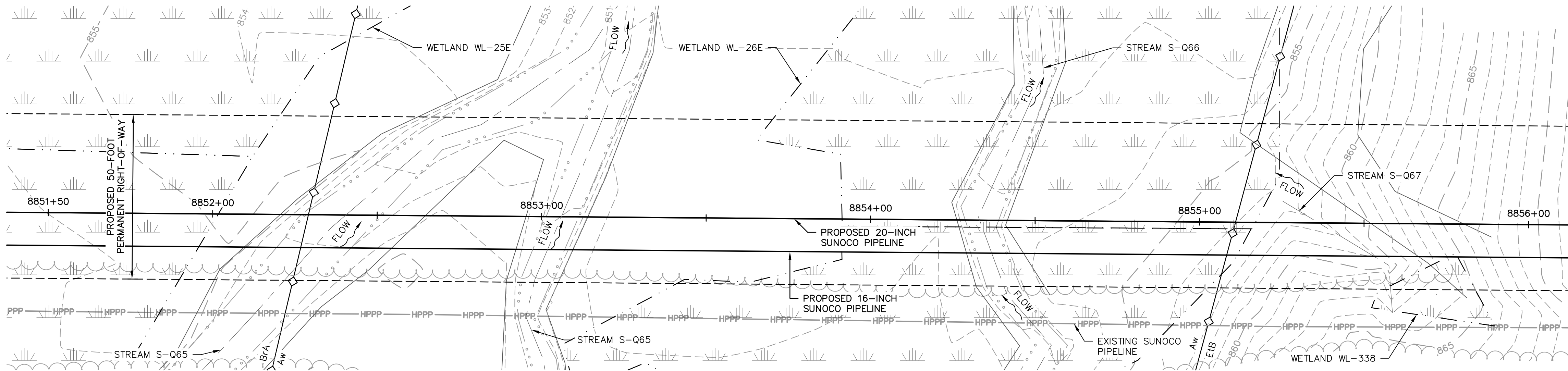
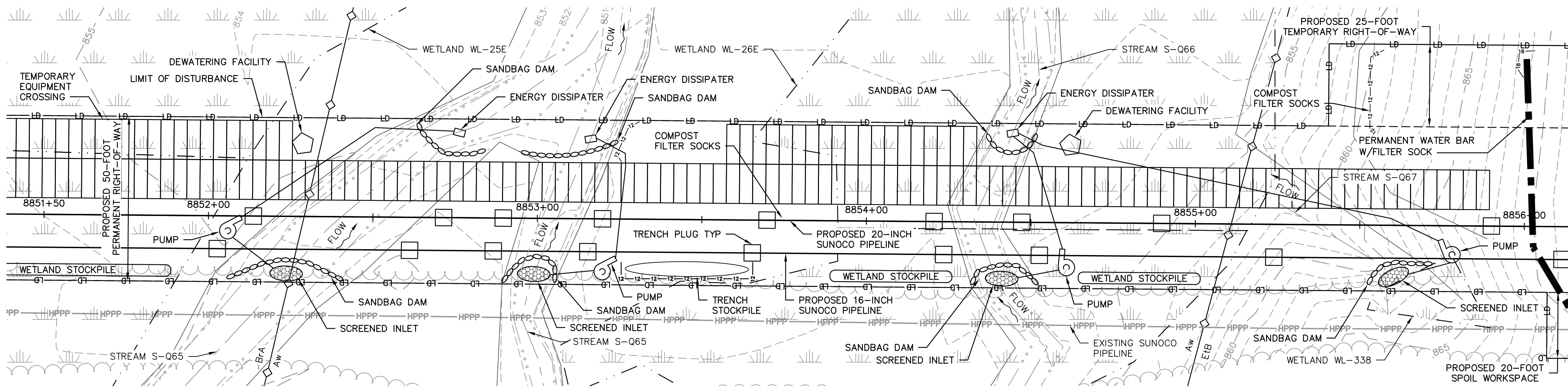
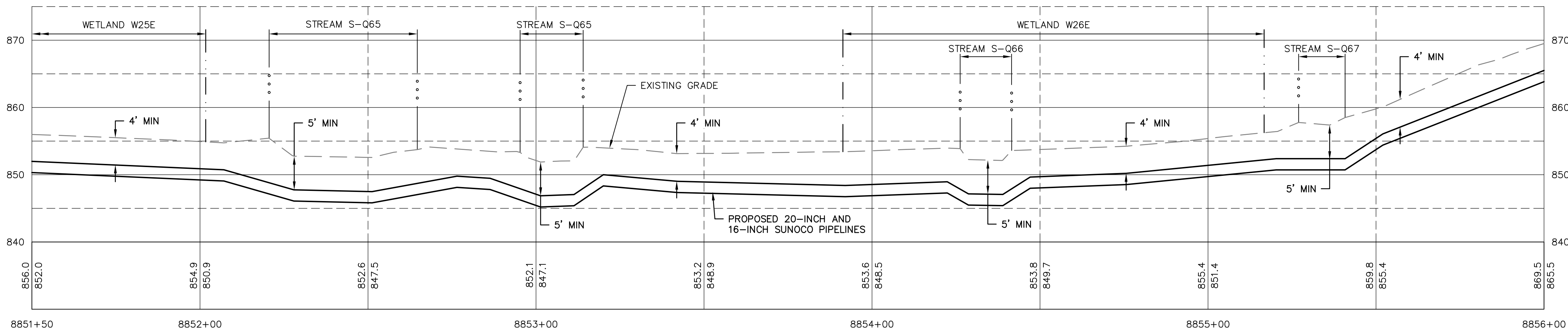




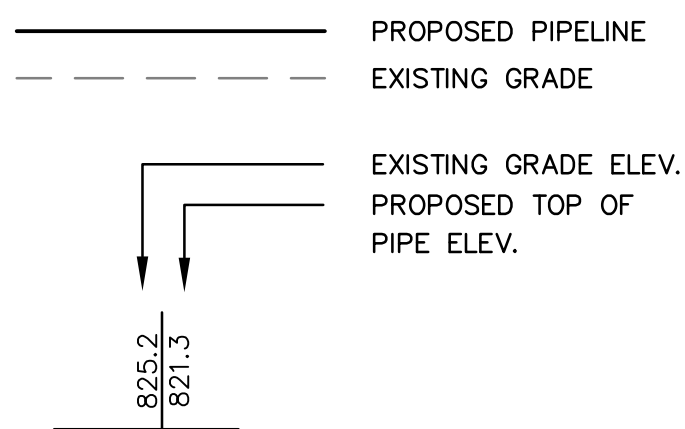
EXISTING CONDITIONS PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'

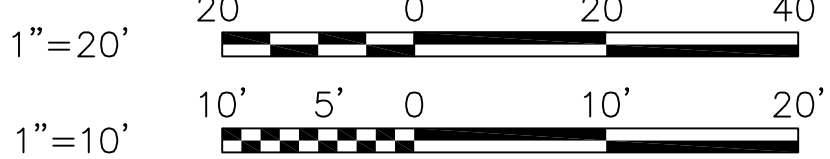


PROFILE LEGEND:



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

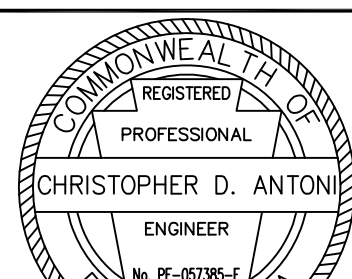
STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-Q65, S-Q66 & S-Q67 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
DWG. NO. S-Q66-A				REV. NO. 0



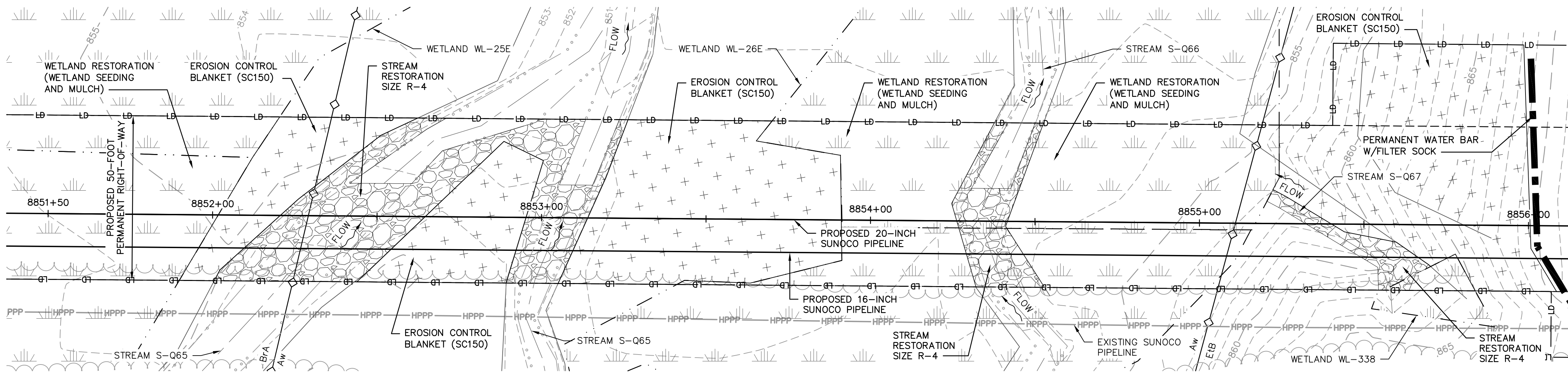
CHRISTOPHER D. ANTONI
PE-057385-E

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SCALE	AS NOTED
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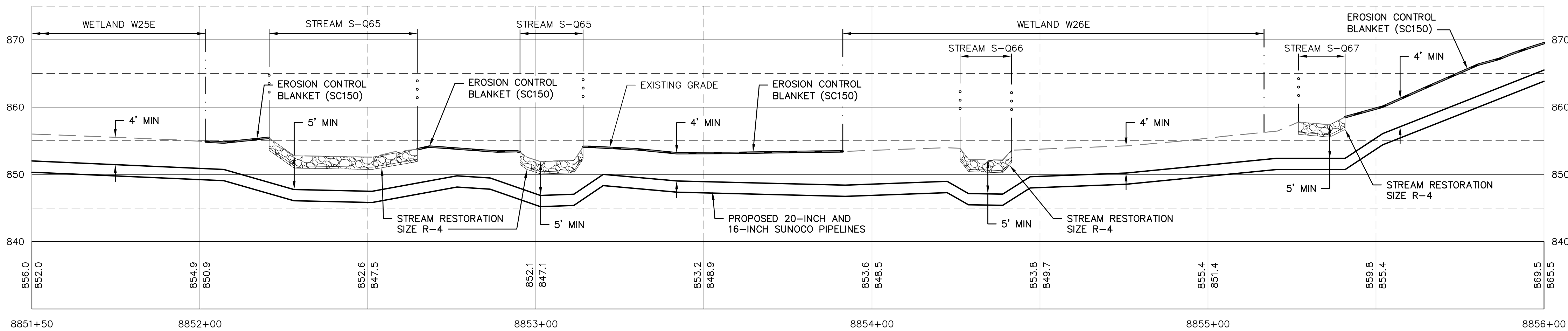
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION
SERVICE.

STV PROJECT No.: 38-17335



PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE

HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

PROFILE LEGEND:

— PROPOSED PIPELINE
- - - EXISTING GRADE

— EXISTING GRADE ELEV.
— PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES

1"=20'



1"=10'



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
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- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

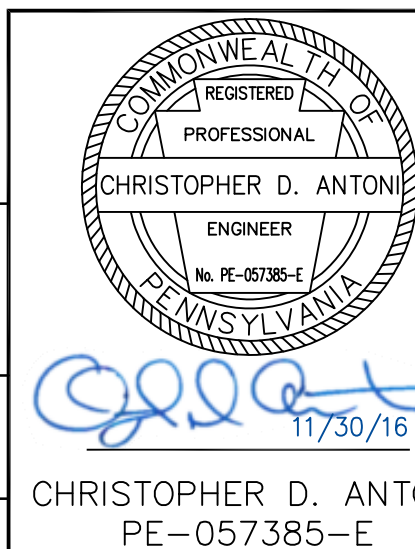
WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
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- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-Q65, S-Q66 & S-Q67 RESTORATION PLAN				
PERRY COUNTY, PA				
DWG. NO.			S-Q66-B	REV. NO.
				0

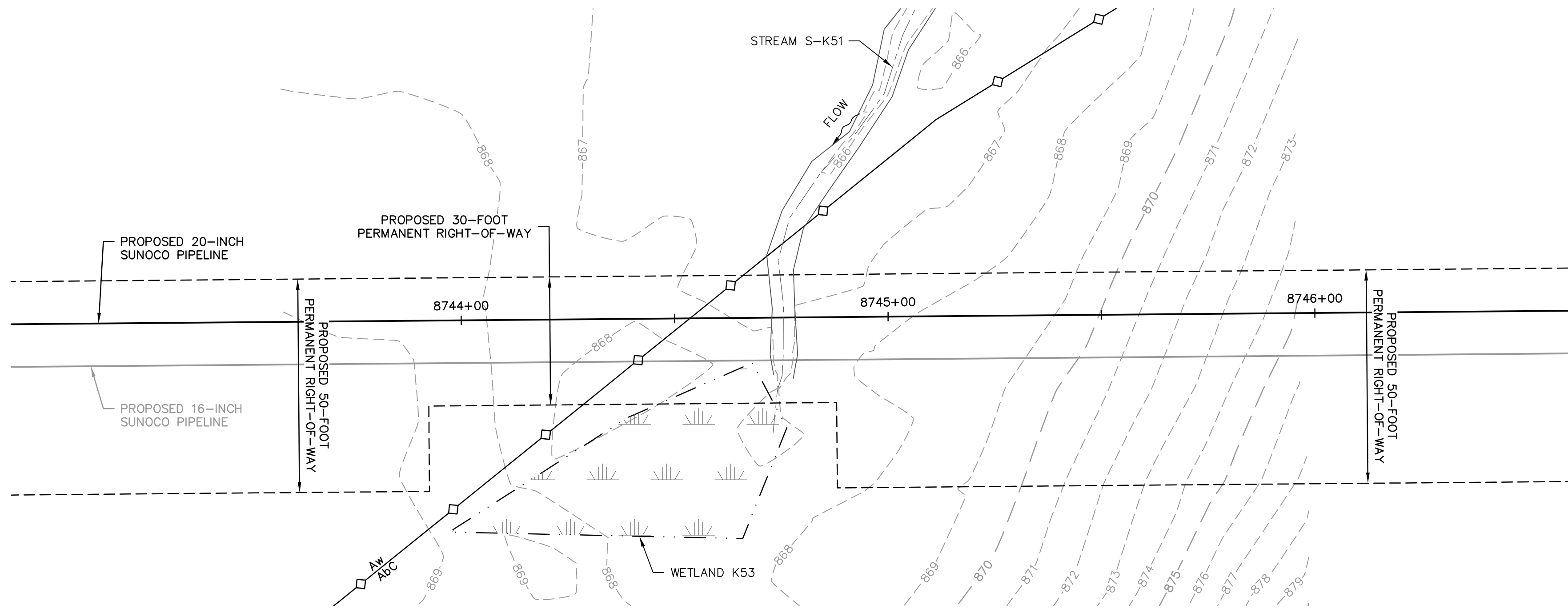


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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
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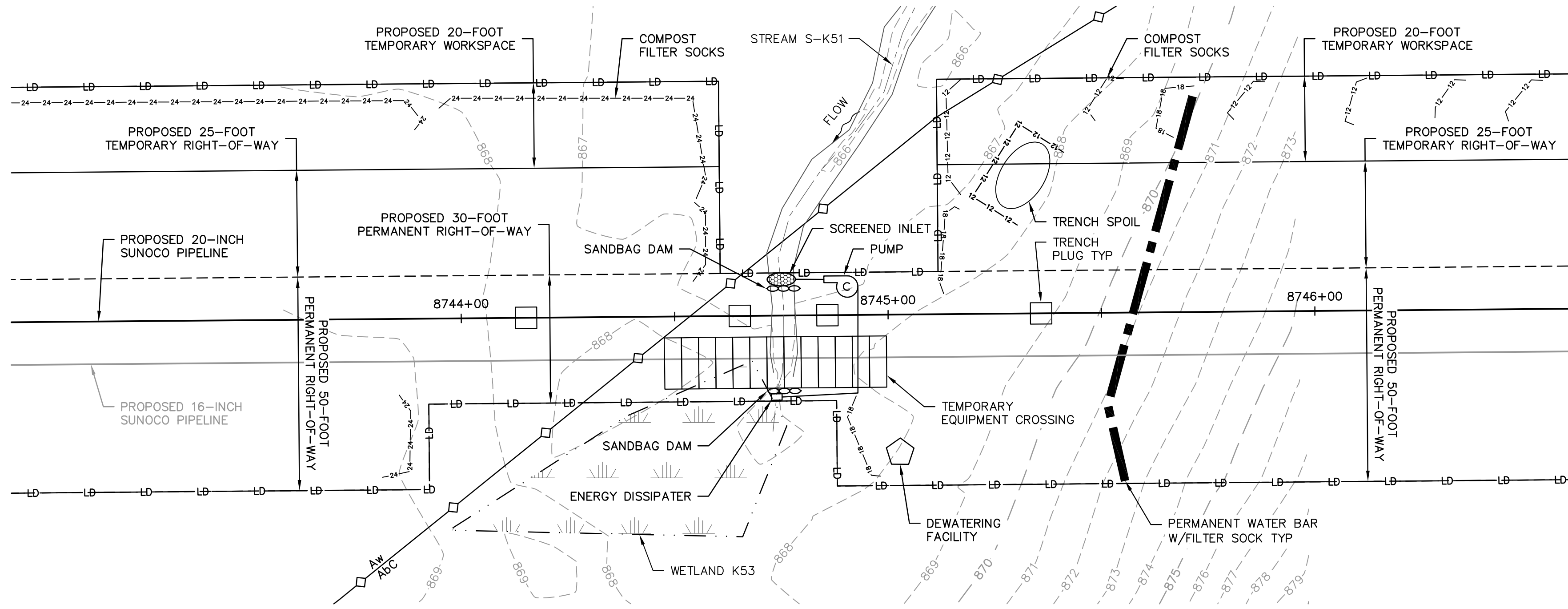
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA Houston, TX
Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
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SERVICE.

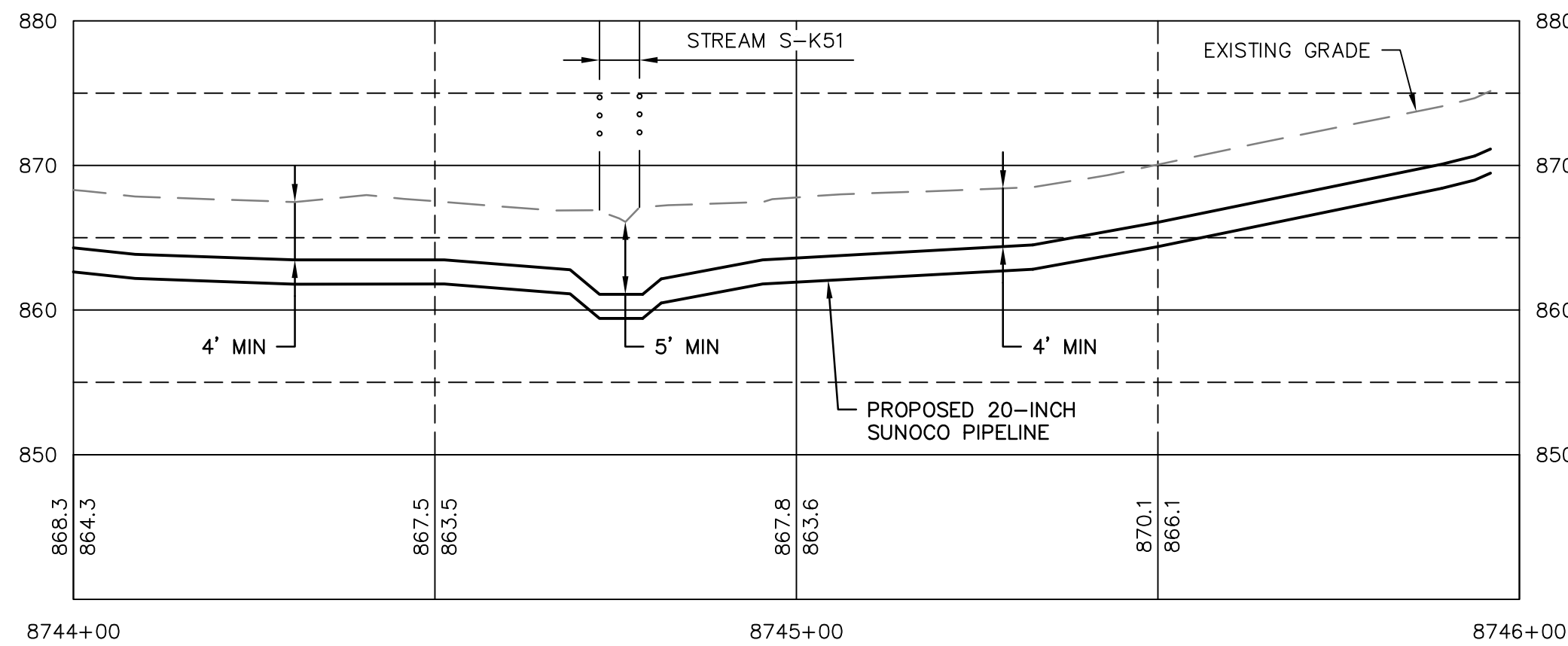
STV PROJECT No.: 38-17335



EXISTING CONDITIONS 20-INCH PLAN
SCALE: 1"=20'

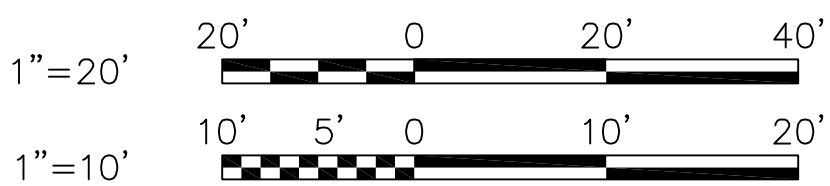


EROSION & SEDIMENTATION CONTROL 20-INCH PLAN
SCALE: 1"=20'



20-INCH PROFILE
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

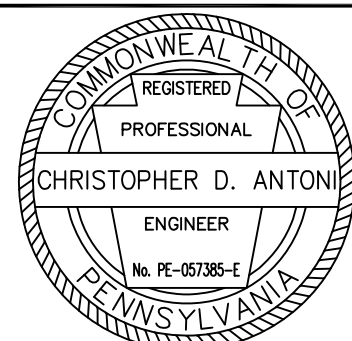
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

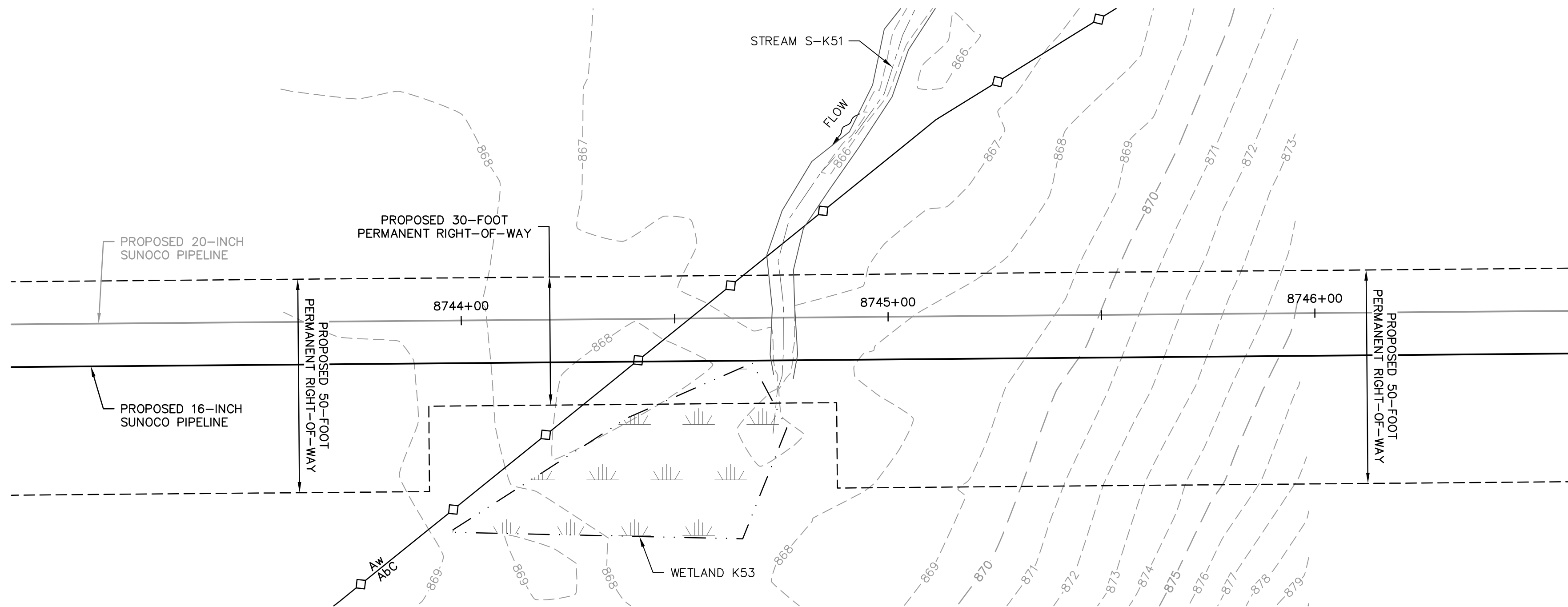


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PE-057385-E

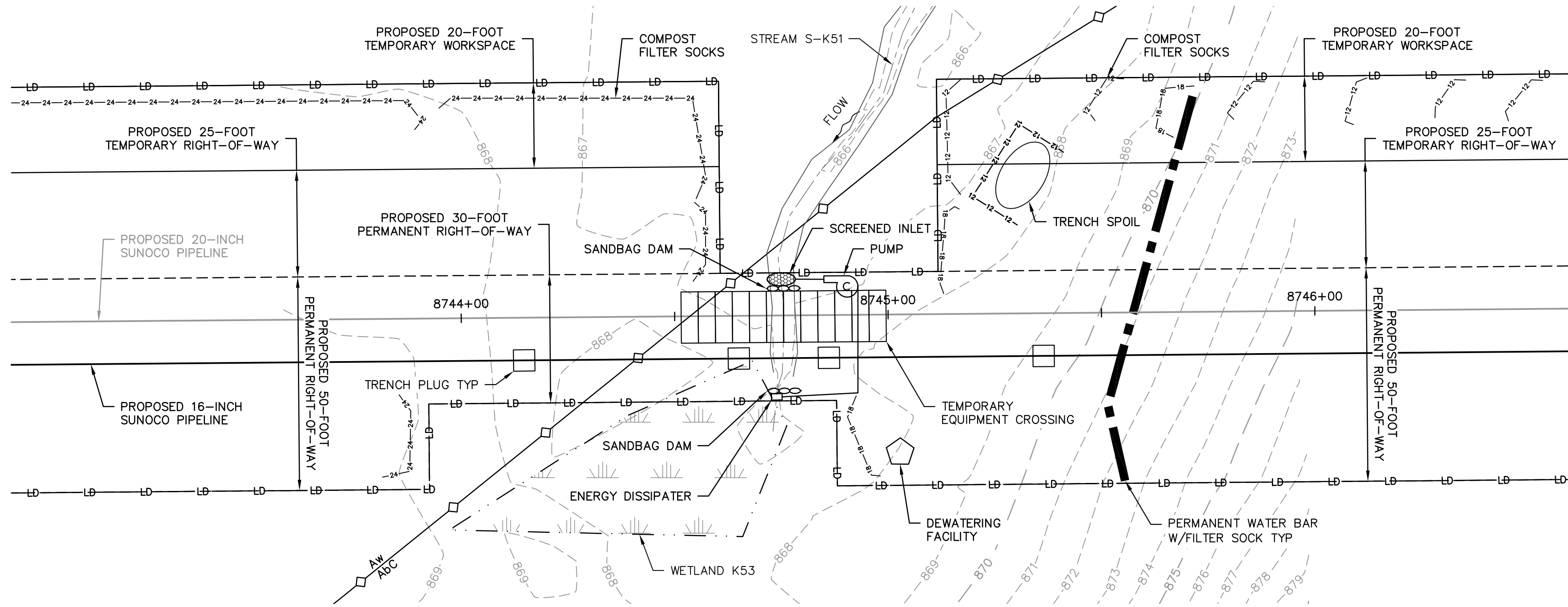
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SCALE	AS NOTED

