

Applicant: C & H Mining Company, Inc.  
Mine Name: Lindbergh Mine No. 2  
Permit Number: P-3765 Revision R-20

Part III - Operation Plan

A. General Operation Information

1. Describe the type and method of coal mining procedures and major equipment to be used. (780.11)

See Attachment III-A-1.

Major equipment to be used includes but may not be limited to:

- Backhoes
- Bulk Anfo Trucks
- Off Road Haulers
- Loaders
- Drills
- Service Trucks
- Dozers
- Track Backhoes
- Marion 7820 Dragline

2. Describe the sequence and timing of increments to be mined (as shown on permit map) over the total life of the permit. (780.11)

The timing increments are as follows:

| <u>Increment No.</u> | <u>Acres</u> | <u>From</u>           | <u>Estimate Life</u> |
|----------------------|--------------|-----------------------|----------------------|
| 2                    | 426          | Currently Being Mined | 24 Months            |
| 7                    | 149          | End of Inc. No. 2     | 24 Months            |
| 6                    | 62           | Issuance of Revision  | Life of Permit       |
| 4                    | 97           | Reclamation Phase     |                      |
| 1                    | 148          | Reclamation Phase     |                      |
| 5                    | 88           | Phase III Release     |                      |
| 3                    | 4            | Phase III Release     |                      |

The sequence of mining operations will be generally as follows:

- 1) Construction of Sediment Control Structures
- 2) Clearing and Grubbing
- 3) Topsoil Removal (if required)
- 4) Overburden Drilling and Blasting
- 5) Overburden Removal
- 6) Coal Recovery
- 7) Re-Grading
- 8) Revegetation

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ATTACHMENT III-A-1  
TYPE AND METHOD OF COAL MINING PROCEDURES

The area method of surface mining will be used. Preparation will consist of (a) timber removal (b) topsoil removal (if required) (c) drilling and blasting of overburden (d) overburden removal (e) coal removal (f) regrading and revegetation. Once the site has been regraded and topsoiled (if required) soil samples will be analyzed (where required) and proper nutrients will be added before revegetation. Any problem that may arise will be handled by proper consulting personnel utilizing various support equipment and support personnel.

Increments No. 1 and No. 4 have been mined as previously approved and are currently in reclamation phase. Increments No. 3 and No. 5 have been fully reclaimed and granted a Phase III Bond Release. Increment No. 7 will be mined as previously approved. Increment No. 2 which is currently being mined will be divided into three areas; western, central and eastern areas.

Mining of Increment No. 2 will continue with cut no. 1 within the western area at the current highwall as shown on the Operations Map. Pits will generally align northwest to southeast with advancement to the southwest. Spoil material from the initial cuts will be placed in previous open pits and spoil material from the next cuts will be placed within subsequent open pits. Mining will continue in this manner until the limits of the western area of the increment are reached. Spoil material from P-3930, Increment No. 1 will be placed in the final open pits of P-3765, western area of Increment No. 2. Revision R-3 for P-3830 will be submitted to the Regulatory Authority to propose spoil material from P-3930 to be placed on P-3765. Also, P-3930 R-3 will address closing, mining through and reconstructing a portion of Elbo Porter Road.

Beginning with cut no. 18 of Increment No. 2 the mining direction will change to mine the central area. Mining of the central area will commence at the current highwall as shown on the Operations Map. Pits will generally align southwest to northeast with advancement to the northeast. Spoil material from the initial cuts will be placed in previous open pits and spoil material from the next cuts will be placed within subsequent open pits.

Beginning with cut no. 19 cuts will alternate every other cut from the central area to the eastern area to allow for drilling, blasting, overburden removal and coal removal simultaneously. Timing may require consecutive cuts at one or both of the alternating locations, however alternating cuts will resume as soon as possible. Mining of the eastern area will commence at the current highwall as shown on the Operations Map. Pits will generally align west to east with advancement to the south. Spoil material from the initial cuts will be placed in previous open pits and spoil material from the next cuts in the alternating sequence will be placed within subsequent open pits. Cuts will follow the

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alternating sequence through cut no. 27. Beginning with cut no. 27 of the eastern area cuts will be mined in consecutive order. Mining will continue in this manner until the limits of the eastern area of the increment are reached.

A eighteen (18) month delay in contemporaneous reclamation will be requested from the Director for the current highwall of the central area of Increment No. 2 located within the SW/NW, SE/NW, NW/SW, NE/SW and SW/SW of Section 35 to remain open until cut no. 18 and cut no. 20 are mined.

A eighteen (18) month delay in contemporaneous reclamation will be requested from the Director for the current highwall of the eastern area of Increment No. 2 located within the NE/NW, SE/NW and SW/NE of Section 35 to remain open until cut no. 19, cut no. 21, cut no. 23, cut no. 25 and cut no. 27 are mined.

A twenty-four (24) month delay in contemporaneous reclamation will be requested from the Director for the final highwall of cut no. 21 within Increment No. 2 located within the NE/NW, SE/NW and SW/NE of Section 35 to remain open until cuts no. 1-8 are mined within Increment No. 7.

A request will be submitted to the Director to rescind the previously approved delays in contemporaneous reclamation.

See Attachment III-A-1, Operations Map for cut layout and sequencing.

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3. Attach a narrative explaining the construction modification, use, maintenance, and removal of the following facilities: (780.11)

- (a) Coal removal, handling, storage, cleaning and transportation structures and facilities.

Additional Best Management Practices (BMP's) consisting of silt fences, hay bales, rock check dams or sumps will be used for sediment control of runoff from coal stockpiles prior to entering sediment basins.

See Attachment III-A-3(a), BMP Typical.

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2. Ponds, impoundments, banks, dams and embankments. (780.25)

- (a) Submit a general plan which complies with Section 780.25(a)(1) for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam or embankment to be located within the proposed permit area.  
See attachment III-B.-2.A
- (b) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.46 for each sedimentation pond to be constructed on the increment you currently propose to mine. If the sediment pond is to remain as a permanent water impoundment, design plans shall also comply with Section 816.49.  
See attachment III-B.-2.A
- (c) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.49 for each temporary or permanent water impoundment to be constructed on the increment you currently propose to mine.  
See attachment III-B.-2.A
- (d) Submit detailed design plans which comply with Sections 780.25(a) (2 and 3) and 816.81-816.85 for each coal processing waste bank to be constructed on the increment you currently propose to mine.  
None proposed.
- (e) Submit detailed design plans which comply with Sections 780.25(a)(2 and 3) and 816.91-816.93 for each coal processing waste dam and embankment to be constructed on the increment which you currently propose to mine.  
None proposed.

3. Diversions. (780.29,816.43, 816.44)

Are diversions of overland flow or stream channel diversions proposed?

