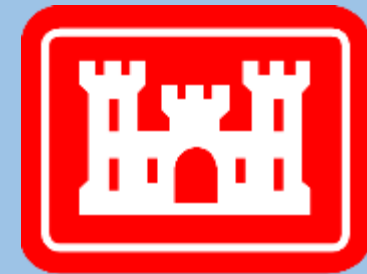


**Morgan Francis Neighborhood  
576/600 East Broadway**

**Raymark  
Industries, Inc.  
Superfund Site  
Stratford, CT**

**Jim DiLorenzo, EPA  
Mike Looney, USACE  
Rachel McPhee, USACE  
Alivia Coleman, Stratford Health Dept**

**November 9, 2022**



**US Army Corps  
of Engineers®**

To download presentation slides visit:

**[Stratfordct.gov/Raymark](http://Stratfordct.gov/Raymark)**

To sign up for Raymark cleanup email updates email:

**[acoleman@townofstratford.com](mailto:acoleman@townofstratford.com)**

# Virtual Meeting Guidelines

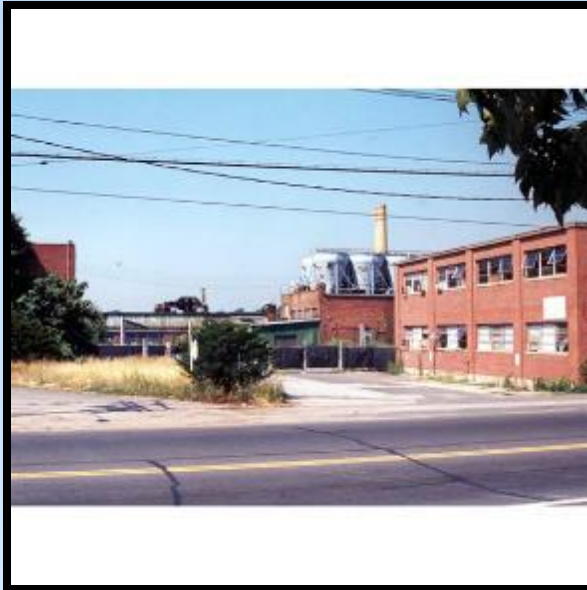
- Everyone will be muted throughout the presentations - please stay muted to eliminate background noise.
- Hold questions until the end of each section.
  - Use the chat box.
  - Mute yourself after speaking.
- Ask questions related to the presentation topic.
- Please be respectful of time, so everyone has a chance to speak.
- Talk one at a time.
- **This meeting will be recorded.**

# AGENDA

- I. CALL TO ORDER
- II. WELCOME, INTRODUCTIONS, VIRTUAL MEETING GUIDELINES
- III. BRIEF HISTORY
- IV. NATURE AND EXTENT OF CONTAMINATION LOCATED AT MORGAN FRANCIS
- V. SUMMARY OF THE CLEANUP DECISION (July 2011 Record of Decision or ROD)
- VI. 2014 REMEDIAL DESIGN & CURRENT DESIGN UPDATE
- VII. SCHEDULE
- VIII. Q&A

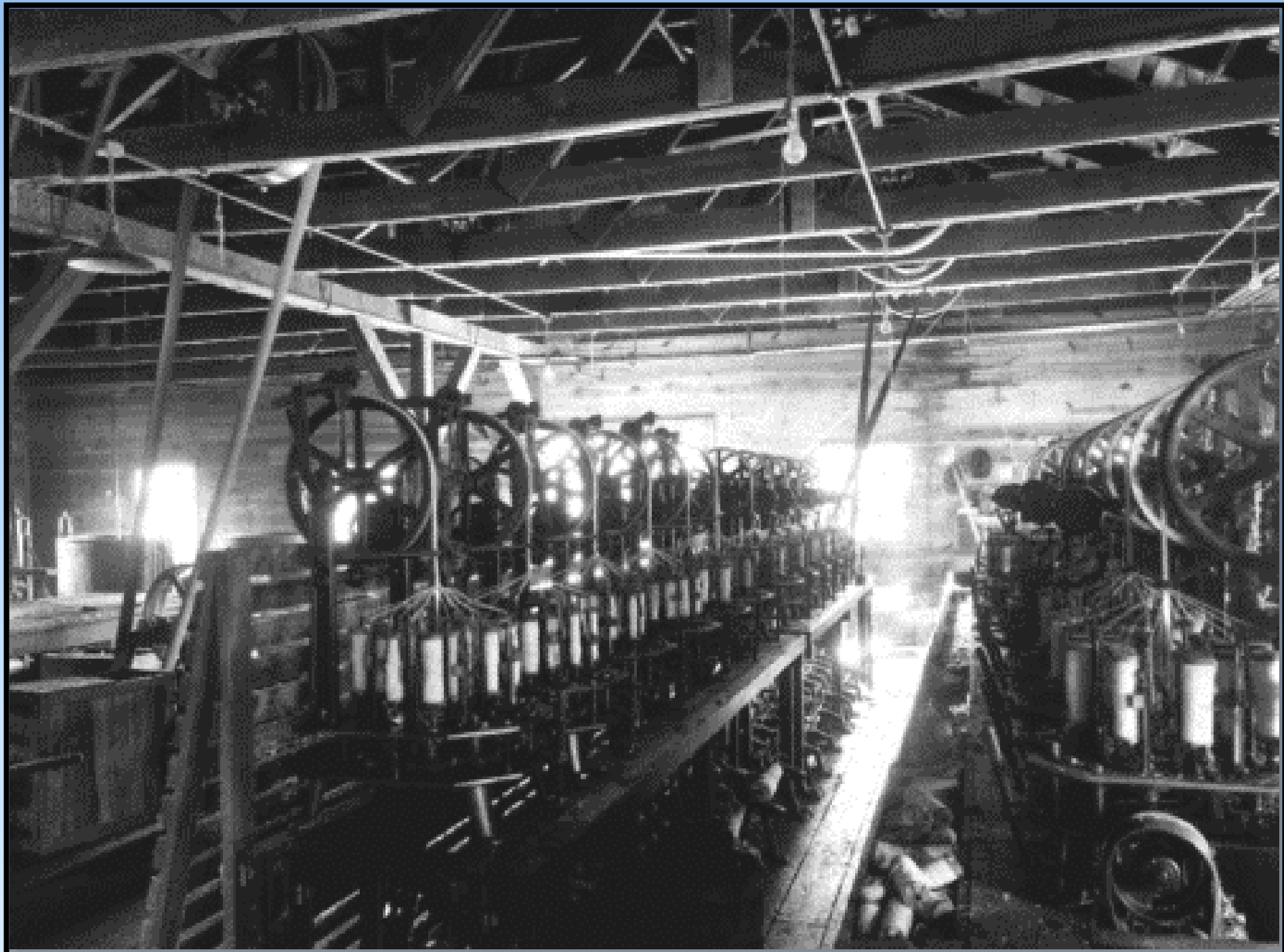
# BRIEF HISTORY OF RAYMARK

# Raybestos - Manhattan Company



- Former 33-acre manufacturing facility
- Operated for 70 years (1919 to 1989)
- Made brake pads and clutch plates
- Liquid wastes discharged to unlined lagoons
- Lagoon sludge/spent solids used as fill material
- Filled low spots on their own property
- Gave away as free fill around town (most to fill wetlands)
- Current location of Stratford Crossing shopping plaza















