



BEAR DEN PHASE 2 PROJECT

Plan of Development

APPENDIX B

Facility Plot Plans and Typical Right-of-Way Cross Sections



BEAR DEN PHASE 2 PROJECT

Plan of Development

Facility Plot Plans and Typical Right-of-Way Cross Sections

**Prepared for:
BUREAU OF LAND MANAGEMENT**

MAY 2014

LIST OF FIGURES

Typical Construction - New/Improved Road Cross Section

Typical Construction - Right-of-Way Private Land

Typical Construction - Right-of-Way ND Department of Trust Lands

Typical Construction - Right-of-Way USFS National Forest Land

Typical Construction – Right-of-Way Private Land Frozen Conditions

Typical Construction – Right-of-Way ND Department of Trust Lands Frozen Conditions

Typical Construction – Right-of-Way USFS National Forest Land Frozen Conditions

Typical Construction - Right-of-Way Wetlands

Typical Construction - Side Slope Private Land

Typical Construction - Side Slope ND Department of Trust Lands

Typical Construction – Side Slope USFS National Forest Land

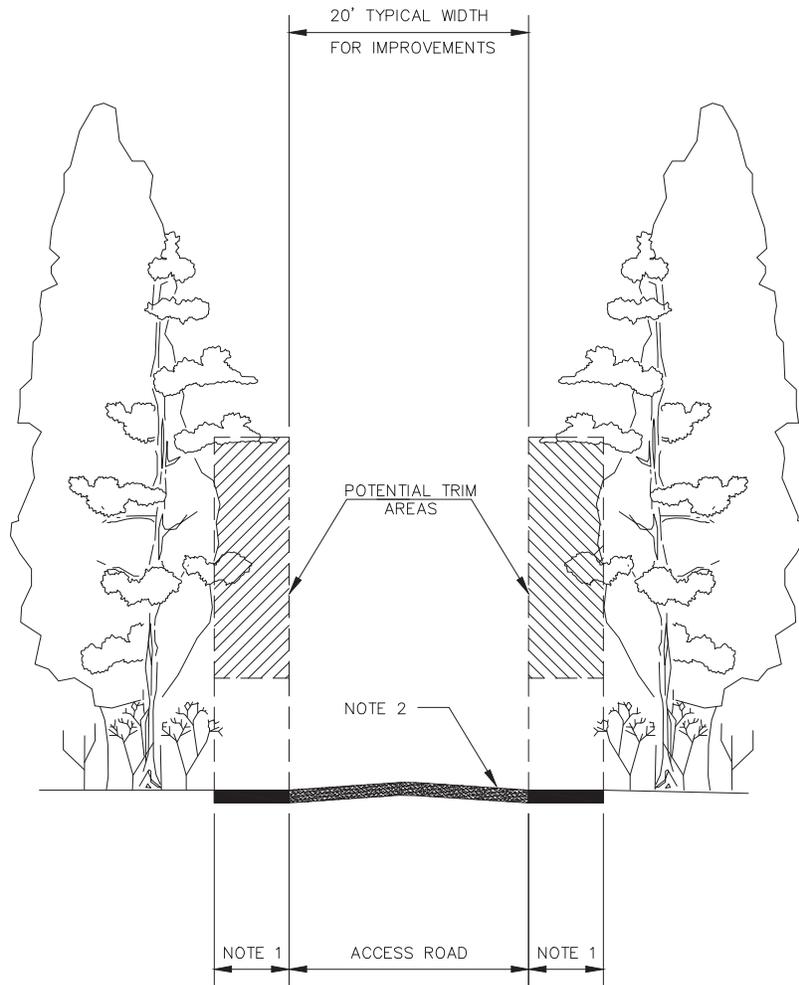
Typical Drawing- Lateral Connection In-line Meter Locations

Typical Drawing- Lateral Connection In-line Meter Locations 1 Acre Lot

Typical Drawing- Well Pad Plot Plan

Typical Drawing- Mainline Valve (Oil and Water)

Plot Info: 3-12-14 - 1:37pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1023.dwg



NOTES:

1. POTENTIAL WIDENING OF EXISTING ROADS UP TO 5' PER SIDE WITH BASE MATERIAL (IF NEEDED).
2. 6" OF ROCK COVER OR NORTH DAKOTA EQUIVALENT.

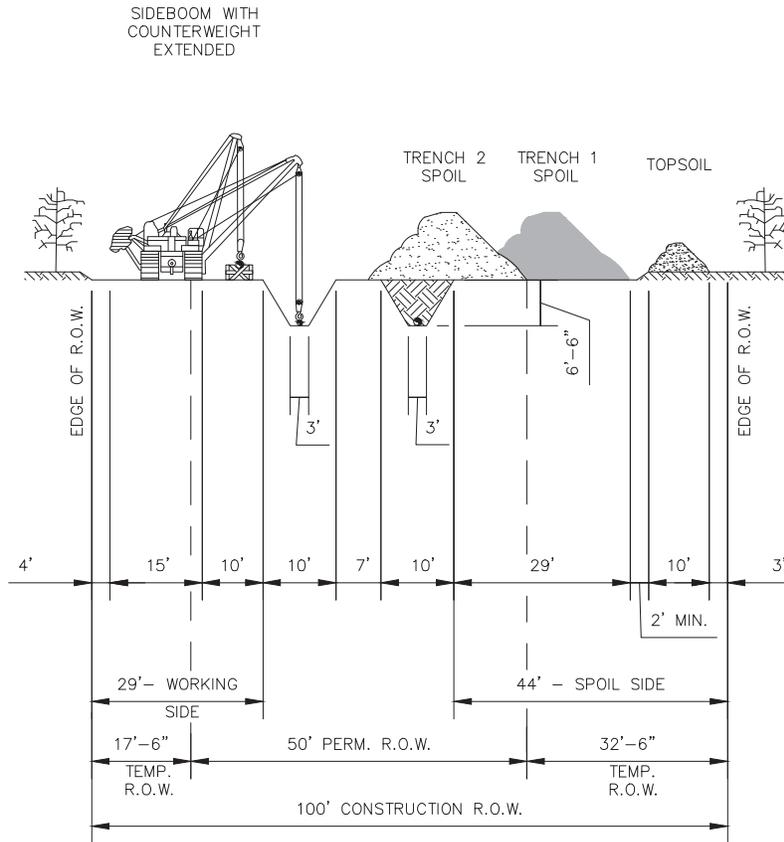


15 E. 5TH St., Suite 2700
Tulsa, OK 74103
918-382-5100

TYPICAL CONSTRUCTION
NEW/IMPROVED ROAD CROSS SECTION

Drawn ACH	Date 3/12/14	Scale NONE	Rev 0
Checked -	Eng app -	Dwg no STD-1023	

Plot info: 3-12-14 - 1:35pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1024.dwg

