

# SCHEMATIC DESIGN for Woodbine Avenue Transect



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4.214 Water Landscape and Urban Design, Fall 2010

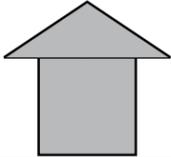
# Housing Typologies

Lower density

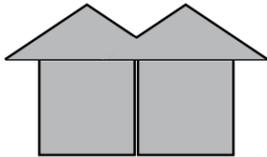
Higher density



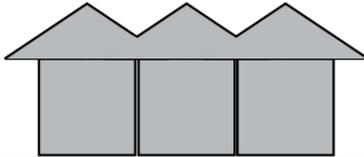
Single family



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

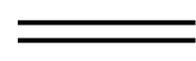
# Streetscape Typologies

Upstream

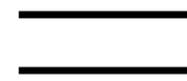
Downstream



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

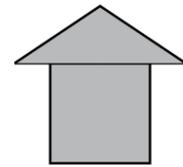
- Green roofs
- Rain barrels
- Trench drains
- Filter strips
- Ritter strips
- Porous surfacing

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

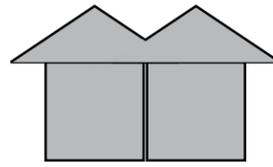
- Permeable crosswalks
- Rain gardens
- Tree trenches
- Bump outs

