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UTAH DIVISION OF
SOLID & HAZARDOUS WASTE

2009.03393

**LEHI CITY
SAND PIT LANDFILL**

PERMIT APPLICATION

**SEPTEMBER 2008
UPDATED OCTOBER 2009**

**Civil Science, Inc.
3160 W. Clubhouse Drive
Lehi, UT 84043
(801) 768-7200**

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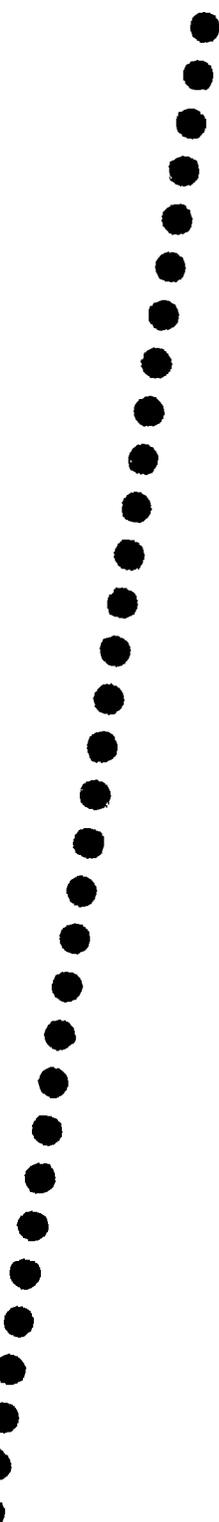
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SECTION 1

PART I - GENERAL DATA

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF SOLID AND HAZARDOUS WASTE

Utah Class IV and VI Landfill Permit Application Form



Utah Class IV and VI Landfill Permit Application Form
Utah Division of Solid and Hazardous Waste
Solid Waste Management Program

Mailing Address
P.O. Box 144880
Salt Lake City, Utah 84114-4880

Office Location
288 North 1460 West
Salt Lake City, Utah 84116

Phone (801) 538-6170
Fax (801) 538-6715
www.deq.utah.gov

APPLICATION FOR A PERMIT TO OPERATE A CLASS IV OR VI LANDFILL

Please read the instructions that are found in the document, INSTRUCTIONS FOR APPLICATION FOR A PERMIT TO OPERATE A CLASS IV or VI LANDFILL. This application form shall be used for all Class IV or VI solid waste disposal facility permits and modifications. Part I, GENERAL INFORMATION, must accompany a permit application. Part II, APPLICATION CHECKLIST, is provided to assist applicants and, if included with the application, will assist review. **Please note** the version date of this form found on the lower right of the page; if you have received this form more than six months after this date it is recommended you contact our office at (801) 538-6170 to determine if this form is still current. When completed, please return this form and support documents, forms, drawings, and maps to:

Dennis R. Downs, Director
Division of Solid and Hazardous Waste
Utah Department of Environmental Quality
PO Box 144880
Salt Lake City, Utah 84114-4880

(Note: When the application is determined to be complete, submittal of two copies of the complete application will be required.)

Utah Class IV and VI Landfill Permit Application Form

Part I: General Information						APPLICANT: PLEASE COMPLETE ALL SECTIONS.					
I. Landfill Type		<input type="checkbox"/> Class IVa		<input checked="" type="checkbox"/> Class IVb		II. Application Type		<input type="checkbox"/> New Application		<input type="checkbox"/> Facility Expansion Modification	
		<input type="checkbox"/> Class VI						<input checked="" type="checkbox"/> Renewal Application			
For Renewal Applications, Facility Expansion Applications and Modifications Enter Current Permit Number										9816	
III. Facility Name and Location											
Legal Name of Facility Lehi City Class IV(b) Landfill											
Site Address (street or directions to site) 2375 North 300 West								County Utah			
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-7100			
Township 5S		Range 1E		Section(s) Section 5		Quarter/Quarter Section NE 1/4		Quarter Section NE 1/4			
Main Gate Latitude degrees 40 minutes 25 second 5				Longitude degrees 111 minutes 51 seconds 12							
IV. Facility Owner(s) Information											
Legal Name of Facility Owner Lehi City Corporation											
Address (mailing) 153 North 100 East											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-7100			
V. Facility Operator(s) Information											
Legal Name of Facility Operator Wade Allred											
Address (mailing) 560 West Glen Carter Drive											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-4833			
VI. Property Owner(s) Information											
Legal Name of Property Owner Lehi City Corporation											
Address (mailing) 153 North 100 East											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-7100			
VII. Contact Information											
Owner Contact Jim Hewitson						Title Public Works Director					
Address (mailing) 560 West Glen Carter Drive											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-9167			
Email Address jhewitson@lehi-ut.gov						Alternative Telephone (cell or other)					
Operator Contact Wade Allred						Title Streets Superintendant					
Address (mailing) 439 West 300 North											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-7102			
Email Address wallred@lehi-ut.gov						Alternative Telephone (cell or other)					
Property Owner Contact Jim Hewitson						Title City Recorder					
Address (mailing) 560 West Glen Carter Drive											
City Lehi				State Utah		Zip Code 84043		Telephone (801)-768-7100			
Email Address						Alternative Telephone (cell or other)					

Utah Class IV and VI Landfill Permit Application Form

Part I General Information (Continued)

VIII. Waste Types (check all that apply)

Landfill will accept all wastes allowed in Class IV or VI landfills **Or** landfill will accept only the following wastes

Waste Type	Combined Disposal Unit	Monofill Unit
<input type="checkbox"/> Construction & Demolition	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Tires	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Yard Waste	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Animals	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Contaminated Soil	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other _____	<input type="checkbox"/>	<input type="checkbox"/>

Note: Disposal of dead animals must be approved by the Executive Secretary

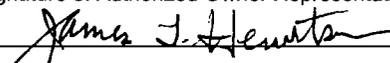
IX. Facility Area

Facility Area.....	8.3	acres
Disposal Area.....	8.3	acres
Design Capacity		
Years.....	22	Remaining
Cubic Yards.....	64,400	
Tons.....	64,400	

X. Fee and Application Documents

Indicate Documents Attached To This Application	<input type="checkbox"/> Application Fee: Amount \$	Class VI Special Requirements
<input checked="" type="checkbox"/> Facility Map or Maps	<input checked="" type="checkbox"/> Facility Legal Description	<input checked="" type="checkbox"/> Plan of Operation
<input type="checkbox"/> Ground Water Report	<input checked="" type="checkbox"/> Closure Design	<input checked="" type="checkbox"/> Waste Description
	<input checked="" type="checkbox"/> Cost Estimates	<input checked="" type="checkbox"/> Financial Assurance
		<input type="checkbox"/> Documents required by UCA 19-6-108(9) and (10)

I HEREBY CERTIFY THAT THIS INFORMATION AND ALL ATTACHED PAGES ARE CORRECT AND COMPLETE.

Signature of Authorized Owner Representative	Title	Date
 Tim Hewitson	Public Works Director	10-29-09
Name typed or printed	Address	
	560 West Glen Carter Drive, Lehi, UT 84043	
Signature of Authorized Land Owner Representative (if applicable)	Title	Date
Name typed or printed	Address	
Signature of Authorized Operator Representative (if applicable)	Title	Date
Name typed or printed	Address	

Utah Class IV and VI Landfill Permit Application Checklist

Important Note: The following checklist is for the permit application and addresses only the requirements of the Division of Solid and Hazardous Waste. Other federal, state, or local agencies may have requirements that the facility must meet. The applicant is responsible to be informed of, and meet, any applicable requirements. Examples of these requirements may include obtaining a conditional use permit, a business license, or a storm water permit. The applicant is reminded that obtaining a permit under the *Solid Waste Permitting and Management Rules* does not exempt the facility from these other requirements.

An application for a permit to construct and operate a landfill is the documentation that the landfill will be located, designed, constructed, and operated to meet the requirements of Rules R315-305 of the *Utah Solid Waste Permitting and Management Rules* and the *Utah Solid and Hazardous Waste Act* (UCA 19-6-101 through 123). The application should be written to be understandable by regulatory agencies, landfill operators, and the general public. The application should also be written so that the landfill operator, after reading it, will be able to operate the landfill according to the requirements with a minimum of additional training.

Copies of the *Solid Waste Permitting and Management Rules*, the *Utah Solid and Hazardous Waste Act*, along with many other useful guidance documents can be obtained by contacting the Division of Solid and Hazardous Waste at 801-538-6170. Most of these documents are available on the Division's web page at www.hazardouswaste.utah.gov. Guidance documents can be found at the solid waste section portion of the web page.

When the application is determined to be complete, the original complete application and one copy of the complete application are required along with an electronic copy.

Part II Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Ia. General Information - All Facilities	
Completed Part I General information form above	Completed Above
General description of the facility (R315-310-3(1)(b))	Section 1-6
Legal description of property (R315-310-3(1)(c))	Section 1-5
Proof of ownership, lease agreement, or other mechanism (R315-310-3(1)(c))	Appendix B
If the permit application is for a Class IV landfill, a demonstration that the landfill is not a commercial facility	
Waste type and anticipated daily volume (R315-310-3(1)(d))	Section 2
Intended schedule of construction (R315-302-2(2)(a))	Section 2-1
Ib. General Information - New Or Laterally Expanding Facilities	
Documentation that the Historical Survey requirements of R315-302-1(2)(f) have been met (R315-305-4(1)(b)(vi))	N/A
Name and address of all property owners within 1000 feet of the facility boundary (R315-310-3(2)(i))	N/A
Documentation that a notice of intent to apply for a permit has been sent to all property owners listed above (R315-310-3(2)(ii))	N/A

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Name of the local government with jurisdiction over the facility site (R315-310-3(2)(iii))	N/A
1c. Location Standards - New Or Laterally Expanding Class IVa Landfills (R315-305-4(1)(a))	
Land use compatibility	N/A
Maps showing the existing land use, topography, residences, parks, monuments, recreation areas or wilderness areas within 1000 feet of the site boundary	N/A
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	N/A
Maps showing the location of dwellings, residential areas, other structures, and historic structures.	N/A
List of airports within five miles of facility and distance to each	N/A
Geology	N/A
Geologic maps showing significant geologic features, faults, and unstable areas	N/A
Maps showing site soils	N/A
Surface water	N/A
Magnitude of 24 hour 25 year and 100 year storm events	N/A
Average annual rainfall	N/A
Maximum elevation of flood waters proximate to the facility	N/A
Maximum elevation of flood water from 100 year flood for waters proximate to the facility	N/A
Wetlands	N/A
Ground water	N/A
1d. Location Standards - New Or Laterally Expanding Class IVb and VI Landfills	
Floodplains as specified in R315-302-1(2)(c)(ii) (R315-305-4(1)(b)(i))	N/A
Wetlands as specified in R315-302-1(2)(d) (R315-305-4(1)(b)(ii))	N/A
The landfill is located so that the lowest level of waste is at least ten feet above the historical high level of ground water (R315-305-4(1)(b)(iii))	N/A
Geology as specified in R315-302-1(2)(b)(i) and (iv) (R315-305-4(1)(b)(iv))	N/A
1e. Additional Location Standards - New Or Laterally Expanding Class IVb and VI Landfills Or Landfills Requesting That Dead Animals Be Added As A New Waste Stream (R315-305-4(1)(a)(v))	
Maps showing the existing land use, topography, residences, parks, monuments, recreation areas or wilderness areas within 1000 feet of the site boundary	N/A

