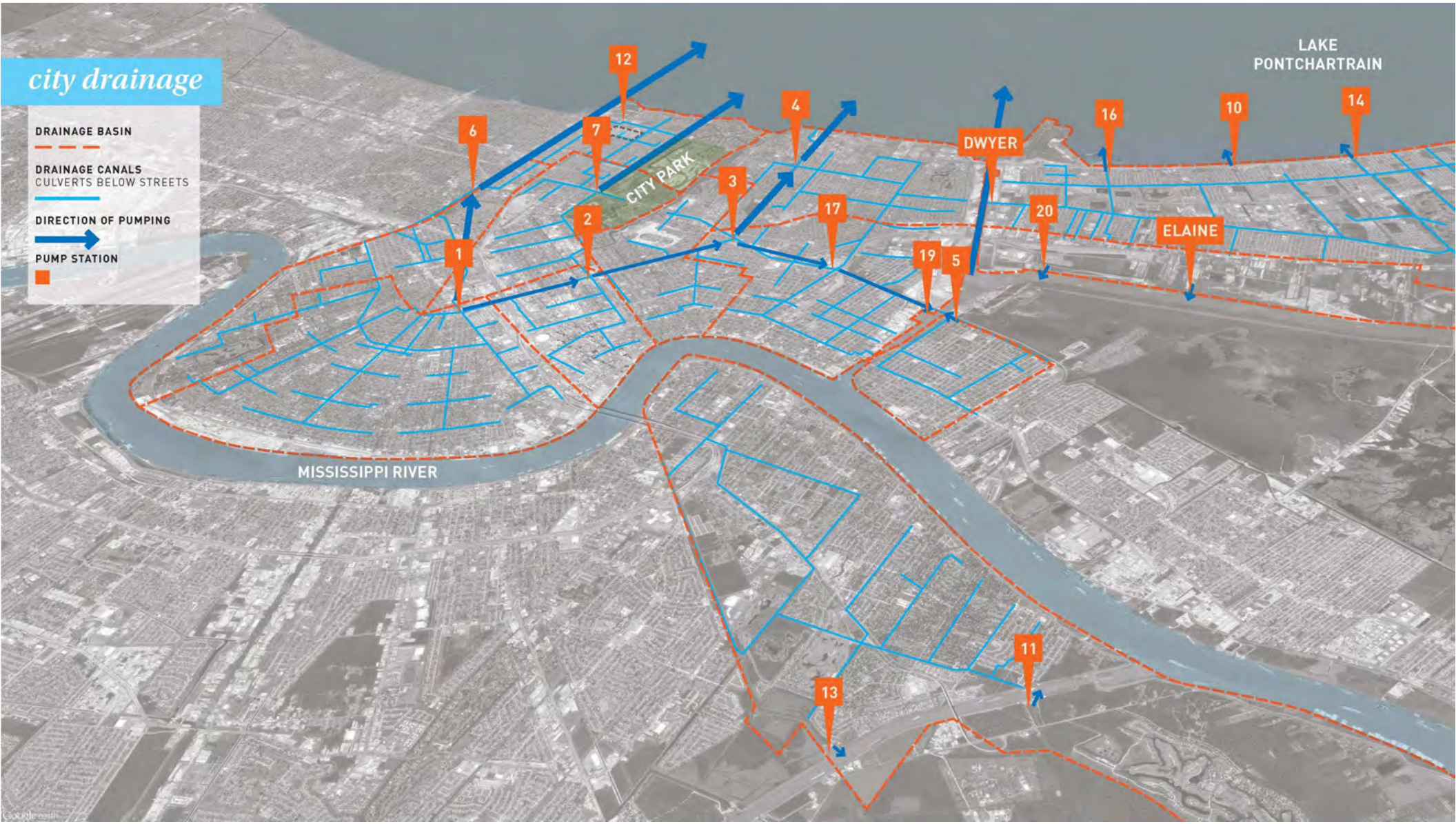
Lakeview Drainage Updates & Green Infrastructure

