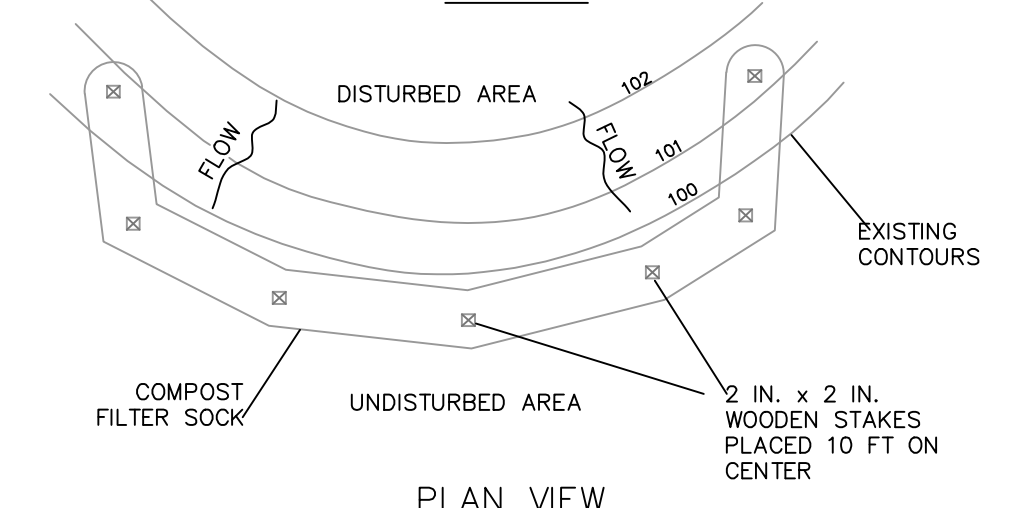
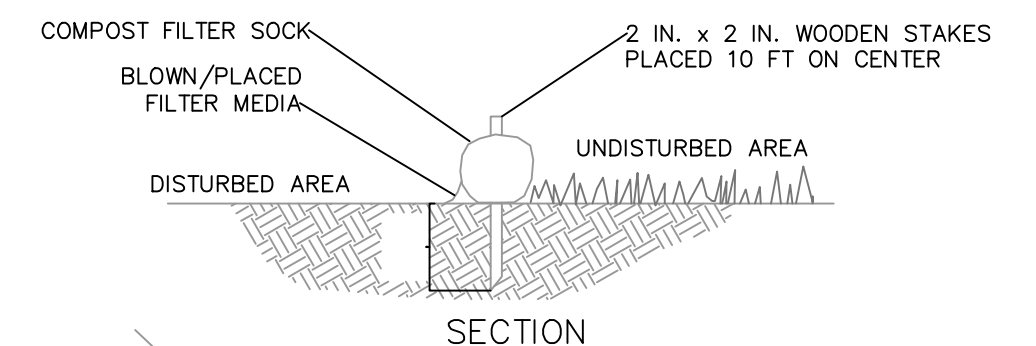
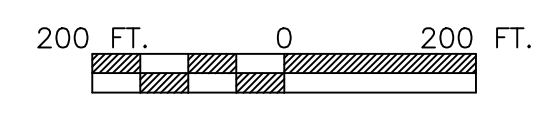


LEGEND

- PERMIT AREA, 47.2 Acs
- UNPAVED ROAD
- STREAM, RIVER SHORE
- POND, LAKE
- WETLAND
- TREELINE
- RAILROAD
- EXISTING CONTOUR, SPOT ELEVATION
- TOPOGRAPHIC LOW AREA, SLIGHT DEPRESSION
- ON-SITE SOILS FOR RE-GRADING
- BERM, Proposed
- DRAINAGE CHANNEL, Proposed Rock Lined
- AREA 1 = 11.4 ACRES
- AREA 2 = 7.6 ACRES
- SURFACE DRAINAGE, Post Re-Grading
- REGRADING CROSS-SECTIONS
- GAS LINE
- ELECTRIC LINE
- APPROXIMATE RAILROAD RIGHT OF WAY
- PROPOSED SILT FENCE
- PROPOSED COMPOST FILTER SOCK
- PROPOSED RECLAMATION CONTOURS (FROM APPROVED CROSS SECTIONS)



NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

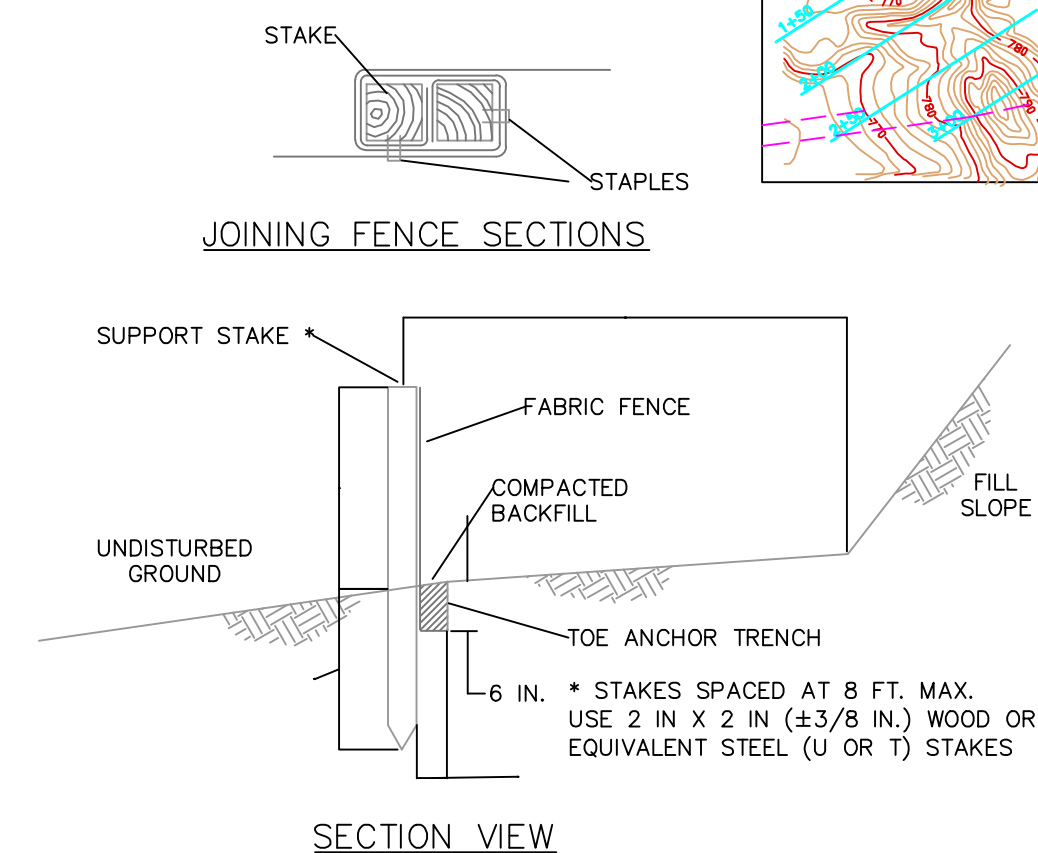
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK**
NOT TO SCALE



NOTES:

FABRIC SHALL HAVE THE MINIMUM PROPERTIES AS SHOWN IN TABLE 4.3 OF THE PA DEP EROSION CONTROL MANUAL.

FABRIC WIDTH SHALL BE 30 IN. MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL (U OR T) STAKES.

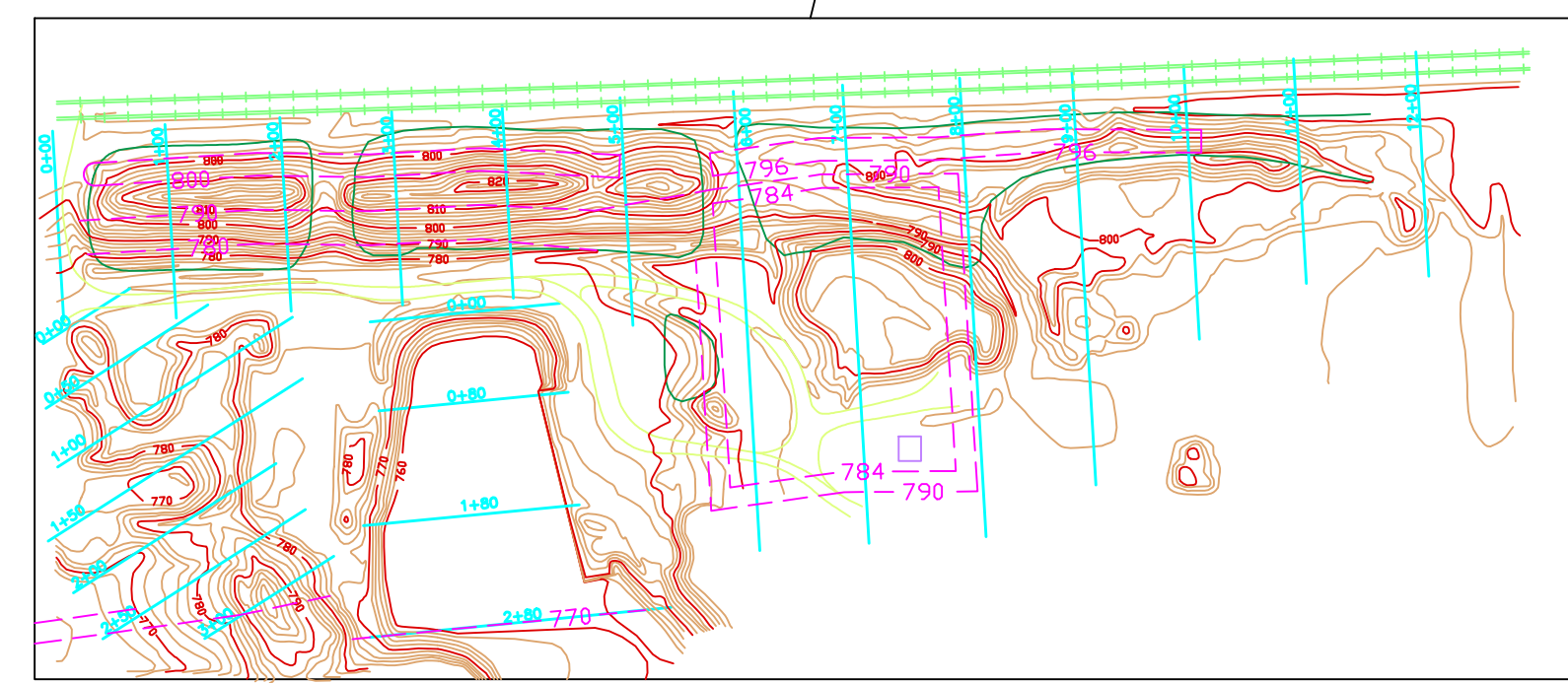
SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET (STANDARD CONSTRUCTION DETAIL # 4-6).

