

September 29, 2026
File No. 27226515.00

Mr. Mike Smith, Environmental Engineer Senior
Iowa Department of Natural Resources
Land Quality Bureau
6200 Park Avenue
Des Moines, Iowa 50321

Transmitted via email to: mike.smith@dnr.iowa.gov

Subject: Construction Observation Report
2026 GCCS Expansion – Phase 1
Loess Hills Regional Sanitary Landfill
Permit No. 65-SDP-01-72

Dear Mr. Smith:

On behalf of the Loess Hills Regional Landfill, SCS Engineers (SCS) is submitting the enclosed 2026 GCCS Expansion – Phase 1 Construction Observation Report.

Please do not hesitate to contact Zach Mahon at (402) 938-0321 or by email at zmahon@scsengineers.com should you have any questions on the material enclosed or require additional information.

Sincerely,



Ben Graham, EI
Project Professional
SCS Engineers



Zachary Mahon, PE
Project Manager
SCS Engineers

BG/ZM

cc: Ms. Becky Jolly, Iowa Department of Natural Resources (electronic)
Mr. Kelly Danielson, Iowa Waste Services (electronic)
Mr. Chaz Roberts, Iowa Waste Services (electronic)
Mr. Bret Stephens, Iowa Waste Services (electronic)
Ms. Rachel Hanigan, PE, Iowa Waste Services (electronic)

Encl. Construction Observation Report 2026 GCCS Expansion – Phase 1



Construction Observation Report
2026 GCCS Expansion – Phase 1
Loess Hills Regional Sanitary Landfill
Malvern, Iowa

Iowa Waste Services, LLC.
59722 290th Street
Malvern, Iowa 51551

SCS ENGINEERS

27226515.00 | September 23, 2026

14755 Grover Street
Omaha, NE 68144
(402) 884-6202

SIGNATURE PAGE

This Construction Observation Report, dated September 23, 2026, for the 2026 Gas Collection and Control System Expansion – Phase 1 at the Loess Hills Regional Sanitary Landfill and as outlined in the following Table of Contents, was prepared and reviewed by the following:



Ben Graham, EI
Staff Professional
SCS Engineers



Zachary Mahon, PE
Project Manager
SCS Engineers

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1.0 INTRODUCTION

SCS Engineers (SCS) was retained by Iowa Waste Services, LLC. to provide Construction Quality Assurance (CQA) services during the construction of the 2026 Gas Collection and Control System (GCCS) Expansion – Phase 1 at the Loess Hills Regional Landfill (Loess Hills) located at 59722 290th St, Malvern, Iowa 51551. The project included the following components:

- Installing and connecting four horizontal LFG extraction wells; and
- Installing and connecting associated landfill gas collection pipe.

2.0 PROJECT DESCRIPTION

SCS was responsible for observing construction activities and observing that the material placement and construction procedures were completed in general accordance with the following:

- Iowa Administrative Code (IAC) 567 Chapter 113;
- Current site permit and relative amendments;
- Construction drawings titled “2026 GCCS Expansion – Phase 1” dated August 2026 by SCS Engineers (Construction Drawings)

2.1 PROJECT ORGANIZATION

The contacts for the project are provided below.

Owner

Iowa Waste Services, LLC.
59722 290th St
Malvern, Iowa 51551
Chaz Roberts, District Manager
Ryan Mitchell, Site Superintendent
Rachel Hanigan, Region Engineer

Contractor

Tricore Group, LLC.
3401 Thunderbird Rdg.
Norman, Oklahoma 73026
Greg Vance, Managing Member

Design Engineer

SCS Engineers (SCS)
14755 Grover Street
Omaha, Nebraska 68144
Ben Graham, EI, Designer
Zach Mahon, PE, Project Manager
Eric Sonsthagen, PE, Certifying Engineer

Surveyor

Thompson, Dreessen & Dorner (TD2)
10836 Old Mill Road
Omaha, Nebraska 68154

Construction Quality Assurance Engineer

SCS Engineers (SCS)
14755 Grover Street
Omaha, Nebraska 68144
Jenna Miller, Resident Project Representative
Ben Graham, EI, Resident Project Representative
Zachary Mahon, PE, Project Manager

3.0 GCCS INSTALLATION AND CQA

This section describes the CQA activities associated with the installation of the 2026 Gas Collection and Control System – Phase 1 (Project). Installation of the horizontal LFG extraction wells and piping began on August 17, 2026, and was substantially completed on August 30, 2026. The Daily Field Activity Reports are included in Appendix A. Thompson, Dreeson, and Dörner, Inc. (TD2) completed the as-constructed survey and provided point files to SCS. SCS prepared as-constructed record drawings from the survey data, which is included in Appendix B.

3.1 CQA PROGRAM

The CQA program for the construction of the Project consisted of documentation and observation of the installation of horizontal LFG extraction wells and associated landfill gas collection piping and components. The requirements for installation and construction were outlined in the documents listed in Section 2.0.

3.2 SUMMARY OF HORIZONTAL LFG EXTRACTION WELL INSTALLATION

The CQA activities during horizontal LFG extraction well installation included observing and documenting the installation of 4 horizontal LFG extraction wells by the Contractor. The resident project representative (RPR) documented the placement of the LFG extraction well components and backfill materials.

SCS completed CQA on a full-time basis during the installation of LFG extraction wells.

3.3 SUMMARY OF LFG COLLECTION PIPING INSTALLATION

The CQA activities during LFG collection piping installation included observing and documenting the following:

- Trenching for the installation of piping;
- Installation and connection of 6-inch (~33 ft) SDR 17 HDPE LFG piping to the existing collection system;
- Installation of road crossings, consisting of CMP culverts with LFG pipe placed inside, where LFG pipe intersected facility roadways.
- Installation of 8-inch (~1,006 ft) SDR 17 HDPE LFG piping

The LFG collection piping installation performed by the Contractor was comprised of two 6-inch pipe tie-ins to existing LFG collection pipe to allow for the construction of four LFG collection risers, one for each horizontal LFG extraction well. Each horizontal LFG extraction well transitioned from 8-inch perforated pipe to solid pipe to facilitate LFG flow to each respective LFG collection riser as shown in Detail 1/C2.0 of the Issued For Construction drawings, provided in Appendix D.

SCS observed the Contractor perform air pressure testing on the LFG collection piping. Air pressure test results show that tested piping met the requirements in the Issued For Construction drawings. Air pressure test documentation is provided in Appendix C. SCS completed CQA on a full-time basis during the installation of the landfill gas collection piping.

Appendix A

Daily Field Activity Reports

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/17/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 07:40			
SCS Project No: 27226515.00		Stop Time: 08:20			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
Work Area or Boundaries:					
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP: 64 - 86°F	WIND SPEED AND DIRECTION: 7 mph N	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.) Partly Cloudy	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.) None	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.) Muddy
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0740	SCS (Miller) arrives onsite, documented field conditions, and met with contractor.				
0820	SCS departed.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller				SCS ENGINEERS	

**Loess Hills
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Photo 1: The hillside eastern pipework will be placed into.

Date: 8/17/25

Direction: Looking south



Photo 2: The current active phase.

Date: 8/17/2026

Direction: Looking west

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Photo 3: Downhill section for HEW – 8 & 9 inbetween the active phase and road crossing.

Date: 8/17/2026

Direction: Looking north



Photo 4: Both roads involved with this expansion are shown in view. However, construction takes place further north.

Date: 8/17/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name:	Iowa Waste Services, LLC.	Date:	8/19/2026		
SCS Project Name:	2026 GGCS Expansion – Phase 1	Start Time:	07:25		
SCS Project No:	27226515.00	Stop Time:	16:20		
Project Location:	Loess Hills Landfill	Task:	GCCS CQA		
		Work Area or Boundaries:	HEW – 8 & 9		
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	68 - 81°F	4 mph ENE	Mostly Cloudy	Rain	Muddy
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0725	SCS (Miller) arrives onsite. Crew measures area for trenching.				
0810	Excavator begins trenching for HEW – 8 & 9, adjacent to GEW – 87, working towards the road. 8" pipe is also welded.				
1145	Excavator strikes existing 6" lateral pipe connected to GEW – 53R. Crew must fix repairs. RNG plant shuts down.				
1400	Light rain begins.				
1520	2", 3", and 6" pipes get repaired. Damaged parts of pipe get cut off and new pipe is welded in place. Excavator backfills hole created for repairs.				
1620	Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller			SCS ENGINEERS		

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Photo 1: Trench for HEW – 8 & 9 in progress.

