



Community & Economic Development Department  
4430 S. Adams County Pkwy.  
1st Floor, Suite W2000B  
Brighton, CO 80601  
PHONE 720.523.6800  
adamscountyco.gov

## Request for Comments

Case Name: Clean Harbors Deer Trail Major Amendment to Solid Waste Disposal Permit

Case Number: EXG2026-00004

July 8, 2026

The Adams County Planning Commission is requesting comments on the following application: **Major Amendment to a Certificate of Designation for the purpose of increasing the allowable waste limit acceptance values for Regulated Waste to align with those governed by the current State of Colorado Radioactive Material License No., Colo. 1102-01, Amendment 14.** This request is located at 108555 HWY 36. The Assessor's Parcel Number is 0180300000044, 0180300000057.

Applicant Information: Clean Harbors Deer Trail, LLC  
EUGENE SULLIVAN  
10855 EAST HWY 36

Please forward any written comments on this application to the Community and Economic Development Department at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or call (720) 523-6800 by 07/30/2026 in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to [KKeefe@adamscountyco.gov](mailto:KKeefe@adamscountyco.gov).

Once comments have been received and the staff report written, the staff report and notice of public hearing dates may be forwarded to you upon request. The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at [www.adamscountyco.gov/landuse](http://www.adamscountyco.gov/landuse).

*Si usted tiene preguntas, por favor escribanos un correo electrónico a [cedespanol@adamscountyco.gov](mailto:cedespanol@adamscountyco.gov) para asistencia en español. Por favor incluya su dirección o número de caso para poder ayudarle mayor.*

Thank you for your review of this case.

Katie Keefe  
Environmental Programs Manager



Clean Harbors Deer Trail, LLC  
108555 East US 36  
Deer Trail, CO 80105-9611

**Date: September 26, 2025**

Ms. Jen Rutter, AICP  
Planning & Development Manager  
Community & Economic Development  
4430 South Adams County Parkway  
Brighton, Colorado 80601

**Re:** Application to Amend the Certificate of Designation for Hazardous and Regulated Waste Disposal for the Clean Harbors Deer Trail Facility in Deer Trail, Colorado.

**Clean Harbors Deer Trail, LLC** is submitting this in accordance with Adams County case number EXG2012-00002 for the Amended and Restated Certificate of Designation. For the purpose of increasing the allowable waste limit acceptance values to align with those governed by the current State of Colorado license number, Colo. 1102-01, Amendment 14.

Pursuant to Part E – Regulated Waste, Section 14.2 and Part H – Scope of Authorization, of the Certificate of Designation, regarding the allowable activity of acceptable wastes. Currently the County has allowed for the summed activity of all NORM and TENORM radionuclides per gram of waste material not to exceed 2000 pCi (74 Bq). With Ra-226 activity per gram of waste material not to exceed 222 pCi (7.4 Bq).

Clean Harbors is asking for an additional section to be included in the authorized radioactive materials, for the specific streams coming from oil and gas field wastes. Along with including the acceptance of an additional radionuclide in other waste materials. Both following those allowed under CDPHE.

For oil and gas field wastes, these limits being set at total radium activity of Ra-226 and Ra-228 per gram not to exceed 12,200 pCi (451.4 Bq) in pipe scale, or 6,000 pCi (222 Bq) in other waste forms. Additionally, the Pb-210 activity per gram shall not exceed 10,000 pCi (370 Bq). Total oil and gas field wastes received for disposal per year shall not exceed 50,000 tons. With the activity per gram of Pb-210 not to exceed 666 pCi (24.6 Bq) in waste materials other than oil and gas field wastes.

In accordance with Part I – Changes to Scope of Authorization; Amendment to CD, Section 27.2.1, Clean Harbors is asking for the modification regarding a change in the Radiation Safety Officer (RSO). The newly designated RSO hired at Deer Trail is Eugene Sullivan. With a four-year undergraduate degree in Radiation Protection/Health Physics, the completion of a 40-hour RSO Certification Course, and three years' experience as an RSO elsewhere, he is on site full time.

*“People and Technology Creating a Safer, Cleaner Environment”*



Consistent with Part I, Clean Harbors is reaching out to the County for review and consideration of the changes being asked and applying for an amendment to the current Certificate of Designation.

Accompanying this letter is the Renewal Application to CDPHE for Radioactive Materials License 1102-01, due to the supporting documentation it contains. Section Two of the document covers the monitoring capabilities of the site and calculated doses to the public and workers. Section Five of the document contains specific technical information and analyses. Attachments D through G encompasses the technical basis documentation for pipe scale waste, groundwater sampling, alternate analysis technique, and exposure-based acceptance criteria. Attachment L is the annual reports for years 2017 – 2020.

Along with the Renewal Application, you will find the License Renewal Acceptance Letter from CDPHE for the Current Radioactive Materials License, CO 1102-01 Amendment 14.

Thank you for your consideration. Please contact me with any questions, concerns or if any clarifications are needed regarding this application.

Regards,

*Eugene Sullivan*

Eugene Sullivan  
Radiation Safety Officer  
Clean Harbors Deer Trail, LLC  
(303) 386-9954  
[sullivan.eugene@cleanharbors.com](mailto:sullivan.eugene@cleanharbors.com)

CC: Jared Torstenson  
Katie Keefe



ADAMS COUNTY  
COLORADO

Community & Economic Development Department  
Planning & Development

4430 S. Adams County Pkwy., 1st Floor, Suite W2000B

Brighton, CO 80601-8218

Phone: 720.523.6800

Website: [adccgov.org](http://adccgov.org)

# CERTIFICATE OF DESIGNATION

Certificates of Designation are required for those solid waste and hazardous waste disposal sites and/or processing facilities which are presumptively incompatible with other land uses authorized or permitted in a zone district, and/or may have long-term ramifications to the use of surrounding lands. In addition to meeting applicable performance standards, Certificates of Designation may require the imposition of conditions in order to ensure the number of solid waste and hazardous waste disposal sites and/or processing facilities and their location, design, configuration, and operation are appropriate at a particular location.

- ☐ Development Application Form
- ☐ Written Explanation
- ☐ Site Plan
- ☐ Proof of Ownership
- ☐ Proof of Water and Sewer Services
- ☐ Proof of Utilities
- ☐ Legal Description
- ☐ Statement of Taxes Paid
- ☐ Neighborhood Meeting Summary
- ☐ Written Concurrence from Colorado Department of Public Health & Environment for the Use of Certificate of Designation for the site
- ☐ Engineering Design and Operations Plan
- ☐ Level 1 Storm Drainage Plan
- ☐ Traffic Impact Study
- ☐ Erosion & Sediment Control Plans

\*A separate Engineering Review Application may be required

| Application Fees                                        | Amount                                                                   | Due                                 |
|---------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------|
| Adams County Certificate of Designation Application Fee | \$ 4,420<br>(plus \$.10 per cubic yard per year to a maximum of \$8,000) | After complete application received |

## Certificate of Designation - Guide to Development Application Submittal

All applications shall be submitted via email to [epermitcenter@adcogov.org](mailto:epermitcenter@adcogov.org). If the submittal is too large to email as an attachment, the application may be sent as an unlocked OneDrive link. Alternatively, the application may be delivered on a flash drive to the One-Stop Customer Service Center. All documents should be combined in a single PDF. Once a complete application has been received, fees will be invoiced and payable online at <https://permits.adcogov.org/CitizenAccess/>.

### Written Explanation:

- A clear and concise, yet thorough, description of the proposal. Please include, if applicable, timeframe, purpose of project, and improvements that will be made to the site.

### Site Plan:

- Name and information of the site operator
- Detailed information on the daily operations on the site for the existing use and the safe parking use
- A clear and concise, yet thorough, description of the services that will be provided to the individuals who will be utilizing the site and the security measures that will be implemented for the individuals utilizing the site and the surrounding properties.

### Proof of Ownership:

- A deed may be found in the Office of the Clerk and Recorder.
- A title commitment is prepared by a professional title company.
- If not the property owner, a signed letter stating permission to apply for permit

### Proof of Water:

- A written statement from the appropriate water district indicating that they will provide service to the property **OR** a copy of a current bill from the service provider.
- Well permit(s) information can be obtained from the Colorado State Division of Water Resources at (303) 866-3587.

### Proof of Sewer:

- A written statement from the appropriate sanitation district indicating that they will provide service to the property **OR** a copy of a current bill from the service provider.
- A written statement from Adams County Health indicating the viability of obtaining Onsite Wastewater Treatment Systems.

### Proof of Utilities (Gas, Electric, etc.):

- A written statement from the appropriate utility provider indicating that they will provide service to the property.
- Copy of a current bill from the service provider.

### Legal Description

- Geographical description used to locate and identify a property.
- Visit <http://gisapp.adcogov.org/quicksearch/>  
To find the legal description for your property.

### Statement of Taxes Paid

- All taxes on the subject property must be paid in full. Please contact the Adams County Treasurer's Office.
- Or <http://adcogov.org/index.aspx?NID=812>

**Neighborhood Meeting Summary:**

- This shall include a summary of the meeting and an explanation of any issues identified. In addition, any names and contact information for participants who would like to receive notice of public hearings concerning any application.

**Engineering Design and Operations Plan**

- See Appendix B in the Adams County Development Standards and Regulations.

**Level 1 Storm Drainage Study**

- If the proposed conditional use permit involves paving, construction of any structures, grading of property, outdoor storage of materials (gravel piles included) or otherwise increasing the impervious area of a site, a Level 1 Storm Drainage Study will be required.
- This plan should be prepared in accordance with the "Level 1 Storm Drainage Plan" criteria as defined in Appendix item B-3 of the Adams County Development Standards and Regulations. Most importantly, it needs to clearly identify a viable storm outfall location, and floodplain/floodway boundaries.

**Preliminary Traffic Impact Study:**

- This shall include, but not limited to:
  - Trip generation estimates from the development,
  - Current traffic counts,
  - Projected future traffic counts to include background traffic projections and future traffic projections from the development,
  - A description of the traffic impacts that the development will have on the surrounding area.

**Erosion and Sediment Control Plan:**

- A site-specific plan that identifies and controls the risks of erosion and sedimentation during and after construction. The plan should include:
  - **Maps and drawings:** A site location map, site development drawing, and topographic features
  - **Soil information:** Soils maps and information
  - **Waterways:** The location of waterways that will receive runoff from the site
  - **Earth disturbance activities:** A description of the activities that will disturb the earth
  - **Runoff:** The amount of runoff and the upstream watershed
  - **Legend:** A legend that defines any symbols used in the plan
  - **Perimeter control:** A barrier that prevents sediment from leaving the site
  - **Phasing:** Clearing the land in phases, stabilizing each phase before moving on to the next
  - **Sediment control measures:** Measures that prevent eroded sediment from leaving the site



## DEVELOPMENT APPLICATION FORM

**PROJECT NAME:** Major Amendment to Solid Waste Disposal Permit - CHDT

### APPLICANT

Name(s): Eugene Sullivan Phone #: 781-556-9374  
Address: 108555 E U.S. Highway 36  
City, State, Zip: Deer Trail, Colorado, 80105  
2nd Phone #: Email: sullivan.eugene@cleanharbors.com

### OWNER

Name(s): Clean Harbors Deer Trail LLC Phone #: 970-386-2293  
Address: 108555 E U.S. Highway 36  
City, State, Zip: Deer Trail, Colorado, 80105  
2nd Phone #: Email: sullivan.eugene@cleanharbors.com

### TECHNICAL REPRESENTATIVE (Consultant, Engineer, Surveyor, Architect, etc.)

Name: Eugene Sullivan Phone #: 781-556-9374  
Address: 108555 E U.S. Highway 36  
City, State, Zip: Deer Trail, Colorado, 80105  
2nd Phone #: Email: sullivan.eugene@cleanharbors.com



**DESCRIPTION OF SITE**

|                               |                             |
|-------------------------------|-----------------------------|
| Address:                      | 108555 E U.S. Highway 36    |
| City, State, Zip:             | Deer Trail, Colorado, 80105 |
| Area (acres or square feet):  |                             |
| Tax Assessor<br>Parcel Number |                             |
| Existing<br>Zoning:           | Industrial                  |
| Existing Land<br>Use:         | Landfill                    |
| Proposed Land<br>Use:         | Landfill                    |

Have you attended a Conceptual Review?   YES ☐                      NO ☒

If Yes, please list PRE#:

I hereby certify that I am making this application as owner of the above described property or acting under the authority of the owner (attached authorization, if not owner). I am familiar with all pertinent requirements, procedures, and fees of the County. I understand that the Application Review Fee is non-refundable. All statements made on this form and additional application materials are true to the best of my knowledge and belief.

|       |                 |       |            |
|-------|-----------------|-------|------------|
| Name: | Eugene Sullivan | Date: | 02/13/2026 |
|-------|-----------------|-------|------------|

Owner's Printed Name

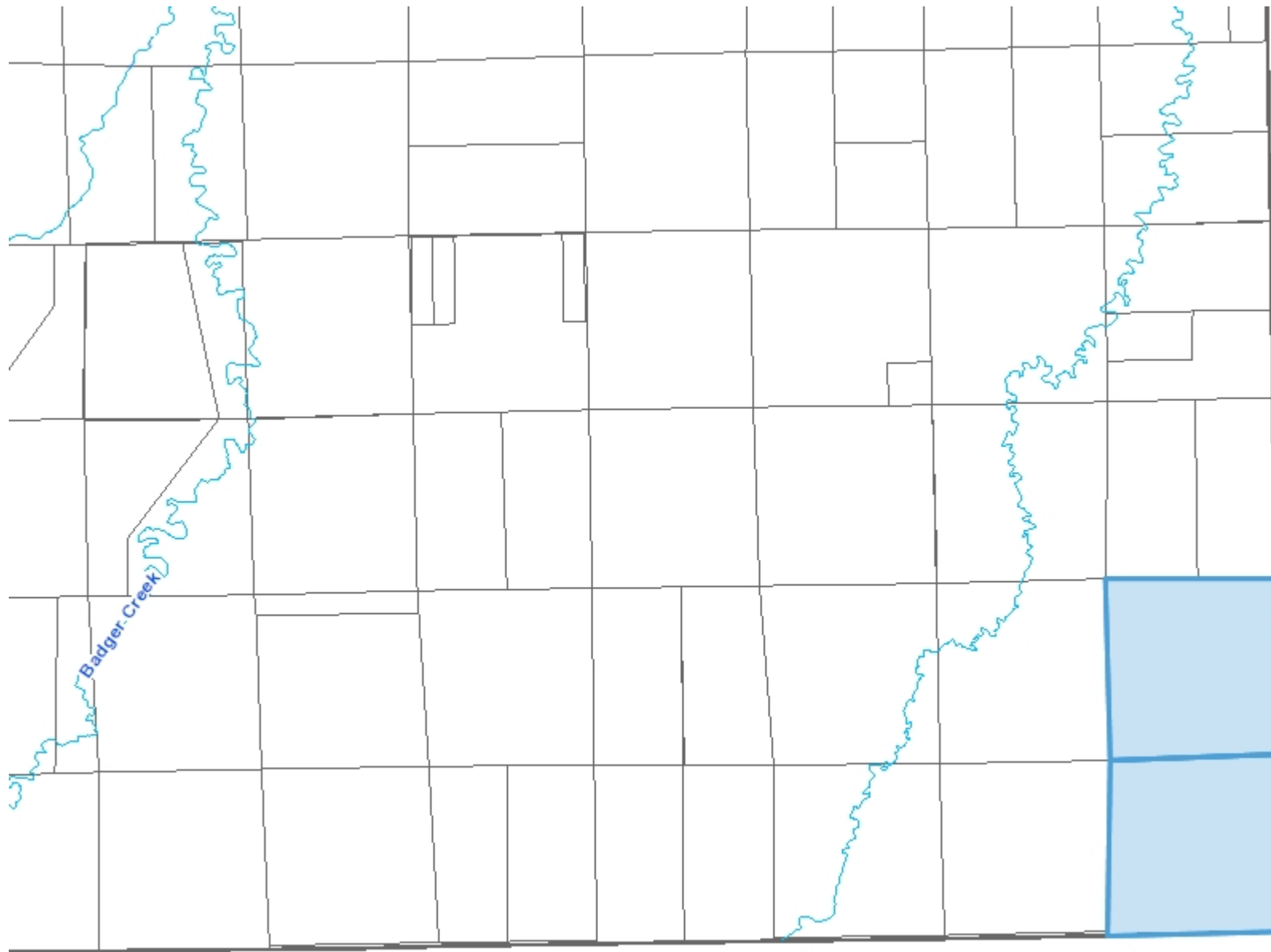
|       |                                                                                     |
|-------|-------------------------------------------------------------------------------------|
| Name: |  |
|-------|-------------------------------------------------------------------------------------|

Owner's Signature





## Adams County Map



### Legend

- +— Railroad
- Major Water
- Zoning Line
- Sections
- Zoning Districts**
- A-1
- A-2
- A-3
- R-E
- R-1-A
- R-1-C
- R-2
- R-3
- R-4
- M-H
- C-0
- C-1
- C-2
- C-3
- C-4
- C-5
- I-1
- I-2
- I-3
- CO
- PL
- AV
- DIA
- P-U-D
- P-U-D(P)
- Conditions

**Case Name:** Major Amendment to the Certificate of Designation for the Clean Harbors Deer Trail Facility

**Case Number:** EXG2026-00004

## Neighborhood Meeting Summary

Location of the meeting took place on Deer Trail's property, inside the Operations Building breakroom. The meeting began at 11:00 AM and finished at about 11:45 AM. Notice was given to members of the public that live within one mile of the site and was attended by multiple employees representing different aspects of the facility.

Meeting format began with calling the meeting to order once all parties have arrived. Previous meeting minutes were distributed and the items for discussion are gone through. This entails any relevant, previous quarter announcements, correspondence with the State and/or County, and going over received waste. Afterwards, an open floor is given to the attending groups: the Colorado Department of Public Health and Environment, Adam County, and any Concerned Citizens of Eastern Colorado. After each group discusses their items, an open floor for general discussion occurs before adjournment.

Key issues identified are dealt with as quickly and safely as possible. Anything that is explainable or able to be resolved from discussions is dealt with then and there. Items that need to be managed in any other way are written down for investigating and a reply is later given to the parties involved. At this meeting, there were no issues identified, and no comments of concern regarding the anticipated CD Amendment submittal.

The individuals and groups put on notice of public hearings concerning any application are:

BOHAN JOHN PATRICK, BOHAN ELIZABETH ANN  
PO BOX 42137  
BAKERSFIELD CA 93384-2137

BRENNER SEAN  
34470 COUNTY ROAD 48  
BURLINGTON CO 80807-9724

CITY OF LITTLETON AND CITY OF ENGLEWOOD  
C/O LE WWTP MGR  
2900 S PLATTE  
ENGLEWOOD CO 80110

DONALD W NICKELL TRUST, JANE NICKELL TRUST  
715 DELORES AVE  
FORT MORGAN CO 80701-4054

FUNK GARY D AND COOPER SHERRY ANN

10533 N VILLA RIDGE CT  
FOUNTAIN HILLS AZ 85268-6613

MCCULLISS PAUL L, MCCULLISS OIL & GAS INC, 0  
31567785 (015)  
ET AL  
PO BOX 3248  
LITTLETON CO 80161-3248

SUSIE LINNEBUR FAMILY LIMITED PARTNERSHIP  
PO BOX 877  
BYERS CO 80103-0877

WHELDEN GAROLD DWAIN  
108557 E 56TH AVE  
DEER TRAIL CO 80105-9707

Regards,

*Eugene Sullivan*

Eugene Sullivan  
Radiation Safety Officer  
Clean Harbors Deer Trail, LLC  
(303) 386-9954  
sullivan.eugene@cleanharbors.com



Clean Harbors Deer Trail, LLC.  
108555 E U.S. Highway 36  
Deer Trail, CO 80105

Tel: 970.386.2293  
www.cleanharbors.com

### Traffic Impact Statement

Any changes made to the Certificate of Designation regarding the increase in acceptance limits for radioactive waste will not generate more traffic to the facility. The volume of business at the facility is not expected to change; with the number of trucks coming to site consistent with what is currently being allotted. The working hours of the facility are not changing, only the acceptance levels for the material arriving at site.

Signed,

A handwritten signature in black ink, appearing to read "Eugene Sullivan", written over a horizontal line.

Eugene Sullivan  
Facility Applicant/Representative

2-13-2020  
Date

# WESTERN



## PURE WATER TRANSPORTATION

P.O. Box 1247 • FT. Morgan, CO 80701 • (970)867-9507 • FAX(970)542-0765

### Invoice

Bill To

Clean Harbors Environmental  
108555 E. Hwy 36  
Deer Trail, CO 80105

Date

Invoice #

10/29/2025

1953

[DTRTL PO 1000000911](#)

P.O. No.

Terms

Net 60

| Description                                                      | Quantity | Rate         | Amount   |
|------------------------------------------------------------------|----------|--------------|----------|
| Re: Deer Trail Facility                                          |          |              |          |
| SERVICES:<br>Provided, transported and off loaded potable water. |          |              |          |
| Thursday 10-29-25                                                |          |              |          |
| Potable Water 13,600 gallons at \$0.06 per gallon.               | 13,600   | 0.06         | 816.00   |
| Fuel Surcharge                                                   | 2        | 75.00        | 150.00   |
|                                                                  |          | <b>Total</b> | \$966.00 |



## **COLORADO**

### **Department of Public Health & Environment**

Dedicated to protecting and improving the health and environment of the people of Colorado

August 21, 2018

Clean Harbors Deer Trail, LLC  
108555 East U.S. Highway 36,  
Deer Trail, Colorado 80105-9611

Attention: Clyde E. Christman, Radiation Safety Officer

Re: License Renewal - Colorado Radioactive Materials License Number CO 1102-01

Enclosed is Radioactive Materials License Number CO 1102-01, Amendment No. 14, which renews this license, and the Decision Analysis. Please review both documents thoroughly.

Please note that the mailing address, use location(s), maximum quantities of radioactive materials, and the radiation safety officer are specific conditions of your license. If you have questions about making changes to your licensed activities, please contact the Radiation Management Unit to discuss the requirements for an amendment of your license.

If you have any questions regarding this letter or your license please contact Shiya Wang at 303-692-3447 or shiya.wang@state.co.us. Additional questions or comments can be directed to me at 303-692-3371 or james.grice@state.co.us.

James H Grice III  
Unit Leader  
Radioactive Materials Unit  
Hazardous Materials and Waste Management Division

Enclosure (2): CO 1102-01, Amendment No. 14  
Decision Analysis, August 2018

CC: John (Jack) Kehoe, CHDT  
Jen Rutter, Adams County  
Shiya Wang, CDPHE



## **PERMIT ATTACHMENT 1**

### **SITE DESCRIPTION**

#### **I. GENERAL COMPANY INFORMATION**

##### **A. Introduction**

Clean Harbors is North America's leading provider of environmental, energy, and industrial services serving over 50,000 customers, including a majority of the Fortune 500 companies, thousands of smaller private entities and numerous federal, state, provincial and local governmental agencies.

Within Clean Harbors Environmental Services, the company offers Technical Services and Field Services. Technical Services provide a broad range of hazardous material management and disposal services including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. Field Services provide a wide variety of environmental cleanup services on customer sites or other locations on a scheduled or emergency response basis.

Within Clean Harbors Energy & Industrial Services, the company offers Industrial Services and Exploration Services. Industrial Services provide industrial and specialty services, such as high-pressure and chemical cleaning, catalyst handling, decoking, material processing and industrial lodging services to refineries, chemical plants, pulp and paper mills, and other industrial facilities. Exploration Services provide exploration, rental, oil and gas field services, and directional boring services to the energy sector serving oil and gas exploration, production, and power generation.

Headquartered in Norwell, Massachusetts, Clean Harbors has more than 175 locations, including over 50 waste management facilities, throughout North America in 38 U.S. States, seven Canadian provinces, Mexico and Puerto Rico. The Company also operates international locations in Bulgaria, China, Sweden, Singapore, Thailand, and the United Kingdom. For more information, visit [www.cleanharbors.com](http://www.cleanharbors.com).

#### **II. FACILITY INFORMATION**

##### **A. Facility Overview**

Clean Harbors Deer Trail, LLC, is a subsidiary of Clean Harbors, Inc. headquartered in Norwell, Massachusetts, which owns and operates a hazardous waste storage, treatment and disposal facility located near Last Chance, Colorado. This facility is commonly referred to as the Deer Trail Facility. The Deer Trail Facility is a fully permitted hazardous waste facility, permitted by various regulatory agencies in the State of Colorado to receive, store, treat and landfill a variety of waste streams. The treatment methods utilized at this facility typically reduce toxicity of waste materials and make it suitable for land disposal.

##### **B. Facility History**

In 1980 the Highway 36 Land Development Company, a wholly owned subsidiary of Browning Ferris, Inc., purchased 5,760 acres in southeast Adams County, Colorado to site a hazardous



waste management facility (Plate 1). In August 1983 the Adams County Commissioners issued the site a Certificate of Designation. In March 1987 the Colorado Department of Health issued the RCRA portion of a Part B permit. In April 1987 the United States Environmental Protection Agency (EPA) issued the HSWA portion of the Part B permit. The site was the first commercial hazardous waste landfill permitted under the passage of the Hazardous and Solid Waste Amendments (HSWA) of 1984. In a press release the EPA said: “A combination of location, operating procedures and more stringent regulations puts the Highway 36 facility into a different dimension than older land disposal facilities. Treatment of hazardous waste prior to disposal is a particularly important aspect of any land disposal operation today. The permit we have issued includes numerous precautions to ensure that the wastes which go into the secure landfill cells will stay there.”

After nearly a decade of development, Concord Resources Group, Inc. acquired the facility. Concord opened the facility on July 1, 1991 and received the first shipment of waste on July 23, 1991.

The site was then purchased by Rollins Environmental Services, Inc. (1994) and then by Laidlaw Environmental Services, Inc. (1996). On May 20, 1998, Safety-Kleen Corporation became a wholly owned subsidiary of Laidlaw Environmental Services, Inc. (LES). In order to take advantage of the tremendous market value of the Safety-Kleen trade name, LES began conducting business as Safety-Kleen Corporation. As such, on July 1, 1998, Laidlaw Environmental Services (Deer Trail), Inc. changed its name to Safety-Kleen (Deer Trail), Inc. The name change reflected adopting the Safety-Kleen trade name by the corporation. With the exception of this name change, no other change occurred to the physical plant, key personnel, or operational procedures. The regulatory agencies that issued facility permits, licenses, or other approvals were properly notified of the change. Any required applications, fees or additional information was also submitted to the appropriate regulatory agencies.

In June 2000, Safety-Kleen filed for bankruptcy protection under Chapter 11 of the Bankruptcy Code. As a result, the Chemical Services Division (CSD), which included the Deer Trail Facility, was sold to Clean Harbors, Inc. on September 6, 2002. As such, all of the Deer Trail Facility's permits were changed to reflect the change in ownership.

On December 21, 2005, the Colorado Department of Public Health and Environment (CDPHE) issued two documents to the Clean Harbors Deer Trail Facility: a Colorado Hazardous Waste Act Permit Renewal, and a Radioactive Materials License. The RCRA permit was renewed on March 15, 2013. The Radioactive Materials License was renewed in December 2018.

## **1. Site Characterization**

The following provides information regard land use around the Deer Trail facility, nearest surface water body, climatologic, 100-year flood plain, hydrogeology, geology and environmental monitoring.

## **2. Land Use**

The Deer Trail Facility is on former unirrigated farmland. The surrounding property is used for unirrigated production of dry land wheat, sunflowers, and grasslands for grazing cattle. There are no residential areas, industrial areas, schools, colleges, hospitals, convalescent homes, or day care

centers within a 1-mile radius of the facility. There are no towns or cities with a population greater than 10,000 persons within a radius of 31 miles of the facility. The only community within a 10-mile radius is Last Chance, which is an unincorporated town with a population of approximately 15 people. Plate 2 is provided as an aerial photograph of the site.

3. **Surface Waters**

The Deer Trail Facility area is characterized by broadly rolling topography. Nearby small creeks are in relatively wide flat areas. The facility is drained by a tributary to Beaver Creek to the east and Wetzel Creek to the west. The facility is well drained with little rainfall run-on. The surface slope of the facility ranges from flat to about 6%.

4. **Climate**

The climate of the eastern plains of Colorado is classified as continental steppe, characterized by cold winters, hot summer days and cool nights, abundant sunshine and low but variable precipitation. The annual average rainfall at Deer Trail is 13 inches and the evaporation rate is 58 inches per year.

5. **100 Year Flood Plain**

A flood plain analysis was performed for the confluence of Beaver and Wetzel Creek drainages. Results of that study, based on a 100-year floor depth of 22 feet above the average stream elevation at the confluence, indicate that the lowest part of the facility is at least 93 feet above the predicted floodplain elevation.

6. **Hydrogeology**

Regionally, the Denver Basin encompasses several ground-water aquifers located stratigraphically above the Pierre Shale. The principal aquifers in the western and central portions of the Basin are the Fox Hills Sandstone, Arapahoe/Denver Formation, and Dawson Formation. These geologic units have been eroded away at the site location; the nearest outcrop (the Fox Hills Sandstone) is approximately 10 miles west of the facility. The Ogallala Formation is the primary aquifer in the eastern part of the Basin; the site is approximately 20 miles from the eastern-most outcrop of the Ogallala Formation. Because all regional aquifers have been eroded away, the facility is geologically and hydraulically isolated. Ground-water flow in the regional aquifers is generally to the east. The Denver-area aquifers are recharged by precipitation and infiltration at outcrops in the extreme western portion of the Basin. In the eastern portion of the Basin, the Ogallala Formation is recharged at outcrops extending over eastern Colorado, southwestern Nebraska, and western Kansas.

Based on historical characterization activities at the facility and the current ground-water monitoring program, the hydrostratigraphic units underlying the facility have been classified in different zones as follows:

The L3 Zone (the sand lens occurring in the surficial Sandy Clay Unit);

The L4A Zone (the interface between the surficial Silty Clay Unit and the underlying weathered Pierre Shale);

The L4 Zone (the interface between the weathered Pierre Shale and the unweathered Pierre Shale);

The L5 Zone (the uppermost water-bearing unit beneath the facility; defined as the uppermost saturated portion of the unweathered Pierre Shale);

The L6 Zone (the first occurrence of saturated conditions in the alluvial drainages outside the compliance boundary).