( ) Yes (XXX) No

If yes, complete the following:

- (a) Is the diversion to be permanent?  
( ) Yes (XXX) No

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Attachment III-B-2(a)

CERTIFICATION STATEMENT:

I hereby certify that Attachment III-B-2(a) prepared for C & H Mining Company, Inc.'s Lindbergh Mine No. 2, Revision R-20 are in accordance with the Regulations of the Alabama Surface Mining Commission as adopted by Act 81-435 of December 18, 1981 and amended to date, and are true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
Stephen Miles, P.E.  
AL License #33253

7/18/2013  
Date



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Attachment III-B-2(a)

#### ADDENDUM TO THE GENERAL PLAN

The addendum to the General Plan includes the re-evaluation of Basins 001CP, 001BE, 001AE, 010E, and 001E for the area added by Revision R-20. No modifications are required to Basins 001CP, 001BE, 001AE, 010E or 001E.

The addendum to the General Plan also proposes to update the construction timetable for Basin 001CP. The proposed updated timetable would require Basin 001CP to be constructed and certified to the Regulatory Authority prior to mining the initial cut within Increment No. 7 or prior to mining any portion of the area added to Increment No. 2 by Revision R-20.

Geologic investigations of the area indicate layers of sandstone, siltstone, shale and minor amounts of bituminous coal and underclay. The coal to be mined by C & H Mining Company, Inc., will be confined to the Pratt, Nickel Plate, and American Seams. The strata in the area is characterized by small scale normal faulting and gentle open folding.

All surface drainage from the proposed mining area flows into Village Creek or unnamed tributaries of Village Creek.

See attachment III-B-2(a), Watershed Map.

See attachment III-B-2(a), Detailed Re-evaluation Plans for Basins 001CP, 001BE, 001AE, 010E and 001E.

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Attachment III-B-2-A

| Basin<br>No. | Location   | Drainage Area<br>(Acres) |
|--------------|--|--------------------------|
| 001          | SW $\frac{1}{4}$ of SE $\frac{1}{4}$ &<br>SE $\frac{1}{4}$ of SE $\frac{1}{4}$ &<br>Sec. 27        | 672                      |
| 001A         | SE $\frac{1}{4}$ of SE $\frac{1}{4}$ , Sec. 27 &<br>NE $\frac{1}{4}$ of NE $\frac{1}{4}$ , Sec. 34 | 542                      |
| 001B         | NE $\frac{1}{4}$ of NE $\frac{1}{4}$ &<br>SE $\frac{1}{4}$ of NE $\frac{1}{4}$ ,<br>Sec. 34        | 513                      |
| 001C         | SE $\frac{1}{4}$ of NE $\frac{1}{4}$ ,<br>Sec. 34  | 482                      |

All located within Township 16 South, Range 5 West, Jefferson County, Alabama, as found on the Sylvan Springs USGS Quadrangle.

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Attachment III-B-2-A

#### Pond Construction Criteria

The embankment for sediment basins (temporary and permanent) shall be designed and built using the following as minimum criteria:

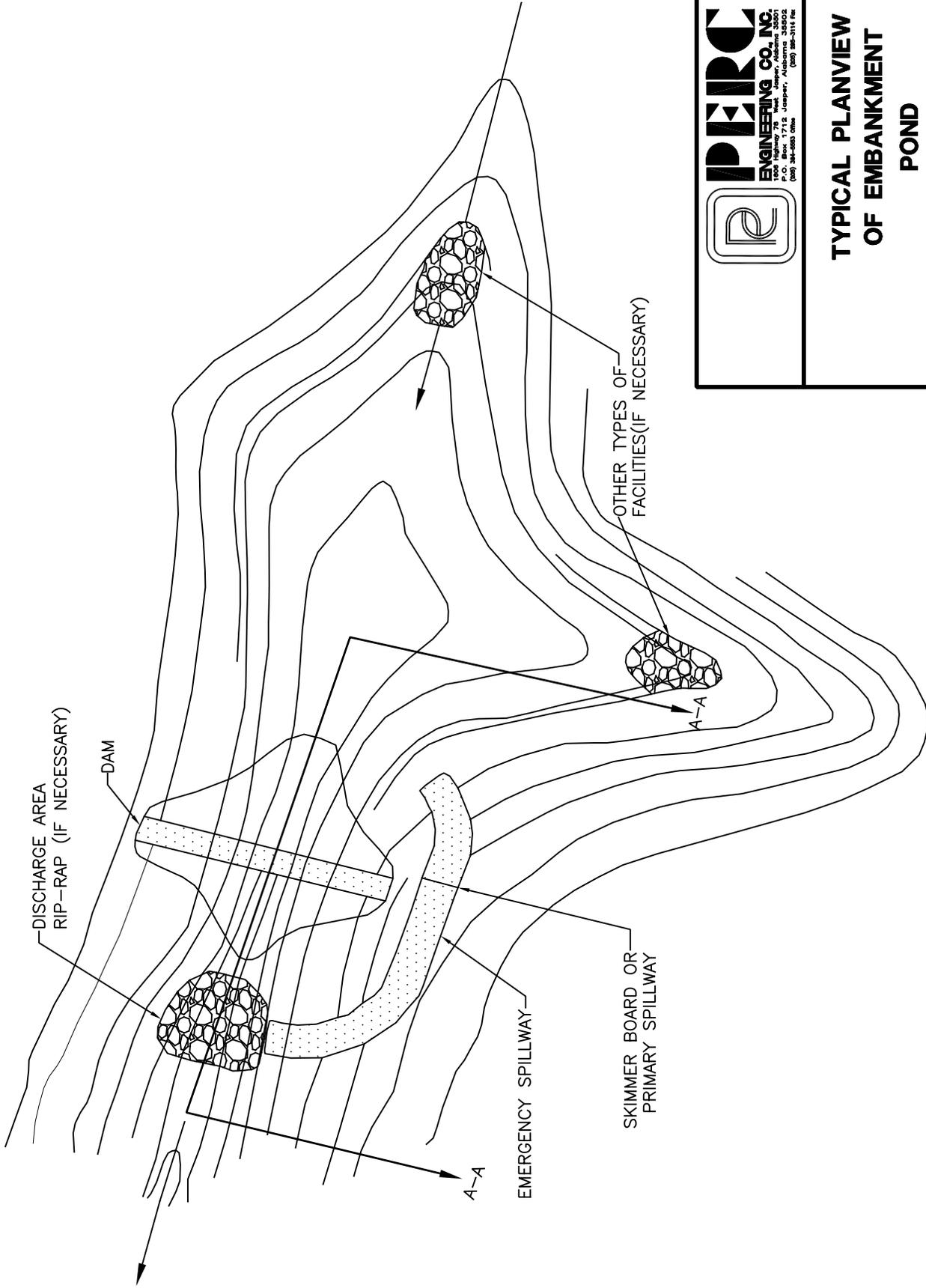
1. The top of the dam shall be no less than 12 feet wide.
2. See design sheet for maximum and minimum embankment slopes.
3. The foundation and abutments for the impounding structure shall be designed to be stable under all conditions of construction and operation of the impoundments, with a minimum static safety factor of 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.20.
4. The dam shall be constructed with a cutoff trench based upon prudent engineering practices for the site. The cutoff shall be located on the dam centerline and be of sufficient depth to extend into a relatively impervious material from which the core of the dam shall also be constructed.
5. The embankment foundation area shall be cleared of all organic matter, all surfaces sloped to no steeper than 1v:1h, and the entire foundation surface scarified.
6. The entire embankment and cutoff trench shall be compacted to 95 percent density, based on standard proctor as outlined in ASTM.
7. The material placed in the embankment shall be free of sod, roots, stones over 6 inches in diameter, and other objectionable materials. The fill material shall be placed and spread over the entire fill area, starting at the lowest point of the foundation, in layers not to exceed 12 inches in thickness. Construction of the fill shall be undertaken only at such times that the moisture content of the fill material will permit satisfactory compaction in accordance with paragraph 5.
8. The pool area of the basin will be cleared of timber and large undergrowth.
9. The primary decant system when consisting of a pipe shall be installed according to Class C pipe installation for embankment bedding.
10. The primary decant system shall be equipped with a device, or constructed, such as to insure that subsurface withdrawal is accomplished to prevent discharge of floating solids. If a channel is used as the primary decant a skimmer shall be installed to prevent floating solids from discharging.