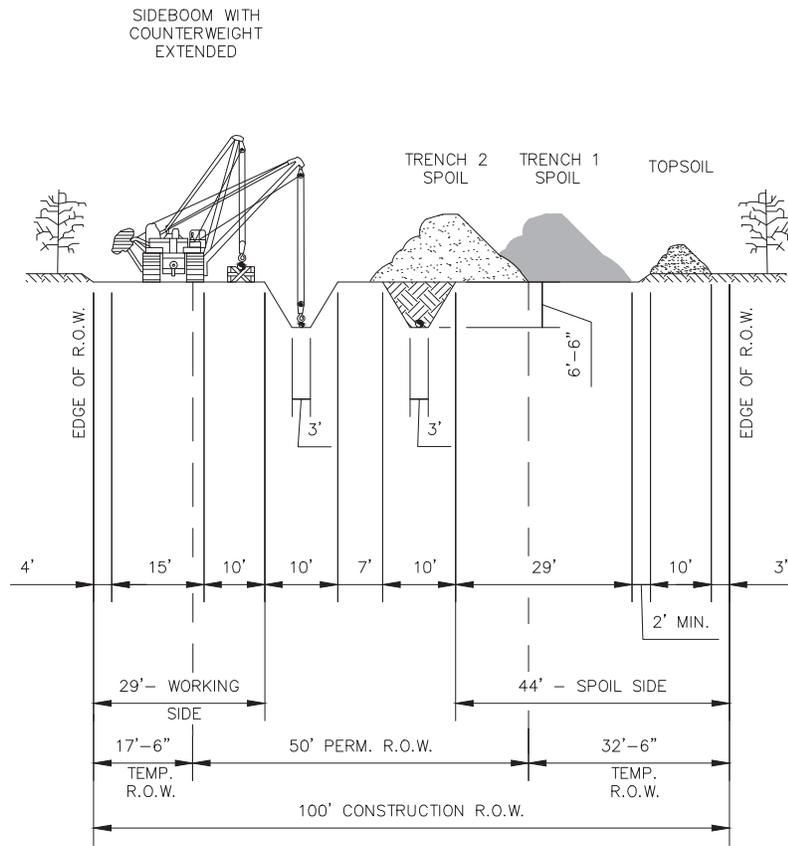


NOTE:

1. DIMENSIONS ARE TYPICAL. SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
2. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY PER LANDOWNER REQUEST.

		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100					
TYPICAL CONSTRUCTION RIGHT-OF-WAY PRIVATE LAND							
Drawn	ACH	Date	3/12/14	Scale	NONE	Rev	0
Checked	-	Eng	app -	Dwg no	STD-1024		

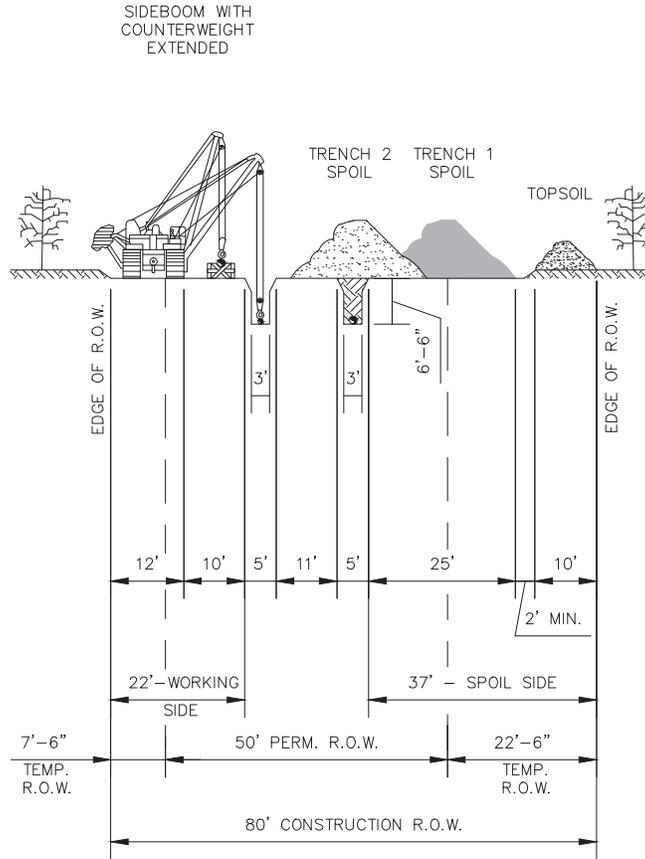
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- NOTE:
1. DIMENSIONS ARE TYPICAL. SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
 2. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY.

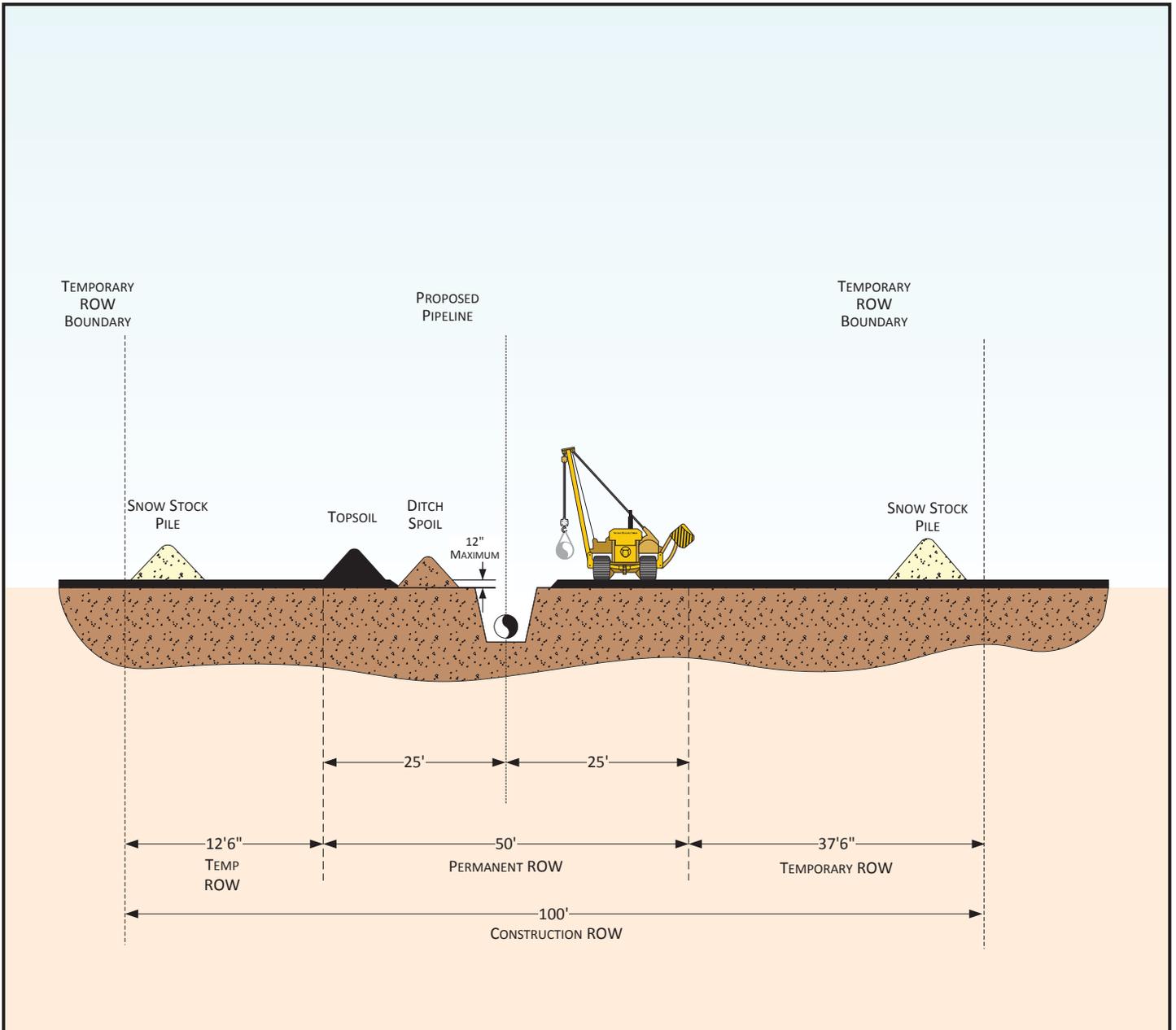
		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100	
TYPICAL CONSTRUCTION RIGHT-OF-WAY ND DEPARTMENT OF TRUST LANDS			
Drawn	ACH	Date	3/12/14
Scale	NONE	Checked	-
Eng	app -	Dwg no	STD-1025
Rev	0		

Plot Info: 3-12-14 - 1:38pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1026.dwg



- NOTE:
1. DIMENSIONS ARE TYPICAL. SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
 2. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY.

