

MLK Way Phytoremediation Boulevard

Erynne van Zee | College of Built Environments LARCH 402 Urban Sites Studio | March 2020

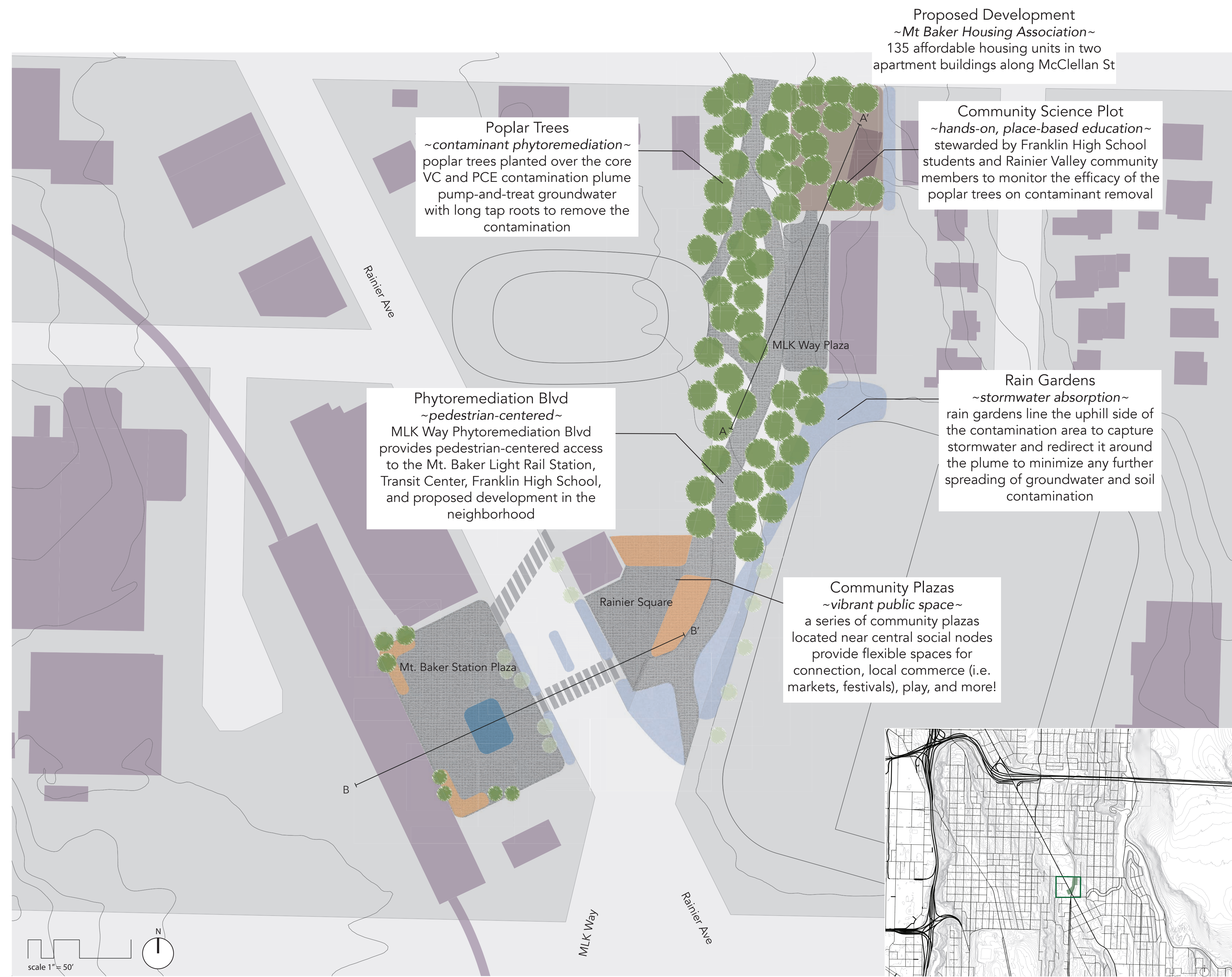
Remediate contaminants **Vinyl Chloride (VC)** and **Tetrachloroethylene (PCE)** in groundwater and soil

