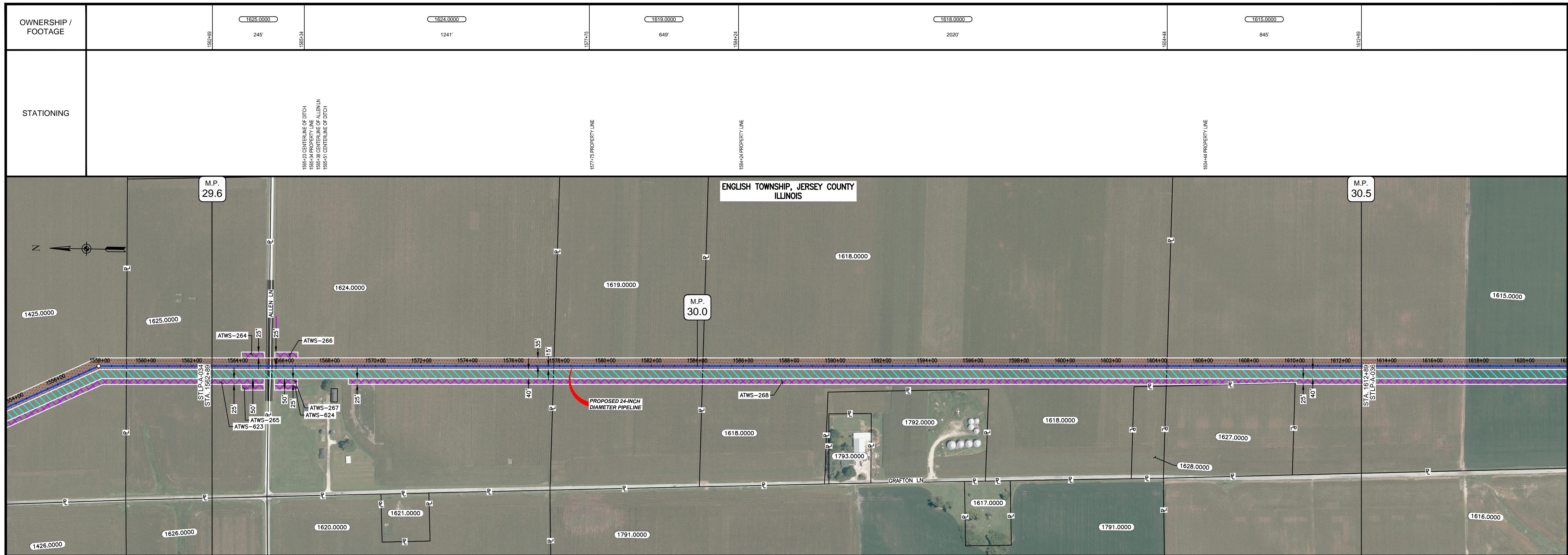
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- PROPERTY LINES DEPICTED ON THIS PLAN ARE BASED ON GIS TAX MAP DATA.
- ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT				
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN:	SCALE PROFILE H:	SCALE PROFILE V:	SCALE	DRAWING NO.	REVISION	
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				JC	1/2017	1" = 200'	1" = 200'	1" = 200'	1" = 200'	STLP-A-034	1	
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017							

**M M**
  
 MOTT MACDONALD

SCALE: 1" = 200'  
 DRAWING NO.: STLP-A-034  
 REVISION: 1





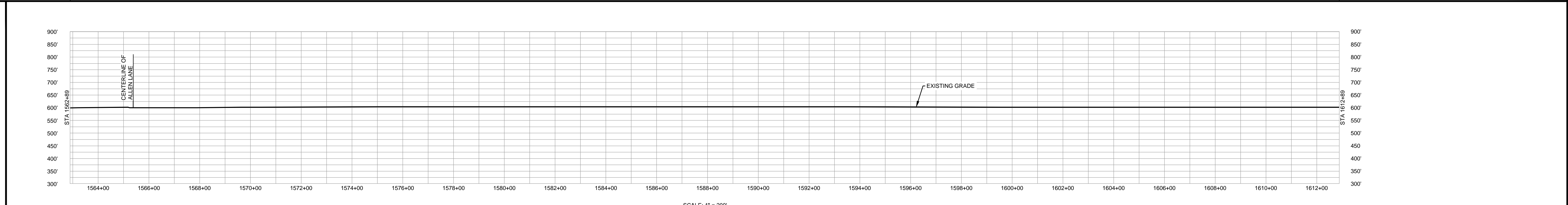
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG										
MATERIAL & COATING											
DESIGN FACTOR	0.72		0.6								0.72
CONSTRUCTION METHOD	OPEN CUT										
PIPELINE COVER	5'										
SOILS	51A	675B	51A	68A	51A	68A	51A	68A	51A	68A	
LAND USE											

