Topsoil will be redistributed and the original soil surface beneath the topsoil stockpile will be roughened as presented in Section 242.100 and seeded with the seed mix described in Chapter 3, Section 352.

Methods used to evaluate success of revegetation and stabilization are discussed in Chapter 3, Section 356.

### 231.400 Construction, Modification, Use, and Maintenance of Topsoil Storage Pile

Topsoil removed from the drill pad sites will be stockpiled on the site. The estimated volumes of topsoil stockpile for each site are shown in Table 2-1. The stockpiles will be sized as shown in Table 2-2.

The slopes of the stockpile will be 1H:1V or approximately $45^0$. Soils in these areas generally have an angle of repose greater than 50 degrees, making a stockpile with 1:1 slopes feasible. The steeper slope also help minimize the area to be disturbed.

**TABLE 2-2**

**Topsoil Stockpile Dimensions***

| Well No. | Length (ft) | Width (ft) | Height (ft) |
|---|---|---|---|
| G-1 | 55 | 35 | 16 |
| G-2 | 156 | 50 | 20 |
| G-3 | 70 | 60 | 17 |

* These are approximate dimensions of the topsoil stockpile and construction dimensions may vary.

See Section 234.200 for detailed information on the topsoil stockpile(s).



File in:
☐ Confidential
☐ Shelf
☒ Expandable
Refer to Record No 0053 Date 08/13/2003
In C/0070037 2003 Incoming
For additional information

0053

COPY

INCOMING C0070039 OK

**Canyon Fuel Company, LLC**
Soldier/Dugout Canyon Mine
P.O. Box 1029
Wellington, Utah 84542
(435)637-6360 Fax: (435)636-2897

August 13, 2003

Ms. Pamela Grubaugh-Littig
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple
Suite 1210
Salt Lake City, UT 84114-5801

**RE:** Revisions to Methane Degassification Amendment, Wells G-1, G-2, and G-3, Canyon Fuel Company, LLC, Dugout Mine, C/007/039

Dear Ms. Grubaugh-Littig:

Enclosed please find four copies of the submittal to address revisions to the methane degassification wells amendment for Dugout Canyon Mine. The information provided in the degassification amendment is to be kept in a separate binder and not incorporated into the M&RP binders. However, Appendix 5-6 of the M&RP are part of this amendment and have received revisions and will need to be incorporated into the M&RP binders once this amendment has been approved.

The information related to berms being used for sediment control has been revised. Information has been added to the Mexican Spotted Owl Survey attachment and the bond has been recalculated.

An additional copy of the submittal has been delivered to the Price Field Office.

Please contact Vicky Miller at (435) 636-2869, if there are any questions concerning this submittal.

Sincerely yours,

Vicky S. Miller

Vicky S. Miller

Cc: Chris Hansen (no enclosures)
Dave Spillman (enclosures)
Pete Hess (enclosures)

C/007/039 2003 Incoming
Refer to:
☐ Confidential
☐ Shelf
☒ Expandable
Date 08/13/03 For additional information

RECEIVED
AUG 13 2003
DIV. OF OIL, GAS & MINING

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☒ New Permit ☐ Renewal ☐ Exploration ☐ Bond Release ☐ Transfer ☐ COPY

**Permittee:** Canyon Fuel Company, LLC
**Mine:** Dugout Canyon Mine **Permit Number:** C/007/039
**Title:** Revisions to Degassification Wells G-1, G-2, & G-3 Amendment
**Description,** Include reason for application and timing required to implement:

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

☒ Yes ☐ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: 2.78 ☒ increase ☐ decrease.
☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
☐ Yes ☒ No 6. Does the application require or include public notice publication?
☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
*Explain*: _____
☐ Yes ☒ No 11. Does the application affect the surface landowner or change the post mining land use?
☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
☐ Yes ☒ No 13. Does the application require or include collection and reporting of any baseline information?
☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
☒ Yes ☐ No 15. Does the application require or include soil removal, storage or placement?
☐ Yes ☒ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
☒ Yes ☐ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
☒ Yes ☐ No 19. Does the application require or include certified designs, maps or calculation?
☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
☒ Yes ☐ No 21. Have reclamation costs for bonding been provided?
☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

David Spillman
Print Name

David Spillman, Engineering Manager 8/12/03
Sign Name, Position, Date

Subscribed and sworn to before me this 12 day of August, 2003

Dionne M Oman
Notary Public

My commission Expires: 12-15, 2006

Attest: State of Utah } ss:
County of Carbon

DIONNE M. OMAN
NOTARY PUBLIC • STATE of UTAH
1015 EAST 2640 SOUTH
PRICE, UTAH 84501
COMM. EXPIRES 12-15-2006

| For Office Use Only: | Assigned Tracking Number: | Received by Oil, Gas & Mining |
|---|---|---|
| | | RECEIVED AUG 13 2003 DIV. OF OIL, GAS & MINING |

Form DOGM- C1 (Revised March 12, 2002)

# APPLICATION FOR COAL PERMIT PROCESSING
## Detailed Schedule Of Changes to the Mining And Reclamation Plan

COPY

**Permittee:** Canyon Fuel Company, LLC
**Mine:** Dugout Canyon Mine **Permit Number:** C/007/039
**Title:** Revisions to Degassification Wells G-1, G-2 and G-3 Amendment

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

| | | | DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED |
|---|---|---|---|
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Chapter 2, pages 2-5, 2-9, and 2-10 |
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Chapter 3, pages 3-2, 3-3, and 3-7 |
| ☒ Add | ☐ Replace | ☐ Remove | Degas Wells - Chapter 3, add information to the back of the Mexican spotted owl survey in Attachment 3-2 |
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Chapter 5, Figures 5-1, 5-2, 5-3, 5-4, 5-5, 5-7, 5-8, 5-9, and 5-11 |
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Chapter 5, page 5-9 |
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Chapter 8, page 8-1 |
| ☐ Add | ☒ Replace | ☐ Remove | Degas Wells - Attachments 2-2 and 7-1 |
| ☐ Add | ☒ Replace | ☐ Remove | M&RP - Appendix 5-6, Reclamation Bond Estimate |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |
| ☐ Add | ☐ Replace | ☐ Remove | |

**Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.**

8/13/03 The Degassification Amendment is a stand alone document and will not be incoroported into the M&RP Volumes. However, Appendix 5-6 included in this submittal will be incorporated into the M&RP upon approval of this amendment.

**Received by Oil, Gas & Mining**

RECEIVED
AUG 13 2003
DIV. OF OIL, GAS & MINING

#### 234.300 Topsoil Stockpile Relocation

Stockpiled soil in jeopardy of being detrimentally affected in terms of its quantity and quality by drilling operations may be temporarily redistributed or relocated on approval by the Division and modification of this M&RP.

## 240 RECLAMATION PLAN

### 241 General Information

Reclamation of the degassification sites (topsoil redistribution, amendments, and stabilization) is discussed in Sections 242, 243, and 244 respectively.

### 242 Soil Redistribution

#### 242.100 Soil Redistribution Practices

The topsoil will be placed after recontouring of the site has occurred. Topsoil will be handled when they are loose or in a friable condition. The moisture content will be visually monitored and water will be added as needed to enhance the soil's condition for handling. The approximate amount of topsoil available for each site is shown in Table 2-1. The reclamation time line can be found on Figure 5-15.

The topsoil will be distributed in two phases, the first phase will be the contemporaneous reclamation of a portion of the pad area used during well construction (see Figures 5-4, 5-8 and 5-12). ~~During this phase the berms surrounding the disturbed pad area will be used as topsoil. When needed additional topsoil will be used from the topsoil stockpile.~~ During contemporaneous reclamation topsoil from the stockpile will be distributed on each site in the depths shown in Table 2-3.

Final reclamation will occur after venting of the methane gas is complete, venting equipment has been removed and the well has been plugged. ~~The topsoil for this phase will come from the topsoil pile. and the berms surrounding the operational pad area.~~ The topsoil stockpile storage area and access road will be reclaimed during this final phase. Refer to Section 341 for additional information.

**Soil Thickness -** The topsoil will be distributed during contemporaneous and final reclamation in the thickness shown in Table 2-3.

**TABLE 2-3**

**Approximate Topsoil Distribution Thickness**

| Well Site No. | Topsoil Thickness (Inches) |
|---|---|
| G-1 | 7 |
| G-2 | 30 |
| G-3 | 12 |

**Compaction -** Prior to the application of topsoil, compacted subsoils will be roughened or loosened for a depth of 18 to 24 inches. To prevent compaction of topsoil, soil moving equipment will refrain from unnecessary operation over spread topsoil. The topsoil will be in a loosened condition prior to seeding.

The dirt excavated to create the mud pit will be mixed with the drill cutting and returned to the pit to prevent a boundary of hard material from forming in the mud pit area that would hamper root penetration.

**Erosion -** Care will be exercised to ensure the stability of topsoil on graded slopes to guard against erosion during and after topsoil application. Post reclamation (contemporaneous and final) erosion control measures will be surface roughing, mulching and seeding.

# ATTACHMENT 2-2

# TOPSOIL CALCULATIONS

# ATTACHMENT 2-2
# TOPSOIL CALCULATIONS

REGISTERED PROFESSIONAL ENGINEER
8-12-03
No. 189797
LAYNE D.
JENSEN
STATE OF UTAH

# Topsoil Calculations

General

- Outslopes of topsoil stockpiles and berms assumed to be 1:1 Angles of repose for soils typical in this area are in excess of 50°. Thus this assumption is justified.
- Outslopes assumed to be at 0.8:1
- All of the topsoil stripped from the site is assumed to be placed in the topsoil stockpile. The berms will be constructed of subsoils.
- Topsoil volume calculations made using an average topsoil depth provided by Dan Larsen of EIS. Topsoil volume estimates are likely conservative

G-1

Ave topsoil Depth = 7"

Pad Area = 17,825 ft² ⇒ 10,398 ft³ of topsoil

Road Area = 1,374 ft² ⇒ 802 ft³ of topsoil

Total topsoil to be stripped = 11,200 ft³

The Average End Area method will be used to calculate the Volume of topsoil in the stockpile. The Areas used in calculations have been generated in AutoCad.

| Height | Area | Volume |
|---|---|---|
| 0 | 0 | |
| 2 | 57 | 57 |
| 4 | 540 | 597 |
| 6 | 1324 | 1864 |
| 7 | 1376 | 1350 |
| 16 | 292 | 7506 |
| | | 11,374 ft³ > 11,200 ft³ ∴ ok |

G-1 (cont)

operational

Pad Area = 5,218 ft² ⇒ 3,043 ft³
Road Area = 1,374 ft² ⇒ 802 ft³

Total = 3,845 ft³

Assume the topsoil for reclamation is removed from the top of the stockpile leaving the footprint the same. Conservative Assumption for Hydrology calculations.

With a height of 7' the stockpile has a capacity of 3,868 ft³.

3,868 ft³ > 3845 ft³ ∴ ok

G-2

Ave Depth = 30"

Pad Area = 23,445 ft² ⇒ 58,612 ft³ = 2,170 yd³

Road Area = 10,074 ft² ⇒ 25,185 ft³ = 933 yd³

Total topsoil = 83,797 ft³ = 3104 yd³

Topsoil pushed Northwest of the pad

I will make a simplifying assumption that the stockpile is built as if the ground was flat. The slope is such that the stockpile can be built as if the site was flat.

| Height | Area | Volume |
|---|---|---|
| 0 | 50 × 156 = 7800 ft² | 34,100 ft³ |
| 5 | 40 × 146 = 5840 ft² | 24,800 ft³ |
| 10 | 30 × 136 = 4080 ft² | 16,500 ft³ |
| 15 | 20 × 126 = 2520 ft² | 9,200 ft³ |
| 20 | 10 × 116 = 1160 ft² | |
| | | 84,600 ft³ |

84,600 ft³ > 83,797 ft³ ∴ ok

G-2 (cont.)

Operational

Pad Area = 4083 $ft^2$ ⇒ 10,208 $ft^3$

Total topsoil = 10,208 + 25,185 = 35,393 $ft^3$

A portion of the topsoil stockpile from the drilling phase will be left in place for use during final reclamation

| Height | Area | Volume |
|---|---|---|
| 0 | 50 × 70 = 3500 | 38,000 $ft^3$ |
| 20 | 10 × 30 = 300 | |

38,000 $ft^3$ > 35,393 $ft^3$ ∴ ok

G-3

Ave topsoil thickness = 12"

Pad Area = 29,805 $ft^2$ ⇒ 29,805 $ft^3$ = 1,104 $yd^3$
Road Area = 2,541 $ft^2$ ⇒ 2,118 $ft^3$ = 78 $yd^3$

Total Vol. = 31,923 $ft^3$

Vol. Calculated using Areas generated using AutoCad.

| Height | Area | Volume |
|---|---|---|
| 0 | 0 | |
| 2 | 315 | 315 |
| 4 | 1264 | 1579 |
| 6 | 2205 | 3469 |
| 8 | 3444 | 5649 |
| 17 | 1597 | 22,685 |

Total = 33,697 $ft^3$

33,697 $ft^3$ > 31,923 $ft^3$ ∴ ok

G-J (cont.)

Operational

Operational Area including road = 11,142 $ft^2$ ⇒ 11,142 $ft^3$

The top of the topsoil will be used to reclaim the drill pad with the rest of the stockpile being left for final reclamation.

| Height | Area | Volume |
|---|---|---|
| 0 | 0 | 315 |
| 2 | 315 | 1579 |
| 4 | 1264 | 3469 |
| 6 | 2205 | 5649 |
| 8 | 3444 | 3282 |
| 9 | 3120 | |

Total 14,294 $ft^3$

14,294 > 11,142 $ft^3$ ∴ ok.

### 321.100 Plant Communities Within the Proposed Permit Area

During June 2003, the degassification well sites were surveyed by Patrick Collins, Mt. Nebo Scientific). The report and survey for the areas are included in Attachment 3-1.

### 321.200 Land Productivity Prior to Mining

Productivity of the well site lands prior to mining are shown in Table 3-1. ~~The productivity is based on data for similar sites from the U.S. Department of Agriculture.~~

**TABLE 3-1**
**Land Productivity**

| Well No. | Productivity (lbs.) |
|---|---|
| G-1 | 300 |
| G-2 | 300 |
| G-3 | 100 |

## 322 Fish and Wildlife Information

A summary of the fish and wildlife resource information for the permit and adjacent areas is contained in Sections 322.100 through 322.200 of the approved M&RP.

### 322.100 Level of Detail

The scope and level of detail within the approved M&RP are sufficient to design the protection and enhancement plan for wildlife and fish in the area.

## 322.200 Site-Specific Resource Information

**Raptors -** An aerial raptor nest survey was done of the area by the Utah Division of Wildlife Resource (DWR, Chris Colt, Leroy Mead) and CFC personnel in May of 2003, refer to Attachment 3-3.

No raptor nests were recorded during the survey in the area (portions of N1/2SE1/4NW1/4 and N1/2SW1/4NE1/4 of Section 24; a portions of N1/2SW1/4NW1/4 Section 19, Township 13 South, Range 13 East) of the degas wells. Refer to Figure 1-1 for mapped well locations.

A raptor survey will be conducted of the well site areas, each year that the wells are in operation.

**Bats -** No known open mine shafts, caves, adits or other man made structures that might provide habitats for bats are known to exist in the degas project area. The sites are open~~, with limited trees~~ and the lack of a food source would force the bats to seek habitat and nourishment elsewhere.

**Mexican Spotted Owl -** In the Summer of 2003, a calling point survey was conducted in the degas well area by EIS Environmental and Engineering Consulting. The survey report concluded that " within the project area, a thorough search did not reveal the presence of any Mexican spotted owls". The report is included in Attachment 3-2.

**Threatened and Endangered Plant and Wildlife Species -** There are no known federally or state listed threatened and endangered plant and wildlife species within the sites planned for degassification wells.

### 333 Plan to Minimize Disturbances and Adverse Impacts

General control and mitigation measures addressing potential related biological impacts will include the following:

- Minimizing the total area of disturbance,
- Design, construction, and operation of the well sites to minimize ~~biological~~ impacts ~~including barriers to wildlife movement,~~
- Exclusion of wildlife from potentially hazardous areas, and
- Reclamation of disturbed areas when they are no longer needed.

All water associated with the drilling of these wells will be appropriated and hauled to the sites by a licensed contractor. Since the drilling of degas wells does not involve the mining of coal, the USWFS consumption requirements for underground operations do not apply (i.e., evaporation form ventilation, coal preparation, sediment pond evaporation, subsidence of springs, alluvial aquifer abstractions into the mine, postmining inflow to workings, coal moisture loss, direct diversions).

