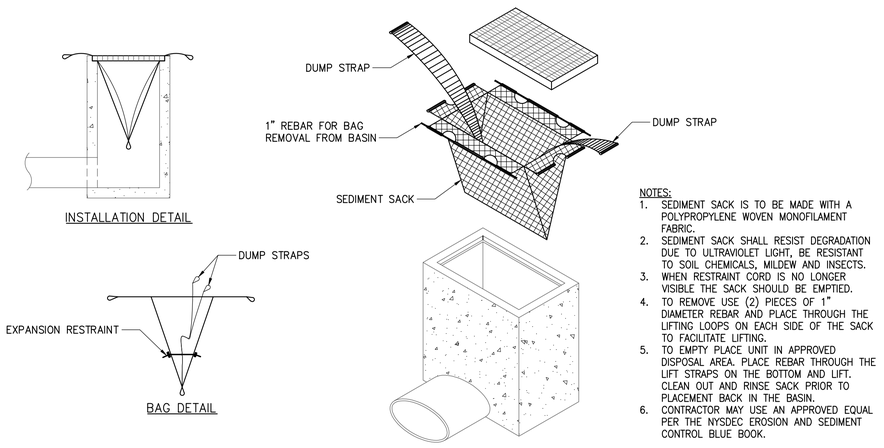
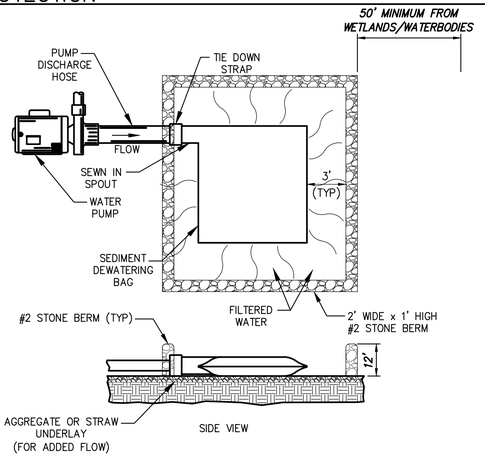


NOTES:
1. SEDIMENT SACK IS TO BE MADE WITH A POLYPROPYLENE WOVEN MONOFILAMENT FABRIC.
2. SEDIMENT SACK SHALL RESIST DEGRADATION DUE TO ULTRAVIOLET LIGHT, BE RESISTANT TO SOIL CHEMICALS, MILDEW AND INSECTS.
3. WHEN RESTRAINT CORD IS NO LONGER VISIBLE THE SACK SHOULD BE EMPTIED.
4. TO REMOVE USE (2) PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE LIFTING.
5. TO EMPTY PLACE UNIT IN APPROVED DISPOSAL AREA. PLACE REBAR THROUGH THE LIFT STRAPS ON THE BOTTOM AND LIFT. CLEAN OUT AND RINSE SACK PRIOR TO PLACEMENT BACK IN THE BASIN.
6. CONTRACTOR MAY USE AN APPROVED EQUAL PER THE NYSDEC EROSION AND SEDIMENT CONTROL BLUE BOOK.

1 INLET PROTECTION
SCALE: N.T.S.



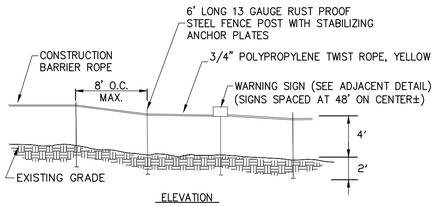
NOTE: THE SEDIMENT DEWATERING BAG WILL BE MANUFACTURED IN THE U.S.A. FROM A NONWOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

SEDIMENT DEWATERING BAG SPECIFICATIONS

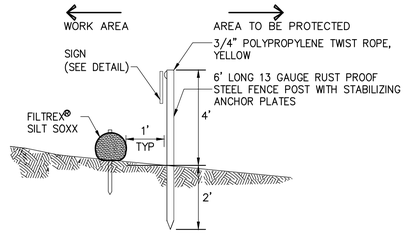
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205) x 0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50 x 50
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80) X 0.36 (80)
UV Resistence	ASTM D 4355	%	70
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.180 (80)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	3866 (95)
Permittivity	ASTM D 4491	Sec⁻¹	1.2

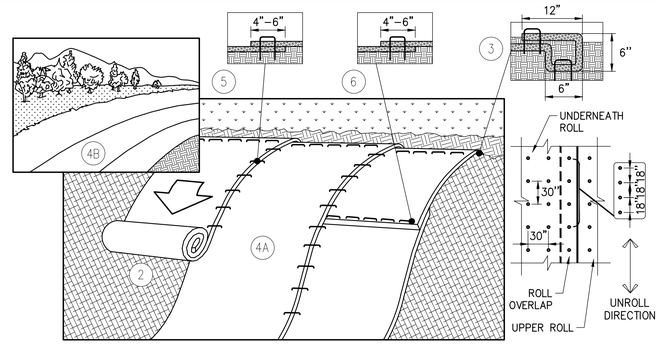
4 SEDIMENT DEWATERING BAG
SCALE: N.T.S.

