

SCHEMATIC DESIGN for Woodbine Avenue Transect



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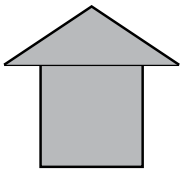
4.214 Water Landscape and Urban Design, Fall 2010

Housing Typologies

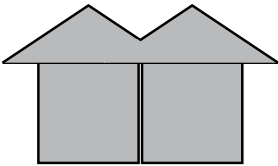
Lower density

Higher density

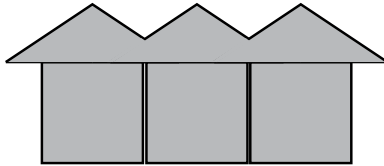
Single family



Duplex



Row house



Characteristics

- Yard space
- Low parking demand
- Peaked roofs
- Existing trees

- Limited yard space
- On street / alley parking
- Flat roofs (false fronts)
- Many existing trees

- Very little yard space
- On street / alley parking
- Flat roofs (false fronts)
- Few trees

Interventions

- Bioswales
- Bump outs
- Rain barrels
- Plantings
- Terracing

- Bioswales
- Bump outs
- Green roofs
- Rain barrels
- Planter boxes
- Terracing

- Tree trenches
- Green roofs
- Rain barrels
- Planter boxes

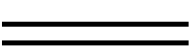
Streetscape Typologies

Upstream

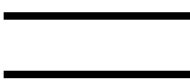
Downstream



Alley



Street



Basin



Characteristics

- Partial to full paving
- Extensive parking
- Semi-public space
- Few if any trees

- Paved
- Parking demand varies
- Public space
- Number of trees varies

- Much pavement
- Surplus sidewalk space
- Public space
- No trees

Interventions

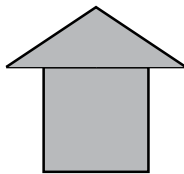
- Green roofs
- Rain barrels
- Trench drains
- Filter strips
- Ritter strips
- Porous surfacing

- Bioswales
- Bump outs
- Pavement treatments
- Planter boxes
- Terracing

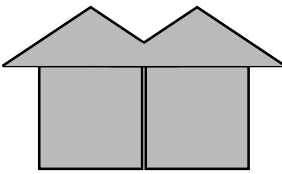
- Permeable crosswalks
- Rain gardens
- Tree trenches
- Bump outs

Matrix of Typologies

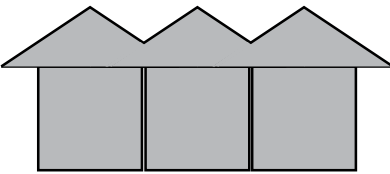
Housing



single family



duplex



row house

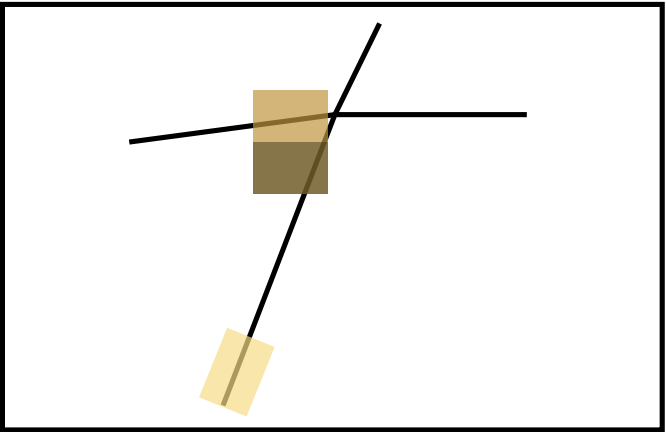
Streetscape

== alley

== street

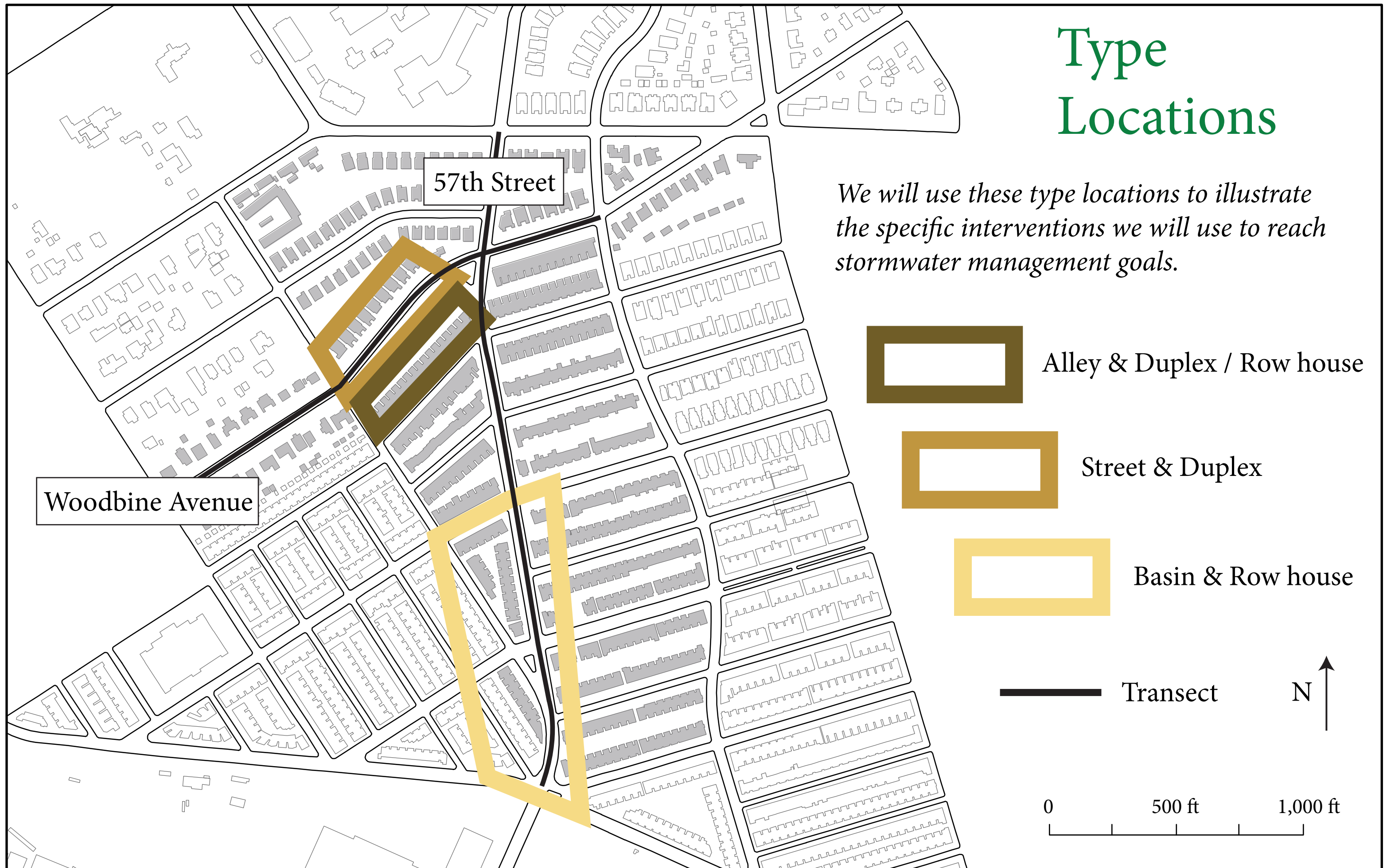
⌒ basin

Site map



Type Locations

We will use these type locations to illustrate the specific interventions we will use to reach stormwater management goals.



