SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. THE CONTRACTOR AND EASEMENT OWNER SHALL ADHERE TO ALL CONDITIONS AND REQUIREMENTS SET FORTH BY THE PERMITTING AUTHORITY AND AS INDICATED IN THE EARTH CHANGE PERMIT FOR THIS SITE.

2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL CONTROL MEASURES IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS INCLUDED IN THIS PLAN AND AS RECOMMENDED BY THE PRODUCT MANUFACTURER. CONFLICTS BETWEEN THE PLAN AND THE MANUFACTURER RECOMMENDATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.

3. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURE SHALL BE INSTALLED BEFORE OR UPON COMMENCEMENT OF PERMITTED EARTH CHANGE ACTIVITIES AND THE MEASURES SHALL BE MAINTAINED ON A DAILY BASIS.

4. THE CONTRACTOR SHALL PRESERVE NATURAL VEGETATION BOTH ON AND OFF THE SITE, UNLESS THE VEGETATION HAS BEEN SPECIFICALLY IDENTIFIED FOR REMOVAL.

5. THE CONTRACTOR SHALL CONTAIN SEDIMENT-LADEN RUNOFF TO THE WORK AREA AND NOT ALLOW SEDIMENT TO COLLECT ON ANY OFF-SITE AREA OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STORM DRAINS, LAKES, PONDS, AND WETLANDS.

6. THE CONTRACTOR SHALL CONTROL MUD TRACKING ON AND OFF THE CONSTRUCTION SITE AND REMOVE ALL MUD AND DIRT FROM ROADWAYS AFFECTED BY THE PERMITTED ACTIVITY BY THE END OF EACH WORKDAY.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND SHALL PROVIDE ALL EQUIPMENT AND MATERIAL TO KEEP DUST IN CHECK AT ALL TIMES. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS.

8. THE CONTRACTOR SHALL INSPECT ALL CONTROL MEASURES AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY MEASURE THAT IS FOUND TO BE OPERATING INEFFECTIVELY.

9. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER WHEN A CHANGE IN SITE CONDITIONS REQUIRES MODIFICATION OF THE EXISTING PLAN AND CONTROL MEASURES.

10. THE CONTRACTOR SHALL REMOVE TEMPORARY CONTROL MEASURES AFTER PERMANENT MEASURES ARE INSTALLED AND THE AREAS IS STABILIZED. ("STABILIZED," MEANS THE ESTABLISHMENT OF VEGETATION OR THE PROPER PLACEMENT, GRADING OR COVERING OF SOIL TO ENSURE ITS RESISTANCE TO SOIL EROSION, SLIDING OR OTHER EARTH MOVEMENT.)

11. THE CONTRACTOR SHALL COMPLETE ALL PERMANENT SOIL EROSION CONTROL MEASURES WITHIN SEVEN (7) CALENDAR DAYS AFTER FINAL GRADING (WEATHER PERMITTING) OR UPON COMPLETION OF THE FINAL EARTH CHANGE. IF IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE THE EARTH CHANGE, THEN THE CONTRACTOR SHALL MAINTAIN TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES UNTIL PERMANENT CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.

REMEMBER THAT EACH PROJECT SITE HAS ITS OWN NUANCES. THEREFORE, THE ORIGINAL SWPPP FOR THE SITE IS THE BEST-ESTIMATED PLAN FOR KEEPING SEDIMENT FROM LEAVING THE SITE. SWPPPS, JUST LIKE CONSTRUCTION SITES, CHANGE WITH THE CONDITIONS AND SITUATIONS THAT A RISE. SOME BMPS MAY NEED TO BE ADDED OR REMOVED OR JOB SITE PRACTICES MAY NEED TO BE ALTERED. DURING THE CONSTRUCTION PROCESS IF ANY COMPONENT OF THE SWPPP CHANGES, REMEMBER TO CHANGE/UPDATE THE SWPPP.

WATER QUALITY CONTROL MEASURE KEY

ID	CONTROL MEASURE	WHERE USED
GO	GRUBBING OMITTED	ON STEEP SLOPES TO PREVENT DRILLING, GULLYING, AND REDUCE SHEET FLOW VELOCITIES OR WHERE CLEAR VISION CORRIDORS ARE NECESSARY
DC	DUST CONTROL	ON PAVED AND UNPAVED ROADS, ETC. TO REDUCE DUST AND SEDIMENTATION FROM WIND AND CONSTRUCTION ACTIVITIES
M	MULCH	IN AREAS SUBJECT TO EROSIVE SURFACE FLOWS OR SEVERE WIND OR ON NEWLY SEEDED AREAS
FR	FIBER ROLL	IN AREAS REQUIRING IMMEDIATE PROTECTION OF SLOPES AGAINST SURFACE EROSION AND GULLY FORMATION AND FOR PERIMETER SEDIMENT CONTROL.
TS	TEMPORARY SEEDING	ON DISTURBED AREAS WHERE EARTH CHANGE HAS BEEN INITIATED BUT NOT COMPLETED WITHIN A 2 WEEK PERIOD
PS	PERMANENT SEEDING	ON DISTURBED AREAS WHERE EARTH CHANGE ACTIVITIES HAVE BEEN COMPLETED (FINAL GRADING ATTAINED) OR ARE DELAYED.
DW	DEWATERING	IN AREAS WHERE CONSTRUCTION ACTIVITIES ARE LIMITED BY THE PRESENCE OF WATER, AND DRY WORK IS REQUIRED
CW	CONCRETE WASHOUT	AT SITES WHERE CONCRETE WASTEWATER COULD BE DISCHARGED TO STORM WATER
CFS	COMPOST FILTER SOCK	ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW
TCE	TEMPORARY CONSTRUCTION ENTRANCE	WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE FROM A PUBLIC ROAD.
WP	WORK PAD	USE WHERE SOILS ARE EASILY COMPACTED OR ERODED. PROVIDES A STABLE BASE FOR HEAVY EQUIPMENT
TMR	TEMPORARY MAT ROAD	USED TO REDUCE PLANT AND SOIL COMPACTION. CAN BE USED IN BOTH WETLANDS AND UPLANDS WHERE UNSTABLE SOILS COULD RESULT IN RUTTING AND EROSION
OCF	ORANGE CONSTRUCTION FENCE	ADJACENT TO CRITICAL/SENSITIVE AREA(S)/FEATURE(S), TO IDENTIFY THESE LOCATIONS FOR PROTECTION

ADDITIONAL CONSTRUCTION SITE POLLUTION CONTROLS

GENERAL:

1. CONSTRUCTION PERSONNEL, INCLUDING SUBCONTRACTORS WHO MAY USE OR HANDLE HAZARDOUS OR TOXIC MATERIALS, SHALL BE MADE AWARE OF THE FOLLOWING GENERAL GUIDELINES REGARDING DISPOSAL AND HANDLING OF HAZARDOUS AND CONSTRUCTION WASTES:
   - PREVENT SPILLS
   - USE PRODUCTS UP
   - FOLLOW LABEL DIRECTIONS FOR DISPOSAL
   - REMOVE LIDS FROM EMPTY BOTTLES AND CANS WHEN DISPOSING IN TRASH
   - RECYCLE WASTES WHENEVER POSSIBLE
   - DON'T POUR INTO WATERWAYS, STORM DRAINS OR ONTO THE GROUND
   - DON'T POUR DOWN THE SINK, FLOOR DRAIN OR SEPTIC TANKS
   - DON'T BURY CHEMICALS OR CONTAINERS
   - DON'T BURN CHEMICALS OR CONTAINERS
   - DON'T MIX CHEMICALS TOGETHER

2. **CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS, AND ANY HAZARDOUS MATERIALS USED ON-SITE.** CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CD&D) WASTE MUST BE DISPOSED OF AT AN OHIO EPA APPROVED CD&E LANDFILL.

3. **NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON-SITE.** BY EXCEPTION, CLEAN FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN AWAY WHICH DOES NOT ENCROACH UPON NATURAL WETLANDS, STREAMS OR FLOODPLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.

4. **CONSTRUCTION AND DEMOLITION DEBRIS (CD&D) DISPOSAL.** CD&D WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ORC 3714 AT AN APPROVED OHIO EPA CD&D LANDFILL. CD&D WASTE IS DEFINED AS ALL MATERIALS ATTACHED TO A STRUCTURE, WHICH IS BEING DEMOLISHED.