### 333.100 Minimize Disturbance to Endangered or Threatened Species

Dugout Canyon will apply all methods necessary to minimize disturbances or any adverse effects to threatened or endangered species. See Section 322.200.

### 333.200 Species and Habitats

All species and habitats within the permit area will be protected to the best of Dugout Canyon's ability.

**Add to the back of the Mexican Spotted Owl Survey**

# ATTACHMENT 3-2

# THREATENED, ENDANGERED, AND SENSITIVE SPECIES INFORMATION

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

3-201
(1/97)

# FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

ENVIRONMENTAL INDUSTRIAL SERVICES
31 NORTH MAIN
HELPER, UT 84526
U.S.A.

2. AUTHORITY-STATUTES
16 USC 1533(d)
16 USC 703-712

REGULATIONS *(Attached)*
50 CFR 17.32
50 CFR 21.23 & 21.27

50 CFR 13

3. NUMBER
TE044836-2 AMENDMENT

4. RENEWABLE
☐ YES
☐ NO

5. MAY COPY
☐ YES
☐ NO

6. EFFECTIVE
07/17/2003

7. EXPIRES
12/31/2005

8. NAME AND TITLE OF PRINCIPAL OFFICER *(If #1 is a business)*
MELVIN A. COONROD

9. TYPE OF PERMIT
THREATENED SPECIES

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED
ON LANDS SPECIFIED WITHIN THE ATTACHED SPECIAL TERMS AND CONDITIONS

11. CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

D. Further conditions of authorization are contained in the attached Special Terms and Conditions.

Permitted species:
Mexican spotted owl

☒ ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS
ANNUAL REPORT DUE: 12/31

| ISSUED BY | TITLE | DATE |
|---|---|---|
| Nanya Hunt | ARD - ECOLOGICAL SERVICES | 07/17/2003 |

TE-044836
Amendment #2



SPECIAL TERMS AND CONDITIONS FOR
Environmental Industrial Services
Melvin Coonrod

Species: **Mexican spotted owl** *(Strix occidentalis lucida)*

This permit amendment adds David Basinger and deletes M. Dean Stacy and David Steed from the List of Authorized Individuals. This permit authorizes the following activities in Utah, through December 31, 2005, to enhance recovery and for research under the following conditions:

E. Only individuals on the attached List of Authorized Individuals are approved to conduct activities pursuant to this permit. **Permittee named on the face of this permit is responsible to ensure that the activities of all individuals listed herein are in compliance with the terms and conditions of this permit.**

F. Conduct presence/absence surveys for Mexican spotted owls in Utah according to the attached, "Mexican Spotted Owl Inventory Protocols."

G. Using recorded Mexican spotted owl calls, locate and determine owl distribution. Avoid calling owls during periods when winds exceed 15 miles per hour and during snowstorms.

H. Watch for and record aggression by known Mexican spotted owl predators including goshawks, red-tailed hawks, great horned owls, and golden eagles. Upon detecting aggressive behavior, surveys at the site of the incident will be suspended for 24 hours. Immediately contact the Field Supervisor, Ecological Services, 2369 West Orton Circle, West Valley City, Utah 84119, telephone 801-975-3330 and report the incident.

Coverage under this permit is provisionary under the following restrictions:

I. You will obtain the required permits and conduct your activities in compliance with all applicable laws and regulations of the State of Utah, and of those Federal and tribal agencies upon whose lands you work. This permit does not grant the right of trespass. Such permission must be obtained from private landowners or the land management agency.

J. All activities will be coordinated with the appropriate Field Supervisor (see address above). You are to inform that office of all activities conducted under this permit.

K. Any threatened or endangered species that is accidentally killed (taken) while conducting activities authorized by this permit must be reported within 24 hours to **both** the Resident Agent in Charge, Law Enforcement, P.O. Box 2369, Ogden, Utah 84402, telephone

801-625-5570 and the Field Supervisor (see address above). Species and/or parts of species that are taken remain the property of the U.S. Fish and Wildlife Service. If the disposal of species is not identified in the above conditions, contact the Field Supervisor (see address above) and the Permit Coordinator, telephone 303-236-7400 extension 227 for the final determination on disposition of any threatened or endangered species taken during authorized activities.

L. If you wish to continue work with threatened or endangered species after expiration of this permit, your request for renewal of your permit must be received by the Permit Coordinator, Ecological Services, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225, telephone 303-236-7400 extension 227, on or before November 30, 2005. Meeting this requirement allows you to continue authorized activities until your renewal application is acted upon. If this requirement is not met, this permit becomes invalid on the date of expiration. Any new activities or changes in activities with threatened or endangered species will require that your permit be amended. You are not authorized to conduct any new activities or to change any permitted activities until you have requested and have received a new or an amended permit.

M. Annual reports of all activities conducted under the authority of this permit must be submitted to the appropriate **Field Supervisor, Ecological Services, 2369 West Orton Circle, West Valley City, Utah 84119** by December 31 annually. Failure to submit annual reports will invalidate this permit. Your reports should include complete accounts of all activities conducted under this permit. A renewal request will not be processed until the annual reports are received.

N. Permittee must also comply with the attached General Conditions for Native Endangered and Threatened Species Permits.

O. Permittee and designed members of your staff must carry a copy of this permit at all times while exercising its authority.

P. Each named individual shall be responsible for compliance with the terms and conditions of this permit. This permit will be considered invalid without this List of Authorized Individuals (List). To request changes to this List, the permittee shall submit a written request to the Permit Coordinator, Ecological Services, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225, telephone 303-236-7400, extension 227. The request shall include the name of each individual to be appended to the List; a resume or qualifications statement of each person to be appended to the List, detailing their experience with each species and type of activity for which authorization is requested; the names and phone numbers of a minimum of two references; and the names of the individuals to be deleted from the List, if applicable.

TE-044836
Amendment #2



LIST OF AUTHORIZED INDIVIDUALS FOR
Environmental Industrial Services
Melvin Coonrod

This list is effective concurrent with the dates on boxes #6 & 7 on the face of this permit.

Individuals authorized to conduct activities pursuant to this permit:

Melvin Coonrod, Katie Nash, Tom Paluso and David Basinger.

Permittee named on the face of this permit is responsible to ensure that the activities of all individuals listed herein are in compliance with the terms and conditions of this permit.

**GENERAL CONDITIONS FOR NATIVE ENDANGERED AND THREATENED SPECIES PERMITS**
**50 CFR 17.22 and 17.32**
**50 CFR 17.62 and 17.72**

All sections of Title 50 *Code of Federal Regulations* Part 13 are conditions of the permit.

All applicable foreign, State, local, tribal, or other Federal laws, including those requiring a permit, must be observed.

Living specimens must be handled and shipped so as to minimize risk of injury, damage to health or cruel treatment.

The container in which authorized wildlife is shipped must be plainly marked with names and addresses of shipper and consignee and an accurate description of the contents including common and scientific name and number of each within.

Permittee must carry a copy of the permit while conducting authorized activities.

Permit or subpermit number must be legibly printed on all documents involving activities conducted under the permit.

Any dead or injured specimens of the authorized wildlife found may be salvaged or cared for.

Unless otherwise specified on the face of the permit, the wildlife must be immediately released at or near the capture site after the permitted activity.

Unexpected death, injury, or escape of the authorized wildlife shall be reported to the U.S. Fish and Wildlife Service before the end of the next business day.

Bird banding, marking, radio tagging, etc., must be conducted in accordance with a Federal Bird Marking and Salvage permit.

**The following conditions apply until authorized disposal of the wildlife regardless of expiration date of the permit:**

The authorized wildlife may NOT be sold, donated, or transferred unless the receiver has first been issued authorization by the Director.

Any dead authorized wildlife shall be preserved and held for scientific purposes whenever practical.

### 529 Management of Mine Openings

The perimeter of the sites will be fenced with gates on the access roads. The well casing will have a valve that is closed and locked. The valve will also prevent access by animals or other material. Mine openings will be monitored in accordance with Federal and State Regulations.

During the life of the methane wells, the sites will be inspected as needed by mine personnel to verify the continued operation of the pumping equipment and general site conditions.

## 530 OPERATIONAL DESIGN CRITERIA AND PLANS

### 531 General

This section contains the general plans for the construction of sediment controls and general construction and maintenance of the well sites.

The decision to construct each well will be based on the amount of methane encountered during mining. If small amounts of methane are encountered and the mine's ventilation system can dilute the methane, no well will be drilled. The proposed well site locations are shown on Figure 1-1.

### 532 Sediment Control

Sediment control measures for the well sites are described in Sections 732 and 742 of this submittal. Runoff control structures at the well sites have been designed to convey runoff in a non-erosive manner. Sediment yields in the well permit area are minimized by:

- Disturbing the smallest practicable area during the construction of the well site and
- Contemporaneously reclaiming areas suitable for such reclamation.

### 533 Impoundments

No impoundments will exist at the well sites.

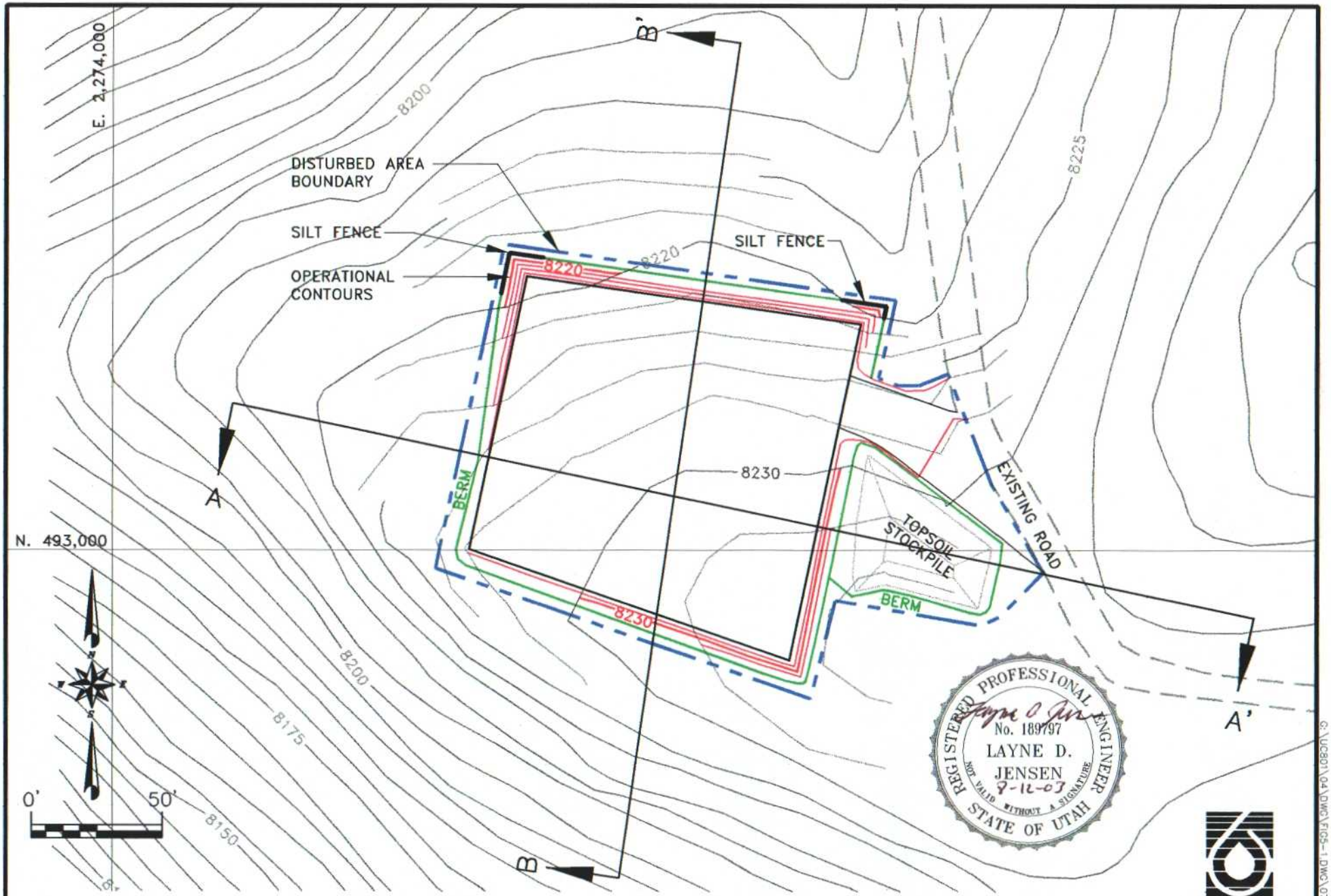
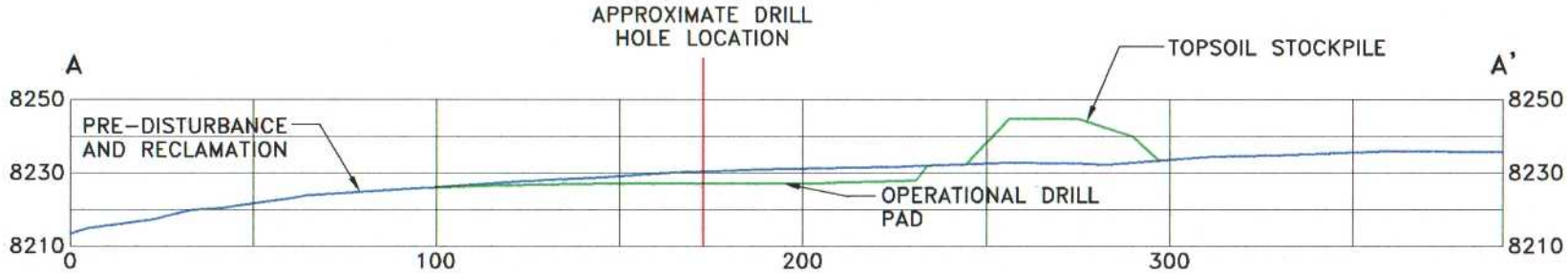
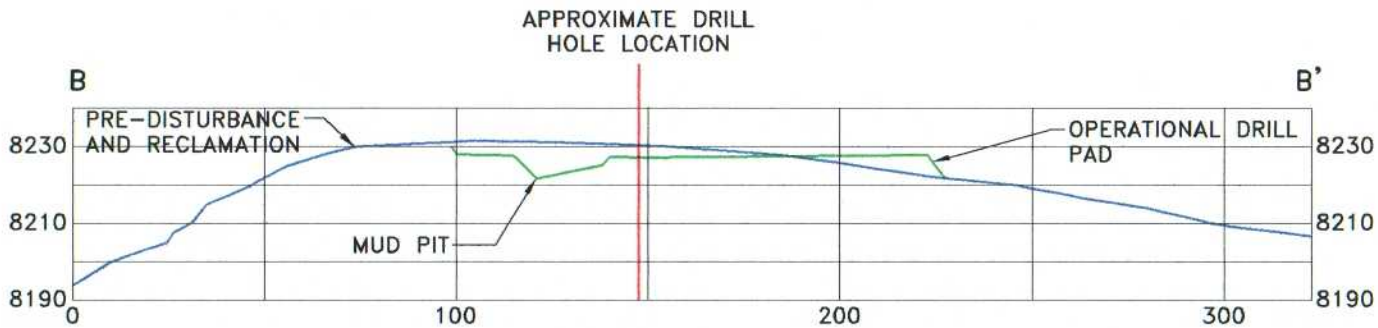



