

Juniper Ridge Landfill Project Overview Meetings

Meeting #1

Project History, Overview, and
Permitting Requirements

November 7, 2024



Project Overview Meeting Schedule

Nov. 7 6 P.M.	City of Old Town	Town Hall	Project History, Overview, and Permitting Requirements
Nov. 21 6 P.M.	Town of Alton	Town Hall	Site Visual, Noise, Traffic, and Natural Resources
Dec. 4 6 P.M.	City of Old Town	Town Hall	Site Geology and Hydrogeology
Dec. 17 6 P.M.	City of Old Town	Town Hall	Phase II Expansion Design, Leachate Management, and Operations

Project History

Landfill History

Initial Site Search conducted for the James River Paper Company in Old Town in 1988



- Juniper Ridge was the best of the 58 sites that were reviewed
- Cells 1-10 were permitted for the mill in 1993
 - 68 acres
 - 3.3 MCY

Purchased by the State of Maine in 2004 – currently managed for the State by the Bureau of General Services



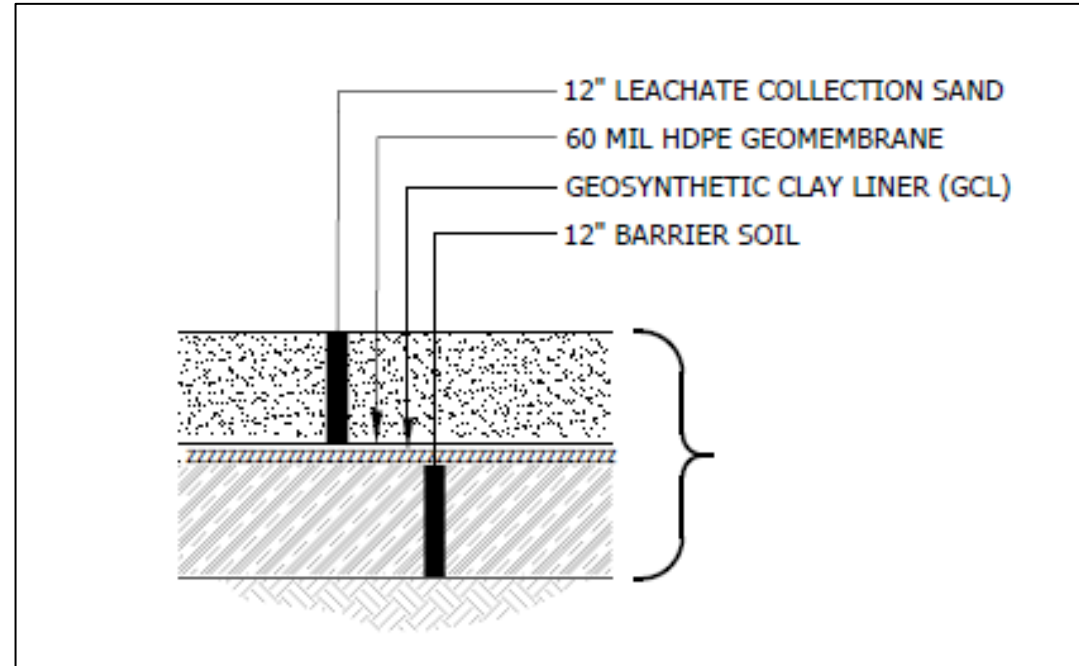
- Operated by NEWSME Landfill Operations, LLC (a subsidiary of Casella Waste Systems)
- Began permitting the first expansion in 2006
- Applied for 21.9 MCY, the MEDEP approved 9.35 MCY in a Public Benefit Determination in 2012
- Design application for Cells 11-17 approved in 2017
 - 54 acres
 - 9.35 MCY

Currently applying for the Phase II Expansion:

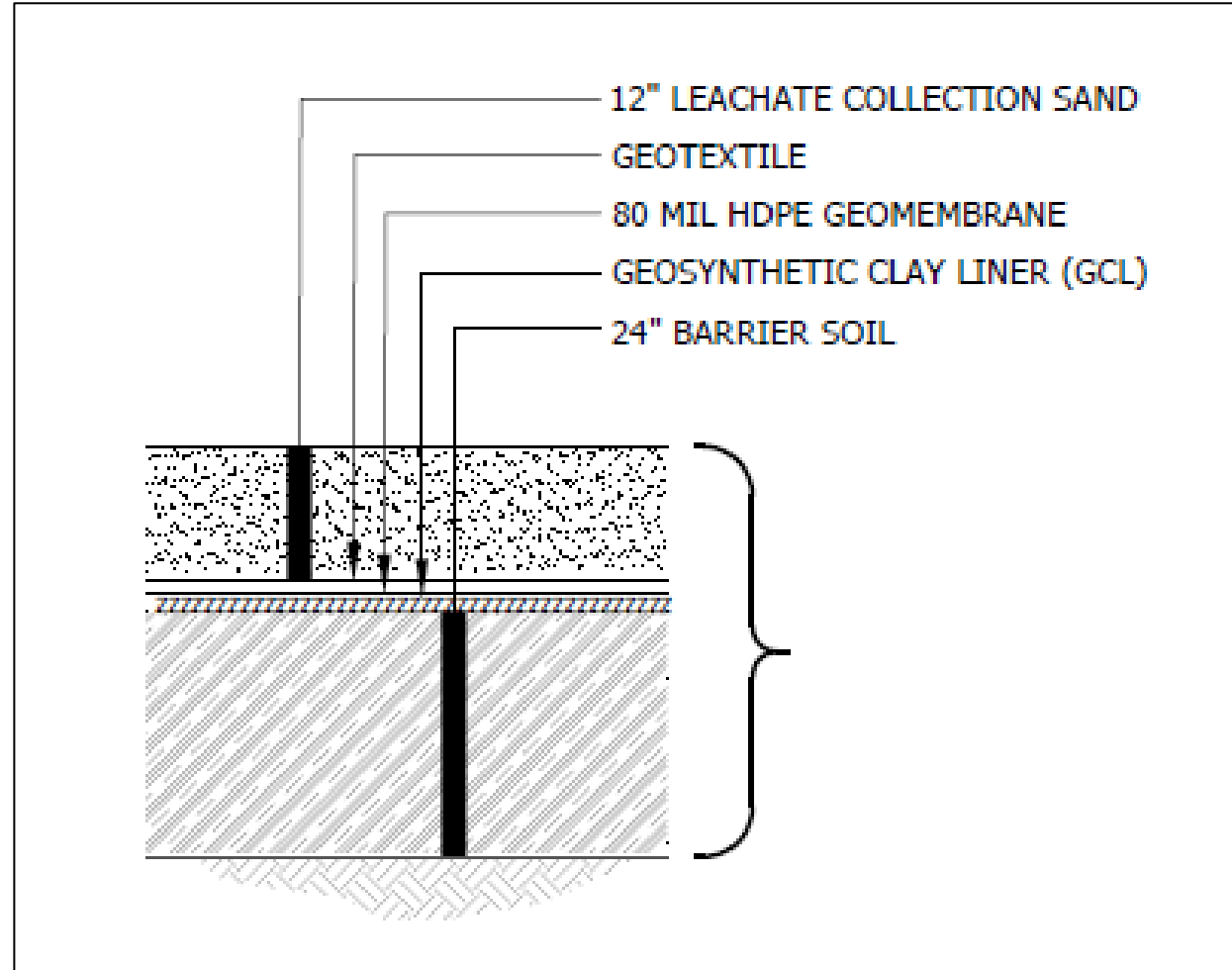
- Remainder of the initially requested 21.9 MCY
- Proposing an additional 59 acres of landfill
- Cells 18 - 22
- 11.9 MCY total in Phase II
- 181 acres total landfill



