LEGEND

PROPOSED

PROJECT COMPONENTS

- PROPOSED PIPELINE
- LIMITS OF DISTURBANCE — LOD —
- PROPOSED PERMANENT EASEMENT
- ACCESS ROAD
- FACILITY LOCATION
- APPROXIMATE LOCATION OF BORE PIT

EROSION & SEDIMENT CONTROL DEVICES

- PERMANENT WATERBAR (WITH SUMP AND COMPOST FILTER SOCK END TREATMENT)
- TEMPORARY WATERBAR (WITH SUMP AND COMPOST FILTER SOCK END TREATMENT)
- DIVERSION SOCK
- TEMPORARY CLEAN WATER SLOPE PIPE
- 12" COMPOST FILTER SOCK
- 18" COMPOST FILTER SOCK
- 24" COMPOST FILTER SOCK
- 32" COMPOST FILTER SOCK
- 32" COMPOST FILTER SOCK (DURASOXX)
- TRENCH PLUG
- TEMPORARY EQUIPMENT BRIDGE
- ROCK CONSTRUCTION ENTRANCE
- TIMBER MAT
- EROSION CONTROL MATTING
- ROCK FILTER OUTLET
- SAFETY FENCE
- HABITAT EXCLUSION FENCING

IMPACTS

- PROPOSED PEM WETLAND IMPACT
- PROPOSED PSS WETLAND IMPACT
- PROPOSED PFO WETLAND IMPACT
- PROPOSED PUB WETLAND IMPACT
- PROPOSED VERNAL POOL IMPACT
- PROPOSED STREAM IMPACT (TOB TO TOB)

EXISTING

ENVIRONMENTAL FEATURES

- EXISTING PEM WETLAND
- EXISTING PSS WETLAND
- EXISTING PFO WETLAND
- EXISTING PUB WETLAND
- EXISTING VERNAL POOL
- WATERCOURSE THROUGH EXISTING CULVERT
- EXISTING STREAM TOP OF BANK
- APPROXIMATE 100 YEAR FLOODWAY

OTHER

- PROPERTY LINE — ₵ —
- EXISTING ROAD CENTERLINE
- EXISTING MAJOR CONTOUR — — 1230' — —
- EXISTING MINOR CONTOUR

IN INSTANCES WHERE A WATERCOURSE OR WETLAND IS CROSSED BY THE PROPOSED PIPELINE OR WORKSPACE MULTIPLE TIMES, CROSSING NUMBER (E.G. "-1", "-2") HAVE BEEN ADDED TO THE WATERCOURSE OR WETLAND ID. THE PURPOSE OF SHOWING THESE CALLOUTS IS TO BETTER REPRESENT IMPACTS SHOWN ON THE WATER OBSTRUCTION AND ENCROACHMENT PERMIT APPLICATION SITE-SPECIFIC DRAWINGS.

STREAM 042415_JC_1002_P_IN - 1

NOTES EXPLAINING IMPACTS:

1. FOR THE IMPACT TABLE SHOWN IN EACH DRAWING VALUES HAVE BEEN ROUNDED TO 3 DECIMAL PLACES. ANY IMPACTS LESS THAN 0.0005 ARE ROUNDED TO 0.001. A "-" DENOTES NO IMPACTS TO THE WETLAND, WATERCOURSE CHANNEL, OR FLOODWAY, AS APPLICABLE.

PADEP IMPACTS:

1. TEMPORARY IMPACT ACRES ARE MEASURED WITHIN THE TEMPORARY WORKSPACE AND ADDITIONAL TEMPORARY WORKSPACE; THE MEASUREMENT DOES NOT INCLUDE ACREAGES IMPACTED WITHIN THE 30' OPERATIONAL ROW.

2. PERMANENT IMPACT ACRES ARE MEASURED WITHIN THE 30' OPERATIONAL ROW, WITHIN AN ABOVEGROUND FACILITY FOOTPRINT, OR REPRESENTS A CULVERT INSTALLATION OR REPLACEMENT. FOR HDDs OR BORES, THE PERMANENT IMPACT IS CALCULATED AS THE LENGTH OF THE CROSSING TIMES THE PIPE DIAMETER.

3. STREAM IMPACTS TITLED "CROSSING WIDTH" WERE MEASURED ALONG THE PIPELINE CENTERLINE, AS APPLICABLE. IN INSTANCES WHERE THE PIPELINE WILL NOT CROSS A WATERCOURSE, THE CROSSING WIDTH WAS MEASURED PARALLEL TO THE PIPELINE OR ALONG THE ACCESS ROAD CENTERLINE. STREAM IMPACTS TITLED "WATERCOURSE CENTERLINE" WERE MEASURED ALONG THE STREAM CENTERLINE WITHIN THE WORKSPACE. FLOODWAY CROSSING LENGTHS ARE NOT INCLUDED ON THE SITE-SPECIFIC DRAWINGS BUT CAN BE FOUND ON THE ARIT IN JPA SECTION A-1.