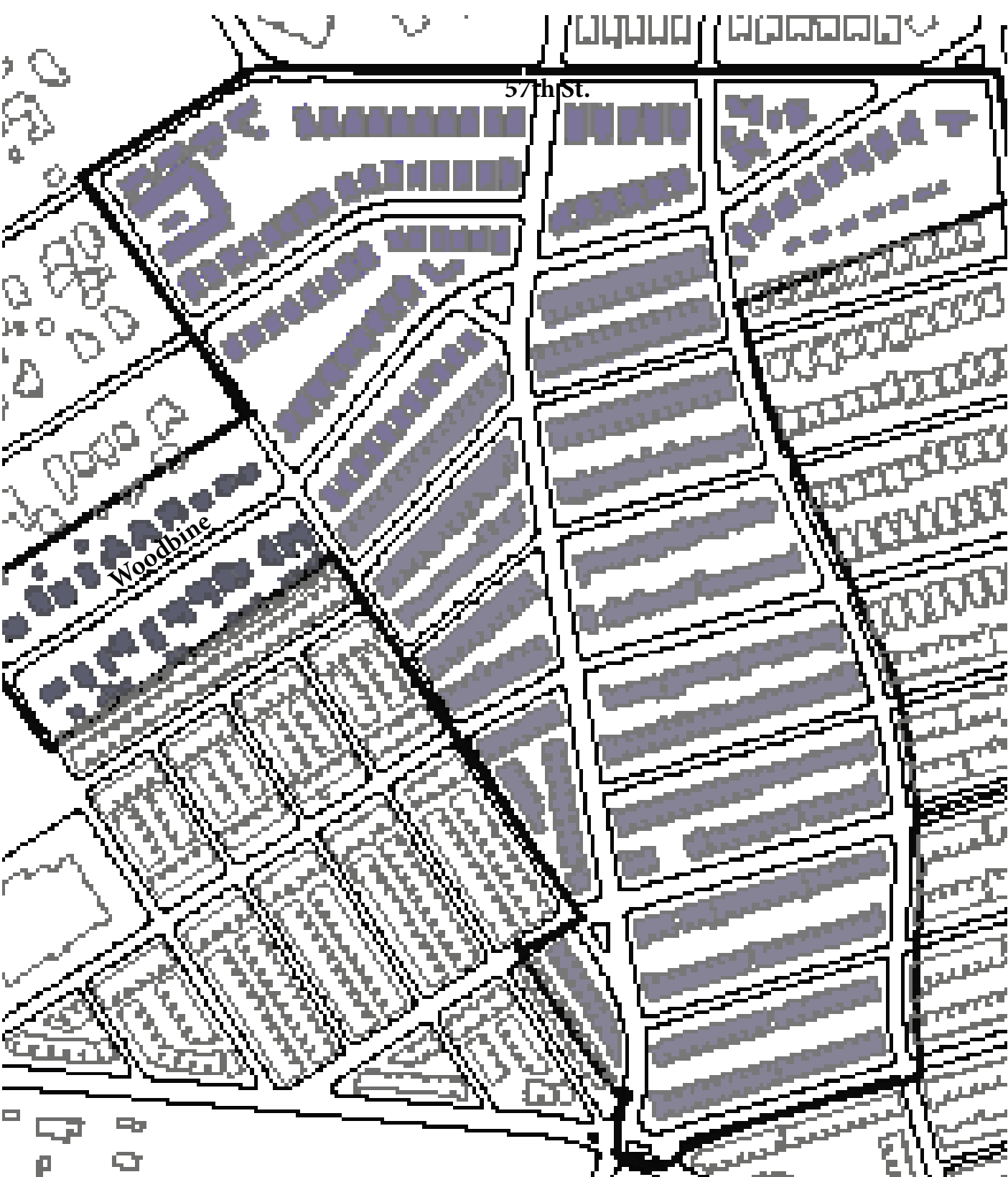
Street Typology



- Streets
- Alleys
- Basin

As observed on Saturday morning between 10 and 12 am, 16 October 2010

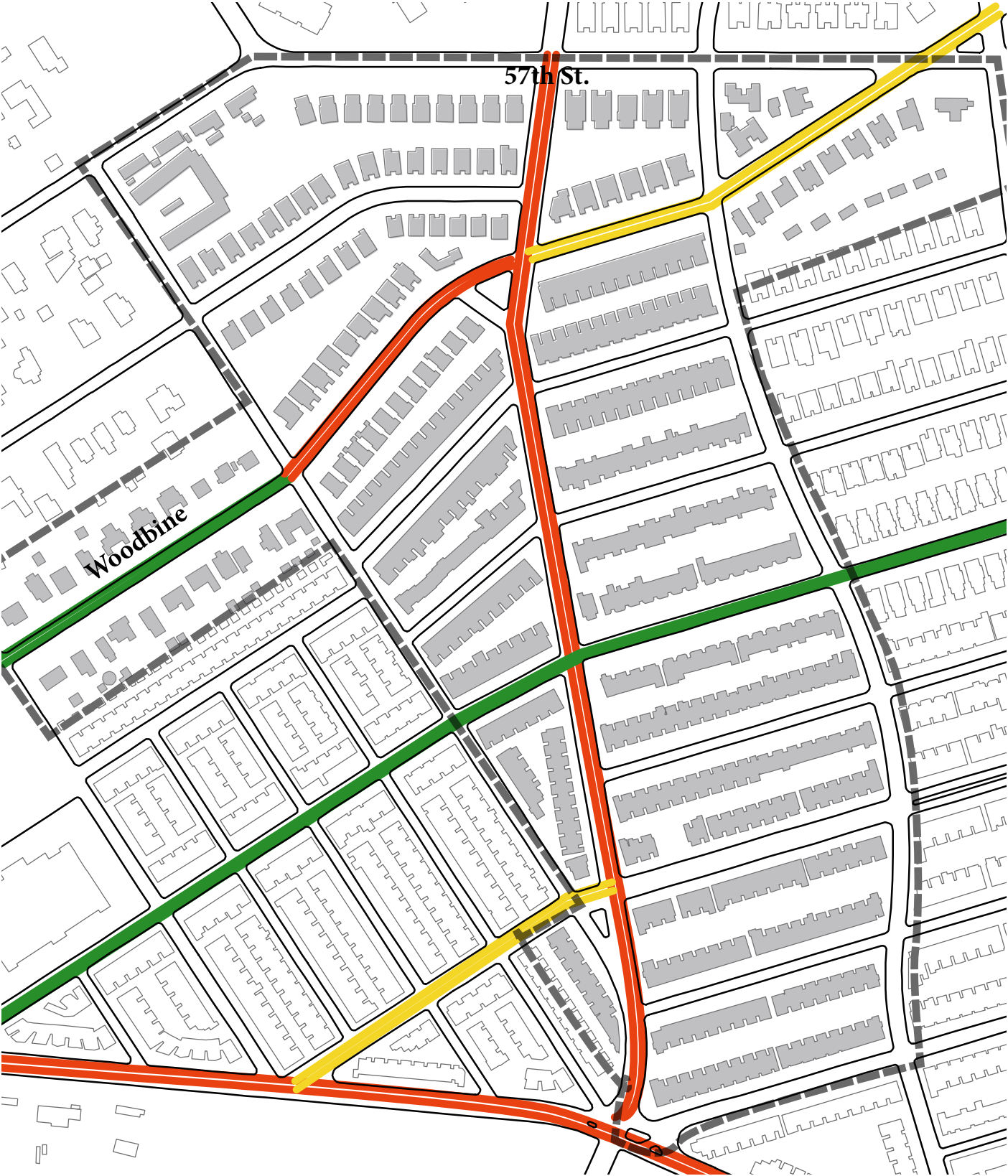
Housing Typology



- Single Family
- Twin Home
- Row Home