Date: 8/19/25

Direction: Looking west



Photo 2: Excavator strikes existing lateral pipes attached to GEW – 53R.

Date: 8/19/2026

Direction: Looking north

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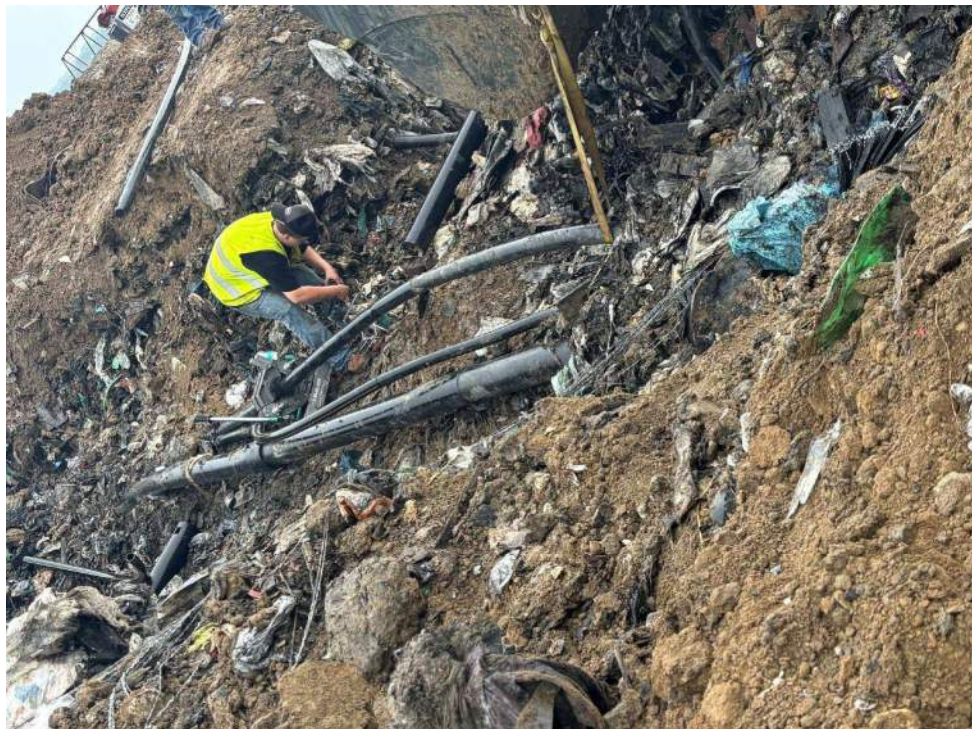


Photo 3: Damaged sections of the 2", 3", and 6" pipes get cut off and new pieces are welded on.

Date: 8/19/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/20/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 07:30			
SCS Project No: 27226515.00		Stop Time: 16:20			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
		Work Area or Boundaries: North Road Crossing			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	62 – 83°F	4 mph SE	Sunny	N/A	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0730	SCS (Miller) arrived onsite. Excavator continues trenching towards the road for HEW – 8 & 9.				
0950	The excavator begins trenching the northern road crossing.				
1620	Road crossing casing is in place with one 8" pipe running through with noncalcareous gravel backfill. The excavator broke and needs to be fixed. SCS offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller					

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Photo 1: Trench for HEW – 8 & 9 east of the road crossing is complete.

Date: 8/20/2026

Direction: Looking east



Photo 2: Trenching for the north road crossing.

Date: 8/20/2026

Direction: Looking west

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Photo 3: Road crossing casing is in place. One of two 8" pipe is being fed through.

Date: 8/20/2026

Direction: Looking east



Photo 4: Noncalcareous gravel fill is backfilled.

Date: 8/20/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/21/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 10:00			
SCS Project No: 27226515.00		Stop Time: 17:15			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
		Work Area or Boundaries: Southern Road Crossing			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	67 - 88°F	7 mph WSW	Partly Cloudy	N/A	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5 Repairmen for Excavator - 1		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
1000	SCS (Miller) arrived onsite. The excavator is under maintenance. Crew welds pipe.				
1330	The excavator is fixed and begins trenching on the east side of the road for HEW – 10 & 11.				
1530	Excavator trenches at the south road crossing.				
1715	Road crossing piping is installed and crew backfills it with noncalcareous rock to leave for the night. Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller				SCS ENGINEERS	

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Photo 1: Trenching completed east of the road for HEW – 10 & 11.

Date: 8/21/2026

Direction: Looking east



Photo 2: The southern road crossing excavation.

Date: 8/21/2026

Direction: Looking west

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Photo 3: Road crossing casing joint point example.

Date: 8/21/2026

Direction: n/a



Photo 4: The southern road crossing casing in place.

Date: 8/21/2026

Direction: Looking northwest

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Photo 5: Noncalcareous gravel was backfilled to complete the day.

Date: 8/21/2026

Direction: Looking northeast

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/22/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 7:30			
SCS Project No: 27226515.00		Stop Time: 17:30			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
		Work Area or Boundaries: East of Active Face			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	64-84°F	4 mph NNW	Sunny	N/A	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
Pressure test of solid pipe for HEW-8, 9, 10, and 11					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0730	SCS (Miller) arrived onsite.				
0740	The crew installs the 2 nd 8" pipe in the northern trench.				
0900	Pressure test #1 begins.				
1015	Pressure test #1 passes, #2 starts. The excavator digs at GEW – 87 to locate the tie- point.				
1115	Pressure test #2 passes.				
1410	Both 8" pipes are placed in the trench for HEW - 10 & 11 and through the road crossing.				
1612	The excavator trenches from the southern road crossing to the active face. Pressure tests # 3 & 4 begin.				
1728	Pressure test #3 and #4 pass.				
1730	Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
~180' solid 8" pipe					
OBSERVER: J. Miller			SCS ENGINEERS		

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Photo 1: HEW – 10 & 11 are installed from the east point through the road crossing.

Date: 8/22/2026

Direction: Looking east



Photo 2: Pressure tests # 1 – 4 are completed (featuring HEW – 10 & 11).

Date: 8/22/2026

Direction: Looking southwest

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Photo 3: The excavator works his way down the southern line to the active face.

Date: 8/22/2026

Direction: Looking west



Photo 4: The excavator trenches on the southern line at the active face.

Date: 8/22/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name:		Iowa Waste Services, LLC. Loess Hills Landfill		Date:	8/23/2026
SCS Project Name:		2026 GGCS Expansion – Phase 1		Start Time:	7:40
SCS Project No:		27226515.00		Stop Time:	16:45
Project Location:		Loess Hills Landfill		Task:	GGCS CQA
				Work Area or Boundaries:	Southern line
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	65-77°F	3 mph SSE	cloudy	none	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0740	SCS (Miller) arrived onsite. The excavator is trenching the southern line on the active face, to the branching point.				
0930	Roughly, a 1.5' bed of noncalcareous gravel and an 8" solid (HEW – 11) and perforated (HEW – 10) pipe are laid in the southern trench. The excavator begins working on the HEW – 9 trench. The trench extends till the landfill's machinery obstructs their path.				
1330	In the southern trench, the geotextile and geomembrane are placed.				
1500	In the southern trench, a layer of clean soil is placed, caution tape, and backfilled to grade with soil. The northern trench starts the same layering process as the southern trench.				
1645	Both trenches are backfilled, only exposing the endpoints to be continued the following day. Holes are barricaded. Everyone offsite				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller					

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Photo 1: Trenching the southern line until the branch off point

Date: 8/23/2026

Direction: Looking northwest



Photo 2: A 1.5' bed of noncalcareous gravel is laid.