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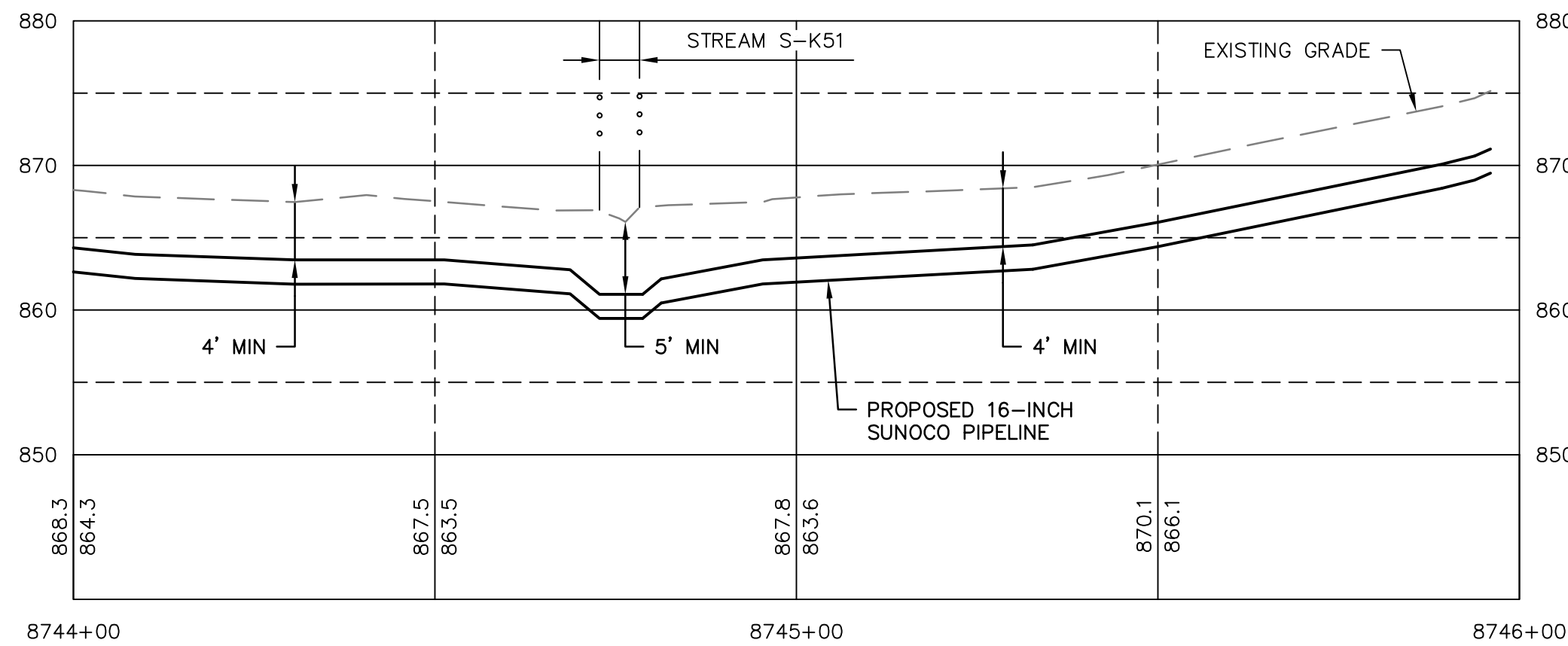
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-K51				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-K51-A1			0	



EXISTING CONDITIONS 16-INCH PLAN
SCALE: 1"=20'

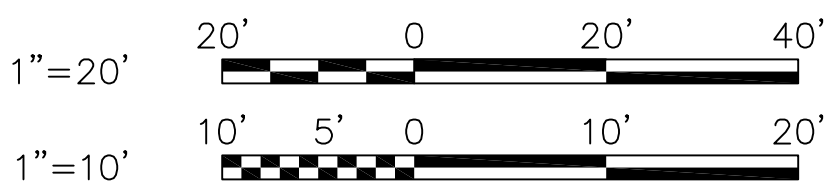


EROSION & SEDIMENTATION CONTROL 16-INCH PLAN
SCALE: 1"=20'



16-INCH PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
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4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
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	TOP/BOTTOM OF BANK
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	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
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	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

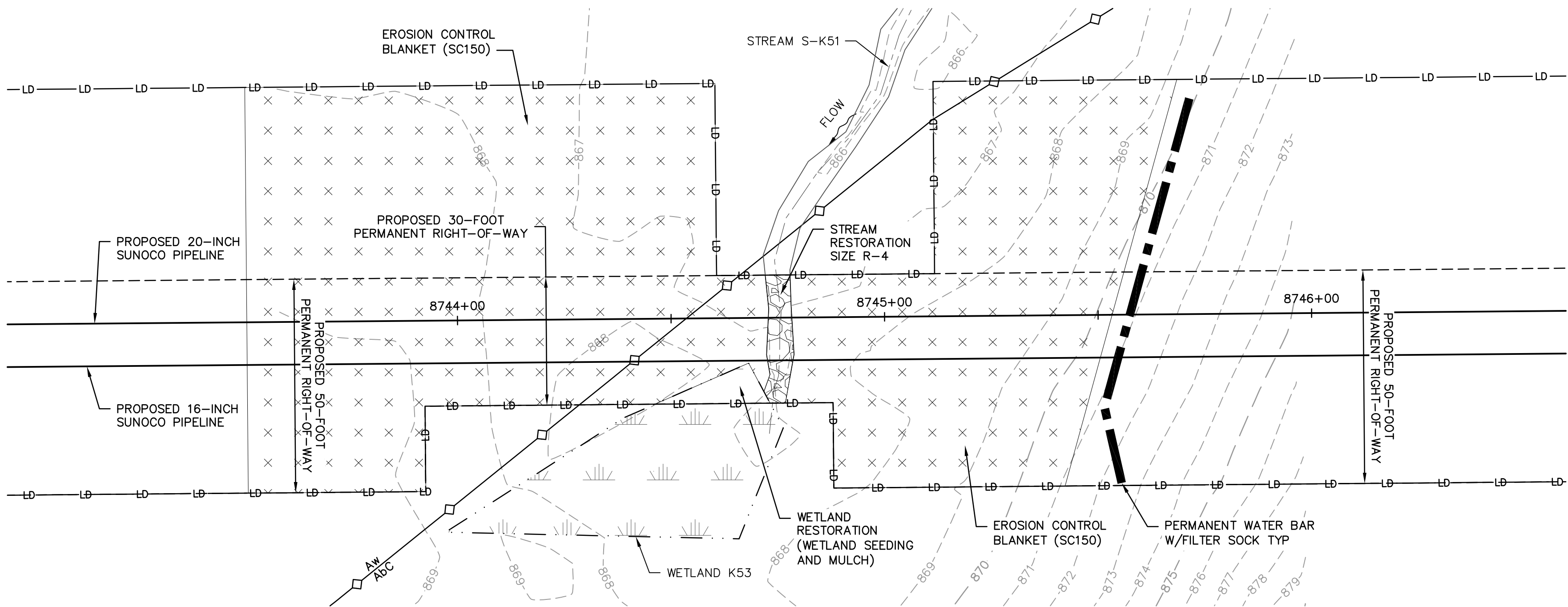


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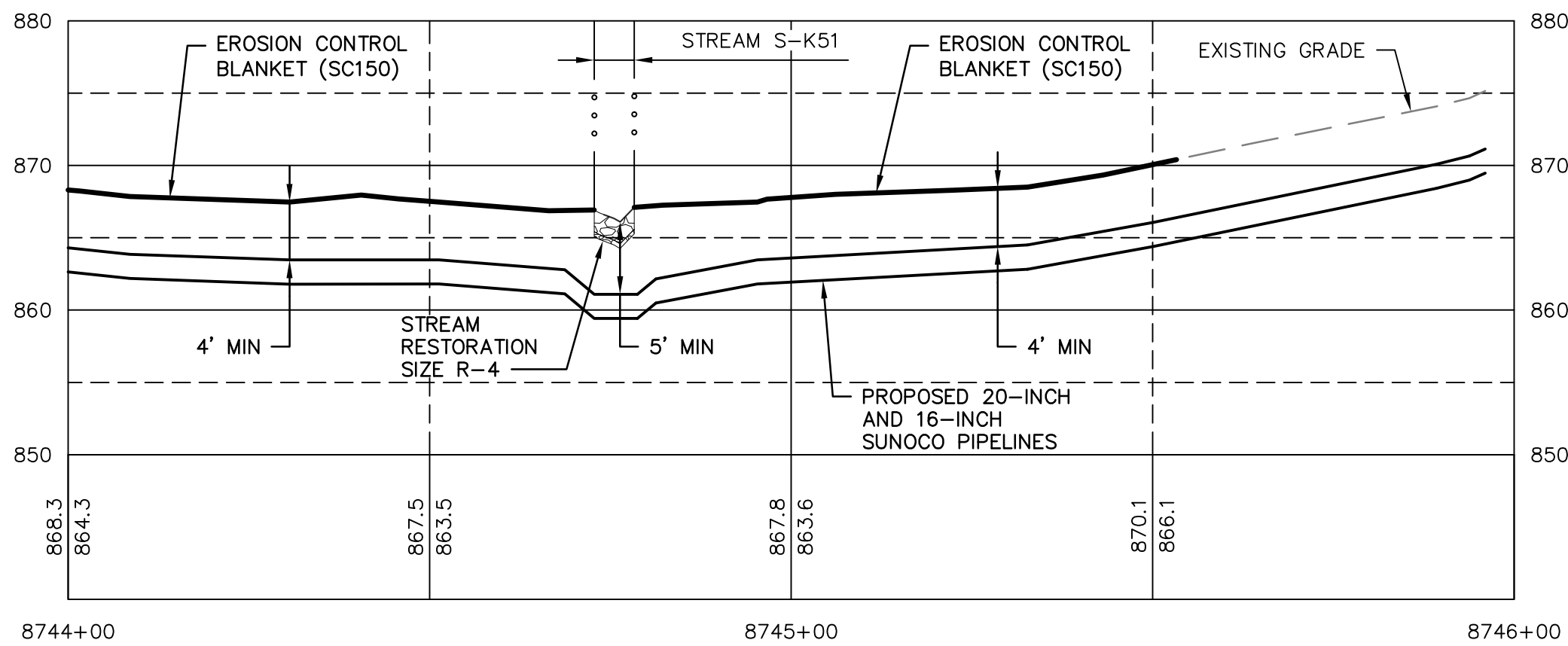
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DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-K51				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-K51-A2			0	

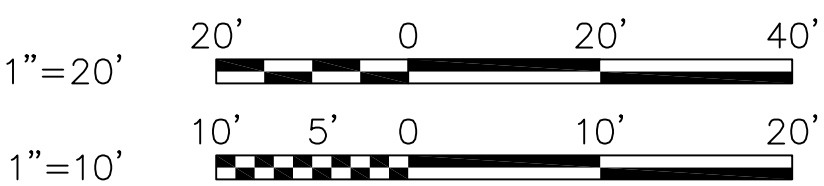


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

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- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

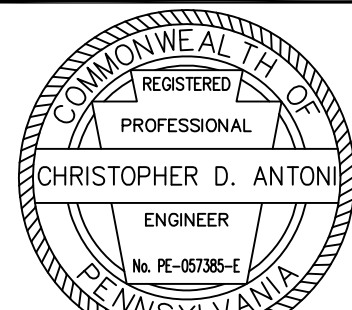
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

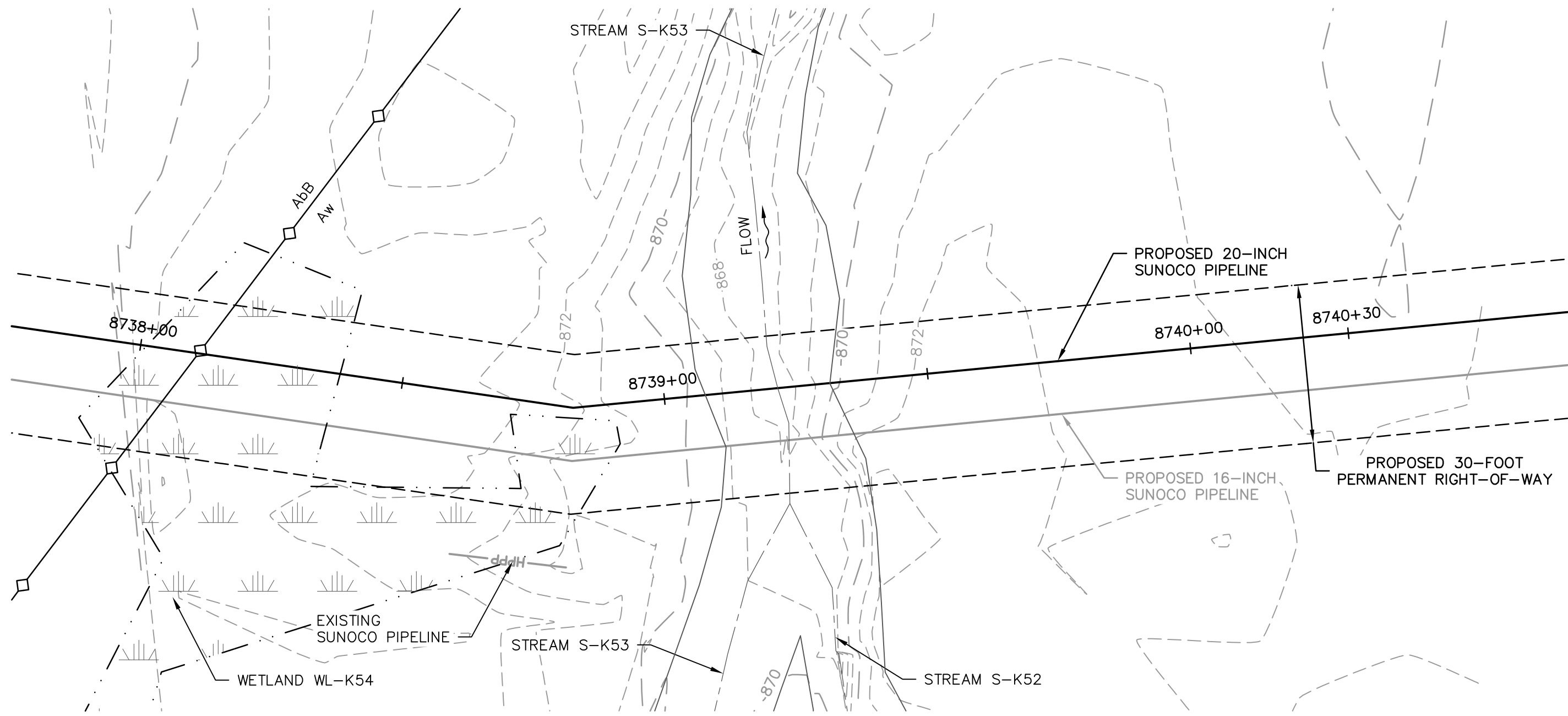
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REV.	DATE	APP#	DESCRIPTION	APPROVAL
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DWG. NO. S-K51-B				REV. NO. 0
PERRY COUNTY, PA				

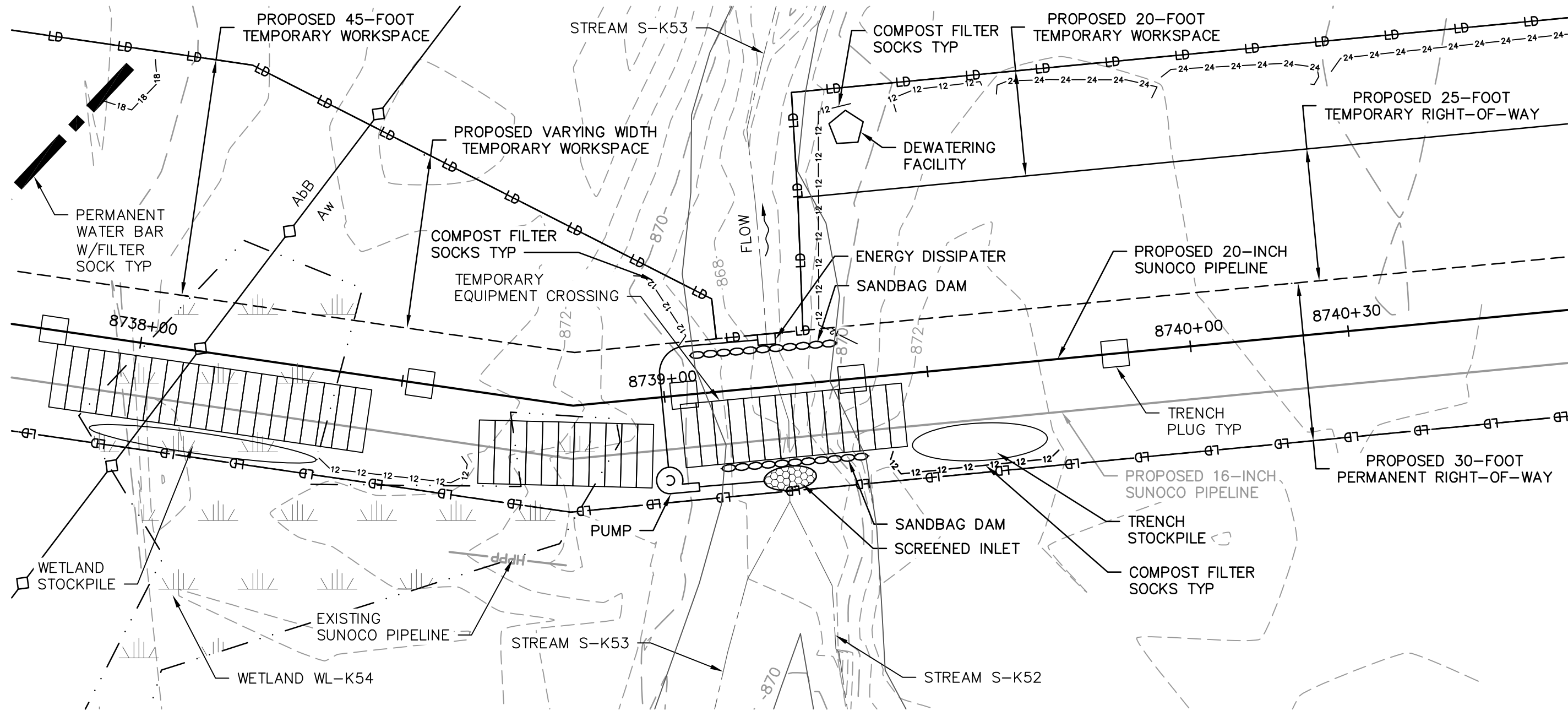
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE
CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT
LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION
SERVICE.

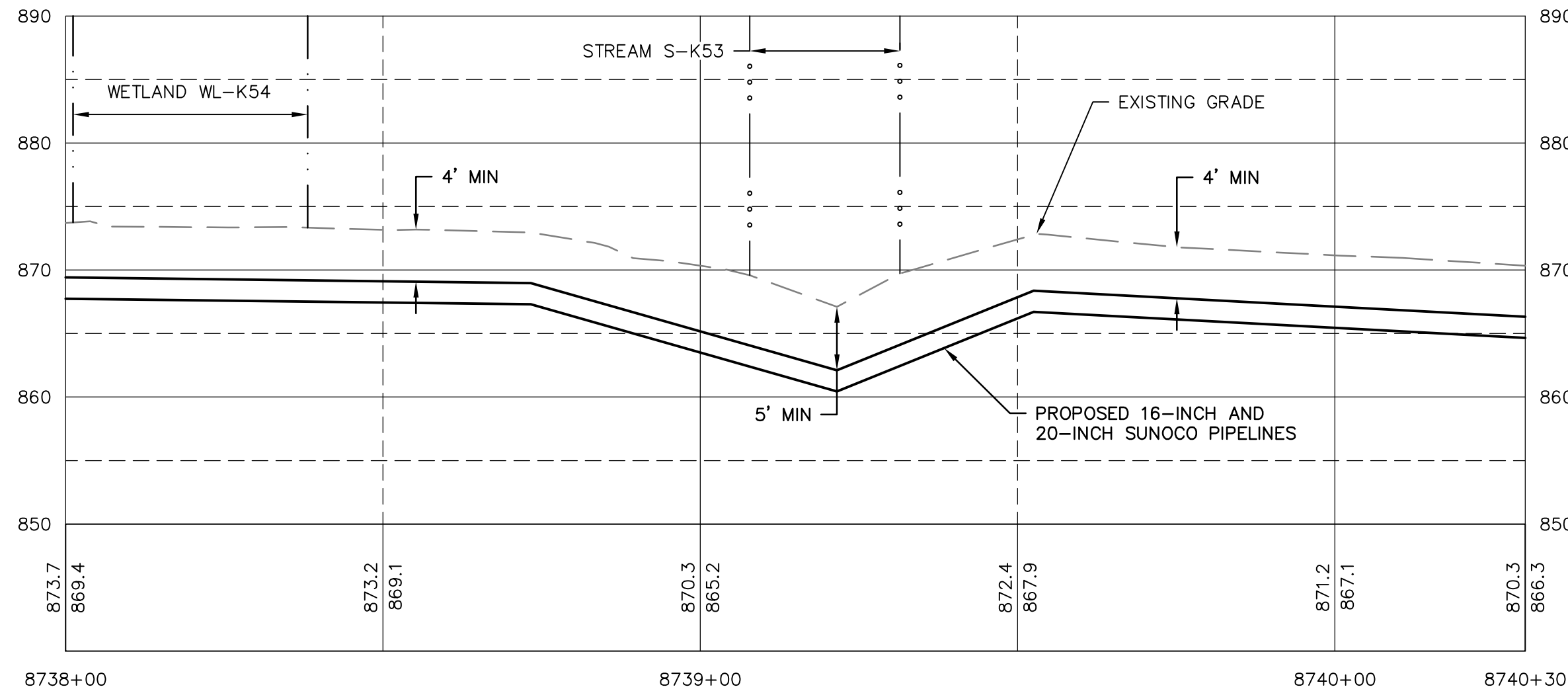
STV PROJECT No.: 38-17335



EXISTING CONDITIONS 20-INCH PLAN
SCALE: 1"=20'

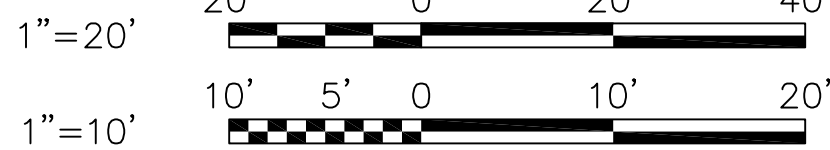


EROSION & SEDIMENTATION CONTROL 20-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAMS S-K52 AND S-K53
EXISTING CONDITIONS/EROSION &
SEDIMENTATION CONTROL PLANS

PERRY COUNTY, PA

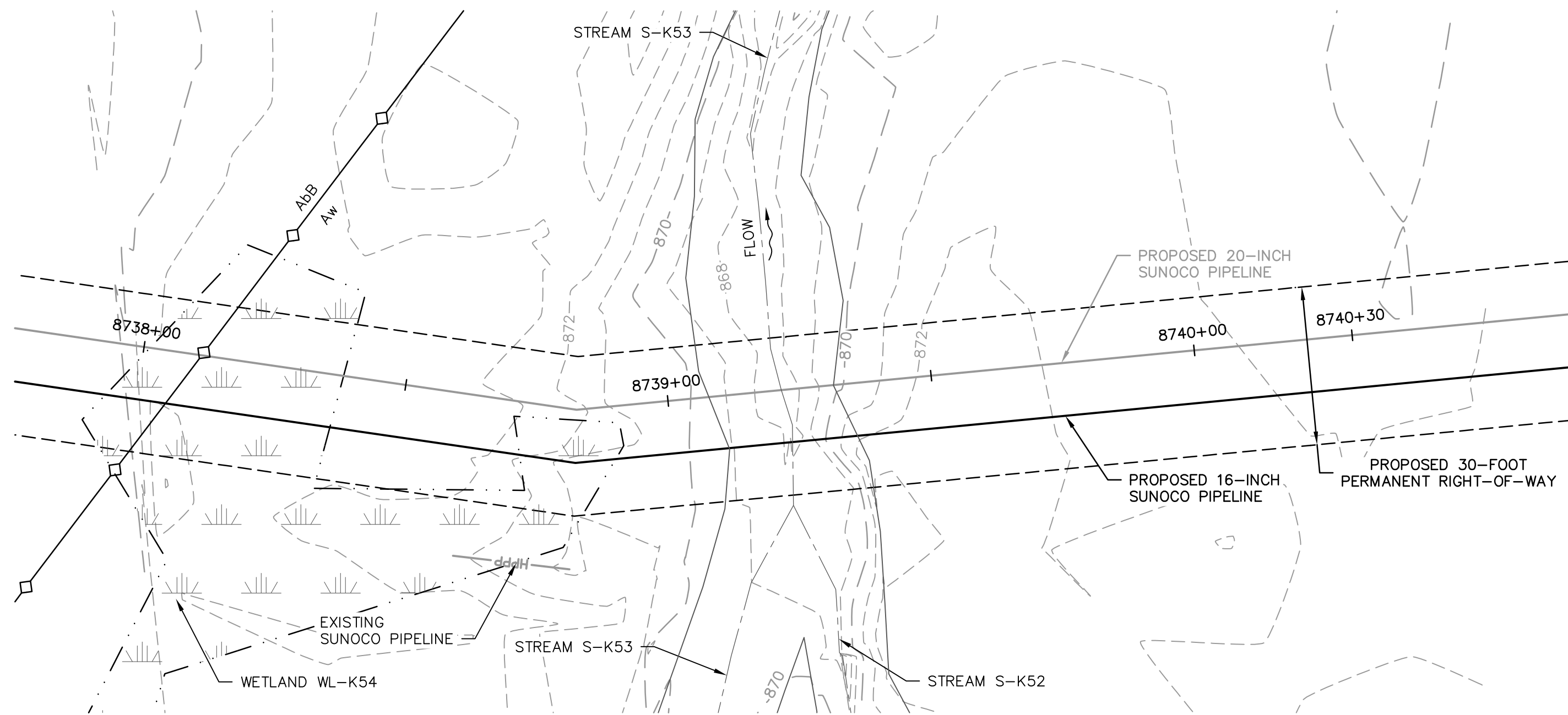
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S-K52-A1