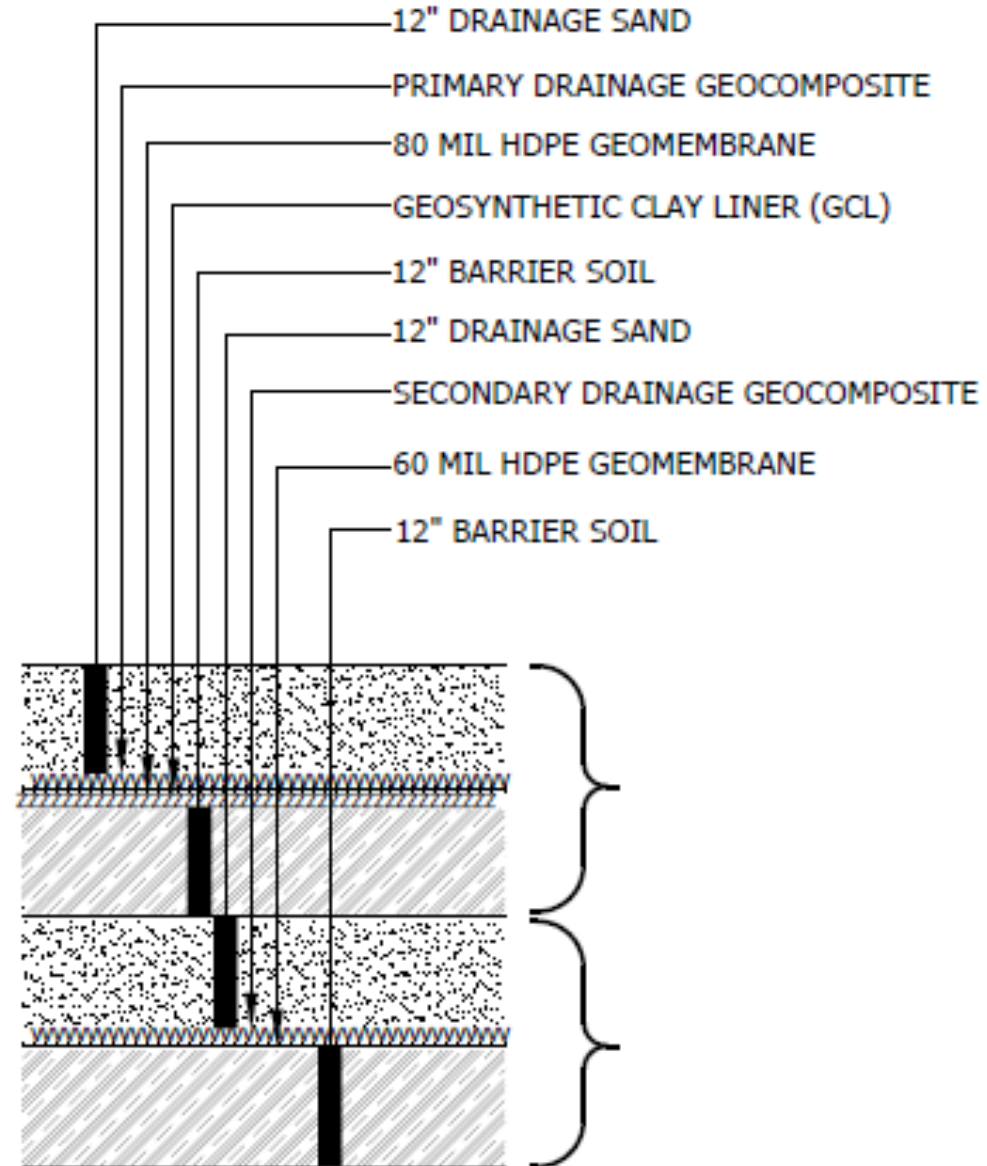
Liner System Required by the Solid Waste Management Rules



Initial Landfill Liner System (Papermill landfill)



Expansion's 4-foot thick Dual- Liner System



Total Remaining Permitted Capacity at Juniper Ridge Landfill

Year	Cubic Yards
2021	7,294,907
2022	6,332,172
2023	5,356,397
2024*	4,306,676
2025*	3,256,956
2026*	2,207,235
2027*	1,157,514
2028*	107,793

* 2024 to 2028 based on estimated future disposal volumes

Project Overview

So far -

- Preliminary Information Report was submitted and approved
- Public Benefit Determination was submitted, public meeting was held, received approval
- Currently preparing the Phase II Expansion application and holding Project Overview Meetings

Next -

- Pre-submission meeting with the MEDEP
- Public Information Meeting
- Submit application
- Public can provide comments, &/or request a public meeting, &/or request a public hearing
- Receive MEDEP comments
- Applicant's response to comments
- MEDEP Decision

What remains the same?