As observed on Saturday morning between 10 and 12 am, 16 October 2010

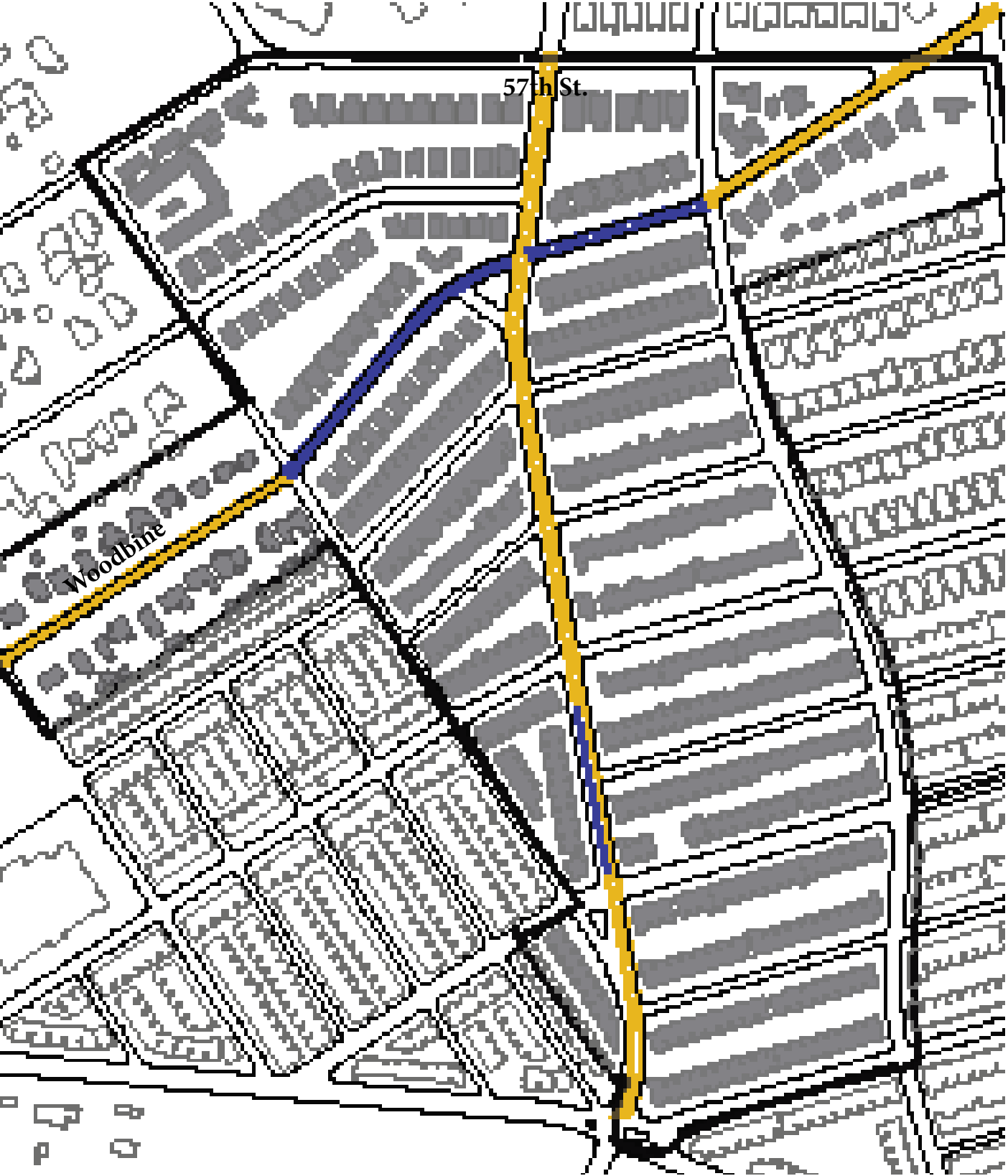
Through Traffic



- High
- Medium
- Low

As observed on Saturday morning between 10 and 12 am, 16 October 2010

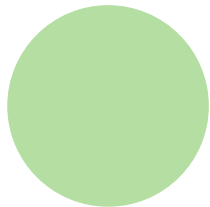
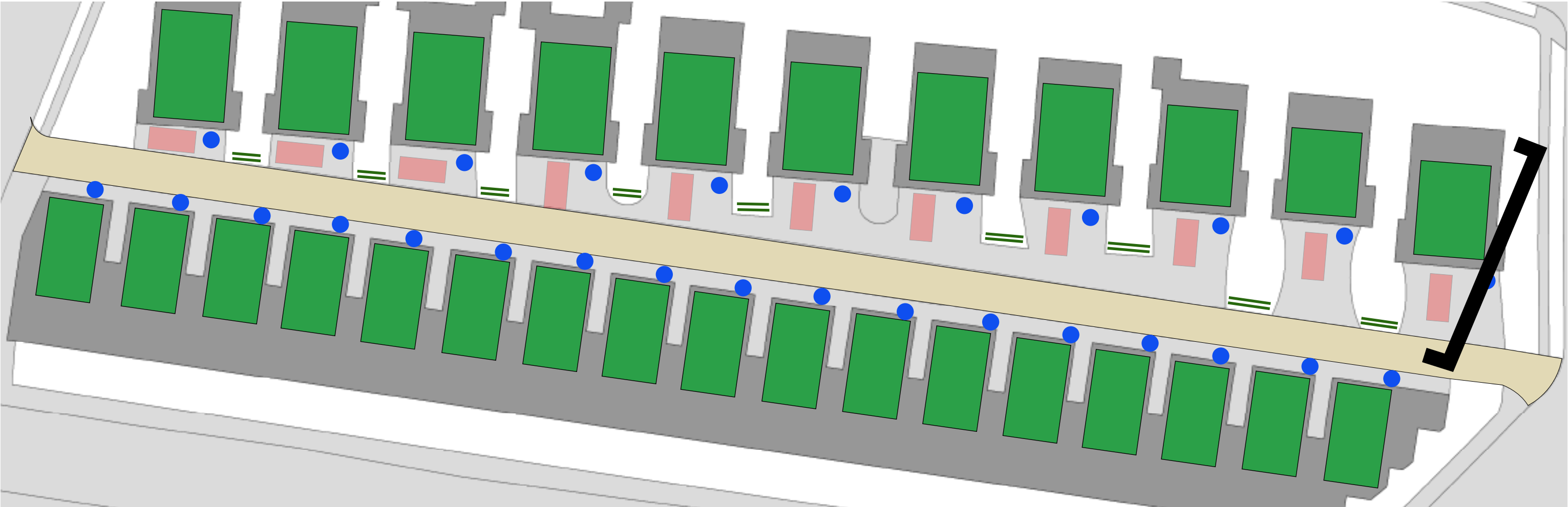
Parking Demand