2 WETLAND PROTECTION FENCE
SCALE: N.T.S.



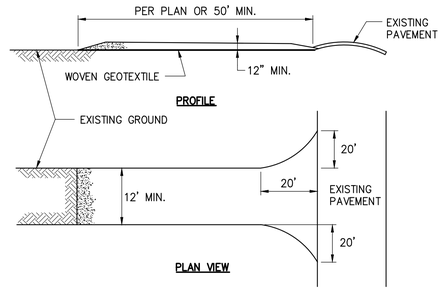
1. CONSTRUCTION BARRIER FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE PLANS PRIOR TO BEGINNING ANY WORK ADJACENT TO THESE AREAS.
2. THE CONTRACTOR SHALL INSTALL AT THE BEGINNING OF THE CONTRACT, AND MAINTAIN THROUGHOUT ITS DURATION.





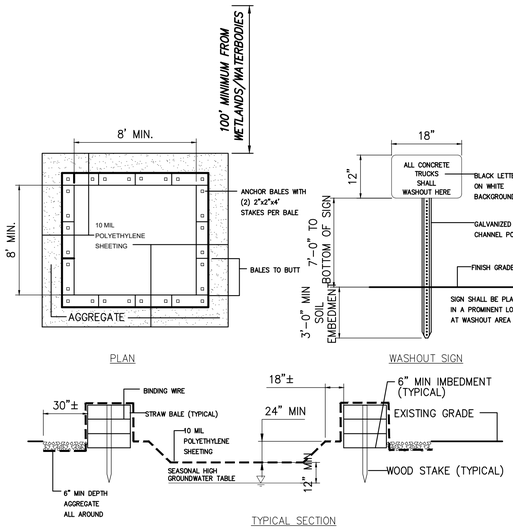
NOTE:
1. EROSION CONTROL BLANKETS TO BE INSTALLED ON SLOPES 3:1 OR GREATER (TYP.)
2. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: DO NOT SEED PREPARED AREA, INSTALL WITH PAPER SIDE DOWN. INSTALL ACCORDING TO MANUFACTURERS INSTRUCTIONS.
3. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDETRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
4. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"–5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
6. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPING AREA APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
7. TO PROPERLY SECURE THE BLANKETS IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES OR STAKES GREATER THAN 6" MAY BE NECESSARY.

3 EROSION CONTROL BANK STABILIZATION DETAIL
SCALE: N.T.S.



1. STONE SIZE–USE AASHTO M43 SIZE 3 COARSE AGGREGATE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN 12".
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY–FOUR (24) FOOT IF SINGLE ACCESS TO SITE.
5. WOVEN GEOTEXTILE FABRIC WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. EXISTING ROAD SIDE DRAINAGE SHALL BE MAINTAINED.
7. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
8. MAINTENANCE–THE ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT OR STONE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
9. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
10. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

5 STABILIZED CONSTRUCTION ACCESS
SCALE: N.T.S.



MAINTENANCE NOTES:
1. ALL CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITATES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA SUCH AS A GRASS FILTER STRIP.
2. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
3. DISPOSAL OF THE HARDENED MATERIAL SHALL BE OFF–SITE IN A CONSTRUCTION/DEMOLITION LANDFILL.
4. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.
5. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON–DESIGNATED AREAS.
6. LOCATION(S) TO BE DETERMINED IN THE FIELD BY THE OWNER'S REPRESENTATIVE
7. CONCRETE WASHOUTS SHALL NOT BE LOCATED WITHIN 200' OF ANY KNOWN WELL.

6 CONCRETE WASHOUT AREA
SCALE: N.T.S.

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B	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
EROSION AND SEDIMENT CONTROL DETAILS

DRAWN BY: BL | DESIGNED BY: SL | APPROVED BY: JL | SCALE AS SHOWN | REV. NO. F

KIEWIT PROJECT NO.	
21162	
KC PROJECT NO.	
120174	
DRAWING NO.	
C-602	
DATE	03/17/2023
SH.NO.	XX OF

DEWATERING PLAN:
CONSTRUCTION ACTIVITY WITHIN THE STREAM SHALL BE PROHIBITED BETWEEN OCTOBER 1 THROUGH MAY 31 FOR ALL STREAMS DESIGNATED AS TROUT WATER OR SUITABLE FOR TROUT SPAWNING.