NEW ORLEANS, LA

SPACKMAN MOSSOP AND MICHAELS

Gaea

RDRC PRESENTATION
NOVEMBER 20 , 2017


city drainage
DRAINAGE BASIN
DRAINAGE CANALS
CULVERTS BELOW STREETS
DIRECTION OF PUMPING
PUMP STATION
LAKE
PONTCHARTRAIN
MISSISSIPPI RIVER
CITY PARK
DWYER
ELAINE
1
2
3
4
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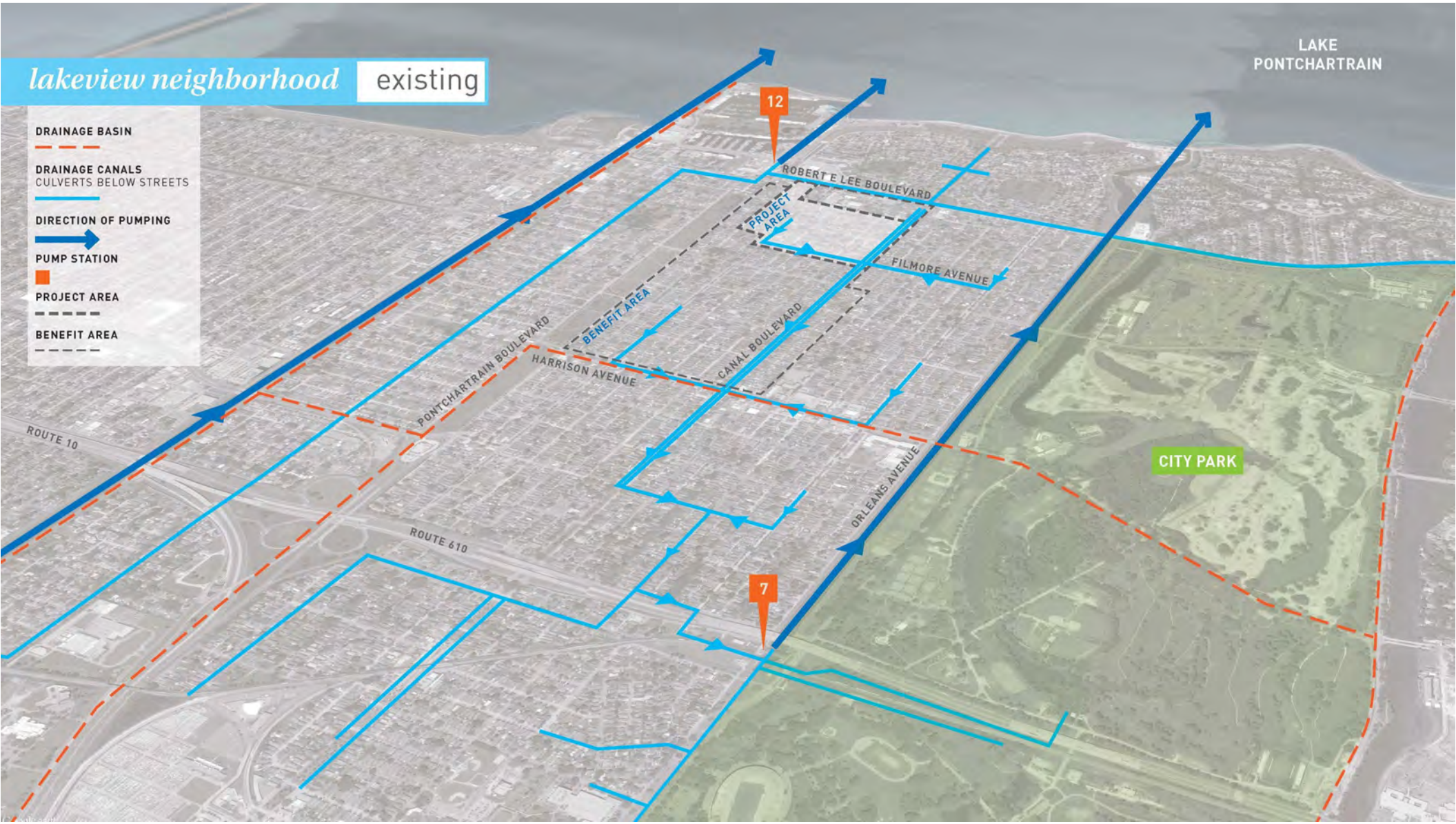
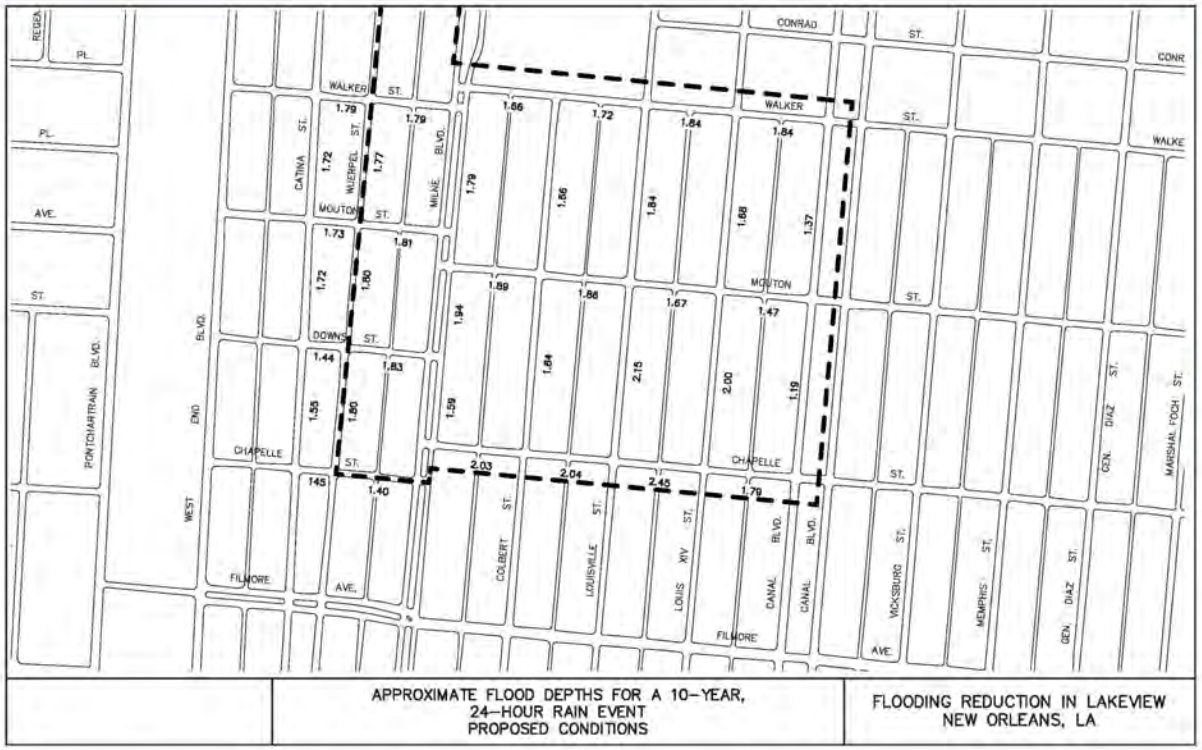
20


lakeview neighborhood
existing
DRAINAGE BASIN
DRAINAGE CANALS
CULVERTS BELOW STREETS
DIRECTION OF PUMPING
PUMP STATION
PROJECT AREA
BENEFIT AREA
LAKE
PONTCHARTRAIN
12
ROBERT E LEE BOULEVARD
PROJECT AREA
FILMORE AVENUE
BENEFIT AREA
CANAL BOULEVARD
PONTCHARTRAIN BOULEVARD
HARRISON AVENUE
ROUTE 10
ROUTE 610
ORLEANS AVENUE
CITY PARK
7

analysis



Reference Example of H&H Model Development During Site Analysis.