- Site access road
- Landfill scales
- Office and maintenance buildings
- Five of the six stormwater detention ponds
- Existing leachate storage tank
- Landfill gas treatment plant
- Renewable Natural Gas plant
- Existing landfill, leachate transport lines, most of the power lines

What are we adding?

- Five new cells each good for about 2 years
- 4500 feet of perimeter roadway around the landfill
- Moving 1 stormwater detention pond
- Adding 3 additional stormwater detention ponds
- 1 additional leachate storage tank
- Additional leachate transport lines
- Additional power lines, both aboveground and underground
- Additional monitoring wells
- PFAS treatment plant (!!!!)





Permitting Requirements

What is in the application?

- **Volume I** – Responses to requirements in Chapters 400 and 401 of the Solid Waste Management Rules
- **Volume II** – Site Assessment Report – Geology and Hydrogeology
- **Volume III** – Design Report – including calculations, plans, and specifications
- **Volume IV** – Operations Manual
- **Volume V** – Natural Resource Protection Act – wetlands impacts

SME
Sme & Miller Engineers, Inc.
Environmental • Civil • Geotechnical • Water • Compliance

Submitted by: JAMES ROSE LANDFILL EXPANSION APPLICATION
VOLUME 1 OF 2
STATE OF MAINE BUREAU OF RESOURCE MANAGEMENT
MINOR LICENSE REVISION APPLICATION FOR THE P&M
July 2019
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APPENDIX A: PERMITS

2015 ARPA Clean Air Act Vol. V

Volume I – Responses to requirements in Chapters 400 and 401 of the Solid Waste Management Rules

- Back up information
 - Deed, list of abutters
 - Financial ability, liability insurance
 - Civil and criminal disclosure
- Permits
 - Air quality permit
- Agreements
 - Leachate disposal contracts
 - Host Community Benefit Agreement
- Plans
 - Stormwater Pollution Prevention Plan
 - Stormwater Management Plan
 - Erosion Control Plan

Volume I (continued)

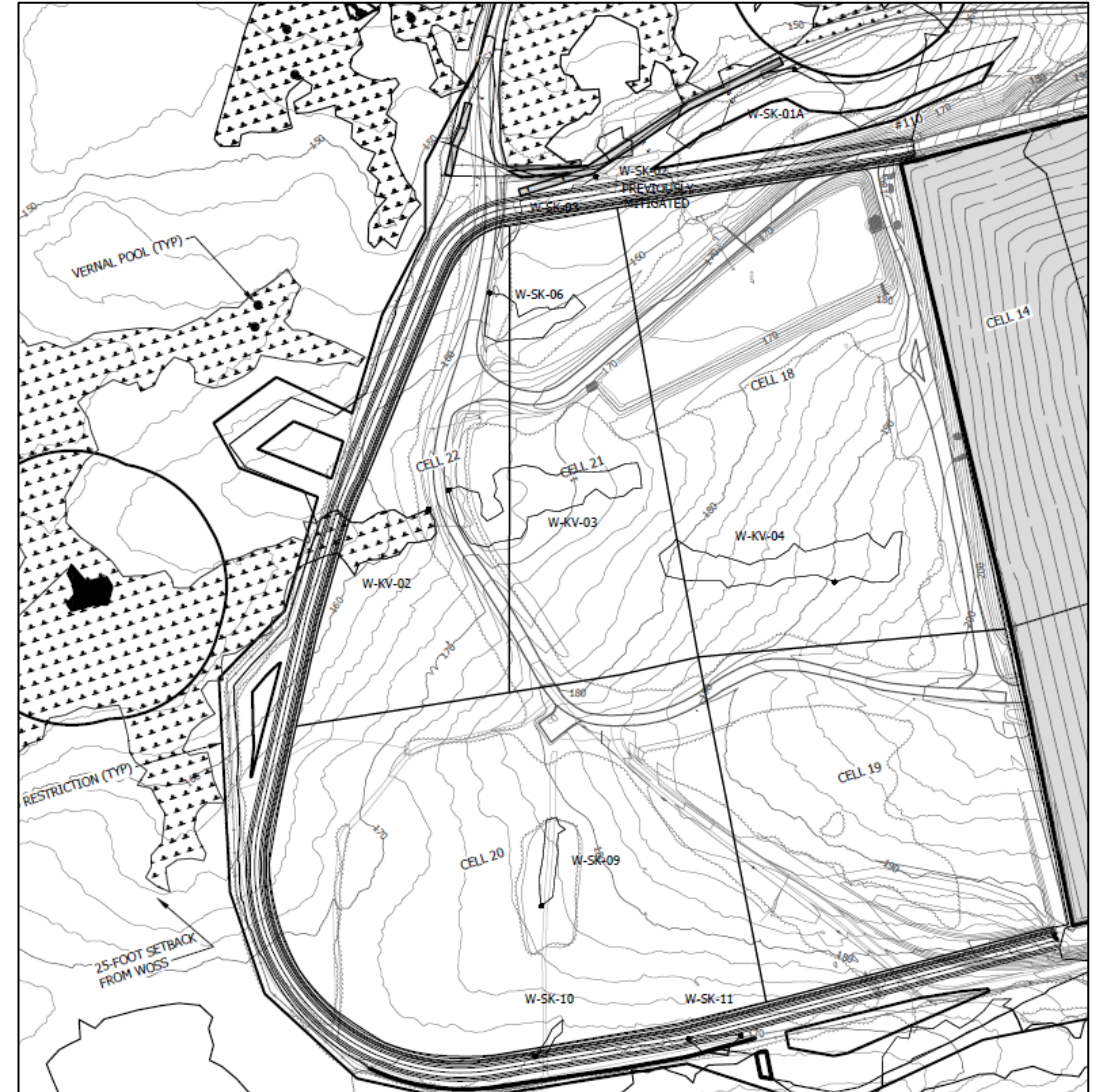
Agency consultations:

- Federal Aviation Administration
- US Fish and Wildlife (threatened and endangered species)
- Maine Department of Inland Fish and Wildlife (habitat)
- Bureau of Land Resources (mapped significant vernal pools)
- Maine Natural Areas Program (rare and exemplary botanical features)
- Maine Historic Preservation Commission (archeology)
- Maine mapped Natural Resources
- Significant Rivers
- Lakes and streams most at risk of development

Volume I (continued)

Consultant Assessments:

- Traffic assessment – Gorrill Palmer
- Visual impact assessment - Viewshed
- Sound level assessment - Epsilon
- Rare, threatened, and endangered species – BRI
- Seagulls - Stantec
- Bat assessment – Stantec
- Wetlands delineation – BRI
- Wetlands functions and values – BRI
- Aerial Photos – Aerial Photo and Survey



Volume II – Site Assessment Report – Geology and Hydrogeology

- Began investigating site in 1989
- Installation of over:
 - 100 borings,
 - 150 test pits,
 - seismic refraction surveys (approximately 34,000 lineal feet of transects);
- Photolineament mapping;
- Bedrock outcrop mapping; and
- In situ hydraulic conductivity testing.



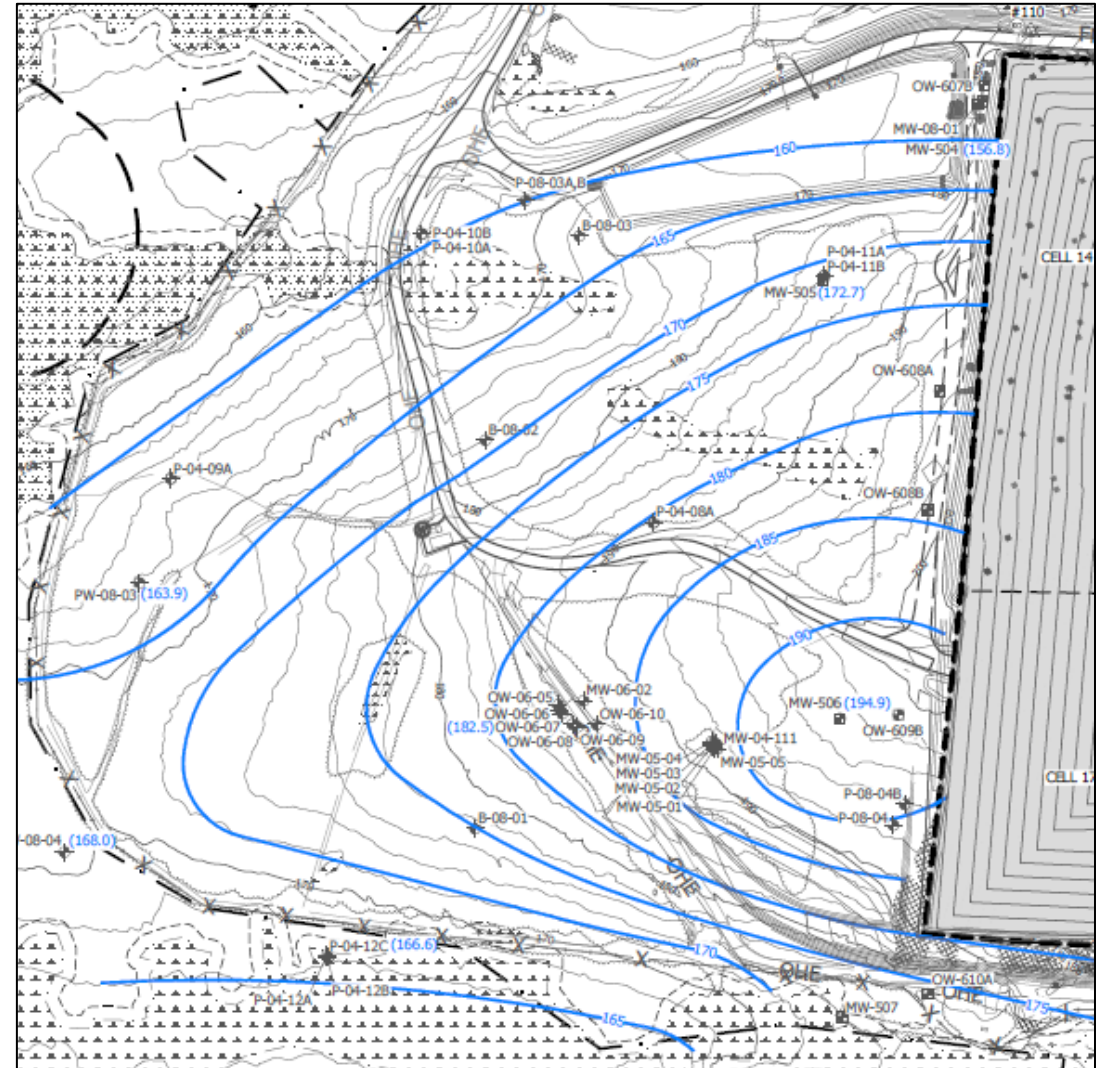
Volume II – Site Assessment Report – (continued)

- Groundwater measurements (wet- and dry-season),
- Groundwater age-dating,
- Groundwater tracer test analysis,
- Numerous bedrock pumping tests, and
- Water quality sampling and analysis.