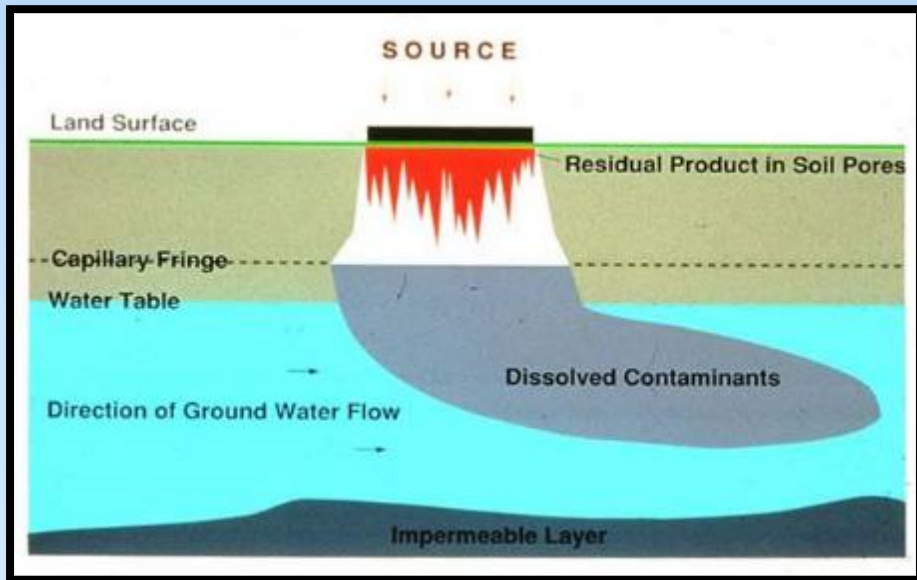




# How Was Contamination Spread?

## 1. Former Waste Lagoons

- Chemicals in lagoons released to surface water and groundwater



## 2. Fill Material

- Chemicals in dredged soils used as fill material



# EPA Definition of Raymark Waste?

**“Raymark Waste** in soil is defined as a single soil sample containing **lead** above 400 parts per million (ppm) [or mg/Kg], **and asbestos** (chrysotile, only) greater than 1 percent, **and either copper** above 288 ppm **or polychlorinated biphenyls (PCBs)** (Aroclor 1268, only) above 1 ppm.”



Often no visible evidence

**Raymark Waste Exposed at the Raybestos Memorial Ballfield**



Soil/Sediment Contaminants of Concern (OUs 3, 4 and 6)
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Dibenz(a,h)anthracene
Indeno(1,2,3-cd)pyrene
N-Nitroso-di-n-propylamine
Dieldrin
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor 1262
★ Aroclor 1268
Dioxin
Arsenic
Chromium
★ Copper
Thallium
★ Lead
★ Asbestos



# EPA's Response History

- 1993 Removal Action
  - Nearly 500 properties sampled.
  - Excavation of RW completed at 46 residential properties and Wooster School.
  - Temporary soil cover added to non-residential properties including Morgan Francis.
- April 25, 1995 – Raymark added to Superfund List
- July 1995 – 1<sup>st</sup> ROD issued (OU1) – consolidated, capped, Stratford Crossing
- **July 2011 – 2<sup>nd</sup> ROD issued – cap 576/600 East Broadway (Morgan Francis)**
- September 2016 – 3<sup>rd</sup> ROD issued – current clean-up work
  - Excavate about 105,000 cubic yards of soil and sediment from OU3 and OU6
  - Transport most waste to OU4 for consolidation and capping
  - Restore properties
- Remaining Operable Units – OU2, OU5, OU7, OU8 and OU9

# Why is Cleanup Necessary?

- Buried waste near the surface
- Erosion will continue to expose waste
- Future workers/digging
- Resources to effectively manage engineered controls

*Eliminate  
potential  
exposure*

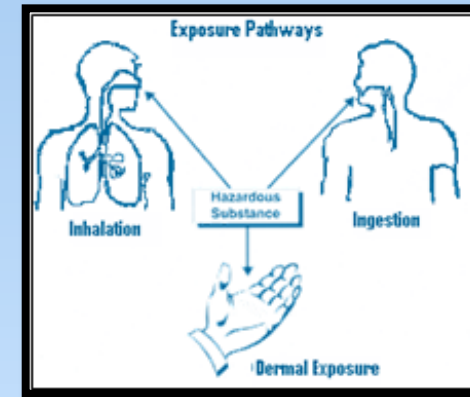
- 
- “Actionable” exposure risks
  - EPA required to mitigate risks



# What Is Chemical Exposure?

- You come into contact with a chemical and it gets into your body.