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11. A splash pad or riprap may be required under the discharge of the primary decant system where necessary to insure that the discharge does not erode the embankment.
12. The combination primary and secondary decant system shall be designed to safely carry the expected peak flow from a 25 year - 6 hour storm. The entire emergency overflow spillway channel will be a stabilized channel and will be stabilized upon completion of construction as specified within the detailed design plans using prudent engineering measures. These measures may consist of lining the spillway with concrete or a durable rock riprap, or the spillway being constructed in consolidated non-erodible material and planted with a mixture or both annual and perennial grasses, or a combination of any or all of the above.
13. Sediment basins using a single spillway system shall be an open channel of non-erodible construction consisting of concrete, durable rock riprap or its being constructed in consolidated non-erodible material as specified in the detailed design plans.
14. The settled embankment for temporary impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff). The settled embankment for permanent impoundments shall be a minimum of 1.0 foot above the maximum water elevation for the runoff from a 25 year - 6 hour, or a 10 year - 24 hour precipitation event (whichever has the greatest runoff).
15. If basins are built in series, then the combined decant system for each shall be designed to accommodate the entire contributing drainage area.
16. The dam and all disturbed areas shall be seeded with both perennial and annual grasses, fertilized and mulched in order to insure erosion is minimized. Hay bales or riprap may be placed at the toe of the dam immediately upon completion of construction.
17. The constructed height of the dam shall be increased a minimum of 5 percent over the design height to allow for settlement over the life of the embankment.
18. Final graded slopes of the entire permanent water impoundment area shall not exceed 2.5H-1.0V to provide for adequate safety and access for proposed water users.
19. Prior to Phase II bond release, additional data concerning water quality, water quantity, depth, size, configuration, postmining land use, etc., for each proposed permanent water impoundment, shall be submitted to the Regulatory Authority for permanent water impoundment approval.

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20. All sediment basins will be inspected for stability, erosion, etc. two (2) times a month until removal of the structure or release of the reclamation bond.
21. The embankment and spillway will be maintained by repairing any damage such as erosion, slope failure or spillway damage until removal of the structure or release of the performance bond.
22. All ponds shall be examined quarterly for structural weakness, instability, erosion, or other hazardous conditions and maintenance performed as necessary. Formal inspections shall be made on an annual basis, including any reports or modifications, in accordance with 880-X-10C-.20[1(j)] of the Alabama Surface Mining Commission Regulations.
23. Sediment will be removed from each pond when the accumulated sediment reaches the sediment storage volume as shown on the detailed design sheet.
24. Upon completion of mining, successful reclamation and effluent standards being met, each sediment basin not remaining as a permanent water impoundment will be dewatered in an environmentally safe manner (such as siphoning, pumping, etc.) and reclaimed to approximate original contours by the following procedure: A permanent diversion channel (designed for a 10 year - 24 hour precipitation event) shall be cut along the outer edge of the basin to re-route drainage around the basin and back through the stabilized spillway to allow reclamation of the sediment basin. The diversion channel shall be designed and grassed as per enclosed information. (See permanent diversion for basin disposal). Upon completion of the diversion channel the back slope of the dam shall be graded to a minimum 3H to 1V slope. The dewatered sediment basin area shall be seeded with some combination of the following: Fescue, bermuda, rye grass, canary grass and willows. After seeding the area shall be mulched. Any additional sediment or embankment material not used to meet original contour, if non-toxic, shall be spread in thin layers within the permit area and vegetated as stated in the approved reclamation plan. All toxic material encountered in the basin disposal shall be buried and covered with 4 feet of non-toxic material and vegetated as stated in the approved reclamation plan.
25. A qualified registered professional engineer or other qualified professional specialist, under the direction of the professional engineer shall conduct regular inspections during construction and upon completion shall inspect each basin for certification purposes.
26. Point source discharge embankments shall be constructed and abutments keyed into desirable material if at all possible. In the event that undesirable material is encountered, addition design and construction criteria shall be submitted prior to certification.