FIGURE 5-1. CONTOUR MAP FOR G-1

TOWNSHIP 13 SOUTH, RANGE 12 EAST, SECTION 24

G:\UC801\04\DWG\FIG5-1.DWG\07-28-03



VERTICAL AND HORIZONTAL

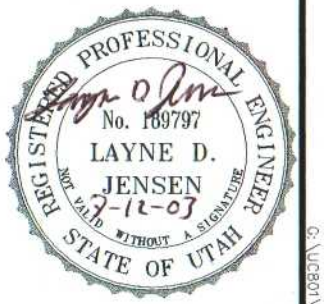
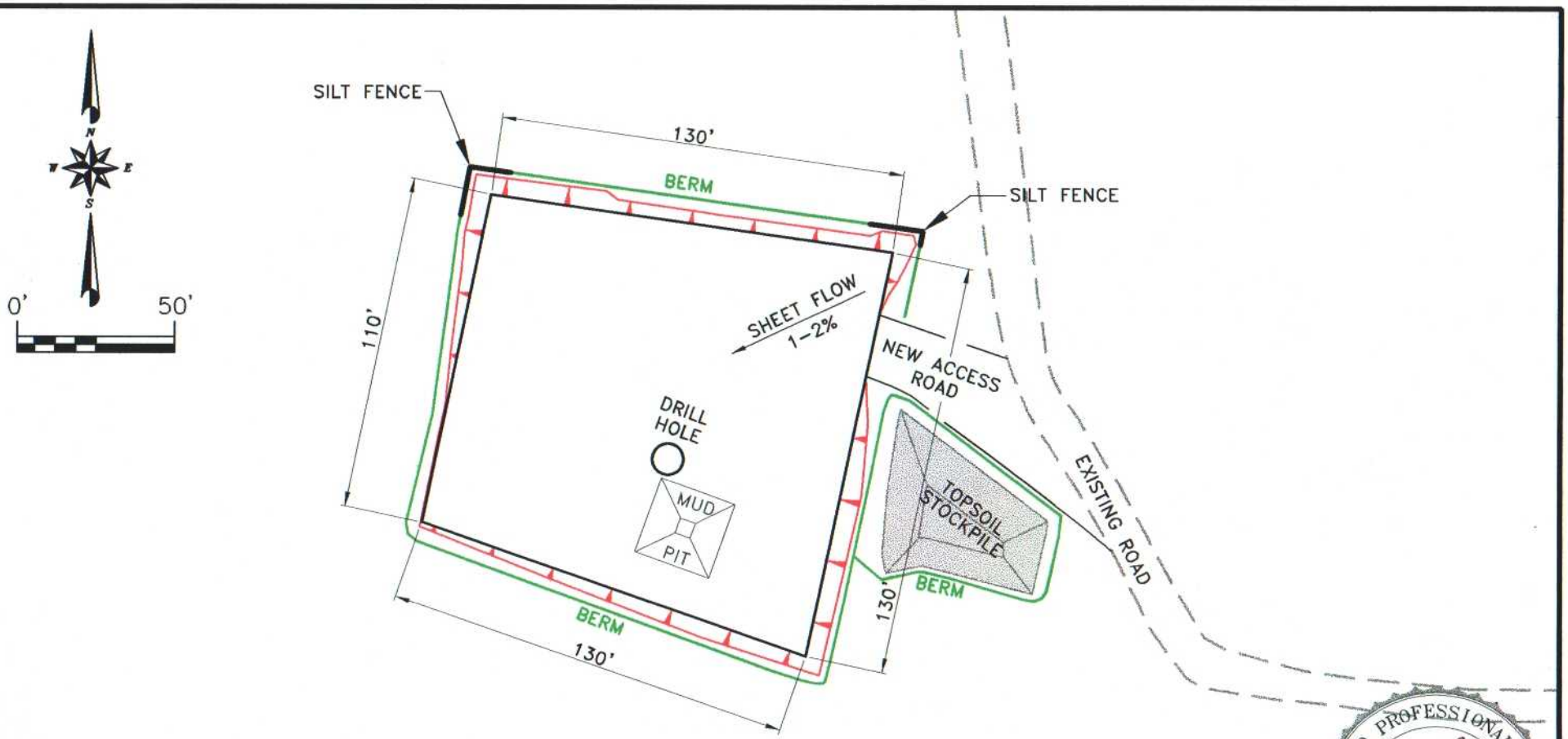



FIGURE 5-2. TYPICAL CROSS-SECTIONS FOR G-1

EarthFax

G:\UC801\G4\DWG\FIG5-2.DWG\07-28-03




NOTES:

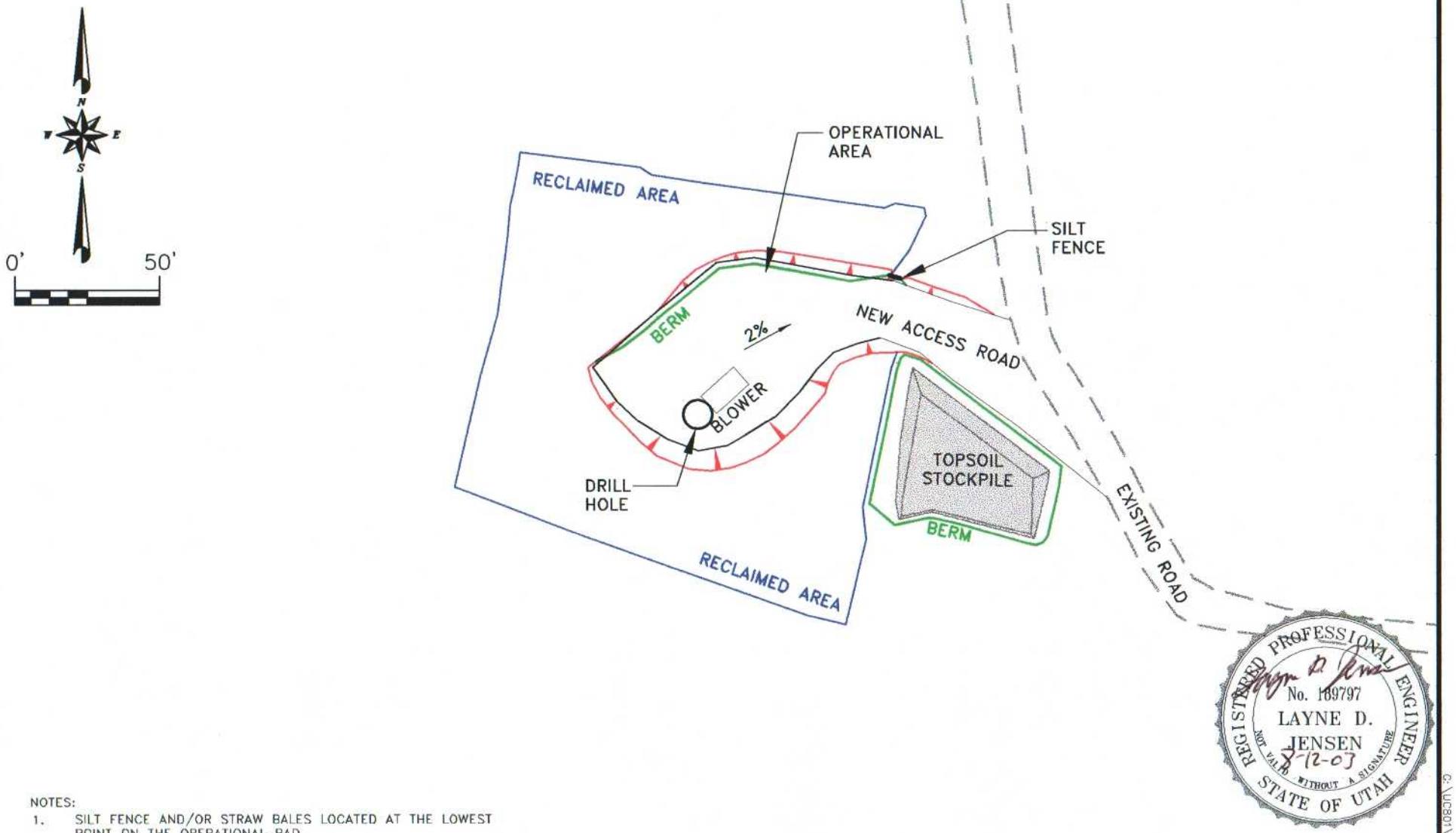
1. THE PAD WILL BE SURROUNDED BY A BERM WHICH WILL DIVERT RUNOFF FROM UNDISTURBED AREAS AWAY FROM THE DRILLING PAD AND DIRECT PAD RUNOFF TO A SILT FENCE AND/OR STRAW BALE DIKE, AT THE LOWEST POINT FOR TREATMENT.
2. A BERM WILL BE PLACED AT THE TOE OF THE FILL SLOPES.
3. DRILL HOLE AND MUD PIT LOCATION MAY VARY.
4. THE TOTAL DISTURBED AREA WILL BE FENCED.
5. PAD ELEVATION IS APPROXIMATELY 8226.7 FT.
6. A BERM WILL BE PLACED AROUND THE TOPSOIL STOCKPILE

REGISTERED PROFESSIONAL ENGINEER
No. 189797
LAYNE D. JENSEN
9-12-07
NOT VALID WITHOUT A SIGNATURE
STATE OF UTAH

FIGURE 5-3 APPROXIMATE DRILLING LAYOUT FOR G-1

EarthFax

C:\UC801\04\DWG\FIG5-3.DWG\07-25-03




REGISTERED PROFESSIONAL ENGINEER
No. 189797
LAYNE D. JENSEN
7-12-03
NOT VALID WITHOUT A SIGNATURE
STATE OF UTAH

NOTES:

1. SILT FENCE AND/OR STRAW BALES LOCATED AT THE LOWEST POINT ON THE OPERATIONAL PAD.
2. RUNOFF FROM THE OPERATIONAL AREA AND ACCESS ROAD WILL BE TREATED BY THE PAD SILT FENCE.

FIGURE 5-4 APPROXIMATE OPERATIONAL LAYOUT FOR G-1

EarthFax

C:\UC801\04\DWG\FIG5-4.DWG\07-28-03

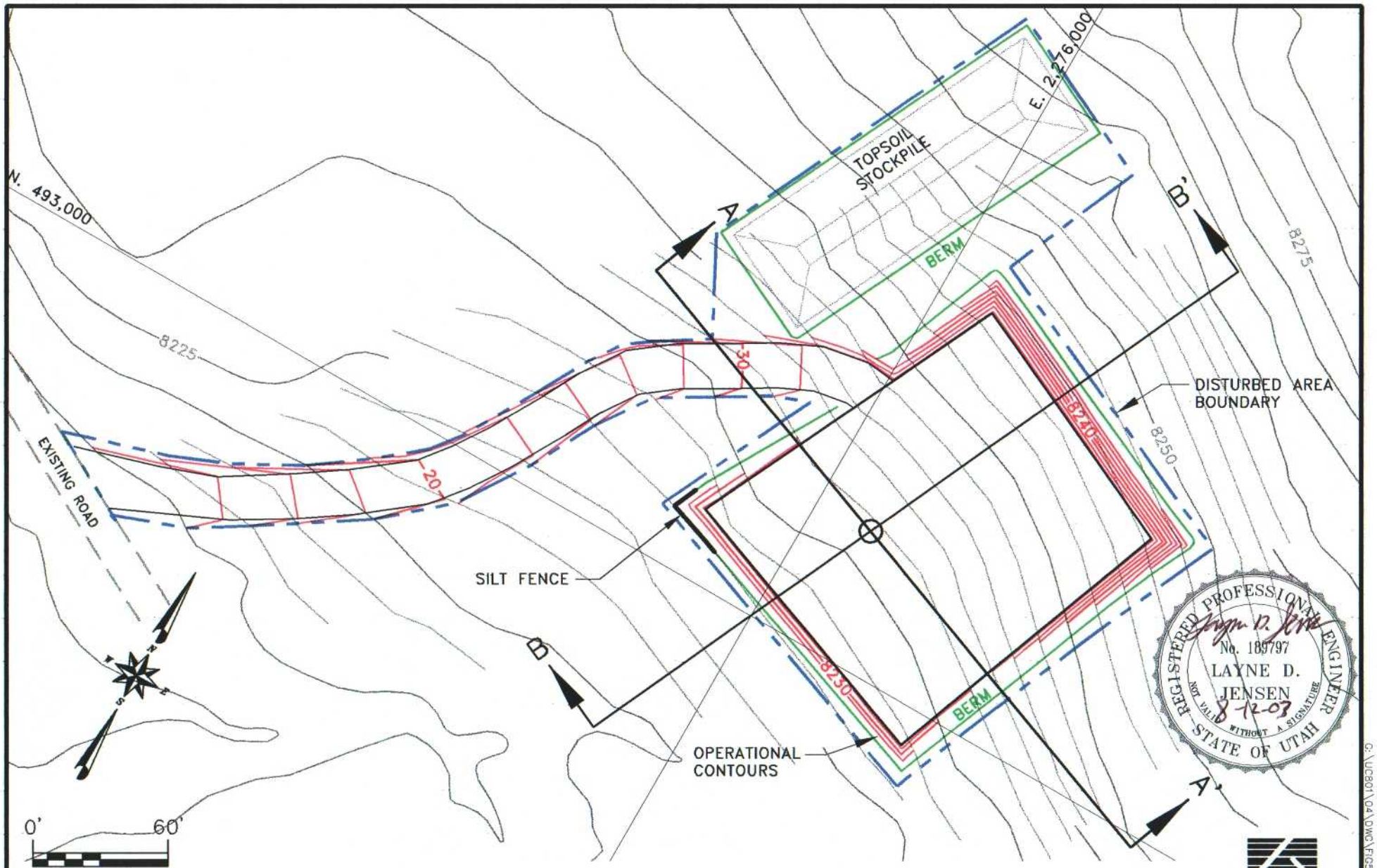
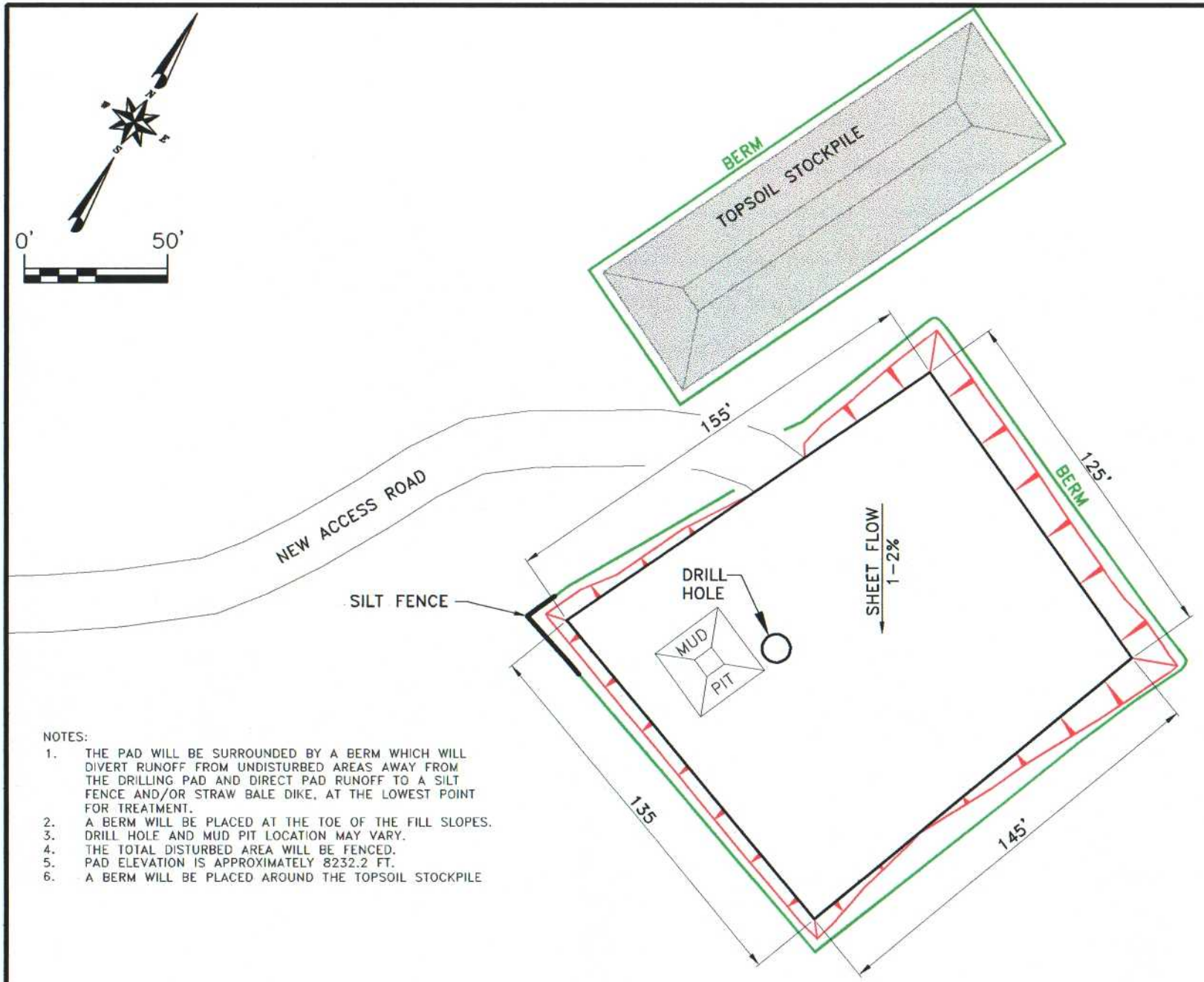



FIGURE 5-5. CONTOUR MAP FOR G-2

TOWNSHIP 13 SOUTH, RANGE 12 EAST, SECTION 24




NOTES:

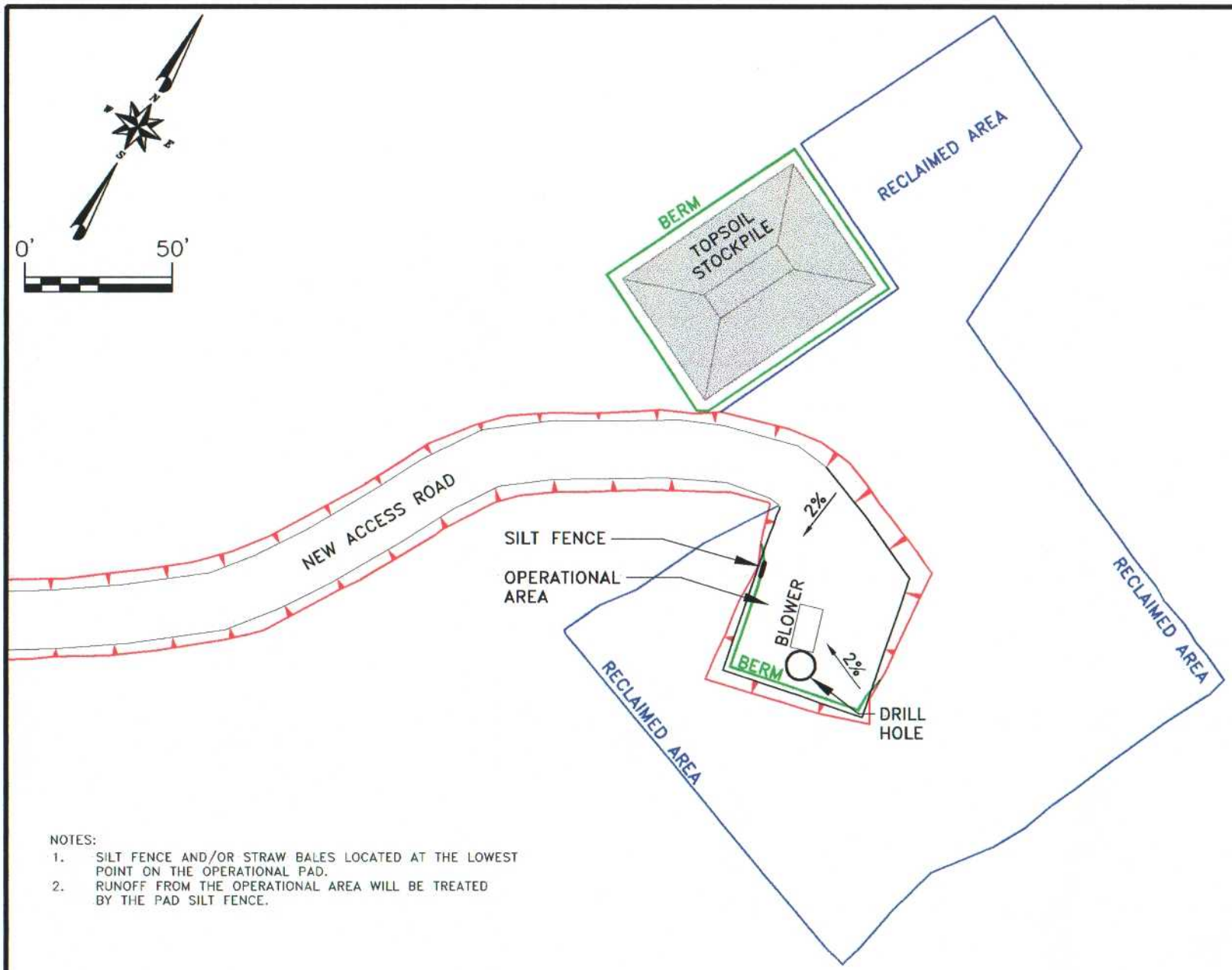
1. THE PAD WILL BE SURROUNDED BY A BERM WHICH WILL DIVERT RUNOFF FROM UNDISTURBED AREAS AWAY FROM THE DRILLING PAD AND DIRECT PAD RUNOFF TO A SILT FENCE AND/OR STRAW BALE DIKE, AT THE LOWEST POINT FOR TREATMENT.
2. A BERM WILL BE PLACED AT THE TOE OF THE FILL SLOPES.
3. DRILL HOLE AND MUD PIT LOCATION MAY VARY.
4. THE TOTAL DISTURBED AREA WILL BE FENCED.
5. PAD ELEVATION IS APPROXIMATELY 8232.2 FT.
6. A BERM WILL BE PLACED AROUND THE TOPSOIL STOCKPILE

REGISTERED PROFESSIONAL ENGINEER
No. 189797
LAYNE D. JENSEN
7-12-03
NOT VALID WITHOUT A SIGNATURE
STATE OF UTAH

FIGURE 5-7. APPROXIMATE DRILLING LAYOUT FOR G-2

EarthFax

C:\UC801\04\DWG\FIG5-7.DWG\07-29-03




NOTES:

1. SILT FENCE AND/OR STRAW BALES LOCATED AT THE LOWEST POINT ON THE OPERATIONAL PAD.
2. RUNOFF FROM THE OPERATIONAL AREA WILL BE TREATED BY THE PAD SILT FENCE.

REGISTERED PROFESSIONAL ENGINEER
No. 189797
LAYNE D. JENSEN
8-12-03
NOT VALID WITHOUT A SIGNATURE
STATE OF UTAH

EarthFax

FIGURE 5-8. APPROXIMATE OPERATIONAL LAYOUT FOR G-2

C:\UC801\04\DWG\FIG5-8.DWG\07-29-03

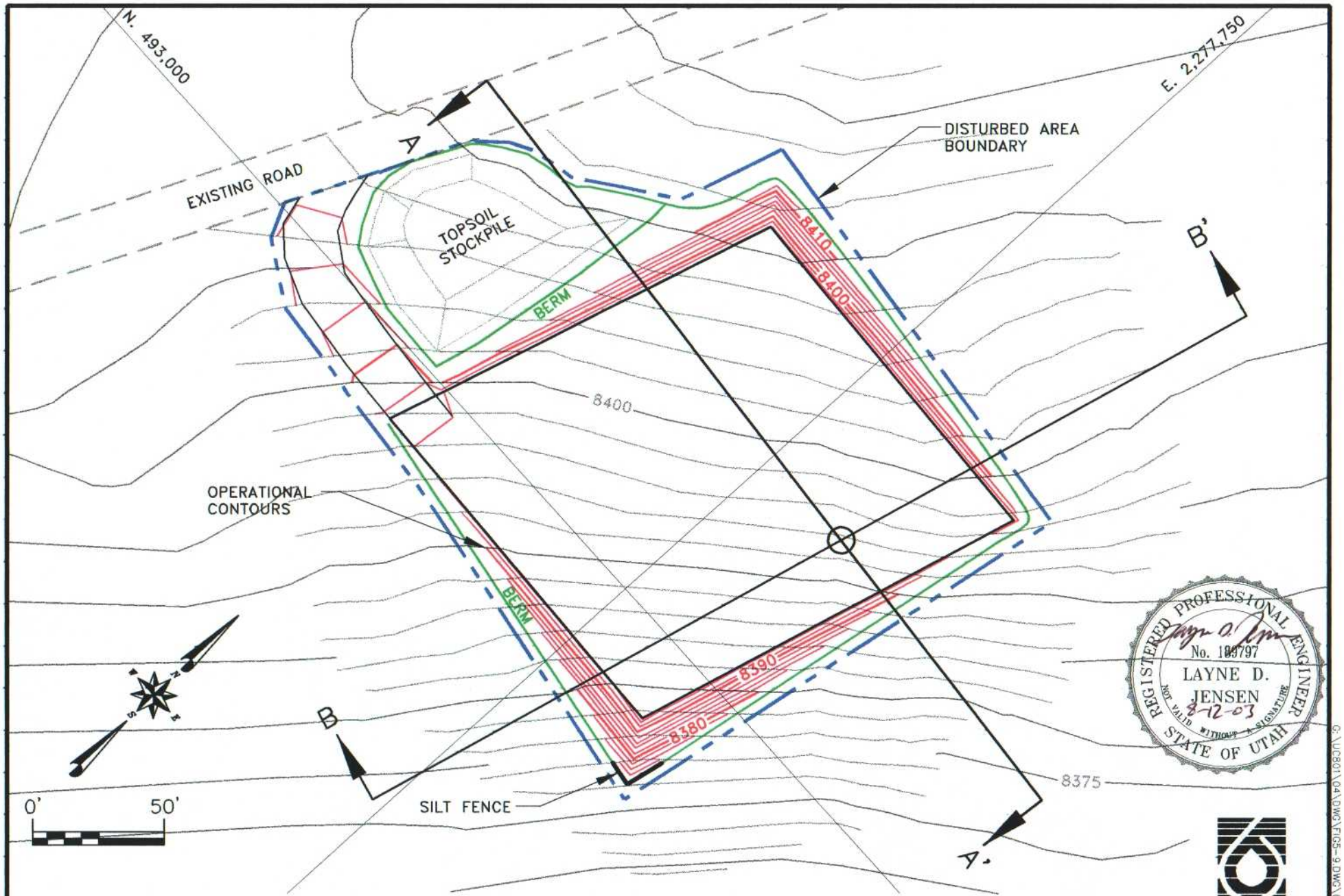
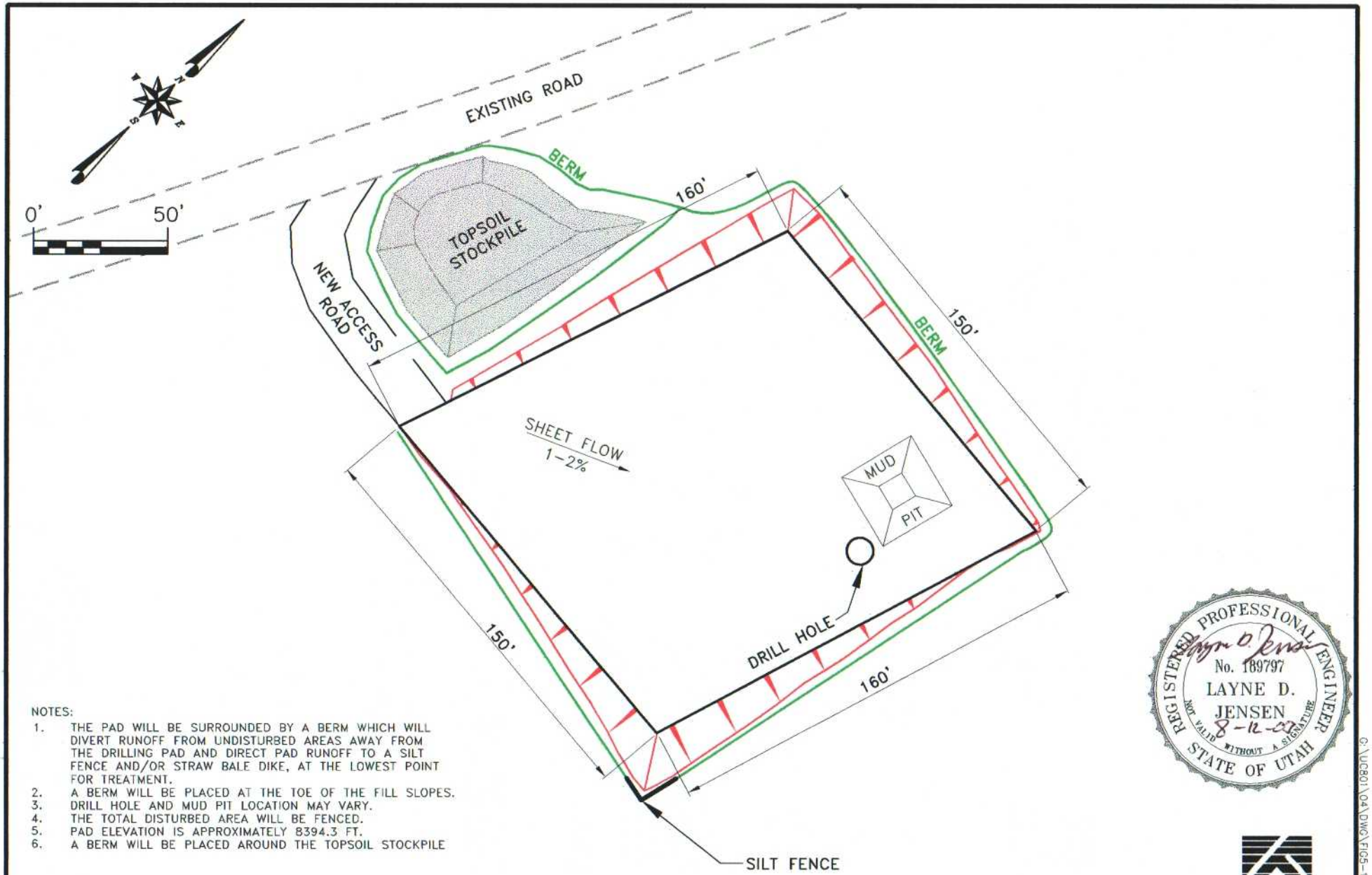



FIGURE 5-9. CONTOUR MAP FOR G-3

TOWNSHIP 13 SOUTH, RANGE 13 EAST, SECTION 19

G:\U0801\04\DWG\FIGS-9DWG\07-25-03




NOTES:

1. THE PAD WILL BE SURROUNDED BY A BERM WHICH WILL DIVERT RUNOFF FROM UNDISTURBED AREAS AWAY FROM THE DRILLING PAD AND DIRECT PAD RUNOFF TO A SILT FENCE AND/OR STRAW BALE DIKE, AT THE LOWEST POINT FOR TREATMENT.
2. A BERM WILL BE PLACED AT THE TOE OF THE FILL SLOPES.
3. DRILL HOLE AND MUD PIT LOCATION MAY VARY.
4. THE TOTAL DISTURBED AREA WILL BE FENCED.
5. PAD ELEVATION IS APPROXIMATELY 8394.3 FT.
6. A BERM WILL BE PLACED AROUND THE TOPSOIL STOCKPILE

REGISTERED PROFESSIONAL ENGINEER
No. 189797
LAYNE D. JENSEN
8-12-03
NOT VALID WITHOUT A SIGNATURE
STATE OF UTAH

FIGURE 5-11. APPROXIMATE DRILLING LAYOUT FOR G-3

EarthFax

G:\UC801\04\DWG\FIG5-11.DWG\07-28-03

# ATTACHMENT 7-1

# HYDROLOGY CALCULATIONS

# ATTACHMENT 7-1
# HYDROLOGY CALCULATIONS

REGISTERED PROFESSIONAL ENGINEER
2-12-03
No. 189797
LAYNE D.
JENSEN
STATE OF UTAH

# Berm Design for Drilling and Operational phases.

G-1

## Berm Design

$P_{10-24} = 2.0''$

Hydrologic soil group is assumed to be C since it is a mix of soils with Hydrologic soil group B and D.