- Ingestion
- Dermal
- Inhalation

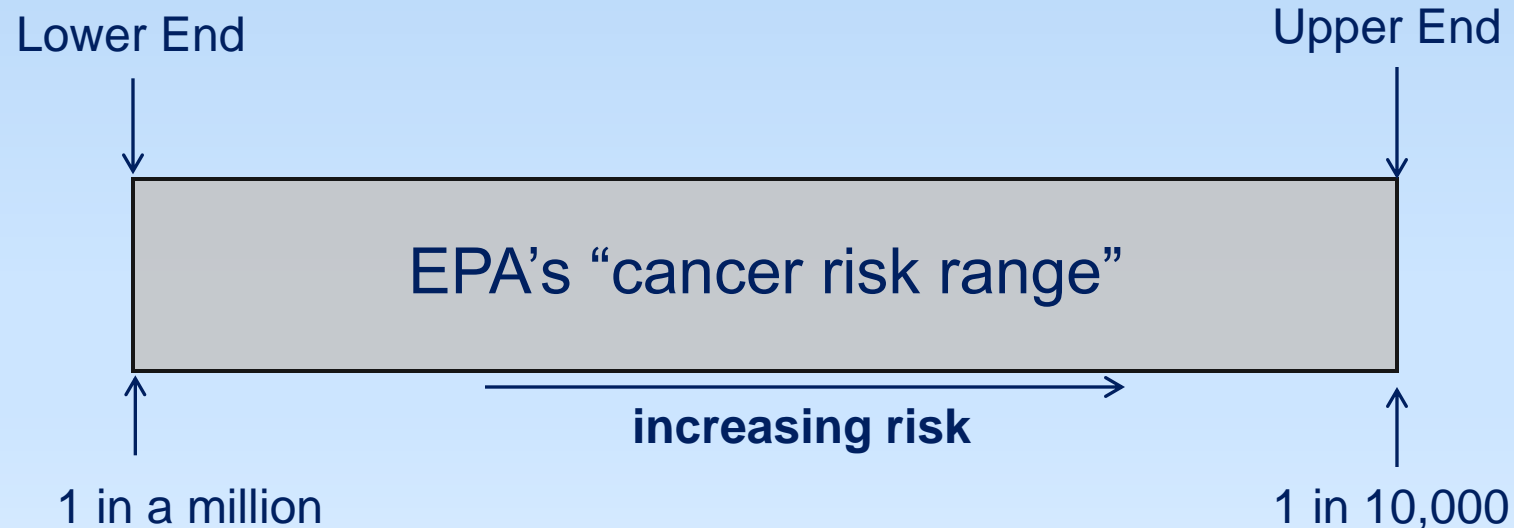


- Being exposed does not necessarily mean you will get sick/have health symptoms. These are long-term/chronic exposures.
- Toxic effects and carcinogens.





# Cancer Risk Explained

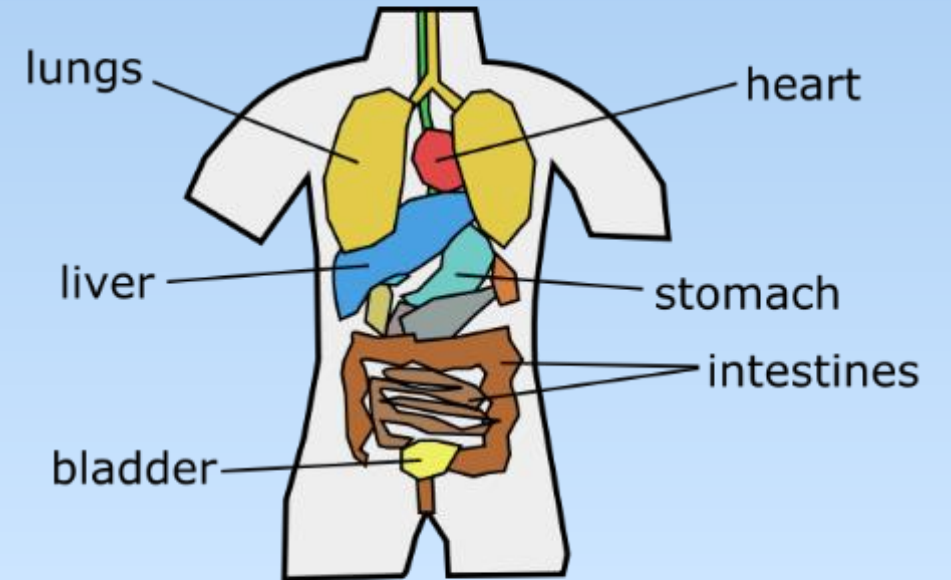
- Average person's "baseline" cancer risk is not "zero".
- The American Cancer Society estimates that 1 in 2 men, and 1 in 3 women, will develop cancer over a lifetime.
- EPA estimates "additional" cancer risk over a "lifetime" exposure.



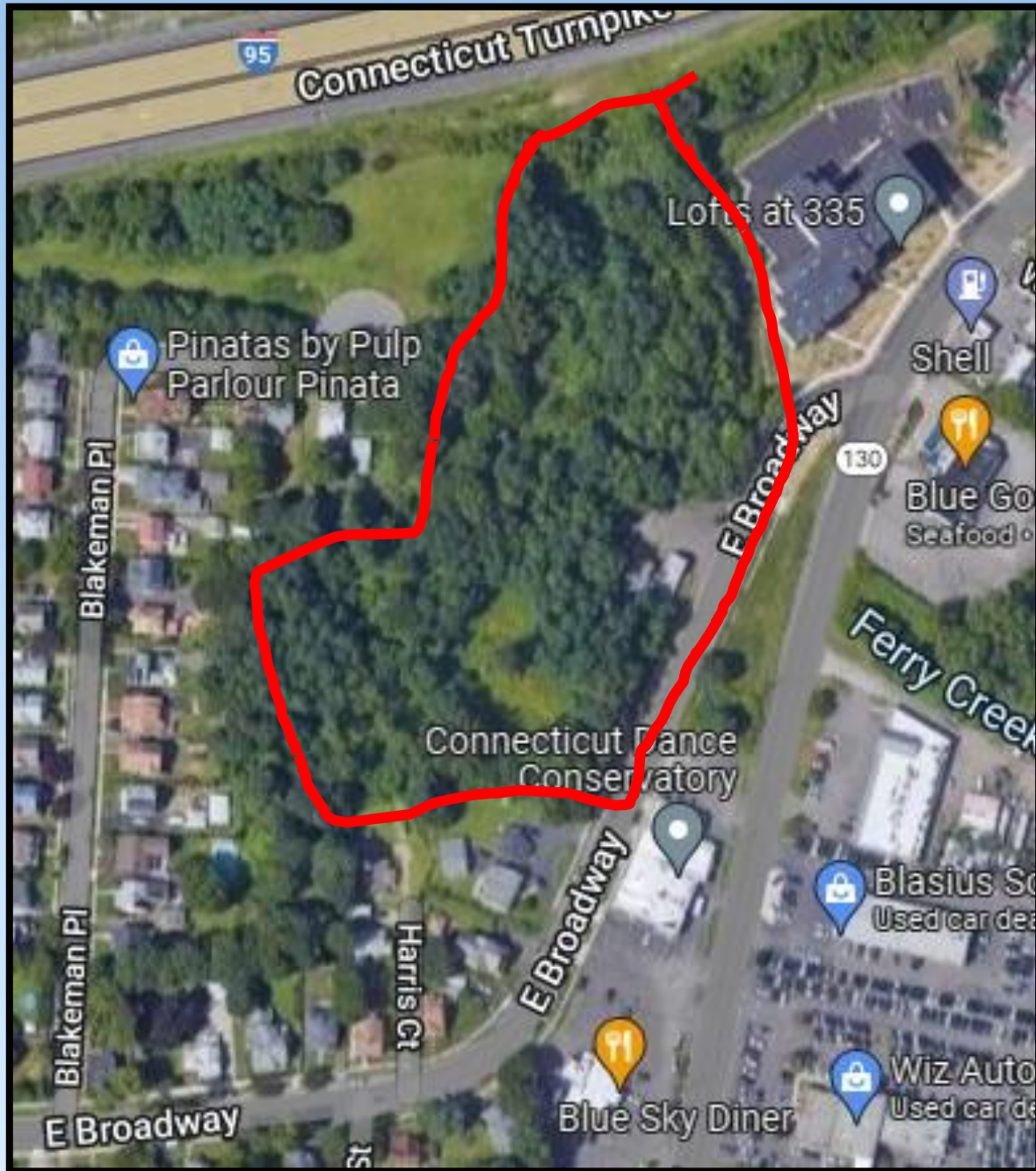
# Toxic Effects

- Mortality
- Behavior
- Reproductive health
- Physiological changes
- Biochemical changes
- Ecological 

