

## Municipal Solid Waste Sanitary Landfill Financial Assurance Report Form

#### **SECTION 1: FACILITY INFORMATION**

(please	print	or ty	pe)
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Information Requested						
Facility Name: Permit Number:						
Permitted Agency/Entity:						
Section 2: Closure/Postclosure or Corrective Action Cost Estimates						
	Information Requested	Cost Estimate	Date of Cost Estimate			

Provide a cost estimate for corrective action only if corrective action is required and a corrective action plan has been approved by the Department. Attach the corrective action cost estimate signed and certified by an lowa-licensed professional engineer. The cost estimate shall account for total costs of the activities described in the approved corrective action plan for the corrective action period.

#### **SECTION 3: FACILITY WASTE TONNAGE INFORMATION**

Information Requested	Tons
Remaining permitted capacity as of the beginning of permit holder's current fiscal year	
Amount of waste disposed of at the facility during the prior fiscal year	

#### **SECTION 4: PROOF OF COMPLIANCE**

**Privately Owned Municipal Solid Waste Landfills** 

Publicly Owned Municipal Solid Waste Landfills	(ATTACH AUDIT REPORT)
Owner's Most Recent Annual Audit Report	
Prepared by:	
For fiscal year ending:	

(ATTACH AFFIDAVIT)

Attach owner/operator's affidavit indicating that an annual review has been performed by a certified public accountant to determine whether the privately owned landfill is in compliance with IAC 567 Chapter 113. The affidavit shall state the name of the certified public accountant, the dates and conclusions of the review, and the steps taken to rectify any deficiencies identified by the accountant.

03/2024 cmc Page 1 DNR Form 542-8090

Updated Closure Cost Estimate \$

Updated Postclosure Cost Estimate \$

Initial or Updated Corrective Action Cost Estimate \$

<sup>\*</sup>Attach closure/postclosure cost estimate(s) signed and certified by an Iowa-licensed professional engineer. Cost estimates shall include, at a minimum, each of the cost line items defined in 113.14(3)"c" for closure and 113.14(4)"c" for postclosure. Please provide closure and/or postclosure site area acreage information with the estimates.

#### **SECTION 5: FINANCIAL ASSURANCE INSTRUMENT**

Type and Value of Financial Assurance Instrument(s)	(ATTACH INSTRUMENT(S))
Type and value of financial Assurance motification	(**************************************

Assurance Instrument	<b>Establishment Date</b>	Mechanism Covers	Instrument Value*
		Closure 🗌	
Trust Fund 567 IAC 113.14(6)"a"		Postclosure	\$
307 I/10 113.1 1(0) d		Corrective Action	
		Closure 🗌	
Surety Bond 567 IAC 113.14(6)"b"		Postclosure	\$
307 I/IC 113.14(0) B		Corrective Action	
		Closure 🗌	
Letter of Credit 567 IAC 113.14(6)"c"		Postclosure 🗌	\$
307 I/IC 113.14(0) C		Corrective Action	
		Closure 🗌	
Insurance 567 IAC 113.14(6)"d"		Postclosure 🗌	\$
307 IAC 113.14(0) U		Corrective Action	
		Closure 🗌	
Corporate Financial Test 567 IAC 113.14(6)"e"		Postclosure	\$
307 IAC 113.14(0) E		Corrective Action 🗌	
		Closure 🗌	
Local Gov't. Financial Test 567 IAC 113.14(6)"f"		Postclosure 🗌	\$
307 IAC 113.14(0) 1		Corrective Action	
		Closure 🗌	
Corporate Guarantee 567 IAC 113.14(6)"g"		Postclosure 🗌	\$
307 IAC 113.14(0) B		Corrective Action	
		Closure 🗌	
Local Gov't Guarantee 567 IAC 113.14(6)"h"		Postclosure 🗌	\$
307 IAC 113.14(0) II		Corrective Action 🗌	
Local Gov't. Dedicated		Closure 🗌	
Fund		Postclosure 🗌	\$
567 IAC 113.14(6)"i"		Corrective Action 🗌	

#### **SECTION 6: INITIAL PROOF OF ESTABLISHMENT OF ACCOUNTS**

Check Which Applies:	New Mechanism	Previously Submitted	
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Pursuant to IAC 567 Chapter 113.14(8)"f", documentation of the establishment of accounts is to be submitted to the department by April 1, 2003 for currently permitted MSWLFs. Permit holders for MSWLFs permitted after April 1, 2003, shall submit documentation of the establishment of accounts prior to the MSWLF's initial receipt of waste.

<sup>\*</sup>Pursuant to IAC 567 113.14(9), if account(s) are restricted/reserved to pay for closure, postclosure or corrective action costs, then the amount of the financial assurance instrument may be reduced by the sum of the cash balance of the account(s) established to comply with subrule 113.14(8).

Please attach documentation indicating accounts/fund have been established for closure and postclosure care and if the account(s) are restricted/reserved for closure or postclosure care. Examples of documentation include bank statements for closure/postclosure accounts, letter signed by the chief financial officer, letter from certified public accountant, etc.

Accounts established pursuant to paragraph 113.14(6)"a" for trust funds or paragraph 113.14(6)"i" for local government dedicated funds also satisfies the requirements of this subrule, and the permit holder shall not be required to establish additional closure and postclosure accounts.

#### **SECTION 7: CLOSURE AND POSTCLOSURE ACCOUNTS**

Completion of the following closure and postclosure account information complies with the annual financial statement requirements of IAC 567 113.14(3)"a" and 113.14(4)"a" by indicating the current balance(s) of the closure/postclosure account(s) or dedicated/trust fund and the projected amount(s) to be deposited in the account(s).

Under "Beginning Balance", please state the account/fund balance 30 days after the start of the previous fiscal year, for "Ending Balance", indicate the account balance 30 days after the close of the previous fiscal year, and for "Projected Deposit", indicate the amount to be deposited within 30 days of the close of the permit holder's fiscal year.