# Matrix of Typologies

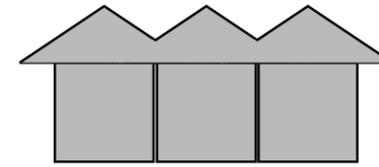
## Housing



single family

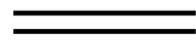


duplex

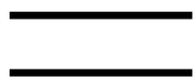


row house

## Streetscape



alley

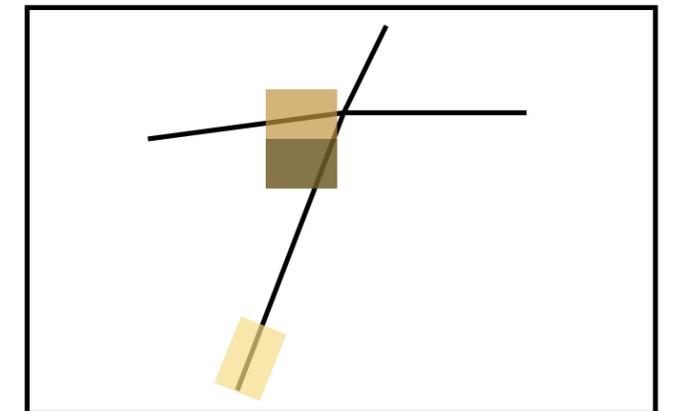


street



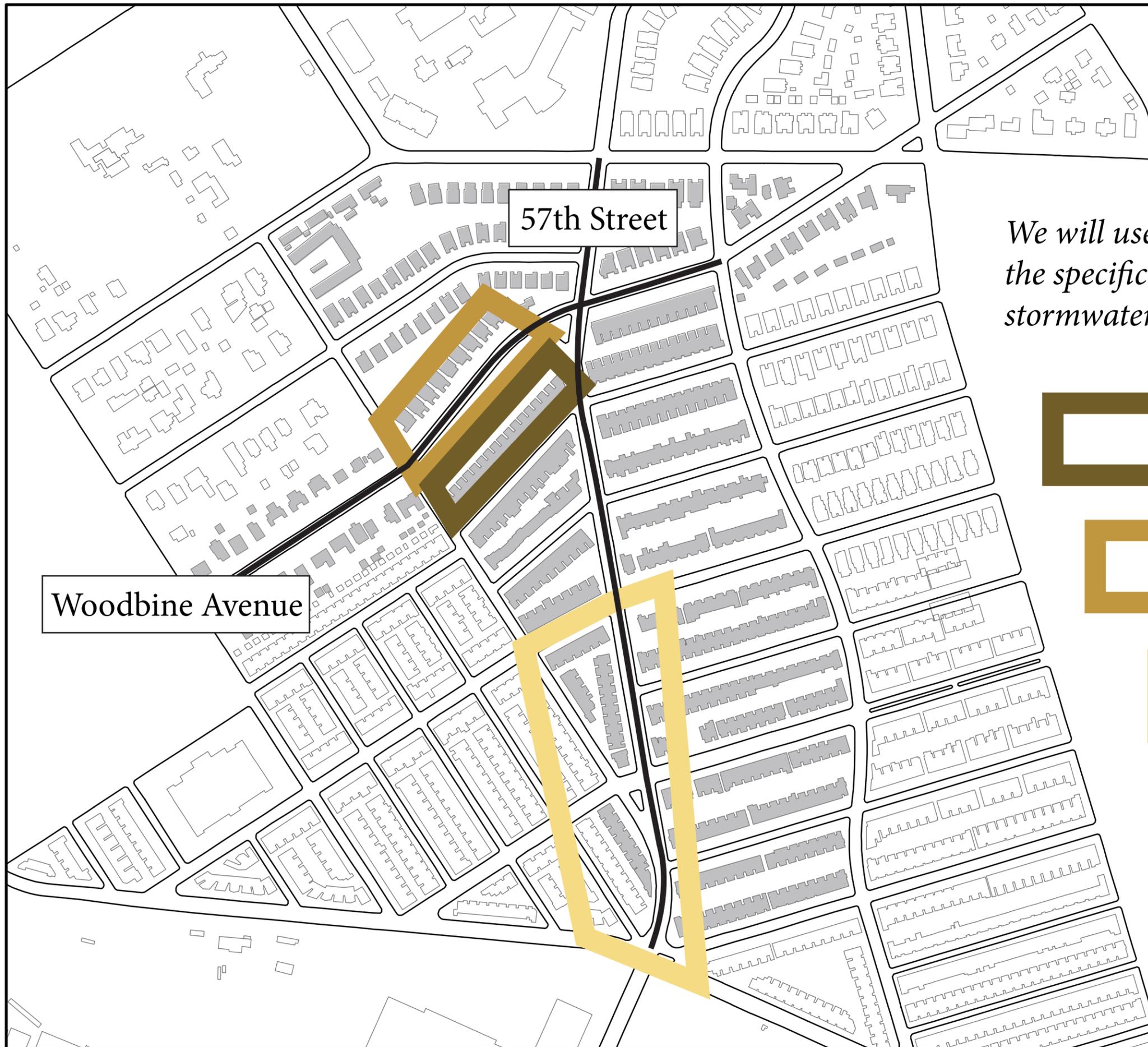
basin


## Site map



# Type Locations

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



