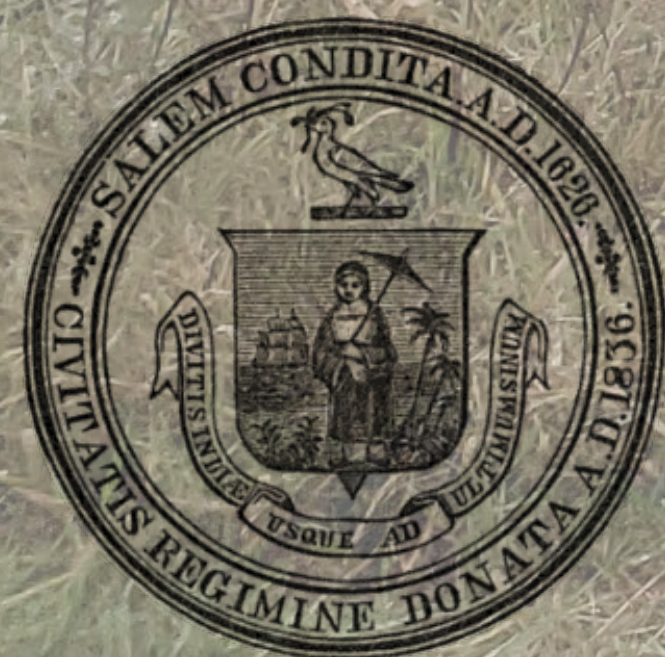


MANSELL FIELD SITE REMEDIATION AND IMPROVEMENTS

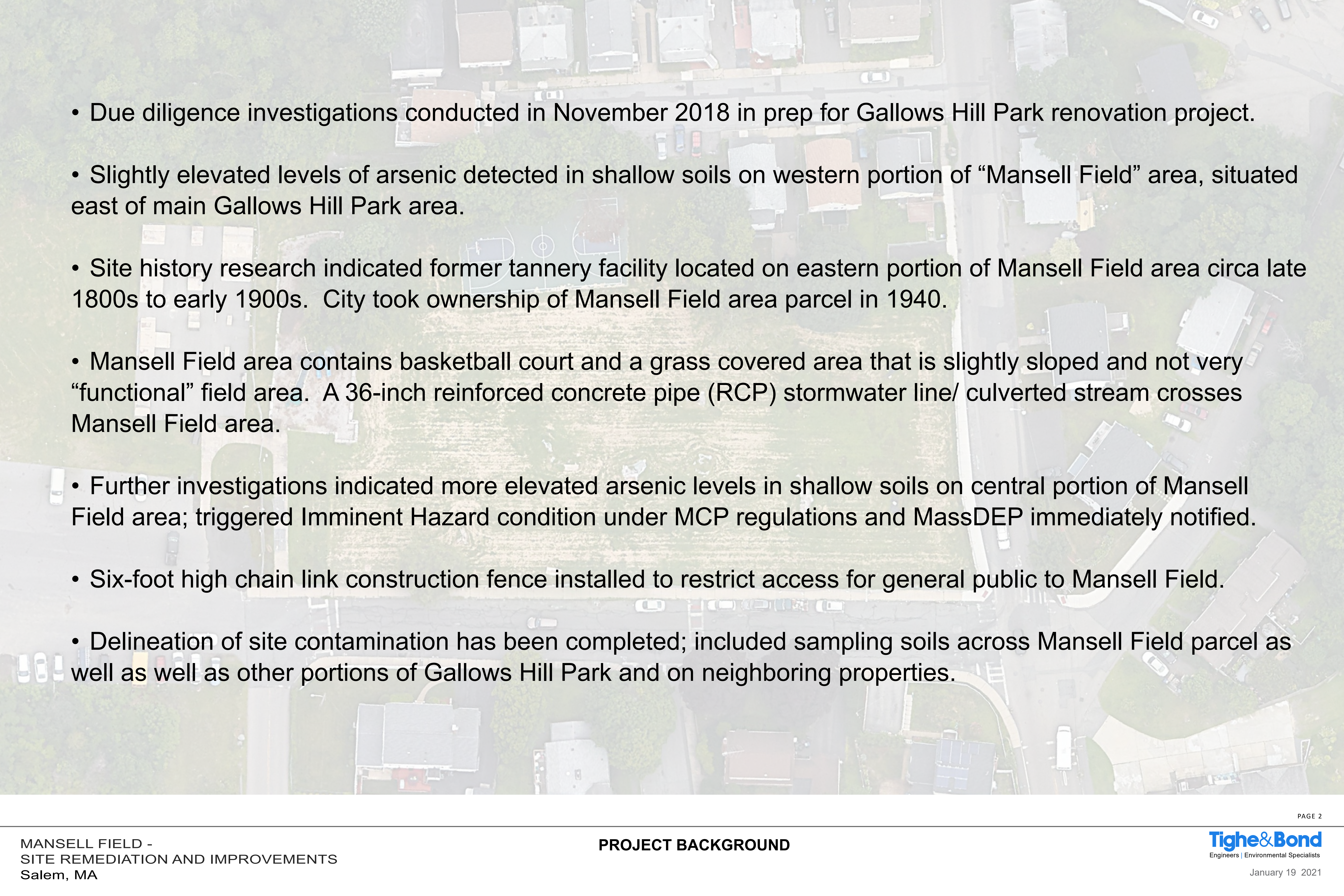
CONCEPTUAL PLAN

JANUARY 19, 2021



CITY OF SALEM, MA

Tighe & Bond
Engineers | Environmental Specialists

- 
- Due diligence investigations conducted in November 2018 in prep for Gallows Hill Park renovation project.
 - Slightly elevated levels of arsenic detected in shallow soils on western portion of “Mansell Field” area, situated east of main Gallows Hill Park area.
 - Site history research indicated former tannery facility located on eastern portion of Mansell Field area circa late 1800s to early 1900s. City took ownership of Mansell Field area parcel in 1940.
 - Mansell Field area contains basketball court and a grass covered area that is slightly sloped and not very “functional” field area. A 36-inch reinforced concrete pipe (RCP) stormwater line/ culverted stream crosses Mansell Field area.
 - Further investigations indicated more elevated arsenic levels in shallow soils on central portion of Mansell Field area; triggered Imminent Hazard condition under MCP regulations and MassDEP immediately notified.
 - Six-foot high chain link construction fence installed to restrict access for general public to Mansell Field.
 - Delineation of site contamination has been completed; included sampling soils across Mansell Field parcel as well as well as other portions of Gallows Hill Park and on neighboring properties.



All soils w/As > 500 ppm scheduled for excavation and off-site disposal. Remaining soils with As < 500 ppm to be consolidated (to extent feasible) and capped on site

APPROXIMATE PARK BOUNDARY

This is the approximate 10-foot "clean corridor" we will plan to create around 36" RCP pipe that will remain on site to address future utility exposure scenario.

See Figure 4 for IRA Borings B-17 and B-18

ARSENIC IN SOILS PLAN (0-3')

LEGEND

Estimated Boundaries for Arsenic in Soils 0-3 Feet

- As > 500 mg/kg
- As > 100 mg/kg
- As > 20 mg/kg

1. See other figures for symbol descriptions.
2. Samples collected from depth intervals within (or partially within) the top 3 feet of surface grade with majority of the samples collected in top 2 feet.

LOCUS MAP

0 20 40
Feet
1:480

OTHER NOTES

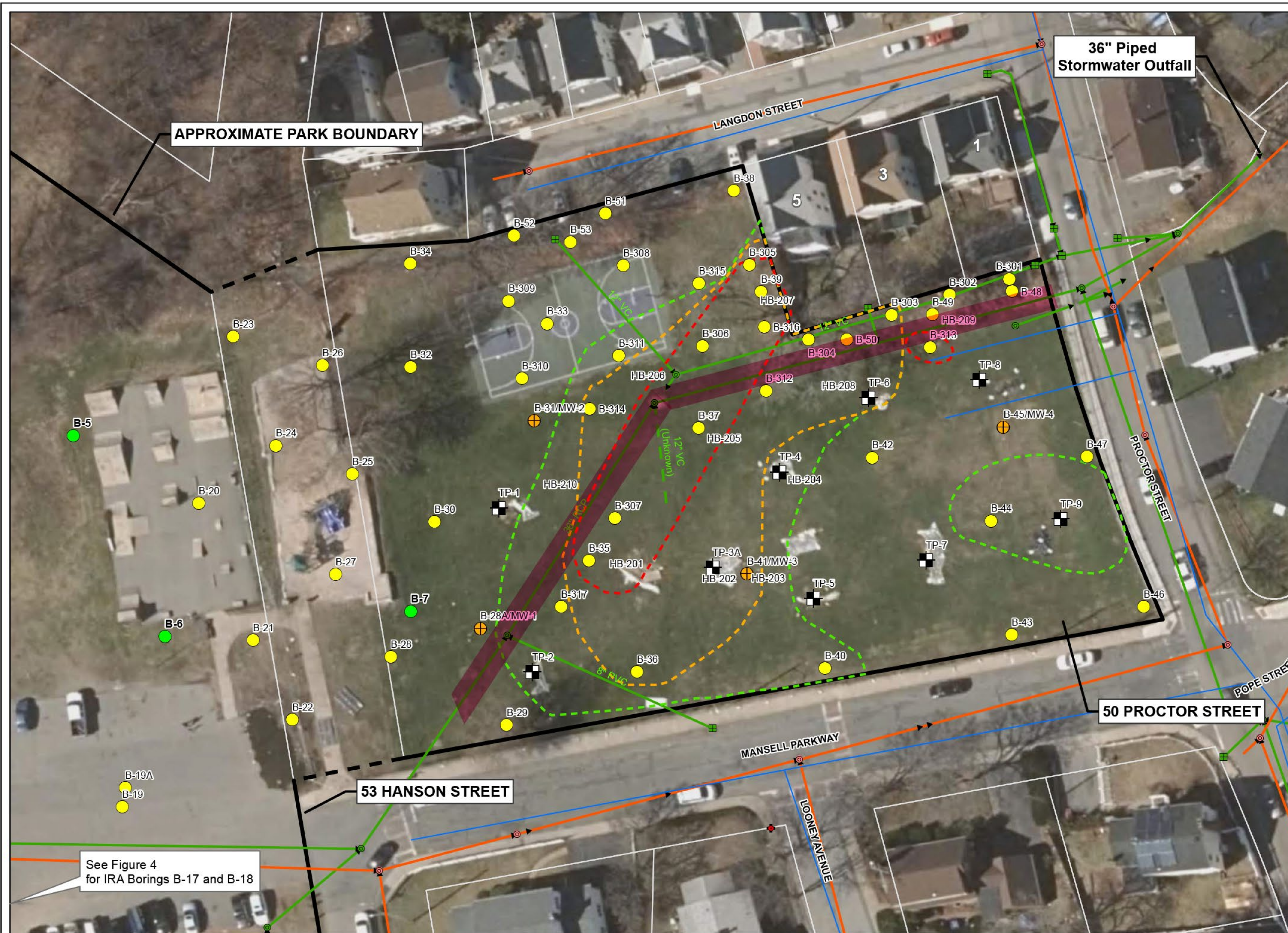
1. Based on Google(C) Imagery (2018)
2. Parcels (FY 2011) downloaded from MassGIS and are approximate.
3. Utility data provided by City of Salem Engineering Dept., and supplemented by camera utility line survey completed by City, 2-6-19

**Gallows Hill Park
50 Proctor Street
Salem, Massachusetts**

RTN 3-35355

Dec 2020

Tighe & Bond
Engineers | Environmental Specialists



See Figure 4
for IRA Borings B-17 and B-18

ARSENIC IN SOILS PLAN (3-6')

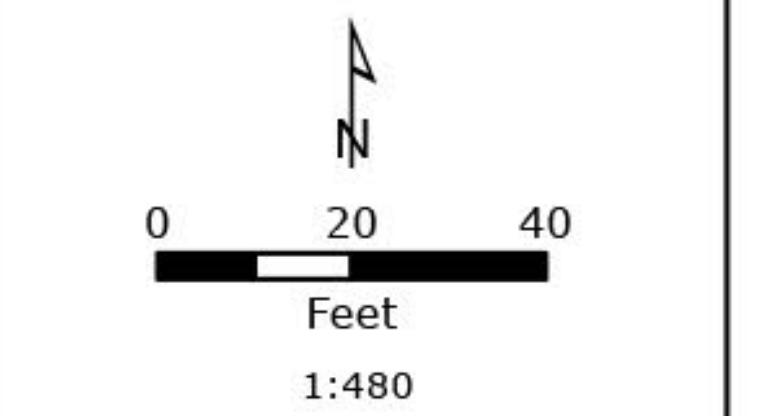
LEGEND

Estimated Boundaries for Arsenic in Soils 0-3 Feet

- As > 500 mg/kg
- As > 100 mg/kg
- As > 20 mg/kg

1. See other figures for symbol descriptions.
2. Samples collected from depth intervals within (or partially within) the 3 to 6 feet of surface grade.
3. Only sample locations where arsenic data collected from within this depth interval are shown.