Increase **stormwater absorption** along the streetscape and phytoremediation area

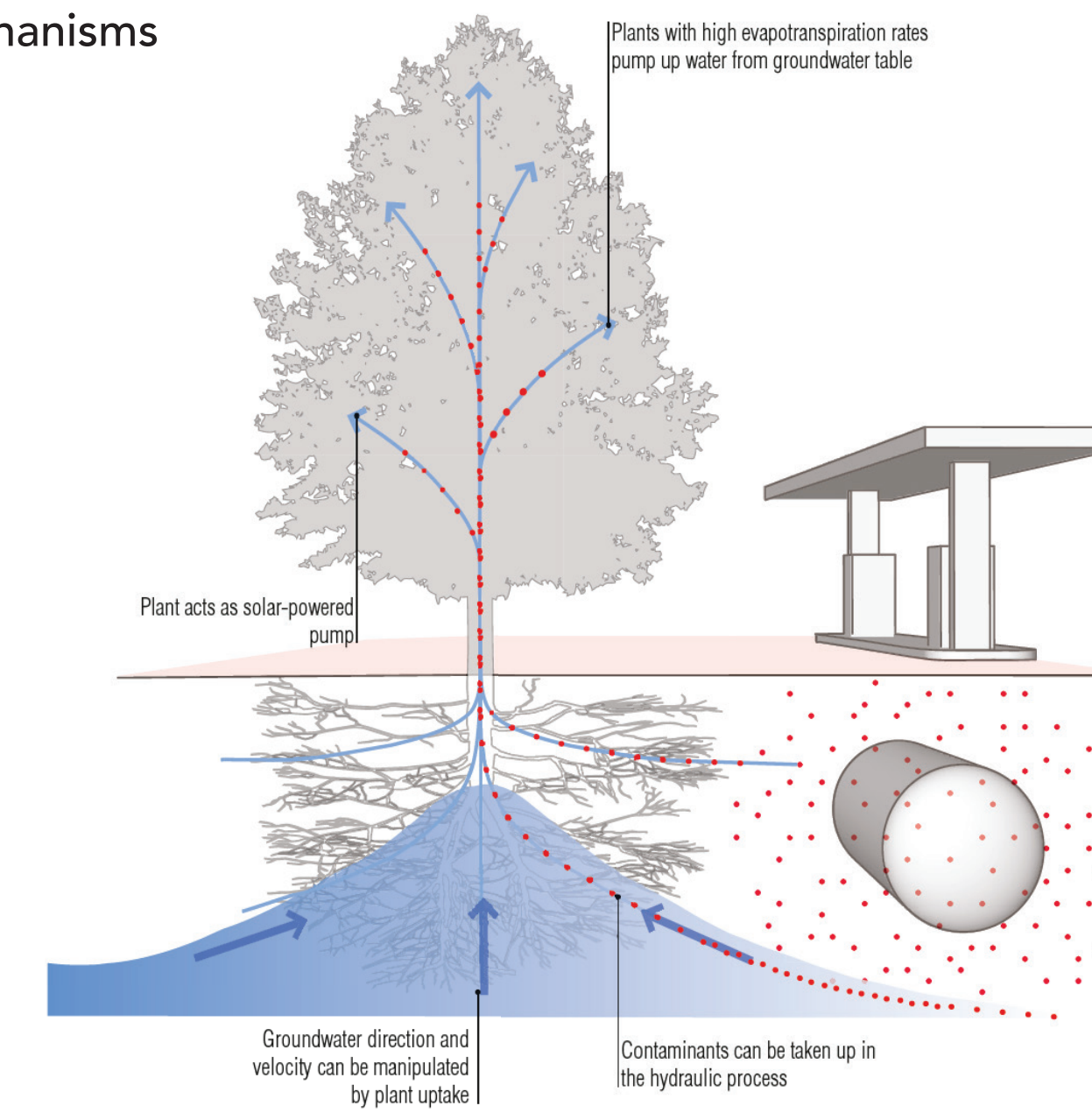
Provide a **pedestrian-centered** experience