Information Requested	Beginning Balance	Ending Balance	Projected Deposit			
Closure Account Balance (see formula below)	\$	\$	\$			
Postclosure Account Balance (see formula below)	\$	\$	\$			
	Or					
Dedicated Fund Balance (see formula below)	\$	\$	\$			
Trust Fund Balance (see formula below)	\$	\$	\$			

#### **Formula for Projected Deposits**

Closure or Postclosure Account

Where "CE" is the closure or postclosure cost estimate, "CB" is the balance 30 days after close of the previous fiscal year, "RPC" is the remaining permitted capacity in tons, of the landfill from the beginning of the current fiscal year, and "TR" is the total number of tons of solid waste disposed in the prior year.

Dedicated/Trust Fund

Where "CE" is the closure or postclosure cost estimate, "CB" is the balance 30 days after close of the previous fiscal year, and "Y" is number of years remaining in the pay-in period.

If needed, the space below can be used to show calculations for projected deposits

	1 7
Closure	Postclosure

#### **SECTION 8: PERMIT HOLDER ENDORSEMENT**

Submittal of this completed and endorsed form along with all required documentation establishes Notification and Proof of Permit Holder Compliance with IAC 567 Chapter 113.

Name of Official:	Title:		
Agency/Entity:			
Address:			
City:	State:	Zip:	
Telephone:	Fax:		
Email Address:			
Signature of Official:		Date:	

Questions? Contact Chad Stobbe at (515) 201-8272 or <a href="Chadd.Stobbe@dnr.iowa.gov">Chadd.Stobbe@dnr.iowa.gov</a>



#### Memorandum

Foth Infrastructure & Environment, LLC 411 6<sup>th</sup> Ave SE, Suite 400 Cedar Rapids, IA 52401 (319) 365-9565 foth.com

February 14, 2025

TO: Kenneth Miller, DMASWA

CC:

FR: Brian Harthun, Foth

RE: 2025 Closure/Post Closure Costs

Attached is the updated engineering estimate for the Closure/Post Closure Cost estimate for Cells 1-9 including the abutment liner in Cell 9. Reviewing the 2024 unit costs and comparing it to the IDNR published Inflation Factor of 1.024, Foth updated the unit costs utilizing current market prices on similar projects during the 2024 calendar year.

Below is the updated Closure Post Closure Cost. The total increase from 2023 to 2024 is \$398,896. Attached separately is the breakdown of the Closure/Post Cost Estimate.

DMASWA Closure/Post Closure Cost Estimate					
2022 2023					
Closure Cost	\$4,542,350	\$4,660,508			
<b>Post Closure Cost</b>	\$2,649,812	\$2,718,732			
Total	\$7,192,162	\$7,379,239			

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## **Closure/Post Closure Cost Estimate**

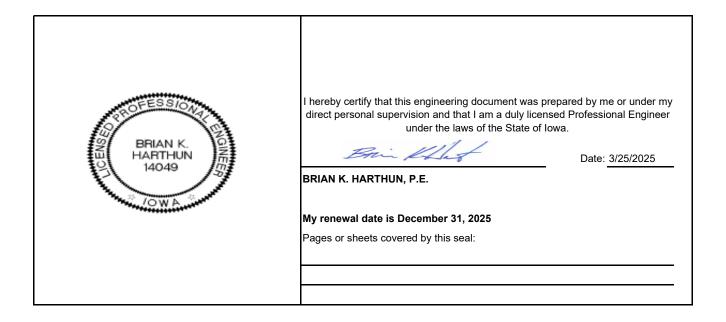
#### **FOR THE**

## **Dubuque Metropolitan Area Solid Waste Agency**

**DUBUQUE, IOWA** 

February 14, 2025

Permit No. 31-SDP-2-75P



### DUBUQUE FIANACIAL ASSURANCE COST ESTIMATE

				Closu	ıre/Post C		Update pdate Year	2/14/2025 2025
Closure Cost Estimate								
Decription	Quantity		Unit	Uni	it Cost	Extension	on	2025
Cells 4-8								
1 R and D Cap		30.7	Acre	\$	29,000	\$	890,300	
2 Engineering/Permitting		1	Each	\$	90,000	\$	90,000	
						Subtota	l	\$ 980,300
Cell 9								
3 Grading Layer		51.9	Acres	\$	1,210	\$	62,799	
4 Compacte Clay Cap		54.9	Acres	\$	8,060	\$	442,494	
5 60-mil HDPE Cap		51.9	Acres	\$	52,272	\$	2,712,917	
6 Rooting Layer		51.9	Acres	\$	4,840	\$	251,196	
7 Vegetation Layer		51.9	Acres	\$	2,710	\$	140,649	
8 Erosion Control/Seeding		51.9	Acres	\$	2,000	\$	103,800	
9 Engineering/Permitting		1	Each	\$	300,000	\$	300,000	
						Subtota	1	\$ 4,013,855
						Total		\$ 4,994,155
Post Closure Cost Estimate								
Decription	Quantity		Unit			Extension	on	
1 Cap Maintenance		30	events	\$	27,190	\$	815,698	
2 GW Monitoring			events		59,107	\$	1,773,220	
3 Inspections		60	events	\$	1,773	\$	106,410	
4 Leachate Disposal			events	\$	2,955	\$	88,653	
•				Tot	al Post Cl	osure Co		\$ 2,783,981
Total Closure/Post Closu	re Estimate							\$ 7,778,136



## Memo

 Date:	Monday, January 27, 2025
Project:	November 2023 - November 2024 Airspace Analysis
To:	Dubuque Metropolitan Area Solid Waste Agency (DMASWA) ATTN: Ken Miller, Joe Mayne
From:	HDR Engineering, Inc. Will Nicholson, P.E., Katie Kinley, P.E., Brendan Bunker, E.I.T.

#### Introduction

The November 2024 airspace analysis for the Dubuque Metropolitan Area Solid Waste Agency (agency or site) is comprised of tonnage and survey data spanning from November 1, 2023 to November 7, 2024 (period) for determination of the period airspace utilization factor (density). For soil borrow comparison, survey data spanning October 6, 2022 to November 7, 2024 was utilized. The 2-year period for soil usage analysis was assumed to be equal between the two comparison periods. The calculations provided below summarize the site's soil use, airspace utilization, and remaining site life as of November 7, 2024.

#### **References/Assumptions**

- 1. Aerial topographic map dated October 6, 2022 (Soil Borrow Comparison Sheet C004).
- 2. Aerial topographic map dated November 1, 2023 (2023 Topo Survey Sheet C002).
- 3. Aerial topographic map dated November 7, 2024 (2024 Topo Survey Sheet C003).
- 4. Landfill tonnages from November 1, 2023 to November 7, 2024.
- 5. Historic waste receipt and airspace utilization factors (Foth).
- 6. It is assumed that aerial topographic maps represent existing grades at the end of the day on the date flown.
- 7. Calculations for remaining life and remaining tonnages are based on the average 3-year waste acceptance and compaction.

#### **Analysis**

#### 1. Site Areas

Total Permitted Area:	115.4	AC	(Cells 1-9 + Abutment Liner Phase I & Phase II)
Total Constructed Area:	111.2	AC	(Permitted Area less Abutment Liner Phase II)
Total Capped Area:	32.8	AC	(Cells 1-3)
Cap Area Remaining:	82.6	AC	(Cells 3-9 + Abutment Liner Area)

#### 2. Soil Usage This Period

Survey data provided by the Agency from the two-year period spanning October 6, 2022 and November 7, 2024 was used to obtain the volume of cover materials used. The total soil usage for the two-year period was split evenly such that the soil use for the current period (November 1, 2023 to November 7, 2024) is half of the total soil usage, as shown below.

Total Soil Usage (Oct-22 to Nov-24):	66,530	CY
Est. Daily/Int. Cover Use (Total / 2)	33,265	CY
Operational Cover Use <sup>1</sup> :	14.0%	CY/CY
<sup>1</sup> (Cover CY / Airspace Consumed CY)		<del></del>

#### 3. Operational Density

Operational density captures both compaction efforts and consolidation from settlement in the waste mass underneath the current active area. This report assesses areas of active waste placement during the analysis period and conservatively does not include inactive areas. Settlement occurs in inactive areas over time, which can increase the site's overall density, but these areas are excluded from this analysis in order to specifically assess the waste density achieved by operations.

The "active" area of the landfill is determined by identifying grade changes between surveys. Fill areas generally represent waste placement, and cut areas are identified as soil borrow operations. Soil for operations is currently sourced from the north, south, and stockpile borrow areas.



#### 4. Waste Acceptance and Compaction

Historic waste acceptance and period densities obtained from 2024 Closure/Post-Closure Costs (Foth) appear below along with this period's waste acceptance and density. Waste acceptance for this period showed an increase of 0.5%, and compaction showed an increase of 1.5%.

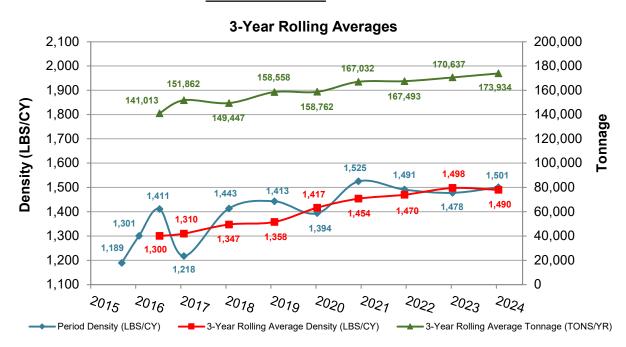
Information provided by Foth in the 2024 Closure/Post-Closure Costs shows a total period airspace consumption of 191,540 CY, resulting in a period density of 1,936 lbs/CY for the period spanning October 6, 2022 through November 1, 2023. This value appeared to be an outlier; therefore, HDR has re-evaluated survey data from this period and calculated a total airspace consumption of 250,947 CY, resulting in a period density of 1,478 lbs/CY. HDR has updated the below table to represent the HDR-analyzed period consumed and period density, which has a direct effect on 3-year rolling averages and remaining site life. This period's density is consistent with historical compaction values.

Survey Period		Waste Acceptance (TONS)	Period Volume Consumed (CY)	Period Density (LBS/CY)	
01/07/2016	to	06/29/2016	63,009	106,000	1,189
06/30/2016	to	11/17/2016	56,914	87,510	1,301
11/18/2016	to	05/02/2017	65,491	92,826	1,411
05/03/2017	to	11/15/2017	88,484	145,322	1,218
11/16/2017	to	11/15/2018	140,091	198,253	1,413
11/16/2018	to	11/19/2019	173,193	240,067	1,443
11/20/2019	to	10/30/2020	155,988	223,825	1,394
10/31/2020	to	09/29/2021	150,880	197,887	1,525
09/30/2021	to	10/08/2022	176,957	237,328	1,491
10/09/2022	to	11/01/2023	185,419	250,947	1,478
11/02/2023	to	11/07/2024	178,118	237,389	1,501

#### 5. 3-Year Rolling Averages

3-year rolling averages are calculated with each airspace analysis to look for trends and for use in longterm planning. The 3-year rolling averages for this period are shown below, and trends in tonnages and densities for each period are shown in the chart below:

3-Year Average Compaction: 1,490 LBS/CY 3-Year Average Annual Tonnage: 173,934 TONS/YR





#### 6. Remaining Site Life

The remaining airspace for the MSW footprint has been evaluated in two (2) ways, both of which appear below:

#### • Remaining Constructed Airspace

Remaining constructed airspace is the volume of waste that can be placed within the constructed waste footprint given current topography and remaining projected fill. This volume is used to project when the next cell construction will be required or when achievable and operationally limiting grades are achieved.

Based on current fill operations and fill rates, it is recommended that the next cell (Cell 9 Abutment Liner - Phase II) be constructed during calendar year 2025 in order to not limit future operations at the intersection of Cell 9 Abutment Liner Phase I and Phase II.

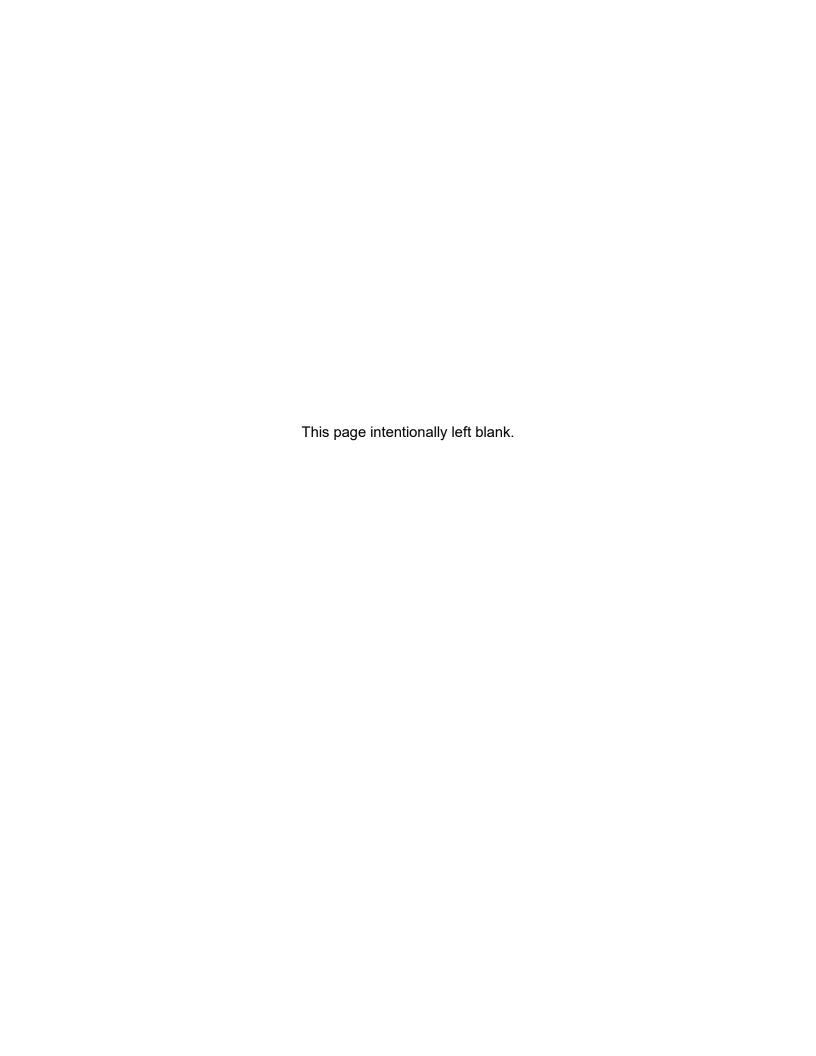
#### o Remaining Permitted Airspace

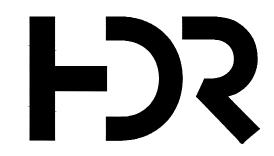
Remaining permitted airspace is calculated from the permitted top of waste (top of intermediate cover) grades compared to existing topography and future permitted cell top of clay (or GCL) grades per the current permit. This incorporates all potential waste that can be disposed within the current waste limits.

Scenario	Remaining Airspace (CY)	Remaining Tonnage (TONS) <sup>2</sup>	Remaining Life (Years & Months) <sup>2</sup>	Life End Date
Rem. Constructed Airspace	2,810,744	2,094,004	12 Years, 1 Months	November 2036
Rem. Permitted Airspace	3,471,206	2,586,048	14 Years, 11 Months	September 2039

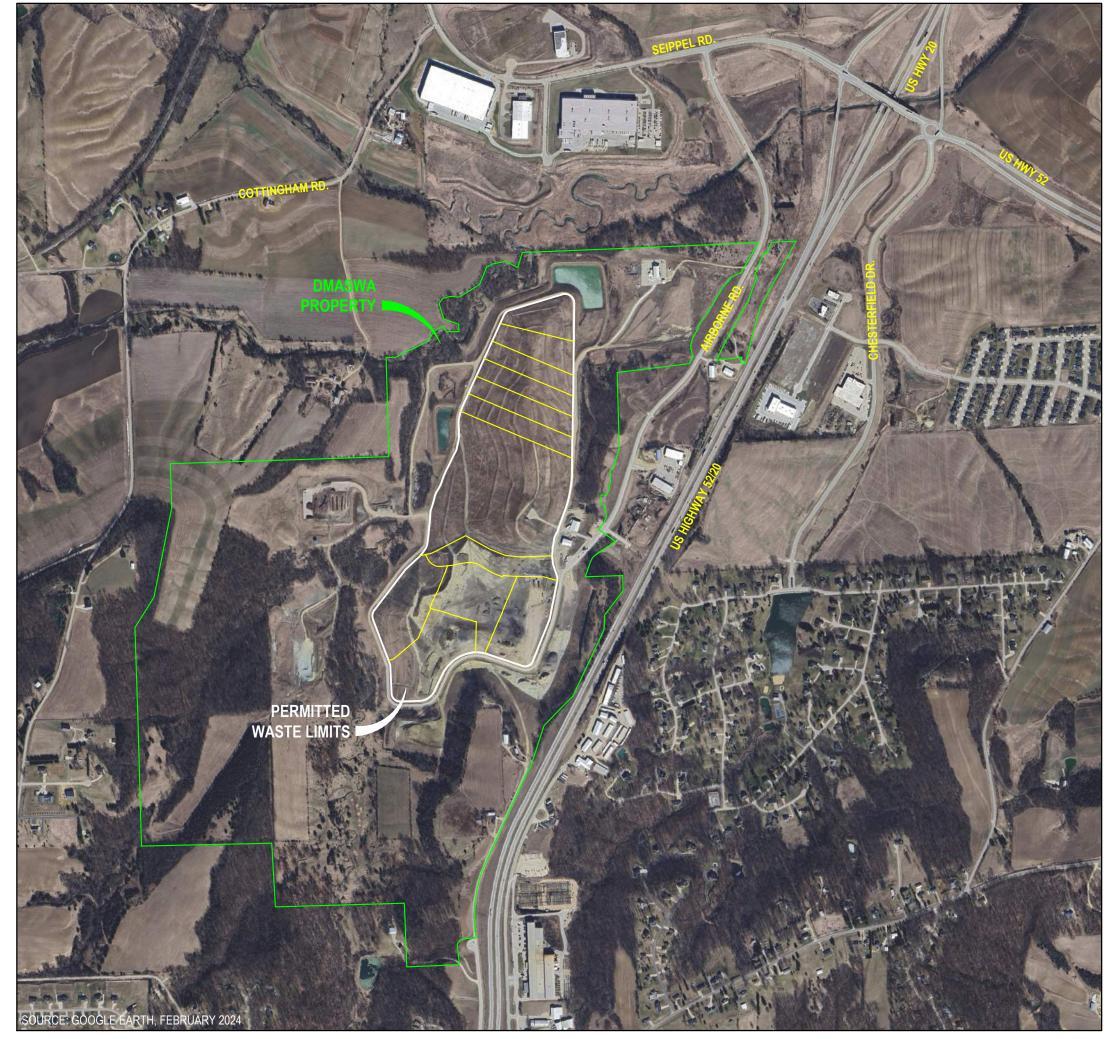
<sup>&</sup>lt;sup>2</sup>The remaining site life and tonnages above were calculated using the 3-year rolling averages for density and tonnage, both shown on the previous page.

Please feel free to reach out to us with any questions and/or comments on any information presented within this report.









VICINITY MAP
SCALE: 1" = 1000'

Drawings For

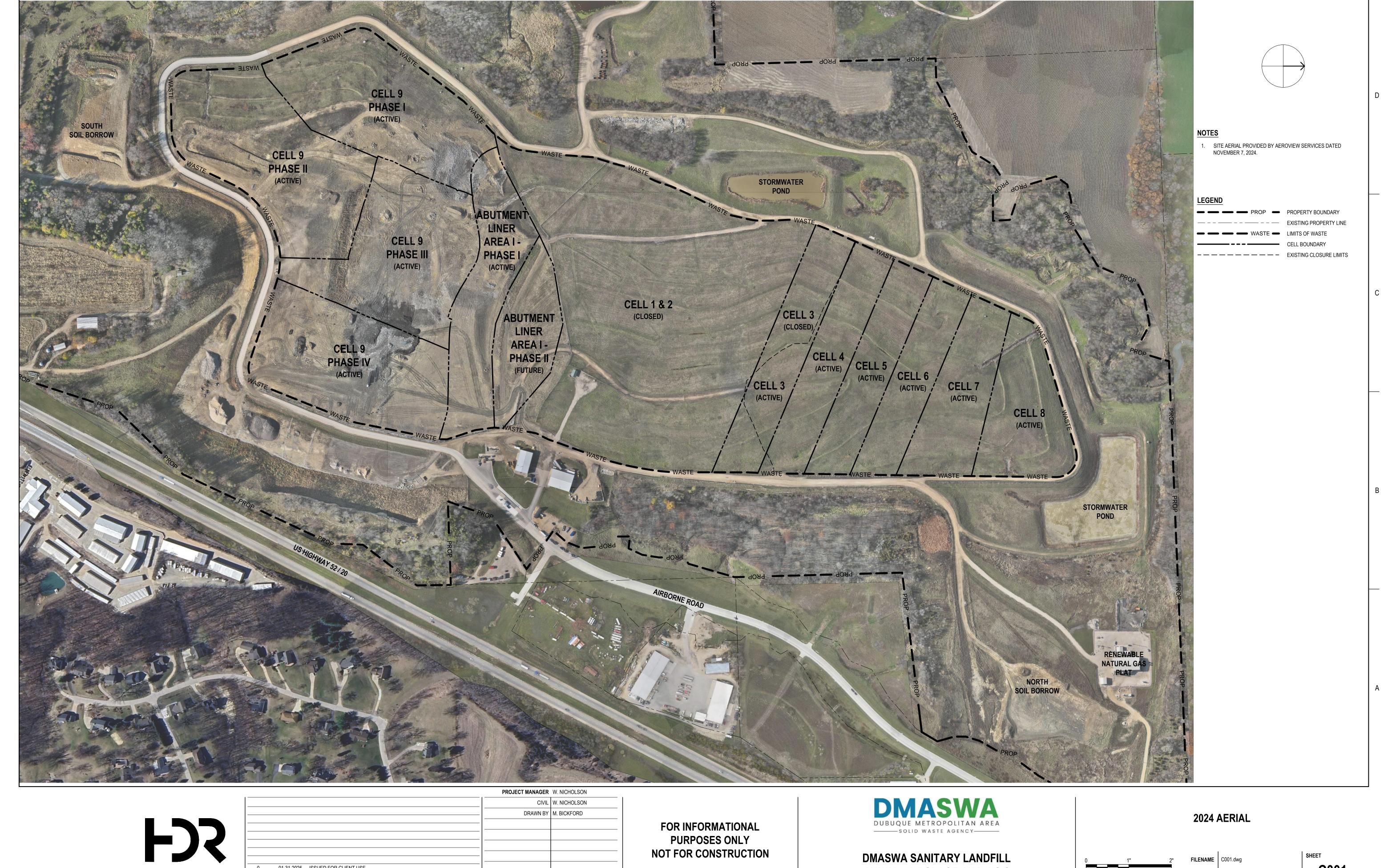
# **DMASWA** Sanitary Landfill

2024 Airspace Analysis

Project No. 10404441

## INDEX OF DRAWINGS

Dubuque, Iowa January 2025



**PURPOSES ONLY** 

PROJECT NUMBER 10404441

NOT FOR CONSTRUCTION

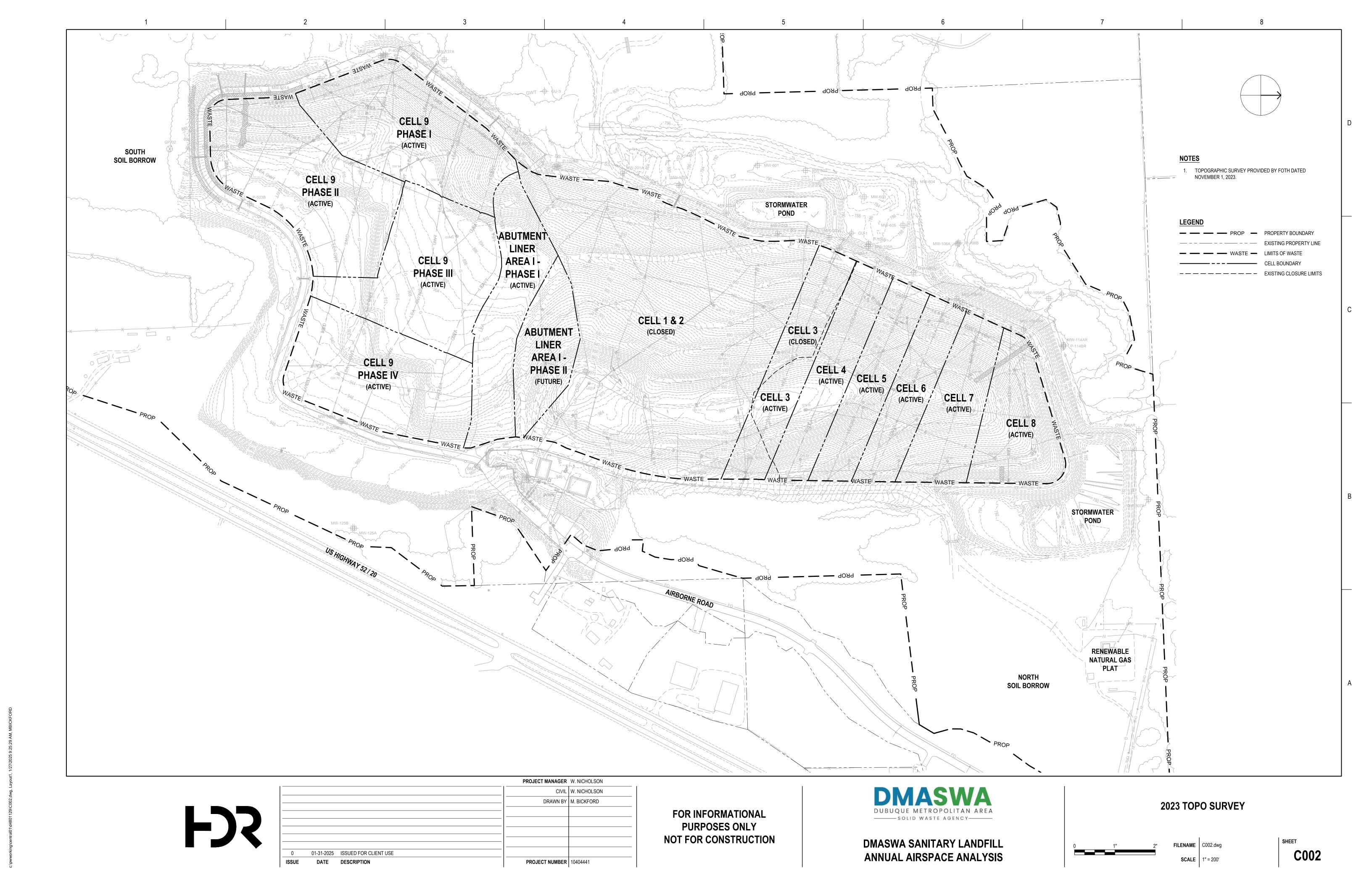
01-31-2025 ISSUED FOR CLIENT USE

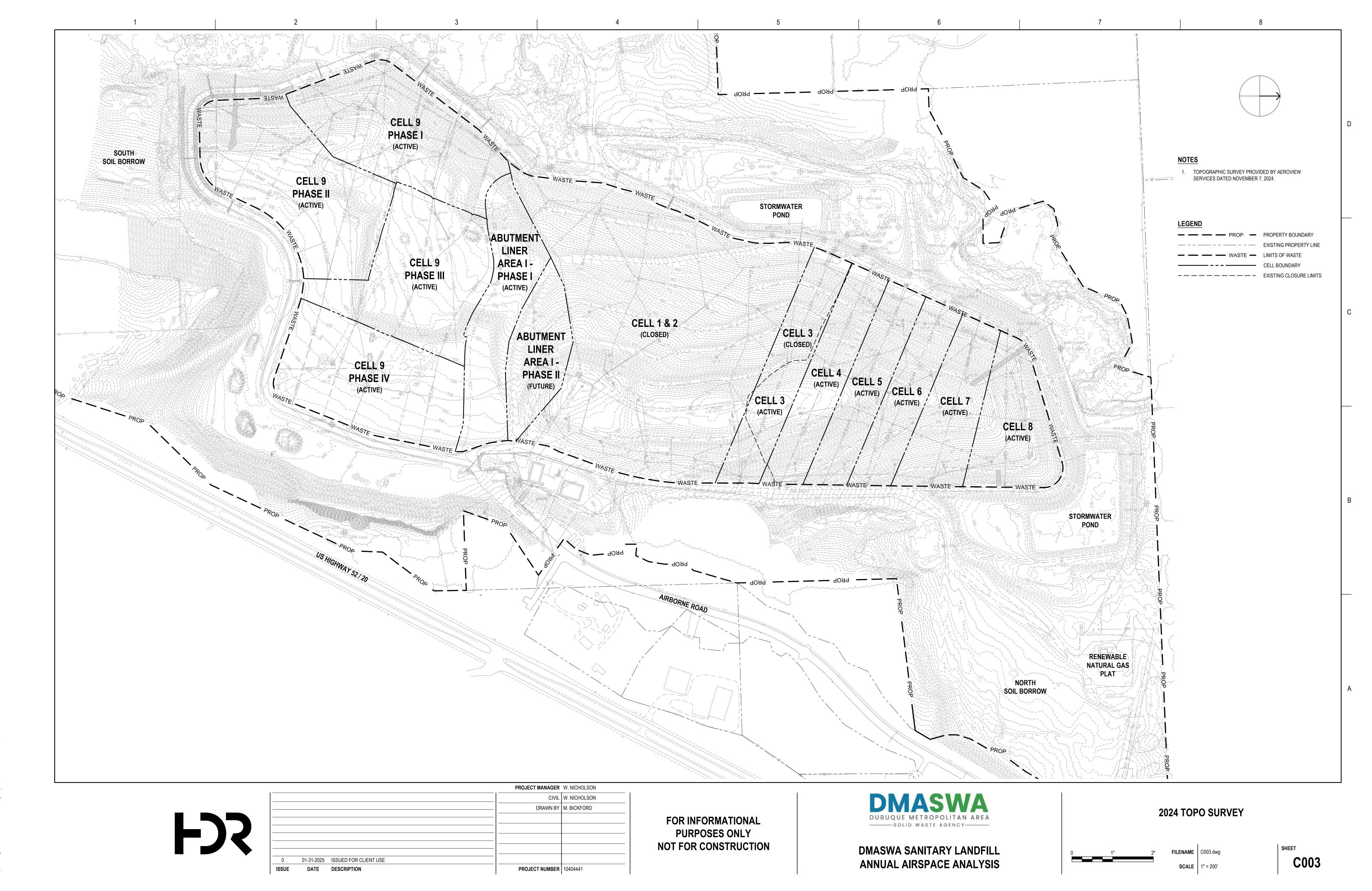
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DMASWA SANITARY LANDFILL **ANNUAL AIRSPACE ANALYSIS** 

