

west virginia department of environmental protection

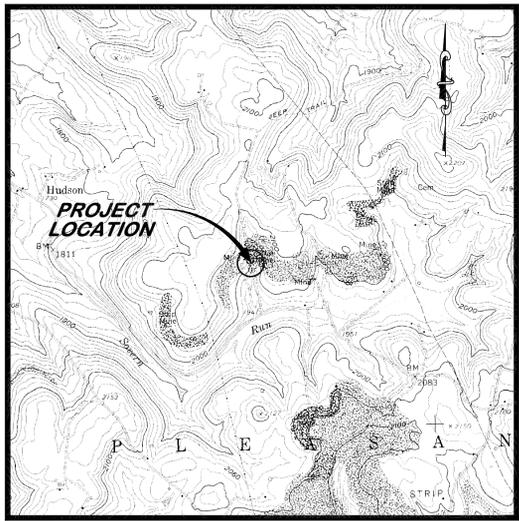
EARL RAY TOMBLIN, GOVERNOR **RANDY C. HUFFMAN, CABINET SECRETARY**

OFFICE OF ABANDONED MINE LANDS AND RECLAMATION

SOVERN RUN (ENGLAND) REFUSE AND PORTALS

NEAR VALLEY POINT
PRESTON COUNTY, WEST VIRGINIA

VICINITY MAP



USGS 7.5' QUAD (VALLEY POINT)

INDEX TO SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 2 | EXISTING CONDITIONS AND TAX MAP OVERLAY |
| 3 | RECLAMATION PLAN |
| 4 | SEDIMENT CONTROL PLAN |
| 5 | BASELINE "A" CROSS SECTIONS |
| 6 | BASELINE "A" (CONTD.) AND BASELINE "B" CROSS SECTIONS |
| 7 | BASELINE "C" CROSS SECTIONS |
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| 10 | TYPICAL DETAILS (2) |
| 11 | SEDIMENT CONTROL DETAILS |

BID SCHEDULE

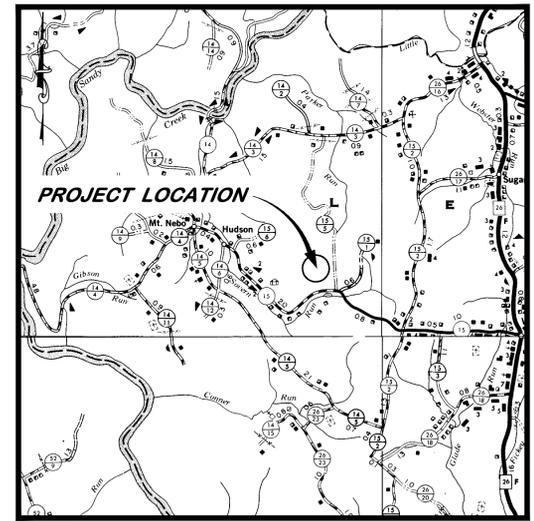
| ITEM NO. | DESCRIPTION | QUANTITY |
|----------|---|----------|
| 1.0 | MOBILIZATION AND DEMOBILIZATION (LIMITED TO 10% OF TOTAL BID) | LS |
| 2.0 | CONSTRUCTION LAYOUT (LIMITED TO 5% OF TOTAL BID) | LS |
| 3.0 | QUALITY CONTROL (LIMITED TO 3% OF TOTAL BID) | LS |
| 4.1 | SITE PREPARATION (LIMITED TO 10% OF TOTAL BID) | LS |
| 4.2 | ACCESS ROAD STONE | 160 TONS |
| 4.3 | GRAVEL DRIVE REHABILITATION | 230 TONS |
| 4.4 | PERMANENT FENCING | 250 LF |
| 5.1 | SILT FENCE SEDIMENT CONTROL | 800 LF |
| 5.2 | STRAW WATTLE EROSION CONTROL | 510 LF |
| 5.3 | STABILIZED CONSTRUCTION ENTRANCE (70 LF x 12' WIDTH) - (2) | 50 TONS |
| 5.4 | ROCK CHECK DAM | 4 EA. |
| 6.0 | REVEGETATION | 2.5 AC. |
| 7.1 | 8' RIPRAP CHANNEL (CHANNEL "A") | 785 LF |
| 7.2 | 18" HDPE CULVERT PIPE | 35 LF |
| 7.3 | 24" HDPE CULVERT PIPE | 60 LF |
| 7.4 | 18" HDPE CONVEYANCE PIPE | 130 LF |
| 7.5 | TYPE "A" MANHOLE | 3 EA. |
| 8.0 | UNCLASSIFIED EXCAVATION | 4450 CY |
| 9.1 | WET/MODIFIED MINE SEAL | 2 EA. |
| 9.2 | SODA ASH BRIQUETTES (50 LB BAG) | 10 EA. |
| 9.3 | MONITORING WELL/PIEZOMETER ABANDONMENT | 2 EA. |
| 11.1 | 4' X 4' UNDERDRAIN (12" PVC SDR-35) | 100 LF |
| 11.2 | UNDERDRAIN CONVEYANCE PIPE (12" PVC SDR-35) | 20 LF |



APPROVED

DATE

LOCATION MAP



COUNTY HIGHWAY MAP, 1" = 1 MI.



LEGEND

- APPROX. PROPERTY LINE
- - - - - EXIST. DRAIN OR WATER COURSE
- EXISTING UTILITY LINE
- DIRECTION OF FLOW
- (T.M. 24 P. 3) TAX MAP AND PARCEL NO.
- EXISTING UTILITY OR LIGHT POLE
- EXISTING OR PROBABLE MINE OPENING
- STA 1 EXISTING SURVEY CONTROL
- EXISTING CULVERT OR PIPE
- EXISTING WOODEN FENCE POST (IN OBLITERATED WIRE FENCE)

NOTES:

- 1) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERMITS REQUIREMENTS.
- 2) CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND VERIFICATION OF ANY AND ALL UTILITIES LOCATED WITHIN THE CONSTRUCTION LIMITS.
- 3) ALL AREAS AFFECTED BY ACCESS AND/OR CONSTRUCTION SHALL BE REGRADED, SEEDED AND MULCHED UPON COMPLETION OF PROJECT.
- 4) ANY PROPERTY CORNERS (i.e. IRON RODS, REBARS, CONC. MONUMENTS AND SIGNS) DISTURBED SHALL BE RE-ESTABLISHED AND RESET UPON COMPLETION OF PROJECT.

SURVEY CONTROL

| NO. | NORTHING | EASTING | ELEV. | DESC. |
|-------|-----------|------------|---------|----------------|
| STA 1 | 398858.62 | 1948710.39 | 2121.88 | 6" GALV. SPIKE |
| STA 2 | 398857.39 | 1948678.78 | 2024.07 | 6" GALV. SPIKE |
| STA 3 | 398496.15 | 1948788.51 | 1986.92 | 6" GALV. SPIKE |
| STA 4 | 398299.55 | 1948781.09 | 1988.89 | 6" GALV. SPIKE |
| STA 5 | 398171.40 | 1948802.11 | 1991.57 | 6" GALV. SPIKE |
| STA 6 | 398084.90 | 1948853.29 | 1983.06 | 6" GALV. SPIKE |
| STA 7 | 398636.52 | 1948743.88 | 2013.81 | 6" GALV. SPIKE |

(STATE PLAIN COORDINATE SYSTEM OF 1927, WEST VIRGINIA NORTH ZONE)

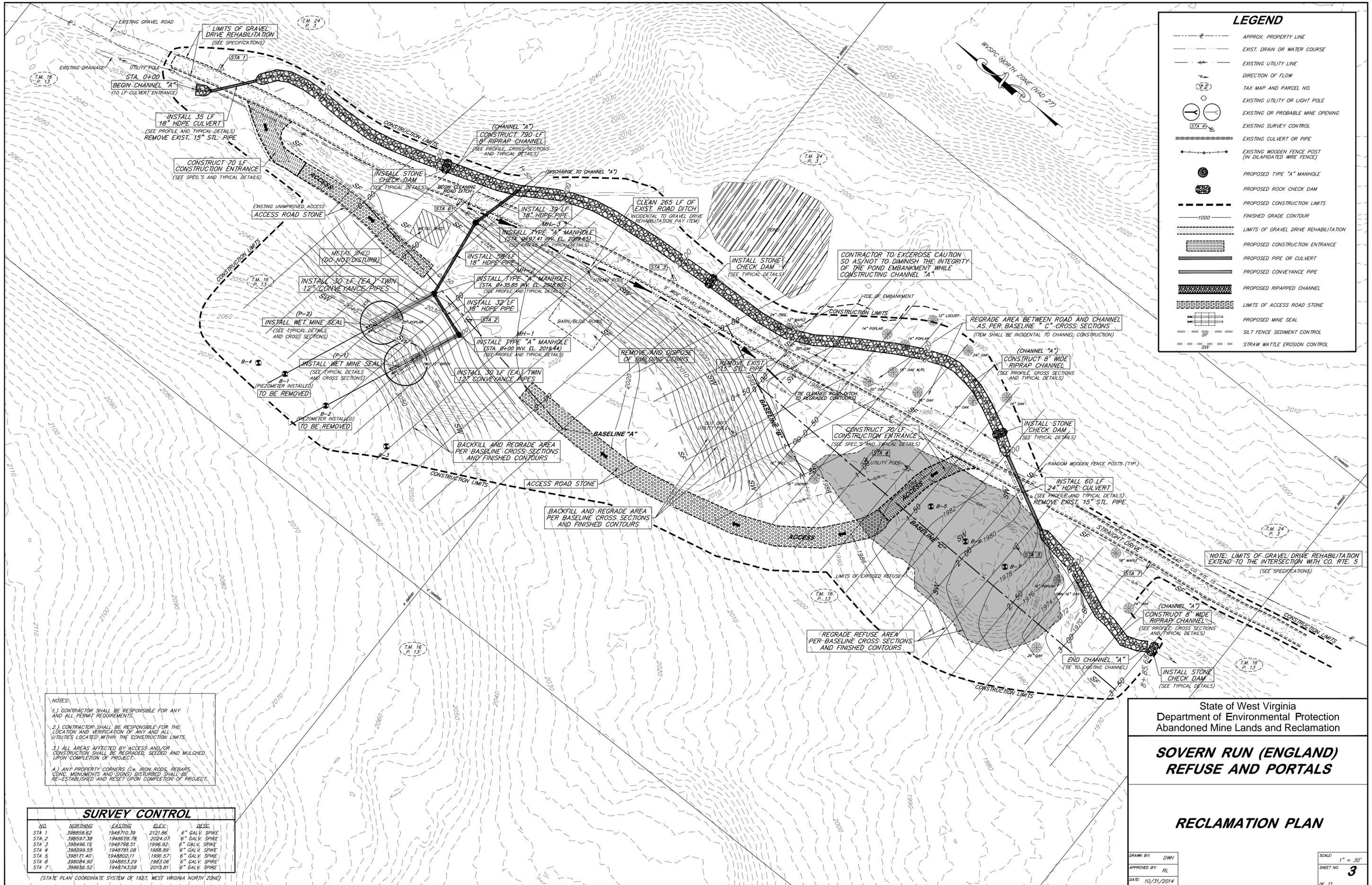
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