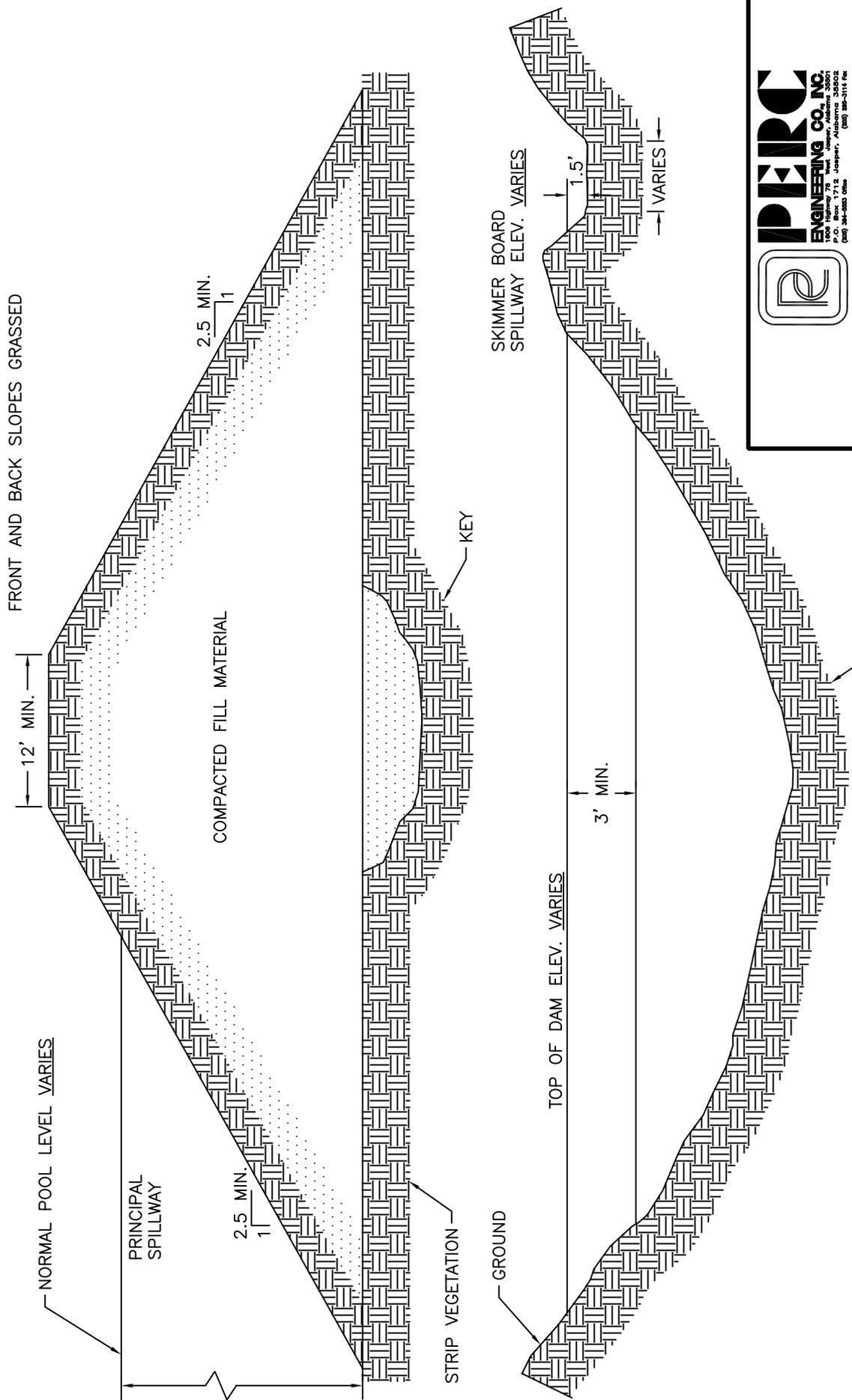


**TYPICAL PLANVIEW  
 OF EMBANKMENT  
 POND**

|              |          |        |         |
|--------------|----------|--------|---------|
| DRAWN BY:    | P.T.O.   | DATE:  | 8-10-05 |
| DWG. NAME:   | TYPICALS |        |         |
| APPROVED BY: | W.K.M.   | SCALE: | NONE    |

PLANVIEW OF EMBANKMENT POND

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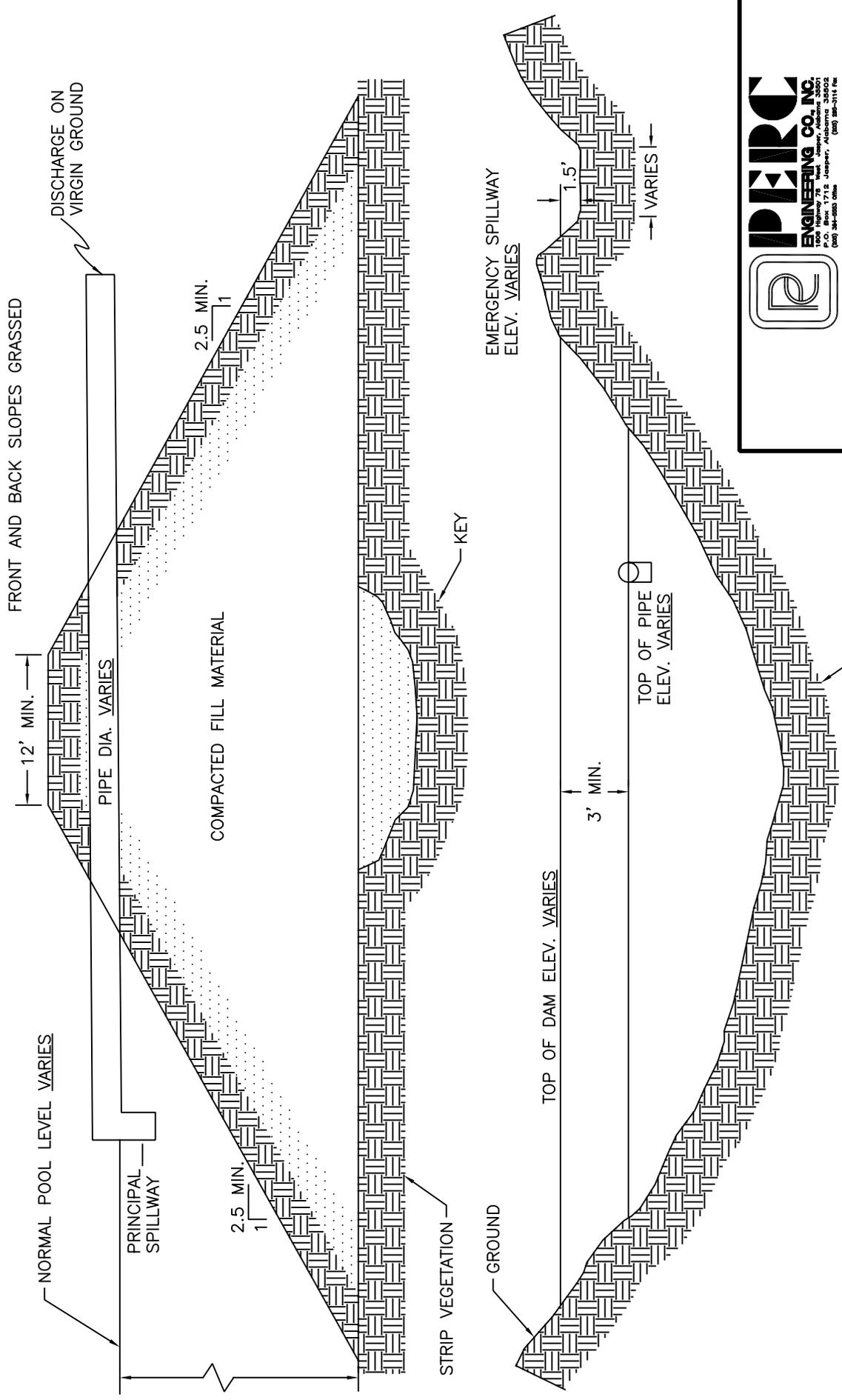
TYPICAL DAM DETAIL  
NO SCALE