5. **HANDLING CONSTRUCTION CHEMICALS.** MIXING, PUMPING, TRANSFERRING, OR OTHER HANDLING OF CONSTRUCTION CHEMICALS SUCH AS FERTILIZER, LIME, ASPHALT, CONCRETE DRYING COMPOUNDS, AND ALL OTHER POTENTIALLY HAZARDOUS MATERIALS SHALL BE PERFORMED IN AN AREA AWAY FROM ANY WATERCOURSE, DITCH, OR STORM DRAIN.

6. **EQUIPMENT FUELING AND MAINTENANCE,** OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITH IN 24 HRS. OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER. SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SP CC) REQUIREMENTS MAY APPLY. AN SP CC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVE GROUND TANK OF 660 GALLONS OR MORE, ACCUMULATIVE ABOVE GROUND STORAGE OF 1,330 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. CONTAMINATED SOILS MUST BE DISPOSED OF IN ACCORDANCE WITH ITEM 8.

7. **CONCRETE WASH WATER/WASH OUTS.** CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW TO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER. FIELD TILE OR OTHER SUBSURFACE DRAINAGE STRUCTURES WITHIN 10 FT. OF THE SUMP SHALL BE CUT AND PLUGGED. FOR SMALL PROJECTS, TRUCK CHUTES MAY BE RINSED AWAY FROM ANY WATER CONVEYANCES.

8. **CONTAMINATED SOILS.** IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC. ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). NOTE THAT STORM WATER RUNOFF ASSOCIATED WITH CONTAMINATED SOILS IS NOT AUTHORIZED UNDER OHIO EPA'S GENERAL STORM WATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

9. **SPILL REPORTING REQUIREMENTS:** SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAW DUST OR KITTY LITTER AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO OHIO EPA (1-800-282-9378). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO OHIO EPA, THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITH IN 30 MIN. OF THE DISCOVERY OF THE RELEASE. ALL SPILLS WHICH CONTACT WATERS OF THE STATE MUST BE REPORTED TO OHIO EPA'S HOTLINE.

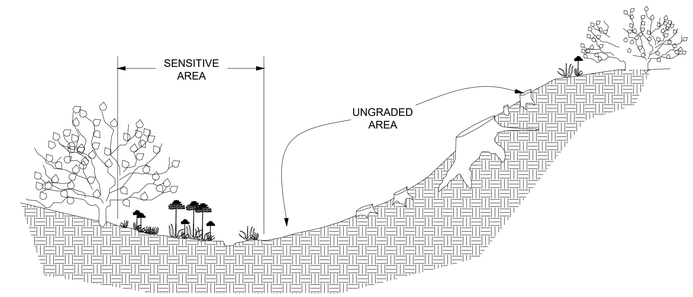
10. **OPEN BURNING:** NO MATERIALS CONTAINING RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS, SUCH AS TIRES, AUTOPARTS, PLASTICS, OR PLASTIC COATED WIRE MAY BE BURNED. OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS, WHICH ARE DEFINED AS: 1) WITHIN CORPORATION LIMITS: 2) WITHIN 1,000 FEET OUTSIDE A MUNICIPAL CORPORATION HAVE A POPULATION OF 1,000 TO 10,000; AND 3) A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE. OUTSIDE OF RESTRICTED AREAS, NO OPEN BURNING IS ALLOWED WITH IN A 1,000 FEET OF AN INHABITED BUILDING ON ANOTHER PROPERTY. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR: HEATING TAR, WELDING, SMUDGE POTS, AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING FOR WARMTH OR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE WASTES (PLAN MATERIAL), LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM OHIO EPA, AND AGRICULTURAL WASTES (MATERIAL GENERATED BY CROP, HORTICULTURAL, OR LIVESTOCK PRODUCTION PRACTICES. THIS INCLUDES FENCE POSTS AND SCRAP LUMBER, BUT NOT BUILDINGS.

11. **DUST CONTROL** OR DUST SUPPRESSANTS SHALL BE USED TO PREVENT NUISANCE CONDITIONS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND IN A MANNER, WHICH PREVENT A DISCHARGE TO WATERS OF THE STATE. SUFFICIENT DISTANCE MUST BE PROVIDED BETWEEN APPLICATIONS AND NEARBY BRIDGES, CATCH BASINS, AND OTHER WATERWAYS. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN RAIN IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

12. **OTHER AIR PERMITTING REQUIREMENTS:** CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS INCLUDING BUT NOT LIMITED TO: MOBILE CONCRETE BATCH PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC. THESE ACTIVITIES WILL REQUIRE SPECIFIC OHIO EPA AIR PERMITS FOR INSTALLATION AND OPERATION. OPERATORS MUST SEEK AUTHORIZATION FROM THE CORRESPONDING DISTRICT OF OHIO EPA. FOR DEMOLITION OF ALL COMMERCIAL SITES, A NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO OHIO EPA TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

GRUBBING OMITTED

(REFER TO THE PLANS AND CONSTRUCTION SPECIFICATIONS FOR SPECIFIC INFORMATION REGARDING LOCATIONS AND MATERIALS.)



APPLICATION:

1. IDENTIFY ON PLANS, AREAS WHERE GRUBBING IS NOT PERMITTED.
2. CUT VEGETATION TO WITHIN A FEW INCHES OF THE GROUND SURFACE AND LEAVE THE ROOT ZONE INTACT.
3. REMOVE ALL CUT VEGETATION.
4. DO NOT GRADE.

(REFER TO THE PLANS AND CONSTRUCTION SPECIFICATIONS FOR SPECIFIC INFORMATION REGARDING LOCATIONS AND MATERIALS).

DUST CONTROL

APPLICATION: USE IN AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY TO OCCUR IF PREVENTIVE MEASURES ARE NOT TAKEN.

INSTALLATION (TUBE OR BAG DEVICE):

1. **VEGETATIVE COVER AND MULCH**
   - A. APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR MORE THAN 21 DAYS.
   - B. SAVE EXISTING TREES AND LARGE SHRUBS TO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS.
2. **WATERING**
   - A. SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES.
   - B. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION.
   - C. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
3. **SPRAY-ON ADHESIVES**
   - A. ADHESIVES WILL NOT BE APPLIED DURING THE PROJECT UNLESS REQUESTED BY THE PROJECT ENGINEER.
   - B. IF REQUESTED, ADHESIVES WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS OR THE FOLLOWING TABLE.

TABLE 1. ADHESIVES FOR DUST CONTROL

ADHESIVE	WATER DILUTION (ADHESIVE:WATER)	NOZZLE TYPE	APPLICATION RATE GAL./AC.
LATEX EMULSION	12.5:1	FINE	235
RESIN IN WATER ACRYLIC EMULSION (NO-TRAFFIC)	4:1	FINE	300
ACRYLIC EMULSION (NO-TRAFFIC)	7:1	COARSE	450
ACRYLIC EMULSION (TRAFFIC)	3.5:1	COARSE	350

4. **STONE**
   - A. GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE.
   - B. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
5. **BARRIERS**
   - A. EXISTING VEGETATION SHALL BE PRESERVED TO THE EXTENT FEASIBLE TO CONTROL AIR CURRENTS AND BLOWING SOIL.
6. **CALCIUM CHLORIDE**
   - A. THIS CHEMICAL WILL NOT BE APPLIED DURING THE PROJECT UNLESS REQUESTED BY THE PROJECT ENGINEER.

Notes:
Some control measures presented in the detail sheets have not been incorporated into the erosion and sedimentation control maps. These measures are commonly required as the site conditions or project activities change and have been included in the details for that purpose. If changes occur and installation of any of these controls becomes necessary, the contractor shall first consult with FE Construction Manager for the site prior to installation.

All changes to the SWPPP will need to be reflected on the master copy kept at the site throughout the project's lifecycle by the contractor. Changes to the SWPPP include, but are not limited to, change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWPPP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity.

FIGURE 2H
EROSION AND SEDIMENT CONTROL PLANS

ASHTABULA-ERIE WEST-PERRY 345 kV TRANSMISSION LINE REBUILD PROJECT

CONTROL MEASURE SCHEDULE AND CONSTRUCTION NOTES

CREATED BY: DS

CHECKED BY: TA

DATE: 02/25/2020

NOTES SHEET 01 OF 04

Jacobs | FirstEnergy

PERMANENT SEEDING - SPECIFICATIONS

APPLICATION: USED IN AREAS THAT WILL NOT BE RE-DISTURBED FOR PERIODS LONGER THAN 12 MONTHS.