Bioaccumulative/Dose 



# NATURE AND EXTENT OF CONTAMINATION AT MORGAN FRANCIS

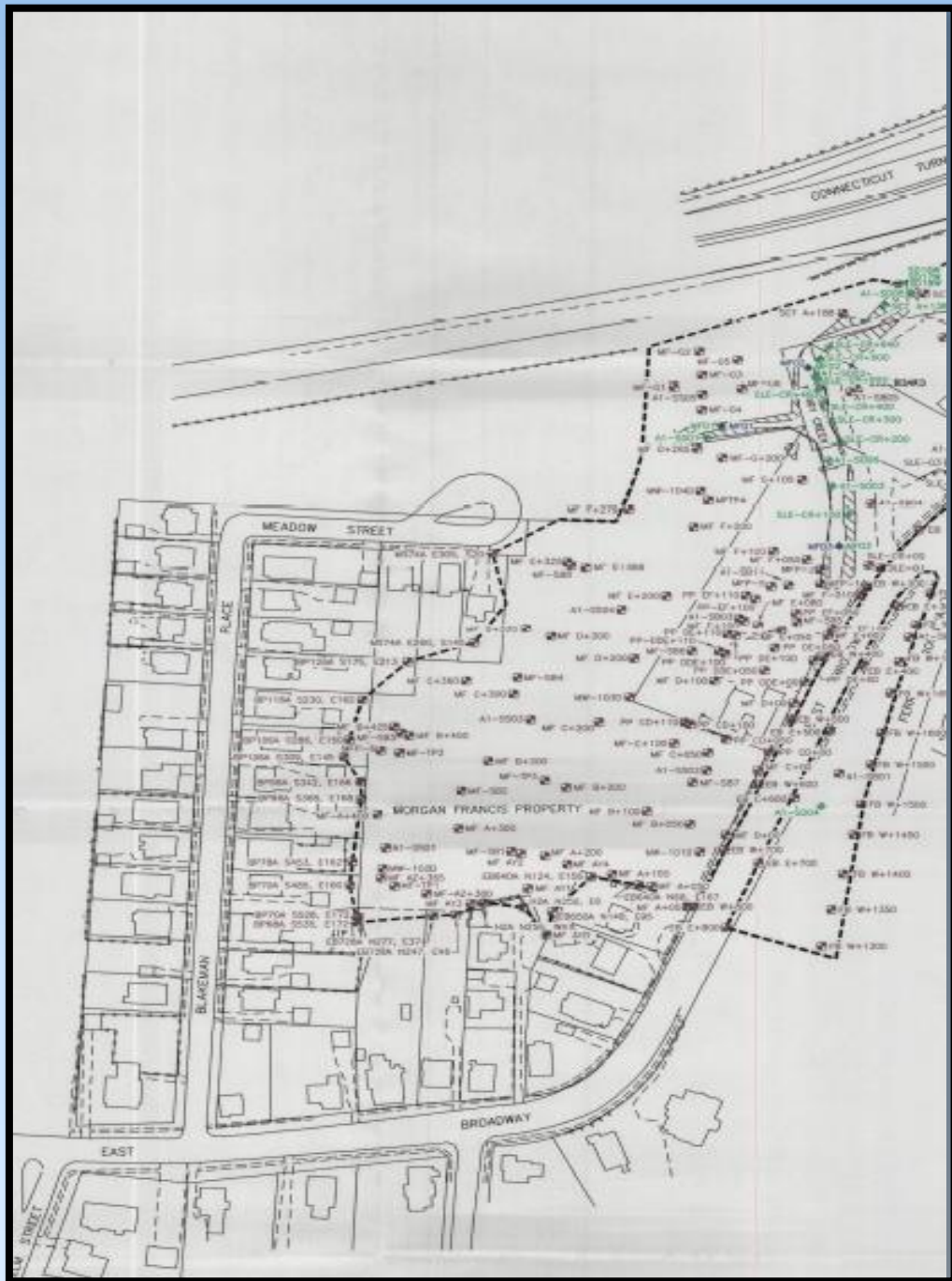


Morgan Francis Flagpole, Inc. 1948 to 1980

Located at 576/600 East Broadway

About 5 ½ acres

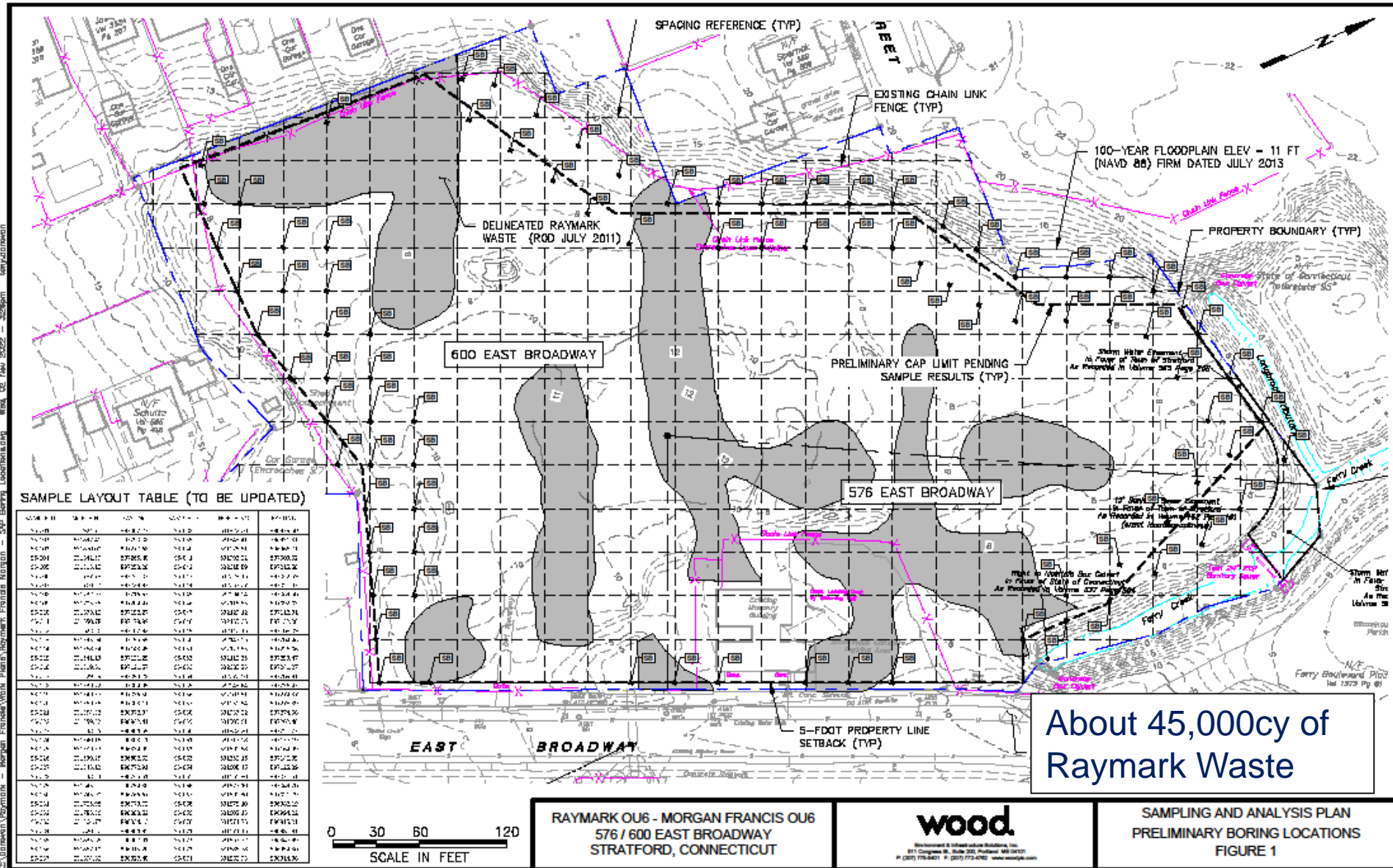
Grassy, some woods, small building and pavement