CN = 87 (Dirt road) the topsoil stockpile will be seeded but I will assume there is no vegetation to be conservative

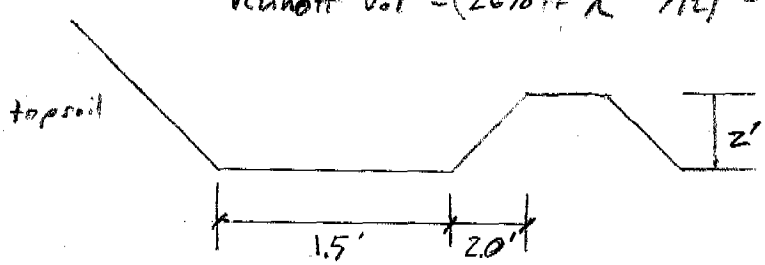
$$\text{Runoff Depth} = \frac{(P - 0.25)^2}{P + 0.8(S)}$$

$$S = 1000/CN - 10 = 1000/87 - 10 = 1.49$$

$$\text{Runoff Depth} = \frac{(2 - 0.2(1.49))^2}{2 + 0.8(1.49)} = \frac{2.9}{3.19} = 0.91''$$

Topsoil stockpile area = 2658 ft²

$$\text{Runoff Vol} = (2658\ ft^2)(0.91/12) = 202\ ft^3$$




Runoff flows to NW corner of stockpile

The volume of the containment will be calculated using the berm height and length to calculate a volume and then divided in half to account for the slope.

length of berm detaining water = 86'

Containment area = $(2')(1.5') + (2)[1/2(2)(2)] = 7\ ft^2$

Containment Volume = $1/2\,[(86')(7\ ft^2)] = 301\ ft^3$

99 ft³ of extra capacity. Calculation for both drilling and operational phases

G-2

Berm Design

Hydrologic soil group = C

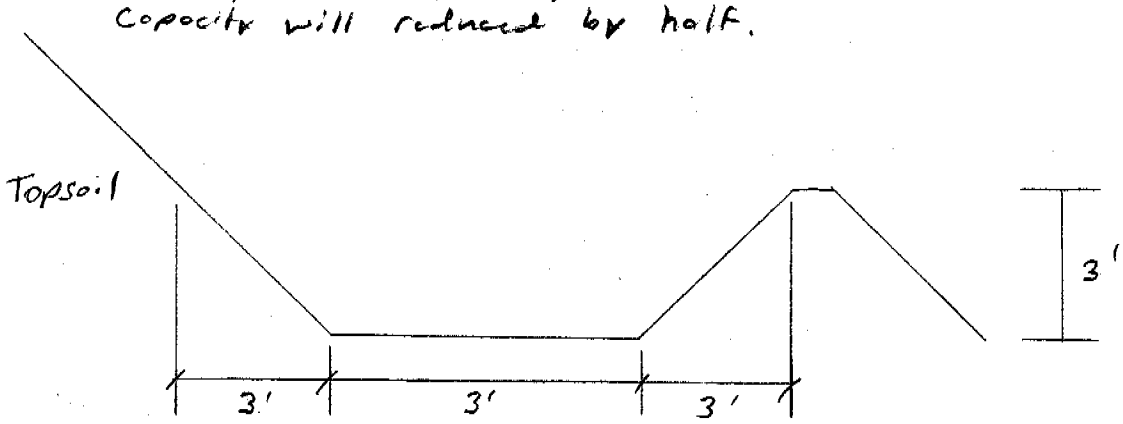
CN = 87

From G-1 Runoff Depth = 0.91"

Topsoil stockpile Area = 9512 ft²

Runoff Vol. = (9512 ft²)(0.91/12) = 721 ft³

Due to slope only the downstream end will store water. The length of berm impounding water is approx 84'. However, due to the slope towards the SE corner the capacity will reduced by half.




Containment Area = (3)(3) + ½ [(3)(3)+(3)(3)] = 18 ft²

Capacity = ½ [ (84')(18 ft²)] = 756 ft³

This design will Also work for the operational phase topsoil stockpile berm

Only the lower ¼ of the berm needs to be this big. A 1' high berm around the rest is sufficient to direct runoff.

G-7 **Berm Design**

Hydrologic Soil Group = D — mixture of topsoil with Hydrologic soil group of C + D.

CN = 89 (Dirt roads) — Assuming non vegetated condition. ∴ conservative estimate.

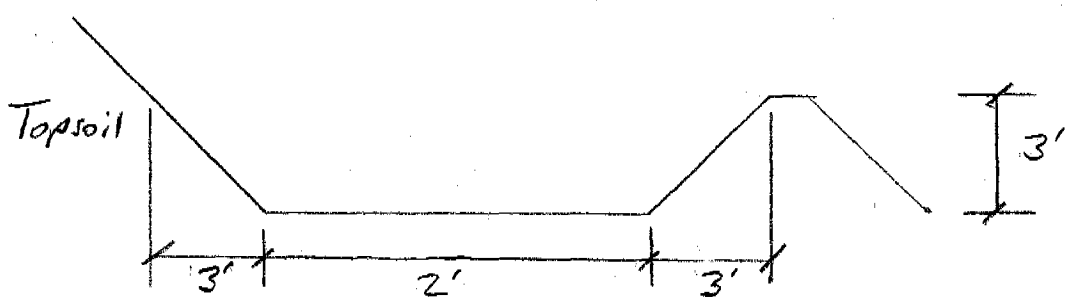
$$S = \frac{1000}{89} - 10 = 1.24$$

$$\text{Runoff Depth} = \frac{(2 - 0.2(1.24))^2}{2 + 0.8(1.24)} = \frac{3.07}{2.99} = 1.03''$$

Topsoil stockpile area = 5216 $ft^2$

Runoff Volume = $(5216\ ft^2)(1.03/12)$ = 448 $ft^3$

Due to the slope only the downstream berm will store runoff. The length of berm impounding water is approximately 77'. Runoff flows to the SE corner. Due to slope storage capacity will be reduced by half




Containment Area = $(2)(3) + \frac{1}{2}((3)(3) + (3)(3))$ = 14 $ft^2$

Berm Capacity = $\frac{1}{2}[(77')(14\ ft^2)]$ = 539 $ft^3 > 448\ ft^3$ ∴ ok

The berm only needs to be 3' tall for 35' from the SE corner. The rest of the berm may be 1' tall.

This design applies to the drilling and operational phase topsoil stockpiles.

## 810 BONDING DEFINITIONS AND DIVISION RESPONSIBILITIES

This chapter provides information regrading the bonding for reclamation of the well sites at the Dugout Canyon Mine. CFC has on file with the Division a bond or bonds payable to the Division for performance of all requirements of the State Program.

## 820 REQUIREMENTS TO FILE A BOND

A description of the disturbed area location for each well site is found in Chapter 1, Table 1-1. Reclamation of the disturbed areas are discussed in Section 340 of this submittal. The performance bond period is for the duration of coal mining and reclamation operations including the extended period designated by the Division. The bond is in the form of a surety bond and is described in Section 860 of the M&RP.

## 830 DETERMINATION OF BOND AMOUNT

The present bond of $3,682,000 should be sufficient to assure the completion of the reclamation plan. The reclamation bond (direct and indirect costs) for the well sites is ~~$62,530~~ 76,000 (2008 dollars). The most current formulas from the Office of Surface Mining, *Handbook for Calculation of Reclamation Bond Amounts*, April 2000 were used to determine the coverage necessary for reclamation (Means 2002). The reclamation plan and design criteria concerning the well sites can be found in Sections 540 and 550. The bonding information pertaining to the well sites will be incorporated into Appendix 5-6 of the approved M&RP upon approval of the bond. The bond coverage will be adjusted per the Division's determination of required bond coverage.

## 840 GENERAL TERMS AND CONDITIONS OF THE BOND

Refer to Chapter 8 of the approved M&RP.

# APPENDIX 5-6

Reclamation Bond Estimate

| | | |
|---|---|---|
| **Direct Costs** | | |
| Subtotal Demolition and Removal | $638,882 | |
| Subtotal Backfilling and Grading | $696,610 | |
| Subtotal Revegetation | $210,982 | |
| Subtotal Direct Costs | $1,546,474 | |
| **Indirect Costs** | | |
| Mobilization/Demobilization | $154,647 | 10.00% |
| Contingencies | $77,324 | 5.00% |
| Engineering Redesign | $38,662 | 2.50% |
| Main Office Expense | $105,160 | 6.80% |
| Project Management Fee | $38,662 | 2.50% |
| Subtotal Indirect Costs | $414,455 | |
| **Total Costs** | $1,960,928 | |
| Inflation Factor | | 0.025226 |
| Years | | 5 |
| Inflation | $247,336 | |
| Reclamation Cost Inflated | $2,208,265 | |
| Bond Amount (rounded to nearest $1,000) | $2,208,000 | |

Inflation Factor = $\frac{\text{ENR Construction Cost Index (CCI) for Current Year}}{\text{ENR CCI for mo/yr 5 years prior to Current Year}}$

| | | | |
|---|---|---|---|
| Current Year Sept. 2002 | 6589 | = | 1.126132 |
| Prior Sept. 1997 | 5851 | | 12.61% |

| Materials | Reference Number | Cost | Unit |
|---|---|---|---|
| Excavate Broken Concrete 3 CY (325BL) | 02315 400 0300 | 2.01 | /CY |
| Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY |
| 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY |
| On Site Disposal | 02220 375 5550 | 6.80 | /CY |
| Asphalt | 02220 375 1750 | 6.20 | /SY |
| Distance Disposal >5 miles | 0220 375 5600 | 9.38 | /CY |
| Steel Building | 02220 100 0012 | 0.24 | /CF |
| City Service | City Service Price | 4.00 | /CY |
| Haul, per mile over 8 CY Truck | 02225 730 5100 | 17.20 | /CY |
| 16 Ton Truck | 01590 200 5300 | 517.66 | /Day |
| Truck Driver | | 38.10 | /HR |
| Masonry Building | 02220 100 0080 | 0.20 | /CF |
| 1 CY Skid Loader | 02315 440 3020 | 10.92 | /CY |
| Excavator, Diesel Hydraulic, 3-1/2 CY Operating Rate | Blue Book | 53.15 | /HR |
| Excavator, Diesel Hydraulic, 3-1/2 CY Rental Rate | Blue Book | 15,130.00 | /Month |
| Concrete Pump | 03310 700 5350 | 19.75 | /CY |
| Excavator, Diesel Hydraulic, 2 CY (325B) | 02315 400 260 | 1.71 | /CY |
| Backfill trench, 2-1/4 CY Bucket | 02315 900 3080 | 1.55 | /CY |
| Machine Placed for Slope Protection | 02370 300 0100 | 27.45 | /CY |
| Polypropylene Mesh, Stapled, 6.5 oz./SY | 02370 300 0200 | 1.45 | /SY |
| Drill and Blast Open Face >1500 Cy | 02315 340 0010 | 8.29 | /CY |
| D9R U-Blade ROPS Operating Rate | Blue Book | 70.00 | /HR |
| D9R U-Blade ROPS Rental Rate | Blue Book | 17,590.00 | /Month |
| 815 F Compactor Operating Rate | Blue Book | 31.85 | /HR |
| 815 F Compactor Rental Rate | Blue Book | 9,064.00 | /Month |
| 613C Water Wagon Operating Rate | Blue Book | 25.70 | /HR |
| 613 C Water Wagon Rental Rate | Blue Book | 5,010.00 | /Month |
| Truck Pickup 3/4 ton, 4 Wheel drive Operating Rate | Blue Book | 7.40 | /HR |
| Truck Pickup 3/4 ton, 4 Wheel drive Rental Rate | Blue Book | 785.00 | /Month |
| Foreman | | 39.60 | /HR |
| Labor | | 36.50 | /HR |
| Heavy Equipment Operator | | 47.15 | /HR |
| Front-End Loader 5 CY (966G) Operating Rate | Blue Book | 29.05 | /HR |
| Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095.00 | /Month |
| 12 CY Truck | 01590 200 5250 | 19.90 | /HR |
| Excavator, Diesel Hydraulic, 2 CY (325B) | 01590 200 0300 | 33.90 | /HR |
| Hydro seeding, seed, fertilizer, wood mulch | 02920 500 1100 | 0.47 | /SY |
| State Nursery | | 1.00 | /Plant |
| Shrubs | 02930 410 0200 | 6.05 | /Plant |
| Storm Drainage | 02630 100 2240 | 31.50 | /FT |
| Water Line | 02220 875 3200 | 4.96 | /FT |
| Sewer Line | 02220 875 3200 | 9.88 | /FT |
| Backhoe-Loader | 01590 200 0460 | 9.20 | /HR |
| 12-18 CY Truck Operating Rate | Blue Book | 25.05 | /HR |
| 12-18 CY Truck Rental Rate | Blue Book | 3,580.00 | |
| Silt Fence | 02370 550 1100 | 0.93 | /LF |
| Chicken Wire | 02820 500 0010 | 6.56 | /LF |
| Crew B 13 | Means Crew B 13 | 374.41 | /HR |
| 6000 gal to 8000 gal tank | 02115 200 0310 | 225.00 | /EA |
| Mixed Material Building, Large | 02220 100 0100 | 0.26 | /CF |
| Pipe Removal 12 inch | 02220 875 2900 | 6.50 | /LF |
| Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY |
| ECDC | ECDC | 35.00 | /TON |
| Seal Portals | AML1 | 5,200.00 | /EA |
| Concrete-Geneva Rock | R03310-060 | 69.00 | /CY |
| Fencing, barbed wire, 3 strand | 0200-875-0600 | 1.36 | /LF |
| Bare root seedlings 6 to 10 inch, heavy soil | | 1.15 | EA |

Note:
Resources used were:
R. S. Means Building Construction Cost Data 60th Edition

**Concrete Breakage**

Concrete Demolition — 13.56 per cu. yd.

Powerline

1/3 the cost of a new line $1,550 plus $705 for labor and equipment divided by 5,280 feet. Personal communication with Means — 0.23 /FT

Powerpoles

1/3 the cost of a new pole $226 plus $51 for labor and equipment Personal communication with Means. — 126 /Pole

| Ref. | Description | Cost |
|---|---|---|
| 1 | Mine Belt BC-1 | 18,333 |
| 2 | Transfer Building | 34,105 |
| 3 | Feed Belt BC-2 | 12,941 |
| 4 | Stack Tube (2) | 4,436 |
| 5 | Head House #1 | 6,233 |
| 6 | Transfer Belt BC-3 | 8,254 |
| 7 | Head House #2 | 1,567 |
| 8 | Reclaim Tunnel | 39,378 |
| 9 | Reclaim Belt BC-4 | 11,599 |
| 10 | 60" Escape Tunnel | 909 |
| 11 | Crusher Building | 30,113 |
| 12 | Truck Loadout Belt BC-5 | 9,569 |
| 13 | Truck Loadout and Scale | 25,024 |
| 14 | Bathhouse | 126,051 |
| 15 | Substation | 1,920 |
| 16 | Power Lines and Poles | 2,884 |
| 17 | Retaining Wall | 844 |
| 18 | Gabion Wall | 55,822 |
| 19 | Pump House | 3,074 |
| 20 | Paved Roads | 53,439 |
| 21 | Stream Culverts | 45,702 |
| 22 | Water Tank (2) | 3,430 |
| 23 | Rock Dust Bin | 1,117 |
| 24 | Fueling Station | 1,610 |
| 25 | Holding Tank (Sewer) | 315 |
| 26 | Ventilation Fan | 2,146 |
| 27 | Magnet | 578 |
| 28 | Water System | 65,266 |
| 29 | Sewage System | 21,873 |
| 30 | Containers | 9,160 |
| 31 | Gilson Well | 1,768 |
| 32 | Shop Building | 5,032 |
| 33 | Switch Houses | 1,128 |
| 34 | Sampling System | 1,472 |
| 35 | Storage Building | 1,950 |
| 36 | Stoker Storage Bin | 990 |
| 37 | Substation No 2 | 2,849 |
| 38 | Seal Portals | 26,000 |
| | Total | 638,882 |