DEWATERING PROCEDURES:
TRAPPED WATER WITHIN THE TRENCH SHALL BE DISCHARGED INTO A PORTABLE SEDIMENT TANK OR SEDIMENT FILTER BAGS LOCATED AWAY FROM THE WATERBODY TO PREVENT SILT-LADEN WATER FROM FLOWING INTO THE WATERBODY.

DAM AND PUMP CROSSING PROCEDURES:
BEFORE THE INITIATION OF ANY IN-STREAM ACTIVITIES, ALL MATERIAL ASSOCIATED WITH THE DAM AND PUMP SITE SET-UP MUST BE ON-HAND. THESE MATERIALS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
A)WATER BARRIERS
B)DOWNSTREAM SPLASH PLATE
C)PUMPS (PRIMARY AND SECONDARY) AND HOSES
D)FUEL FOR PUMPS (STORED AT LEAST ONE HUNDRED (100) FEET FROM WATERBODY)
E)SPILL PREVENTION AND CONTROL MATERIALS (INCLUDING SECONDARY CONTAINMENT FOR PUMPS LOCATED WITHIN ONE HUNDRED (100) FEET OF WETLAND OR WATERBODY)

ONCE THE NECESSARY MATERIALS ARE ON-LOCATION, SITE SET-UP MAY BEGIN. THE FIRST STEP IS TO SELECT AN APPROPRIATE LOCATION FOR THE PUMP INTAKE HOSE(S) TO BE POSITIONED. DEPENDING UPON THE CHANNEL CHARACTERISTICS, EITHER A NATURALLY OCCURRING DEEP SPOT OR CHANNEL WILL BE SELECTED AS A 'SUMP' OR A SUMP MAY NEED TO BE CREATED TO PROVIDE SUFFICIENT WATER DEPTH FOR THE SCREENED HOSE INTAKE(S). IF A NATURAL SUMP IS NOT AVAILABLE FOR THE INTAKE HOSE, AN IN-STREAM SUMP WILL BE CREATED BY EXCAVATING WITHIN THE STREAM CHANNEL AND SURROUNDING THE EXCAVATION USING SANDBAGS.

THE FOLLOWING BMPS SHALL BE IMPLEMENTED AT THE INTAKE OR SUMP SITE:
A)ALL EQUIPMENT, MATERIAL, AND CONSTRUCTION PERSONNEL NECESSARY FOR THE CROSSING SHALL BE ON-SITE BEFORE SET-UP BEGIN
SB)UPON COMPLETION OF THE WATERBODY CROSSING ANY SANDBAGS UTILIZED FOR A SUMP SHALL BE REMOVED AND THE STREAM CHANNEL RESTORED TO PRE-CONSTRUCTION CONDITION
C)THE SUMP SHALL BE OF SUFFICIENT DEPTH TO PREVENT THE ENTRAINMENT OF EXCESSIVE AMOUNTS OF SEDIMENT INTO THE SUMP INTAKE, HOSE AND PUMP

DURING THE ASSEMBLY OF THE UPSTREAM AND DOWNSTREAM WATER BARRIERS, THE PUMPING NETWORK SHALL BE SETUP TO BEGIN THE TRANSFER OF WATER AROUND THE CONSTRUCTION WORK AREA.

THE PUMP INTAKE AND DISCHARGE HOSES SHALL BE APPROPRIATELY PLACED AND OF SUFFICIENT LENGTH, BASED UPON SITE-SPECIFIC CONDITIONS. THE INTAKE HOSE SHALL BE SCREENED TO PREVENT THE ENTRAINMENT OF FISH. DISCHARGE HOSES SHALL BE PROVIDED WITH SUPPORT OVER THE DITCH-LINE AS NEEDED TO PREVENT EXCESSIVE SAGGING AND REDUCTION OF PUMPING CAPACITY.