		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100					
TYPICAL CONSTRUCTION RIGHT-OF-WAY USFS NATIONAL FOREST LAND							
Drawn	ACH	Date	3/1/14	Scale	NONE	Rev	0
Checked	-	Eng	app -	Dwg no	STD-1026		



PROFILE

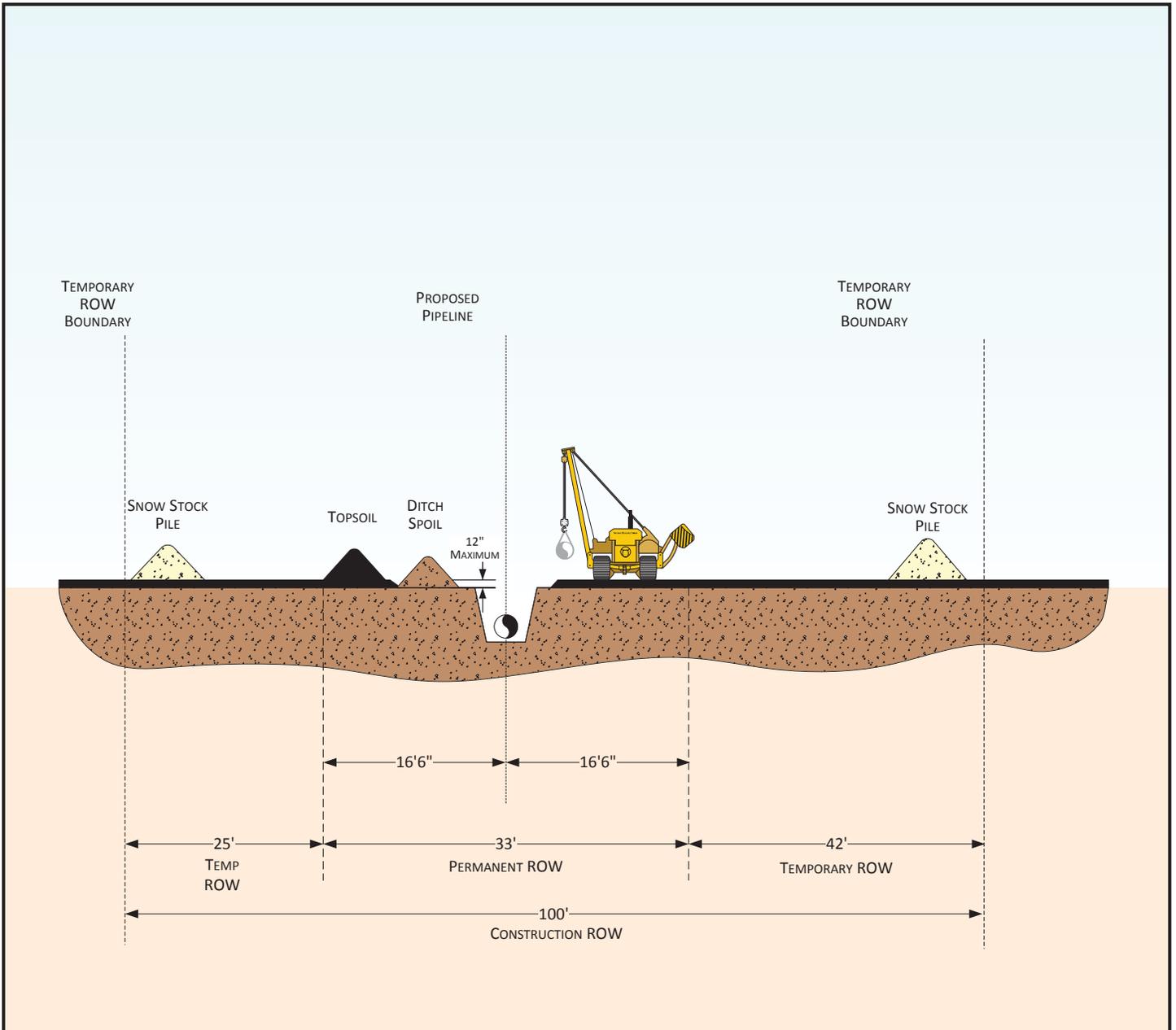
NOTES:

1. CONSTRUCTION RIGHT-OF-WAY TYPICALLY WILL BE 100' WIDE CONSISTING OF 50' OF PERMANENT EASEMENT AND 50' OF TEMPORARY CONSTRUCTION RIGHT-OF-WAY. ADDITIONAL TEMPORARY WORKSPACE WILL BE NECESSARY AT MAJOR ROAD, RAIL, AND RIVER CROSSINGS, AT SIDESLOPES AND AT OTHER SPECIAL LOCATIONS AS REQUIRED.
2. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN CONFIGURATION APPROVED BY ENABLE.

For environmental review purposes only.

Bear Den Phase 2 Project
Enable Bakken Crude Services, LLC
 Typical Construction ROW in Frozen Conditions in Uplands
 Private Land