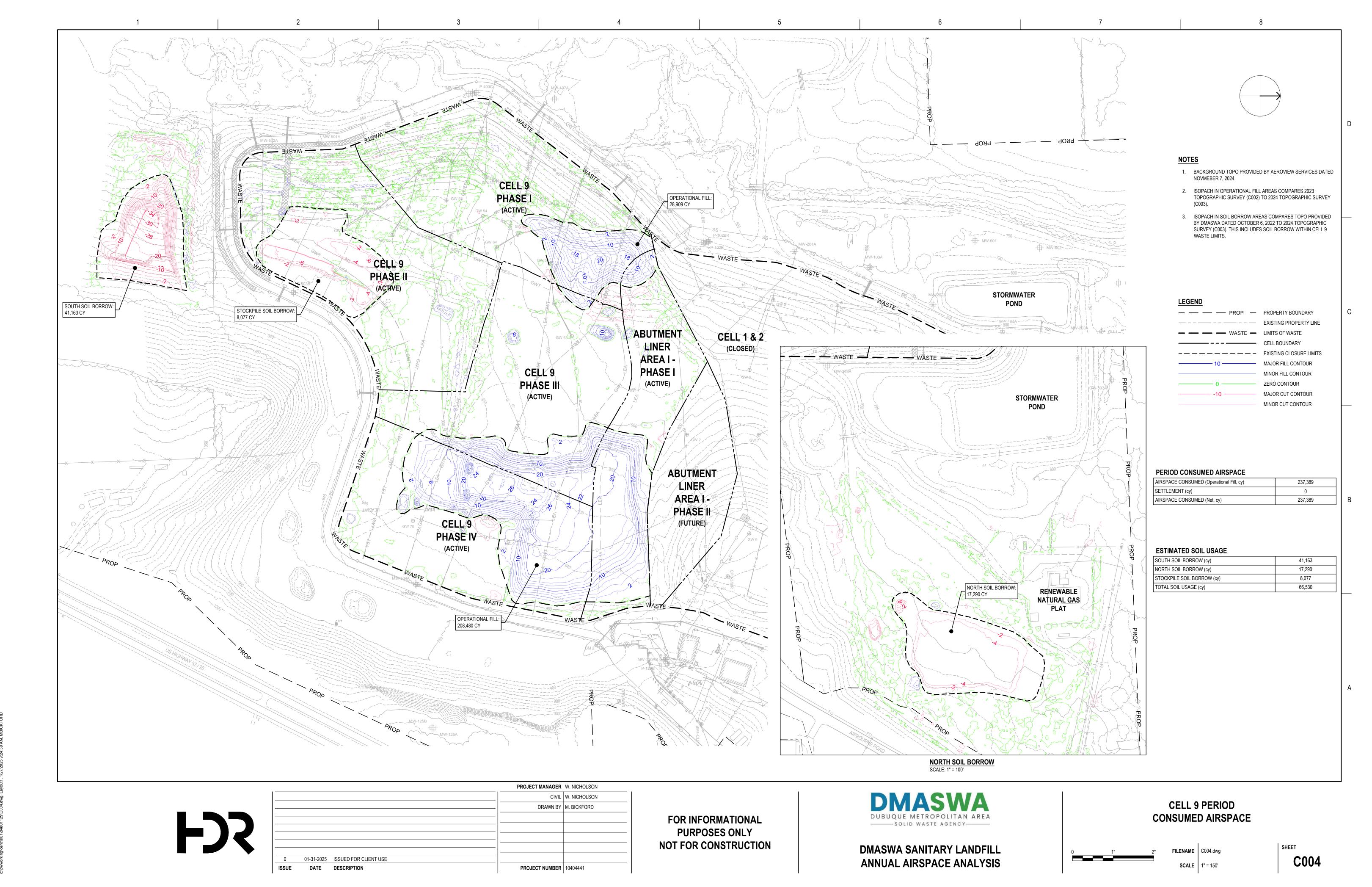
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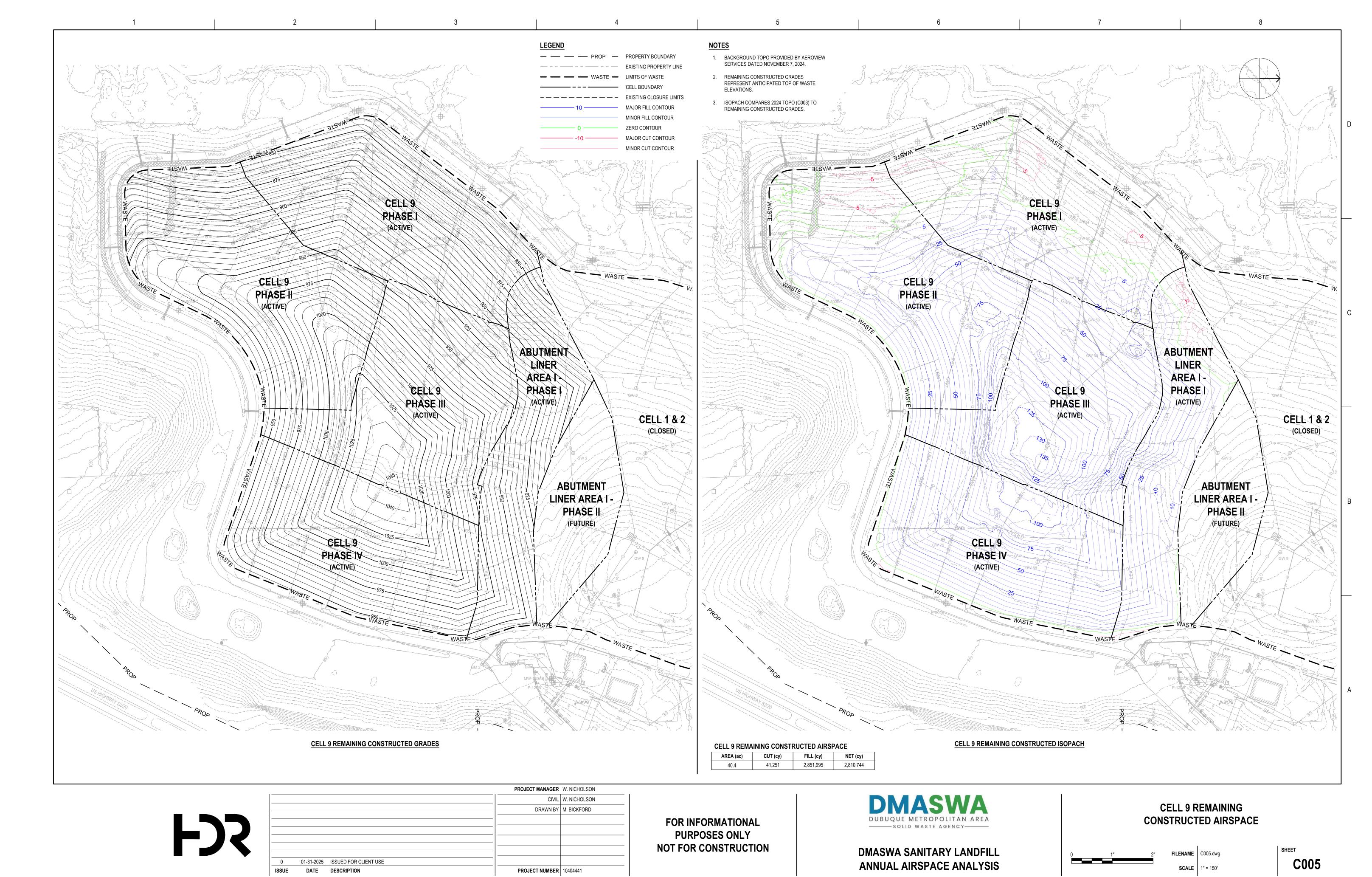