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	N/A
Maps showing the location of dwellings, residential areas, other structures, and historic structures.	N/A
List of airports within five miles of facility and distance to each	N/A
If. Plan Of Operations - All Facilities (R315-310-3(1)(e) and R315-302-2(2))	
Description of on-site waste handling procedures and an example of the form that will be used to record the weights or volumes of waste received (R315-302-2(2)(b) And R315-310-3(1)(f))	Section 2-3 Appendix D
Schedule for conducting inspections and monitoring, and examples of the forms that will be used to record the results of the inspections and monitoring (R315-302-2(2)(c), R315-302-2(5)(a), and R315-310-3(1)(g))	Section 2-5 Section 2-10 Appendix D
Contingency plans in the event of a fire or explosion (R315-302-2(2)(d))	2-10, 2-11
Plan to control fugitive dust generated from roads, construction, general operations, and covering the waste (R315-302-2(2)(g))	Section 2-9
Plan for letter control and collection (R315-302-2(2)(h))	Section 2-9
Procedures for excluding the receipt of prohibited hazardous or PCB containing waste (R315-302-2(2)(j))	Section 2-5
Procedures for controlling disease vectors (R315-302-2(2)(k))	Section 2-9
A plan for alternative waste handling (R315-302-2(2)(l))	2-3, 2-4, 2-5
A general training and safety plan for site operations (R315-302-2(2)(o))	Section 2-5
Any recycling programs planned at the facility (R315-303-4(6))	Section 2-5
Any other site specific information pertaining to the plan of operation required by the Executive Secretary (R315-302-2(2)(o))	Section 2 Various locations
Ig. Additional Plan Of Operation Requirements - Class IVa Facilities	
Corrective action programs to be initiated if ground water is contaminated (R315-302-2(2)(e))	N/A
II Facility Technical Information	
Ila. Maps - All Facilities	
Topographic map drawn to the required scale with contours showing the boundaries of the landfill unit, ground water monitoring well locations, gas monitoring points, and the borrow and fill areas (R315-310-4(2)(a)(i))	Appendix A
Most recent U.S. Geological Survey topographic map, 7-1/2 minute series, showing the waste facility boundary; the property boundary; surface drainage channels; any existing utilities and structures within one-fourth mile of the site; and the direction of the prevailing winds (R315-310-4(2)(a)(ii))	Section 3-1 Appendix A Figures 3 & 4

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
IIb. Geohydrological Assessment - Class IVa Landfills (R315-310-4(2)(b))	
Local and regional geology and hydrology including faults, unstable slopes and subsidence areas on site (R315-310-4(2)(b)(i))	N/A
Evaluation of bedrock and soil types and properties including permeability rates (R315-310-4(2)(b)(ii))	N/A
Depth to ground water (R315-310-4(2)(b)(iii))	N/A
Quantity, location, and construction of any private or public wells on-site or within 2,000 feet of the facility boundary (R315-310-4(2)(b)(v))	N/A
Tabulation of all water rights for ground water and surface water on-site and within 2,000 feet of the facility boundary (R315-310-4(2)(b)(vi))	N/A
Identification and description of all surface waters on-site and within one mile of the facility boundary (R315-310-4(2)(b)(vii))	N/A
For an existing facility, identification of impacts upon the ground water and surface water from leachate discharges (R315-310-4(2)(b)(viii))	N/A
Calculation of site water balance (R315-310-4(2)(b)(ix))	N/A
IIc. Engineering Report, Plans, Specifications, And Calculations - All Facilities	
Unit design to include cover design; fill methods; and elevation of final cover including plans and drawings signed and sealed by a professional engineer registered in the State of Utah, when required (R315-310-3(1)(b) and R315-310-4(2)(c)(iii))	Class IV(b) Not Required
Design and location of run-on and run-off control systems (R315-310-4(2)(c)(viii))	3-1, Fig. 6 & 7
Anticipated facility life and the basis for calculating the facility's life (R315-310-4(2)(c)(ii))	Section 4-3
Engineering reports required to meet the location standards of R315-305-4 including documentation of any demonstration or exemption made for any location standard (R315-310-4(2)(c)(i))	Does not apply Existing Facility
Identification of borrow sources for final cover (R315-310-4(2)(c)(iv))	Does not apply R315-310-4(2)(c)
Run-off collection, treatment, and disposal and documentation to show that any treatment system is being or has been reviewed by the Division of Water Quality (R315-310-4(2)(c)(v) and R315-310-3(1)(i))	Does not apply
IIId. Closure Requirements - All Facilities	
CLOSURE PLAN (R315-310-3(1)(h))	Section 4
Closure schedule (R315-310-4(2)(d)(i))	Section 4-3
Design of final cover (R315-310-4(2)(c)(iii))	Not Required

Utah Class IV and VI Landfill Permit Application Checklist

I. Facility General Information	
Description of Item	Location In Document
Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii))	Section 4-3
Final inspection by regulatory agencies (R315-310-4(2)(d)(iii))	Section 4-3
II. Post-Closure Requirements - All Facilities	
POST-CLOSURE CARE PLAN (R315-310-3(1)(h))	Section 5
Changes to record of title, land use, and zoning restrictions (R315-310-4(2)(e)(ii))	3-1, Fig 9
Maintenance activities to maintain cover and run-on/run-off control systems (R315-310-4(2)(e)(iii))	Section 4-1 Section 4-2
List the name, address, and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(vi))	Section 5-1
III. Financial Assurance - All Facilities (R315-310-3(1)(j))	
Identification of closure costs including cost calculations (R315-310-4(2)(d)(iv))	Section 4-4
Identification of post-closure care costs including cost calculations (R315-310-4(2)(e)(iv))	Section 5-3
Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date that the mechanism will become effective (R315-309-1(1))	Section 6-1

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PART II - GENERAL REPORT

FACILITY INFORMATION

The Lehi Class IV(b) Landfill is an existing solid waste disposal facility located in Lehi City, Utah. The landfill is in a semi inactive state servicing only the needs of the city's public works operations. The facility accepts construction demolition waste, yard waste, and inert waste for disposal. This Application for a Permit to Operate a Class IV(b) Disposal Facility at the Lehi landfill has been prepared in accordance with applicable State of Utah solid waste regulations. This section will provide information regarding ownership, facility description and location, land use and zoning, waste stream characteristics, and facility administration.

Figures depicting site facilities are enclosed in Appendix A of this report.

Owner and Operator Information

The property on which the Lehi Landfill is located is owned by Lehi City Corporation. Lehi City has continuously operated the facility since prior to 1960. When the City began contracting solid waste removal in May, 1970, the landfill was placed on semi inactive status accepting only waste from city construction and demolition operations. A copy of the ownership deed is included in Appendix B of this report. The name, address and telephone number of the contact person at Lehi City regarding site ownership is:

Connie Ashton, City Recorder
153 North 100 East
Lehi, Utah 84043
(801) 768-7100

Operations of the landfill are performed under the supervision of Mr. Wade Allred, Superintendent of the Lehi City Streets Department. Mr. Allred can be reached at the Lehi City Public Works Office:

Wade Allred, Streets Department
439 West 300 North
Lehi, Utah 84043
(801) 768-7102
Email: wallred@lehi-ut.gov

Site Location

The Lehi City Class IV(b) Landfill is located approximately one mile north of Interstate 15 and State Street on city street 300 West. The facility is located on 8.26 acres of land described in the public land survey as Beginning 994.56 feet south and 1237.51 feet west of the northeast corner of Section 5, T. 5 S., R. 1 E., S.L.B. & M., and running thence N. 62°42'28" E. 696.87 feet; thence N. 90°00'00" E. 280.00 feet; thence S. 00°00'00" E. 328.52 feet; thence S. 67°32'33" W. 828.23 feet; thence S. 89°59'26" W. 133.88 feet; thence N. 00°00'06" W. 325.43 feet to the point of beginning. Entrance to the site is approximately located at latitude 40°25' N. and longitude 111°51' W. The location of Lehi City in relation to state and county borders is presented in Figure 1. A Site Vicinity Map is included in Appendix A. Figure 2, Site Location Map, delineates the facility location with respect to Lehi City.

Pursuant to the provisions set forth in Section R315-305-2 of the Utah Administrative Code (UAC), a Class IV(b) landfill facility is not subject to the general location standards established for landfills as provided in Section R315-302-1 of the UAC.

Land Use and Zoning

The landfill site is within Lehi City zoning boundaries designated as C (commercial) and A-1 (agricultural). The site has been in use as a landfill since before the current zoning was established and, therefore, this use may continue under Chapter 14 of the Lehi City Development Code - "Non-Conforming Uses, Buildings and Structures." Surrounding land use is primarily for agricultural to the south, light industrial to the north and low density residential to the east and west. Zoning boundaries for Lehi City are delineated in Figure 10, Lehi City Planning Zone Map, enclosed in Appendix C.

Facility Description

The Lehi City Class IV(b) Landfill accepts construction and demolition waste from Lehi City projects for disposal. It also accepts wood and yard wastes from city operations and city related projects. Existing site features (including topography) are identified on the enclosed Figure 3 (Appendix A), Existing Facilities Plan. Discussion related to facility waste characteristics and disposal practices are presented in the Plan of Operations.

Waste placement at the landfill is intermittent. Waste is usually placed in the active area by city trucks. Cover material (which will be stockpiled) from on site will be placed as needed. As most waste is "heavy" and not organic, the need for intermediate or daily cover will be minimal.

Waste Stream Characteristics

Lehi City Class IV(b) Landfill provides waste disposal capacity for city operations and city related construction projects. Lehi City will limit waste disposal at the Landfill to

approximately 250 cubic yards per month on an annual average over the remaining life of the landfill.

The Lehi City Landfill will remain a Class IV(b) facility and will be operated in compliance with the regulations for Class IV(b) waste landfill facilities as described in the Plan of Operations. Waste accepted for disposal at the site is comprised solely of inert waste, construction and demolition debris, wood and yard waste that meet the requirements of UAC Sections 26-32a-103.5 and R315-320-3 (a). Excluded wastes include, but are not limited to, scrap metal, household and commercial wastes, industrial wastes, liquids, sewage sludge, hazardous materials, contaminated soils, grease and waste oils.

Incoming waste loads will be logged for type of waste and approximate volume.

County Recorder

In accordance with UAC R315-302-2(6), the location and nature of the landfill site will be recorded as part of the record of title with the County Recorder no later than 60 days after certification of closure. If required by local authorities, records may also include information regarding the dates of landfill operation, the amount of solid waste disposed at the site and the location of disposal areas.



SECTION 2

PLAN OF OPERATION

Lehi City is submitting the following Plan of Operation for a Class IV(b) solid waste disposal facility at the site of the Lehi City Landfill as required by the general provisions for solid waste disposal defined in UAC R315-310-3 and R315-302-2 (2). This Plan of Operation presents the general procedures for the handling of various types of wastes which are accepted (or prohibited) for disposal at the facility, the intended schedule of landfill construction, inspections and maintenance, fire control and contingency plans in the event of a fire or explosion, litter prevention, procedures for controlling disease vectors, general training and safety plan for site personnel, and other information pertaining to the operation and maintenance of the facility. Information related to closure construction, post-closure maintenance care and financial assurance is presented in Sections 4, 5, and 6, respectively, of this permit application.

Construction Schedule

The Lehi City Landfill utilizes the area fill method of solid waste disposal. Waste placement at the landfill currently takes place southwest of the center of the site. Waste accepted for disposal is compacted semi-annually, resulting in a fill that progresses in a northern and eastern direction. Soil cover is obtained on-site or from construction activities within the city where excess soil is generated. Existing site conditions are presented on Figure 3, Existing Facilities Plan.

Once the current lift reaches its northeastern limit, waste placement will commence in the northerly end of the hollow now used as a practice range by the Lehi City Police Department. Fill will then progress to the south with a 25-30 foot high lift. Soil cover will be obtained on

site. The proposed final grades are presented on Figure 4, Future Topography (Appendix A). The access road and drainage facilities will be constructed during the operational life of the facility as the appropriate grades are reached during fill progression.

Given the intermittent nature of the waste disposal rate, the remaining site life is difficult to calculate. However, there remain approximately 64,400 cubic yards of storage volume left in the landfill.

Hours of Operation

The Lehi City Landfill is opened only when the city transports its disposal wastes to the site. At all other times the facility is closed and the gate locked.

Facilities Signing

Pursuant to UAC R315-303-4(5), Lehi City shall erect a sign at the facility entrance which identifies the name of the facility, the hours during which the facility is open for public use, unacceptable materials, and an emergency telephone number.

Site Personnel and Equipment

UAC R315-305-5(2) requires that at least one person be on site during hours of operation and shall prevent unauthorized disposal during off-hours by controlling entry. Since deposition of wastes in the Lehi Landfill will be intermittent, there will be an authorized city employee during each waste deposit. At all other times, the landfill will be fenced, gated and locked.

The Lehi City Streets Superintendent will act as operations manager and will periodically visit the site and will be available for consultation during operations at the landfill. The Streets

Superintendent is Mr. Wade Allred. In the event of an emergency, Mr. Allred should be notified.

He can be reached at the following address and telephone number:

439 West 300 North
Lehi, Utah 84043
(801) 768-7102

If Mr. Allred is unavailable or if a situation requires further attention, the Lehi City Police or Fire Department should be notified by calling 911.