TYPICAL DAM DETAIL

|                     |               |
|---------------------|---------------|
| DRAWN BY: P.T.O.    | DATE: 8-10-05 |
| DWG. NAME: TYPICALS |               |
| APPROVED BY: W.K.M. | SCALE: NONE   |

ATTACHMENT III-B-2-A



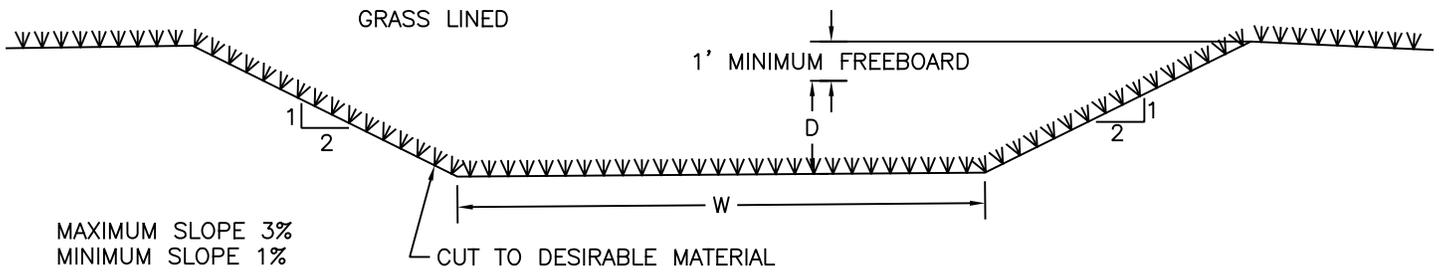
TYPICAL DAM DETAIL  
NO SCALE



TYPICAL DAM DETAIL

|                     |               |
|---------------------|---------------|
| DRAWN BY: P.T.O.    | DATE: 8-10-05 |
| DWG. NAME: TYPICALS |               |
| APPROVED BY: W.K.M. | SCALE: NONE   |

ATTACHMENT III-B-2-A



$$Q = \frac{1.49}{N} A R^{2/3} S^{1/2}$$

$N(\text{LOOSE STONE OR GRASS LINED}) = 0.035$   
 $A = \text{AREA}$   
 $R = \text{AREA/WETTED PERIMETER}$   
 $S = \text{SLOPE}$

\* GRASS LINING: FESCUE, BERMUDA, RYE GRASS

| DIVERSION CHANNEL DEPTH (D)<br>FOR WIDTH (W) 8.0 FT. |                 |
|--|-----------------|
| PEAK FLOW<br>Q (CFS)                                 | DEPTH<br>D (FT) |
| 0-15   | 0.5             |
| 15-50  | 1.0             |
| 50-100   | 1.5             |
| 100-180  | 2.0             |
| 180-270  | 2.5             |

| DIVERSION CHANNEL DEPTH (D)<br>FOR WIDTH (W) 10.0 FT. |                 |
|---|-----------------|
| PEAK FLOW<br>Q (CFS)                                  | DEPTH<br>D (FT) |
| 0-15  | 0.5             |
| 15-60   | 1.0             |
| 60-120  | 1.5             |
| 120-210   | 2.0             |
| 210-320   | 2.5             |

| DIVERSION CHANNEL DEPTH (D)<br>FOR WIDTH (W) 12.0 FT. |                 |
|---|-----------------|
| PEAK FLOW<br>Q (CFS)                                  | DEPTH<br>D (FT) |
| 0-20  | 0.5             |
| 20-70   | 1.0             |
| 70-150  | 1.5             |
| 150-250   | 2.0             |
| 250-383   | 2.5             |

| DIVERSION CHANNEL DEPTH (D)<br>FOR WIDTH (W) 15.0 FT. |                 |
|---|-----------------|
| PEAK FLOW<br>Q (CFS)                                  | DEPTH<br>D (FT) |
| 0-25  | 0.5             |
| 25-90   | 1.0             |
| 90-180  | 1.5             |
| 180-300   | 2.0             |
| 300-450   | 2.5             |



## TYPICAL PERMANENT DIVERSION FOR BASIN DISPOSAL

DRAWN BY: S.D.M.  
DWG. NAME: TYPICALS

DATE: 1/4/2011

APPROVED BY: L.G.S.

SCALE: NONE

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5. Transportation Facilities (780.33, 780.37)

Revision R-20 proposes to add Primary Road 14P.

- (a) Describe the measures to be taken to ensure the interest of the public and landowners affected are protected if disturbance within 100 feet of the right-of-way or relocation of a public road is proposed.
- 1) Safety berms will be constructed adjacent to roadways to be disturbed to contain traffic.
  - 2) Proper signs, informing the traveling public of the disturbance, will be posted along the road right-of-ways 500 feet from the beginning of the disturbance.
  - 3) All safety requirements of the appropriate public health and safety, will be followed.

See Attachment III-B-5(a), Roadway Safety Cross-section and Safety Berm Typical.

- (b) Describe any unique design, feature, or structure which is necessary for the road to meet the performance standards of Subchapter K using any necessary maps, plans, or cross-sections.

See Attachment III-B-5 for specifications.

See Attachment III-B-5, Detailed Design Plans for Primary Road 14P.

See Attachment III-B-5, Primary Road Location Map.

- (c) Describe, in detail, the measures to be taken during construction, maintenance and use of the transportation facilities to prevent damage to fish and wildlife and their habitat; public and private property; and erosion, siltation, and pollution of water. Roads will be constructed with the required ditching for proper drainage. Roads will be maintained with a dozer and motor grader patrol as required. Water will be used to reduce erosion and dust emissions. Roads will be located on ridge tops where possible or on the most stable slopes to minimize erosion. Vegetation will not be cleared except as necessary for roadway and ditch construction. After construction of the roads is complete, vegetation will be established on cut and fill slopes that exist along the all roads. To the extent possible, roads will be located above the sediment basins to be constructed for the mining operation in an effort to control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area and to comply with State and Federal water quality standards applicable to receiving waters and avoid the alteration of the normal flow of water in streambeds

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or drainage channels while preventing or controlling damage to public or private property. Where it is not possible or is impractical to locate roads in this manner, sediment control devices such as silt fencing, hay bale check dams and rock filter check dams will be used as necessary to maintain water quality. Roads not required for fire and sediment basin access will be reclaimed. See Attachment III-B-5, Attachment III-B-5(b), and Specifications for the construction, maintenance, and reclamation of primary roads.