Enhance **vibrant public spaces** in Mt. Baker and Rainier Valley that foster **community engagement**

Integrate **hands-on and place-based educational opportunities** for all ages

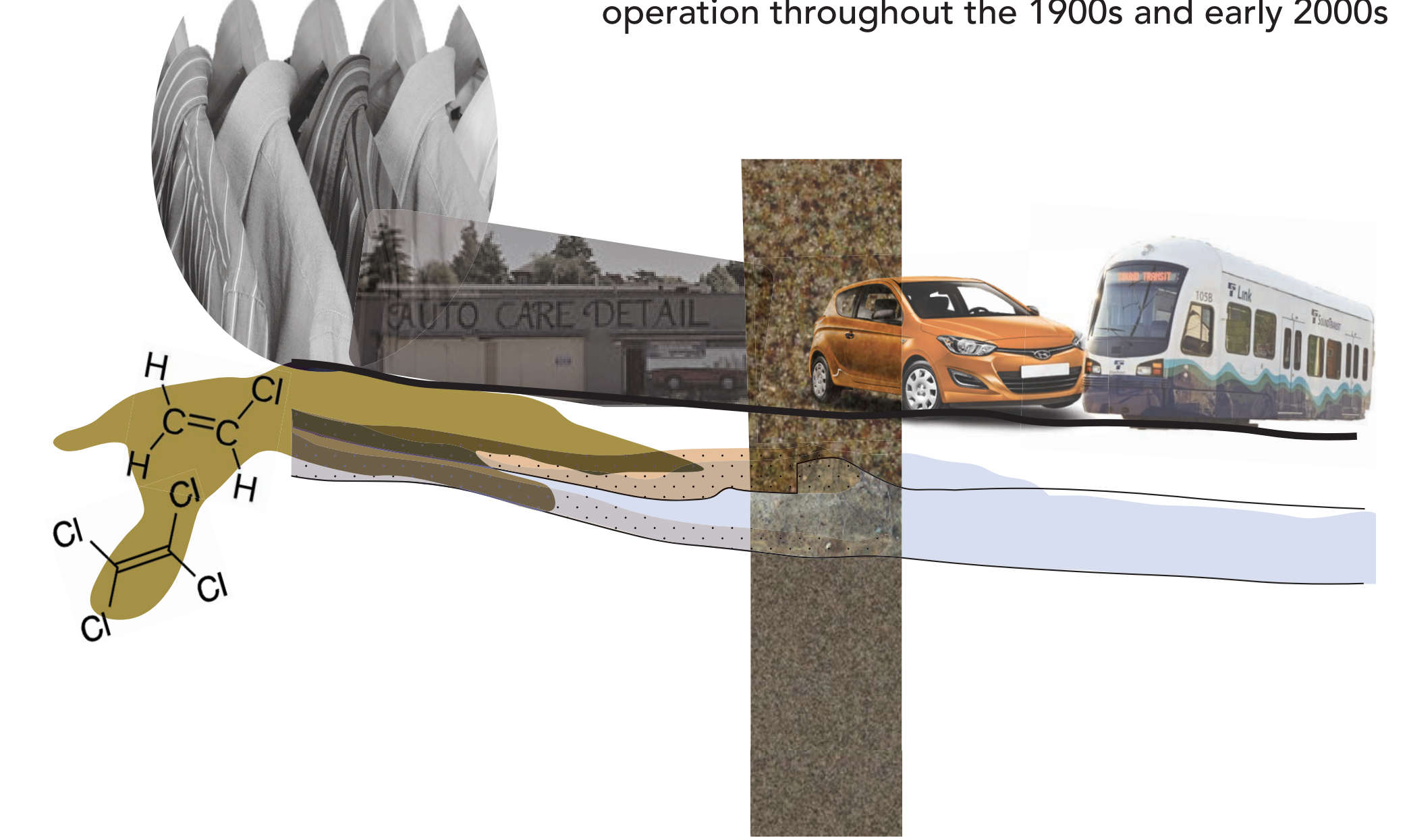


Phytoremediation:
natural pump-and-treat mechanisms

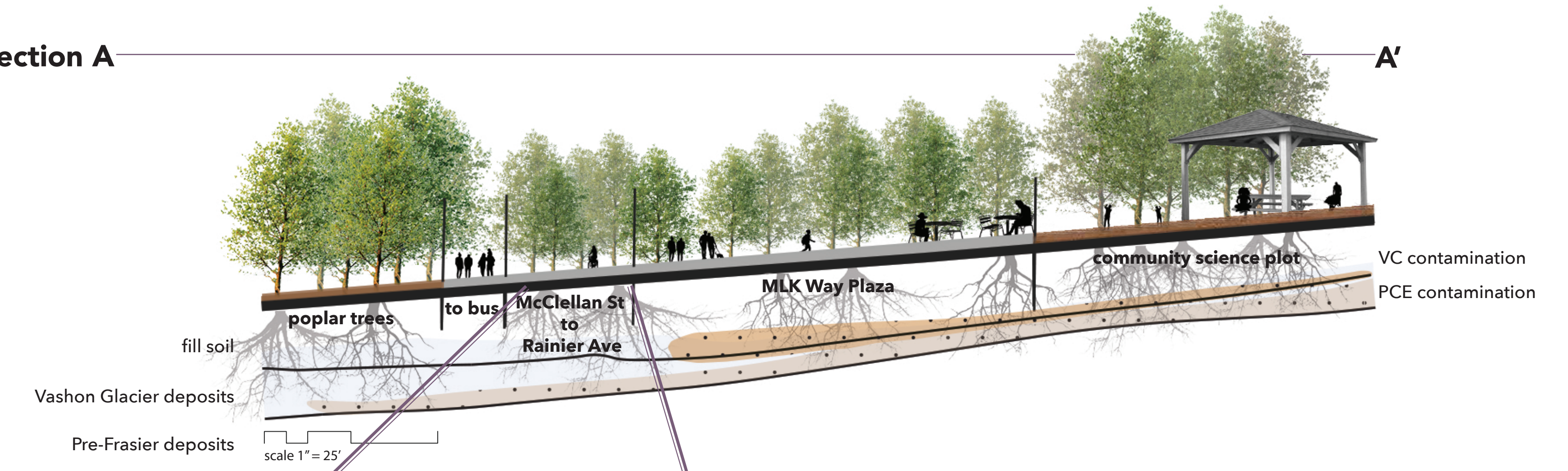


Kennen and Kirkwood (2015). Phytoremediation: Principles and Resources for Site Remediation and Landscape Design. p. 40

Mt. Baker Dry Cleaners and Phillips 66 Auto Care Detail were two sources of PCE and VC contaminants in the soil and groundwater along MLK Way, in operation throughout the 1900s and early 2000s