INSTALLATION:

1. PREPARE THE SITE BY LOOSENING ANY COMPACTED SOIL, GRADING TO PRE=EXISTING CONTOURS, AND ADDING TOPSOIL, IF NEEDED.
2. SELECT THE SEED MIX DESCRIBED IN THE PLANS AND SPECIFICATIONS.
3. APPLY SEED MIX AT THE SPECIFIED RATE (SEE TABLE) AND BY INDUSTRY ACCEPTED METHODS.
4. PLACE STRAW MULCH AT A RATE OF 90 POUNDS PER 1,000 SQUARE FEET.
5. ANCHOR MULCH BY METHODS DESCRIBED IN THE CONSTRUCTION SPECIFICATIONS.
6. CONTRACTOR TO MEET PERMANENT STABILIZATION REQUIREMENTS WITHIN THE PERMIT REQUIREMENTS.

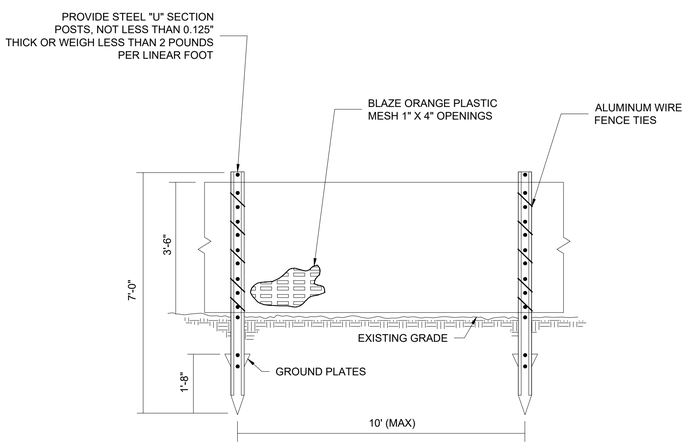
MAINTENANCE

1. INSPECT WEEKLY AND WITHIN 24 HOURS OF A RAIN EVENT TO ENSURE THE SEED HAS GERMINATED AND TO DOCUMENT THE PROGRESS OF GROWTH.
2. ADD SEED, AS WELL AS MULCH, AS NEEDED.

TABLE 2: FIRST ENERGY PERMANENT SEED MIX

SEED MIX	SEEDING RATE		NOTES
	LB./AC	LB./1,000 SQ. FT.	
GENERAL USE			
CREEPING RED FESCUE	20-40	1/2-1	FOR CLOSE MOVING & FOR WATERWAYS WITH <2.0 FT. SEC. VELOCITY
DOMESTIC RYEGRASS	10-20	1/4-1/2	
KENTUCKY BLUEGRASS	20-40	1/2-1	
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE FESCUE	90		
STEEP BANKS OR CUT SLOPES			
TALL FESCUE	40-50	1-1 1/4	
CROWN VETCH	10-20	1/4-1/2	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20-30	1/2-3/4	
FLAT PEA	20-25	1/2-3/4	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20-30	1/2-3/4	
ROAD DITCHES AND SWALES			
TALL FESCUE	40-50	1-1 1/4	
TURF-TYPE FESCUE	90	2 1/4	
KENTUCKY BLUEGRASS	5	0.1	
LAWNS			
KENTUCKY BLUEGRASS	100-120	2	
PERENNIAL RYEGRASS		2	
KENTUCKY BLUEGRASS	100-120	2	
CREEPING RED FESCUE		1-1 1/2	FOR SHADED AREAS

ORANGE BARRIER FENCE (OBF)



TEMPORARY SEEDING - SPECIFICATIONS

SEEDBED PREPARATION - GRADE AND APPLY SOIL AMENDMENTS.
SEEDING FREQUENCY - SEED ROUGH GRADED AREAS DAILY WHILE SOIL IS STILL LOOSE AND MOIST.
DENSITY OF VEGETATIVE COVER - EIGHTY PERCENT(70%) OR GREATER OVER THE SOIL SURFACE.

MATERIALS

1. SOIL AMENDMENTS – SELECT MATERIALS AND RATES AS DETERMINED BY A SOIL TEST (CONTACT YOUR COUNTY SOIL AND WATER CONSERVATION DISTRICT OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE AND SOIL INFORMATION, INCLUDING AVAILABLE SOIL TESTING SERVICES) OR 400 TO 600 POUNDS OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT. CONSIDER THE USE OF REDUCED PHOSPHORUS APPLICATION WHERE SOIL TESTS INDICATE ADEQUATE PHOSPHOROUS LEVELS IN THE SOIL PROFILE.
2. SEED – SELECT APPROPRIATE PLANT SPECIES SEED OR SEED MIXTURES ON THE BASIS OF QUICK GERMINATION, GROWTH, AND TIME OF YEAR TO BE SEEDED (SEE TABLE 1).
3. MULCH –
   A. STRAW, HAY, WOOD FIBER, ETC. (TO PROTECT SEEDBED, RETAIN MOISTURE, AND ENCOURAGE PLANT GROWTH).
   B. ANCHORED TO PREVENT REMOVAL BY WIND OR WATER OR COVERED WITH MANUFACTURED EROSION CONTROL BLANKETS.

TABLE 3. TEMPORARY SEEDING

SEEDING DATES	SEED MIX	SEEDING RATE	
		LB./1,000 SQ. FT.	LB./ACRE
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREEPING RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
	OATS	3	128
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREEPING RED FESCUE	0.4	40
	KENTUCKY BLUEGRASS	0.4	40
NOVEMBER 2 TO FEBRUARY 29	USE MULCH ONLY OR DORMANT SEEDING		

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED

APPLICATION

SEEDBED PREPARATION

1. TEST SOIL TO DETERMINE PH AND NUTRIENT LEVELS.
2. APPLY SOIL AMENDMENTS AS RECOMMENDED BY THE SOIL TEST. IF TESTING IS NOT DONE, APPLY 400 TO 600 POUNDS PER ACRE OF 12-12-12 ANALYSIS FERTILIZER, OR EQUIVALENT.
3. WORK THE SOIL AMENDMENTS INTO THE UPPER TWO TO FOUR INCHES OF THE SOIL WITH A DISK OR RAKE OPERATED ACROSS THE SLOPE.

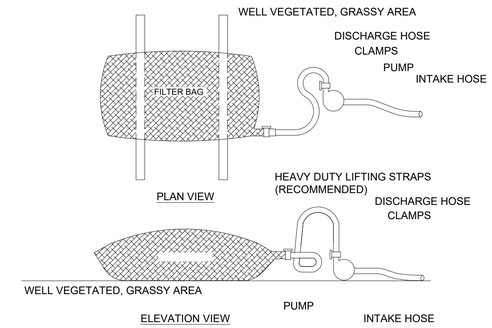
SEEDING

1. SELECT A SEED SPECIES OR AN APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE 1.
2. APPLY SEED UNIFORMLY WITH A DRILL OR CULTIPACKER SEEDER OR BY BROADCASTING. PLANT OR COVER SEED TO THE DEPTH SHOWN IN TABLE 1.
   NOTES:
   A. IF DRILLING OR BROADCASTING THE SEED, ENSURE GOOD SEED-TO-SOIL CONTACT BY FIRMING THE SEEDBED WITH A ROLLER OR CULTIPACKER AFTER COMPLETING SEEDING OPERATIONS.
   B. DAILY SEEDING WHEN THE SOIL IS MOIST IS USUALLY MOST EFFECTIVE.
   C. IF SEEDING IS DONE WITH A HYDROSEEDER, FERTILIZER AND MULCH CAN BE APPLIED WITH THE SEED IN A SLURRY MIXTURE.
3. APPLY MULCH (SEE **MULCHING** OR COMPOST MULCHING ON PAGE 59-CHAPTER 7 OF STORM WATER QUALITY MEASURES: CONSTRUCTION AND LAND-DISTURBING ACTIVITIES)) AND ANCHOR IT IN PLACE.