USACE IMPACTS:

1. USACE TEMPORARY IMPACT ACRES ARE MEASURED WITHIN THE 50-FOOT WIDE PERMANENT EASEMENT, TEMPORARY WORKSPACE, AND ADDITIONAL TEMPORARY WORKSPACE. THIS CALCULATION EXCLUDES ACREAGES OF PFO AND PSS WETLANDS THAT WILL BE MAINTAINED AS PEM WETLANDS WITHIN THE 30-FOOT WIDE OPERATIONAL ROW, WETLANDS THAT WILL BE FILLED, PERMANENT CULVERTS WITHIN WATERCOURSES, AND WETLANDS AND WATERCOURSES THAT WILL BE CROSSED UNDER USING BORES OR HDD TECHNOLOGY.

2. USACE PERMANENT IMPACTS ACRES INCLUDE WETLAND COVER TYPE CONVERSION, PERMANENT CULVERT INSTALLATION, AND WETLAND FILL.

3. STREAM IMPACTS TITLED "CROSSING WIDTH" WERE MEASURED ALONG THE PIPELINE CENTERLINE, AS APPLICABLE. IN INSTANCES WHERE THE PIPELINE WILL NOT CROSS A WATERCOURSE, THE CROSSING WIDTH WAS MEASURED PARALLEL TO THE PIPELINE OR ALONG THE ACCESS ROAD CENTERLINE. STREAM IMPACTS TITLED "WATERCOURSE CENTERLINE" WERE MEASURED ALONG THE STREAM CENTERLINE WITHIN THE WORKSPACE.

GENERAL NOTES:

1. ALTERNATIVE CROSSING METHODS SHOWN ON THE APPROVED E&S PLAN MAY BE IMPLEMENTED, AS NECESSARY, TO ADDRESS FIELD CONDITIONS DURING CONSTRUCTION.

2. IN INSTANCES WHERE THE PROJECT WORKSPACE CROSSES A WETLAND/WATERCOURSE MORE THAN ONCE, THE CROSSING NUMBER (I.E. -1, -2, -3) HAS BEEN ADDED AS A SUFFIX TO THE WETLAND/WATERCOURSE NAME.

3. PROFILES ARE ONLY SHOWN ON THE DRAWINGS WHERE THE PROPOSED PIPELINE CROSSES A WETLAND OR WATERCOURSE.

4. THE PROPOSED PIPELINE IS TO BE INSTALLED WITH 3-FEET MINIMUM COVER THROUGH WETLANDS AND 5-FEET MINIMUM COVER THROUGH WATERCOURSE CHANNELS.

5. BORE PIT LOCATIONS SHOWN IN PLAN VIEW ARE APPROXIMATE. DEPTH OF PIPE AT CONVENTIONAL BORED LOCATIONS IS APPROXIMATE AND WILL BE AT A MINIMUM OF 5-FEET COVER BELOW WATERCOURSE CHANNELS.

6. WETLAND AND WATERCOURSE DELINEATIONS AND RESOURCE IMPACT CALCULATIONS COMPLETED BY AECOM.

7. DURING THE CONSTRUCTION PHASE, IF SHALLOW BEDROCK IS PRESENT, THE PIPELINE WILL BE INSTALLED THROUGH THE WATERCOURSE CHANNEL WITH A MINIMUM OF 2 FEET OF COVER, AS THE REQUIRED 5 FEET OF MINIMUM COVER WILL NOT BE FEASIBLE.

8. TOWNSHIP/ COUNTY LINE SOURCE: PENNDOT

9. PENNSYLVANIA MUNICIPALITY BOUNDARIES, DATED 01/2017 AND PENNDOT PENNSYLVANIA COUNTY BOUNDARIES, DATED 07/2018. AVAILABLE AT WWW.PASDA.PSU.EDU

10. FLOODWAYS CROSSED ON EXISTING ACCESS ROADS WHERE IMPROVEMENTS ARE NOT REQUIRED ARE NOT SHOWN AS IMPACTS.

CROSSING METHOD KEY FOR WATERCOURSE CHANNELS:

- BX = CONVENTIONAL BORE CROSSING
- CD = COFFERDAM CROSSING
- DPX = DAM-AND-PUMP CROSSING
- DX-NF = DRY CROSSING IF NO FLOW
- FX = FLUME CROSSING
- HDD = HORIZONTAL DIRECTIONAL DRILL CROSSING
- N/A = NOT APPLICABLE

REVISIONS					
NO.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVAL
0	10/2018	ISSUED FOR PADEP 105 PERMIT	HM	JB/KEK	MJD
1	04/2019	REVISED FOR USACE	HM	JB/KEK	MJD
2	10/2019	REVISED FOR USACE	HM	JB/KEK	MJD

APPROVALS	
DRAWN BY	DATE
HM (MM)	10/2018
CHECKED BY	DATE
JB/KEK (MM)	10/2018
ENG. APPROVAL	DATE
MJD (MM)	10/2018
P.M. APPROVAL	DATE

PREPARED FOR:

PREPARED BY:

PennEast PIPELINE

PENNEAST PIPELINE PROJECT

WETLAND & STREAM CROSSING PLAN
PROPOSED 36" PENNEAST PIPELINE
PROPOSED 24" HELLERTOWN LATERAL
PROPOSED 4" BLUE MOUNTAIN LATERAL
LEGEND SHEET

SCALE	DRAWING NO.	REVISION
N/A	LEGEND	2