Section A

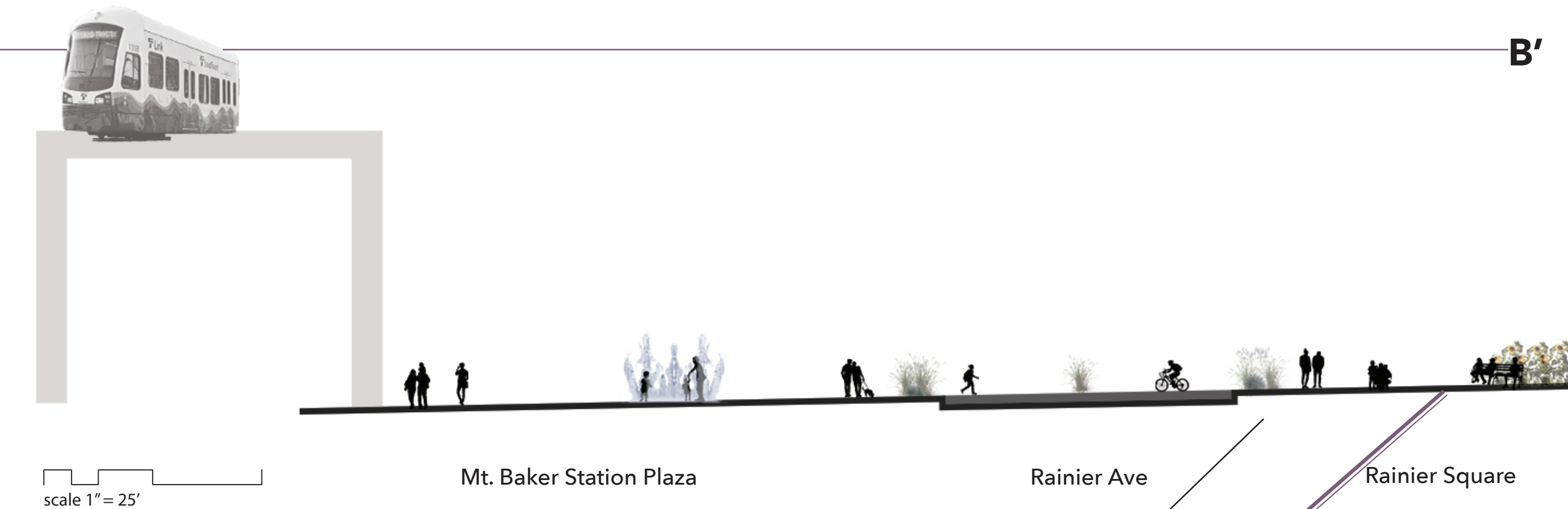


Hybrid poplar trees planted along the core of the VC and PCE plumes remove the contaminants by natural pump-and-treat mechanisms

Pedestrian and bike-centered experience along MLK Way for recreation, community interactions, and daily commutes

Vibrant public open space that connects proposed development with the Mt. Baker Light Rail Station

Section B



Rain gardens manage stormwater runoff from Rainier Ave

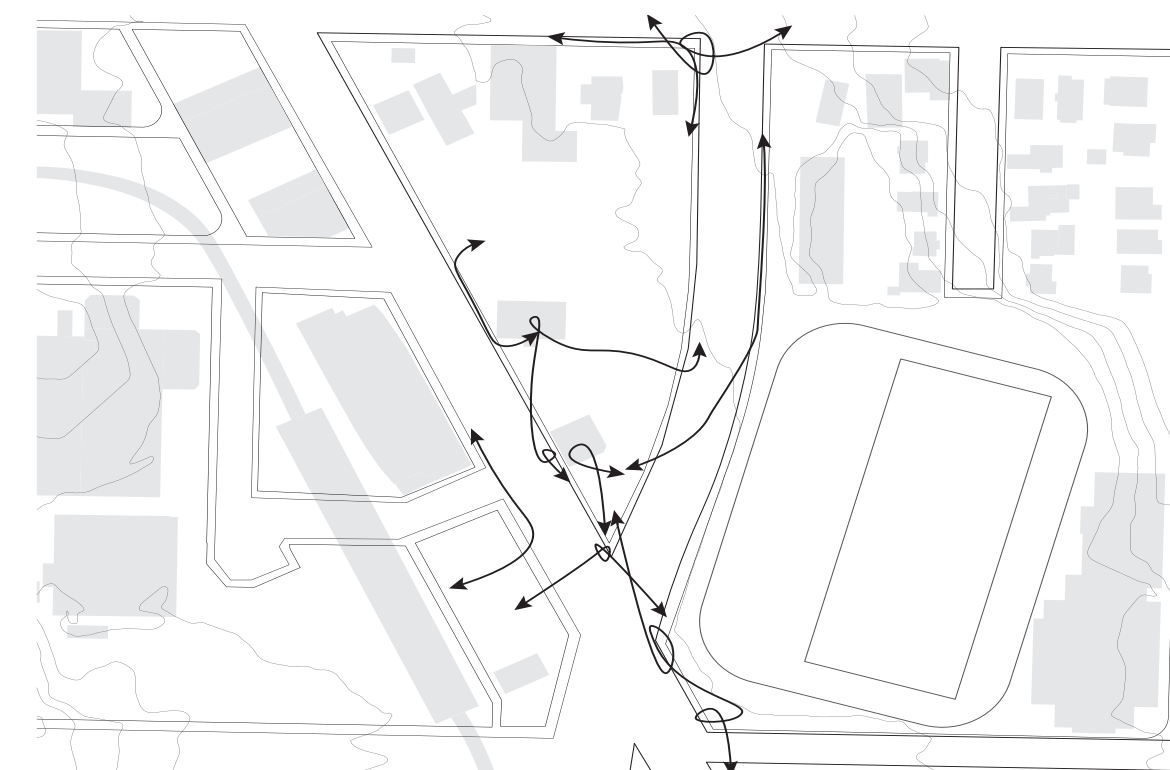
Sunflowers remediate the SW edge of the PCE plume