There is currently no equipment assigned to the Lehi City Landfill. Contouring and grooming operations are completed either by leasing a track dozer for city employees to operate or by contracting with an independent company for these services.

Access Control

Lehi City shall provide fencing at the unit boundary (property boundary). There are currently two lockable gates at the entry points to the landfill. These gates will remain locked during all non-operating hours. An attendant will be on duty at the landfill during all operating hours. A perimeter fence has been installed along the full boundary of the landfill site as shown on the enclosed existing facilities plan (Figure 3).

Waste Handling Procedures

Pursuant to UAC R315-302-2 (2), the Plan of Operation provides for a description of on-site solid waste handling procedures during the active life of the facility. The waste accepted at the Lehi City Landfill is comprised of inert waste, construction and demolition debris and yard waste. Excluded wastes include, but are not limited to, industrial wastes, liquids, sewage sludge,

hazardous materials, household and commercial wastes, contaminated soils, grease and waste oils.

The quantity of incoming waste is visually estimated and recorded by city personnel stationed at the facility. Daily logs of all incoming waste are maintained and will be entered into the operating record.

Construction and Demolition Debris

Construction and demolition (C&D) debris must be non-hazardous in order to be accepted; C&D debris is deposited at the active disposal face and periodically compacted (if possible), separated and covered with soil to prevent uncontrolled fires, rodent or vector harborage and differential settlement.

Yard Waste

Yard waste is a general term used to refer to vegetative wastes which may include cuttings from trees and brush, grass clippings, straw and hay, and waste from seasonal or special events. Grass clippings, leaves and similar wastes are disposed of with C&D debris. Open burning of stockpiled tree limbs and woody yard waste will take place one time per year in accordance with Air Quality Rules Sub Section R307-1-2.4.4 (B)(5). Prior to any burning, Lehi City will obtain a permit from its local fire department.

Prohibited Waste Exclusion Program

Wastes which are prohibited from disposal at the Lehi City Landfill include, but are not limited to, industrial wastes, liquids, sewage sludge, hazardous materials, household and commercial wastes, contaminated soils, grease trappings, waste oils, and dead animals. Pursuant

to UAC R315-303-4 (7), an owner or operator of a landfill shall not knowingly dispose, treat, store or otherwise handle hazardous waste or waste containing PCBs (polychlorinated biphenyl).

An owner or operator of a landfill shall include and implement as part of the plan of operations a plan that will inspect loads or take other steps as approved by the Executive Secretary that will prevent the disposal of hazardous waste or waste containing PCBs. These procedures include random load inspections, training records of facility personnel, handling procedures for hazardous and PCB wastes and notification of the solid waste management authority.

Records of Inspection

Records of all load inspections will be maintained in the facility operating records and made available to UDEQ on request. The "Record of Random Inspection" form, contained in Appendix D, will be used to record information obtained during each inspection. Inspection records will include, but are not limited to, the date and time waste loads were received and inspected, source or generator of the wastes, vehicle and driver identification, observations made by the inspector, description of rejected loads, and rationale for rejection.

Training of Facility Personnel

All facility personnel will be trained in the identification of containers and labels typically used for hazardous and PCB wastes. Training for hazardous material screening procedures will address hazardous waste handling, safety precautions, and record keeping requirements.

Documentation of personnel training will be included with the operation records for the facility.

Procedures for Handling Hazardous and PCB Waste

If primary load inspections reveal the presence of regulated quantities of hazardous or PCB wastes on incoming haul vehicles, the landfill attendant will refuse to accept the load and UDEQ will be notified. If regulated quantities of hazardous or PCB wastes are identified during secondary load checks, random inspections, or at any other time, the Lehi City Fire Department will be called. The Lehi City Fire Department, acting as the first responder for hazardous materials, will implement their Hazardous Materials Response Plan. Any subsequent activities related to the waste load, including transportation, storage, and containment will be managed by the Lehi City Fire Department. Landfill personnel will participate in these activities only as directed by the fire department. Following notification, it will be the responsibility of the fire department to ensure that the hazardous materials are handled, stored, or transported in accordance with applicable federal and state regulations.

In the event that PCB wastes are identified on-site, the Lehi City Fire Department or personnel from the Utah County Solid Waste Transfer Station in Lindon, Utah, will temporarily store and ensure disposal of the waste as required by 40 CFR Part 761, while completing the following activities:

- an EPA PCB identification number will be obtained;
- the PCB waste will be properly stored until transport;
- the containers will be properly marked with the words "Caution: Contains PCBs"; and,
- the container will be manifested for shipment to a permitted disposal facility.

If waste is transported off-site by a hazardous waste disposal company, a provisional or one-time U.S. EPA identification number will be obtained, the waste will be packaged according to applicable Department of Transportation regulations, and the container will be properly transported and manifested to its point of destination. Proper chain of custody and manifest

documents will be obtained from the hazardous materials disposal facility in order to maintain compliance with all applicable federal and state regulations.

Notification of the Solid Waste Management Authority

The landfill operator will notify UDEQ within 24 hours if suspected hazardous materials or PCB wastes are discovered at the landfill. A record of notification will be submitted to UDEQ which identifies the date and time of discovery, type of material (if possible without analytical testing), probable hauler, an estimate of the quantity of material, and actions proposed for the removal of the material from the area of discovery. The record of notification will be entered into the operating record maintained at the facility.

Environmental Monitoring Systems

UAC R315-303-4 and R315-305-2 state that owners or operators of a Class IV(b) solid waste landfill must design, construct, and maintain run-on and run-off structures to control the peak discharge from a 24-hour, 25-year storm event. Drainage areas and run-off patterns at the site through final closure, details of the structures used for run-on and run-off control, and engineering design calculations used to determine flow volume and appropriate sizes of drainage structures are contained in the Engineering Report for the Lehi Landfill. The report is included in this *Application for a Permit to Operate* the site in Section 3, and is maintained in the operating record for the landfill.

Construction of the surface water control devices described in the Engineering Report, in conjunction with dry waste management practices, and compaction of solid wastes, and the application of cover, increases the protection of waters of the State of Utah from a discharge of

pollutants or contaminants during landfill operation. The surface water control devices and operational practices will be modified if it is determined that discharges from the site contain pollutants or contaminants which may degrade waters of the State of Utah.

Nuisance Control

The Landfill will be operated in a manner which does not create odors, unsightliness, and other nuisances. The working face will be kept as narrow as possible while remaining consistent with safe and efficient operation. Bulky waste material will not be used for the final surface of side slopes.

Pursuant to UAC R315-303-4(4), a minimum of six inches of compacted earthen material will be used to cover the combustible solid waste at a frequency which is sufficient to prevent the uncontrolled migration of fires. The integrity of cover will be maintained until filling is resumed or final cover is constructed. Routine visual inspections of the cover material will be made, and all erosion surfaces, cracks, and depressions will be repaired as soon as is practicable.

Intermediate cover will be uniformly graded to promote drainage of surface water; all slopes will have a grade of not less than three percent.

Vector Control Program

Pursuant to UAC R315-303-5(4), appropriate control and prevention of disease vectors at the Lehi Landfill will be used for the protection of public health and safety. Control and prevention are accomplished using techniques appropriate for the protection of public health and safety and the environment. Compaction and grading of waste at the active face prevents vector harborage in the waste mass. This waste management practice assures minimum exposure of

wastes to potential disease vectors by reducing available entry space, food sources, and nesting locations. Rodent populations may be controlled by the use of poisons, smoke devices, or sonar techniques, if necessary.

Insect breeding areas, which may develop in areas of stagnant water or putrescible wastes, will be addressed as discovered. The presence of standing water at the facility will be minimized through the uniform grading of fill surfaces and the installation of a drainage control system. The accumulation of fluids in the waste mass will be minimized by the restriction of liquid wastes accepted at the landfill. If insect infestations occur in spite of these measures, approved insecticidal sprays or other methods may be employed.

Erosion and Dust Control

Completed portions of the landfill will be configured and maintained as described in the closure and post-closure plans contained in Sections 4 and 5 of this *Application for a Permit to Operate* the site. Construction of a graded and compacted final cover, and subsequent revegetation, will help prevent erosion, surface deterioration, and fugitive dust generation. A water truck will be available on an as-needed basis to apply water to site roads and disturbed surfaces on the landfill property to control fugitive dust emissions.

Litter Control Program

Litter control measures will be implemented at the Lehi Landfill in order to prevent scattering of lightweight debris. Litter collection will be performed on an as-needed basis by Lehi City Streets Department personnel or contracted day-laborers.

Scavenging/Salvaging

Scavenging and salvaging at the Lehi Landfill are prohibited in all areas of the facility. This provision is enforced through the use of access control measures, perimeter fencing, and employee diligence.

Site Inspections

The landfill attendant will conduct periodic site inspections for litter, scattered paper, and other lightweight debris. All recovered waste is returned to the active fill area for proper disposal. Quarterly site inspections will be performed and will include a visual inspection of drainage control systems, fill surfaces, perimeter fencing, and site equipment and structures. Quarterly inspection reports will be entered into the operating record for the facility. A copy of the quarterly inspection form is included in Appendix D.

Contingency Plans

UAC R315-302-2(d,f,j) require the development of contingency plans to be implemented in the event of an emergency at the site. These plans must include an organized, coordinated, and technically and financially feasible course of action for response to fire or explosion, releases of toxic or hazardous material, landfill gas, failure of run-off containment system, and equipment breakdown. In addition, an alternative waste handling or disposal system must be developed in

On-site personnel are prepared to provide immediate fire suppression in the event of a waste or structure fire. Fire extinguishers are mounted on all site equipment and City vehicles. In the event of a fire at the active face or within the waste mass, stockpiled cover soils will be used to cover the burning or smoldering area. Water will not be applied to the active face unless absolutely necessary. In the event of an uncontrolled fire or a fire that cannot be managed by on-site personnel, the Lehi City Fire Department will be contacted. The Fire Department is located in Lehi, approximately two miles from the landfill; estimated response time is approximately 10 minutes. On arrival at the facility, the Fire Department will assume responsibility for continued fire abatement activities.

Environmental Releases

The Lehi City Fire Department will be called immediately and will act as the first response team in the event of hazardous or toxic material discharges at the Lehi Landfill. On arrival at the facility, the fire department will assume responsibility for subsequent activities related to the safe handling of the discharged material. Landfill personnel will not handle hazardous material spills, except under the direct supervision of the Fire Department or the emergency management team. The landfill attendant will ensure the safe evacuation of all employees and the public. Advanced planning of emergency exit routes is the responsibility of the operator. All employees will be regularly informed of established primary and secondary exit routes.

Facility Shutdown

In the unlikely event of an emergency which requires the short term closure of the landfill, waste handling will be suspended until the emergency situation is resolved.

Personnel Training

Personnel will receive training in landfill operations. Training of landfill personnel will be a continuing process including landfill operations, basic first aid, and safety training. Basic safety and first aid training will be conducted on an annual basis.

Record Keeping

The operation of the Lehi Landfill is considered to be approved by UDEQ on issuance of a permit to operate. The following information will be recorded and maintained in the operating record for the Lehi Landfill, at the Lehi City Streets Department, and the Lehi City offices:

- records of inspections, training of personnel, and procedures for notifications to UDEQ relating to hazardous waste required by UAC R315-303-5;
- plans for closure and post-closure and any monitoring, testing or analytical data required by UAC R315-302-3 and R315-302-2(c); and,
- documentation of cost estimates and financial assurance required by UAC R-315-309-2(2).

Because leachate collection and ground water monitoring systems are neither installed nor planned for installation at the Lehi Landfill, documentation related to these systems will not be kept. The records of documentation related to the plans for closure and post-closure are included in this *Application for a Permit to Operate*, and therefore have been included in the operating record. The records of inspections, personnel training, and hazardous waste

notifications, as well as any monitoring required during closure or post-closure activities, will be entered into the operating record as the information is developed. UDEQ will be notified when new documentation has been placed in or added to the operating record. All information will be made available to UDEQ upon request. Reports of the quantity of solid waste received at the Lehi Landfill will be submitted to UDEQ on an annual basis on forms supplied by UDEQ.



SECTION 3

TECHNICAL REPORT

ENGINEERING REPORT

This engineering report has been prepared in accordance with R315-310-4(2)(c) of the Utah Administrative Code (UAC).

