



Case Studies in Massachusetts & Other New England States

Presentation to
NEWMOA

September 25, 2019

Outline

1. Conflicting Objectives
2. Site Feasibility
3. Design Considerations
4. Permitting/Construction
5. Project Examples



Conflicting Objectives

- Remediation Goals

- Limit off-site soil disposal
- Maximize separation to contaminants
- Limit leaching and dissolved migration
- Re-use soil on-site
- Keep construction costs low and the client happy

- Stormwater Goals

- Excavate for stormwater structures
- Reduce impervious area to decrease runoff
- Promote infiltration and groundwater recharge
- Import freely draining soil
- Keep construction costs low and the client happy



Site Feasibility

- Remediation

- Review MassDEP files
- Perform Phase I ESA
- Review historic mapping
- Identify RECs
- Coordinate REC locations with Stormwater Engineer

- Stormwater

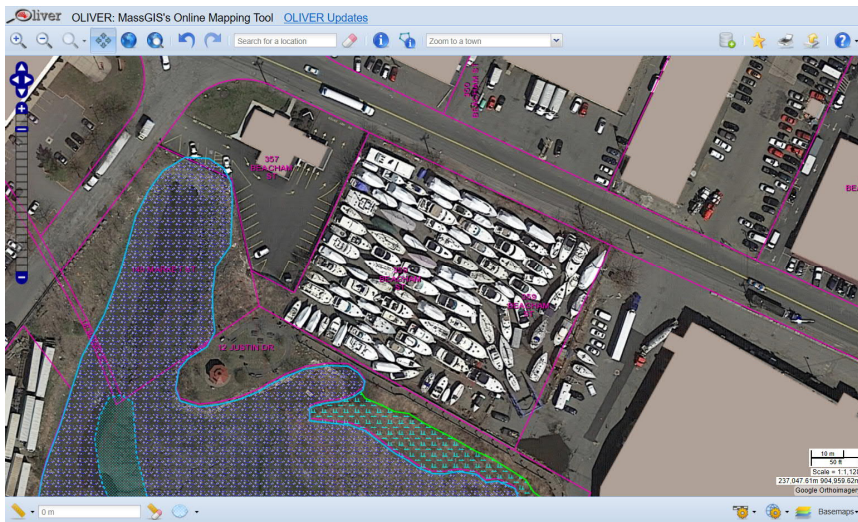
- Review MassGIS
- Check local regulations
- Perform initial stormwater calculations
- Identify BMP locations
- Coordinate locations with Environmental Engineer



Site Feasibility

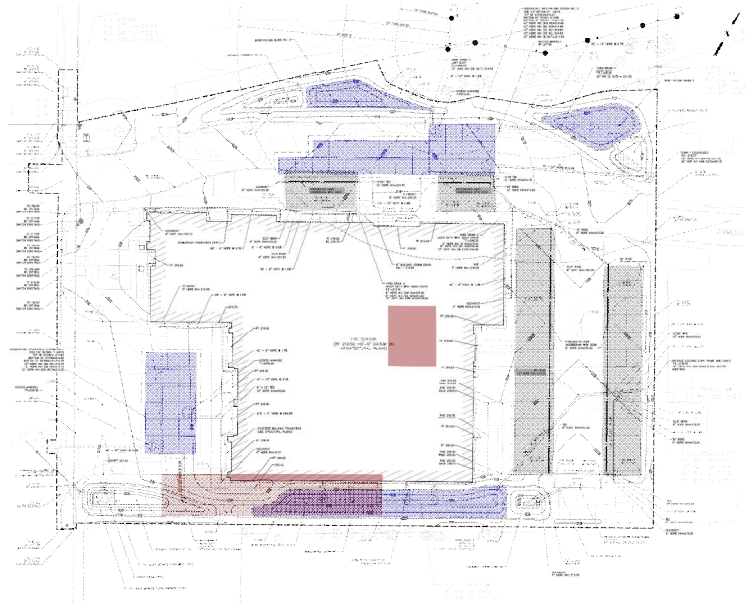


Site Feasibility



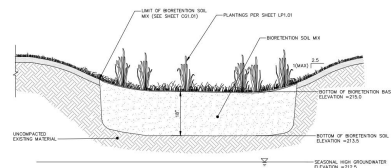
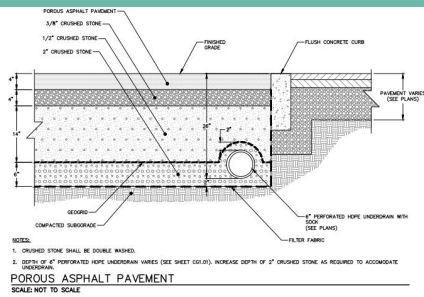
- Coordinate with Stormwater Engineer