LOCUS MAP



- OTHER NOTES**
1. Based on Google(C) Imagery (2018)
 2. Parcels (FY 2011) downloaded from MassGIS and are approximate.
 3. Utility data provided by City of Salem Engineering Dept., and supplemented by camera utility line survey completed by City, 2-6-19

**Gallows Hill Park
50 Proctor Street
Salem, Massachusetts**

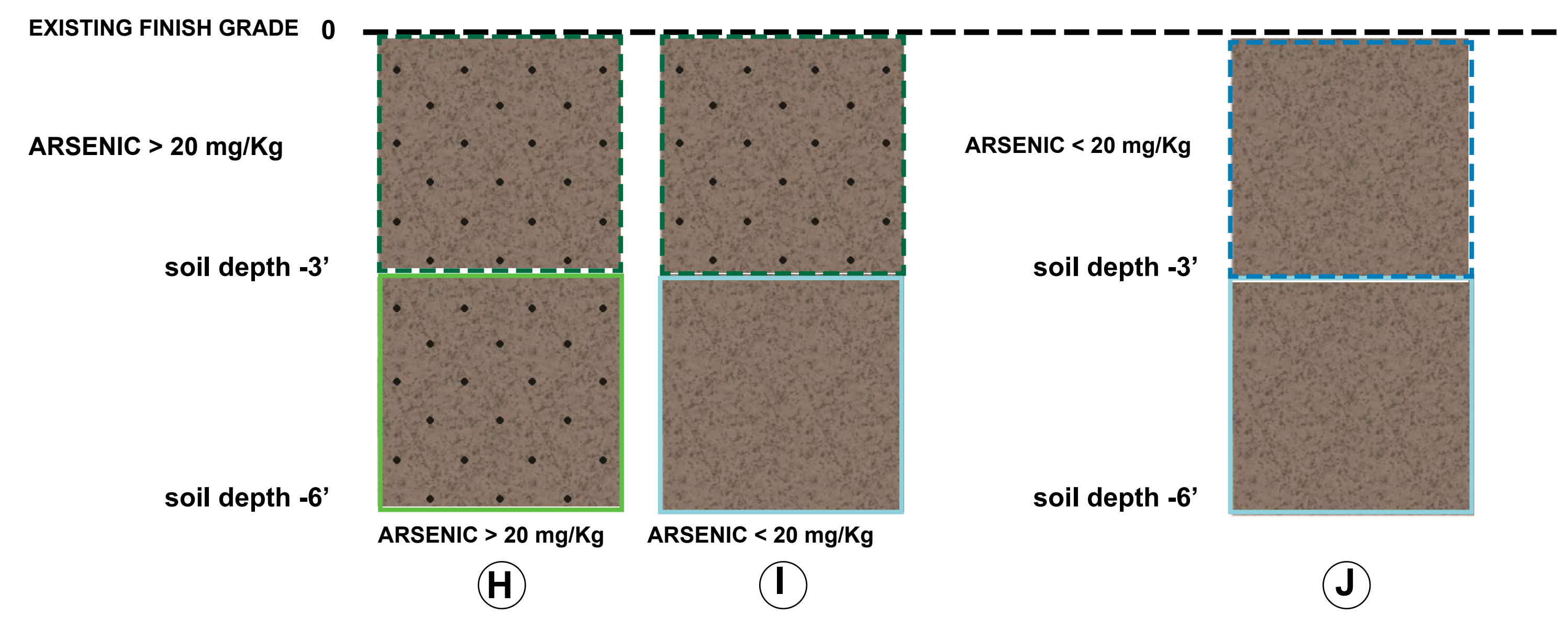
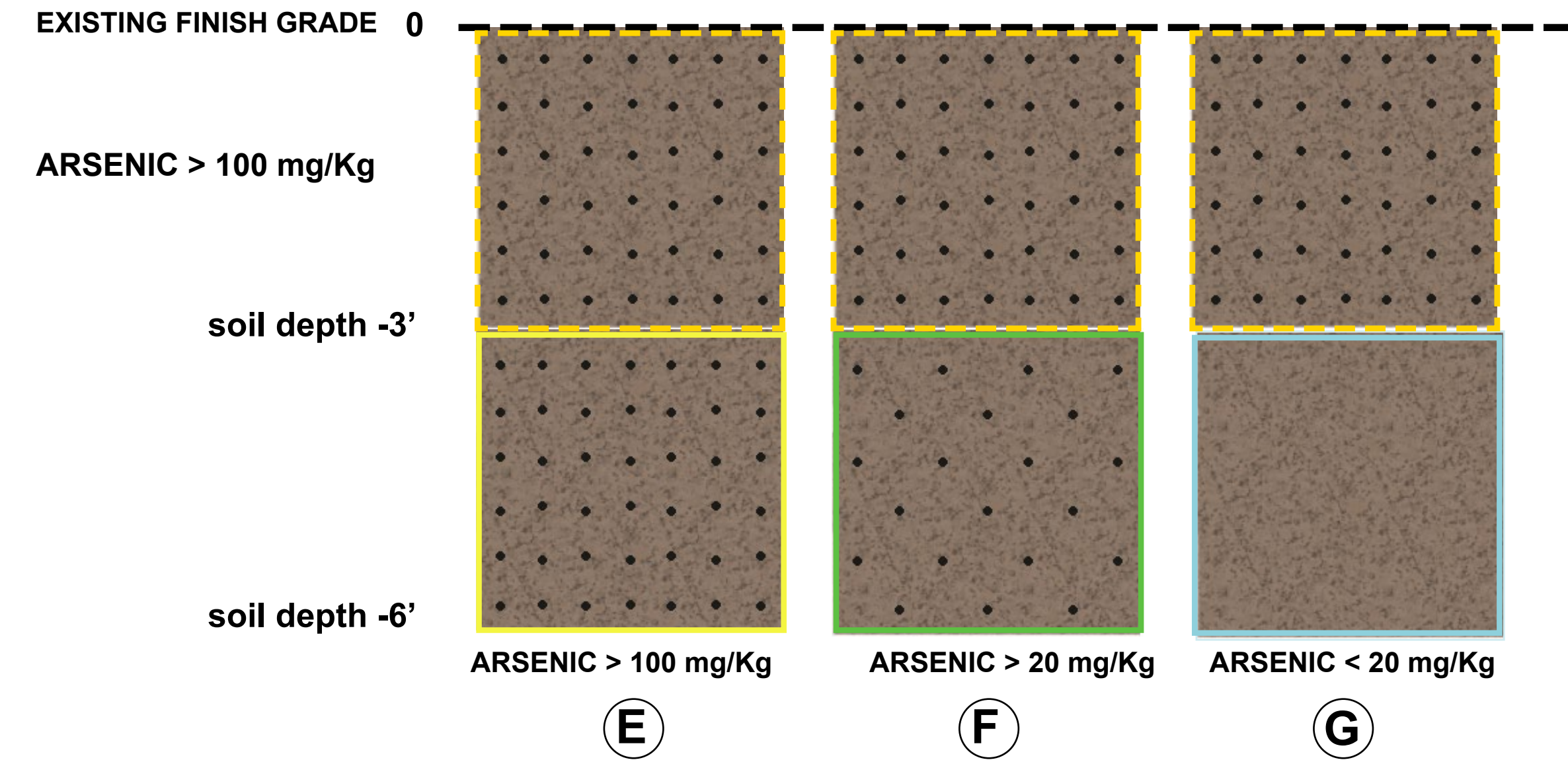
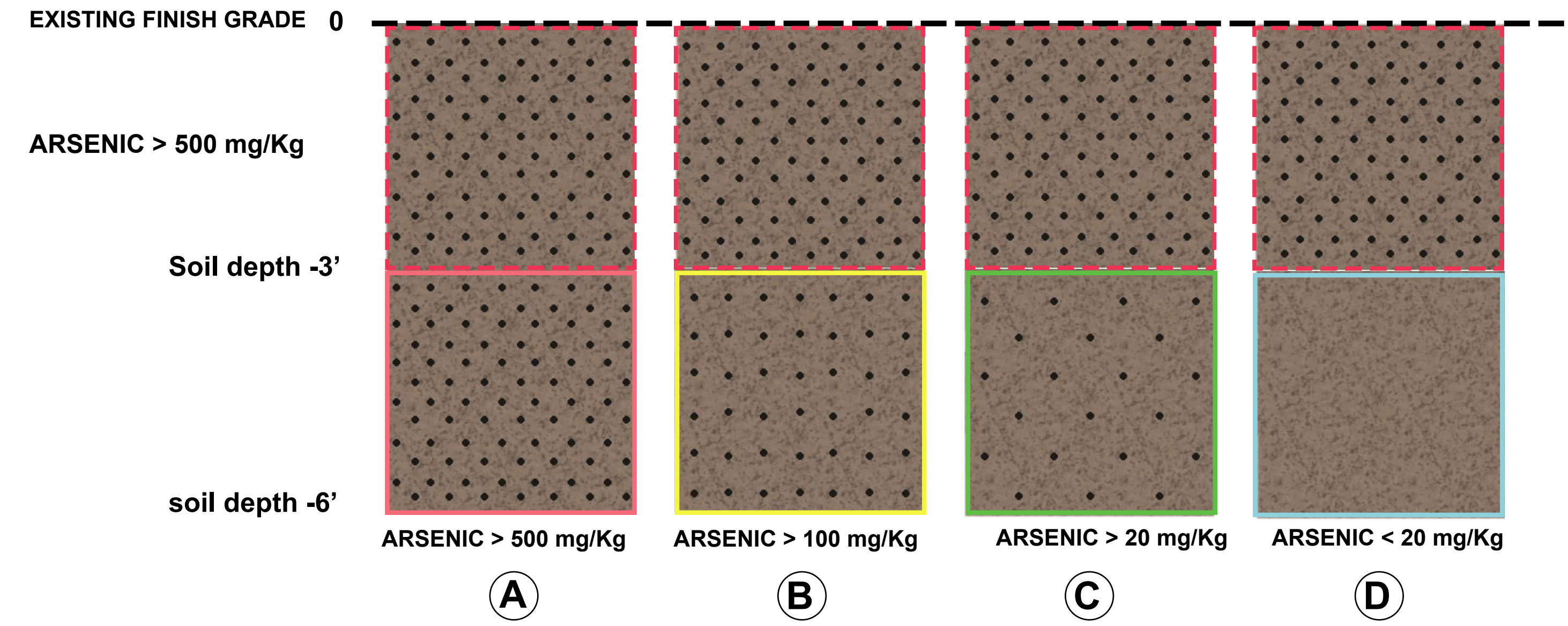
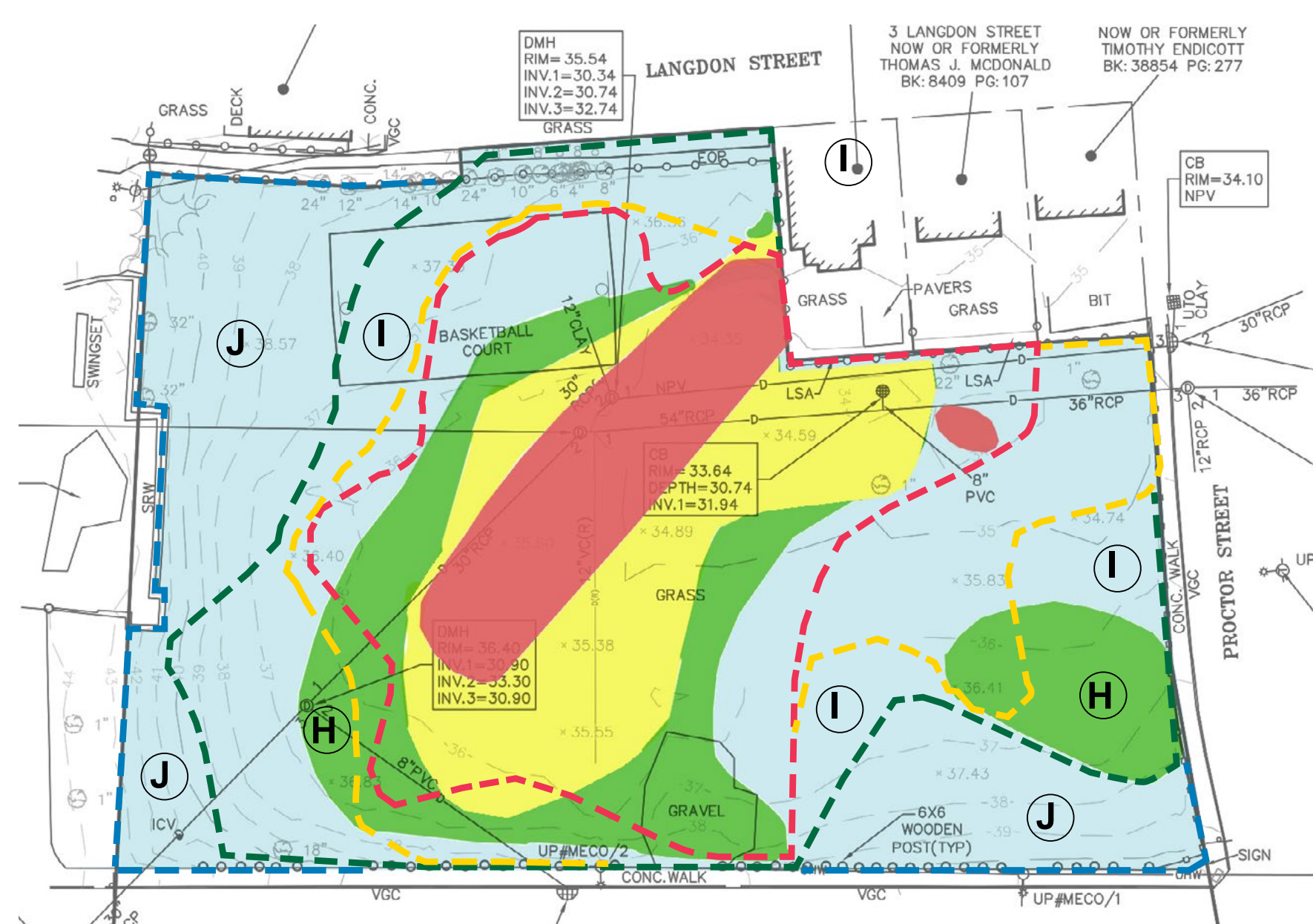
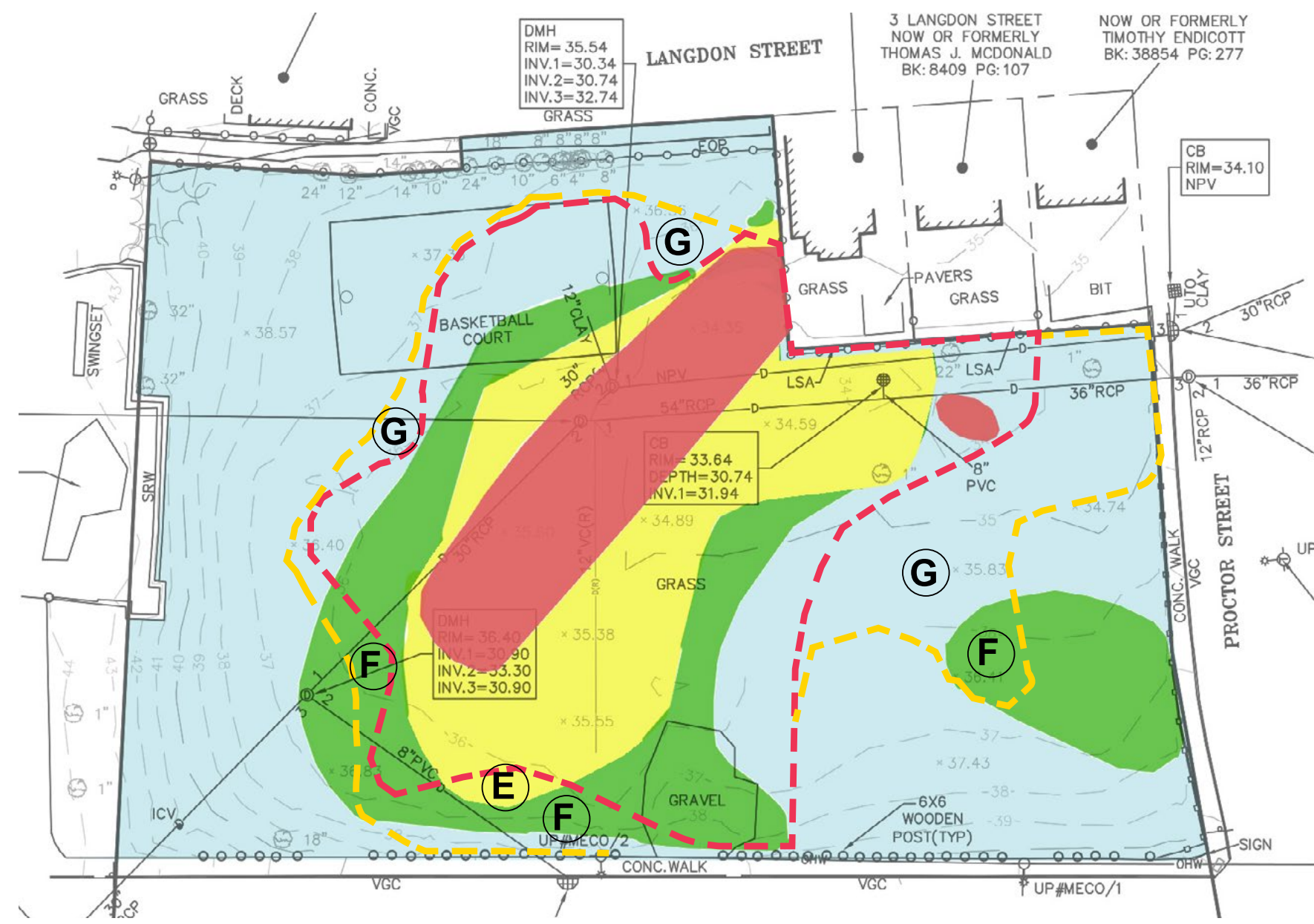
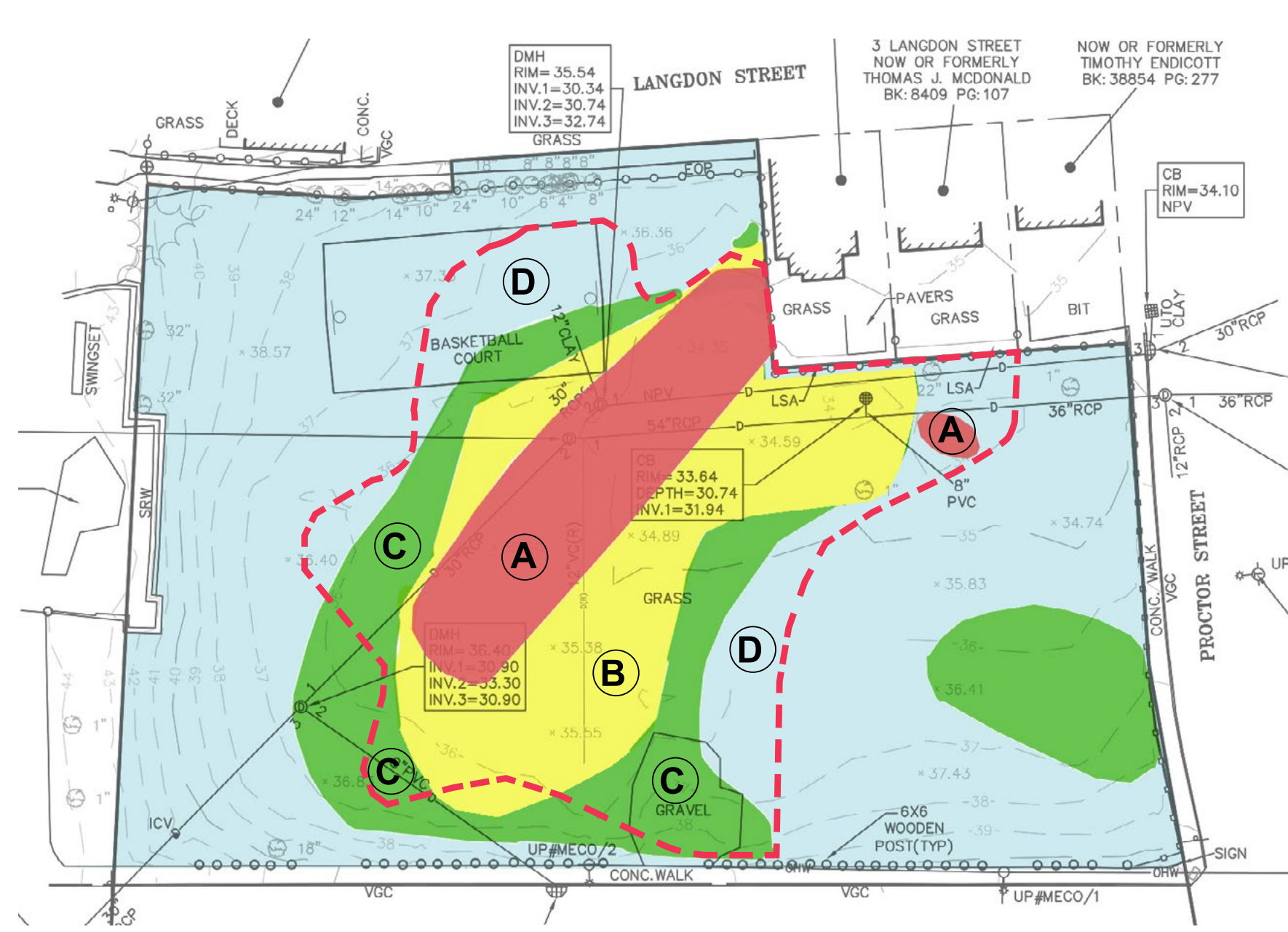
RTN 3-35355