- High
- Low

As observed on Saturday morning between 10 and 12 am, 16 October 2010

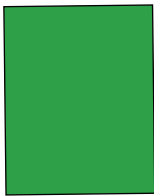
Alley Strategy: Woodbine & Woodcrest



Existing tree



Parked car



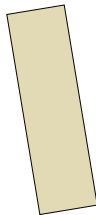
Green roof



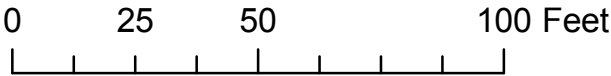
Rain barrel



Filter strip

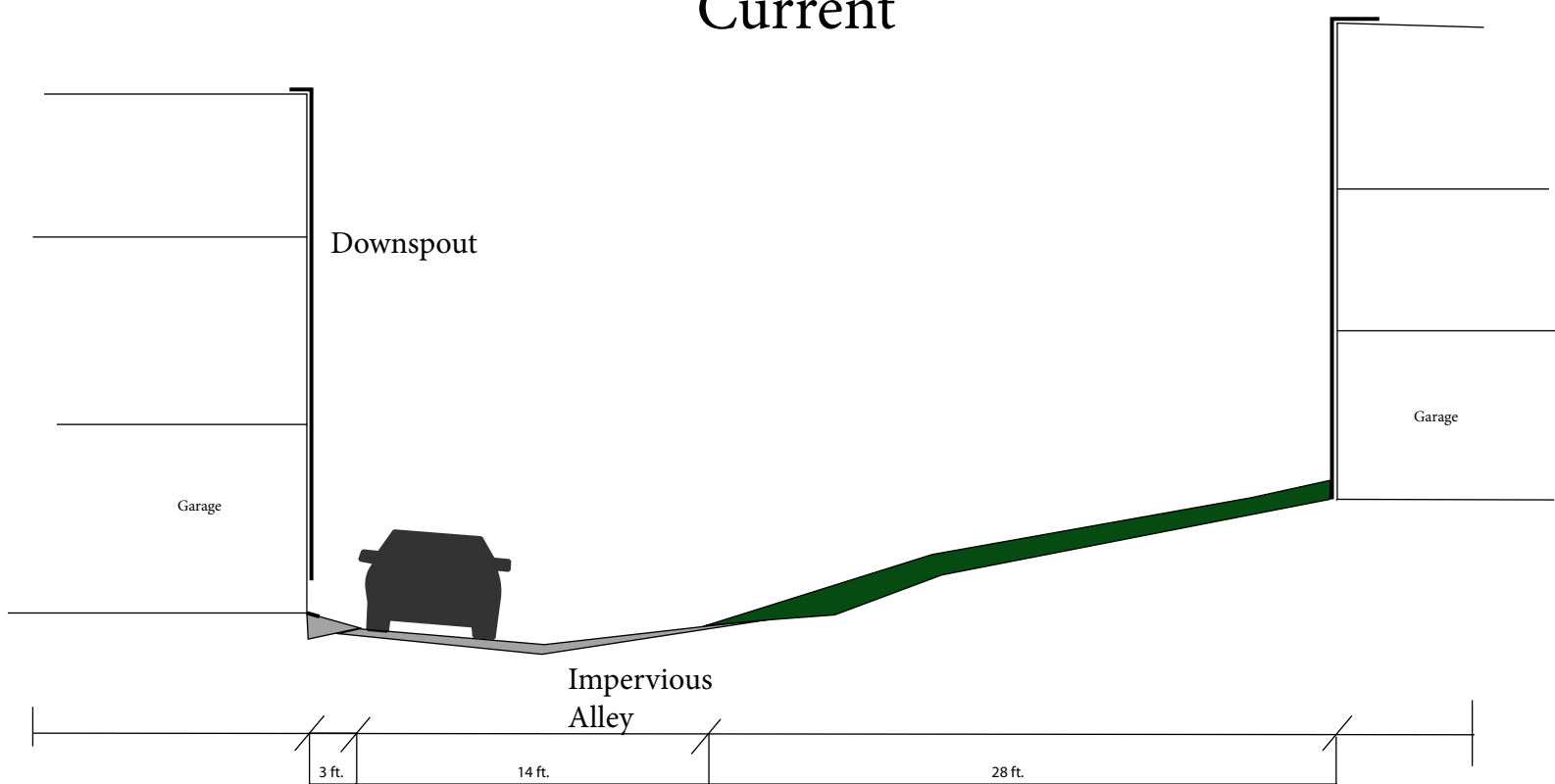


Gravel paving

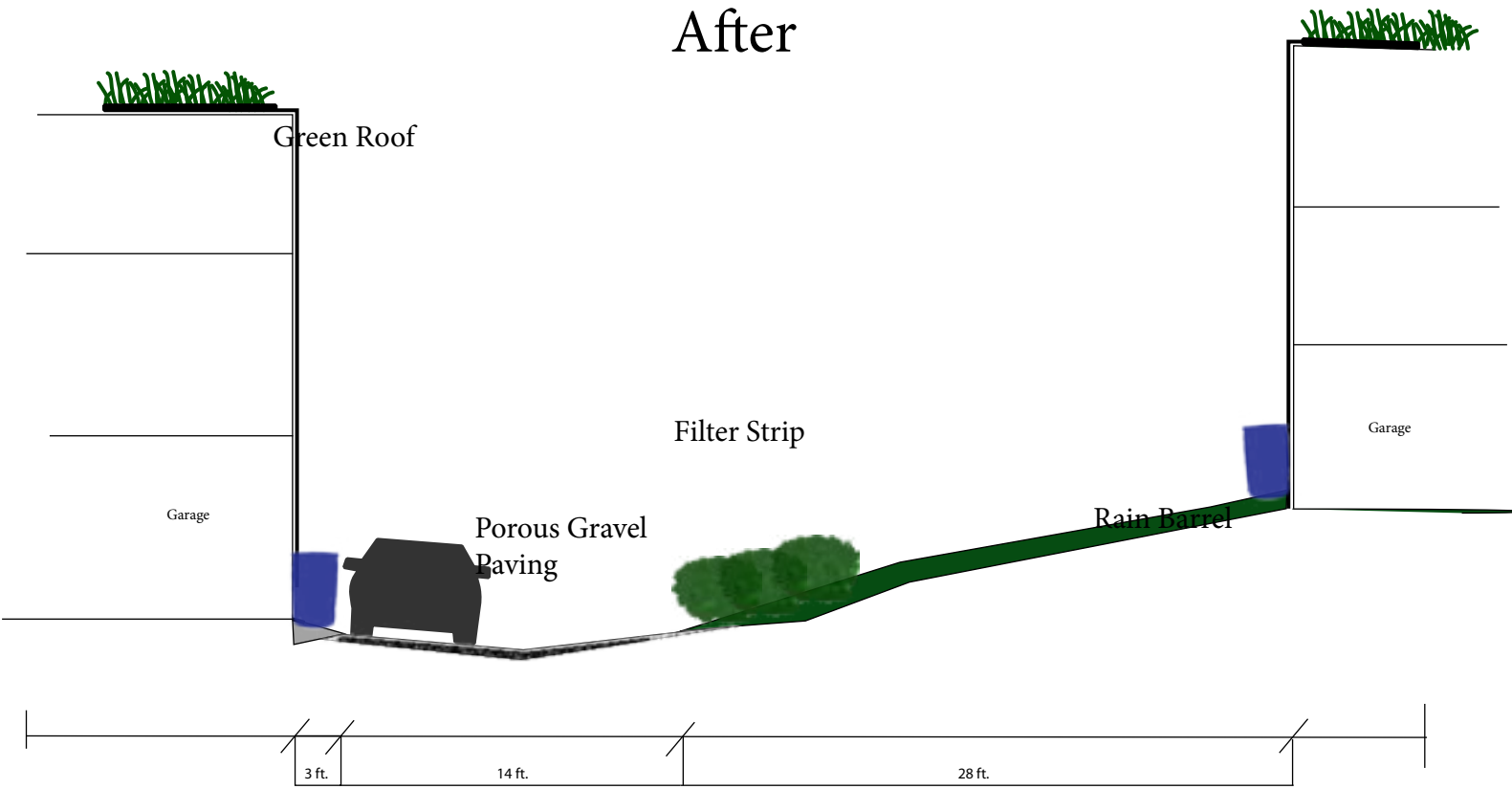


Alley Strategy: Woodbine & Woodcrest

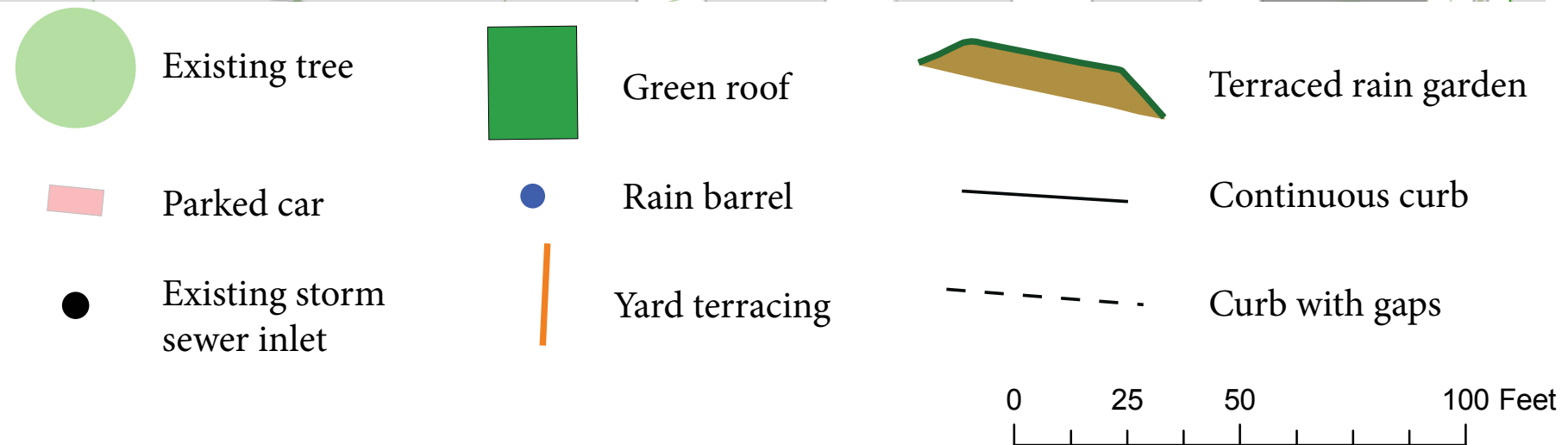
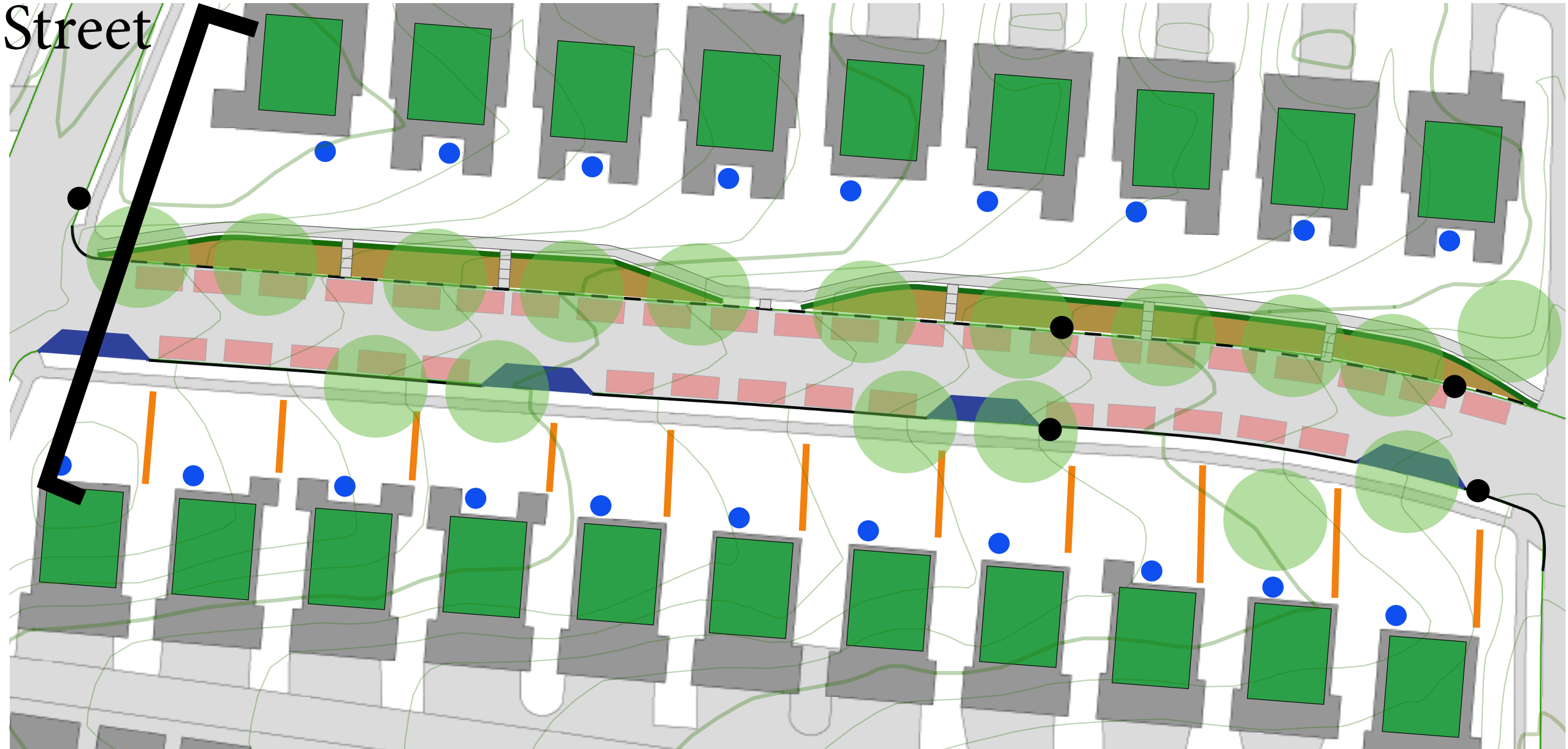
Current