Monitoring wells have been installed in these hydrostratigraphic zones to assess ground-water conditions and quality beneath the facility. The wells included in the facility-monitoring program are labeled in accordance with the zone classification presented here (e.g., L3 Zone well numbers begin with L3). Eight L5 wells comprise the detection monitoring program for the facility and fulfill the ground-water monitoring requirements in 6 CCR 1007-3, Subpart F, Part 264 for permitted hazardous waste disposal facilities. The L3, L4A, L4 and L6 wells comprise the inspection-monitoring program for the facility, and supplement the regulatory-required detection monitoring well network. Additional wells were installed in the L4 and L4A Zones as part of the RCRA Facility Investigation of the closed brine pond associated with the Jolly-Axtell #2 oil well. These wells, referred to as the BP wells, are inside and outside the northern compliance boundary. Water quality data from the BP wells has been used historically in establishing part of the background water-quality database. These wells, however, are no longer included in the facility-monitoring program.

The facility has conducted extensive ground water monitoring. Of the 120 monitoring wells at the facility, most of which have been monitored since 1986, 85 are dry. Water has never been detected in most of the L3 wells. Further, water levels for many of the L4A, L4, and L6 wells were consistently below the screened intervals (i.e., only minor amounts of condensation was observed in the 5-foot-long sumps below the screened intervals). Water detected in most of the L4A and L4 wells near the former brine pond has consistently declined with time, which reflects the cessation of pond use and subsequent elimination of the source of recharge to shallow ground water. Water levels in several L4 wells near Cell 2 have increased, which probably reflects the focused recharge of precipitation through the unlined cell base during the time the cell was unlined. The only zone that consistently contains water, and therefore can be periodically monitored with respect to ground-water quality and historical water level trends, is L5. The early water levels measured in L5 Zone wells were erratic, indicative of the slow recovery of the wells between quarterly sampling events. However, since 1992, due to a longer period between sampling events, the water levels appear to be more consistent than the earlier measurements indicate. In general, the quality of ground water beneath the facility is poor (i.e., contains elevated concentrations of total dissolved solids [TDS]), primarily due to (1) historical brine disposal practices associated with production from the Jolly-Axtell #2 and Zexco-State #1-36 oil wells, which affected water quality in the L4A and L4 Zones along the northern compliance boundary, (2) dissolution of evaporates and weathered components of the Silty Clay Unit and weathered Pierre Shale, which affected water quality in the L4A and L4 Zones, and (3) long residence times (e.g., the L5 Zone). In addition to elevated concentrations of TDS, concentrations of many inorganic parameters are naturally elevated. Mean concentrations of chloride, sulfate, fluoride, nitrate, selenium, and manganese are elevated in many of the wells at the facility, and often exceed drinking water and/or agricultural standards.

The various hydrostratigraphic units beneath the facility have distinct ground-water chemistries, which further indicates the lack of hydraulic connection between the limited areas of saturation in the L4A and L4 Zones and the uppermost continuous water-bearing zone (i.e., the L5 Zone) in the unweathered Pierre Shale.

Ground-water quality data from the monitoring wells at the facility are classified in six distinct groups for characterizing the composition of ground water and evaluating potential impacts from hypothetical releases from the secure cells. The well groupings were developed from a comprehensive evaluation of hydrogeologic properties (depth to water, proximity to brine pond, etc.) and water chemistry data using standard geochemical techniques such as construction of bivariate plots of the major ions and trilinear diagrams, and evaluating the appropriateness of the well groupings using a multivariate statistical procedure referred to as discriminant function analysis.

The well groupings appear to separate wells based on their position relative to the evolutionary flow path of the brine pond seepage. Ground water becomes more concentrated in solutes as it moves laterally and vertically away from the brine pond through the subsurface, apparently as a result of the travel (i.e., residence) time in the subsurface geologic units and subsequent dissolution of the abundant evaporitic (gypsum, anhydrite, etc.) and other minerals. The shallow seepage waters lowest in TDS concentrations are from the wells near the brine pond. Although this seems counterintuitive, the brine pond liquids were actually very dilute, and the term “brine” is a misnomer. Results of chemical analyses on water samples collected from the former brine pond from January 1981 to February 1984 indicate that the oil-field water had an average TDS concentration of 1,879 milligrams per liter (mg/L), which is much lower than true brines (TDS concentrations greater than 100,000 mg/L). Only after the seepage migrates downward and away from the former brine pond does the water increase in TDS, through the dissolution of evaporite minerals along the flow paths, and take on the characteristics considered typical of saline waters (i.e., TDS greater than 10,000 mg/L). None of the groundwater at the facility approaches the composition of a true brine.

Group 1 wells, which are the shallow L4A wells adjacent to the former brine pond along the northern compliance boundary, are the shallowest and screen the least geochemically “mature” shallow ground water at the Facility. Group 1 wells generally exhibit low concentrations of most major cations and anions. The wells in Groups 2 and 3, which monitor water quality in the dissipating brine pond seepage plume, are generally farther from the brine pond than Group 1 wells, or they are screened at greater depths. Group 4 wells produce the deepest of the “shallow” waters at the facility, and monitor water related, at least in part, to former oil-field activities. The wells in Group 4 that are along the western compliance boundary adjacent to Cell 2 are generally the deepest of the shallow wells and produce the most geochemically “mature” shallow water at the facility. The concentrations of most major cations and anions increase from the levels in Group 1 (and Group 6 wells, which are discussed below) to the concentrations exhibited by wells in Group 4.

Concentrations of major ions in Group 5 wells, the deep wells in the unweathered Pierre Shale (i.e., Level 5), are generally quite different from the concentrations observed in shallower wells at the facility.

The concentrations of major anions and cations in Group 6 (Level 6) wells are relatively low and similar in many respects to Group 1 wells. Group 6 wells, which are in shallow geologic materials in surface-water drainages outside the compliance boundary, are presumably subject to a greater recharge of dilute incident precipitation and shorter residence times than other wells at the facility. As a consequence, ground water in the Group 6 wells exhibits low concentrations of major ions.

**7. Environmental Monitoring**

The following is a description of some of the environmental monitoring systems at the Deer Trail facility.

**8. Leachate Collection and Removal Systems**

Leachate collection, Leak detection, Permanent sump and removal systems (LCRSs) are designed to intercept and collect liquid migrating downward through the waste towards the liner system. Landfill LCRSs are monitored for the presence of liquid on a daily basis. When the liquid level in the sump approaches 8.4 inches in depth, the liquid is pumped from the sump.

**9. Ground Water Monitoring**

Water level measurements and LCRS samples are collected quarterly. Groundwater samples are collected semi-annually.

Groundwater and LCRS samples are analyzed for the following chemicals:

- General chemistry parameters (e.g., chloride, sulfate, TDS, EC, pH, etc.)
- Metals (e.g., arsenic, barium, chromium, lead, etc.)
- Volatile organic compounds (VOCs) by EPA Method 8260
- Organochlorine pesticides by EPA Method 8081
- PCBs by EPA Method 8082
- Chlorinated Herbicides by EPA Method 8151
- Organophosphorous Pesticides by EPA Method 8141
- Radium by EPA Method 903
- Gross Alpha, Gross Beta by EPA Method 900

In addition to the Annual and Semi-annual report, a quarterly technical report is prepared and submitted to CDPHE for review.

Groundwater contamination has not been detected at the Deer Trail Facility.

**10. Security**

The Clean Harbors Deer Trail facility is surrounded by an eight foot high chain-link fence topped with barbed wire. Access to the facility is controlled by a gate that is maintained in the closed and locked position. Drivers and all other visitors are prohibited from entering the facility until they have produced appropriate identification, received a visitor badge, and signed into a visitor log. All the facility's employees have been trained on these sign-in requirements, as well as the need to ensure facility access only to authorized personnel.

**11. Facility Address**

108555 East Highway 36

Deer Trail, Colorado 80105

Telephone: (970) 386-2293

The facility is located off I-70 Exit #316 (Byers, CO).

Follow US Highway 36 East for approximately 28 miles. The facility is on the north side of the highway.

**III. OPERATING LICENSES AND PERMITS****A. Permit Summary**

The Deer Trail Facility is currently permitted by CDPHE and Adams County for the storage, treatment, and disposal of hazardous and nonhazardous waste and certain naturally occurring radioactive materials. A list of permits is shown below:

| <b><u>Permit Type/Governing Agency</u></b>                                                                                        | <b><u>Permit No.</u></b>    | <b><u>Expiration Date</u></b>         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------|
| State – RCRA Permit<br>CDPHE – Hazardous Materials &<br>Waste Management Division                                                 | CO-13-03-15-01              | October 19, 2029                      |
| State – Radioactive Materials License<br>CDPHE – Hazardous Materials &<br>Waste Management Division<br>Radioactive Materials Unit | CO-1102-01,<br>Amendment 14 | December 31, 2023                     |
| Air Permit (Final Permit)<br>CDPHE – Air Pollution Control<br>Division                                                            | 01AD0713                    | N/A, Synthetic Minor<br>Source Permit |
| Colorado Discharge System<br>CDPHE – Water Quality Control<br>Division                                                            | CO-0042064                  | March 1, 2022                         |
| Adams County, CO Amended and<br>Restated Certificate of Designation<br>for Hazardous and Regulated Waste<br>Disposal Site         | N/A                         | November 5, 2042                      |

**B. Principal Contacts/Agencies**

The list of contacts below can provide additional information regarding Clean Harbors of Braintree's facility operations or compliance:

Operations: John H. (Jack) Kehoe  
108555 East Highway 36  
Deer Trail, CO 80105

Telephone: 970-386-2293

Regulatory: Clyde Christman  
108555 East Highway 36  
Deer Trail, CO 80105  
Telephone: 970-386-2293

RCRA Permitting: Julianna Mahr – CDPHE  
4300 Cherry Creek S. Drive  
Denver, CO 80246  
Telephone: 303-692-3451

Air Pollution: 4300 Cherry Creek S. Drive  
Denver, CO 80246  
Telephone: 303-692-3100

Radioactive Materials: Shiya Wang, CDPHE  
4300 Cherry Creek S. Drive  
Denver, CO 80246  
Telephone: 303-692-3447

#### **IV. PROCESS DESCRIPTION**

The Deer Trail facility receives and treats bulk, drummed, and small-container waste for treatment followed by either placement in secure landfill cells or by shipment off site for disposal. The facility is designed and constructed to serve the core business for hazardous waste treatment, storage, and disposal. The facility contains the following units that are regulated under various permits.

##### **A. Waste Treatment Building**

The treatment building is permitted to store and treat hazardous waste. It is a fully enclosed metal fabricated building with an air purification system. The building is contained within a double liner system. Hazardous waste treatment occurs in eight treatment mixing basins and in a semi-continuous waste mixing system (process equipment). The treatment mixing basins are constructed of reinforced concrete with a protective, sacrificial steel liner installed inside the basins. There are nine compartmentalized treatment-mixing basins; six (6) have an approximate capacity of 150 cubic yards each, one (1) has an approximate capacity of 300 cubic yards, and two (2) have an approximate capacity of 150 cubic yards each. The maximum treatment capacity of the unit is 2400 cubic yards per day.

The liner system for the treatment building consists of (from bottom to top) 3 feet of compacted clay, a 40-mil high-density polyethylene (HDPE) geo-membrane, a leachate collection/leak detection system, three feet of compacted clay, and an 80-mil geo-membrane. The leachate collection system consists of a geo-composite layer that drains to a sump. In the area of the basins, the primary liner is covered by a minimum of 1.5 feet of clay structural fill, which is overlain by 1.5 to 2.25 feet of concrete. The concrete is then overlain with a one-inch steel plate. An annulus

monitoring system exists between the concrete and the steel plate in each basin. The floors of the treatment building are sloped to provide segregated drainage to each of the mixing basins.

The size of a designated waste storage and staging area located in the western portion of the treatment building is approximately 120 feet by 60 feet. The maximum capacity of the storing and staging area is 600 cubic yards.

## **B. Container Storage Areas**

Drummed and small container wastes are off loaded in the container storage areas. Under the RCRA permit, the facility is allowed to store hazardous waste in containers at the following areas:

### **1. Drum Dock**

The Drum Dock is located in the southeast section of the treatment building. It is separated from the treatment building by a common wall, where the waste shredder is located. One of the advantages of this layout is to pass the waste directly into a mixing basin in the solidification building for treatment when shredding drums. The maximum capacity of the Drum Dock is 33,000 gallons (11,000 gallons for Class I/II wastes and 22,000 gallons for Class III wastes).

### **2. Container Storage Area A**

Container Storage Area A is located east of the maintenance building in the southeast corner of the process area. The maximum capacity of Container Storage Area A is 2,000 cubic yards.

### **3. Container Storage Area B**

Container Storage Area B is located west of the treatment building. The maximum capacity of Container Storage Area B is 1,000 cubic yards.

## **C. Storage Tanks**

The facility is permitted to store hazardous wastes in the following tanks. Each tank and/or tank system is equipped with the secondary containment system that was constructed to be sufficiently impervious to contain leaks, spills, and accumulated precipitation until detected and removed.

### **1. Contaminated Water Tanks**

The contaminated water tanks are two above ground, dish-bottomed, steel tanks. The tanks are lined with Tenemac Series 104 epoxy coating. The tanks were constructed with an additional one-eighth inch corrosion allowance added to each of the maximum thicknesses. The maximum capacity of the tank is 250,000 gallons each, for a maximum total capacity of 500,000 gallons.

### **2. Operations and Maintenance Accumulation Tanks**

The Operations and Maintenance Accumulation Tanks (O & M Tanks) are two underground, fiberglass tanks. The interior shells of the tanks are lined with chemical resistant vinyl ester to a minimum thickness of 100 mils. The tanks have a minimum shell thickness of 0.22 inch. An additional 0.12-inch corrosion allowance has also been added to the initial thickness of each surface. The maximum capacity of each tank is 4,000 gallons. The tanks are located adjacent to the operations and maintenance buildings.



**D. Permitted Secure Cell Areas**

The facility is permitted for seven secure disposal cells. The cells have the following approximately volumes:

Cell 1: 173,000 cubic yards (closed)  
Cell 2: 220,600 cubic yards (closed)  
Cell 3: 480,240 cubic yards (closed)  
Cell 4: 491,480 cubic yards (active)  
Cell 5: 472,120 cubic yards (to be constructed)  
Cell 6: 433,840 cubic yards (to be constructed)  
Cell 7: 466,320 cubic yards (to be constructed)

The total maximum permitted capacity is 2,528,000 cubic yards. Current, Cell 1, Cell 2, and Cell 3 are closed and capped. Cell 4 was constructed during 2014 and was placed in active use in July 2015. All the cells are excavated to have the entire floor set in the un-weathered Pierre Shale. The construction features of the cells are described in the following:

**E. Liner System for Cells 1 and 2**

The base liner system from bottom to top consists of the layers that are: 3-foot compacted clay, 80-mil HDPE geo-membrane liner, geo-composite leak detection system, 3-foot compacted clay, 80-mil HDPE geo-membrane liner, geo-composite leachate collection system, 1-foot sand, and 2-foot compacted protective soil. A permanent sump is installed under the leak detection sump and consists of gravel surrounded by geo-textile fabric. The side-slope liner system from bottom to top consists of 4 ½-foot compacted clay, 80-mil HDPE geo-membrane liner, geo-composite drainage layer, 3-foot compacted clay, 80-mil HDPE geo-membrane liner, geo-composite drainage layer, and 1 ½-foot protective soil layer.

**F. Liner System for Cells 3 through 7**

The bottom liner system shall consist of (from bottom to top) prepared sub-grade, three feet of compacted clay, and 80-mil HDPE geo-membrane liner (these two components comprise the secondary composite liner), a geo-composite leak detection system, three feet of compacted clay, a geo-synthetic clay liner, an 80-mil HDPE geo-membrane liner (these three components comprise the primary composite liner), a geo-composite drainage layer, one foot of sand (these two components comprise the leachate collection system, a geo-textile and two foot of protective soil. The side-slope liner system shall consist of (from bottom to top) prepared subgrade, 4 ½ feet of compacted clay, an 80-mil HDPE secondary liner system, a geo-composite drainage layer, a geo-synthetic clay liner, an 80-mil HDPE geo-membrane liner (these two components comprise the primary liner system), and 1 ½ feet of protective soil.

**G. Leachate Collection System**

The leachate collection system for Cell 1 is located on the base of the cell and consists of ten lateral pipes and one header pipe. Nine of the lateral pipes are connected to the header pipe and the remaining lateral pipe drains into a 36-inch diameter reinforced concrete riser pipe that rises

vertically out of the sump, and the concrete riser pipe was extended vertically as the secure cell was filled.

The leachate collection system for Cell 2 through 7 consists of two leachate collection pipes that drain to the leachate collection sump and a layer of geo-net that extends across the base of the secure cell beneath the geo-textile layer, covered with gravel, and the geo-textile cushion is wrapped around the gravel. There are three leachate collection system clean-out pipes and a geo-net flush pipe is located in the corner of the cell near the access ramp and along the toe of the access ramp slope. The leachate collection systems drains and is accessed by a 24-inch HDPE riser pipe placed at the corner of the slope. The HDPE pipe used for the access of the leachate collection system, leachate detection system, and permanent sump consists of a one-foot perforated section with a perforated HDPE end cap at the bottom of the pipe.

#### **H. Leak Detection System and Permanent Sump**

The access for the leak detection system and permanent sump on Cells 2 through 7 is through the 18-inch diameter HDPE riser pipes that were trenched into the corner of the cell. The liquid in the sump enters the pipe that is placed along the bottom of the sump through a perforated section of the pipe.

#### **I. Air Handling System**

The two air handling systems consist of a bag house unit that has a filtering capacity of approximately 99.4% efficiency and a 2% potassium permanganate packed column scrubber that is designed to have a VOC removal efficiency of at least 95%.

#### **J. Acceptable Waste Codes**

The following table lists the approved waste codes for disposal in the secure landfill cells, provided the waste meets the applicable Land Disposal Restrictions specified in 6 CCR 1007-3 §268:

| D Codes            | F Codes           | K Codes                                                            | P Codes                                                    | U Codes           |
|--------------------|-------------------|--------------------------------------------------------------------|------------------------------------------------------------|-------------------|
| D001 through D0043 | F001 through F012 | K001 through K052                                                  | P001 through P018                                          | U001 through U012 |
|                    | F019 through F028 | K060 through K062                                                  | P020 through P031                                          | U014 through U223 |
|                    | F032              | K064 through K066                                                  | P033 through P051                                          | U225 through U249 |
|                    | F034, F035        | K069, K071                                                         | P054                                                       | U271              |
|                    | F037 through F039 | K073                                                               | P056 through P060                                          | U277 through U280 |
|                    |                   | K083 through K088                                                  | P062 through P078                                          | U328, U353, U359  |
|                    |                   | K090, K091                                                         | P081, P082                                                 | U364 through U367 |
|                    |                   | K093 through K118                                                  | P084, P085                                                 | U372, U373        |
|                    |                   | K123 through K126                                                  | P087 through P089                                          | U381 through U387 |
|                    |                   | K131, K132                                                         | P092 through P099                                          | U389 through U396 |
|                    |                   | K136, K140                                                         | P101 through P116                                          | U400 through U404 |
|                    |                   | K141 through K145                                                  | P118 through P123                                          | U409, U410, U411  |
|                    |                   | K147 through K151                                                  | P127, P128                                                 |                   |
|                    |                   | K156 through K161                                                  | P185                                                       |                   |
|                    |                   | K169 through K172                                                  | P188 through P192                                          |                   |
|                    |                   | K176 through K178                                                  | P194                                                       |                   |
|                    |                   | State Codes K901 through K903 – meeting demilitarization standards | P196 through P199                                          |                   |
|                    |                   |                                                                    | P201 through P205                                          |                   |
|                    |                   |                                                                    | State codes P909-P911 – meeting demilitarization standards |                   |
|                    |                   |                                                                    |                                                            |                   |

## K. Prohibited Wastes

The following wastes are specifically prohibited from storage, treatment, or disposal at the facility:

- Compressed gases
- Air reactive materials
- Shock sensitive materials
- Infectious wastes
- DOT-forbidden explosives

**V. Closure Plan**

A comprehensive facility closure plan has been developed in accordance with State and Federal requirements and is available at the site for inspection upon request. A Certificate of Insurance guarantees financial assurance for closure and post-closure.

**VI. Insurance**

Clean Harbors presently carries general liability and auto liability insurance providing coverage in the aggregate amount of \$30 million per year. The Company has excess pollution liability insurance coverage in the amount of \$29 million which insures the Company against liability for sudden and accidental occurrences from the time waste is picked up from a customer, while being handled at the Company's treatment and transfer facilities, through its delivery to a disposal site.

The follow information and sample certificates depict insurance coverage afforded under such policies.

**A. Clean Harbors' Casualty Insurance Program Summary**

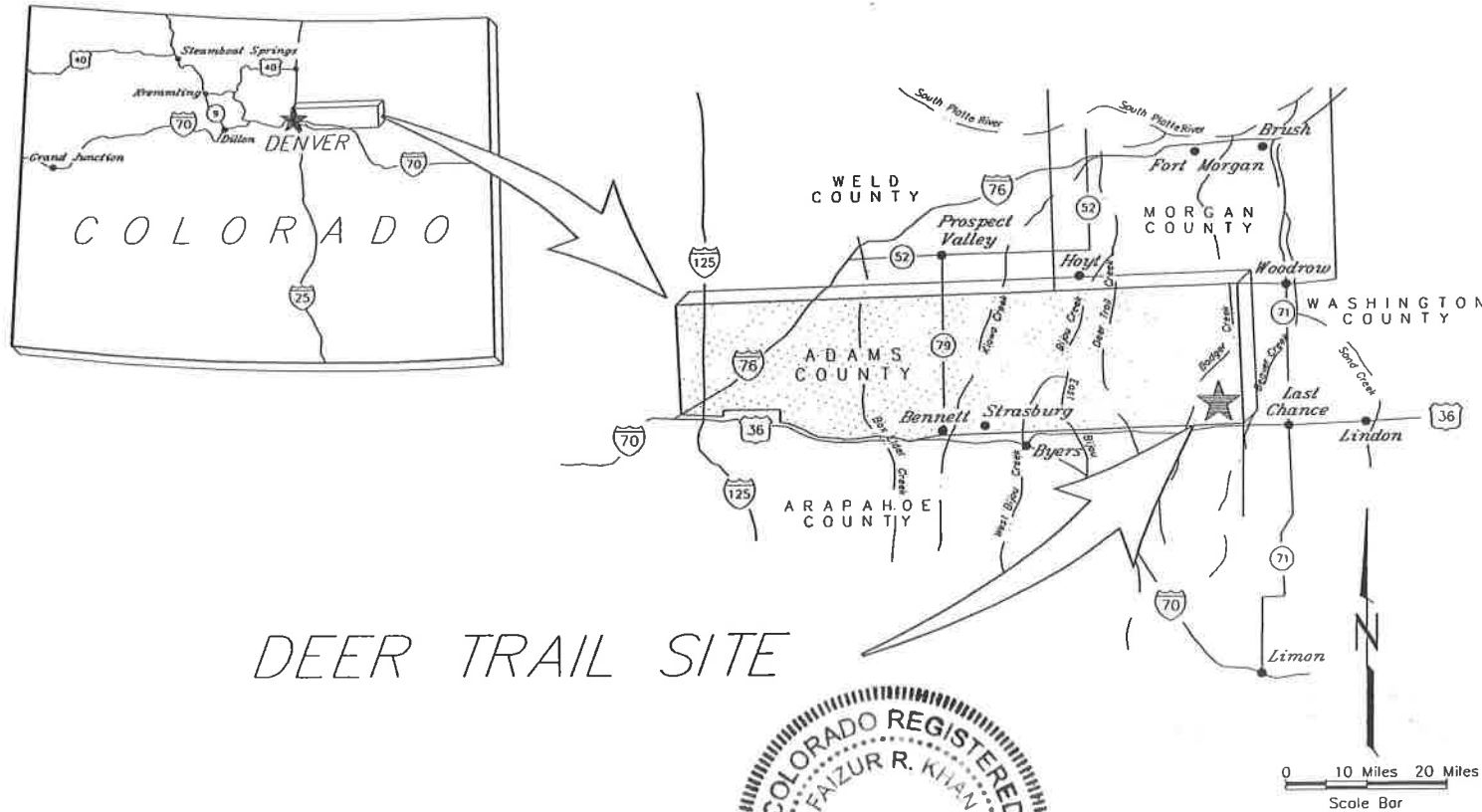
| Policy                                                                     | Limits of Liability                                    |
|----------------------------------------------------------------------------|--------------------------------------------------------|
| Workers' Compensation & Employer's Liability                               | Statutory<br>\$1,000,000 Each Accident                 |
| Business Automobile Liability (Includes MCS-90 Endorsement)                | \$1,000,000 Each Occurrence<br>\$5,000,000 MCS-90      |
| Comprehensive General Liability                                            | \$1,000,000 Each Occurrence<br>\$3,000,000 Aggregate   |
| Excess (Umbrella) Liability (Follow Form)                                  | \$30,000,000 Each Occurrence<br>\$30,000,000 Aggregate |
| Wharfingers Liability                                                      | \$10,000,000 Any one Vessel/Any one Accident           |
| Contractor's Pollution Liability (Off-Site)                                | \$10,000,000 Each Occurrence<br>\$10,000,000 Aggregate |
| Protection and Identity                                                    | \$1,000,000 Each Occurrence/Any one Vessel             |
| Environmental Impairment Liability (Coverage for Clean Harbors Facilities) | \$3,000,000 Each Occurrence<br>\$6,000,000 Aggregate   |
| Excess Pollution Liability (Sudden and Accidental Occurrences)             | \$30,000,000 Each Occurrence<br>\$30,000,000 Aggregate |
| Total coverage for Pollution incidences                                    | \$30,000,000 Limit                                     |

PERMIT ATTACHMENT LF-4  
CONCEPTUAL SITE DEVELOPEMENT PLANS  
CLEAN HARBORS DEER TRAIL, LLC  
WASTE TREATMENT, STORAGE AND DISPO  
ADAMS COUNTY, COLORADO

SEPTEMBER 2017

REVISION - 1

## LIST OF DRAWINGS



### PROFESSIONAL ENGINEER'S STATEMENT

Original design drawings 1 through 25 created by  
Patrick G Corser (Co. P.E. 28431) Undersigned  
is the responsible design engineer for  
revisions discussed in the notes section  
dated September 2017.