Dec 2020

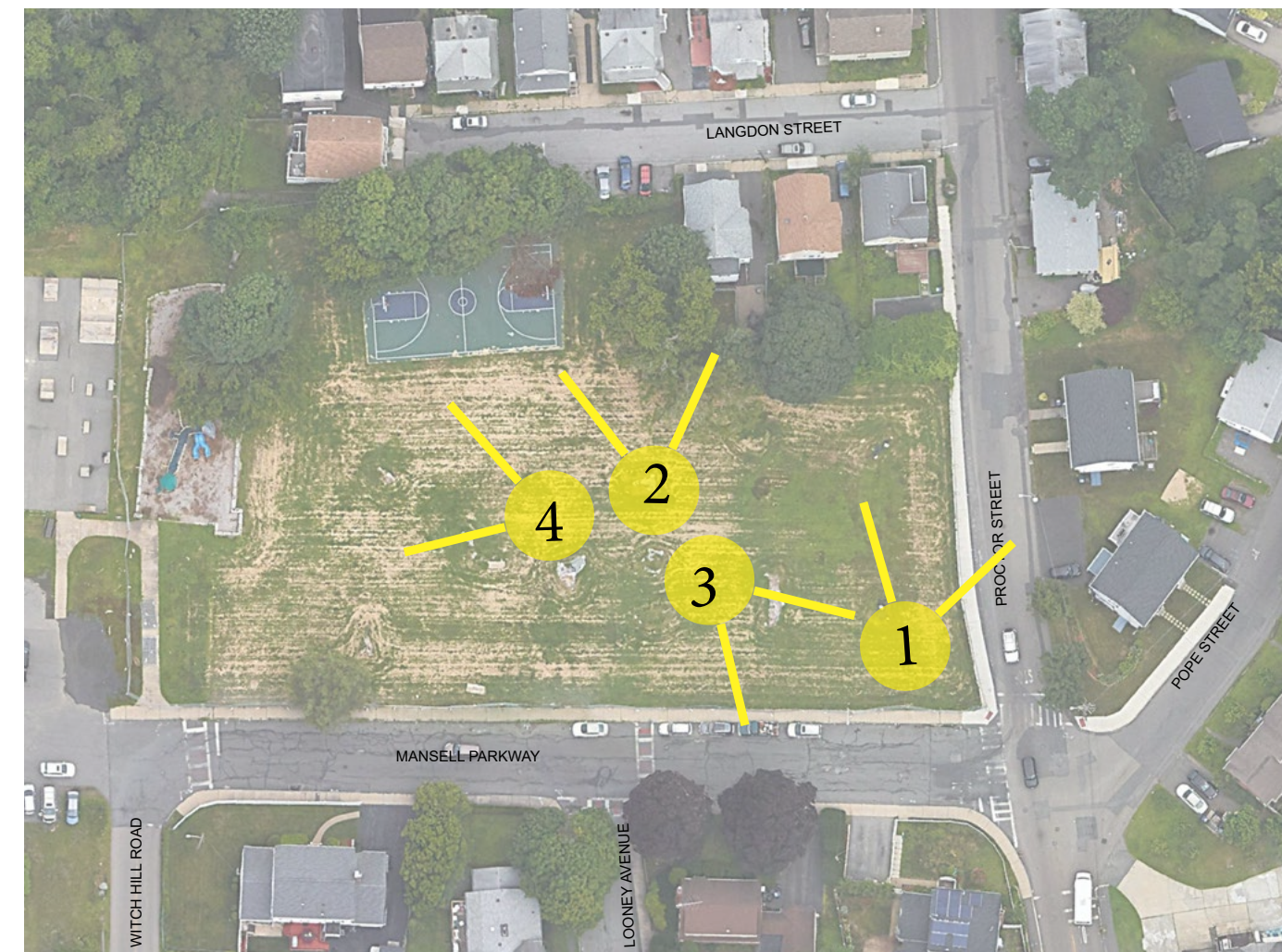


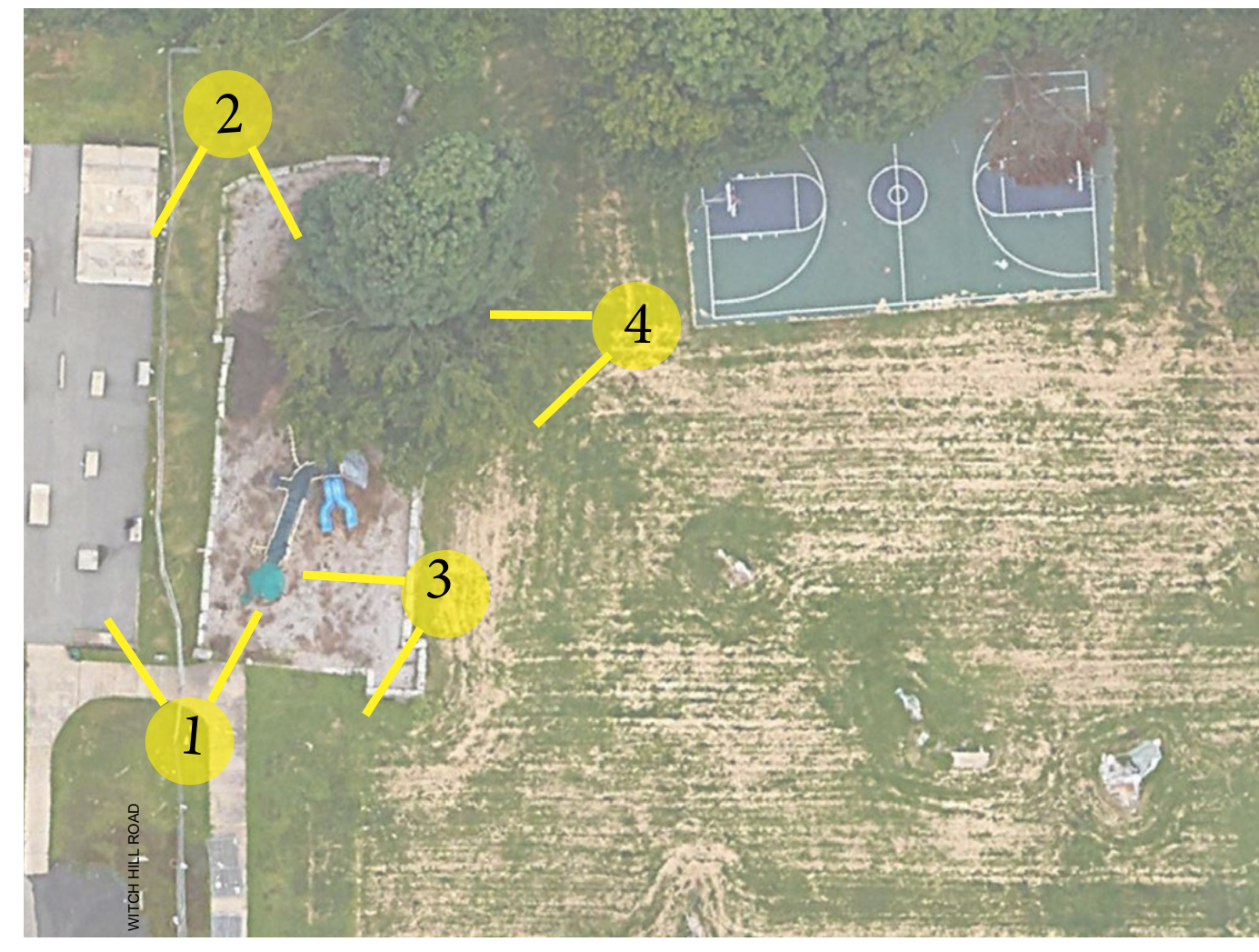
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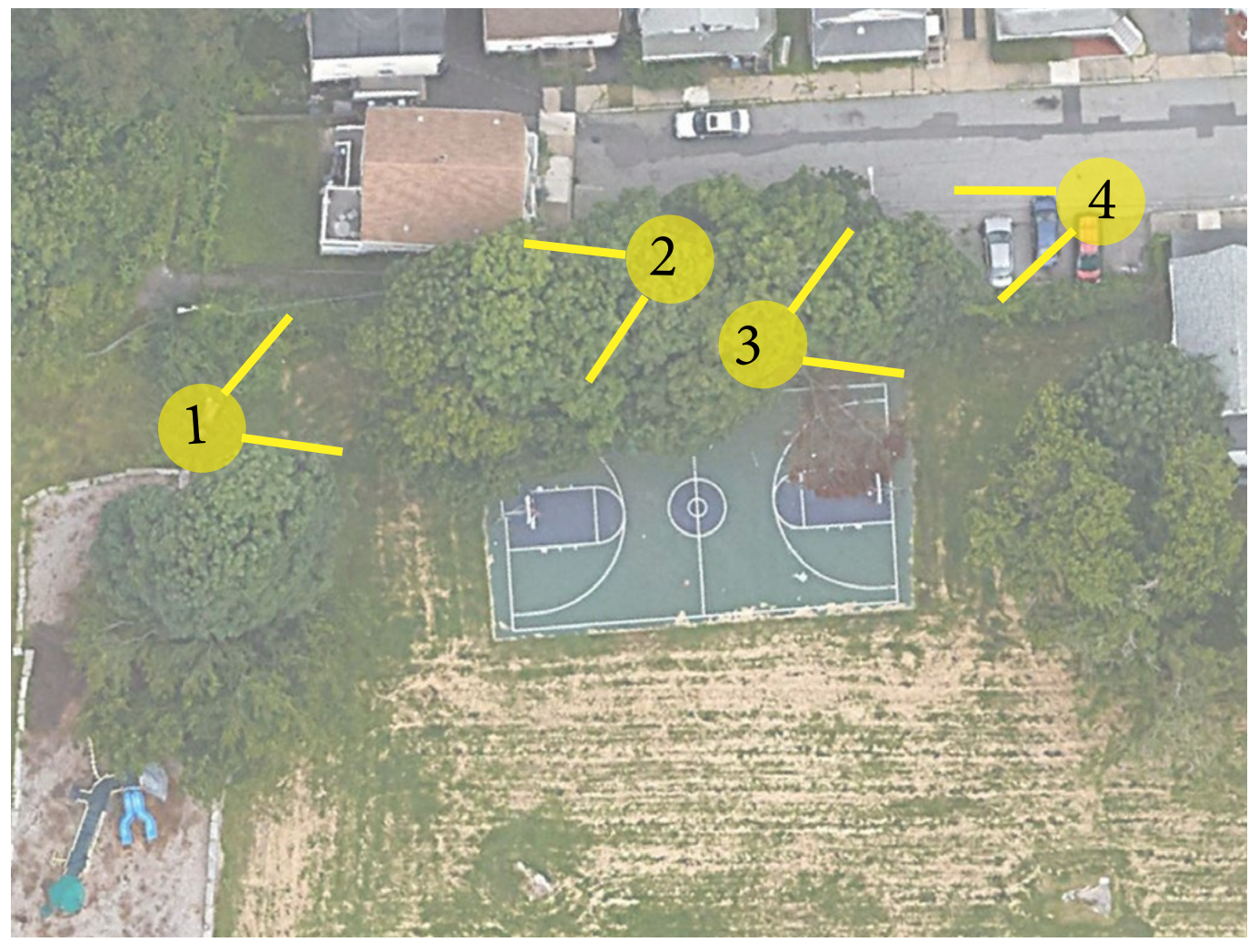
- - - ARSENIC > 500 mg/Kg BETWEEN 0 TO -3 FEET DEPTH
- - - ARSENIC > 100 mg/Kg BETWEEN 0 TO -3 FEET DEPTH
- - - ARSENIC > 20 mg/Kg BETWEEN 0 TO -3 FEET DEPTH
- - - ARSENIC < 20 mg/Kg BETWEEN 0 TO -3 FEET DEPTH
- █ ARSENIC > 500 mg/Kg BETWEEN -3 TO -6 FEET DEPTH
- █ ARSENIC > 100 mg/Kg BETWEEN -3 TO -6 FEET DEPTH
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- █ ARSENIC < 20 mg/Kg BETWEEN -3 TO -6 FEET DEPTH