**EXISTING CONDITIONS AND
TAX MAP OVERLAY**

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: 1" = 30'
SHEET NO. **2**
OF 11



LEGEND

- APPROX. PROPERTY LINE
- EXIST. DRAIN OR WATER COURSE
- EXISTING UTILITY LINE
- DIRECTION OF FLOW
- TAX MAP AND PARCEL NO.
- EXISTING UTILITY OR LIGHT POLE
- EXISTING OR PROBABLE MINE OPENING
- EXISTING SURVEY CONTROL
- EXISTING CULVERT OR PIPE
- EXISTING WOODEN FENCE POST (W/ GUARDED WIRE FENCE)
- PROPOSED TYPE "A" MANHOLE
- PROPOSED ROCK CHECK DAM
- PROPOSED CONSTRUCTION LIMITS
- FINISHED GRADE CONTOUR
- LIMITS OF GRAVEL DRIVE REHABILITATION
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED PIPE OR CULVERT
- PROPOSED CONVEYANCE PIPE
- PROPOSED RIPAPPED CHANNEL
- LIMITS OF ACCESS ROAD STONE
- PROPOSED MINE SEAL
- SILT FENCE SEDIMENT CONTROL
- STRAW WATTLE EROSION CONTROL

NOTES:
 1.) CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERMITS REQUIREMENTS.
 2.) CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND VERIFICATION OF ANY AND ALL UTILITIES LOCATED WITHIN THE CONSTRUCTION LIMITS.
 3.) ALL AREAS AFFECTED BY ACCESS AND/OR CONSTRUCTION SHALL BE REGRADED, SEEDED AND MULCHED UPON COMPLETION OF PROJECT.
 4.) ANY PROPERTY CORNERS (i.e. IRON RODS, REBARS, CONC. MONUMENTS AND SIGNS) DISTURBED SHALL BE RE-ESTABLISHED AND RESET UPON COMPLETION OF PROJECT.

| SURVEY CONTROL | | | | |
|----------------|-----------|------------|---------|----------------|
| NO. | NORTHING | EASTING | ELEV. | DESC. |
| STA 1 | 398558.62 | 1948710.39 | 2121.86 | 6" GALV. SPIKE |
| STA 2 | 398597.38 | 1948678.78 | 2024.01 | 6" GALV. SPIKE |
| STA 3 | 398496.15 | 1948788.51 | 1996.92 | 6" GALV. SPIKE |
| STA 4 | 398299.55 | 1948781.08 | 1988.89 | 6" GALV. SPIKE |
| STA 5 | 398171.40 | 1948802.11 | 1991.57 | 6" GALV. SPIKE |
| STA 6 | 398084.90 | 1948853.29 | 1983.06 | 6" GALV. SPIKE |
| STA 7 | 398636.52 | 1948743.68 | 2015.81 | 6" GALV. SPIKE |

(STATE PLAIN COORDINATE SYSTEM OF 1927, WEST VIRGINIA NORTH ZONE)

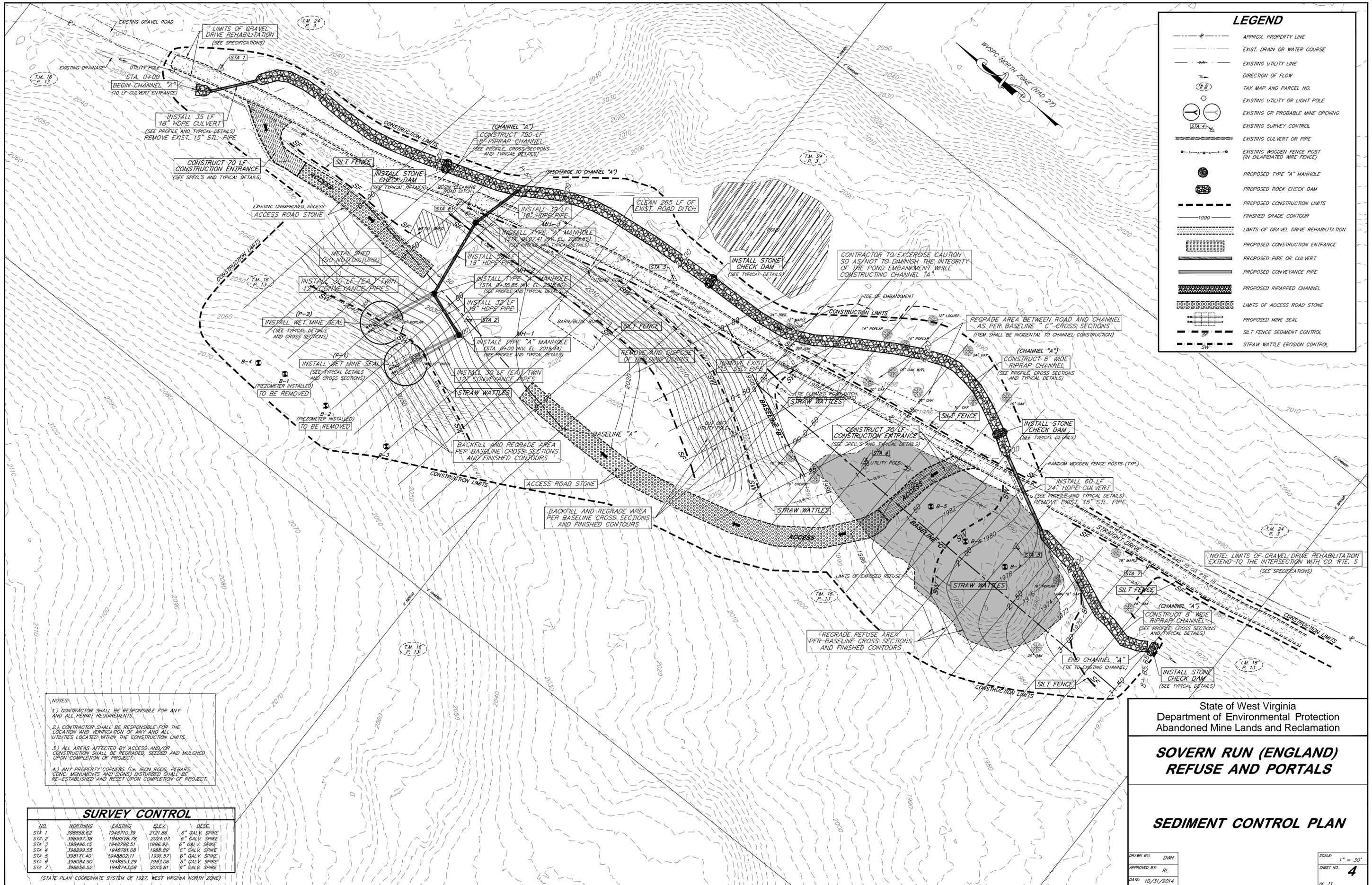
State of West Virginia
 Department of Environmental Protection
 Abandoned Mine Lands and Reclamation

SOVERN RUN (ENGLAND) REFUSE AND PORTALS

RECLAMATION PLAN

DRAWN BY: DWH
 APPROVED BY: RL
 DATE: 10/31/2014

SCALE: 1" = 30'
 SHEET NO. **3**
 OF 11



LEGEND

- APPROX. PROPERTY LINE
- EXIST. DRAIN OR WATER COURSE
- EXISTING UTILITY LINE
- DIRECTION OF FLOW
- (T.M. 24 P. 3) TAX MAP AND PARCEL NO.
- (T.M. 16 P. 13) EXISTING UTILITY OR LIGHT POLE
- (T.M. 16 P. 13) EXISTING OR PROBABLE MINE OPENING
- (T.M. 16 P. 13) EXISTING SURVEY CONTROL
- EXISTING CULVERT OR PIPE
- EXISTING WOODEN FENCE POST (W/ GALVANIZED WIRE FENCE)
- PROPOSED TYPE "A" MANHOLE
- PROPOSED ROCK CHECK DAM
- PROPOSED CONSTRUCTION LIMITS
- FINISHED GRADE CONTOUR
- LIMITS OF GRAVEL DRIVE REHABILITATION
- PROPOSED CONSTRUCTION ENTRANCE
- PROPOSED PIPE OR CULVERT
- PROPOSED CONVEYANCE PIPE
- PROPOSED RIPAPPED CHANNEL
- LIMITS OF ACCESS ROAD STONE
- PROPOSED MINE SEAL
- SILT FENCE SEDIMENT CONTROL
- STRAW WATTLE EROSION CONTROL

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SURVEY CONTROL

| NO. | NORTHING | EASTING | ELEV. | DESC. |
|-------|-----------|------------|---------|----------------|
| STA 1 | 398558.62 | 1948710.39 | 2121.86 | 6" GALV. SPIKE |
| STA 2 | 398597.39 | 1948678.78 | 2024.01 | 6" GALV. SPIKE |
| STA 3 | 398496.15 | 1948788.51 | 1996.92 | 6" GALV. SPIKE |
| STA 4 | 398299.55 | 1948781.09 | 1988.89 | 6" GALV. SPIKE |
| STA 5 | 398171.40 | 1948802.11 | 1991.57 | 6" GALV. SPIKE |
| STA 6 | 398084.90 | 1948853.29 | 1983.06 | 6" GALV. SPIKE |
| STA 7 | 398636.52 | 1948743.58 | 2015.81 | 6" GALV. SPIKE |