| Ref. | Description | Cost |
|---|---|---|
| 39 | Cut and Fill Mine Site | 311,921 |
| 40 | Topsoil Placement | 143,686 |
| 41 | Stream Channel | 108,250 |
| 42 | Gabion Baskets | 447 |
| 43 | Refuse Site | 91,166 |
| 44 | G-1 | 6,340 |
| 45 | G-2 | 20,473 |
| 46 | G-3 | 14,327 |
| | Total | 696,610 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Mine Bell BC-1 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 62600 | | | | | CF | | 62600 | CF | 15,072 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 814 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 15 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 52 | | | | | Ton | | 3.3 | Days | 1,708 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 26 | Hrs. | 991 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 17,771 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.55 | /CY | | | | | | 20 | | | | | CY | | 20 | CY | 271 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 26 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (988G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 26 | CY | 34 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 26 | CY | 80 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 26 | CY | 177 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 562 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 18,333 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Transfer Building | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 104618 | | | | | CF | | 104618 | CF | 25,108 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 1356 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 50 | | | | | Ton | | 3.1 | Days | 1,605 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 25 | Hrs. | 953 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | 27,666 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 229 | | | | | CY | | 229 | CY | 3,105 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 298 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 298 | CY | 387 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0020 | 3.09 | /CY | | | | | | | | | | | | | 298 | CY | 921 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 298 | CY | 2,026 |
| | [illegible] | | | | | | | | | | | | | | | | | | | 6,440 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total [illegible] | | | | | | | | | | | | | | | | | | | 34,106 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Feed Belt BC-2 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 47438 | | | | | CF | | 47438 | CF | 11,385 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 615 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 30 | | | | | Ton | | 1.9 | Days | 984 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 15 | Hrs. | 572 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 12,941 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total (Rd 1) | | | | | | | | | | | | | | | | | | | 12,941 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Stack Tube (2) | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 158 | | | | | CY | | 158 | CY | 2,142 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 205 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 205 | CY | 267 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 205 | CY | 633 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 205 | CY | 1,394 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 4,436 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Bitwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 4,436 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Head House #1 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 23878 | | | | | CF | | 23878 | CF | 5,731 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 310 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 15 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 10 | | | | | Ton | | 0.6 | Days | 311 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 5 | Hrs. | 191 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | [illegible] | | | | | | | | | | | | | | | | | 6,233 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | [illegible] | | | | | | | | | | | | | | | | | | | 6,233 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Transfer Belt BC-3 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 30000 | | | | | CF | | 30000 | CF | 7,200 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 389 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 20 | | | | | Ton | | 1.3 | Days | 673 |
| | Transportation Cost Steel Drive | Truck Driver | | 36.10 | /HR | | | | | | | | | | | | | 10 | Hrs. | 361 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 8,254 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 8,254 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | Head House #2 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 4436 | | | | | CF | | 4436 | CF | 1,065 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 58 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 10 | | | | | Ton | | 0.6 | Days | 311 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 5 | Hrs. | 191 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,567 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,567 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Reclaim Tunnel | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 160 0012 | 0.24 | /CF | | | | | | 18774 | | | | | CF | | 18774 | CF | 4,506 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 243 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 32 | | | | | Ton | | 2 | Days | 1,035 |
| | Transportation Cost Steel Drive | Truck Driver | | 36.10 | /HR | | | | | | | | | | | | | 16 | Hrs. | 610 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 6,151 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 1182 | | | | | CY | | 1182 | CY | 16,028 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 1537 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 1537 | CY | 1,998 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 1537 | CY | 4,749 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 1537 | CY | 10,452 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 33,227 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 39,378 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Reclaim Belt BC-4 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 35180 | | | | | CF | | 35180 | CF | 8,443 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 456 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.86 | /Day | | | | | | 40 | | | | | Ton | | 2.5 | Days | 1,294 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 20 | Hrs. | 762 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 10,499 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 39 | | | | | CY | | 39 | CY | 529 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 51 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 51 | CY | 66 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 51 | CY | 158 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 51 | CY | 347 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,100 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 11,599 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 60" Escape Tunnel | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 2827 | | | | | CF | | 2827 | CF | 678 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 37 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 4 | | | | | Ton | | 0.3 | Days | 155 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 2 | Hrs. | 76 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 909 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Totals | | | | | | | | | | | | | | | | | | | 909 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Crusher Building | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 93305 | | | | | CF | | 93305 | CF | 22,393 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 18 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 100 | | | | | Ton | | 6.3 | Days | 3,261 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 50 | Hrs. | 1,905 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 27,558 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 91 | | | | | CY | | 91 | CY | 1,234 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 118 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 118 | CY | 153 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 118 | CY | 365 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 118 | CY | 802 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,554 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Birwell | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 30,113 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | Truck Loadout Bell BC-5 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 30899 | | | | | CF | | 30899 | CF | 7,416 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 401 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 20 | | | | | Ton | | 1.3 | Days | 673 |
| | Transportation Cost Steel Drive | Truck Driver | | 35.10 | /HR | | | | | | | | | | | | | 10 | Hrs. | 351 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 8,440 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 39 | | | | | CY | | 39 | CY | 529 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 51 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 51 | CY | 66 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 51 | CY | 158 |
| | Disposal Cost | On Site Disposal | 02220 375 5560 | 6.80 | /CY | | | | | | | | | | | | | 51 | CY | 347 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,100 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 9,500 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | Truck Loadout and Scale | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 74976 | | | | | CF | | 74976 | CF | 17,994 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 972 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 50 | | | | | Ton | | 3.1 | Days | 1,605 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 25 | Hrs. | 953 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 20,552 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 159 | | | | | CY | | 159 | CY | 2,156 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 207 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 207 | CY | 269 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 207 | CY | 640 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 207 | CY | 1,406 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 4,472 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sirwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 25,024 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | Bathhouse | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 416365 | | | | | CF | | 416365 | CF | 99,928 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.2 | 3084 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | City Service | City Service Price | 4.00 | /CY | | | | | | | | | | | | | 3084 | CY | 12,336 |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 15 Ton Truck | 01590 200 5300 | 517.68 | /Day | | | | | | 107 | | | | | Ton | | 6.7 | Days | 3,468 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 54 | Hrs. | 2,057 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 117,789 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 294 | | | | | CY | | 294 | CY | 3,987 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 382 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 382 | CY | 497 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 382 | CY | 1,180 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 382 | CY | 2,598 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 8,262 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 126,051 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Substation | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | Mixed Material Building, Large | 02220 100 0100 | 0.26 | /CF | | | | | | 4000 | | | | | CF | | 4000 | CF | 1040 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | 0.35 | 52 | CY | |
| | Bubblee Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | City Service | City Service Price | 4.00 | /CY | | | | | | | | | | | | | 52 | CY | 206 |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,246 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 24 | | | | | CY | | 24 | CY | 325 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 31 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 31 | CY | 40 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 31 | CY | 96 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 31 | CY | 211 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 672 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Bitwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 3,920 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | Power Lines and Poles | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | Wire Removal | | 0.23 | /FT | | | | | | 3773 | | | | | FT | | 3773 | FT | 868 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 868 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | Pole Removal | | 126 | /Pole | | | | | | 16 | | | | | Poles | | 16 | Poles | 2,016 |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,016 |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sidewall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 2,884 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | Retaining Wall | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 30 | | | | | CY | | 30 | CY | 407 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 39 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 39 | CY | 51 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 39 | CY | 121 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 39 | CY | 265 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 844 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 844 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Gabion Wall | | | | | | | | | | | | | | | | | | | |
| | Structure Volume | | | | | | | | | | 880 | | | | | CY | | | | |
| | Demolition Time 60 CY/DAY | | | | | | | | | | | | | | 117 | HR | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Crew B 13 | Means Crew B 13 | 374.41 | /HR | | | | | | | | | | | | | 117 | HR | 43,806 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | 2 | | | TONS/CY | | 1760 | TONS | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | | | | | | | | 14.6 | Days | 7,558 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 117 | Hrs. | 4,458 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 55,822 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 55,822 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | Pump House | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CY | | | | | | 2219 | | | | | CY | | 2219 | CY | 533 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 5 | | | | | Ton | | 0.3 | Days | 155 |
| | Transportation Cost Steel Drive | Truck Driver | | 35.10 | /HR | | | | | | | | | | | | | 2 | Hrs. | 76 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 764 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 82 | | | | | CY | | 82 | CY | 1,112 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 107 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 107 | CY | 139 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 107 | CY | 331 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 107 | CY | 728 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,306 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 3,074 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | Paved Roads | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | Asphalt | 02220 375 1750 | 6.20 | /SY | | | | | | 8448 | | | | | SY | | 8448 | SY | 52,378 |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | On Site Disposal | 02220 375 1750 | 6.80 | /CY | | | | | | 156 | | | | | CY | | 156 | CY | 1,061 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 53,439 |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 53,439 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | Stream Culverts | | | | | | | | | | | | | | | | | | | |
| | Excavate Culvert | Excavator, Diesel Hydraulic, 2 CY (325B) | 02315 400 260 | 1.71 | /CY | 2350 | 12 | 12 | | | 12533 | | | | | CT | | 12533 | CY | 21431 |
| | Backfill Culvert | Backfill trench, 2-1/4 CY Bucket | 02315 900 3060 | 1.55 | /CY | 2350 | 12 | 12 | | | 12533 | | | | | CT | | 12533 | CY | 19426 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 15 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 94 | | | | | Ton | | 5.9 | Days | 3,054 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 47 | Hrs. | 1,791 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 45,702 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Birwell | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 45,702 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | Water Tank (2) | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 241 | | | | | CF | | 241 | CF | 58 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 3 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 15 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 39 | | | | | Ton | | 2.4 | Days | 1,242 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 19 | Hrs. | 724 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,024 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 50 | | | | | CY | | 50 | CY | 678 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 65 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 65 | CY | 85 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 65 | CY | 201 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 65 | CY | 442 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,406 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 3,430 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | Rock Dust Bin | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 2265 | | | | | CF | | 2265 | CF | 544 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 5 | | | | | Ton | | 0.3 | Days | 155 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 2.0 | Hrs. | 76 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 775 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 12 | | | | | CY | | 12 | CY | 163 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 16 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 16 | CY | 21 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 16 | CY | 49 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 16 | CY | 109 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 342 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,117 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | Fueling Station | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 3945 | | | | | CF | | 3945 | CF | 947 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 51 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 617.66 | /Day | | | | | | 7 | | | | | Ton | | 0.4 | Days | 207 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 3 | Hrs. | 114 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,268 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 12 | | | | | CY | | 12 | CY | 163 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 16 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 16 | CY | 21 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 16 | CY | 49 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 16 | CY | 109 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 342 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,610 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | Holding Tank (Sewer) | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | 6000 gal to 8000 gal tank | | 226.00 | /GAL | | | | | | 1 | | | | | EA | | 1 | Gal | 225 |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | 2 | | | | TON | | 2 | TON | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.88 | /Day | | | | | | | | | | | | | 0.10 | Days | 52 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 1 | Hrs. | 38 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 315 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 315 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | Ventilation Fan | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 6850 | | | | | CF | | 6850 | CF | 1,644 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 89 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 10 | | | | | Ton | | 0.6 | Days | 311 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 5 | Hrs. | 191 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,146 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 2,146 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | Magnet | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 35 | | | | | CF | | 35 | CF | 8 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 0 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 2 | | | | | Ton | | 0.1 | Days | 52 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 1 | Hrs. | 38 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 98 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.58 | /CY | | | | | | 17 | | | | | CY | | 17 | CY | 231 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 22 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.23 | /CY | | | | | | | | | | | | | 22 | CY | 27 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.29 | /CY | | | | | | | | | | | | | 22 | CY | 72 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 22 | CY | 150 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 480 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 578 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | Water System | | | | | | | | | | | | | | | | | | | |
| | Excavate Pipe | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | 8450 | 2 | 4 | | | 67600 | | | | | CF | | 2504 | CY | 6460 |
| | Pipe Removal | Pipe Removal 12 inch | 02220 875 2900 | 6.50 | /LF | 8450 | | | | | | | | | | LF | | 8450 | LF | 54925 |
| | Backfill Trench | Backfill trench, 2-1/4 CY Bucket | 02315 900 3080 | 1.55 | /CY | 8450 | 2 | 4 | | | 67600 | | | | | CF | | 2504 | CY | 3881 |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubble Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 65,266 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sitewall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 65,266 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 29 | Sewage System | | | | | | | | | | | | | | | | | | | |
| | Excavate Pipe | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | 2832 | 2 | 4 | | | 22656 | | | | | CF | | 839 | CY | 2165 |
| | Pipe Removal | Pipe Removal 12 inch | 02220 875 2900 | 6.50 | /LF | 2832 | | | | | | | | | | | | 2832 | LF | 18406 |
| | Backfill Trench | Backfill trench, 2-1/4 CY Bucket | 02315 900 3060 | 1.55 | /CY | 2832 | 2 | 4 | | | 22656 | | | | | CF | | 839 | CY | 1300 |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 21,873 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 21,873 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | Containers | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Mixed Material Building, Large | 02220 100 0100 | 0.26 | /CF | 40 | 10 | 10 | | | 4000 | | | | 8 | CF | | 32000 | CF | 8,320 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | | CF | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | ECDC | ECDC | 35.00 | /TON | | | | | | 24 | | | | | TON | | 24 | TON | 840 |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 9,160 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sitewall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 9,160 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Gibson Well | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 800 | | | | | CF | | 800 | CF | 192 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 10 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 0.5 | | | | | Ton | | 0.03 | Days | 16 |
| | Transportation Cost Steel Drive | Truck Driver | | 35.10 | /HR | | | | | | | | | | | | | 0.2 | Hrs. | 8 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 216 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.58 | /CY | | | | | | 55 | | | | | CY | | 55 | CY | 746 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 72 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 72 | CY | 94 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 72 | CY | 222 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 72 | CY | 490 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,552 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,768 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | Shop Building | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 14400 | | | | | CF | | 14400 | CF | 3,456 |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | 0.35 | 187 | CY | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 0.5 | | | | | Ton | | 0.03 | Days | 16 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 0.2 | Hrs. | 8 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 3,480 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 55 | | | | | CY | | 55 | CY | 746 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 72 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 72 | CY | 94 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 72 | CY | 222 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 72 | CY | 490 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,552 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 5,032 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | Switch Houses | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubblee Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 18 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 16 | | | | | Ton | | 1.00 | Days | 518 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 8 | Hrs. | 305 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 823 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.55 | /CY | | | | | | 11 | | | | | CY | | 11 | CY | 149 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 14 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 14 | CY | 18 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 14 | CY | 43 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 14 | CY | 95 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 305 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,126 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | Sampling System | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 16 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 16 | | | | | Ton | | 1.1 | Days | 569 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 9 | Hrs. | 343 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 912 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.58 | /CY | | | | | | 19.84 | | | | | CY | | 19.84 | CY | 269 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 26 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 26 | CY | 34 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 26 | CY | 80 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 26 | CY | 177 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 560 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavsie | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 1,472 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | Storage Building | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | Steel Building | 02220 100 0012 | 0.24 | /CF | | | | | | 2284 | | | | | CF | | 2284 | CF | 548 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | 0.35 | 30 | CY | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | 18 Ton Truck | 01590 200 5300 | 517.66 | /Day | | | | | | 5 | | | | | Ton | | 0.4 | Days | 207 |
| | Transportation Cost Steel Drive | Truck Driver | | 38.10 | /HR | | | | | | | | | | | | | 3 | Hrs. | 114 |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 869 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.66 | /CY | | | | | | 38.4 | | | | | CY | | 38.4 | CY | 521 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 50 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 50 | CY | 65 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 50 | CY | 155 |
| | Disposal Cost | On Site Disposal | 02220 376 5550 | 6.80 | /CY | | | | | | | | | | | | | 50 | CY | 340 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,081 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sinwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 2,950 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 36 | Stoker Storage Bin | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| 6 | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 35 | | | | | CY | | 35 | CY | 475 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 46 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1850 | 1.30 | /CY | | | | | | | | | | | | | 46 | CY | 60 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 46 | CY | 142 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 46 | CY | 313 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 990 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 990 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | Substation No 2 | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | Mixed Material Building, Large | 02220 100 0100 | 0.26 | /CF | | | | | | 4000 | | | | | CF | | 4000 | CF | 1040 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | 0.35 | 52 | CY | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Hautage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | City Service | City Service Price | 4.00 | /CY | | | | | | | | | | | | | 52 | CY | 208 |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Hautage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,248 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | Concrete Demolition | | 13.56 | /CY | | | | | | 57 | | | | | CY | | 57 | CY | 773 |
| | Demolition Cost | | | | | | | | | | | | | | | | 1.3 | 74 | CY | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Front-End Loader 5 CY (966G) | 02315 400 1650 | 1.30 | /CY | | | | | | | | | | | | | 74 | CY | 96 |
| | Transportation Cost | 12 CY Truck, 1/2 mile Round Trip | 02320 200 0320 | 3.09 | /CY | | | | | | | | | | | | | 74 | CY | 229 |
| | Disposal Cost | On Site Disposal | 02220 375 5550 | 6.80 | /CY | | | | | | | | | | | | | 74 | CY | 503 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,601 |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 2,849 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | Seal Portals | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | Seal Portals | AML1 | 5,200.00 | /EA | | | | | | | | | | 5 | EA | | 5 | EA | 26000 |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 26,000 |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Binwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | | | | | | | | | | | | | | | | | | | |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 26,000 |

| 39 | Equipment Costs | Hourly Operating Costs | Hourly Equipment Cost | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cut and Fill Mine Site | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Equipment | | | | | | | | | | | | | | | |
| Rough Grading (1) | | | | | | | | | | | | | | | |
| D9R U-Blade ROPS | 17,590 | 70.00 | 0.10 | 47.15 | 234.09 | 1 | 234.09 | $/Hr | 118,169 | CY | 186 | CY/Hr | 635.3 | Hrs. | 148,721 |
| | | | | | | | | | | | | | | | |
| Finishing Grading (2) | | | | | | | | | | | | | | | |
| D9R U-Blade ROPS | 17,590 | 70.00 | 0.10 | 47.15 | 234.09 | 1 | 234.09 | $/Hr | 19,926 | CY | 186 | CY/Hr | 107.1 | Hrs. | 25,078 |
| | | | | | | | | | | | | | | | |
| 815 F Compactor (3) | 9,064 | 31.85 | 0.10 | 47.15 | 138.84 | 1 | 138.84 | $/Hr | 58,490 | CY | 876 | CY/Hr | 66.8 | Hrs. | 9,270 |
| | | | | | | | | | | | | | | | |
| Excavator, Diesel Hydraulic, 3-1/2 CY | 15,130 | 53.15 | 0.10 | 47.15 | 200.18 | 1 | 200.18 | $/Hr | 10,000 | CY | 392 | CY/Hr | 25.5 | Hrs. | 5,107 |
| | | | | | | | | | | | | | | | |
| Front-End Loader 5 CY (996G) | 7,095 | 29.05 | 0.10 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 8,342 | CY | 204 | CY/Hr | 40.9 | Hrs. | 5,048 |
| | | | | | | | | | | | | | | | |
| Support Personnel and Labor | | | | | | | | | | | | | | | |
| Laborer | | | | 36.50 | 36.50 | 1 | 36.50 | $/Hr | | | | | 635.3 | Hrs. | 23,189 |
| 5,000 Gallon Water Wagon | 5,010 | 25.70 | 0.1 | 38.10 | 97.68 | 1 | 97.68 | $/Hr | | | | | 635.3 | Hrs. | 62,058 |
| Pick-up 3/4 Ton 4x4 | 785 | 7.40 | 0.10 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 635.3 | Hrs. | 8,291 |
| Foreman Outside | | | | 39.60 | 39.60 | 1 | 39.60 | $/Hr | | | | | 635.3 | Hrs. | 25,159 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | 311,921 |