MAINTENANCE

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80 PERCENT DENSITY); RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
4. IF NITROGEN DEFICIENCY IS APPARENT, TOP-DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

FILTER BAG



SPECIFICATIONS:
LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

INSTALLATION:
BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

MAINTENANCE:

1. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
2. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
3. INSPECT DISCHARGE POINTS DAILY FOR SIGNS OF SCOUR OR EROSIVE DAMAGE.
4. INSPECT RECEIVING STREAMS FOR TURBIDITY. TURBID DISCHARGES RESULTING FROM DEWATERING ARE A VIOLATION OF OHIO REVISED CODE 6111.04
5. REMOVE AND DISPOSED OF ACCUMULATED SEDIMENT AWAY FROM WATERWAYS OR ENVIRONMENTALLY SENSITIVE AREAS.
6. REPLACE BAGS WHEN HALF FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL AMOUNT.
   A. SLIT OPEN AND REMOVE ACCUMULATED SEDIMENT
   B. DISPOSE OF BAG AT APPROPRIATE FACILITY
7. EMPTY OR REPLACE TUBES WHEN HALF FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL AMOUNT
   C. OPEN BOTH ENDS OF THE TUBE.
   D. PICK THE TUBE UP IN THE CENTER AND DUMP THE ACCUMULATED SEDIMENT OUT OF BOTH ENDS.
8. ALLOW TUBE TO DRY AND STORE FOR RE-USE

Notes:
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FIGURE 2I
EROSION AND SEDIMENT CONTROL PLANS

ASHTABULA-ERIE WEST-PERRY 345 kV TRANSMISSION LINE REBUILD PROJECT

CONTROL MEASURE SCHEDULE AND CONSTRUCTION NOTES

CREATED BY: DS

DATE: 02/25/2020

NOTES SHEET 02 OF 04

CHECKED BY: TA

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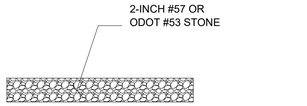
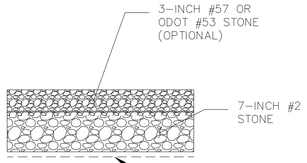
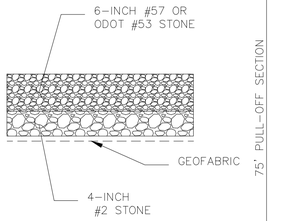
TEMPORARY CONSTRUCTION ENTRANCE WITH CONCRETE WASHOUT



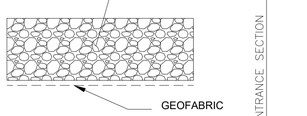
EXISTING ACCESS
ROAD IMPROVEMENT
(AS NEEDED)



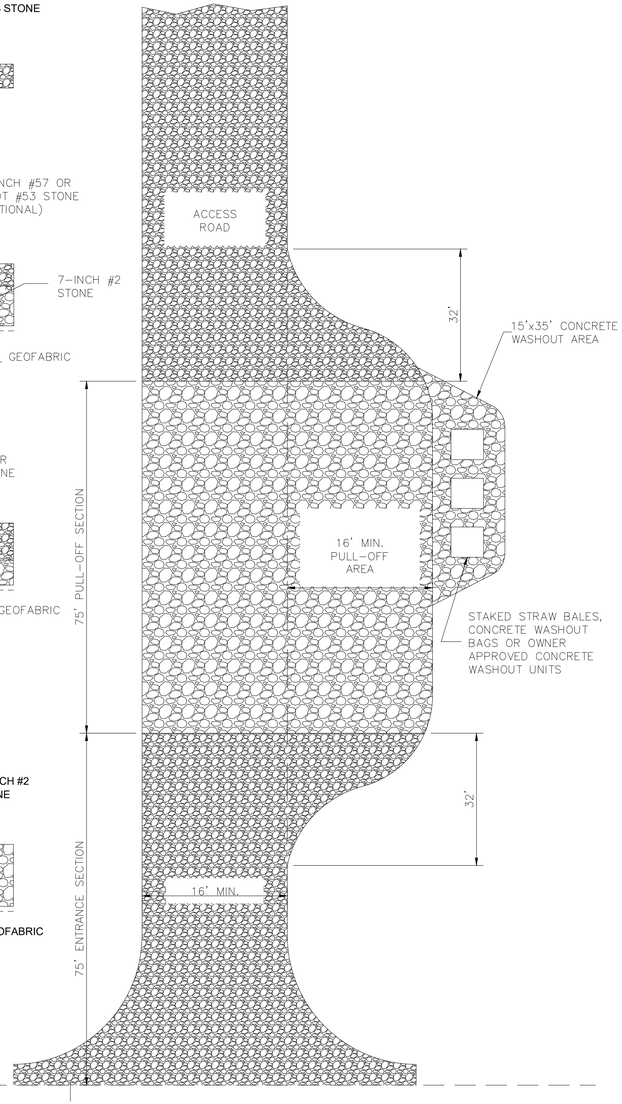
ACCESS ROAD



ENTRANCE SECTION



PULL-OFF SECTION



NOTE: ADDITIONAL AGGREGATE MAY BE ADDED BASED ON ACTUAL FIELD CONDITIONS. ADDITIONAL MATERIAL TO BE APPROVED BY FE CONSTRUCTION MANAGER OR OWNER'S REPRESENTATIVE.

INSTALLATION:
1. CLEAR LOCATION BY CUTTING. (NO GRUBBING).
2. PLACE GEOTEXTILE FABRIC (SEE TABLE) OVER ENTIRE ENTRANCE BEFORE PLACING AGGREGATE. IF APPROVED BY THE OWNER.
3. PLACE ODOT NO. 2 (1-1/2 TO 2 12 INCHES) AGGREGATE OR LARGER ON TOP OF FABRIC.
4. THICKNESS-STONE LAYER SHALL BE AT LEAST 6-INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10-INCHES FOR HEAVY DUTY USE

MAINTENANCE:
1. INSPECT FOR COMPACTION AND MUD ACCUMULATION. LAYER ADDITIONAL AGGREGATE AS NEEDED.
2. INSPECT ASSOCIATED PUBLIC ROADS FOR TRACKED SEDIMENT. REMOVE SEDIMENT BY SCARPING OR SWEEPING.
3. ADD A WATER BAR OR CULVERT AS CONDITIONS DICTATE.

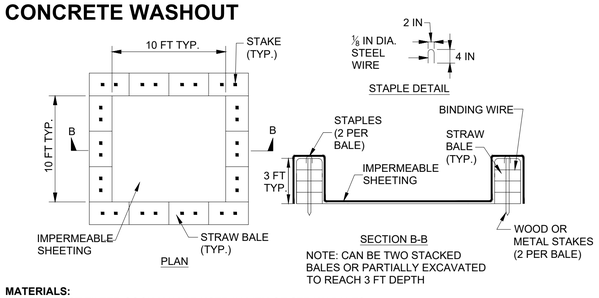
REMOVAL:
1. REMOVE AGGREGATE AND FABRIC.
2. RE-GRADE TO MATCH PRE-EXISTING CONTOURS, AS NEEDED.
3. SEED DISTURBED AREA WITH GENERAL USE SEED MIX.
4. MULCH THE DISTURBED AREA.

TABLE 4. GEOTEXTILE SPECIFICATIONS FOR CONSTRUCTION ENTRANCE

PROPERTIES	VALUES
MINIMUM TENSILE STRENGTH	200 LBS.
MINIMUM PUNCTURE STRENGTH	80 PSI.
OR MINIMUM BURST STRENGTH	320 PSI.
MINIMUM TEAR STRENGTH	50 LBS.
MINIMUM ELONGATION	20%
APPARENT OPENING SIZE	EOS ≤ 0.6 MM
MINIMUM PERMITTIVITY	1X10^-3 CM/SEC

(REFER TO THE PLANS AND CONSTRUCTION SPECIFICATIONS FOR SPECIFIC INFORMATION REGARDING LOCATIONS AND MATERIALS).

CONCRETE WASHOUT



NOTE: CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

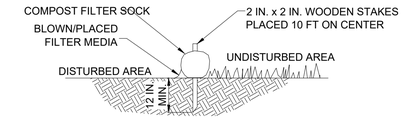
MATERIALS:
1. COMPOST FILTER SOCK MAY BE USED IN LIEU OF STRAW BALES.
2. POLYETHYLENE SHEETING A MINIMUM OF 10 MILLIMETERS THICK, SEAMLESS, AND DEFECT FREE.
3. SIGNAGE.
4. ORANGE SAFETY FENCING OR EQUIVALENT.
5. FILTER SOCK, STRAW BALES, SAND BAGS, SOIL, OR OTHER APPROPRIATE MATERIAL.
   A. FILTER SOCK SHALL BE A MINIMUM OF 12-INCHES DIAMETER.
   B. SANDBAGS SHOULD BE ULTRAVIOLET STABILIZED GEOTEXTILE FABRIC.
   C. BALES SHALL CONSIST OF STRAW, NOT HAY.
   D. BALES SHALL BE BOUND BY EITHER STEEL WIRE, NYLON OR POLYPROPYLENE STRING
   E. EACH BALE SHALL BE A MINIMUM OF 14 INCHES WIDE, 18 INCHES IN HEIGHT, AND 36 INCHES IN LENGTH.
   F. EACH BALE SHALL WEIGHT APPROXIMATELY 45-50 POUNDS (MINIMUM).
   G. EACH BALE SHALL BE COMPOSED ENTIRELY OF VEGETATIVE MATTER, EXCEPT FOR THE BINDING MATERIAL.
6. ANCHORS
   A. WOOD ANCHORS (STAKES) SHALL CONSIST OF COMMERCIAL QUALITY LUMBER; SHALL BE FREE FROM DECAY, SPLITS OR CRACKS LONGER THAN THE THICKNESS OF THE STAKE, OR OTHER DEFECTS THAT WOULD WEAKEN THE STAKES AND CAUSE THE STAKES TO BE STRUCTURALLY UNSUITABLE; AND SHALL MEASURE 2 INCHES BY 2 INCHES WIDE AND 24 INCHES LONG (MINIMUM).
   B. METAL PINS OR STAPLES A MINIMUM OF 6 INCHES IN LENGTH, SANDBAGS, OR ALTERNATIVE FASTENERS TO SECURE POLYETHYLENE LINING TO THE CONTAINMENT SYSTEM.