(STATE PLAN COORDINATE SYSTEM OF 1927, WEST VIRGINIA NORTH ZONE)

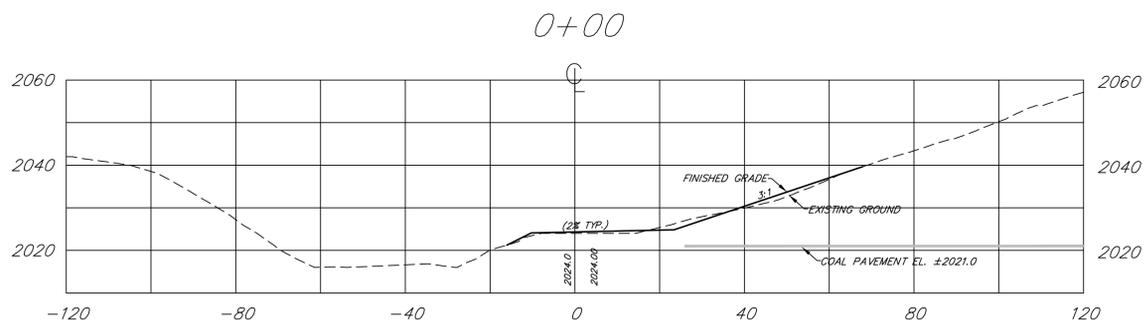
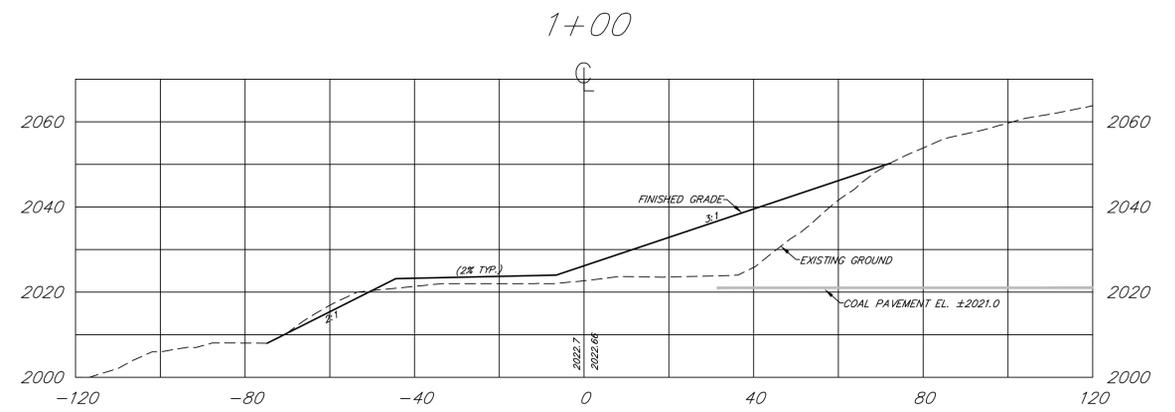
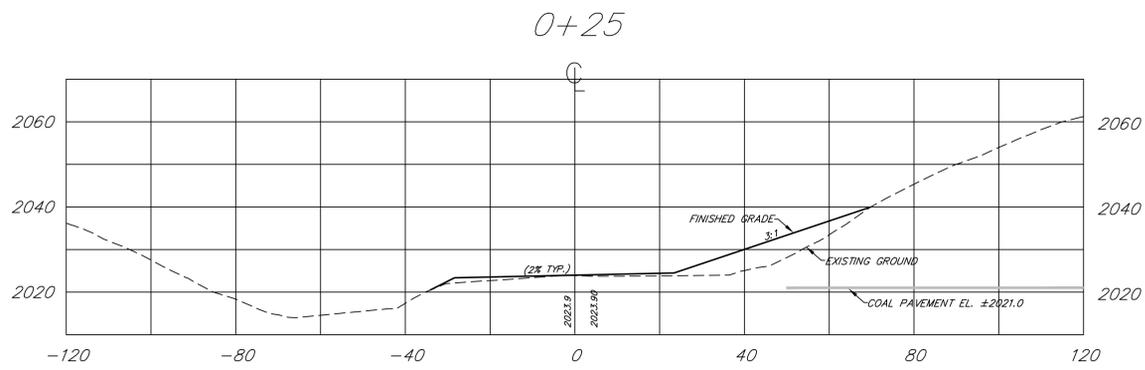
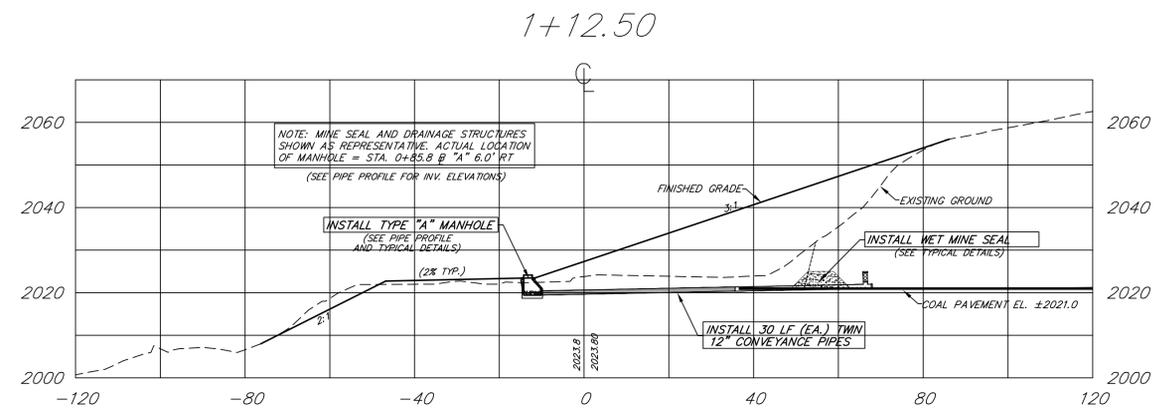
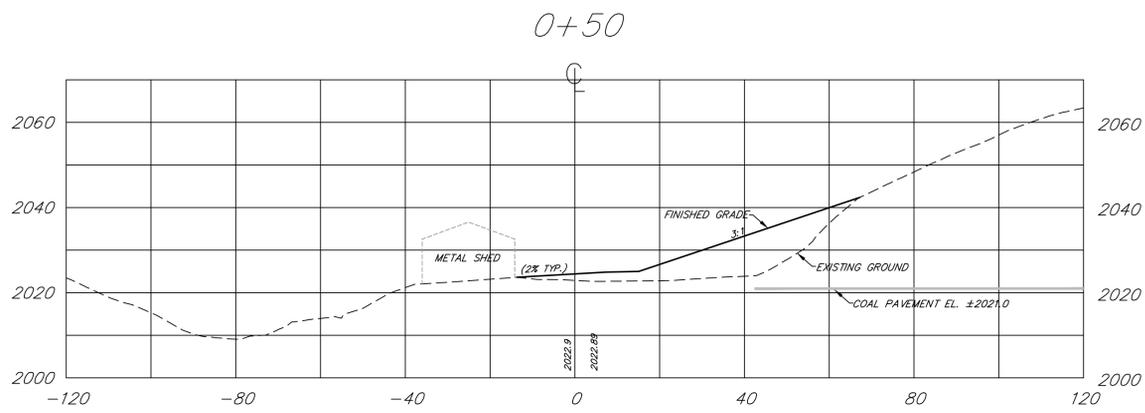
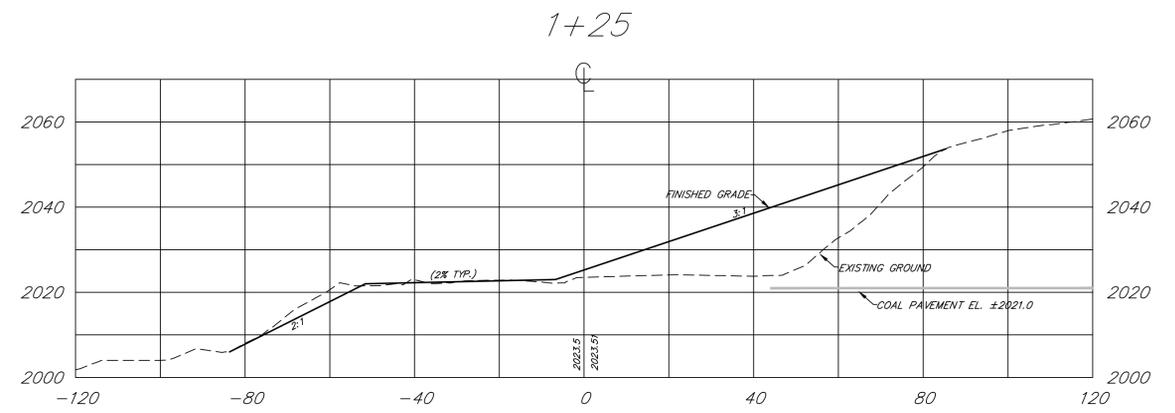
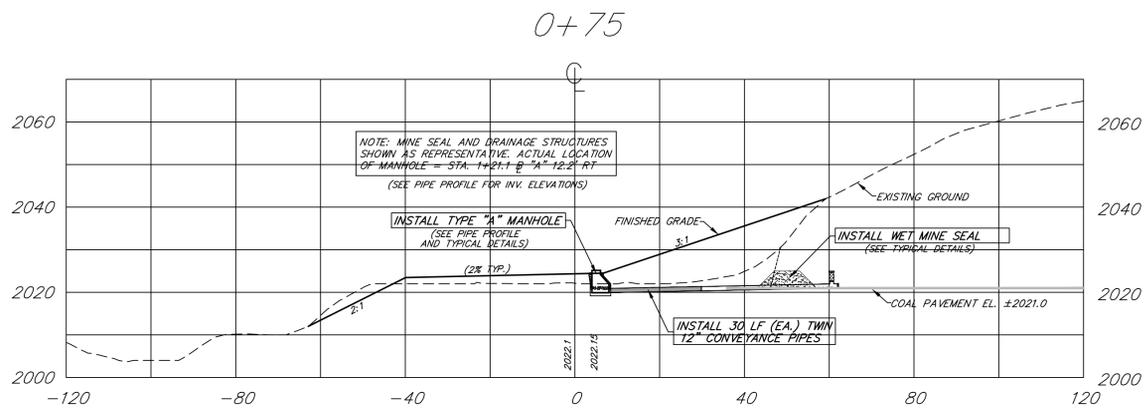
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