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**SPECIFICATIONS FOR THE CONSTRUCTION, MAINTENANCE  
AND RECLAMATION OF PRIMARY ROADS**

1. Primary roads shall be designed by or under the direction of a registered professional engineer in accordance with the Alabama Surface Mining Commission rules and regulations and prudent engineering practice.
2. Each roadway embankment will be designed and constructed so as to have a minimum static safety factor of 1.3.
3. To the extent possible, roads will be located on ridges or on the most stable available slopes to prevent or minimize erosion, downstream sedimentation and flooding in an effort to prevent adverse effects to fish, wildlife and related environmental values.
4. To the extent possible, roads will be located above the sediment basins to be constructed for the mining operation in an effort to control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area and to comply with State and Federal water quality standards applicable to receiving waters and avoid the alteration of the normal flow of water in streambeds or drainage channels while preventing or controlling damage to public or private property. Where it is not possible or is impractical to locate roads in this manner, sediment control devices such as silt fencing, hay bale check dams and rock filter check dams will be used as necessary to maintain water quality. No fording of intermittent or perennial streams will be conducted unless specifically approved by the Alabama Surface Mining Commission as temporary routes to be used during road construction.
5. Prior to construction, the roadway will be cleared, grubbed and will have the topsoil removed. The clearing limits will be kept to the minimum necessary to accommodate the roadbed and associated ditch construction.
6. Roads will be constructed of suitable compacted subgrade material. The material will be free of sod, roots, stones over 12 inches in diameter, and other objectionable materials. The material will be placed and spread over the entire fill area, starting at the lowest point in layers not to exceed 12 inches in thickness. The material will be compacted to 95 percent of the density, based on standard proctor as outlined in ASTM.
- 8) Primary roads will have a minimum width of eighteen feet and a maximum width necessary to accommodate the largest equipment traveling the road.

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- 9) Roadbeds will be cut to consolidated non-erodible material or will be surfaced with durable non-toxic, non-acid forming substances. The wearing surface will consist of durable sandstone, chert, crushed limestone, crushed concrete, crushed asphalt, red rock, ironore refuse, gravel, or other durable non-toxic, non-acid forming material approved by the Regulatory Authority. The wearing surface will be placed on the roadbed to a depth of four inches.
9. No sustained grades will exceed ten percent unless deemed necessary, in which case appropriate sediment control facilities will be constructed. If grades in excess of fifteen percent are required, cross drains, ditch relief drains and road drainways will be located at a minimum distance of three-hundred feet.
10. Roads will be constructed so as to have adequate drainage utilizing ditches, culverts, cross drains and ditch relief drains designed to safely pass the peak runoff from a ten year, six hour precipitation event. Drainage pipes and culverts shall be installed as designed and will be maintained in a free and operating condition to prevent and control erosion at inlets and outlets. Culverts have been designed to support the load of the heaviest equipment to travel the road and are based on the Handbook of Steel Drainage and Highway Construction Products by the American Iron and Steel Institute and the equipment specifications. Drainage ditches will be constructed and maintained in accordance with the approved design to prevent uncontrolled drainage over the road surface and embankment. Roads will not be located in the channel of an intermittent or perennial stream unless specifically approved by the Alabama Surface Mining Commission. Additionally, no relocation and/or alteration of an intermittent or perennial stream will be done unless specifically approved by the Alabama Surface Mining Commission. In the event that it becomes evident that any drainage structures including culverts, bridges and/or low water crossings will be required in order to cross an intermittent or perennial stream, the structure will be designed and constructed in accordance with Alabama Surface Mining Commission requirements and prudent engineering practice and the approval of the design(s) will be acquired prior to the commencement of construction. Hay bale check dams and silt fences will be used at strategic locations when necessary to control sediment runoff. Immediately upon completion of construction, the side slopes of the road embankments and/or cuts will be fertilized, seeded with annual and perennial grasses and mulch will be added to aid in the prevention of erosion and to enhance seed germination. The seed mix will consist of, but is not limited to, some combination of the following species: Bermuda grass, fescue,

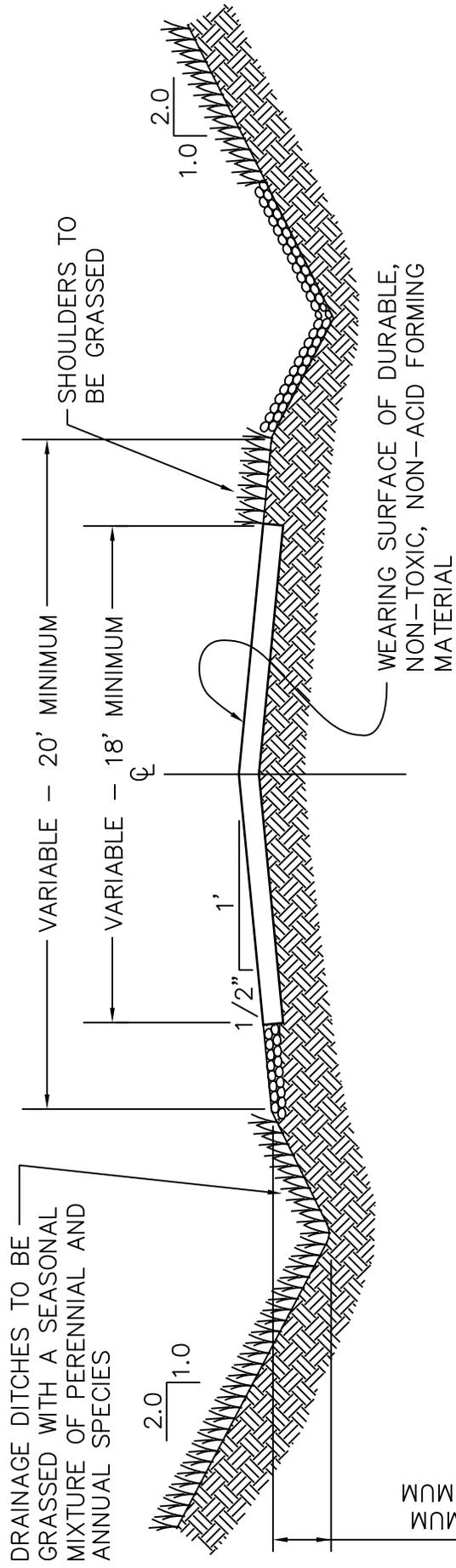
Applicant: C & H Mining Company, Inc.  
Mine Name: Lindbergh Mine No. 2  
Permit Number: P-3765 Revision R-20

lespedeza, rye grass, brown top millet, clover and vetch. The particular species to be planted will vary with the planting season at the time of seed application. Upon completion of construction of each phase of the roadway the construction will be certified to the Alabama Surface Mining Commission as having been done in accordance with the approved plans for the roadway and associated facilities.