Alley & Duplex / Row house



Street & Duplex



Basin & Row house



Transect



N

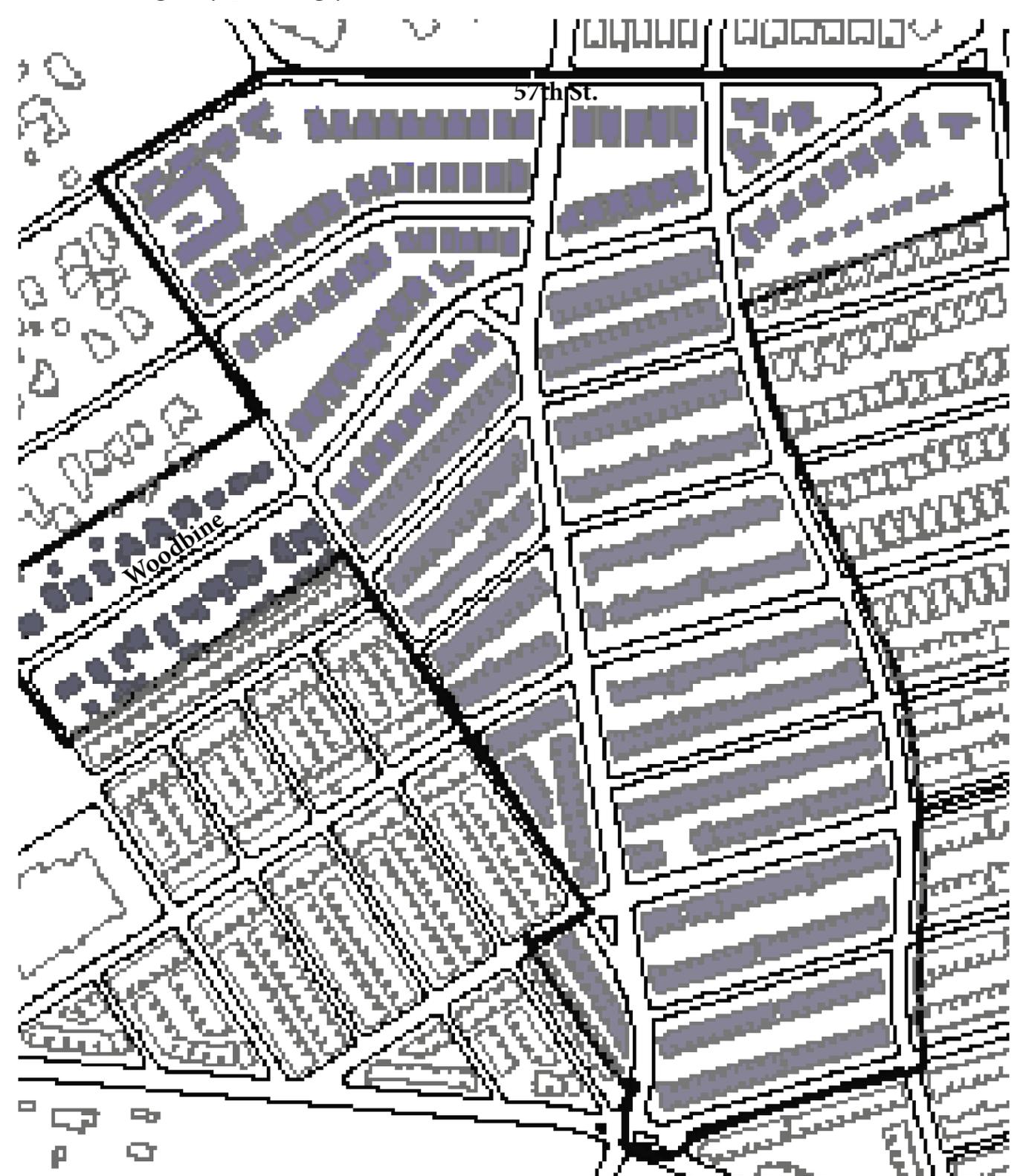


# Street Typology



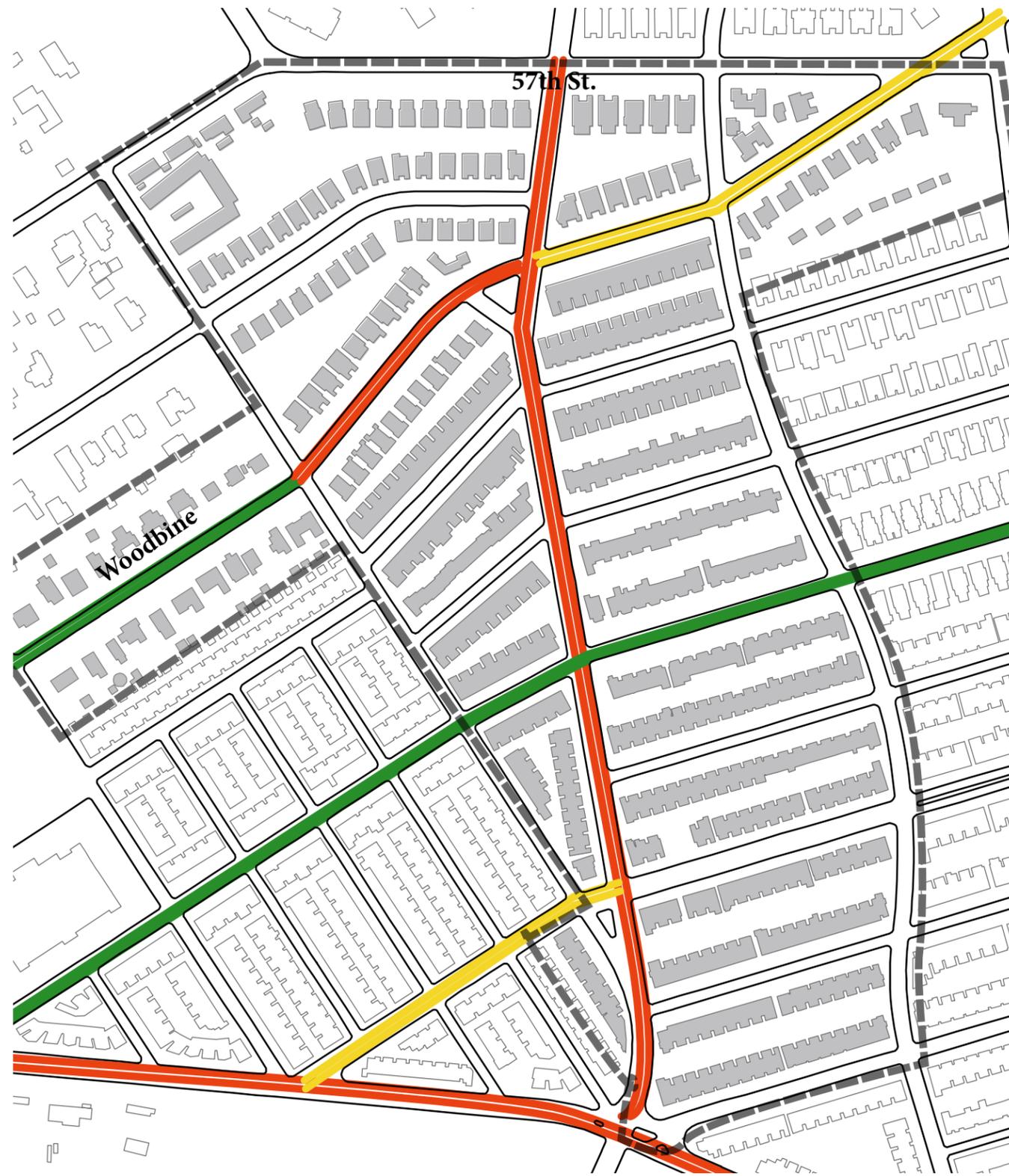
■ Streets  
■ Alleys  
■ Basin  
 As observed on Saturday morning between 10 and 12 am, 16 October 2010

# Housing Typology



■ Single Family  
■ Twin Home  
■ Row Home  
 As observed on Saturday morning between 10 and 12 am, 16 October 2010