Parameter	LOQ	Method
Alkalinity	1.5	SM2320B
Ammonia	0.5	SM4500NH3B/SM4500NH3C
TDS	10	SM2540C
TSS	8.3	SM2540D
Arsenic, total	0.005	SW3010A/SW6010C
Boron, total	0.05	SW3010A/SW6010C
Calcium, total	0.3	SW3010A/SW6010C
Copper, total	0.003	SW3010A/SW6010C
Iron, total	0.05	SW3010A/SW6010C
Magnesium, total	0.3	SW3010A/SW6010C
Manganese, total	0.05	SW3010A/SW6010C
Potassium, total	0.3	SW3010A/SW6010C
Sodium, total	0.3	SW3010A/SW6010C
Bromide	0.1	SW9056A
Chloride	1	SW9056A
Sulfate	2	SW9056A
TOC	1	SW9060A

Volume II – Site Assessment Report – (continued)

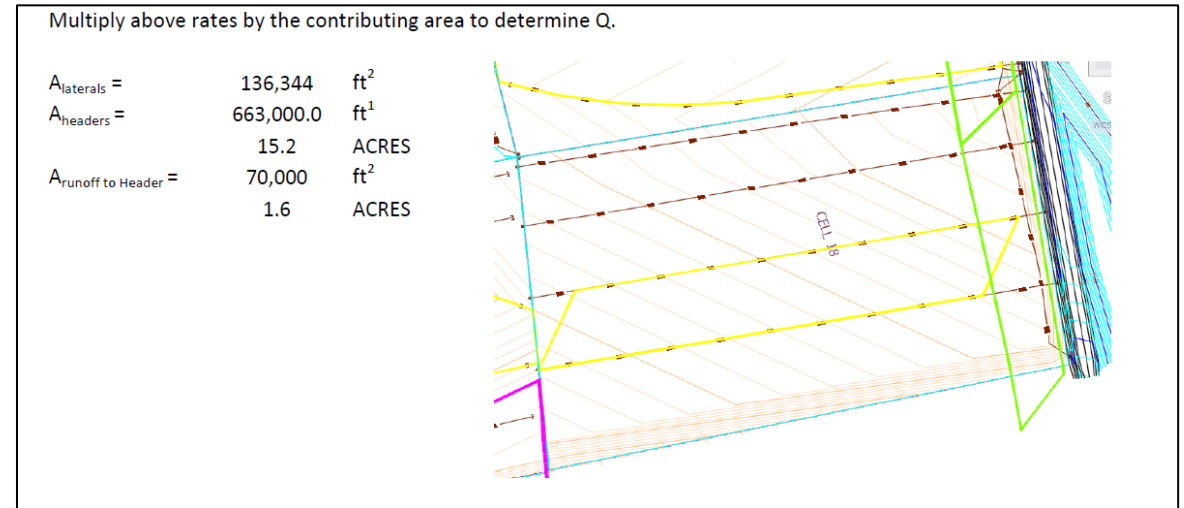
- Prepared bedrock map,
- Prepared wet and dry season groundwater maps for soils and bedrock,
- Conducted time of travel analysis to nearest sensitive receptors, and
- Conducted contaminant transport analysis.



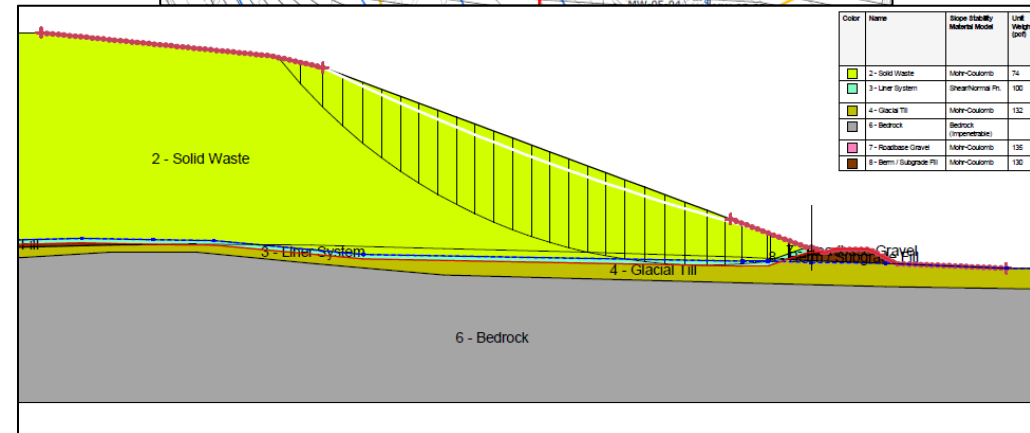
Volume III – Engineering Design Report

Landfill calculations:

- Pipe size and spacing (LC, LD, UD)
- Pipe strength
- Leachate flow during a large storm
- Leachate tank size
- Soil filter and pipe perforation design
- Drainage net flow
- Force main capacity
- Flow through the waste