SEDIMENT CONTROL PLAN

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: 1" = 30'
SHEET NO. 4
OF 11



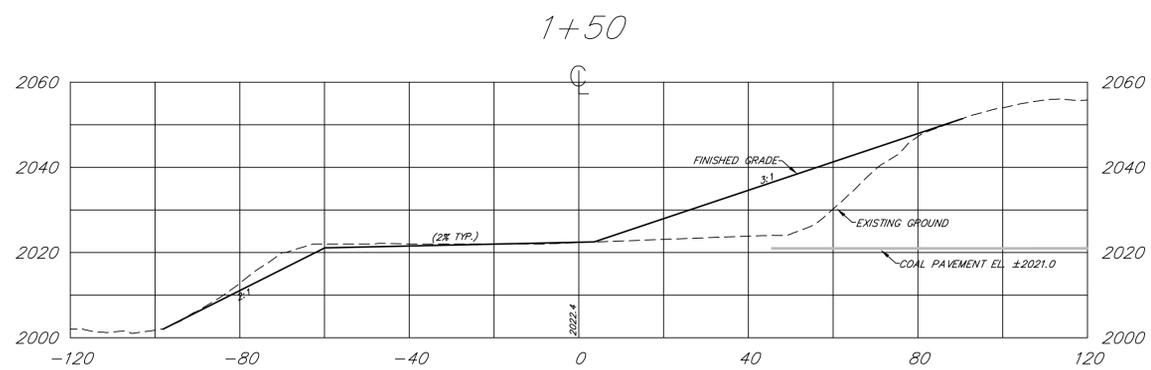
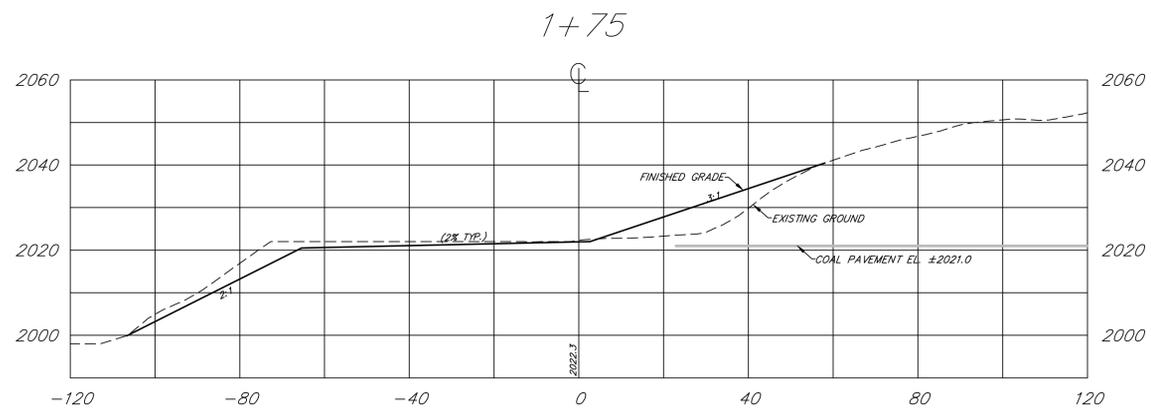
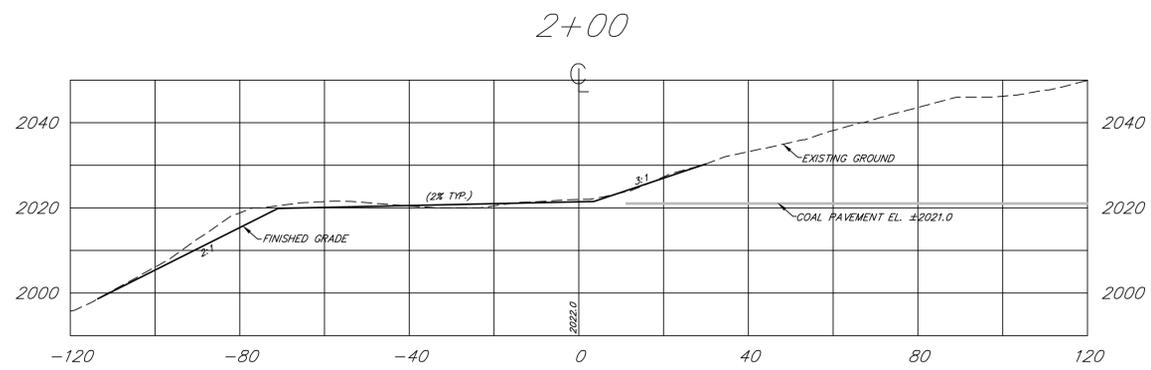
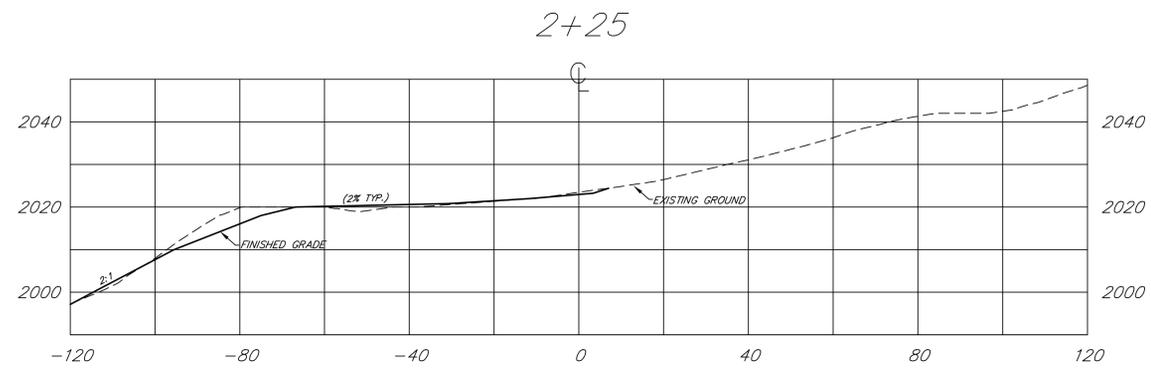
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

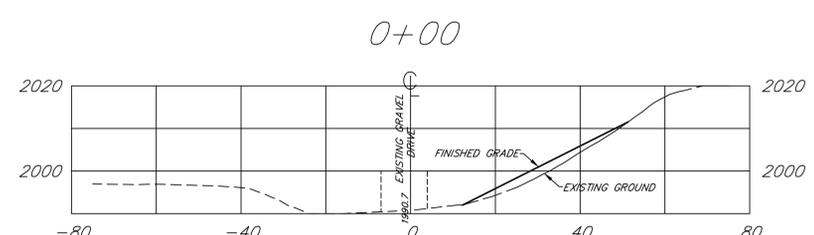
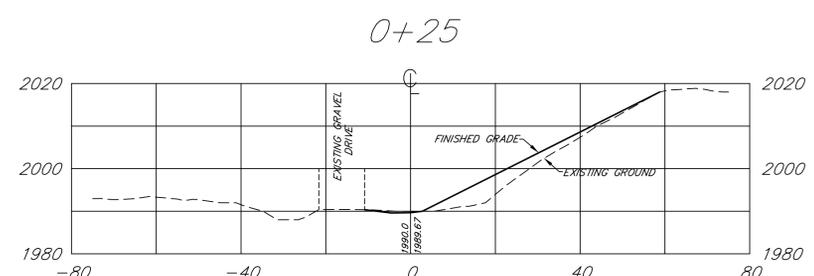
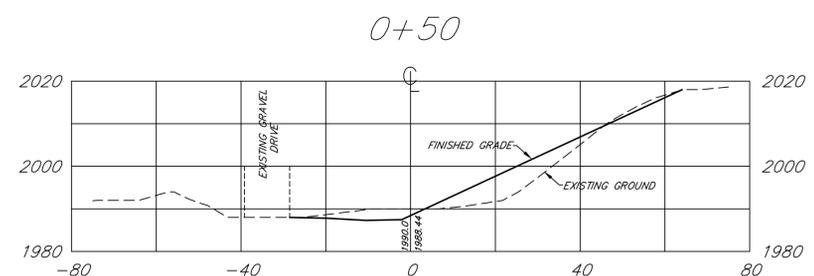
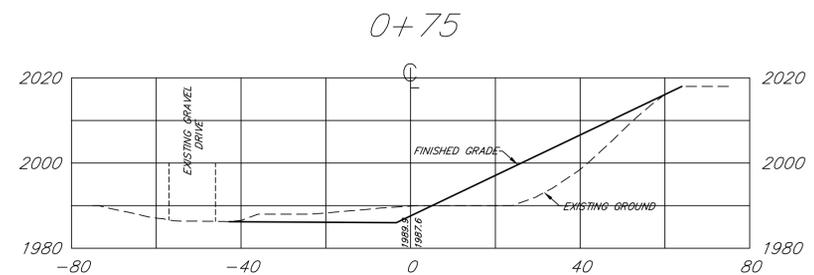
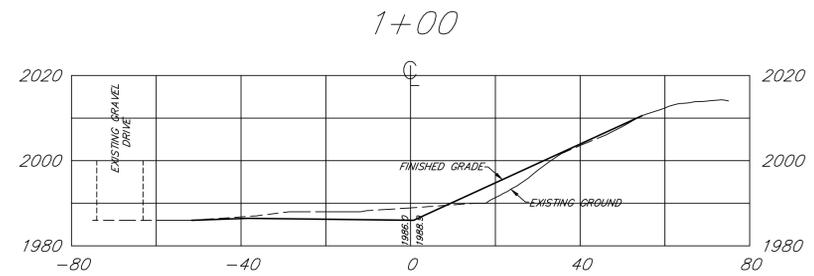
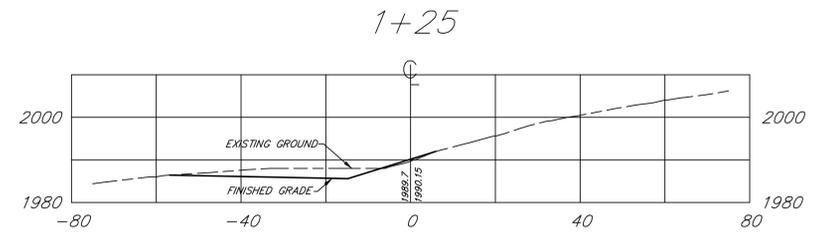
**BASELINE "A"
CROSS SECTIONS (1)**

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: 1" = 20'
SHEET NO. 5
OF 11



BASELINE "A" CROSS SECTIONS (CONT'D.)