PROFILE

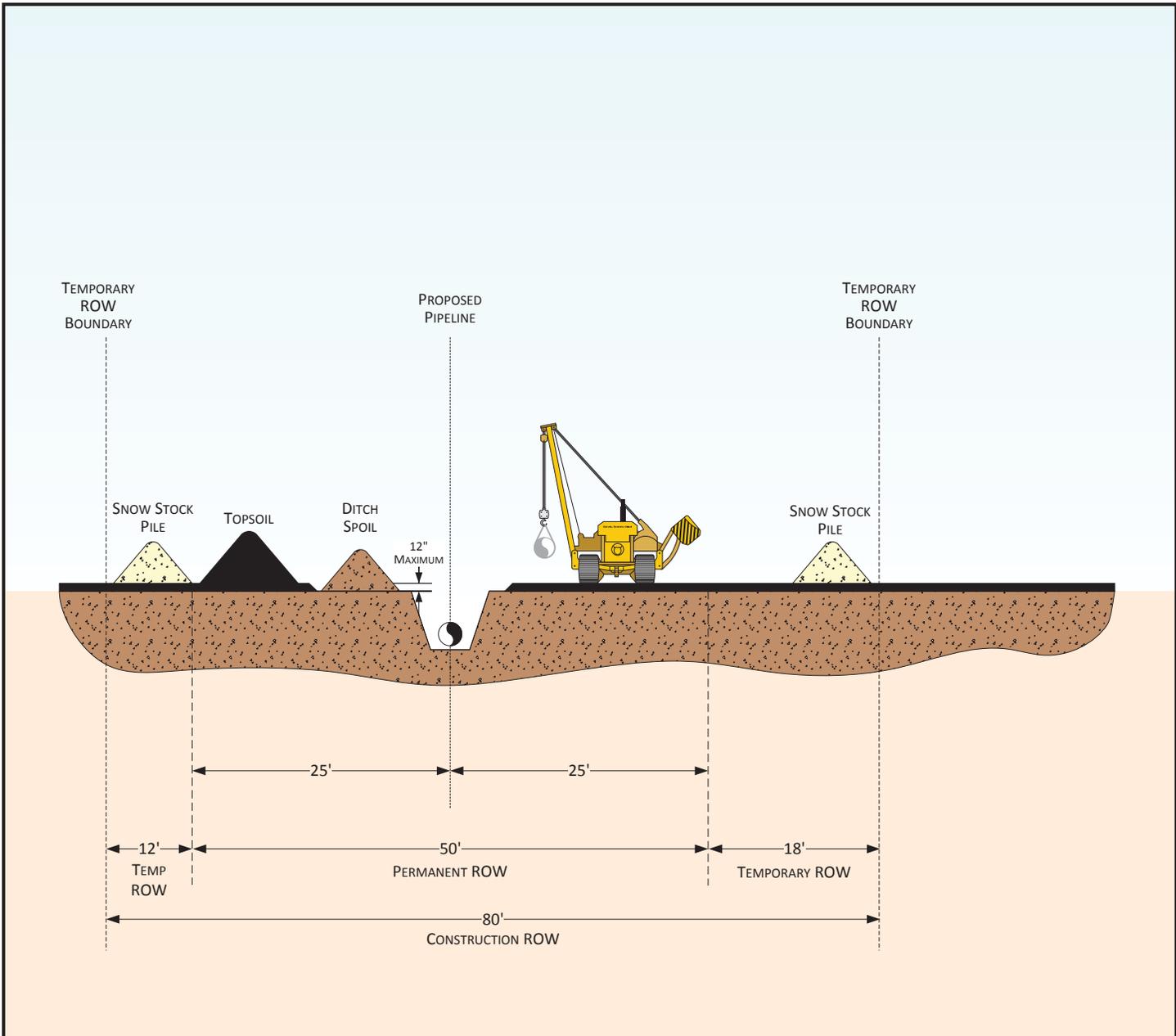
NOTES:

1. CONSTRUCTION RIGHT-OF-WAY TYPICALLY WILL BE 100' WIDE CONSISTING OF 33' OF PERMANENT EASEMENT AND 67' OF TEMPORARY CONSTRUCTION RIGHT-OF-WAY. ADDITIONAL TEMPORARY WORKSPACE WILL BE NECESSARY AT MAJOR ROAD, RAIL, AND RIVER CROSSINGS, AT SIDESLOPES AND AT OTHER SPECIAL LOCATIONS AS REQUIRED.
2. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN CONFIGURATION APPROVED BY ENABLE.

For environmental review purposes only.

**Bear Den Phase 2 Project
 Enable Bakken Crude Services, LLC
 Typical Construction ROW in Frozen Conditions in Uplands
 State Land**





PROFILE

NOTES:

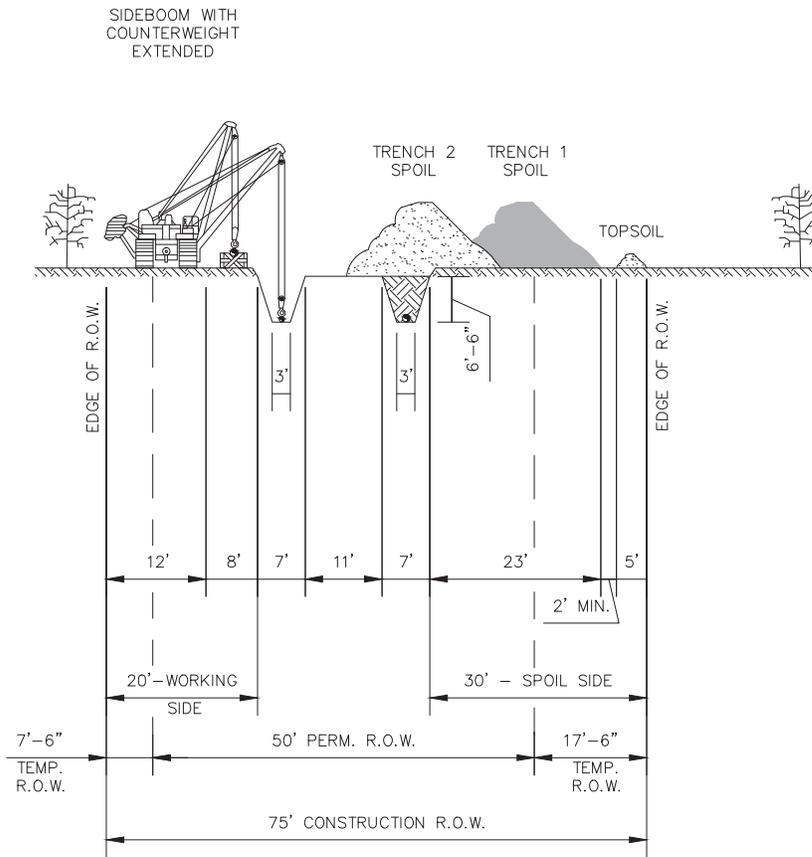
1. CONSTRUCTION RIGHT-OF-WAY TYPICALLY WILL BE 80' WIDE CONSISTING OF 50' OF PERMANENT EASEMENT AND 30' OF TEMPORARY CONSTRUCTION RIGHT-OF-WAY. ADDITIONAL TEMPORARY WORKSPACE WILL BE NECESSARY AT MAJOR ROAD, RAIL, AND RIVER CROSSINGS, AT SIDESLOPES AND AT OTHER SPECIAL LOCATIONS AS REQUIRED.
2. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN CONFIGURATION APPROVED BY ENABLE.

For environmental review purposes only.

Bear Den Phase 2 Project
Enable Bakken Crude Services, LLC
 Typical Construction ROW in Frozen Conditions in Uplands
 Federal Land