REV. NO.
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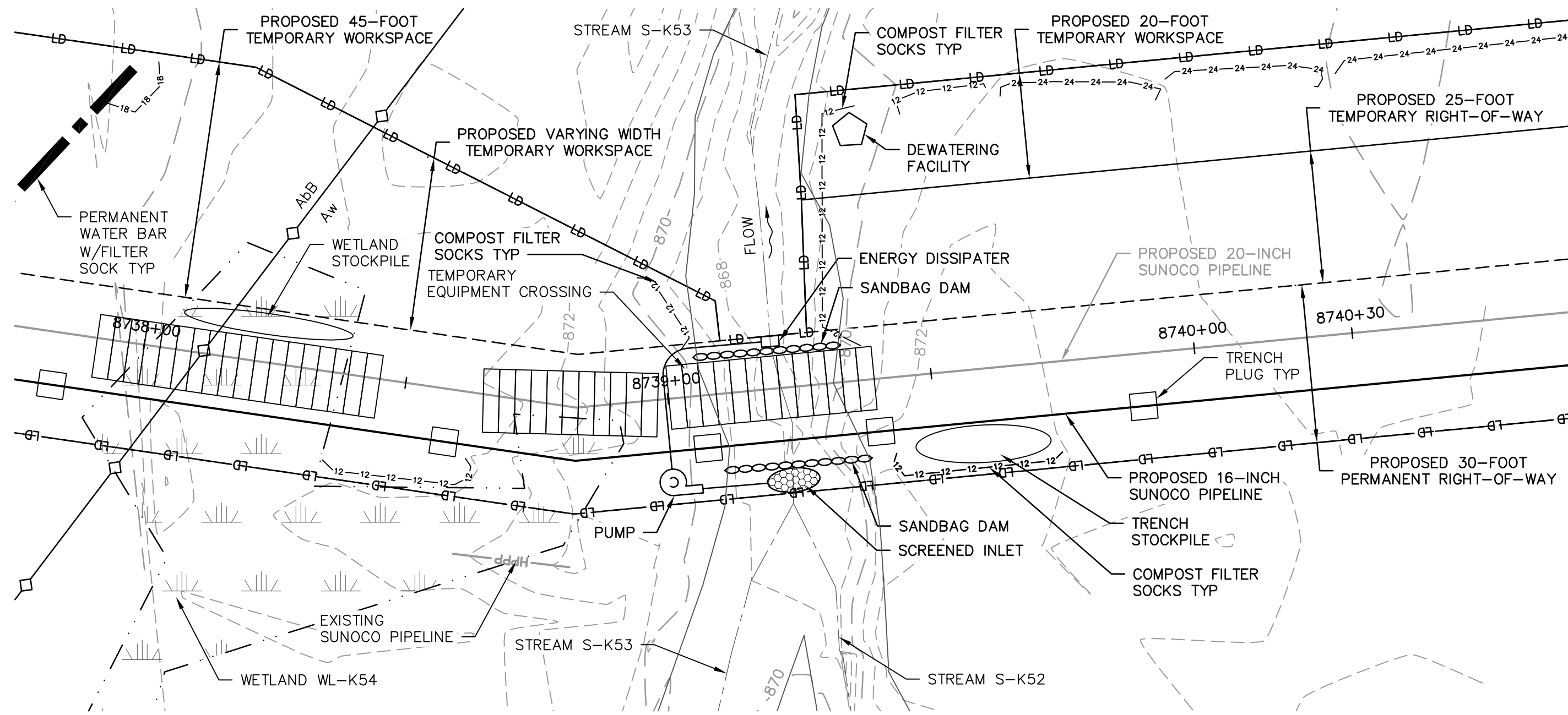
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

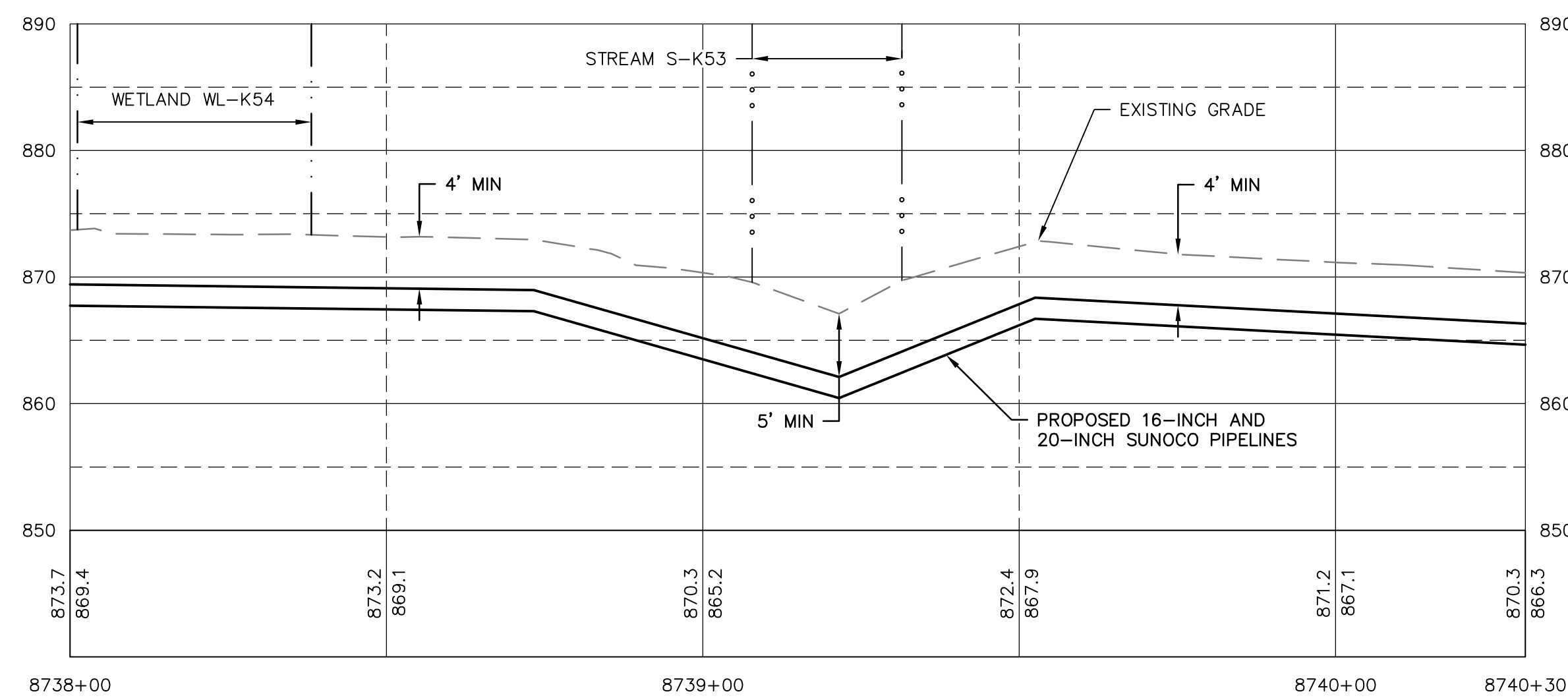
STV PROJECT No.: 38-17335



EXISTING CONDITIONS 16-INCH PLAN
SCALE: 1"=20'

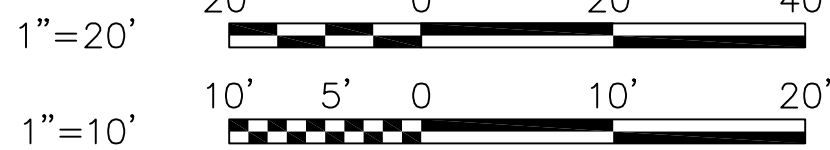


EROSION & SEDIMENTATION CONTROL 16-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
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	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAMS S-K52 AND S-K53
EXISTING CONDITIONS/EROSION &
SEDIMENTATION CONTROL PLANS

PERRY COUNTY, PA

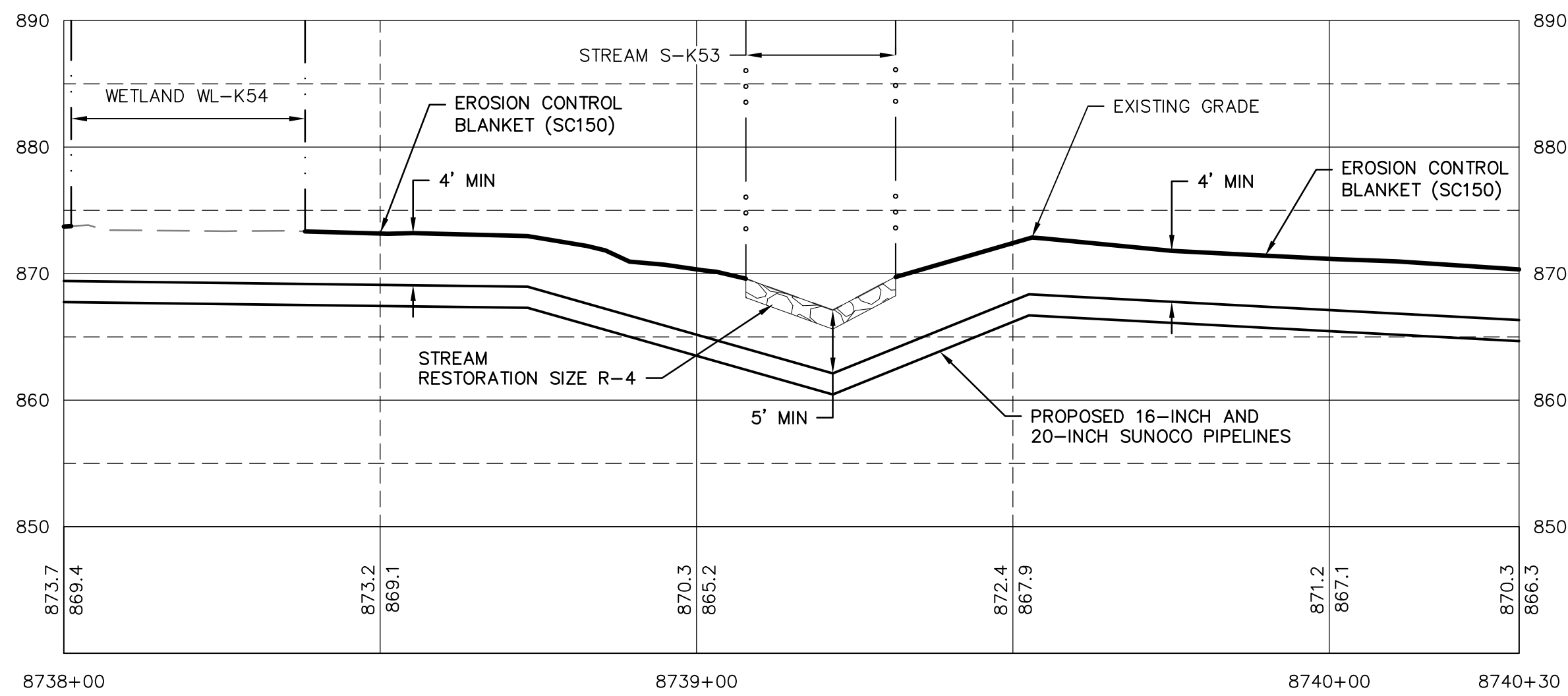
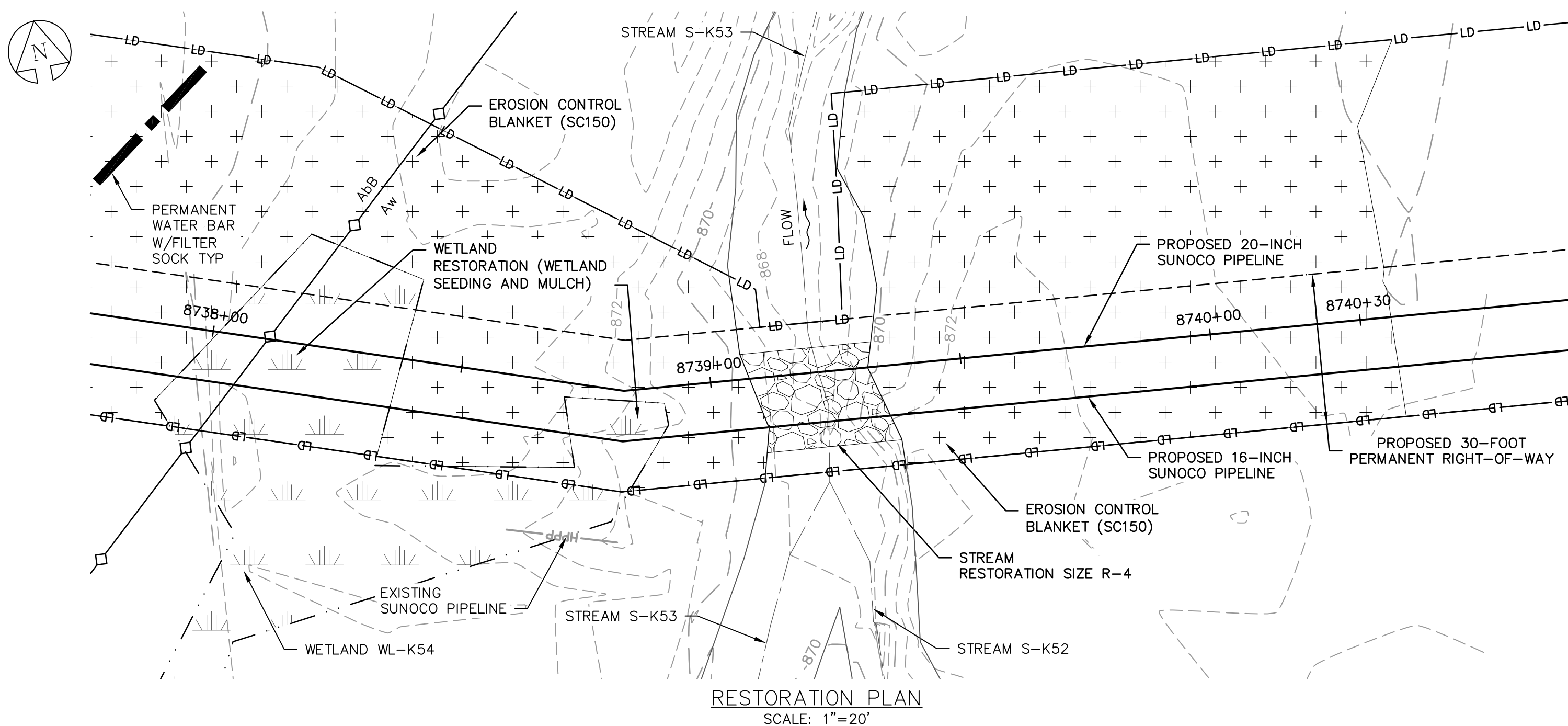
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S-K52-A2

REV. NO.
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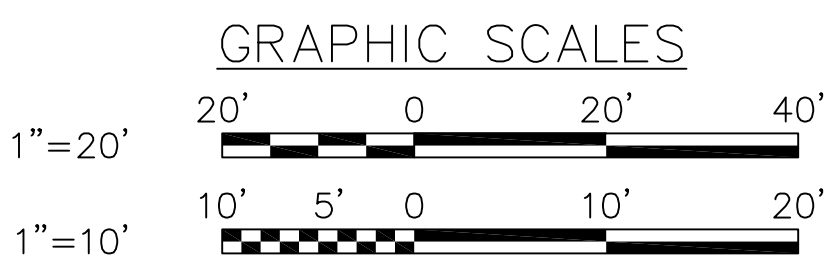
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

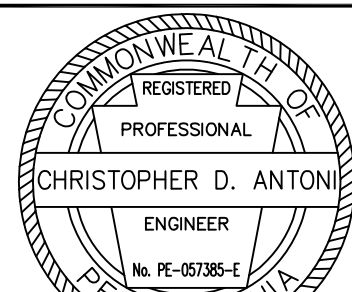
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
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	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

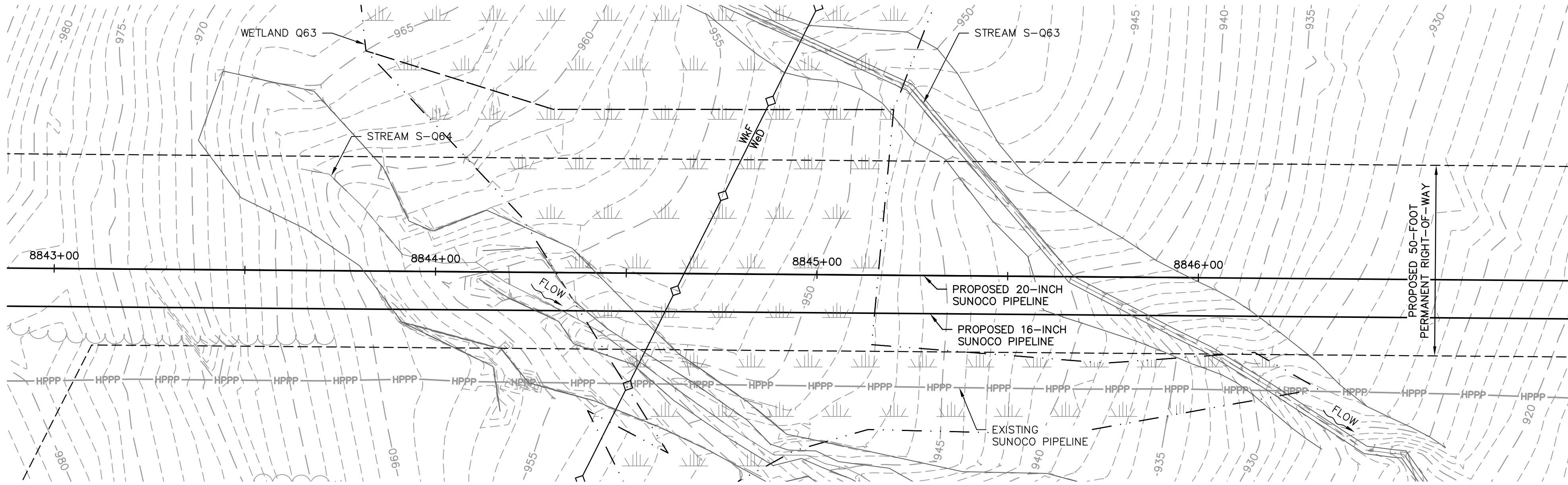
OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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DWG. NO. S-K52-B				REV. NO. 0
PERRY COUNTY, PA				

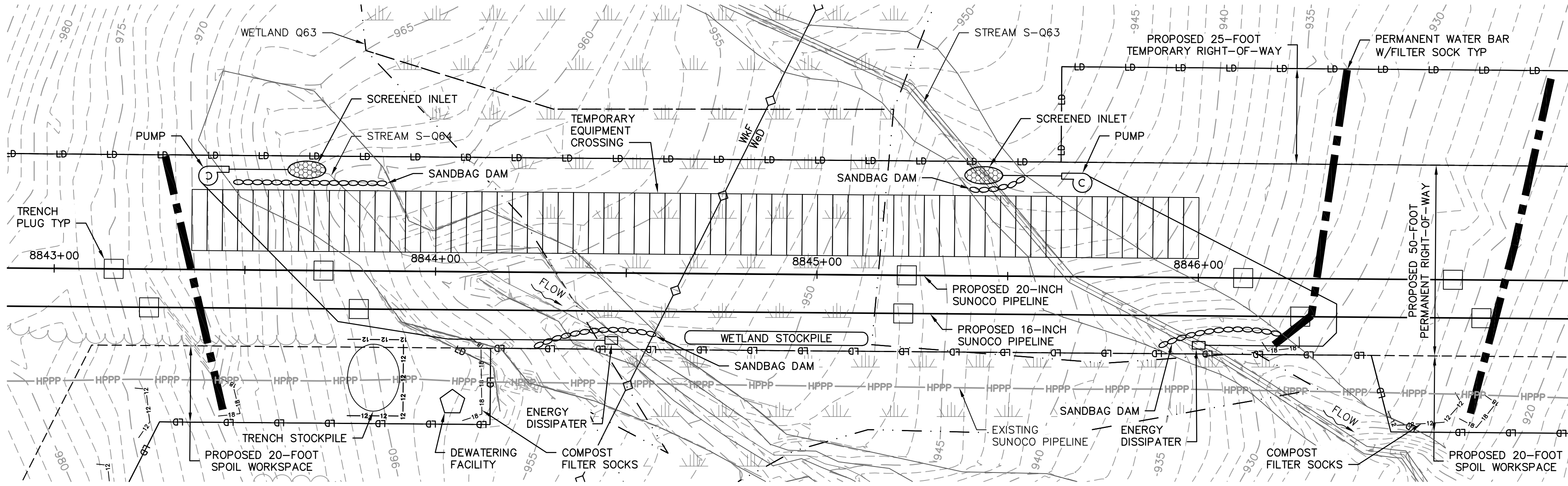
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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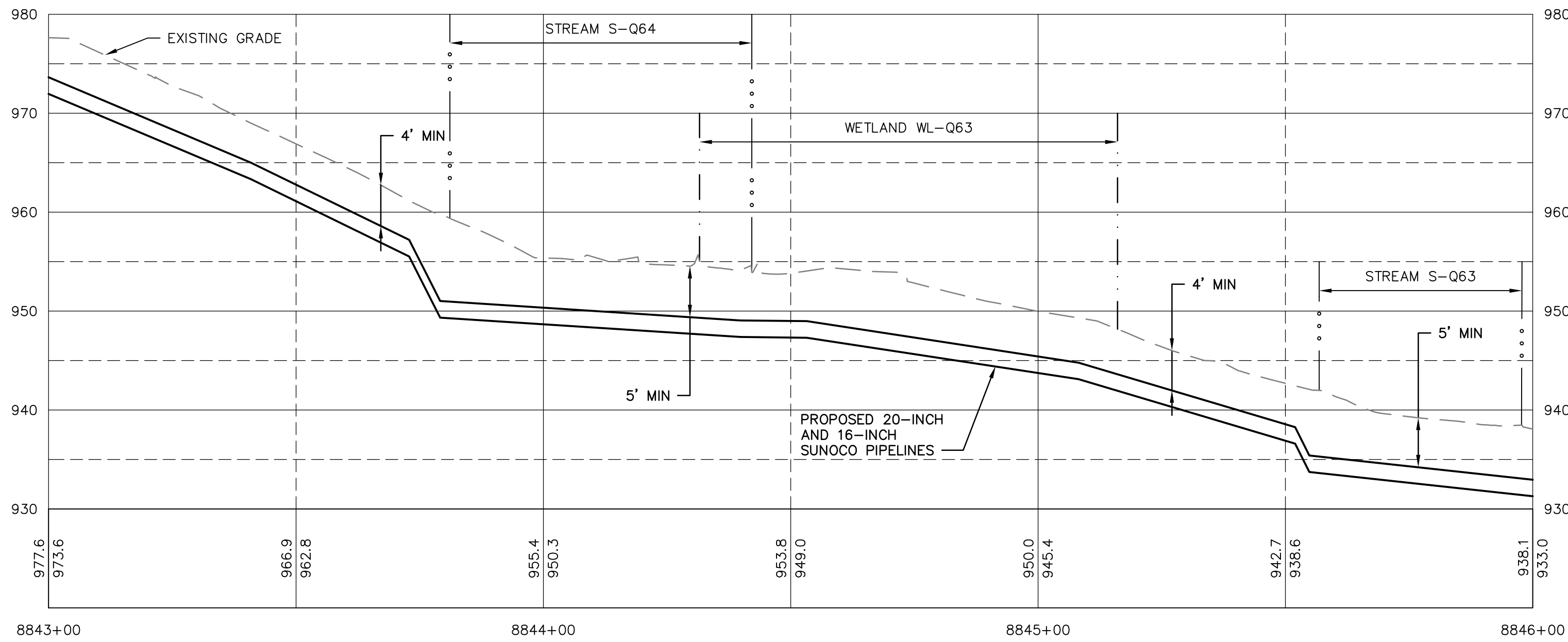
STV PROJECT No.: 38-17335



EXISTING CONDITIONS PLAN
SCALE: 1"=20'

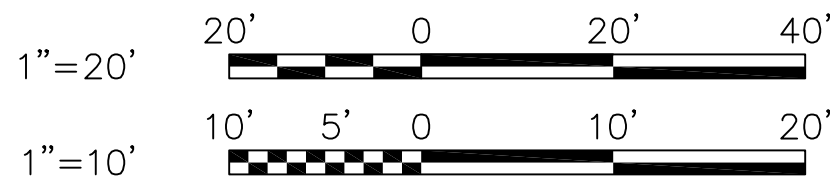


EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

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STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
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- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

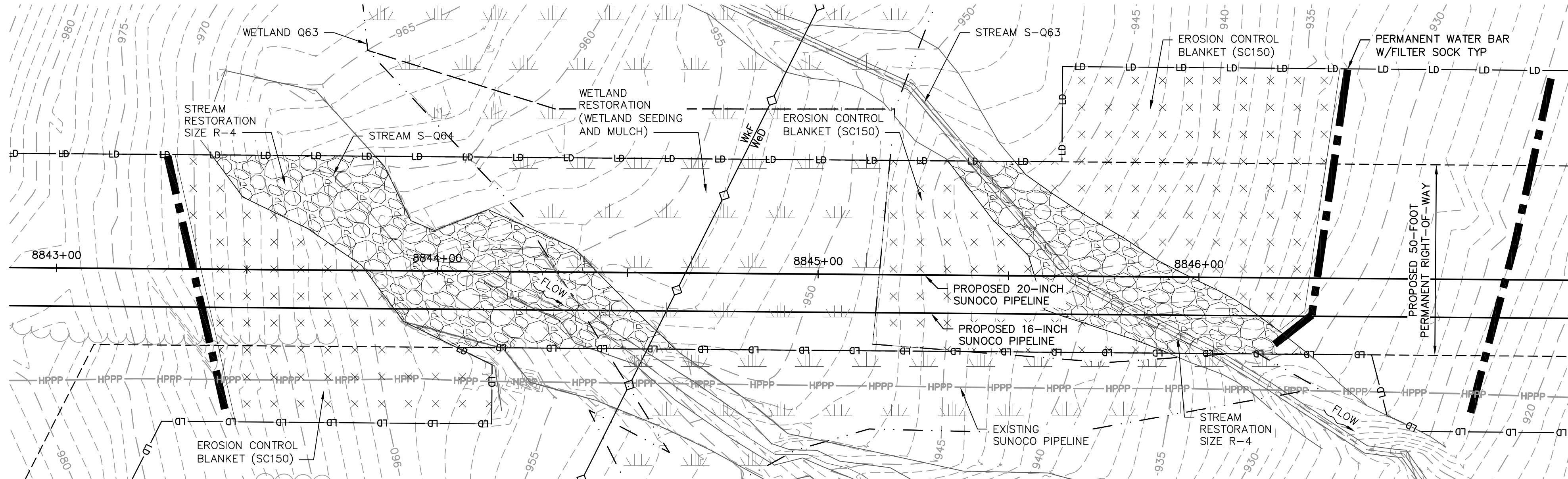


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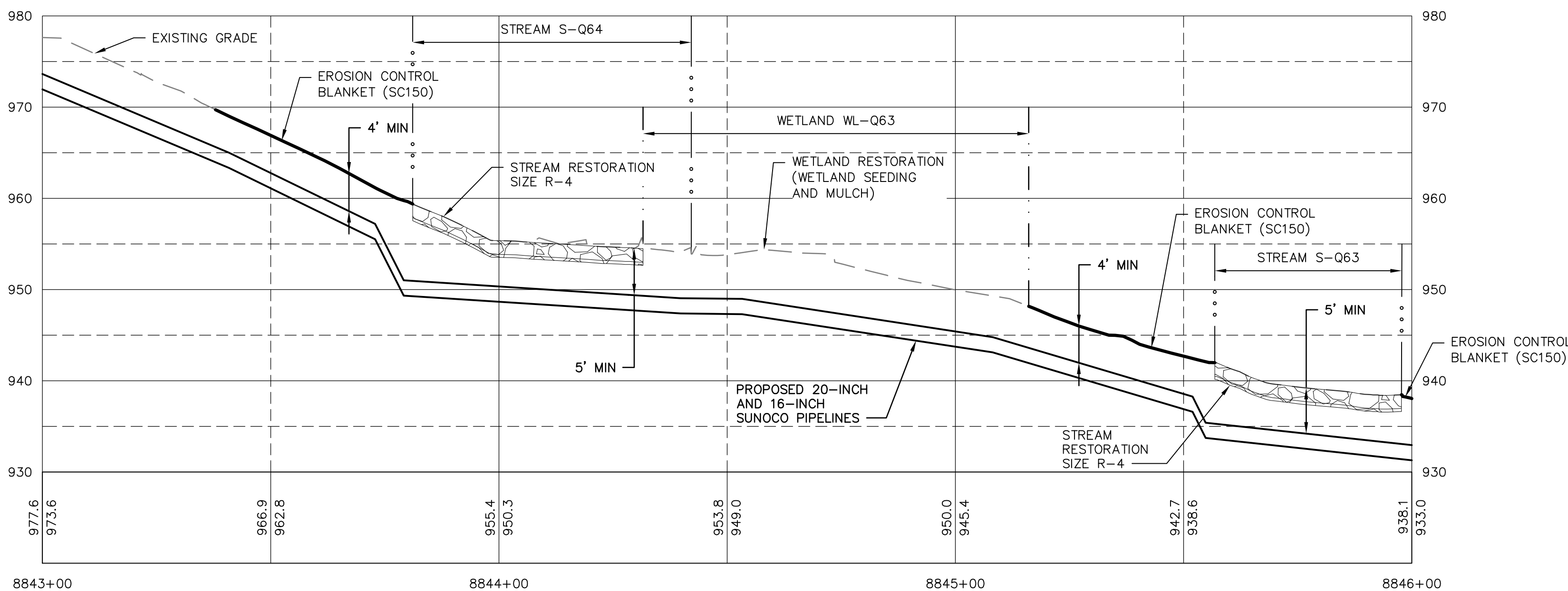
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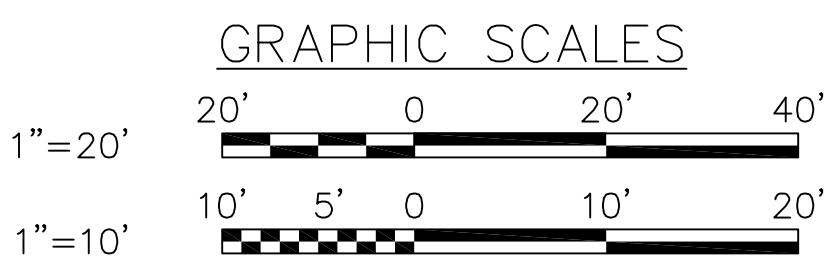
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-Q64 AND S-Q63 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
DWG. NO. S-Q64-A				REV. NO. 0



PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

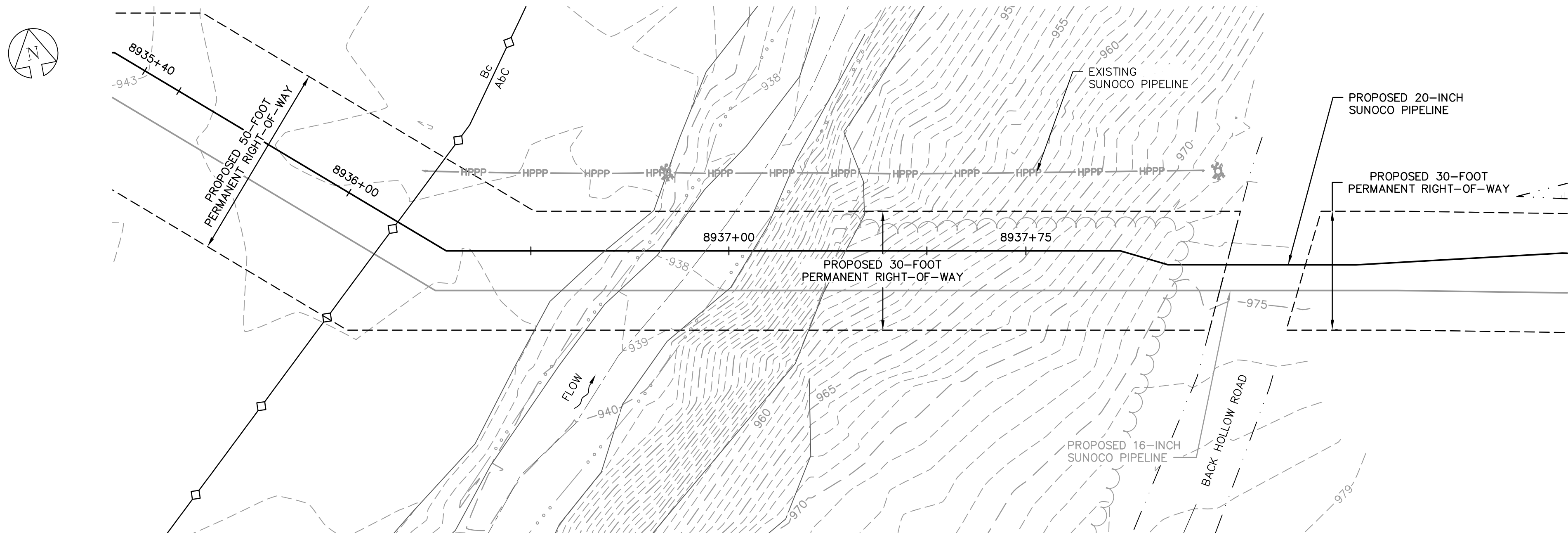
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11/30/16

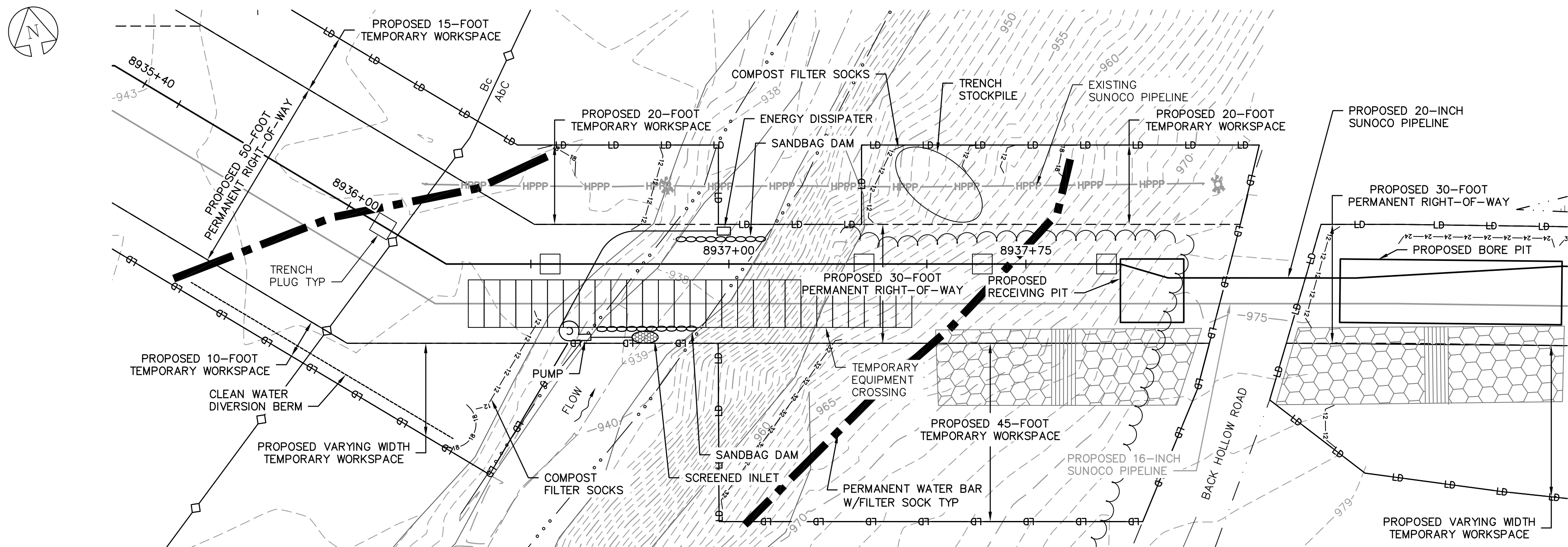
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PE-057385-E

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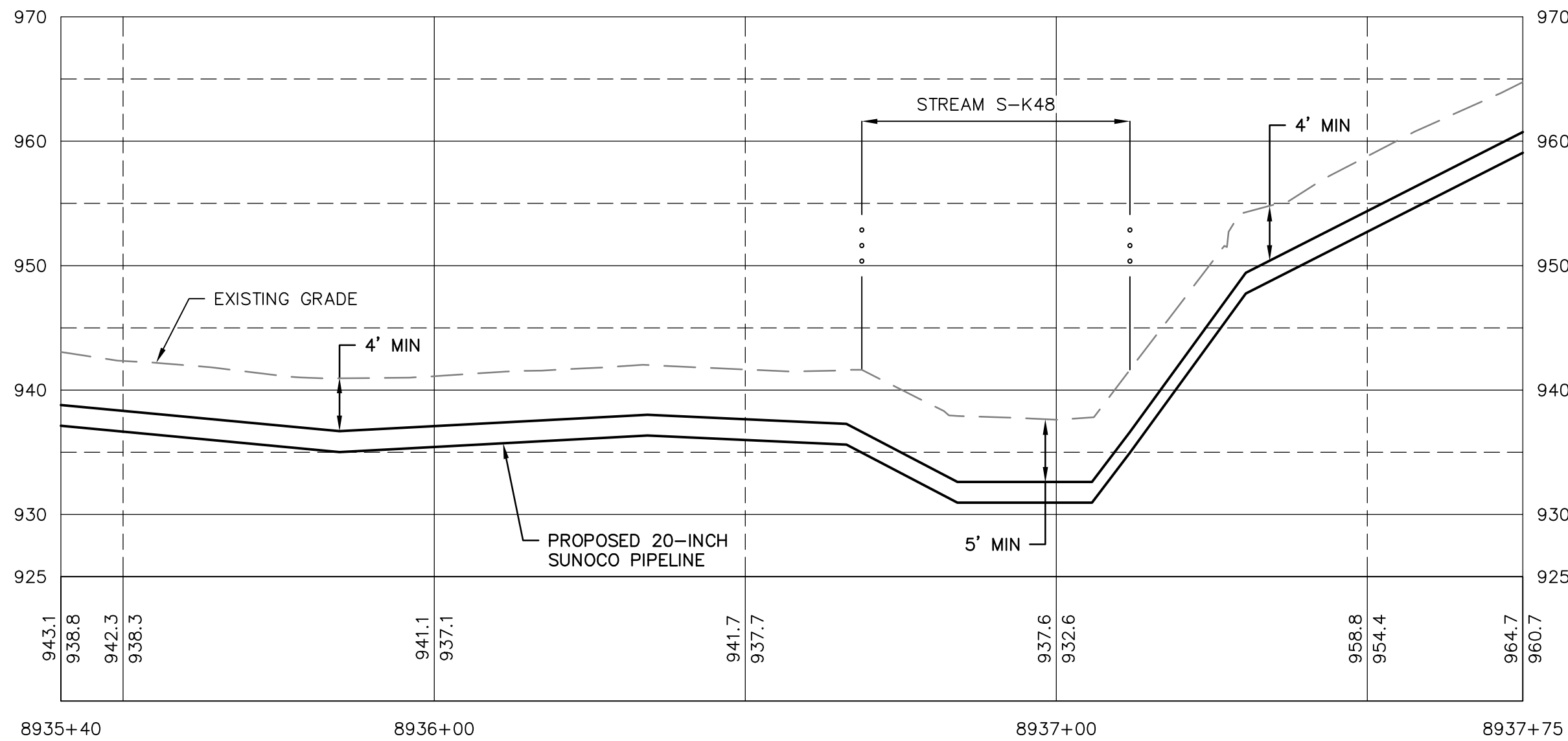
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Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-Q64 AND S-Q63 RESTORATION PLAN PERRY COUNTY, PA				
DWG. NO. S-Q64-B				REV. NO. 0



EXISTING CONDITIONS 20-INCH PLAN
SCALE: 1"=20'

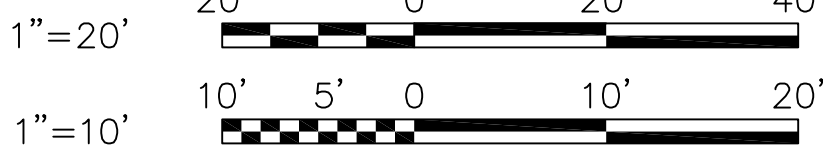


EROSION & SEDIMENTATION CONTROL 20-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16"/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

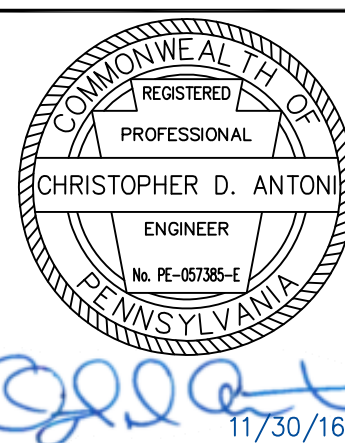
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

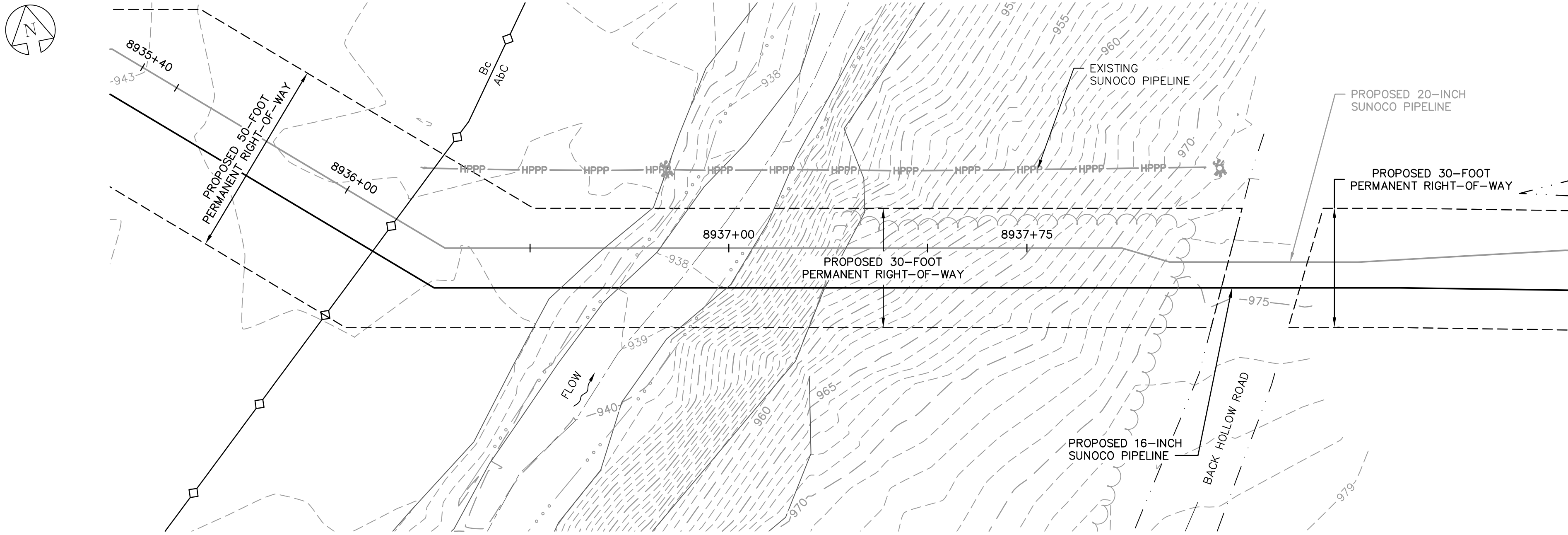


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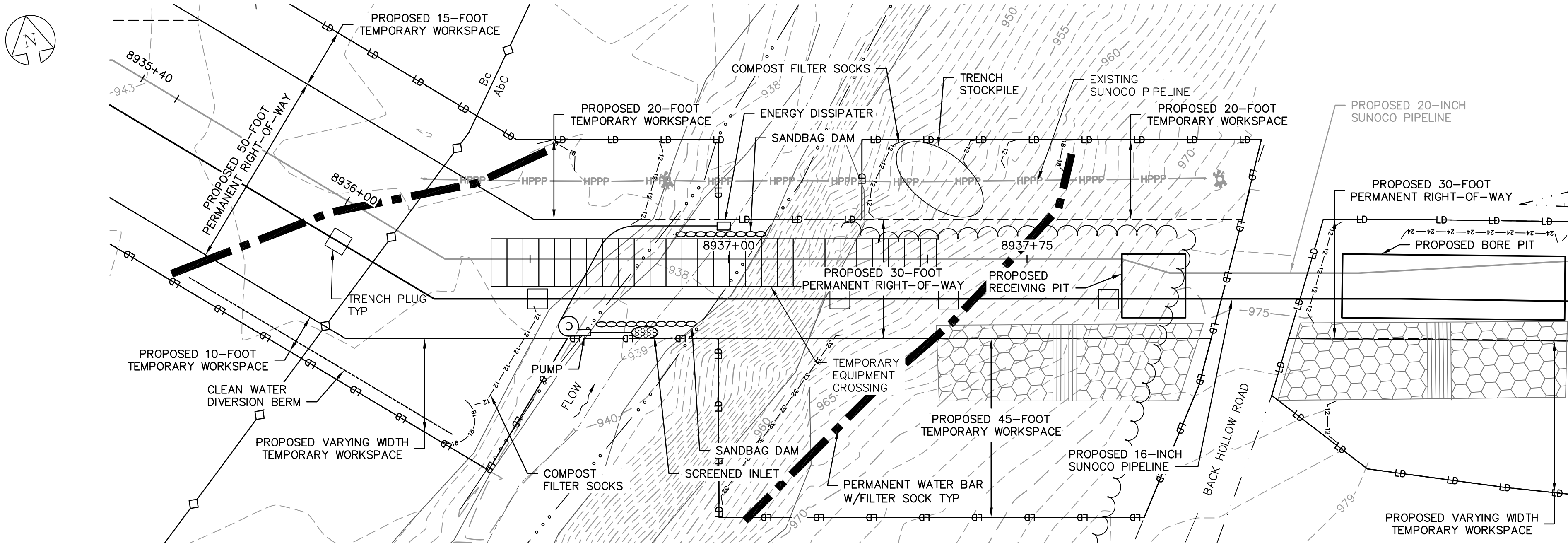
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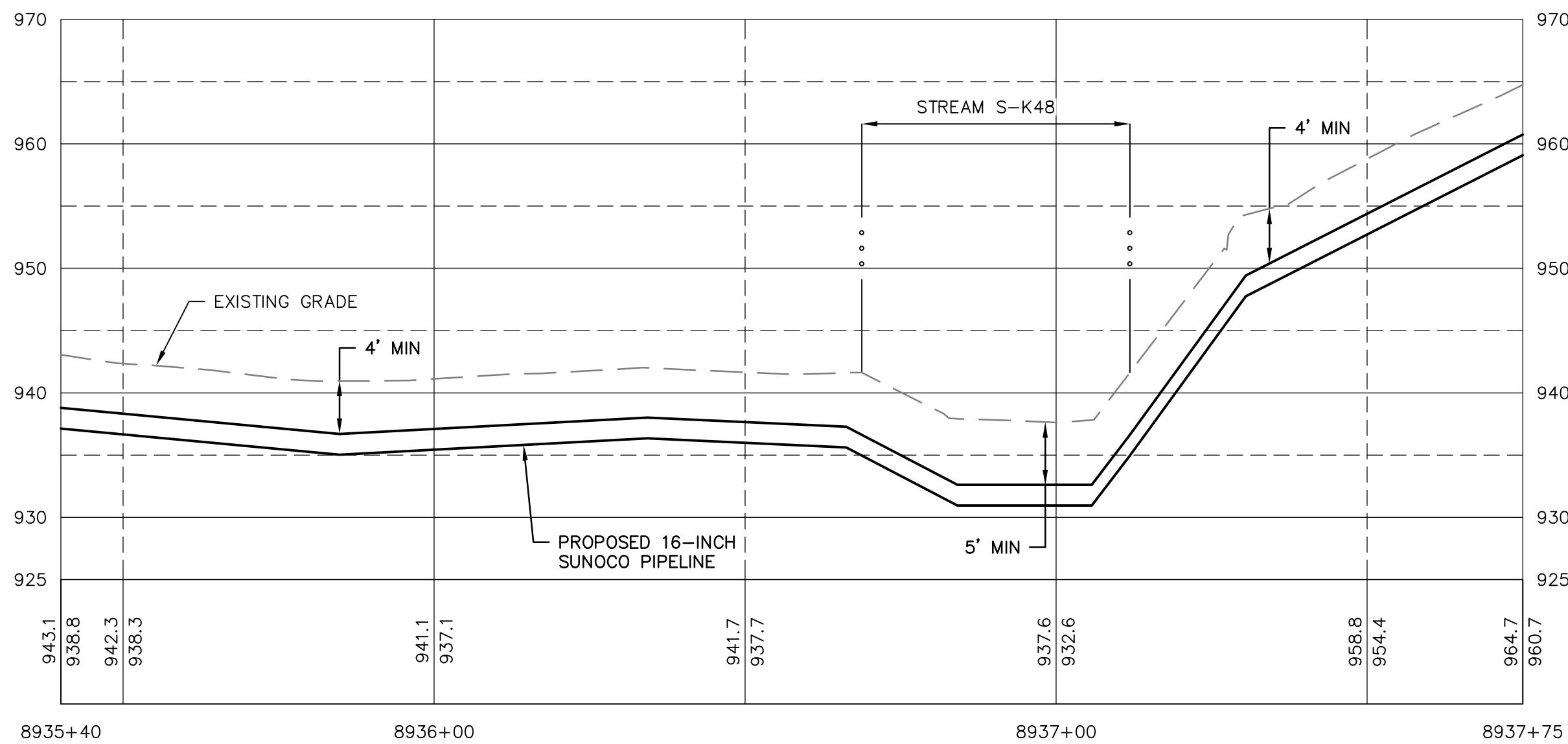
REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-K48				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-K48-A1			0	



EXISTING CONDITIONS 16-INCH PLAN
SCALE: 1"=20'

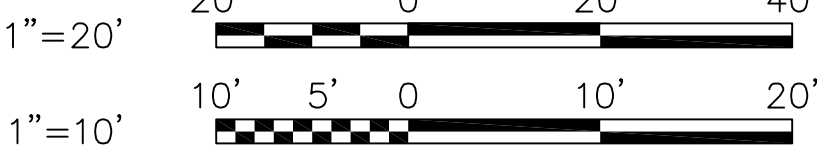


EROSION & SEDIMENTATION CONTROL 16-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16"/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

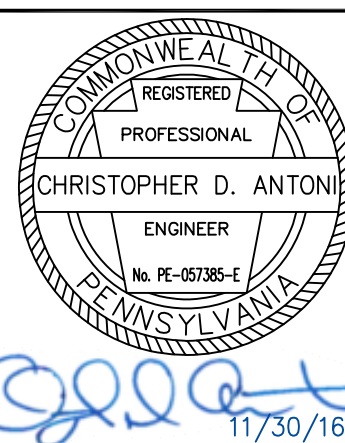
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
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- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

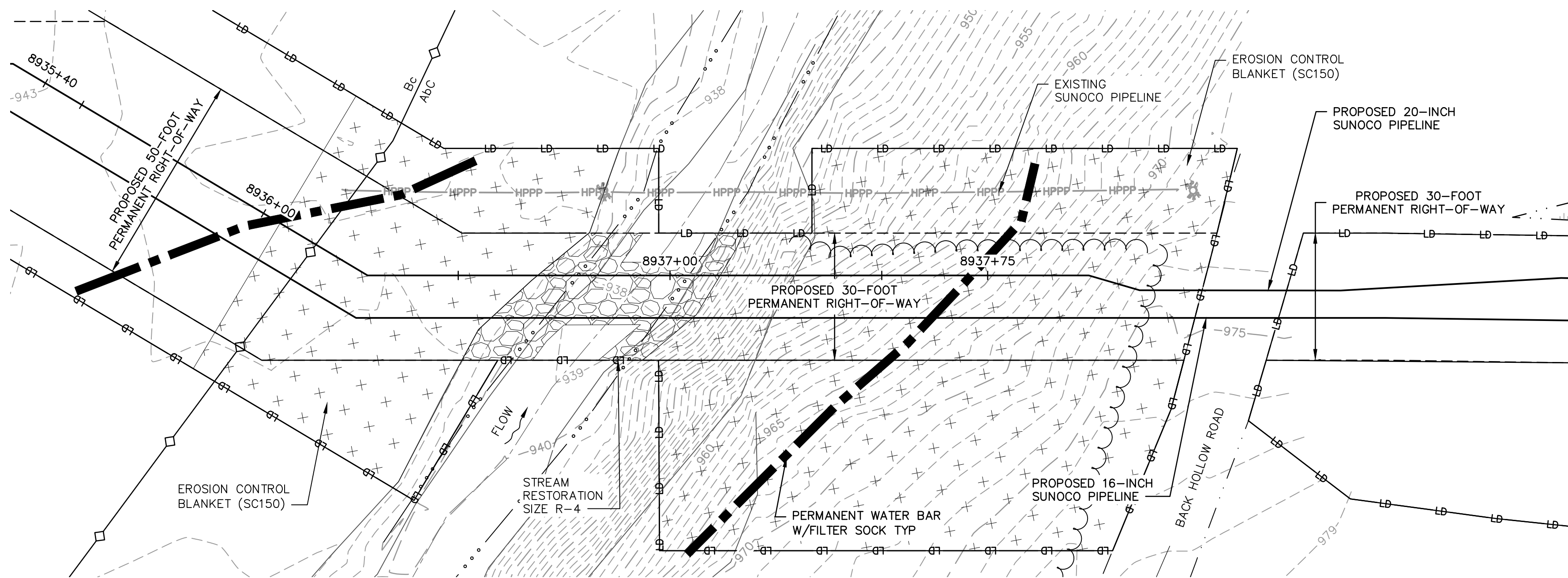


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PE-057385-E

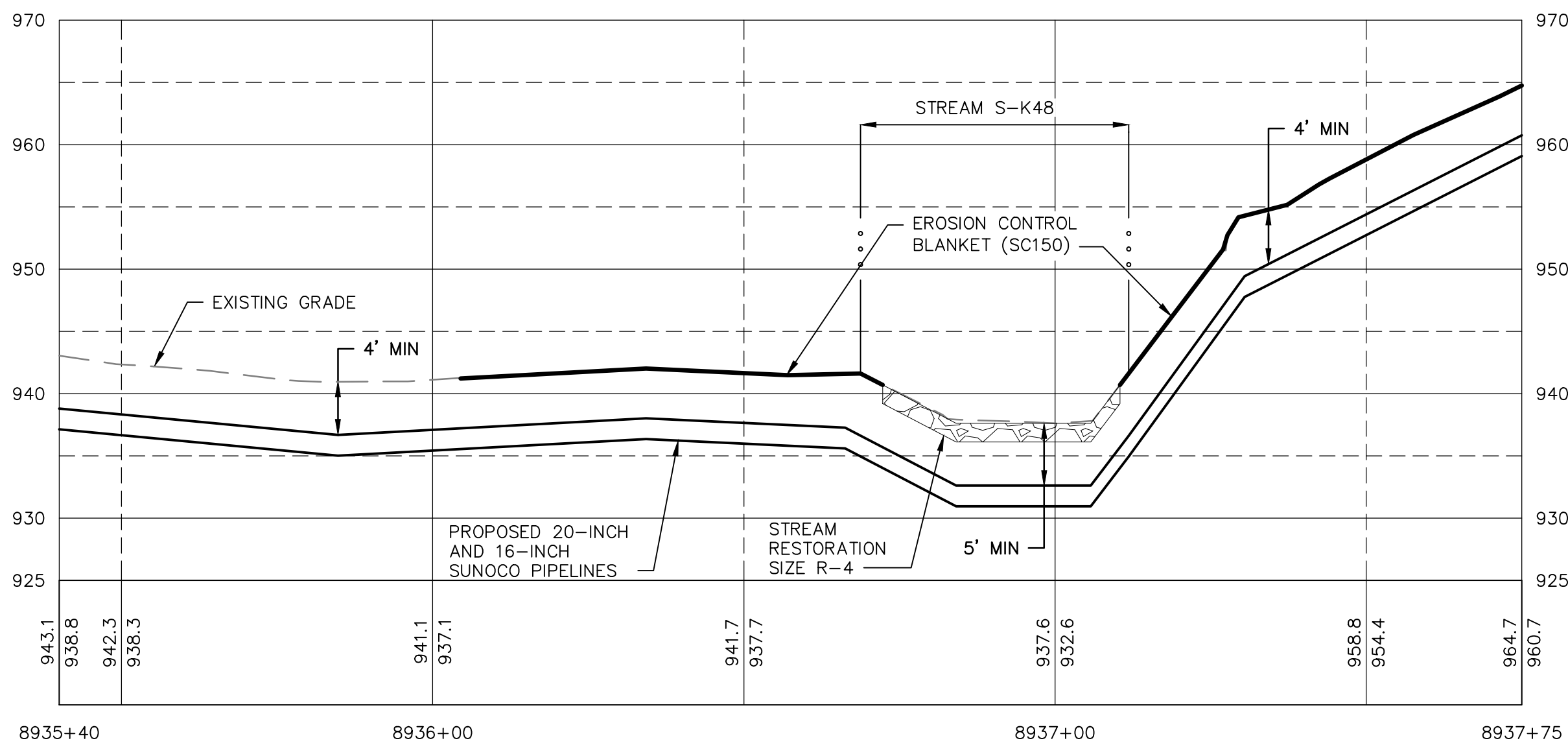
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APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT				
STREAM S-K48				
EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-K48-A2			0	