After

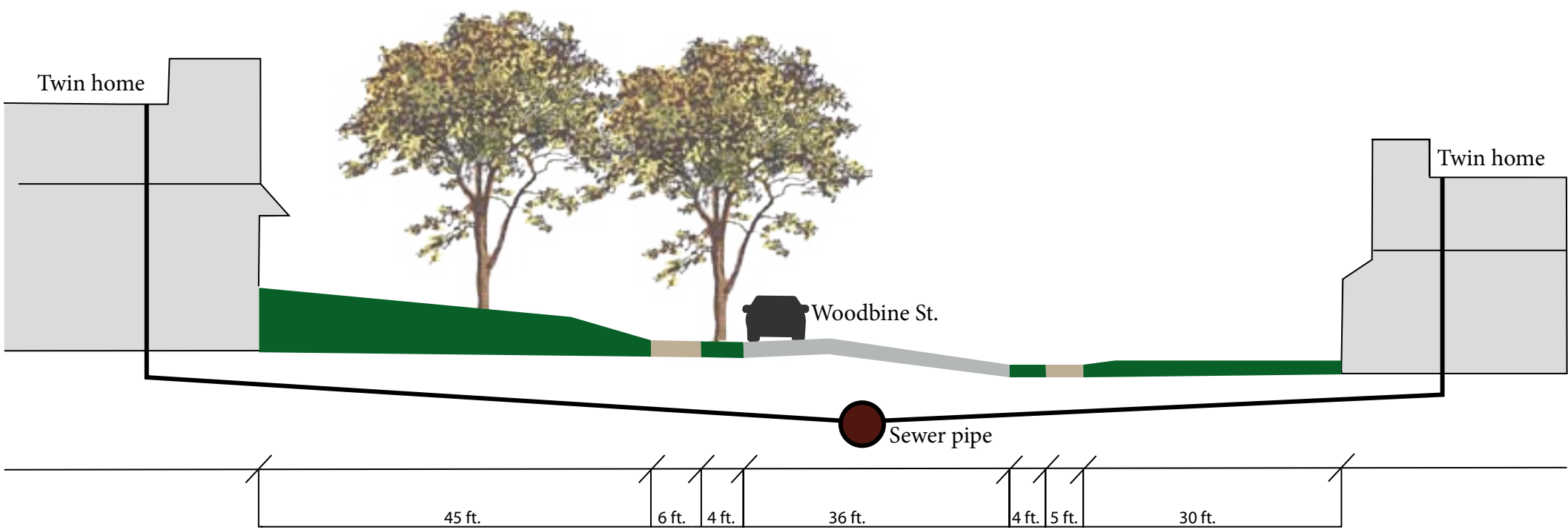


Woodbine from 58th Street

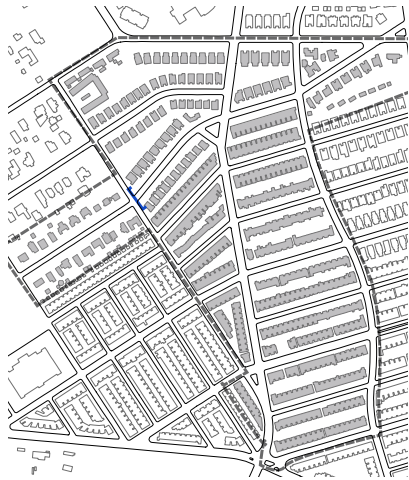
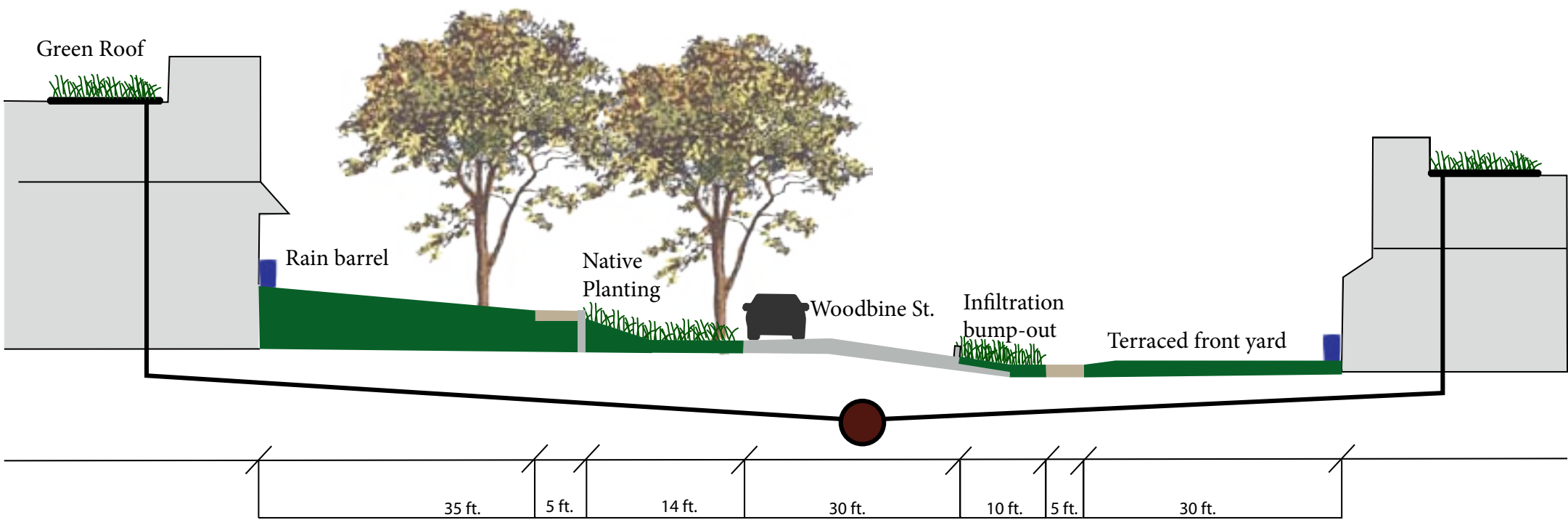