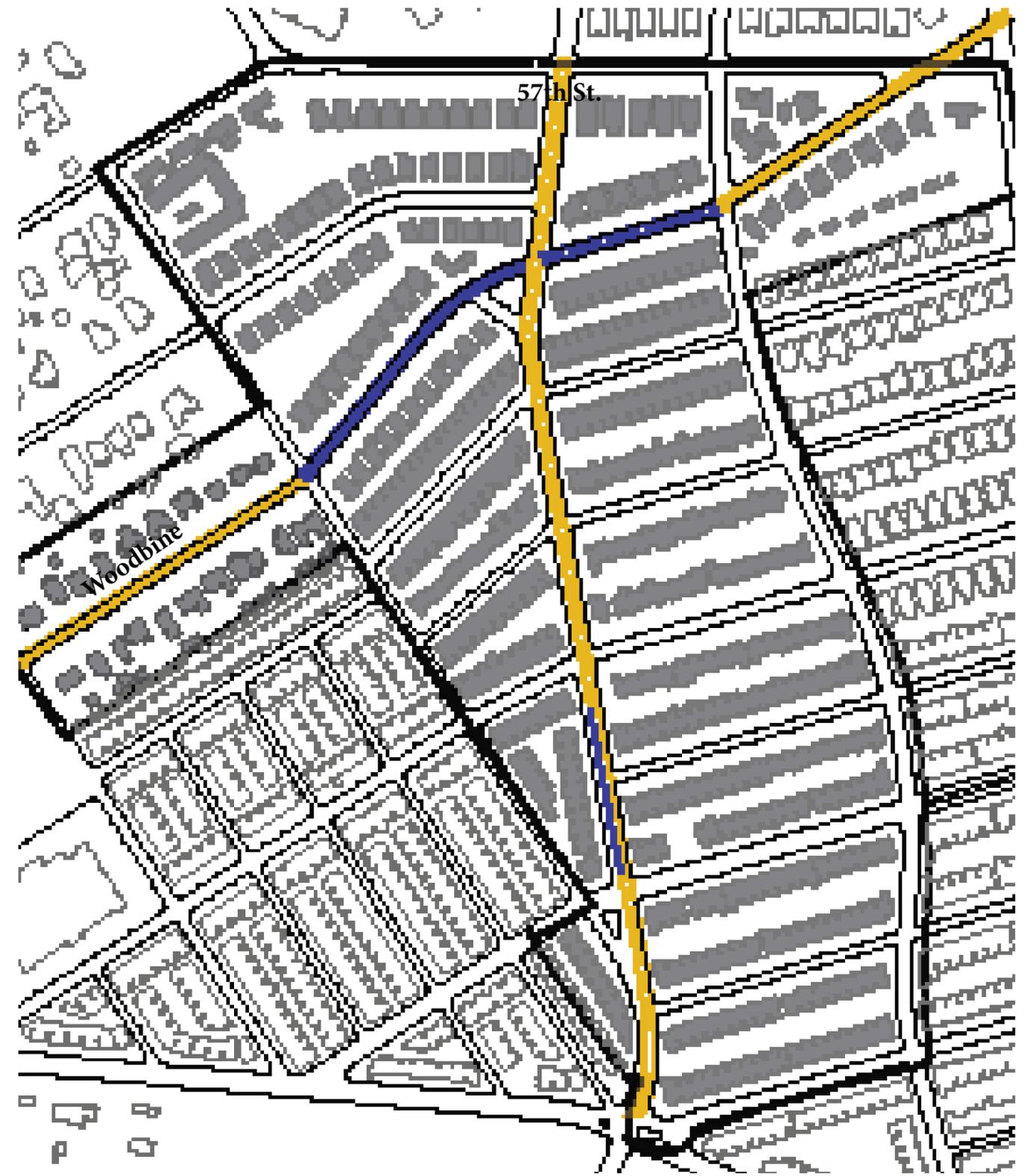
# Through Traffic



- High
- Medium
- Low

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

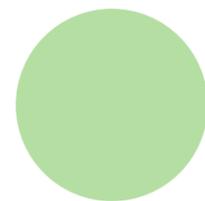
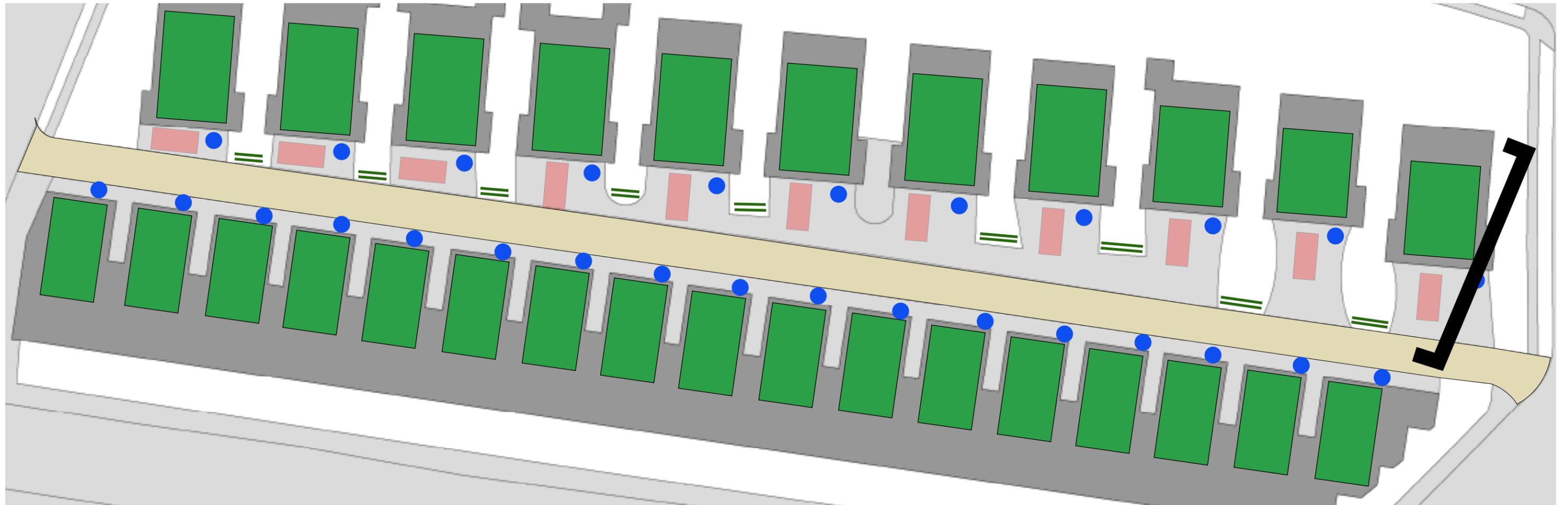
# Parking Demand