INSTALLATION:
1. INSTALL BEFORE THE START OF ANY CONCRETE ACTIVITIES OR DELIVERIES.
2. PREPARE BASE BY REMOVING ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE SHEETING.
3. INSTALL BERM OR CONTAINMENT MATERIALS. BALES SHOULD BE ENTRENCHED 4 INCHES INTO THE SOIL.
4. SECURE BALES WITH WOOD ANCHORS (2 PER BALE).
5. PLACE POLYETHYLENE SHEETING OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE SHEETING OVER THE BERM OR CONTAINMENT MATERIALS.
6. SECURE SHEETING WITH PINS, STAPLES, OR THEIR FASTENERS.
7. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASH OUT AREA.

MAINTENANCE:
1. INSPECT DAILY AND AFTER EACH STORM EVENT.
2. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE AND THE CONTAINMENT SYSTEM.
3. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
4. INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
5. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
6. EXCESS CONCRETE SHOULD BE REMOVED W HEN THE WASH OUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY.
7. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE.
8. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
9. DISPOSE OF ALL CONCRETE IN A LEGAL MANNER.
10. REPLACE PLASTIC SHEETING AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
11. REPAIR OR ENLARGE SYSTEM AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
12. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASH OUT AREAS.

REMOVAL:
1. WHEN CONCRETE WASH OUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASH OUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.
2. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

FILTER SOCK



SECTION

SPECIFICATIONS:
1. MATERIALS - COMPOST USED FOR FILTER SOCKS SHALL BE WEED PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH . THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF A PARTICLE RANGING FROM 3/8" TO 2".
2. FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.

INSTALLATION:
3. FILTER SOCKS W ILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEED MID-SLOPE.
4. FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDED AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
5. FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.

MAINTENANCE:
6. ROUTINELY INSPECT FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES.
7. REMOVE SEDIMENT COLLECTED AT THE BASE OF THE FILTER SOCKS W H EN THEY REACH 1/3 OF THE EXPOSED HEIGHTS OF THE PRACTICE.
8. WHERE THE FILTER SOCKS DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.

REMOVAL:
9. FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDLINGS.

TABLE 5: MAXIMUM SLOPE LENGTH ABOVE FILTER SOCK AND RECOMMENDED DIAMETER

SLOPE	RATIO (H:V)	8"	12"	18"	24"
0%-2%	10%-20%	125	250	300	350
10%-20%	50:1-10:1	100	125	200	250
2%-10%	10:1-5:1	75	100	150	200
20%-33%	5:1-2:1		50	75	100
>50%	>2:1		25	50	75

NOTE: FOR LARGER DRAINAGE AREAS, SEE STANDARDS FOR TEMPORARY DIVERSIONS, SEDIMENT TRAPS AND SEDIMENT BASINS.

WORK PAD

WORK PAD
1. CONTRACTOR TO REDUCE WORK PAD DISTURBANCE AREA TO ALLOW FOR INSTALLATION OF TRANSMISSION POLE.
2. SOIL STOCKPILE WILL BE ENCLOSED BY COMPOST FILTER SOCK AND LOCATED IN FIELD.
3. TEMPORARY STABILIZATION MAY BE REQUIRED BASED ON SCHEDULE.
4. SOIL STOCKPILE WILL NOT BE LOCATED IN SENSITIVE RESOURCE AREAS (WETLAND, STREAMS, CULTURAL, ETC.)
5. COMPOST FILTER SOCK TO BE USED TO REDUCE STORM WATER RUNOFF FROM THE WORK PAD AS CONDITIONS REQUIRE.

STOCKPILE MANAGEMENT

STOCKPILE MANAGEMENT
GENERAL:
1. PROTECTION OF STOCKPILES IS A YEAR-ROUND REQUIREMENT.
2. TO THE EXTENT FEASIBLE, ALL ACTIVE STOCKPILES SHOULD BE COVERED WITH PLASTIC, MATS, BLANKETS, OR MULCH, SPRAYED WITH WATER, AND PROTECTED WITH A TEMPORARY PERIMETER SEDIMENT BARRIER.
3. MATERIAL SHOULD BE STOCKPILES IN INDIVIDUAL PILES. EROSIVE MATERIAL, SUCH AS TOPSOIL OR FILL MATERIAL, SHOULD BE PREVENTED FROM INTERMINGLING.
4. ALL NON-ACTIVE STOCKPILES SHOULD BE COVERED OR STABILIZED WITH SEED AND PROTECTED WITH A TEMPORARY PERIMETER SEDIMENT BARRIER.
5. KEEP THE HEIGHT OF STOCKPILES LOW, AND ADJUST THE SHAPE AND ORIENTATION OF THE STOCKPILES TO REDUCE THE AREA OF EXPOSURE TO THE PREVAILING WIND.
6. LOCATE STOCKPILES AWAY FROM CONCENTRATED FLOWS OF STORM WATER, DRAINAGE COURSES, INLETS,CULTURAL RESOURCE(S), WETLAND(S), RIPARIAN BUFFER(S), AND/OR OTHER SENSITIVE LOCATION(S).
7. BAGGED MATERIALS SHOULD BE PLACED ON PALLETS AND UNDER COVER.
8. TREATED WOOD (WOOD TREATED WITH COPPER, CHROMIUM AND ARSENIC OR AMMONICAL, COPPER, ZINC, AND ARSENATE) SHOULD BE COVERED WITH PLASTIC OR COMPARABLE MATERIAL.
9. ANTICIPATED TO BE LOCATED WITH IN THE LIMITS OF THE WORK PAD UNLESS FE CONSTRUCTION MANAGER APPROVES ALTERNATIVE LOCATION.

INSPECTION:
1. INSPECT WITH IN 24 HOURS OF A RAIN EVENT, AND WEEKLY THROUGH OUT THE RAINY SEASON.
2. INSPECT COVERS AND BAGS FOR DAMAGE, MOVEMENT, OR WEATHERING.
3. INSPECT PERIMETER SEDIMENT BARRIERS FOR DAMAGE, SEDIMENT ACCUMULATIONS, SLUMPING OR WEATHERING.
4. INSPECT PILES FOR SLUMPING, INTERMINGLING, AND SEED AND MULCH COVERAGE.

MAINTENANCE:
1. REPAIR OR REPLACE DAMAGED OR INEFFECTIVE COVERS, BAGS, AND SILT FENCE.
2. REMOVE BUILT UP SEDIMENT WHEN DEPTH REACHES ONE-THIRD THE SILT FENCE HEIGHT. REMOVED SEDIMENT SHALL BE INCORPORATED INTO APPROPRIATE ON-SITE AREAS.
3. RESHAPE STOCKPILES.