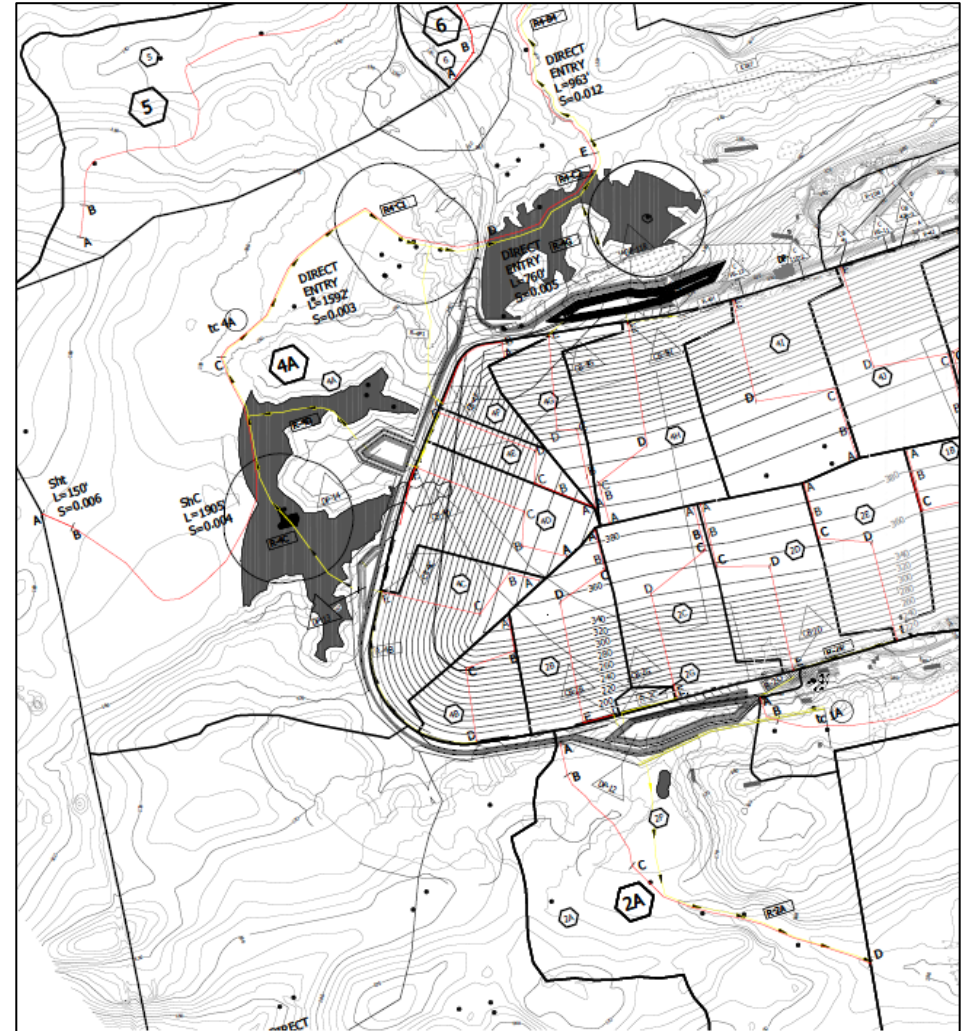
Geotechnical Calculations:



Volume III – Engineering Design Report (cont.)

Stormwater calculations:

- Pre-existing condition
- Post-development condition
- Stormwater detention pond sizing
- Culvert size
- Catch basin size
- Rip rap size
- Level spreader size



Volume IV – Operations Manual



Updates:

- Cell development figures
- Environmental Monitoring Plan

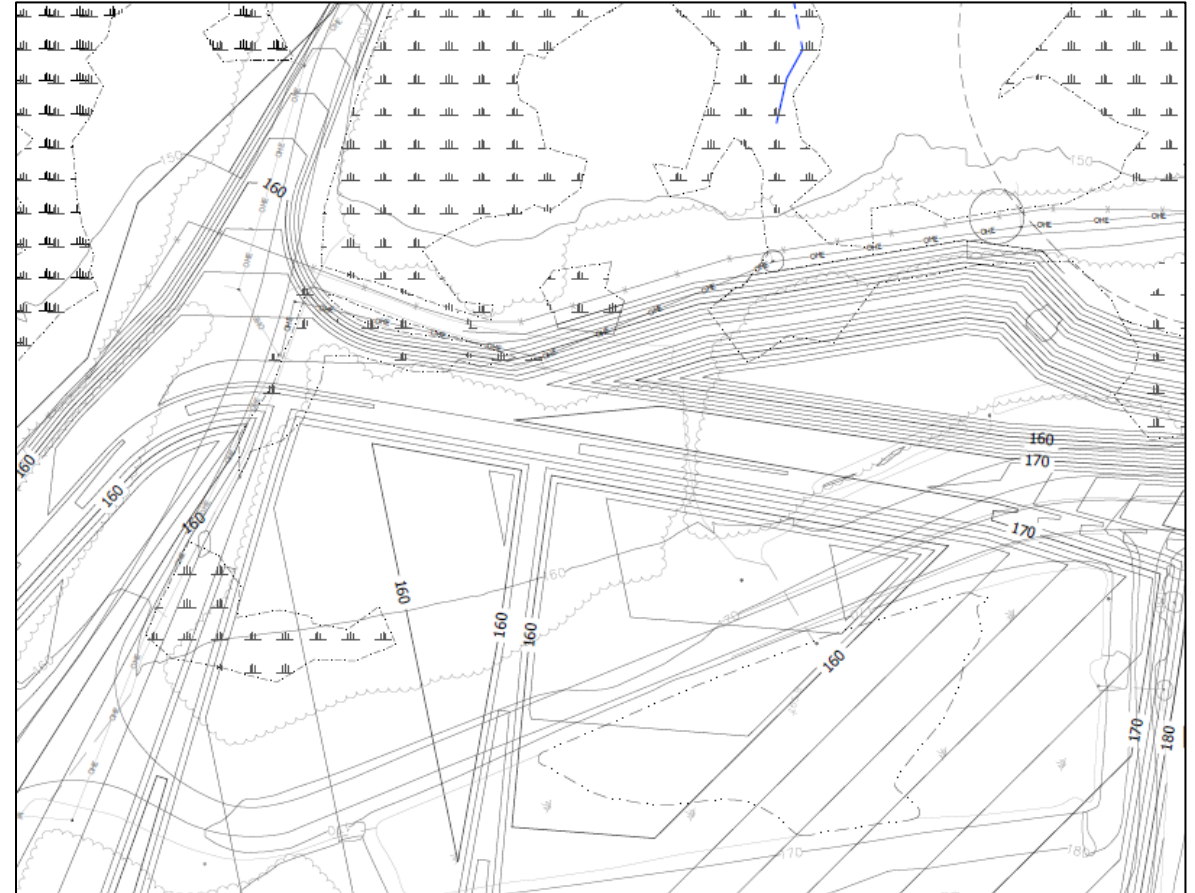


Volume V – Natural Resource Protection Act (NRPA)

- Requires minimizing wetland impacts to the extent practicable
- Report describes wetlands impacts
- Considers alternative development options
- Calculate in lieu fee for wetlands mitigation

Plan set

- Base grade of cells
- Extend the access road
- 4 stormwater detention ponds
- Underdrain piping
- Leak detection piping
- Leachate collection piping
- Pump stations
- Force mains with vaults
- Culverts and catch basins
- Closure cap with access road, downspouts, and terraces