Woodbine from 58th Street

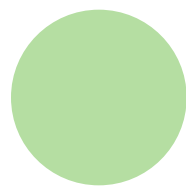
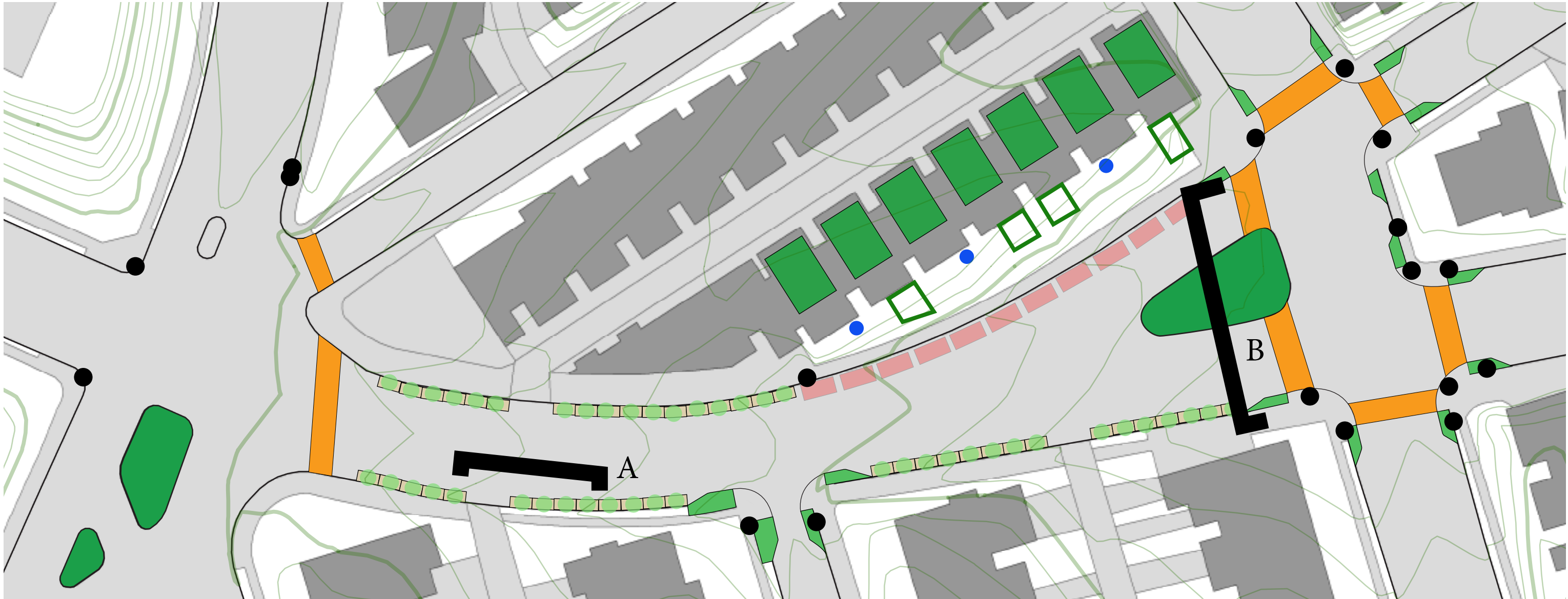
Current



After



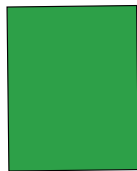
Basin Plan



Existing tree



Parked car



Green roof



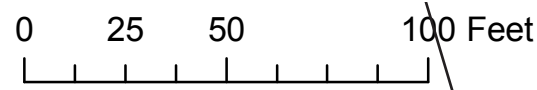
Rain barrel



Filter strip

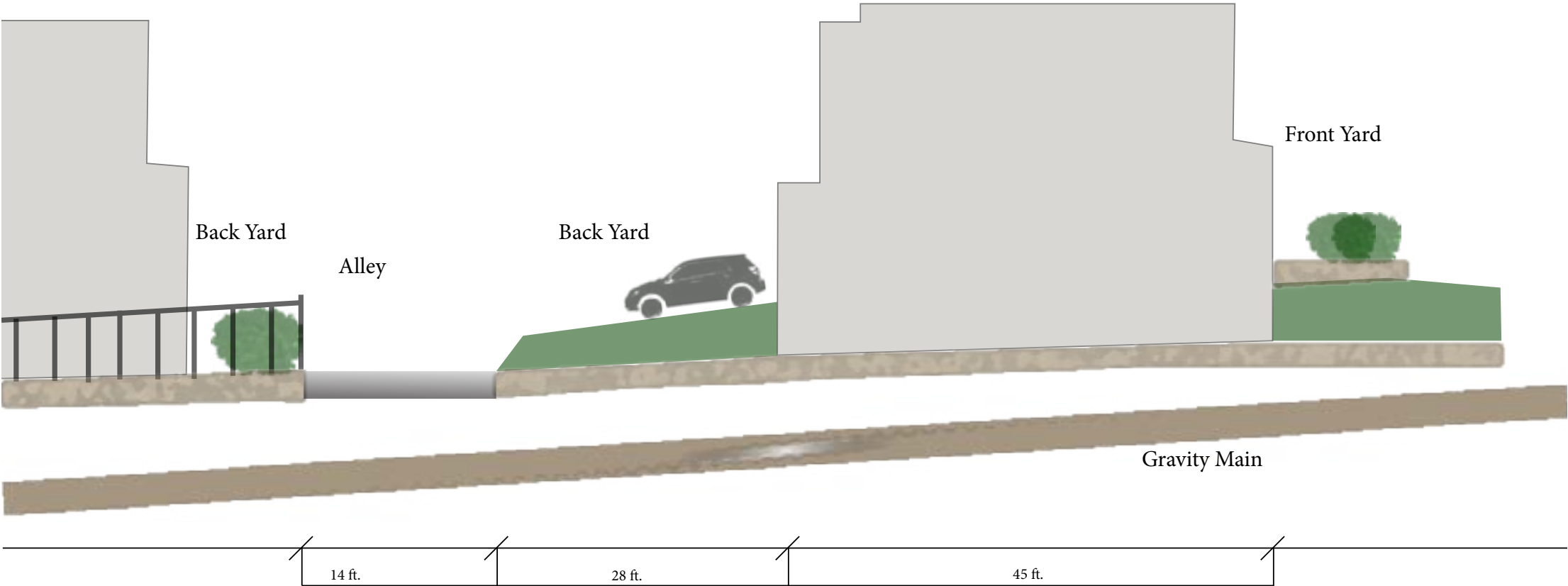


Gravel paving

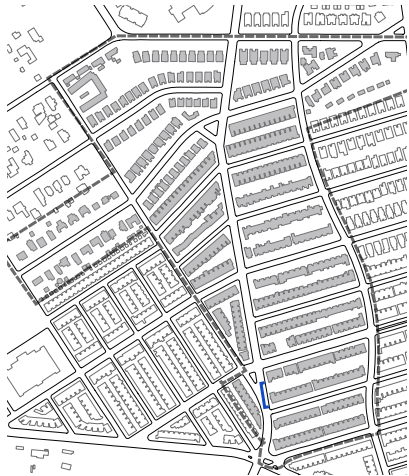


57th Street Between Lebanon & Arlington (A)