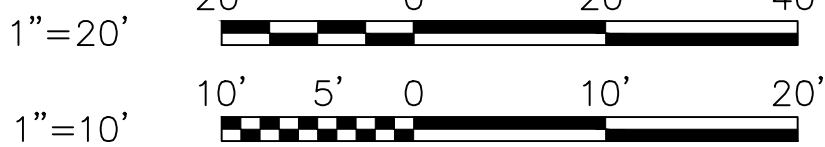


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

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DRAWN BY	PDZ
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

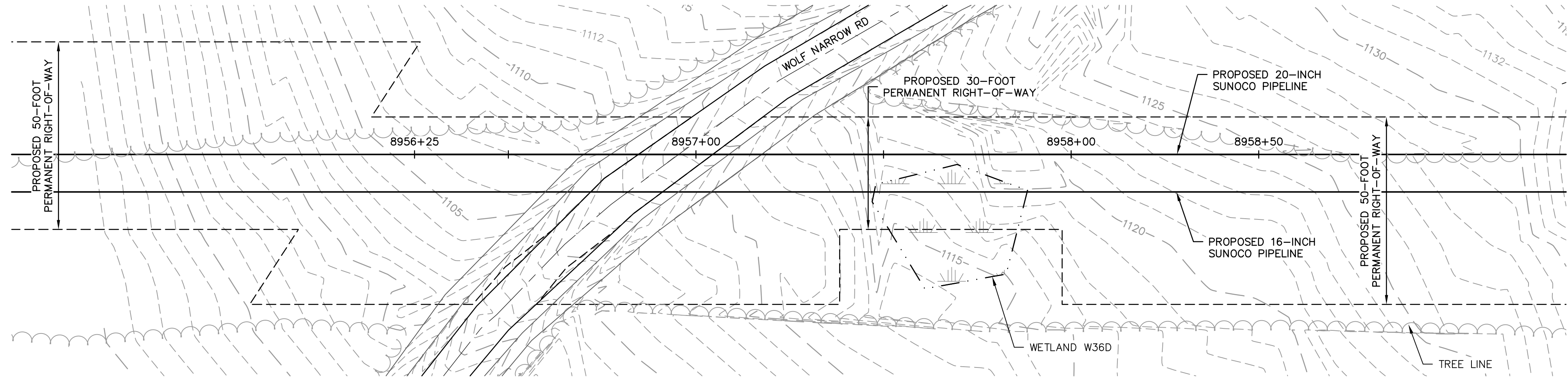
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REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-K48 RESTORATION PLAN				
PERRY COUNTY, PA				
DWG. NO.			S-K48-B	REV. NO. 0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

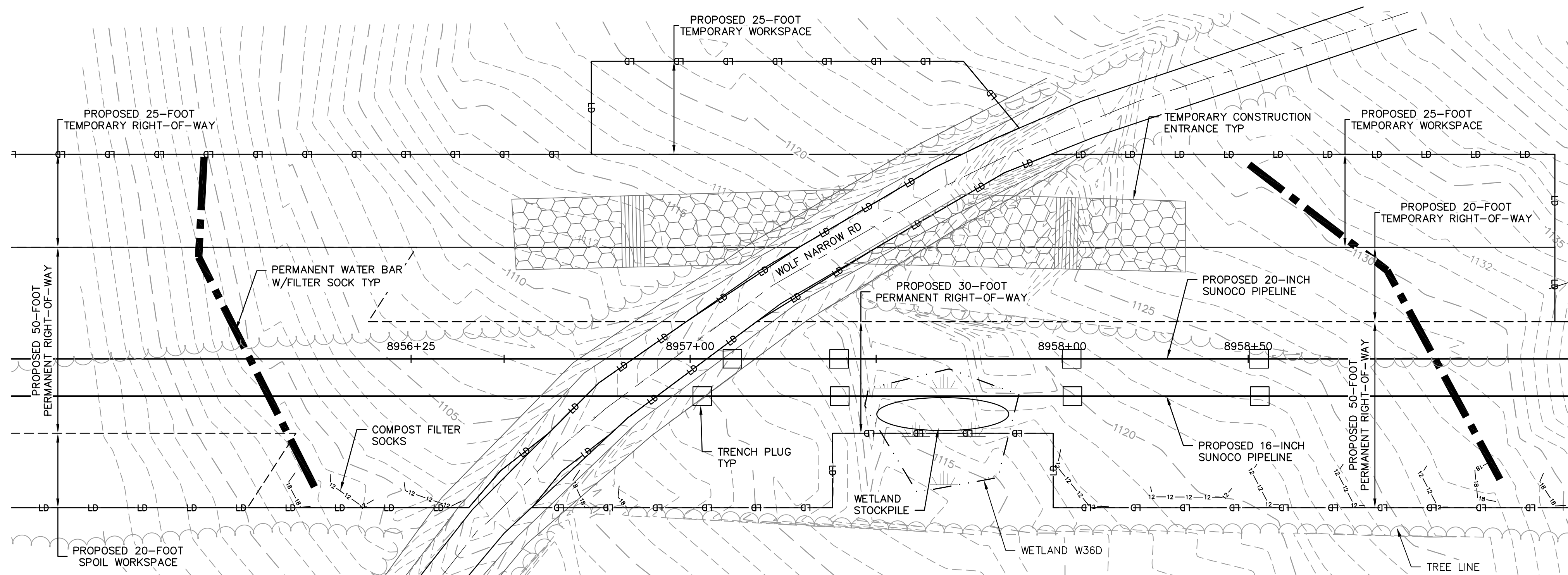
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335



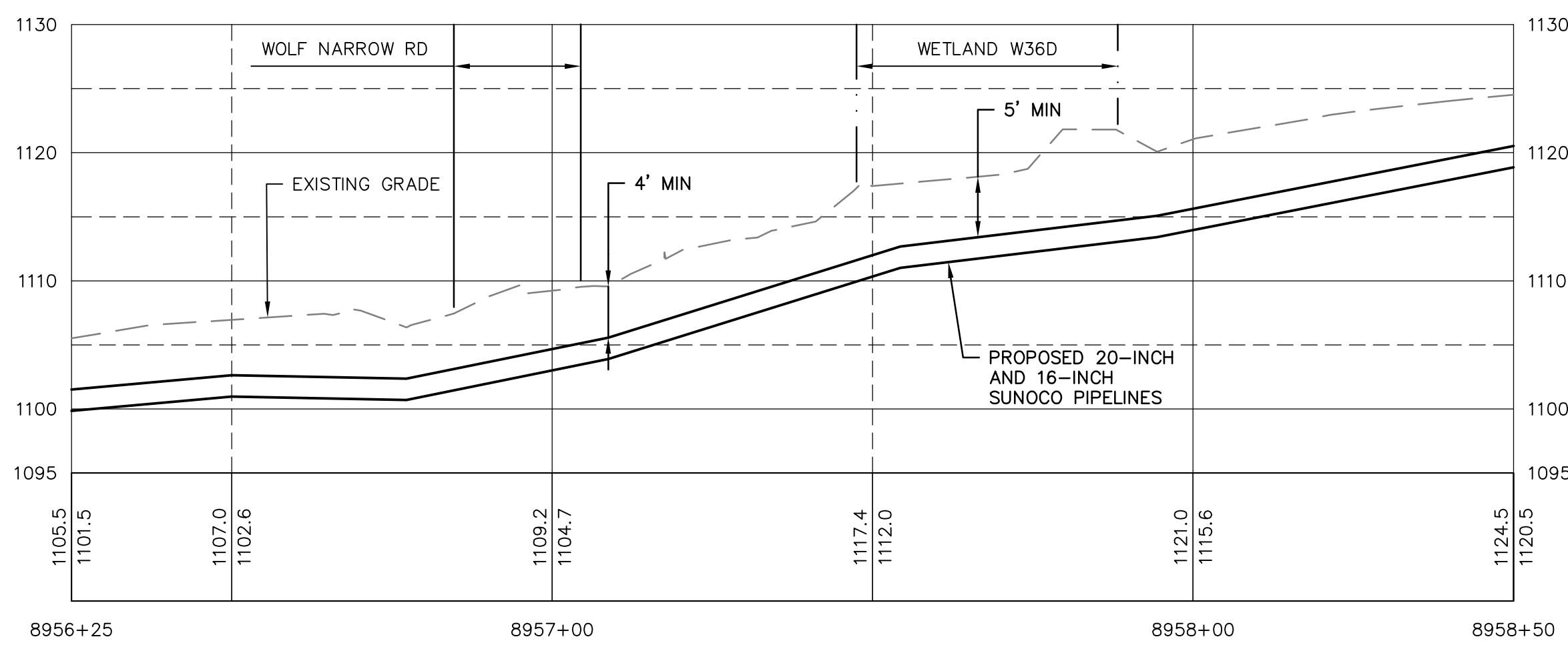
EXISTING CONDITIONS PLAN
SCALE: 1"=20'

NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA Bhd



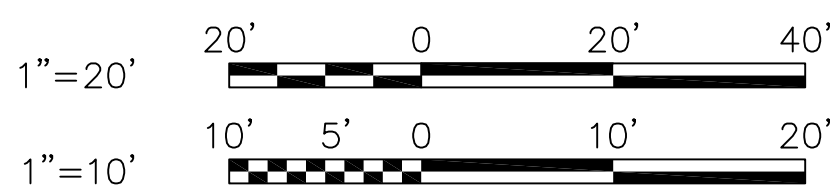
EROSION & SEDIMENTATION CONTROL PLAN
SCALE: 1"=20'

NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA Bhd



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

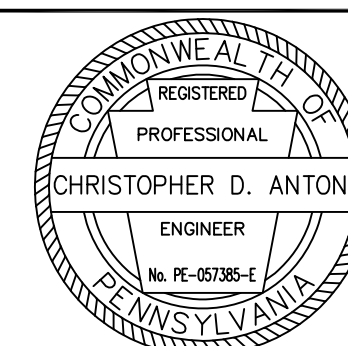
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	LG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

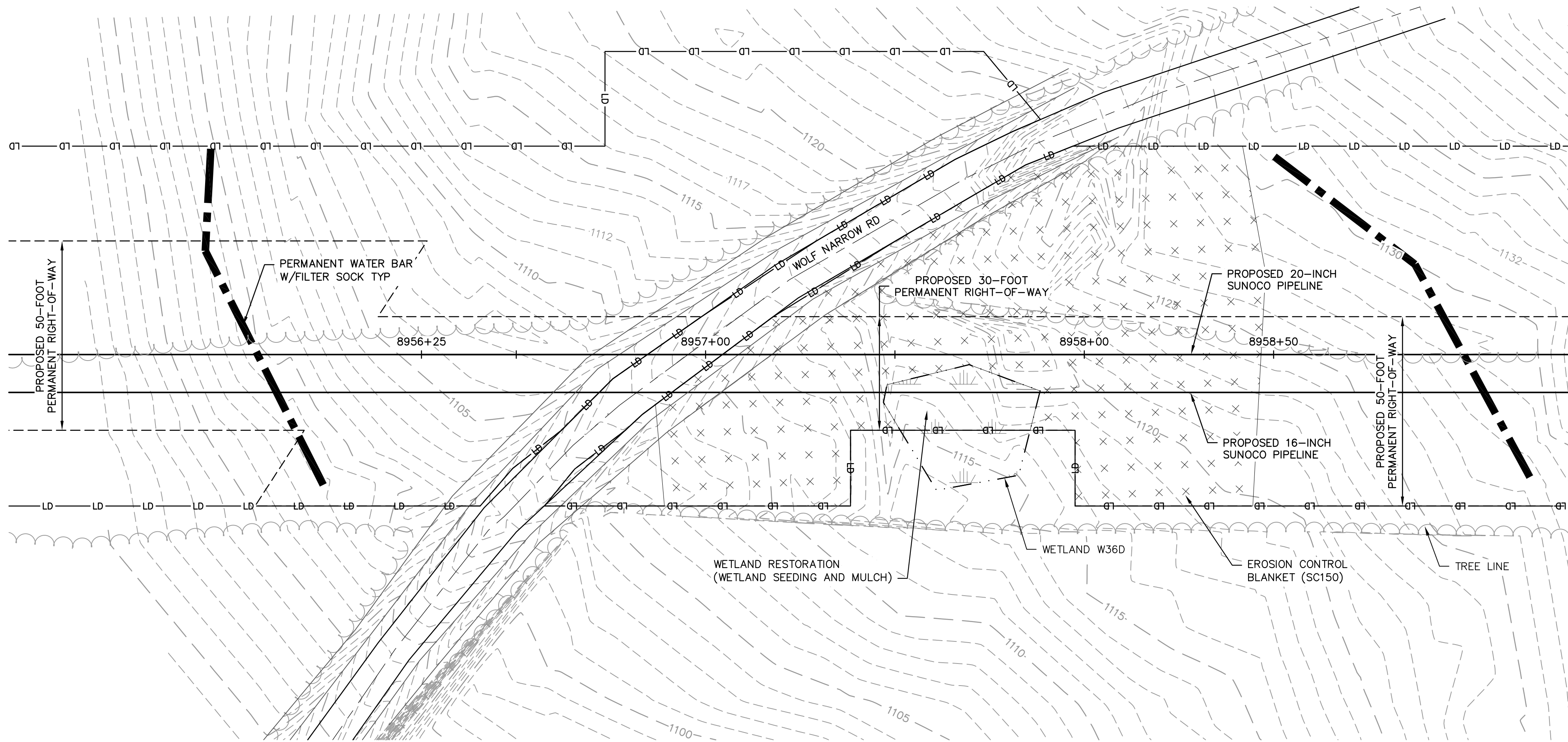
OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT WETLAND W36D EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO. WL-36D-A				REV. NO. 0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

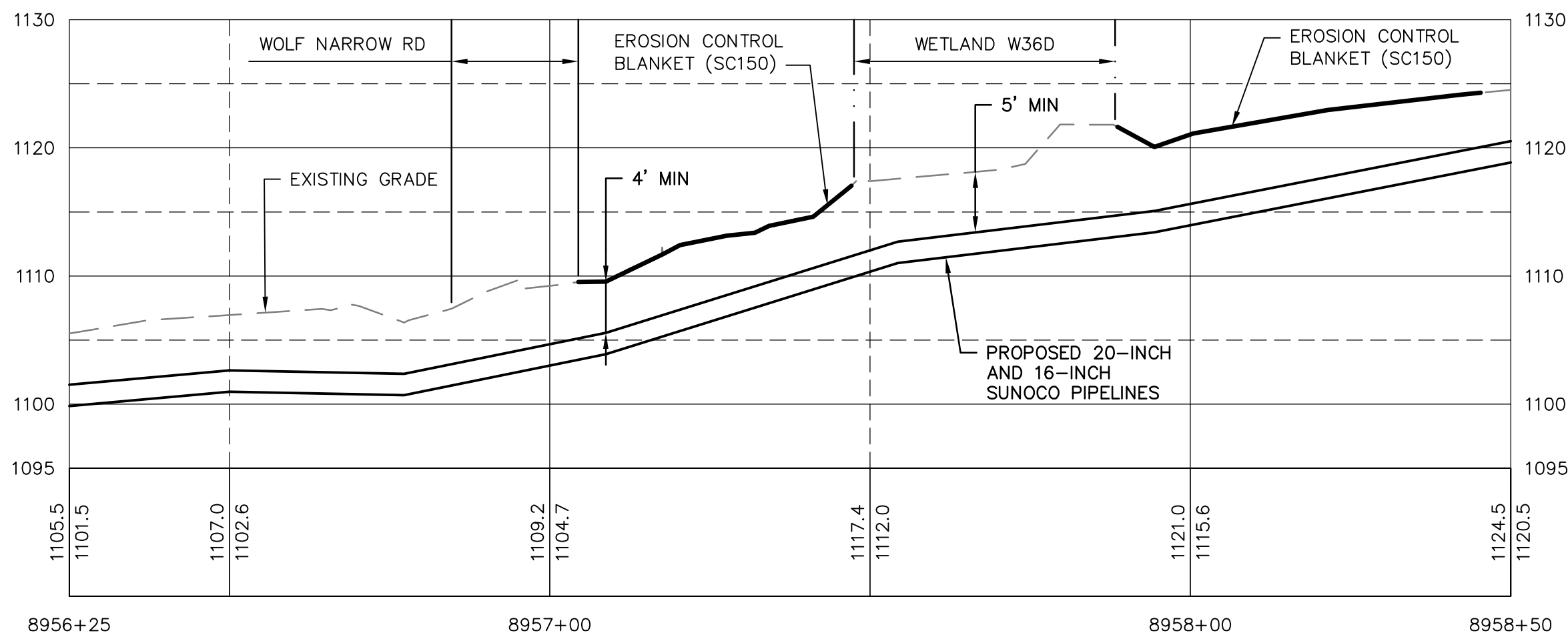
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STV PROJECT No.: 38-17335



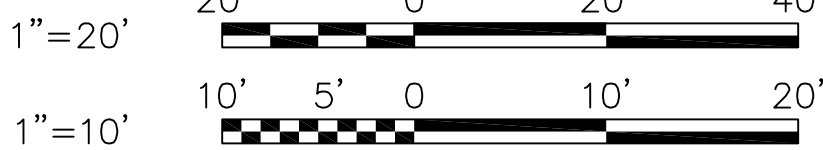
PLAN
SCALE: 1"=20'

NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA Bhd



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

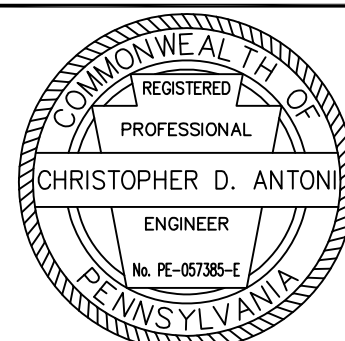
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	LG
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
WETLAND W36D
RESTORATION PLAN

PERRY COUNTY, PA

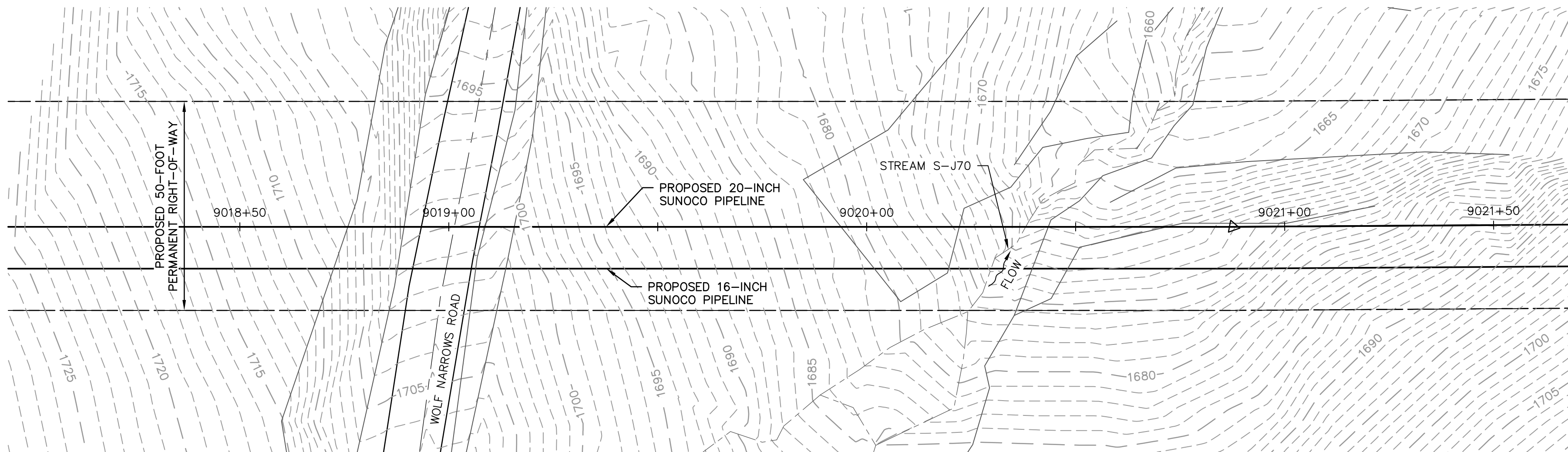
DWG. NO.
WL-36D-B

REV. NO.
0

STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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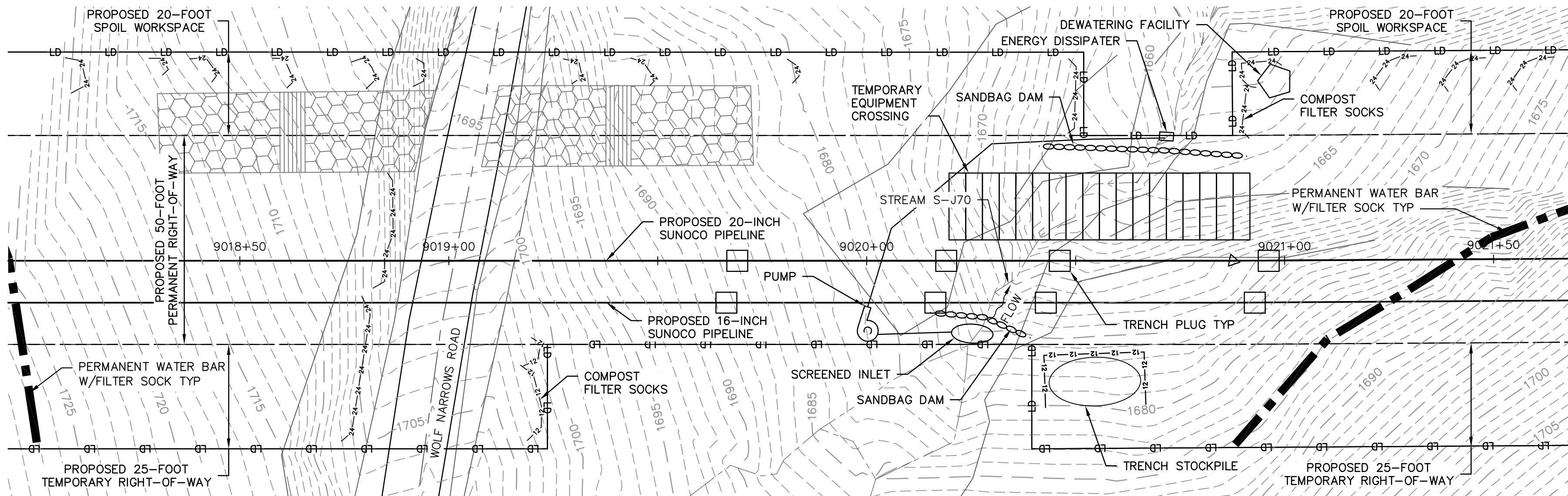
STV PROJECT No.: 38-17335



EXISTING CONDITIONS PLAN

SCALE: 1"=20'

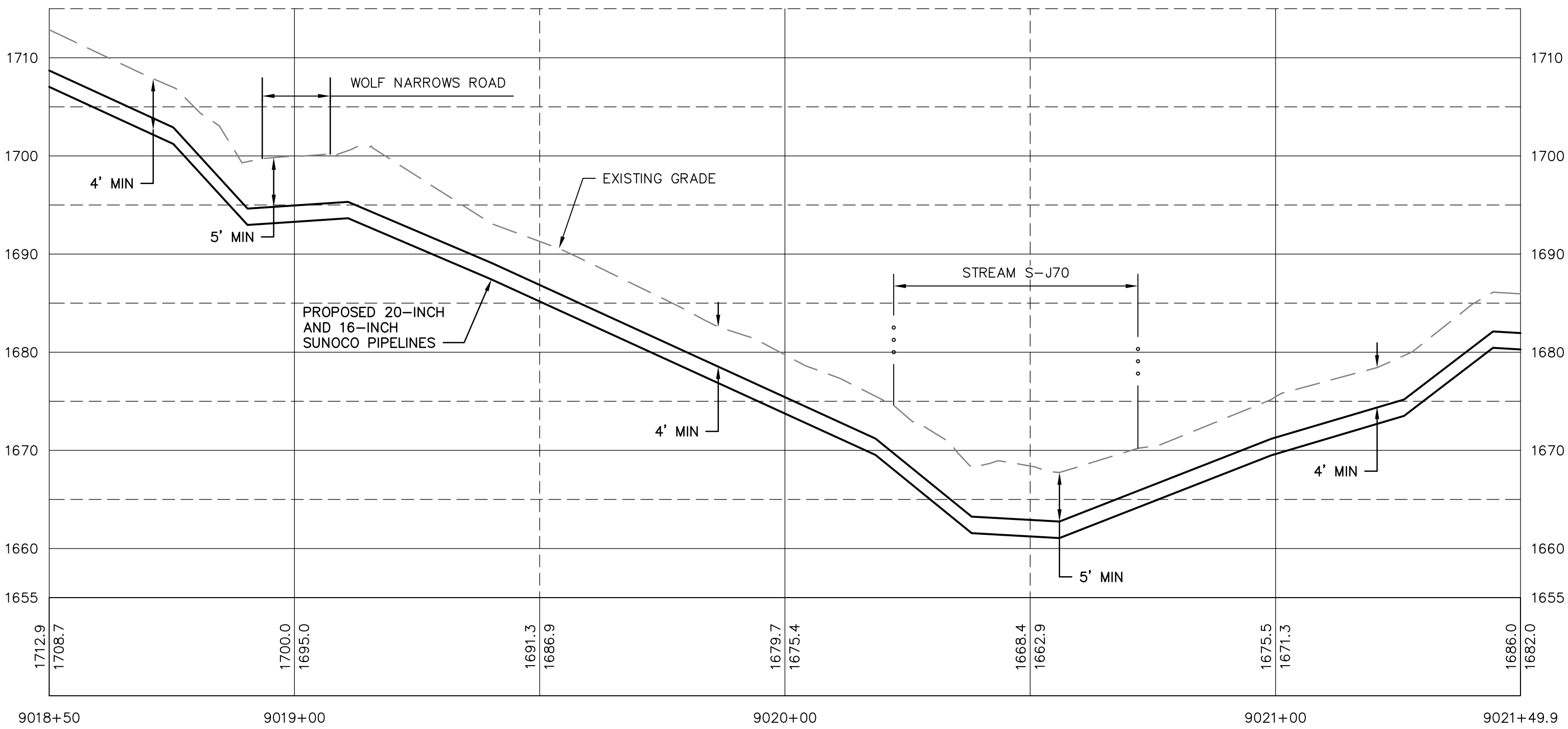
NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA HfF



EROSION & SEDIMENTATION CONTROL PLAN

SCALE: 1"=20'

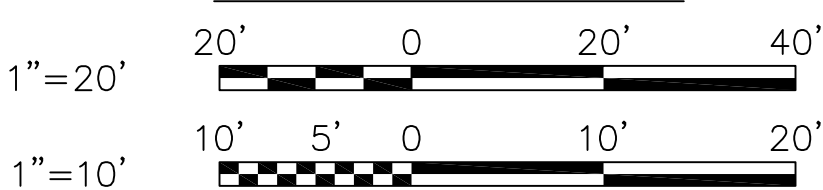
NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA HfF