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

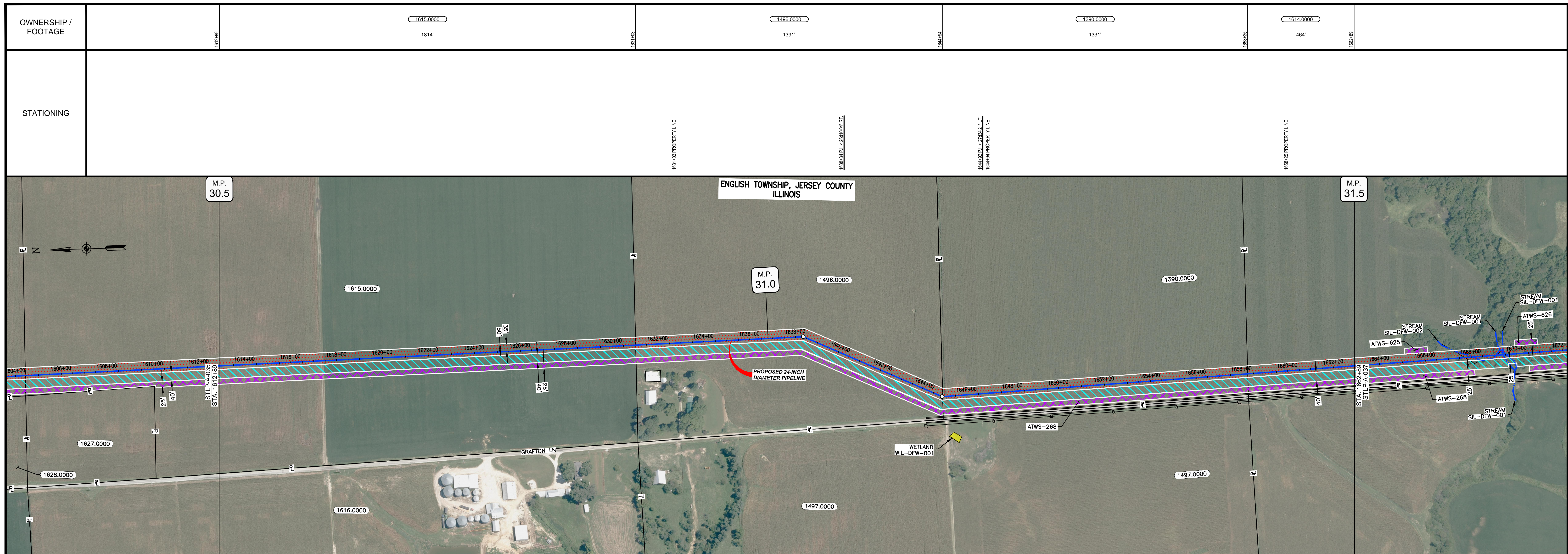
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



- NOTES:
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  - 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.
  - ROAD CENTERLINES SHOWN ARE FROM PUBLICLY AVAILABLE DATA AND HAVE NOT BEEN SURVEYED.

MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT				
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN:	SCALE PROFILE H:	SCALE PROFILE V:				
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR PERC	1/2017				JC	1/2017	1" = 200'	1" = 200'	1" = 200'	PREPARED FOR <b>Spire STL Pipeline</b> PREPARED BY <b>M M MOTT MACDONALD</b>			ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE JERSEY COUNTY, ILLINOIS STA. 1562+89 TO STA. 1612+89
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017				SCALE	DRAWING NO.	REVISION	
											DGG	1/2017				1" = 200'	STLP-A-035	1	
											JEV	1/2017							





CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG												
MATERIAL & COATING	5000' (1)												
DESIGN FACTOR	0.72												
CONSTRUCTION METHOD	OPEN CUT												
PIPELINE COVER	5'												
SOILS	68A	51A	675B	279C3	675B	279C3	675B	51A	675B	86B	51A	675C2	675B
LAND USE													