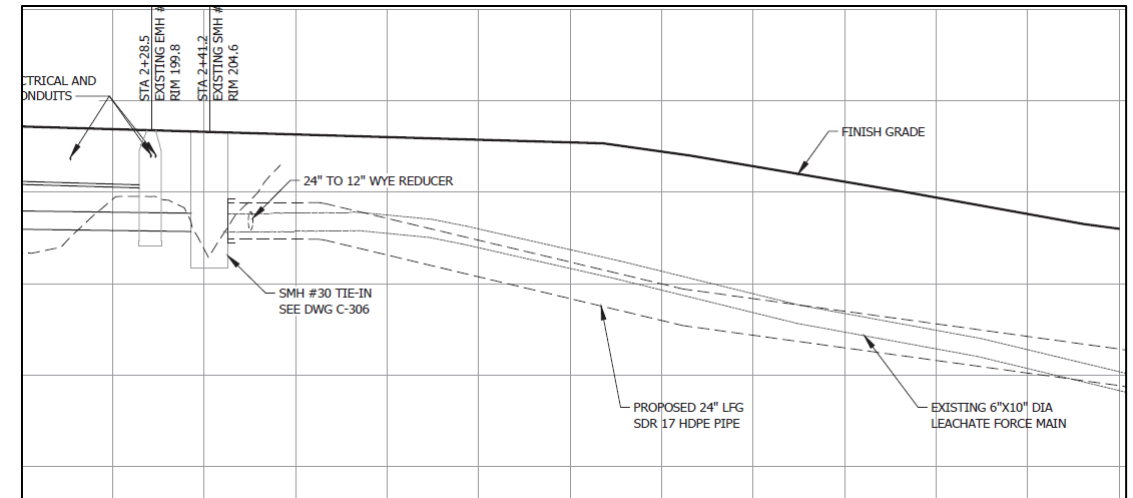
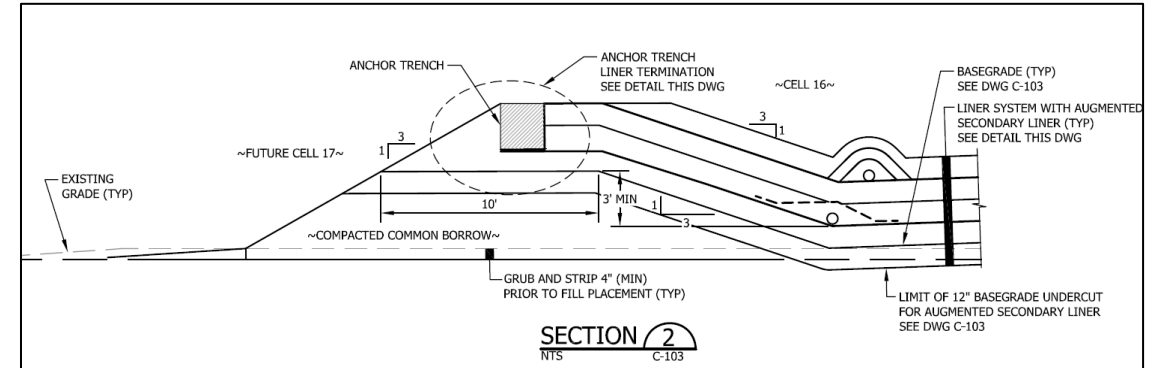
Plan set (cont.)

- Electrical utilities
- Communication lines
- Additional leachate tank
- Additional monitoring wells
- Landfill gas management – Sanborn Head
 - Gas wells
 - Piping on landfill
 - Gas transmission pipes



Plan Set (cont.)

- Sections
- Profiles
 - Every 100' in both directions
 - Force main
- Details
 - Liner system
 - Liner tie-ins
 - Catch basins and vaults
 - Pipe perforations
 - Etc.
 - Etc.
 - Etc.