GOALS

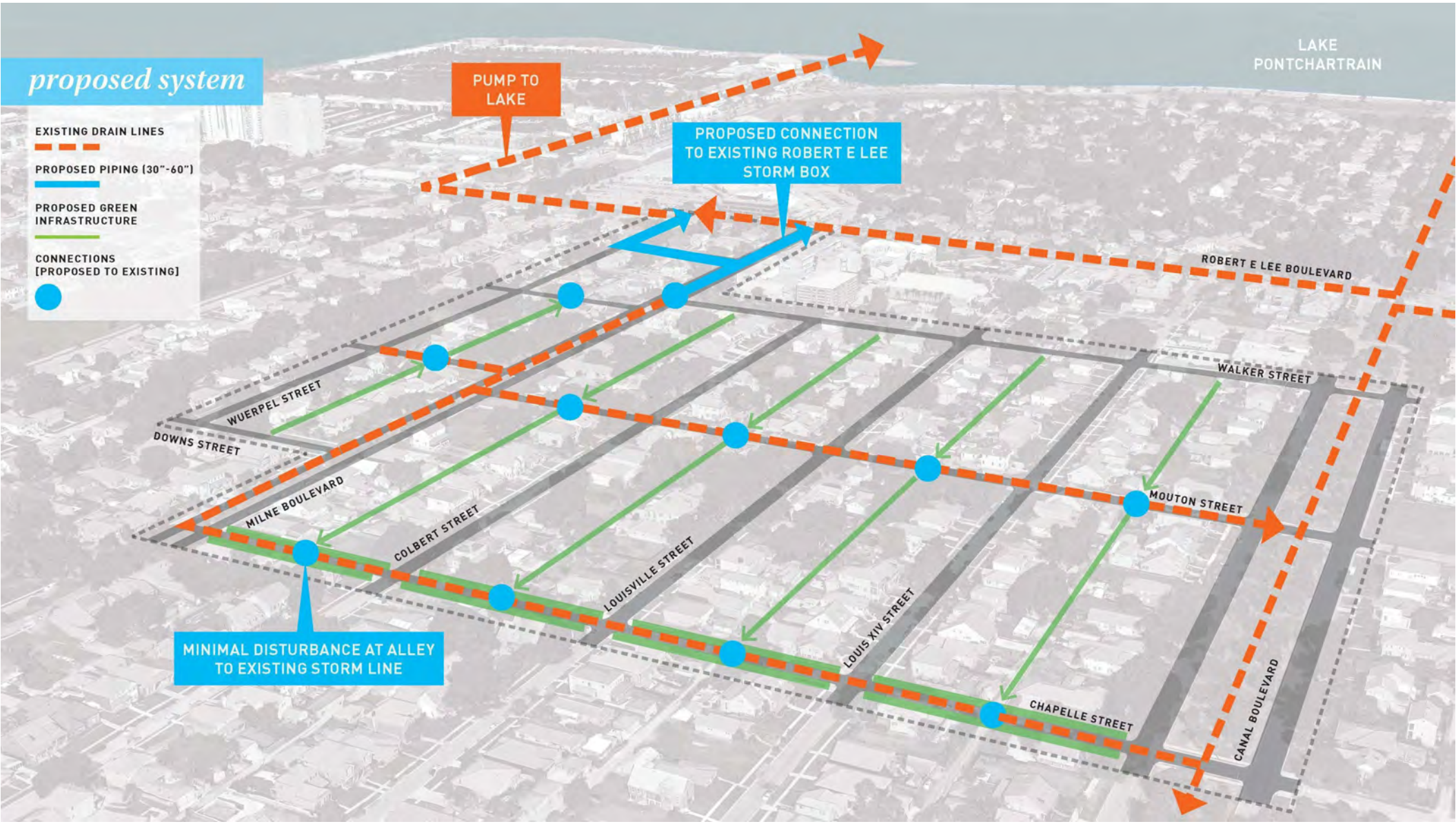
- *Mitigate and Reduce Flooding*
- *Upgrade Infrastructure and Reroute Storm Drain*
- *Slow and Store Water with Green Infrastructure*

RESULTS

- *Average Flood Reduction of 1" Across the Site*
- *Up to 2.5" of Average Flood Reduction in Areas Adjacent to the Site*

project area
LAKE
PONTCHARTRAIN
ROBERT E LEE BOULEVARD
WUERPEL STREET
DOWNS STREET
MILNE BOULEVARD
COLBERT STREET
LOUISVILLE STREET
LOUIS XIV STREET
WALKER STREET
MOUTON STREET
CHAPELLE STREET
CANAL BOULEVARD

limits of work
LIMITS OF PHASED CONSTRUCTION
INSTALLATION OF PROPOSED PIPING WITHIN ROADWAY TO BE PHASED
ALLEY BIOSWALES TO BE PHASED
INSTALLATION OF RAIN GARDENS; ROADWAY TO REMAIN OPEN
LAKE PONTCHARTRAIN
ROBERT E LEE BOULEVARD
WUERPEL STREET
DOWNS STREET
MILNE BOULEVARD
COLBERT STREET
LOUISVILLE STREET
LOUIS XIV STREET
WALKER STREET
MOUTON STREET
CHAPELLE STREET
CANAL BOULEVARD


proposed system
EXISTING DRAIN LINES
PROPOSED PIPING (30"-60")
PROPOSED GREEN INFRASTRUCTURE
CONNECTIONS [PROPOSED TO EXISTING]
PUMP TO LAKE
PROPOSED CONNECTION TO EXISTING ROBERT E LEE STORM BOX
LAKE PONTCHARTRAIN
ROBERT E LEE BOULEVARD
WALKER STREET
WUERPEL STREET
DOWNS STREET
MILNE BOULEVARD
COLBERT STREET
LOUISVILLE STREET
LOUIS XIV STREET
MOUTON STREET
CHAPELLE STREET
CANAL BOULEVARD
MINIMAL DISTURBANCE AT ALLEY TO EXISTING STORM LINE