# Historic Sampling



C:\Users\wood\Documents\Raymark - Morgan Francis\Plans\Raymark - Morgan Francis\Locations\Map - 02 - New 2022 - 22266.mxd



**SAMPLE LAYOUT TABLE (TO BE UPDATED)**

NO. OF B	DATE	NO.	NO.	NO.	NO.
05-01	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-02	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-03	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-04	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-05	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-06	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-07	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-08	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-09	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-10	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-11	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-12	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-13	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
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05-24	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-25	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
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05-27	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-28	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-29	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-30	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22
05-31	05-01-22	05-01-22	05-01-22	05-01-22	05-01-22

**About 45,000cy of Raymark Waste**

**RAYMARK OU6 - MORGAN FRANCIS OU6**  
**576 / 600 EAST BROADWAY**  
**STRATFORD, CONNECTICUT**



**SAMPLING AND ANALYSIS PLAN**  
**PRELIMINARY BORING LOCATIONS**  
**FIGURE 1**

# July 2011 ROD

- **576/600 East Broadway (Morgan Francis Property)**

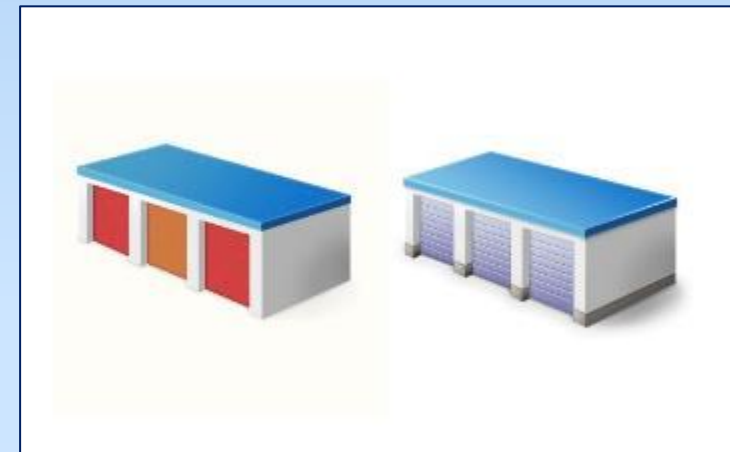
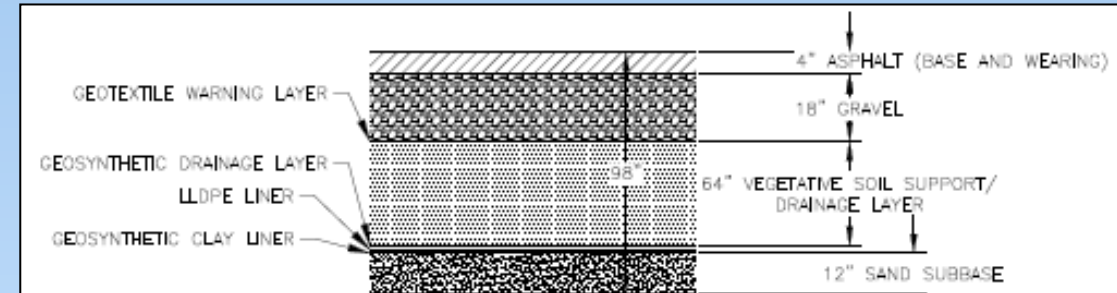
- Cap Raymark Waste in place
- Active developer - planned reuse as storage units
- Currently being designed