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FIGURE 2J
EROSION AND SEDIMENT CONTROL PLANS

ASHTABULA-ERIE WEST-PERRY 345 kV TRANSMISSION LINE REBUILD PROJECT

CONTROL MEASURE SCHEDULE AND CONSTRUCTION NOTES

CREATED BY: DS

CHECKED BY: TA

DATE: 02/25/2020

NOTES SHEET 03 OF 04

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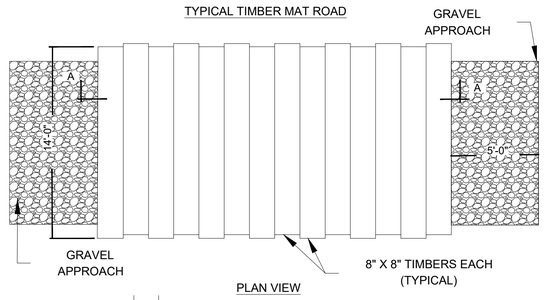
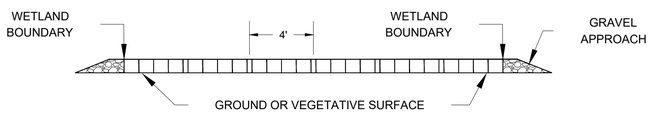
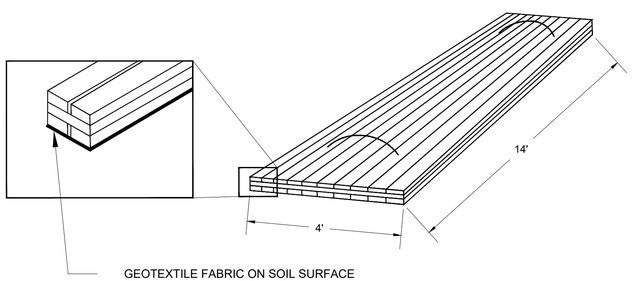
TEMPORARY MAT ROAD



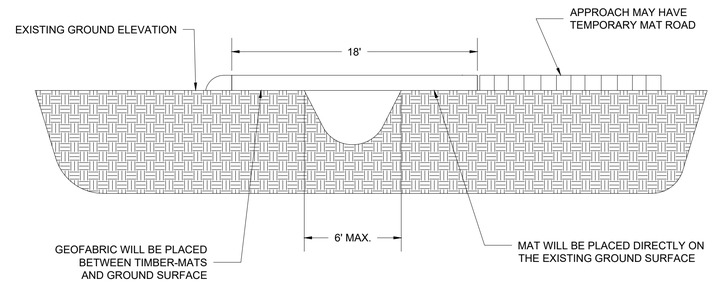
TYPICAL TIMBER MAT SECTION A-A (BOLTED TOGETHER)



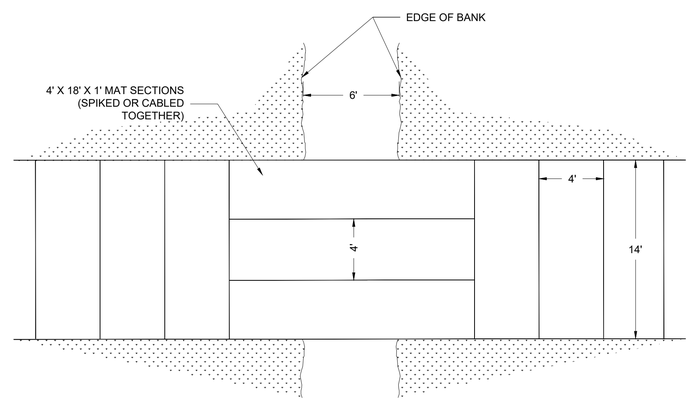
ALTERNATIVE TYPICAL LAMINATED MAT ROAD SECTION



TYPE 1 - TEMPORARY TIMBER MAT BRIDGE (TYPICAL)



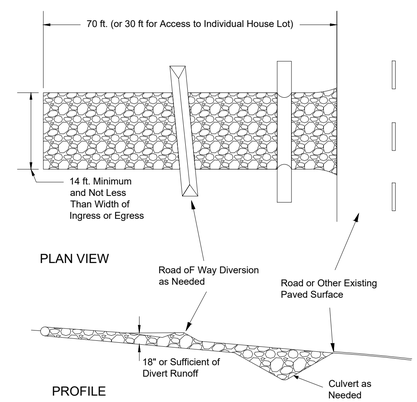
FOR USE OVER DRAINS UP TO 6' BANK-TO-BANK IN PLACE FOR SHORT DURATIONS TO CROSS SMALL DRAINAGES



BRIDGE DECK MAY HAVE SECOND LAYER OF TIMBER MATS FOR REINFORCEMENT

TEMPORARY CONCRETE ENTRANCE

(Not to Scale)



SOIL STOCKPILING

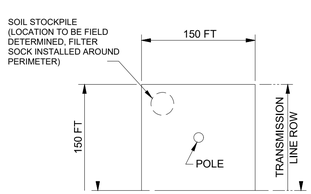


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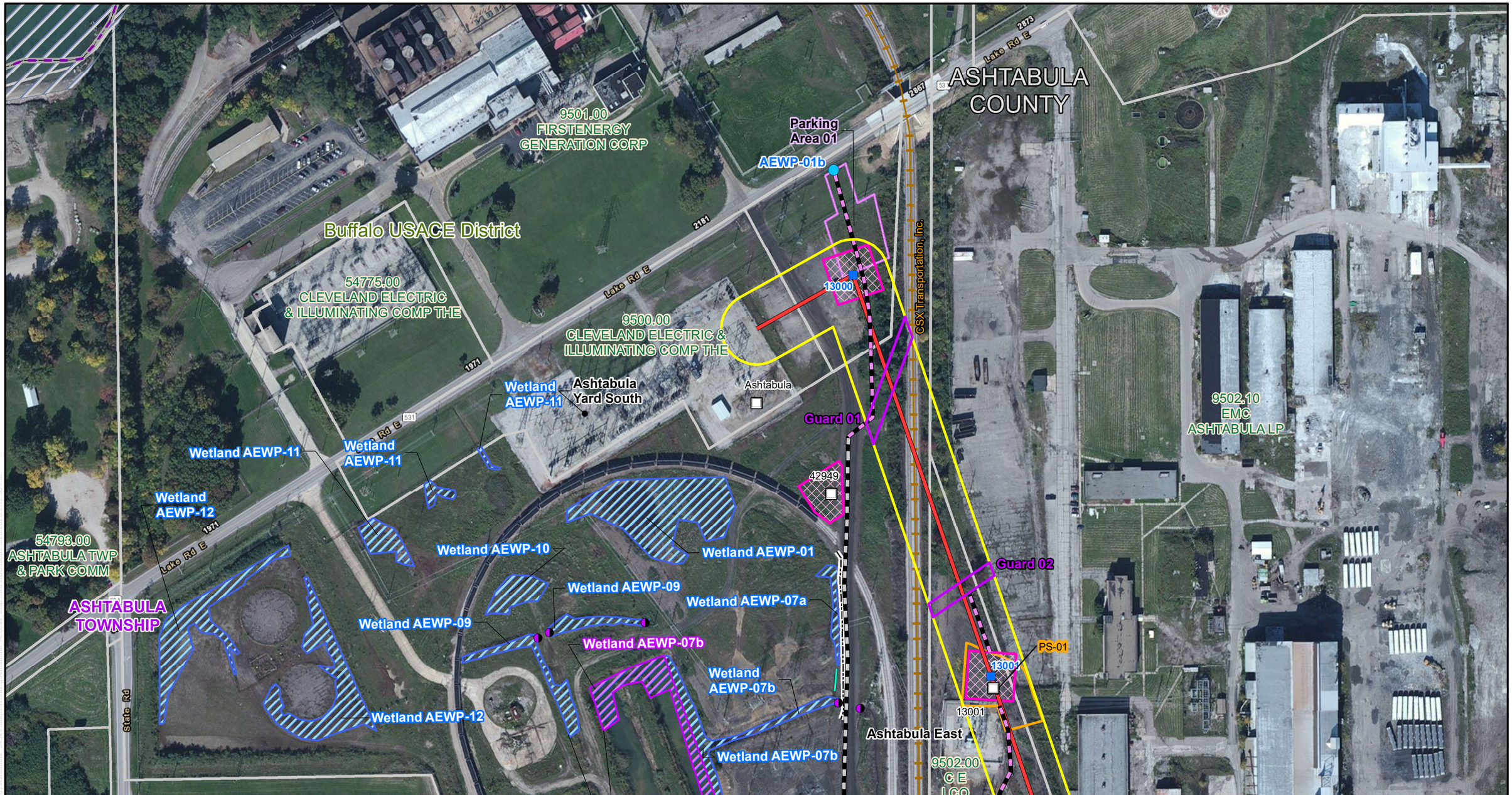
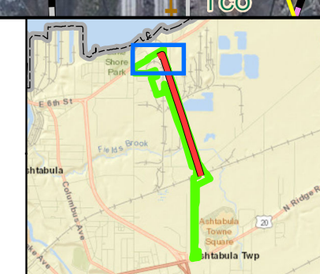
FIGURE 2K EROSION AND SEDIMENT CONTROL PLANS **ASHTABULA-ERIE WEST-PERRY 345 kV TRANSMISSION LINE REBUILD PROJECT**	CONTROL MEASURE SCHEDULE AND CONSTRUCTION NOTES	CREATED BY: DS	DATE: 02/25/2020
			NOTES SHEET 04 OF 04
		CHECKED BY: TA	Jacobs / FirstEnergy