11. Routine maintenance will be required to assure that the road continually meets performance standards and will consist of periodic grading, resurfacing, dust suppression and maintenance of sediment control facilities. Dust suppression will consist of the application of water, chemical binders and/or other dust suppressants. No oil will be utilized in this process. Spot seeding, fertilizing and mulching will be performed as necessary to improve vegetative cover on roadway slopes. A road damaged by a catastrophic event shall be repaired as soon as practicable after the damage has occurred.
12. Roads not to be retained as part of the post mine land use shall be reclaimed in accordance with the approved reclamation plan for this permit as soon as practicable after they are no longer needed as part of the mining and reclamation operation, using the following procedures:
  - a. The road will be closed to traffic.
  - b. All bridges, culverts and other drainage structures not approved as part of the post mine land use will be removed.
  - c. All road surfacing materials that are not compatible with the post mine land use or revegetation requirements will be properly disposed of on-site or removed from the site for re-use.
  - d. Roadway cut and fill slopes shall be regraded and reshaped to be compatible with the post mine land use and to compliment the natural drainage pattern of the surrounding terrain.
  - e. The natural drainage patterns shall be protected from surface runoff and erosion utilizing the installation of dikes and/or cross drains as necessary.
  - f. The roadbed shall be ripped or scarified as necessary, the topsoil or substitute or approved growing medium shall be replaced and revegetated in accordance with the approved reclamation plan for this permit.
13. The drawings and data contained in the specific design plans illustrate typical roadbed configurations for primary roads as well as site specific design of drainage structures, stability analysis and ditch sections.

# TYPICAL HAUL ROAD CUT SECTION

NO SCALE



TYPICAL CUT SECTION  
PRIMARY HAUL ROAD

DRAWN BY: K.D.P.  
DWG. NAME: TYPHAULC

DATE: 2-3-97

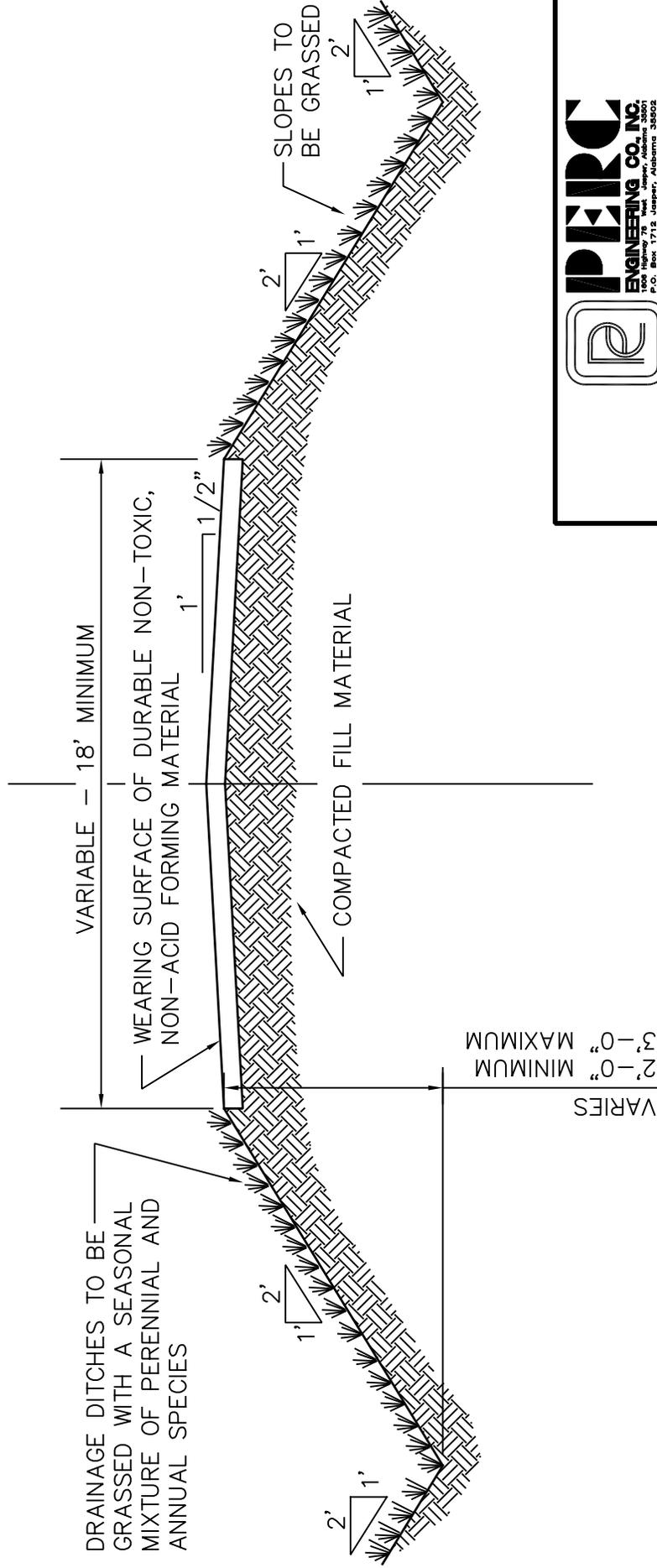
APPROVED BY: S.R.I.

SCALE: NONE

ATTACHMENT III. - B. - 5.

# TYPICAL HAUL ROAD FILL SECTION

NO SCALE



TYPICAL FILL SECTION  
PRIMARY HAUL ROAD

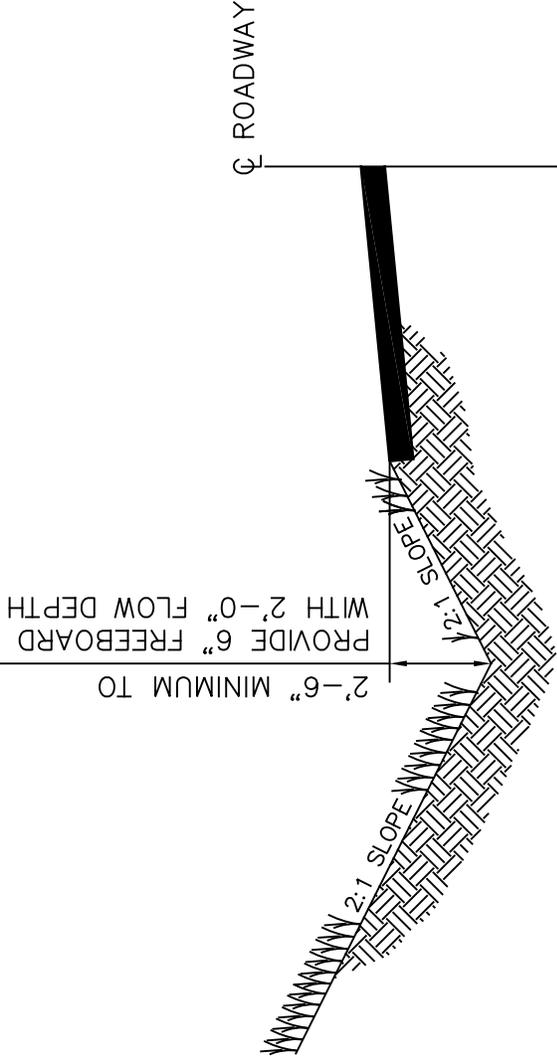
DRAWN BY: K.D.P.  
DWG. NAME: TYPHAULF

DATE: 2-3-97

APPROVED BY: S.R.I.