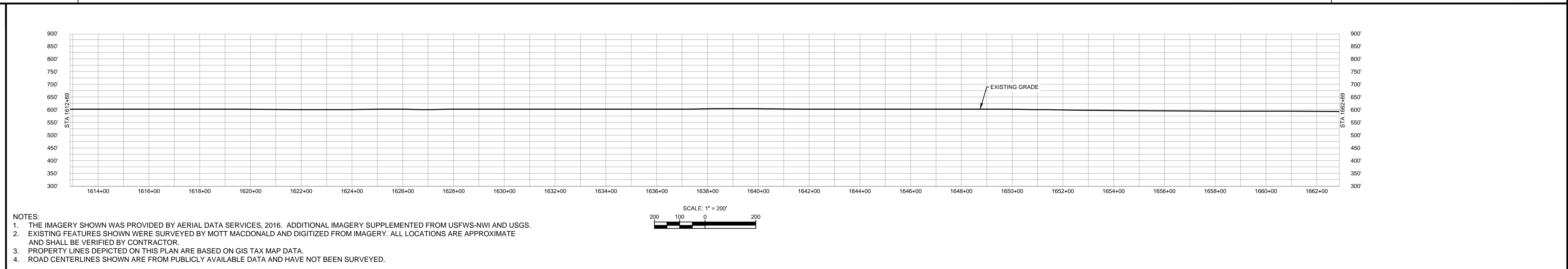
THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



NOTES:  
 1. THE IMAGERY SHOWN WAS PROVIDED BY AERIAL DATA SERVICES, 2016. ADDITIONAL IMAGERY SUPPLEMENTED FROM USFWS-NWI 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.  
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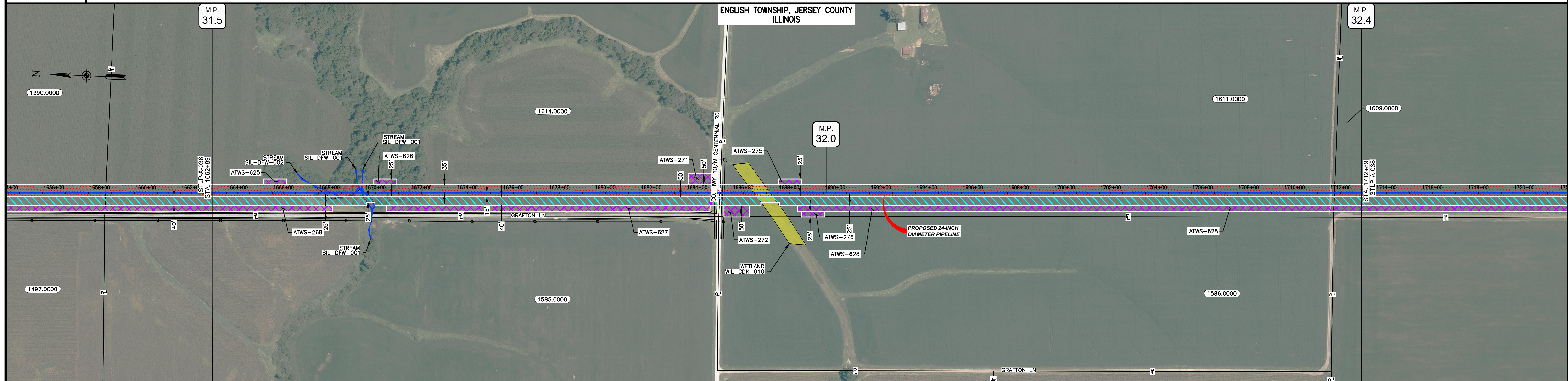
MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	DATE	SCALE	DRAWING NO.	REVISION
1	5000	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FERC	1/2017				GH	1/2017			1" = 200'	STLP-A-036	1

PREPARED BY: **M M**  
**MOTT MACDONALD**

SCALE: 1" = 200'  
 DRAWING NO.: STLP-A-036  
 REVISION: 1



OWNERSHIP / FOOTAGE	1814.0000 2209'	1611.0000 2675'	1609.0000 116'
STATIONING	1662+89 1662+89	1662+89 1662+89	1712+89 1712+89