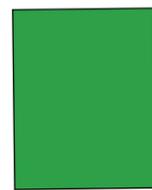
- High
- Low

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

# Alley Strategy: Woodbine & Woodcrest



Existing tree



Green roof



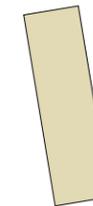
Filter strip



Parked car



Rain barrel

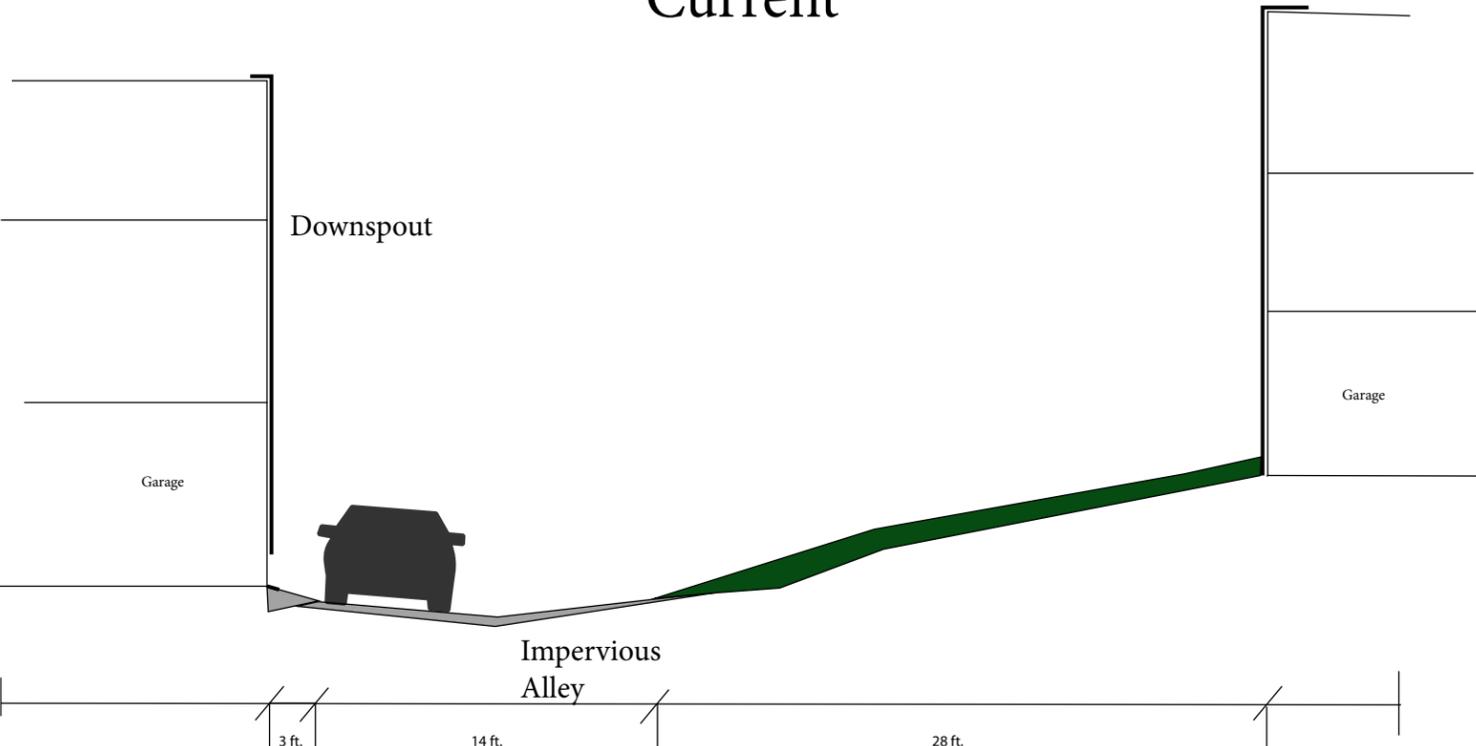


Gravel paving