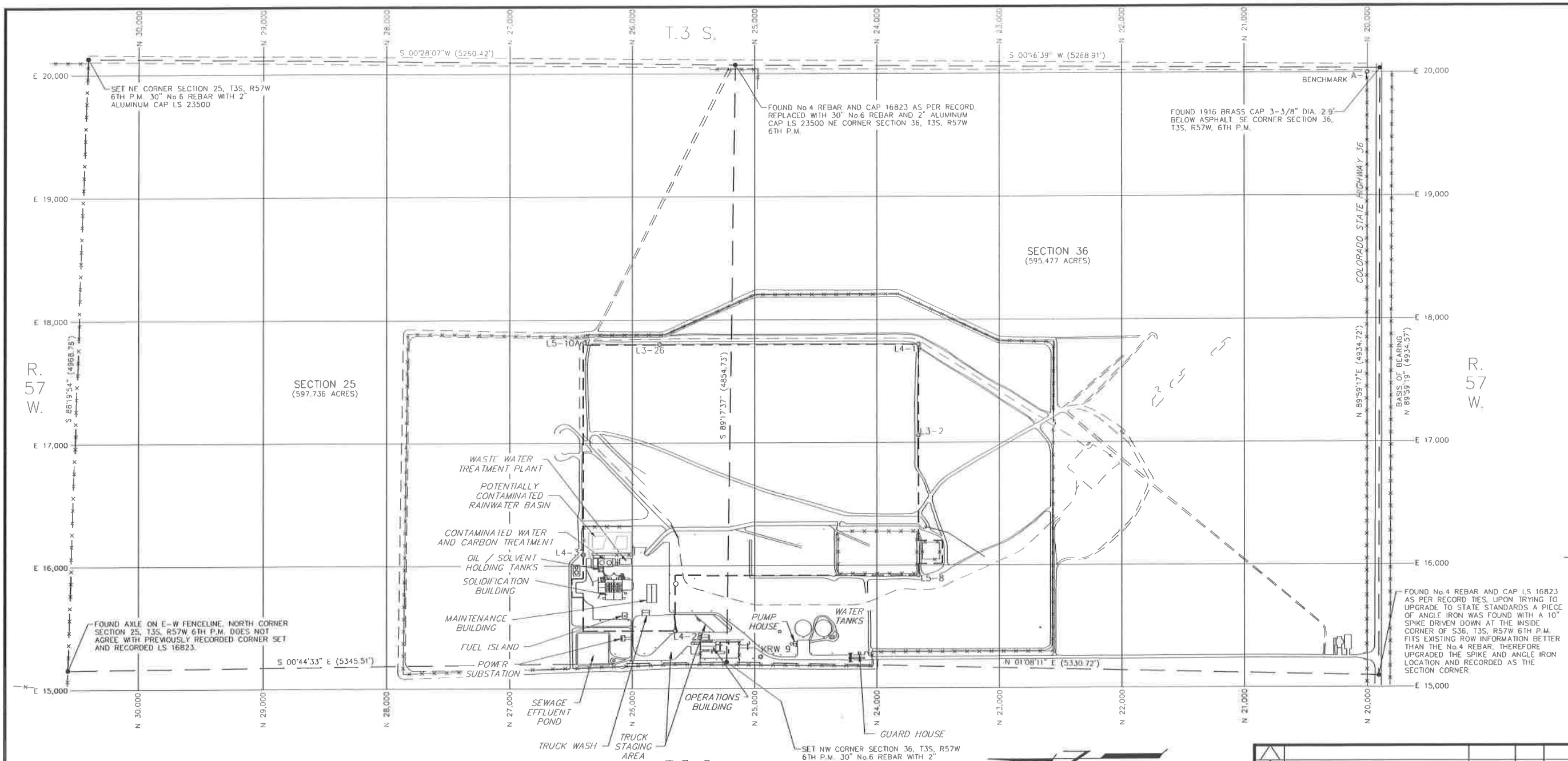
9-29-17 Faizur R. Khan  
Date Faizur R. Khan, CO P.E. 30036

NOTE: ORIGINAL DESIGN DRAWINGS PREPARED BY  
TERRAMATRIX ON 11/94



THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC  
ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED  
OR USED WITHOUT WRITTEN PERMISSION OF OWNER

|                              |          |
|------------------------------|----------|
| DWG.: <i>Deertrail-1.DWG</i> |          |
| DRAWING No.:                 | REV.     |
| <i>1</i>                     | <i>1</i> |

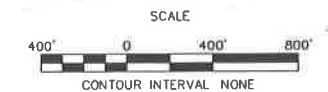


## LEGEND

- — — SURFACE WATER DRAINAGE
- == ROAD
- x-x-x- FENCE
- — — SECTION LINE BOUNDARY
- — — COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK

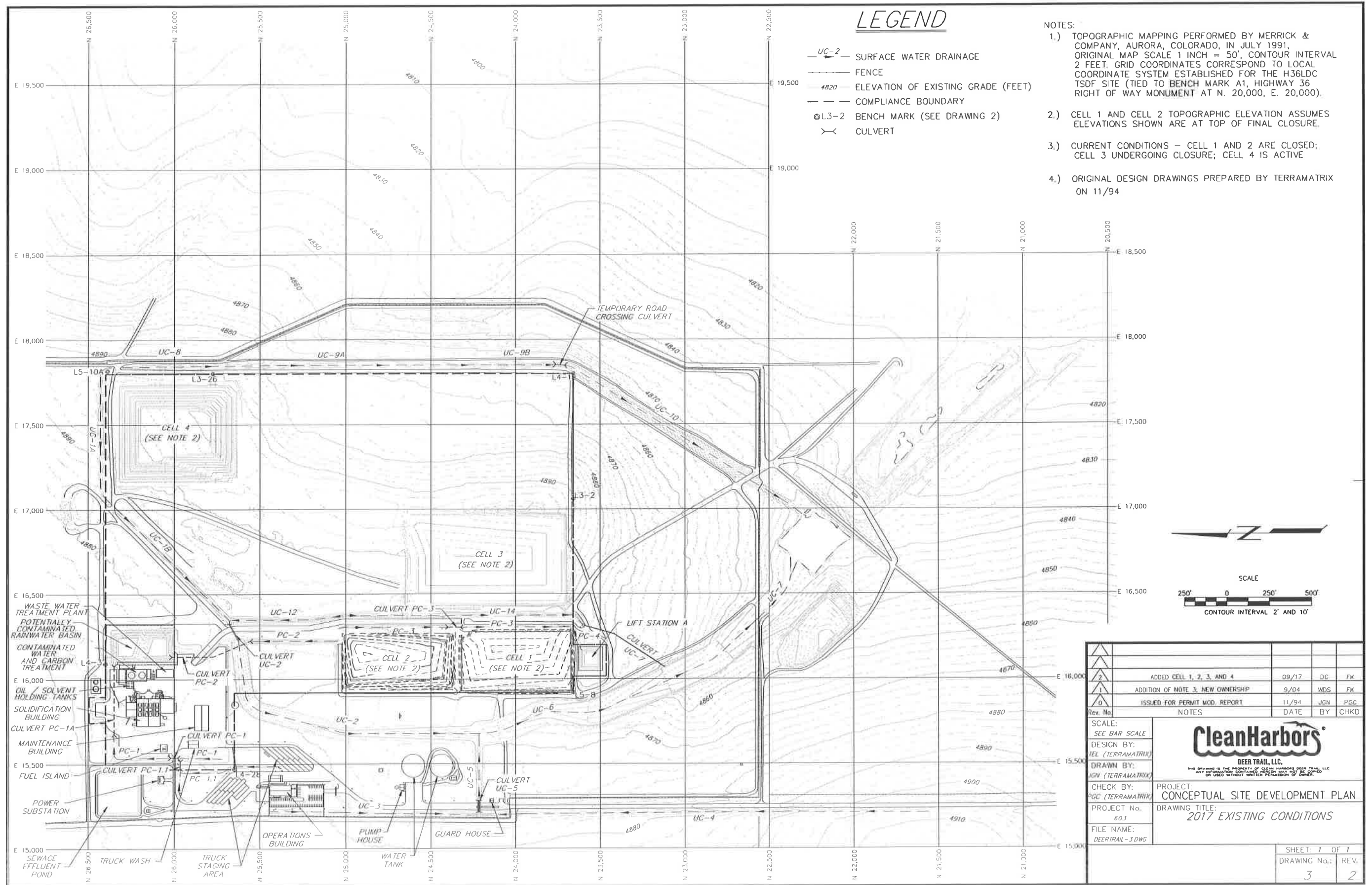
### NOTES:

- 1.) TOPOGRAPHIC MAPPING PERFORMED BY MERRICK & COMPANY, AURORA, COLORADO, IN JULY 1991. ORIGINAL MAP SCALE 1 INCH = 50'. CONTOUR INTERVAL 2 FEET. GRID COORDINATES CORRESPOND TO LOCAL COORDINATE SYSTEM ESTABLISHED FOR THE H36LDC TSDf SITE (TIED TO BENCH MARK A1, HIGHWAY 36 RIGHT OF WAY MONUMENT AT N. 20,000, E. 20,000).
- 2.) SECTION CORNER INFORMATION OBTAINED FROM SURVEY DATA COLLECTED BY HASCALL SURVEYS INC. LONGMONT, COLORADO, IN AUGUST 1994.
- 3.) BENCH MARK INFORMATION OBTAINED FROM TOPOGRAPHIC MAPPING PERFORMED BY MERRICK & COMPANY, AURORA, COLORADO, IN JULY 1991. UPDATED BY SOUDER, MILLER, AND ASSOCIATES LAKEWOOD, COLORADO, IN SEPTEMBER 2017
- 4.) ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94

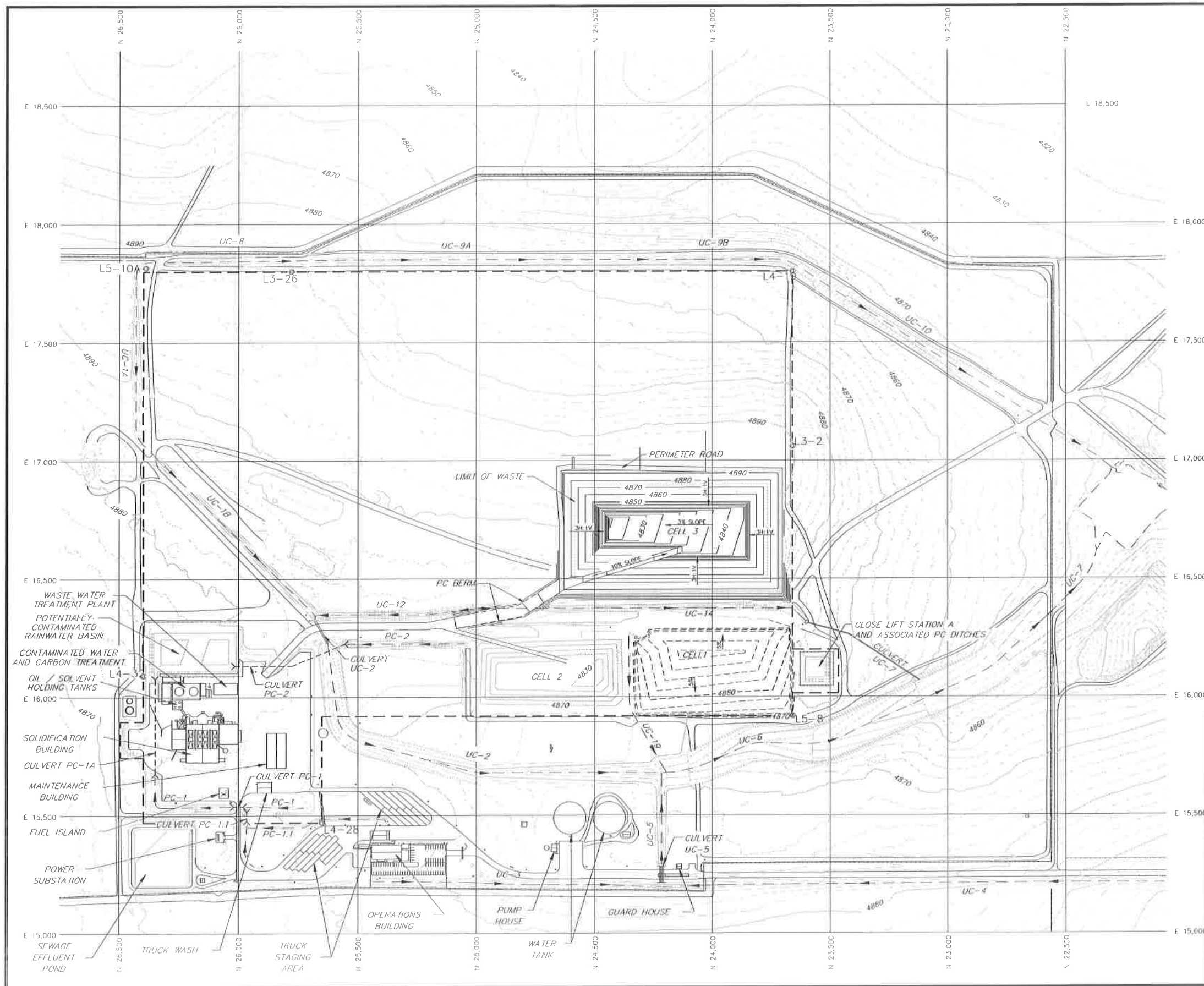


| SURVEY BENCH MARKS |           |           |           |
|--------------------|-----------|-----------|-----------|
| NO.                | NORTHING  | EASTING   | ELEVATION |
| A1                 | 20,000.00 | 20,000.00 | 4,779.95  |
| L3-2               | 23,659.32 | 17,060.48 | 4,891.27  |
| L3-26              | 25,775.50 | 17,800.24 | 4,892.34  |
| L4-28              | 25,649.14 | 15,471.23 | 4,880.85  |
| L4-32              | 26,402.38 | 16,088.23 | 4,874.14  |
| L5-8               | 23,659.13 | 15,919.36 | 4,869.82  |
| L5-10A             | 26,389.30 | 17,817.65 | 4,893.67  |
| KRW 9              | 24,952.24 | 15,257.60 | 4,878.27  |

|                                                         |                   |       |      |
|---------------------------------------------------------|-------------------|-------|------|
| Rev. No.                                                | 2                 | 1     | 0    |
| SCALE:                                                  | SEE BAR SCALE     |       |      |
| DESIGN BY:                                              | TEL (TERRAMATRIX) |       |      |
| DRAWN BY:                                               | IGN (TERRAMATRIX) |       |      |
| CHECK BY:                                               | PCC (TERRAMATRIX) |       |      |
| PROJECT No.                                             | 603               |       |      |
| FILE NAME:                                              | DEERTRAIL-2.DWG   |       |      |
| NOTES                                                   |                   | DATE  | BY   |
| UPDATE SURVEY BENCH MARKS                               |                   | 9/17  | DC   |
| REVISED TO SHOW NEW OWNERSHIP                           |                   | 9/04  | WDS  |
| ISSUED FOR PERMIT MOD. REPORT                           |                   | 11/94 | JGN  |
|                                                         |                   |       | PCC  |
|                                                         |                   |       | CHKD |
| PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN               |                   |       |      |
| DRAWING TITLE: COMPLIANCE BOUNDARY GENERAL LOCATION MAP |                   |       |      |
| SHEET: 1 OF 1                                           |                   |       |      |
| DRAWING No.:                                            |                   |       |      |
| 2                                                       |                   |       |      |
| REV.                                                    |                   |       |      |
| 2                                                       |                   |       |      |



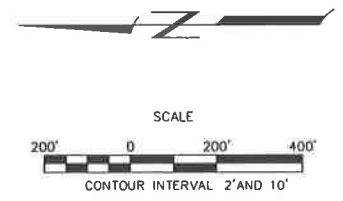




- LEGEND**
- UC-2 SURFACE WATER DRAINAGE
  - FENCE
  - 4820 ELEVATION OF EXISTING GRADE (FEET) (BASED ON 1991 TOPOGRAPHY)
  - COMPLIANCE BOUNDARY
  - ⊙ L3-2 BENCH MARK (SEE DRAWING 2)
  - 4830 ELEVATION OF CELL GRADE (FEET)
  - 4870 ELEVATION OF COVER GRADE (FEET)
  - WASTE LIMIT
  - PC BERM (POTENTIALLY CONTAMINATED)
  - CULVERT

| APPROXIMATE DESIGN VOLUME:          |                 |
|-------------------------------------|-----------------|
| CELL 1                              | 173,385 cu. yd. |
| CELL 2                              | 220,600 cu. yd. |
| CELL 3                              | 480,240 cu. yd. |
| TOTAL                               | 874,225 cu. yd. |
| PC AREA (POTENTIALLY CONTAMINATED): |                 |
| TOTAL PC AREA                       | 19.8 acres      |

- NOTE:
- ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
  - FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
  - CURRENT CONDITIONS - CELL 1, 2, AND CELL 3 ARE CLOSED
  - ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



|                   |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----|------|
| 2                 | REVISE CELL 3 DESIGN AND TOTAL VOLUME                                                                                                                                                                                                                                                                                  | 09/17             | DC  | FK   |
| 1                 | REV. CELL 2 DESIGN VOL.; NEW OWNERSHIP; NOTE 3                                                                                                                                                                                                                                                                         | 9/04              | WDS | FK   |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                                                                                                          | 11/94             | JCN | PGC  |
| Rev. No.          | NOTES                                                                                                                                                                                                                                                                                                                  | DATE              | BY  | CHKD |
| SCALE:            | <div><br/><b>DEER TRAIL, LLC.</b><br/><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC.<br/>ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED<br/>OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small></div> |                   |     |      |
| SEE BAR SCALE     |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| DESIGN BY:        |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| TEL (TERRAMATRIX) |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| DRAWN BY:         |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| IGN (TERRAMATRIX) | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                                                                                                              |                   |     |      |
| CHECK BY:         | DRAWING TITLE:                                                                                                                                                                                                                                                                                                         |                   |     |      |
| PGC (TERRAMATRIX) | CELL DEVELOPMENT SEQUENCE                                                                                                                                                                                                                                                                                              |                   |     |      |
| PROJECT No.       | FILL CELL 2 - CONSTRUCT CELL 3                                                                                                                                                                                                                                                                                         |                   |     |      |
| 603               |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| FILE NAME:        |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
| DEERTRAIL-4.DWG   |                                                                                                                                                                                                                                                                                                                        |                   |     |      |
|                   |                                                                                                                                                                                                                                                                                                                        | SHEET: 1 OF 1     |     |      |
|                   |                                                                                                                                                                                                                                                                                                                        | DRAWING No.: REV. |     |      |
|                   |                                                                                                                                                                                                                                                                                                                        | 4 2               |     |      |



# LEGEND

- UC-2 SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK (SEE DRAWING 2)
- 4830 ELEVATION OF CELL GRADE (FEET)
- 4870 ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT

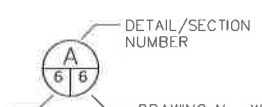
| APPROXIMATE DESIGN VOLUME: |                  |
|----------------------------|------------------|
| CELL 1                     | 173,385 cu.yd.   |
| CELL 2                     | 220,600 cu.yd.   |
| CELL 3                     | 480,240 cu.yd.   |
| CELL 4                     | 491,840 cu.yd.   |
| TOTAL                      | 1,366,065 cu.yd. |

| PC AREA (POTENTIALLY CONTAMINATED): |            |
|-------------------------------------|------------|
| TOTAL PC AREA                       | 21.1 acres |

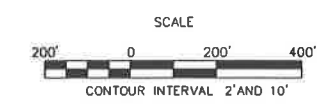
## NOTE:

- ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE
- ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

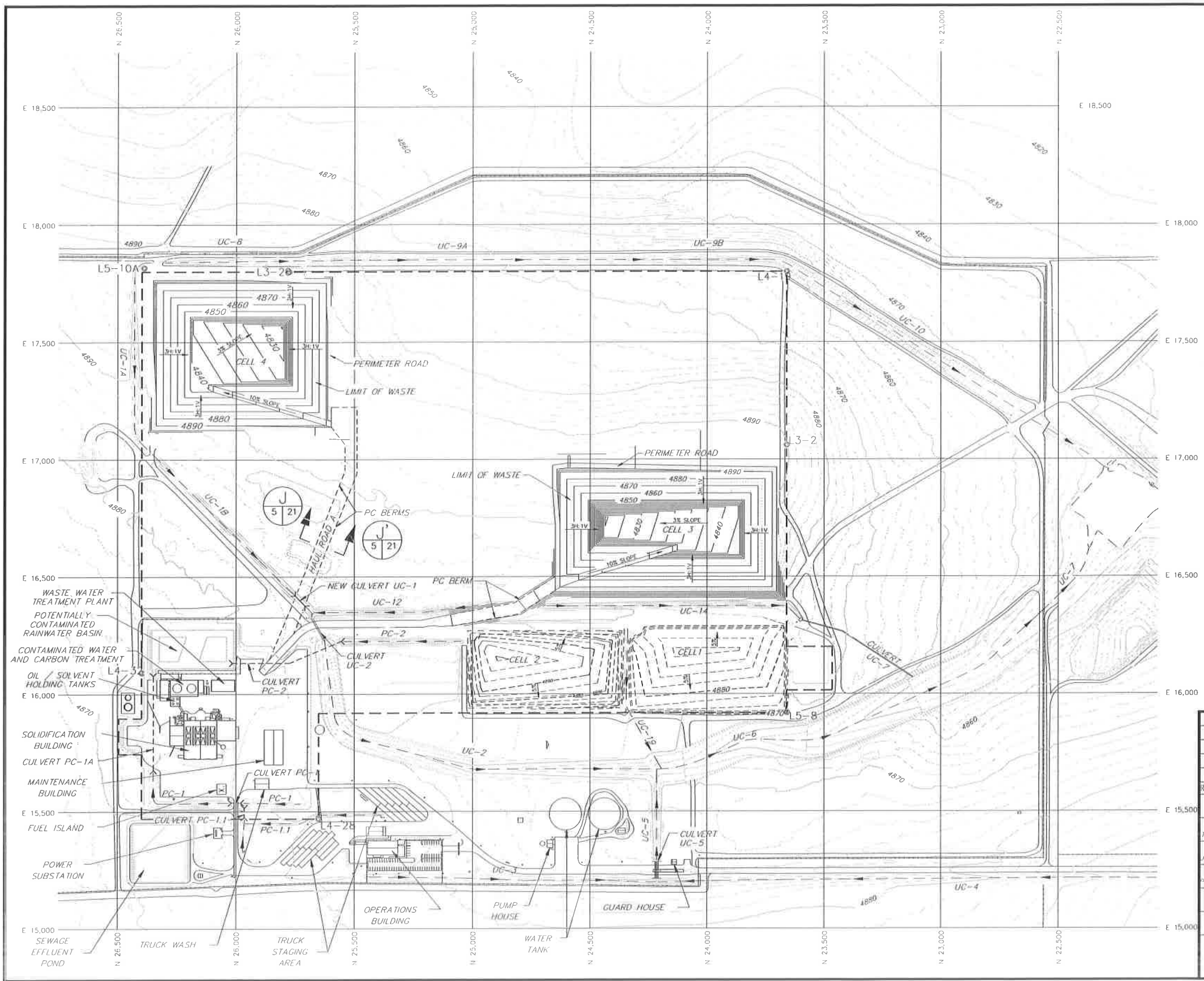
DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN



| 2                               | REVISE CELL 3 AND 4 DESIGN VOLUME           | 09/17 | DC  | FK   |
|---------------------------------|---------------------------------------------|-------|-----|------|
| 1                               | REV. CELL 2 VOL/CONT; NEW OWNERSHIP; NOTE 3 | 9/04  | WDS | FK   |
| 0                               | ISSUED FOR PERMIT MOD. REPORT               | 11/94 | JGN | PCC  |
| Rev. No.                        | NOTES                                       | DATE  | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE         |                                             |       |     |      |
| DESIGN BY:<br>TEL (TERRAMATRIX) |                                             |       |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)  |                                             |       |     |      |
| CHECK BY:<br>PCC (TERRAMATRIX)  |                                             |       |     |      |
| PROJECT No.<br>603              |                                             |       |     |      |
| FILE NAME:<br>DEERTRAIL-5.DWG   |                                             |       |     |      |

|                                                                                                                                                                                                                                  |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
|                                                                                                                                                                                                                                  |        |
| <b>DEER TRAIL, LLC.</b><br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS/DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF CLEAN HARBORS/DEER TRAIL, LLC.</small> |        |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br>DRAWING TITLE:<br>CELL DEVELOPMENT SEQUENCE<br>FILL CELL 3 - CONSTRUCT CELL 4                                                                                                    |        |
| SHEET: 1 OF 1                                                                                                                                                                                                                    |        |
| DRAWING No. 5                                                                                                                                                                                                                    | REV. 2 |



# LEGEND

- UC-2 SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK (SEE DRAWING 2)
- 4830 ELEVATION OF CELL GRADE (FEET)
- 4870 ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT

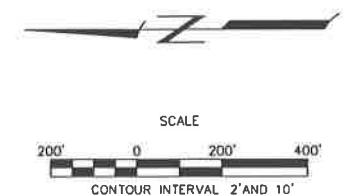
| APPROXIMATE DESIGN VOLUME: |                 |
|----------------------------|-----------------|
| CELL 1                     | 173,385 cu.yd   |
| CELL 2                     | 220,600 cu.yd   |
| CELL 3                     | 480,240 cu.yd   |
| CELL 4                     | 491,840 cu.yd   |
| CELL 5                     | 472,120 cu.yd   |
| TOTAL                      | 1,838,185 cu.yd |

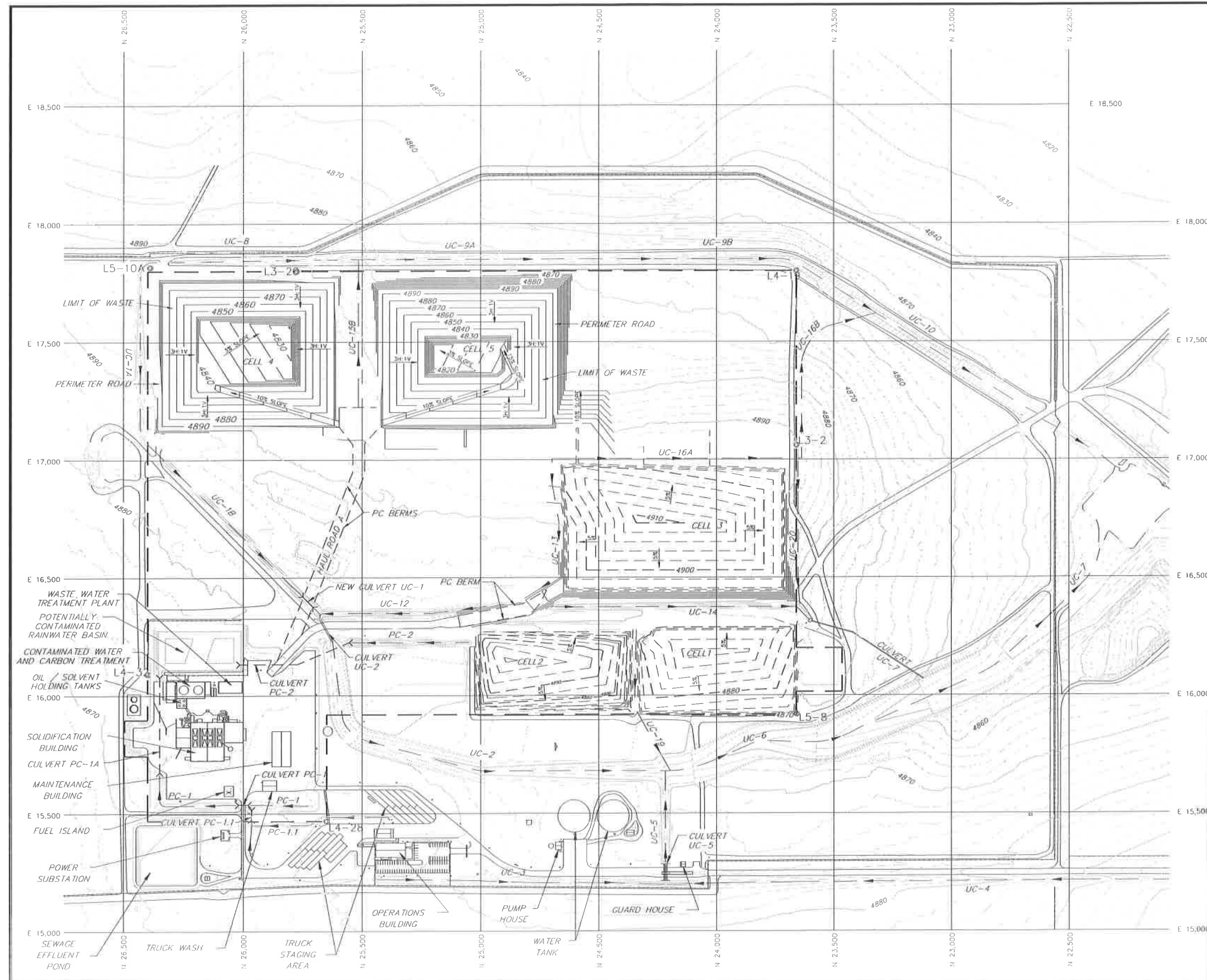
| PC AREA (POTENTIALLY CONTAMINATED): |            |
|-------------------------------------|------------|
| TOTAL PC AREA                       | 21.1 acres |

## NOTE:

- ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE; CELLS 5 IS NOT CONSTRUCTED (FUTURE)
- ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



| 2                                                                                                                                                                                                                                                         | REVISE CELL 3, 4, AND 5 DESIGN VOLUME      | 09/17 | DC  | FK   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------|-----|------|
| 1                                                                                                                                                                                                                                                         | REV CELL 2 VOL/CONT. NEW OWNERSHIP; NOTE 3 | 9/04  | WDS | FK   |
| 0                                                                                                                                                                                                                                                         | ISSUED FOR PERMIT MOD. REPORT              | 11/94 | JGN | PCC  |
| Rev. No                                                                                                                                                                                                                                                   | NOTES                                      | DATE  | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE                                                                                                                                                                                                                                   |                                            |       |     |      |
| DESIGN BY:<br>TEL (TERRAMATRIX)                                                                                                                                                                                                                           |                                            |       |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)                                                                                                                                                                                                                            |                                            |       |     |      |
| CHECK BY:<br>PCC (TERRAMATRIX)                                                                                                                                                                                                                            |                                            |       |     |      |
| PROJECT No.<br>603                                                                                                                                                                                                                                        |                                            |       |     |      |
| FILE NAME:<br>DEERTRAIL-6.DWG                                                                                                                                                                                                                             |                                            |       |     |      |
| <div style="text-align: center;"> <br/> <b>DEER TRAIL, LLC.</b><br/> <small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> </div> |                                            |       |     |      |
|                                                                                                                                                                                                                                                           |                                            |       |     |      |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                                              |                                            |       |     |      |
| DRAWING TITLE:<br>CELL DEVELOPMENT SEQUENCE<br>FILL CELL 4 - CONSTRUCT CELL 5                                                                                                                                                                             |                                            |       |     |      |
| SHEET: 1 OF 1                                                                                                                                                                                                                                             |                                            |       |     |      |
| DRAWING No. 6 REV. 2                                                                                                                                                                                                                                      |                                            |       |     |      |



# LEGEND

- UC-2 SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙L3-2 BENCH MARK (SEE DRAWING 2)
- 4830 ELEVATION OF CELL GRADE (FEET)
- 4870 ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT

## APPROXIMATE DESIGN VOLUME:

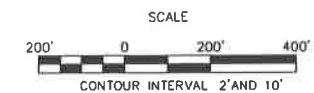
|        |                   |
|--------|-------------------|
| CELL 1 | 173,385 cu. yd.   |
| CELL 2 | 220,600 cu. yd.   |
| CELL 3 | 480,240 cu. yd.   |
| CELL 4 | 491,840 cu. yd.   |
| CELL 5 | 472,120 cu. yd.   |
| CELL 6 | 433,840 cu. yd.   |
| TOTAL  | 2,272,025 cu. yd. |

## PC AREA (POTENTIALLY CONTAMINATED):

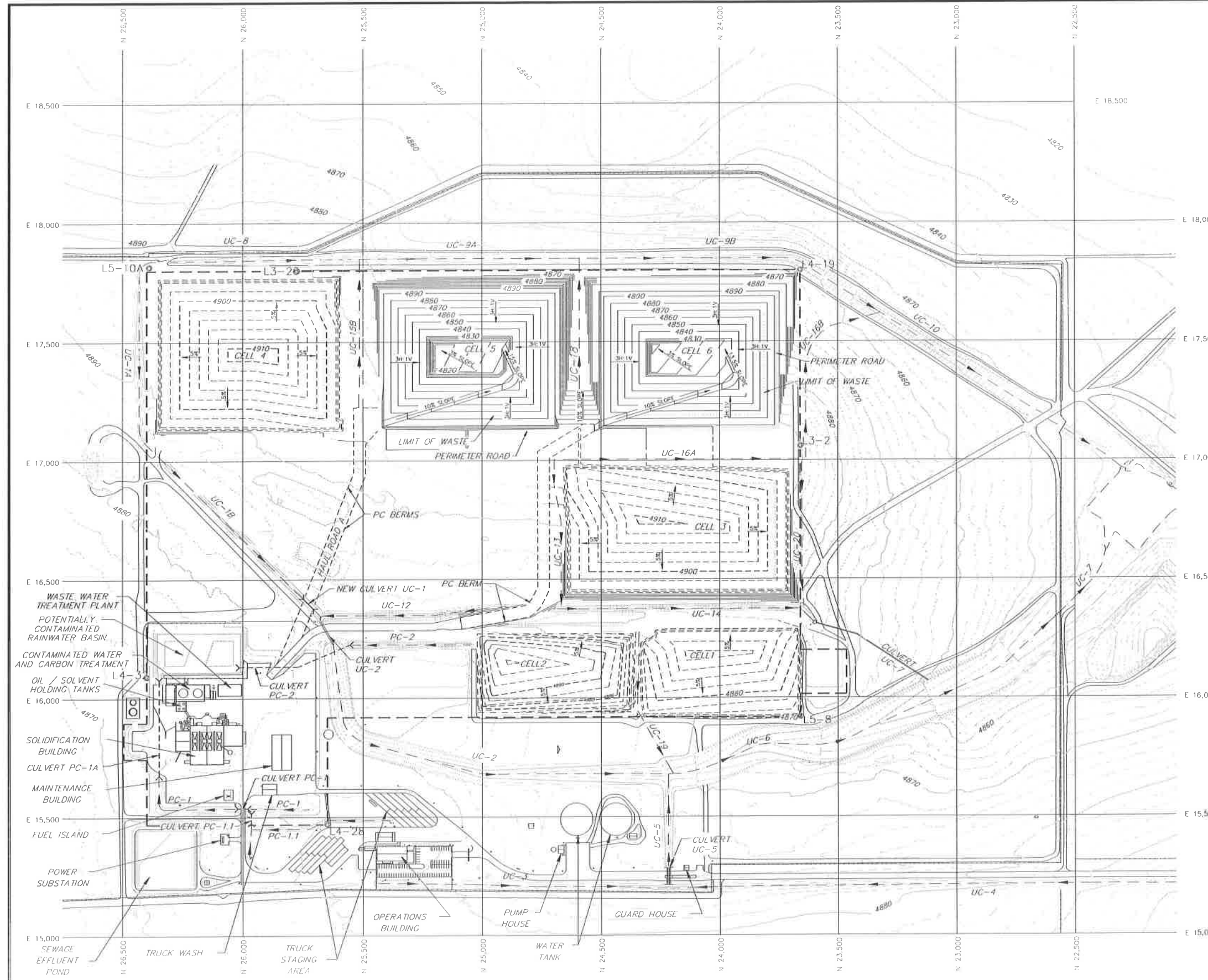
|               |            |
|---------------|------------|
| TOTAL PC AREA | 21.8 acres |
|---------------|------------|