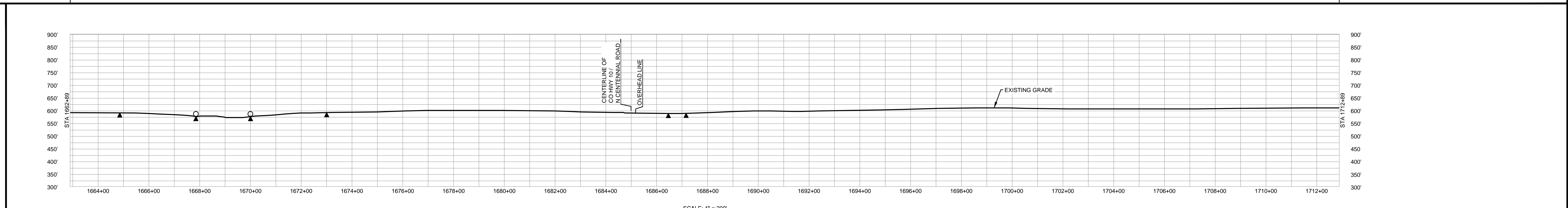
CLASS LOCATION/MAOP	CLASS I / 1480 PSIG									
MATERIAL & COATING	2163' (1) 80' (2) 2757' (1)									
DESIGN FACTOR	0.72 0.6 0.72									
CONSTRUCTION METHOD	OPEN CUT OPEN CUT (FLUMED) OPEN CUT OPEN CUT OPEN CUT									
PIPELINE COVER	5' 3' 5' 3' 5' 3' 5'									
SOILS	675B 675C2 3451A 279C3 675C2 675B 61A 675B 675C2 3451A 675C2 675B 86B 51A									
LAND USE										

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



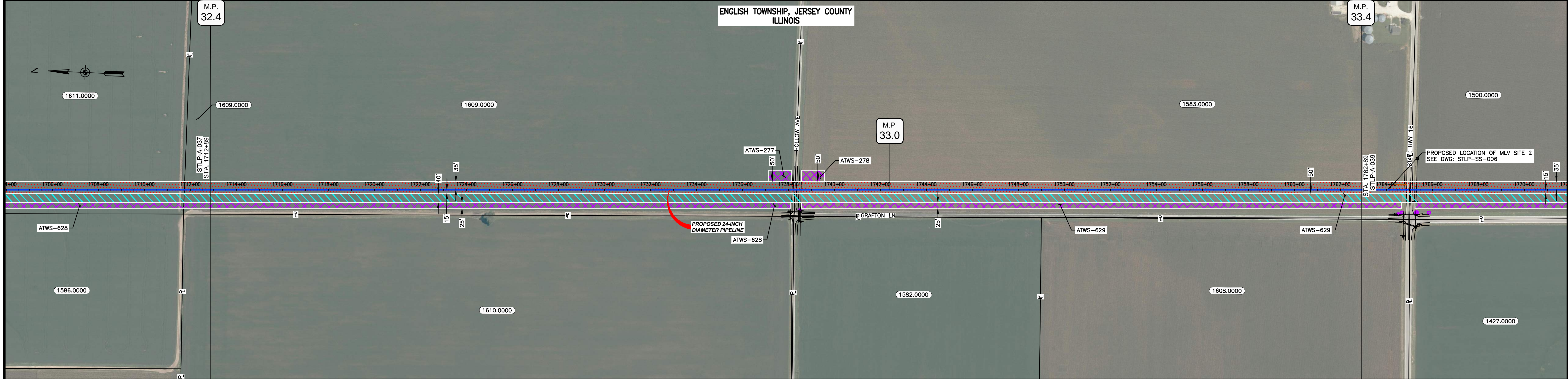
NOTES:

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MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	PREPARED BY	SCALE	DRAWING NO.	REVISION
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				GH	1/2017		M	1" = 200'	STLP-A-037	1
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017		M			
											ENG. APPROVAL	DATE					
											DGG	1/2017					
											P.M. APPROVAL	DATE					
											JEV	1/2017					