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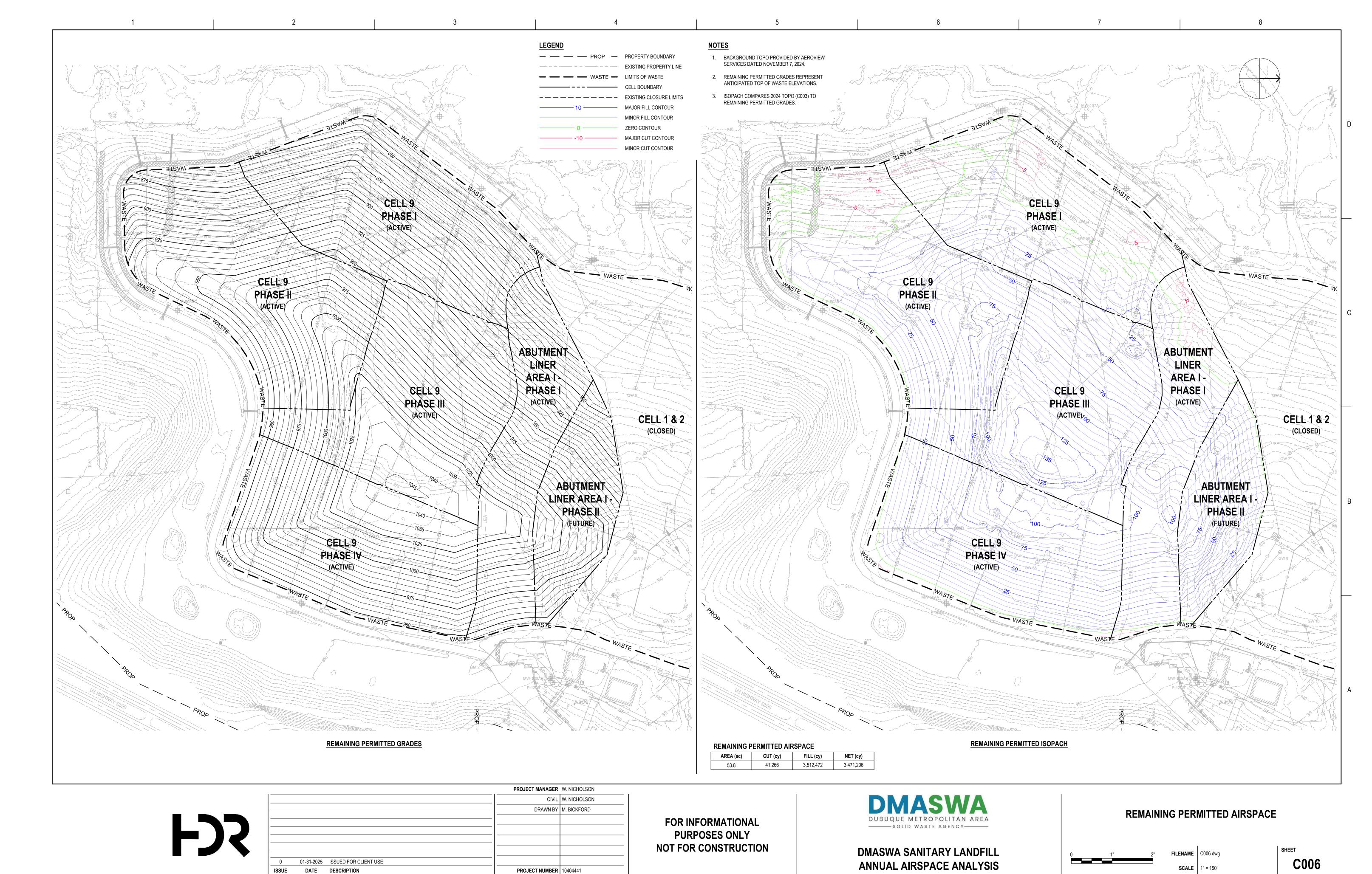


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