analysis 10 year storm existing

analysis 10 year storm proposed

flood reduction

1" - 2"
2" - 3"
3" - 4"
4" - 5"
5" - 6"
6"+

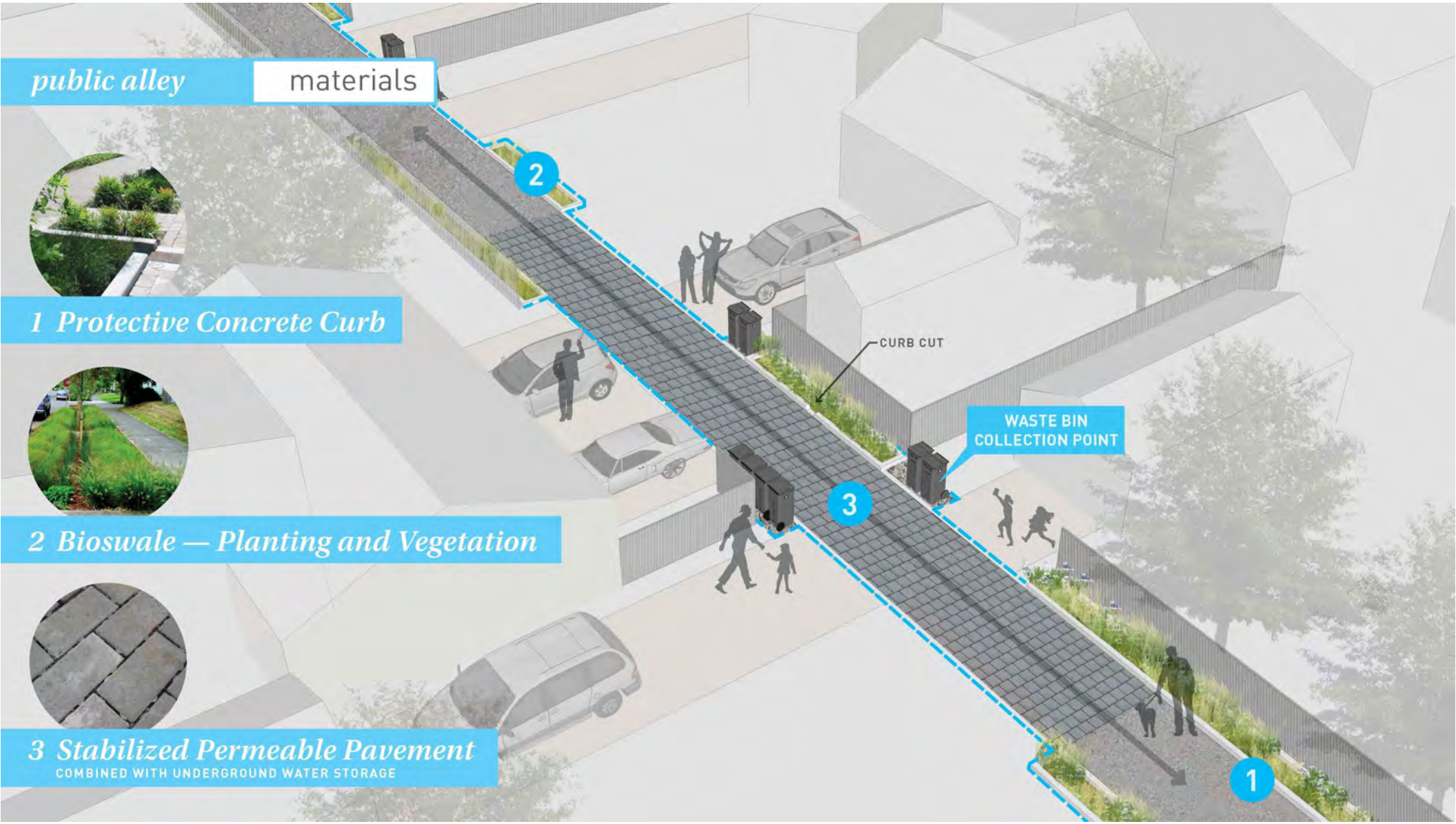
0' 250 500 1000 Ft

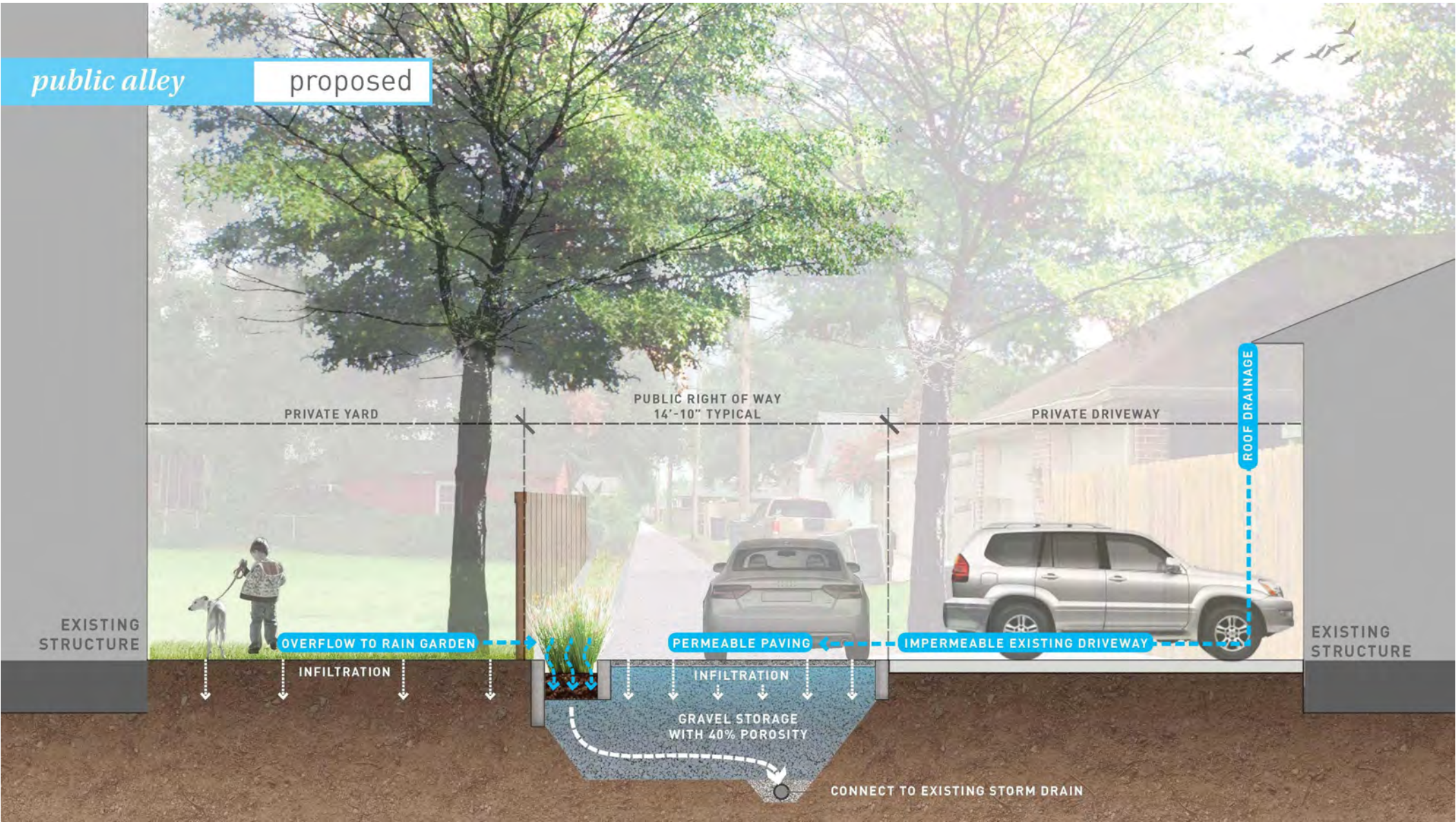
public alley materials

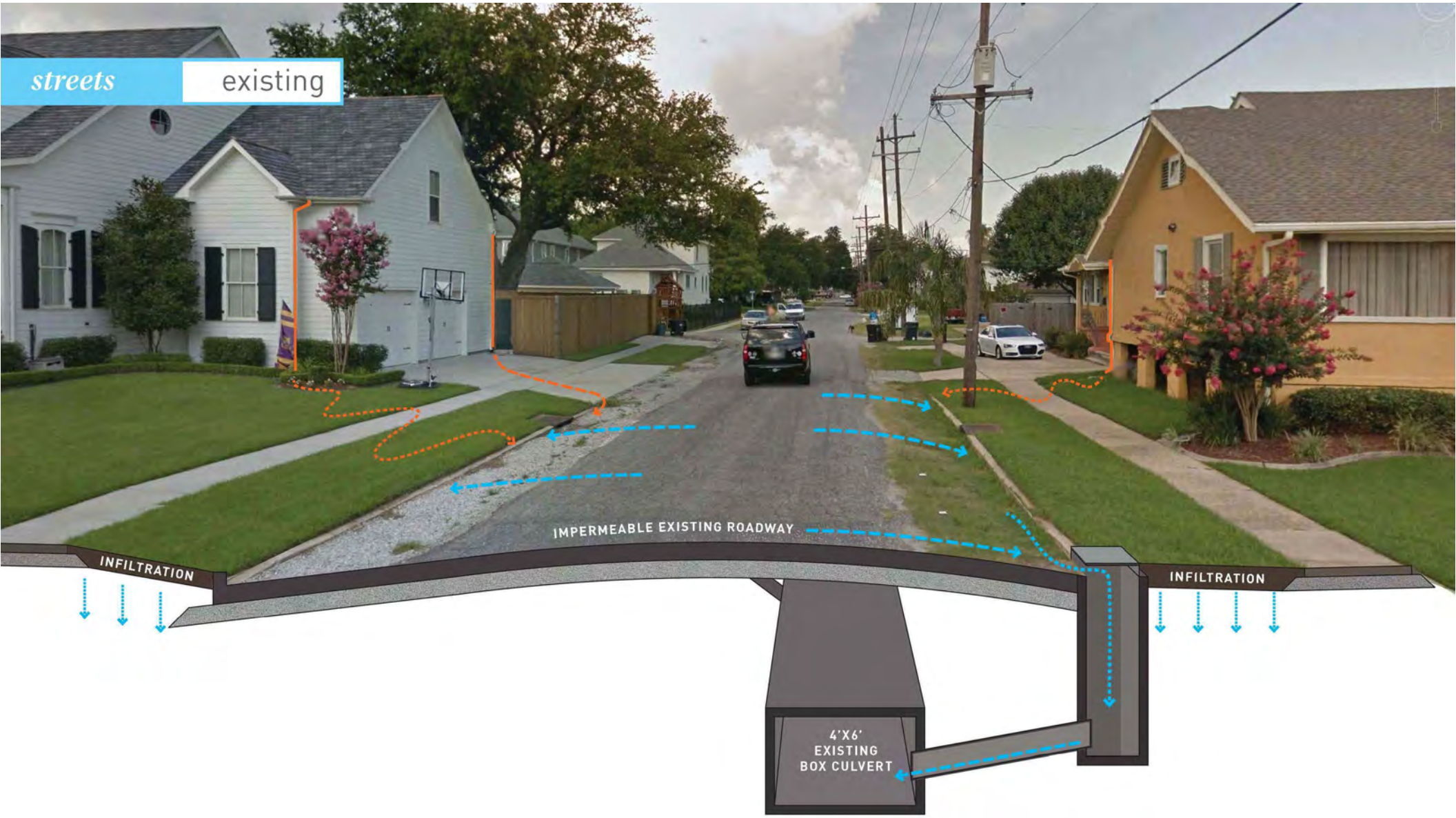
1 Protective Concrete Curb

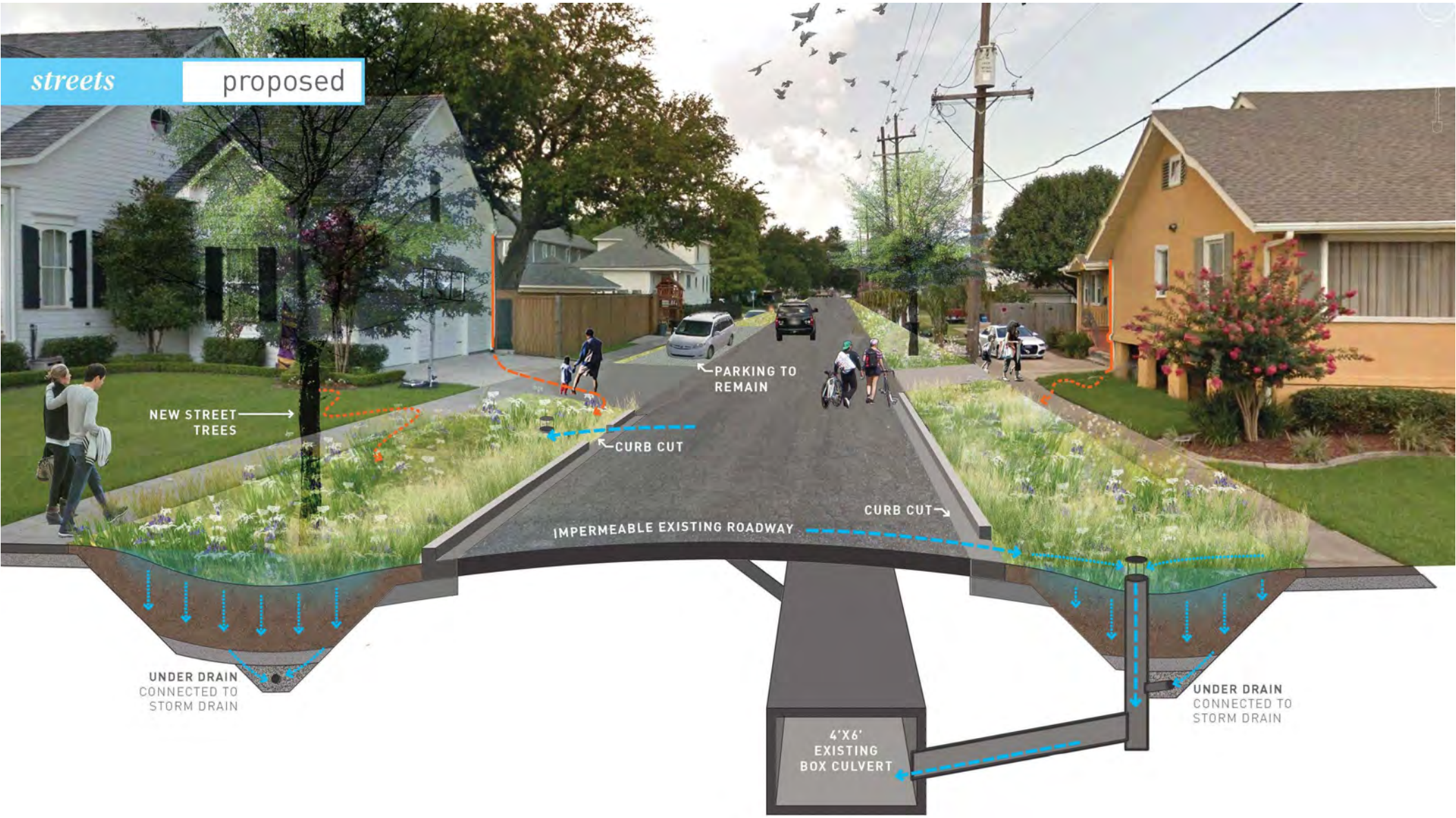
2 Bioswale — Planting and Vegetation