PROFILE

HORIZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

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STREAM CROSSING NOTES:

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- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

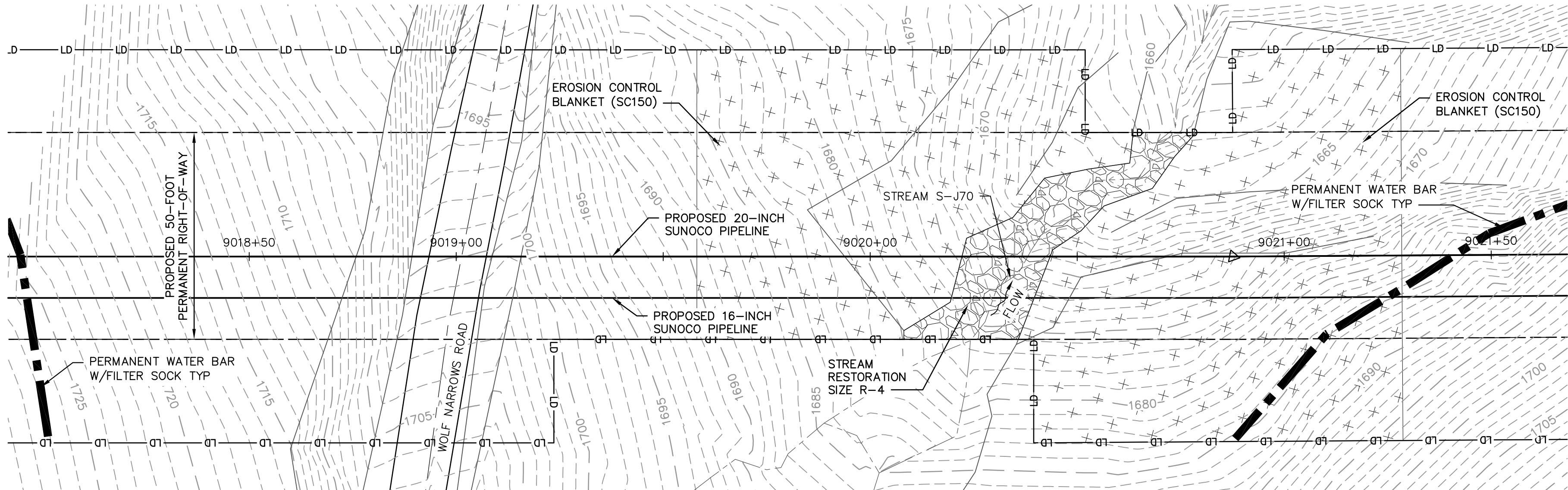


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PE-057385-E

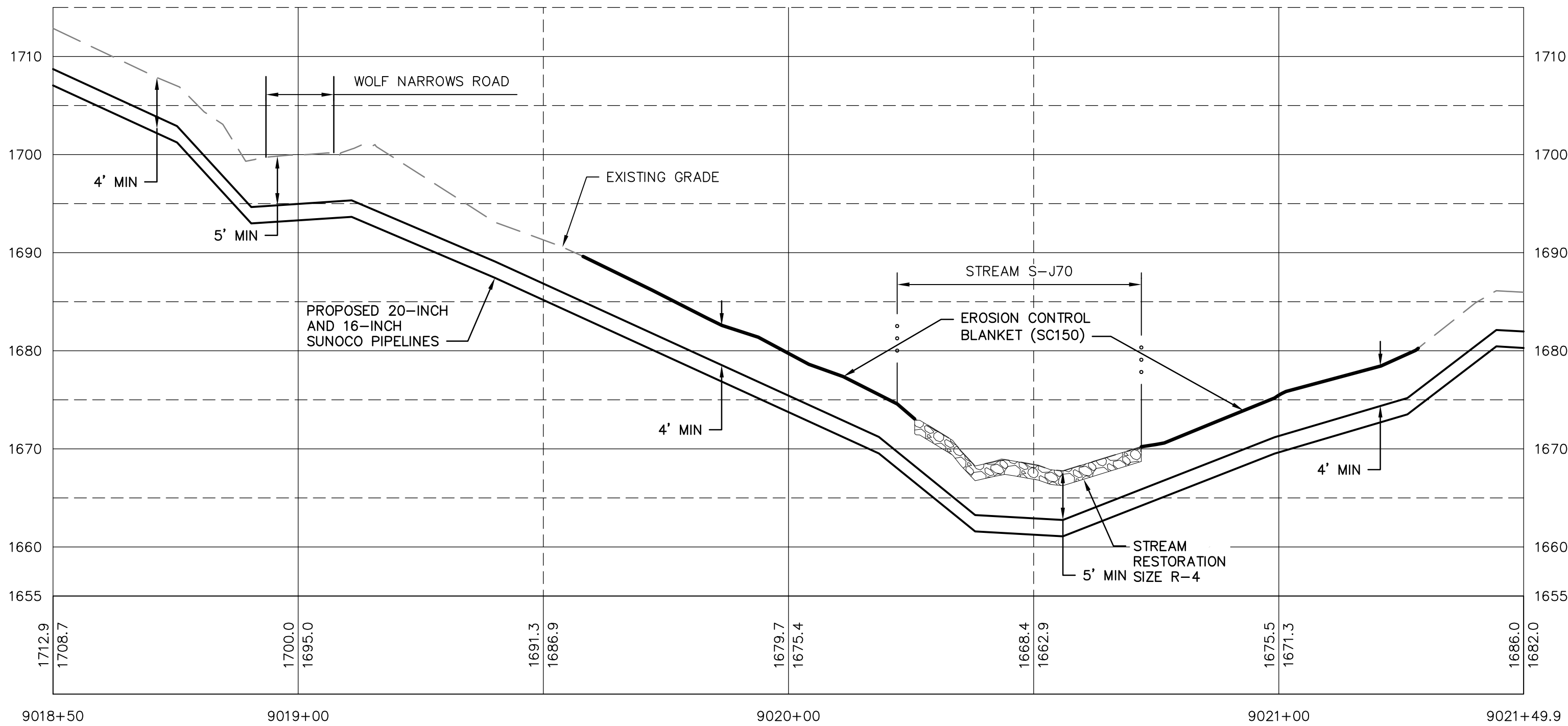
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

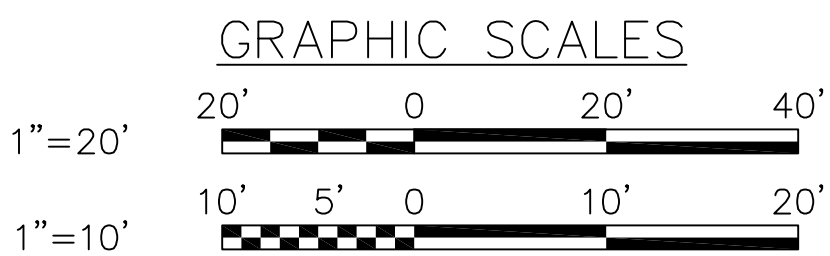
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAM S-J70 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-J70-A			0	



PLAN
SCALE: 1"=20'
NOTE: ENTIRE AREA IS LOCATED WITHIN SOIL AREA H1F



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

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STREAM CROSSING NOTES:

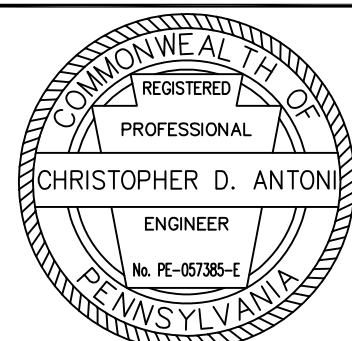
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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	RFC
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
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PENNSYLVANIA PIPELINE PROJECT
STREAM S-J70
RESTORATION PLAN

PERRY COUNTY, PA

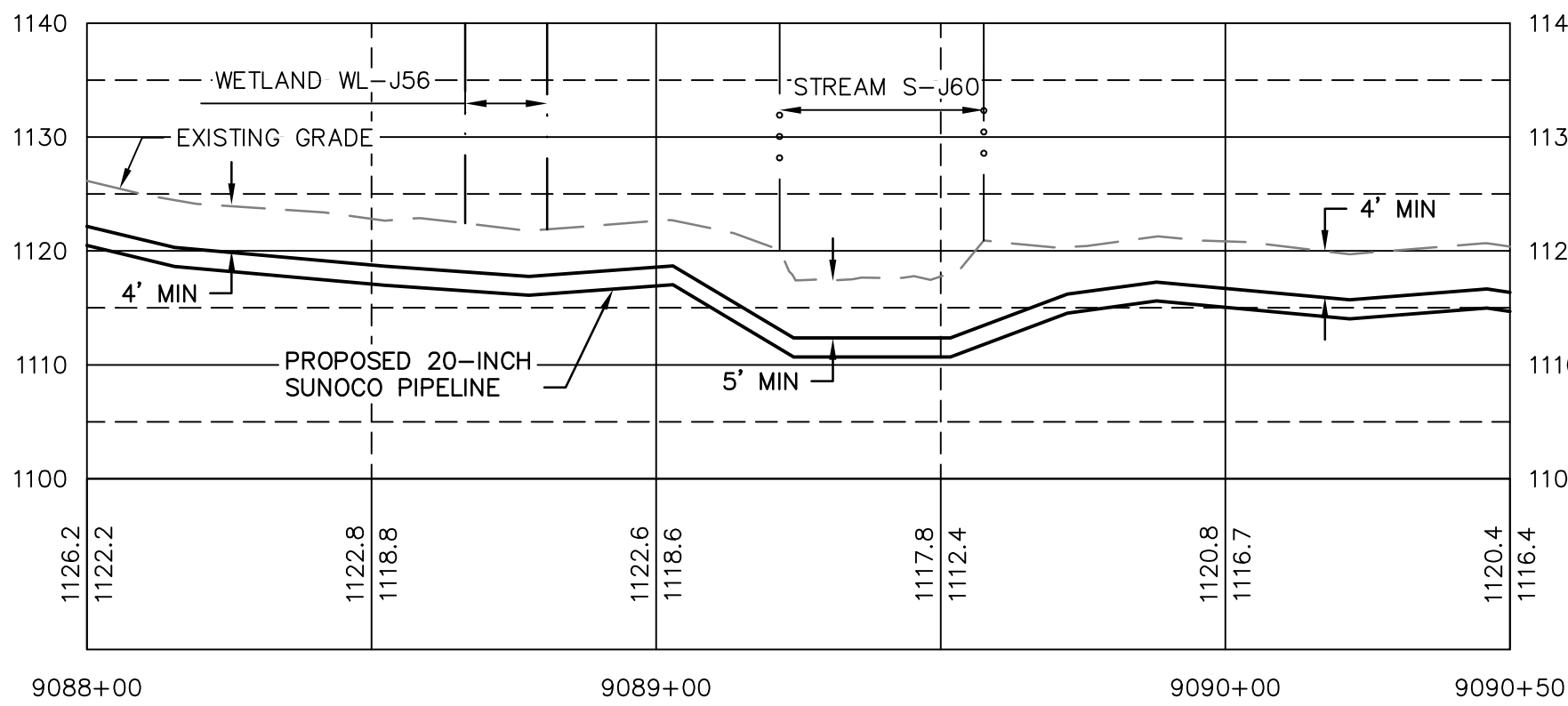
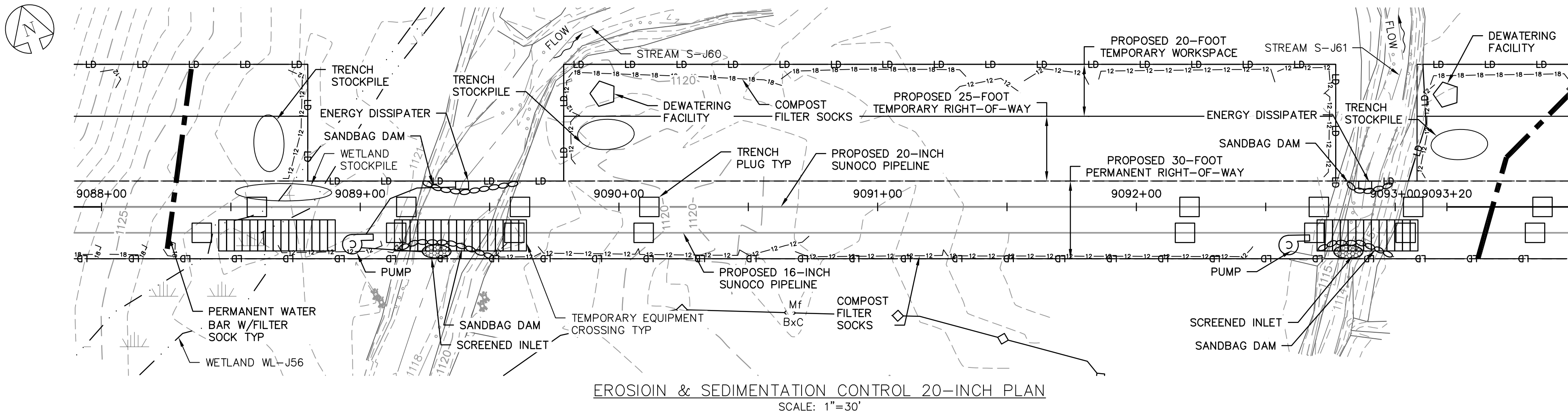
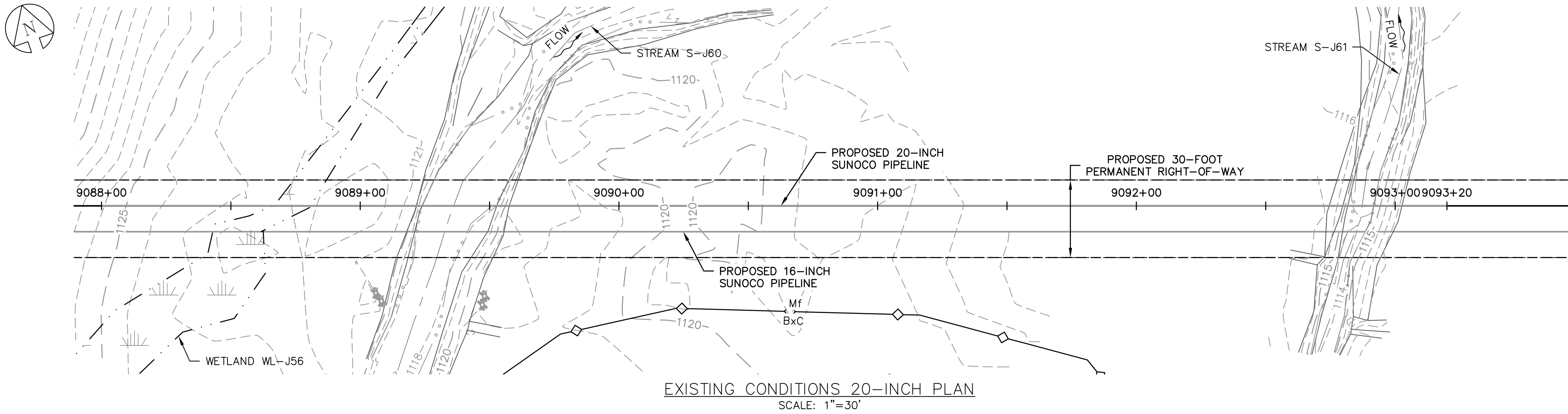
DWG. NO.
S-J70-B

REV. NO.
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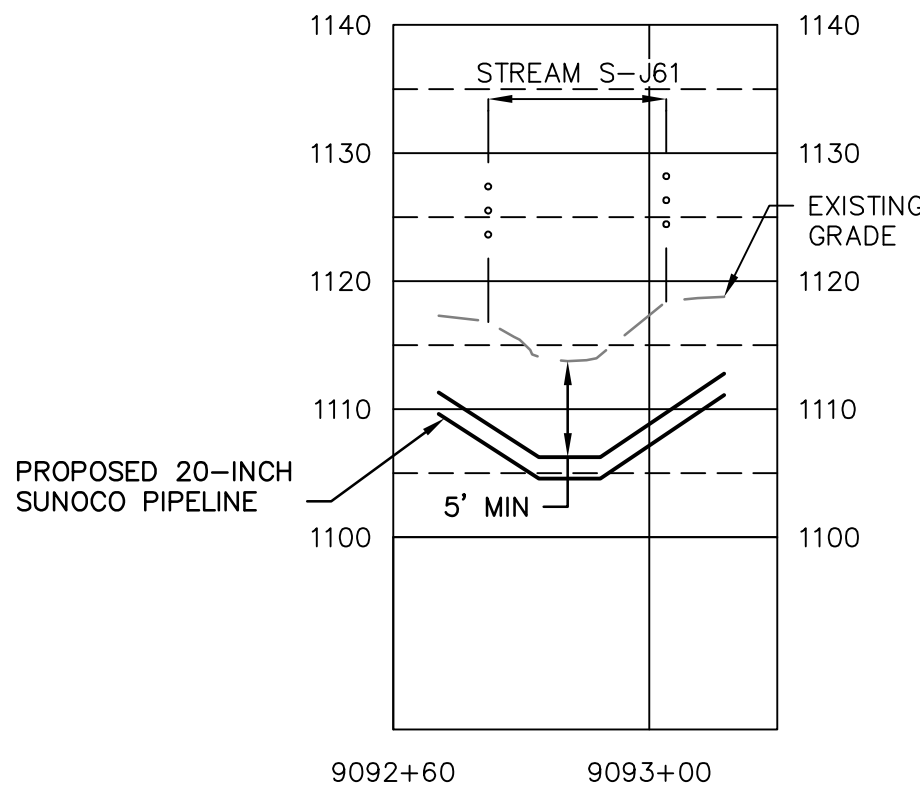
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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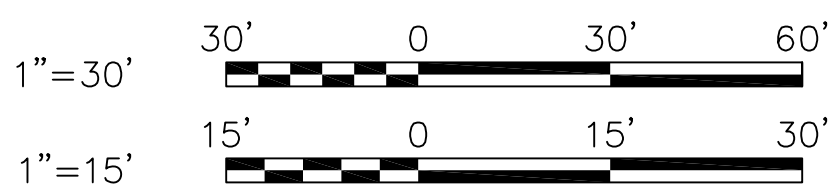
STV PROJECT No.: 38-17335



PROFILE
HORZ SCALE: 1"=30'
VERT SCALE: 1"=15'



GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
- ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

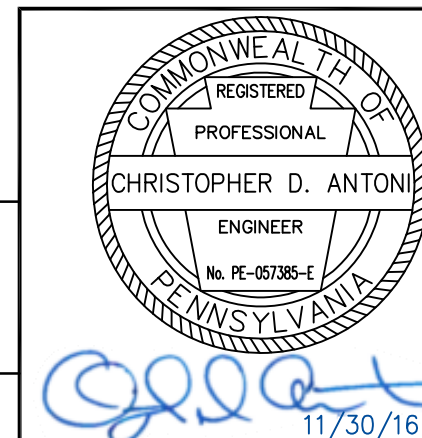
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
- SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
- THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
- REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
- TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
- COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
---	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
- - - -	PROPOSED SUNOCO RIGHT-OF-WAY
-----	EXISTING SUNOCO PIPELINE
910	MAJOR CONTOUR
-----	MINOR CONTOUR
-----	STREAM CENTERLINE
-----	TOP/BOTTOM OF BANK
-----	EXISTING EDGE OF PAVED ROADWAY
-----	EXISTING EDGE OF UNPAVED ROADWAY
-----	EXISTING VEGETATION
-----	EDGE OF WATER
-----	SOIL TYPE BOUNDARY
-----	WETLAND
-----	PROPOSED ROCK CONSTRUCTION ENTRANCE
-----	LIMIT OF DISTURBANCE
-----	CONSTRUCTION FENCE
12-12-12-12	12-INCH COMPOST FILTER SOCK
18-18-18-18	18-INCH COMPOST FILTER SOCK
24-24-24-24	24-INCH COMPOST FILTER SOCK
32-32-32-32	32-INCH COMPOST FILTER SOCK
-----	PERMANENT WATER BAR W/FILTER SOCK
-----	TRENCH PLUG
-----	TEMPORARY EQUIPMENT CROSSING
-----	SANDBAG DAM
-----	PUMP
-----	SCREENED INLET
-----	ENERGY DISSIPATER
-----	DEWATERING FACILITY
-----	CULVERT PIPE
-----	EROSION CONTROL BLANKET
-----	STREAM RESTORATION

PROFILE LEGEND:

-----	PROPOSED PIPELINE
- - - -	EXISTING GRADE
-----	EXISTING GRADE ELEV.
-----	PROPOSED TOP OF PIPE ELEV.

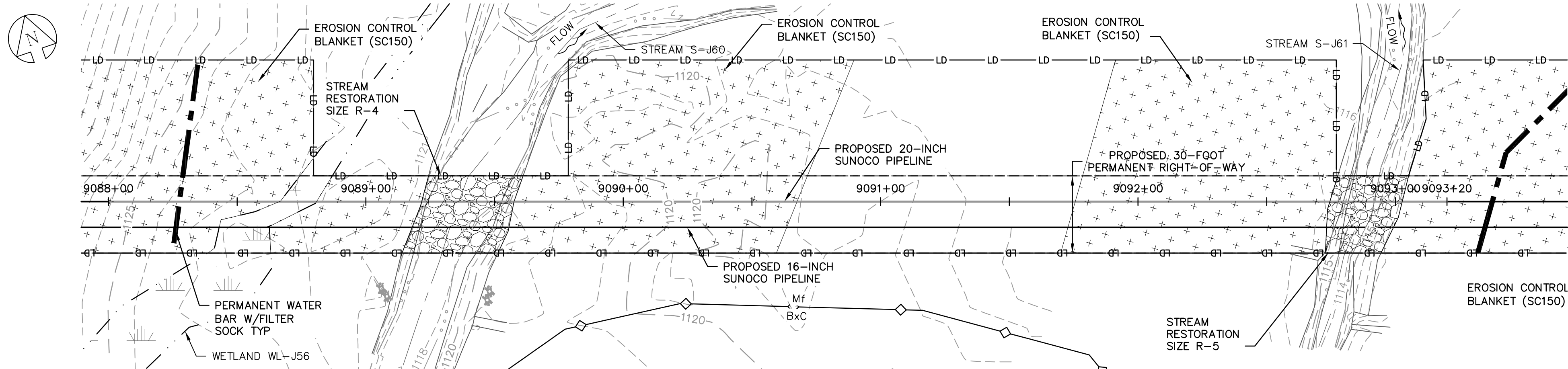


CHRISTOPHER D. ANTONI
PE-057385-E

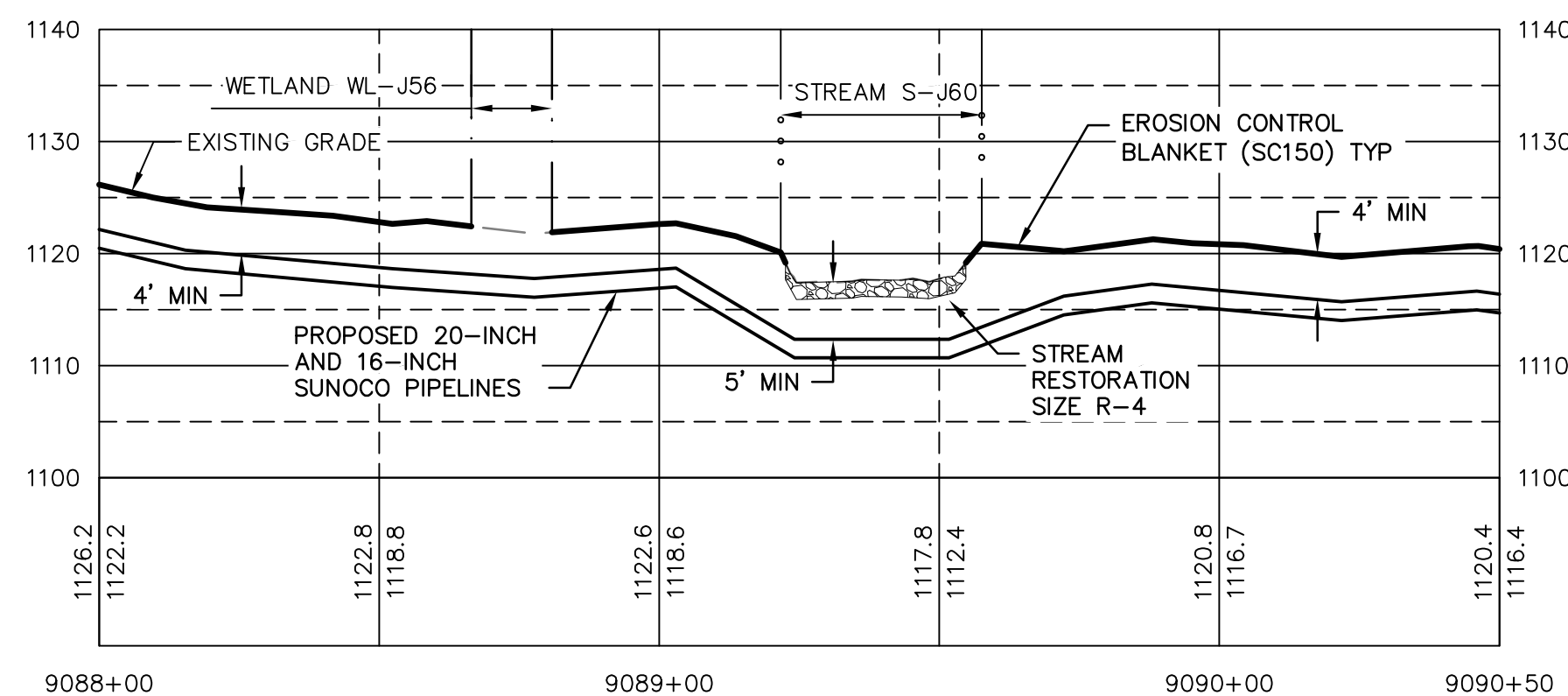
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DRAWN BY	PDZ
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
SUNOCO LOGISTICS PARTNERS L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-J60 & S-J61 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO. S-J60-A1				REV. NO. 0

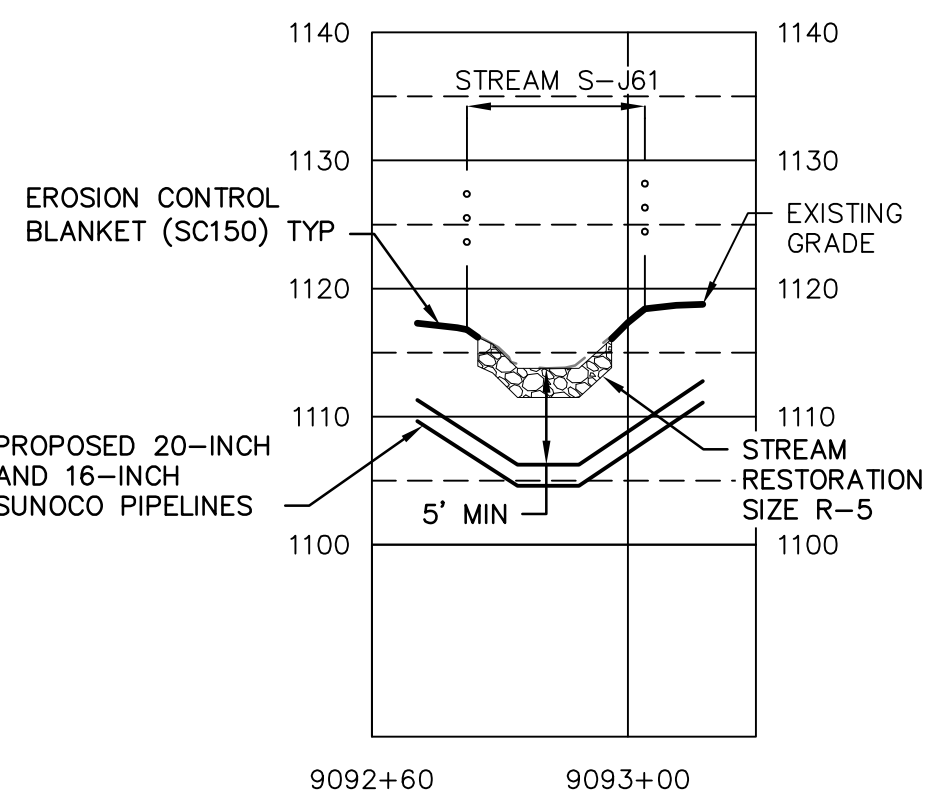


PLAN
SCALE: 1"=30'