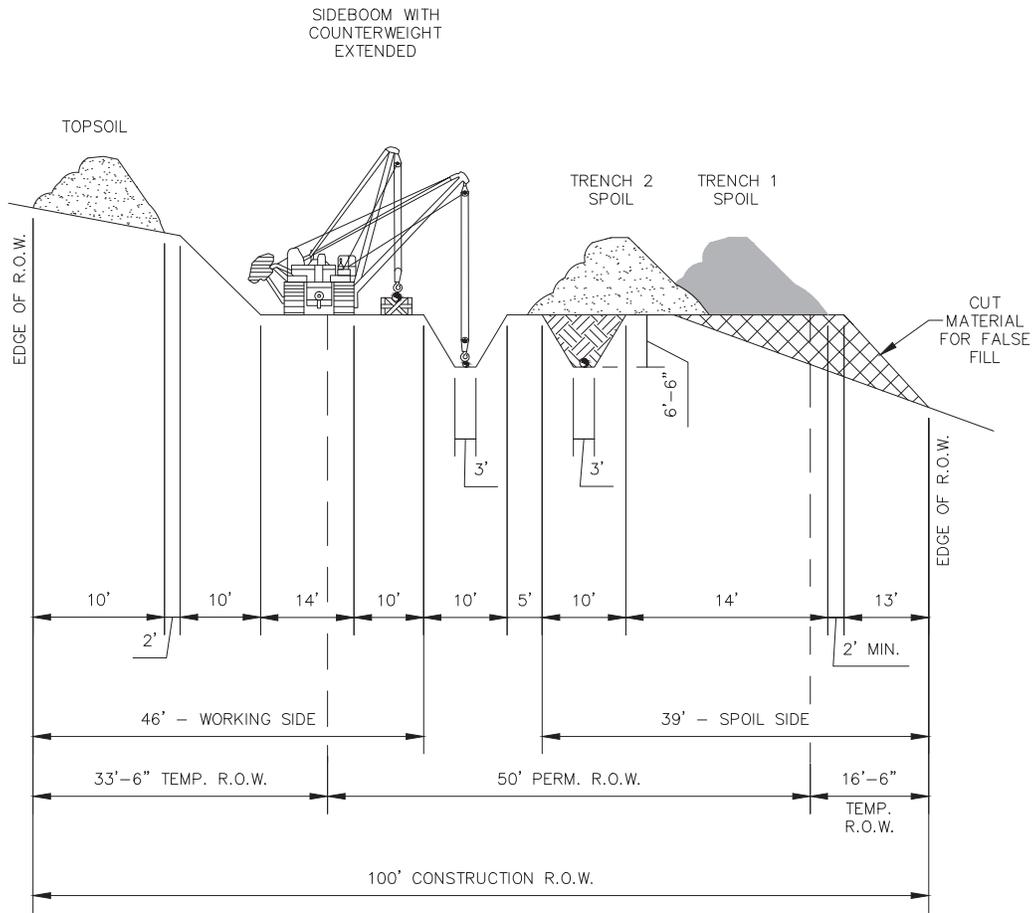
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- NOTE:
1. DIMENSIONS ARE TYPICAL. SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
 2. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE TRENCH LINE ONLY.
 3. EQUIPMENT WORKING MATS TO BE USED AS NEEDED.

		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100	
TYPICAL CONSTRUCTION RIGHT-OF-WAY WETLANDS			
Drawn	ACH	Date	3/12/14
Checked	-	Eng app	-
Scale	NONE	Dwg no	STD-1031
Rev	0		

Plot Info: 3-12-14 - 1:51pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1027.dwg



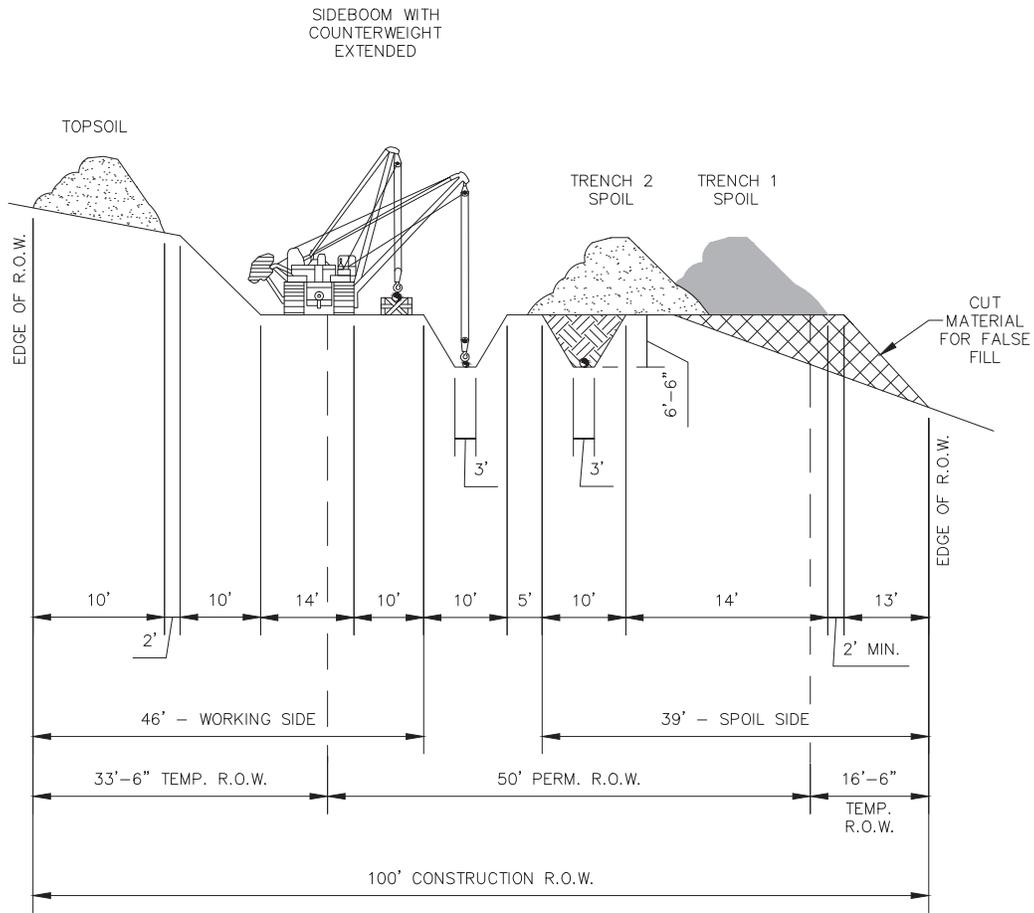
PROFILE

NOTES:

1. DIMENSIONS ARE TYPICAL, SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
2. LEAVE GAPS IN SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT PUSH UPLAND SOILS INTO CANALS OR WETLANDS.
3. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY.

		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100	
		TYPICAL CONSTRUCTION SIDE SLOPE PRIVATE LAND	
Drawn ACH	Date 3/12/14	Scale NONE	Rev 0
Checked -	Eng app -	Dwg no STD-1027	

Plot Info: 3-12-14 - 1:39pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1028.dwg