## NOTE:

- ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE; CELLS 5 AND 6 ARE NOT CONSTRUCTED (FUTURE)
- ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



|             |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------|
| 4           |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| 3           |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| 2           | REVISE CELL 3, 4, 5, AND 6 DESIGN VOLUME                                                                                                                                                                                                                                                                                            | 09/17 | DC   | FK   |
| 1           | REV CELL 2 VOL/CONT; NEW OWNERSHIP; NOTE 3                                                                                                                                                                                                                                                                                          | 9/04  | WDS  | FK   |
| 0           | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                                                                                                                       | 11/94 | JGN  | PCC  |
| Rev. No.    | NOTES                                                                                                                                                                                                                                                                                                                               | DATE  | BY   | CHKD |
| SCALE:      | <p>DEER TRAIL, LLC</p> <p>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</p> <p>PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN</p> <p>DRAWING TITLE: CELL DEVELOPMENT SEQUENCE</p> <p>FILL CELL 5 - CONSTRUCT CELL 6</p> |       |      |      |
| DESIGN BY:  |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| DRAWN BY:   |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| CHECK BY:   |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| PROJECT No. |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| 603         |                                                                                                                                                                                                                                                                                                                                     |       |      |      |
| FILE NAME:  | DEERTRAIL-7.DWG                                                                                                                                                                                                                                                                                                                     |       |      |      |
|             | SHEET: 1 OF 1                                                                                                                                                                                                                                                                                                                       |       |      |      |
|             | DRAWING No.:                                                                                                                                                                                                                                                                                                                        |       | REV. |      |
|             | 7                                                                                                                                                                                                                                                                                                                                   |       | 2    |      |





# LEGEND

- UC-2 SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ØL3-2 BENCH MARK (SEE DRAWING 2)
- 4830 ELEVATION OF CELL GRADE (FEET)
- 4870 ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT

| APPROXIMATE DESIGN VOLUME: |                   |
|----------------------------|-------------------|
| CELL 1                     | 173,385 cu. yd.   |
| CELL 2                     | 220,600 cu. yd.   |
| CELL 3                     | 480,240 cu. yd.   |
| CELL 4                     | 491,840 cu. yd.   |
| CELL 5                     | 472,120 cu. yd.   |
| CELL 6                     | 433,840 cu. yd.   |
| CELL 7                     | 466,320 cu. yd.   |
| TOTAL                      | 2,738,345 cu. yd. |

| PC AREA (POTENTIALLY CONTAMINATED): |            |
|-------------------------------------|------------|
| TOTAL PC AREA                       | 20.4 acres |

## NOTE:

- ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE; CELLS 5 THRU 7 ARE NOT CONSTRUCTED (FUTURE)
- ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



| 2                               | REVISED CELL 3, 4, 5, 6, AND 7 DESIGN VOLUME | 09/17 | DC  | FK   |
|---------------------------------|----------------------------------------------|-------|-----|------|
| 1                               | REV CELL 2 VOL/CONT; NEW OWNERSHIP; NOTE 3   | 9/04  | WDS | FK   |
| 0                               | ISSUED FOR PERMIT MOD. REPORT                | 11/94 | JGN | PGC  |
| Rev. No.                        | NOTES                                        | DATE  | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE         |                                              |       |     |      |
| DESIGN BY:<br>TEL (TERRAMATRIX) |                                              |       |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)  |                                              |       |     |      |
| CHECK BY:<br>PGC (TERRAMATRIX)  |                                              |       |     |      |
| PROJECT No.<br>603              |                                              |       |     |      |
| FILE NAME:<br>DEERTRAIL-8.DWG   |                                              |       |     |      |

|                                                                                                                                                                                                       |  |                                                                                                                               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------|--|
| <br>DEER TRAIL, LLC.<br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |  | PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br>DRAWING TITLE:<br>CELL DEVELOPMENT SEQUENCE<br>FILL CELL 6 - CONSTRUCT CELL 7 |  |
| SHEET: 1 OF 1                                                                                                                                                                                         |  | DRAWING No.: REV.                                                                                                             |  |
| 8                                                                                                                                                                                                     |  | 2                                                                                                                             |  |

# LEGEND

- UC-2 — SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK (SEE DRAWING 2)
- 4830 — ELEVATION OF CELL GRADE (FEET)
- 4870 — ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT

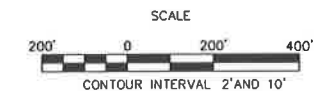
| APPROXIMATE DESIGN VOLUME: |                  |
|----------------------------|------------------|
| CELL 1                     | 173,385 cu.yd.   |
| CELL 2                     | 220,600 cu.yd.   |
| CELL 3                     | 480,240 cu.yd.   |
| CELL 4                     | 491,840 cu.yd.   |
| CELL 5                     | 472,120 cu.yd.   |
| CELL 6                     | 433,840 cu.yd.   |
| CELL 7                     | 466,320 cu.yd.   |
| TOTAL                      | 2,738,345 cu.yd. |

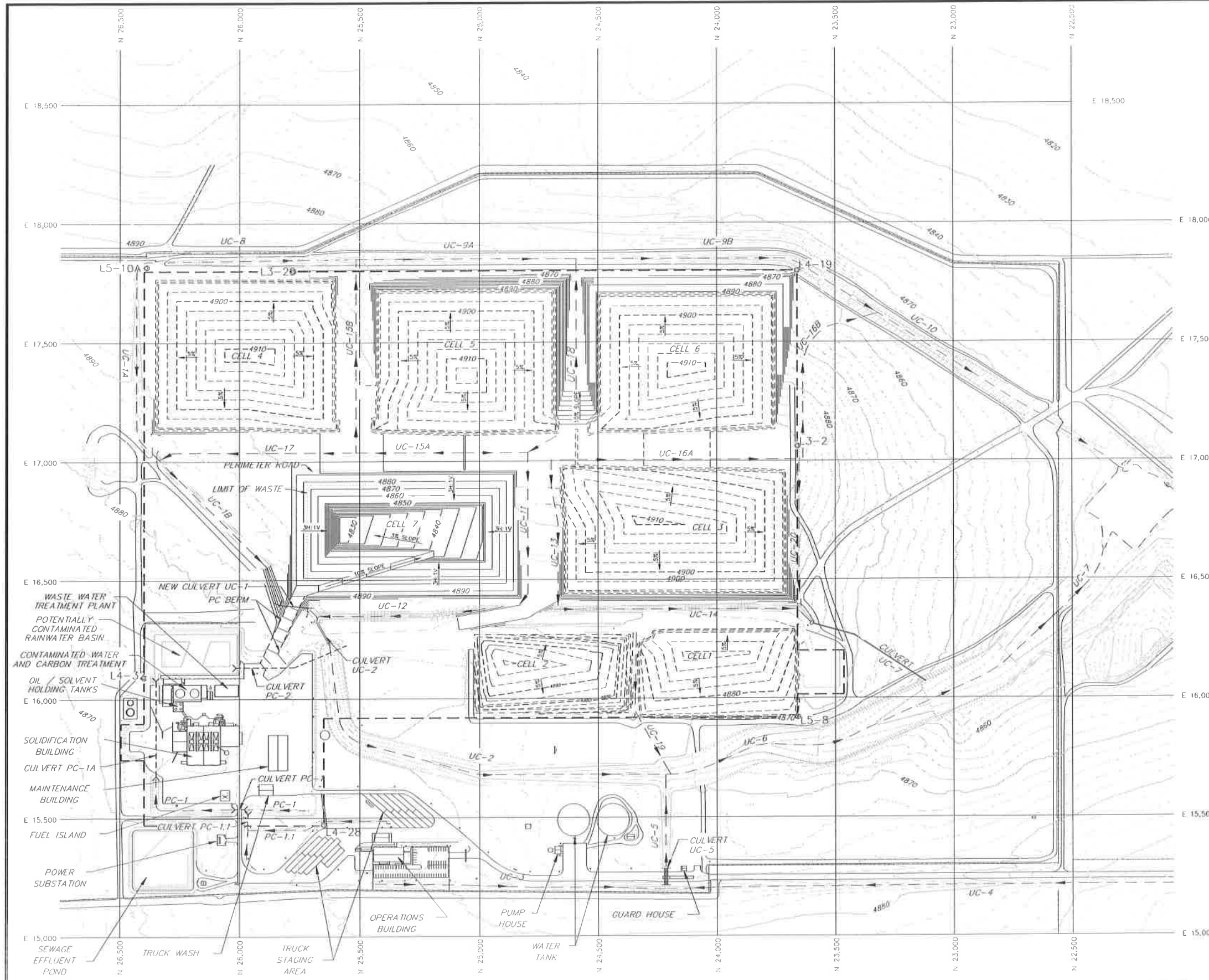
| PC AREA (POTENTIALLY CONTAMINATED): |            |
|-------------------------------------|------------|
| TOTAL PC AREA                       | 18.2 acres |

## NOTE:

- 1.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- 2.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- 3.) CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE; CELLS 5 THRU 7 ARE NOT CONSTRUCTED (FUTURE)
- 4.) ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94



|                |                                                                                                                                                                                                              |       |     |      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|------|
| 2              | REVISED CELL 3, 4, 5, 6, AND 7 DESIGN VOLUME                                                                                                                                                                 | 09/17 | DC  | FK   |
| 1              | REV CELL 2 VOL/CONT; NEW OWNERSHIP; NOTE 3                                                                                                                                                                   | 9/04  | WDS | FK   |
| 0              | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                | 11/94 | JGN | PCC  |
| Rev. No.       | NOTES                                                                                                                                                                                                        | DATE  | BY  | CHKD |
| SCALE:         | <br><b>DEER TRAIL, LLC.</b><br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |       |     |      |
| DESIGN BY:     |                                                                                                                                                                                                              |       |     |      |
| DRAWN BY:      |                                                                                                                                                                                                              |       |     |      |
| CHECK BY:      |                                                                                                                                                                                                              |       |     |      |
| FILE NAME:     |                                                                                                                                                                                                              |       |     |      |
| PROJECT:       | CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                             |       |     |      |
| DRAWING TITLE: | CELL DEVELOPMENT SEQUENCE FILL CELL 7                                                                                                                                                                        |       |     |      |
| SHEET: 1 OF 1  |                                                                                                                                                                                                              |       |     |      |
| DRAWING No.:   |                                                                                                                                                                                                              |       |     |      |
| 9              |                                                                                                                                                                                                              |       |     |      |
| REV.           |                                                                                                                                                                                                              |       |     |      |
| 2              |                                                                                                                                                                                                              |       |     |      |



# LEGEND

- UC-2 — SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK (SEE DRAWING 2)
- 4830 — ELEVATION OF CELL GRADE (FEET)
- - 4870 - - ELEVATION OF COVER GRADE (FEET)
- WASTE LIMIT
- PC BERM (POTENTIALLY CONTAMINATED)
- CULVERT
- ◇ DROP STRUCTURE

## NOTE:

- 1.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- 2.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPE PRIOR TO CONSTRUCTION.
- 3.) CURRENT CONDITIONS - CELL 1, 2, AND 3 ARE CLOSED; CELL 4 IS ACTIVE; CELLS 5 THRU 7 ARE NOT CONSTRUCTED (FUTURE)
- 4.) ORIGINAL DESIGN DRAWINGS PREPARED BY TERRAMATRIX ON 11/94

DETAIL/SECTION NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN



SCALE  
200' 0 200' 400'  
CONTOUR INTERVAL 2' AND 10'

|                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                            |       |     |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------|-----|------|
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                            |       |     |      |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                            |       |     |      |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                      | REVISED CELL 4, 5, 6, AND 7 DESIGN VOLUME  | 09/17 | DC  | FK   |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                      | REV CELL 2 VOL/CONT; NEW OWNERSHIP; NOTE 3 | 9/04  | WDS | FK   |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                      | ISSUED FOR PERMIT MOD. REPORT              | 11/94 | JGN | PGC  |
| Rev. No.                                                                                                                                                                                                                                                                                                                                                                                                                               | NOTES                                      | DATE  | BY  | CHKD |
| <div> <div> SCALE:<br/>SEE BAR SCALE<br/>DESIGN BY:<br/>TEL (TERRAMATRIX)<br/>DRAWN BY:<br/>JGN (TERRAMATRIX)<br/>CHECK BY:<br/>PGC (TERRAMATRIX)<br/>PROJECT No.<br/>603<br/>FILE NAME:<br/>DEERTRAIL-10.DWG </div> <div> <p>DEER TRAIL, LLC.</p> <p>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</p> </div> </div> |                                            |       |     |      |
| <div> <div>PROJECT:<br/>CONCEPTUAL SITE DEVELOPMENT PLAN</div> <div>DRAWING TITLE:<br/>FINAL CLOSURE<br/>CELL DEVELOPMENT SEQUENCE<br/>FINAL COVER CELL 7</div> </div>                                                                                                                                                                                                                                                                 |                                            |       |     |      |
| <div> <div>SHEET: 1 OF 1</div> <div>DRAWING No. 10</div> <div>REV. 2</div> </div>                                                                                                                                                                                                                                                                                                                                                      |                                            |       |     |      |



# LEGEND

- UC-2 SURFACE WATER DRAINAGE
- FENCE
- 4820 ELEVATION OF EXISTING GRADE (FEET)  
(BASED ON 1991 TOPOGRAPHY)
- COMPLIANCE BOUNDARY
- ⊙ L3-2 BENCH MARK (SEE DRAWING 2)

NOTE:  
FOR CELL DETAILS SEE DRAWINGS  
4 THRU 10 (CELL DEVELOPMENT  
SEQUENCE), AND DRAWING 15  
(TYPICAL - EXCAVATION PLAN).

DETAIL/SECTION  
NUMBER

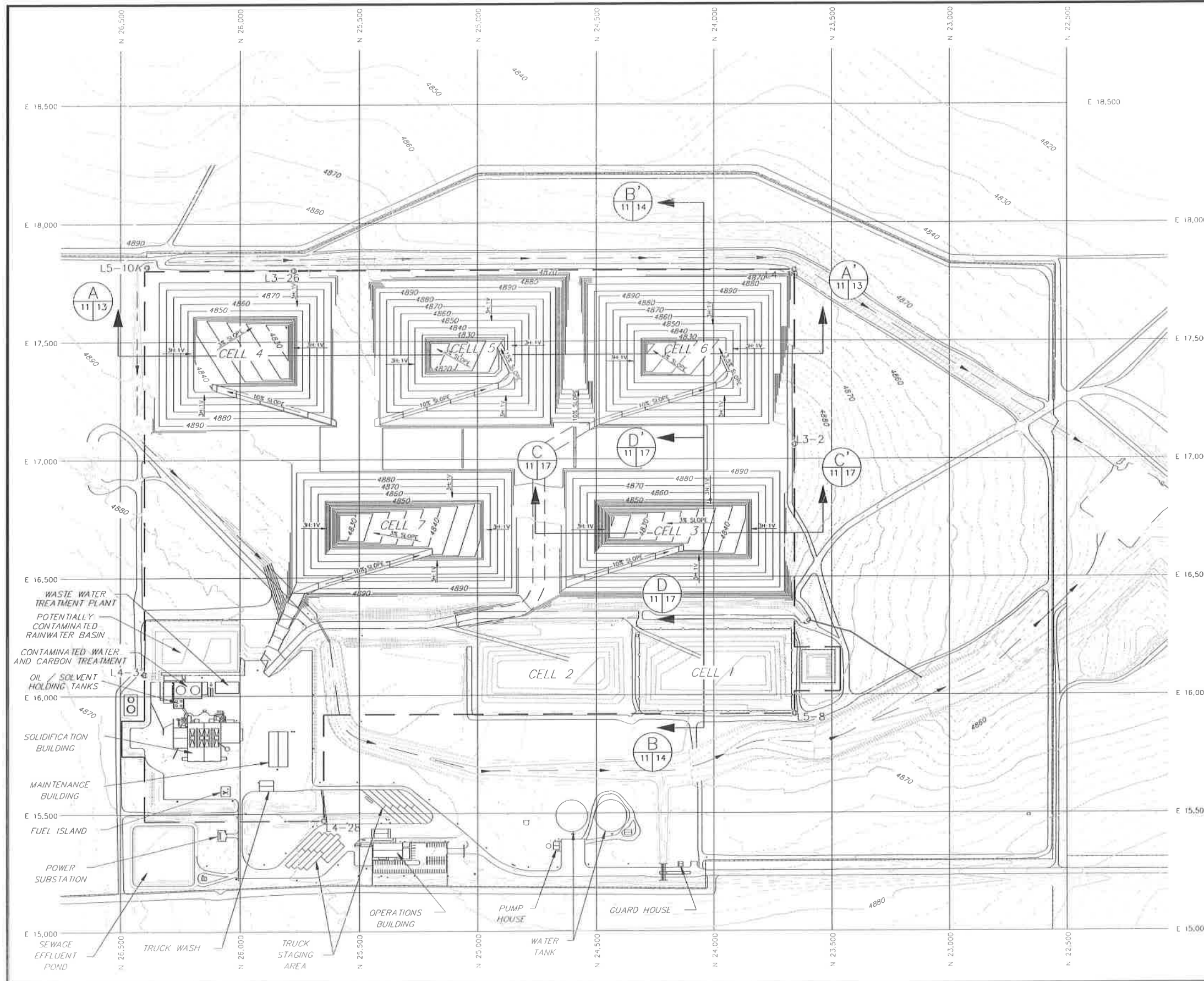
DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

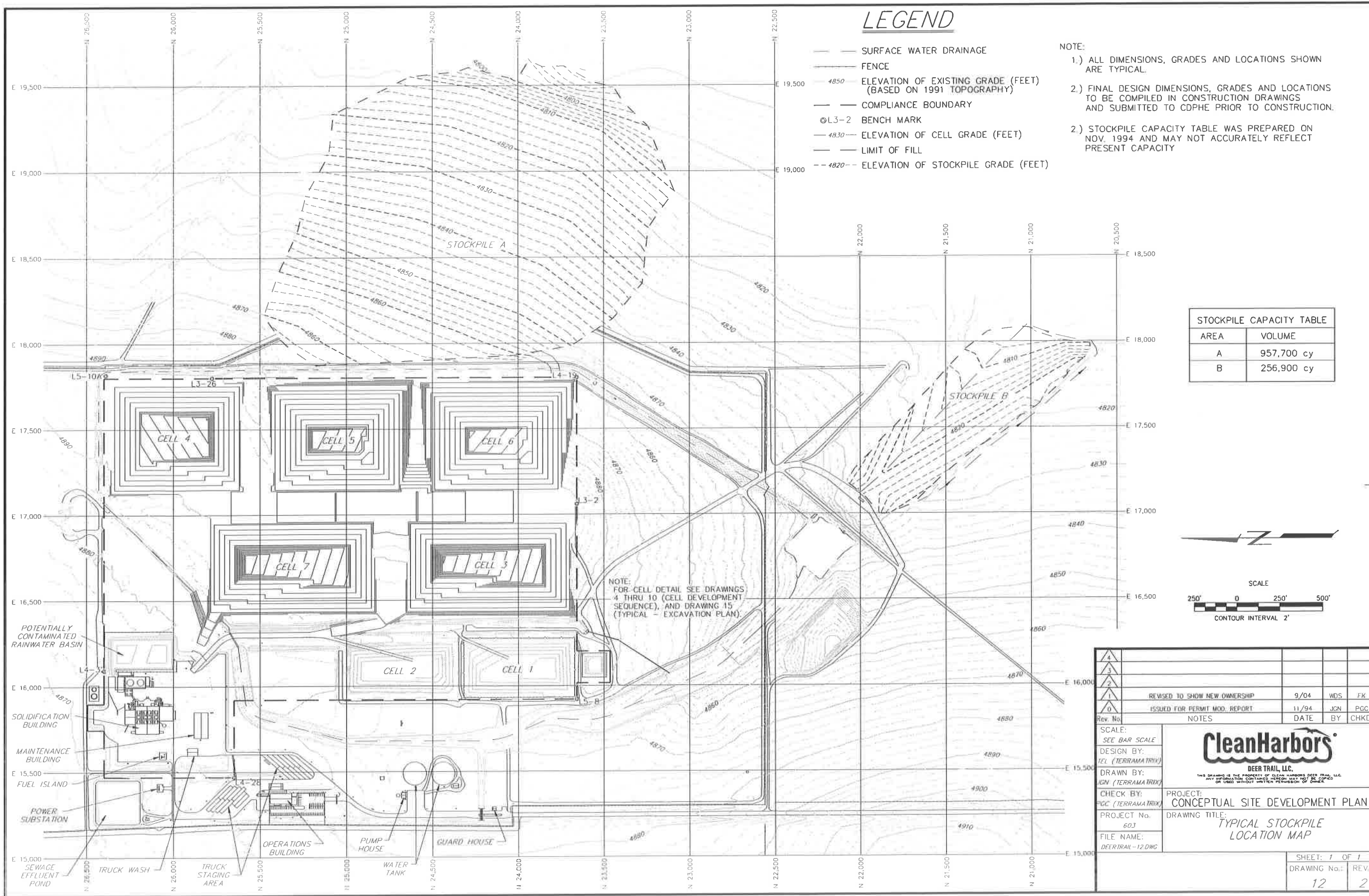
DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN



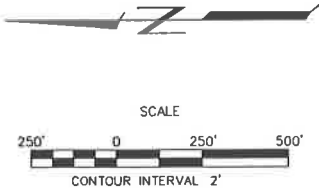
SCALE  
200' 0 200' 400'  
CONTOUR INTERVAL 2' AND 10'

|                                                                                                                                                                                                                                                                                    |                               |       |     |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------|-----|------|
| 4                                                                                                                                                                                                                                                                                  |                               |       |     |      |
| 3                                                                                                                                                                                                                                                                                  |                               |       |     |      |
| 2                                                                                                                                                                                                                                                                                  |                               |       |     |      |
| 1                                                                                                                                                                                                                                                                                  | REVISED TO SHOW NEW OWNERSHIP | 9/04  | WDS | FK   |
| 0                                                                                                                                                                                                                                                                                  | ISSUED FOR PERMIT MOD. REPORT | 11/94 | JGN | PCC  |
| Rev. No                                                                                                                                                                                                                                                                            | NOTES                         | DATE  | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE<br>DESIGN BY:<br>TEL (TERRAMATRIX)<br>DRAWN BY:<br>JGN (TERRAMATRIX)<br>CHECK BY:<br>JGC (TERRAMATRIX)<br>PROJECT No.<br>603<br>FILE NAME:<br>DEERTRAIL-11.DWG                                                                                             |                               |       |     |      |
| <div style="text-align: center;"> <p><b>Clean Harbors</b><br/>DEER TRAIL, LLC.<br/><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC.<br/>ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED<br/>OR USED WITHOUT WRITTEN PERMISSION OF OWNER</small></p> </div> |                               |       |     |      |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br>DRAWING TITLE:<br>EXCAVATION PLAN FOR<br>NEW SITE LAYOUT                                                                                                                                                                           |                               |       |     |      |
| SHEET: 1 OF 1<br>DRAWING No.: 11<br>REV. 2                                                                                                                                                                                                                                         |                               |       |     |      |



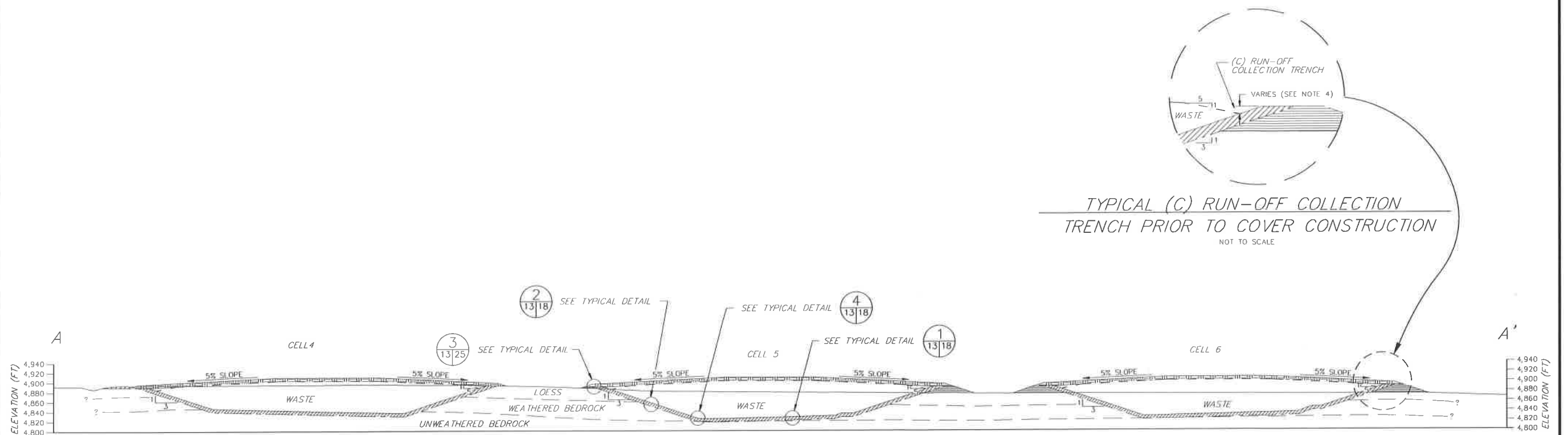


| STOCKPILE CAPACITY TABLE |            |
|--------------------------|------------|
| AREA                     | VOLUME     |
| A                        | 957,700 cy |
| B                        | 256,900 cy |



|                                                                                                                                                                                                                                                                                                                                                                |       |                 |    |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------|----|------|
| 4                                                                                                                                                                                                                                                                                                                                                              |       |                 |    |      |
| 3                                                                                                                                                                                                                                                                                                                                                              |       |                 |    |      |
| 2                                                                                                                                                                                                                                                                                                                                                              |       |                 |    |      |
| 1                                                                                                                                                                                                                                                                                                                                                              |       |                 |    |      |
| 0                                                                                                                                                                                                                                                                                                                                                              |       |                 |    |      |
| Rev. No.                                                                                                                                                                                                                                                                                                                                                       | NOTES | DATE            | BY | CHKD |
| SCALE:<br>SEE BAR SCALE                                                                                                                                                                                                                                                                                                                                        |       |                 |    |      |
| DESIGN BY:<br>TEL (TERRAMATRIX)                                                                                                                                                                                                                                                                                                                                |       |                 |    |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)                                                                                                                                                                                                                                                                                                                                 |       |                 |    |      |
| CHECK BY:<br>PCC (TERRAMATRIX)                                                                                                                                                                                                                                                                                                                                 |       |                 |    |      |
| PROJECT No.<br>603                                                                                                                                                                                                                                                                                                                                             |       |                 |    |      |
| FILE NAME:<br>DEERTAIL-12.DWG                                                                                                                                                                                                                                                                                                                                  |       |                 |    |      |
| <div><div><b>CleanHarbors</b><br/>DEER TRAIL, LLC.<br/><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small></div><div>PROJECT:<br/>CONCEPTUAL SITE DEVELOPMENT PLAN<br/>DRAWING TITLE:<br/>TYPICAL STOCKPILE LOCATION MAP</div></div> |       |                 |    |      |
|                                                                                                                                                                                                                                                                                                                                                                |       | SHEET: 1 OF 1   |    |      |
|                                                                                                                                                                                                                                                                                                                                                                |       | DRAWING No.: 12 |    |      |
|                                                                                                                                                                                                                                                                                                                                                                |       | REV: 2          |    |      |





## LEGEND

- EXISTING GRADE
- - - TOP OF WASTE
- - - SUBGRADE
- ▨ LINER LAYER
- ▨ COVER LAYER
- ▨ FILL
- ▨ CUT

### NOTES:

- 1.) CONTACT BETWEEN LOESS / WEATHERED BEDROCK AND WEATHERED BEDROCK / UNWEATHERED BEDROCK IS BASED ON ISOPACH MAPS PRODUCED FROM REVIEW OF ALL BORINGS COMPLETED AT THE SITE. ACTUAL LIMITS MAY VARY FROM THOSE SHOWN.
- 2.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL.
- 3.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN DESIGN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPE PRIOR TO CONSTRUCTION.
- 4.) DIMENSION VARIES TO MAINTAIN STORAGE CAPACITY OF RUN-OFF FROM 24 HOUR 8.2 INCH RAIN FALL WITH 1-INCH OF FREEBOARD AS REQUIRED BY SECTION 1 (D)(9)(o) OF PART B PERMIT. CONTAMINATED WATER STORAGE DITCH MAY BE FILLED WITH WASTE AS COVER IS CONSTRUCTED AND DRAINAGE AREA REDUCED.