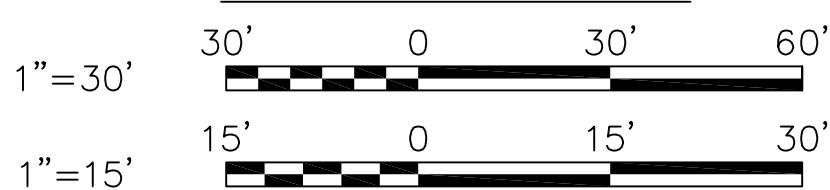


RESTORED GRADE PROFILE

HORZ SCALE: 1"=30'
VERT SCALE: 1"=15'



GRAPHIC SCALES



GENERAL NOTES:

- REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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- MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
- THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
- THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
- EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

- REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
- A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
- FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
- EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

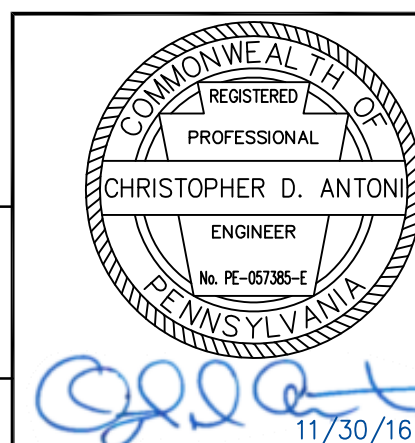
- REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
- FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

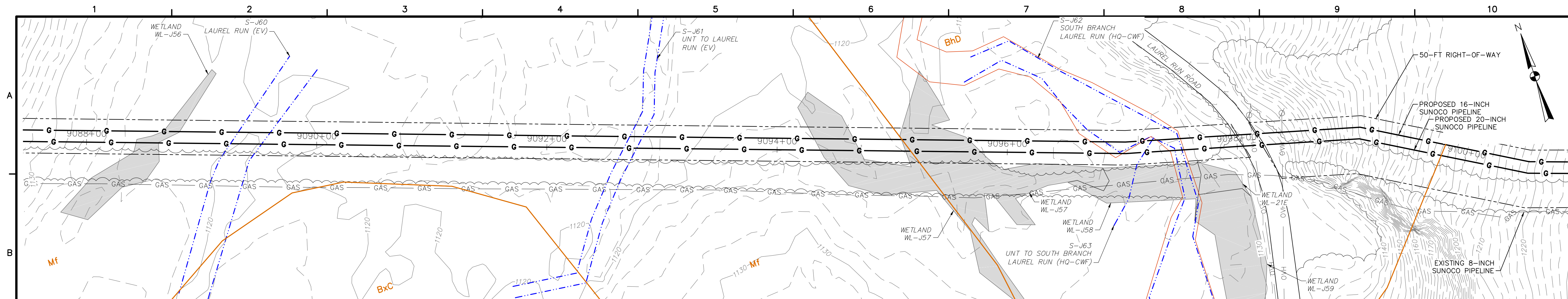


CHRISTOPHER D. ANTONI
PE-057385-E

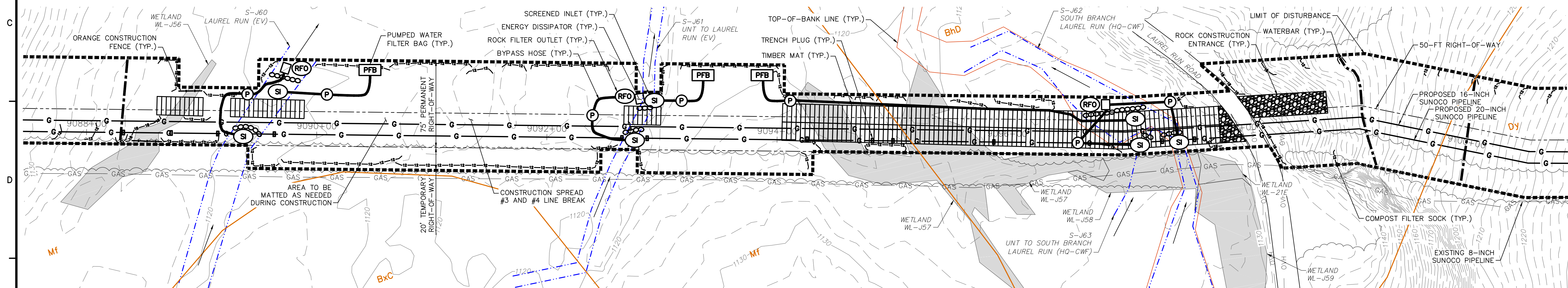
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

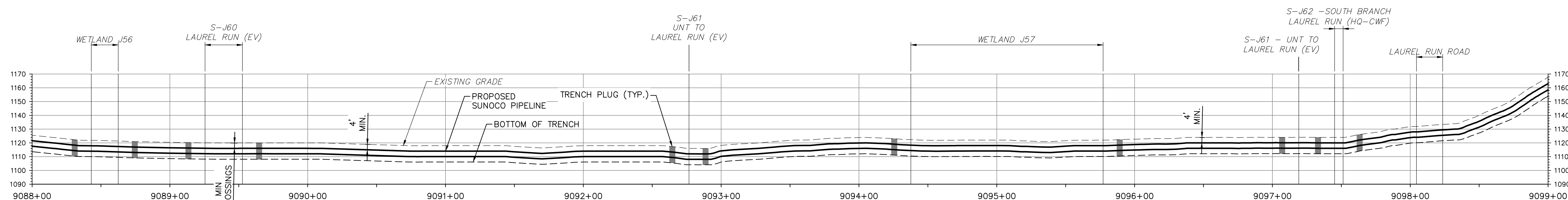
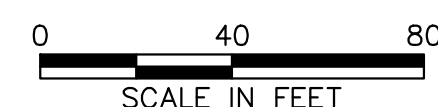
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PENNSYLVANIA PIPELINE PROJECT STREAMS S-J60 & S-J61 RESTORATION PLAN				
PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-J60-B			0	



EXISTING CONDITIONS PLAN



EROSION AND SEDIMENT CONTROL PLAN



PROFILE



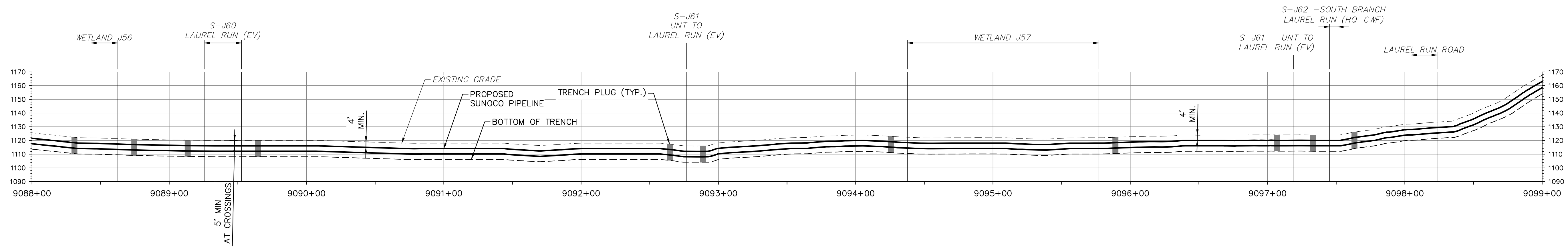
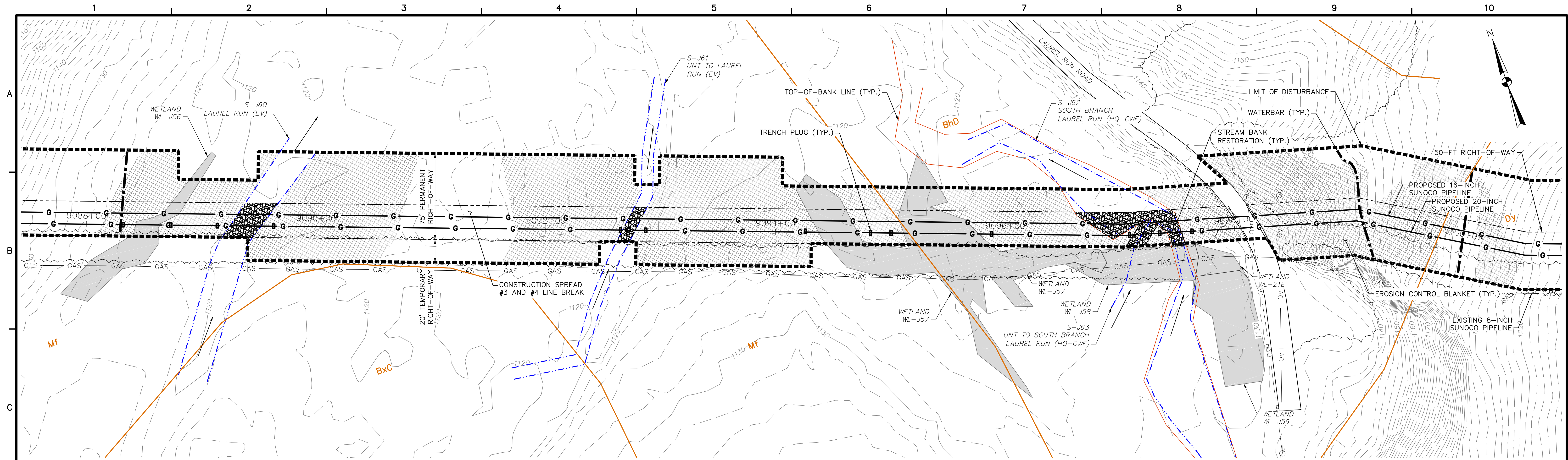
661 ANDERSEN DRIVE - FOSTER PLAZA 7
PITTSBURGH, PA 15220
T: (412) 921-7090 | F: (412) 921-4040

REVISIONS			
NO.	BY	DATE	REMARKS

SUNOCO PIPELINE L.P.
SINKING SPRING, PENNSYLVANIA
PENNSYLVANIA PIPELINE PROJECT
CONSTRUCTION SPREAD 2

PROPOSED WELDED STEEL NATURAL GAS LIQUIDS PIPELINE
PADEP-SOUTHWEST REGION
PERRY COUNTY CONSERVATION DISTRICT
CROSSINGS S-J60, S-J61, S-J62, S-J63, WL-J56, WL-J57
EROSION AND SEDIMENT CONTROL PLAN & PROFILE

DATE: 5/27/16
PROJECT NO.: 112C05958
DESIGNED BY: BH
DRAWN BY: BH
CHECKED BY: RS
COPYRIGHT TETRA TECH INC.
S-J60-A
SHEET 1 OF 1



NOTES:

- 1. STREAM RESTORATION CHANNEL DESIGN TABLE WITH STONE SIZING AND DETAIL PROVIDED IN UP FRONT SHEET.
- 2. EROSION CONTROL BLANKET TYPICAL DETAIL PROVIDED ON ES-0.08



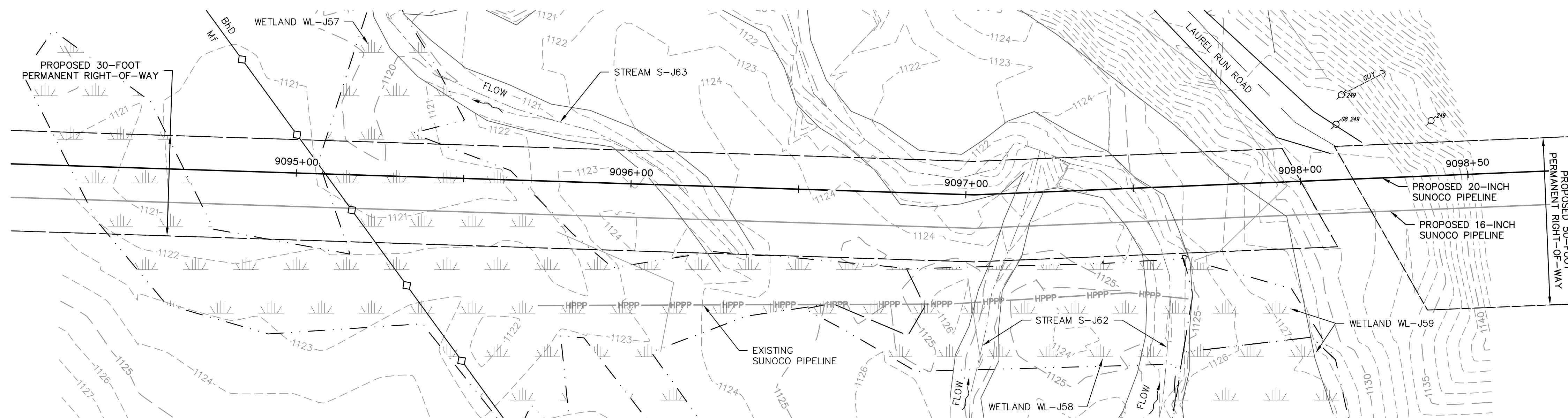
661 ANDERSEN DRIVE - FOSTER PLAZA 7
PITTSBURGH, PA 15220
T: (412) 921-7090 | F: (412) 921-4040

REVISIONS			
NO.	BY	DATE	REMARKS

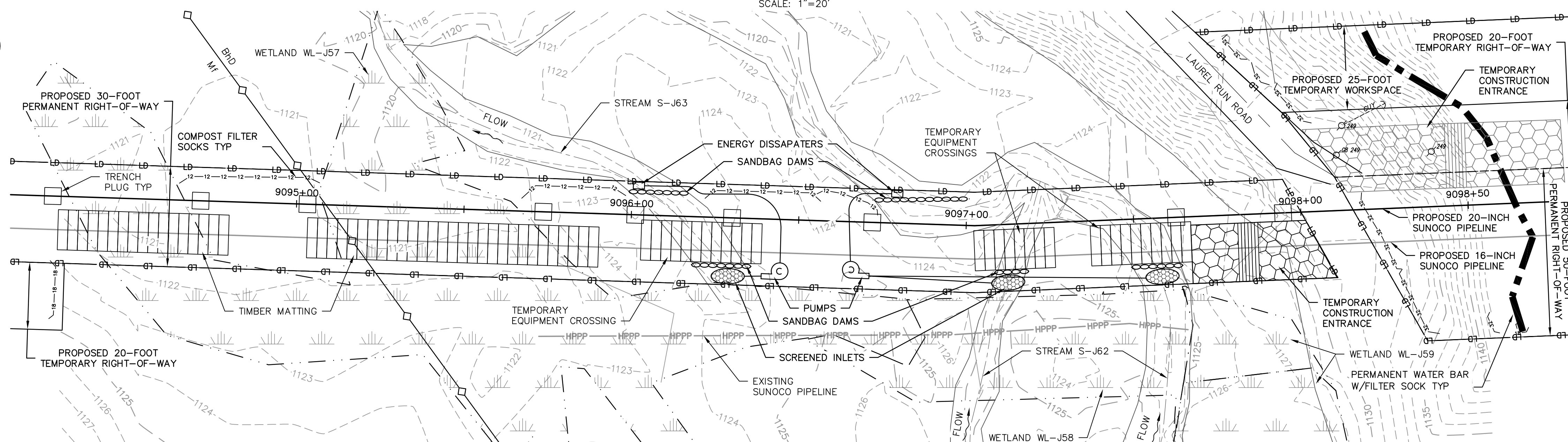
SUNOCO PIPELINE L.P.
SINKING SPRING, PENNSYLVANIA
PENNSYLVANIA PIPELINE PROJECT
CONSTRUCTION SPREAD 2

PROPOSED WELDED STEEL NATURAL GAS LIQUIDS PIPELINE
PADEP-SOUTHWEST REGION
PERRY COUNTY CONSERVATION DISTRICT
CROSSINGS S-J60, S-J61, S-J62, S-J63, WL-J56, WL-J57
RESTORATION PLAN

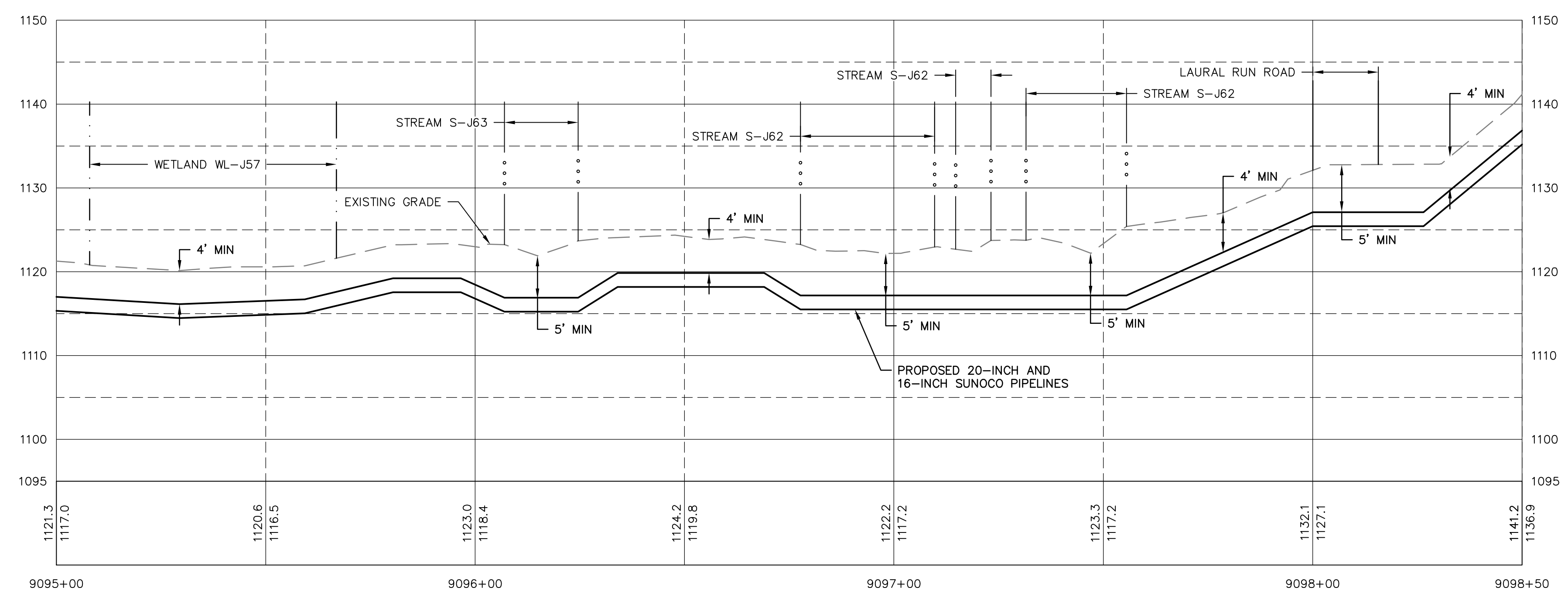
DATE:	11/4/16
PROJECT NO.:	112C05958
DESIGNED BY:	BH
DRAWN BY:	BH
CHECKED BY:	RS
COPYRIGHT TETRA TECH INC.	
S-J60-B	
SHEET	1 OF 1



EXISTING CONDITIONS 20-INCH PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL 20-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES
20' 0 20' 40'
10' 5' 0 10' 20'

1"=20'
1"=10'

GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4'-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

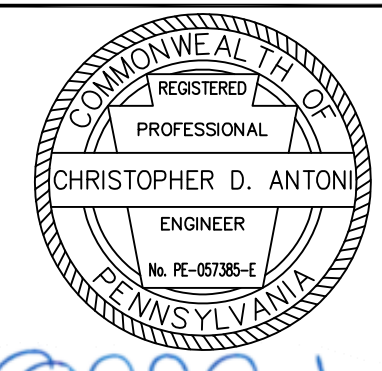
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
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7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

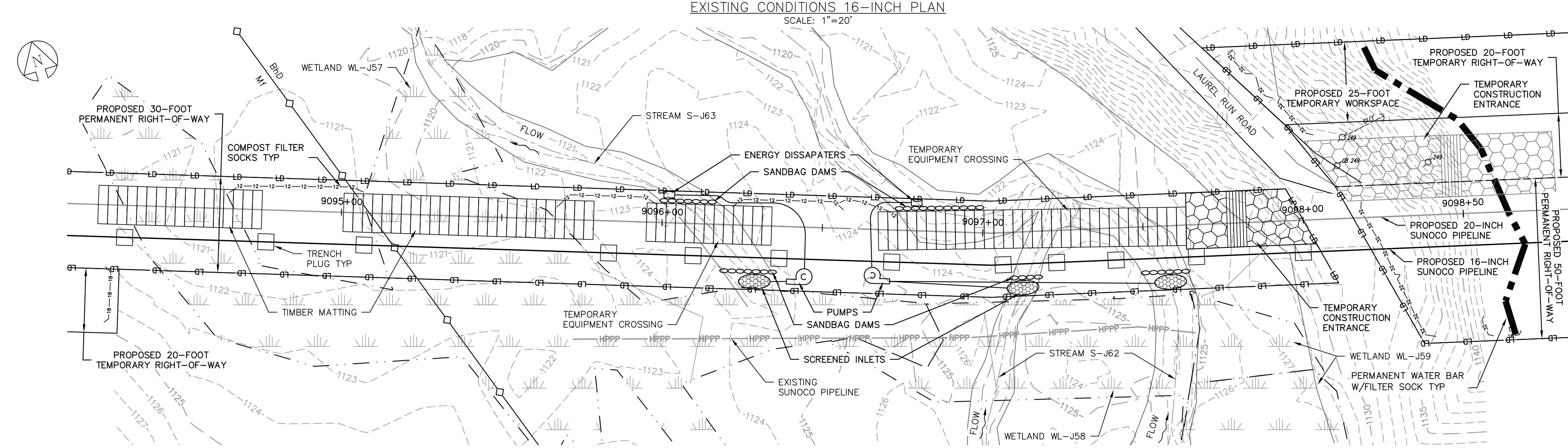


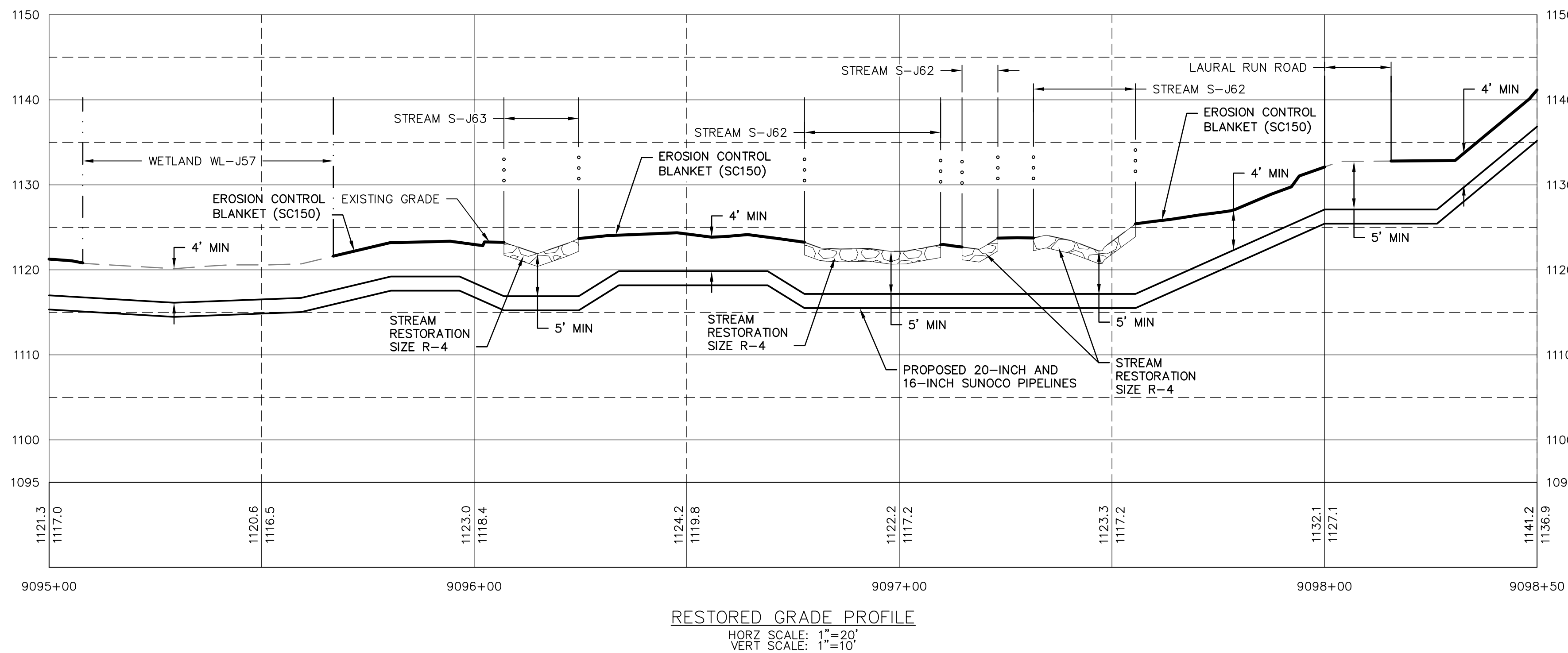
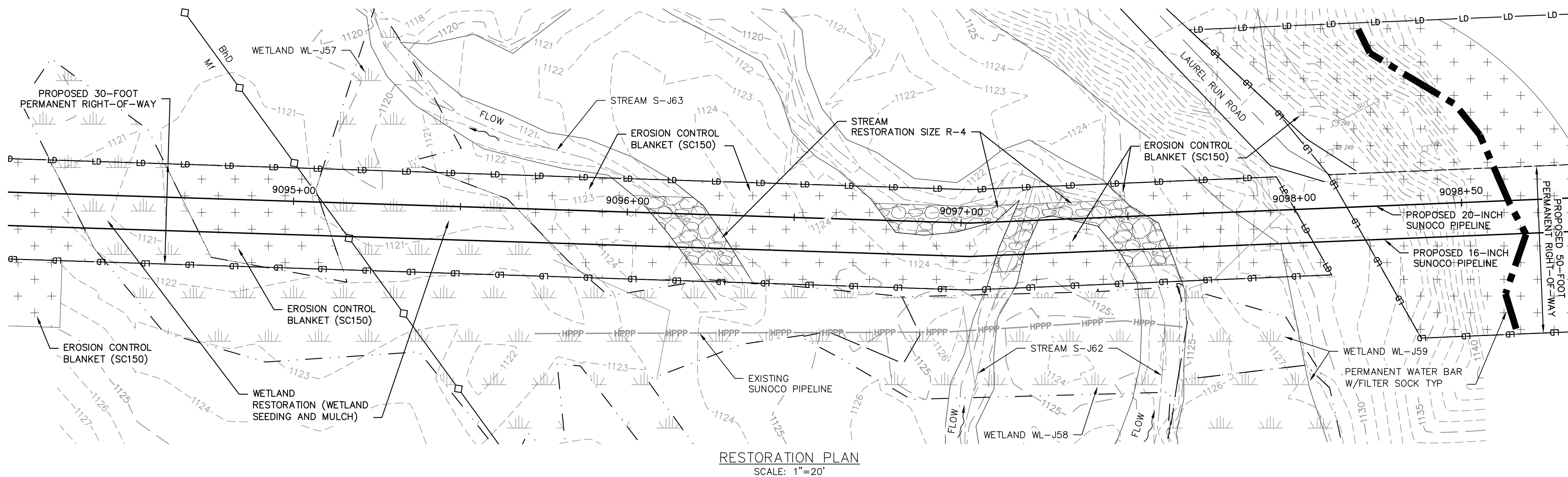
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAMS S-J62 AND S-J63 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO. S-J62-A1				REV. NO. 0





GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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WETLAND CROSSING NOTES:

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STREAM CROSSING NOTES:

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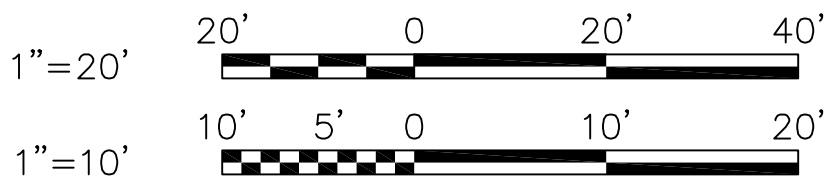
LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
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	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.