OWNERSHIP / FOOTAGE		1609.0000	2539'	1583.0000	2461'
STATIONING		1712+89	1738+28	1762+89	1788+28



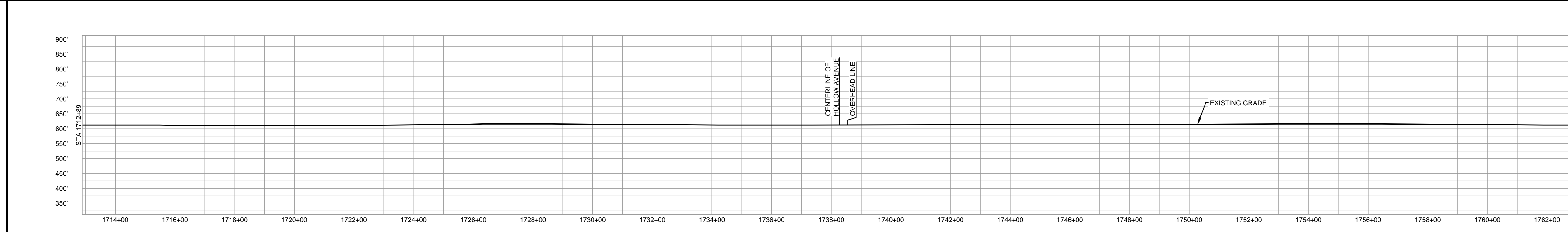
CLASS LOCATION/MAOP	CLASS 1 / 1480 PSIG							
MATERIAL & COATING	OPEN CUT							
DESIGN FACTOR	0.72		0.6		0.72			
CONSTRUCTION METHOD								
PIPELINE COVER	5'							
SOILS	51A	68A	51A	68A	51A	68A	51A	68A
LAND USE								

THE LOCATION OF TRENCH PLUGS AND WATERBARS ARE INTENDED TO BE USED AS A GUIDELINE ONLY. EXACT LOCATION TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CHIEF INSPECTOR.

PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15 - 30%	200	200
>30%	100	100

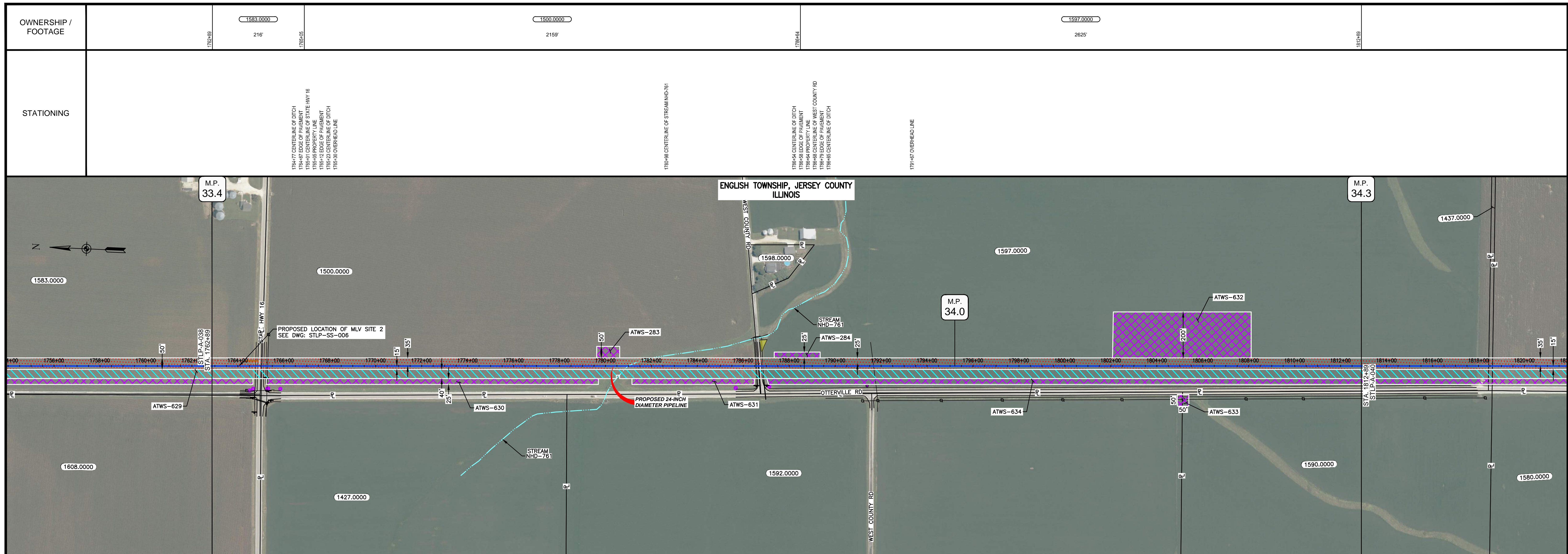
MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10 - 15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