Current

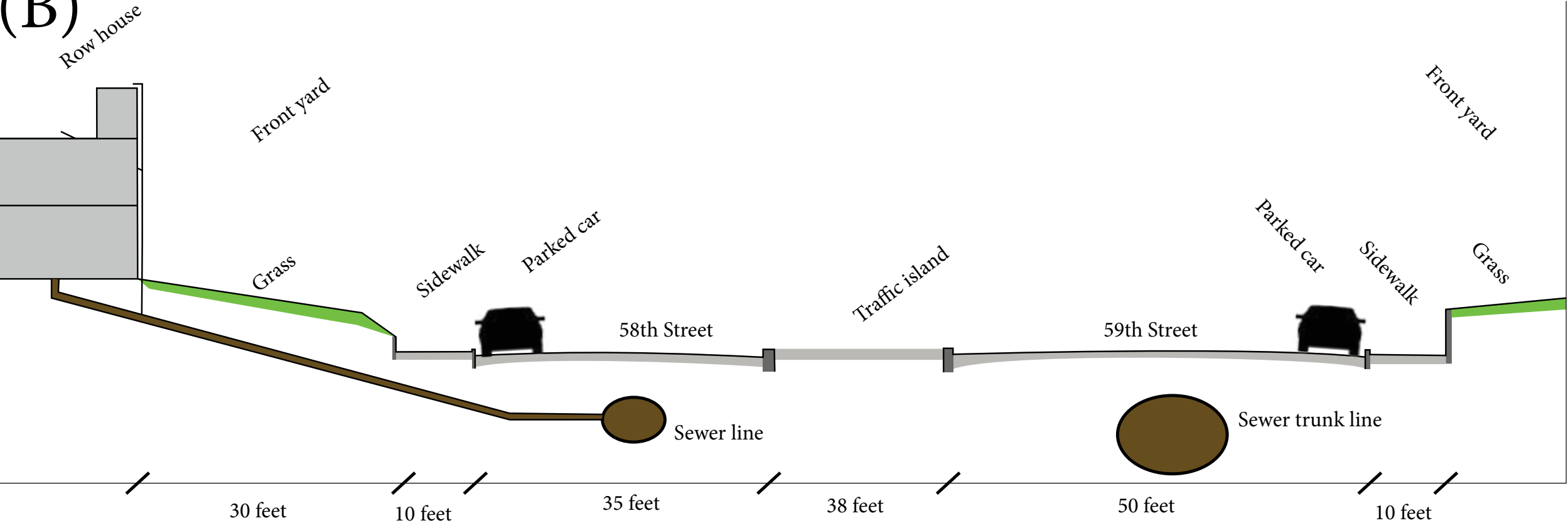


After

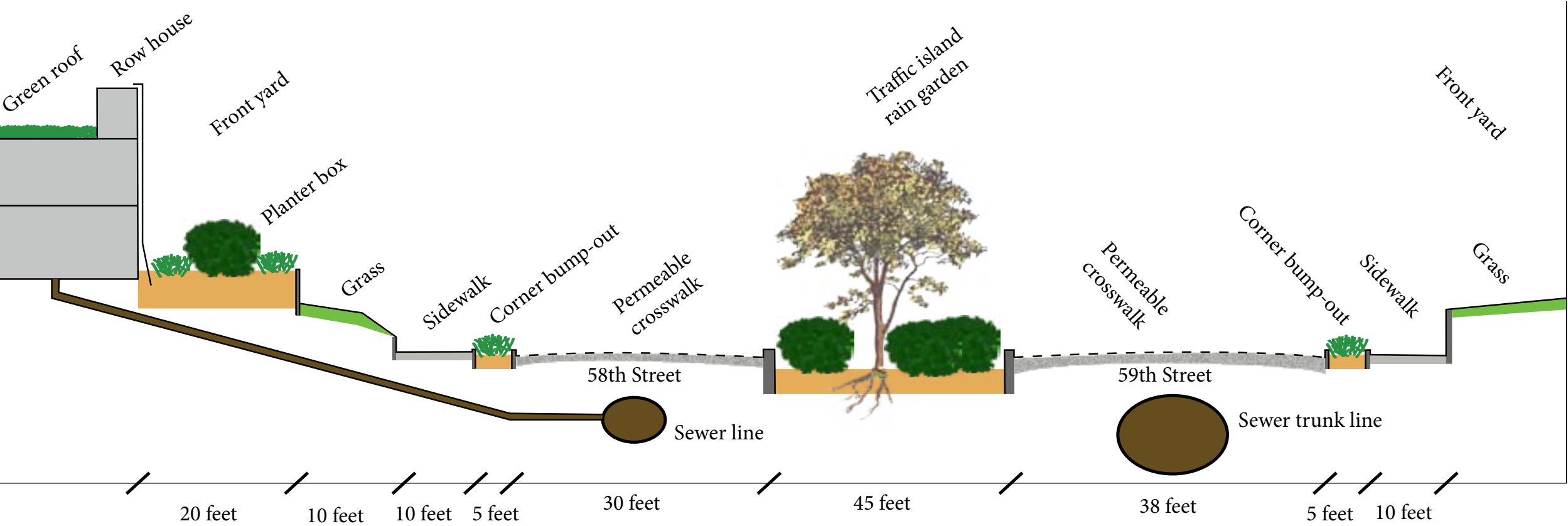


57th Street Between Lebanon & Arlington (B)

Current



After





Bump-outs along Woodbine will capture water sheeting from front lawns and from upstream portions of the road. This intervention will be applied in concert with a new sidewalk strip design.



Corner bump-outs will capture water at the low point of the transect, and address the high degree of impervious surface in the downstream portions of 57th Street.



We would like to propose a system of comprehensive storm-water capture for each alley mini-watershed. Water draining off the roof can be captured by rain barrels for use in gardens or for car-washing; concrete drives can be replaced with a porous gravel surface.



A system of large-scale terraced planters will line the densest part of the transect, creating a carefully contained system to channel rainwater off the highest part of 57th - the intersection of 57th and 59th.