- **Third Avenue Property**

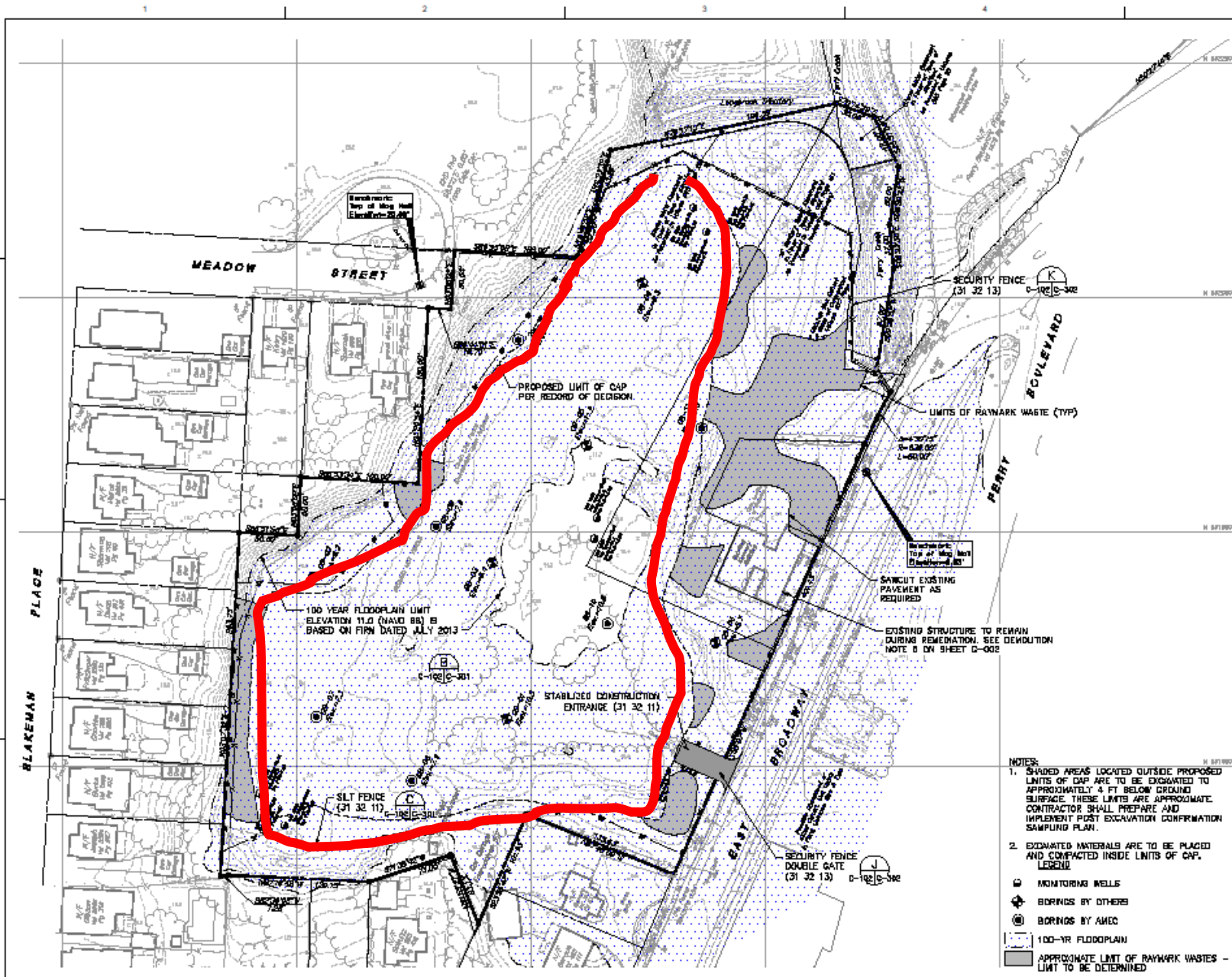
- Excavate Raymark Waste and consolidate at 576/600 EB (if capacity)
- Is now included as additional property in 2016 ROD

- **Beacon Point AOC2**

- Institutional controls to prevent digging



# 2014 REMEDIAL DESIGN



- NOTES:**
1. SHADED AREAS LOCATED OUTSIDE PROPOSED LIMITS OF CAP ARE TO BE EXCAVATED TO APPROXIMATELY 4 FT BELOW GROUND SURFACE. THESE LIMITS ARE APPROXIMATE. CONTRACTOR SHALL PREPARE AND IMPLEMENT POST EXCAVATION CONFIRMATION SAMPLING PLAN.
  2. EXCAVATED MATERIALS ARE TO BE PLACED AND COMPACTED INSIDE LIMITS OF CAP. **LEBEN!**
- MONITORING WELLS
  - ⊕ BORINGS BY OTHERS
  - ⊙ BORINGS BY AMEC
  - ⋯ 100-YR FLOODPLAIN
  - APPROXIMATE LIMIT OF RAYMARK WASTES - LIMIT TO BE DETERMINED



US Army Corps of Engineers  
New England District

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10

AMEC  
Environmental & Engineering  
Construction

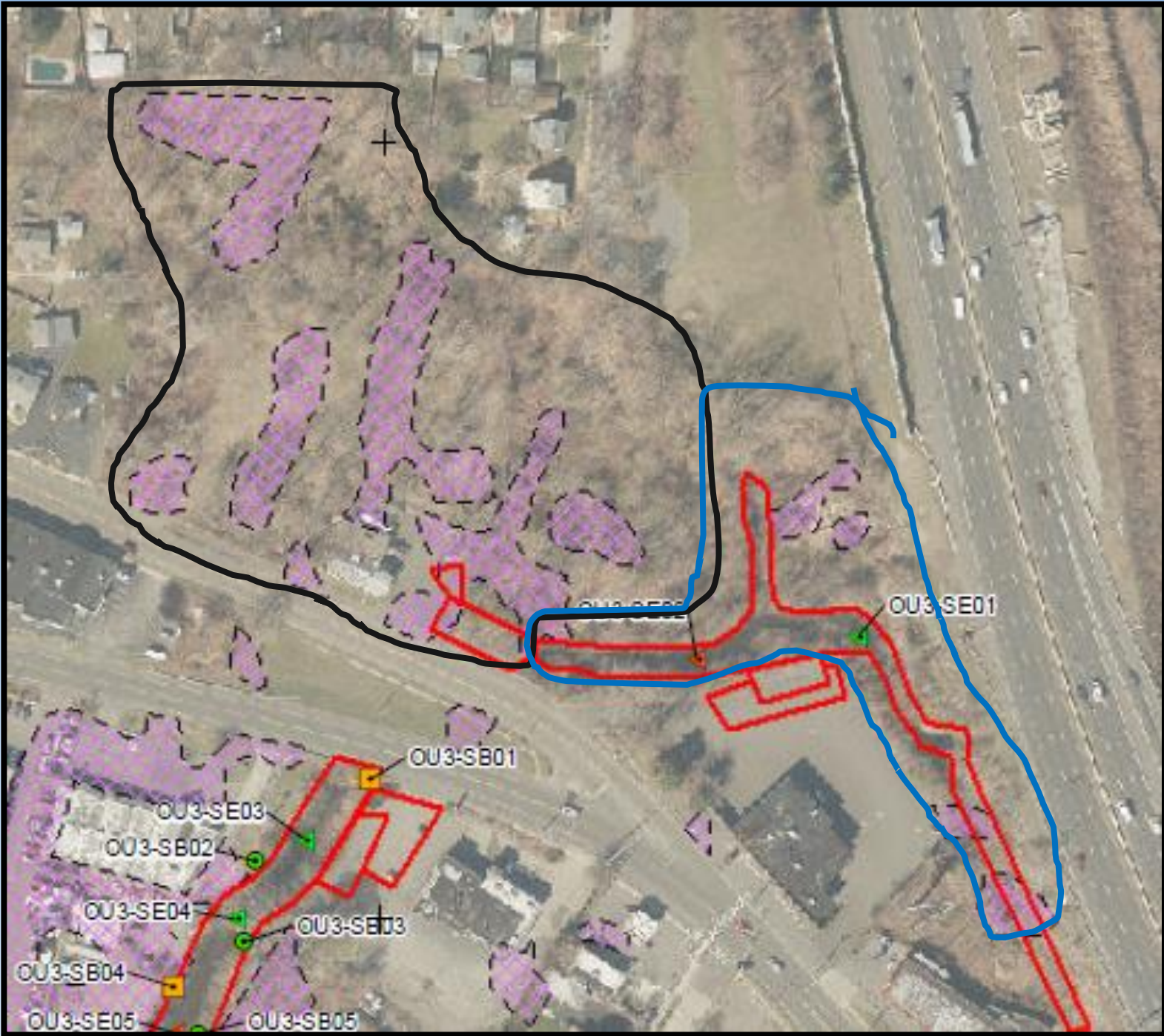
REMEDIAL DESIGN OF LATERAL CAP  
STRAVED EAST BROADWAY  
STATIONING, CONNECTICUT