Maps, Drawings, and Specifications

All maps and drawings are included in Appendices B and C of this permit application. Figures 1 and 2 illustrate the location of the landfill in relation to state and county boundaries and the City of Lehi. Figure 10 depicts the zoning of the landfill property and the surrounding land. Figure 3 illustrates the existing facilities and topography of the site. Base topography for Figures 3 and 4 was surveyed using USGS. Figure 4 presents the proposed final grading plan for the landfill. Figure 5 shows fill areas within the site. Figures 6 and 7 illustrate the off-site and on-site drainage sub-areas used to calculate run-on and run-off flows and design the drainage control system. No information is available from the Utah State Climatologist's Office or the mesonet concerning prevailing winds in the area of this landfill site. People living in the area say the wind predominantly blows from the north and northwest.

Design and Location of Run-off and Run-on Control System

The run-off control systems proposed for the Lehi Class IV(b) Landfill, illustrated on Figure 4 (Appendix A), have been designed to control and redirect the flow resulting from a 25-year, 24-hour storm event during the post-closure period. During the operating life, the application of daily and intermediate cover to exposed waste surfaces will minimize the volume

of contact water generated during precipitation events. Temporary berms will be constructed around the active disposal area to contain run-off flows which may come into contact with waste during disposal operations.

Run-on controls during the active life of the facility will include the construction of exterior and interior perimeter drainage along the perimeter of the landfill site. As a result of this run-on control feature, the amount of water entering or affecting the active disposal area will be limited to direct precipitation. Based on the favorable climate of the area and relatively low calculated flow velocities, all drainage channels will be native soil.

The rational method was used to calculate the total run-off for a 25-year, 24-hour storm. The entire landfill site of 8.26 acres was used as one drainage area as shown in Figure 7. Rainfall intensity was derived from the Precipitation Frequency Atlas of the Western United States - Volume VI - Utah (NOAA Atlas 2, 1973). The 25-year, 24-hour storm depth used was 2.2 inches, while a two-year storm depth of 1.0 inch was used.

The 8.26-acre site contains sandy gravel and gravelly sand soils. All drainage channels which collect and control on-site run-off were conservatively sized as 12-inch deep v-ditches with 2:1 side slopes. The drainage diversion ditch along the northern and eastern property boundary which diverts off-site run-on away from the facility footprint was conservatively designed as an 18-inch deep trapezoidal channel with 2:1 side slopes and a 12-inch base. The rational method predicts a maximum flow of 1.4 cfs in the channel on the south (lower) side of the facility. The total required retention capacity determined by this method is 14,200 cubic feet.

The retention basin designed along the southwest corner of the property has a capacity of over 43,000 cubic feet before Fill Area A reaches capacity. A 2-foot tall berm will be placed along

the southern (lower) edge of each fill area as it is completed to create a permanent retention basin in each fill area.

Closure and Post-Closure Design, Construction and Maintenance

A detailed discussion of closure and post-closure design, construction, and maintenance is included in Sections 4 and 5 of this application. The post-closure land use of the property is proposed to be a city park. During the post-closure care period, the perimeter fence will be removed and the site will be landscaped as a park.

Facility Zoning Status

The landfill site is within Lehi City zoning boundaries designated as GC-2 General Commercial and PR-1 Parks and Recreation. Use of the site for landfilling purposes is consistent with the GC-2 zoning classification and the Lehi City Council will approve this landfill within the PR-1 zone classification. Surrounding land use is primarily low to medium density residential developments. Adjacent to the landfill site on the north are several Lehi City water storage tanks and reservoirs. Lands within one-half mile of facility property boundaries in all directions are primarily designated with zoning classifications R-1-8, RA-1, and A-1A. Lehi City zoning boundaries and classifications within three miles of the property boundaries are delineated in Figure 10, Lehi Zoning Map, enclosed in Appendix C.

Relationship to Solid Waste Management Plan

All municipal waste with Lehi City is currently routed to the Utah County Solid Waste Transfer Station in Lindon, Utah. The Lehi Class IV(b) Landfill is solely designed for disposal of construction and demolition waste from the City of Lehi and will not accept municipal waste.

Compliance with R315-305

Section R315-305 of the Utah Administrative Code defines general and operating requirements for the operation of a Class IV(b) landfill in the State of Utah. This section describes how the Lehi Class IV(b) Landfill satisfies those requirements.

- As described above, the Lehi Class IV(b) Landfill is not subject to the location restrictions defined in Section R315-302-1.
- With the submittal and subsequent approval of this *Application for a Permit to Operate a Class IV(b) Disposal Facility at the Lehi Landfill, Lehi, Utah*, Lehi City will obtain a permit to operate in accordance with R315-305-2(2).
- As described in Section 3, the Lehi Class IV(b) Landfill has been designed to collect and control the run-on and run-off resulting from a 25-year, 24-hour storm event as per Section R315-305-2(3).
- As required by Section R315-305-2(4) and described in the Plan of Operations, the landfill attendant will record estimates of the incoming volumes and types of waste disposed of at the site.
- Lehi City will comply with UAC R315-302-2(6) as described in Section 5 of this report regarding notations to the deed to the landfill property.
- The operation of the Lehi Class IV(b) Landfill meets with the requirements for operation established by R315-305-3, as described by the Plan of Operations in Section 2 of this permit application.
- The landfill will be closed in accordance with the Closure Plan described in Section 4 of this application.



SECTION 4

CLOSURE PLAN

This Closure Plan has been prepared for the Lehi Class IV(b) Landfill in accordance with UAC R315-302-3. Closure of the landfill will be performed in accordance with this plan, and in such a manner as to:

- minimize the need for further maintenance;
- minimize or eliminate threats to human health and the environment from post-closure escape of solid waste constituents, leachate, landfill gases, contaminated run-off or waste decomposition products to the ground, ground water, surface water, or the atmosphere; and,
- adequately prepare the facility for the post-closure period.

This plan and any future alterations or amendments to this plan will be maintained with the operations plan for the facility at the Lehi City Public Works offices.

Closure Construction

The final cover will be constructed in accordance with UAC R315-303-4(4)(a). The final cover will consist of two feet of compacted native soil. Of these two feet, the upper six inches will be topsoil or other suitable soil which is capable of sustaining plant growth. The final cover will be revegetated with trees and grasses consistent with a city park environment, and graded to prevent ponding and minimize infiltration of run-off waters.

Based on the vertical and lateral design presented in the topographic maps in Appendix A, Lehi City will perform final cover placement at the end of the active life of each area of the landfill. Closure activities will be initiated when the development of the site reaches the final design height illustrated on attached Figure 4 (Appendix A). As a result, the size of the area to be closed will encompass the entire 8.26-acre limit of final cover placement. All

equipment which will not be used on-site during the post-closure period will be removed. Structures at the site which remain after the final receipt of waste, and which will not be an integral part of post-closure site maintenance, will be dismantled and removed from the site. Any soil contamination remaining after the final receipt of waste will be removed, treated, or disposed of according to applicable regulations. Following the final receipt of waste, any remaining stockpiles of recyclable or other stored materials will be removed from the site.

Rough contouring will be performed throughout the life of the site during daily operations. Following the general site cleanup described above, final contouring will be performed using waste and native soils to establish a suitable foundation for final cover construction. The site will be surveyed to establish base elevations for closure cap construction. After final grading of the foundation layer, the final cover layer will be constructed. Following the placement and compaction of a minimum of two feet of native soil, the landfill will again be surveyed to verify the final thickness of the final cover layer. As described above, the upper six inches of the final cover layer will be comprised of topsoil or a comparable soil which is capable of sustaining native plant growth. Following placement of the final cover, the site will be landscaped as a city park.

Drainage channels have been designed and will be constructed to accommodate the flow from a 25-year, 24-hour storm event. Much of the drainage system construction will be accomplished throughout the active life of the facility. Any drainage system construction which remains after the final receipt of waste, such as along the southerly line of the property against the proposed road, will be completed following the installation of the final cover described above. Interior and exterior perimeter drainage or drainage diversions will be constructed as defined in Section 3 and illustrated in Figures 6 and 7 (Appendix A). The drainage will assist in

maintaining the integrity of the final cover and preventing a washout of waste due to uncontrolled run-off during precipitation events.

Closure Schedule

At least 60 days before the projected final receipt of waste, Lehi City will notify the Executive Secretary of the intent to close the Lehi City Class IV(b) Landfill and implement the closure plan. Within thirty days after the final receipt of waste, Lehi City will implement the approved closure plan. The closure activities described in this plan will be completed within 180 days of initiation. Following the completion of closure activities, Lehi City will submit to the Executive Secretary a set of as-built drawings of final closure construction.

Site Capacity

The area-fill method of disposal is utilized as the Lehi Class IV(b) Landfill. Current operating plans are to continue filling in the west side (Area A of Figure 5) of the site until the area reaches the level of the existing land between Area A and Area B to the east. Filling will then commence against the north wall of Area B and continue south, north and west as the borrow pit is expanded to the southern limit of waste placement. The approximate remaining life of the facility is expected to 22 years. In order to estimate the expected life of the facility, the following assumptions have been made:

- total landfill waste is estimated at approximately 250 cy per month, 12 months per year;
- remaining volume of the existing landfill is approximately 28% of the original capacity of 230,000 cy. This leaves 64,400 cy (64,400 tons) volume remaining;
- waste to soil ratio is approximately 10:1.

The calculations indicate that the remaining portion of the existing waste area will provide approximately 64,400 cubic yards of waste disposal capacity lasting into the year 2030.

Final Inspection

Following the completion of closure activities, a final report will be prepared and entered into the operating record of the facility. The report will summarize laboratory and field test data which support the conformance of the final cover installation and closure activities with the Utah solid waste regulations and the approved Closure Plan. The report will also include as-built construction drawings. The Executive Secretary will be notified of the completion of closure activities and arrangements will be made for a final inspection by UDEQ. Following final approval by UDEQ, the post-closure maintenance plan will be initiated pursuant to the approved Post-Closure Plan, outlined in Section 5 of this permit application.

Closure Construction Cost Estimate

The closure cost estimate, detailed in Table I, has been prepared utilizing Appendix G of the Utah State Solid Waste Permitting and Management Rules as a general guideline. It is estimated that the site will be closed by parts, Area A and Area B. The cost estimate is based on the assumption that an outside contractor will perform the construction tasks and has been prepared using reasonable estimates of unit costs based on 2008 dollars. A ten percent contingency has been built into the final estimate to account for variances in unit costs and any possible unforeseen circumstances. Lehi City is complying with the Financial assurance

requirements and provides annual proof that they can provide for closure construction and post-closure maintenance at the Lehi Class IV(b) Landfill.

<i>TABLE I: COST ESTIMATE FOR CLOSURE CONSTRUCTION Lehi Class IV(b) Landfill</i>				
ITEM	UNIT	\$/UNIT	#UNITS	COST
1. Topographic Survey	day	\$2,000	2	\$ 4,000
2. Contract Admin., Bidding and Award	L.S.	10% total cost	n/a	\$54,000
3. Project Management/CQA	L.S.	\$4,000	n/a	\$ 4,000
Engineering Subtotal				\$62,000
4. Water Truck	L.S.	\$7,500	n/a	\$ 7,500
5. On-site Final Cover Soil Acquisition	cy	\$18.00/cy	19,400	\$349,200
6. Final Cover Placement	cy	\$1.00/cy	19,400	\$ 19,400
7. Revegetation and Landscaping	acre	\$7,500/acre	8.3	\$62,250
Construction Subtotal				\$438,350
Engineering Subtotal				\$ 62,000
Construction Subtotal				\$ 438,350
5% Contractor Fee (of Constr. Cost only)				\$ 21,900
1.5% Bond Fee (of Constr. Cost only)				\$ 6,600
SUBTOTAL				\$528,850
10% CONTINGENCY				\$ 52,885
TOTAL				\$581,735



SECTION 5

POST-CLOSURE PLAN

The Post-Closure Plan has been developed in accordance with UAC R315-302-3. Post-closure care and maintenance of the Lehi Class IV(b) Landfill will be performed in accordance with this plan, which provides for continued facility maintenance. The design of the Lehi Class IV(b) Landfill does not include a gas monitoring, ground water monitoring, or leachate collection system; therefore, the post-closure plan does not include provisions for gas or ground water monitoring. The office listed below may be contacted during the post-closure period regarding issues which concern the landfill property:

Lehi Public Works Director
560 W. Glen Carter Drive
P.O. Box 255
Lehi, Utah 84043
(801) 768-7120

Monitoring of Environmental Systems

This permit application is submitted without provisions for ground water monitoring, surface water monitoring, or leachate collection or treatment systems. Exclusion of these items is based on the classification of the landfill as a Class IV(b) waste disposal facility.