NOTES:

(1) Assumes all cut material handled by a dozer with 20% double handling.
(2) Finish grading production is based on a 150' haul and 70% efficiency.
(3) Assumes that the top 18" are not compacted to promote establishment of vegetation.
(4) Channel excavation is accounted for in the stream channel restoration section.

| 40 | Equipment Costs | Hourly Operating Costs | Hourly Equipment Cost | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Topsoil Placement | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Move Topsoil | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| D9R U-Blade ROPS | 17,590 | 70.00 | 0.1 | 47.15 | 234.09 | 1 | 234.09 | $/Hr | 21,460 | CY | 186 | CY/Hr | 115.4 | Hrs. | 27,008 |
| | | | | | | | | | | | | | | | |
| Pocking Handled in Vegetation Section | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Front-End Loader (966G) | 7,095 | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 21,460 | CY | 204 | CY/Hr | 105.2 | Hrs. | 12,986 |
| | | | | | | | | | | | | | | | |
| 20 CY Truck | 3,580 | 25.05 | 0.1 | 38.10 | 88.03 | 10 | 880.30 | $/Hr | 21,460 | CY | 230 | CY/Hr | 93.3 | Hrs. | 82,136 |
| | | | | | | | | | | | | | | | |
| Support Personnel and Labor | | | | | | | | | | | | | | | |
| Laborer | | | | 36.50 | 36.50 | 1 | 36.50 | $/Hr | | | | | 115.4 | Hrs. | 4,211 |
| 5,000 Gallon Water Wagon | 5,010 | 25.70 | 0.1 | 38.10 | 97.68 | 1 | 97.68 | $/Hr | | | | | 115.4 | Hrs. | 11,270 |
| Pick-up 3/4 Ton 4x4 | 785 | 7.40 | 0.10 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 115.4 | Hrs. | 1,506 |
| Foreman Outside | | | | 39.60 | 39.60 | 1 | 39.60 | $/Hr | | | | | 115.4 | Hrs. | 4,569 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | 143,686 |

| 41 | Equipment Costs | Hourly Operating Costs | Hourly Equipment Costs | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Channel | | | | | | | | | | | | | | | |
| Excavator, Diesel hydraulic, 3-1/2 CY | 15,130 | 53.15 | 0.1 | 47.15 | 200.18 | 1 | 200.18 | $/Hr | 14,400 | CY | 392 | CY/Hr | 36.7 | Hrs. | 7,354 |
| Front-End Loader (966G) | 7,095 | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 1,500 | CY | 204 | CY/Hr | 7.4 | Hrs. | 908 |
| 20 CY Truck | 3,580 | 25.05 | 0.1 | 38.10 | 88.03 | 6 | 528.18 | $/Hr | 7,000 | CY | 50 | CY/Hr | 140.0 | Hrs. | 73,945 |
| Machine Placed for Slope Protection | | | | | | | 27.45 | /CY | 561 | CY | | | | | 15,399 |
| Polypropylene Mesh, Stapled, 6.5 oz./SY | | | | | | | 1.45 | /SY | 1,683 | SY | | | | | 2,440 |
| Support Personnel and Labor | | | | | | | | | | | | | | | |
| Laborer (2) | | | | 36.50 | 36.50 | 2 | 73.00 | $/Hr | | | | | 36.7 | Hrs. | 2,682 |
| Pick-up 3/4 Ton 4x4 | 785 | 7.40 | 0.1 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 36.7 | Hrs. | 479 |
| Foreman Outside | | | | 39.60 | 39.60 | 1 | 39.60 | $/Hr | | | | | 36.7 | Hrs. | 1,455 |
| 5,000 Gallon Water Wagon | 5,010.00 | 25.70 | 0.1 | 38.10 | 97.68 | 1 | 97.68 | $/Hr | | | | | 36.7 | Hrs. | 3,588 |
| | Total | | | | | | | | | | | | | | 108,250 |

| Ref | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | Gabion Baskets | | | | | | | | | | | | | | | | | | | |
| | Structure Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Structure Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Bubbles Weight (exclude steel) | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Non-Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Non-Steel | | | | | | | | | | | | | | | | | | | |
| | Steel Weight | | | | | | | | | | | | | | | | | | | |
| | Truck Capacity | | | | | | | | | | | | | | | | | | | |
| | Haulage | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Truck | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost Steel Drive | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost Steel | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Equipment Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Dismantling Cost | | | | | | | | | | | | | | | | | | | |
| | Equipment Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Costs | | | | | | | | | | | | | | | | | | | |
| | Transport Costs | | | | | | | | | | | | | | | | | | | |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Excavation | | | | | | | | | | | | | | | | | | | |
| | Excavation Sirwall | | | | | | | | | | | | | | | | | | | |
| | Excavate | Excavator, Diesel Hydraulic, 2 CY | 02315 400 0260 | 1.71 | /CY | | | | | | 88 | | | | | CY | | 88 | CY | 150 |
| | Vol. To Be Disposed | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | Laborers (2) 4 Hours/Laborer | | 36.50 | /HR | | | | | | 8 | | | | | Hrs | | 8 | Hrs. | 292 |
| | Transportation Cost | | City Service Price | 4.00 | /CY | | | | | | 1.22 | | | | | CY | | 1.22 | CY | 5 |
| | Disposal Costs | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 447 |
| | | | | | | | | | | | | | | | | | | | | |
| | Concrete Demolition | | | | | | | | | | | | | | | | | | | |
| | Demolition Cost | | | | | | | | | | | | | | | | | | | |
| | Concrete Vol. Demolished | | | | | | | | | | | | | | | | | | | |
| | Loading Cost | | | | | | | | | | | | | | | | | | | |
| | Transportation Cost | | | | | | | | | | | | | | | | | | | |
| | Disposal Cost | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 447 |

| Ref 43 | Description | Materials | Means Reference Number | Unit Cost | Unit | Hourly Operating Costs | Hourly Equipment Costs | Operator's Hourly Wage Rate | Hourly Cost | Number or Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Unit | Equip. + Labor Time/Dis. | Unit | | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refuse Site | | | | | | | | | | | | | | | | | | | | |
| | Sturcture Demolition Cost | Fencing, barbed wire, 3 strand | 0200-875-0600 | 1.36 | /LF | | | | | | | | 3250 | LF | | | 1.36 | /LF | | 4,420 |
| | | | | | | | | | | | | | | | | | | | | |
| | Grading and Backfilling | D9R U-Blade ROPS Operating Rate | | 17,590 | | 70.00 | 0.1 | 47.15 | 234.09 | 1 | 234.09 | $/Hr | 9687 | CY | 102 | CT/Hr | 96.9 | hrs | | 22,683 |
| | | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 27,103 |
| | | | | | | | | | | | | | | | | | | | | |
| | Spread Topsoil | Front-End Loader 5 CY (966G) | | 7,095 | | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr. | 36700 | CY | 203 | LCY/Hr. | 180.8 | Hrs. | | 22,318 |
| | | | | | | | | | | | | | | | | | | | | |
| | Subtotal | | | | | | | | | | | | | | | | | | | 22,318 |
| | | | | | | | | | | | | | | | | | | | | |
| | Foreman | | | | | | | 39.60 | 39.60 | 1 | 39.60 | $/Hr. | | | | | 277.7 | Hrs. | | 10,996 |
| | Truck Pickup 3/4 ton, 4 Wheel drive | | | 788 | | 7.40 | 0.1 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 277.7 | Hrs. | | 3,624 |
| | 5,000 Gallon Water Wagon | | | 5,010 | | 25.70 | 0.1 | 38.10 | 97.68 | 1 | 97.68 | $/Hr | | | | | 277.7 | Hrs. | | 27,125 |
| | | | | | | | | | | | | | | | | | | | | 41,745 |
| | | | | | | | | | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | | | | | | | | 91,166 |

| Ref 44 | Description | Materials | Means Reference Number | Unit Costs | Units | Hourly Operating Costs | Hourly Equipment Cost | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G-1 | | | | | | | | | | | | | | | | | | | |
| | Grading and Backfilling | | | | | | | | | | | | | | | | | | |
| | Fill In Mud Pit | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095.00 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 42 | CY | 193 | CY | 0.2 | Hrs | 27 |
| | Fill Drill Pad | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 840 | CY | | | | | 2,167 |
| | | | | | | | | | | | | | | | | | | | 2,194 |
| | Plug Well Casing | Concrete-Geneva Rock | R03310-060 | 69 | /CY | | | | | | | 21 | | CY | | | | | 1,449 |
| | | | | | | | | | | | | | | | | | | | 1,449 |
| | Spread Topsoil | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 414 | CY | 84 | CY | 4.9 | Hrs | 608 |
| | Spread Topsoil | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 414 | CY | | | | | 1,068 |
| | | | | | | | | | | | | | | | | | | | 1,677 |
| | Remove barbed wire | Fencing, barbed wire, 3 strand | 0200-875-0600 | 1.36 | /LF | | | | | | | | 551 | FT | | | | | 749 |
| | Foreman | | | | | | | 39.60 | 39.60 | 1 | 39.6 | $/Hr | | | | | 5.1 | Hrs | 204 |
| | Truck Pickup 3/4 ton, 4 wheel drive | | | 785.00 | /Month | 7.40 | 0.1 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 5.1 | Hrs | 67 |
| | | | | | | | | | | | | | | | | | | | 1,020 |
| | | | | Total | | | | | | | | | | | | | | | 6,340 |

| Ref 45 | Description | Materials | Means Reference Number | Unit Costs | Units | Hourly Operating Costs | Hourly Equipment Cost | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G-2 | | | | | | | | | | | | | | | | | | | |
| | Grading and Backfilling | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | Fill In Mud Pit | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095.00 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 56 | CY | 193 | CY | 0.3 | Hrs | 36 |
| | | | | | | | | | | | | | | | | | | | |
| | Fill Drill Pad | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 1,246 | CY | | | | | 3,215 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | 3,250 |
| | | | | | | | | | | | | | | | | | | | |
| | Plug Well Casing | Concrete-Geneva Rock | R03310-060 | 69 | /CY | | | | | | | | 21 | CY | | | | | 1,449 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | 1,449 |
| | | | | | | | | | | | | | | | | | | | |
| | Spread Topsoil | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 3,103 | CY | 84 | CY | 36.9 | Hrs | 4,560 |
| | | | | | | | | | | | | | | | | | | | |
| | Spread Topsoil | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 3103 | CY | | | | | 8,006 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | 12,566 |
| | | | | | | | | | | | | | | | | | | | |
| | Remove barbed wire | Fencing, barbed wire, 3 strand | 0200-875-0600 | 1.36 | /LF | | | | | | | | 917 | FT | | | | | 1,247 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | Foreman | | | | | | | 39.60 | 39.60 | 1 | 39.6 | $/Hr | | | | | 37.2 | Hrs | 1,474 |
| | Truck Pickup 3/4 ton, 4 wheel drive | | | 785.00 | /Month | 7.40 | 0.1 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 37.2 | Hrs | 486 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | 3,207 |
| | | | | | | | | | | | | | | | | | | | |
| | | | | Total | | | | | | | | | | | | | | | 20,473 |

| Ref 46 | Description | Materials | Means Reference Number | Unit Costs | Units | Hourly Operating Costs | Hourly Equipment Cost | Operator's Hourly Wage Rate | Hourly Cost | Number of Men or Eq. | Total Eq. & Lab. Costs | Units | Quantity | Units | Production Rate | Units | Equip. + Labor Time/Dis. | Units | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G-3 | | | | | | | | | | | | | | | | | | | |
| | Grading and Backfilling | | | | | | | | | | | | | | | | | | |
| | Fill In Mud Pit | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095.00 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 57 | CY | 193 | CY | 0.3 | Hrs | 38 |
| | Fill Drill Pad | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 2,543 | CY | | | | | 6,561 |
| | | | | | | | | | | | | | | | | | | | 6,597 |
| | Plug Well Casing | Concrete-Geneva Rock | R03310-060 | 69 | /CY | | | | | | | 21 | | CY | | | | | 1,449 |
| | | | | | | | | | | | | | | | | | | | 1,449 |
| | Spread Topsoil | Front-End Loader 5 CY (966G) Rental Rate | Blue Book | 7,095 | /Month | 29.05 | 0.1 | 47.15 | 123.45 | 1 | 123.45 | $/Hr | 1,182 | CY | 84 | CY | 14.1 | Hrs | 1,737 |
| | Spread Topsoil | Excavating 2-1/2 CY hydraulic backhoe | 02315 900 0620 | 2.58 | /CY | | | | | | | | 1182 | CY | | | | | 3,050 |
| | | | | | | | | | | | | | | | | | | | 4,787 |
| | Remove barbed wire | Fencing, barbed wire, 3 strand | 0200-875-0600 | 1.36 | /LF | | | | | | | | 542 | FT | | | | | 737 |
| | Foreman | | | | | | | 39.60 | 39.60 | 1 | 39.6 | $/Hr | | | | | 14.4 | Hrs | 569 |
| | Truck Pickup 3/4 ton, 4 wheel drive | | | 785.00 | /Month | 7.40 | 0.1 | | 13.05 | 1 | 13.05 | $/Hr | | | | | 14.4 | Hrs | 187 |
| | | | | | | | | | | | | | | | | | | | 1,494 |
| | | | | Total | | | | | | | | | | | | | | | 14,327 |

| | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | Vegetation | | | | | | | | | | | | | | | | | | | |
| | De-gas G-1 | | | | | | | | | | | | | | | | | | | |
| | Soil Preparation | | | | | | | | | | | | | | | | | | | |
| | Packing | Excavator, Diesel Hydraulic, 2 CY (3258) | 02315 400 280 | 1.71 | /CY | | | | | 0.6 | | | | | | AC | | 965 | CY | 1,655 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,655 |
| | Fence | | | | | | | | | | | | | | | | | | | |
| | Silt Fence | Silt Fence | 02370 550 1100 | 0.93 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Chicken Wire | Fence Chicken Wire | 02820 500 0010 | 6.56 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Subtotal Fence | | | | | | | | | | | | | | | | | | | 0 |
| | Seed Mix | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 0.6 | | | | | | AC | | 26 | MSF | 519 |
| | Hydroseed Material | De-Gas Seed Mix No. 1 | Maple Leaf | 358.00 | /AC | | | | | 0.6 | | | | | | AC | | 1 | AC | 215 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 734 |
| | De-gas G-2 | | | | | | | | | | | | | | | | | | | |
| | Soil Preparation | | | | | | | | | | | | | | | | | | | |
| | Packing | Excavator, Diesel Hydraulic, 2 CY (3258) | 02315 400 280 | 1.71 | /CY | | | | | 1.21 | | | | | | AC | | 1,952 | CY | 3,336 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 3,336 |
| | Fence | | | | | | | | | | | | | | | | | | | |
| | Silt Fence | Silt Fence | 02370 550 1100 | 0.93 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Chicken Wire | Fence Chicken Wire | 02820 500 0010 | 6.56 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 0 |
| | Seed Mix | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 1.21 | | | | | | AC | | 53 | MSF | 1,057 |
| | Hydroseed Material | De-Gas Seed Mix No. 2 | Maple Leaf | 358.00 | /AC | | | | | 1.21 | | | | | | AC | | 1 | AC | 433 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,490 |
| | De-gas G-3 | | | | | | | | | | | | | | | | | | | |
| | Soil Preparation | | | | | | | | | | | | | | | | | | | |
| | Packing | Excavator, Diesel Hydraulic, 2 CY (3258) | 02315 400 280 | 1.71 | /CY | | | | | 0.97 | | | | | | AC | | 1,565 | CY | 2,676 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 2,676 |
| | Fence | | | | | | | | | | | | | | | | | | | |
| | Silt Fence | Silt Fence | 02370 550 1100 | 0.93 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Chicken Wire | Fence Chicken Wire | 02820 500 0010 | 6.56 | /LF | 0 | | | | | | | | | | FT | | 0 | FT | 0 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 0 |
| | Seed Mix | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 0.97 | | | | | | AC | | 42 | MSF | 838 |
| | Hydroseed Material | De-Gas Seed Mix No. 2 | Maple Leaf | 358.00 | /AC | | | | | 0.97 | | | | | | AC | | 1 | AC | 347 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 1,185 |
| | Seed Mix No. 3 Refuse Site | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 15.6 | | | | | | AC | | 680 | MSF | 13,566 |
| | Hydroseed Material | Refuse Seed Mix No. 1 | Maple Leaf | 164.95 | /AC | | | | | 15.6 | | | | | | AC | | 16 | AC | 2,573 |
| | Transplant Area No. 3 | | | | | | | | | | | | | | | | | | | |
| | Area | | | | | | | | | 15.6 | | | | | | AC | | | | |
| | Transplant Materials | | | | | | | | | | | | | | | | | | | |
| | | Black Sagebrush | | 0.40 | EA | | | | | | | | | | 200 | /AC | | 3,120 | EA | 1,248 |
| | | Schadecale | | 0.75 | EA | | | | | | | | | | 200 | /AC | | 3,120 | EA | 2,340 |
| | Transplant Labor | Bare root seedlings 5 to 10 inch, heavy soil | | 1.15 | EA | | | | | | | | | | | | | 6,240 | EA | 7,176 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 37,881 |
| | Revegetation | | | | | | | | | | | | | | | | | | | |
| | 25% Vegetation Rate | | | | | | | | | | | | | | | | | | | 5,784 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 5,784 |
| | Total | | | | | | | | | | | | | | | | | | | 45,428 |