## NORTH - SOUTH CROSS-SECTION

HORIZONTAL SCALE  
0 100' 200'

VERTICAL SCALE  
0 100' 200'

DETAIL/SECTION  
NUMBER

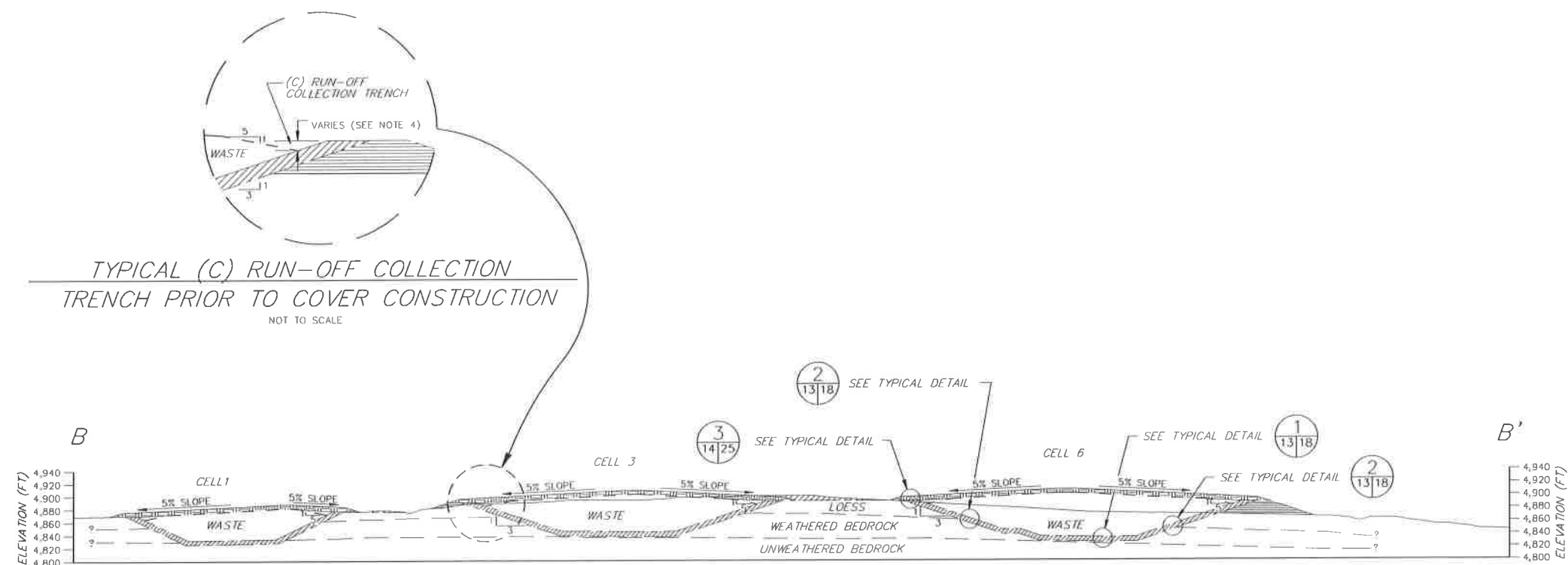
DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                |                               |                                  |     |      |
|----------------|-------------------------------|----------------------------------|-----|------|
| 4              |                               |                                  |     |      |
| 3              |                               |                                  |     |      |
| 2              |                               |                                  |     |      |
| 1              | REVISED TO SHOW NEW OWNERSHIP | 9/04                             | WDS | FK   |
| 0              | ISSUED FOR PERMIT MOD. REPORT | 11/94                            | JGN | PGC  |
| Rev. No.       | NOTES                         | DATE                             | BY  | CHKD |
| SCALE:         | SEE BAR SCALE                 |                                  |     |      |
| DESIGN BY:     | TEL (TERRAMATRIX)             |                                  |     |      |
| DRAWN BY:      | JGN (TERRAMATRIX)             |                                  |     |      |
| CHECK BY:      | PGC (TERRAMATRIX)             |                                  |     |      |
| PROJECT No.    | 603                           |                                  |     |      |
| FILE NAME:     | DEERTRAIL-13.DWG              |                                  |     |      |
| PROJECT:       |                               | CONCEPTUAL SITE DEVELOPMENT PLAN |     |      |
| DRAWING TITLE: |                               | NORTH-SOUTH CROSS-SECTION        |     |      |
| SHEET: 1 OF 1  |                               | DRAWING No. 1                    |     |      |
| 13             |                               | REV. 1                           |     |      |

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- LEGEND**
- EXISTING GRADE
  - - - TOP OF WASTE
  - - - SUBGRADE
  - ▨ LINER LAYER
  - ▨ COVER LAYER
  - ▨ FILL
  - ▨ CUT

HORIZONTAL SCALE  
0 100' 200'  
VERTICAL SCALE  
0 100' 200'

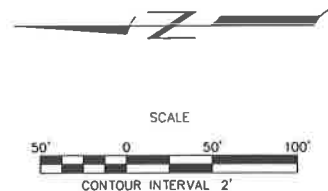
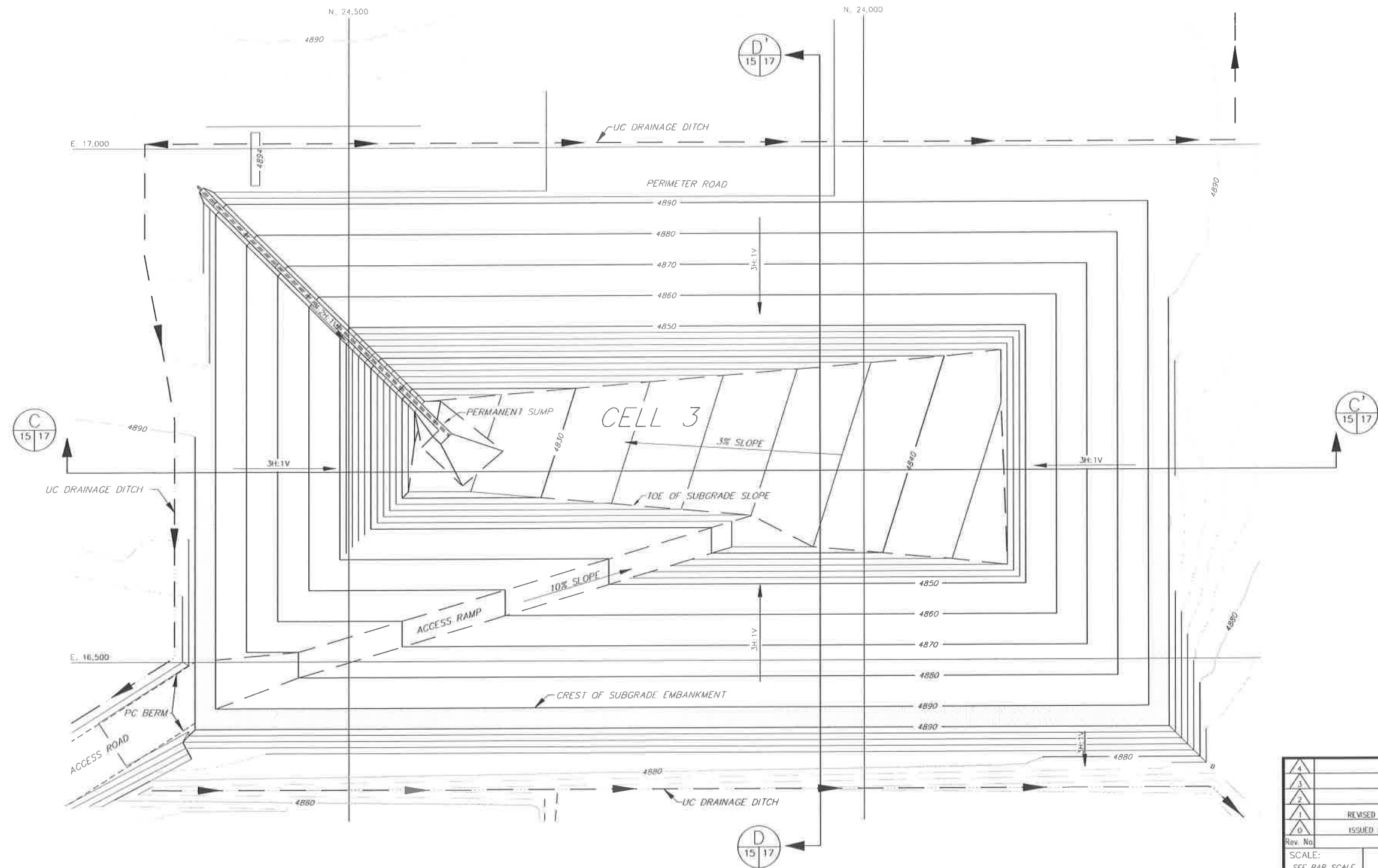
- NOTES:**
- 1.) CONTACT BETWEEN LOESS / WEATHERED BEDROCK AND WEATHERED BEDROCK / UNWEATHERED BEDROCK IS BASED ON ISOPACH MAPS PRODUCED FROM REVIEW OF ALL BORINGS COMPLETED AT THE SITE. ACTUAL LIMITS MAY VARY FROM THOSE SHOWN.
  - 2.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL
  - 3.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN DESIGN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
  - 4.) DIMENSION VARIES TO MAINTAIN STORAGE CAPACITY OF RUN-OFF FROM 24 HOUR 8.2 INCH RAIN FALL WITH 1-INCH OF FREEBOARD AS REQUIRED BY SECTION 1 (D)(9)(a) OF PART B PERMIT. CONTAMINATED WATER STORAGE DITCH MAY BE FILLED WITH WASTE AS COVER IS CONSTRUCTED AND DRAINAGE AREA REDUCED.

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                                 |                               |                                                                                                                                                                                               |     |      |
|---------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 4                               |                               |                                                                                                                                                                                               |     |      |
| 3                               |                               |                                                                                                                                                                                               |     |      |
| 2                               |                               |                                                                                                                                                                                               |     |      |
| 1                               | REVISED TO SHOW NEW OWNERSHIP | 9/04                                                                                                                                                                                          | WDS | FK   |
| 0                               | ISSUED FOR PERMIT MOD. REPORT | 11/94                                                                                                                                                                                         | JGN | PGC  |
| Rev. No.                        | NOTES                         | DATE                                                                                                                                                                                          | BY  | CHKD |
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| DESIGN BY:<br>TEL (TERRAMATRIX) |                               |                                                                                                                                                                                               |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)  |                               |                                                                                                                                                                                               |     |      |
| CHECK BY:<br>PGC (TERRAMATRIX)  |                               |                                                                                                                                                                                               |     |      |
| PROJECT No.<br>603              |                               | PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                  |     |      |
| FILE NAME:<br>DEERTRAIL-14.DWG  |                               | DRAWING TITLE:<br>EAST-WEST CROSS-SECTION                                                                                                                                                     |     |      |
|                                 |                               | SHEET: 1 OF 1                                                                                                                                                                                 |     |      |
|                                 |                               | DRAWING No.: 14                                                                                                                                                                               |     |      |
|                                 |                               | REV: 1                                                                                                                                                                                        |     |      |



# LEGEND

- 4890 — ELEVATION OF CELL GRADE (FEET)
- 4880 — ELEVATION OF EXISTING GRADE (FEET)
- - - - - PC BERM (POTENTIALLY CONTAMINATED)
- UC DRAINAGE DITCH (UNCONTAMINATED)
- ▭ LIMITS OF CONSTRUCTION
- - - - - GRADE BREAK

## NOTES:

- 1.) GRADING PLANS INDICATE 90 DEGREE CORNERS. FINAL DESIGN MAY INCORPORATE UNIFORM RADIUS CORNERS.
- 2.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL
- 3.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN DESIGN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.

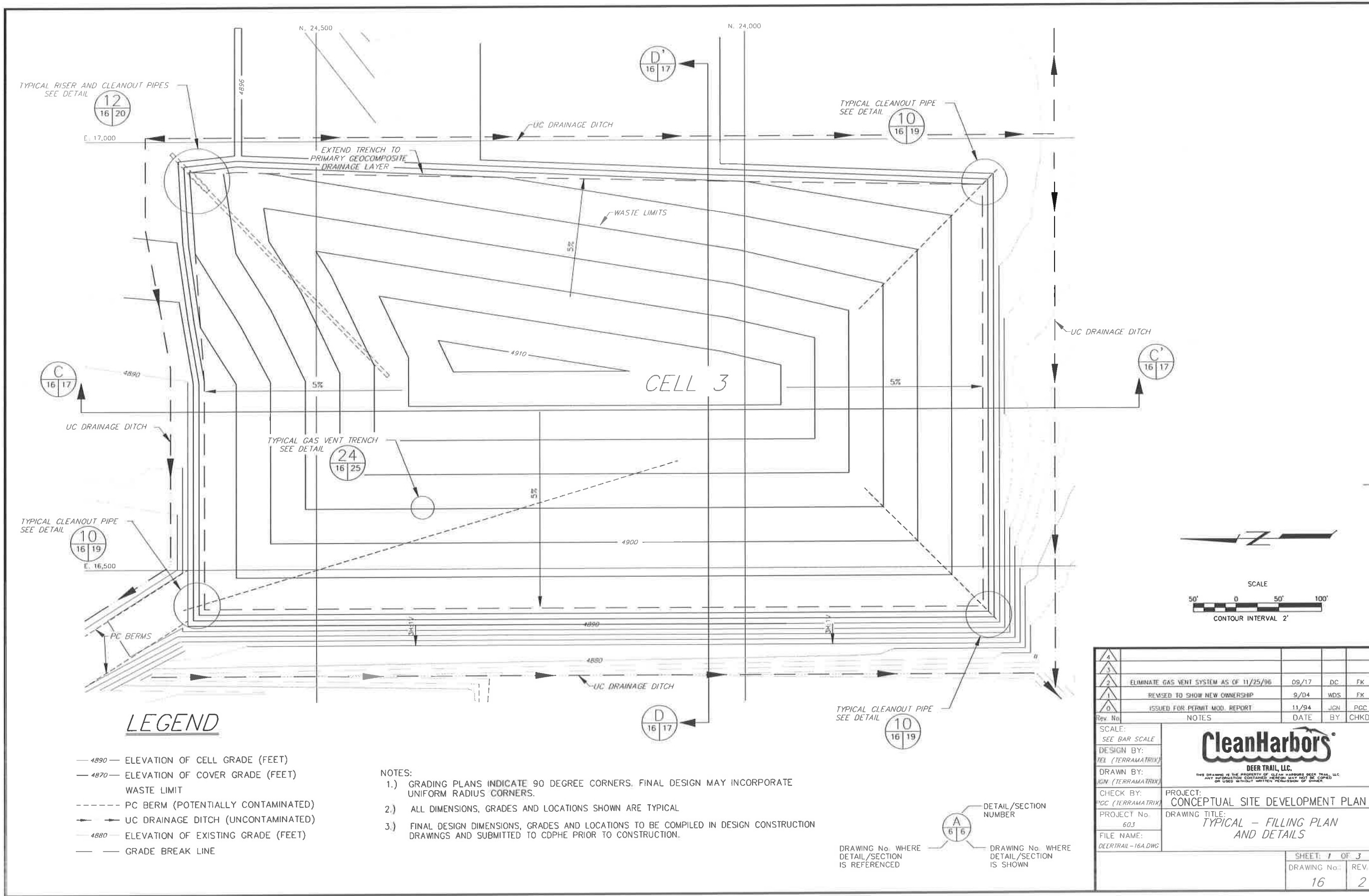
DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED



DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                                                                                                                                                                                                                                                                                                                           |                               |                 |     |      |
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| 4                                                                                                                                                                                                                                                                                                                         |                               |                 |     |      |
| 3                                                                                                                                                                                                                                                                                                                         |                               |                 |     |      |
| 2                                                                                                                                                                                                                                                                                                                         |                               |                 |     |      |
| 1                                                                                                                                                                                                                                                                                                                         |                               |                 |     |      |
| 0                                                                                                                                                                                                                                                                                                                         |                               |                 |     |      |
| Rev. No.                                                                                                                                                                                                                                                                                                                  | NOTES                         | DATE            | BY  | CHKD |
| 1                                                                                                                                                                                                                                                                                                                         | REVISED TO SHOW NEW OWNERSHIP | 9/04            | WDS | FK   |
| 0                                                                                                                                                                                                                                                                                                                         | ISSUED FOR PERMIT MGD. REPORT | 11/94           | JGN | PCC  |
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| FILE NAME:                                                                                                                                                                                                                                                                                                                | DEERTRAIL-15.DWG              |                 |     |      |
| SHEET: 1 OF 1                                                                                                                                                                                                                                                                                                             |                               | DRAWING No.: 15 |     |      |
|                                                                                                                                                                                                                                                                                                                           |                               | REV. 1          |     |      |



**LEGEND**

- 4890 — ELEVATION OF CELL GRADE (FEET)
- 4870 — ELEVATION OF COVER GRADE (FEET)
- PC BERM (POTENTIALLY CONTAMINATED)
- UC DRAINAGE DITCH (UNCONTAMINATED)
- 4880 — ELEVATION OF EXISTING GRADE (FEET)
- GRADE BREAK LINE

**NOTES:**

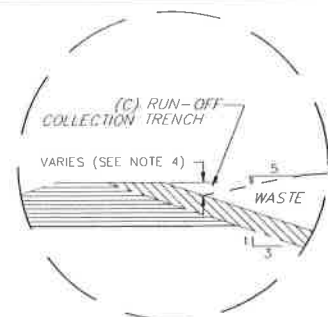
- 1.) GRADING PLANS INDICATE 90 DEGREE CORNERS. FINAL DESIGN MAY INCORPORATE UNIFORM RADIUS CORNERS.
- 2.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL
- 3.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN DESIGN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DETAIL/SECTION  
NUMBER

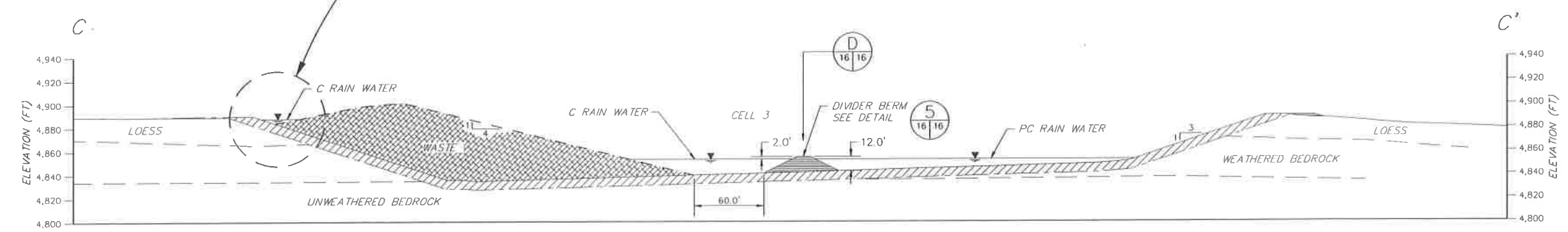
DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                   |                                                                                                                                                                                                                                         |       |     |      |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|------|
| 4                 |                                                                                                                                                                                                                                         |       |     |      |
| 3                 |                                                                                                                                                                                                                                         |       |     |      |
| 2                 | ELIMINATE GAS VENT SYSTEM AS OF 11/25/96                                                                                                                                                                                                | 09/17 | DC  | FK   |
| 1                 | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                                                           | 9/04  | WDS | FK   |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                           | 11/94 | JGN | PCC  |
| Rev. No.          | NOTES                                                                                                                                                                                                                                   | DATE  | BY  | CHKD |
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| SEE BAR SCALE     |                                                                                                                                                                                                                                         |       |     |      |
| DESIGN BY:        |                                                                                                                                                                                                                                         |       |     |      |
| TEL (TERRAMATRIX) |                                                                                                                                                                                                                                         |       |     |      |
| DRAWN BY:         | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                               |       |     |      |
| JGN (TERRAMATRIX) |                                                                                                                                                                                                                                         |       |     |      |
| CHECK BY:         | DRAWING TITLE: TYPICAL - FILLING PLAN AND DETAILS                                                                                                                                                                                       |       |     |      |
| PCC (TERRAMATRIX) |                                                                                                                                                                                                                                         |       |     |      |
| PROJECT No.       | SHEET: 1 OF 3                                                                                                                                                                                                                           |       |     |      |
| 603               |                                                                                                                                                                                                                                         |       |     |      |
| FILE NAME:        | DRAWING No.: REV.                                                                                                                                                                                                                       |       |     |      |
| DEERTRAIL-16A.DWG |                                                                                                                                                                                                                                         |       |     |      |
|                   | 16 2                                                                                                                                                                                                                                    |       |     |      |



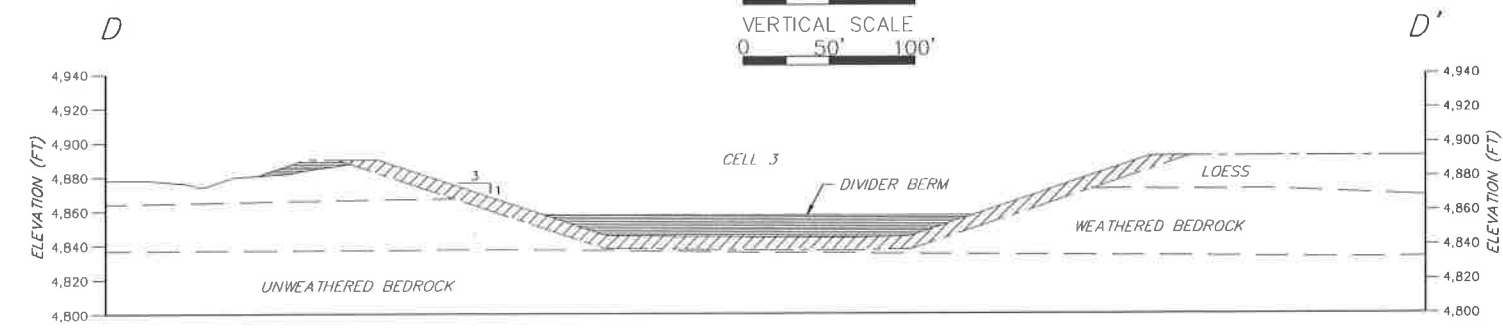
TYPICAL (C) RUN-OFF COLLECTION TRENCH PRIOR TO COVER CONSTRUCTION  
NOT TO SCALE

- NOTES:
- (1) TYPICAL DIVIDER BERM IS SHOWN TO SEGREGATE PC AND C WATER WITHIN ACTIVE CELLS. THE LOCATION OF THE BERM CAN BE VARIED TO MEET OPERATIONAL REQUIREMENTS PROVIDED ADEQUATE STORAGE CAPACITY IS AVAILABLE.
  - (2) A FILLING PLAN FOR EACH SECURE CELL WILL BE DEVELOPED AS PART OF THE CONSTRUCTION DRAWING PREPARATION. THIS FILLING PLAN WILL INCORPORATE OPERATIONAL REQUIREMENTS, STABILITY CONSTRAINTS AND SURFACE WATER CONTROL FEATURES.
  - (3) CONTACT BETWEEN LOESS/WEATHERED BEDROCK AND WEATHERED BEDROCK/UNWEATHERED BEDROCK IS BASED ON ISOPACH MAPS PRODUCED FROM REVIEW OF ALL BORINGS COMPLETED AT THE SITE, ACTUAL LIMITS MAY VARY FROM THOSE SHOWN.
  - (4) DIMENSION VARIES TO MAINTAIN STORAGE CAPACITY OF RUN-OFF FROM 24 HOUR 8.2 INCH RAIN FALL WITH 1-INCH OF FREEBOARD AS REQUIRED BY SECTION I (D)(9)(a) OF PART B PERMIT. CONTAMINATED WATER STORAGE DITCH MAY BE FILLED WITH WASTE AS COVER IS CONSTRUCTED AND DRAINAGE AREA REDUCED.



TYPICAL INTERMEDIATE FILLING PLAN CROSS-SECTION WITH DIVIDER BERM

HORIZONTAL SCALE  
0 50' 100'  
VERTICAL SCALE  
0 50' 100'



TYPICAL INTERMEDIATE FILLING PLAN CROSS-SECTION WITH DIVIDER BERM

HORIZONTAL SCALE  
0 50' 100'  
VERTICAL SCALE  
0 50' 100'

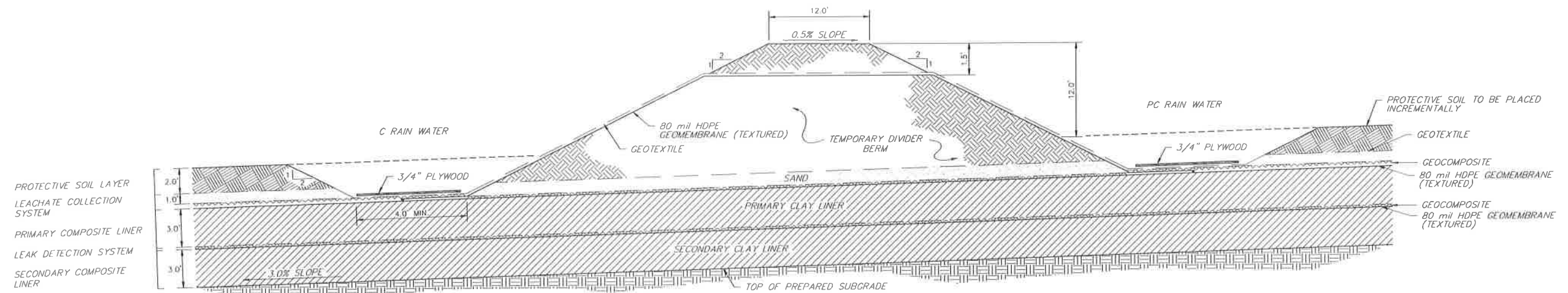
LEGEND

- EXISTING GRADE
- - - TOP OF WASTE
- SUBGRADE
- ▨ LINER LAYER
- ▨ WASTE
- ▨ FILL

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                                 |                                                                                                                                                                                                                              |               |      |       |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------|-------|
| 4                               |                                                                                                                                                                                                                              |               |      |       |
| 3                               |                                                                                                                                                                                                                              |               |      |       |
| 2                               |                                                                                                                                                                                                                              |               |      |       |
| 1                               | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                                                | 9/04          | WDS  | FK    |
| 0                               | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                | 11/94         | JGN  | PGC   |
| Rev. No.                        | NOTES                                                                                                                                                                                                                        | DATE          | BY   | CHKD. |
| SCALE:<br>SEE BAR SCALE         | <br><b>CleanHarbors</b><br>DEER TRAIL, LLC.<br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |               |      |       |
| DESIGN BY:<br>TEL (TERRAMATRIX) |                                                                                                                                                                                                                              |               |      |       |
| DRAWN BY:<br>JGN (TERRAMATRIX)  |                                                                                                                                                                                                                              |               |      |       |
| CHECK BY:<br>PGC (TERRAMATRIX)  |                                                                                                                                                                                                                              |               |      |       |
| PROJECT No.<br>603              | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                    |               |      |       |
| FILE NAME:<br>DEERTRAIL-16B.DWG | DRAWING TITLE:<br>TYPICAL - FILLING PLAN AND DETAILS                                                                                                                                                                         |               |      |       |
|                                 |                                                                                                                                                                                                                              | SHEET: 2 OF 3 |      |       |
|                                 |                                                                                                                                                                                                                              | DRAWING No.:  | REV. |       |
|                                 |                                                                                                                                                                                                                              | 16            | 1    |       |



TEMPORARY DIVIDER BERM DETAIL

NOT TO SCALE

5  
16/16

NOTE:

- 1.) HEIGHT OF TEMPORARY DIVIDER BERM MAY VARY DEPENDING ON LOCATION IN CELL.
- 2.) BERM AND TEMPORARY LINER SYSTEM WILL BE REMOVED PRIOR TO FILLING.
- 3.) SEE ADDITIONAL NOTES ON DRAWING 16, SHEET 2 OF 3

A  
6/6

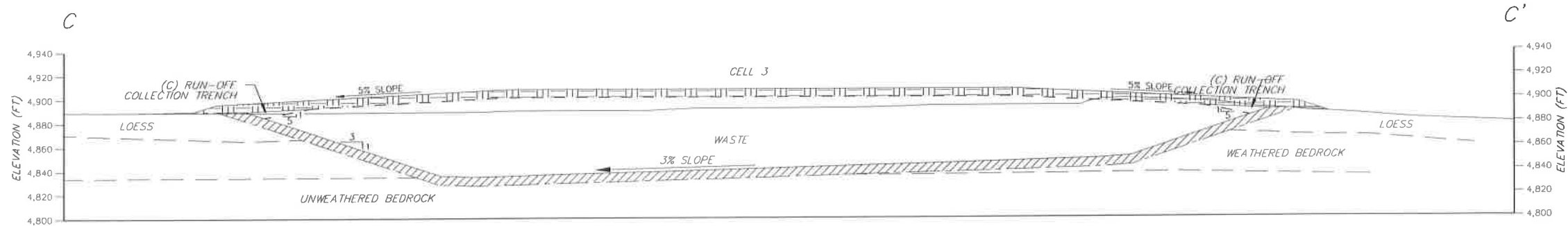
DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

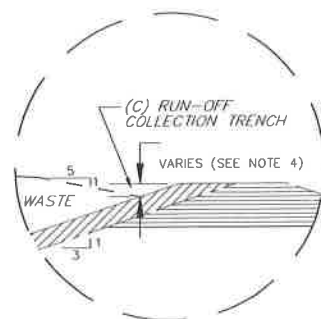
|                                                                                                                                                                                                                                                                               |                               |               |      |      |
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| 4                                                                                                                                                                                                                                                                             |                               |               |      |      |
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| 1                                                                                                                                                                                                                                                                             | REVISED TO SHOW NEW OWNERSHIP | 9/04          | JDS  | FK   |
| 0                                                                                                                                                                                                                                                                             | ISSUED FOR PERMIT MOD. REPORT | 11/94         | JGN  | PGC  |
| Rev. No.                                                                                                                                                                                                                                                                      | NOTES                         | DATE          | BY   | CHKD |
| SCALE:<br>SEE BAR SCALE<br>DESIGN BY:<br>TEL (TERRAMATRIX)<br>DRAWN BY:<br>JGN (TERRAMATRIX)<br>CHECK BY:<br>PGC (TERRAMATRIX)<br>PROJECT No.<br>603<br>FILE NAME:<br>DEERTRAIL-16C.DWG                                                                                       |                               |               |      |      |
| <div style="text-align: center;"> <p><b>CleanHarbors</b><br/>DEER TRAIL, LLC.</p> <p><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small></p> </div> |                               |               |      |      |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br>DRAWING TITLE:<br>TYPICAL - FILLING PLAN<br>AND DETAILS                                                                                                                                                                       |                               |               |      |      |
|                                                                                                                                                                                                                                                                               |                               | SHEET: 3 OF 3 |      |      |
|                                                                                                                                                                                                                                                                               |                               | DRAWING No.:  | REV. |      |
|                                                                                                                                                                                                                                                                               |                               | 16            | 1    |      |



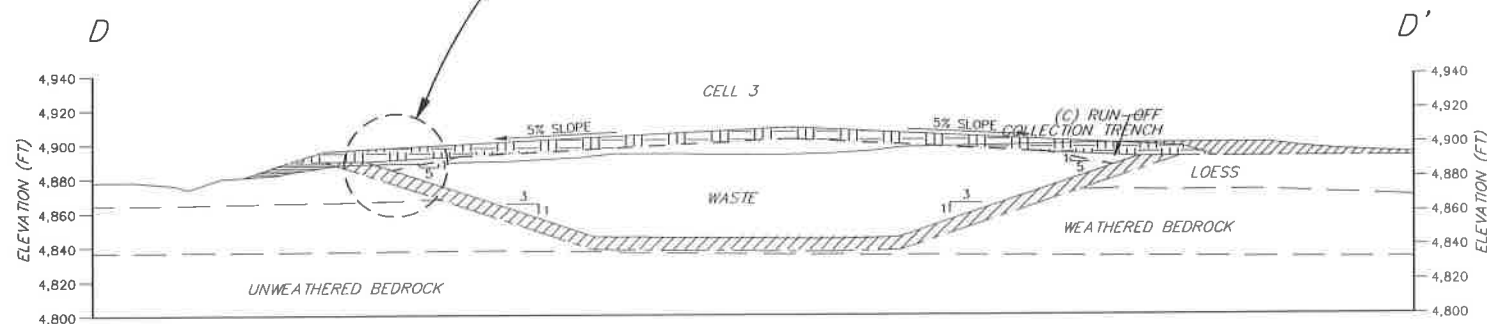


TYPICAL CROSS-SECTION (C)  
(0,11,15,16,17)

HORIZONTAL SCALE  
0 50' 100'  
VERTICAL SCALE  
0 50' 100'



TYPICAL (C) RUN-OFF COLLECTION  
TRENCH PRIOR TO COVER CONSTRUCTION  
NOT TO SCALE



TYPICAL CROSS-SECTION (D)  
(0,11,15,16,17)

HORIZONTAL SCALE  
0 50' 100'  
VERTICAL SCALE  
0 50' 100'

## LEGEND

- EXISTING GRADE
- - - TOP OF WASTE
- - - SUBGRADE
- ▨ LINER LAYER
- ▨ COVER LAYER
- ▨ FILL
- ▨ CUT

### NOTES:

- 1.) CONTACT BETWEEN LOESS / WEATHERED BEDROCK AND WEATHERED BEDROCK / UNWEATHERED BEDROCK IS BASED ON ISOPACH MAPS PRODUCED FROM REVIEW OF ALL BORINGS COMPLETED AT THE SITE. ACTUAL LIMITS MAY VARY FROM THOSE SHOWN.
- 2.) ALL DIMENSIONS, GRADES AND LOCATIONS SHOWN ARE TYPICAL
- 3.) FINAL DESIGN DIMENSIONS, GRADES AND LOCATIONS TO BE COMPILED IN DESIGN CONSTRUCTION DRAWINGS AND SUBMITTED TO CDPHE PRIOR TO CONSTRUCTION.
- 4.) DIMENSION VARIES TO MAINTAIN STORAGE CAPACITY OF RUN-OFF FROM 24 HOUR 8.2 INCH RAIN FALL WITH 1-INCH OF FREEBOARD AS REQUIRED BY SECTION I (D)(9)(a) OF PART B PERMIT. CONTAMINATED WATER STORAGE DITCH MAY BE FILLED WITH WASTE AS COVER IS CONSTRUCTED AND DRAINAGE AREA REDUCED.