Maintenance Activities

Following closure of the Lehi Class IV(b) Landfill, which will result in a city park, the final cover and drainage systems will be inspected at least annually by personnel from Lehi City. The final cover and drainage system will be examined for the effects of erosion, subsidence, settlement, or other events which may compromise the integrity of the final cover or the

effectiveness of the drainage system. Necessary repairs will be completed as soon as is practicable following each inspection in order to maintain the effectiveness of the drainage system and restore the integrity of the final cover.

Post-Closure Schedule

Post-closure activities will be initiated immediately following the completion of the closure activities described in Section 4 of this application. Post-closure activities will continue for a period of thirty years or a period established by the Executive Secretary. If post-closure monitoring activities indicate that the site has stabilized and does not pose a threat to human health or the environment, Lehi City may petition the Executive Secretary for a decrease in the length of the post-closure monitoring period.

Upon completion of post-closure monitoring activities as determined by the Executive Secretary, Lehi City will submit to the Executive Secretary a certification, signed by a city representative, which states why post-closure activities are no longer necessary. Following final approval by the Executive Secretary, post-closure monitoring activities will be discontinued.

Record Modifications

Within 60 days after the completion of all closure activities, plats and a statement of fact concerning the location of any disposal site shall be recorded as part of the record of title with the County Recorder. The notation will serve to notify any potential purchaser of the property that the land has been used as a landfill, and that its use may be restricted by local land use or zoning regulations. Lehi City will notify the Executive Secretary that the deed notation has been recorded.

Post-Closure Cost Estimate

The following post-closure cost estimate has been prepared utilizing Appendix G of the Utah State Solid Waste Permitting and Management Rules. Some of the assumptions used to derive the cost estimate include annual inspections of the integrity of the final cover and general site condition and hiring a third party to perform the inspections. The cost estimate for annual post-closure care is presented in detail in Table II below, and is based on 2008 dollars. A ten percent contingency has been built into the cost estimate. Lehi City will prepare documentation to provide financial assurance according to the Local Government Financial Test prior to the issuance of a *Permit to Operate* by the Utah Department of Environmental Protection. This will provide financial assurance for closure construction and post-closure maintenance at the Lehi Class IV(b) Landfill.

<i>TABLE II: COST ESTIMATE FOR ANNUAL POST-CLOSURE CARE Lehi Class IV(b) Landfill</i>				
ITEM	UNIT	\$/UNIT	#UNITS	COST
1. Site Inspection and Record keeping	hr	\$85	40	\$ 3,400
2. Correctional Plans and Specifications	hr	\$125	12	\$ 1,500
3. Maintenance Construction	hr	\$125	24	\$ 3,000
Subtotal				\$ 7,900
10% CONTINGENCY				\$ 790
TOTAL				\$ 8,690



SECTION 6

FINANCIAL ASSURANCE

Lehi City financial assurance is through a Standard & Poor's bond rating process. In 2003 the City issued Sales Tax Revenue Bonds and received a bond rating from Standard & Poor's. Standard & Poor's gave Lehi City an A+ rating on these bonds and has since upgraded the City's rating to AA-

REFERENCES

Merritt, F.S., 1996, Standard Handbook for Civil Engineers: Third edition, McGraw-Hill Book Company, New York.



APPENDIX A

LEHI CITY

LEHI CLASS IV (B) LANDFILL 2500 NORTH & 300 WEST

SEPTEMBER 2008
UPDATED OCTOBER 2009

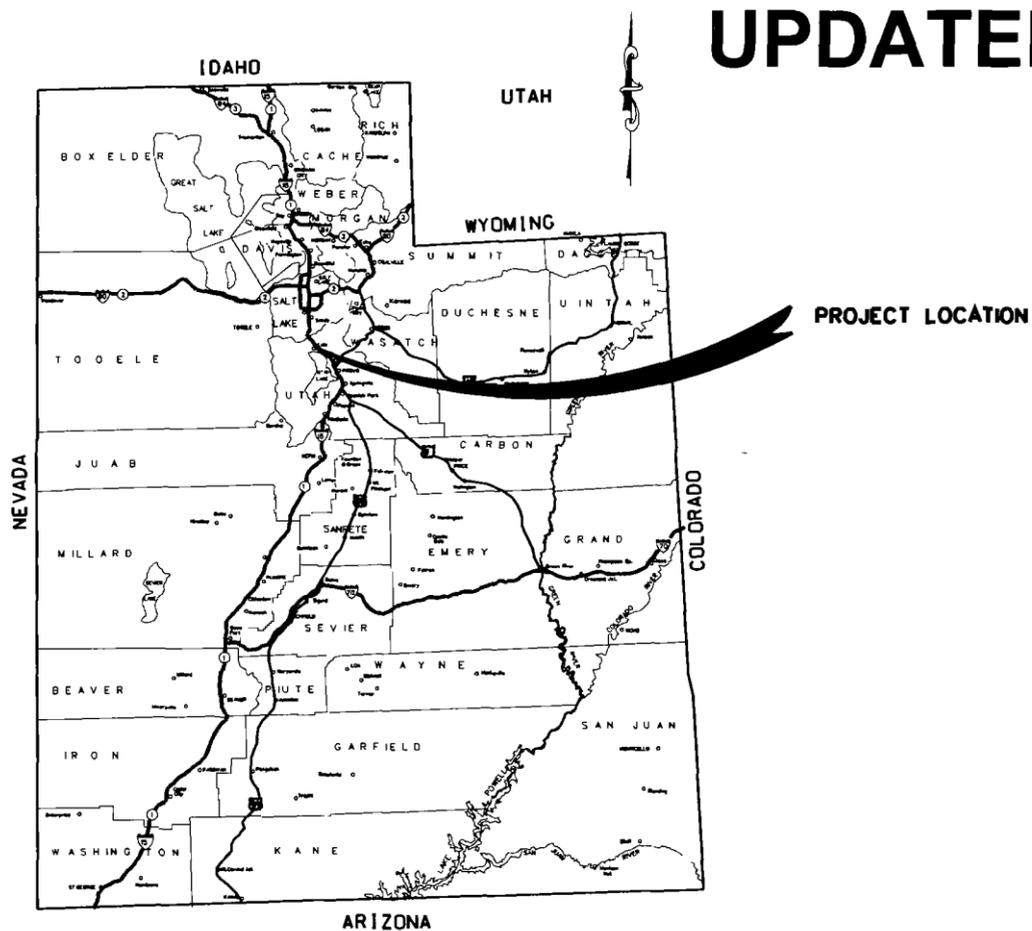


FIGURE 1

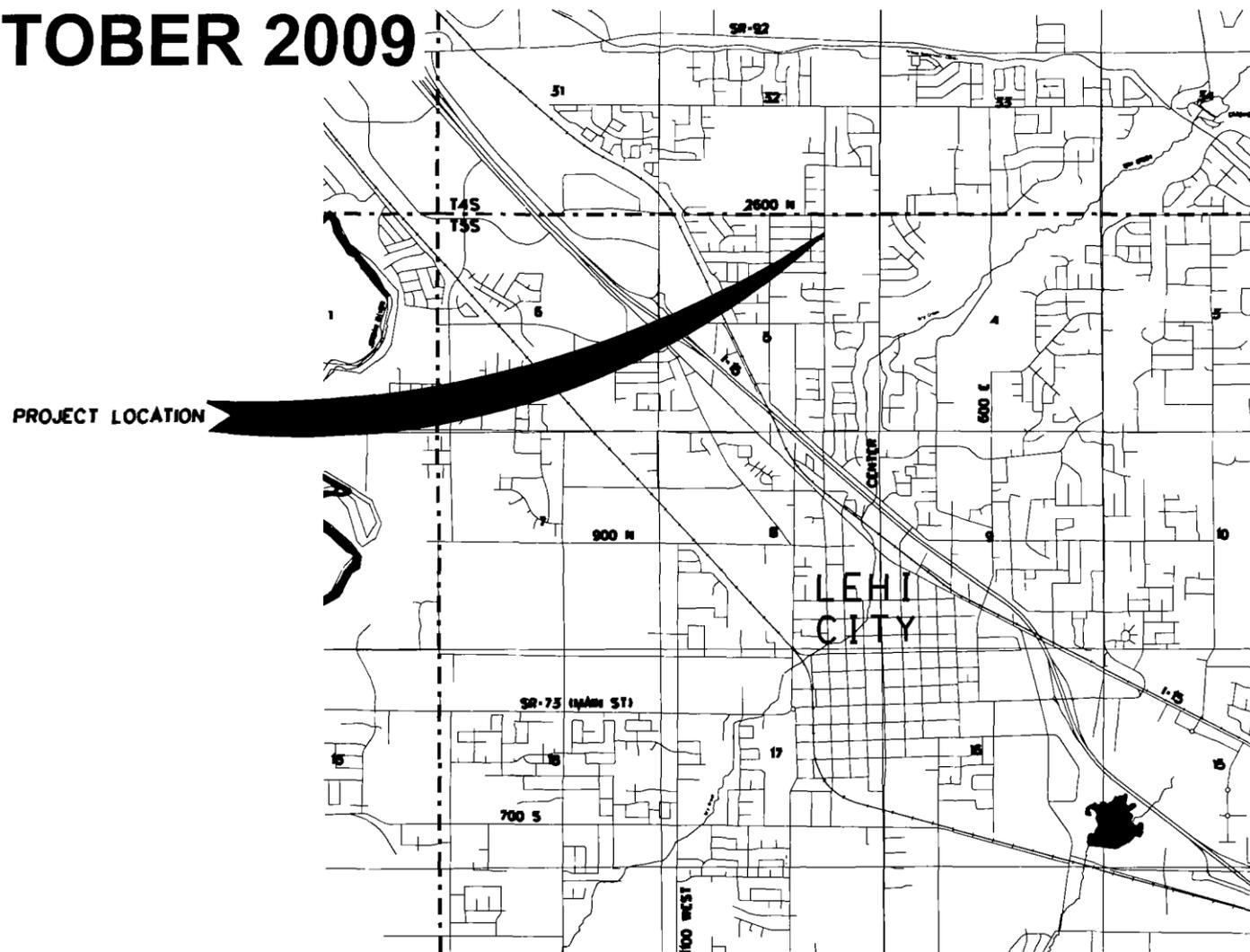
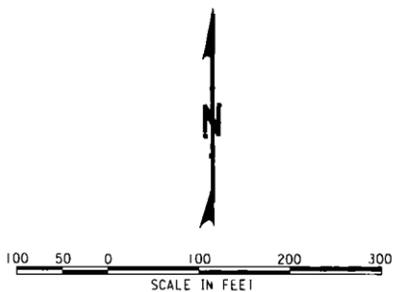
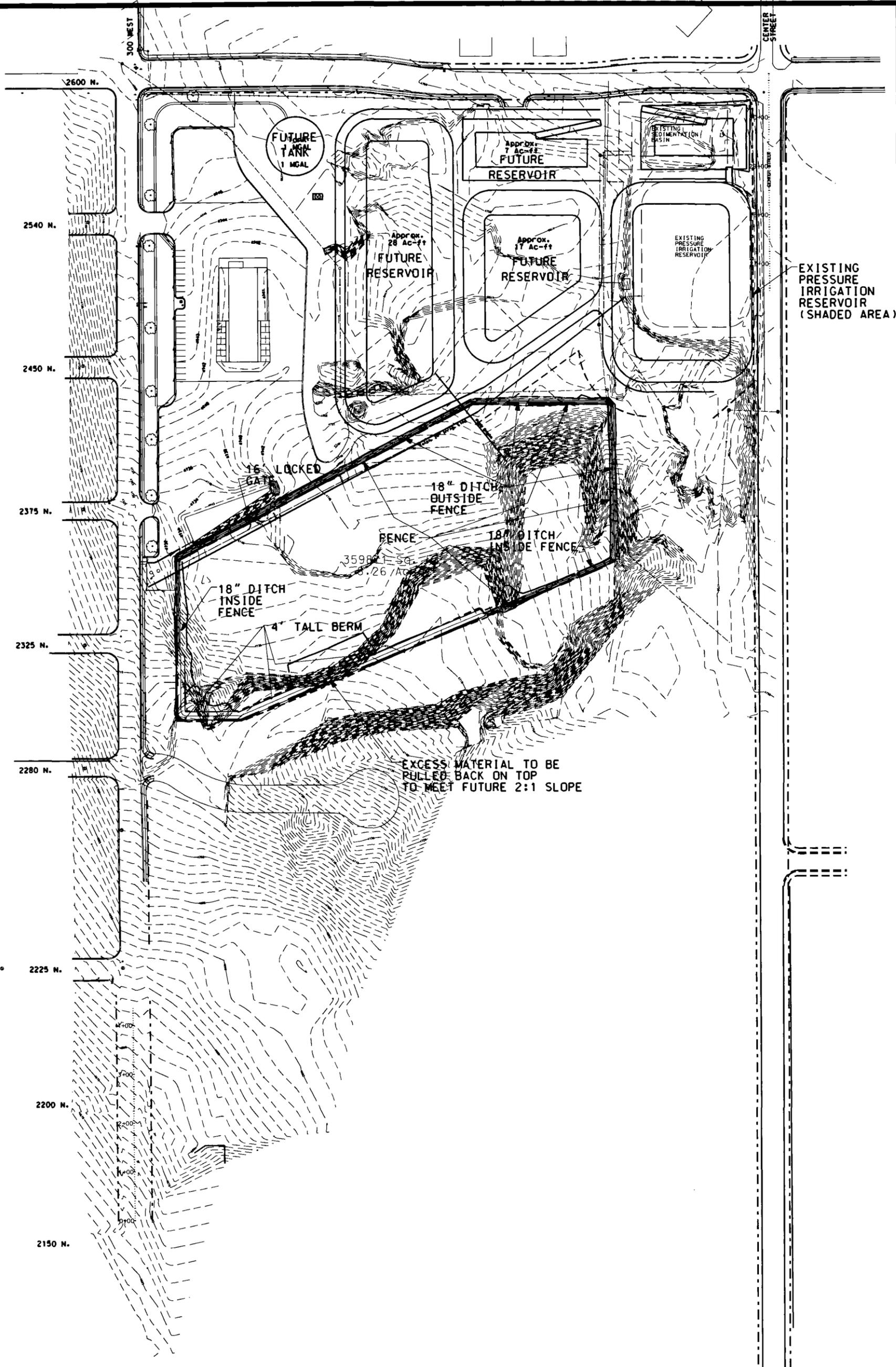