EXCAVATION AND SEDIMENTATION  
CONTROL PLAN

**SHEET IDENTIFICATION**  
**C-102**

# Design Update – What Has Changed?

- Current design does not cover all Raymark Waste.
- Updated policies allow capping/filling in a coastal flood zone.
- Cap will cover most of the property and be flatter.
- Commercial reuse has been deemed not practical. Too much peat/spongy material.
- The Town is considering recreational reuse.
- Plan to consolidate Raymark Waste from adjacent DOT parcel and uppermost Ferry Creek area (about 5,000yds).

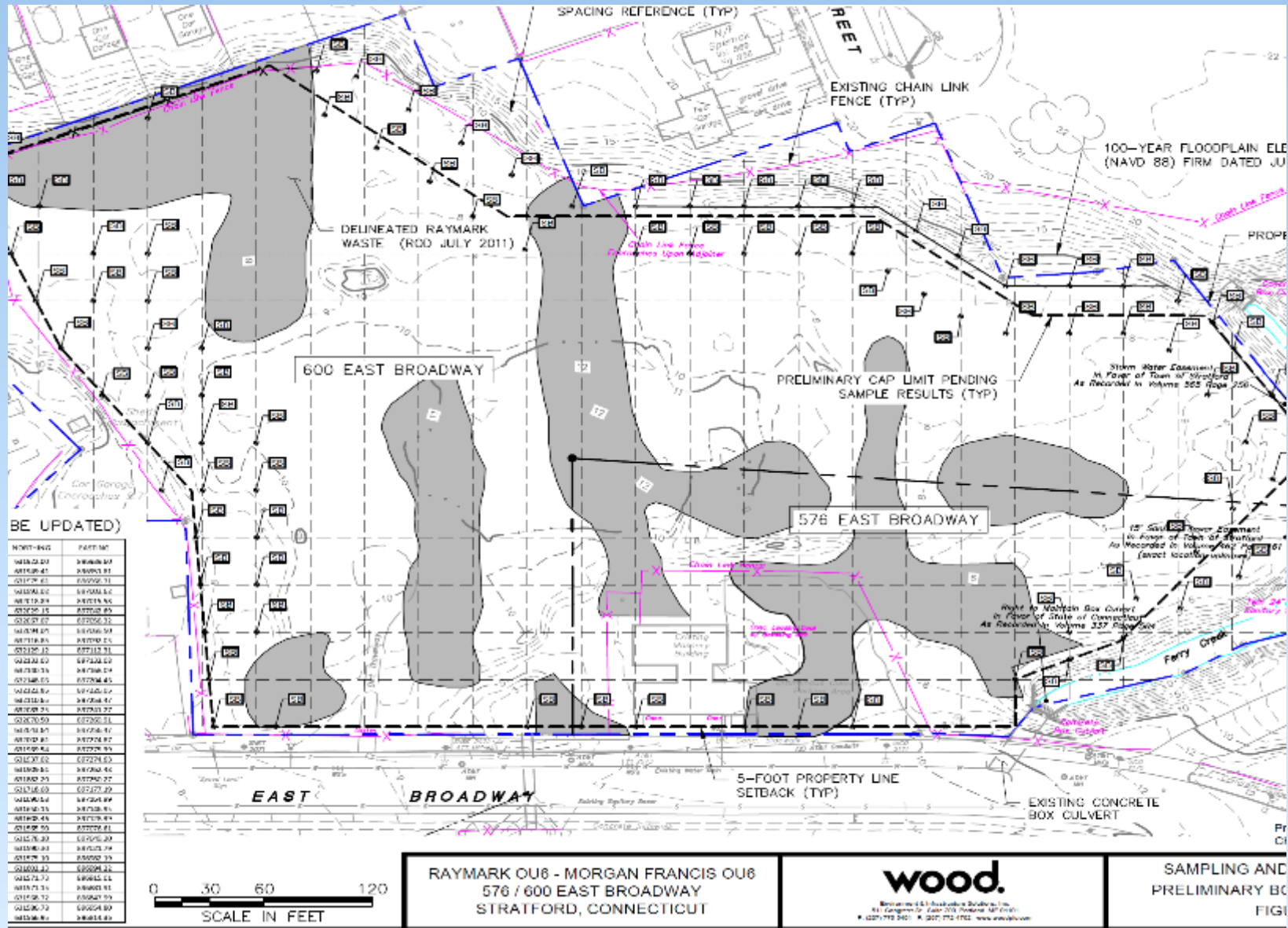


# DOT Property and Uppermost Ferry Creek

# Upcoming Field Work and Sampling Approach

# Environmental Sampling

- Approximately 70 soil borings and 150 soil samples will be collected around the perimeter of the Morgan Francis property using direct – push soil sampling methods.
- Minor brush removal will be completed to access sample locations.
- All samples will be analyzed for Raymark Waste constituents, and CT RSR criteria at select locations.
- Why?
  - Determine the limits of the cap and support design.
  - Characterize areas we are not going to cap.
- Estimated Start Date: December 2022
- Estimated Duration: 10 days