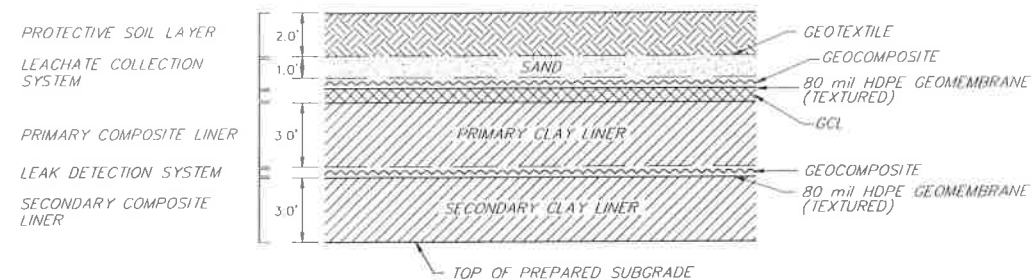


DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DETAIL/SECTION  
NUMBER

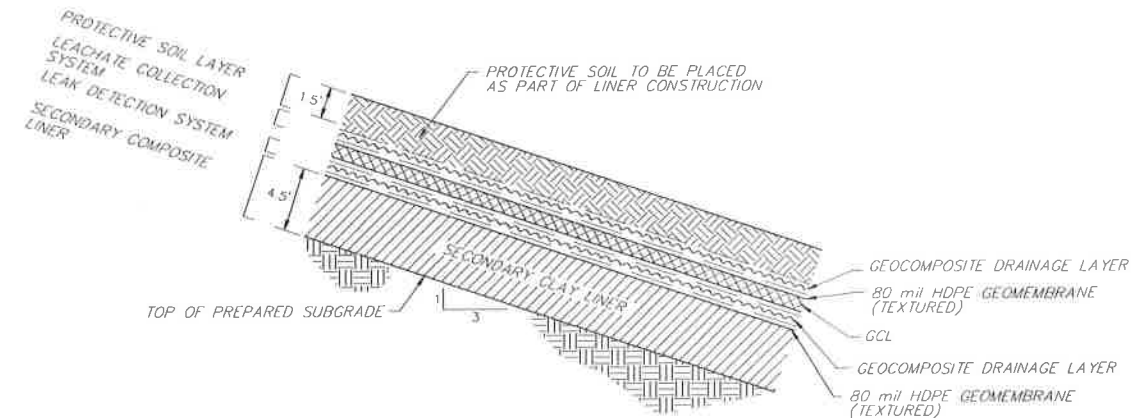
DRAWING No. WHERE  
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|                   |                                                                                                                                                                                                    |       |     |     |
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| 1                 | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                      | 9/04  | WDS | FK  |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                      | 11/94 | JGN | PGC |
| Rev. No.          | NOTES                                                                                                                                                                                              |       |     |     |
| SCALE:            | <br>DEER TRAIL, LLC. <small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |       |     |     |
| DESIGN BY:        |                                                                                                                                                                                                    |       |     |     |
| TCL (TERRAMATRIX) |                                                                                                                                                                                                    |       |     |     |
| DRAWN BY:         |                                                                                                                                                                                                    |       |     |     |
| JGN (TERRAMATRIX) | PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                       |       |     |     |
| CHECK BY:         |                                                                                                                                                                                                    |       |     |     |
| PGC (TERRAMATRIX) | DRAWING TITLE:<br>TYPICAL<br>CELL CROSS-SECTION                                                                                                                                                    |       |     |     |
| PROJECT No.       |                                                                                                                                                                                                    |       |     |     |
| 603               | SHEET: 1 OF 1                                                                                                                                                                                      |       |     |     |
| FILE NAME:        |                                                                                                                                                                                                    |       |     |     |
| DEERTRAIL-17.DWG  | DRAWING No.: REV.                                                                                                                                                                                  |       |     |     |
|                   | 17 1                                                                                                                                                                                               |       |     |     |



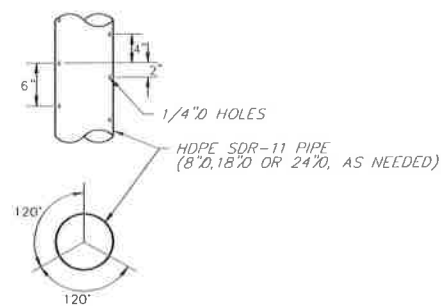
TYPICAL BASE LINING SYSTEM DETAIL

SCALE IN FEET



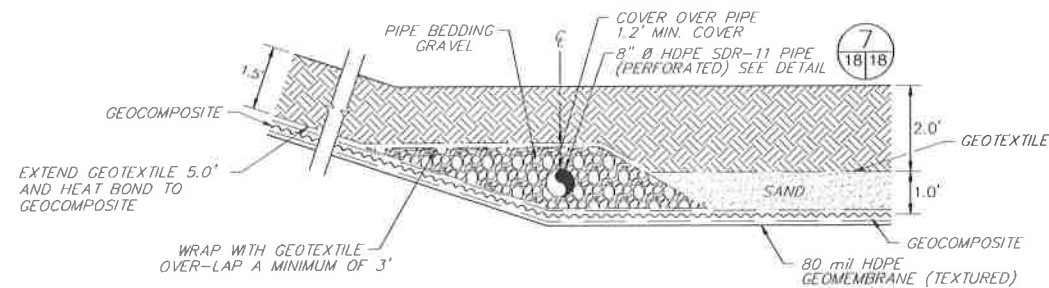
TYPICAL SIDESLOPE LINING SYSTEM DETAIL

SCALE IN FEET



TYPICAL PIPE PERFORATION DETAIL

NOT TO SCALE (SEE NOTE 4)

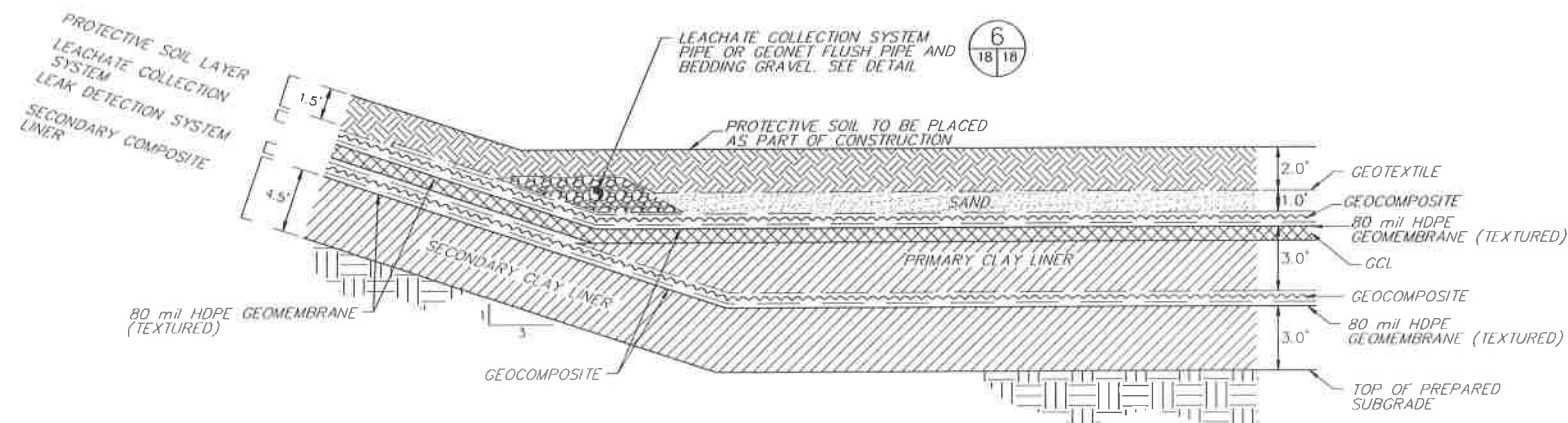


TYPICAL LEACHATE COLLECTION SYSTEM PIPE OR GEONET FLUSH PIPE AND BEDDING GRAVEL

SCALE IN FEET

NOTES:

- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
- 2.) MATERIAL SPECIFICATIONS ARE PROVIDED IN THE GENERAL SPECIFICATIONS AND THE SUPPLEMENTAL SPECIFICATIONS.
- 3.) PERFORATIONS SHALL CONSIST OF THREE ROWS OF HOLES 1/4" IN DIAMETER AT 6" CENTERS WITH ALLOWABLE TOLERANCE OF 1/16" ON THE DIAMETER AND 1/4" ON THE SPACING. THE ROWS SHALL BE PARALLEL TO THE AXIS OF THE PIPE AND SET 120 DEGREES PLUS OR MINUS 5 DEGREES APART. THE HOLES OF EACH ROW SHALL BE OFFSET FROM THE HOLES OF THE OTHER ROWS BY 2".
- 4.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.



TYPICAL TOE OF SLOPE DETAIL

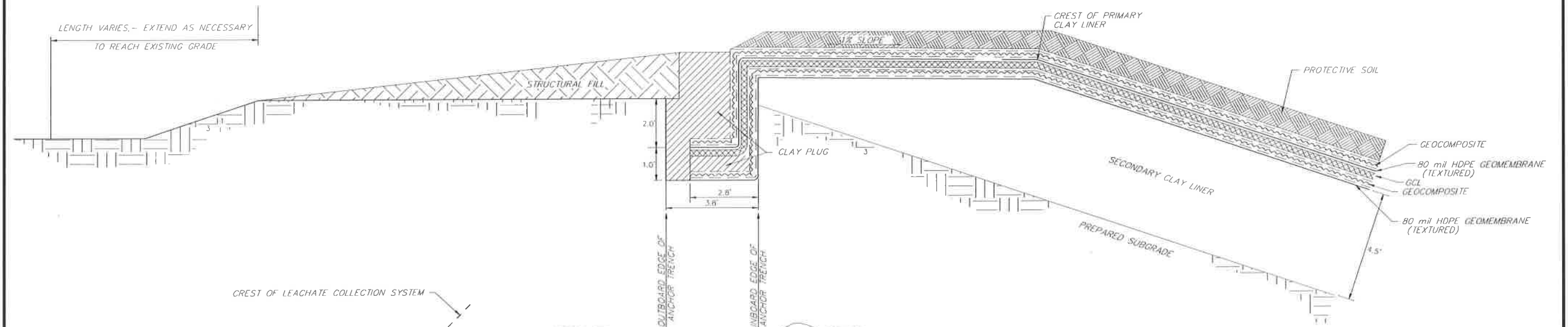
SCALE IN FEET (SEE NOTE 1, 2 AND 3)

DRAWING No. WHERE DETAIL/SECTION IS REFERENCED

DETAIL/SECTION NUMBER

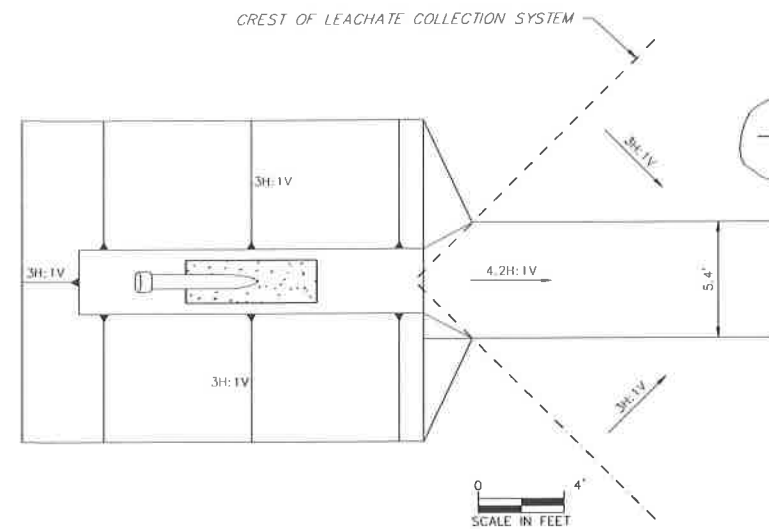
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|                                |                               |                                                                                                                                                                                                                                                                                                      |     |      |
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| 1                              | REVISED TO SHOW NEW OWNERSHIP | 9/04                                                                                                                                                                                                                                                                                                 | WDS | FK   |
| 0                              | ISSUED FOR PERMIT MOD. REPORT | 11/94                                                                                                                                                                                                                                                                                                | JGN | PGC  |
| Rev. No                        | NOTES                         | DATE                                                                                                                                                                                                                                                                                                 | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE        |                               | <br>DEER TRAIL, LLC.<br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC.<br/>ANY INFORMATION CONTAINED HEREIN SHALL NOT BE COPIED<br/>OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |     |      |
| DESIGN BY:                     |                               |                                                                                                                                                                                                                                                                                                      |     |      |
| TEL (TERRAMATRIX)              |                               |                                                                                                                                                                                                                                                                                                      |     |      |
| DRAWN BY:                      |                               |                                                                                                                                                                                                                                                                                                      |     |      |
| JGN (TERRAMATRIX)              |                               |                                                                                                                                                                                                                                                                                                      |     |      |
| CHECK BY:                      |                               | PROJECT:                                                                                                                                                                                                                                                                                             |     |      |
| PGC (TERRAMATRIX)              |                               | CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                                                                                                     |     |      |
| PROJECT No.<br>603             |                               | DRAWING TITLE:                                                                                                                                                                                                                                                                                       |     |      |
| FILE NAME:<br>DEERTRAIL-18.DWG |                               | TYPICAL LINER<br>SYSTEM DETAILS                                                                                                                                                                                                                                                                      |     |      |
|                                |                               | SHEET: 1 OF 1                                                                                                                                                                                                                                                                                        |     |      |
|                                |                               | DRAWING No. 18 REV. 1                                                                                                                                                                                                                                                                                |     |      |



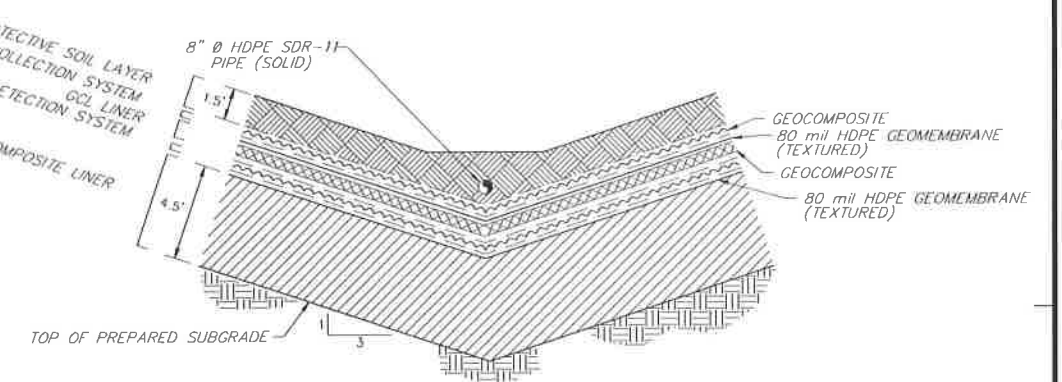
TYPICAL ANCHOR TRENCH DETAIL

SCALE IN FEET  
(SEE NOTE 1 AND 2)



TYPICAL CLEANOUT PIPE SUPPORT  
PLAN, PROFILE, AND DETAIL

10  
16/19



TYPICAL CLEANOUT PIPE DETAIL

SCALE IN FEET  
(SEE NOTE 1 AND 2)

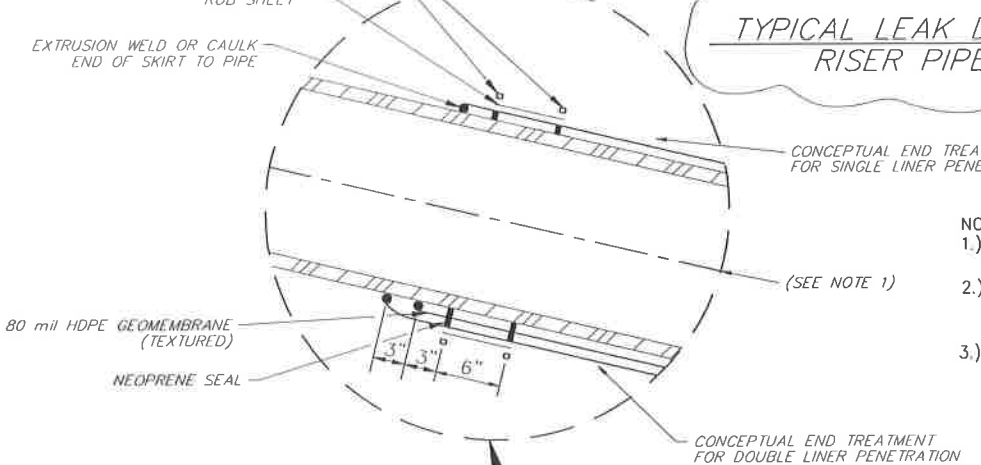
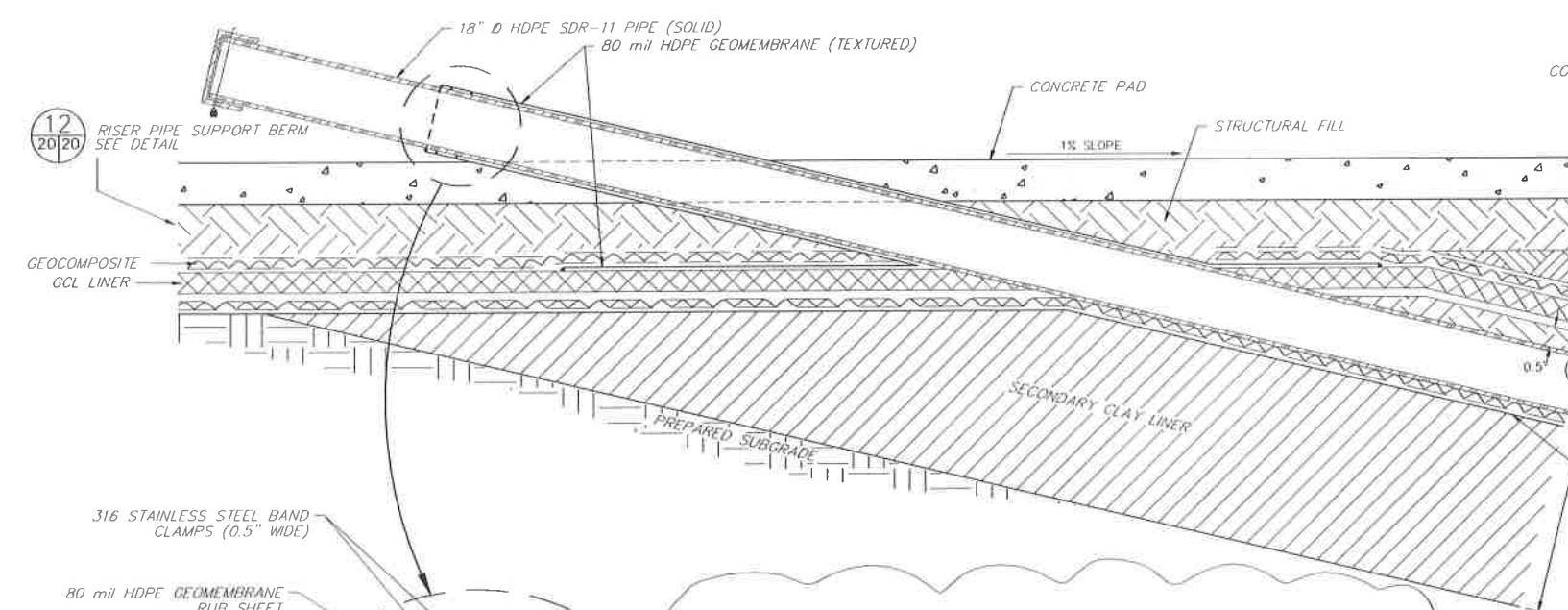
- NOTES:
- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
  - 2.) MATERIAL SPECIFICATIONS ARE PROVIDED IN THE GENERAL SPECIFICATIONS AND THE SUPPLEMENTAL SPECIFICATIONS.
  - 3.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

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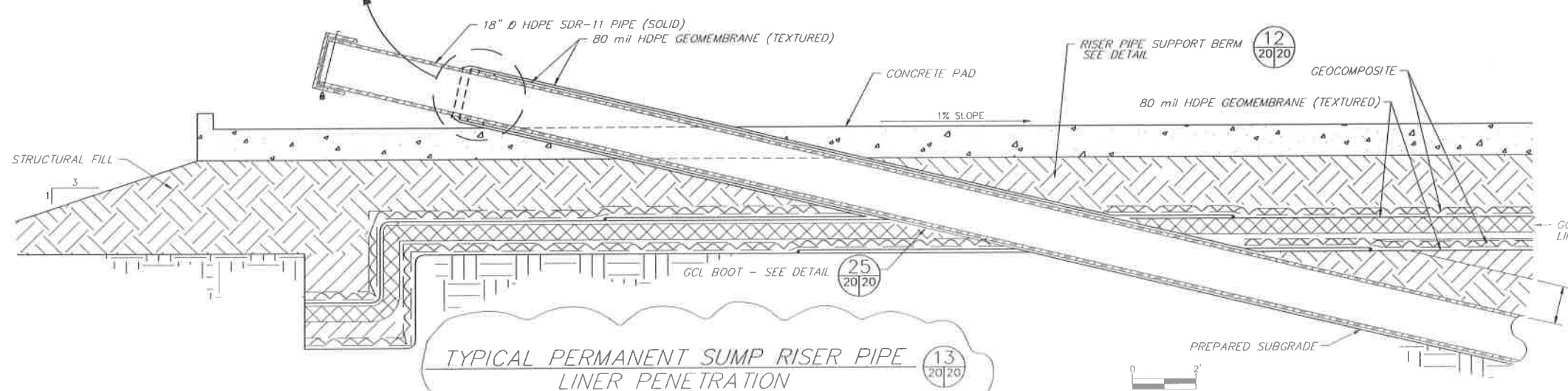
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| 4                 |                                               |               |      |       |
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| 2                 | REVISED TO SHOW NEW OWNERSHIP                 | 9/04          | WDS  | FK    |
| 1                 | ADD GCL & ELIMINATE PRIM. CLAY ON SIDE SLOPES | 11/96         | KLC  | JPP   |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                 | 11/94         | JGN  | PGC   |
| Rev. No.          | NOTES                                         | DATE          | BY   | CHKD. |
| SCALE:            |                                               |               |      |       |
| SEE BAR SCALE     |                                               |               |      |       |
| DESIGN BY:        |                                               |               |      |       |
| TEL (TERRAMATRIX) |                                               |               |      |       |
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| JGN (TERRAMATRIX) |                                               |               |      |       |
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| PGC (TERRAMATRIX) |                                               |               |      |       |
| PROJECT No.       | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN     |               |      |       |
| 603               |                                               |               |      |       |
| FILE NAME:        | DRAWING TITLE: TYPICAL LINER SYSTEM DETAILS   |               |      |       |
| DEERTRAIL-19.DWG  |                                               |               |      |       |
|                   |                                               | SHEET: 1 OF 1 |      |       |
|                   |                                               | DRAWING No.:  | REV. |       |
|                   |                                               | 19            | 2    |       |

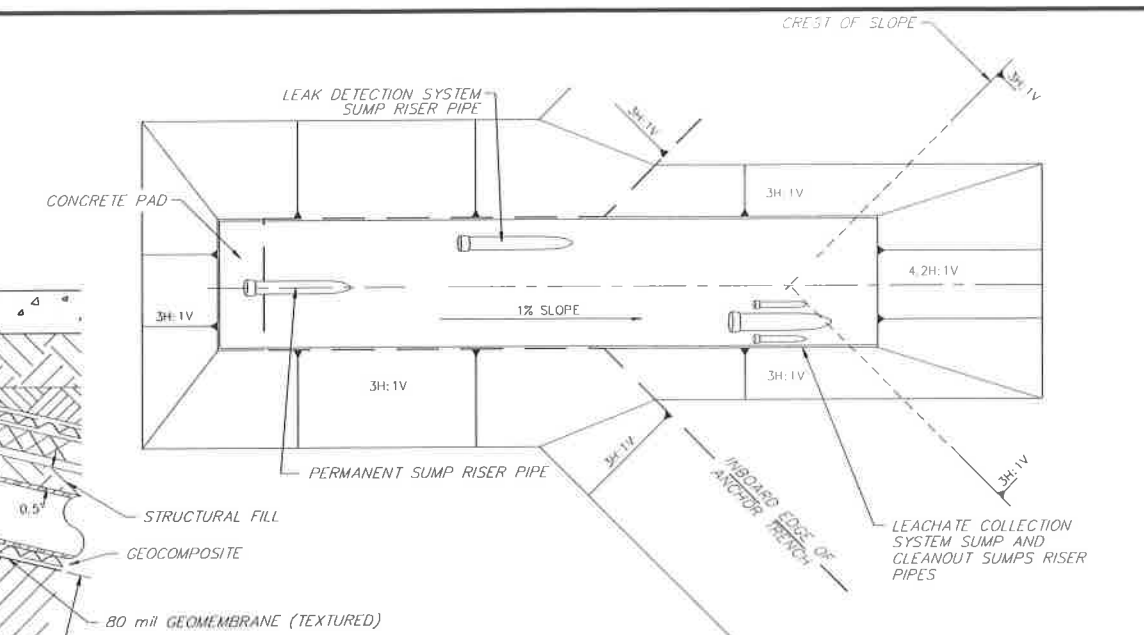


**TYPICAL LEAK DETECTION SYSTEM SUMP RISER PIPE LINER PENETRATION**

- NOTES:
- 1.) ACTUAL LINER END TREATMENT DETAILS SHALL BE DESIGNED BY GEOMEMBRANE INSTALLER AND SUBMITTED ON SHOP DRAWINGS.
  - 2.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS: THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
  - 3.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.



**TYPICAL PERMANENT SUMP RISER PIPE LINER PENETRATION**



**TYPICAL PLAN AND PROFILE RISER AND CLEANOUT PIPE SUPPORT BERM**

SCALE IN FEET

DETAIL/SECTION NUMBER

DRAWING No. WHERE DETAIL/SECTION IS REFERENCED

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DEER TRAIL, LLC.

PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN

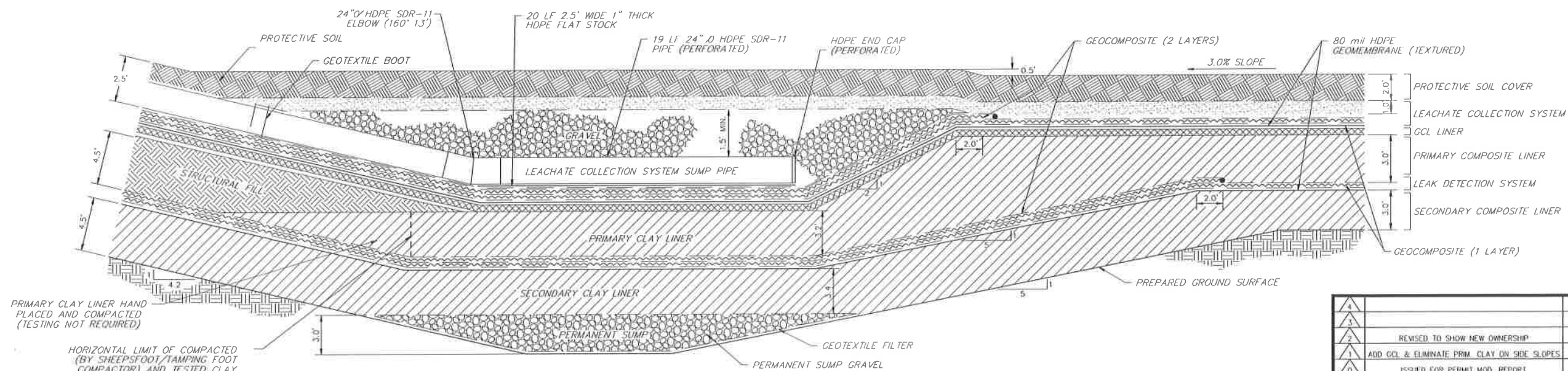
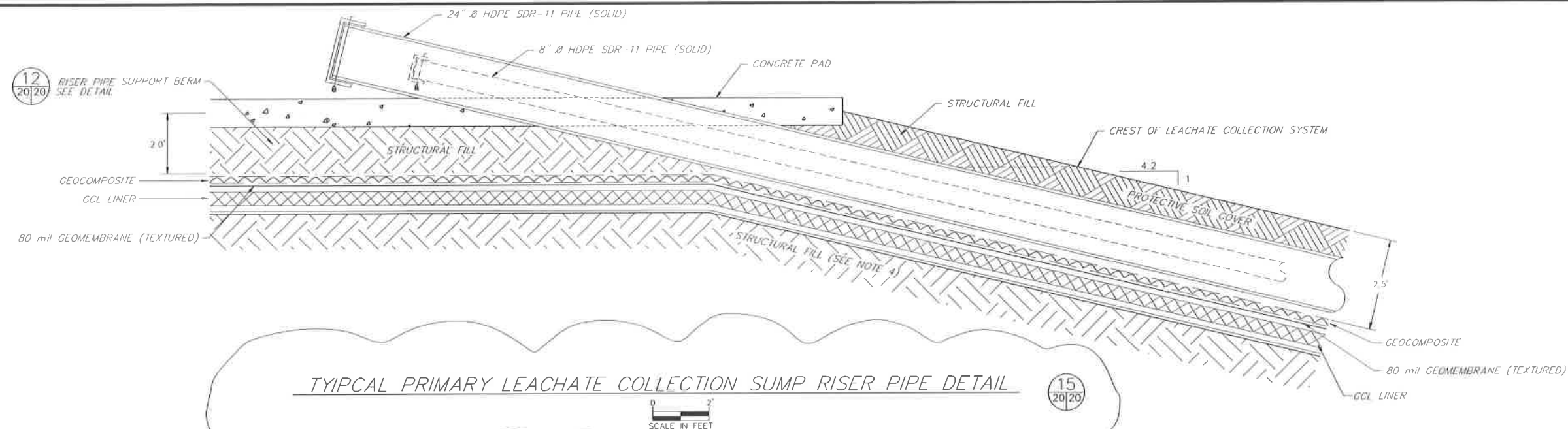
DRAWING TITLE: TYPICAL - SUMP DETAILS AND CROSS-SECTIONS

SHEET: 1 OF 4

DRAWING No.: 20

REV: 1





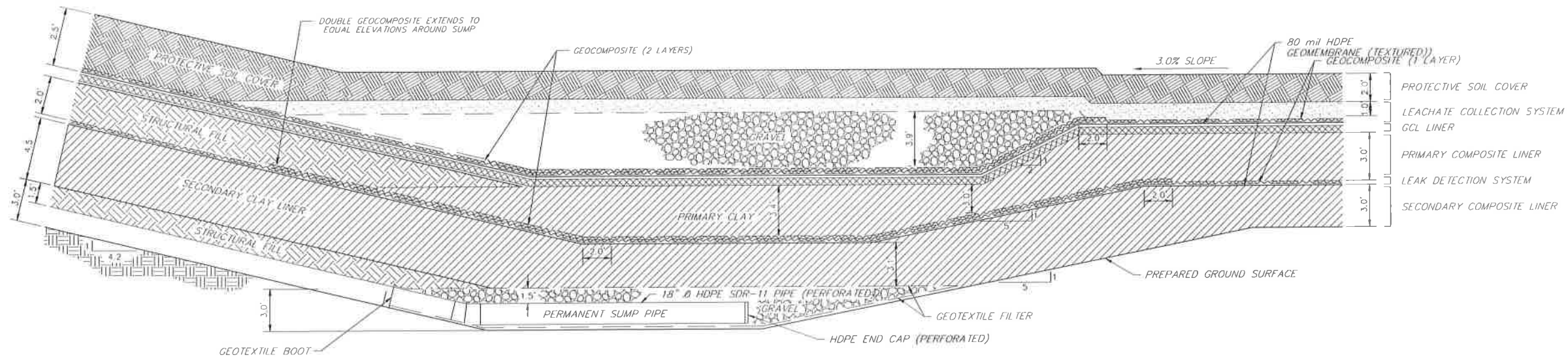
- NOTES:
- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
  - 2.) LOWER LINER COMPONENTS NOT SHOWN.
  - 3.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.
  - 4.) SECTIONS CUT ALONG SIDE SLOPE RISER PIPE TRENCH, THEREFORE, STRUCTURAL FILL BACKFILL FOR PIPES IS SHOWN BELOW PRIMARY AND SECONDARY CLAY LINERS.

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

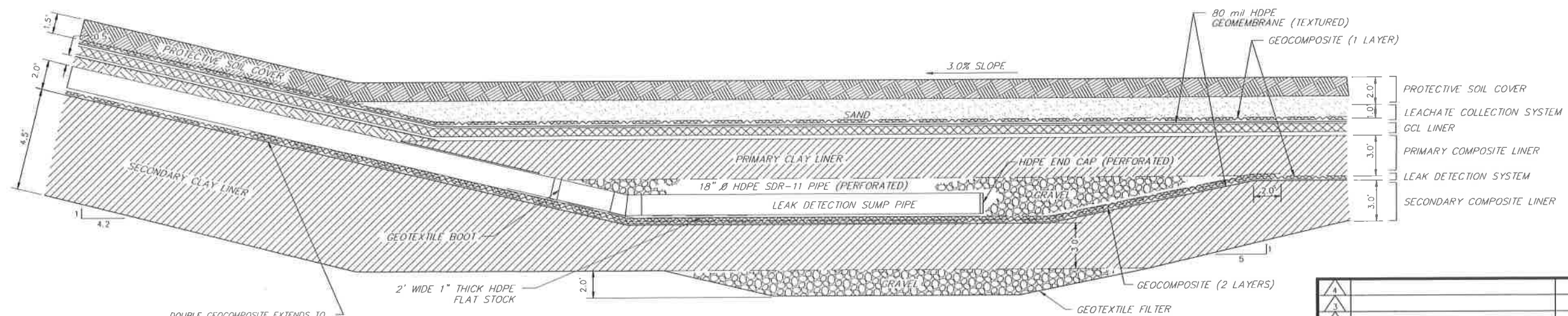
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| 4                 |                                                                                                                                                                                                       |               |      |      |
| 3                 |                                                                                                                                                                                                       |               |      |      |
| 2                 | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                         | 9/04          | WDS  | FK   |
| 1                 | ADD GCL & ELIMINATE PRIM CLAY ON SIDE SLOPES                                                                                                                                                          | 11/96         | KLC  | JPP  |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                         | 11/94         | JGN  | PGC  |
| Rev. No.          | NOTES                                                                                                                                                                                                 | DATE          | BY   | CHKD |
| SCALE:            | <br>DEER TRAIL, LLC.<br><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> |               |      |      |
| DESIGN BY:        |                                                                                                                                                                                                       |               |      |      |
| TCL (TERRAMATRIX) |                                                                                                                                                                                                       |               |      |      |
| DRAWN BY:         |                                                                                                                                                                                                       |               |      |      |
| JGN (TERRAMATRIX) |                                                                                                                                                                                                       |               |      |      |
| CHECK BY:         | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                             |               |      |      |
| JGC (TERRAMATRIX) |                                                                                                                                                                                                       |               |      |      |
| PROJECT No.       | DRAWING TITLE: TYPICAL - SUMP DETAILS AND CROSS-SECTIONS                                                                                                                                              |               |      |      |
| 603               |                                                                                                                                                                                                       |               |      |      |
| FILE NAME:        | DEERTRAIL-206.DWG                                                                                                                                                                                     |               |      |      |
|                   |                                                                                                                                                                                                       |               |      |      |
|                   |                                                                                                                                                                                                       | SHEET: 2 OF 4 |      |      |
|                   |                                                                                                                                                                                                       | DRAWING No.:  | REV. |      |
|                   |                                                                                                                                                                                                       | 20            | 2    |      |



TYPICAL PERMANENT SUMP SECTION

NOT TO SCALE

F  
-20



TYPICAL LEAK DETECTION SUMP SECTION

NOT TO SCALE

G  
-20

NOTES:

- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
- 2.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.

A  
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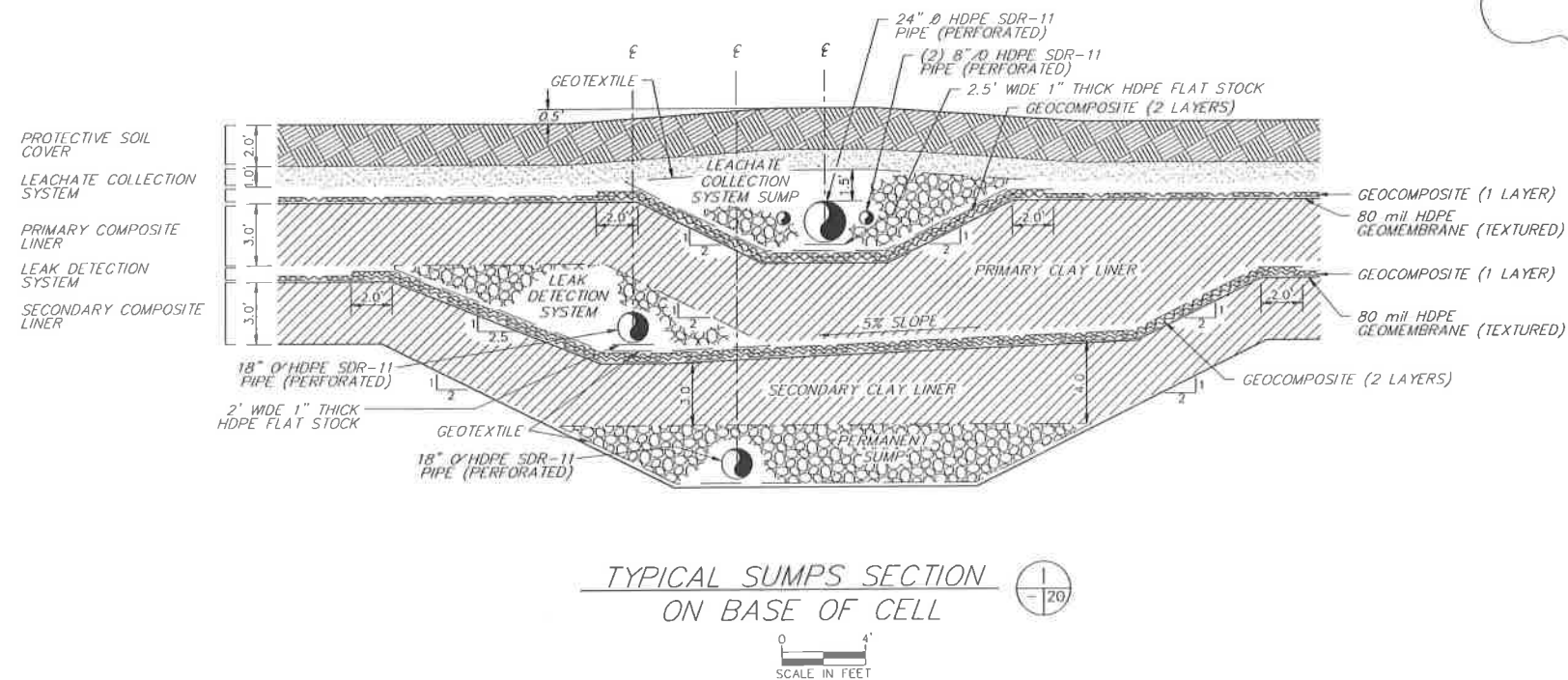
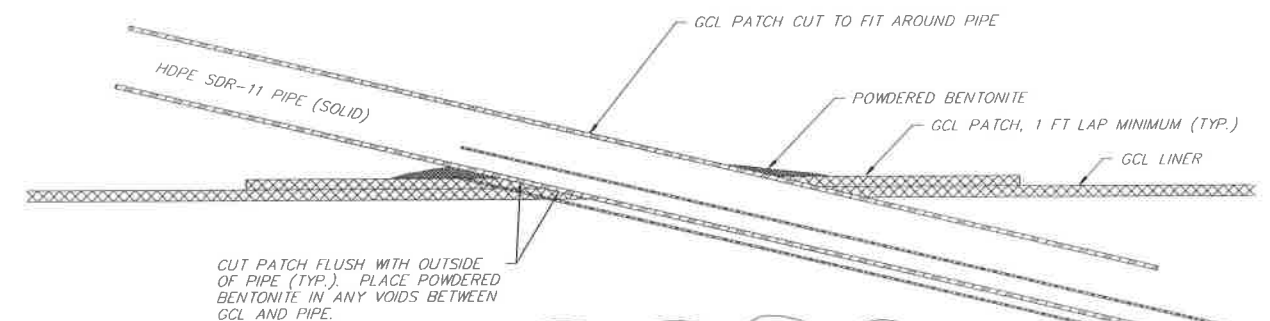
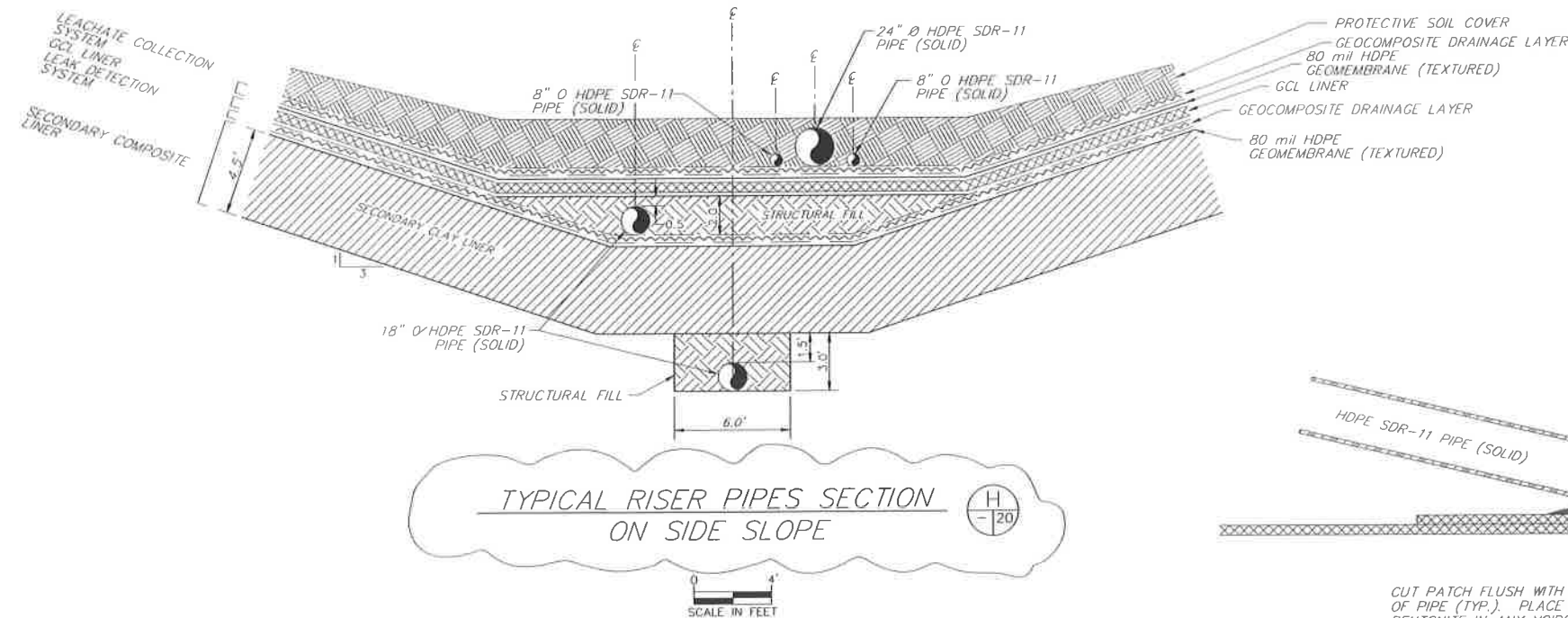
DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                   |                                                                                                                                                                                                 |               |      |      |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------|------|
| 4                 |                                                                                                                                                                                                 |               |      |      |
| 3                 |                                                                                                                                                                                                 |               |      |      |
| 2                 | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                   | 9/04          | WDS  | FK   |
| 1                 | ADD GCL & ELIMINATE PRIM. CLAY ON SIDE SLOPES                                                                                                                                                   | 11/96         | KLC  | JPP  |
| 0                 | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                   | 11/94         | JGN  | PGC  |
| Rev. No.          | NOTES                                                                                                                                                                                           | DATE          | BY   | CHKD |
| SCALE:            | <p>DEER TRAIL, LLC.</p> <p>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN SHALL NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</p> |               |      |      |
| DESIGN BY:        |                                                                                                                                                                                                 |               |      |      |
| TEL (TERRAMATRIX) |                                                                                                                                                                                                 |               |      |      |
| DRAWN BY:         |                                                                                                                                                                                                 |               |      |      |
| JGN (TERRAMATRIX) |                                                                                                                                                                                                 |               |      |      |
| CHECK BY:         | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                       |               |      |      |
| PGC (TERRAMATRIX) |                                                                                                                                                                                                 |               |      |      |
| PROJECT No.       | DRAWING TITLE: TYPICAL - SUMP DETAILS AND CROSS-SECTIONS                                                                                                                                        |               |      |      |
| 603               |                                                                                                                                                                                                 |               |      |      |
| FILE NAME:        | DEERTRAIL-20C.DWG                                                                                                                                                                               |               |      |      |
|                   |                                                                                                                                                                                                 |               |      |      |
|                   |                                                                                                                                                                                                 | SHEET: 3 OF 4 |      |      |
|                   |                                                                                                                                                                                                 | DRAWING No.:  | REV. |      |
|                   |                                                                                                                                                                                                 | 20            | 2    |      |





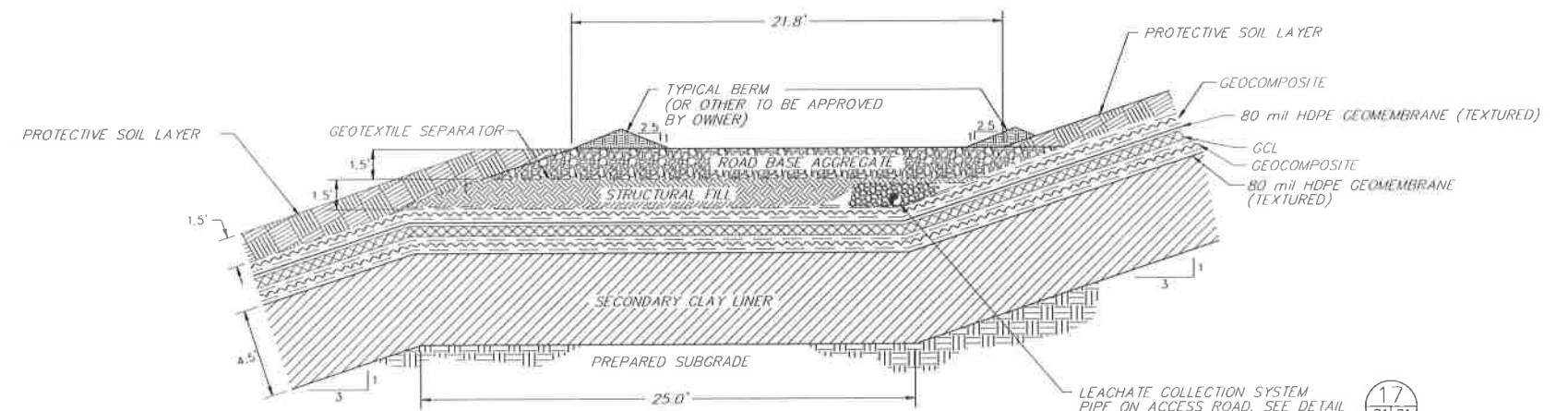
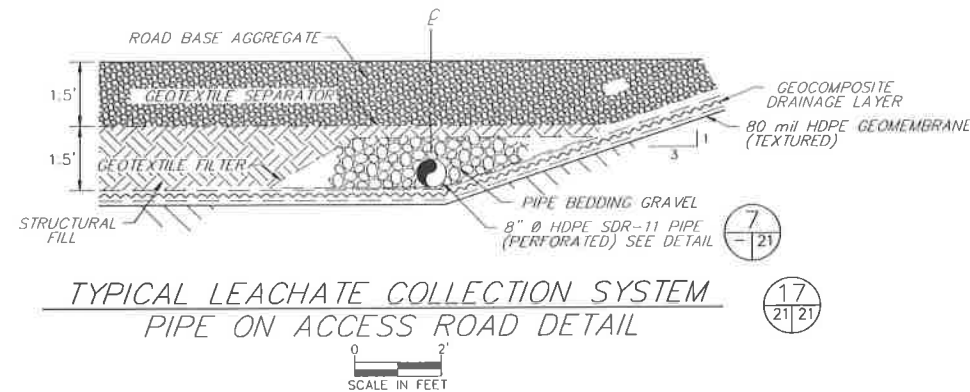
- NOTES:
- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
  - 2.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.

DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

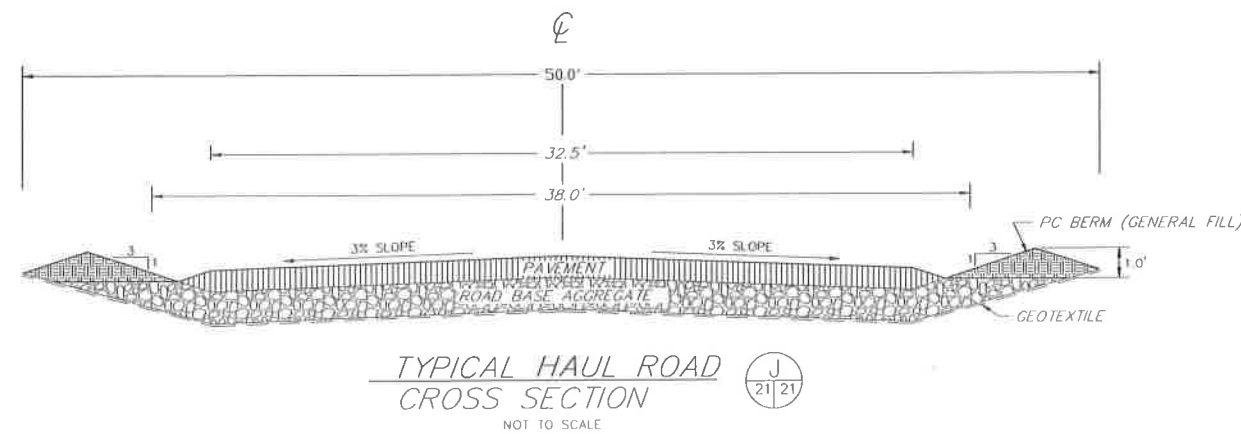
DETAIL/SECTION  
NUMBER

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

|                                                                                                                                                                                                                           |                               |                |        |      |
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| 4                                                                                                                                                                                                                         |                               |                |        |      |
| 3                                                                                                                                                                                                                         |                               |                |        |      |
| 2                                                                                                                                                                                                                         | REVISED TO SHOW NEW OWNERSHIP | 9/04           | WDS    | FK   |
| 1                                                                                                                                                                                                                         | ADD GCL TO LINER SYSTEM       | 11/96          | TWS    | PGC  |
| 0                                                                                                                                                                                                                         | ISSUED FOR PERMIT MOD. REPORT | 11/94          | JGN    | PGC  |
| Rev. No.                                                                                                                                                                                                                  | NOTES                         | DATE           | BY     | CHKD |
| SCALE:<br>SEE BAR SCALE<br>DESIGN BY:<br>TEL (TERRAMATRIX)<br>DRAWN BY:<br>JGN (TERRAMATRIX)<br>CHECK BY:<br>PGC (TERRAMATRIX)<br>PROJECT No.<br>603<br>FILE NAME:<br>DEERTRAIL-200.DWG                                   |                               |                |        |      |
| <div> <p>DEER TRAIL, LLC.</p> <p><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small></p> </div> |                               |                |        |      |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br>DRAWING TITLE:<br>TYPICAL - SUMP DETAILS<br>AND CROSS-SECTIONS                                                                                                            |                               |                |        |      |
|                                                                                                                                                                                                                           |                               | SHEET: 4 OF 4  |        |      |
|                                                                                                                                                                                                                           |                               | DRAWING No. 20 | REV. 2 |      |



- NOTES:
- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
  - 2.) MATERIAL SPECIFICATIONS ARE PROVIDED IN THE GENERAL SPECIFICATIONS AND THE SUPPLEMENTAL SPECIFICATIONS.
  - 3.) ALL DIMENSIONS ARE TYPICAL (EXCEPT SOIL LINER THICKNESS ) AND COULD VARY IN FINAL DESIGN CONSTRUCTION DRAWINGS.



|                                                                                                                                                                                                                                     |                                              |       |     |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------|-----|------|
| 4                                                                                                                                                                                                                                   |                                              |       |     |      |
| 3                                                                                                                                                                                                                                   |                                              |       |     |      |
| 2                                                                                                                                                                                                                                   | REVISED TO SHOW NEW OWNERSHIP                | 9/04  | WDS | FK   |
| 1                                                                                                                                                                                                                                   | ADD GCL & ELIMINATE PRIM CLAY ON SIDE SLOPES | 11/96 | KLC | JPP  |
| 0                                                                                                                                                                                                                                   | ISSUED FOR PERMIT MOD. REPORT                | 11/94 | JGN | PGC  |
| Rev. No                                                                                                                                                                                                                             | NOTES                                        | DATE  | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE                                                                                                                                                                                                             |                                              |       |     |      |
| DESIGN BY:<br>TEL (TERRAMATRIX)                                                                                                                                                                                                     |                                              |       |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)                                                                                                                                                                                                      |                                              |       |     |      |
| CHECK BY:<br>PGC (TERRAMATRIX)                                                                                                                                                                                                      |                                              |       |     |      |
| PROJECT No.<br>603                                                                                                                                                                                                                  |                                              |       |     |      |
| FILE NAME:<br>DEERTRAIL-21.DWG                                                                                                                                                                                                      |                                              |       |     |      |
| <div> <div> </div> <div> <b>DEER TRAIL, LLC.</b><br/> <small>THIS DRAWING IS THE PROPERTY OF DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small> </div> </div> |                                              |       |     |      |
| PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                        |                                              |       |     |      |
| DRAWING TITLE:<br>TYPICAL ACCESS RAMP DETAILS                                                                                                                                                                                       |                                              |       |     |      |
| SHEET: 1 OF 1                                                                                                                                                                                                                       |                                              |       |     |      |
| DRAWING No.: 21                                                                                                                                                                                                                     |                                              |       |     |      |
| REV. 2                                                                                                                                                                                                                              |                                              |       |     |      |

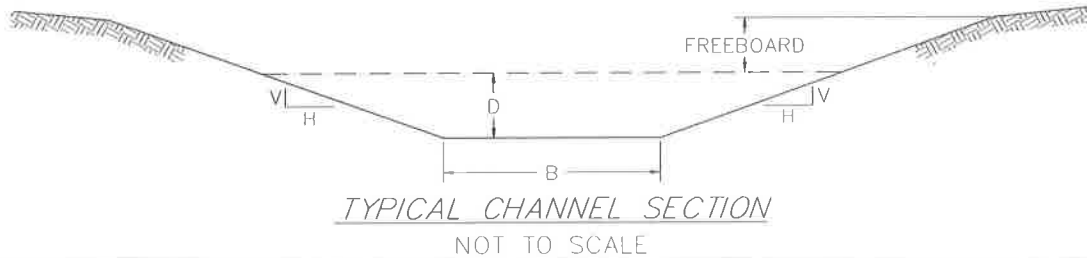
DRAWING No. WHERE  
DETAIL/SECTION  
IS REFERENCED