Date: 8/23/2026

Direction: Looking east

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Photo 3: HEW – 10 & 11 are laid and noncalarerous gravel is placed atop.

Date: 8/23/2026

Direction: Looking west



Photo 4: Geotextile is placed

Date: 8/23/2026

Direction: Looking west

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Photo 5: HEW – 9 is trenched.

Date: 8/23/2026

Direction: Looking northwest



Photo 6: On the southern line geomembrane, clean soil, caution tape, and more clean soil is placed to grade.

Date: 8/23/2026

Direction: Looking east

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Photo 7: All the same layers are placed on HEW – 9.

Date: 8/23/2026

Direction: Looking west



Photo 8: The southern line and HEW – 9 are compacted to grade, and open ends are barricaded.

Date: 8/23/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name:	Iowa Waste Services, LLC.	Date:	8/24/2026		
SCS Project Name:	2026 GGCS Expansion – Phase 1	Start Time:	7:45		
SCS Project No:	27226515.00	Stop Time:	19:00		
Project Location:	Loess Hills Landfill	Task:	GCCS CQA		
		Work Area or Boundaries:			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	67-79°F	7 mph ESE	Cloudy	Morning Rain	Muddy
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 5		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0745	SCS (Miller) arrived onsite. The excavator trenches to finish HEW – 10.				
0925	The HEW – 10 trench is done. A layer of noncalcareous gravel is placed. The excavator moves to HEW – 9 to finish trenching.				
1025	The 8" perforated pipe is placed and welded at HEW – 10. The gravel window for HEW – 9 is dug.				
1250	HEW – 10 gravel drain window is excavated and backfilled with noncalcareous rock.				
1400	The excavator finishes the trench for HEW – 9. More noncalcareous rock is placed in HEW – 10, then geotextile and geomembrane.				
1440	Noncalcareous rock and the 8" pipe are installed in HEW – 9, as the excavator starts trenching the HEW – 11 branch, beginning with the gravel drain window.				
1710	The 8" pipe at HEW – 9 is covered with noncalcareous rock. Clean soil and caution tape are placed at HEW – 10.				
1853	A layer of noncalcarerous rock is placed in the branched off trench for HEW – 11. Pressure test #5 starts. The results will be reviewed in the morning. Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
~300' of 8" perforated pipe					
OBSERVER: J. Miller			SCS ENGINEERS		

SCS ENGINEERS

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Photo 1: Finished trench for HEW – 10.

Date: 8/24/2026

Direction: Looking west



Photo 2: Noncalcareous rock and the 8" perforated pipe placed in HEW – 10.

Date:

Direction: N/A

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Photo 3: Trenching for HEW – 9.

Date: 8/24/2026

Direction: Looking west



Photo 4: HEW – 10 gravel drain window.

Date: 8/24/2026

Direction: Looking southwest

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Photo 5: Overview of HEW – 9.

Date: 8/24/2026

Direction: Looking west



Photo 6: HEW – 10 with noncalcareous rock, geotextile, geomembrane, and soil layers shown.

Date: 8/24/2026

Direction: Looking west

SCS ENGINEERS

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Photo 7: Digging the gravel drain window for HEW – 11.

Date: 8/24/2026

Direction: Looking southeast



Photo 8: The excavator trenches HEW – 11.

Date: 8/24/2026

Direction: Looking south

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/25/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 7:50			
SCS Project No: 27226515.00		Stop Time: 17:40			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
		Work Area or Boundaries: HEW – 10, 9			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	64-85°F	4 mph SSE	Cloudy	N/A	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 4		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
Air test #5					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0711	Test #5 passes; results confirmed via pictures from the crew.				
0750	SCS (Miller) arrives onsite. Crew welds elbow sweep and 8" perforated pipe for the HEW – 11 branch.				
1005	Excavator continues trenching HEW – 11. Dozer backfills HEW – 10 with clean soil. HEW – 9 gets geotextile and geomembrane.				
1540	Clean soil and caution tape are placed on HEW – 9. Trench for HEW – 11 is done. The first layer of noncalcareous rock is placed in the trench.				
1740	Noncalcareous rock is done being placed in HEW – 11. Everyone is offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller			SCS ENGINEERS		

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Photo 1: Elbow sweep and some 8" perforated pipe is welded for HEW – 11.

Date: 8/25/2026

Direction: Looking west



Photo 2: HEW – 10 is backfilled.

Date: 8/25/2026

Direction: Looking southwest

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27226515.00



Photo 3: HEW – 11 continues to be trenched.

Date: 8/25/2026

Direction: Looking southwest



Photo 4: Geotextile and geomembrane are placed at HEW – 9.

Date: 8/25/2026

Direction: Looking west

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 5: Noncalcareous rock is placed in HEW – 11.

Date: 8/25/2026

Direction: Looking south



Photo 6: Clean soil and caution tape are placed in HEW – 9.

Date: 8/25/2026

Direction: Looking west

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/26/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 7:35			
SCS Project No: 27226515.00		Stop Time: 16:50			
Project Location: Loess Hills Landfill		Task: GCCS CQA			
		Work Area or Boundaries: HEW - 11			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	67-84°F	11 mph NNW	Sunny	None	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 4		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0735	SCS (Miller) arrived onsite.				
0938	8" perforated pipe is welded in at HEW – 11. The excavator places noncalcareous gravel on top.				
1445	Crew places geomembrane.				
1530	Crew places geotextile.				
1650	Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
400' of 8" perforated pipe					
OBSERVER: J. Miller		SCS ENGINEERS			

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 1: 8" perforated pipe is laid in HEW – 11. Noncalcareous rock is laid atop.

Date: 8/26/2026

Direction: Looking north



Photo 2: Noncalcareous rock is placed to cover the piping.

Date: 8/26/2026

Direction: Looking south

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 3: Geomembrane laid at HEW – 11.

Date: 8/26/2026

Direction: Looking north



Photo 4: Geotextile at HEW – 11.

Date: 8/26/2026

Direction: Looking north

DAILY FIELD ACTIVITIES REPORT					
Client Name:	Iowa Waste Services, LLC.	Date:	8/27/2026		
SCS Project Name:	2026 GGCS Expansion – Phase 1	Start Time:	7:45		
SCS Project No:	27226515.00	Stop Time:	17:30		
Project Location:	Loess Hills Landfill	Task:	GCCS CQA		
		Work Area or Boundaries:	HEW – 8, 10, & 11		
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	60-81°F	3 mph NW	Sunny	None	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 4 Regional Engineer – Rachel Hanigan		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0745	SCS (Miller) arrived onsite. Crew is hauling dirt and tying in the southern line, just west of the road crossing.				
1345	The excavator begins trenching HEW – 8.				
1530	HEW – 10 is backfilled with clean soil to grade. HEW – 11 receives its first layer of clean soil.				
1730	Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller			SCS ENGINEERS		

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 1: Tie-in on the southern line west of the road crossing. Gravel drain window is located at the bulge point of the trench.
HEW – 10: solid to perforated,
HEW – 11: solid to solid

Date: 8/27/2026

Direction: Looking west



Photo 2: The excavator trenches HEW – 8.

Date: 8/27/2026

Direction: Looking northwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 3: HEW – 9 is backfilled with clean soil to grade.

Date: 8/27/2026

Direction: Looking west



Photo 4: HEW – 11 receives its first layer of clean topsoil.

Date: 8/27/2026

Direction: Looking south

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 5: HEW – 8 continues to be trenched.