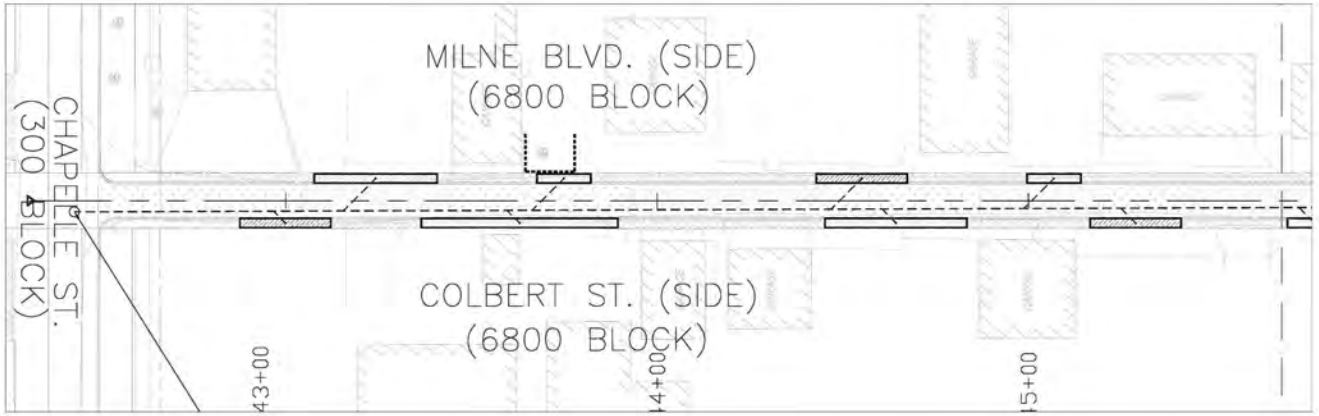
3 Stabilized Permeable Pavement
COMBINED WITH UNDERGROUND WATER STORAGE

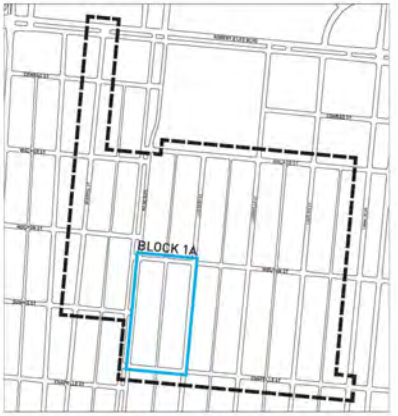


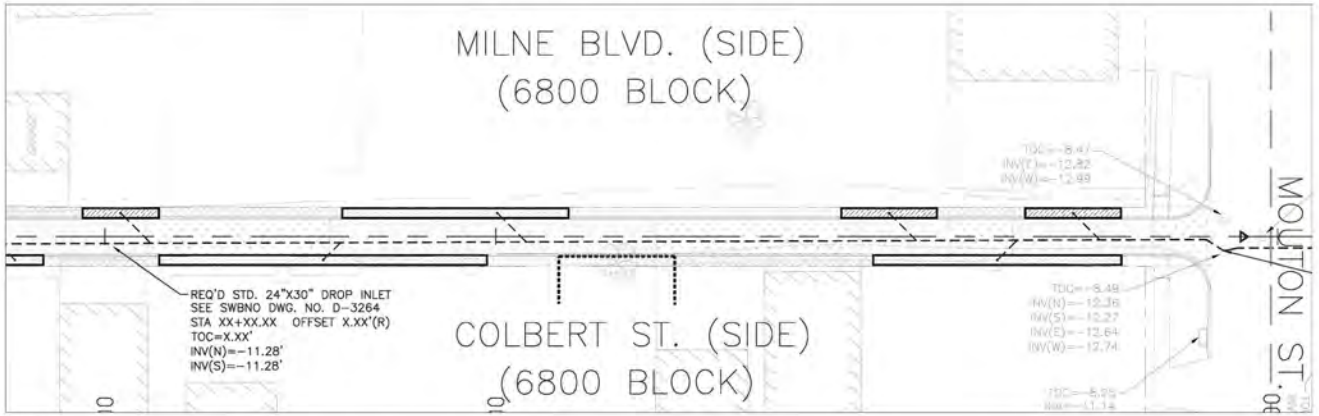

public alley
proposed
PRIVATE YARD
PUBLIC RIGHT OF WAY
14'-10" TYPICAL
PRIVATE DRIVEWAY
ROOF DRAINAGE
EXISTING STRUCTURE
OVERFLOW TO RAIN GARDEN
INFILTRATION
PERMEABLE PAVING
IMPERMEABLE EXISTING DRIVEWAY
INFILTRATION
GRAVEL STORAGE
WITH 40% POROSITY
CONNECT TO EXISTING STORM DRAIN
EXISTING STRUCTURE


streets
existing
IMPERMEABLE EXISTING ROADWAY
INFILTRATION
INFILTRATION
4'X6'
EXISTING
BOX CULVERT


streets
proposed
NEW STREET TREES
PARKING TO REMAIN
CURB CUT
CURB CUT
IMPERMEABLE EXISTING ROADWAY
UNDER DRAIN
CONNECTED TO
STORM DRAIN
4'X6'
EXISTING
BOX CULVERT
UNDER DRAIN
CONNECTED TO
STORM DRAIN