FIGURE 2

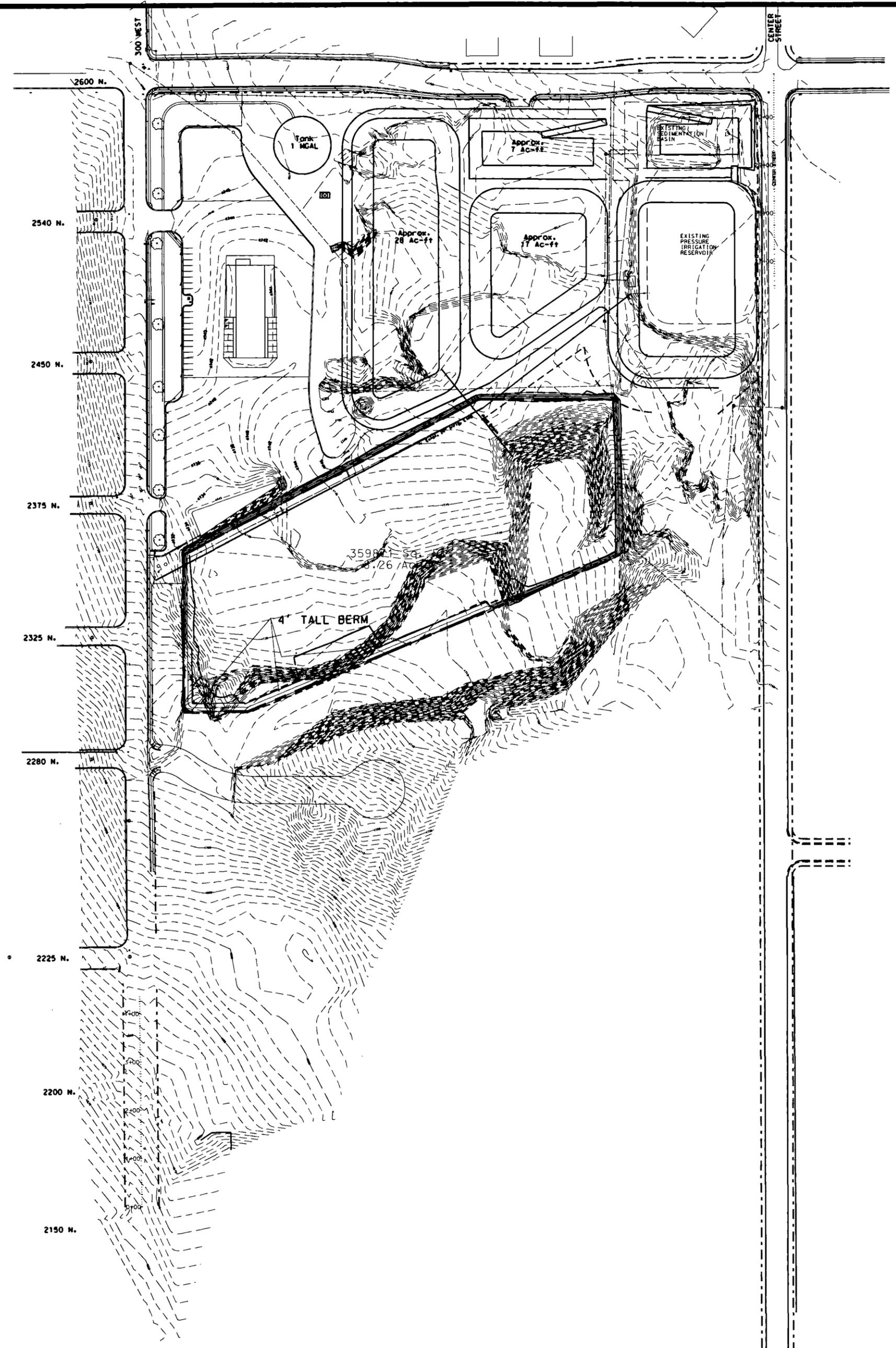
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LEHI CITY
 SAND PIT LANDFILL SITE
 EXISTING TOPOGRAPHY

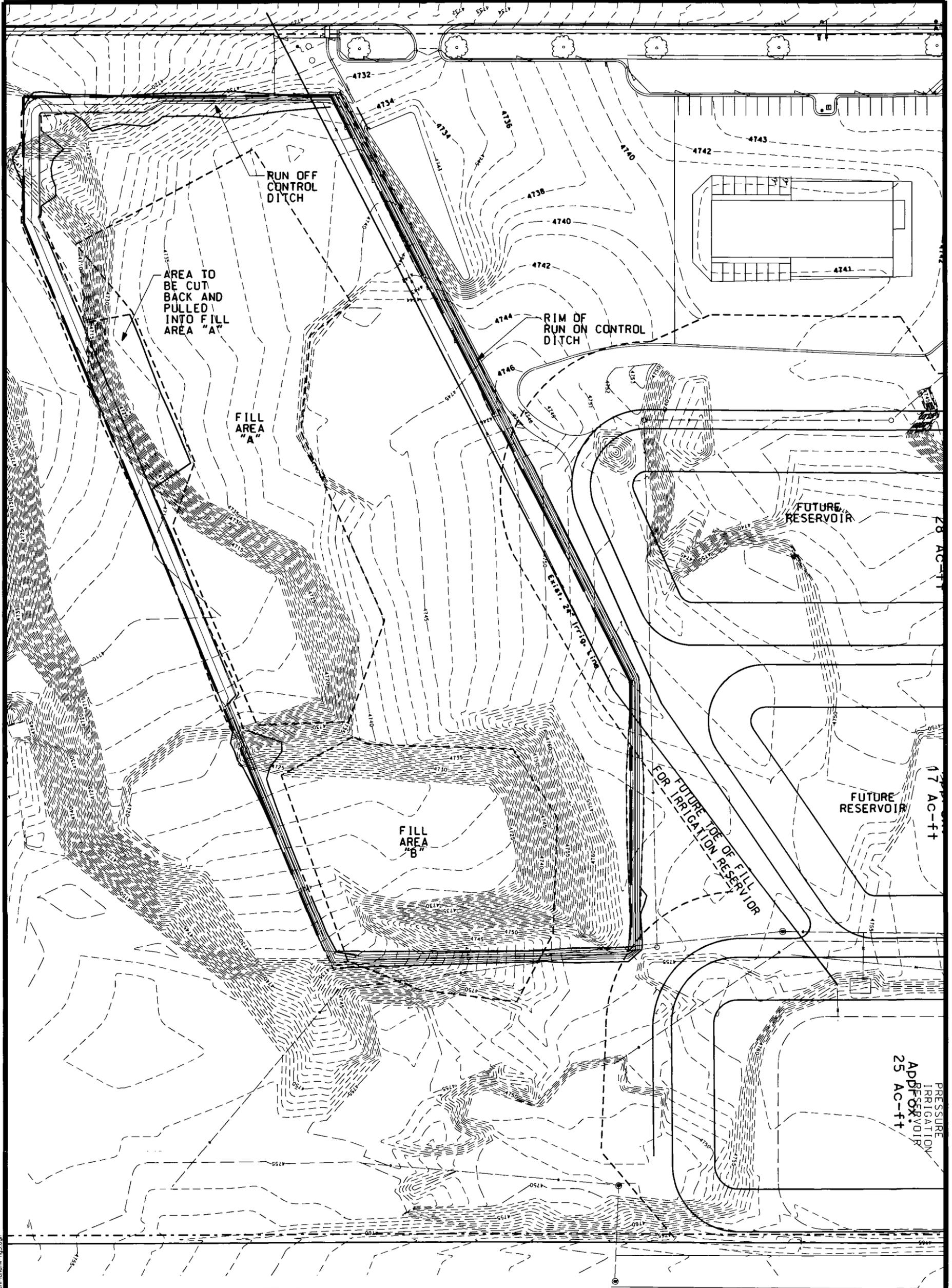
FIGURE 3



9/29/2008 0:\V0008\08152.00 Lehi Sandpit Landfill Permt\CAO\lehi-sandfill-194.dgn



 <small>ENGINEERS - SURVEYORS - PLANNERS - SCIENTISTS</small>
LEHI CITY SAND PIT LANDFILL SITE FUTURE TOPOGRAPHY
<small>FIGURE 4</small>



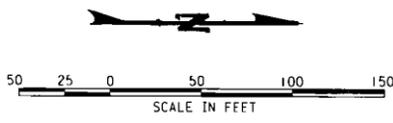
9/29/2008 0:\2008\08152 00 Lem Sandpitt Landfill Permit\CAD\lehi-sona\fig-5.dwg