SCALE: NONE

ATTACHMENT III - B. - 5.



MINIMUM DITCH GRADIENT = 1%  
 MAXIMUM DITCH GRADIENT = 5%

DITCH CHANNEL TO BE VEGETATED WITH  
 A MIXTURE OF BERMUDA GRASS, FESCUE,  
 AND LESPEDEZA TO CONFORM TO CLASS  
 "D" RETARDANT CLASS.



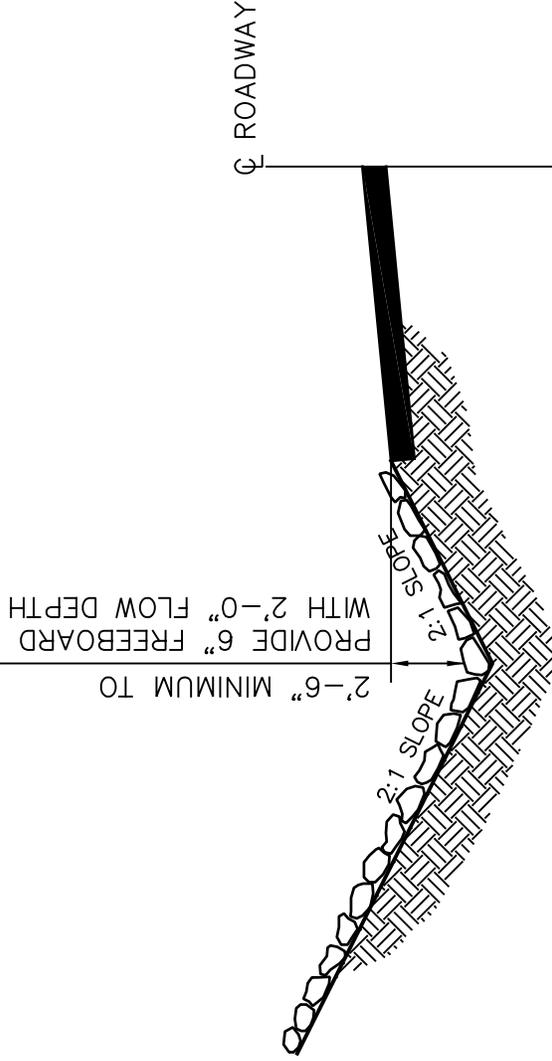
TYPICAL PRIMARY ROADWAY DITCH  
 CROSS SECTION

DRAWN BY: K.D.P.  
 DWG. NAME: PRIMROAD

DATE: 2-4-97

APPROVED BY: R.E.P.

SCALE: NONE



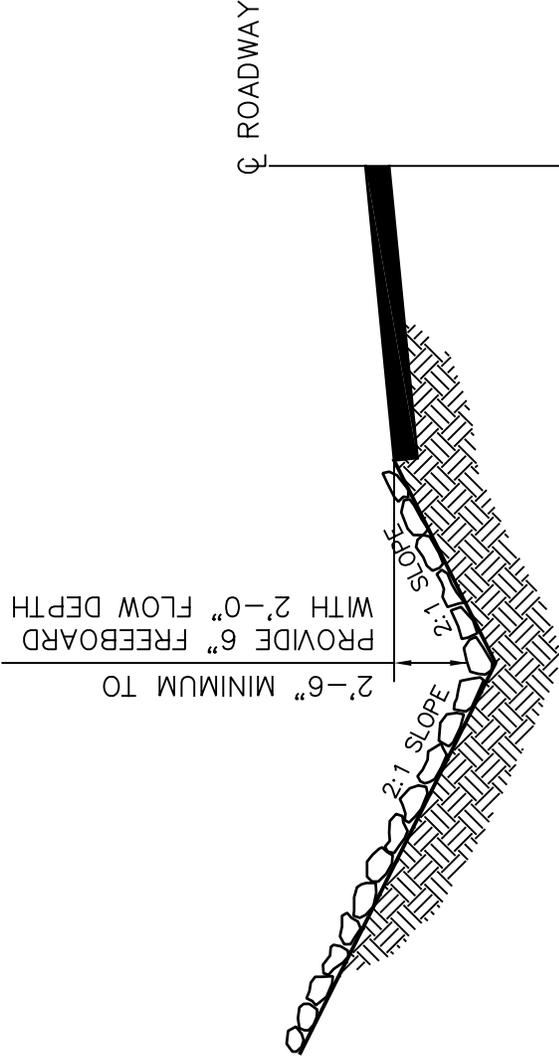
DITCH GRADIENT 5% TO 10%

DITCH CHANNEL TO BE LINED WITH NON-ERODIBLE NON-TOXIC, NON-ACID FORMING SANDSTONE OR LIMESTONE RIP-RAP. THE RIP-RAP WILL BE "CLASS 1" RIP-RAP AND HAVE A MINIMUM THICKNESS OF 12".



TYPICAL PRIMARY ROADWAY DITCH  
CROSS SECTION

|                     |                 |
|---------------------|-----------------|
| DRAWN BY: S.D.M.    | DATE: 11/8/2011 |
| DWG. NAME: PRIMRD1  |                 |
| APPROVED BY: L.G.S. | SCALE: NONE     |



DITCH GRADIENT 11% TO 17%

DITCH CHANNEL TO BE LINED WITH NON-ERODIBLE  
 NON-TOXIC, NON-ACID FORMING SANDSTONE OR  
 LIMESTONE RIP-RAP. THE RIP-RAP WILL BE "CLASS 2"  
 RIP-RAP AND HAVE A MINIMUM THICKNESS OF 16".



TYPICAL PRIMARY ROADWAY DITCH  
 CROSS SECTION

|                     |                 |
|---------------------|-----------------|
| DRAWN BY: S.D.M.    | DATE: 11/8/2011 |
| DWG. NAME: PRIMRD2  |                 |
| APPROVED BY: L.G.S. | SCALE: NONE     |