Construction Access Maps



LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
- Guard Location
- Turn Around
- Laydown Yard
- Pull Site
- Parking Area
- Workpad
- Culvert
- Delineated Stream
- Delineated PEM Wetland
- Delineated POW Wetland
- Non Jurisdictional Ditch
- Timber Matting
- Soil and Erosion Control
- Timber Matting
- Stone to Remain
- Railroad
- Township
- Parcel
- City/Village
- County
- USACE District



BASE MAP SOURCE:
World Imagery (Clarity)

N

0 100 200 400
FEET

FirstEnergy

Ashtabula-Erie West-Perry 345 kV S-29 Transmission Line Rebuild Project

Figure 1 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
CREATED BY: RED	Jacobs
REVIEWED BY: BAO	

Wetland AEWP-12
Wetland AEWP-07b
Wetland AEWP-09
Wetland AEWP-07b
Ashtabula East
PS-01
13002
13002
9502.10
EMC
ASHTABULA LP
Laydown 01
ASHTABULA
TOWNSHIP
ASHTABULA
COUNTY
9502.00
C E I CO
Buffalo USACE District
Wetland AEWP-08
13003
13003
9503.10
EMC ASHTABULA
INC
9503.00
C E I CO
9501.00
FIRSTENERGY
GENERATION CORP
9504.00
EMC ASHTABULA
INC
CSX Transportation, Inc.
Wetland AEWP-02
CSX Transportation, Inc.
Guard 03

LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
- Guard Location
- Turn Around
- Laydown Yard
- Pull Site
- Parking Area
- Workpad
- Culvert
- Delineated Stream
- Delineated PEM Wetland
- Delineated POW Wetland
- Non Jurisdictional Ditch
- Timber Matting
- Soil and Erosion Control
- Timber Matting
- Stone to Remain
- Railroad
- Township
- Parcel
- City/Village
- County
- USACE District

BASE MAP SOURCE:
World Imagery (Clarity)

N

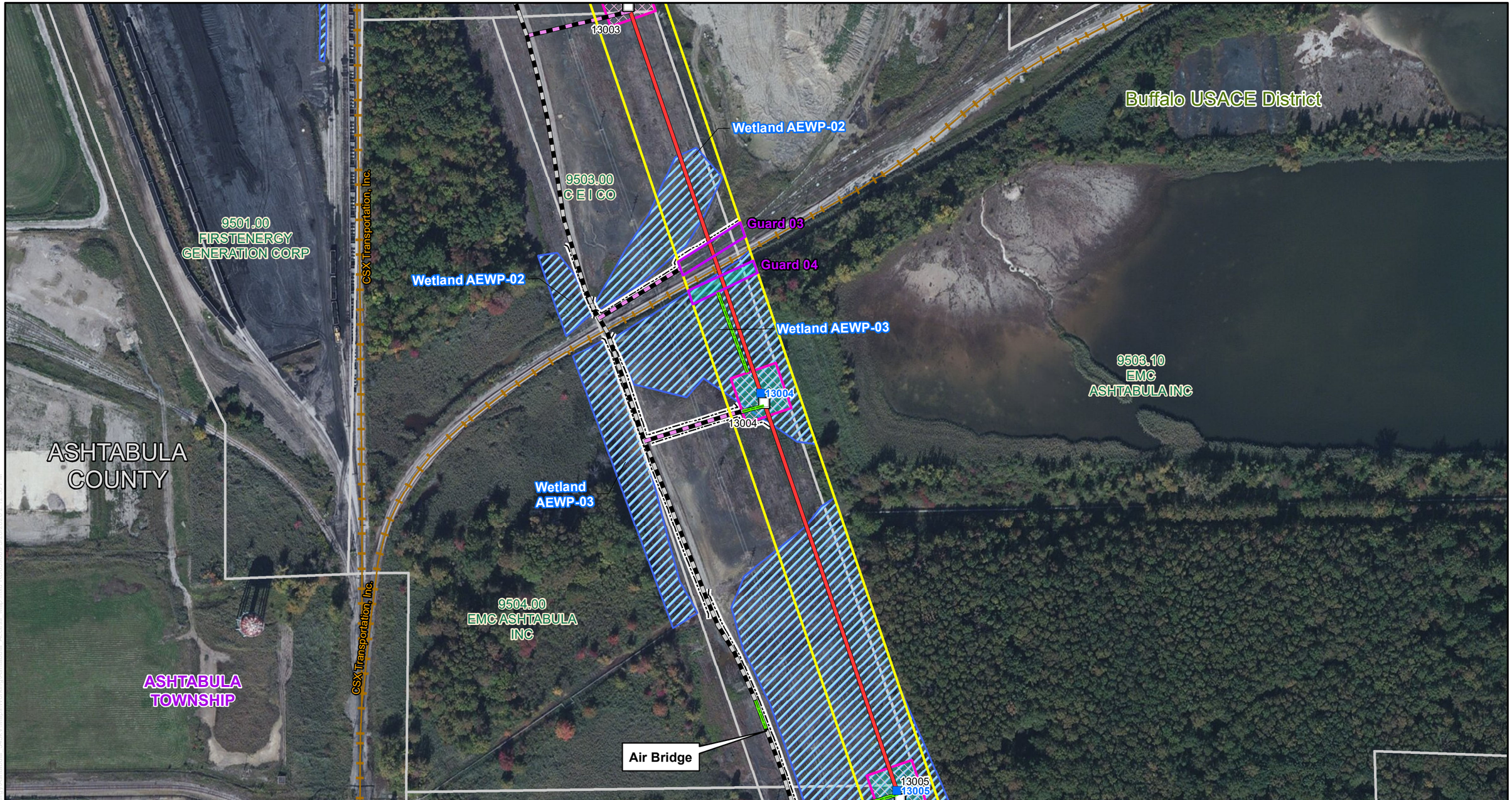
0 100 200 400
FEET

FirstEnergy

Ashtabula-Erie West-Perry 345 kV S-29 Transmission Line Rebuild Project

Figure 2 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
CREATED BY: RED	Jacobs
REVIEWED BY: BAO	



LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
- Guard Location
- Turn Around
- Laydown Yard
- Pull Site
- Parking Area
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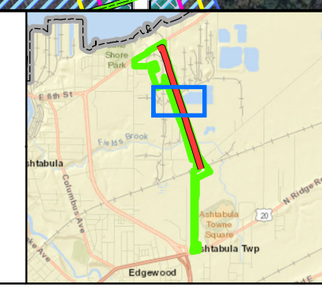


BASE MAP SOURCE:
World Imagery (Clarity)