GRAPHIC SCALES



STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

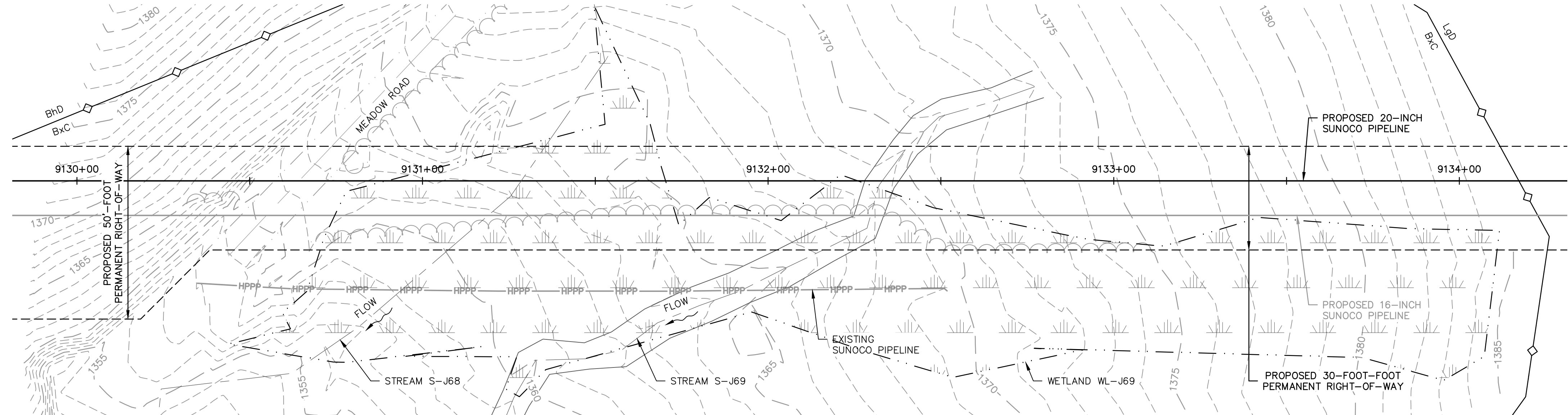
THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

STV PROJECT No.: 38-17335

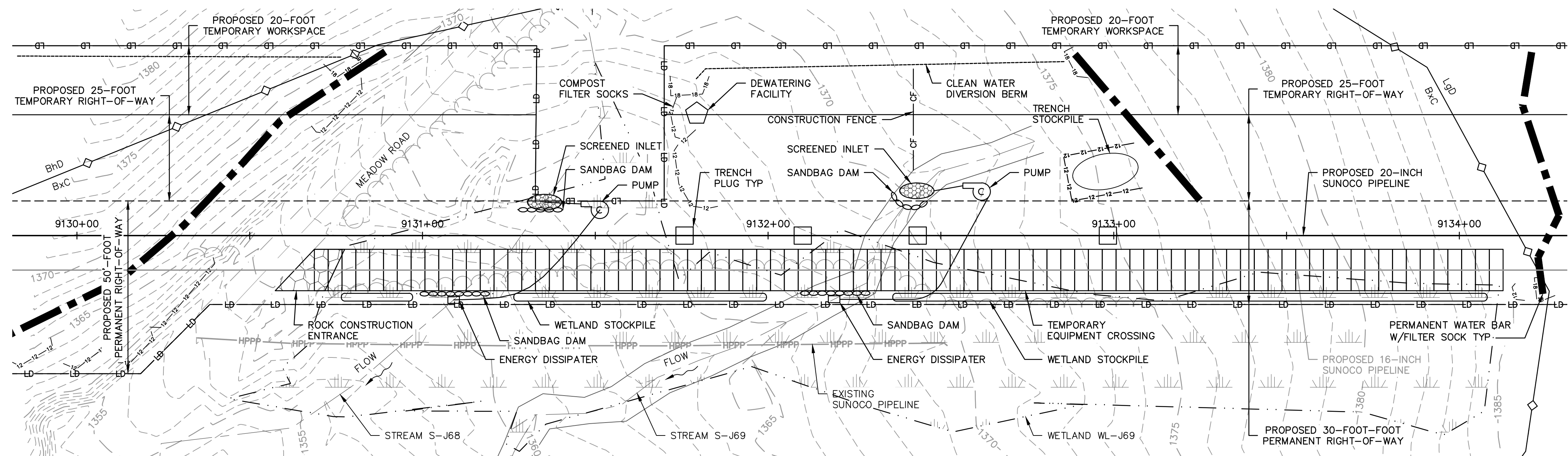
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER D. ANTONI
No. PE-057385-E
11/30/16
CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	DLH
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

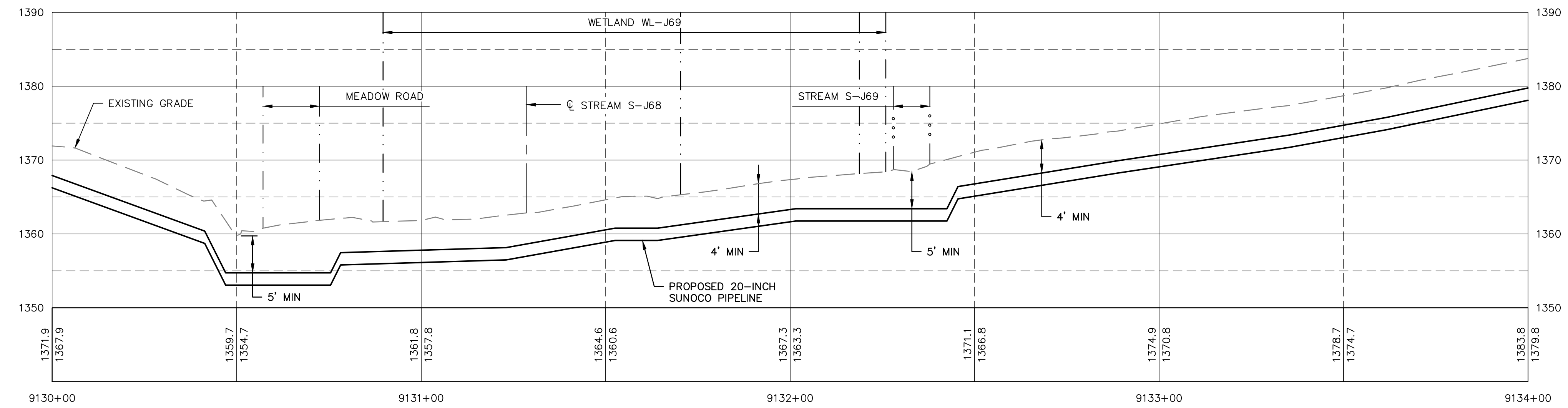
REV.	DATE	APP#	DESCRIPTION	APPROVAL
Sunoco Logistics Partners L.P. PENNSYLVANIA PIPELINE PROJECT STREAMS S-J62 AND S-J63 RESTORATION PLAN PERRY COUNTY, PA				
DWG. NO.			REV. NO.	
S-J62-B			0	



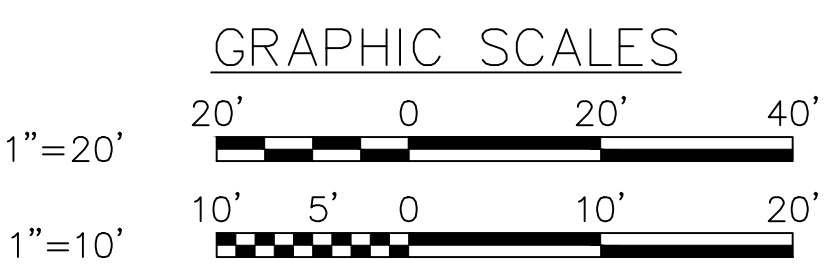
EXISTING CONDITIONS 20-INCH PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL 20-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV.
	PROPOSED TOP OF PIPE ELEV.



CHRISTOPHER D. ANTONI
PE-057385-E

ENGINEERING RECORD	
DRAWN BY	LS
CHECKED BY	CDA
APPROVED BY	CDA
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SCALE	AS NOTED

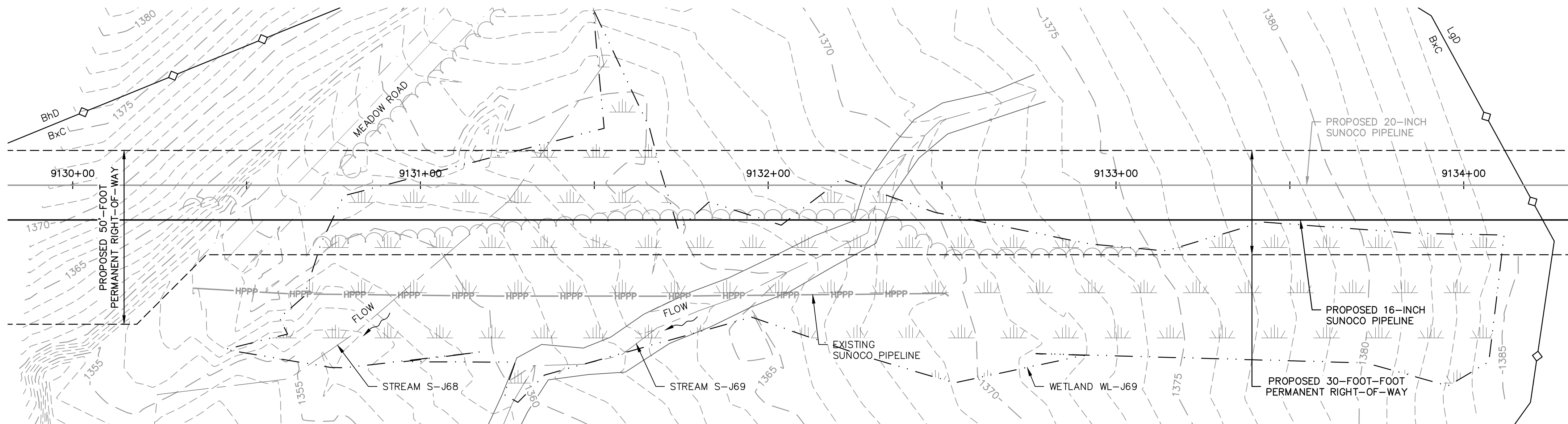
OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-J69 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
DWG. NO.			S-J69-A1	REV. NO. 0

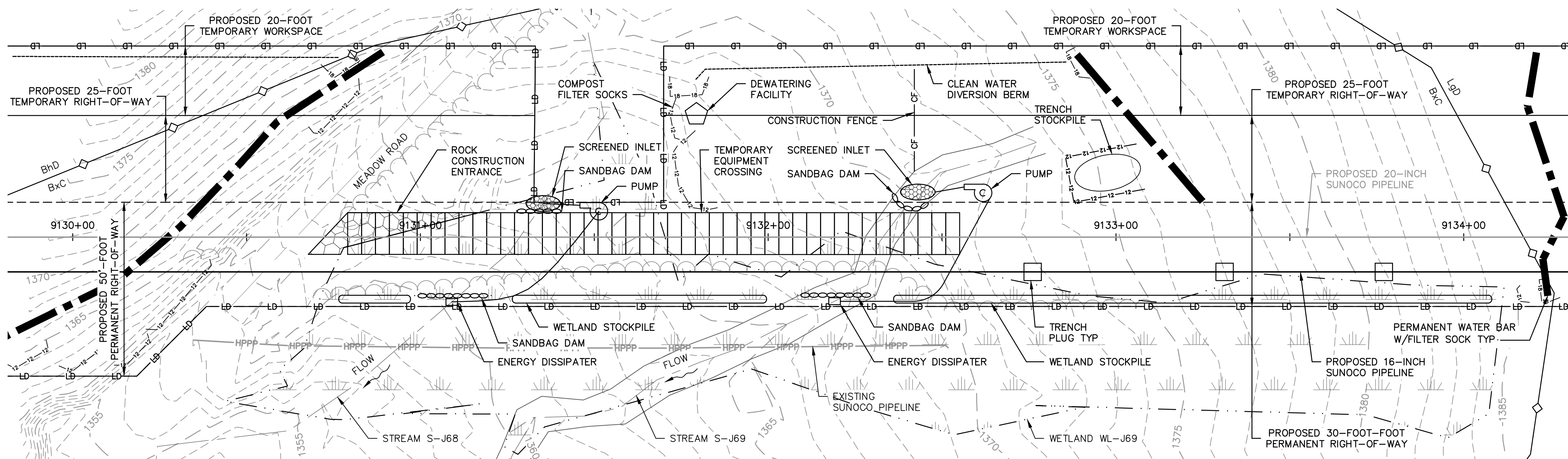
STV
Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

THE LOCATION OF THE PIPELINE FACILITIES AS SHOWN HEREON MUST BE CONSIDERED AS APPROXIMATE ONLY. BEFORE DIGGING OR FOR AN EXACT LOCATION PLEASE CONTACT YOUR STATES UNDERGROUND UTILITY LOCATION SERVICE.

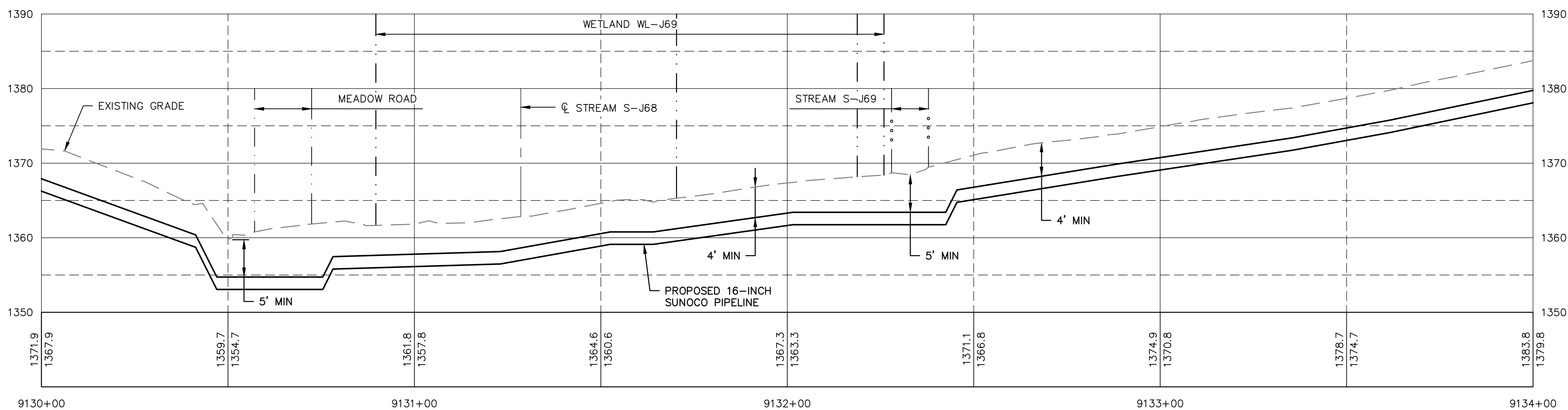
STV PROJECT No.: 38-17335



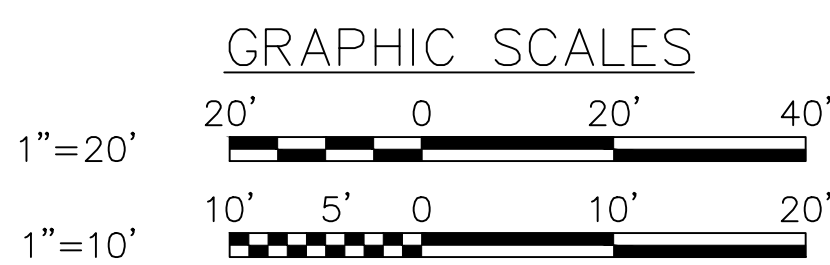
EXISTING CONDITIONS 16-INCH PLAN
SCALE: 1"=20'



EROSION & SEDIMENTATION CONTROL 16-INCH PLAN
SCALE: 1"=20'



PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
2. ALL EXISTING UTILITY INFORMATION IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. MAINTAIN 2'-0" MINIMUM VERTICAL SEPARATION BETWEEN THE PROPOSED PIPELINE AND OTHER UTILITIES.
4. THE BACKGROUND TOPOGRAPHY WAS OBTAINED FROM TOPOGRAPHIC SURVEYS PERFORMED IN SEPTEMBER 2016.
5. THE PROJECT IS LOCATED IN NAD83 PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SOUTH ZONE), NAVD88.
6. EXCAVATION IS LIMITED TO THE CENTERLINE WITH A TYPICAL TRENCH WIDTH OF 4-5' FOR 16/20" PIPELINE.

WETLAND CROSSING NOTES:

1. REFERENCE NOTES AND DETAILS FOR WETLAND CONSTRUCTION SEQUENCING AND WETLAND RESTORATION (ES-0.03, ES-0.08, ES-0.10, AND ES-0.15).
2. A MINIMUM OF 4 FEET COVER UNDER WETLANDS AND UPLANDS IS REQUIRED.
3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
4. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET EDGE OF WETLAND OR 100 FEET FROM EDGE OF WETLAND FOR SPECIAL PROTECTION WATERS (HQ OR EV).

STREAM CROSSING NOTES:

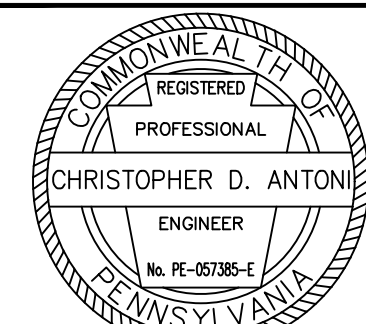
1. REFERENCE NOTES AND DETAILS FOR STREAM CONSTRUCTION SEQUENCING AND STREAM RESTORATION (ES-0.01-ES-0.17).
2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
3. SITE CONDITIONS MAY ALLOW FOR IMPLEMENTATION OF OTHER APPROVED PIPELINE INSTALLATION METHODS REFERENCED WITH THE NOTES AND DETAILS (ES-0.11-ES-0.14).
4. THE PIPELINES SHALL MAINTAIN A MINIMUM OF 5 FEET OF COVER UNDER STREAMS FROM THE TOP OF PIPE TO THE STREAM BED. THIS COVER WILL BE MAINTAINED AT A MINIMUM FROM TOP OF BANK TO TOP OF BANK.
5. REFERENCE THE STREAM BANK STABILIZATION DETAIL AND STREAM RESTORATION TABLE IN THE NOTES AND DETAILS WHERE RIP-RAP IS PROPOSED (ES-0.18).
6. EROSION CONTROL BLANKET SHALL BE PLACED A MINIMUM OF 50 FEET FROM TOP OF BANK OR 100 FEET FROM TOP OF BANK FOR SPECIAL PROTECTION WATERS (HQ OR EV).
7. TIMBER MATS SHALL EXTEND A MINIMUM OF 20 FEET BEYOND TOP OF BANK.
8. COMPOST FILTER SOCKS SHALL BE INSTALLED ALONG THE TOP OF THE STREAM BANK ACROSS THE RIGHT-OF-WAY WHEN PUMP BYPASS IS NOT IN PLACE.

LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
	PROPOSED ROCK CONSTRUCTION ENTRANCE
	LIMIT OF DISTURBANCE
	CONSTRUCTION FENCE
	12-INCH COMPOST FILTER SOCK
	18-INCH COMPOST FILTER SOCK
	24-INCH COMPOST FILTER SOCK
	32-INCH COMPOST FILTER SOCK
	PERMANENT WATER BAR W/FILTER SOCK
	TRENCH PLUG
	TEMPORARY EQUIPMENT CROSSING
	SANDBAG DAM
	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

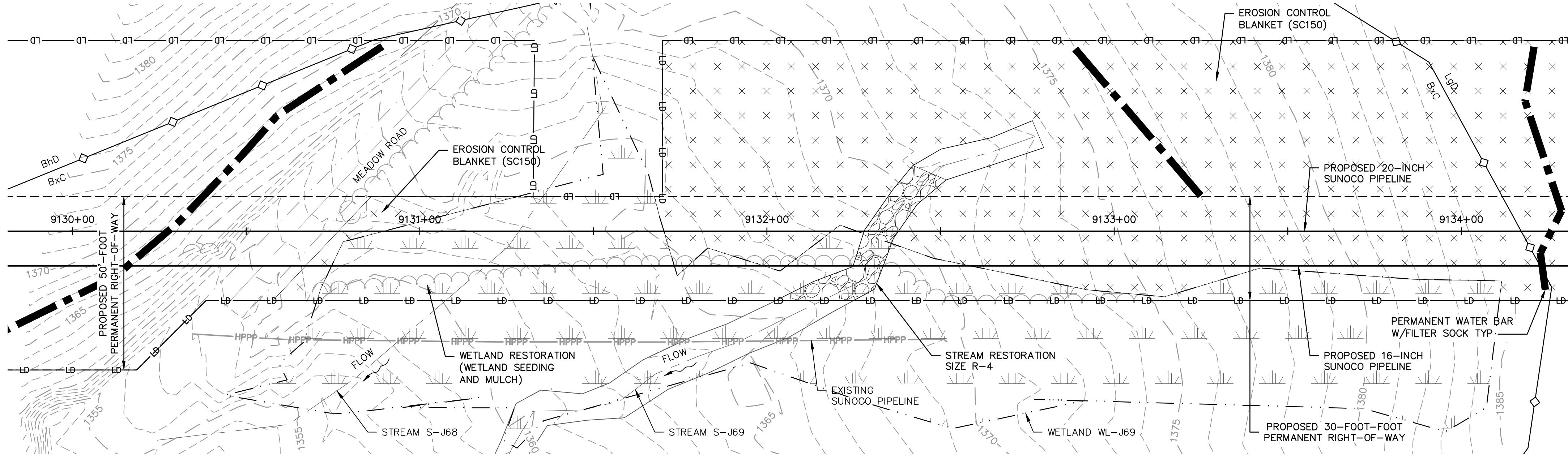


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PE-057385-E

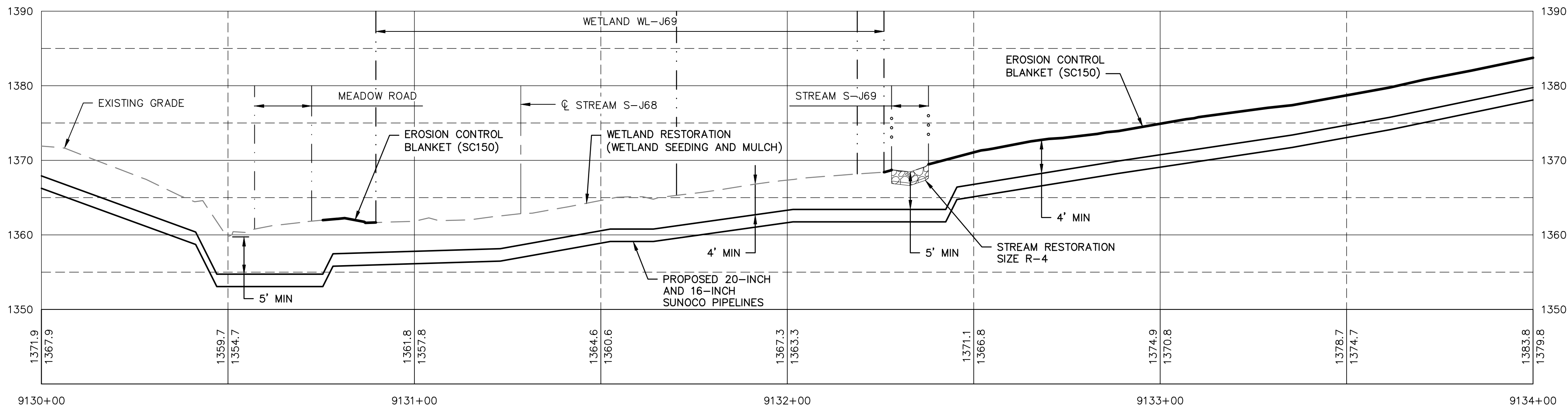
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DRAWN BY	LS
CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED

OLD DRAWING NO.

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-J69 EXISTING CONDITIONS/EROSION & SEDIMENTATION CONTROL PLANS				
PERRY COUNTY, PA				
DWG. NO.			S-J69-A2	REV. NO. 0

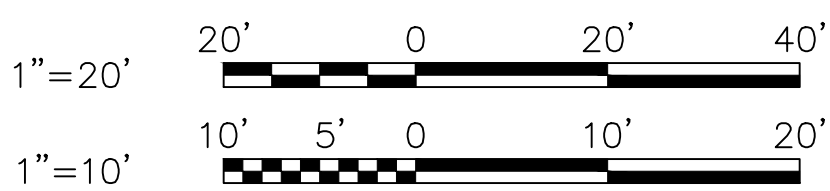


PLAN
SCALE: 1"=20'



RESTORED GRADE PROFILE
HORZ SCALE: 1"=20'
VERT SCALE: 1"=10'

GRAPHIC SCALES



GENERAL NOTES:

1. REFERENCE E&S PLAN AND SITE RESTORATION NOTES AND DETAILS FOR ADDITIONAL CONSTRUCTION SEQUENCING, TYPICAL DETAILS AND NOTES (ES-0.01-ES-0.23); AND PLAN SHEETS FOR ADDITIONAL PLANS AND TOPOGRAPHY.
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3. FOR TEMPORARY TIMBER MAT REFERENCE (ES-0.10)
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STREAM CROSSING NOTES:

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2. FOR TEMPORARY EQUIPMENT CROSSINGS REFERENCE (ES-0.10).
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LEGEND

SYMBOL	DESCRIPTION
	PROPOSED 16-INCH & 20-INCH SUNOCO PIPELINES
	PROPOSED SUNOCO RIGHT-OF-WAY
	EXISTING SUNOCO PIPELINE
	MAJOR CONTOUR
	MINOR CONTOUR
	STREAM CENTERLINE
	TOP/BOTTOM OF BANK
	EXISTING EDGE OF PAVED ROADWAY
	EXISTING EDGE OF UNPAVED ROADWAY
	EXISTING VEGETATION
	EDGE OF WATER
	SOIL TYPE BOUNDARY
	WETLAND
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	LIMIT OF DISTURBANCE
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	PERMANENT WATER BAR W/FILTER SOCK
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	PUMP
	SCREENED INLET
	ENERGY DISSIPATER
	DEWATERING FACILITY
	CULVERT PIPE
	EROSION CONTROL BLANKET
	STREAM RESTORATION

PROFILE LEGEND:

	PROPOSED PIPELINE
	EXISTING GRADE
	EXISTING GRADE ELEV. PROPOSED TOP OF PIPE ELEV.

Baltimore, MD Bismarck, ND Denver, CO Douglassville, PA
Houston, TX Pittsburgh, PA Williamsport, PA

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STV PROJECT No.: 38-17335

CHRISTOPHER D. ANTONI
PE-057385-E

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ENGINEERING RECORD	
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CHECKED BY	CDA
APPROVED BY	CDA
DATE	11/30/16
SCALE	AS NOTED
OLD DRAWING NO.	

REV.	DATE	APP#	DESCRIPTION	APPROVAL
PENNSYLVANIA PIPELINE PROJECT STREAM S-J69 RESTORATION PLAN				
DWG. NO.			S-J69-B	REV. NO. 0

PERRY COUNTY, PA