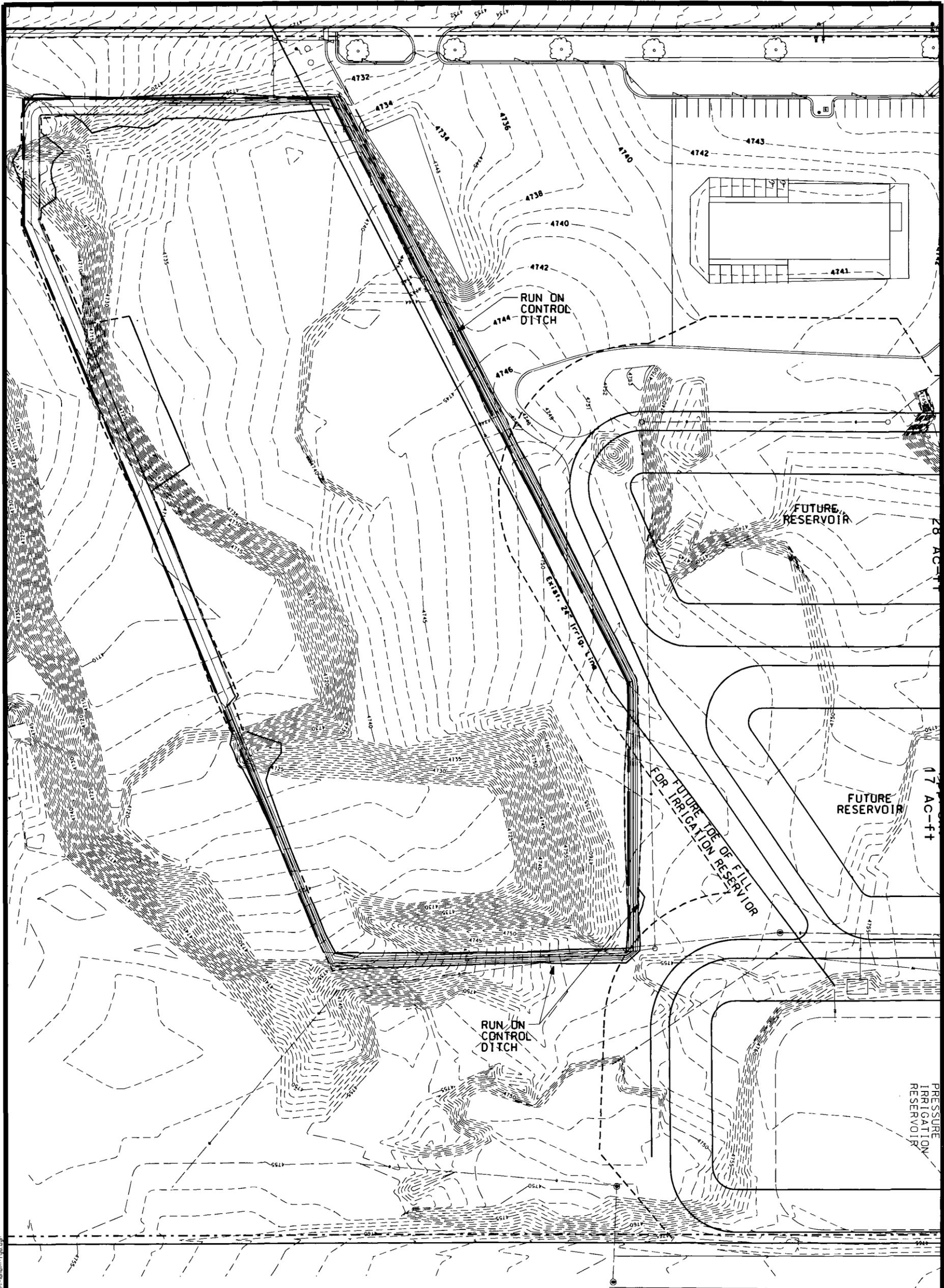
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**LEHI CITY
 SAND PIT LANDFILL SITE**

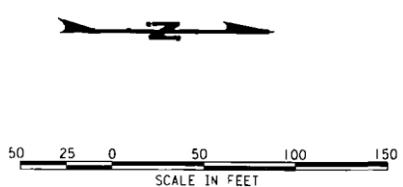
FILL AREAS

FIGURE 5





--- RUN ON DRAINAGE CONTROL AREA
 337682.044 SQ FT
 7.75 ACRES



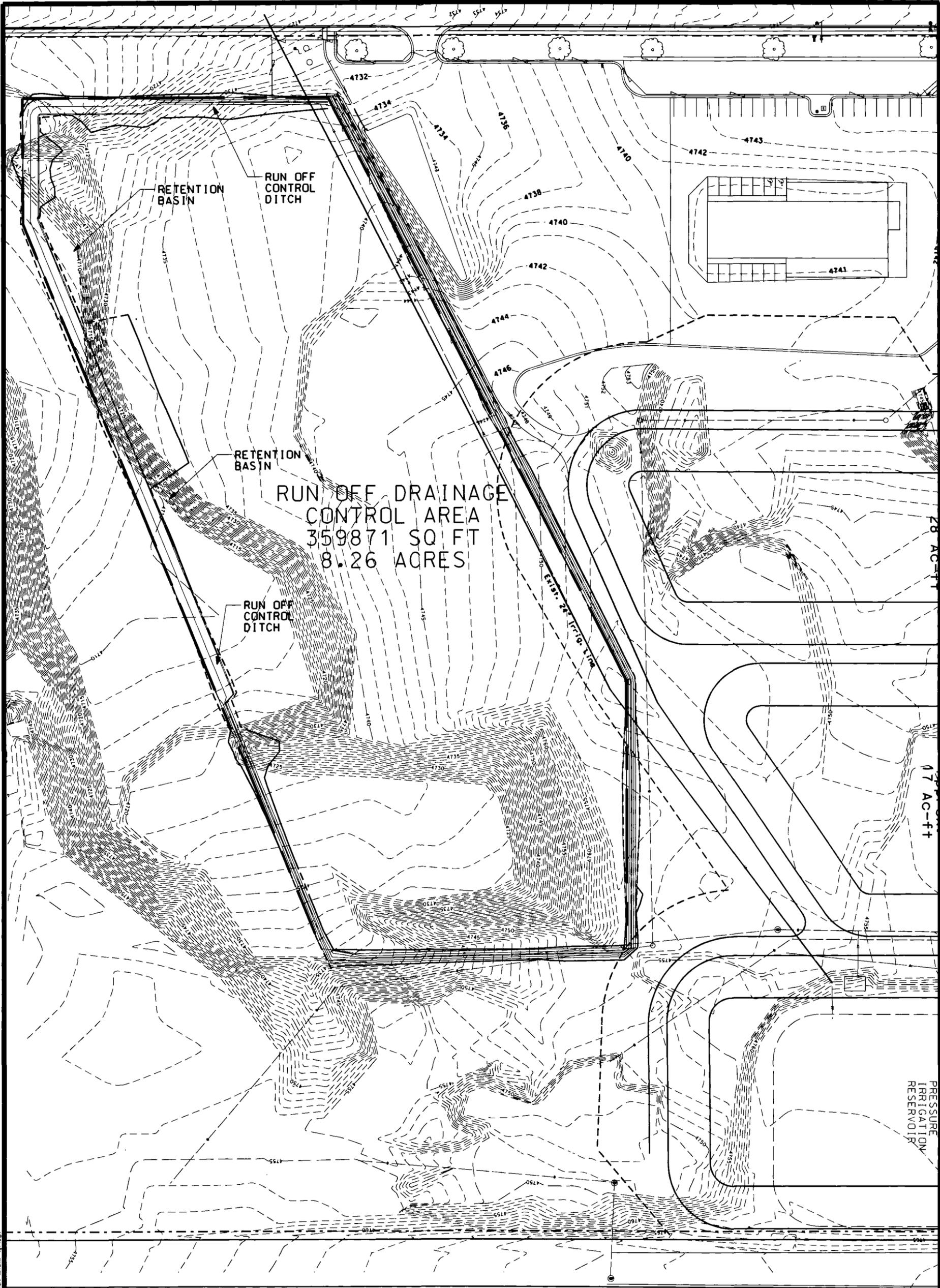
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 SAND PIT LANDFILL SITE

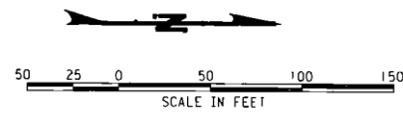
RUN ON DRAINAGE CONTROL

FIGURE 6

G:\2008\08162.00_Lehi\Sandpit Landfill\Permit\CAD\Views\landfill\fig6.dwg
 9/29/2008



9/29/2008 0:\2008\08152.00_Leh_Scoggin_Landfill\Permit\CAD\lehi-landfill-fig7.dwg

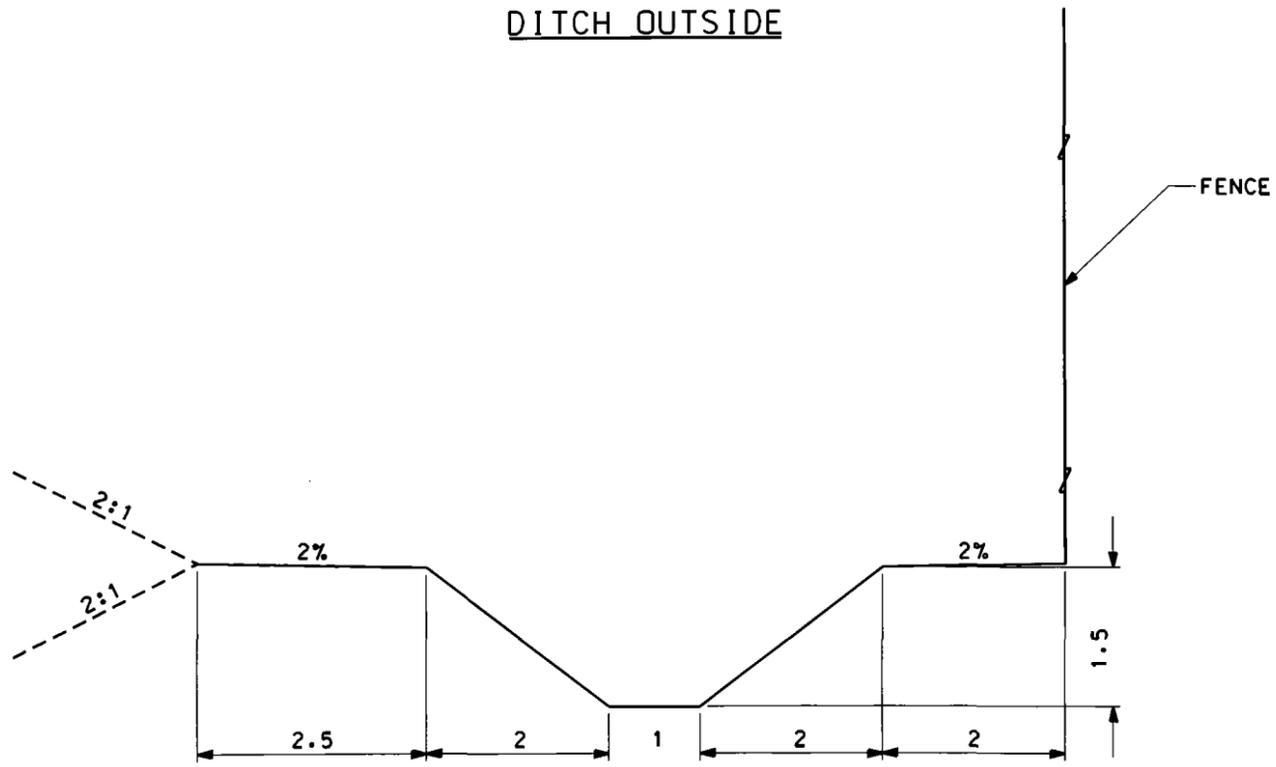


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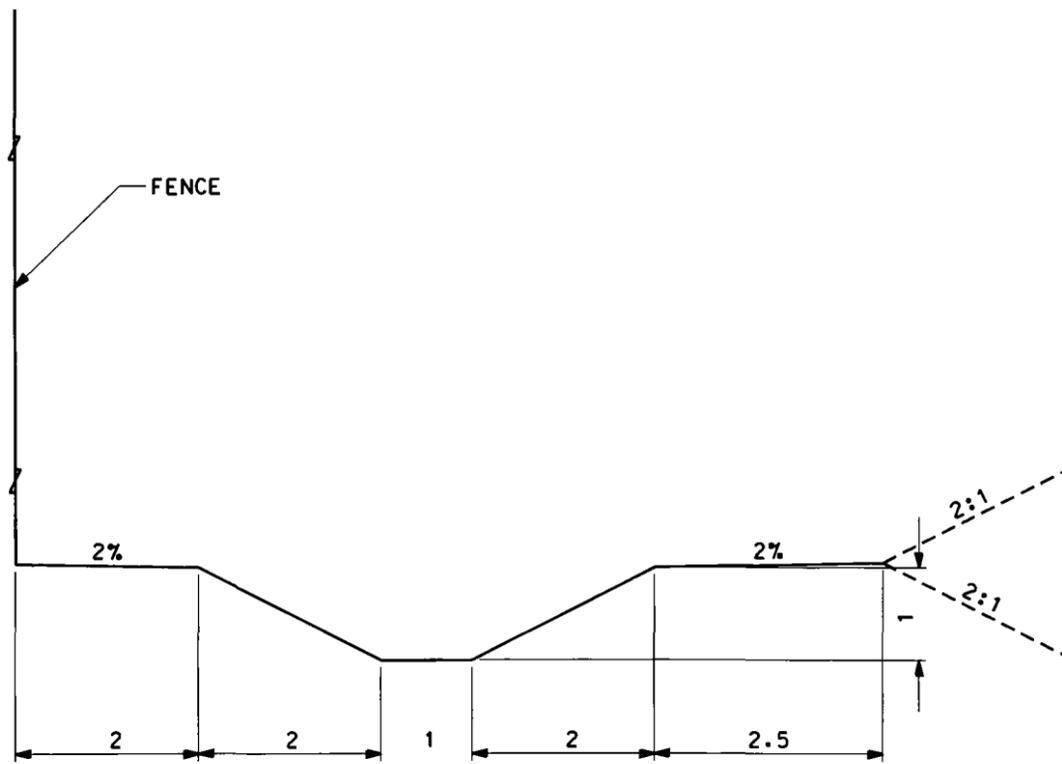
LEHI CITY
SAND PIT LANDFILL SITE
RUN OFF DRAINAGE CONTROL