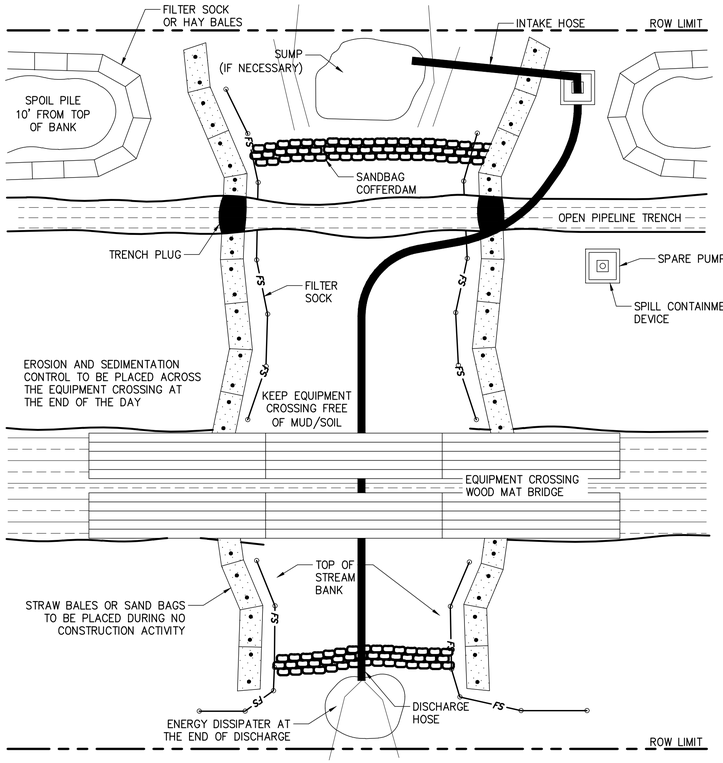
THE NUMBER AND SIZES OF PUMPS TO BE USED AT ANY CROSSING SHALL BE DEPENDENT UPON THE VOLUME OF WATER FLOWING AT THE TIME THE CROSSING IS MADE.

BMPS TO BE IMPLEMENTED DURING PUMP SET-UP INCLUDE:
A)PUMPS SHALL BE FUELED PRIOR TO PLACING THEM IN POSITION
B)IF IT IS NECESSARY TO REFUEL DURING THE PUMP OPERATION, EXTRA CARE SHALL BE TAKEN TO AVOID SPILLAGE AND SPILL CONTROL MATERIALS WILL BE READILY AVAILABLE ON SITE
C)SECONDARY CONTAINMENT SHALL BE PLACED UNDER THE PUMPS AS AN ADDITIONAL PRECAUTIONARY MEASURE TO PROTECT AGAINST ACCIDENTAL LEAKAGE OR SPILL
D)FUEL FOR FILLING THE PUMPS SHALL NOT BE STORED WITHIN ONE HUNDRED (100) FEET OF THE WATERBODY
E)THE INTAKE HOSE SHALL BE SCREENED TO PREVENT THE ENTRAINMENT OF FISH
F)THE END OF THE DISCHARGE HOSE SHALL BE MOUNTED UPON A SPLASH PLATE OR SIMILAR DEVICE OR IN A MANNER THAT WILL DISSIPATE THE ENERGY OF THE DISCHARGING WATER AND REDUCE OR ELIMINATE STREAMBED SCOUR
G)IF HOSES CROSS THE TEMPORARY ACCESS ROAD, THEY SHALL BE PROTECTED FROM TRAVELING EQUIPMENT
H)PUMP(S) SHALL BE OF SUFFICIENT CAPACITY TO TRANSFER TWICE THE CAPACITY OF THE ENTIRE STREAMFLOW AROUND THE CONSTRUCTION WORK AREA
I)RESERVE OR BACKUP PUMP(S) SHALL BE KEPT ON SITE AT ALL TIMES.

WATER BARRIER INSTALLATION

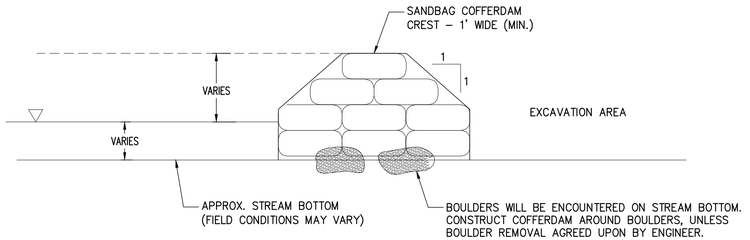
BETWEEN THE PUMP HOSE INTAKE OR SUMP HOLE AREA AND THE TRENCH, AS WELL AS DOWNSTREAM OF THE TRENCH, DAMS OF RELATIVELY IMPERVIOUS MATERIAL SHALL BE INSTALLED. THE UPSTREAM DAM SHALL BE COMPLETED FIRST. EVERY REASONABLE EFFORT SHALL BE MADE TO CONSTRUCT THE DAMS AS WATER TIGHT AS POSSIBLE.