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MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS				PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	CLIENT APPROVAL	PREPARED BY	SCALE	DRAWING NO.	REVISION	
1	4920	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED			1	ISSUE FOR FER	1/2017				GH	1/2017		M	1" = 200'	STLP-A-038	1	
2	80	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017		M				
											DGG	1/2017						
											JEW	1/2017						





CLASS LOCATION/MAOP	CLASS I / 1480 PSIG													
MATERIAL & COATING	1752+89	1762+22	1762+42	1764+59	1766+39	1788+29	1787+09	1812+89					1812+89	
DESIGN FACTOR	0.72	0.5	0.72	0.6	0.72	0.6	0.72							
CONSTRUCTION METHOD	OPEN CUT		BORE	OPEN CUT			OPEN CUT (FLUMED)	OPEN CUT						
PIPELINE COVER	5'													
SOILS	68A		51A	86B	259C2			86B	259C2	86B	51A	675B	61A	675B
LAND USE														

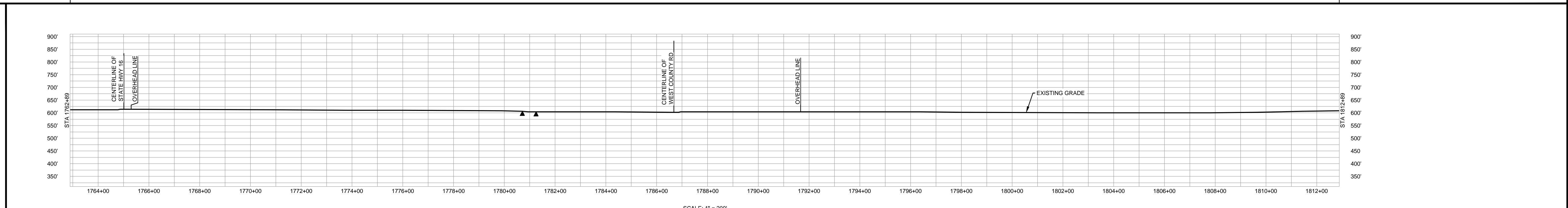
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PERMANENT WATERBAR WITH COMPOST FILTER  
SOCK AT WATERBAR DISCHARGE  
PERMANENT TRENCH PLUG

ILLINOIS		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
5-15%	300	300
15-30%	200	200
>30%	100	100

MISSOURI		
SLOPE	SLOPE BREAKER SPACING (FT)	TRENCH PLUG SPACING (FT)
<5%	125	---
5-10%	100	300
10-15%	75	300
15-20%	75	200
20-30%	50	200
30-35%	50	100
>35%	25	100



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MATERIAL			REFERENCE DRAWINGS		REVISIONS					APPROVALS			PREPARED FOR		SPIRE STL PIPELINE PROJECT		
TAG	QUANTITY	DESCRIPTION	DWG. NO.	TITLE	NO.	REVISIONS	DATE	DRAWN	CK	APPR	DRAWN BY	DATE	SCALE PLAN: 1" = 200'	Spire STL Pipeline	ALIGNMENT SHEET PROPOSED 24-INCH DIAMETER PIPELINE JERSEY COUNTY, ILLINOIS STA. 1762+89 TO STA. 1812+89		
1	4780	PIPE, 24.000" OD X 0.353" WT, API-5L, X70, DSAW, FBE COATED	STLP-SS-006	24" PIPELINE MLV SITE 2	1	ISSUE FOR FERC	1/2017				GH	1/2017	SCALE PROFILE H: 1" = 200'				
2	160	PIPE, 24.000" OD X 0.508" WT, API-5L, X70, DSAW, FBE/ARO COATED									EB	1/2017	SCALE PROFILE V: 1" = 200'	PREPARED BY <b>M M</b> MOTT MACDONALD	SCALE: 1" = 200'		
REF	60	SEE REFERENCED DETAIL DRAWING									DGG	1/2017	CLIENT APPROVAL				
											JEW	1/2017	DATE	STLP-A-039	1		