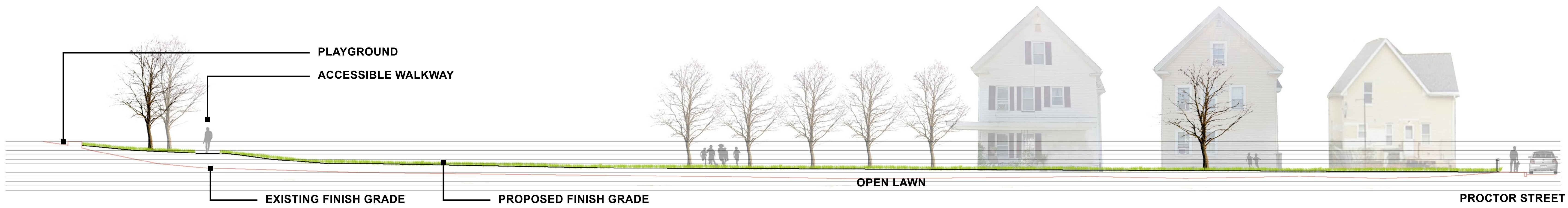




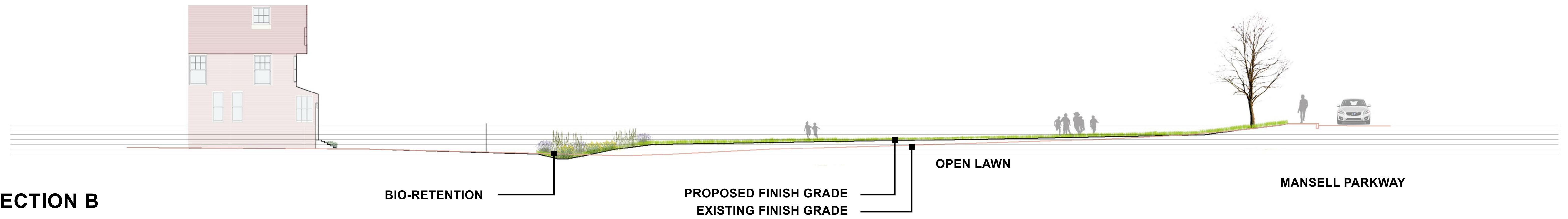




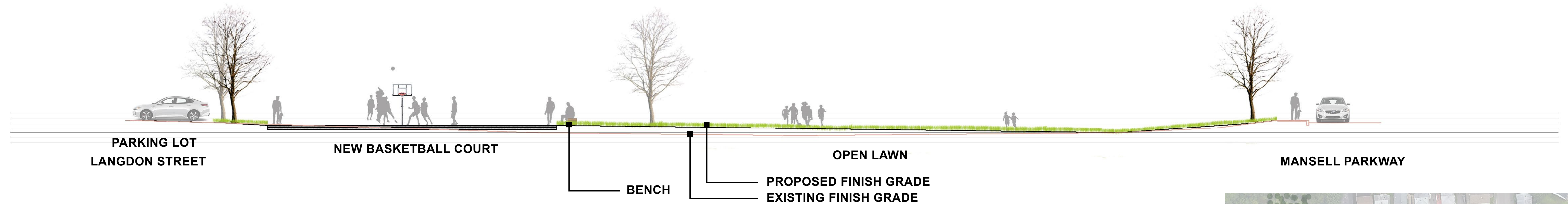




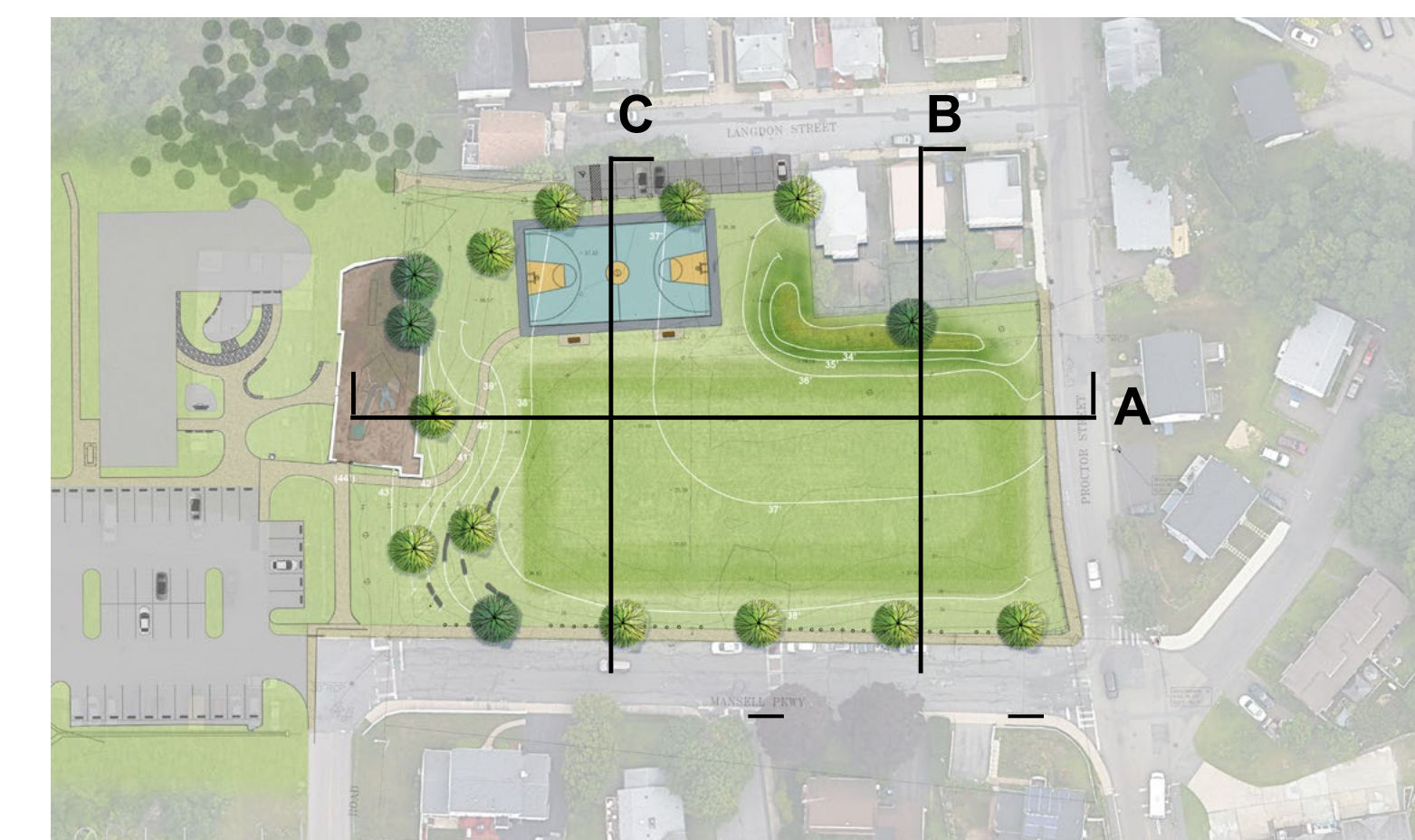
SECTION A

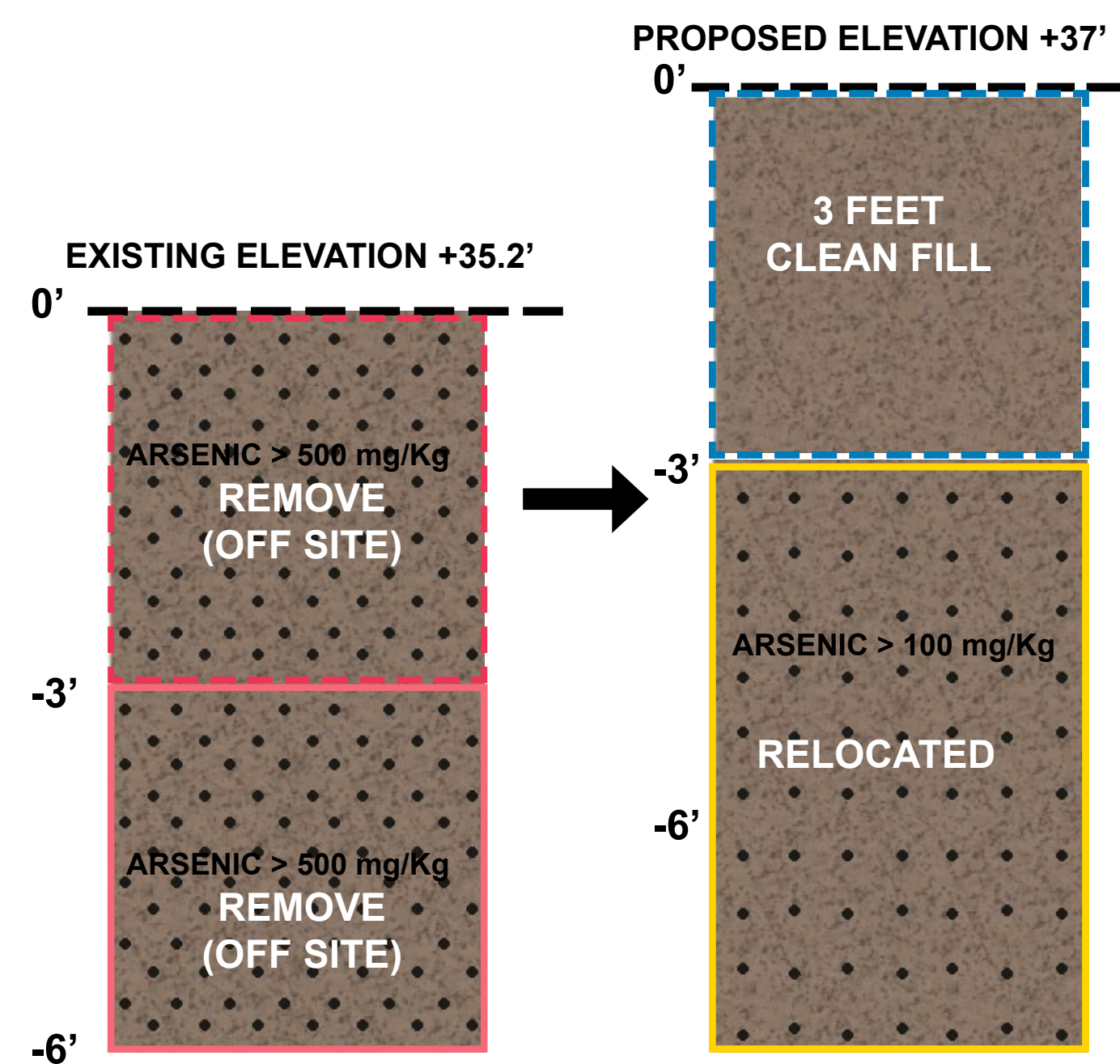


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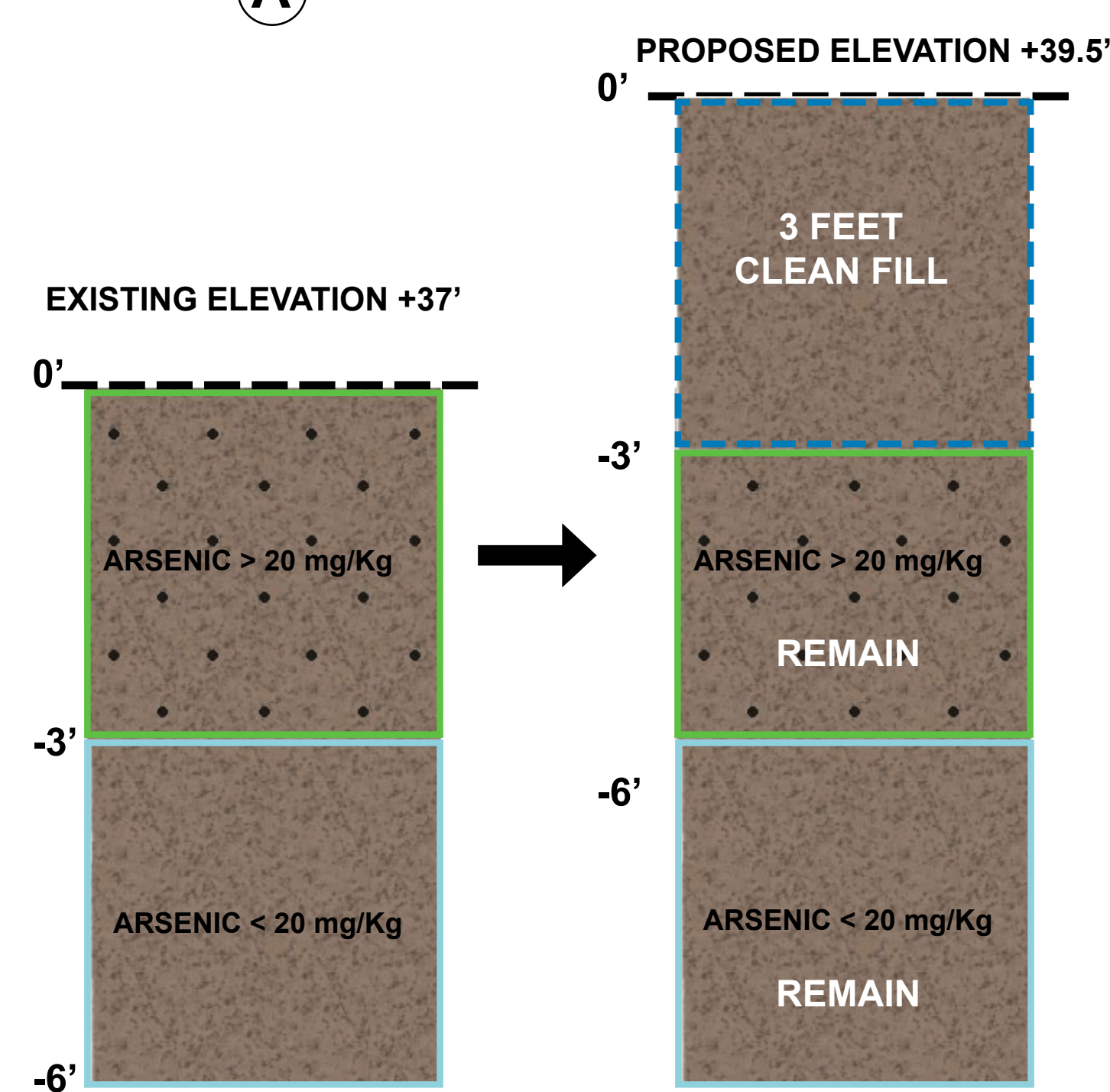


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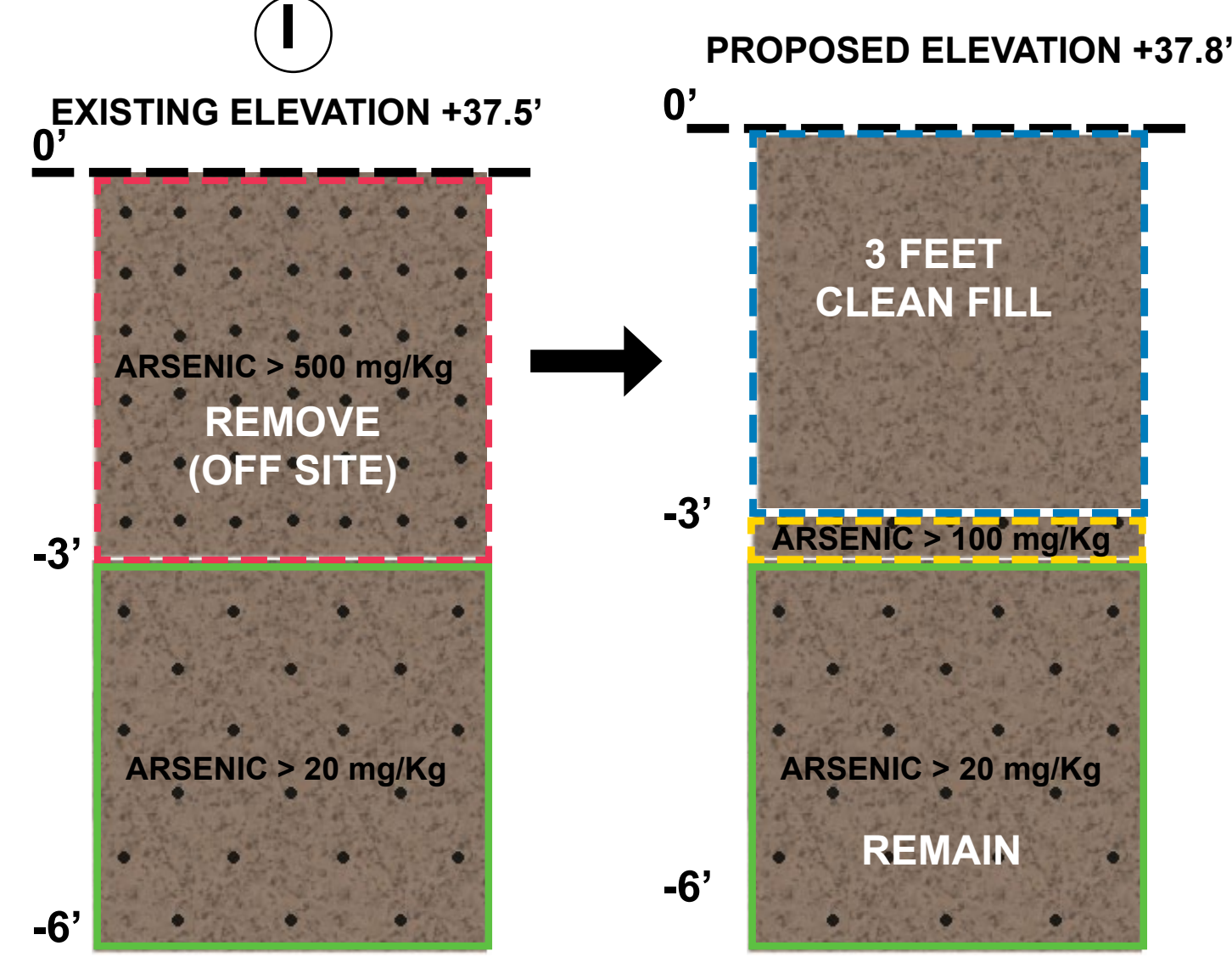