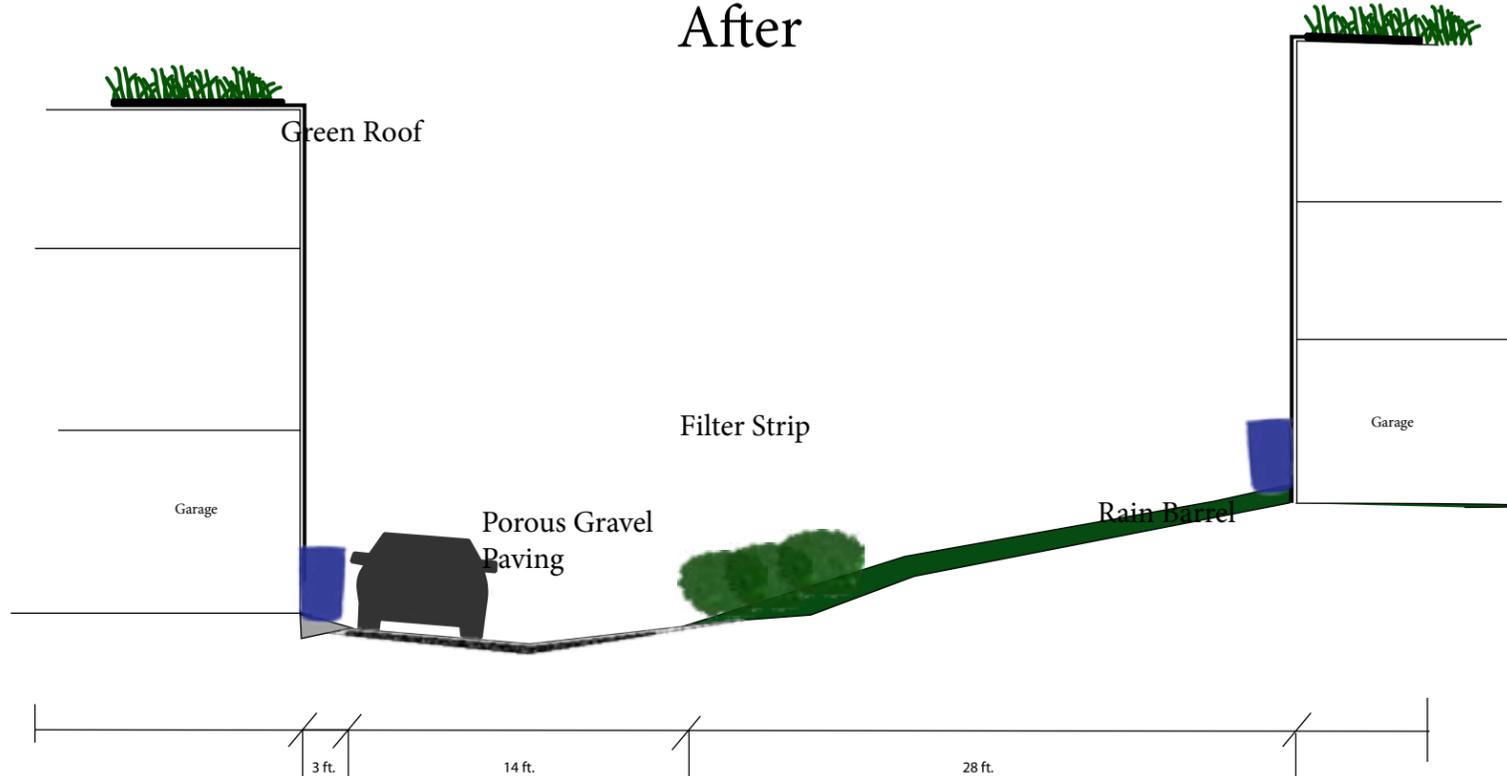


# Alley Strategy: Woodbine & Woodcrest

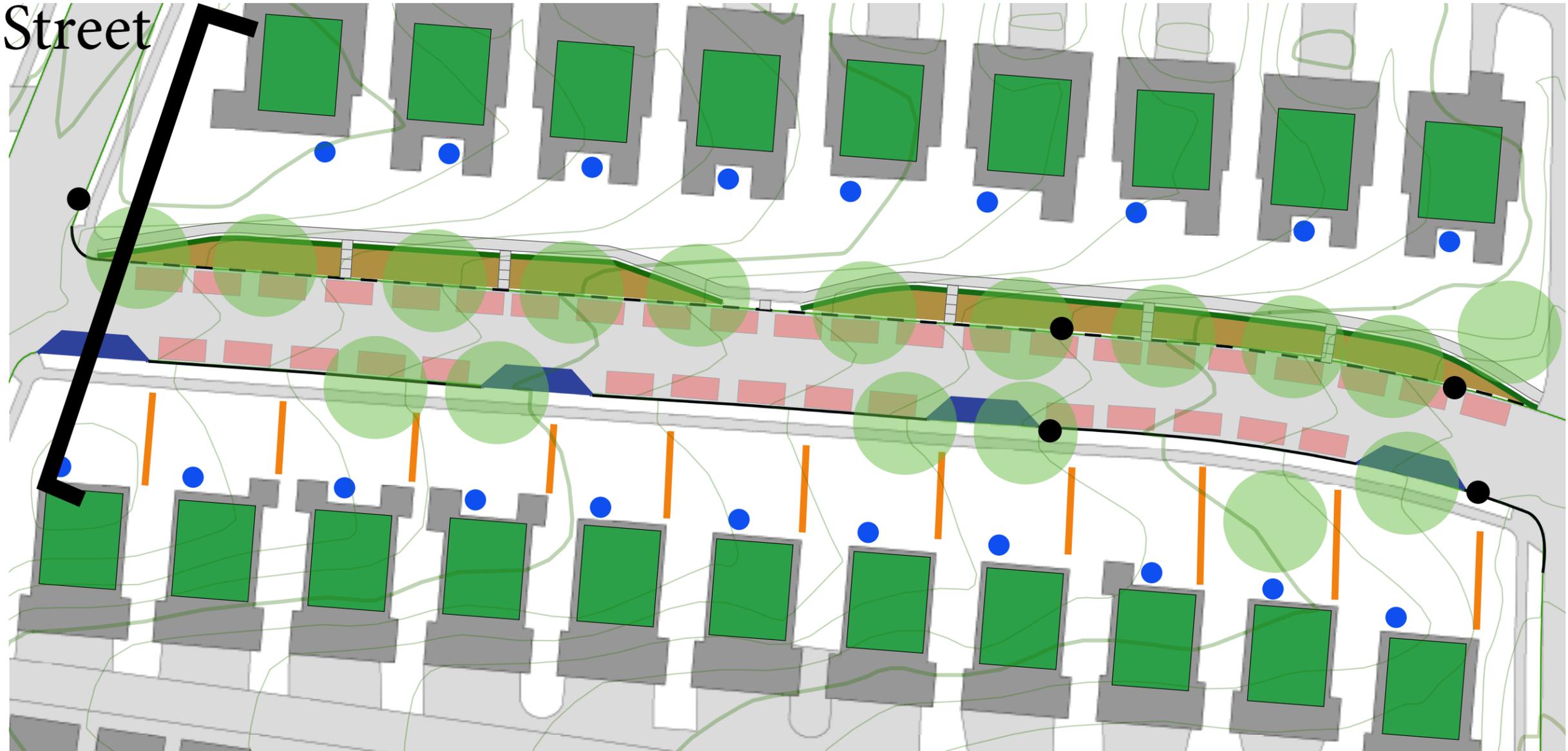
Current



After



# Woodbine from 58th Street

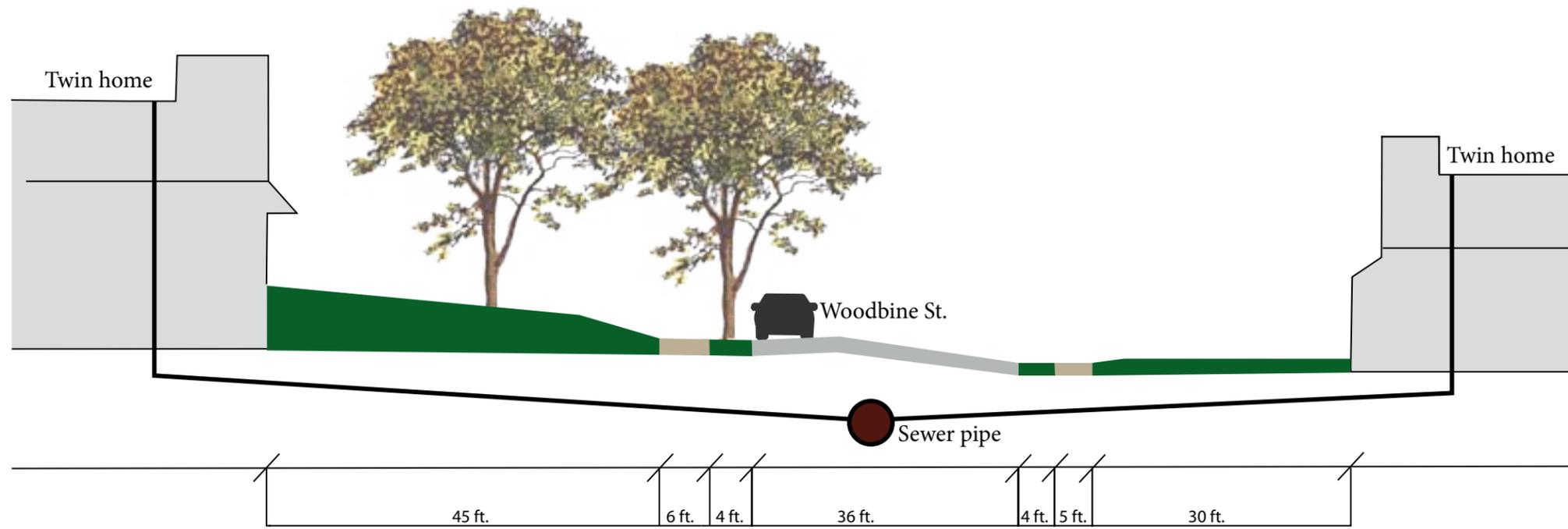


	Existing tree		Green roof		Terraced rain garden
	Parked car		Rain barrel		Continuous curb
	Existing storm sewer inlet		Yard terracing		Curb with gaps