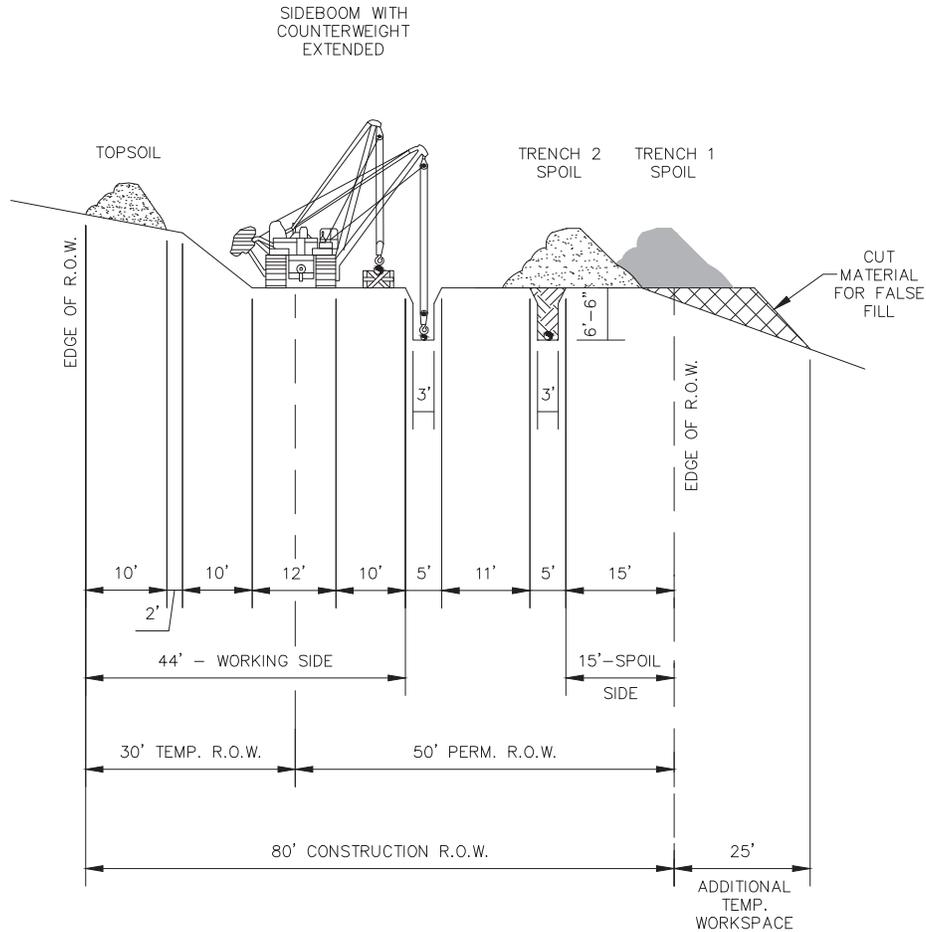
PROFILE

NOTES:

1. DIMENSIONS ARE TYPICAL, SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
2. LEAVE GAPS IN SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT PUSH UPLAND SOILS INTO CANALS OR WETLANDS.
3. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY.

		15 E. 5TH St., Suite 2700 Tulsa, OK 74103 918-382-5100				
		TYPICAL CONSTRUCTION SIDE SLOPE ND DEPARTMENT OF TRUST LANDS				
Drawn	ACH	Date	3/12/14	Scale	NONE	Rev 0
Checked	-	Eng app	-	Dwg no	STD-1028	

Plot Info: 3-12-14 - 1:40pm-00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\04_Standards\01_Standards Drawings\STD-1032.dwg



PROFILE

NOTES:

1. DIMENSIONS ARE TYPICAL, SEE ALIGNMENT SHEETS FOR ACTUAL RIGHT-OF-WAY CONFIGURATIONS AND CLEARING LIMITS.
2. LEAVE GAPS IN SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT PUSH UPLAND SOILS INTO CANALS OR WETLANDS.
3. TOPSOIL SHALL BE STRIPPED AND SEGREGATED FROM THE FULL RIGHT-OF-WAY.

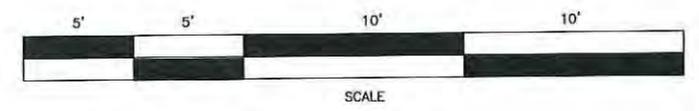
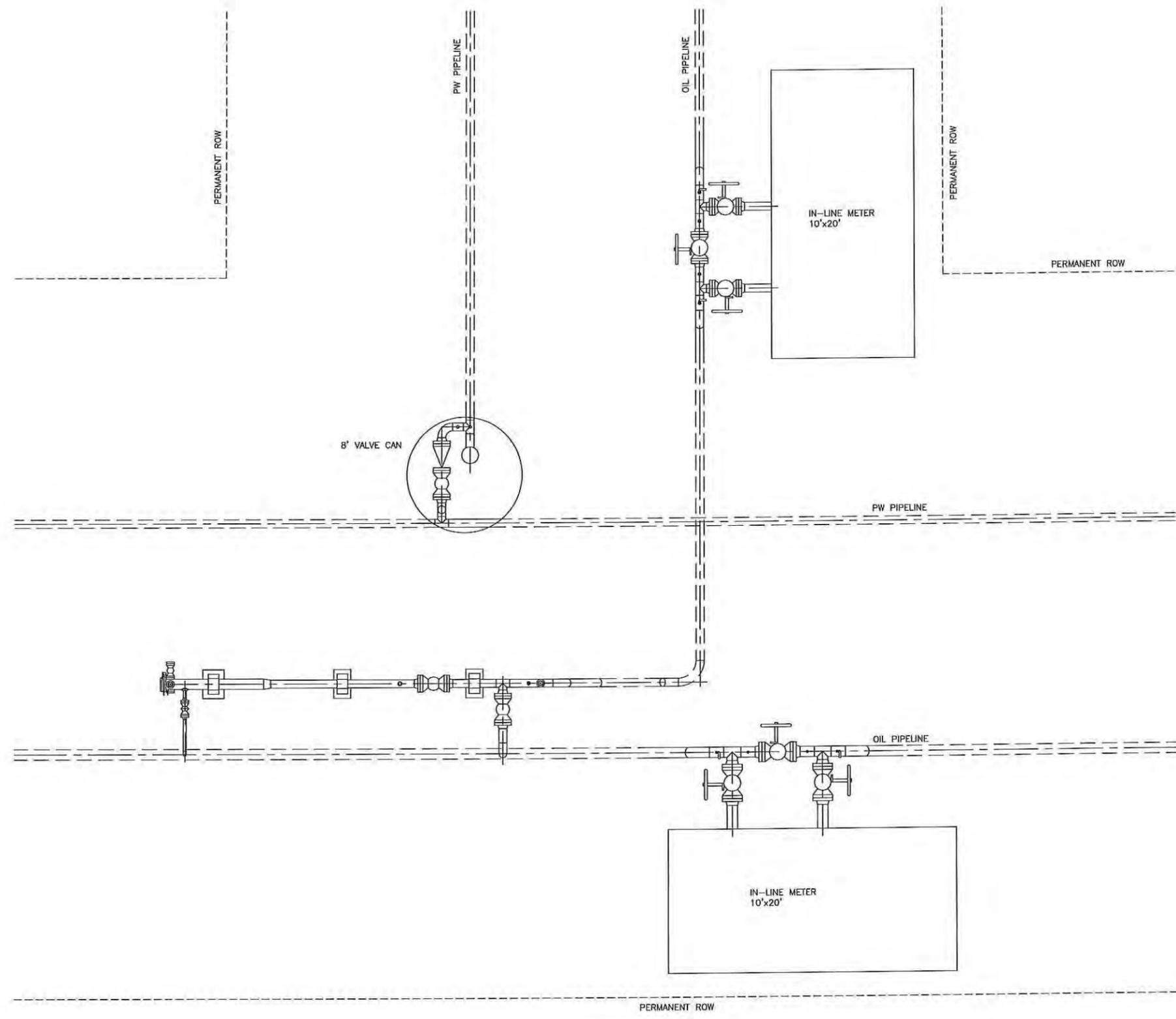


15 E. 5TH St., Suite 2700
Tulsa, OK 74103
918-382-5100

TYPICAL CONSTRUCTION
SIDE SLOPE
USFS NATIONAL FOREST LAND

Drawn ACH	Date 3/12/14	Scale NONE	Rev 0
Checked -	Eng app -	Dwg no STD-1032	

Plot info: 5-09-13 - 10:40am-00221367-2:01_CEEFS Drawings and Documents\12_Drafting\09_Design_Tools\PIG LAUNCHERS & RECEIVERS\TypicalLauncherAndReceiver 1 ACRE LOT 90 In-LineMeter.dwg