BASELINE "B" CROSS SECTIONS (CONT'D.)

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

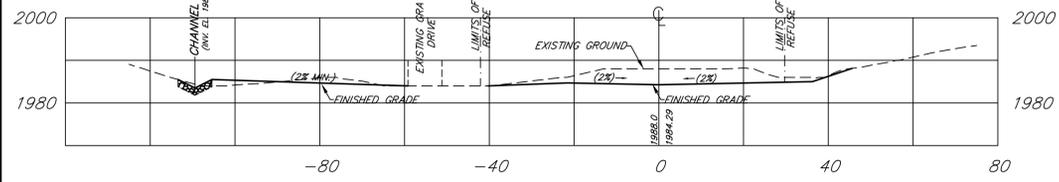
**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

**BASELINE "A" (CONT'D.)
AND BASELINE "B"
CROSS SECTIONS**

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: 1" = 20'
SHEET NO. **6**
OF 11

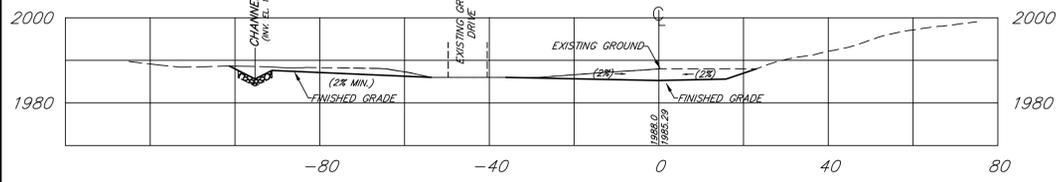
1+25



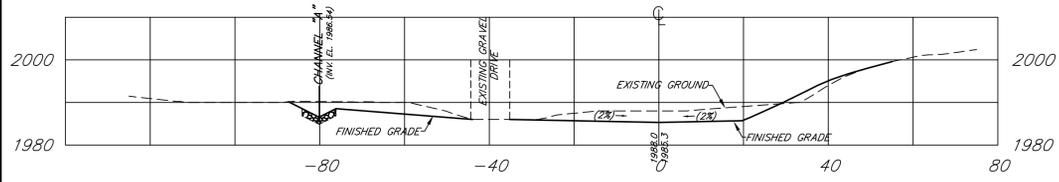
1+00



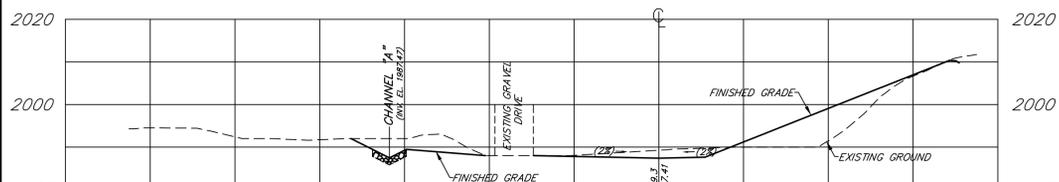
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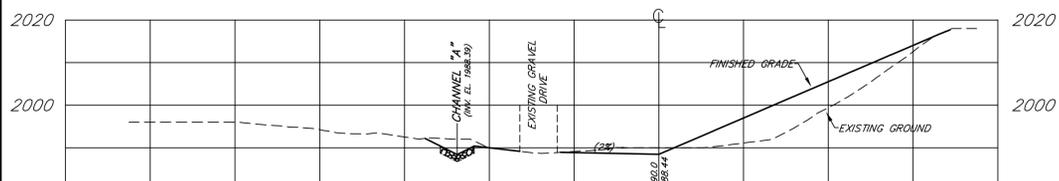
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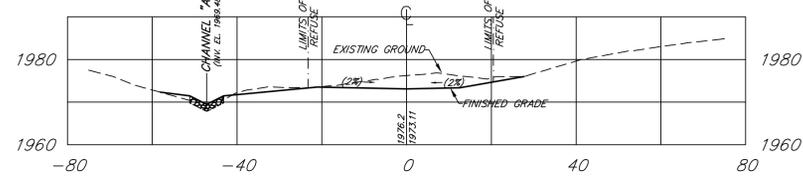
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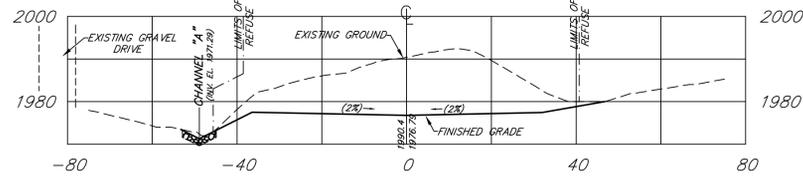
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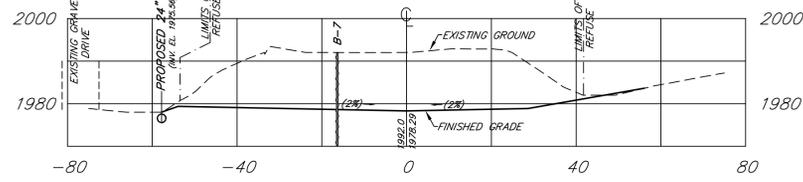
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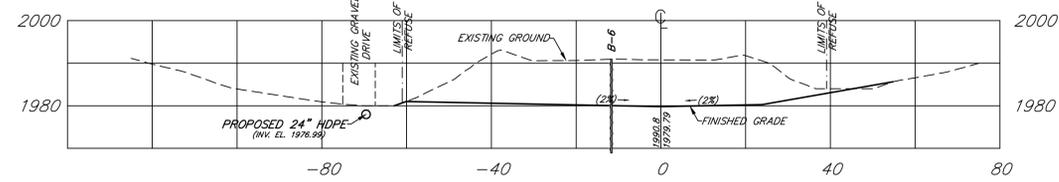
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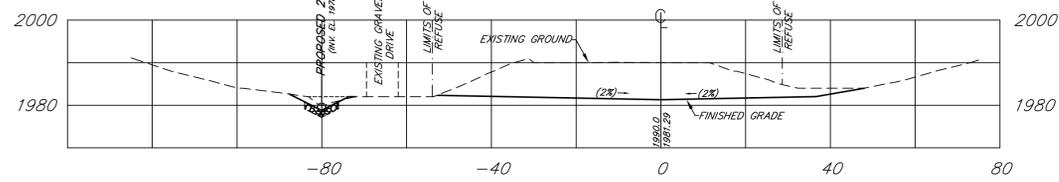
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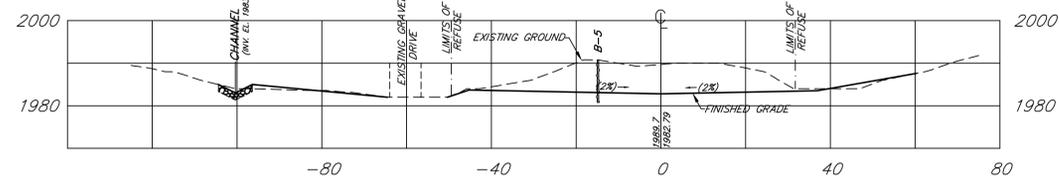
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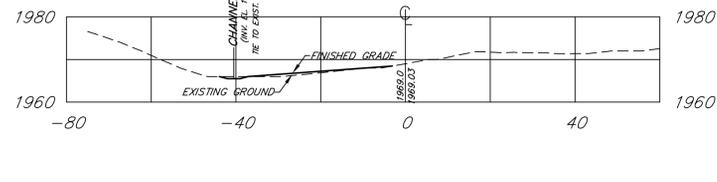
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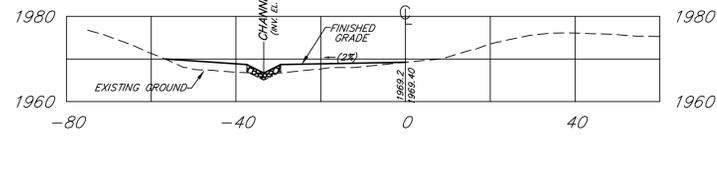
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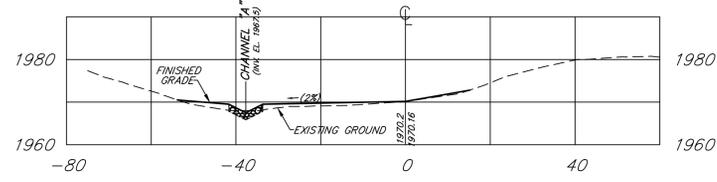
3+50