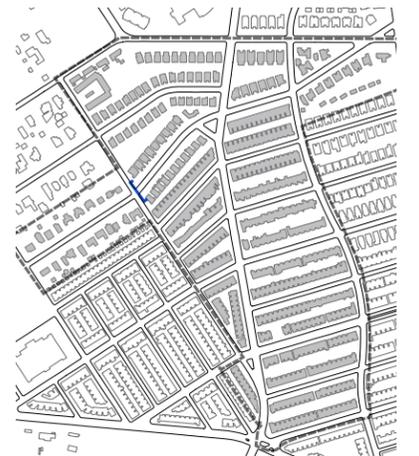
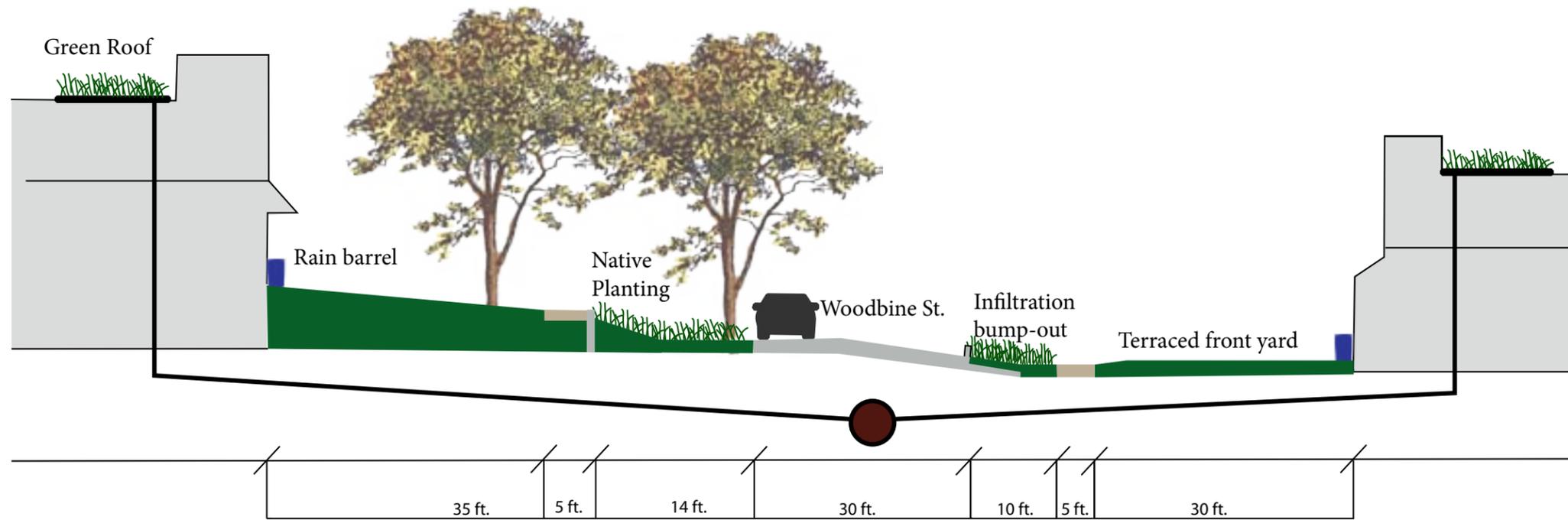
0 25 50 100 Feet