FIGURE 7

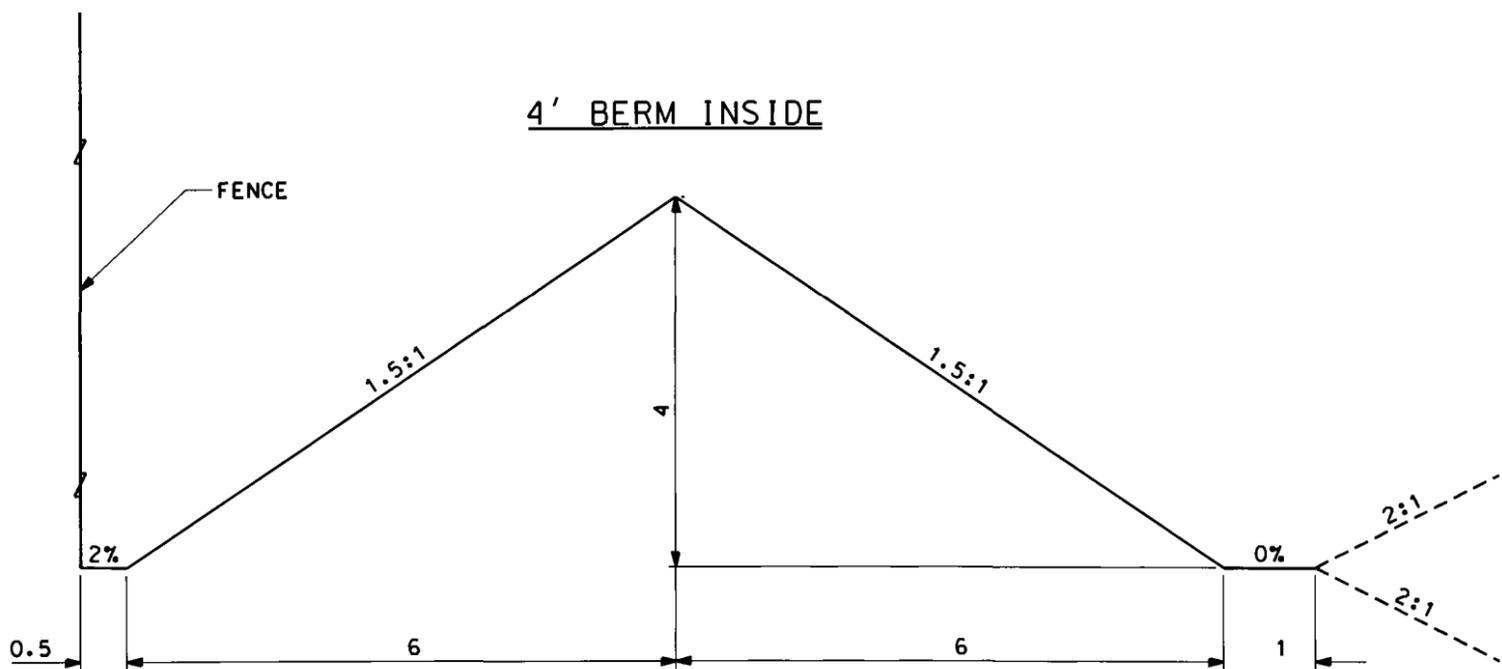
DITCH OUTSIDE



DITCH INSIDE



4' BERM INSIDE



9/24/2008 0:24:00 PM C:\Users\lehi\Documents\Lehi\Sandpit\Permit\CAD\Views\landfill_fig8.dgn


 ENGINEERS - SURVEYORS - PLANNERS - SCIENTISTS
 LEHI CITY
 SAND PIT LANDFILL SITE
 TYPICAL SECTIONS
 FIGURE 8



APPENDIX B

603
WARRANT DEED
Owen Dean and Amy Dean, husband and wife, Grantor s
of American Fork, County of Utah, State of Utah, hereby CONVEY and
WARRANT to Lehi City, a Municipal Corporation,

Grantee
of Lehi, County of Utah, State of Utah, for the sum of
Ten dollars and other valuable considerations, ~~DOLLARS~~
the following described tract of land in Utah County, State of Utah:

Commencing at the Northeast corner of the
Northeast quarter of Section five, Township five,
South of Range one East of the Salt Lake Base
and Meridian; thence West eleven chains; thence
South twenty chains; thence East eleven chains; thence
North twenty chains to the place of beginning.

Area 22 acres.



WITNESS the hands of said Grantor s, this eighth day of December, A. D. 19 48.

Signed in the presence of
[Signature]
[Signature]
[Signature]

STATE OF UTAH }
County of Utah } ss.

On the 8th. day of December, A. D., 19 48, personally
appeared before me Owen Dean and Amy Dean,
the signer s of the within instrument, who duly acknowledged to me that
they executed the same.



[Signature]
Notary Public
Residing at: American Fork, Utah
My Commission expires: Aug 9-1951

STANDARD SUPPLY CO., PRIMO, UTAH (Use black typewriter ribbon only)

REC'D
JAN 11 4 23 PM '49
RECEIVED BY
JAN 11 1949
MAIL TO
Lehi, Utah
231

UTAH COUNTY DEED RECORD 285

1369 Filed Mar 14 1931 at 9:20 A.M.

QUIT-CLAIM DEED

JOSEPH J. SHAW AND SARAH A. SHAW, his wife Grantors of Provo, in the County of Utah State hereby quit-claim to LEHI CITY, A Municipal Corporation Grantee of Lehi, Utah County, the sum of One Hundred Seventy and No/100 Dollars the following described tract of Lehi Precinct Utah County, State of Utah, to-wit:

Commencing 11 chains West of Northeast corner of Section 5, Township 5 South of Range 11, M. thence West 7.75 chains; thence South 20 chains thence East 7.75 chains; North 20 chains to the beginning. Area 15.50 ____.

WITNESS the hand_ of said Grantor_ this 5 day of March A.D. 1931.

in the presence of

Joseph J. Shaw

Wiley Dunford

Sarah A. Shaw

OF UTAH)
:SS. On this 5th day of March 1931, before me the undersigned a Notary Public within and for the County and State aforesaid, personally appeared Joseph J. Shaw and Sarah A. Shaw, his wife the signers of the foregoing instrument who duly acknowledged to me that they executed the same.

I further certify that my commission as a Notary Public will expire May 31 1934.

(NOTARY SEAL)

Willard L. Sowards Notary Public

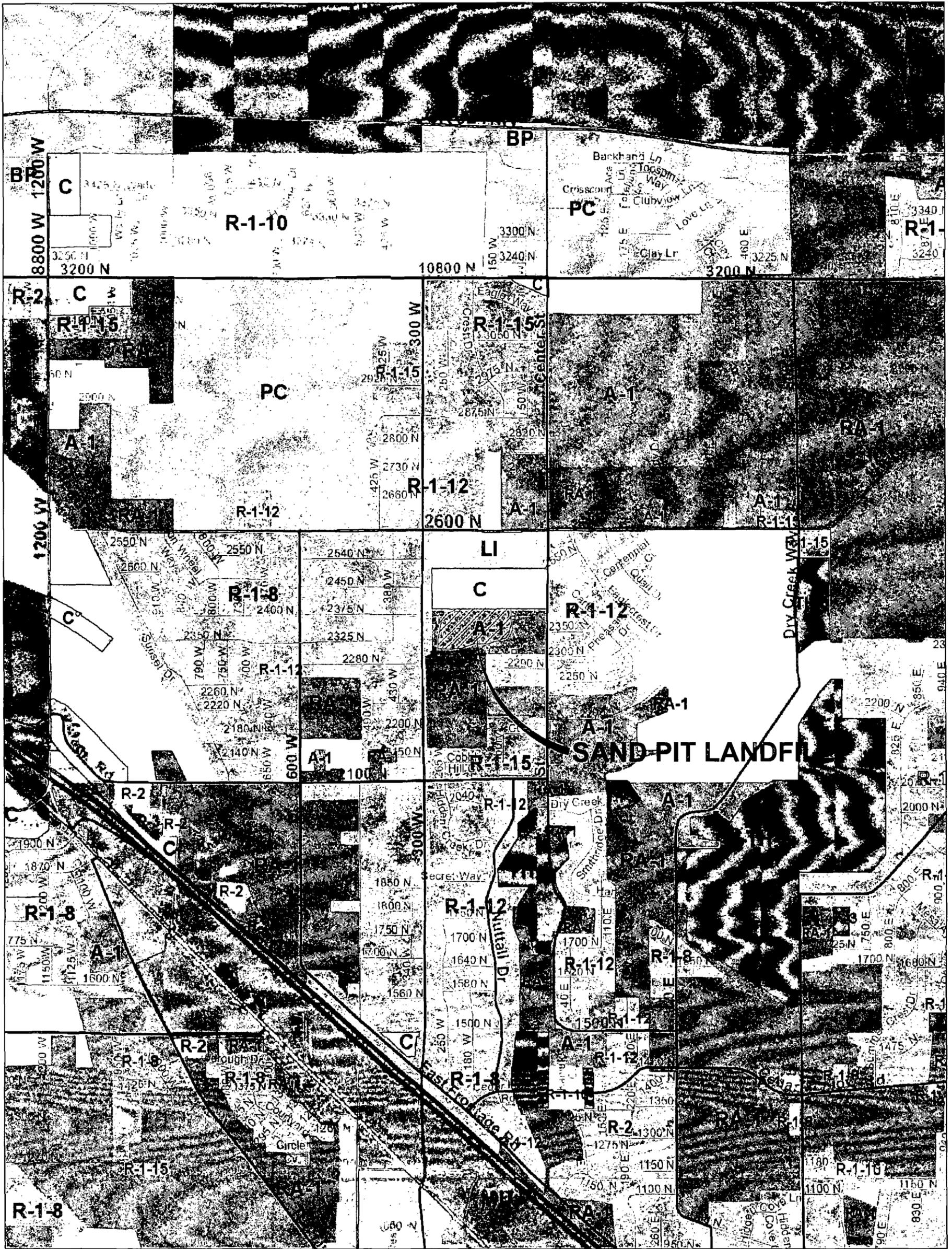
Provo, Utah

UTAH COUNTY RECORDER

#####



APPENDIX C



Legend

- | | | |
|-----------------------|-------------------------------------|-----------------------------|
| Land Fil Site | RA-1 Residential / Agriculture | C Commercial |
| Centerlines | R-1-22 Residential / Agriculture | BP Business Park |
| Classification | R-1-15 Residential | T-M Technical Manufacturing |
| Roads | R-1-12 Residential | H/I Historical / Industrial |
| Collectors | R-1-10 Residential | LI Light Industrial |
| Arterials | R-1-8 Residential | I Industrial |
| Ramps | R-2 Medium Density Residential | TH-5 Transitional Holding |
| Freeways | R-3 High Density Residential | RC Resort Community |
| A-5 Agricultural | MU Mixed Use Commercial/Residential | C-I Commercial / Industrial |
| A-1 Agricultural | PC Planned Community | |

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 PHONE: (801) 768-7200, FAX: (801) 768-7201
 www.civilscience.com

**EXISTING ZONING
 FIGURE 10**

**LEHI CITY
 SAND PIT LANDFILL SITE**



APPENDIX D

LEHI CLASS IV(b) LANDFILL RECORD OF RANDOM INSPECTION

DATE	TIME	INSPECTOR	LICENSE #	DRIVER'S NAME	MAKE/MODEL	ACCEPTED	UDEQ NOTIFIED?	UDEQ CONTACT

LOAD DESCRIPTION:

IF REJECTED, RATIONALE FOR REJECTION:

ACTIONS TAKEN:

