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February 24, 2023

Ms. Arin Anderson, Project Manager
Waste Permits Division (MC-124)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

RE: MSW Permit No. 2123 – Texas Disposal Systems Landfill TCEQ Tracking No. 28105718
Response to Clarifications and Request for Additional Information

Dear Ms. Anderson,

We have reviewed your email and the 11 comments therein dated January 25, 2023. As requested, we have listed each of the comments with responses immediately following each comment where applicable:

1. *Revise the core data form to correct the following items:*

- ***Correct the regulated entity name (“landfill”) in item 22.***

Applicant Response: The typo was corrected in the attached Core Data Form. This change was made on Page 2 of 3 on TCEQ Core Data Form 10400. The Regulated Entity Name on Line 22 is also being modified to reflect the Facility Name of Texas Disposal Systems Landfill, Composting and Recycling Facility. This correction is shown on Page 2 of 3.

- ***Correct the latitude and longitude to be consistent with latitude and longitude on the modification application form. The point representing the facility location should be the latitude and longitude of the facility permanent benchmark. [30 TAC 330.143(b)(8)]***

Applicant Response: Completed as requested in the Core Data Form. The latitude and longitude were also revised on the attached modification application form. The latitude and longitude for the facility permanent benchmark is Latitude 30d6’4.9942” North, Longitude 97d45’25.19495 West. This change was made on Page 2 of 3 on TCEQ Core Data F. A completed TCEQ Core Data Form that includes all three pages is provided with this response.

- 2. *Provide a complete landowner list and land ownership map showing all property ownership within ¼ mile of the facility (as was provided in the application for the 2019 buffer zone modification issued December 30, 2019), and all mineral interest ownership under the facility.***

Applicant Response: A complete revised landowner list including mineral interest ownership and map based on the expanded facility boundary is attached. The revised landowner list is provided in Appendix C, beginning on Page 13 of the Narrative. The revised map is provided in Appendix D, beginning on page 14 of the narrative.

- 3. *Revise the legend of the land ownership map in Appendix D to indicate the dashed lines represent the landfill unit (“footprint”) boundaries, not the facility boundary.***

Applicant Response: The facility boundary map has been revised to expand the facility boundary within the permit boundary. This map is shown in Appendix D. The 2019 buffer zone modification issued December 30, 2019 laterally expanded the permit boundary, and as such, the permit boundary was appropriate to use for notification purposes. 30 Tex. Admin. Code Section 330.59(c)(3)(A) requires the land ownership map to “show all property ownership within ¼ mile of the facility, and all mineral interest ownership under the facility.” TCEQ defines the term “facility” as “all contiguous land and structures, other appurtenances, and improvements on the land used for the storage, processing, or disposal of solid waste.” 30 Tex. Admin. Code § 330.3(52); see also id. § 330.3(91) (definition of “municipal solid waste facility”).

After a review of this definition in conjunction with several other defined terms in TCEQ’s rules (including “municipal solid waste landfill unit,” “waste management unit boundary,” and “buffer zone”) and various provision of the Chapter 330 MSW rules, TDSL has redrawn the “facility boundary” to include not just the landfill footprint but also other structures, appurtenances, and improvements, including the composting operation and the appropriate buffer zones. This “facility boundary,” shown on Attachment D, is based on TCEQ’s definition of “facility” and incorporates all areas traditionally included within the facility boundary.

When the TDSL landfill permit area was expanded in 2019, it specifically identified that the vast majority of the area to the west of the then existing permitted landfill was for ancillary activities, not MSW processing or disposal. Because that area is not used for storage, processing, or disposal of solid waste, and because the entirety of the area is not necessary to meet the buffer zone requirements set out in the Chapter 330 rules, that area does not meet TCEQ’s definition of facility, and thus, is not included in the “facility boundary. This text has been added to Appendix D on Page 14.

- 4. *In Section 1.1 of the modification narrative, indicate whether the proposed minimum elevation of 579 feet msl stated is the elevation of deepest excavation (EDE; lowest elevation in any existing or proposed excavation, including leachate sumps).***

Applicant Response: The text in Section 1.1 on Pages 4 and 5 of the Modification Narrative was revised to reflect the elevation of deepest elevation of 577 feet MSL. This elevation represents the deepest elevation of the proposed leachate collection sumps, which are excavated two feet below the proposed elevation of waste placement of 579 feet MSL. The leachate collection sumps are excavated to be 20 foot wide by 20 foot long and are filled with rock, resulting in no increase in waste capacity. One sump is being added for this modification.

- 5. *In Sections 1.1 and 2.2 of the modification narrative, and in Appendix B, clarify the history of final cover elevation changes. Indicate the following:***

- ***Drawing number and drawing date showing original permitted final cover elevations.***

- *Drawing number and drawing date showing reduced final cover elevations resulting from interpit wall removal modification issued November 21, 2017.*
- *Drawing number in the current modification application showing proposed final cover elevations.*

Applicant Response: Additional clarity to the history of final cover elevation changes along with the requested drawing numbers were added to the modification narrative at the beginning of Section 1.1, Page 4, Section 2.2, Pages 8 and 9 and in Appendix B on Page 11 of the narrative text.

6. *In Section 2.2 of the modification narrative, there is a quantity missing in the last sentence. Revise for completeness.*

Applicant Response: The text in Section 2.2 on Page 9 has been rewritten to correct the wording related to the volume changes in this modification. Additionally, the text in Section 1.1, Page 5 has been modified to reflect the same text included in Section 2.2.

7. *Explain how proposed changes to final contours will not adversely affect drainage and how the designed channels will be adequate for new drainage patterns.*

Applicant Response: Modifications to the final contours will improve the movement of water from the top of the completed landfill. Water flowing from the high point of the landfill will be able to move into the lowered portion of Ditch A. This same water previously would have flowed across the entire cap to the east and west and down the side slopes. The drainage patterns for the watersheds remain unchanged. The improvements in the ability to move water from the high point in the landfill more efficiently will better distribute the runoff to the perimeter channels, with flows being released to the channels at different times. This modification in time for the flows to reach the channels will effectively reduce the peak runoff flow, but will not change the runoff volume. The perimeter channels were designed to handle a higher peak flow; therefore, the reduced flows resulting from the modified cap contours will not result in increase in peak flow depth or velocities in the channels. These same improvements to the flows in the perimeter channels will also allow the landfill ponds to more efficiently capture and treat stormwater runoff, allowing for more sediment settling time in the basins. Section 1.4 has been added to Pages 6 and 7 of the narrative describing the improvements to surface water drainage.

8. *Revise drawing references in the narrative text in Parts I through IV of the permit application to reflect the drawing replacements. Provide "clean" and marked copies of the revised pages.*

Applicant Response: A description of the replacement and modified Attachment has been added to Section 2.3 on Page 8 of the narrative text. Clean and marked copies of the revised pages containing references of the drawing replacements in the narrative text have been included in Appendix A, on page 12, along with a table that provides a listing of existing, replacement and modified drawings.

9. Address the following items regarding replacement drawings:

- **Label the landfill Phases I, II, III, and IV.**

Applicant Response: Labels have been added to Attachments 6-6.1., 9-6.1., and 9-6.1.a.

- **Delete or define the word “polyline” in the legends.**

Applicant Response: The word “polyline” has been deleted from legends.

- **Remove the words “proposed” and “modified” from legends and title blocks to avoid future misunderstanding and uncertainty regarding status of the changes.**

Applicant Response: The words “proposed” and “modified” have been removed from legends and title blocks on Attachments 6-6.1., 9-6.1., and 9-6.1.a.

10. Revise drawing Attachment 9-6.1.b to address the following items on both cross sections:

- **Revise the “Original/Modified Design” label for Area 2 to indicate it refers to final cover elevation before the 2017 interpit wall removal modification issued November 21, 2017, and reestablished by 2022-2023 excavation and drainage modification.**

Applicant Response: Attachment 9-6.1.b has been revised as requested.

- **Revise the “Current Design” label for Areas 2 and 3 to indicate it refers to final cover elevation after the 2017 interpit wall removal modification issued November 21, 2017.**

Applicant Response: Attachment 9-6.1.b has been revised as requested.

- **Revise the “Modified Design” label for Area 3 to indicate it refers to final cover elevation established by 2022-2023 excavation and drainage modification.**

Applicant Response: Attachment 9-6.1.b has been revised as requested.

- **Indicate where in the “Subchapter J Groundwater Monitoring Permit Modification, February 25, 2019” the materials encountered in the borings are characterized as liner to the depth of the borings.**

Applicant Response: The landfill liner system is a performance-based liner system comporting with 30 TAC 330.331(a)(1) and 335. The efficacy of this liner system has already been demonstrated. The 2006 Proposed Site Investigation – Revised Soil Boring Plan (approved by the TCEQ in letter dated June 21, 2006) was submitted by TDSL to meet the requirements of 30 TAC 330.63(e)(4) regarding characterization of the subsurface at the site with regard to excavation depths for the purpose of landfill expansion. The soil boring plan field work was executed in 2006, 2007, and 2010. The Soil Boring Plan specifies the deepest excavation of 550 feet or shallower. The boring plan results were reported and subsurface characterized in the narrative and geotechnical results of the Subchapter J report in accordance with the Soil Boring

Plan. The characterization confirmed that the subsurface conditions to 520-feet MSL meet the requirements for the performance-based liner system of 30 TAC 330.331(a)(1) and 335.

Soil materials encountered in Stratum III, unweathered shale, in the February 25, 2019 Subchapter J Monitoring Modification approved June 28, 2019 are characterized as an insitu liner to the depth of the borings in several places in the final report. The depth of the soil borings was selected in order to drill all the borings into Stratum III of the landfill (Narrative p. 29, para. 2). The deepest boring depth would be to an elevation of 520 feet ASL which is at least 30 feet below the deepest depth of an expanded landfill (Narrative p. 29, para. 3). Stratum III extends downward to the bottom of the borings dictated by the Soil Boring Plan which upon inspection and testing of hydraulic conductivity functions as an insitu liner (Executive Summary p. ii, para. 4). Delineation of the Stratum II/III interface was the most critical strata demarcation in the Soil Boring Plan because it shows the suitability of the floor to serve as an insitu liner (Narrative p. 6, para. 4). The boring logs prepared pursuant to the Subchapter J Soil Boring Plan were used to evaluate the geology and hydrogeology within the entire permit boundary (Narrative p. 7, para. 1). All soil materials encountered in the borings into Stratum III which extends to at least 520 feet ASL are inherently slowly permeable with hydraulic conductivities of less than $1E-7$ (Narrative p. 39, para. 3) which more than meets the requirements for a performance based insitu liner system under 30 TAC Section 330.331(a). In summary, the Subchapter J Groundwater Monitoring report proved that Stratum III to a depth of 520 ASL is practically impervious (Narrative p. 27, para. 1) and therefore an excellent material for an insitu liner. The Subchapter J final approved report supported the excavation of the landfill floor to a depth within 30 feet of the deepest borings (Narrative p. 29, para. 3). This text has been added to Section 2.1, beginning on Page 7. Backup information for this response is provided in new Appendix F, beginning on Page 16.

- ***In Area 1, add a label to the light-weight line to indicate it is the excavation elevation before the 2022-2023 excavation and drainage modification.***

Applicant Response: Attachment 9-6.1.b has been revised as requested.

- ***In Area 1, add a label to the heavy-weight line to indicate it is the excavation elevation after the 2022-2023 excavation and drainage modification.***

Applicant Response: Attachment 9-6.1.b has been revised as requested.

- ***The heavy-weight line in Area 1 appears to extend below the proposed EDE of 597 feet msl. Revise the cross sections to show proposed bottom elevation consistent with proposed EDE.***

Applicant Response: Attachment 9-6.1.b shows the EDE of 579 feet msl. Additional notes and text have been added to Attachment 9-6.1.b to provide clarity and the cross sections have been modified to only show Phases I and II/III.

11. Modify the first paragraph of Appendix B to clarify that the red lines on Attachment 9-6.1.b mark and enclose Areas 1, 2, and 3 on the cross sections, so that recognition of the lines is not solely dependent on color.

Applicant Response: Appendix B has been revised as requested. These changes are included in Appendix B on page 12. Additional text has also been added to describe the history of the final cover elevations changes as noted in Comment 5.

This response is being submitted by email to mswper@tceq.texas.gov on February 24, 2023. As per 30 TAC §305.70(f), one Original, two unmarked copies and one redline copy will be sent via certified mail to the Waste Permits Division (MC-126) and to the Region 11 Office. Also included is the required TCEQ Form 20714.

If you should require additional information or if you have any questions regarding the enclosed application, please contact me or Gary Newton at 512-421-1300.

Sincerely,



Bob Gregory
President

Cc: Charly Fritz, Deputy Director
Megan Henson, MSW Section Manager
Lori Wilson, Region 11 Director

Attachments:

TCEQ Correspondence Cover Sheet Form 20714
TCEQ Core Data Form - Revised 2/24/2023
Modification Application - Revised 2/24/2023
TDSL Modification Tracking No 28105718 Marked
TDSL Modification Tracking No 28105718, dated 2/24/2023 - Clean



Texas Commission on Environmental Quality Waste Permits Division Correspondence Cover Sheet

Date: 02/24/2023

Facility Name: Texas Disposal Systems Landfill,
Composting and Recycling Facility

Permit or Registration No.: 2123

Nature of Correspondence:

Initial/New

Response/Revision to TCEQ Tracking No.:
28105718 (from subject line of TCEQ letter
regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input checked="" type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> Post-Closure Order	<input type="checkbox"/> Closure Certification/Report
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Construction Certification/Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> CCR Registration	<input type="checkbox"/> Extension Request
<input type="checkbox"/> CCR Registration Major Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> CCR Registration Minor Amendment	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 3 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Waste Minimization Report
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> 335.6 Notification	
<input type="checkbox"/> Other:	



TCEQ Core Data Form

For detailed instructions on completing this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (If other is checked please describe in space provided.)		
<input type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input checked="" type="checkbox"/> Other	
2. Customer Reference Number (if issued)	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number (if issued)
CN 600126932		RN 102016698

SECTION II: Customer Information

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		2/24/2023	
<input type="checkbox"/> New Customer <input checked="" type="checkbox"/> Update to Customer Information <input type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).</i>					
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>	
Texas Disposal Systems Landfill, Inc.					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID	10. DUNS Number (if applicable)
0107484000				(9 digits)	
11. Type of Customer:		<input checked="" type="checkbox"/> Corporation		<input type="checkbox"/> Individual	
Government: <input type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other				Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
				<input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Other:	
12. Number of Employees				13. Independently Owned and Operated?	
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input type="checkbox"/> 251-500 <input checked="" type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following					
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant					
15. Mailing Address:		P.O. Box 17126			
City	Austin		State	TX	ZIP
					78760
				ZIP + 4	7126
16. Country Mailing Information (if outside USA)			17. E-Mail Address (if applicable)		
			gnewton@texasdisposal.com		
18. Telephone Number		19. Extension or Code		20. Fax Number (if applicable)	

SECTION III: Regulated Entity Information

21. General Regulated Entity Information <i>(If "New Regulated Entity" is selected, a new permit application is also required.)</i>								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).</i>								
22. Regulated Entity Name <i>(Enter name of the site where the regulated action is taking place.)</i>								
Texas Disposal Systems Landfill, Composting and Recycling Facility								
23. Street Address of the Regulated Entity: <i>(No PO Boxes)</i>		3016 FM 1327						
		City	Creedmoor	State	TX	ZIP	78610	ZIP + 4
24. County								

If no Street Address is provided, fields 25-28 are required.

25. Description to Physical Location:								
26. Nearest City				State		Nearest ZIP Code		
<i>Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).</i>								
27. Latitude (N) In Decimal:			28. Longitude (W) In Decimal:					
Degrees	Minutes		Seconds		Degrees	Minutes		Seconds
N 30	6		4.9942		W 97	45		25.19495
29. Primary SIC Code		30. Secondary SIC Code		31. Primary NAICS Code		32. Secondary NAICS Code		
(4 digits)		(4 digits)		(5 or 6 digits)		(5 or 6 digits)		
4953				562212				
33. What is the Primary Business of this entity? <i>(Do not repeat the SIC or NAICS description.)</i>								
Solid Waste Disposal and Recycling								
34. Mailing Address:		P.O. Box 17126						
		City	Austin	State	TX	ZIP	78760	ZIP + 4
35. E-Mail Address:								
36. Telephone Number			37. Extension or Code			38. Fax Number <i>(if applicable)</i>		
(512) 421-1300						(512) 243-4123		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.


<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input checked="" type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
			TH0787H	
<input checked="" type="checkbox"/> Municipal Solid Waste	<input checked="" type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
Permit 2123/102016698	80958			
<input type="checkbox"/> Sludge	<input checked="" type="checkbox"/> Storm Water	<input checked="" type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
	TXR05U151	2401		
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

SECTION IV: Preparer Information

40. Name:	Gary Newton	41. Title:	General Counsel
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address
(512) 421-1300		() -	gnewton@texasdisposal.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Texas Disposal Systems Landfill, Inc.	Job Title:	President/CEO
Name (In Print):	Bob Gregory	Phone:	(512) 421- 1300
Signature:		Date:	2/24/2023



Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: Texas Disposal Systems Landfill, Composting and Recycling Facility

Permittee or Registrant Name: Texas Disposal Systems Landfill, Inc.

MSW Authorization Number: 2123

Initial Submission Date: 12/07/2022

Revision Date: 02/24/2023

Instructions for completing this form are provided in [form TCEQ-20650-instr](#)¹. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type
<input type="checkbox"/> Initial Submission <input checked="" type="checkbox"/> Notice of Deficiency (NOD) Response
2. Authorization Type
<input checked="" type="checkbox"/> Permit <input type="checkbox"/> Registration
3. Application Type
<input checked="" type="checkbox"/> Modification with Public Notice <input type="checkbox"/> Modification without Public Notice
<input type="checkbox"/> Temporary Authorization (TA) <input type="checkbox"/> Modification for Name Change or Transfer
4. Application Fee
Amount The application fee for a modification or temporary authorization is \$150.
Payment Method
<input type="checkbox"/> Check
<input checked="" type="checkbox"/> Online through ePay portal www3.tceq.texas.gov/epay/
If paid online, enter ePay Trace Number: <u>582EA000498821</u>

¹ www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

5. Application URL

For modifications that require notice (other than those for arid exempt landfills), provide the URL address of a publicly accessible internet web site where the application and all revisions to the application will be posted:

https://texasdisposal.com/wp-content/uploads/2022/12/PermitModification.pdf

6. Party Responsible for Mailing Notice

For modifications that require notice, indicate who will be responsible for mailing notice:

Applicant Agent in Service Consultant

Contact Name: Larry Laine

Title: Director of Facilities

Email Address: llaine@texasdisposal.com

7. Confidential Documents

Does the application contain confidential documents?

Yes No

If "Yes", reference the confidential documents in the application, but submit the confidential documents as an attachment in a separate binder marked "CONFIDENTIAL."

8. Facility General Information

Facility Name: Texas Disposal Systems Landfil, Composting and Recycling Facility

Contact Name: Larry Laine Title: Director of Facilities

MSW Authorization Number (if existing): 2123

Regulated Entity Reference Number: **RN** 102016698

Physical or Street Address: 3016 FM 1327

City: Creedmoor County: Travis State: TX Zip Code: 78610

Phone Number: 512-421-1300

Latitude (Degrees, Minutes, Seconds): 30d06'4.9942" North

Longitude (Degrees, Minutes, Seconds): 97d45'25.19495 West

9. Facility Types

Type I Type IV Type V

Type IAE Type IVAE Type VI

10. Description of the Revisions to the Facility

Provide a brief description of revisions to permit or registration conditions and supporting documents referred to by the permit or registration, and a reference to the specific provisions under which the modification or temporary authorization application is being made. Also, provide an explanation of why the modification or temporary authorization is needed:

The proposed changes improve the leachate collection system drainage and the surface water drainage in the Phase II/III waste unit as well as changes to the excavation plan. The changes are protective of the public health and environment. There is no change in the disposal capacity of the landfill

11. Facility Contact Information

Site Operator (Permittee or Registrant)

Name: Texas Disposal Systems Landfill, Inc.

Customer Reference Number: **CN** 600126932

Contact Name: Larry Laine Title: Director of Facilities

Mailing Address: P.O. Box 17126

City: Austin County: Travis State: TX Zip Code: 78760

Phone Number: 512-421-1300

Email Address: llaine@texasdisposal.com

Texas Secretary of State (SOS) Filing Number: 01047484000

Operator (if different from *Site Operator*)

Name: _____

Customer Reference Number: **CN** _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Texas Secretary of State (SOS) Filing Number: _____

Consultant (if applicable)

Firm Name: _____

Consultant Name: _____

Texas Board of Professional Engineers Firm Registration Number: _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Agent in Service (required for out-of-state applicants)

Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

12. Ownership Status of the Facility

Is this a modification that changes the legal description, the property owner, or the Site Operator (Permittee or Registrant)?

Yes No

If the answer is "No", skip this section.

Does the Site Operator (Permittee or Registrant) own all the facility units and all the facility property?

Yes No

If "No", provide the following information for other owners.

Owner Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

Signature Page

Site Operator or Authorized Signatory

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Bob Gregory Title: President/CEO

Email Address: bgregory@texasdisposal.com

Signature:  Date: 02/24/23

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: _____

Notary

SUBSCRIBED AND SWORN to before me by the said Bob Gregory

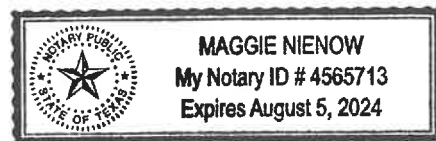
On this 24 day of February, 2023

My commission expires on the 5 day of August, 2024



Notary Public in and for

Travis County, Texas



Note: Application Must Bear Signature and Seal of Notary Public

Attachments for Permit or Registration Modification with Public Notice

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 1. Required attachments.

Required Attachments	Attachment Number
Land Ownership Map	D
Landowners List	C
Marked (Redline/Strikeout) Pages	
Unmarked Revised Pages	

Attachments Table 2. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input checked="" type="checkbox"/> TCEQ Core Data Form(s)	1
<input type="checkbox"/> Signatory Authority Delegation	
<input checked="" type="checkbox"/> Fee Payment Receipt	4
<input type="checkbox"/> Confidential Documents	

Attachments for Permit or Registration Modification without Public Notice, or Temporary Authorization

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 3. Required attachments for modifications.

Required Attachments for Modification	Attachment Number
Marked (Redline/Strikeout) Pages	
Unmarked Revised Pages	

Attachments Table 4. Additional attachments for modifications and temporary authorizations, as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> TCEQ Core Data Form(s)	
<input type="checkbox"/> Signatory Authority Delegation	
<input type="checkbox"/> Fee Payment Receipt	
<input type="checkbox"/> Confidential Documents	

Attachments for Permit or Registration Name Change or Transfer Modification

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 5. Required attachments.

Required Attachments	Attachment Number
TCEQ Core Data Form(s)	
Property Legal Description	
Property Metes and Bounds Description	
Metes and Bounds Drawings	
On-Site Easements Drawing	
Land Ownership Map	
Land Ownership List	
Property Owner Affidavit	
Verification of Legal Status	
Evidence of Competency	

Attachments Table 6. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
<input type="checkbox"/> Signatory Authority Delegation	
<input type="checkbox"/> Fee Payment Receipt	
<input type="checkbox"/> Confidential Documents	
<input type="checkbox"/> Final Plat Record of Property	
<input type="checkbox"/> Assumed Name Certificate	

Appendix D – Landowner’s Map.....1311

Appendix E – Mailing Labels for Notice to Landowners.....1412

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1.0 General

Texas Disposal Systems Landfill, Inc. ("TDSL") per 30 Texas Administrative Code (TAC) Section (§) 305.70(e)(4) has identified the following provisions under which TDSL is submitting this request for a permit modification with notice to MSW Permit No. 2123 for its Texas Disposal Systems Landfill, Composting and Recycling Facility, specifically:

- 30 TAC §305.70(k)(8) for changes to the excavation plan with no increase in the landfill's maximum permitted elevation, no increase in the characterized depth of the approved in-situ performance liner system and no change in the permitted capacity of the landfill. Further, the proposed modification does not alter the effectiveness of the groundwater monitoring system.
- 30 TAC §305.70(k)(9) for changes to the approved final contours and approved final slopes with no height or capacity increase over the maximum permitted height or capacity, with no impact to off-site drainage.
- 30 TAC §305.70(j)(10) for changes to drainage control plan that do not impact offsite drainage.
- 30 TAC §305.70(j)(19) for changes to an existing leachate collection system design.

A description of the proposed changes and an explanation of why these changes are necessary is explained herein as required by 30 TAC §305.70(e)(1) & (2) as well as revisions

to drawings per 30 TAC §305.70 (e)(3). A landowner's list and map current on the day of filing for an area ¼ miles of the ~~Facility~~ facility boundary is also attached.

1.1 Description of the Proposed Changes (30 TAC §305.70(e)(1))

~~TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced slightly to offset the removal of the interpit wall between Phases II and III in a modification issued November 21, 2017. These completion plan following the November 21, 2017 modification this modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.~~

~~Currently the permitted landfill consists of four below grade development phases. The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1. proposed Modified Landfill Completion Plan Contours for Phases I-III are depicted in Attachment 9-6.1.~~ The proposed modification for changes to the excavation plan only affects Phases I through III and Ditch A. Currently fill in Sectors 1 and 2 within Phase III are underway. To accommodate increasing demand and future landfill planning it is beneficial to modify the excavation grade in Sectors 3, 4, and 5 of Phase III. The modified Phase III floor will have an modified minimum elevation of deepest excavation

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~~(EDE) elevation of 579.577 feet MSL msl, which represents the elevation of the bottom of the lowest leachate collection sump. Only one leachate collection sump is being added in this modification, with two sumps at elevation 577 feet msl and one sump at elevation 578 feet msl. The leachate collection sumps are excavated two feet below the proposed lowest elevation of waste placement of 579 feet msl, and are excavated 20 feet wide and 20 feet long and are filled with rock, resulting in no increase in waste capacity. The proposed waste placement elevation increase in excavating results in resulting in a waste capacity increase of 810,041 cubic yards. The final cover contours over the area connecting Phase II and Phase III have also been elevated slightly to return to its originally permitted elevation prior to the '2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume' resulting in a waste capacity increase of 522,137 cubic yards. To offset these capacity surpluses and to maintain access to the western portion of the permit boundary, the final cover contours along Ditch A between Phase I and Phase II have been modified (lowered) resulting in an overall net decrease in waste capacity of 1,332,178 cubic yards for no net gain in landfill volume waste capacity resulting from this modification. To offset these capacity surpluses and to maintain access to the western portion of the permit boundary, the final cover contours along Ditch A between Phase I and Phase II have additionally been modified (lowered) in a decrease in waste capacity of 1,332,178 cubic yards for no net gain in landfill volume waste capacity resulting from this modification.~~

The proposed modification also improves the leachate collection system by lowering the area that will drain to a large sump that will allow for the improved collection of leachate

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from the Phase II/III waste unit as needed. The leachate trenches have been modified to provide more slope on the channels moving leachate to the permanent sump locations. This allows for leachate to flow more efficiently to the collection sumps for removal. A third permanent sump will be added on the northeast corner of the Phase II/III waste unit that allows for improved collection and removal of leachate since the leachate will not have to travel as far as previously designed before being collected from the sump. These changes are illustrated on Attachment 6-6.1 ~~Modified~~ Subsurface Grades, Phase and Phase II/III Leachate Trenches and Permanent Sumps.

1.2 Explanation Detailing Why the Change is Necessary (30 TAC §305.70(e)(2))

The purpose of this proposed permit modification is to extend the life of waste disposal in Phase III. This modification is necessary for future landfill planning and to accommodate increasing demand for landfill disposal capacity resulting from increased flow rates correlated with the Covid pandemic, the 2021 ice storm, the 2022 tornadoes, and area growth trends. Also included in this modification are slight alterations and improvements of the Phase A-1 contours to accommodate surface drainage and interior roadways in order to facilitate continued access to the western portion of the ~~permitted~~ Permitted facility ~~Facility~~. The modification will have no impact on adjacent property owners or community and no impact to off-site drainage.

1.3 Existing Conditions

The landfill is currently operating in compliance with approved MSW Permit #2123. Filling of sequenced sectors has taken place over Phases I and II and partially into Phase III.

1.4 Improvements to Surface Water Drainage

Modifications to the final contours will improve the movement of water from the top of the completed landfill. Water flowing from the high point of the landfill will be able to move into the lowered portion of Ditch A. This same water previously would have flowed across the entire cap to the east and west and down the side slopes. The drainage patterns for the watersheds remain unchanged. The improvements in the ability to move water from the high point in the landfill more efficiently will better distribute the runoff to the perimeter channels, with flows being released to the channels at different times. This modification in the time it takes for the flows to reach the channels will effectively reduce the peak runoff flow, but will not change the runoff volume. The perimeter channels were designed to handle a higher peak flow; therefore, the reduced flows resulting from the modified cap contours will not result in increase in peak flow depth or velocities in the channels. These same improvements to the flows in the perimeter channels will also allow the landfill ponds to more efficiently capture and treat stormwater runoff, allowing for more sediment settling time in the basins.

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2.0 Proposed Modifications

2.1 Revisions to Subsurface Grading Plans (TAC §305.70(k)(8))

The modified grading plan is depicted in Attachment 6-6.1. Specifically, the grading plan for Phase III has been modified to alter subsurface grading deeper into the characterized ~~in-~~ in-situ liner in the northern portion of Phase III resulting in a volumetric waste disposal increase of 810,041 cubic yards.

Soil materials encountered in Stratum III, unweathered shale, in the February 25, 2019 Subchapter J Monitoring Modification approved June 28, 2019 are characterized as an in-situ liner to the depth of the borings in several places in the final report. The depth of the soil borings was selected in order to drill all the borings into Stratum III of the landfill (Narrative p. 29, para. 2). The deepest boring depth would be to an elevation of 520 feet ASL which is at least 30 feet below the deepest depth of an expanded landfill (Narrative p. 29, para. 3). Stratum III extends downward to the bottom of the borings dictated by the Soil Boring Plan which upon inspection and testing of hydraulic conductivity functions as an in-situ liner (Executive Summary p. ii, para. 4). Delineation of the Stratum II/III interface was the most critical strata demarcation in the Soil Boring Plan because it shows the suitability of the floor to serve as an in-situ liner (Narrative p. 6, para. 4). The boring logs prepared pursuant to the Subchapter J Soil Boring Plan were used to evaluate the geology and hydrogeology within the entire permit boundary (Narrative p. 7, para. 1). All soil materials encountered in the borings into Stratum III which extends to at least 520 feet ASL are inherently slowly permeable with hydraulic conductivities of less than 1E-7 (Narrative p. 39, para. 3) which more than meets the requirements for a performance based in-situ liner system under 30

TAC Section 330.331(a). In summary, the Subchapter J Groundwater Monitoring report proved that Stratum III to a depth of 520 ASL is practically impervious (Narrative p. 27, para. 1) and therefore an excellent material for an in-situ liner. The Subchapter J final approved report supported the excavation of the landfill floor to a depth within 30 feet of the deepest borings (Narrative p. 29, para. 3)

2.2 Revisions to Landfill Completion Plan (TAC §305.70(k)(9))

TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced slightly to offset the removal of the interpit wall between Phases II and III. The completion plan following the November 21, 2017 modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.

The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1, Landfill Completion Plan Contours.

The modified completion plan contours are provided in Attachment 9-6.1. The final cover contours have been modified in two areas as depicted on the Attachment 9-6-1.b Cross Sections. The final cover contours over the area connecting Phase II and Phase III have been

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elevated slightly to return to its originally permitted elevation prior to the '2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume' resulting in a waste capacity increase of 522,137 cubic yards.

To offset these capacity surpluses and to maintain access to the western portion of the permit boundary, the final cover contours along Ditch A between Phase I and Phase II have ~~additionally been modified (lowered) in a decrease in waste capacity] of cubic yards~~ resulting in an overall net decrease in waste capacity of 1,332,178 cubic yards for no net gain in landfill volume waste capacity resulting from this modification.

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2.3 Modifications to Existing Permit

The modifications described herein are illustrated on Attachment 6-6.1., Attachment 9-6.1, Attachment 9-6.1.a., and Attachment 9-6.1.b. These proposed attachments ~~supersede and replace existing Attachments 6-6, 6-6A, 9-5, 9-6, not including Phase IV, 9-6A-1, 9-6A-2, 9-6A-2A, 9-6A-3, and 9-6B~~ replace Attachments 6.6A, 9-6A-1, 9-6A-2, 9-6A-3 and 9-6B, and modify Attachments 6-6, 9-5, 9-6 and 9-6A-2A from the original permit application and the 2017 Modification to Permit 2123.

3.0 Appendices

Appendices are included on the following pages.

Appendix A – Permit Pages to be Replaced

Permit Pages to be ReplacedThe following table provides a summary of Attachments from the Original Permit Application in 1988 and the 2017 Inter-Pit Wall Modification that are modified or replaced by this proposed Modification

Permit 2123 Attachments 6-6, 6-6A, 9-5, 9-6, 9-6A-1, 9-6A-2, 9-6A-2A, 9-6A-3, and 9-6B, to be replaced by new revised Attachments 6-6.1, 9-6.1, 9-6.1.a, 9-6.1.b.

<u>ORIGINAL PERMIT 2123 ATTACHMENT</u>	<u>REPLACED BY NEW ATTACHMENT IN 2022 MODIFICATION APPLICATION</u>	<u>MODIFIED BY NEW ATTACHEMENT IN 2022 MODIFICATION APPLICATION</u>
<u>Attachment 6-6</u>		<u>Attachment 6-6.1</u>
<u>Attachment 6-6A</u>	<u>Attachment 6-6.1</u>	
<u>Attachment 9-5</u>		<u>Attachment 9-6.1</u>
<u>Attachment 9-6</u>		<u>Attachment 9-6.1</u>
<u>Attachment 9-6A-1</u>	<u>Attachments 6-6.1 & 9-6.1</u>	
<u>Attachment 9-6A-2</u>	<u>Attachment 6-6.1</u>	
<u>Attachment 9-6A-2A</u>		<u>Attachment 6-6.1</u>
<u>Attachment 9-6A3</u>	<u>Attachment 9-6.1.a</u>	
<u>Attachment 9-6B</u>	<u>Attachment 9-6.1.b</u>	

Attachments included on following pages.

Appendix B - No Net Increase in Capacity Demonstration — Replaced by Revised No Net Increase in Capacity Demonstration 2/15/2023

TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced slightly to offset the removal of the interpit wall between Phases II and III. The completion plan following the November 21, 2017 modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.

The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1, Landfill Completion Plan Contours.

Three areas are identified for modification (depicted by dash lines with labels that mark and enclose Areas 1, 2, and 3 on the cross sections depicted in Attachment 9-6.1.b.) to result in no net gain in Landfill Volume. Calculations were performed using *AutoCAD Civil 3D*.

Area 1 – Modification of design within Phase III (Total Volume Addition 810,041 cubic yards).

Area 2 – Modification of design over Phases II/III to its originally permitted design prior to the ‘2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume’ (Total Volume Addition 522,137 cubic yards).

Area 3 – Modification of design over Phases I/II (over Ditch A) (Total Volume Reduction 1,332,178 cubic yards).

Summary Table

<u>Area ID</u>	<u>Volume Change (cu yds)</u>	<u>Notes</u>
<u>Area 1</u>	<u>810,041</u>	<u>Increase</u>
<u>Area 2</u>	<u>522,137</u>	<u>Increase</u>
<u>Area 3</u>	<u>-1,332,178</u>	<u>Decrease</u>

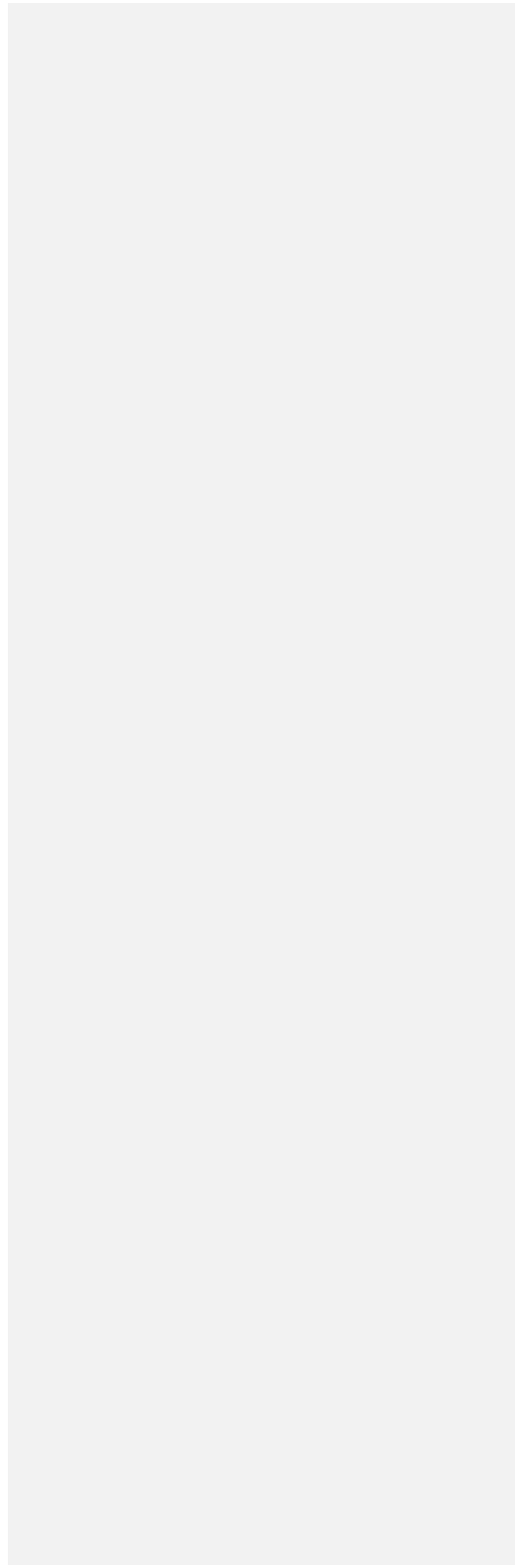
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<u>Difference</u>	<u>0</u>	<u>No Net Change</u>
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Appendix C - Landowner's Name and Address per TCAD



Appendix D - Landowner's Map

The facility boundary map has been revised to expand the facility boundary within the permit boundary. This map is shown in Appendix D. The 2019 buffer zone modification issued December 30, 2019 laterally expanded the permit boundary, and as such, the permit boundary was appropriate to use for notification purposes. 30 Tex. Admin. Code Section 330.59(c)(3)(A) requires the land ownership map to "show all property ownership within ¼ mile of the facility, and all mineral interest ownership under the facility." TCEQ defines the term "facility" as "all contiguous land and structures, other appurtenances, and improvements on the land used for the storage, processing, or disposal of solid waste." 30 Tex. Admin. Code § 330.3(52); see also id. § 330.3(91) (definition of "municipal solid waste facility").

After a review of this definition in conjunction with several other defined terms in TCEQ's rules (including "municipal solid waste landfill unit," "waste management unit boundary," and "buffer zone") and various provision of the Chapter 330 MSW rules, TDSL has redrawn the "facility boundary" to include not just the landfill footprint but also other structures, appurtenances, and improvements, including the composting operation and the appropriate buffer zones. This "facility boundary," shown on Attachment D, is based on TCEQ's definition of "facility" and incorporates all areas traditionally included within the facility boundary.

When the TDSL landfill permit area was expanded in 2019, it specifically identified that the vast majority of the area to the west of the then existing permitted landfill was for ancillary activities, not MSW processing or disposal. Because that area is not used for storage, processing, or disposal of solid waste, and because the entirety of the area is not necessary to meet the buffer zone requirements set out in the Chapter 330 rules, that area does not meet TCEQ's definition of facility, and thus, is not included in the "facility boundary."

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Appendix E - Mailing Labels for Notice to Landowners

Appendix F

Supporting Documentation for Response to Question 10. *“Indicate where in the “Subchapter+
J Groundwater Monitoring Permit Modification, February 25, 2019” the materials encountered
in the borings are characterized as liner to the depth of the borings”*

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Narrative of Proposed Modification

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1.0 General

Texas Disposal Systems Landfill, Inc. (“TDSL”) per 30 Texas Administrative Code (TAC) Section (§) 305.70(e)(4) has identified the following provisions under which TDSL is submitting this request for a permit modification with notice to MSW Permit No. 2123 for its Texas Disposal Systems Landfill, Composting and Recycling Facility, specifically;

- 30 TAC §305.70(k)(8) for changes to the excavation plan with no increase in the landfill’s maximum permitted elevation, no increase in the characterized depth of the approved in-situ performance liner system and no change in the permitted capacity of the landfill. Further, the proposed modification does not alter the effectiveness of the groundwater monitoring system.
- 30 TAC §305.70(k)(9) for changes to the approved final contours and approved final slopes with no height or capacity increase over the maximum permitted height or capacity, with no impact to off-site drainage.
- 30 TAC §305.70(j)(10) for changes to drainage control plan that do not impact offsite drainage.
- 30 TAC §305.70(j)(19) for changes to an existing leachate collection system design.

A description of the proposed changes and an explanation of why these changes are necessary is explained herein as required by 30 TAC §305.70(e)(1) & (2) as well as revisions

to drawings per 30 TAC §305.70 (e)(3). A landowner's list and map current on the day of filing for an area ¼ miles of the facility boundary is also attached.

1.1 Description of the Proposed Changes (30 TAC §305.70(e)(1))

TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced slightly to offset the removal of the interpit wall between Phases II and III. The completion plan following the November 21, 2017 modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.

The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1, Landfill Completion Plan Contours. The proposed modification for changes to the excavation plan only affects Phases I through III and Ditch A. Currently fill in Sectors 1 and 2 within Phase III are underway. To accommodate increasing demand and future landfill planning it is beneficial to modify the excavation grade in Sectors 3, 4, and 5 of Phase III. The modified Phase III floor will have an elevation of deepest excavation (EDE) of 577 feet msl, which represents the elevation of the bottom of the lowest leachate collection sump. Only one leachate collection sump is being added in this modification, with two sumps at elevation 577 feet msl and one sump at elevation 578 feet

msl. The leachate collection sumps are excavated two feet below the proposed lowest elevation of waste placement of 579 feet msl, and are excavated 20 feet wide and 20 feet long and are filled with rock, resulting in no increase in waste capacity. The proposed waste placement elevation increase in excavating results in a waste capacity increase of 810,041 cubic yards. The final cover contours over the area connecting Phase II and Phase III have also been elevated slightly to return to its originally permitted elevation prior to the '2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume' resulting in a waste capacity increase of 522,137 cubic yards. To offset these capacity surpluses and to maintain access to the western portion of the permit boundary, the final cover contours along Ditch A between Phase I and Phase II have been modified (lowered) resulting in an overall net decrease in waste capacity of 1,332,178 cubic yards for no net gain in landfill volume waste capacity resulting from this modification.

The proposed modification also improves the leachate collection system by lowering the area that will drain to a large sump that will allow for the improved collection of leachate from the Phase II/III waste unit as needed. The leachate trenches have been modified to provide more slope on the channels moving leachate to the permanent sump locations. This allows for leachate to flow more efficiently to the collection sumps for removal. A third permanent sump will be added on the northeast corner of the Phase II/III waste unit that allows for improved collection and removal of leachate since the leachate will not have to travel as far as previously designed before being collected from the sump. These changes are

illustrated on Attachment 6-6.1 –Subsurface Grades and Phase II/III Leachate Trenches and Permanent Sumps.

1.2 Explanation Detailing Why the Change is Necessary (30 TAC §305.70(e)(2))

The purpose of this proposed permit modification is to extend the life of waste disposal in Phase III. This modification is necessary for future landfill planning and to accommodate increasing demand for landfill disposal capacity resulting from increased flow rates correlated with the Covid pandemic, the 2021 ice storm, the 2022 tornadoes, and area growth trends. Also included in this modification are slight alterations and improvements of the Phase A-1 contours to accommodate surface drainage and interior roadways in order to facilitate continued access to the western portion of the Permitted Facility. The modification will have no impact on adjacent property owners or community and no impact to off-site drainage.

1.3 Existing Conditions

The landfill is currently operating in compliance with approved MSW Permit #2123. Filling of sequenced sectors has taken place over Phases I and II and partially into Phase III.

1.4 Improvements to Surface Water Drainage

Modifications to the final contours will improve the movement of water from the top of the completed landfill. Water flowing from the high point of the landfill will be able to move into the lowered portion of Ditch A. This same water previously would have flowed across the entire cap to the east and west and down the side slopes. The drainage patterns for the

watersheds remain unchanged. The improvements in the ability to move water from the high point in the landfill more efficiently will better distribute the runoff to the perimeter channels, with flows being released to the channels at different times. This modification in the time it takes for the flows to reach the channels will effectively reduce the peak runoff flow, but will not change the runoff volume. The perimeter channels were designed to handle a higher peak flow; therefore, the reduced flows resulting from the modified cap contours will not result in increase in peak flow depth or velocities in the channels. These same improvements to the flows in the perimeter channels will also allow the landfill ponds to more efficiently capture and treat stormwater runoff, allowing for more sediment settling time in the basins.

2.0 Proposed Modifications

2.1 Revisions to Subsurface Grading Plans (TAC §305.70(k)(8))

The modified grading plan is depicted in Attachment 6-6.1. Specifically, the grading plan for Phase III has been modified to alter subsurface grading deeper into the characterized in-situ liner in the northern portion of Phase III resulting in a volumetric waste disposal increase of 810,041 cubic yards.

Soil materials encountered in Stratum III, unweathered shale, in the February 25, 2019 Subchapter J Monitoring Modification approved June 28, 2019 are characterized as an in-situ liner to the depth of the borings in several places in the final report. The depth of the soil borings was selected in order to drill all the borings into Stratum III of the landfill (Narrative p. 29, para. 2). The deepest boring depth would be to an elevation of 520 feet ASL which is at least 30 feet below the deepest depth of an expanded landfill (Narrative p. 29, para. 3).

Stratum III extends downward to the bottom of the borings dictated by the Soil Boring Plan which upon inspection and testing of hydraulic conductivity functions as an in-situ liner (Executive Summary p. ii, para. 4). Delineation of the Stratum II/III interface was the most critical strata demarcation in the Soil Boring Plan because it shows the suitability of the floor to serve as an in-situ liner (Narrative p. 6, para. 4). The boring logs prepared pursuant to the Subchapter J Soil Boring Plan were used to evaluate the geology and hydrogeology within the entire permit boundary (Narrative p. 7, para. 1). All soil materials encountered in the borings into Stratum III which extends to at least 520 feet ASL are inherently slowly permeable with hydraulic conductivities of less than $1E-7$ (Narrative p. 39, para. 3) which more than meets the requirements for a performance based in-situ liner system under 30 TAC Section 330.331(a). In summary, the Subchapter J Groundwater Monitoring report proved that Stratum III to a depth of 520 ASL is practically impervious (Narrative p. 27, para. 1) and therefore an excellent material for an in-situ liner. The Subchapter J final approved report supported the excavation of the landfill floor to a depth within 30 feet of the deepest borings (Narrative p. 29, para. 3)

2.2 Revisions to Landfill Completion Plan (TAC §305.70(k)(9))

TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced

slightly to offset the removal of the interpit wall between Phases II and III. The completion plan following the November 21, 2017 modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.

The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1, Landfill Completion Plan Contours.

The final cover contours have been modified in two areas as depicted on the Attachment 9-6-1.b Cross Sections. The final cover contours over the area connecting Phase II and Phase III have been elevated slightly to return to its originally permitted elevation prior to the '2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume' resulting in a waste capacity increase of 522,137 cubic yards. To offset these capacity surpluses and to maintain access to the western portion of the permit boundary, the final cover contours along Ditch A between Phase I and Phase II have been modified (lowered) resulting in an overall net decrease in waste capacity of 1,332,178 cubic yards for no net gain in landfill volume waste capacity resulting from this modification.

2.3 Modifications to Existing Permit

The modifications described herein are illustrated on Attachment 6-6.1., Attachment 9-6.1, Attachment 9-6.1.a., and Attachment 9-6.1.b. These proposed attachments replace Attachments 6.6A, 9-6A-1, 9-6A-2, 9-6A-3 and 9-6B, and modify Attachments 6-6, 9-5, 9-6 and 9-6A-2A from the original permit application and the 2017 Modification to Permit 2123.

3.0 Appendices

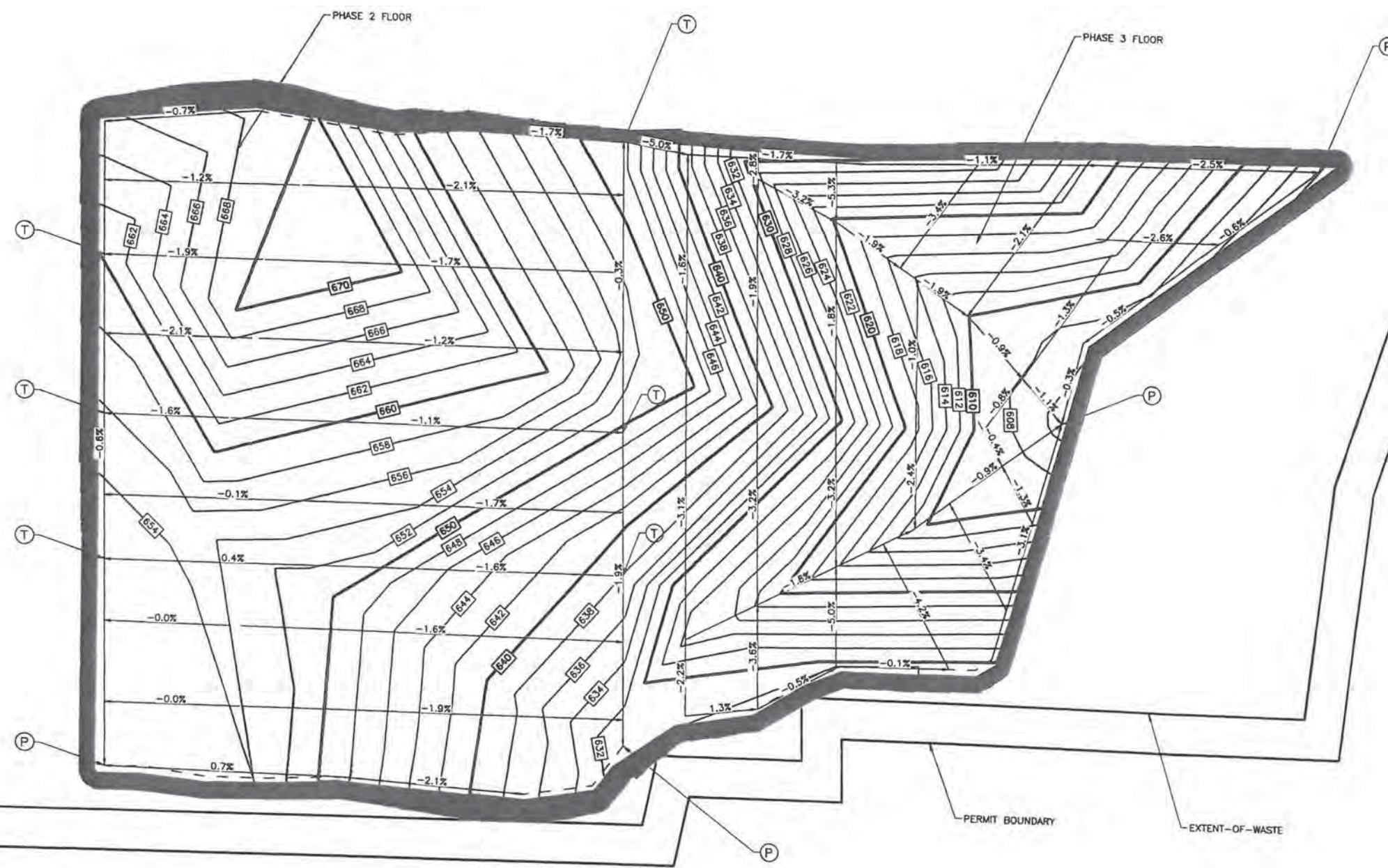
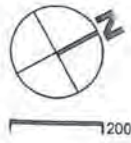
Appendices are included on the following pages.

Appendix A – Permit Pages to Be Replaced

The following table provides a summary of Attachments from the Original Permit Application in 1988 and the 2017 Inter-Pit Wall Modification that are modified or replaced by this proposed Modification

ORIGINAL PERMIT 2123 ATTACHMENT	REPLACED BY NEW ATTACHMENT IN 2022 MODIFICATION APPLICATION	MODIFIED BY NEW ATTACHEMENT IN 2022 MODIFICATION APPLICATION
Attachment 6-6		Attachment 6-6.1
Attachment 6-6A	Attachment 6-6.1	
Attachment 9-5		Attachment 9-6.1
Attachment 9-6		Attachment 9-6.1
Attachment 9-6A-1	Attachments 6-6.1 & 9-6.1	
Attachment 9-6A-2	Attachment 6-6.1	
Attachment 9-6A-2A		Attachment 6-6.1
Attachment 9-6A3	Attachment 9-6.1.a	
Attachment 9-6B	Attachment 9-6.1.b	

Attachments included on following pages.



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

This Attachment 6-6A is replaced by new Attachment 6-6.1 in the 2022 Modification Application

LEGEND

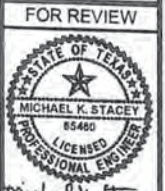
- (P) PERMANENT SUMP
- (T) TEMPORARY SUMP

1 PLAN
1"=200'

NO.	DATE	REVISION	BY

TEXAS DISPOSAL SYSTEMS LANDFILL
PERMIT MODIFICATION
LEACHATE PLAN - PHASE 2 & 3

FOR REVIEW



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 85480 ON 2.1.2017

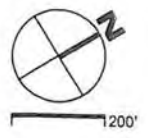
IF SHEET IS IN 11"X17" FORMAT, DIMENSIONS ARE AT 1/2 OF NOTED SCALE.

PROJECT No. 15030
DESIGNED: FMI
DRAWN: NCB
CHECKED: MKS

ATTACHMENT
6-6A
SHEET 1 OF 1

Replaced 2/24/23

FREEMAN-MILLICAN, INC.
ENGINEERS - ARCHITECTS - PLANNERS
1000 N. GARDNER, P.O. BOX 1000, DALLAS, TX 75201



APPROVED TOP COVER TO BE REDUCED

APPROVED PHASE 2 FLOOR

WEDGE TO BE REMOVED

APPROVED PHASE 3 FLOOR

PROPOSED TOP COVER REDUCTION

EXTENT-OF-WASTE

PERMIT BOUNDARY

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00



This Attachment 9-6A-1 is replaced by new Attachments 6-6.1 and 9-6.1 in the 2022 Modification Application

The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

Replaced 2/24/23

No.	DATE	REVISION	BY



TEXAS DISPOSAL SYSTEMS LANDFILL PERMIT MODIFICATION

GRADING PLAN - COMBINED SURFACES

FOR REVIEW

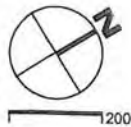


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 65460 ON 9.1.2017

PROJECT No. 15030
DESIGNED: FMI
DRAWN: NCB
CHECKED: MKS

ATTACHMENT 9-6A-1
SHEET 1 OF 2

1 PLAN 1"=200'



1/200'

APPROVED TOP COVER TO BE REDUCED

APPROVED PHASE 2 FLOOR

WEDGE TO BE REMOVED

APPROVED PHASE 3 FLOOR

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00

EXTENT-OF-WASTE

PERMIT BOUNDARY



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

This Attachment 9-6A-2 is replaced by new Attachment 6-6.1 in the 2022 Modification Application

Replaced 2/24/23

1 PLAN
1"=200'

NO.	DATE	REVISION	BY

FREEMAN-MILLICAN, INC.
 ENGINEERS - ARCHITECTS - PLANNERS
 1700 N. WINDYBROOK, STE. 500 DALLAS, TX 75201 PH 214.393.3993 TX REG. ENG. 1287

TEXAS DISPOSAL SYSTEMS LANDFILL
 PERMIT MODIFICATION
 GRADING PLAN - PHASE 2 AND PHASE 3 EXCAVATION GRADES

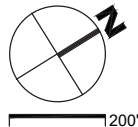
FOR REVIEW

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 65460 ON 2-1-2017

IF SHEET IS IN 11"x17" FORMAT, DRAWINGS ARE AT 1/2 OF NOTED SCALE.

PROJECT No. 15030
 DESIGNED: FMI
 DRAWN: NCB
 CHECKED: MKS

ATTACHMENT
 9-6A-2
 SHEET 1 OF 2



1200'

APPROVED TOP COVER TO BE REDUCED

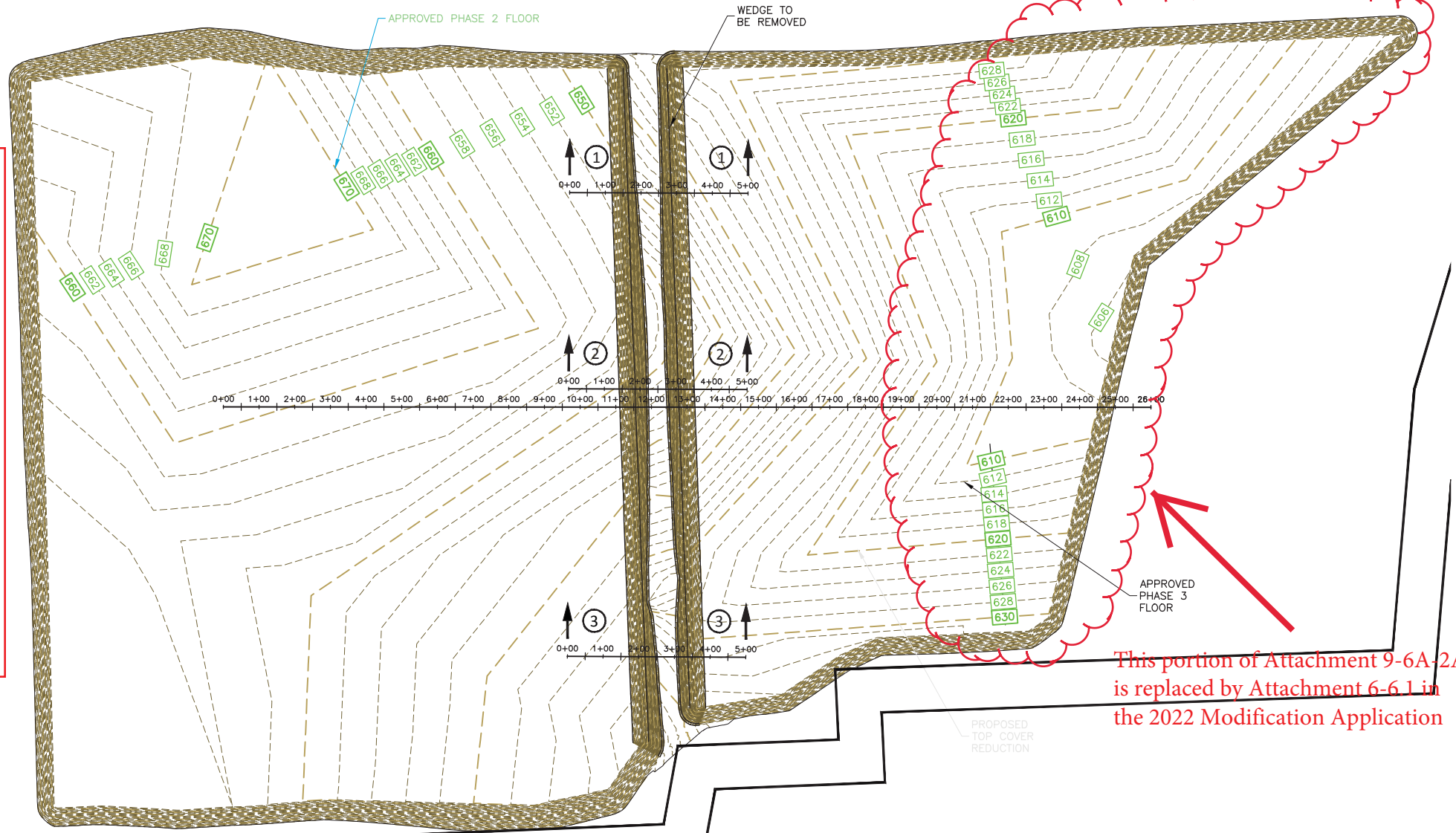
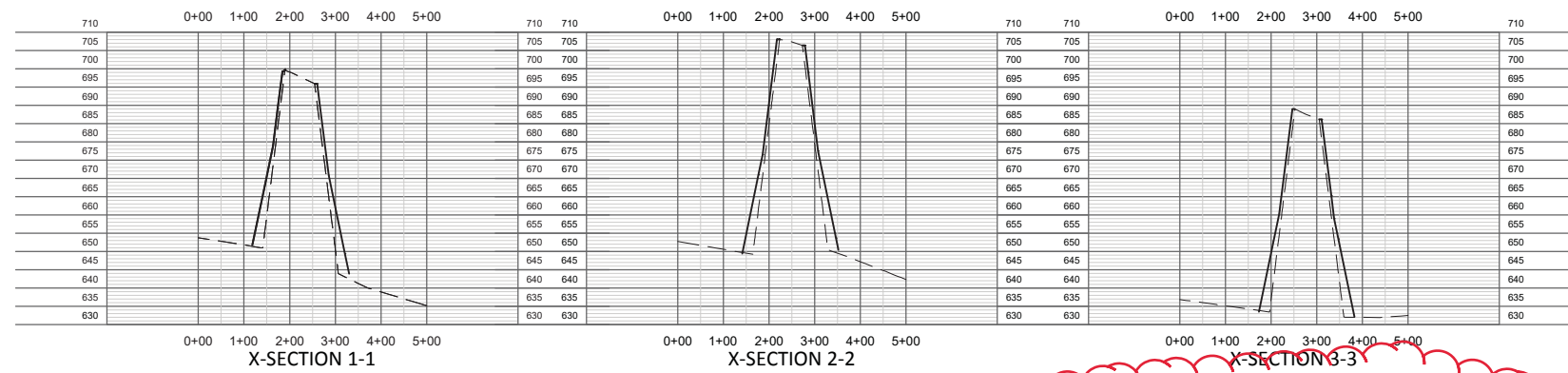
Net Approximate Volume of Interpit Wall removal/floor fill - 437,500 cubic yards

Net Approximate Volume of Sidewall Liner and Cover along both faces of Phase II and III interpit wall - 76,000 cubic yards

Net Approximate Volume of Sidewall Liner and Cover at both ends of Phase II and III interpit wall - 7,000 cubic yards

Total of Interpit wall related Volume - 520,500 cubic yards

Net Approximate Volume of Landfill Cover Removal - 522,000 cubic yards



This portion of Attachment 9-6A-2A is replaced by Attachment 6-6.1 in the 2022 Modification Application

PERMIT BOUNDARY

EXTENT-OF-WASTE



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023.
Hill Engineering P.L.L.C., TBPE Registration No. 3532

Revised 2/24/23

1 PLAN 1"=200'

DATE	REVISION	BY

TEXAS DISPOSAL SYSTEMS LANDFILL PERMIT MODIFICATION

GRADING PLAN - PHASE 2 AND PHASE 3 EXCAVATION GRADES

FOR REVIEW

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 65460 ON 10.25.2017

IF SHEET IS IN 11"X17" FORMAT, DRAWINGS ARE AT 1/2 OF NOTED SCALE.

PROJECT No. 15030
DESIGNED: FMI
DRAWN: NCB
CHECKED: MKS

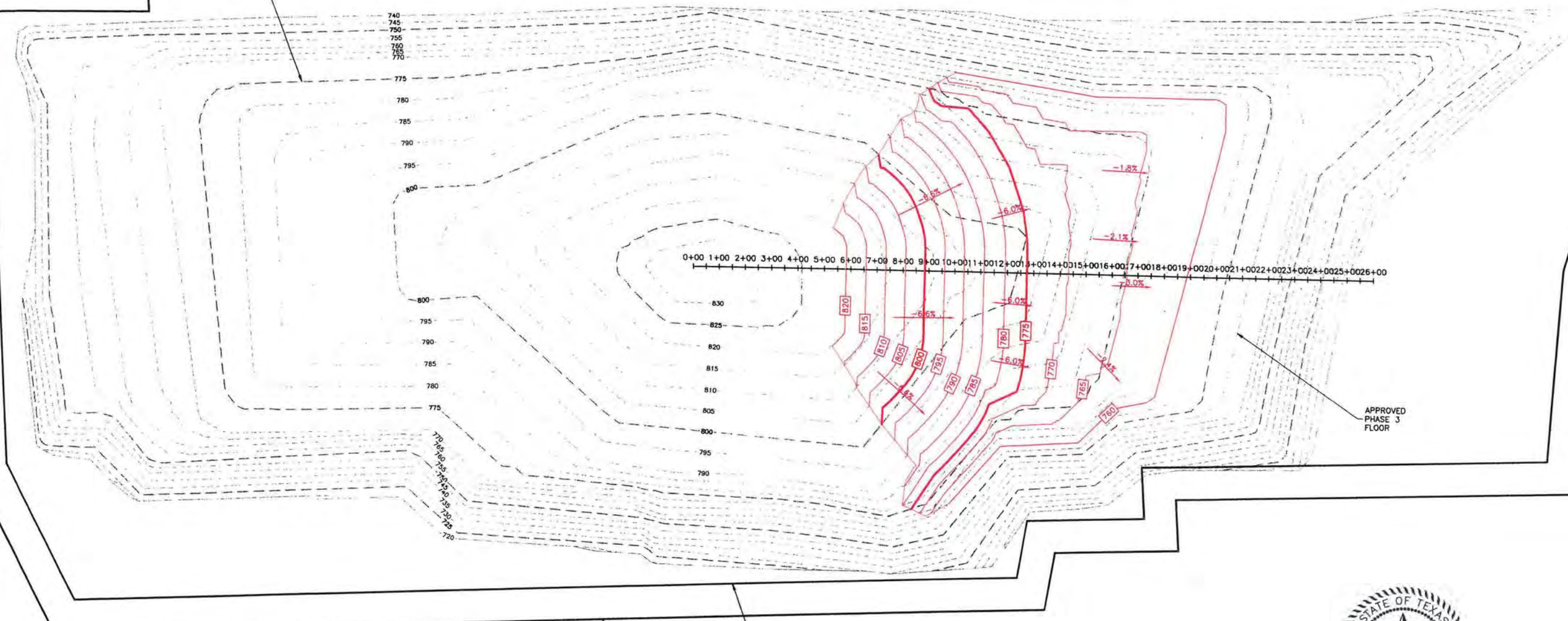
ATTACHMENT 9-6A-2A

SHEET 1 OF 2

Freeman-Millican, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
1000 JARVIS RD., STE. 600 CALUMAS, TX 75002 PH: 409.383.8888 TX REG. NO. 00113207



APPROVED TOP COVER TO BE REDUCED



This Attachment 9-6A-3 is replaced by new Attachment 9-6.1a in the 2022 Modification Application

The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

Replaced 2/24/23

1 PLAN 1"=200'

No.	DATE	REVISION	BY

TEXAS DISPOSAL SYSTEMS LANDFILL
PERMIT MODIFICATION

GRADING PLAN - PROPOSED TOP COVER REDUCTION

FOR REVIEW

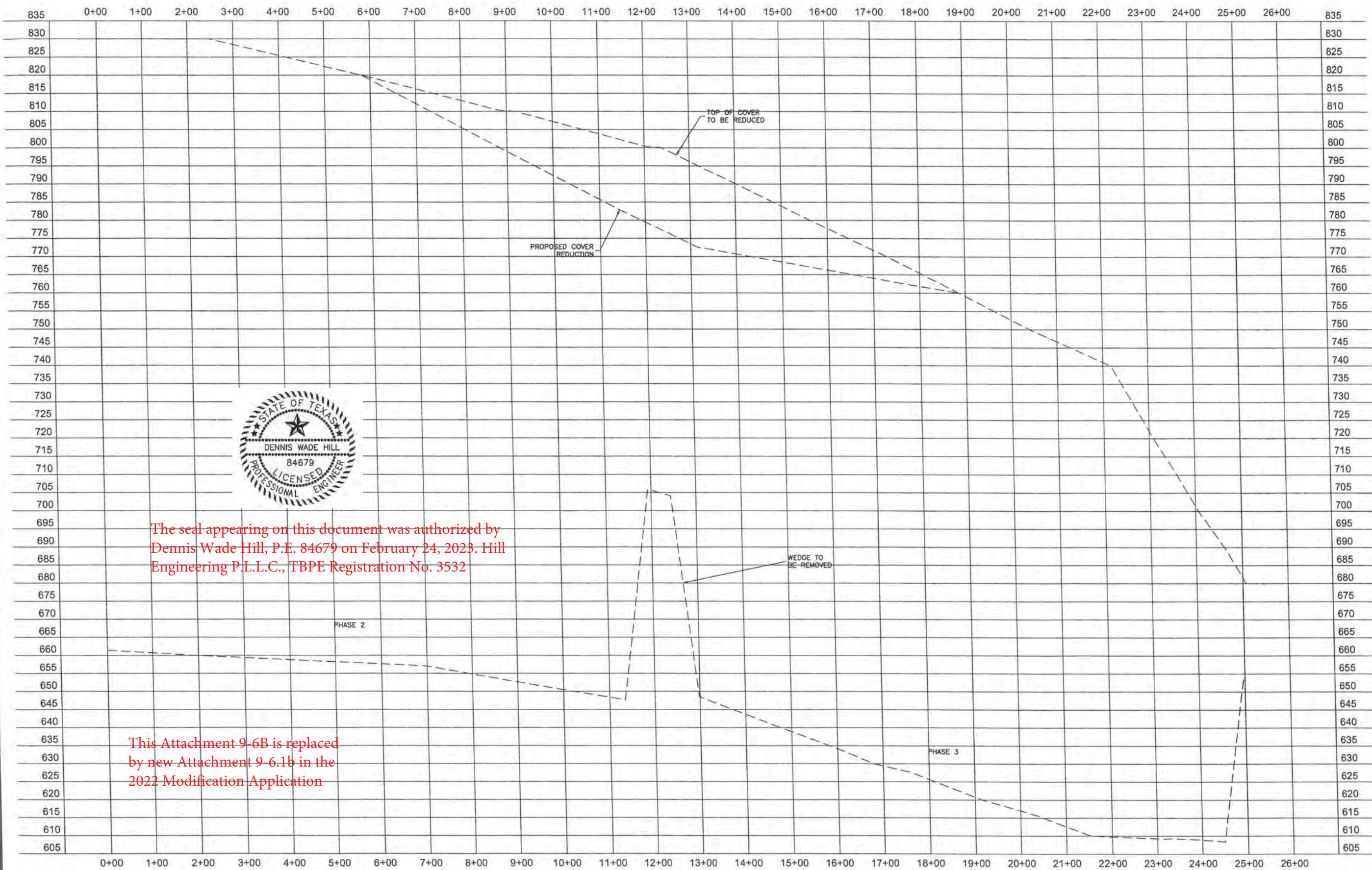
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 65460 ON 9.1.2017

IF SHEET IS IN 11"x17" FORMAT, DRAWINGS ARE AT 1/2 OF NOTED SCALE.

PROJECT No. 15030
DESIGNED: FMI
DRAWN: NCB
CHECKED: MKS

ATTACHMENT
9-6A-3
SHEET 1 OF 2

Freeman-Millican, Inc.
ENGINEERS - ARCHITECTS - PLANNERS
1700 N. ARNOLD RD., STE. 200 DALLAS, TX 75243 PH: 214.633.6666 TX REG. NO. 0011327



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

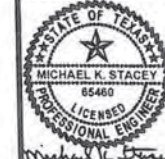
This Attachment 9-6B is replaced by new Attachment 9-6.1b in the 2022 Modification Application

No.	DATE	REVISION	BY



TEXAS DISPOSAL SYSTEMS LANDFILL
PERMIT MODIFICATION
GRADING PLAN - TOP COVER

FOR REVIEW



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL K. STACEY, P.E. NO. 65460 ON 2/24/23

IF SHEET IS IN 11"x17" FORMAT, DRAWINGS ARE AT 1/2" OF NOTED SCALE.
PROJECT No. 15030
DESIGNED: FMI
DRAWN: NCB
CHECKED: MKS

ATTACHMENT
9-6B
SHEET 2 OF 2

1 PROFILE
1"=100'

Replaced 2/24/23



Michael K. Stacey
9/1/17

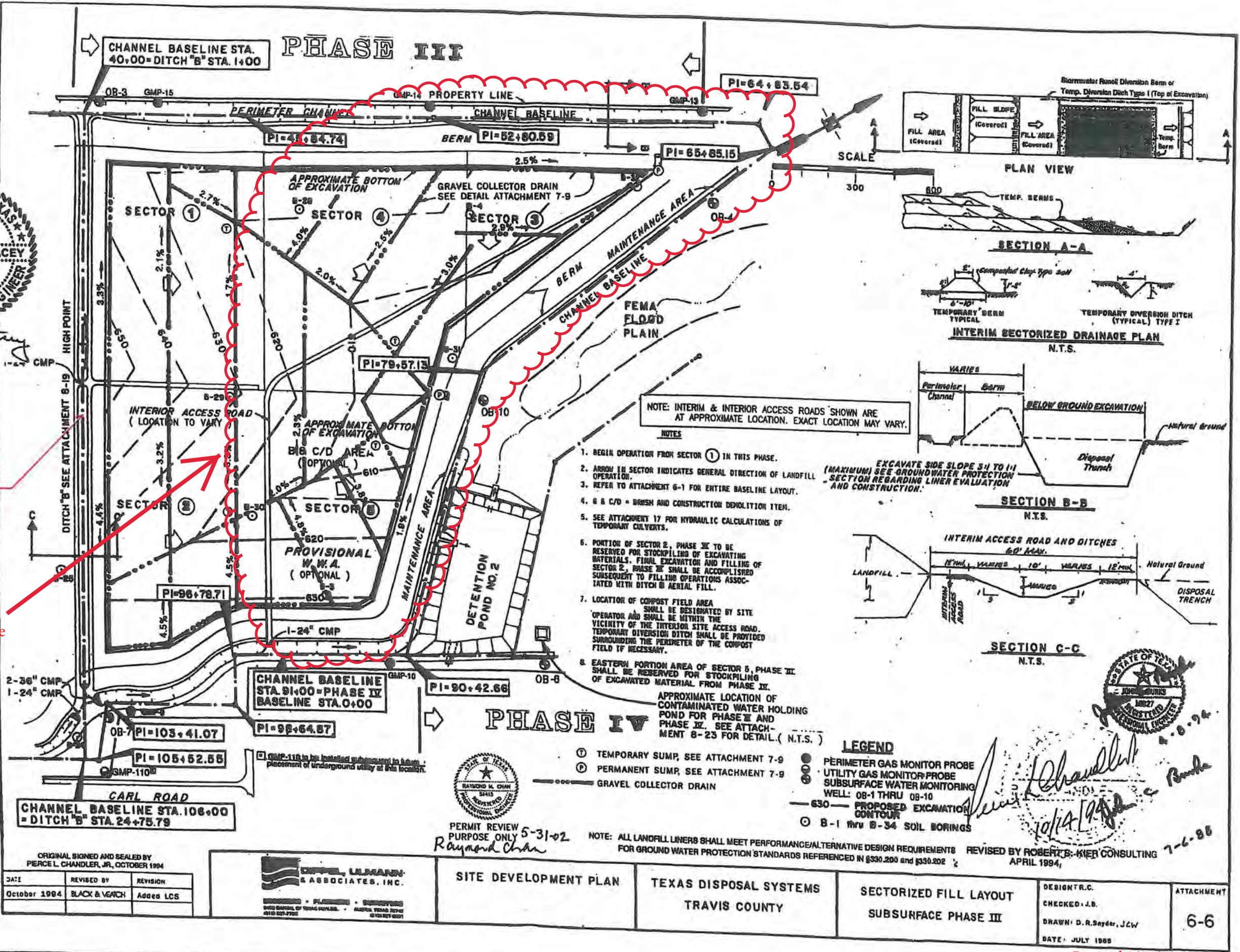
Interpit wall to be removed per Attachment 6-6A, 9-6A-1, 2, 3, and 9-6B shown in permit modification to remove wall dated September 2017

This portion of Attachment 6-6 is modified by Attachment 6-6.1 of the 2022 Modification Application



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532

May 31, 2002 - 2:49pm
Drawing name: 0301-0008-0318-06-inter-removal/plan/UTRICH-1-04.dwg



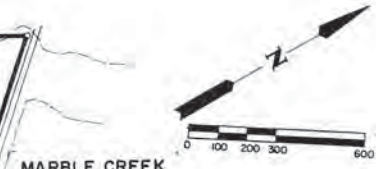
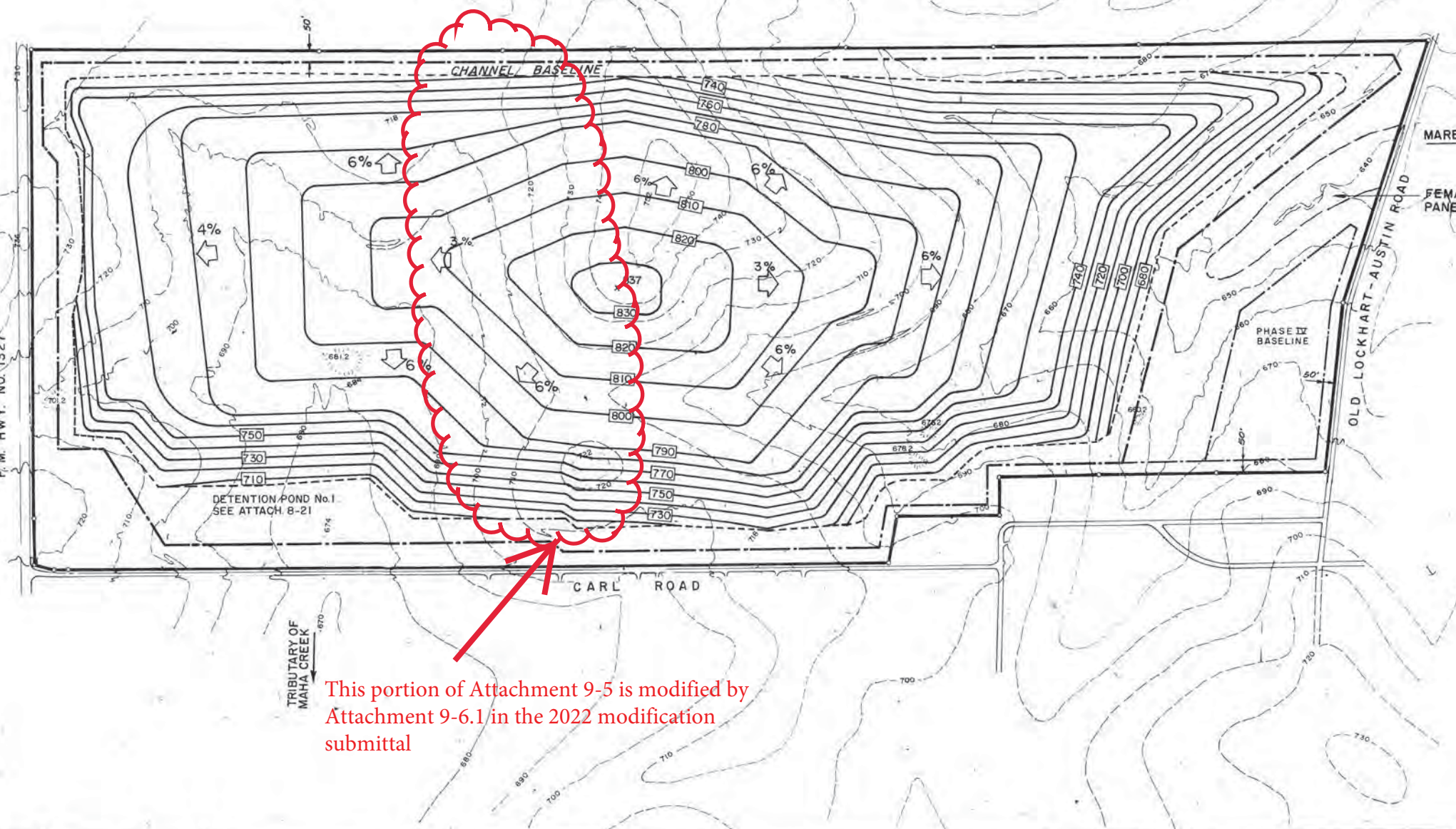
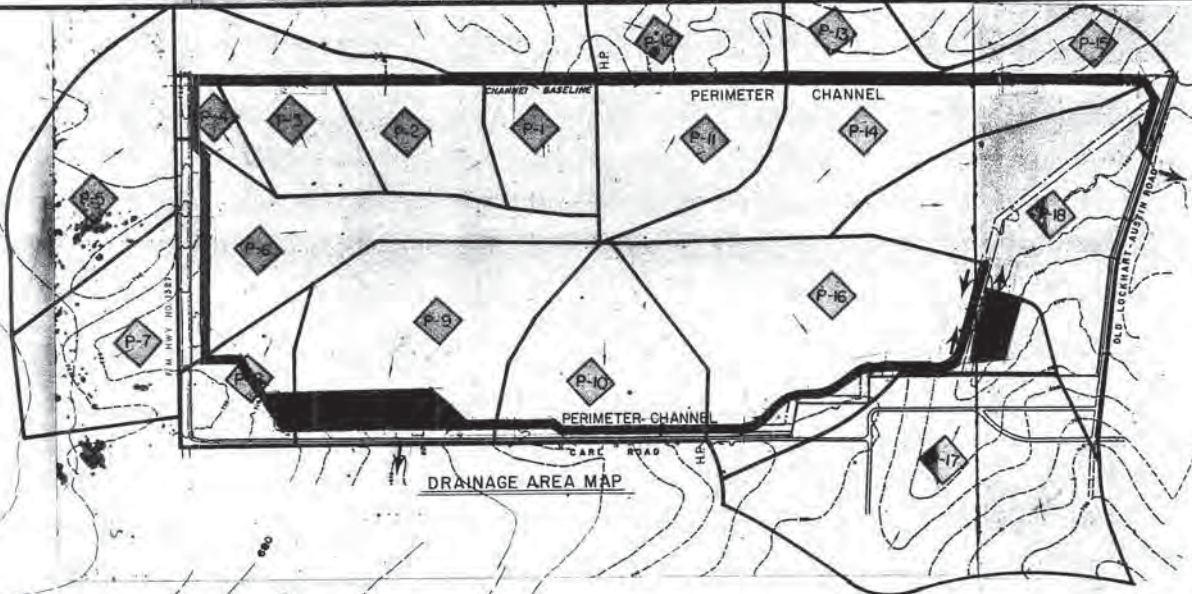
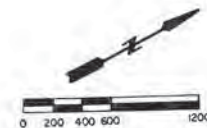
25-YEAR DRAINAGE CALCULATIONS CHART

AREA NO.	AREA (AC)	T.C. C	I min	I in/hr	Q cfs	COMBINED AREA NO.	ACCUMULATED AREA (AC)	COMPOSITE C	TOTAL T.C. min	I in/hr	TOTAL Q cfs
P-1	15.11	0.70	20	6.67	70.55						
P-2	18.43	0.70	20	6.67	86.05	P-1 & P-2	33.54	0.70	20	6.67	156.6
P-3	22.99	0.56	20	6.67	85.87	P-1 to P-3	56.53	0.64	20	6.67	241.3
P-4	3.79	0.70	20	6.67	17.70	P-1 to P-4	60.32	0.64	20	6.67	257.5
P-5	36.56	0.33	11	8.91	107.50	P-1 to P-5	96.88	0.52	20	6.67	336.0
P-6	35.82	0.70	20	6.67	167.24	P-1 to P-6	132.70	0.57	20	6.67	503.3
P-7	27.98	0.38	9	9.67	102.82	P-1 to P-7	160.68	0.54	20	6.67	578.7
P-8	13.09	0.70	20	6.67	61.12	P-1 to P-8	173.77	0.55	20	6.67	637.5
P-9	47.29	0.70	20	6.67	220.80						
P-10	32.21	0.70	20	6.67	150.39	P-1 to P-10	253.27	0.60	20	6.67	1013.6
P-11	24.78	0.70	20	6.67	115.70						
P-12	30.20	0.33	11	8.91	88.80	P-11 & P-12	54.98	0.50	20	6.67	183.4
P-13	14.07	0.33	11	8.91	41.37	P-11 to P-13	69.05	0.47	20	6.67	216.5
P-14	39.55	0.70	20	6.67	184.66						
P-15	8.55	0.33	11	8.91	25.14	P-11 to P-15	117.15	0.54	20	6.67	421.9
P-16	59.51	0.70	20	6.67	277.85						
P-17	63.73	0.35	13	8.27	184.47	P-16 & P-17	123.24	0.52	20	6.67	427.4
P-18	50.12	0.70	20	6.67	234.01	P-11 to P-15, P-18	167.27	0.59	20	6.67	656.0

WHERE $I = \frac{b}{(tc + d)^e}$ b=87 d=8.6 e=0.766



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532



FEMA FLOODPLAIN PANEL No. 481026 0220B

- LEGEND**
- PROPERTY BOUNDARY
 - TOE OF 4:1 WASTE FILL SLOPE
 - PROPOSED CONTOUR
 - SHEET FLOW WITH SLOPE
 - EXISTING CONTOURS

- NOTES:**
1. REFER TO ATTACH 8-1 THRU 7 FOR BUFFER ZONE PLAN AND PROFILE.
 2. REFER TO ATTACH 6-12 FOR MAIN ACCESS ROAD PLAN AND PROFILE.
 3. REFER TO ATTACH 8-8 THRU 17 FOR BUFFER ZONE CROSS SECTIONS.
 4. REFER TO ATTACH 8-18 & 8-19 FOR DITCH "A" & "B" PROFILES.

This portion of Attachment 9-5 is modified by Attachment 9-6.1 in the 2022 modification submittal



SITE DEVELOPMENT PLAN

TEXAS DISPOSAL SYSTEMS
TRAVIS COUNTY

LANDFILL COMPLETION PLAN
PHASE I, II & III
(FINAL)

DESIGN: R.C.
CHECKED: J.C.B.
DRAWN: D.R. Snyder / R.T.
DATE: FEBRUARY 1988

ATTACHMENT
9-5
Revised 2/24/23

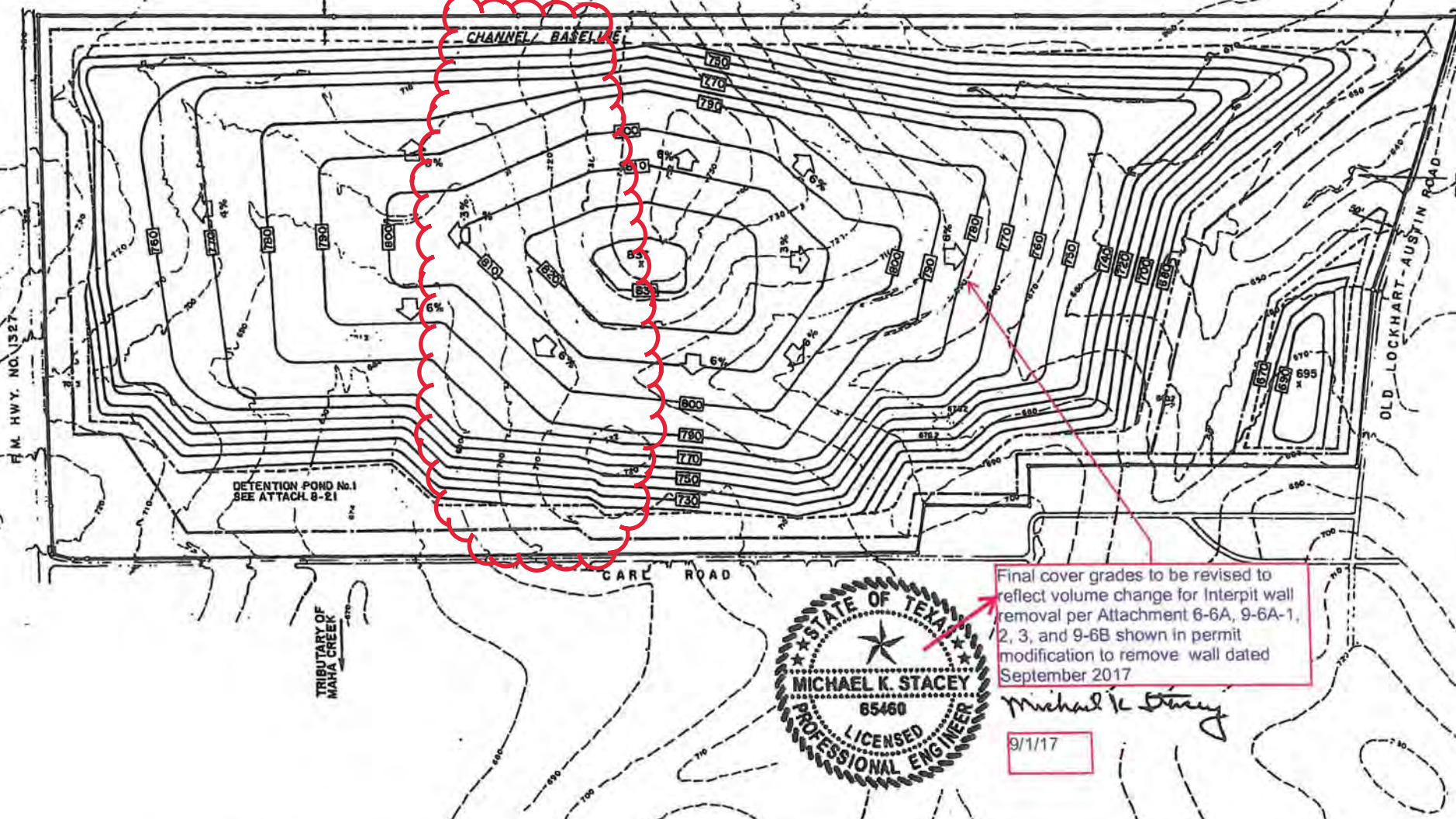
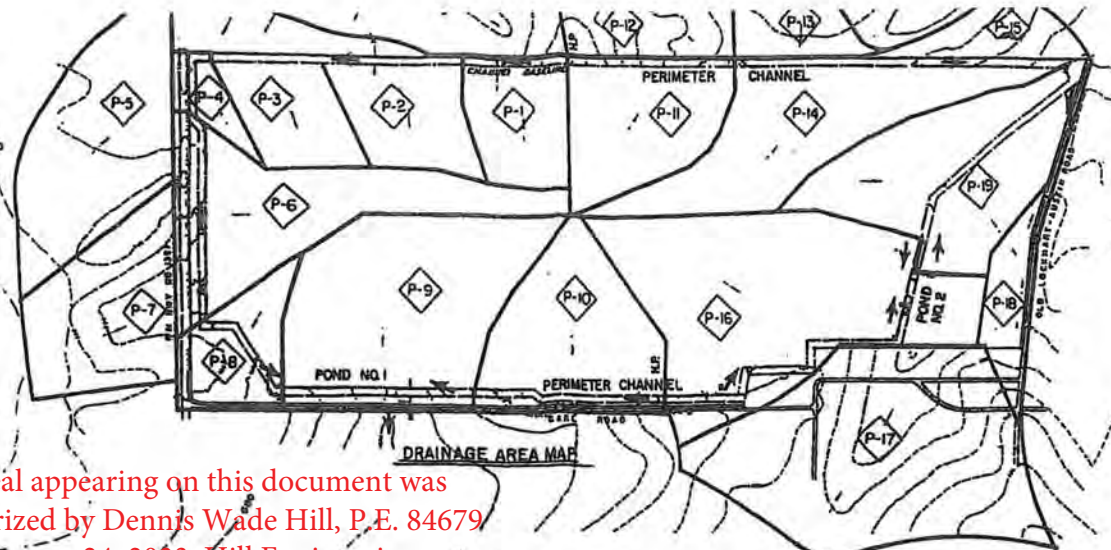
AREA NO.	AREA (AC)	T.C. C	I in/hr	Q cfs	COMBINED AREA NO.	ACCUMULATED AREA (AC)	COMPOSITE C	TOTAL T.C. min	I in/hr	TOTAL Q cfs	
P-1	15.11	0.70	20	6.67	70.55						
P-2	18.43	0.70	20	6.67	86.05	P-1 & P-2	33.54	0.70	20	6.67	156.6
P-3	22.99	0.56	20	6.67	85.07	P-1 to P-3	56.53	0.64	20	6.67	241.3
P-4	3.79	0.70	20	6.67	17.70	P-1 to P-4	60.32	0.64	20	6.67	257.5
P-5	36.56	0.33	11	8.91	107.50	P-1 to P-5	96.88	0.52	20	6.67	336.0
P-6	35.82	0.70	20	6.67	167.24	P-1 to P-6	132.70	0.57	20	6.67	583.3
P-7	27.98	0.36	9	9.67	102.82	P-1 to P-7	160.68	0.54	20	6.67	578.7
P-8	13.09	0.70	20	6.67	61.12	P-1 to P-8	173.77	0.55	20	6.67	637.5
P-9	47.29	0.70	20	6.67	220.80						
P-10	32.21	0.70	20	6.67	150.39	P-1 to P-10	253.27	0.60	20	6.67	1013.6
P-11	24.78	0.70	20	6.67	115.70						
P-12	30.20	0.33	11	8.91	86.80	P-11 & P-12	54.98	0.80	20	6.67	183.4
P-13	14.07	0.33	11	8.91	41.37	P-11 to P-13	89.05	0.47	20	6.67	218.5
P-14	39.55	0.70	20	6.67	184.66						
P-15	8.55	0.33	11	8.91	25.14	P-11 to P-15	117.13	0.34	20	6.67	421.9
P-16	65.39	0.70	20	6.67	305.31						
P-17	63.73	0.35	13	8.27	184.47	P-16 & P-17	123.24	0.52	20	6.67	427.4
P-18	7.44	0.70	20	6.67	34.74						
P-19	36.80	0.70	20	6.67	171.82	P-11 to P-15 P-18, P-19	161.39	0.58	20	6.67	624.4

WHERE $I = \frac{b}{(tc + d)^2}$ $b=87$ $d=0.6$ $e=0.766$

This portion of Attachment 9-6 is modified by new Attachment 9-6.1 included in the 2022 Modification Application



The seal appearing on this document was authorized by Dennis Wade Hill, P.E. 84679 on February 24, 2023. Hill Engineering P.L.L.C., TBPE Registration No. 3532



FEMA FLOODPLAIN PANEL No. 481026 0220B

- LEGEND**
- PROPERTY BOUNDARY
 - TOE OF 4:1 WASTE FILL SLOPE
 - PROPOSED CONTOUR
 - SHEET FLOW WITH SLOPE
 - EXISTING CONTOURS

- NOTES:**
1. REFER TO ATTACH. 8-1 THRU 7 FOR BUFFER ZONE PLAN AND PROFILE.
 2. REFER TO ATTACH. 8-12 FOR MAIN ACCESS ROAD PLAN AND PROFILE.
 3. REFER TO ATTACH. 8-8 THRU 17 FOR BUFFER ZONE CROSS SECTIONS.
 4. REFER TO ATTACH. 8-18 & 8-19 FOR DITCH "A" & "B" PROFILES.

Final cover grades to be revised to reflect volume change for Interpit wall removal per Attachment 6-6A, 9-6A-1, 2, 3, and 9-6B shown in permit modification to remove wall dated September 2017



Michael K. Stacey
9/1/17

John C. Bunk
7-6-88

DIPPEL, ULMANN & ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
2400 CAPITAL OF TEXAS HWY. SO. • AUSTIN, TEXAS 78748

SITE DEVELOPMENT PLAN

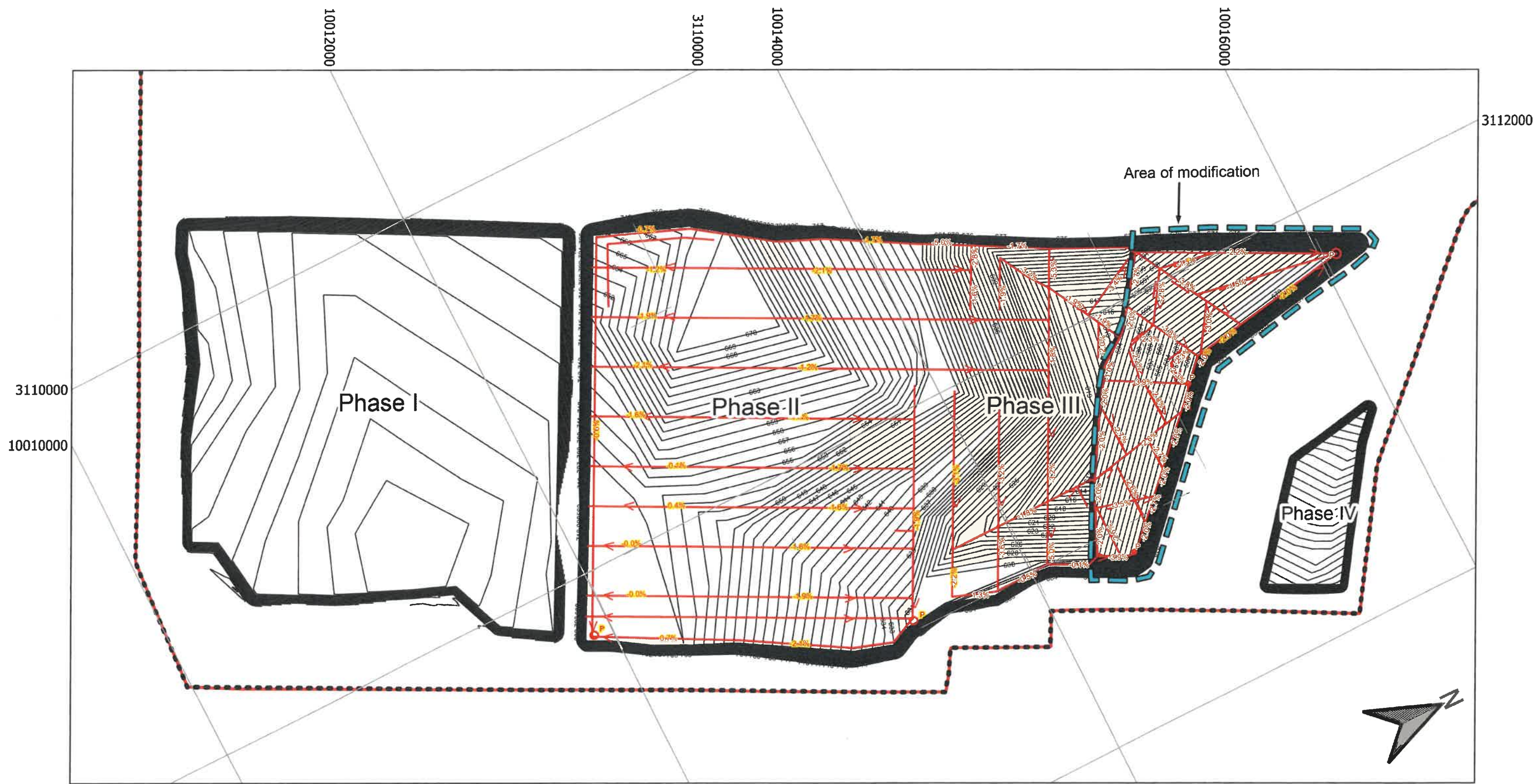
TEXAS DISPOSAL SYSTEMS
TRAVIS COUNTY

LANDFILL COMPLETION PLAN
PHASE IV
(FINAL)

DESIGN: R.C.
CHECKED: J.C.B.
DRAWN: D.R. Snyder / R.T.
DATE: FEBRUARY, 1988

ATTACHMENT
9-6

Revised 2/24/23



Dennis Wade Hill
 2/24/23 TX.BPE.Frm.3532

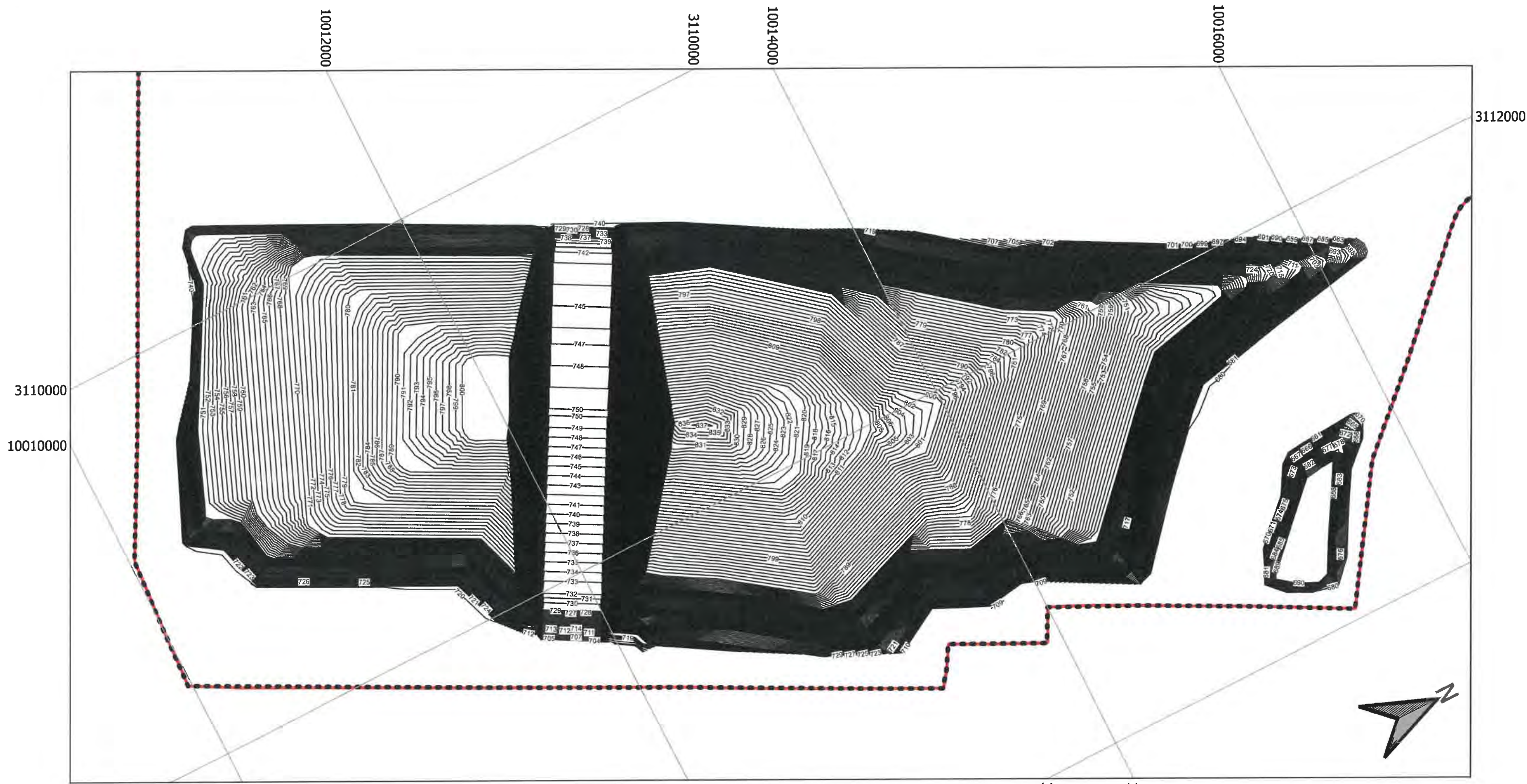
Legend

- Leachate Trenches and Permanent Sumps
- Subsurface Grades
- Facility Boundary
- Permit Boundary



NOTES:
 - LOCATION MAP COORDINATES NAD83 TEXAS STATE PLANE CENTRAL (FEET)

	Attachment 6-6.1. Subsurface Grades and Phase II/III Leachate Trenches and Permanent Sumps
	Texas Disposal Systems Landfill, Inc. Type I MSW Landfill, Creedmoor, Texas
Project No.: 2123 Date: Revised 2/24/2023	



Dennis Wade Hill
 2/24/23 TXBPE Firm 3532

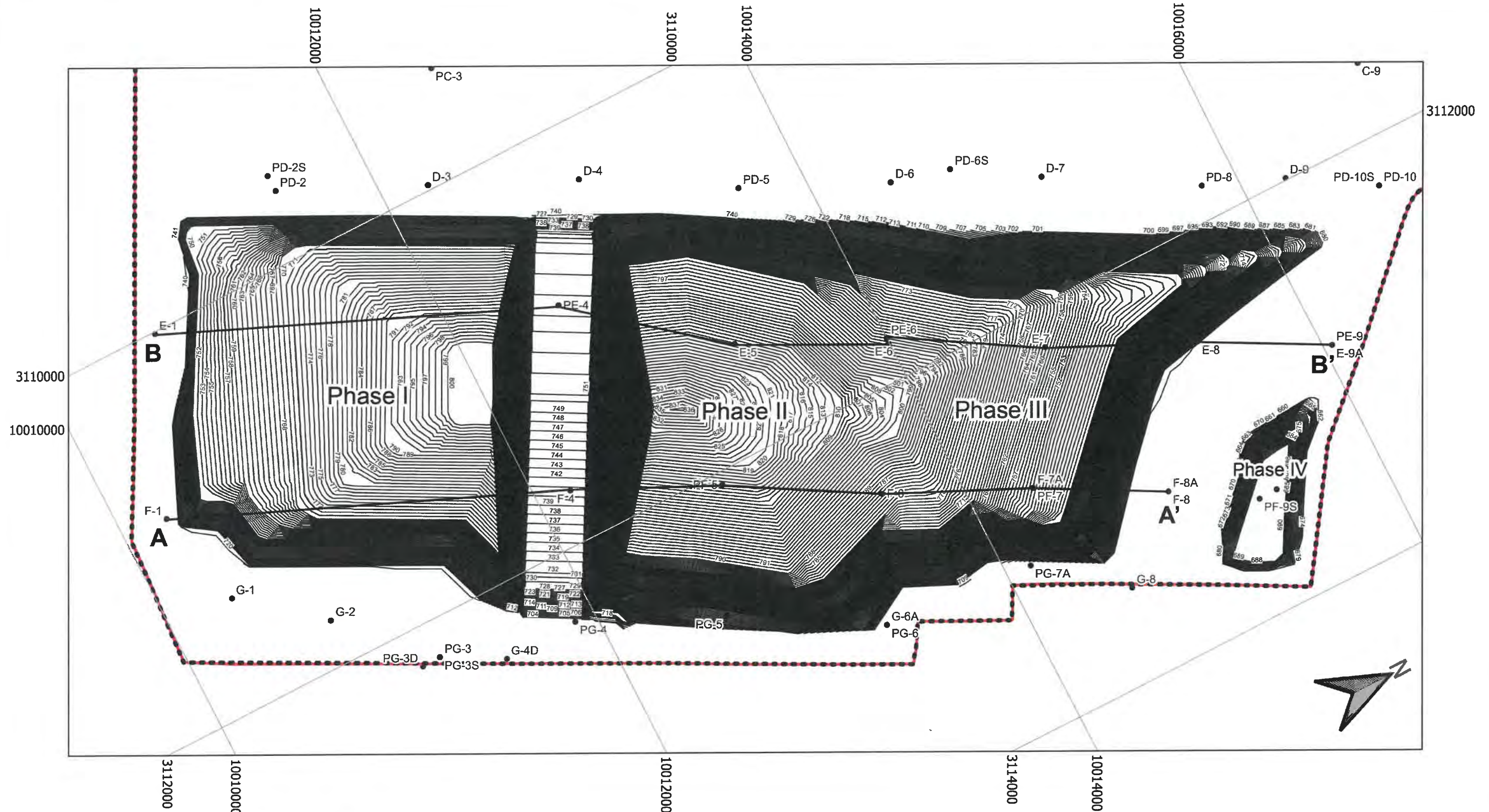
Legend

- Facility Boundary
- Permit Boundary

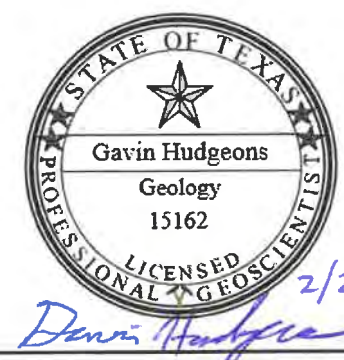


NOTES:
 - LOCATION MAP COORDINATES NAD83 TEXAS STATE PLANE CENTRAL (FEET)

 Texas Disposal Systems Landfill, Inc.	Attachment 9-6.1. Landfill Completion Plan Contours	
	Texas Disposal Systems Landfill, Inc. Type I MSW Landfill, Creedmoor, Texas	
	Project No.: 2123Mod Date: Revised 2/24/2023	



NOTES:
 - LOCATION MAP COORDINATES NAD83 TEXAS STATE PLANE CENTRAL (FEET)

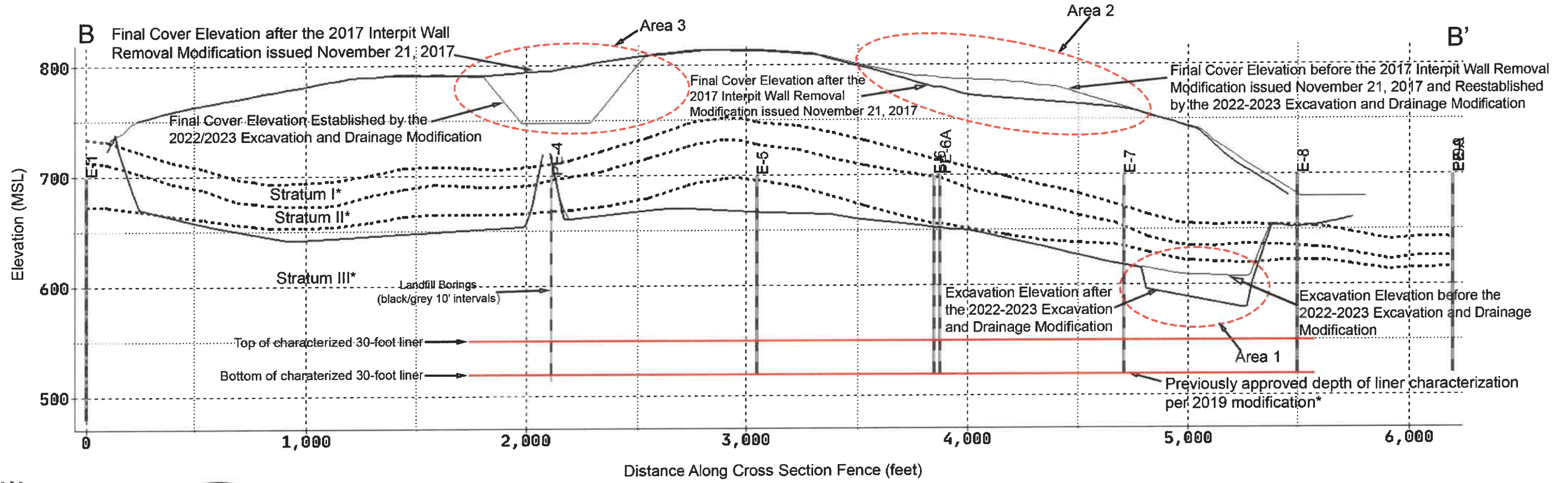
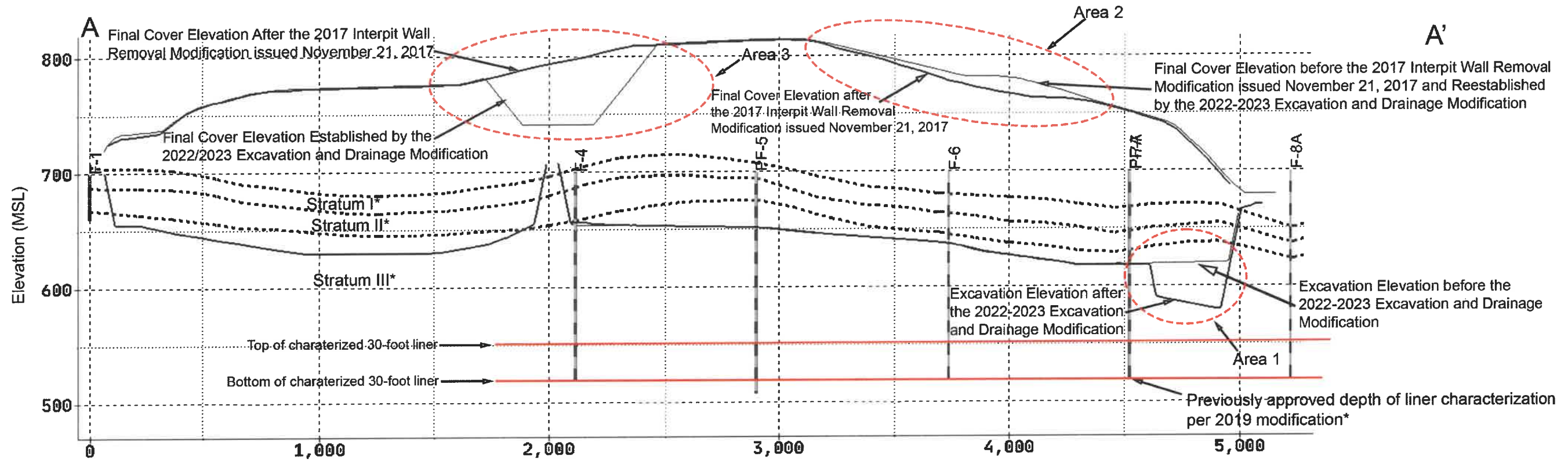


Legend

- Facility Boundary
- Permit Boundary



	Attachment 9-6.1.a. Phase I, II and III Cross Section Location Map	
	Texas Disposal Systems Landfill, Inc. Type I MSW Landfill, Creedmoor, Texas	
	Project No.: 2123Mod Date: Revised 2/24/2023	



Notes:

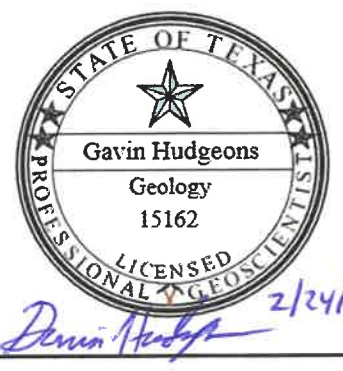
Three areas identified for modification (depicted by dash red lines) to result in no net gain in Landfill Volume:

Area 1 – Modification of design within Phase III (Total Volume Addition 810,041 cubic yards)

Area 2 – Modification of design over Phases II/III to its originally permitted design prior to the '2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume' (Total Volume Addition 522,137 cubic yards)

Area 3 – Modification of design over Phases I/II (over Ditch A) (Total Volume Reduction 1,332,178 cubic yards).

* Stratum definitions, boring plan, and liner characterization as approved per Subchapter J Groundwater Monitoring Permit Modification (See Executive Summary page ii, last paragraph), February 25, 2019.



Dennis Wade Hill
2/24/23 TXRPE Fm 3532

Gavin Hudgeons
2/24/2023

	Attachment 9-6.1.b. Phases I, II and III Cross Sections	
	Texas Disposal Systems Landfill, Inc. Type I MSW Landfill, Creedmoor, Texas	
Project No.: 2123 Date: Revised 2/24/2023		

Appendix B - No Net Increase in Capacity Demonstration

TDSL received its permit to operate a Type I Municipal Solid Waste Disposal Landfill, MSW Permit No. 2123, on September 4, 1990. Actual landfilling began on February 1, 1991. The original permit area encompassed a total of 341.46 acres with four below grade development phases. The originally permitted Landfill Completion Plan, Attachment 9-6 dated February 1988, shows the original permitted final cover elevations. In a modification approved November 21, 2017, the originally permitted Landfill final cover elevations were reduced slightly to offset the removal of the interpit wall between Phases II and III. The completion plan following the November 21, 2017 modification is shown in Attachment 9-6A-3 Grading Plan – Proposed Top Cover Reduction, dated September 1, 2017.

The proposed modifications to the landfill completion plan contours are shown in this submittal on Attachment 9-6.1, Landfill Completion Plan Contours.

Three areas are identified for modification (depicted by dash lines with labels that mark and enclose Areas 1, 2, and 3 on the cross sections depicted in Attachment 9-6.1.b.) to result in no net gain in Landfill Volume. Calculations were performed using *AutoCAD Civil 3D*.

Area 1 – Modification of design within Phase III (Total Volume Addition 810,041 cubic yards).

Area 2 – Modification of design over Phases II/III to its originally permitted design prior to the ‘2017 Permit Modification for Removal of Interpit Wall Between Phases II and III and Readjustment of Final Cover Elevations to Result in a no Net Gain in Landfill Volume’ (Total Volume Addition 522,137 cubic yards).

Area 3 – Modification of design over Phases I/II (over Ditch A) (Total Volume Reduction 1,332,178 cubic yards).

Summary Table

Area ID	Volume Change (cu yds)	Notes
Area 1	810,041	Increase
Area 2	522,137	Increase
Area 3	-1,332,178	Decrease
Difference	0	No Net Change

Appendix C - Landowner's Name and Address per TCAD

Appendix C - Landowner's Name and Address per TCAD - Revised 2/24/2023

Property ID	Name	Mailing Address	City	State	Zip Code	
1	531613	HERNANDEZ ALEJANDRO & MARCO ANTONIO ALVARADO & FROYLAN MADRIGAL BENITEZ	10901 OLD LOCKHART RD	AUSTIN	TX	78747
2	464376	CHAMINADE CAPITAL CORPORATION % SANDRA L LIPPARD	10915 OLD LOCKHART RD	AUSTIN	TX	78747
3	464380	CHAMINADE CAPITAL CORPORATION % SANDRA L LIPPARD	10915 OLD LOCKHART RD	AUSTIN	TX	78747
4	464378	ASSOCIATES FINANCIAL SERVICES % CARLOS MORA & FAUSTINO ALVARADO	11015 OLD LOCKHART RD	AUSTIN	TX	78747
5	446282	SALINAS MARIA A & RICARDO M SALINAS	11117 OLD LOCKHART RD	AUSTIN	TX	78747
6	352566	GUERRERO MARIA ALEJANDRA & JUANA MARIA GONZALEZ MIRANDA	12410 WRIGHT RD	CREEDMOOR	TX	78610
7	352560	CONTRERAS MICHAEL R SR & NATALINA M CONTRERAS	12515 PALMER RD	CREEDMOOR	TX	78610
8	300490	PERRY COMPANY THE ATTN LINDA PERRY	5905 OVERLOOK DR	AUSTIN	TX	78731
9	300608	PERRY COMPANY THE ATTN LINDA PERRY	5905 OVERLOOK DR	AUSTIN	TX	78731
10	299818	RODRIGUEZ VICTOR & PEDRO RODRIGUEZ & VICTOR ANTONIO RODRIGUEZ	7304 BETHUNE AVE #B	AUSTIN	TX	78752
11	300529	MANCHACA JESSE WAYNE ETAL % PAULA SEGURA	8111 TREEHOUSE LN	AUSTIN	TX	78749
12	779119	MERITAGE HOMES OF TEXAS LLC & TAYLOR MORRISON INC & TRENDMAKER HOMES INC	8920 BUSINESS PARK DR STE 350	AUSTIN	TX	78759
13	299813	HUNT LLOYD EARL TRUSTEE	PO BOX 828	BUDA	TX	78610
14	352534	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
15	300573	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
16	371702	ALFARO MARTIN & SANDRA	10708 THAXTON RD	AUSTIN	TX	78747
17	299807	BERNHARD GARY C & LIBBY	206 E 15TH ST APT 9	AUSTIN	TX	78701
18	299799	BERNHARD GARY CHARLES	206 E 15TH ST APT 9	AUSTIN	TX	78701
19	300563	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
20	300570	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
21	300571	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
22	300586	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
23	300591	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
24	300592	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
25	300596	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
26	300597	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
27	352547	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
28	352548	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
29	352550	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
30	352551	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
31	352556	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
32	352557	BGICO LLC	PO BOX 17126	AUSTIN	TX	78760
33	762133	BOCANEGRA MANUEL D & ADRIANA FLORES	10909 THAXTON RD	AUSTIN	TX	78747
34	300486	CAGE VIRGINIA S MORRIS	4807 HILLDALE DR	AUSTIN	TX	78723
35	300491	CEMETERY				
36	351861	CEMETERY				
37	464394	CISNEROS LETICIA OCHOA	10817 OLD LOCKHART RD	AUSTIN	TX	78747
38	351857	CREEDMOOR MAHA WATER SUPPLY CORP	12100 LAWS RD	BUDA	TX	78610
39	352558	CREEDMOOR MAHA WATER SUPPLY CORP	12100 LAWS RD	BUDA	TX	78610
40	300528	DAVIS DONNA	11419 OLD LOCKHART RD	CREEDMOOR	TX	78610
41	464377	DOMINGUEZ ARNULFO & MARY	11103 OLD LOCKHART RD	AUSTIN	TX	78747
42	724159	FLORES ENRIQUE & MARIA	10755 OLD LOCKHART RD	AUSTIN	TX	78747
43	352545	FM 1327 ENTERPRISES LP	833 CASTLE RIDGE RD	AUSTIN	TX	78746
44	956762	FM 1327 REAL ESTATE LLC	1001 KINGSTON PL	CEDAR PARK	TX	78613
45	299819	GARCIA DANIEL	10727 OLD LOCKHART RD	AUSTIN	TX	78747
46	464379	GARCIA JOSE	11001 OLD LOCKHART RD	AUSTIN	TX	78747
47	300600	GOMEZ ALFREDO	11401 HUNTERS RIDGE RD	CREEDMOOR	TX	78610
48	352553	GOMEZ ODILON H & BLANCA PAZ	12400 WRIGHT RD	BUDA	TX	78610
49	464381	HERNANDEZ ANTONIO & MARIA	10909 OLD LOCKHART RD	AUSTIN	TX	78747
50	707962	HERNANDEZ JUAN GAMEZ & HILDA RAMOS	10741 OLD LOCKHART RD	AUSTIN	TX	78747
51	300598	JAIMES PEDRO & HILDA SANTOS	11601 HUNTERS RIDGE RD	CREEDMORE	TX	78610
52	300595	LEDESMA JOSE & VERA	11604 HUNTERS RIDGE RD	CREEDMOOR	TX	78610
53	722141	LEIJA BRENDA ISELA	10105 WIND CAVE TRL	AUSTIN	TX	78747
54	508658	LOPEZ NICHOLAS JR	10737 OLD LOCKHART RD	AUSTIN	TX	78747
55	300493	LORI HUNT PROPERTIES LLC	PO BOX 828	BUDA	TX	78610
56	722159	LUNAIRE GROUP LP	95 E PRICE RD BLDG E	BROWNSVILLE	TX	78521
57	300589	MARTINEZ JOEL & SANTANA	9401 CLIFFBROOK DR	AUSTIN	TX	78747
58	464384	MAYA CANDELARIO SR	10811 OLD LOCKHART RD	AUSTIN	TX	78747
59	300488	MORRIS FRED	11412 OLD LOCKHART RD	CREEDMOOR	TX	78610
60	352552	MUNOZ HECTOR G & NORMA P	3305 FM 1327	BUDA	TX	78610
61	707963	NACONA LAND COMPANY LIMITED	10739 OLD LOCKHART RD	AUSTIN	TX	78747
62	300599	NAVA ROMMELL ANGEL & GRISelda	11501 HUNTERS RIDGE RD	CREEDMOOR	TX	78610
63	300593	NAVARRO EDUARDO	11478 OLD LOCKHART RD	CREEDMOOR	TX	78610
64	300555	NAVARRO EDUARDO & MARILU	11478 OLD LOCKHART RD	CREEDMOOR	TX	78610
65	301045	NEC WRIGHT N 45 LLC	1327 BALINT LN	FRISCO	TX	75035
66	351866	NEIRA ROGELIO B & MAGDALENA B	10258 OLD LOCKHART RD	AUSTIN	TX	78747
67	352563	NELSON JOHN W & MARY A NELSON	12503 PALMER RD	BUDA	TX	78610
68	885006	NELSON MICHAEL W & SABRINA A	12503 PLAMER RD	BUDA	TX	78610
69	352567	ORR CYNTHIA & MICHAEL	12075 LINCOLNSHIRE DR	AUSTIN	TX	78758
70	352568	ORR MICHAEL & CYNTHIA	12075 LINCOLNSHIRE DR	AUSTIN	TX	78758
71	464421	PENA MARTINA	11210 THAXTON RD	AUSTIN	TX	78747
72	300530	PLEASANT VALLEY CHURCH	PO BOX 6102	AUSTIN	TX	78762
73	464389	QUILL JAMES T & MARTHA J SULLIVAN	11123 OLD LOCKHART RD	AUSTIN	TX	78747
74	464382	QUINTANILLA ALBERT	10905B OLD LOCKHART RD	AUSTIN	TX	78747
75	531615	SALINAS ROBERTO & RUTH	11117 OLD LOCKHART RD APT A	AUSTIN	TX	78747
76	300594	SANCHEZ ERNEST Y & ESTHER J	11600 HUNTERS RIDGE RD	CREEDMOOR	TX	78610
77	300587	SNYDER RICHARD LEROY & NANCY E	11711 CARL RD	CREEDMOOR	TX	78610
78	508657	SOLIS ARACELI PONCE	11127 OLD LOCKHART RD	AUSTIN	TX	78747
79	352554	STARY RANDY J & MARTHA C	1964 PALMER RD	BUDA	TX	78610
80	300607	TEMPLO APOSTOLICO	1600 MONTOPOLIS DR	AUSTIN	TX	78741
81	300484	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
82	300492	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
83	300519	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760

84	300553	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
85	300588	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
86	300606	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
87	351835	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
88	351856	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
89	351858	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
90	351863	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
91	351864	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
92	351873	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
93	352531	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
94	352532	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
95	352549	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
96	352562	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
97	382570	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
98	726401	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
99	936818	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
100	936819	TEXAS DISPOSAL SYSTEMS LANDFILL INC	PO BOX 17126	AUSTIN	TX	78760
101	352559	TEXAS DISPOSAL SYSTEMS LANDFILL INC ETAL	PO BOX 17126	AUSTIN	TX	78760
102	300487	THE PERRY COMPANY	5905 OVERLOOK DR	AUSTIN	TX	78731
103	300577	TJFA L P	PO BOX 17126	AUSTIN	TX	78760
104	508688	TJFA L P	PO BOX 17126	AUSTIN	TX	78760
105	300590	TORRES JULIO & ISABEL	6610 FM RD 1327	AUSTIN	TX	78747

Note: All mineral interests under the Texas Disposal Systems Landfill, Composting and Recycling Facility and the Permit Boundary are owned by Texas Disposal Systems Landfill, Inc. except for a 1/32 non-participating royalty interest reserved by the Estate of Nannie S. Thaxton on 107.4 acres.

Appendix D - Landowner's Map

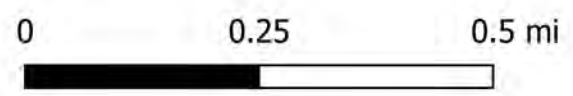
The facility boundary map has been revised to expand the facility boundary within the permit boundary. This map is shown in Appendix D. The 2019 buffer zone modification issued December 30, 2019 laterally expanded the permit boundary, and as such, the permit boundary was appropriate to use for notification purposes. 30 Tex. Admin. Code Section 330.59(c)(3)(A) requires the land ownership map to “show all property ownership within ¼ mile of the facility, and all mineral interest ownership under the facility.” TCEQ defines the term “facility” as “all contiguous land and structures, other appurtenances, and improvements on the land used for the storage, processing, or disposal of solid waste.” 30 Tex. Admin. Code § 330.3(52); see also id. § 330.3(91) (definition of “municipal solid waste facility”).

After a review of this definition in conjunction with several other defined terms in TCEQ’s rules (including “municipal solid waste landfill unit,” “waste management unit boundary,” and “buffer zone”) and various provision of the Chapter 330 MSW rules, TDSL has redrawn the “facility boundary” to include not just the landfill footprint but also other structures, appurtenances, and improvements, including the composting operation and the appropriate buffer zones. This “facility boundary,” shown on Attachment D, is based on TCEQ’s definition of “facility” and incorporates all areas traditionally included within the facility boundary.

When the TDSL landfill permit area was expanded in 2019, it specifically identified that the vast majority of the area to the west of the then existing permitted landfill was for ancillary activities, not MSW processing or disposal. Because that area is not used for storage, processing, or disposal of solid waste, and because the entirety of the area is not necessary to meet the buffer zone requirements set out in the Chapter 330 rules, that area does not meet TCEQ’s definition of facility, and thus, is not included in the “facility boundary.”



1/4 Mile Radius →



NOTES:
 - LOCATION MAP COORDINATES NAD83 TEXAS STATE PLANE CENTRAL (FEET)

Legend

- Facility Boundary
- - - Landfill Unit Footprint
- Permit Boundary



 <p>Texas Disposal Systems Landfill, Inc.</p>	Appendix D Landowner's Map 1/4 Mile From the Facility Boundary	
	Texas Disposal Systems Landfill, Inc. Type I MSW Landfill, Creedmoor, Texas	
Project No.: 2123Mod Date.: Revised 2/24/2023		

Appendix E - Mailing Labels for Notice to Landowners

HERNANDEZ ALEJANDRO & MARCO ANTONIO ALVARADO &
FROYLAN MADRIGAL BENITEZ

531613

10901 OLD LOCKHART RD

AUSTIN, TX 78747

CHAMINADE CAPITAL CORPORATION % SANDRA L LIPPARD

464376

10915 OLD LOCKHART RD

AUSTIN, TX 78747

CHAMINADE CAPITAL CORPORATION % SANDRA L LIPPARD

464380

10915 OLD LOCKHART RD

AUSTIN, TX 78747

ASSOCIATES FINANCIAL SERVICES % CARLOS MORA &
FAUSTINO ALVARADO

464378

11015 OLD LOCKHART RD

AUSTIN, TX 78747

SALINAS MARIA A & RICARDO M SALINAS

446282

11117 OLD LOCKHART RD

AUSTIN, TX 78747

GUERRERO MARIA ALEJANDRA & JUANA MARIA GONZALEZ
MIRANDA

352566

12410 WRIGHT RD

CREEDMOOR, TX 78610

CONTRERAS MICHAEL R SR & NATALINA M CONTRERAS

352560

12515 PALMER RD

CREEDMOOR, TX 78610

PERRY COMPANY THE ATTN LINDA PERRY

300490

5905 OVERLOOK DR

AUSTIN, TX 78731

PERRY COMPANY THE ATTN LINDA PERRY

300608

5905 OVERLOOK DR

AUSTIN, TX 78731

RODRIGUEZ VICTOR & PEDRO RODRIGUEZ & VICTOR
ANTONIO RODRIGUEZ

299818

7304 BETHUNE AVE #B

AUSTIN, TX 78752

MANCHACA JESSE WAYNE ETAL % PAULA SEGURA
300529
8111 TREEHOUSE LN
AUSTIN, TX 78749

MERITAGE HOMES OF TEXAS LLC & TAYLOR MORRISON INC
& TRENDMAKER HOMES INC
779119
8920 BUSINESS PARK DR STE 350
AUSTIN, TX 78759

HUNT LLOYD EARL TRUSTEE
299813
PO BOX 828
BUDA, TX 78610

TEXAS DISPOSAL SYSTEMS LANDFILL INC
352534
PO BOX 17126
AUSTIN, TX 78760

TEXAS DISPOSAL SYSTEMS LANDFILL INC
300573
PO BOX 17126
AUSTIN, TX 78760

ALFARO MARTIN & SANDRA
371702
10708 THAXTON RD
AUSTIN, TX 78747

BERNHARD GARY C & LIBBY
299807
206 E 15TH ST APT 9
AUSTIN, TX 78701

BERNHARD GARY CHARLES
299799
206 E 15TH ST APT 9
AUSTIN, TX 78701

BGICO LLC
300563
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300570
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300571
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300586
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300591
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300592
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300596
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
300597
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352547
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352548
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352550
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352551
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352556
PO BOX 17126
AUSTIN, TX 78760

BGICO LLC
352557
PO BOX 17126
AUSTIN, TX 78760

BOCANEGRA MANUEL D & ADRIANA FLORES
762133
10909 THAXTON RD
AUSTIN, TX 78747

CAGE VIRGINIA S MORRIS
300486
4807 HILLDALE DR
AUSTIN, TX 78723

CEMETERY
300491

CEMETERY
351861

CISNEROS LETICIA OCHOA
464394
10817 OLD LOCKHART RD
AUSTIN, TX 78747

CREEDMOOR MAHA WATER SUPPLY CORP
351857
12100 LAWS RD
BUDA, TX 78610

CREEDMOOR MAHA WATER SUPPLY CORP
352558
12100 LAWS RD
BUDA, TX 78610

DAVIS DONNA
300528
11419 OLD LOCKHART RD
CREEDMOOR, TX 78610

DOMINGUEZ ARNULFO & MARY
464377
11103 OLD LOCKHART RD
AUSTIN, TX 78747

FLORES ENRIQUE & MARIA
724159
10755 OLD LOCKHART RD
AUSTIN, TX 78747

FM 1327 ENTERPRISES LP
352545
833 CASTLE RIDGE RD
AUSTIN, TX 78746

FM 1327 REAL ESTATE LLC
956762
1001 KINGSTON PL
CEDAR PARK, TX 78613

GARCIA DANIEL
299819
10727 OLD LOCKHART RD
AUSTIN, TX 78747

GARCIA JOSE
464379
11001 OLD LOCKHART RD
AUSTIN, TX 78747

GOMEZ ALFREDO
300600
11401 HUNTERS RIDGE RD
CREEDMOOR, TX 78610

GOMEZ ODILON H & BLANCA PAZ
352553
12400 WRIGHT RD
BUDA, TX 78610

HERNANDEZ ANTONIO & MARIA
464381
10909 OLD LOCKHART RD
AUSTIN, TX 78747

HERNANDEZ JUAN GAMEZ & HILDA RAMOS
707962
10741 OLD LOCKHART RD
AUSTIN, TX 78747

JAIMES PEDRO & HILDA SANTOS
300598
11601 HUNTERS RIDGE RD
CREEDMORE, TX 78610

LEDESMA JOSE & VERA
300595
11604 HUNTERS RIDGE RD
CREEDMOOR, TX 78610

LEIJA BRENDA ISELA
722141
10105 WIND CAVE TRL
AUSTIN, TX 78747

LOPEZ NICHOLAS JR
508658
10737 OLD LOCKHART RD
AUSTIN, TX 78747

LORI HUNT PROPERTIES LLC
300493
PO BOX 828
BUDA, TX 78610

LUNAIRE GROUP LP
722159
95 E PRICE RD BLDG E
BROWNSVILLE, TX 78521

MARTINEZ JOEL & SANTANA
300589
9401 CLIFFBROOK DR
AUSTIN, TX 78747

MAYA CANDELARIO SR
464384
10811 OLD LOCKHART RD
AUSTIN, TX 78747

MORRIS FRED
300488
11412 OLD LOCKHART RD
CREEDMOOR, TX 78610

MUNOZ HECTOR G & NORMA P
352552
3305 FM 1327
BUDA, TX 78610

NACONA LAND COMPANY LIMITED
707963
10739 OLD LOCKHART RD
AUSTIN, TX 78747

NAVA ROMMELL ANGEL & GRISELDA
300599
11501 HUNTERS RIDGE RD
CREEDMOOR, TX 78610

NAVARRO EDUARDO
300593
11478 OLD LOCKHART RD
CREEDMOOR, TX 78610

NAVARRO EDUARDO & MARILU
300555
11478 OLD LOCKHART RD
CREEDMOOR, TX 78610

NEC WRIGHT N 45 LLC
301045
1327 BALINT LN
FRISCO, TX 75035

NEIRA ROGELIO B & MAGDALENA B
351866
10258 OLD LOCKHART RD
AUSTIN, TX 78747

NELSON JOHN W & MARY A NELSON
352563
12503 PALMER RD
BUDA, TX 78610

NELSON MICHEAL W & SABRINA A
885006
12503 PLAMER RD
BUDA, TX 78610

ORR CYNTHIA & MICHAEL
352567
12075 LINCOLNSHIRE DR
AUSTIN, TX 78758

ORR MICHAEL & CYNTHIA
352568
12075 LINCOLNSHIRE DR
AUSTIN, TX 78758

PENA MARTINA
464421
11210 THAXTON RD
AUSTIN, TX 78747

PLEASANT VALLEY CHURCH
300530
PO BOX 6102
AUSTIN, TX 78762

QUILL JAMES T & MARTHA J SULLIVAN
464389
11123 OLD LOCKHART RD
AUSTIN, TX 78747

QUINTANILLA ALBERT
464382
10905B OLD LOCKHART RD
AUSTIN, TX 78747

SALINAS ROBERTO & RUTH
531615
11117 OLD LOCKHART RD APT A
AUSTIN, TX 78747

SANCHEZ ERNEST Y & ESTHER J
300594
11600 HUNTERS RIDGE RD
CREEDMOOR, TX 78610

SNYDER RICHARD LEROY & NANCY E
300587
11711 CARL RD
CREEDMOOR, TX 78610

SOLIS ARACELI PONCE
508657
11127 OLD LOCKHART RD
AUSTIN, TX 78747

STARY RANDY J & MARTHA C
352554
1964 PALMER RD
BUDA, TX 78610

TEMPLO APOSTOLICO
300607
1600 MONTOPOLIS DR
AUSTIN, TX 78741

TEXAS DISPOSAL SYSTEMS LANDFILL INC
300484
PO BOX 17126
AUSTIN, TX 78760

TEXAS DISPOSAL SYSTEMS LANDFILL INC
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PO BOX 17126
AUSTIN, TX 78760

TEXAS DISPOSAL SYSTEMS LANDFILL INC
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PO BOX 17126
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC
382570
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AUSTIN, TX 78760

TEXAS DISPOSAL SYSTEMS LANDFILL INC
726401
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AUSTIN, TX 78760

TEXAS DISPOSAL SYSTEMS LANDFILL INC
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TEXAS DISPOSAL SYSTEMS LANDFILL INC ETAL

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PO BOX 17126

AUSTIN, TX 78760

THE PERRY COMPANY

300487

5905 OVERLOOK DR

AUSTIN, TX 78731

TJFA L P

300577

PO BOX 17126

AUSTIN, TX 78760

TJFA L P

508688

PO BOX 17126

AUSTIN, TX 78760

TORRES JULIO & ISABEL

300590

6610 FM RD 1327

AUSTIN, TX 78747

Appendix F

Supporting Documentation for Response to Question 10, ***“Indicate where in the “Subchapter J Groundwater Monitoring Permit Modification, February 25, 2019” the materials encountered in the borings are characterized as liner to the depth of the borings”***

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10) from south to north. Where a boring location was skipped because of the existing excavation, that alphanumeric boring designation also was skipped.

[The intent of the boring plan was to drill completely through the weathered Taylor (Stratum I and II, or equivalent) and into the unweathered Taylor (Stratum III or equivalent)] and to define the uppermost aquifer. Initial drilling took place between June and September 2006 under the purview of Mr. Winfield McAtee, PG, with Kleinfelder, who was onsite during all drilling, sampling, and piezometer installation; boring logs generated in the field were faxed to Dr. Robert Kier, PG, for review. Dr. Kier and Mr. Michael Stacey, PE, each spent several days observing the drilling and logging.

In substantial compliance with the approved SBP, [59 borings were drilled and logged to an elevation of 520 feet (or no more than a tenth of a foot higher; A-9, C-3, and G-7), which is approximately 90 feet below the lowest topographic elevation within the permit area and at least 30 feet below the deepest depth of excavation for an expanded landfill anticipated at the time the SBP was prepared] (TAC330.63 (e) (4)). Depths of these borings ranged from 114 feet to approximately 223 feet. The borings were advanced using hydraulically pushed thin-walled tube samplers, split spoons, and a rock-coring barrel with hollow stem augers or air, sometimes with water injection, and wet or mud rotary techniques. Where the borehole was drilled more than 50 feet below the deepest excavation anticipated at the time the boring plan was submitted, use of the rock-coring barrel was discontinued and the hole logged with cuttings except for the final five feet, which were again sampled with the rock-coring barrel.

All thin-walled tube and rock-coring barrel samples were logged in the field, wrapped in plastic, labeled, and boxed for secure, temperature-controlled storage at

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demonstrate where ground water monitoring wells are needed. Other permit modifications requested in the March 2008 submittal are not included in this submittal.

The TDSL landfill is sited in the Taylor Clay of the Blackland Prairie, comprising, from the ground surface downward, a completely weathered clay stratum (Stratum I), an incompletely or partially weathered shale stratum (Stratum II), and an unweathered shale stratum (Stratum III). Limestone encountered at depth in borings drilled within the permit boundary likely represents establishment of calcite secreting organisms on bathymetric highs supported by volcanism on the otherwise euxinic paleo seafloor on which the Taylor accumulated. The site is near the eastern extent of the Balcones Fault Zone; no faults are known to cross the site. The shallowest aquifer below the site is the bad water zone of the Edwards Aquifer approximately 700 to 1,000 feet below the landfill. Soil series within the permit area belong almost entirely to the Austin silty clay, the Heiden clay, and the Houston Black clay.

There is no unified ground water flow system at the TDSL landfill site. Rather ground water flow mimics surface water flow and follows topography. Stratum II, is the primary water-bearing zone and is the uppermost aquifer. Locally, Stratum I becomes part of the uppermost aquifer as a consequence of surface recharge and discharge in topographically low places. Although Stratum III is likely saturated, its hydraulic conductivity is so low that it functions as an aquitard.

As designed, the landfill is excavated in four subsurface phases that extend downward into the unweathered Taylor of Stratum III below the base of the uppermost aquifer. [Upon inspection and testing of hydraulic conductivity, the unweathered Taylor of Stratum III functions as an insitu liner.] The sidewalls of the landfill excavation are 1:1 over which an equipment width clay soil liner is placed and ballasted as necessary as a barrier between waste inside the landfill and ground water in the uppermost aquifer in the weathered Taylor outside the landfill. A leachate

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Upon completion, all but two of the borings, which were converted to temporary piezometers, were pressure grouted from bottom to ground surface. Temporary piezometers also were installed in separate boreholes as close as possible to the soil boring locations to measure water levels over an extended period of time in weathered and unweathered insitu material and to perform field hydraulic tests. All the temporary piezometers were later plugged and abandoned.

Although the field logs for the borings advanced during the summer of 2006 and later in 2007 were consistent with the boring logs underlying TDSL's original municipal solid waste permit, the finished boring logs submitted to TCEQ were not consistent; no reasons for changes were documented or elucidated by those involved. Thus, in preparation for this submittal, Dr. Robert Kier, PG, and Mr. Michael Stacy, PE, assisted by Dr. R. Jeffery Dunn, PE GE, re-examined all cores in secure storage at TDSL with primary emphasis on strata demarcations, relying on the field logs for detail.

For the original permit application in 1990, the soil/weathered bedrock (Stratum I/II) demarcation was based on sampler refusal. Because of changes in equipment, this could not be duplicated, and the soil/weathered bedrock demarcation is based on the occurrence vs. lack of occurrence of pedogenic deposits of calcium carbonate, which on the average yields an interface slightly less deep than that defined for the original permit.

[Delineation of the weathered/unweathered (Stratum II/III) interface, the most critical strata demarcation because it affects the suitability of the floor of the landfill to serve as an insitu liner] and setting completion zones for monitoring wells, was based on the same criterion as was used for the original permitting of the landfill, that being a downward color change from predominantly tan to predominantly gray

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indicating a change from predominantly weathered to predominantly unweathered material. Logs of borings that supported the original permitting of the TDSL facility and the installed monitoring wells (OB-1, 2, 3, 7, 8, and 9), although presented in separate appendices, have been integrated with the more recent boring logs to evaluate the geology and hydrogeology within the entire permit boundary.

SITE CONDITIONS

TDSL is situated several miles east of the Balcones Escarpment in the physiographic region of the Gulf Coastal Plain known as the Blackland Prairie, (Figure 3). The Blackland Prairie is characterized by deep, rich soils that historically have made the land desirable for agriculture. Natural slopes typically range from 2 to 5 percent, although there are a few broad areas with slopes less than 2 percent. The characteristic vegetation consists of native grasses and, in more recent times, mesquite trees.

Within the TDSL permit area, site topography varies from a low elevation slightly below 610 feet on the west side to a high elevation slightly above 750 feet near the center for a total relief of more than 140 feet (Figure 2). Much of the site is located on a topographic high, at or near the inception of surface water drainage, which carries runoff east, west, and north into streams that drain into the Colorado River. Most of the site has been farmed in the past, and much of the land was terraced to reduce erosion. Parts of the site not currently being used for waste disposal, composting operations, recycling activities, and concrete crushing serve as an exotic game ranch hosting more than 1,500 animals belonging to over 100 species. The portion of the site used as an exotic game ranch is carefully maintained to encourage growth of native grasses, to conserve water, and to minimize erosion.

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Geotechnical Testing

Following review of the field logs of the borings drilled at TDSL, samples were selected by Mr. Michael Stacey, PE, design engineer, with Freeman-Millican and Mr. Winfield McAtee, PG, geologist, with Kleinfelder, for testing in Kleinfelder's geotechnical laboratories. The samples selected were representative of the completely weathered Taylor along with soil and alluvium, partially weathered Taylor, and the unweathered Taylor. The tests include Atterberg limits, percent passing the No. 200 mesh sieve, dry unit weight, moisture content, unconfined compressive strength, and hydraulic conductivity. Geotechnical testing of the samples from the 2006-2007 boring program and the 2010 soil boring program and the soil liner evaluation reports were reviewed by Dr. R. Jeffrey Dunn, PE, GE, (CA)

Dr. Dunn's findings are consistent with observations conveyed by the boring logs. The three strata are predominantly fine-grained material composed of highly plastic, fat or CH clays. Moisture contents vary, but tend to cluster about the plastic limit, as is common in the kind of soils found at the TDSL facility. Unit dry weights (or dry unit weights) are consistent with materials descriptions and tend to increase with depth as would be expected in a downward transition from soil, through weathered Taylor, and into unweathered Taylor. Unconfined compressive strengths vary, but indicate relatively high strength. Like the unit dry weight, compressive strength increases with depth.

[Vertical and horizontal laboratory hydraulic conductivity tests on undisturbed, intact samples indicate that all materials encountered at TDSL are inherently slowly permeable with hydraulic conductivities of less than 1 E-7 cm/sec.]

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Stratum III, the underlying unweathered Taylor, is more than 28 to 50 feet thick in the borings advanced for permitting the landfill. Stratum III is uniformly gray although near the top of the stratum there may be a few, discontinuous, thin layers of tan weathered claystone or shale. Secondary structures, primarily hard seams, are present; slickensides are evident in the upper part of the stratum. Stratum III is very hard and commonly must be ripped before it can be excavated and loaded.

[Based on laboratory testing, Stratum III is practically impervious ($<1.0 \text{ E-7 cm/sec}$).]

At the time the geologic report for the permit application was prepared, it was believed that Stratum III was part of the Sprinkle Formation, the lowest formation in the Taylor Group.

2006-2007 Site Investigation

Prior to preparing the Subchapter J permit modification submitted in March 2008, TDSL commissioned an extensive subsurface investigation. A soil boring plan (SBP) was submitted to TCEQ in May 2006, revised in June 2006, and approved by letter dated June 21, 2006. Two addenda were submitted in July 2006 to clarify construction of the planned piezometers and to allow flexibility in drilling techniques. These addenda were accepted by letter from TCEQ dated August 8, 2006.

The borings were laid out in a grid with 750 to 850 feet between each borehole, excluding portions of the permitted waste disposal area that had been excavated, evaluated as a liner (SLERed), and in which waste either had already been placed or was being placed (Figure 10). For convenience, north-south rows of borings, starting on the west side of the permit area, were labeled with an alphabetic designation (A - G), and each boring in each row was given a number (1 -