3+25



3+00



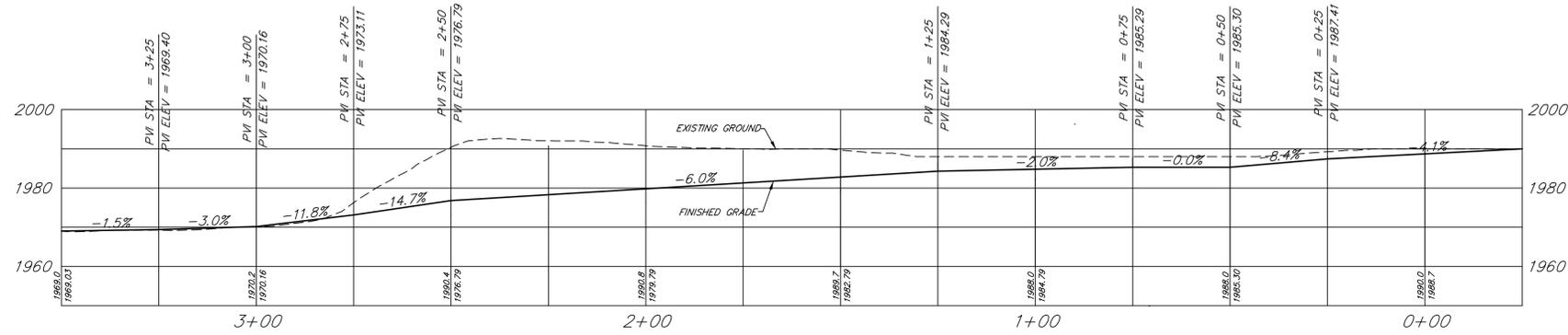
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

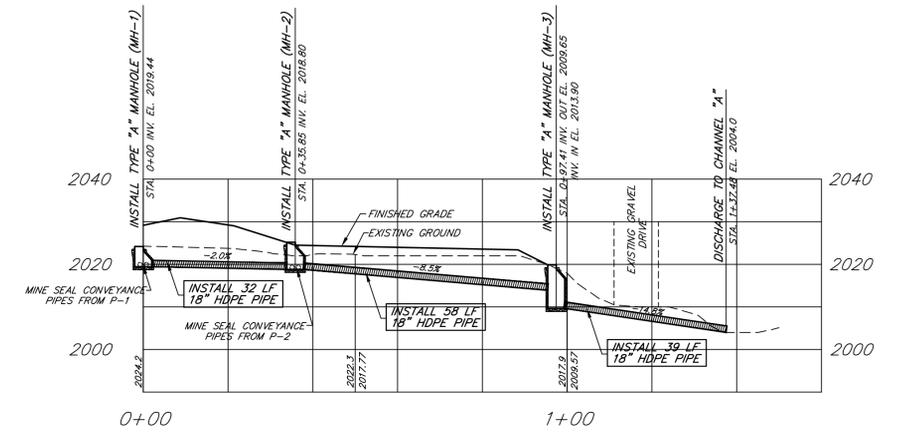
**BASELINE "C"
CROSS SECTIONS**

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

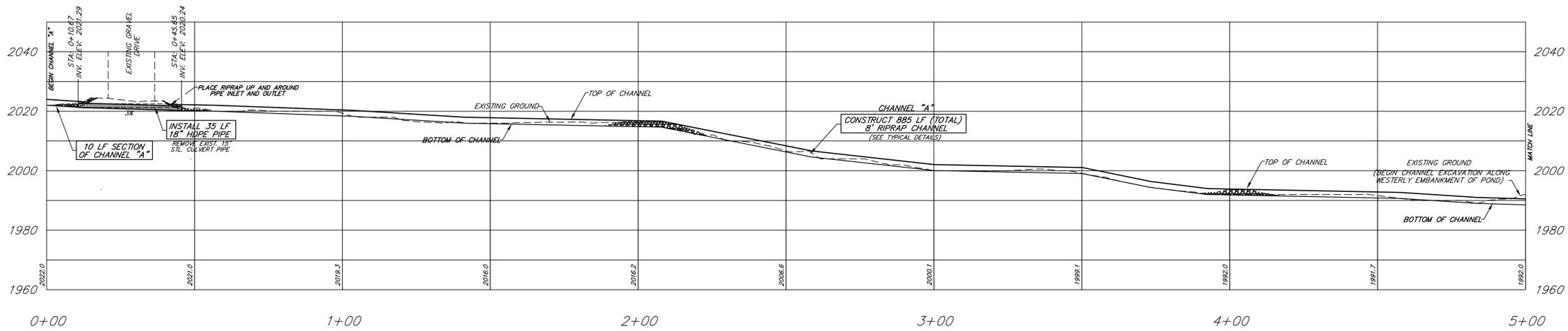
SCALE: 1" = 20'
SHEET NO. 7
OF 11



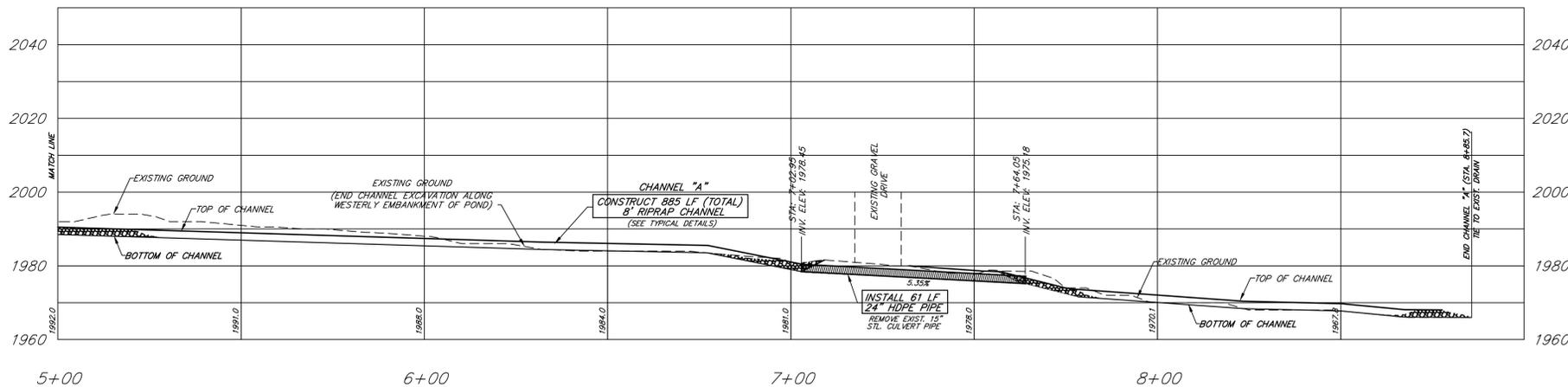
PROFILE - BASELINE "C"



PROFILE - 18" HDPE PIPES



CHANNEL "A" SHALL BE CONSTRUCTED AT THE LOCATION AND GRADES OF AN EXISTING CHANNEL, EXCEPT IN THE AREA BETWEEN STATIONS 4+83 TO 6+32, WHERE MORE SIGNIFICANT EXCAVATION SHALL BE REQUIRED. CARE SHALL BE TAKEN SO THAT EXCAVATION OF THE CHANNEL DOES NOT DIMINISH THE INTEGRITY OF THE EMBANKMENT OF THE EXISTING POND THROUGH THIS AREA. GRADES ALONG ANY PORTION OF THE CHANNEL SHALL NOT BE LESS THAN 2%.



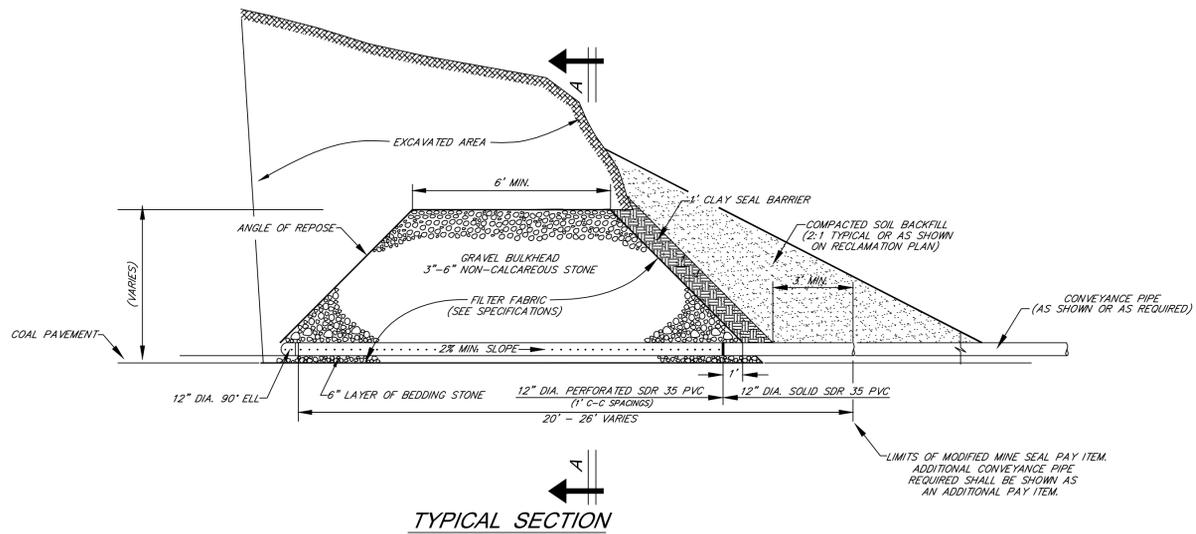
PROFILE - CHANNEL "A"