Central community space for interacting with neighbors



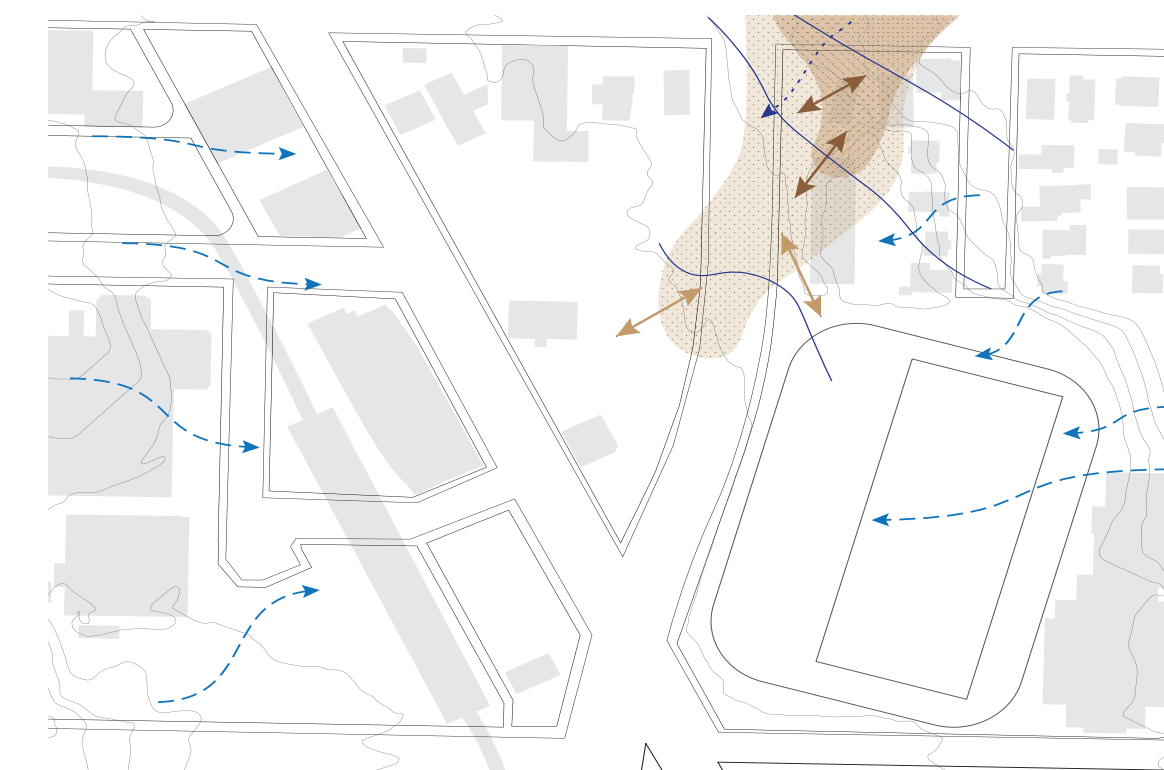
Pedestrian Flow

difficult crossings
traffic-centric



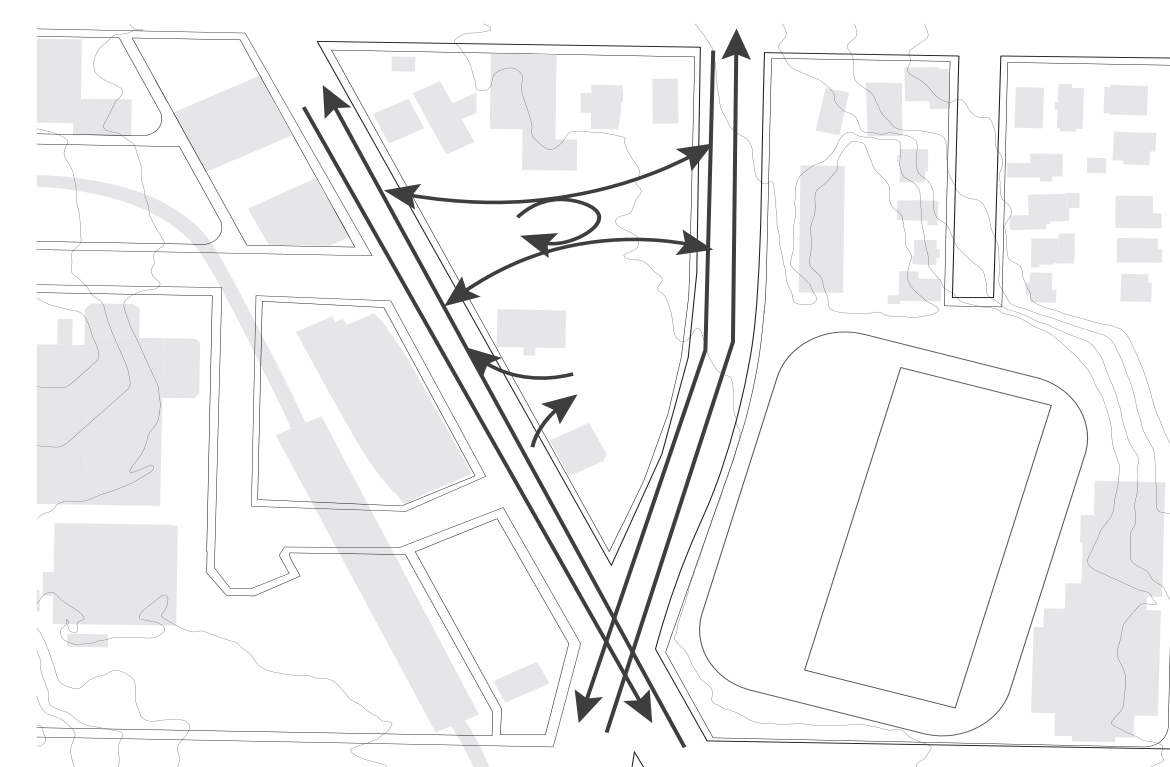
Groundwater & Surfacewater Flow

stormwater pooling along Rainier Ave & MLK Way
groundwater flows SSW
VC & PCE contamination



Traffic Flow

5 lanes
two-way
dominant flow



Constraint Areas

groundwater contamination crossing Rainier Ave and MLK Way
pedestrian experience