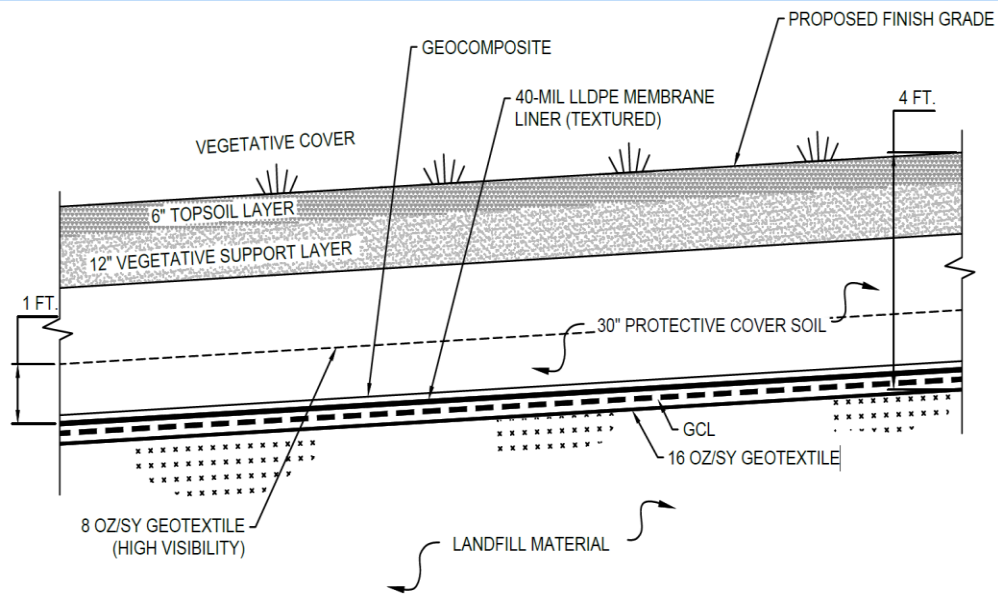




# Morgan Francis Design Update

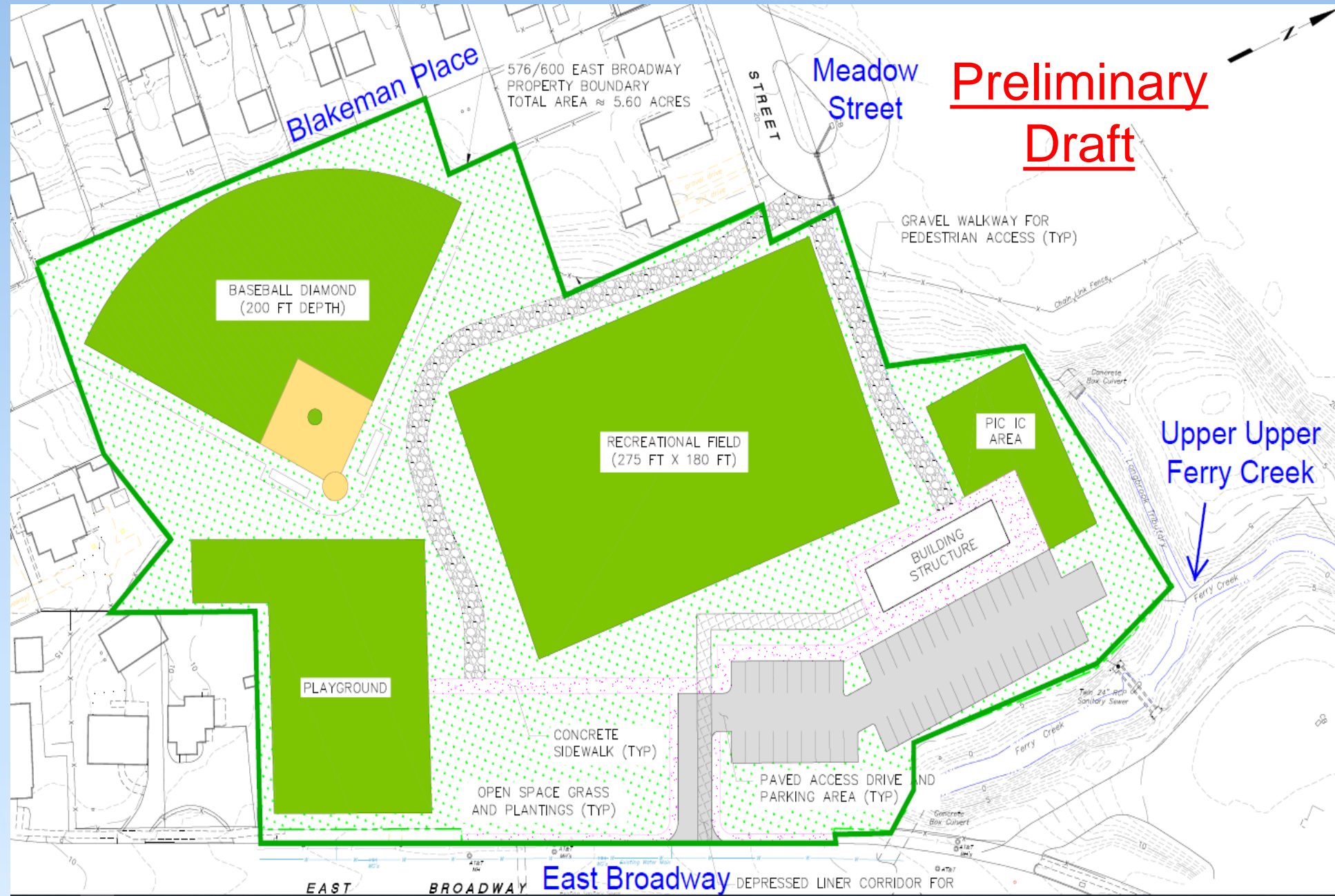
# Updated Design for Morgan Francis

- Update to the 2014 design
- Design contract awarded to WSP
- Team offices in Portland, ME and Rocky Hill, CT
- Design to incorporate consolidation of waste from adjacent property (UUFC)
- Passive post closure use
- 4' Low permeability cap
- The site elevation is expected to rise approximately 6', most of that increase in elevation is from capping materials



# Future Use Concepts for Morgan Francis

- Primary design focus to cover and secure waste on site
- Provide 4' of clean cover and a low permeability cap
- Control stormwater runoff
- Support post closure use
- Utility access
- Primary access off East Broadway likely



## Why Does EPA Consider Future Use?

- EPA considers reuse concepts in our remedial design to:
  - Ensure the desired end use is safe
  - Design and grade the cap to facilitate reuse
- Redevelopment is a local planning issue
- EPA does not select reuse concepts or final plans
- EPA cannot fund redevelopment of the property

# Morgan Francis - Tentative Schedule

2023 - Design update complete

2024 - Administrative requirements, funding, and remedial contract actions

2025 - Potential construction start



# Questions?

- Unmute yourself and ask your question.
- Or use the chat box.

# Upcoming Meetings

- Next Morgan Francis Neighborhood Meeting –TBD
- Next Raymark Community Advisory Group Meeting -  
November 30 at 6:30pm (Hybrid)
  - In person at 300 Ferry Boulevard
  - Or join through GoToMeeting or phone

# Thank you for joining!

- Visit [www.stratfordct.gov/Raymark](http://www.stratfordct.gov/Raymark) for updates, contact information, air monitoring results, meeting dates, meeting recordings and Powerpoint slides
- Email Alivia at: [acoleman@townofstratford.com](mailto:acoleman@townofstratford.com) with further questions, concerns, feedback or to sign up for email distribution list.



# Help Update Stratford's POCD!

- The Plan of Conservation and Development (POCD) is the Town's land use guide for managing growth and conserving resources.
- Learn more and provide your input at [www.planstratford.com](http://www.planstratford.com)