DRAWING No. WHERE  
DETAIL/SECTION  
IS SHOWN

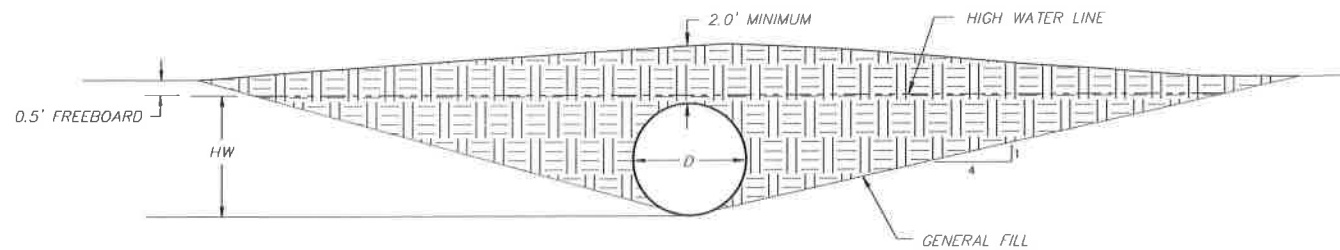
| PERMANENT UC STORMWATER CHANNEL DESIGN ANALYSIS |                        |                   |                              |                              |                  |           |                      |                |                             |                         |                                   |                        |                       |
|-------------------------------------------------|------------------------|-------------------|------------------------------|------------------------------|------------------|-----------|----------------------|----------------|-----------------------------|-------------------------|-----------------------------------|------------------------|-----------------------|
| CHANNEL                                         | TRIBUTARY AREA (acres) | TRIBUTARY CHANNEL | TOTAL TRIBUTARY AREA (acres) | 8.2" EVENT DESIGN FLOW (cfs) | BOTTOM SLOPE (%) | SHAPE     | BOTTOM WIDTH B (ft.) | SIDE SLOPE H:V | FLOW VELOCITY n=0.035 (fps) | FLOW DEPTH n=0.06 (ft.) | ACTUAL DESIGN CHANNEL DEPTH (ft.) | FREEBOARD n=0.06 (ft.) | FROUDE NUMBER n=0.035 |
| UC-1A *                                         | 3.5                    | ---               | 3.5                          | 28                           | 1.10             | VEE       | ---                  | 4:1            | 3.5                         | 1.7                     | 4.1                               | 2.4                    | .73 (Subcritical)     |
| UC-1B *                                         | 6.4                    | UC-1,17           | 16.0                         | 95                           | 0.50             | VEE       | ---                  | 4:1            | 3.5                         | 3.2                     | 4.1                               | 0.9                    | .54 (Subcritical)     |
| UC-2 *                                          | 18.2                   | UC-1B,12          | 45.3                         | 247                          | 0.50             | VEE       | ---                  | 4:1            | 4.5                         | 4.6                     | 4.7                               | 0.9                    | .58 (Subcritical)     |
| UC-3 *                                          | 13.9                   | ---               | 13.9                         | 72                           | 0.75             | VEE       | ---                  | 4:1            | 3.8                         | 2.7                     | 3.7                               | 1.0                    | .64 (Subcritical)     |
| UC-4 *                                          | 34.5                   | ---               | 34.5                         | 155                          | 0.75             | VEE       | ---                  | 4:1            | 4.6                         | 3.6                     | 4.6                               | 1.0                    | .68 (Subcritical)     |
| UC-5 *                                          | 2.1                    | UC-3,4            | 50.5                         | 220                          | 0.80             | VEE       | ---                  | 5:1            | 4.9                         | 3.7                     | 4.7                               | 1.0                    | .64 (Subcritical)     |
| UC-6 *                                          | 24.0                   | UC-2,5,19         | 123.0                        | 401                          | 1.00             | VEE       | ---                  | 16:1           | 4.7                         | 2.8                     | 4.3                               | 1.5                    | .77 (Subcritical)     |
| UC-7 *                                          | 38.8                   | UC-6,20,14        | 175.8                        | 621                          | 0.76             | VEE       | ---                  | 16:1           | 4.7                         | 3.5                     | 4.8                               | 1.3                    | .69 (Subcritical)     |
| UC-8 *                                          | 4.7                    | ---               | 4.7                          | 37                           | 1.20             | VEE       | ---                  | 4:1            | 3.9                         | 1.9                     | 3.3                               | 1.7                    | .65 (Subcritical)     |
| UC-9A *                                         | 5.2                    | UC-8,15B          | 21.8                         | 121                          | 0.70             | VEE       | ---                  | 4:1            | 4.2                         | 3.3                     | 4.6                               | 1.3                    | .77 (Subcritical)     |
| UC-9B *                                         | 5.6                    | UC-9A,18          | 34.8                         | 156                          | 0.70             | VEE       | ---                  | 4:1            | 4.5                         | 3.6                     | 4.8                               | 1.2                    | .64 (Subcritical)     |
| UC-10 *                                         | 15.0                   | UC-9B,16B         | 62.3                         | 204                          | 0.50             | TRAPEZOID | 12                   | 4:1            | 4.1                         | 3.1                     | 3.4                               | 0.3                    | .57 (Subcritical)     |
| UC-11                                           | 5.1                    | ---               | 5.1                          | 35                           | 2.20             | VEE       | ---                  | 7.5            | 4.1                         | 1.3                     | 1.6                               | 0.3                    | .98 (Subcritical)     |
| UC-12 *                                         | 6.0                    | UC-11             | 11.1                         | 64                           | 0.40             | VEE       | ---                  | 4:1            | 2.9                         | 2.9                     | 3.1                               | 0.3                    | .48 (Subcritical)     |
| UC-13                                           | 2.5                    | ---               | 2.5                          | 20                           | 2.20             | VEE       | ---                  | 4:1            | 4.1                         | 1.4                     | 1.7                               | 0.2                    | .58 (Subcritical)     |
| UC-14 *                                         | 9.3                    | UC-13             | 11.8                         | 80                           | 0.60             | VEE       | ---                  | 4:1            | 3.6                         | 2.9                     | 3.4                               | 0.5                    | .48 (Subcritical)     |
| UC-15A                                          | 4.5                    | ---               | 4.5                          | 35                           | 0.70             | VEE       | ---                  | 4:1            | 3.1                         | 2.1                     | 2.4                               | 0.3                    | .99 (Subcritical)     |
| UC-15B                                          | 7.4                    | UC-15A            | 11.9                         | 84                           | 2.00             | VEE       | ---                  | 9:1            | 4.7                         | 1.7                     | 2.0                               | 0.3                    | .60 (Subcritical)     |
| UC-16A                                          | 9.6                    | ---               | 9.6                          | 68                           | 0.50             | VEE       | ---                  | 4:1            | 3.2                         | 2.8                     | 3.1                               | 0.3                    | .53 (Subcritical)     |
| UC-16B                                          | 2.9                    | UC-16A            | 12.5                         | 81                           | 1.80             | VEE       | ---                  | 6:1            | 4.9                         | 2.0                     | 2.3                               | 0.3                    | .96 (Subcritical)     |
| UC-17                                           | 6.1                    | ---               | 6.1                          | 46                           | 1.40             | VEE       | ---                  | 4:1            | 4.3                         | 2.0                     | 2.3                               | 0.3                    | .84 (Subcritical)     |
| UC-18                                           | 7.4                    | ---               | 7.4                          | 57                           | 2.00             | VEE       | ---                  | 6:1            | 4.7                         | 1.7                     | 2.0                               | 0.3                    | .58 (Subcritical)     |
| UC-19                                           | 3.2                    | ---               | 3.2                          | 25                           | 0.70             | VEE       | ---                  | 4:1            | 2.9                         | 1.8                     | 2.1                               | 0.3                    | .58 (Subcritical)     |
| UC-20                                           | 2.2                    | ---               | 2.2                          | 18                           | 2.10             | VEE       | ---                  | 4:1            | 4.0                         | 1.3                     | 1.6                               | 0.3                    | .96 (Subcritical)     |

| TEMPORARY PC STORMWATER CHANNEL DESIGN ANALYSIS |                        |                   |                              |                              |                  |       |                     |                |                             |                        |                                  |                        |                       |
|-------------------------------------------------|------------------------|-------------------|------------------------------|------------------------------|------------------|-------|---------------------|----------------|-----------------------------|------------------------|----------------------------------|------------------------|-----------------------|
| CHANNEL                                         | TRIBUTARY AREA (acres) | TRIBUTARY CHANNEL | TOTAL TRIBUTARY AREA (acres) | 8.2" EVENT DESIGN FLOW (cfs) | BOTTOM SLOPE (%) | SHAPE | BOTTOM WIDTH B (ft) | SIDE SLOPE H:V | FLOW VELOCITY n=0.035 (fps) | FLOW DEPTH n=0.06 (ft) | ACTUAL DESIGN CHANNEL DEPTH (ft) | FREEBOARD n=0.06 (ft.) | FROUDE NUMBER n=0.035 |
| PC-1 *                                          | 5.6                    | PC 1,1            | 9.5                          | 68                           | 0.20             | TRAP. | 12                  | 3:1            | 2.3                         | 2.3                    | 3.5                              | 1.2                    | .35 (Subcritical)     |
| PC-1.1 *                                        | 3.9                    | ---               | 3.9                          | 33                           | 0.50             | VEE   | ---                 | 3:1            | 2.9                         | 2.4                    | 3.0                              | 0.6                    | .51 (Subcritical)     |
| PC-2 *                                          | 1.3                    | HAUL RD B         | 2.4                          | 18                           | 0.50             | VEE   | ---                 | 3:1            | 2.5                         | 1.9                    | 2.3                              | 0.4                    | .49 (Subcritical)     |
| PC-3 *                                          | 1.6                    | ---               | 1.6                          | 15                           | 0.4              | VEE   | ---                 | 3:1            | 2.2                         | 1.9                    | 2.3                              | 0.4                    | .44 (Subcritical)     |
| PC-4 *                                          | 0.3                    | PC-3              | 1.8                          | 17                           | 1.80             | VEE   | ---                 | 3:1            | 3.9                         | 1.5                    | 1.9                              | 0.4                    | .89 (Subcritical)     |
| HAUL ROAD A                                     | 1.3                    | ---               | 1.3                          | 10                           | 1.1              | VEE   | ---                 | 3:1 / 33.3:1   | 3.0 **                      | 0.5 **                 | 1.0                              | 0.5                    | .86 (Subcritical)     |
| HAUL ROAD B                                     | 1.3                    | ---               | 1.1                          | 9                            | 1.0              | VEE   | ---                 | 3:1 / 33/3:1   | 3.0 **                      | 0.5 **                 | 1.0                              | 0.5                    | .82 (Subcritical)     |

NOTE:  
 \* EXISTING STRUCTURE  
 \*\* Mannings N = 0.025



|                     |                                                                                                                                                                                                                                   |               |      |      |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------|------|
| 4                   |                                                                                                                                                                                                                                   |               |      |      |
| 3                   |                                                                                                                                                                                                                                   |               |      |      |
| 2                   | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                                                     | 9/04          | WDS  | FK   |
| 1                   | REVISED DITCH 16B                                                                                                                                                                                                                 | 7/95          | JCN  | TEL  |
| 0                   | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                     | 11/94         | JCN  | PGC  |
| Rev. No.            | NOTES                                                                                                                                                                                                                             | DATE          | BY   | CHKD |
| SCALE:              | <div>CleanHarbors</div> <div>DEER TRAIL, LLC.</div> <small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF CHHRA.</small> |               |      |      |
| SEE BAR SCALE       |                                                                                                                                                                                                                                   |               |      |      |
| DESIGN BY:          |                                                                                                                                                                                                                                   |               |      |      |
| TEL (TERRAMATRIX)   |                                                                                                                                                                                                                                   |               |      |      |
| DRAWN BY:           |                                                                                                                                                                                                                                   |               |      |      |
| JCN (TERRAMATRIX)   | PROJECT: CONCEPTUAL SITE DEVELOPMENT PLAN                                                                                                                                                                                         |               |      |      |
| CHECK BY:           | DRAWING TITLE: TYPICAL - SURFACE WATER DETAILS                                                                                                                                                                                    |               |      |      |
| PGC (TERRAMATRIX)   |                                                                                                                                                                                                                                   |               |      |      |
| PROJECT No.         |                                                                                                                                                                                                                                   |               |      |      |
| 603                 |                                                                                                                                                                                                                                   |               |      |      |
| FILE NAME:          |                                                                                                                                                                                                                                   |               |      |      |
| DEERTRAIL - 22A.DWG |                                                                                                                                                                                                                                   |               |      |      |
|                     |                                                                                                                                                                                                                                   | SHEET: 1 OF 2 |      |      |
|                     |                                                                                                                                                                                                                                   | DRAWING No.   | REV. |      |
|                     |                                                                                                                                                                                                                                   | 22            | 2    |      |

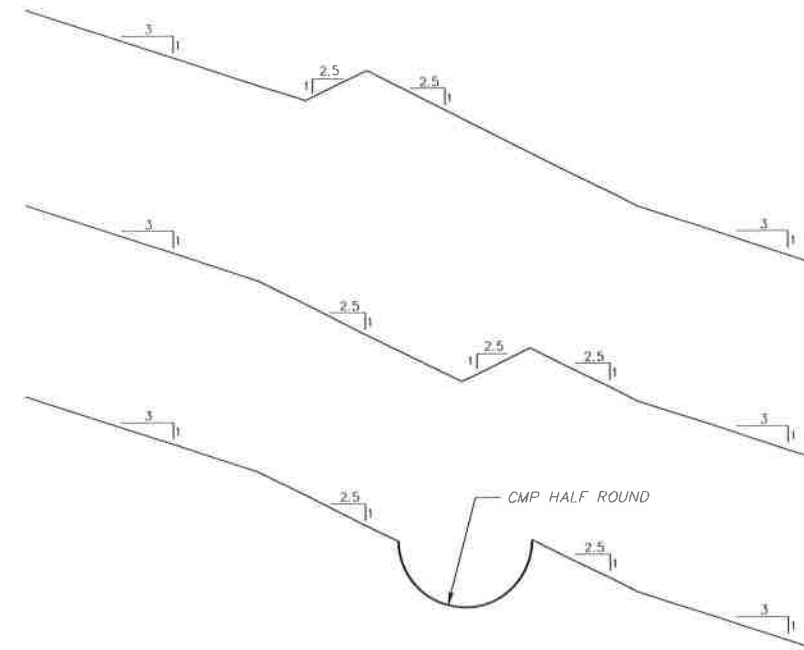


| STORMWATER CULVERT DESIGN ANALYSIS |                   |                              |                     |           |               |                         |      |                        |                                  |
|------------------------------------|-------------------|------------------------------|---------------------|-----------|---------------|-------------------------|------|------------------------|----------------------------------|
| Culvert                            | Tributary Channel | 8.2" Event Design Flow (cfs) | Inlet Condition     | Slope (%) | Length (Feet) | # /Design Size (Inches) | HW/D | Actual #/Size (Inches) | Outlet Rip Rap Protection (Feet) |
| UC-1                               | UC-1B             | 95                           | Rip Rap Headwall    | 0.5       | 125           | 2/36                    | 1.5  |                        | 10                               |
| UC-2 (*)                           | UC-1B,12          | 160                          | Concrete Headwall   | 0.9       | 190           | 1/72                    | 0.9  | 1/72                   | 20                               |
| UC-5 (*)                           | UC-3,4            | 224                          | Concrete Headwall   | 0.8       | 70            | 3/48                    | 1.1  | 3/48                   | 20                               |
| UC-7 (*)                           | UC-14,20          | 93                           | Concrete Drop Inlet | 3.7       | 660           | 1/48                    | 1.3  | 1/48                   | 50                               |
| Temporary (*) Road Crossing        | UC-9B, 15-B       | 156                          | Projecting          | 0.5       | 40            | 2/48                    | 1.1  | 2/48                   | 10                               |
| PC-1 (*)                           | PC-1              | 49                           | Concrete Headwall   | 0.2       | 70            | 1/48                    | 0.8  | 2/48                   | 10                               |
| PC-1,1 (*)                         | PC-1,1            | 33                           | Concrete Headwall   | 3.4       | 70            | 1/36                    | 1.0  | 2/36                   | 10                               |
| PC-2 (*)                           | PC-2              | 18                           | Concrete Drop Inlet | 0.1       | 469           | 1/24                    | 1.4  | 1/24                   | ---                              |
| PC-3 (*)                           | PC-3              | 7                            | RipRap              | 0.5       | 100           | 1/24                    | 0.7  | 1/24                   | 10                               |
| PC-1A (*)                          | PC-1              | 68                           | Concrete Drop Inlet | 0.5       | 400           | 1/65x40                 | 1.0  | 2/65x40                | ---                              |

NOTE: (\*) EXISTING CULVERT

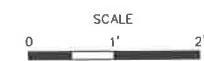
TYPICAL CULVERT CROSS-SECTION AND DESIGN ANALYSIS

NOT TO SCALE



TYPICAL CONTOUR DITCH ALTERNATIVES SECTION AND DETAIL

23  
25/22

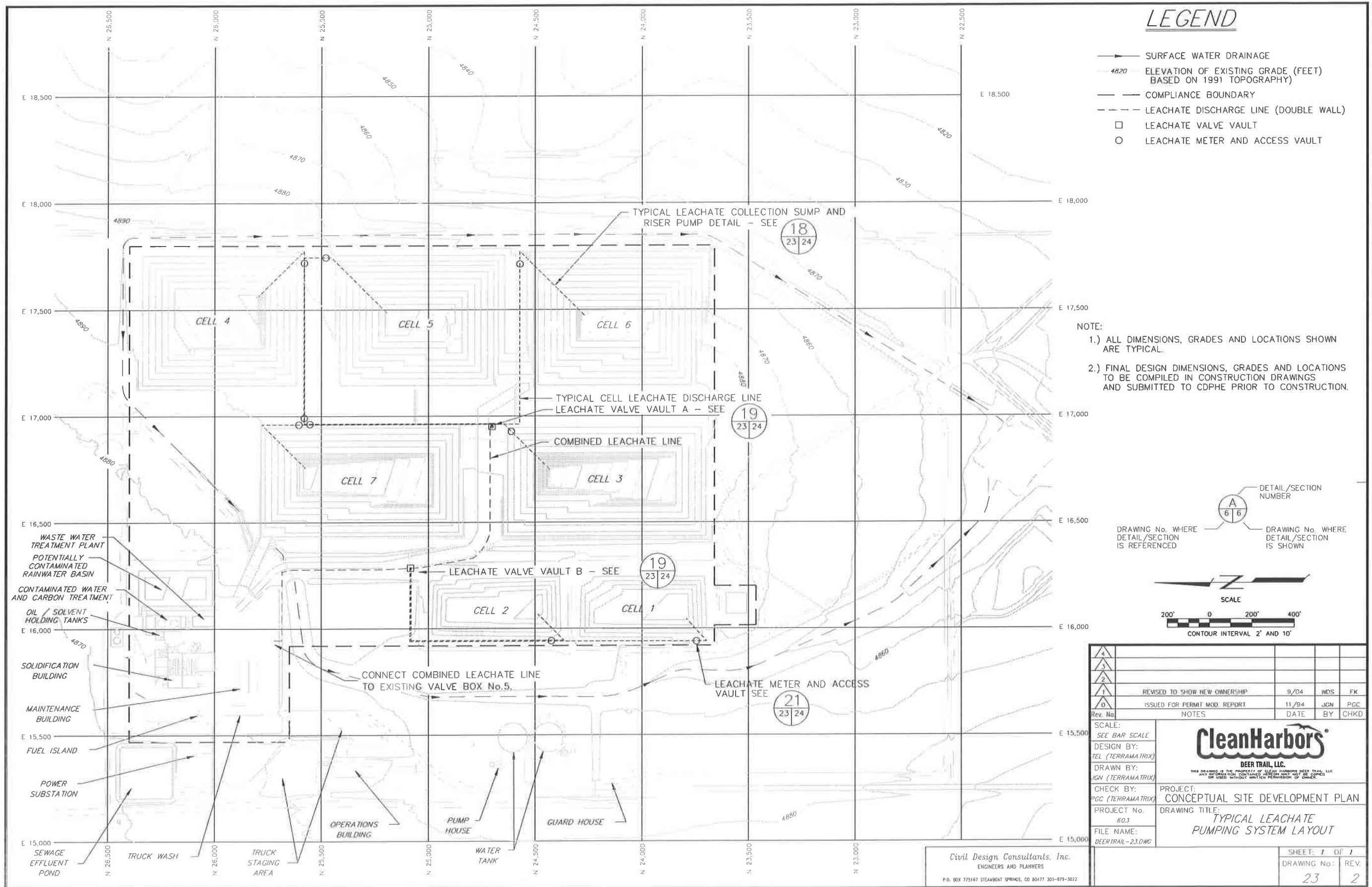


DETAIL/SECTION NUMBER

DRAWING No. WHERE DETAIL/SECTION IS REFERENCED

DRAWING No. WHERE DETAIL/SECTION IS SHOWN

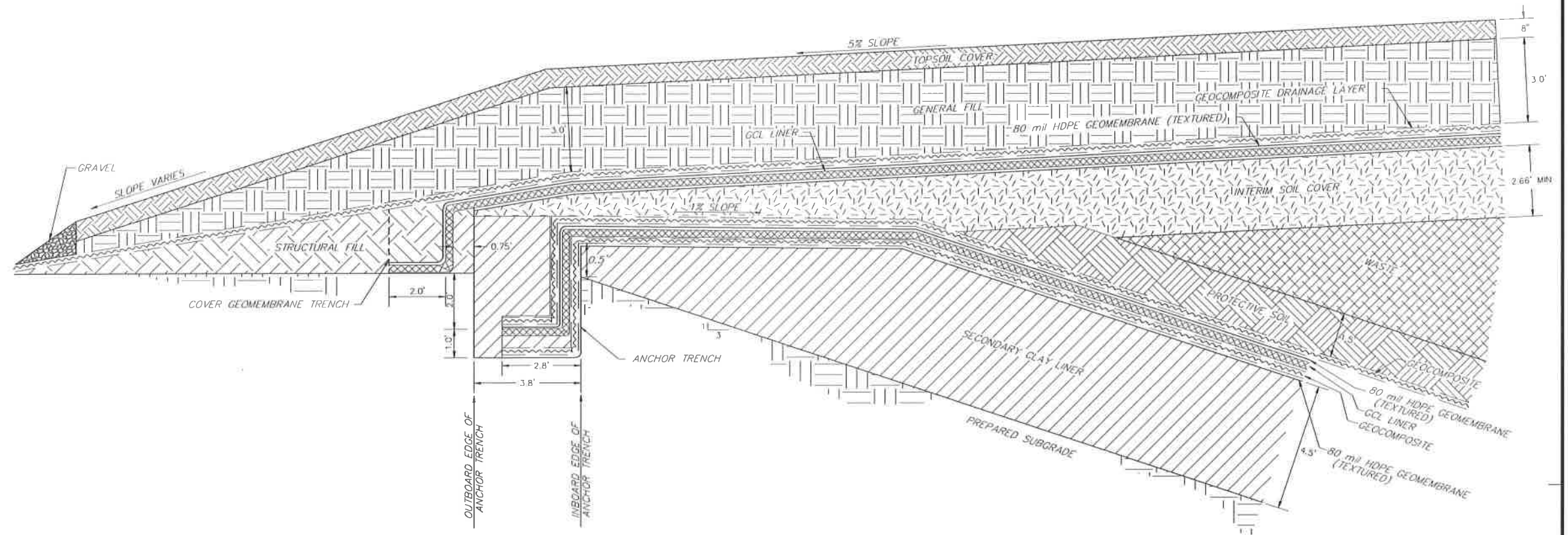
|                                                                                                                                                                                                                                                                                                                                                                    |                               |               |     |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------|-----|------|
| 4                                                                                                                                                                                                                                                                                                                                                                  |                               |               |     |      |
| 3                                                                                                                                                                                                                                                                                                                                                                  |                               |               |     |      |
| 2                                                                                                                                                                                                                                                                                                                                                                  | REVISED TO SHOW NEW OWNERSHIP | 9/04          | WDS | FK   |
| 1                                                                                                                                                                                                                                                                                                                                                                  | DRAFT 1                       | 11/94         | JGN | PCC  |
| 0                                                                                                                                                                                                                                                                                                                                                                  | DRAFT                         | 10/94         | TWS | PCC  |
| Rev. No                                                                                                                                                                                                                                                                                                                                                            | NOTES                         | DATE          | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE<br>DESIGN BY:<br>TEL (TERRAMATRIX)<br>DRAWN BY:<br>JGN (TERRAMATRIX)<br>CHECK BY:<br>PCC (TERRAMATRIX)<br>PROJECT No.<br>603<br>FILE NAME:<br>DEERTAIL - 22B.DWG                                                                                                                                                                           |                               |               |     |      |
| <div> <div> <p>DEER TRAIL, LLC.</p> <p><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</small></p> </div> <div> <p>PROJECT:<br/>CONCEPTUAL SITE DEVELOPMENT PLAN</p> <p>DRAWING TITLE:<br/>TYPICAL - SURFACE WATER DETAILS</p> </div> </div> |                               |               |     |      |
|                                                                                                                                                                                                                                                                                                                                                                    |                               | SHEET: 2 OF 2 |     |      |
|                                                                                                                                                                                                                                                                                                                                                                    |                               | DRAWING No.:  | REV |      |
|                                                                                                                                                                                                                                                                                                                                                                    |                               | 22            | 2   |      |





|                                  |                                                                                                                                                                                                                                                                                     |                   |     |      |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----|------|
| 4                                |                                                                                                                                                                                                                                                                                     |                   |     |      |
| 3                                |                                                                                                                                                                                                                                                                                     |                   |     |      |
| 2                                |                                                                                                                                                                                                                                                                                     |                   |     |      |
| 1                                | REVISED TO SHOW NEW OWNERSHIP                                                                                                                                                                                                                                                       | 9/04              | WDS | FK   |
| 0                                | ISSUED FOR PERMIT MOD. REPORT                                                                                                                                                                                                                                                       | 11/94             | JGN | PCC  |
| Rev No                           | NOTES                                                                                                                                                                                                                                                                               | DATE              | BY  | CHKD |
| SCALE:<br>SEE BAR SCALE          |  <p>DEER TRAIL, LLC.</p> <p>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY INFORMATION CONTAINED HEREON MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.</p> |                   |     |      |
| DESIGN BY:<br>TEL (TERRAMATRIX)  |                                                                                                                                                                                                                                                                                     |                   |     |      |
| DRAWN BY:<br>JGN (TERRAMATRIX)   |                                                                                                                                                                                                                                                                                     |                   |     |      |
| CHECK BY:<br>PCC (TERRAMATRIX)   |                                                                                                                                                                                                                                                                                     |                   |     |      |
| PROJECT No.<br>603               |                                                                                                                                                                                                                                                                                     |                   |     |      |
| FILE NAME:<br>DEERTRAIL - 24.DWG | PROJECT:<br>CONCEPTUAL SITE DEVELOPMENT PLAN<br><br>DRAWING TITLE:<br>TYPICAL LEACHATE<br>PERMIT SYSTEM DETAILS                                                                                                                                                                     |                   |     |      |
|                                  |                                                                                                                                                                                                                                                                                     | SHEET: 1 OF 1     |     |      |
|                                  |                                                                                                                                                                                                                                                                                     | DRAWING No.: REV. |     |      |
|                                  |                                                                                                                                                                                                                                                                                     | 24 1              |     |      |





TYPICAL COVER LINER DETAIL

NOT TO SCALE

NOTES:

- 1.) DETAILS ARE SHOWN TO THE SCALE NOTED EXCEPT FOR THE GEOSYNTHETICS; THESE ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
- 2.) SEE FIGURE 8 FOR SURFACE WATER DRAINAGE.
- 3.) SEE TECHNICAL SPECIFICATIONS, COA PLAN FOR GENERAL FILL, TOPSOIL & VEGETATION SPECIFICATIONS.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              |               |      |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------|------|------|
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                              |               |      |      |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REVISED ANCHOR TRENCH DETAILS                | 5/18/17       | WDS  | FK   |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REVISED TO SHOW NEW OWNERSHIP                | 9/04          | WDS  | FK   |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ACC GCL & ELIMINATE FROM CLAY ON SIDE SLOPES | 11/96         | KLC  | JPP  |
| 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ISSUED FOR PERMIT MOD. REPORT                | 11/94         | JGN  | PGC  |
| Rev. No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | NOTES                                        | DATE          | BY   | CHKD |
| <div> <div> SCALE:<br/>SEE BAR SCALE<br/>DESIGN BY:<br/>TEL (TERRAMATRIX)<br/>DRAWN BY:<br/>JGN (TERRAMATRIX)<br/>CHECK BY:<br/>PGC (TERRAMATRIX)<br/>PROJECT No.<br/>603<br/>FILE NAME:<br/>DEERTRAIL-7.DWG </div> <div> <p>DEER TRAIL, LLC.</p> <p><small>THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER TRAIL, LLC. ANY REPRODUCTION, COPIING, OR USE WITHOUT WRITTEN PERMISSION OF CLEAN HARBORS DEER TRAIL, LLC IS PROHIBITED.</small></p> </div> <div> PROJECT:<br/>CONCEPTUAL SITE DEVELOPMENT PLAN<br/>DRAWING TITLE:<br/>TYPICAL COVER<br/>CROSS-SECTIONS AND DETAILS </div> </div> |                                              |               |      |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              | SHEET: 1 OF 1 |      |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              | DRAWING No.:  | REV. |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                              | 25            | 1    |      |



**COLORADO**  
**Department of Public**  
**Health & Environment**

Dedicated to protecting and improving the health and environment of the people of Colorado

August 21, 2018

Clean Harbors Deer Trail, LLC  
108555 East U.S. Highway 36,  
Deer Trail, Colorado 80105-9611

Attention: Clyde E. Christman, Radiation Safety Officer

Re: License Renewal - Colorado Radioactive Materials License Number CO 1102-01

Enclosed is Radioactive Materials License Number CO 1102-01, Amendment No. 14, which renews this license, and the Decision Analysis. Please review both documents thoroughly.

Please note that the mailing address, use location(s), maximum quantities of radioactive materials, and the radiation safety officer are specific conditions of your license. If you have questions about making changes to your licensed activities, please contact the Radiation Management Unit to discuss the requirements for an amendment of your license.

If you have any questions regarding this letter or your license please contact Shiya Wang at 303-692-3447 or shiya.wang@state.co.us. Additional questions or comments can be directed to me at 303-692-3371 or james.grice@state.co.us.

James H Grice III  
Unit Leader  
Radioactive Materials Unit  
Hazardous Materials and Waste Management Division

Enclosure (2): CO 1102-01, Amendment No. 14  
Decision Analysis, August 2018

CC: John (Jack) Kehoe, CHDT  
Jen Rutter, Adams County  
Shiya Wang, CDPHE



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The amount of taxes due on this page are based on last year's property value assessments.

For current year values and for a full breakdown of the values visit the [ADAMS COUNTY Assessor's site.](#)

## Summary

Account Id P0006433  
Parcel Number  
Owners CLEAN HARBORS  
Address PO BOX 92108  
AUSTIN, TX 78709-2108  
Situs Address 108555 HIGHWAY 36  
Legal

## Inquiry

As Of  

Payment Type ☐ First  
☒ Second

Taxes Due \$13,859.14

Total Due \$13,859.14

## Value

| Area Id                   | Authority Type | Mill Levy          |
|---------------------------|----------------|--------------------|
| 260 - 260                 | School         | 36.6790000         |
|                           | Non-School     | 33.1980000         |
|                           | <b>Actual</b>  | <b>Assessed</b>    |
| Ind Eq/Furn/Mch - 3410    | 1,469,164      | 396,670            |
| <b>Taxes (Non-School)</b> |                | \$13,168.66        |
|                           | <b>Actual</b>  | <b>Assessed</b>    |
| Ind Eq/Furn/Mch - 3410    | 1,469,164      | 396,674            |
| <b>Taxes (School)</b>     |                | \$14,549.62        |
| <hr/>                     |                |                    |
| <b>Total Billed</b>       |                | <b>\$27,718.28</b> |