# Woodbine from 58th Street

Current



After



# Basin Plan



Existing tree



Green roof



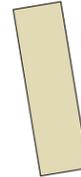
Filter strip



Parked car



Rain barrel



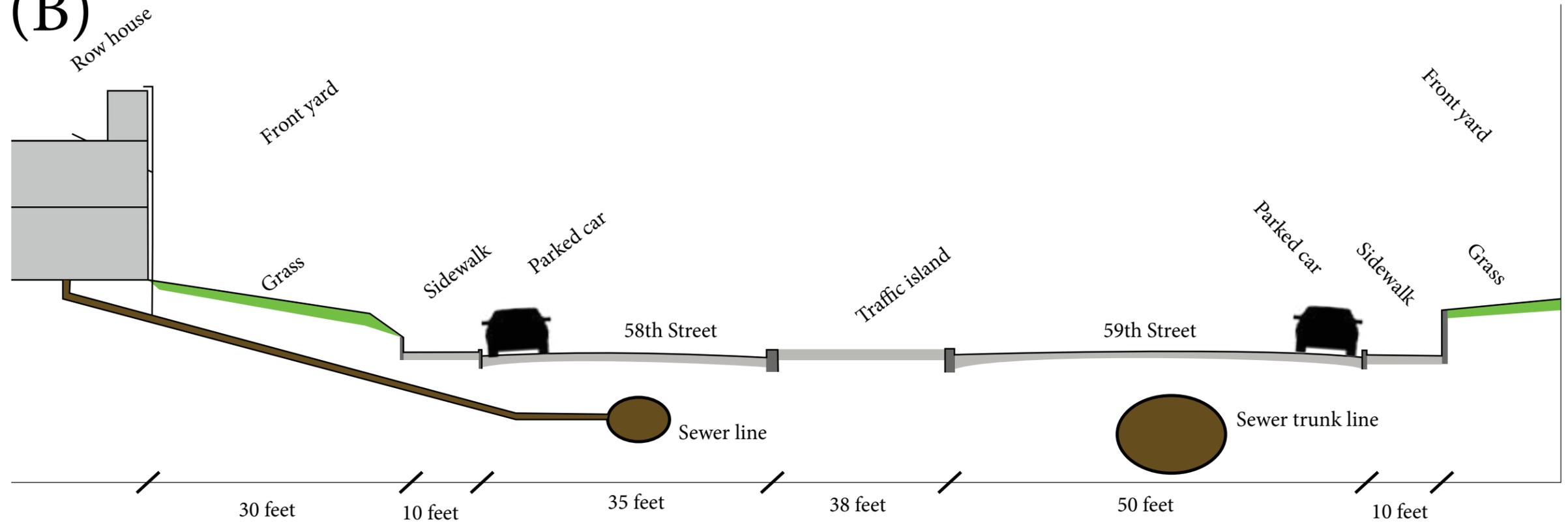
Gravel paving



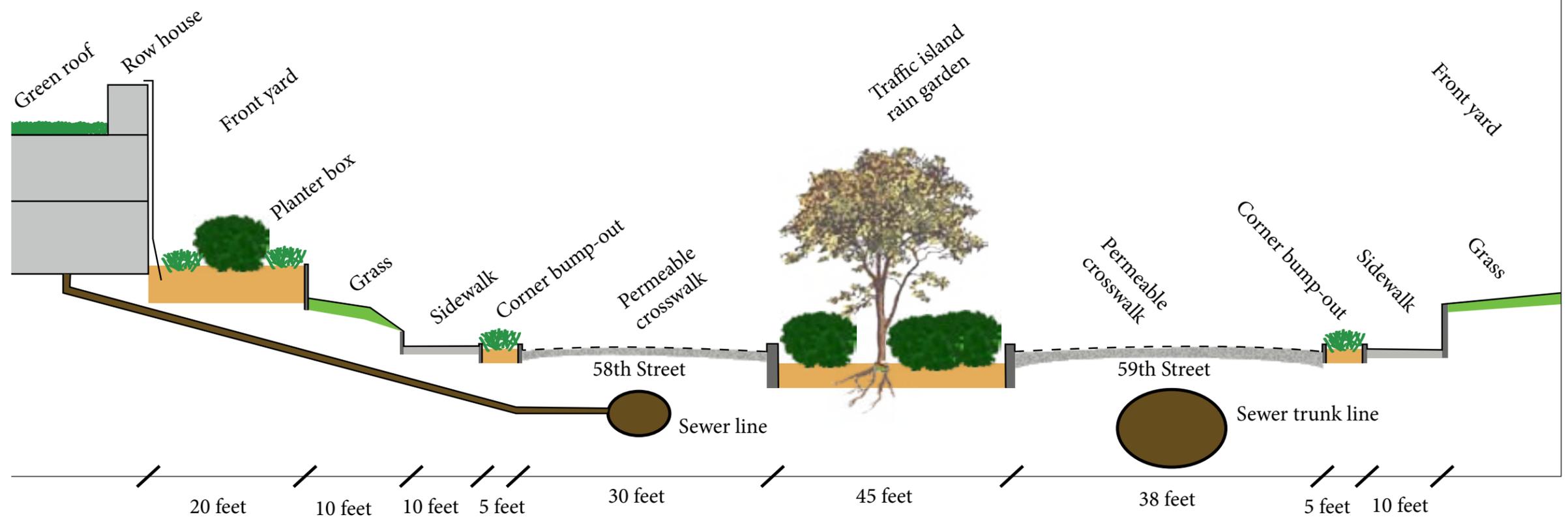


# 57th Street Between Lebanon & Arlington (B)

Current

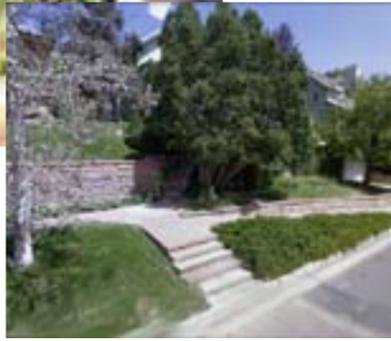


After





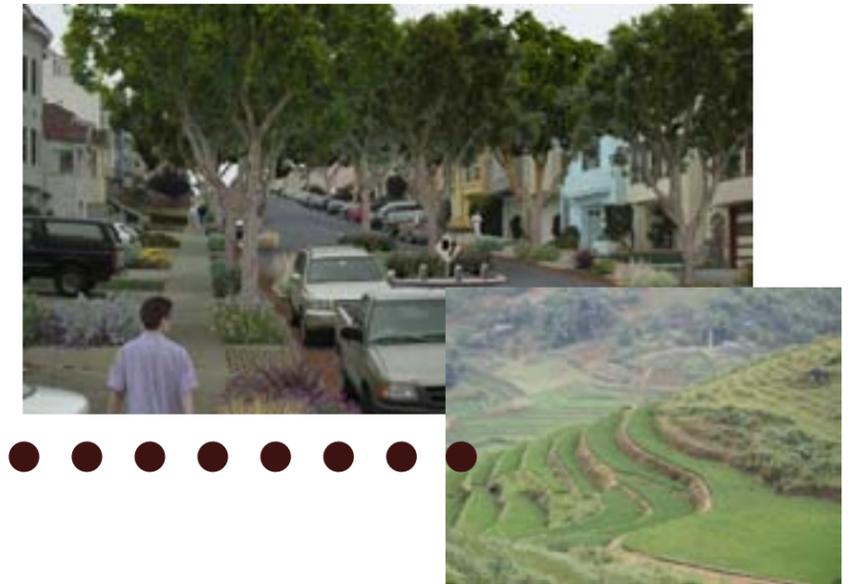
Bump-outs along Woodbine will capture water sheeting from front lawns and from upstream portions of the road. This intervention will be applied in concert with a new sidewalk strip design.



We would like to propose a system of comprehensive stormwater 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.



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.



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.