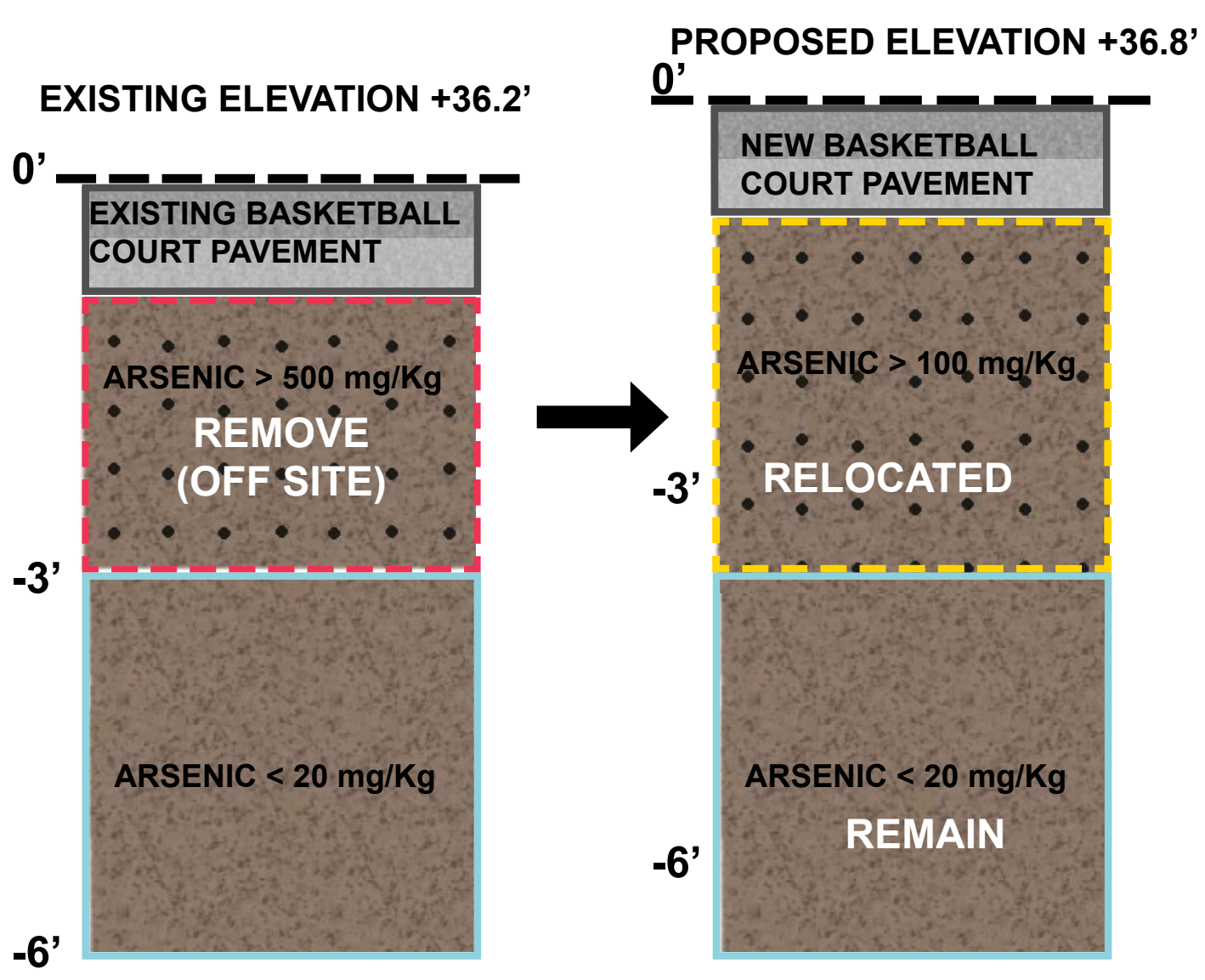
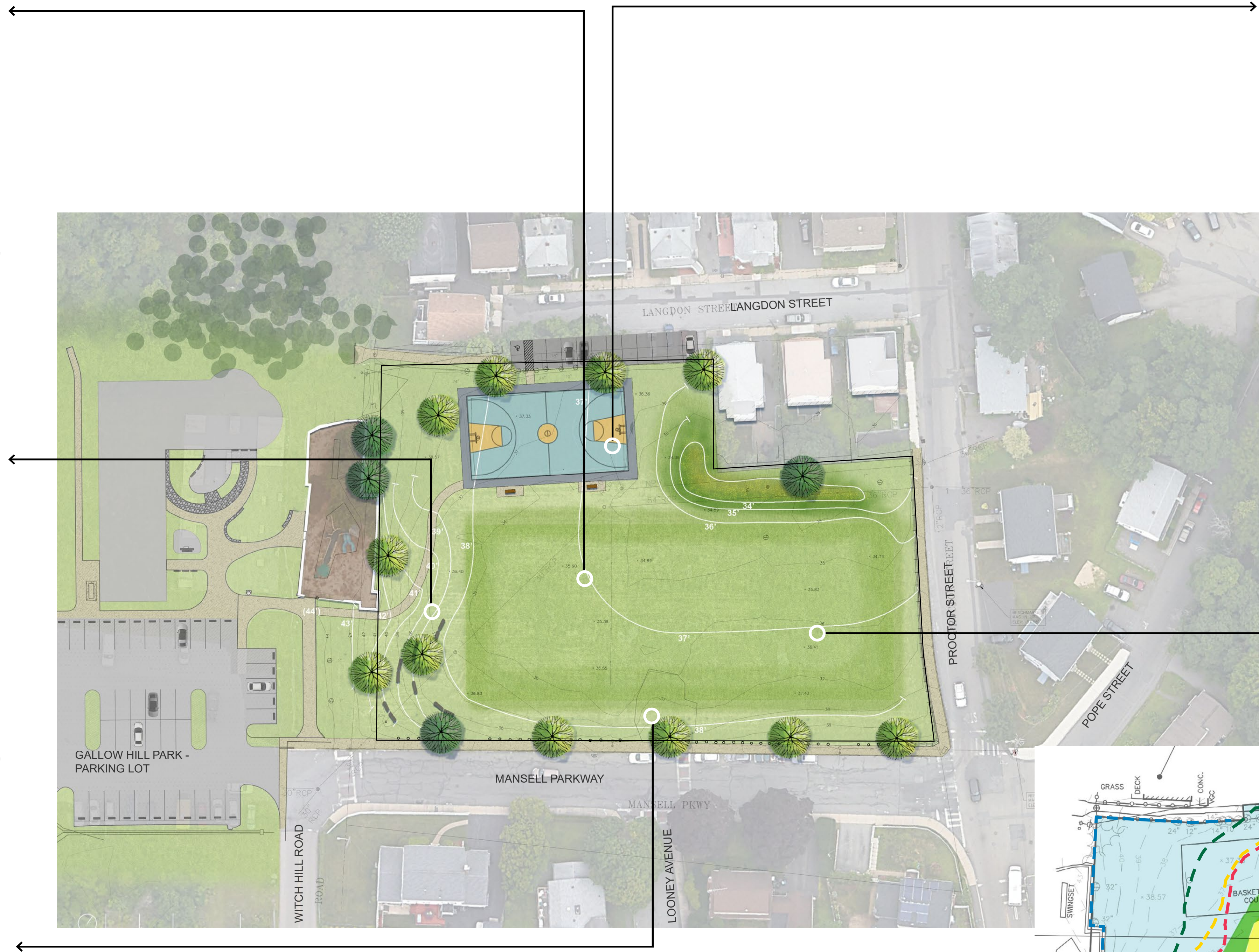
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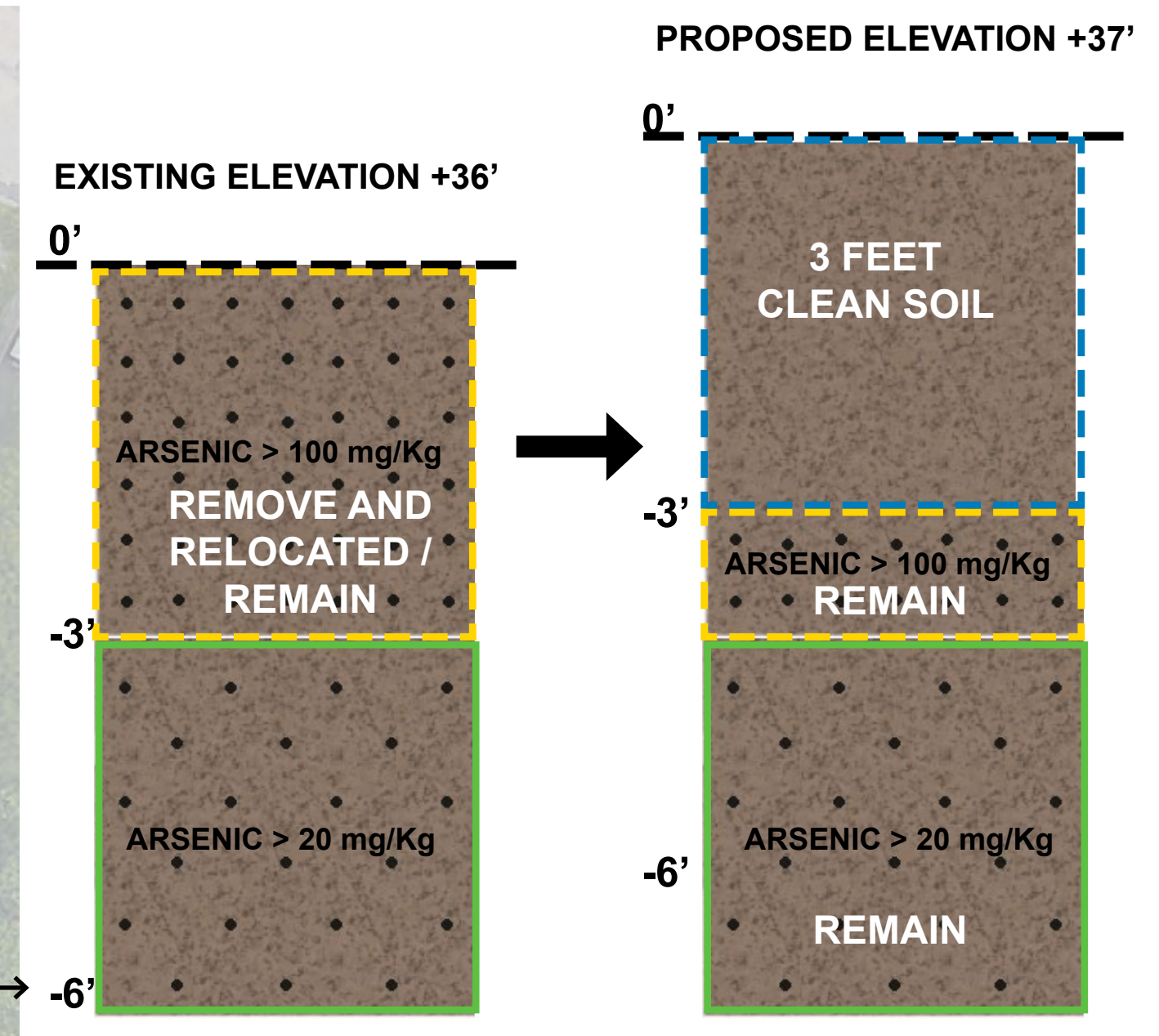
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