N

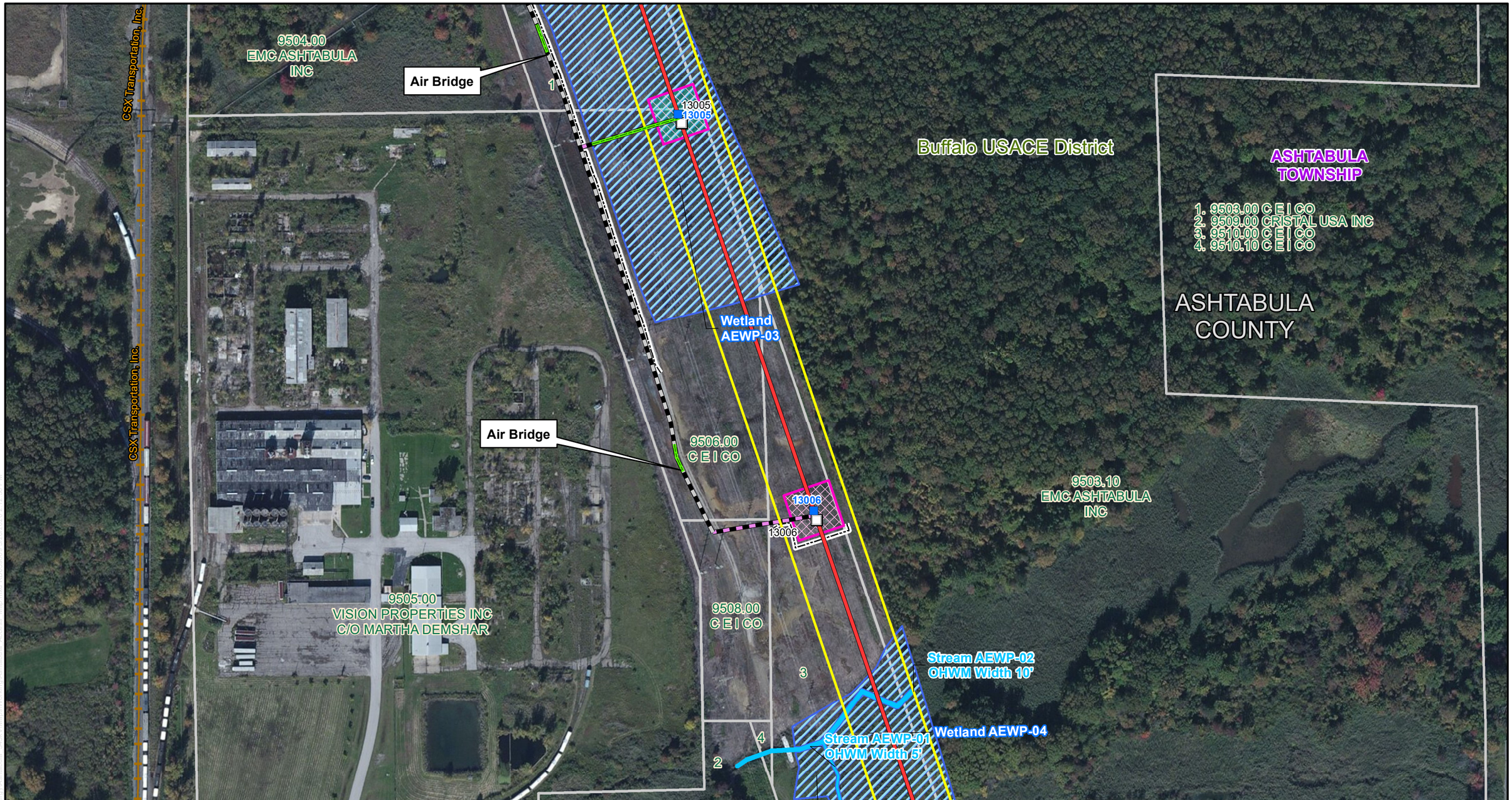
0 100 200 400
FEET

FirstEnergy

Ashtabula-Erie West-Perry 345 kV S-29 Transmission Line Rebuild Project

Figure 3 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
CREATED BY: RED	Jacobs
REVIEWED BY: BAO	



LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
- Guard Location
- Turn Around
- Laydown Yard
- Pull Site
- Parking Area
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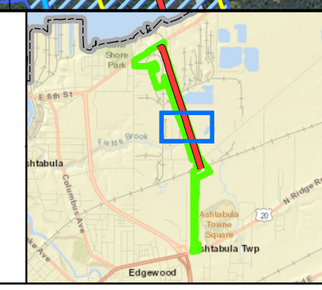
- Timber Matting
- Stone to Remain
- Railroad
- Township
- Parcel
- City/Village
- County
- USACE District



BASE MAP SOURCE:
World Imagery (Clarity)

N

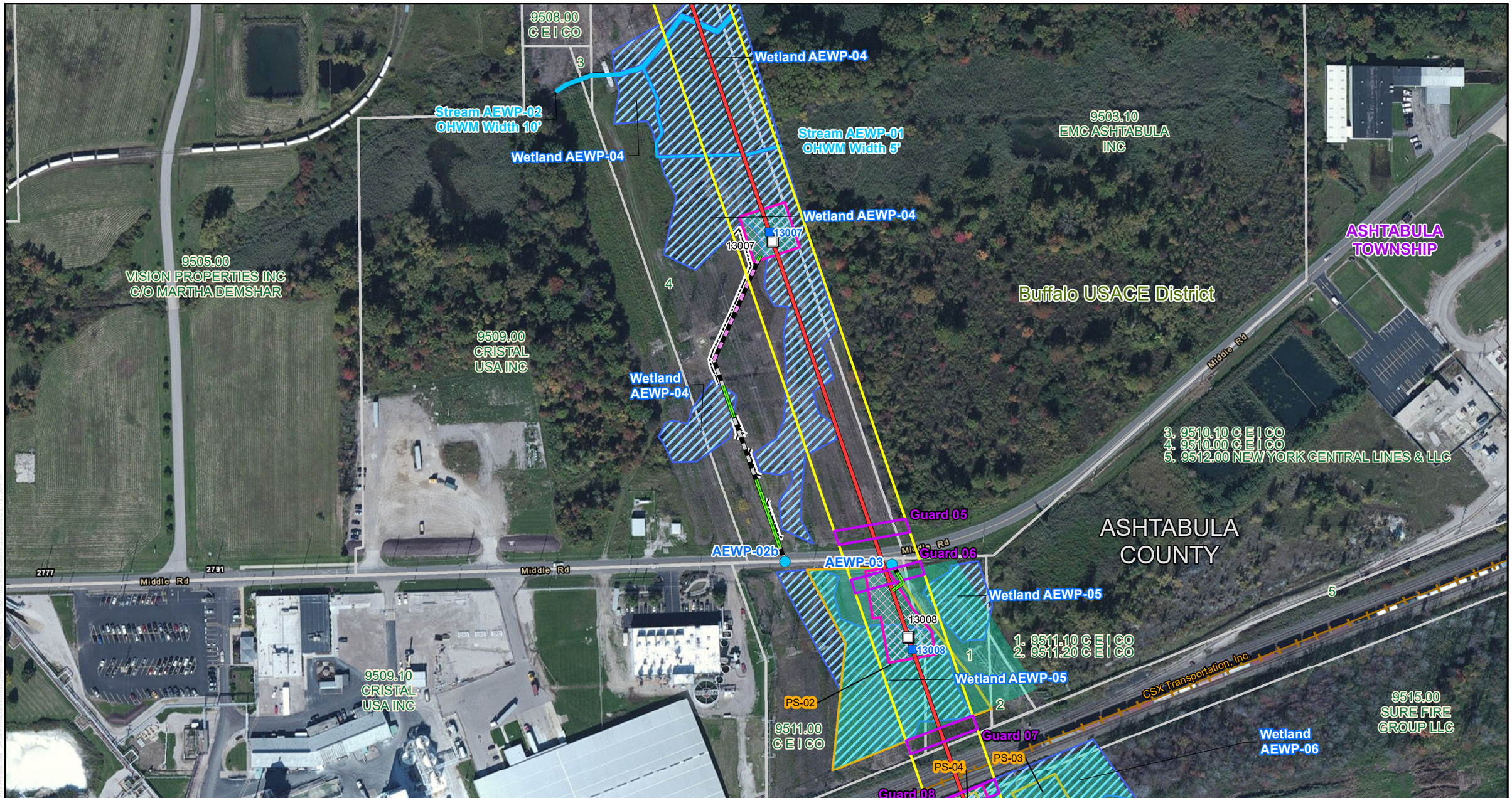
0 100 200 400
FEET

FirstEnergy

Ashtabula-Erie West-Perry 345 kV S-29 Transmission Line Rebuild Project

Figure 4 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
CREATED BY: RED	Jacobs
REVIEWED BY: BAO	



LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
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- Timber Matting
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- Railroad
- Township
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- County
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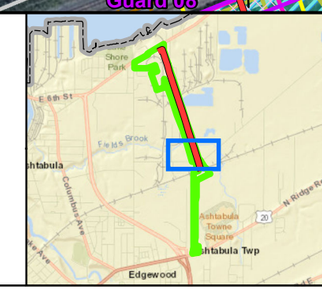

BASE MAP SOURCE:
World Imagery (Clarity)

N

0 100 200 400
FEET

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Ashtabula-Erie West-Perry 345 kV S-29 Transmission Line Rebuild Project

Figure 5 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
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LEGEND:

- Substation
- Perry-Ashtabula-Erie West 345kV S-29
- Existing Structure
- Proposed Structure
- Project ROW (150ft)
- Access Point
- Existing Access Road
- New Access Road
- Guard Location
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- Timber Matting
- Stone to Remain
- Railroad
- Township
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- County
- USACE District

BASE MAP SOURCE:
World Imagery (Clarity)

N

0 100 200 400
FEET

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Ashtabula-Erie
West-Perry 345 kV S-29
Transmission Line
Rebuild Project

Figure 6 of 9
Construction Access Map

PN: 708941	Date: 3/20/2020
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REVIEWED BY: BAO	