STATE OF INDIANA  
INDIANA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF RECLAMATION  

BOND FORFEITURE  
RESTORATION  

COLLIE POND  
SITE 2305  
CONTRACT DEL1915208634/E005-300  
VIGO COUNTY  

Reclamation of a bond forfeiture site. Remove trash, clear and grub, regrade and cover coal refuse, and revegetate.
P-40 Permit

Boundary

Grading Limits

WIN Energy
R.E.M.C.
Substation

Grading exclusion area

Dallas Drive

Project Limits

Texas Gas Transmission Pipeline

Staging Area

Liberty Cem.

Texas Gas Transmission Pipeline

Access

AML Site 2305

SITE MAPS
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

DATE MADE

DRAWN BY
C.J.H.

DESIGNED BY
C.J.H.

DATE REVISED
07/30/2019 3:06:45 PM

SCALE
1" = 200'

SITE MAPS
AS NOTED
E005-300

PROJECT
SITE
2 OF 7

2/1/2019
7/29/2019 3:46:45 PM

Legend

- AML Site Boundary
- Permit Boundary
- Project Limits
- Grading Limits
- Site Access
- Staging Area
- Sheet Index

Site Map with 2017 Aerial (December)

Site Map with 2018 Aerial (February-April)
1. Material shall be placed as noted on the subgrade plan on Sheet 6 and tapered to the grading limits as shown on this Sheet.

2. Alkaline material stockpiles, spread material over subgrade area at 20 tons/acre, except as proposed water locations.

3. 1.5 feet of cover material shall be placed as noted on the project plan on Sheet 6 and approved by the Engineer.
Borrow Area C

Area at 20 tons/acre, except in riprap, coarse aggregate, and final water areas.

Borrow Area B

Excavate and place cover material from borrow areas, and revegetate as noted on the revegetation plan.

Borrow Area A

Field mix shall be placed on access routes, staging areas, and all other disturbed areas not otherwise specified on the revegetation map, except in riprap, coarse aggregate, and final water areas.

Legend

- Grading Limits
- Project Limits
- Borrow Area
- Exclusion Area
- Site Access
- Riprap Feature
- Unpaved Feature
- Alkaline Material Stockpile
- Riprap Feature
- Unpaved Feature
- Field Mix

Note:

Subgrade Plan

Legend

- Existing Contour
- Existing Spot Elevation
- Existing Existing Trees Line
- Existing Driveway
- Existing Water
- Existing Building/Structure
- Existing Panel Road/Drive
- Existing Fence

Staging Area

FOR APPROVAL:

RECOMMENDED

DESIGNED BY

C.J.H.

DRAWN BY

C.J.H.

DATE MADE

2/1/2019

DATE REVISED

7/29/2019

DATE

TIME

2:46:45 PM

SUBGRADE PLAN & REVEGETATION PLAN

STATE OF INDIANA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF RECLAMATION

DIVISION OF RECLAMATION

PROJECT

E005-300

SHEET

6 OF 7

SCALE

AS NOTED

SITE

2305

Revegetation Plan

Legend

- Riprap Feature
- Unpaved Feature
- Site Access
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area

Legend

- Existing Contour
- Existing Spot Elevation
- Existing Existing Trees Line
- Existing Driveway
- Existing Water
- Existing Building/Structure
- Existing Panel Road/Drive
- Existing Fence

Legend

- Field Mix
- Site Access
- Riprap Feature
- Unpaved Feature
- Alkaline Material Stockpile

Note:

Subgrade Plan

Legend

- Existing Contour
- Existing Spot Elevation
- Existing Existing Trees Line
- Existing Driveway
- Existing Water
- Existing Building/Structure
- Existing Panel Road/Drive
- Existing Fence

Staging Area

FOR APPROVAL:

RECOMMENDED

DESIGNED BY

C.J.H.

DRAWN BY

C.J.H.

DATE MADE

2/1/2019

DATE REVISED

7/29/2019

DATE

TIME

2:46:45 PM

SUBGRADE PLAN & REVEGETATION PLAN

STATE OF INDIANA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF RECLAMATION

DIVISION OF RECLAMATION

PROJECT

E005-300

SHEET

6 OF 7

SCALE

AS NOTED

SITE

2305

Revegetation Plan

Legend

- Riprap Feature
- Unpaved Feature
- Site Access
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved Area
- Riprap Area
- Unpaved
### Low Water Crossing Information

<table>
<thead>
<tr>
<th>ID</th>
<th>Width, W</th>
<th>Base Width, W₀</th>
<th>Side Slope, S₀</th>
<th>Height, H₀</th>
<th>Transverse Slope, Sₜ</th>
<th>Upstream Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12</td>
<td>12</td>
<td>5.1:1</td>
<td>1.0</td>
<td>0.0%</td>
<td>577.9</td>
</tr>
<tr>
<td>B</td>
<td>12</td>
<td>12</td>
<td>5.1:1</td>
<td>1.0</td>
<td>1.35%</td>
<td>577.9</td>
</tr>
<tr>
<td>C</td>
<td>12</td>
<td>12</td>
<td>5.1:1</td>
<td>1.0</td>
<td>2.14%</td>
<td>594.6</td>
</tr>
<tr>
<td>D</td>
<td>12</td>
<td>12</td>
<td>10.1:1</td>
<td>1.0</td>
<td>1.0%</td>
<td>577.9</td>
</tr>
<tr>
<td>E</td>
<td>12</td>
<td>12</td>
<td>10.1:1</td>
<td>1.0</td>
<td>1.52%</td>
<td>577.9</td>
</tr>
<tr>
<td>F</td>
<td>12</td>
<td>12</td>
<td>10.1:1</td>
<td>1.0</td>
<td>3.98%</td>
<td>578.2</td>
</tr>
<tr>
<td>G</td>
<td>12</td>
<td>12</td>
<td>10.1:1</td>
<td>1.0</td>
<td>4.03%</td>
<td>576.4</td>
</tr>
</tbody>
</table>

*Note:* Ends of individual rolls of fabric shall be securely fastened to a common post and overlapped 3 in. max.

**Streambed Subsoil:**
- Variations in depth and material shall be considered.
- Streambed subsoil should be removed to a depth of 6 in. in the center.

**Geotextile:**
- Irrigation:
  - Approx. 8 in. of fabric, backfill trench with earth, compact thoroughly.
  - Trench approx. 6 in. deep x 6 in. wide.

**Geotextile, stakes:**
- Should be fastened to fabric in accordance with manufacturer recommendations.

**Embed:**
- Approx. 8 in. of fabric, backfill trench with earth, compact thoroughly.

**Temporary Check Dam, Straw Bale:**
- Stakes to be driven toward next bale, min. 12" into ground.
  - 1" x 2" wood stakes (typ.)
  - Straw bales w/ wire or nylon binding

**Flow:**
- 4" min.

**Note:** Ends of individual rolls of fabric shall be securely fastened to a common post and overlapped 3 in. max.