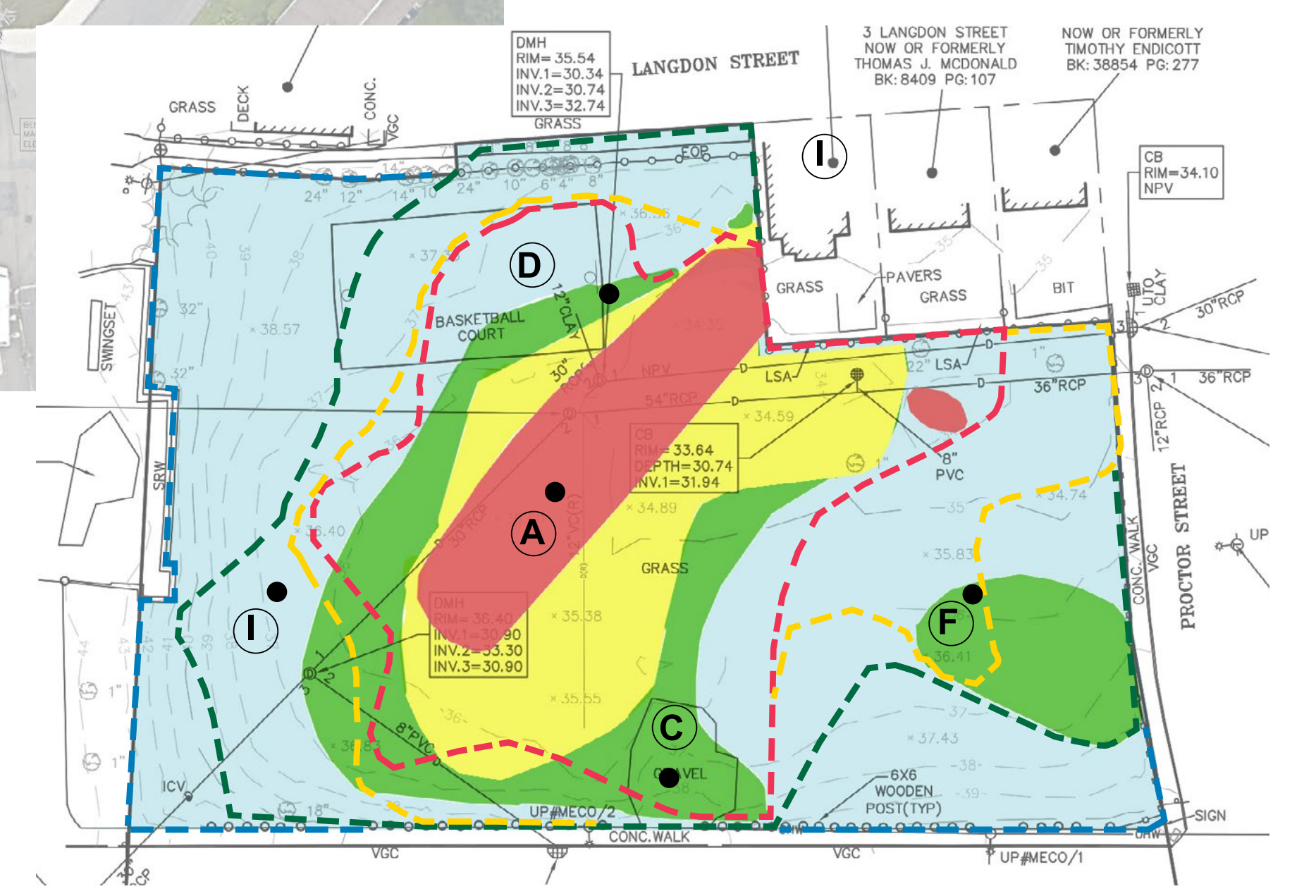
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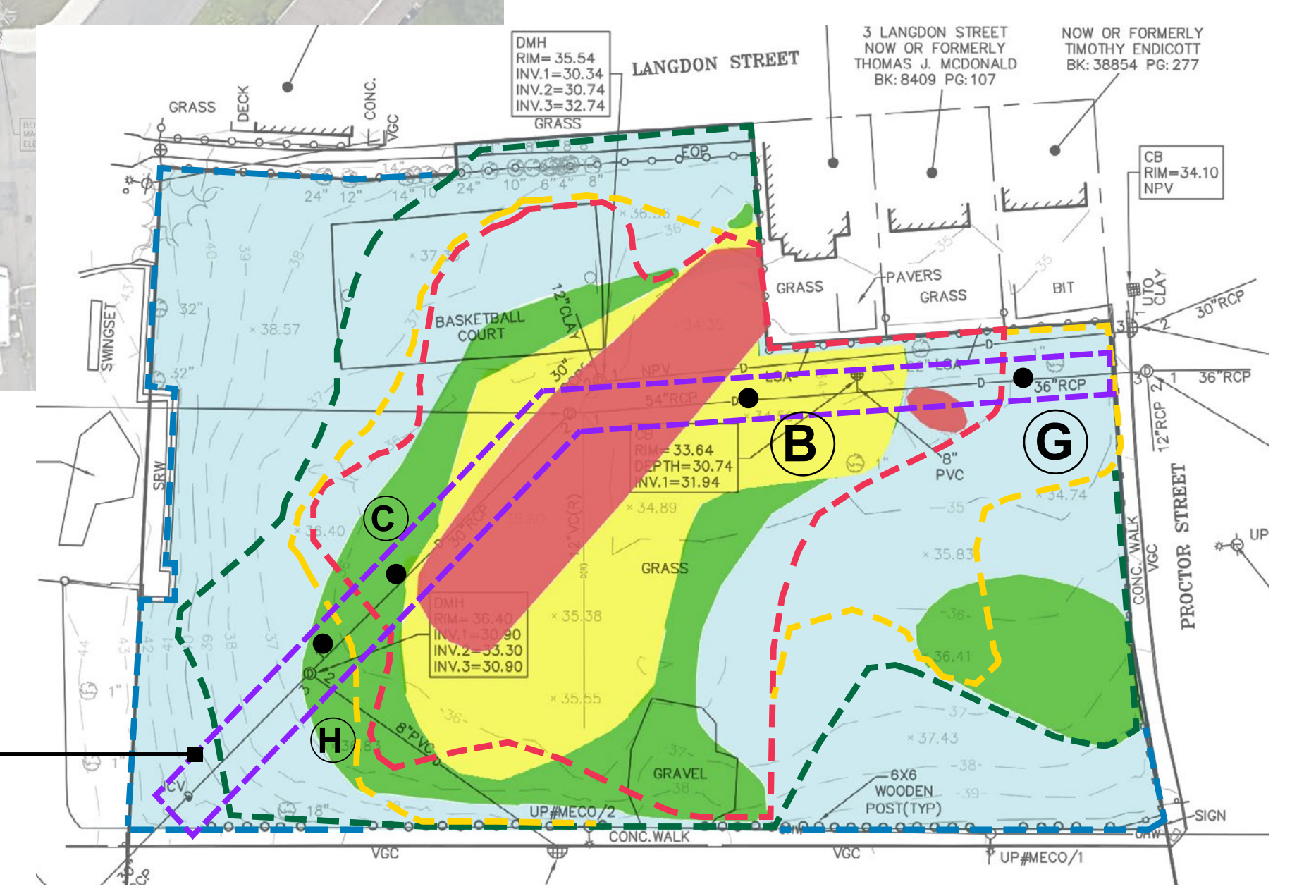
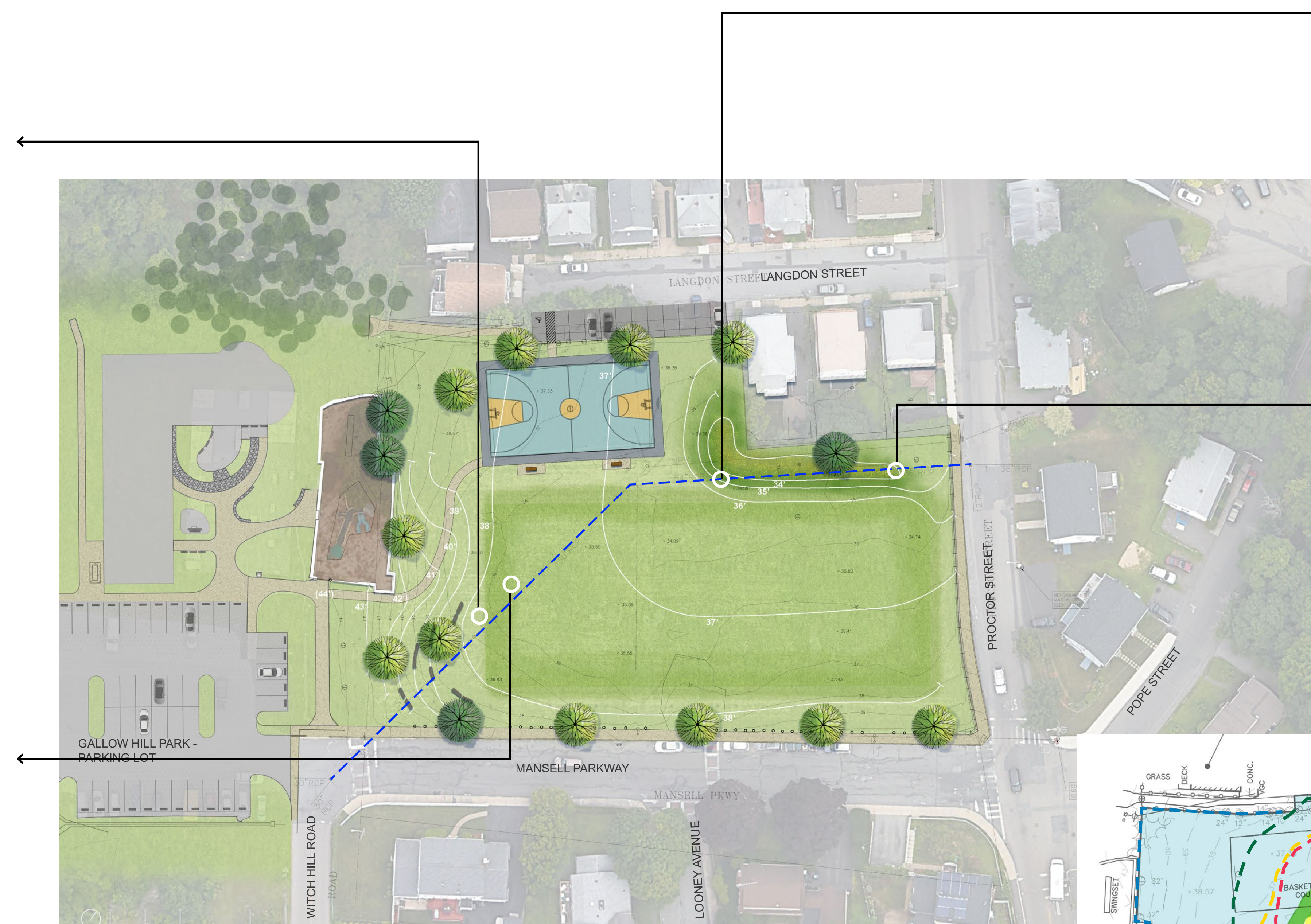
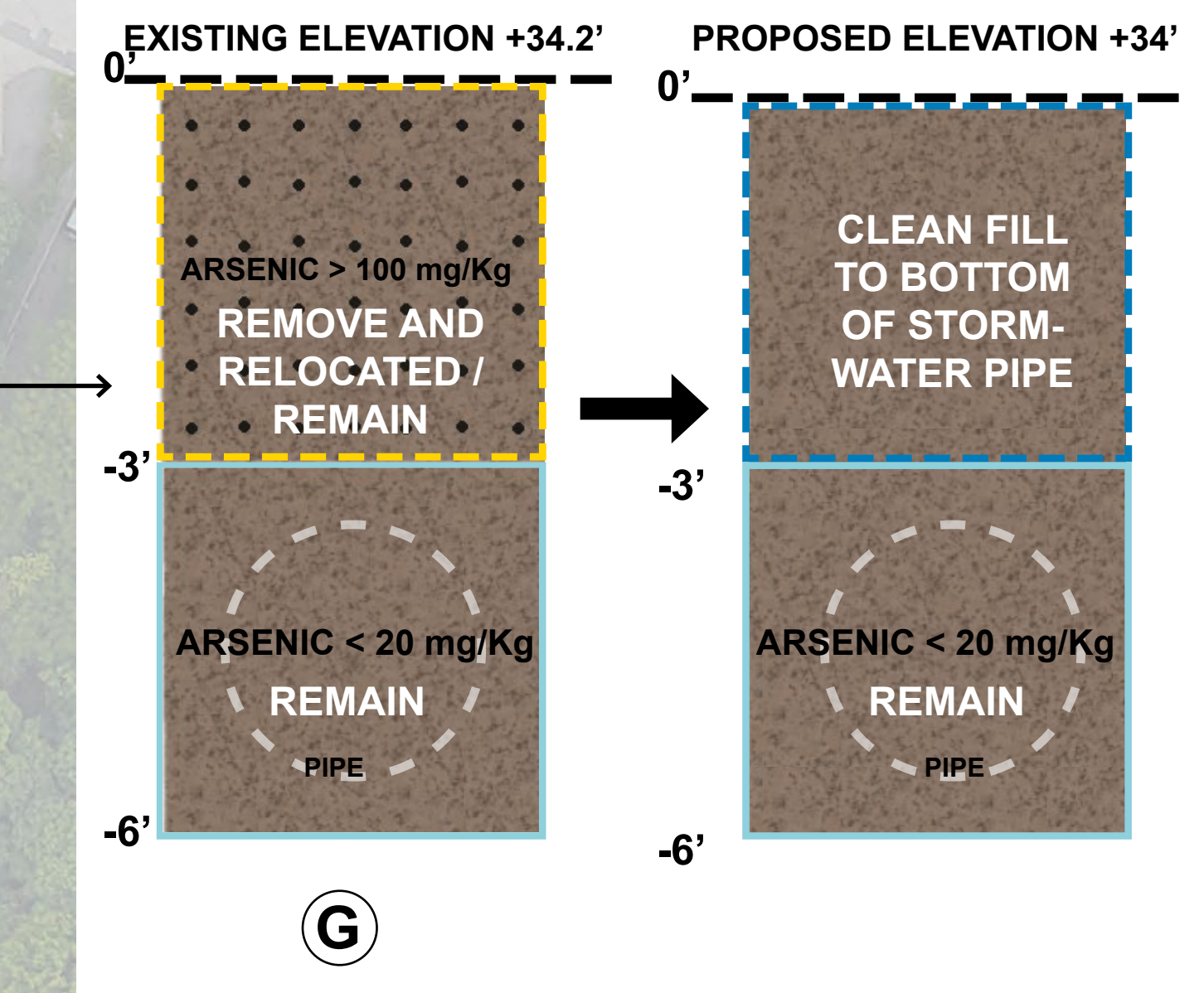