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

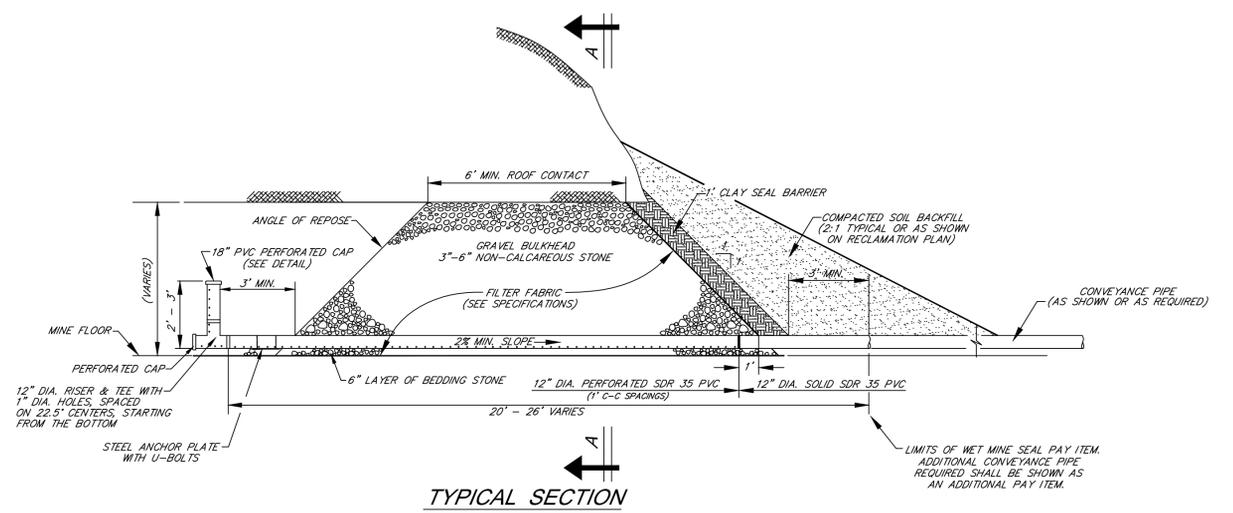
**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

**PROFILES - CHANNEL "A",
18" HDPE PIPES AND
BASELINE "C"**

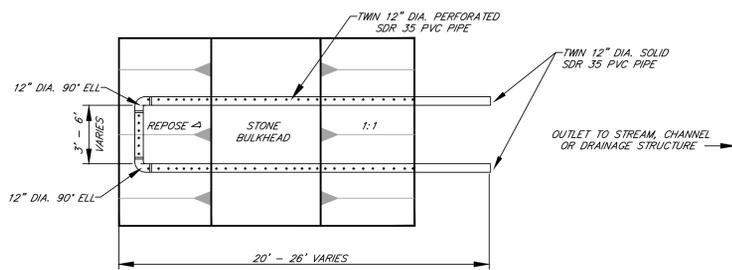
| | |
|------------------|--------------------|
| DRAWN BY: DWH | SCALE: 1" = 20' |
| APPROVED BY: RL | SHEET NO. 8 |
| DATE: 10/31/2014 | OF 11 |



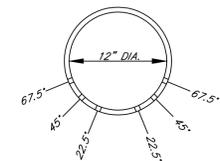
TYPICAL SECTION



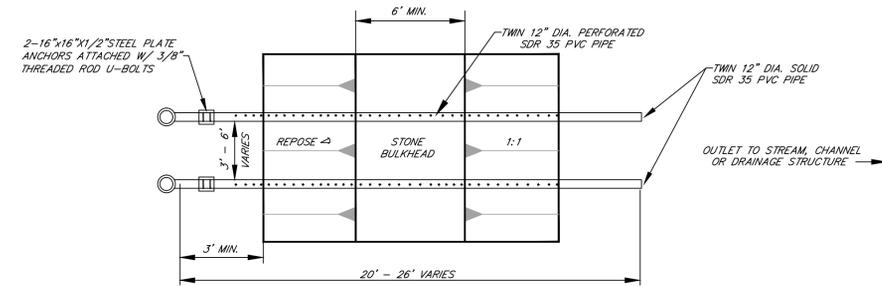
TYPICAL SECTION



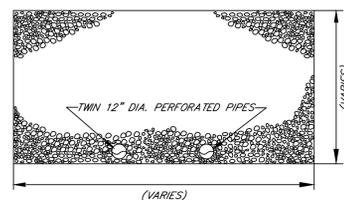
PLAN
MODIFIED WET MINE SEAL DETAIL



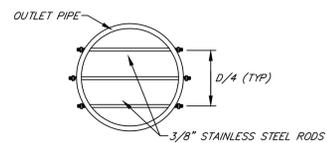
PIPE PERFORATIONS
DETAIL
(ALL PIPE PERFORATIONS TO BE 1" DIA. ON 12" C-C ALONG LENGTH OF PIPE)



PLAN
WET MINE SEAL DETAIL



SECTION A-A
STONE BULKHEAD
(MODIFIED AND WET MINE SEALS)



TYPICAL ANIMAL GUARD
DETAIL



PERFORATED CAP DETAIL

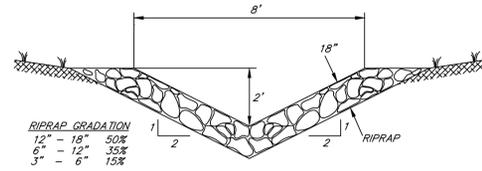
State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

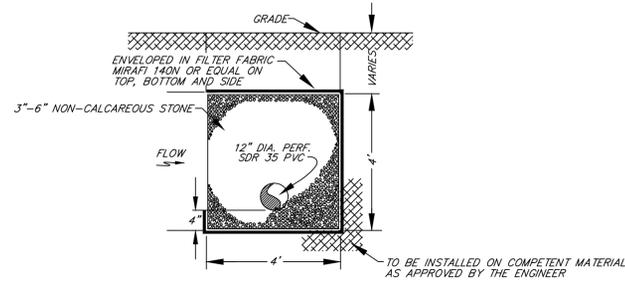
TYPICAL DETAILS (1)

DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: NONE
SHEET NO. **9**
OF 11

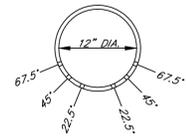


**(CHANNEL "A")
8' RIPRAP CHANNEL**

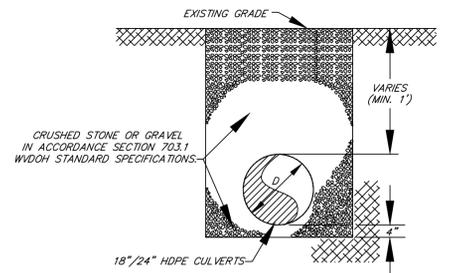


UNDERDRAIN DETAIL

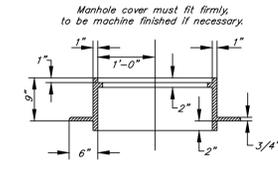
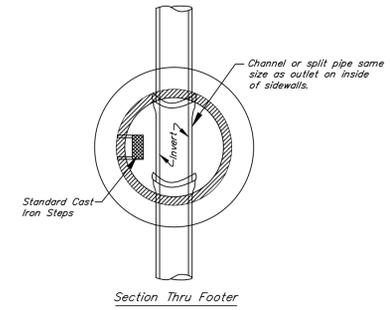
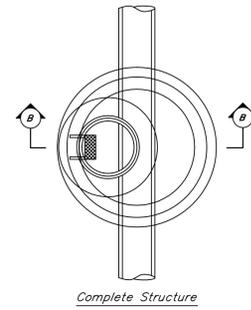
(ALL PIPE PERFORATIONS TO BE 1" DIA. ON 12" C-C ALONG LENGTH OF PIPE)



**PIPE PERFORATIONS
DETAIL**



**ROAD CULVERT / PIPE TRENCH
TYPICAL SECTION**



**SECTION
Manhole Frame Casting**

NOTES
All concrete pipe to be used as sidewall for the manhole shall meet the requirements for Class III pipe of Subsection 714.2 of the Standard Specifications.

Concrete pipe sections may be used in any combination to produce a manhole of desired depth, except the tapered top section shall be retained as shown.

The tapered top sections shall be manufactured and meet the same requirements as the concrete pipe.

Lifting hole in the tapered top section and the circumferential notches in the manhole cover are for handling purposes only.

Drawing shows pipe entering and leaving manhole in a straight line. However, the pipes may enter or leave at any angle or place as called for or shown on the plans.

The footer up to the joint shown shall be Class B concrete.

Castings are to be of the design shown and are to be of Gray-Iron meeting the requirements of Subsection 709.10 of the Standard Specifications.

Steps may be either the Cast Iron Step or the Wrought Iron Step as shown and shall conform to the requirements of Subsections 709.10 and 709.11, respectively, of the Standard Specifications.

The precast sections of pipe shall be set in joint mortar.

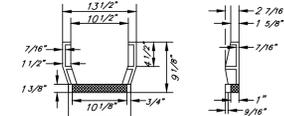
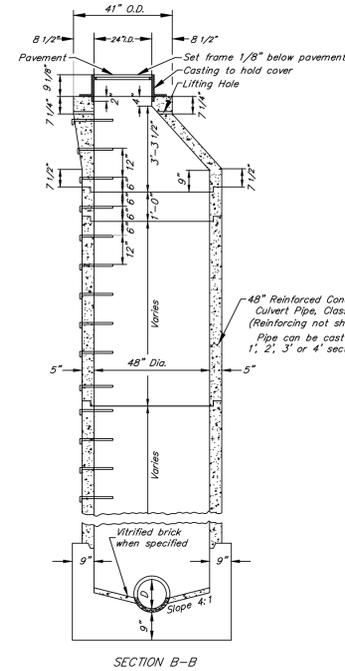
The forming of the seat in the footing may be by the use of a section of the precast pipe or by means of a jig.

Pipe at elevations of than shown may be joined to the manhole by cutting a hole the size of the connecting pipe in the manhole. Inserting the pipe the thickness of the manhole shell and closing all openings around the connecting pipe with joint mortar.

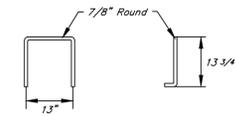
Either this manhole or the cast in place manhole on Standard M.S. J-A may be furnished when Type A manhole is called for in the contract.

Minimum height of bench wall above flow line of pipe is 25% of the diameter of the pipes.

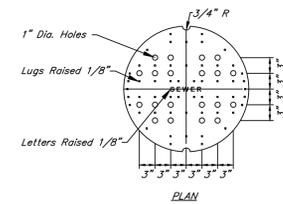
The bearing area of the frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting, and the cover shall seat in its frame without rocking.