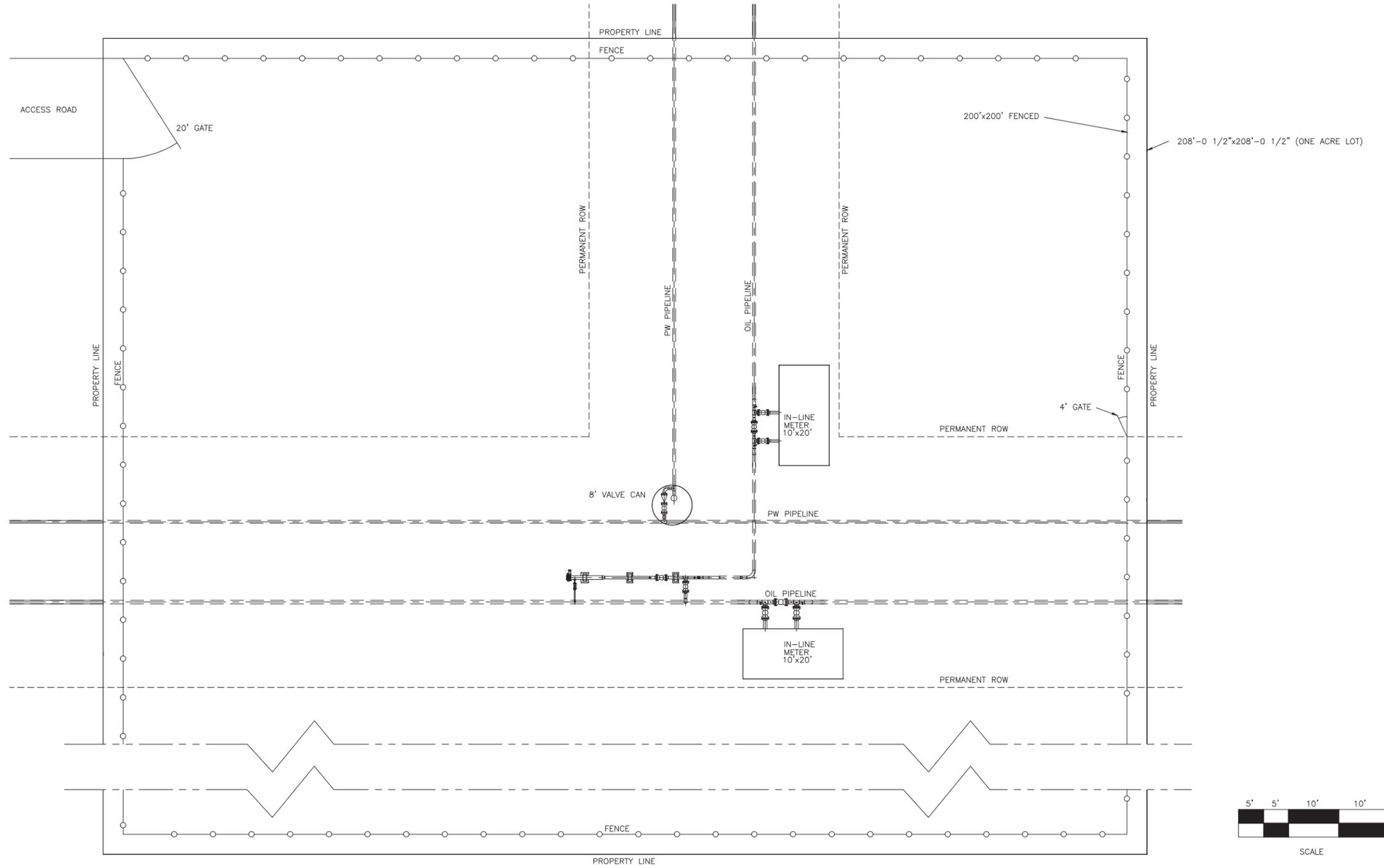
NOTE:
1. PERMANENT ROW VARIES BETWEEN 30' AND 50'.
FOR ACTUAL ROW SEE ALIGNMENT SHEET.

ENABLE MIDSTREAM PARTNERS
Field Services
P.O. Box 21734 Shreveport, LA 71151
318-429-2805
www.centerpointenergy.com

**TYPICAL DRAWING
LATERAL CONNECTION
IN-LINE METER LOCATIONS**

DWG NO	TITLE	REV	BY	APP	DATE	DESCRIPTION	Drawn BWS	Date 5/9/13	Scale 3/32"=1'-0"	Fac. no XXX	Rev
	REFERENCE DRAWINGS					REVISIONS	Checked -	Eng app -	Design -	Dwg no XXX-XXX-X-XXX	-

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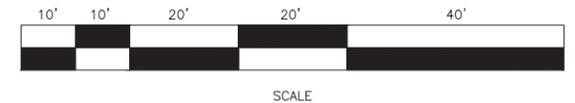
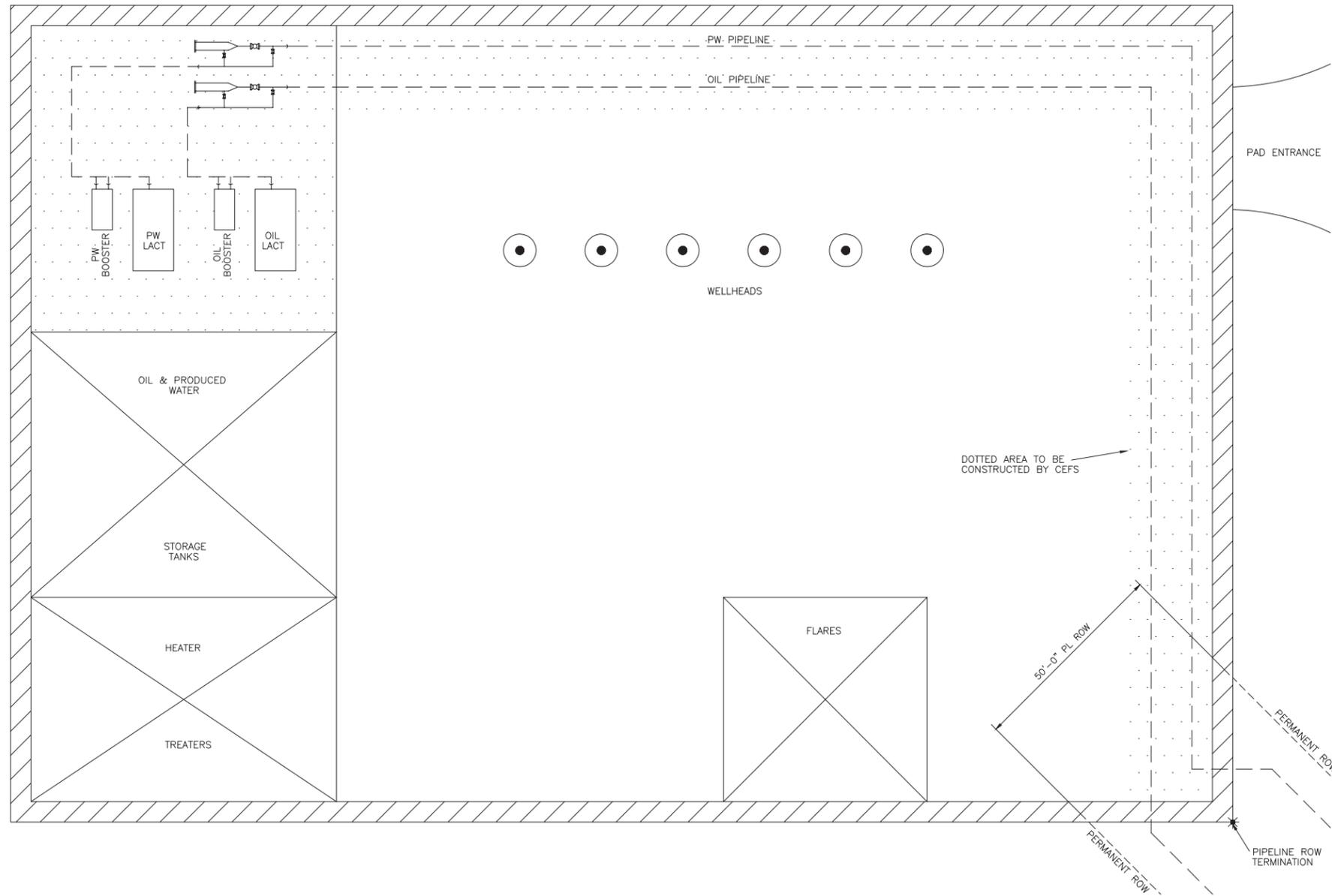
NOTE:
1. PERMANENT ROW VARIES BETWEEN 30' AND 50'.
FOR ACTUAL ROW SEE ALIGNMENT SHEET.

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MIDSTREAM PARTNERS P.O. Box 21734 Shreveport, LA 71151
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TYPICAL DRAWING
LATERAL CONNECTION
IN-LINE METER LOCATIONS 1 ACRE LOT

DWG NO	TITLE	REV	BY	APP	DATE	DESCRIPTION	Drawn	Date	Scale	Fac. no	Rev
	REFERENCE DRAWINGS					REVISIONS	BWS	5/9/13	3/32"=1'-0"	XXX	-
							Checked	Eng app	Design	Dwg no XXX-XXX-X-XXX	-

Plot Info: 3-12-14 - 1:45pm - 00224105-Z:\01_CEFS_Drawings and Documents\12_Drafting\09_Design_Tools\PIG_LAUNCHERS & RECEIVERS\PROPOSED_PLOT_WELL_PAD.dwg



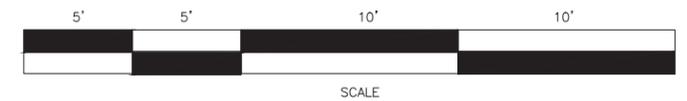
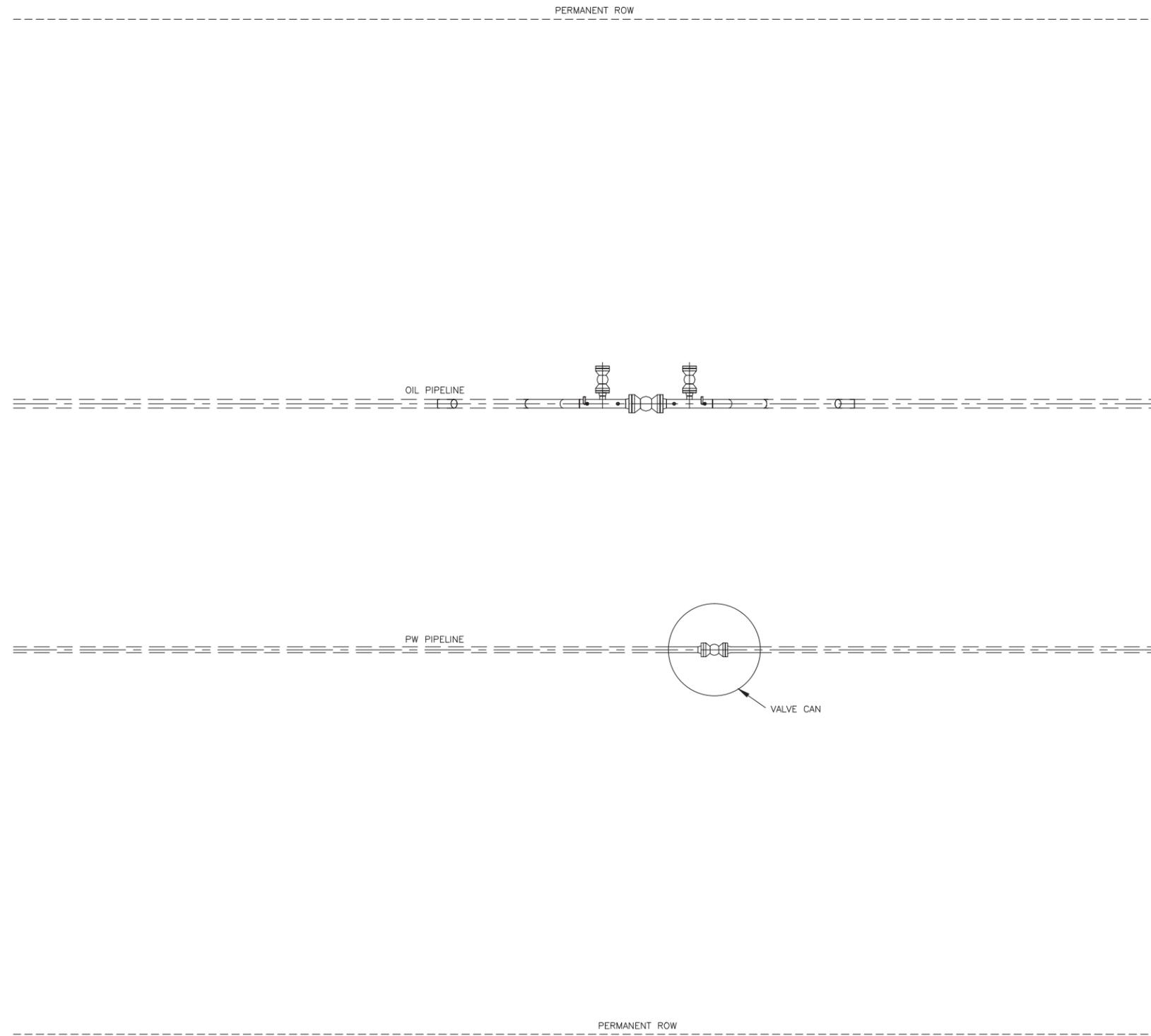
NOTE:
1. PERMANENT ROW VARIES BETWEEN 30' AND 50'.
FOR ACTUAL ROW SEE ALIGNMENT SHEET.

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MIDSTREAM PARTNERS
15 E. 5th St. Suite 2700, Tulsa, OK 74103
918-382-5100

TYPICAL DRAWING
WELL PAD PLOT PLAN

DWG NO	TITLE	REV	BY	APP	DATE	DESCRIPTION	Drawn BWS	Date 2/13/13	Scale 1/16"=1'-0"	Fac. no XXX	Rev
	REFERENCE DRAWINGS					REVISIONS	Checked -	Eng app -	Design -	Dwg no XXX-XXX-X-XXX	-

Plot info: 3-12-14 1:46pm - 00224105-Z:\01_CDFS Drawings and Documents\12_Drafting\09_Design Tools\PIG LAUNCHERS & RECEIVERS\TYPICAL MAINLINE VALVE_BOTH.dwg



NOTE:
1. PERMANENT ROW VARIES BETWEEN 30' AND 50'.
FOR ACTUAL ROW SEE ALIGNMENT SHEET.

ENABLE MIDSTREAM PARTNERS 15 E. 5th St. Suite 2700, Tulsa, OK 74103
918-382-5100

TYPICAL DRAWING
MAINLINE VALVE (OIL AND WATER)

DWG NO	TITLE	REV	BY	APP	DATE	DESCRIPTION	Drawn	BWS	Date	2/18/13	Scale	1/4"=1'-0"	Fac. no	XXX	Rev
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