| | Description | Materials | Means Reference Number | Unit Cost | Unit | Length | Width | Height | Diameter | Area | Volume | Weight | Density | Time | Number | Unit | Swell Factor | Quantity | Unit | Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | Vegetation | | | | | | | | | | | | | | | | | | | |
| | Soil Preparation | | | | | | | | | | | | | | | | | | | |
| | Pocking | Excavator, Diesel Hydraulic, 2 CY (325B) | 02315 400 260 | 1.71 | /CY | | | | | 14.56 | | | | | | AC | | 23,490 | CY | 40,188 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 40,188 |
| | Fence | | | | | | | | | | | | | | | | | | | |
| | Silt Fence | Silt Fence | 02370 550 1100 | 0.93 | /LF | 7460 | | | | | | | | | | FT | | 6,800 | FT | 6,324 |
| | Chicken Wire | Fence Chicken Wire | 02820 500 0010 | 6.56 | /LF | 4500 | | | | | | | | | | FT | | 3,400 | FT | 22,304 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 28,628 |
| | Seed Mix No. 1 | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 13.9 | | | | | | AC | | 605 | MSF | 12,070 |
| | Hydroseed Material | Dugout Seed Mix No. 1 | Dugout 07391 | 394.75 | /AC | | | | | 13.9 | | | | | | AC | | 13.9 | AC | 5,487 |
| | Transplant Area No. 1 | | | | | | | | | | | | | | | | | | | |
| | Area | | | | | | | | | | 13.9 | | | | | AC | | | | |
| | Transplant Materials | Snowberry | | 0.66 | EA | | | | | | | | | | 75 | /AC | | 1,043 | EA | 688 |
| | | Utah Serviceberry | | 0.66 | EA | | | | | | | | | | 75 | /AC | | 1,043 | EA | 688 |
| | | Pinyon Pine | | 0.59 | EA | | | | | | | | | | 200 | /AC | | 2,780 | EA | 1,640 |
| | | Utah Juniper | | 0.66 | EA | | | | | | | | | | 200 | /AC | | 2,780 | EA | 1,835 |
| | Transplant Labor | Bare root seedlings 6 to 10 inch, heavy soil | | 1.15 | EA | | | | | | | | | | | | | 7,645 | EA | 8,792 |
| | Seed Mix No. 2 | | | | | | | | | | | | | | | | | | | |
| | Hydroseed Equipment and Labor | Hydro Spreader (equip. & labor) B-81 | Reveg005 | 19.95 | /MSF | | | | | 2.45 | | | | | | AC | | 107 | MSF | 2,135 |
| | Hydroseed Material | Dugout Seed Mix No. 1 | Dugout 07391 | 362.25 | /AC | | | | | 2.45 | | | | | | AC | | 2 | AC | 888 |
| | Transplant Area No. 2 | | | | | | | | | | | | | | | | | | | |
| | Area | | | | | | | | | | 2.45 | | | | | AC | | | | |
| | Transplant Materials | Narrowleaf Cottonwood | | 0.83 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 508 |
| | | Rocky Mountain Maple | | 1.00 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 613 |
| | | Willow | | 0.84 | EA | | | | | | | | | | 4000 | /AC | | 9,800 | EA | 8,232 |
| | | Woods Rose | | 0.55 | EA | | | | | | | | | | 1000 | /AC | | 2,450 | EA | 1,348 |
| | | Snowberry | | 0.66 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 404 |
| | | Utah Serviceberry | | 0.66 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 404 |
| | | Blue Elderberry | | 8.95 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 5,482 |
| | | Chokecherry | | 0.73 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 447 |
| | | Golden Current | | 0.66 | EA | | | | | | | | | | 250 | /AC | | 613 | EA | 404 |
| | | Carex Spp. | | 0.75 | EA | | | | | | | | | | 500 | /AC | | 1,225 | EA | 919 |
| | | Horsetail | | 0.75 | EA | | | | | | | | | | 500 | /AC | | 1,225 | EA | 919 |
| | Transplant Labor | Bare root seedlings 6 to 10 inch, heavy soil | | 1.15 | EA | | | | | | | | | | | | | 18,988 | EA | 21,836 |
| | | | | 19.95 | /MSF | | | | | 1.61 | | | | | | AC | | 70 | MSF | 1,397 |
| | | | | 172.18 | /AC | | | | | 1.61 | | | | | | AC | | 2 | AC | 277 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 77,413 |
| | Revegetation | | | | | | | | | | | | | | | | | | | |
| | 25% Vegetation Rate | | | | | | | | | | | | | | | | | | | 19,353 |
| | Subtotal | | | | | | | | | | | | | | | | | | | 19,353 |
| | Total | | | | | | | | | | | | | | | | | | | 166,562 |

**Productivity and Hours Required for Dozer Use**

**Earthmoving Activity:**
Rough grading and backfilling

**Characterization of Dozer Used (type, size, etc.):**
Caterpillar Dozer D0R-9SU

**Description of Dozer Use (origin, destination, grade, haul distance, materials, etc.):**
Level grade, 21 feet blade width, 11.4 cu. yd. Capacity, 500 foot push

**Productivity Calculations:**

| | | | | |
|---|---|---|---|---|
| Operating Adjustment Hours = | 0.85 x operation factor | 0.9 x material factor | 0.83 x efficiency factor | 1.0 grade factor |
| | 0.97 x weight correction factor | 1.0 x production method/blade factor | 1.0 x visibility factor | 1.0 elevation factor |
| | = | 0.62 | | |

| | | | | |
|---|---|---|---|---|
| Net Hourly Production = | 300 LCY/Hr normal hourly production | x | 0.62 = operating adjustment factor | 186 LCY/Hr |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Compactor Use**

**Earthmoving Activity:**
Rough grading of loose and compacted material

**Characterization of Compactor Used (type, size, etc.):**
Caterpillar Sheepfoot Compactor 815F

**Description of Compactor Used (loading, geometry, materials, etc.):**
3 passes per lift, 8-inch lifts, 4 MPH, 80% efficiency, 77 inches width of wheel

**Productivity Calculations:**

Production Table = 1095 LCY/Hr

| | | | | | |
|---|---|---|---|---|---|
| Net Hourly Production = | 1095 LCY/Hr production | x | 0.8 efficiency | = | 876 LCY/Hr |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Excavator Use**

**Earthmoving Activity:**
Rough grading of loose and compacted material

**Characterization of Excavator Used (type, size, etc.):**
Caterpillar Excavator 325 BL

**Description of Excavator Used (loading, geometry, materials, etc.):**
Loose and compacted dirt, 3.5 C.Y.

**Productivity Calculations:**

| | | | | | | |
|---|---|---|---|---|---|---|
| Net Bucket Capacity = | 3.5 LCY heaped bucket capacity | x | 0.9 = bucket fill factor | 3.15 LCY | | |
| Hourly Production = | 3.15 LCY net bucket capacity | x | 60 min/hr | / | | |
| | 0.4 x cycle time | 0.83 = efficiency factor | 392 LCY/Hr | | | |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Loader Use**

**Earthmoving activity:**
Rough grading of loose and compacted materials

**Characterization of Loader Used (type, size, etc.):**
Caterpillar Front End Loader 966G

**Description of Loader Used (loading, geometry, materials, etc.):**
Loose and compacted dirt, 2.5 C.Y.

**Productivity Calculations:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cycle Time | = | 0.18 min<br>haul time (loaded) | + | 0.18 min<br>return time (empty) | + | | |
| | | 0.25 min<br>basic cycle time | = | 0.61 min | | | |
| Net Bucket Capacity | = | 2.5 LCY<br>heaped bucket capacity | x | 1<br>bucket fill factor | = | 2.5 LCY | |
| Hourly Production | = | 2.5 LCY<br>net bucket capacity | / | 0.61 min<br>cycle time | x | | |
| | | 0.83 x<br>efficiency factor | | 60 min/hr | = | 204 LCY/Hr | |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Truck Use**

**Earthmoving Activity:**
Hauling Topsoil

**Characterization of Trucks Used (type, size, etc.):**
Trailer and pup, 18 C.Y.

**Description of Trucks Used (origin, destination, grade, haul distance, capacity, etc.):**

**Productivity Calculations**

| | | | | | | |
|---|---|---|---|---|---|---|
| No. Loader Passes/ Truck | = | 18 C. Y. truck capacity | / | 2.5 LCY loader bucket capacity | | |
| | | = | 7.2 passes | | | |
| Net Truck Capacity | = | 2.5 LCY loader bucket capacity | x | 7.2 = no. loader passes/truck | | 18 LCY |
| Loading Time/Truck | = | 0.61 min loader cycle time | x | 7.2 = no. loader passes/truck | | 4.39 min. |
| Truck Cycle Time | = | 19 min haul time | + | 18 min return time | + | |
| | | 4.392 min loading time | + | 2 min dump and maneuver time | = | |
| | | 43.392 min | | | | |
| No. Trucks Required | = | 43.392 min | / | 4.392 min | = | |
| | | 9.88 trucks | use | 10 trucks | | |
| Production Rate | = | 20 LCY | x | 10 / no. trucks | | 43.392 min truck cycle time |
| | | = | 4.61 LCY/min | | | |
| Hourly Production | = | 4.61 LCY/min production rate | x | 60 min/hr | x | |
| | | 0.83 = efficiency | 230 LCY/Hr | | | |

**Productivity and Hours Required for Truck Use**

**Earthmoving Activity:**
Hauling Topsoil

**Characterization of Trucks Used (type, size, etc.):**
Trailer and pup, 12 C.Y.

**Description of Trucks Used (origin, destination, grade, haul distance, capacity, etc.):**

**Productivity Calculations**

| | | | | | |
|---|---|---|---|---|---|
| No. Loader Passes/ Truck = | 12 C. Y. truck capacity | / | 2.5 LCY loader bucket capacity | | |
| | = | 4.8 passes | | | |
| Net Truck Capacity = | 2.5 LCY loader bucket capacity | x | 4.8 = no. loader passes/truck | | 12 |
| Loading Time/Truck = | 0.61 min loader cycle time | x | 4.8 = no. loader passes/truck | | 2.93 |
| Truck Cycle Time = | 33 min haul time | + | 33 min return time | + | |
| | 2.93 min loading time | + | 3 min dump and maneuver time | = | |
| | 71.93 min | | | | |
| No. Trucks Required = | 71.93 min | / | 2.93 min | = | |
| | 24.57 trucks | use | 6 trucks | | |
| Production Rate = | 12 LCY | x | 6 / no. trucks | | 71.93 truck cycle time |
| | = | 1.00 LCY/min | | | |
| Hourly Production = | 1.00 LCY/min production rate | x | 60 min/hr | x | |
| | 0.83 = efficiency | 50 LCY/Hr | | | |

**Productivity and Hours Required for Loader Use**

**Earthmoving activity:**
Fill in mud pit

**Characterization of Loader Used (type, size, etc.):**
Caterpillar Front End Loader 966G

**Description of Loader Used (loading, geometry, materials, etc.):**
5 CY bucket, haul distance 50 feet, zero percent grade

**Productivity Calculations:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cycle Time | = | 0.5 min<br>haul time<br>(loaded) | + | 0.5 min<br>return time<br>(empty) | + | | |
| | | 0.55 min<br>basic<br>cycle time | = | 1.55 min | | | |
| Net Bucket Capacity | = | 5 LCY<br>heaped bucket<br>capacity | x | 1.2<br>bucket<br>fill factor | = | 6 LCY | |
| Hourly Production | = | 6 LCY<br>net bucket<br>capacity | / | 1.55 min<br>cycle time | x | | |
| | | 0.83 x<br>efficiency<br>factor | | 60 min/hr | = | 193 LCY/Hr | |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Loader Use**

**Earthmoving activity:**
Spread topsoil

**Characterization of Loader Used (type, size, etc.):**
Caterpillar Front End Loader 966G

**Description of Loader Used (loading, geometry, materials, etc.):**
5 CY bucket, haul distance 350 feet, zero percent grade

**Productivity Calculations:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cycle Time | = | 2 min<br>haul time<br>(loaded) | + | 1 min<br>return time<br>(empty) | + | | |
| | | 0.55 min<br>basic<br>cycle time | = | 3.55 min | | | |
| Net Bucket Capacity | = | 5 LCY<br>heaped bucket<br>capacity | x | 1.2 = | | 6 LCY | |
| Hourly Production | = | 6 LCY<br>net bucket<br>capacity | / | 3.55 min<br>cycle time | x | | |
| | | 0.83 x<br>efficiency<br>factor | | 60 min/hr | = | 84 LCY/Hr | |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Dozer Use**

**Earthmoving Activity:**
Rough grading and backfilling

**Characterization of Dozer Used (type, size, etc.):**
Caterpillar Dozer D0R-9SU

**Description of Dozer Use (origin, destination, grade, haul distance, materials, etc.):**
Level grade, 21 feet blade width, 11.4 cu. yd. Capacity, 400 foot push

**Productivity Calculations:**

| | | | | |
|---|---|---|---|---|
| Operating Adjustment Hours = | 0.85 x operation factor | 0.8 x material factor | 0.83 x efficiency factor | 1.0 grade factor |
| | 0.9 x weight correction factor | 1.0 x production method/blade factor | 1.0 x visibility factor | 1.0 elevation factor |
| | = | 0.51 | | |

| | | | | |
|---|---|---|---|---|
| Net Hourly Production = | 200 LCY/Hr normal hourly production | x | 0.51 = operating adjustment factor | 102 LCY/Hr |

**Data Source:**
Caterpillar Performance Handbook - Edition 30

**Productivity and Hours Required for Loader Use**

**Earthmoving activity:**
Moving and spreading topsoil

**Characterization of Loader Used (type, size, etc.):**
Caterpillar Front End Loader 966G

**Description of Loader Used (loading, geometry, materials, etc.):**
5 CY bucket, haul distance 500 feet, -2% grade

**Productivity Calculations:**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Cycle Time | = | 0.38 min<br>haul time<br>(loaded) | + | 0.4 min<br>return time<br>(empty) | + | | |
| | | 0.5 min<br>basic<br>cycle time | = | 1.28 min | | | |
| Net Bucket Capacity | = | 5 LCY<br>heaped bucket<br>capacity | x | 0.95<br>bucket<br>fill factor | = | 4.75 LCY | |
| Hourly Production | = | 4.75 LCY<br>net bucket<br>capacity | / | 1.28 min<br>cycle time | x | | |
| | | 0.91 x<br>efficiency<br>factor | | 60 min/hr | = | 203 LCY/Hr | |

**Data Source:**
Caterpillar Performance Handbook - Edition 30