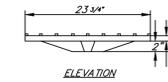
**STEP
(Cast Iron)**



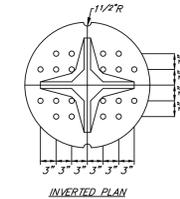
**STEP
(Wrought Iron)**



PLAN



**MANHOLE COVER
ELEVATION**



**MANHOLE COVER
INVERTED PLAN**

**STANDARD DETAIL
TYPE "A" MANHOLE
(PRECAST)**

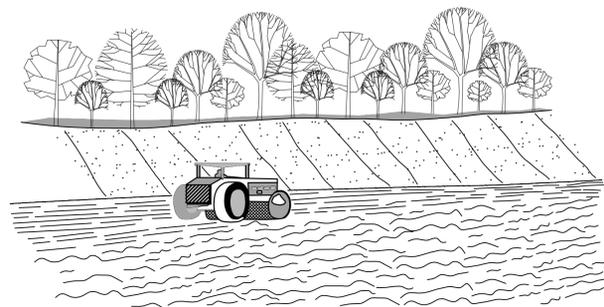
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**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

TYPICAL DETAILS (2)

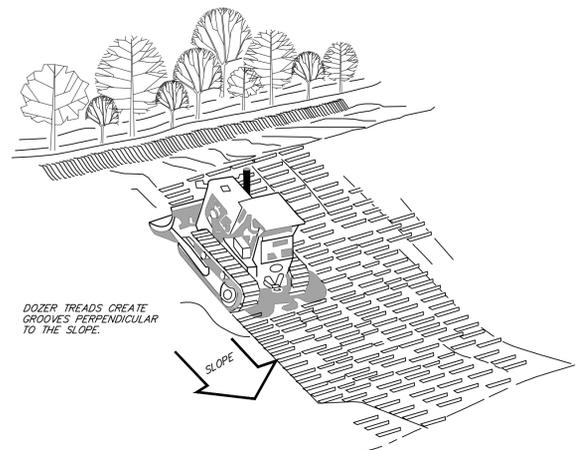
DRAWN BY: DWH
APPROVED BY: RL
DATE: 10/31/2014

SCALE: NONE
SHEET NO. 10
OF 11



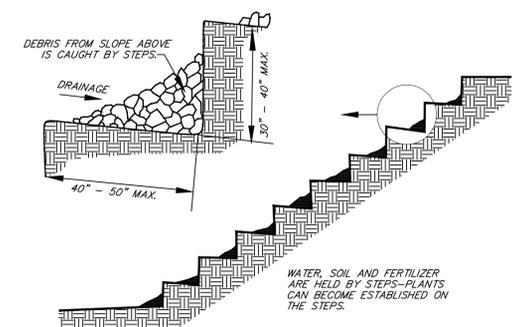
FILL SLOPE TREATMENT

EACH LIFT OF THE FILL IS COMPACTED, BUT THE OUTER FACE OF THE SLOPE IS ALLOWED TO REMAIN LOOSE SO THAT THE ROCKS, CLOUDS, ETC. REACH THE NATURAL ANGLE OF REPOSE.

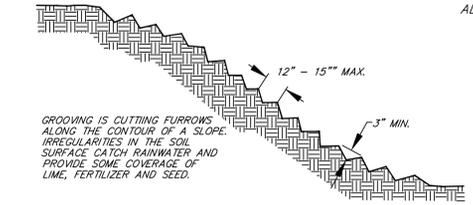


TRACKING

DOZER TREADS CREATE GROOVES PERPENDICULAR TO THE SLOPE.



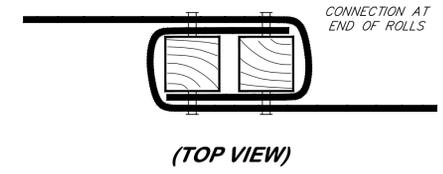
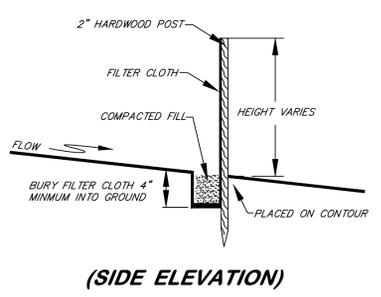
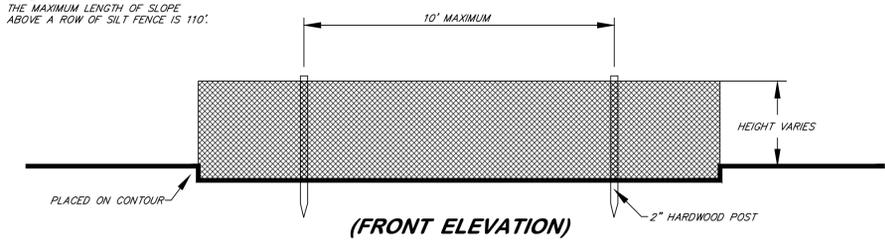
STAIR STEPPING CUT SLOPES



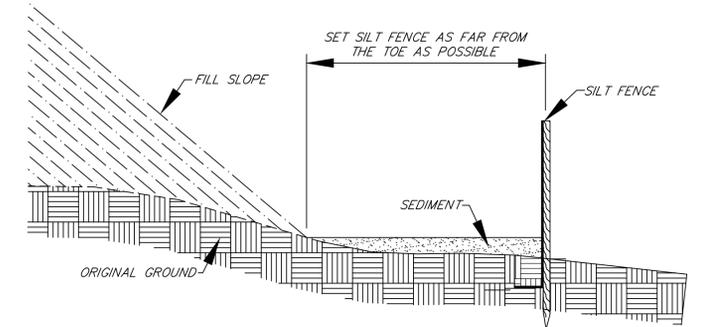
GROOVING SLOPES

GROOVING IS CUTTING FURROWS ALONG THE CONTOUR OF A SLOPE. IRREGULARITIES IN THE SOIL SURFACE CAUSE RAINWATER AND PROVIDE SOME COVERAGE OF LIME, FERTILIZER AND SEED.

NOTE: THE MAXIMUM LENGTH OF SLOPE ABOVE A ROW OF SILT FENCE IS 110'.

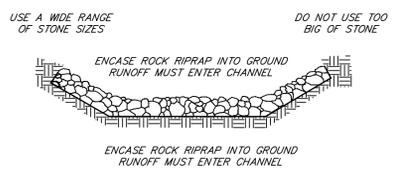


SILT FENCE
(FIG. 3.27.2)

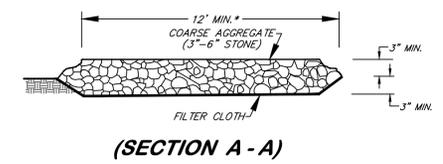
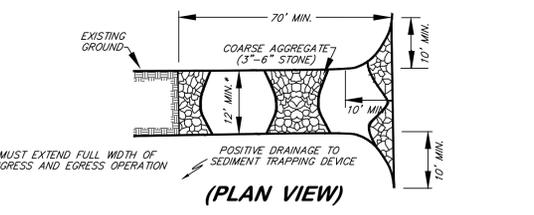
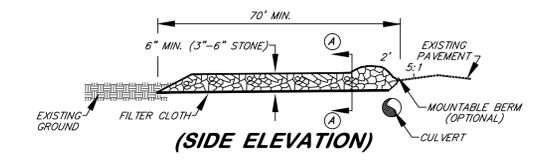
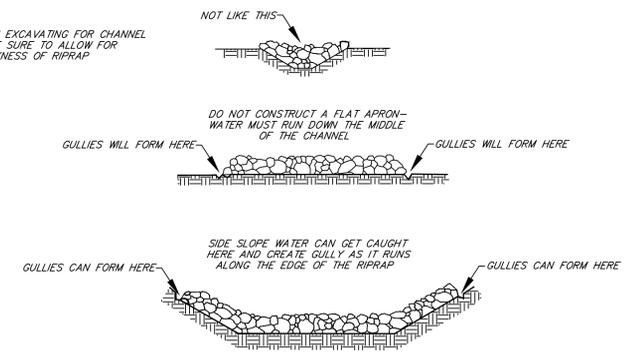


PLACEMENT OF SILT FENCE
(FIG. 3.27.1)

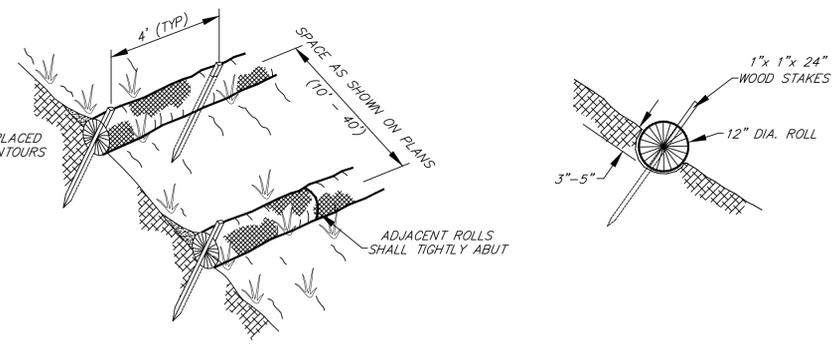
RIPRAP DIVERSION
(FIG. 3.15.3)



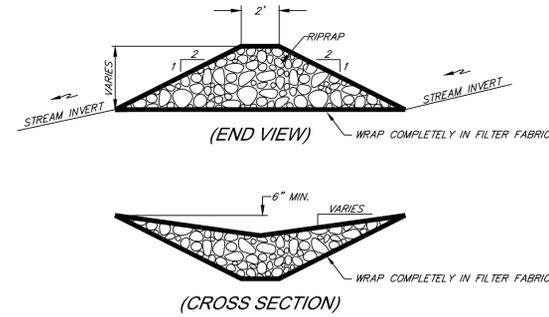
COMMON PROBLEMS



STONE CONSTRUCTION ENTRANCE
(FIG. 3.02.1)



12" WATTLE EROSION CONTROL



IN-STREAM ROCK CHECK DAM

State of West Virginia
Department of Environmental Protection
Abandoned Mine Lands and Reclamation

**SOVERN RUN (ENGLAND)
REFUSE AND PORTALS**

**SEDIMENT CONTROL
TYPICAL DETAILS**

| | |
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| APPROVED BY: RL | SHEET NO. 11 |
| DATE: 10/31/2014 | OF 11 |