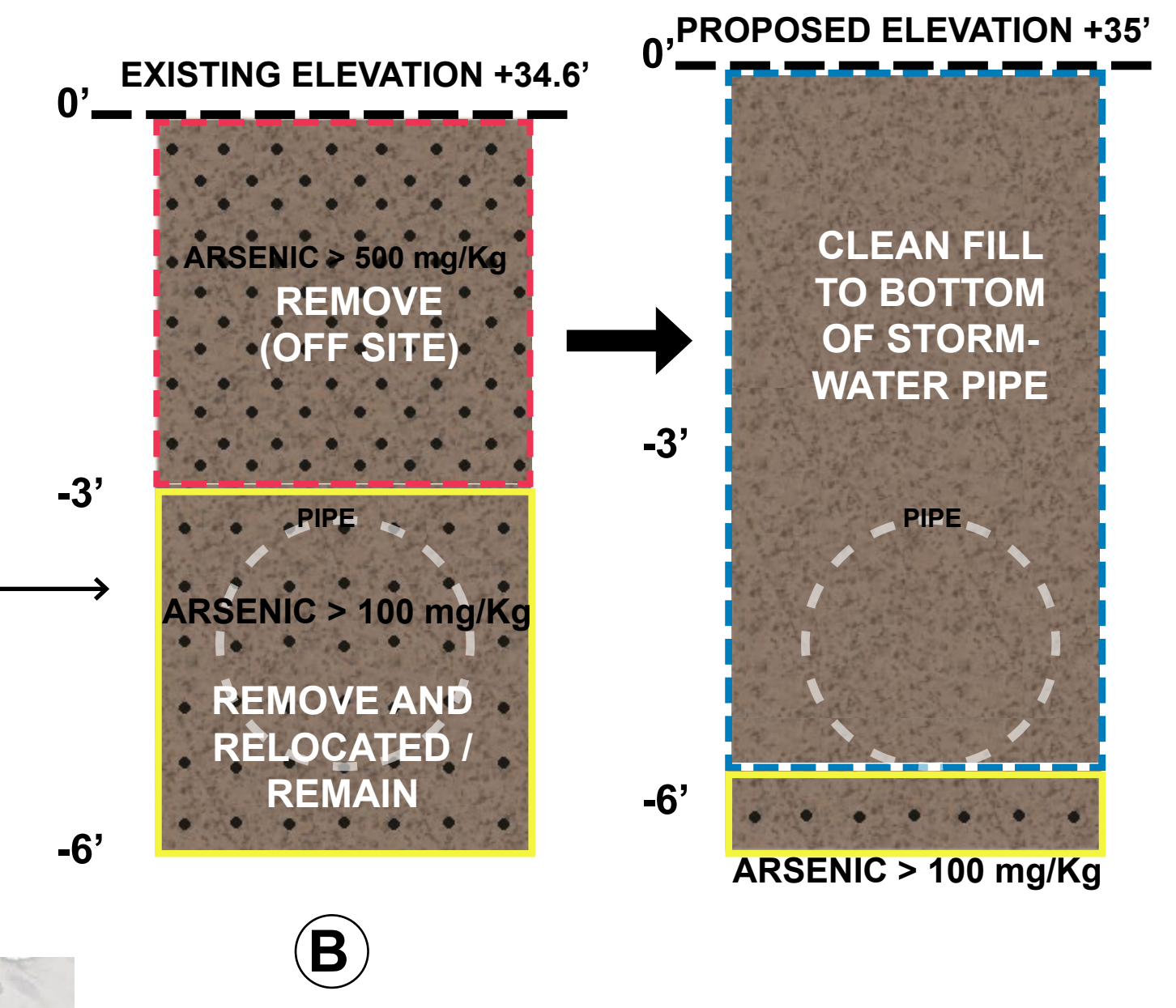
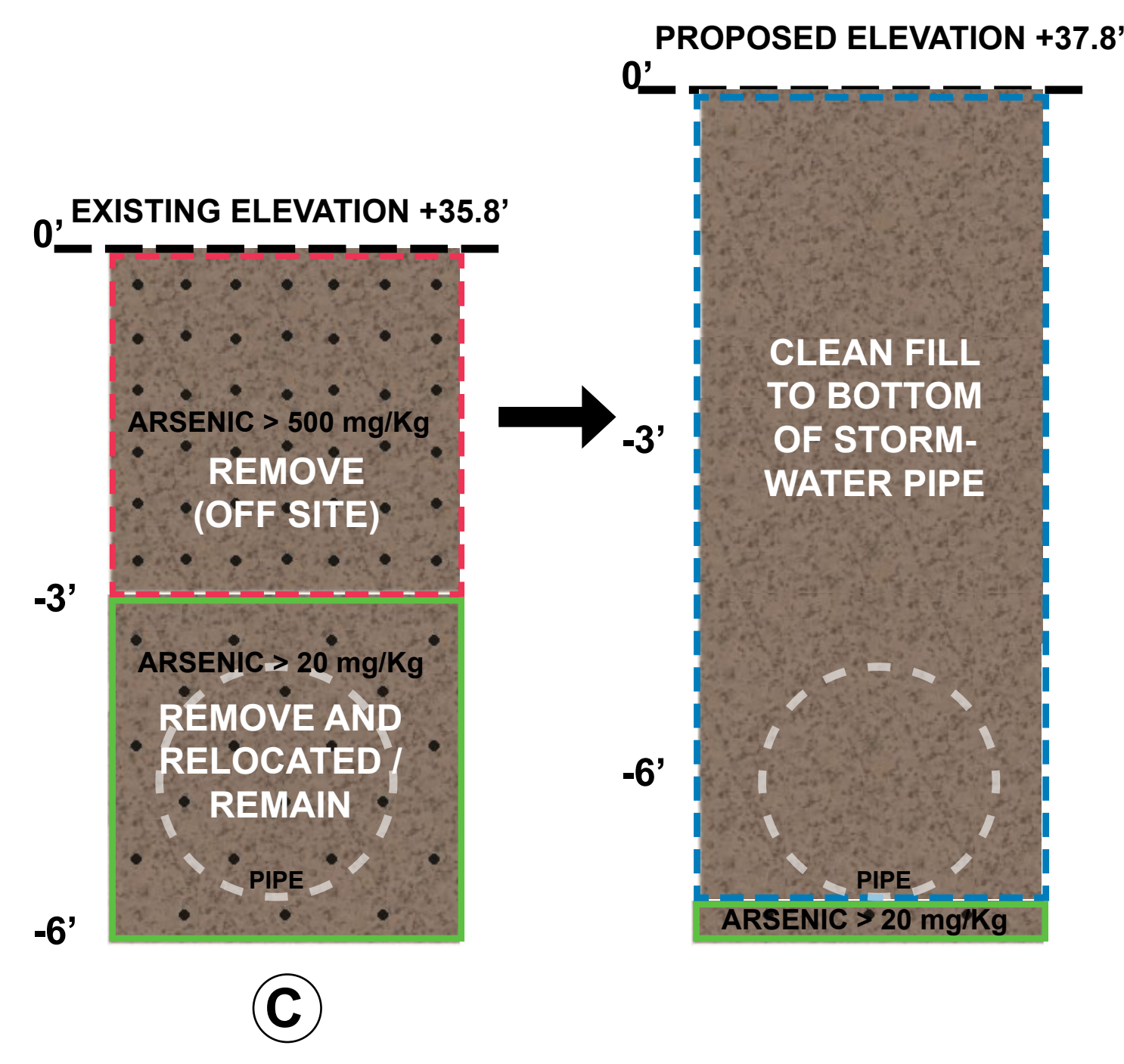
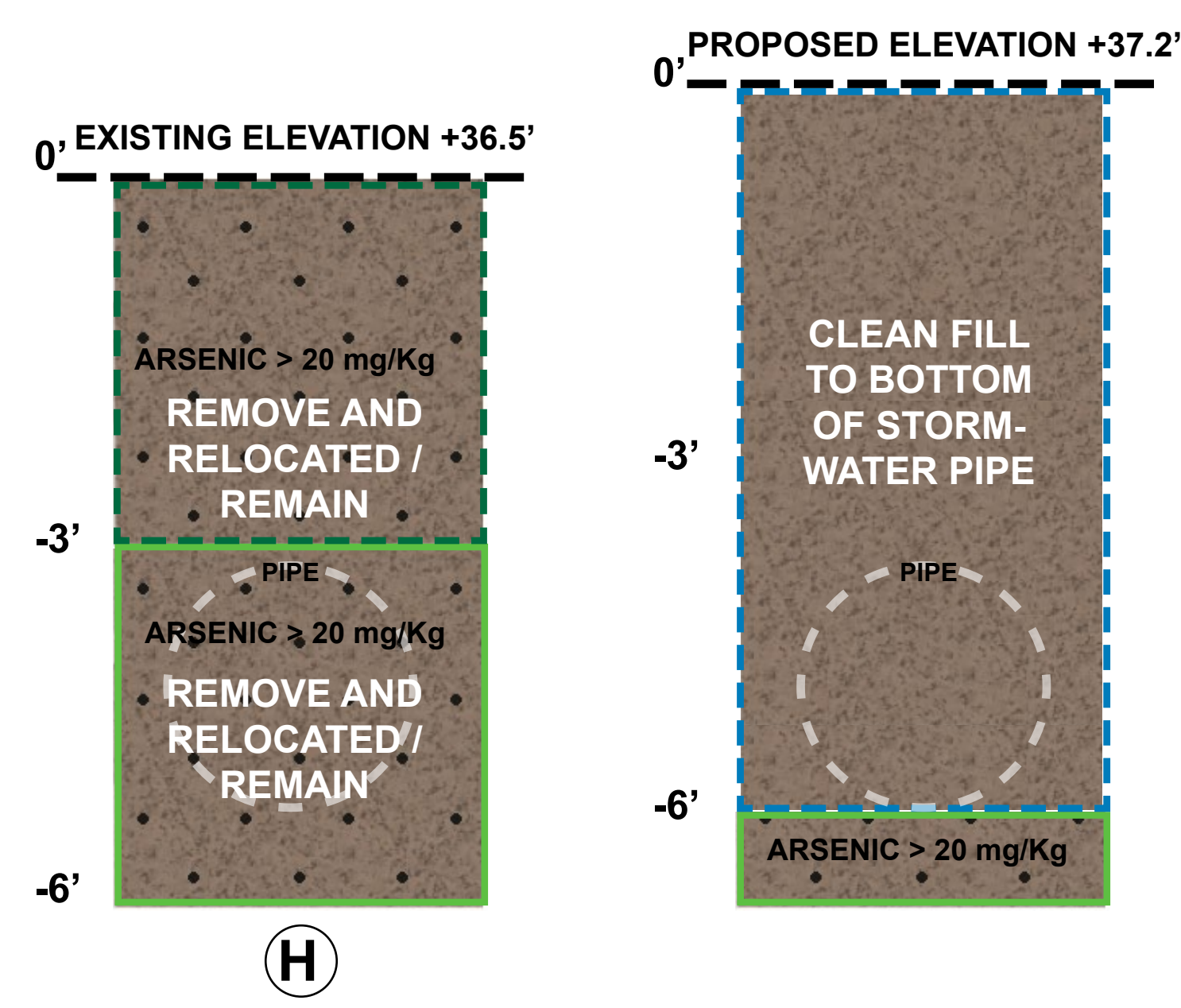


D



F





10' wide corridor along stormwater pipes

QUESTIONS ?

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