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

**STANDARD CONSTRUCTION DETAIL #4-7
STANDARD SILT FENCE (18" HIGH)**
NOT TO SCALE



INLET AREA DETAIL

NOTES:

- The overall permit site is divided into three areas:
- Area 1** - The eastern portion of the permit site. - Area 1 will be regraded and downcut in order to obtain additional fill material needed elsewhere on the site. The barge inlet will be filled-in and will tie into the existing grades on the north, east and west of the inlet. The existing barge dock wall will remain in-place and covered with soils. Once at final grade, the area will be revegetated.
- Area 2** - The area along the river, west of the inlet, between the river and the lake. Area 2 will generally require the down cutting of the upper portion and placing the material on the inside slope (to the north). Additional material from Area 1 will also be placed on the inside slope, in order to create the final grade.
- Area 3** - All other remaining areas within the permit boundary. - Area 3 is currently in stable condition and contains well established vegetation, which provides excellent wildlife and/or aquatic habitat. No additional disturbance or reclamation is required.
- Area 1** - The eastern portion of the permit site.
- Prior to disturbance of this area, silt fence/compost filter sock will be placed down slope of the proposed disturbance. A rock filter outlet will be installed where the existing barge inlet meets the river.
 - The soil piles along the north of the area and other portions of Area 1 will be regraded and additional fill material will be obtained for use elsewhere on the site. Final grading will promote positive site drainage.
 - The existing barge inlet will be filled-in and will tie into the existing grades on the north, east and west on the inlet. The existing barge dock wall will remain in-place and covered with soils.
 - On-site piles of soils/topsoils will be used in reclamation and are identified on the Reclamation Plan.
 - Every effort will be made to avoid affecting the current vegetation and the tree growth along the southern and eastern perimeter of the area. These areas are stable and require no further reclamation.
 - The permittee's aggregate processing plant and other associated equipment have previously been dismantled and removed from the site.
 - The conveyor and loadout system that remains on-site will be removed.
 - Revegetation will be accomplished by seeding of perennial grass and legume mixtures suitable for the on-site sandy soil conditions. Fertilizer and soil amendments will be added, as per the results of the soil tests.
 - Refer to the cross sections for Area 1.
- Area 2** - The area along the river, west of the inlet, between the river and the lake.
- Prior to disturbance of this area, silt fence/compost filter sock will be placed on the river side, at an elevation lower than the proposed disturbance.
 - This area will be stabilized by down cutting the upper portion and placing the material on the inside slope (to the north). Additional material from Area 1 will also be placed on the inside slope, in order to create the final grade.
 - The river side will be minimally disturbed.
 - A flat and nearly level top will be provided. The proposed top will be 20 feet higher than normal pool elevation and will also be higher than the 100-year flood elevation of the river.
 - Grade the nearly level top to the north (away from the river), for drainage.
 - Revegetation will be accomplished by seeding of selected perennial grass and legume mixtures suitable for the on-site sandy soil conditions. Fertilizer and soil amendments will be added, as per the results of the soil tests.
 - Refer to the cross sections for Area 2.
- Area 3** - All other remaining areas within the permit boundary.
- No additional disturbance or reclamation is required.

NOTE

- SEE REGRADING CROSS-SECTIONS ATTACHED.
- THE MAP INFORMATION WAS PROVIDED BY HANSON AGGREGATES PMA, INC.
- THE EXISTING, AS WELL AS, THE PROPOSED POST-MINING LAND USE IS UNMANAGED NATURAL HABITAT.

FINAL GRADING PLAN

EXHIBIT 18 MAP

FOR
HANSON AGGREGATES PMA, INC.
MURPHY'S BOTTOM SITE

IN
SOUTH BUFFALO TOWNSHIP, ARMSTRONG COUNTY
SCALE : 1" = 200', CONTOUR INTERVAL: 10'
S.M.P. No. 3572SM22



DATE	DESCRIPTION
12/8/05	PLAN UPDATES
7/18/06	PLAN UPDATES
4/15/15	PLAN UPDATES
12/27/18	BOND UPDATE
9/8/19	OWNER UPDATE
7/21/20	ADD REC. CONTOURS