THE FOLLOWING BMPS WILL BE IMPLEMENTED DURING WATER BARRIER INSTALLATION:
A)DAMS SHALL BE CONSTRUCTED OF EITHER SANDBAGS, WATER BLADDERS, STEEL PLATES, PORTA-DAMS OR EQUIVALENT OR 'JERSEY BARRIERS' AND PLASTIC SHEETING OR A COMBINATION THEREOF
B)THE DAMS SHALL BE CONSTRUCTED OF SUFFICIENT HEIGHT TO ALLOW ADEQUATE FREEBOARD UNDER REASONABLY EXPECTED WATER LEVELS OR FLOWS AND PROVIDE FOR SOME IMPOUNDMENT OF WATER
C)PRIOR TO COMPLETION OF THE DAMS, THE PUMP(S) MUST BE STARTED IN ORDER TO PROVIDE DOWNSTREAM FLOW OF WATER AROUND THE CONSTRUCTION WORK AREA
D)THE RATE OF PUMPING SHALL BE MONITORED TO MINIMIZE DRAINING OF THE INTAKE SUMP AND THE RESULTING CESSATION IN FLOW. ALTERNATIVELY, PUMPING SHALL BE MONITORED AND INCREASED AS NECESSARY TO PREVENT OVERTOPPING OF THE DAMS.



GENERAL SEQUENCE:
1. SCHEDULE CONSTRUCTION DURING LOW FLOW PERIOD, IF POSSIBLE.
2. SET UP PUMP AND HOSE AS SHOWN, OR USE PRACTICAL ALTERNATIVES. PUMP SHOULD HAVE TWICE THE PUMPING CAPACITY OR ANTICIPATED FLOW. HAVE STANDBY PUMP ON SITE. DEPENDING ON STREAM FLOW,DIG SUMP HOLE TO CONCENTRATE WATER AT INTAKE.
3. INSTALL UPSTREAM DAM COMPOSED OF SANDBAGS, METAL PLATING OR A COMBINATION OF BOTH. INSTALL DOWNSTREAM DAM, IF REQUIRED, TO KEEP STREAM BED DRY.
4. AFTER DAMS ARE IN PLACE, IT MAY BE NECESSARY TO USE ADDITIONAL PUMPS TO HANDLE STREAM FLOW.
5. EXCAVATE TRENCH AND LOWER IN PIPE UNDER HOSE. MOVE HOSE AS REQUIRED OR DISCONNECT, IF TEMPORARY FLOW BLOCKAGE IS ACCEPTABLE. BACKFILL TRENCH.
6. DISMANTLE DOWNSTREAM DAM, THEN UPSTREAM DAM. KEEP PUMP RUNNING TO MAINTAIN STREAM FLOW.
7. RESTORE STREAM BANKS AND APPROACHES FOR A MINIMUM DISTANCE OF AT LEAST 50 FEET FROM THE STREAM EDGES AND PERMANTENTLY STABLIZE WITHIN 1 DAY OF INITIAL RESTORATION.

1 DAM AND PUMP AROUND STREAM CROSSING
SCALE: N.T.S.



2 SANDBAG COFFERDAM DETAIL
SCALE: N.T.S.

NOTES:
1. SAND BAGS SHALL BE FILTER FABRIC TYPE AND BE DOUBLE BAGGED.
2. PORTADAM, BY PORTADAM, INC. SHALL BE CONSTRUCTED ACCEPTABLE SUBSTITUTE TO SAND BAGS

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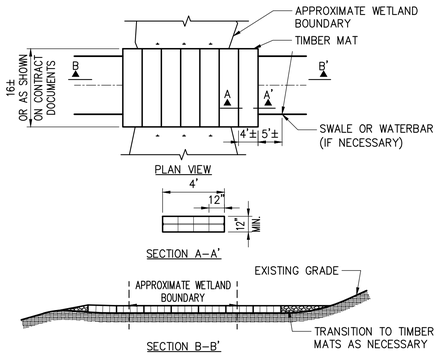
CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
EROSION AND SEDIMENT CONTROL DETAILS