Date: 8/27/2026

Direction: Looking northwest

DAILY FIELD ACTIVITIES REPORT					
Client Name:	Iowa Waste Services, LLC.	Date:	8/28/2026		
SCS Project Name:	2026 GGCS Expansion – Phase 1	Start Time:	7:35		
SCS Project No:	27226515.00	Stop Time:	18:50		
Project Location:	Loess Hills Landfill	Task:	GCCS CQA		
		Work Area or Boundaries:	HEW - 8		
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	63-85°F	4 mph SSE	Partly Cloudy	None	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 4		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0735	SCS (Miller) arrived onsite.				
0745	Excavator continues trenching HEW – 8. Noncalcareous gravel begins to line the bottom of the trench.				
1021	Crew begins to backfill and place caution tape in areas such as the north and south lines east of the road crossings and HEW – 11.				
1345	HEW – 8's gravel window is dug and backfilled with gravel.				
1540	HEW – 8's perforated pipe is laid. HEW – 8 & 9 solid pipe is tied onto the perforated pipe.				
1850	Everyone offsite.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller			SCS ENGINEERS		

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 1: Excavator digs HEW – 8, while the dozer delivers noncalcareous gravel.

Date: 8/28/2026

Direction: Looking northwest



Photo 2: Clean soil and caution tape are placed at the northern line.

Date: 8/28/2026

Direction: Looking southeast

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 3: Clean soil and caution tape are placed at HEW – 11.

Date: 8/28/2026

Direction: Looking south



Photo 4: 5' gravel windows extending 3' into each branch, backfilled with noncalcareous gravel.

Date: 8/28/2026

Direction: Looking northwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 5: 8" perforated pipe placed at HEW – 8.

Date: 8/28/2026

Direction: Looking southeast



Photo 6: Solid to perforated pipe tie-ins.

Date: 8/28/2026

Direction: Looking northwest

DAILY FIELD ACTIVITIES REPORT					
Client Name: Iowa Waste Services, LLC.		Date: 8/29/2026			
SCS Project Name: 2026 GGCS Expansion – Phase 1		Start Time: 7:35			
SCS Project No: 27226515.00		Stop Time: 19:00			
Project Location: Loess Hills Landfill		Task: GGCS CQA			
		Work Area or Boundaries: GEW – 87 & 53R, HEW – 8			
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	68-91°F	15 mph S	Cloudy	None	Dry
CONTRACTORS/PERSONNEL:		EQUIPMENT ONSITE (USED AND UNUSED):			
SCS Engineers – 1 Tri Core Construction Workers – 4		Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1			
TESTS COMPLETED/OBSERVED					
Document all tests in separate spreadsheet or below					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0735	SCS (Miller) arrived onsite. The dozer covers the 8" perforated pipe in HEW – 8 with noncalcareous rock. The section of the landfill including GEW – 87 & 53R are shut off from the system. The rest of the crew works at GEW – 87 for the tie in. Crew cuts into existing riser below grade and attaches a molded SDR 17 Tee.				
1025	Geotextile and geomembrane are laid in HEW – 8's trench. At GEW – 87 crew welds in 6" pipe with another tee and elbow for collection risers. Hoses are attached at wellheads. Risers are attached to HEW – 8 & 9.				
1420	Crew moves over to GEW – 53R to repeat the tie-in process just completed at GEW – 87.				
1545	Geotextile and geomembrane are placed on the southern line after the road crossing but before the active face. After discussion with the Project Manager (Z. Mahon), the hoses placed on the risers are to be replaced with 6" caps. Geotextile and geomembrane are at HEW – 9 between the active face and road crossing.				
1900	Welds at GEW – 87 are complete. The section cut off from the system is turned back on. Crew cannot locate enough 8" slip caps. HEW – 8, 10, and 11 are covered with duct tape. SCS offsite. Part of the crew stays onsite to haul loads of clean soil to the construction zone.				
DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:					
OBSERVER: J. Miller			SCS ENGINEERS		

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 1: Area around GEW – 87 is getting prepared for the tie-in.

Date: 8/29/2026

Direction: Looking east



Photo 2: A layer of noncalcareous rock sandwiches the 8" perforated pipe.

Date: 8/29/2026

Direction: Looking northwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 3: Molded SDR 17 Tee is welded onto the riser pipe.

Date: 8/29/2026

Direction: Looking east



Photo 4: Geotextile is laid in HEW – 8.

Date: 8/29/2026

Direction: Looking northwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 5: Two 6" risers are attached to GEW-87's riser. Both are positioned adjacent to the 2 solid 8" pipes. Risers are secured with a slip cap. Crew cannot locate enough 8" caps for the 8" pipes and are covered with duct tape.

Date: 8/29/2026

Direction: Looking southeast



Photo 6: Tie-in at GEW-53R begins.

Date: 8/29/2026

Direction: Looking south

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 7: Geotextile laid at HEW – 8 & 9. Skinny pieces will be fixed the following day.

Date: 8/29/2026

Direction: Looking northwest



Photo 8: Tie-in is complete at GEW – 87.

Date: 8/29/2026

Direction: Looking east

DAILY FIELD ACTIVITIES REPORT					
Client Name:		Iowa Waste Services, LLC. Loess Hills Landfill		Date:	8/30/2026
SCS Project Name:		2026 GGCS Expansion – Phase 1		Start Time:	0745
SCS Project No:		27226515.00		Stop Time:	18:05
Project Location:		Loess Hills Landfill		Task:	GCCS CQA
				Work Area or Boundaries:	Finalizing everywhere
WEATHER INFORMATION: *Update information if it significantly changes*	MAX/MIN TEMP:	WIND SPEED AND DIRECTION:	WEATHER CONDITIONS: (Cloudy, Partially Cloudy, Sunny, etc.)	PRECIPITATION: (Fog, Drizzle, Rain, Snow, etc.)	SOIL CONDITIONS: (Dry, Muddy, Ponding, Frozen, etc.)
	69- 93 °F	17 mph	Partially cloudy	none	dry
CONTRACTORS/PERSONNEL:			EQUIPMENT ONSITE (USED AND UNUSED):		
SCS Engineers – 1 Tri Core Construction Workers – 4			Komatsu Excavator – 1 Dozer – 1 Skid Steerer – 1 Haul Truck – 1 UTV – 1 Skytrak - 1		
TESTS COMPLETED/OBSERVED *Document all tests in separate spreadsheet or below*					
TIME:	ACTIVITIES AND OBSERVATIONS:				
0745	SCS (Miller) arrived onsite. Crew notified Miller at 0630 that they would have a late start.				
0815	The crew arrives onsite and hauls clean dirt loads to the construction zone and fixes geomembrane areas pointed out by SCS due to having too small of geomembrane pieces placed.				
0945	Crew delivers clean soil and caution tape to the southern line east of the road crossing and at HEW – 10.				
1045	Crew delivers clean soil and caution tape to the southern line, HEW – 9 (in-between the road crossing and active face) and HEW – 8.				
1240	Crew begins backfilling.				
1500	Miller informs the crew she will depart the site at 1800.				
1540	Skid steerer works to backfill the area surrounding GEW – 53R & 87. Dozer slightly hollows both road crossings and backfills with clean soil.				
1800	SCS offsite. Crew continues working.				
Site conditions at the time of SCS's departure: road crossings have all layers placed except for the top gravel layer, bentonite seals need to be placed, areas between the road crossings and active face on the southern line and HEW – 9 still need backfilling (these are the areas where					

caution tape touches the pipes), area also needs backfilling west of the active face road crossing where HEW – 10 & 11 branch off from each other. Otherwise, all areas are backfilled, with no mounding.

Before SCS's departure, multiple crew members were reminded of the remaining work items and SCS highlighted applicable portions of the drawings. SCS also requested survey markers be placed at the solid to perforated pipe transitions. The crew mentioned they would finish the project this evening and leave tomorrow morning.

DESCRIPTION OF MATERIAL(S) INSTALLED OR DELIVERED:

OBSERVER: J. Miller

SCS ENGINEERS

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 1: Geomembrane is laid in a wider layer at HEW – 9 (shown) & 8.

Date: 8/30/2026

Direction: Looking west



Photo 2: Caution tape and the top layer of clean soil is placed on HEW – 11.

Date: 8/30/2026

Direction: Looking southwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 3: Caution tape and the first layer of clean top soil is placed at HEW – 8, after the branch off point from HEW – 9.

Date: 8/30/2026

Direction: Looking northwest



Photo 4: The first layer of clean topsoil is placed at HEW – 9, between the active face and road crossing.

Date: 8/30/2026

Direction: Looking east

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 5: At HEW – 9 caution tape is placed, and clean topsoil is placed to begin final grading.

Date: 8/30/2026

Direction: Looking east



Photo 6: The southern line between the road crossing and active face with the caution tape being sandwiched between clean topsoil layers.

Date: 8/30/2026

Direction: Looking east

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 7: HEW – 8's final grading observed with end survey marker in place.

Date: 8/30/2026

Direction: Looking southeast



Photo 8: Final noted conditions at the branch off point for HEW – 8 & 9. Grading is completed west of gravel drain windows.

Date: 8/30/2026

Direction: Looking northwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 9: Noncalcareous rock is hollowed out of the southern road crossing for layer of clean soil. This is the final condition observed for this uncompleted area.

Date: 8/30/2026

Direction: Looking northeast



Photo 10: Layer of clean soil is placed on the northern road crossing. This is the final condition observed for this uncompleted area.

Date: 8/30/2026

Direction: Looking southwest

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 11: Trench is backfilled to grade from the northern road crossing to GEW – 87.

Date: 8/30/2026

Direction: Looking southwest



Photo 12: Final grading documented at GEW – 53R.

Date: 8/30/2026

Direction: Looking east

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 13: Final grading documented west of GEW – 53R going towards the southern road crossing.

Date: 8/30/2026

Direction: Looking northwest



Photo 14: Final grading documented for HEW – 9 and the southern line between the road crossing and the active face.

Date: 8/30/2026

Direction: Looking east

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 15: Final conditions documented at the drainage window on the southern line.

Date: 8/30/2026

Direction: Looking north



Photo 16: Final conditions observed at the transition point for HEW – 11.

Date: 8/30/2026

Direction: Looking west

Loess Hills
2026 GCCS Expansion – Phase 1
27226515.00



Photo 17: Photo provided by a Tri Core Construction Crew Member. Bentonite seal placed just east of HEW – 10's gravel drain window.

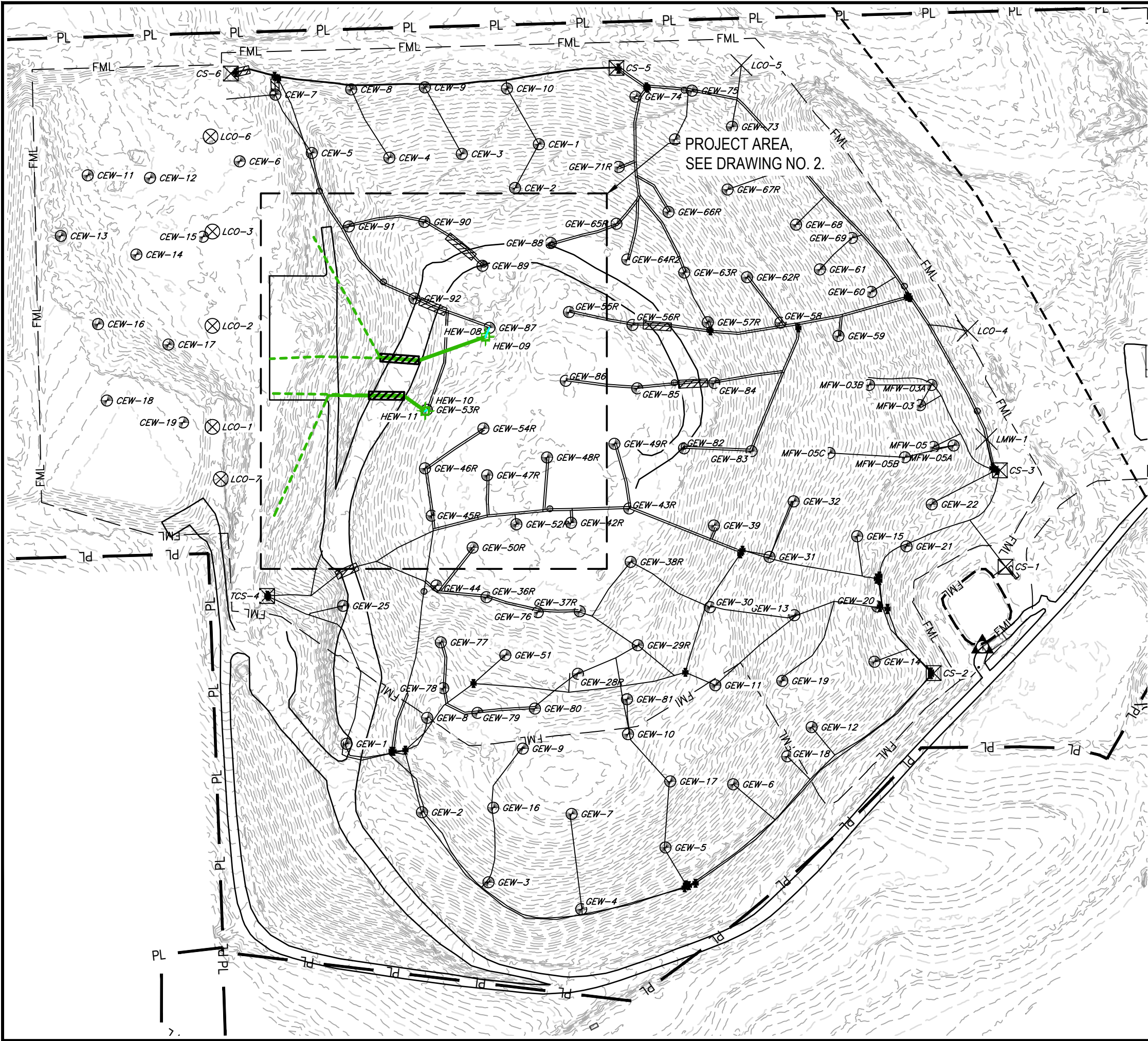
Date: 8/30/2026

Direction: Looking southwest

Appendix B

As-Constructed Drawings

T:\27226515.00\DRAWINGS\AUTOCAD\LAYOUT - LOESS HILLS 2026 GCCS EXP DESIGN.DWG



LEGEND

EXISTING LFG, AIR SUPPLY, AND FORCEMAIN PIPE

EXISTING 2' CONTOUR

EXISTING 10' CONTOUR

GEW-21 EXISTING LFG EXTRACTION WELL

EXISTING ROAD CROSSING

CONSTRUCTED 6" LFG PIPE

CONSTRUCTED 8" LFG PIPE

CONSTRUCTED HORIZONTAL EXTRACTION WELL PIPE

CONSTRUCTED HORIZONTAL EXTRACTION WELLHEAD

CONSTRUCTED ROAD CROSSING

- NOTES:
1.

EXISTING SITE LAYOUT FROM AS-CONSTRUCTED SURVEYS OF GCCS INSTALLATION AND EXPANSION PROJECTS PROVIDED BY IOWA WASTE SERVICES, LLC.
2.

EXISTING TOPOGRAPHY FROM SURVEY CONDUCTED FEBRUARY 11, 2026, PROVIDED BY IOWA WASTE SERVICES, LLC.
3.

PIPES SHOWN ADJACENT TO EACH OTHER ARE LOCATED IN THE SAME TRENCH. SPACING OF PIPES IN TRENCH NOT SHOWN TO SCALE.
4.

CONSTRUCTED LFG PIPE ALIGNMENTS AND WELLHEAD LOCATIONS FROM SURVEY CONDUCTED AUGUST 31, 2026 BY TD2.

2500500

SCALE

FEET

ISSUED FOR REVIEW

CK	BY	DATE	REV	DATE	REV	DATE	REV	DATE	REV
SHEET TITLE					PROJECT TITLE				
AS-CONSTRUCTED SITE LAYOUT					LOESS HILLS LANDFILL				
IOWA WASTE SERVICES, LLC.					2026 GCCS EXPANSION - PHASE 1				
CLIENT					59722 290TH STREET				
MALVERN, IA									
SCS ENGINEERS					CADD FILE:				
14755 GROVER STREET					DATE:				
OMAHA, NE 68144					9/17/26				
PH. (402) 884-6202 FAX. (913) 881-0012					DRAWING NO.				
PROJ. NO. 27226515.00					1				
DWN. BY: BSG									
CHK. BY: ZEM									
PRG. MGR: ZEM									

Appendix C

Field Pressure Test Results

Pressure Testing Information

Client: Iowa Waste Services, LLC. Loess Hills Landfill

Project: 2026 GCCS Expansion - Phase 1

Project No.: 27226515.00

CQA Technician: J. Miller

Contractor: Tri Core

Pressure Gauge: _____

Date	Test Number	Segment	Pipe Size (in.)	Time		Temperature (°F)		Pressure (psig)		Acceptable Pressure Change Due to Temp	Pressure Change (psig)	Pass/Fail
				Start	End	Start	End	Start	End			
08/22/26	1	HEW - 8 solid pipe	8	9:00	9:58	72	75	13	13	0.16	0.00	P
08/22/26	2	HEW - 9 solid pipe	8	10:15	11:15	76	78	10	10	0.09	0.00	P
08/22/26	3	HEW - 11 solid pipe - road crossing & east	8	16:12	17:28	84	83	12	12	-0.05	0.00	P
08/22/26	4	HEW - 10 solid pipe	8	16:12	17:28	84	83	10	10	-0.05	0.00	P
08/24/26	5	HEW - 11 between road crossing & perforated transition	8	18:53	7:17	77	65	10	10	-0.55	0.00	P
										0.00	0.00	
										0.00	0.00	
										0.00	0.00	
										0.00	0.00	
										0.00	0.00	
										0.00	0.00	

Acceptable Change in Pressure =

$$\left((\text{End Pres} + 459) \left(\frac{\text{Start Pres} + 14.65}{\text{Start Temp} + 459} \right) \right) - 14.65 - \text{Start Pres}$$

Appendix D

Issued for Construction Drawings

IOWA WASTE SERVICES, LLC.

LOESS HILLS LANDFILL

2026 GCCS EXPANSION - PHASE 1

PREPARED FOR



IOWA WASTE SERVICES, LLC.
59722 290TH STREET
MALVERN, IA

PREPARED BY

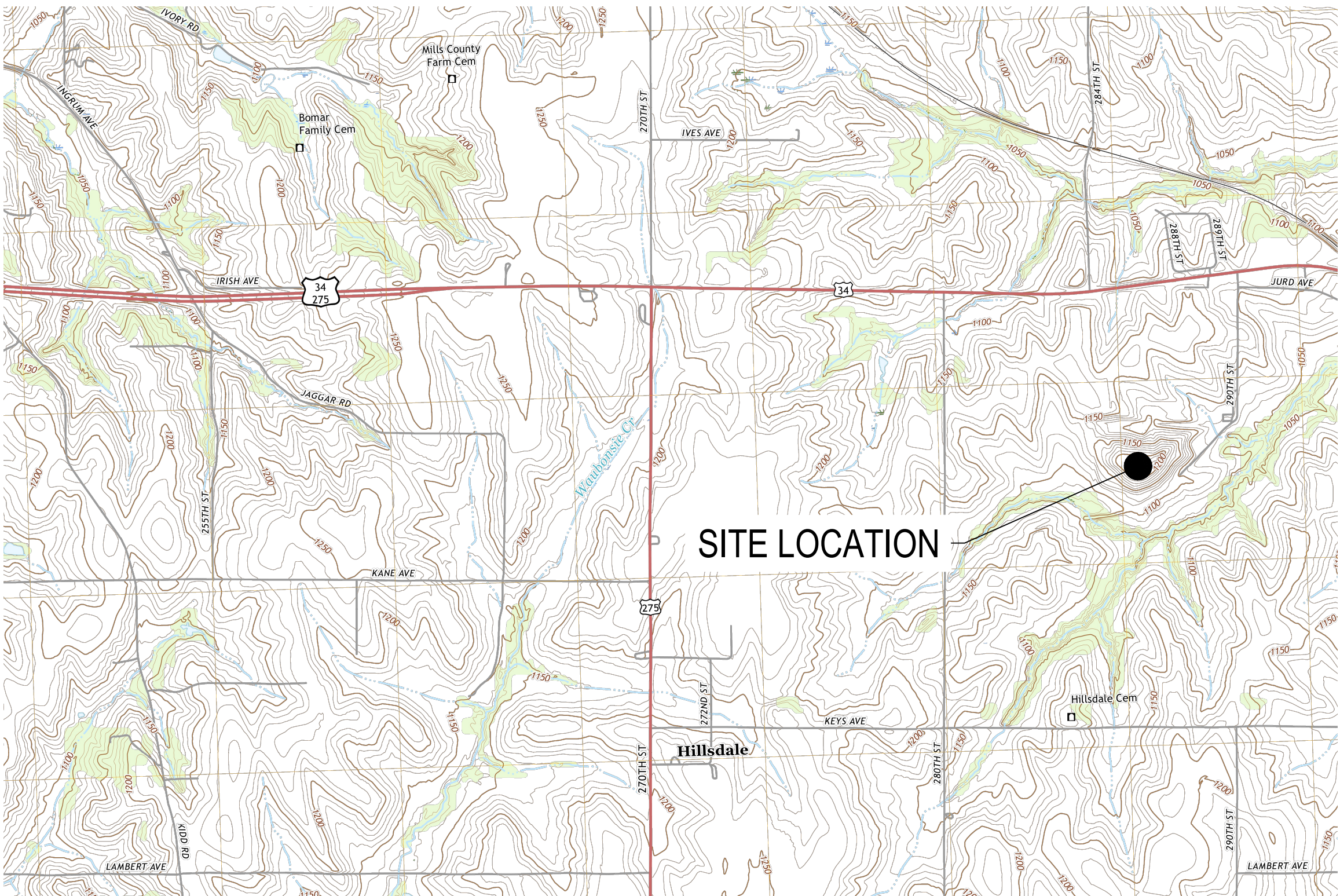
SCS ENGINEERS

14755 GROVER STREET
OMAHA, NE 68144
(402) 884-6202 FAX (913) 681-0012

PROJECT NO. 27226286.00

Solid Waste Permit No. 65-SDP-01-72P
AUGUST 2026

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C0.1	GENERAL NOTES AND LEGEND
C1.0	SITE LAYOUT
C1.1	PROJECT LAYOUT
C2.0	WELL AND RISER DETAILS
C2.1	TRENCH AND PIPE CONNECTION DETAILS



REFERENCE: USGS QUADRANGLE MAP, GLENWOOD, IOWA, 2022

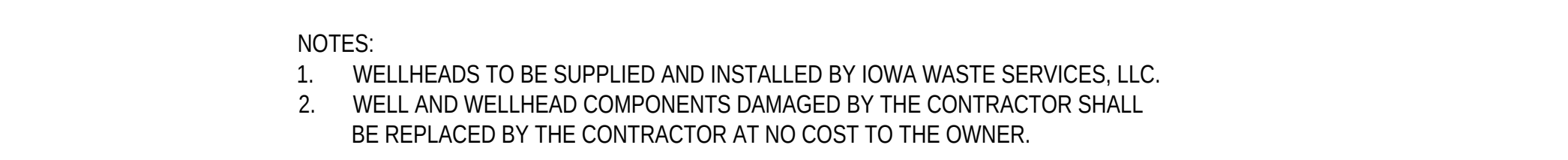
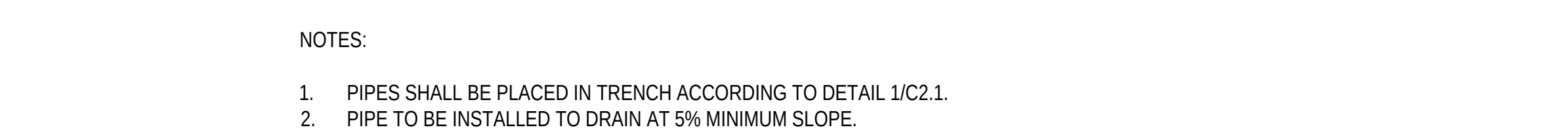
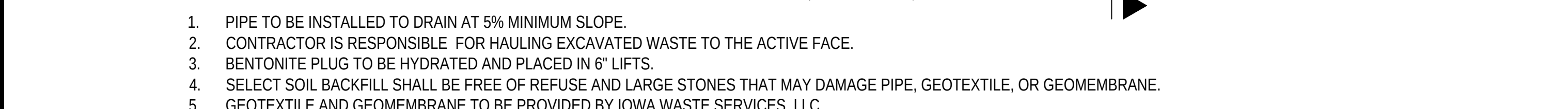
2000 0 2000 4000
SCALE FEET

	I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER LAWS OF THE STATE OF IOWA.	
		08/12/2026
	ERIC SONSTHAGEN, P.E.	DATE
	LICENSE NUMBER P24844	
	MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027	
PAGES OR SHEETS COVERED BY THIS SEAL: ALL		

ISSUED FOR CONSTRUCTION

1:2722606 00DRAWINGS\AUTOCAD\SHEETS\PHASE - HORIZONTAL COLLECTORS\01 GENERAL NOTES AND LEGENDING

		GENERAL NOTES:		GENERAL NOTES FOR PIPE INSTALLATION (BELOW AND ABOVE GRADE):		CK BY													
		</																	



ISSUED FOR CONSTRUCTION

[illegible]

PROJECT TITLE
LOESS HILLS LANDFILL
2026 GCCS EXPANSION - PHASE 1

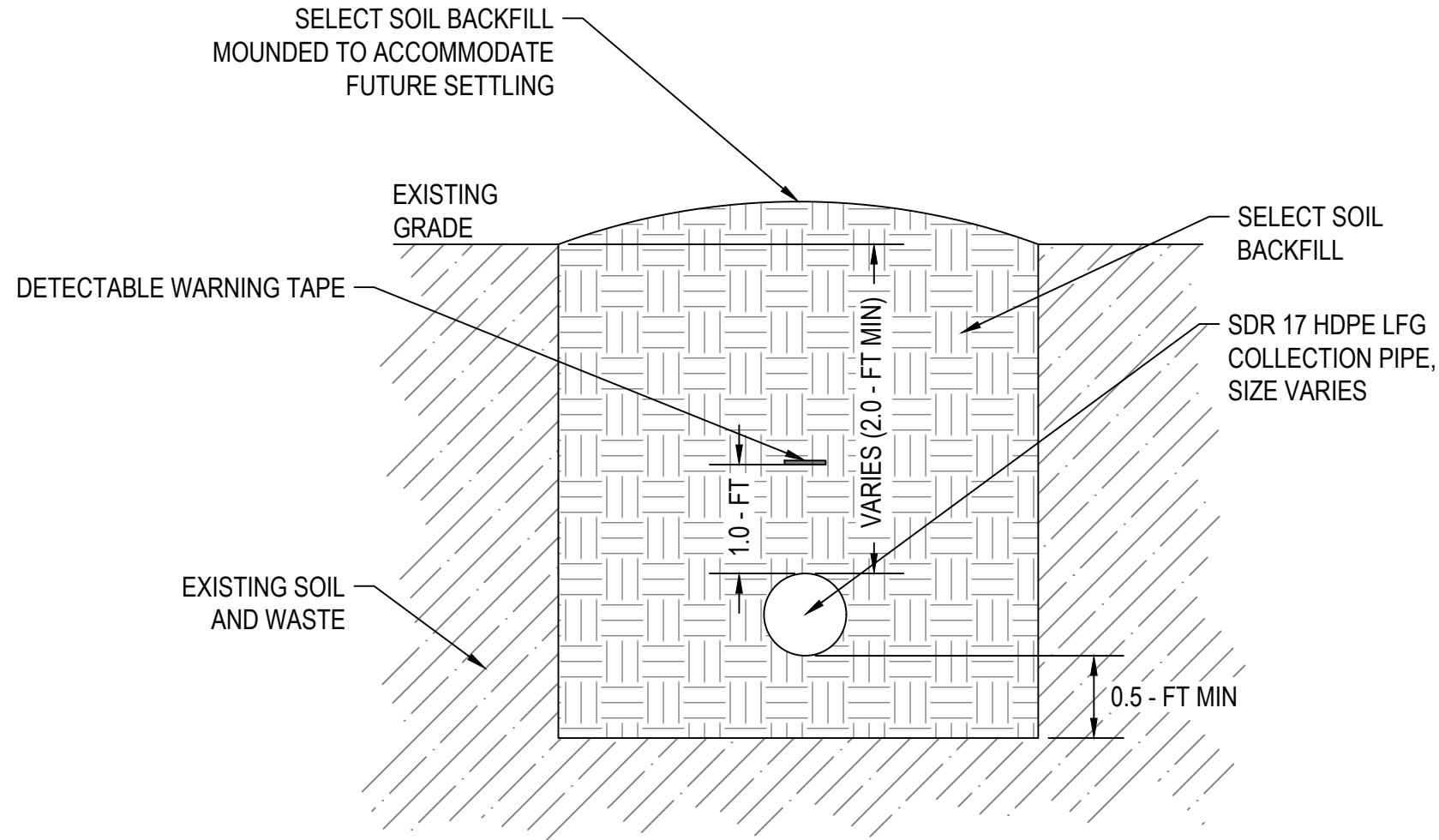
59722 290TH STREET
MALVERN, IA

PH. (402) 884-6202 FAX. (913) 681-0012	PROJ. NO. 272726286.00	DWN. BY: BSG	PROJ. BSG
		CHK. BY: EMS	

C2.0

ISSUED FOR CONSTRUCTION

T:\2726266_00\DRAWINGS\AUTOCAD\SHEETS\PHASE - HORIZONTAL COLLECTORS\C2.1 TRENCH AND PIPE CONNECTION DETAILS.DWG

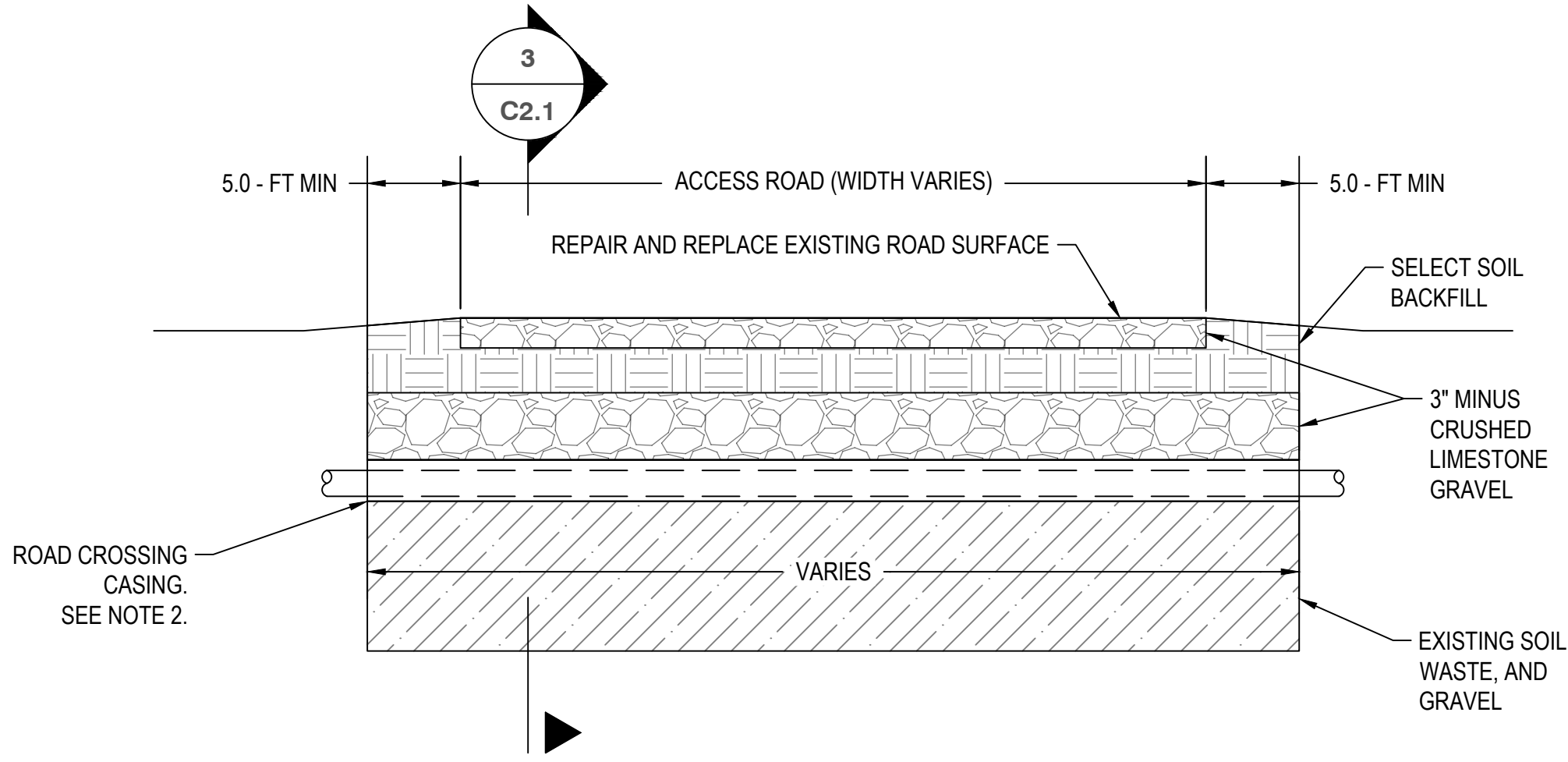


NOTES:

- EXCAVATED SOIL SUITABLE TO BE USED AS SELECT SOIL BACKFILL MATERIAL SHALL BE SEPARATED FROM EXCAVATED REFUSE. ANY MATERIALS NOT SUITABLE FOR USE AS SELECT SOIL BACKFILL SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED ON SITE AS DIRECTED BY THE OWNER OR ITS REPRESENTATIVE.
- SELECT SOIL BACKFILL SHALL BE FREE OF REFUSE OR ANY LARGE STONES THAT MAY DAMAGE THE PIPE.
- ALL PIPING SHALL LAY FLAT ON THE BOTTOM OF THE TRENCH.
- WARNING TAPE SHALL BE MIN 3" WIDE AND IMPRINTED "BURIED GAS LINE".

1 TYPICAL TRENCH DETAIL

NOT TO SCALE

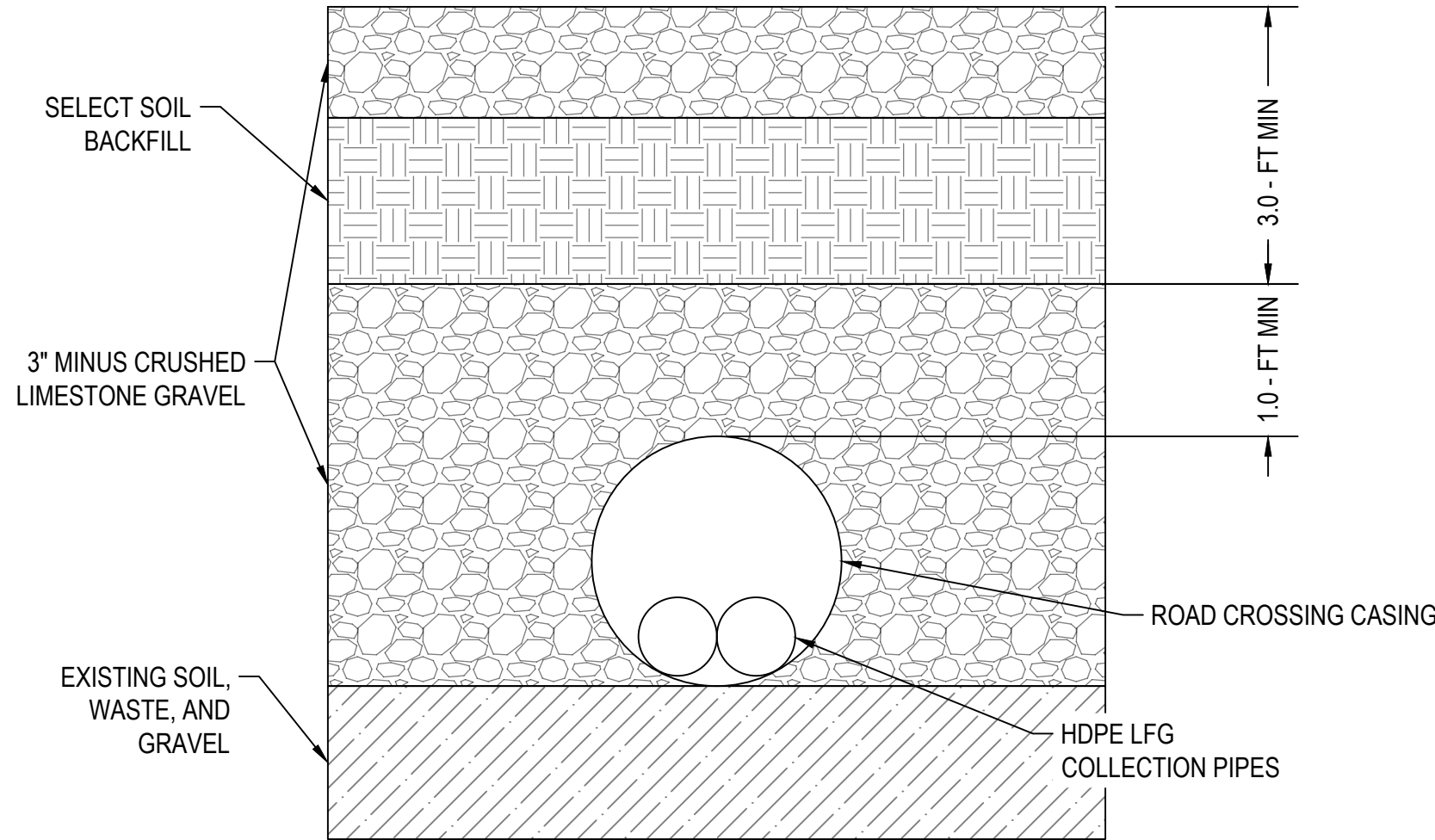


NOTES:

- ROAD SHALL BE RESTORED TO MATCH ORIGINAL CONDITIONS.
- ROAD CROSSING CASING SHALL BE 14 GAUGE GALVANIZED CMP WITH A MINIMUM DIAMETER OF 5" GREATER THAN THE CUMULATIVE DIAMETER OF THE PIPES ENCLOSED.

2 ROAD CROSSING DETAIL

NOT TO SCALE



NOTES:

- HDPE PIPES SHALL NOT CROSS-OVER WITHIN ROAD CROSSING CASING.
- LIMESTONE GRAVEL AND SELECT SOIL BACKFILL SHALL BE COMPACTED IN 6-INCH LIFTS.
- RESTORED ROAD SURFACE SHALL MATCH DEPTH OF ORIGINAL ROAD.

3 ROAD CROSSING TRENCH

NOT TO SCALE

SCS ENGINEERS

14755 GROVER STREET
OMAHA, NE 68144
PH. (402) 884-6202 FAX. (913) 681-0012

PROJ. NO. 2726266-00
DWN. BY: BSG
CHK. BY: BSG
PROJ. MGR. ZEM

CLIENT

IOWA WASTE SERVICES, LLC.

59722 290TH STREET
MALVERN, IA

SHEET TITLE

**TRENCH AND PIPE CONNECTION
DETAILS**

PROJECT TITLE

**LOESS HILLS LANDFILL
2026 GCCS EXPANSION - PHASE 1**

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CADD FILE:
C2.1 TRENCH AND PIPE CONNECTION DETAILS.DWG

DATE:
8/12/26

DRAWING NO.

C2.1

ISSUED FOR CONSTRUCTION