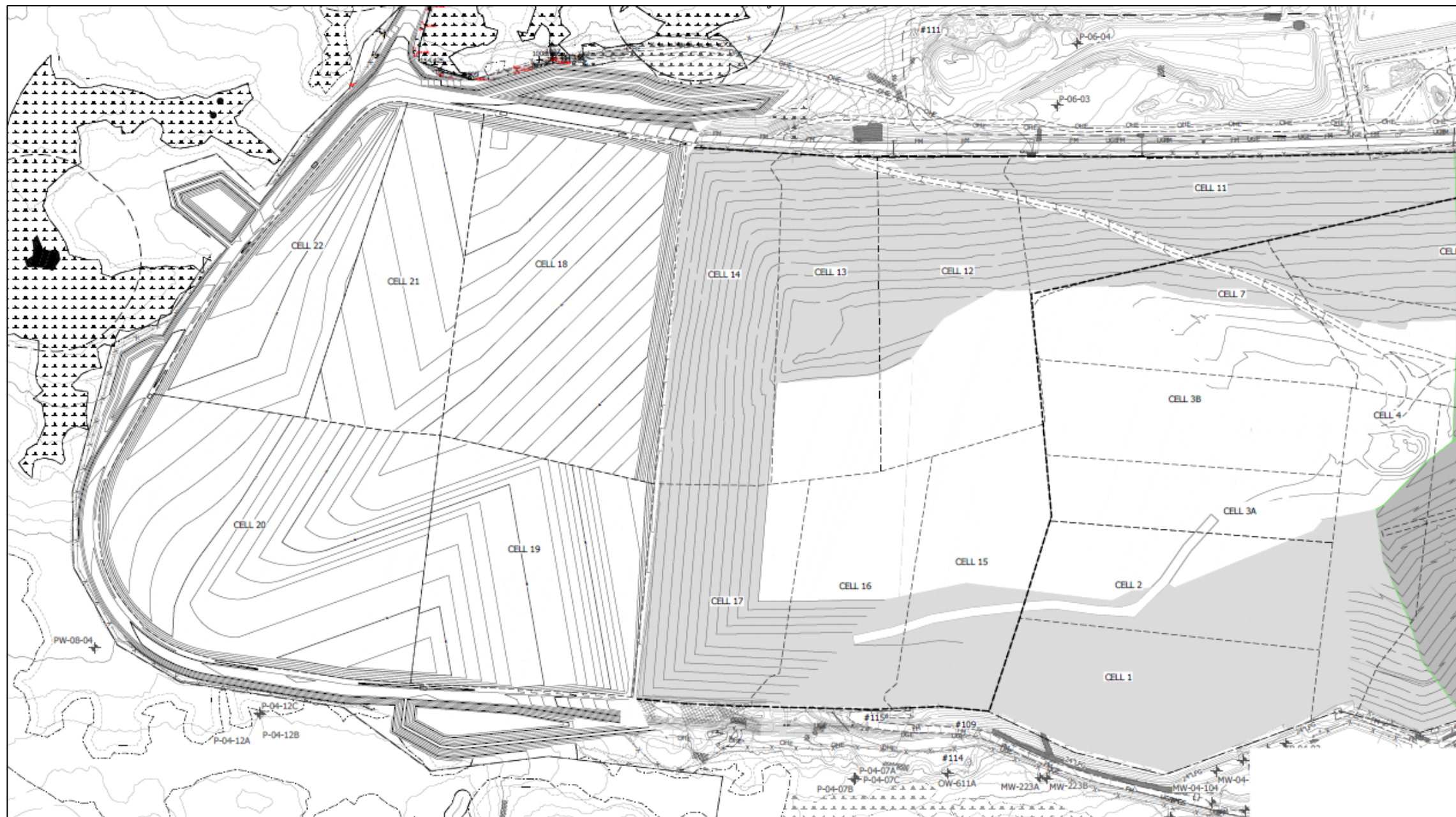


PFAS Treatment Plant (!!!!)

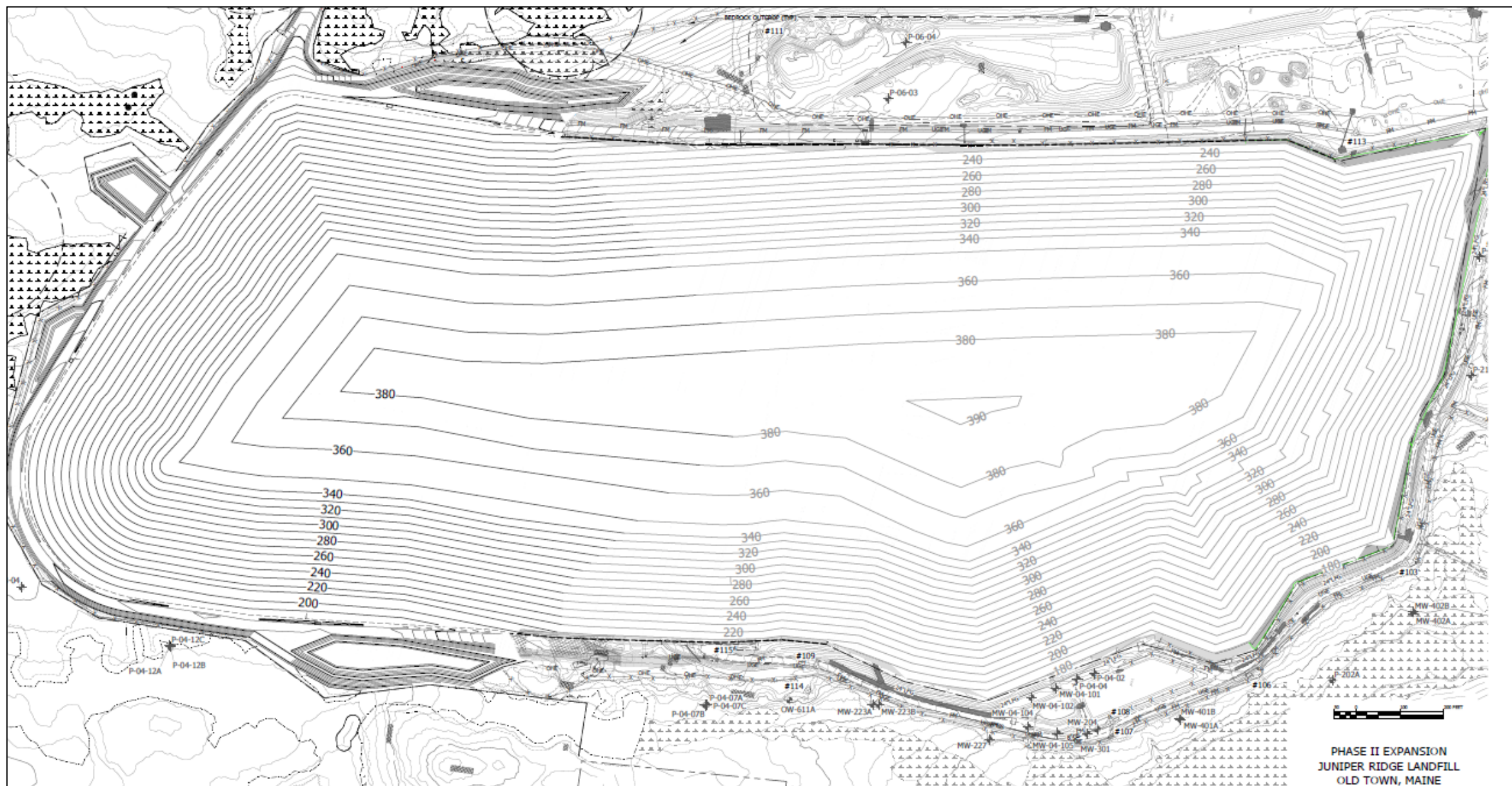
Casella is leading this with the treatment plant company. The plan for treatment is in the early stages. Infrastructure will include:

- Treatment plant
- Additional storage tanks
- Piping
- Loadout structures









PHASE II EXPANSION
JUNIPER RIDGE LANDFILL
OLD TOWN, MAINE

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Questions?