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-603

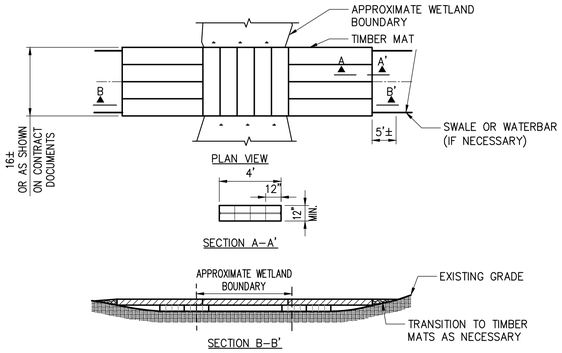
DRAWN BY: BL | DESIGNED BY: SL | APPROVED BY: JL | SCALE AS SHOWN | REV. NO. F | DATE 03/17/2023 | SH.NO. XX OF



NOTES:
1. TIMBER MATS SHOULD BE INSTALLED IN WETLANDS AND OTHER AREAS IF NECESSARY TO PREVENT RUTTING.
2. BASED ON ACTUAL SITE CONDITIONS, MULTIPLE LAYERS OF TIMBER MATS MAY BE REQUIRED.
3. TIMBER MAT SURFACE SHOULD BE LEVEL TO PREVENT EQUIPMENT AND VEHICLES FROM SLIDING OFF DURING MUDDY OR ICING CONDITIONS, AND PREVENT TIMBERS FROM BREAKING.
4. SEDIMENT TRACKED ONTO TIMBER MATTING SHOULD BE REMOVED AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING WETLAND DURING RAIN EVENTS. SEDIMENT SHOULD BE REMOVED TO A STABILIZED SOIL STOCKPILE OR OTHER APPROVED LOCATION.
5. PERIMETER EROSION AND SEDIMENT CONTROL ARE REQUIRED TO BE INSTALLED PRIOR TO PLACING TIMBER MATTING.
6. UNLESS PERMITTED FROM REMOVAL, STUMPS WITHIN THE WETLAND SHOULD REMAIN. THIS MAY REQUIRE ADDITIONAL TIMBERS TO BRIDGE ABOVE.
7. UPON REMOVAL OF TIMBER MATTING ALL SPLINTERED WOOD SHOULD BE REMOVED. IF EXPOSED SOILS ARE PRESENT STRAW MULCH SHOULD BE APPLIED.

NOTE: GEOTEXTILE FABRIC TO BE INSTALLED UNDER MATTING (TYP)

OPTION "A"
NOT TO SCALE



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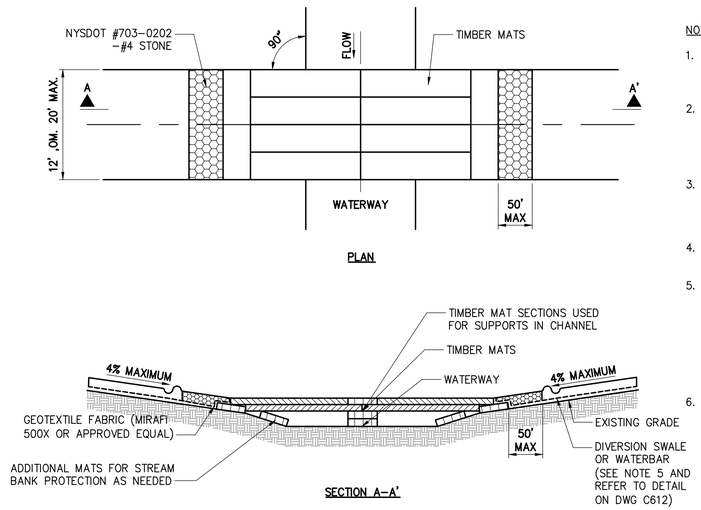
NOTE: GEOTEXTILE FABRIC TO BE INSTALLED UNDER MATTING (TYP)

OPTION "B"
NOT TO SCALE



NOTES:

1. IN–STREAM EXCAVATION SHOULD BE COMPLETED IN ACCORDANCE WITH "TEMPORARY ACCESS WATERWAY CROSSING" ON PAGE 2.32 OF THE 2016 NYSDEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (OR NEWEST VERSION).
2. THE CONSTRUCTION OF ANY CROSSING SHOULD NOT CAUSE A SIGNIFICANT WATER LEVEL DIFFERENCE BETWEEN THE UPSTREAM AND DOWNSTREAM WATER SURFACE ELEVATIONS. FISH SPAWNING OR MIGRATION DATES CAN VARY ACROSS NEW YORK, AND RESTRICTIONS IMPOSED BY THE NYSDEC MY VARY AND MUST BE VERIFIED.
3. THE TEMPORARY WATERWAY CROSSING SHOULD BE AT RIGHT ANGLES TO THE STREAM WHERE APPROACH CONDITIONS DICTATE, THE CROSSINGS MAY VARY 15 DEGREES FROM A LINE DRAWN PERPENDICULAR TO THE CENTERLINE OF THE STREAM AT THE INTENDED CROSSING LOCATION.
4. ALL FILL MATERIALS ASSOCIATED WITH THE ROADWAY APPROACH SHOULD BE LIMITED TO A MAXIMUM HEIGHT OF 2 FEET ABOVE THE EXISTING FLOOD PLAIN ELEVATION.
5. A WATER DIVERTING STRUCTURE SUCH AS A SWALE OR WATERBAR SHOULD BE CONSTRUCTED (ACROSS THE ROADWAY ON BOTH ROADWAY APPROACHES) 50 FEET (MAXIMUM) ON EITHER SIDE OF THE WATERWAY CROSSING. THIS WILL PREVENT ROADWAY SURFACE RUNOFF FROM DIRECTLY ENTERING THE WATERWAY. THE 50 FEET MEASURED IS MEASURED FROM THE TOP OF THE WATERWAY BANK. IF THE ROADWAY APPROACH IS CONSTRUCTED WITH A REVERSE GRADE AWAY FROM THE WATERWAY, A SEPARATE DIVERTING STRUCTURE IS NOT REQUIRED.
6. ALL CROSSINGS SHOULD HAVE ONE TRAFFIC LANE. THE MINIMUM WIDTH SHOULD BE 12 FEET WITH A MAXIMUM WIDTH OF 20 FEET.

OPTION "C"
NOT TO SCALE

1 TIMBER MATTING (WETLAND CROSSING)
SCALE: N.T.S.

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Kiewit

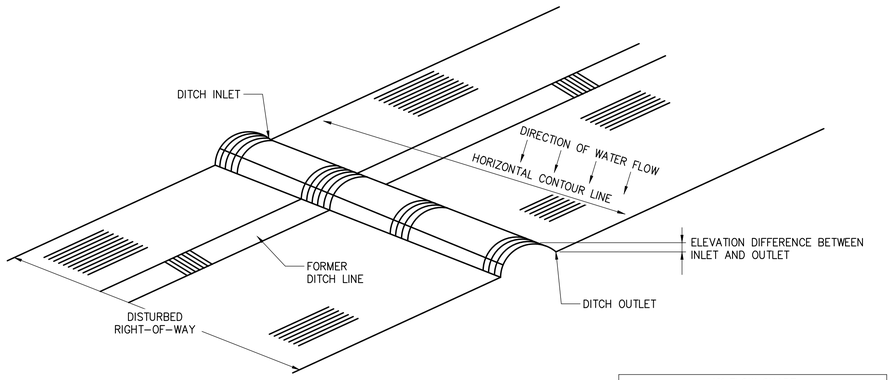
Engineering and Land Surveying, P.C.

No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP
F	03/17/2023	FINAL SUBMISSION	BL	JL
E	01/24/2023	DRAFT FINAL SUBMISSION	RB	JL
D	11/16/2022	PRELIMINARY DRAFT FINAL SUBMISSION	RB	JL
C	04/29/2022	60% DESIGN SUBMISSION	RB	JL
B	03/22/2022	PRELIMINARY DESIGN DEVELOPMENT	BV	TK
A	02/14/2022	PRELIMINARY PROGRESS	BV	TK

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
WETLAND CROSSING DETAILS

DRAWN BY: BL | DESIGNED BY: SL | APPROVED BY: JL | SCALE AS SHOWN | REV. NO. F | DATE 03/17/2023 | SH.NO. XX OF

KIEWIT PROJECT NO. 21162
KC PROJECT NO. 120174
DRAWING NO. **C-611**



4% FLOW CHART	
HORIZONTAL DISTANCE BETWEEN WATERBAR INLET & OUTLET (FEET)	ELEVATION DISTANCE BETWEEN WATERBAR INLET AND OUTLET (FEET)
75	3
100	4
125	5
150	6
175	7

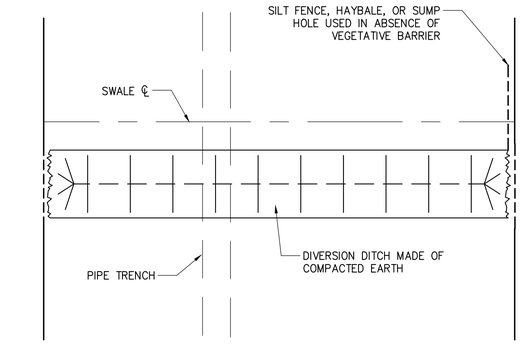
WATER SHALL BE DIVERTED OFF THE DISTURBED RIGHT-OF-WAY AT AN OUTSLOPE OF THREE TO FIVE PERCENT BY CONSTRUCTING DIVERSION DITCH ACCORDING TO THE FOLLOWING PROCEDURES:

1. AT THE PROPOSED INTERCEPTOR DITCH LOCATION ESTABLISH A HORIZONTAL CONTOUR LINE (USING A POCKET TRANSIT OR HAND LEVEL) WHICH EXTENDS COMPLETELY ACROSS THE DISTURBED RIGHT-OF-WAY. THIS LINE WILL ALWAYS BE PERPENDICULAR TO THE DIRECTION OF WATER FLOW AND SHOULD BE PARALLEL TO THE MAP CONTOURS SHOWN ON THE PLAN DRAWINGS.
2. DETERMINE WHICH SIDE OF THE RIGHT-OF-WAY IS BEST SUITED FOR THE DITCH OUTLET (EVALUATE VEGETATION DENSITY, LOCAL TOPOGRAPHY, ETC.) AND DEVIATE DIKE AWAY FROM THE HORIZONTAL CONTOUR LINE SLIGHTLY DOWNWARD TOWARD THE SELECTED OUTLET SIDE MAINTAINING A THREE TO FIVE PERCENT SLOPE. AS AN EXAMPLE, THE CHART AT THE RIGHT SHOWS DIMENSIONS ASSUMING A FOUR PERCENT SLOPE.
3. WHEN OUTLETTING NEAR WATER BODIES, STREAMS, DITCHES, & CROP FIELDS, A FILTER FENCE OR STRAW BALE FENCE SHOULD BE PLACED ON OUTLET END OF THE DIVERSION DITCH.

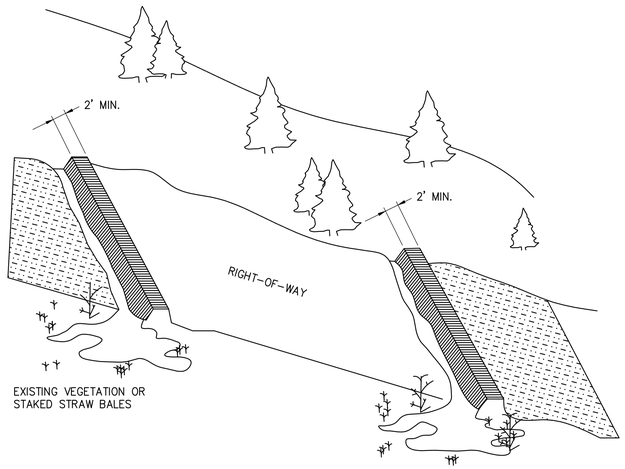
TEMPORARY DRAINAGE DITCH

NOTES:

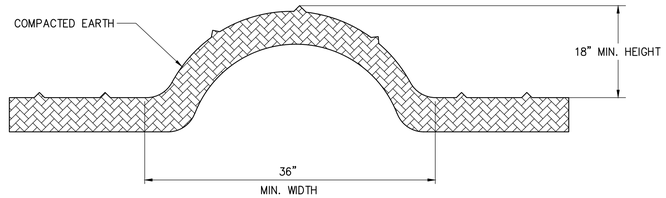
1. TEMPORARY DIVERSION DITCH SHOULD BE BUILT SIMILAR TO THE PERMANENT DITCH CONFIGURATION BUT THE DIMENSION CAN BE SCALED BACK.
2. MAXIMUM HEIGHT SHOULD BE 12" AND SHOULD BE COMPACTED.
3. SPACING BETWEEN DIVERSION DITCHES AND SKEW OF THE DIVERSION DITCHES CAN VARY FROM THE PERMANENT DIVERSION DITCHES.
4. WHEN CONSTRUCTING TEMPORARY DIVERSION DITCHES THEY SHOULD BE FUNCTIONAL, WHILE MAINLINE CONSTRUCTION IS PROCEEDING, UNTIL RESTORATION BEGINS AND PERMANENT DIVERSION DITCHES ARE THEN CONSTRUCTED.



OVERHEAD VIEW



1 PERMANENT DIVERSION DITCH DETAIL
SCALE: N.T.S.



2 MINIMAL HEIGHT & WIDTH DIMENSIONS FOR WATERBAR CONSTRUCTION
SCALE: N.T.S.

CHPE Champlain Hudson Power Express

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CHAMPLAIN HUDSON POWER EXPRESS

SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL

WATERBAR DETAILS

KIEWIT PROJECT NO.	21162
KC PROJECT NO.	120174
DRAWING NO.	C-612

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