Design Considerations



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Design Considerations



BIORETENTION BASIN
SCALE: NOT TO SCALE

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Permitting & Construction

- Remediation
 - Release Notification
 - Tier Classification
 - RAM Plan
 - Identify disposal facility & perform soil characterization
 - Take confirmatory samples
 - Project closeout
- Stormwater
 - Notice of Intent
 - Site Plan Review
 - Special Permit
 - Implement temporary controls for construction
 - Observe BMP construction
 - Project closeout



Permitting & Construction



Permitting & Construction



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The collage consists of seven photographs arranged in three rows. The top row has three images: a wide pedestrian walkway with brick and cobblestone patterns, a large rectangular stormwater detention basin, and a street corner with a brick-paved sidewalk and a Starbucks. The middle row has two images: a modern building with a dark, sloped roof and large windows, and a street view with a brick-paved sidewalk and a Starbucks. The bottom row has three images: a landscaped area with a stone path and young trees, a street view with a brick-paved sidewalk and a Starbucks, and a construction site showing a large yellow corrugated metal structure being installed in a trench.

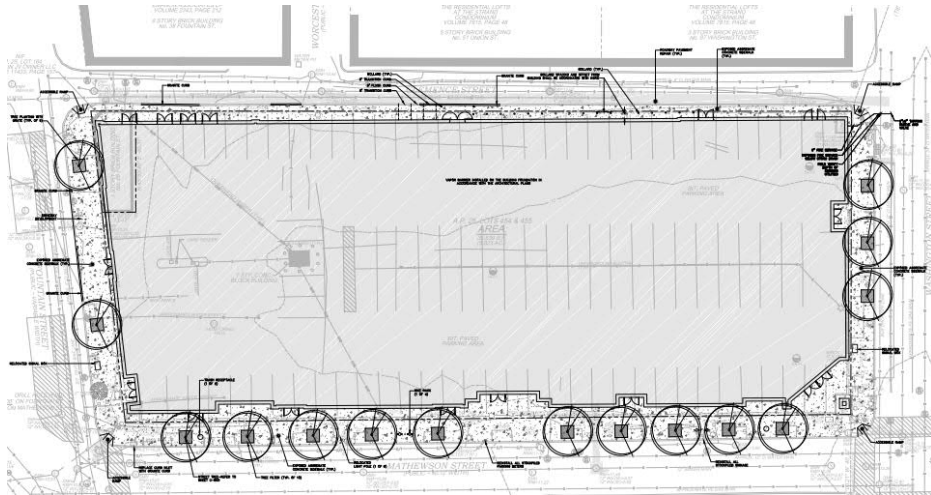
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Other State Case Studies

The image is a detailed architectural site plan of the University of Michigan Law School building. The plan shows the building's footprint, which is a large, rectangular structure with a complex internal layout. The building is surrounded by a parking area, and there are several streets shown, including 'MATTHEWS STREET' and 'W. HURON STREET'. The plan includes numerous labels for various rooms and areas, such as 'LAW SCHOOL BUILDING', 'PARKING AREA', 'STREET', 'COURT', 'OFFICE', 'CLASSROOM', 'LIBRARY', 'RESEARCH CENTER', 'STUDENT UNION', 'FACULTY OFFICE', 'ADMINISTRATIVE OFFICE', 'RECEPTION AREA', 'ENTRANCE', 'EXIT', 'ELEVATOR', 'STAIRWELL', 'RESTROOM', 'CLOSET', 'HALLWAY', 'CORRIDOR', 'LOBBY', 'RECEPTION AREA', 'ENTRANCE', 'EXIT', 'ELEVATOR', 'STAIRWELL', 'RESTROOM', 'CLOSET', 'HALLWAY', 'CORRIDOR', 'LOBBY'. The plan also shows the building's orientation and its relationship to the surrounding urban environment.

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Questions?

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