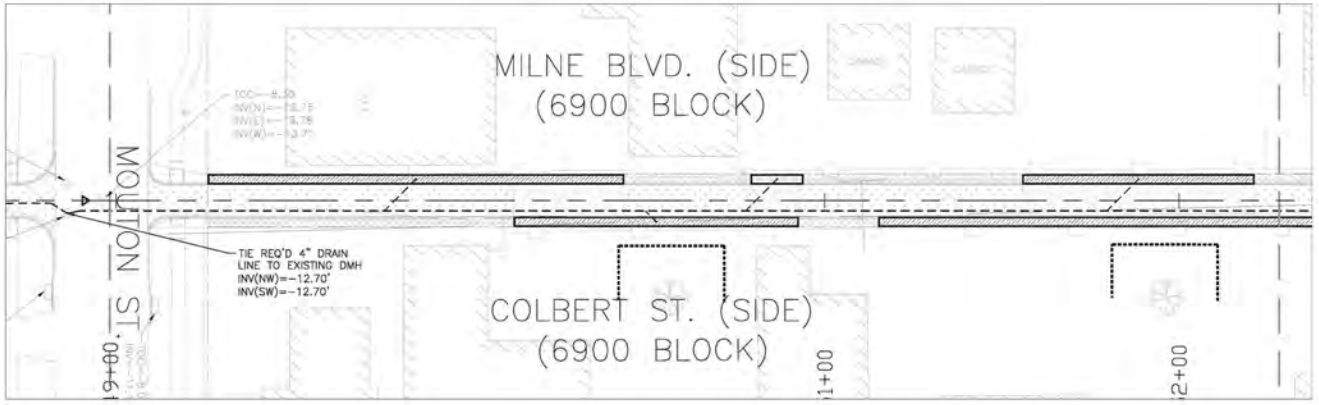
LEGEND

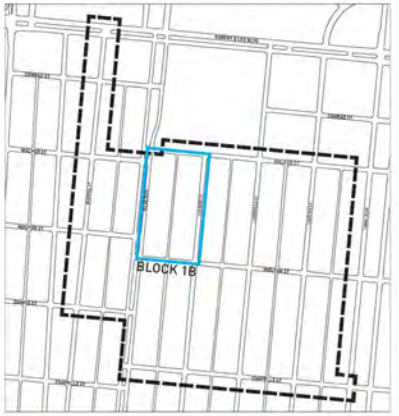
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

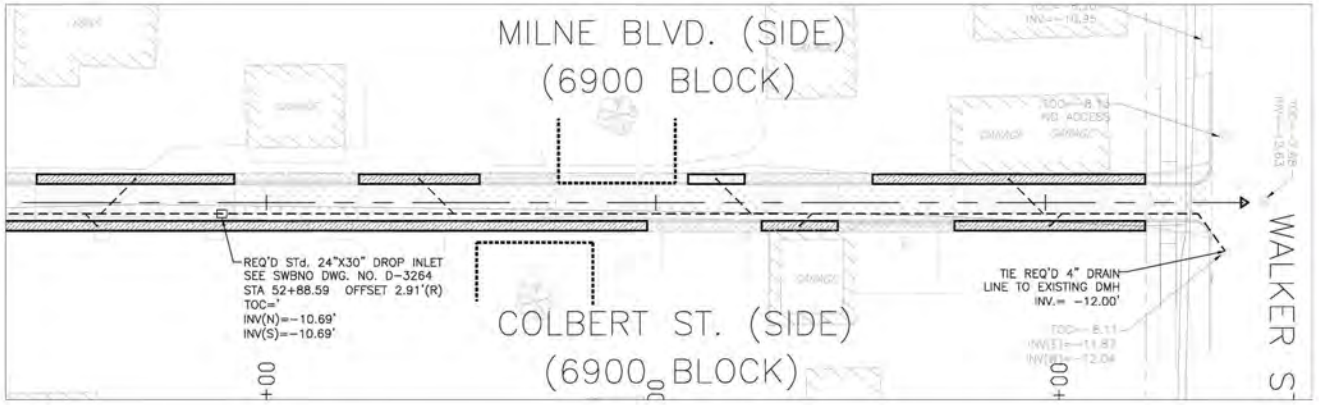
1A MILNE BLVD AND COLBERT ST ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS







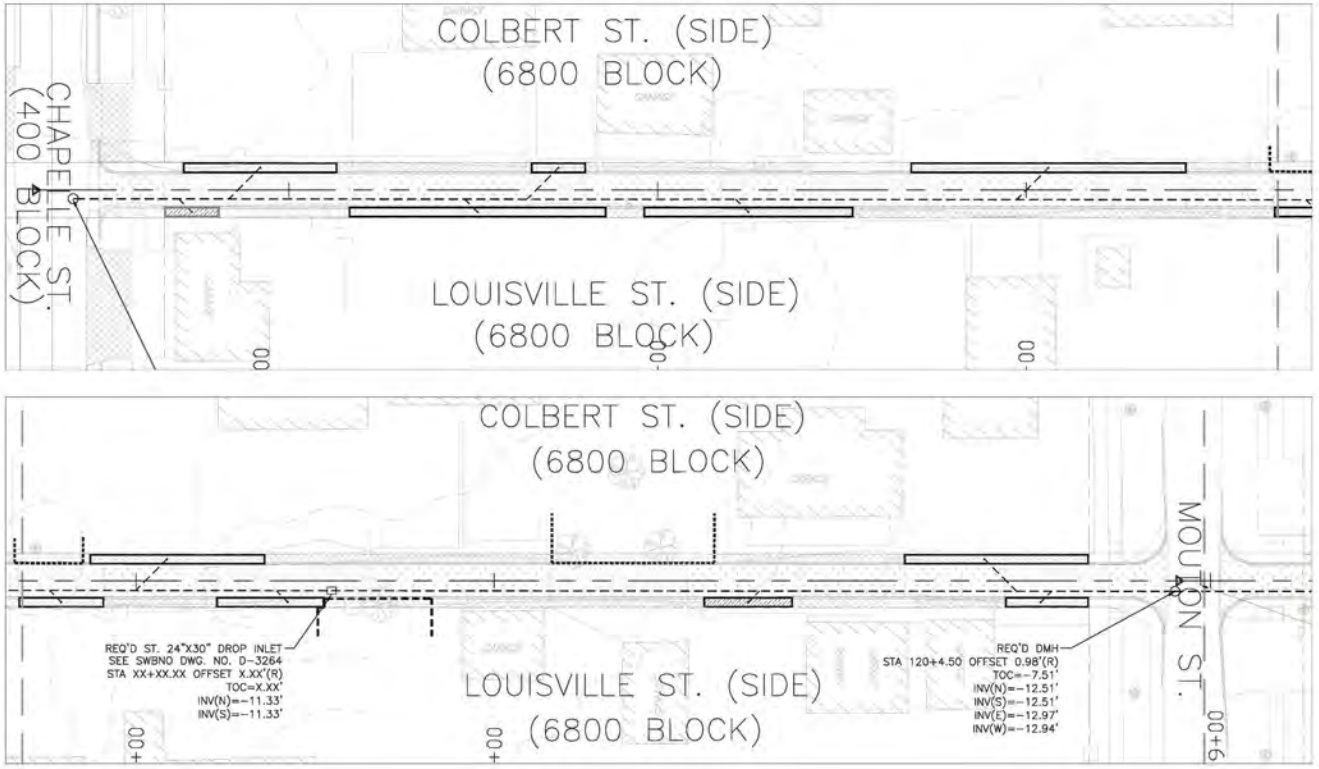
LEGEND

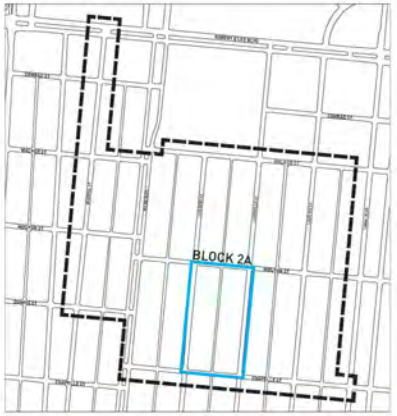
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

1B MILNE BLVD AND COLBERT ST ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS





LEGEND

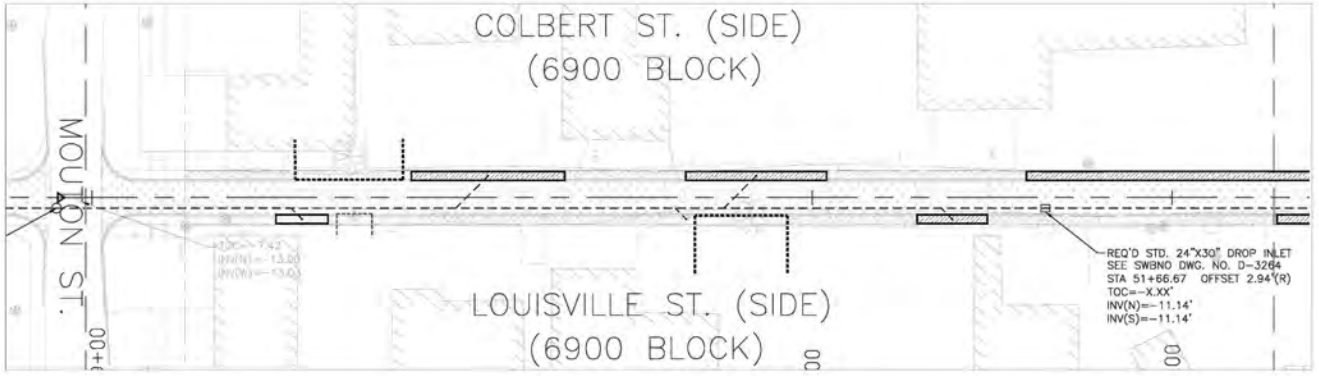
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

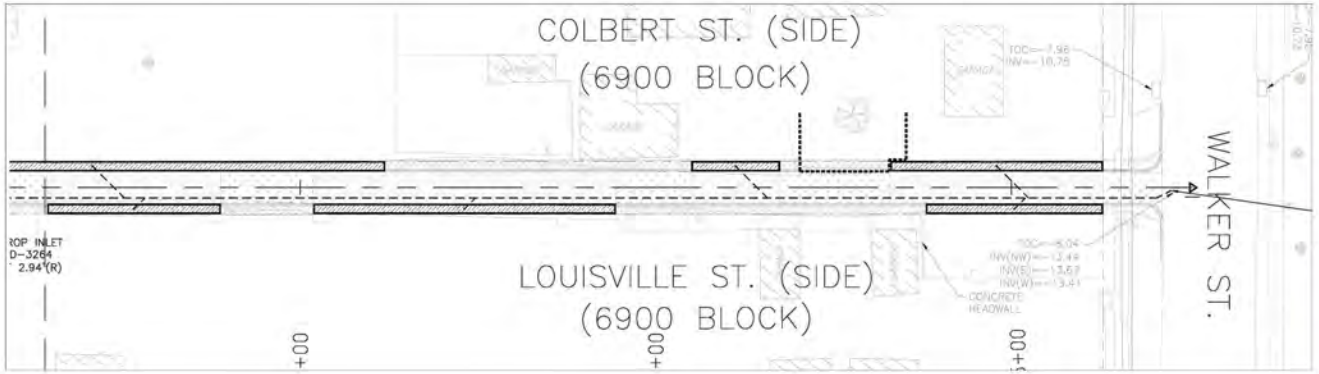
2A COLBERT ST & LOUISVILLE ST ALLEY

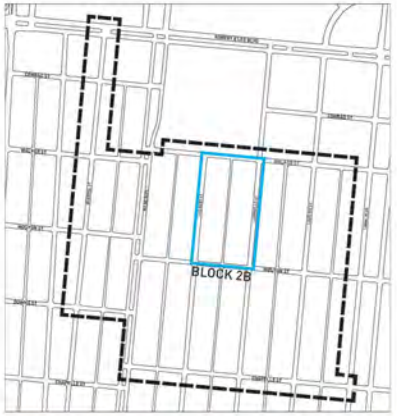
LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS

Gaea







LEGEND

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- GRAVEL PAVEMENT
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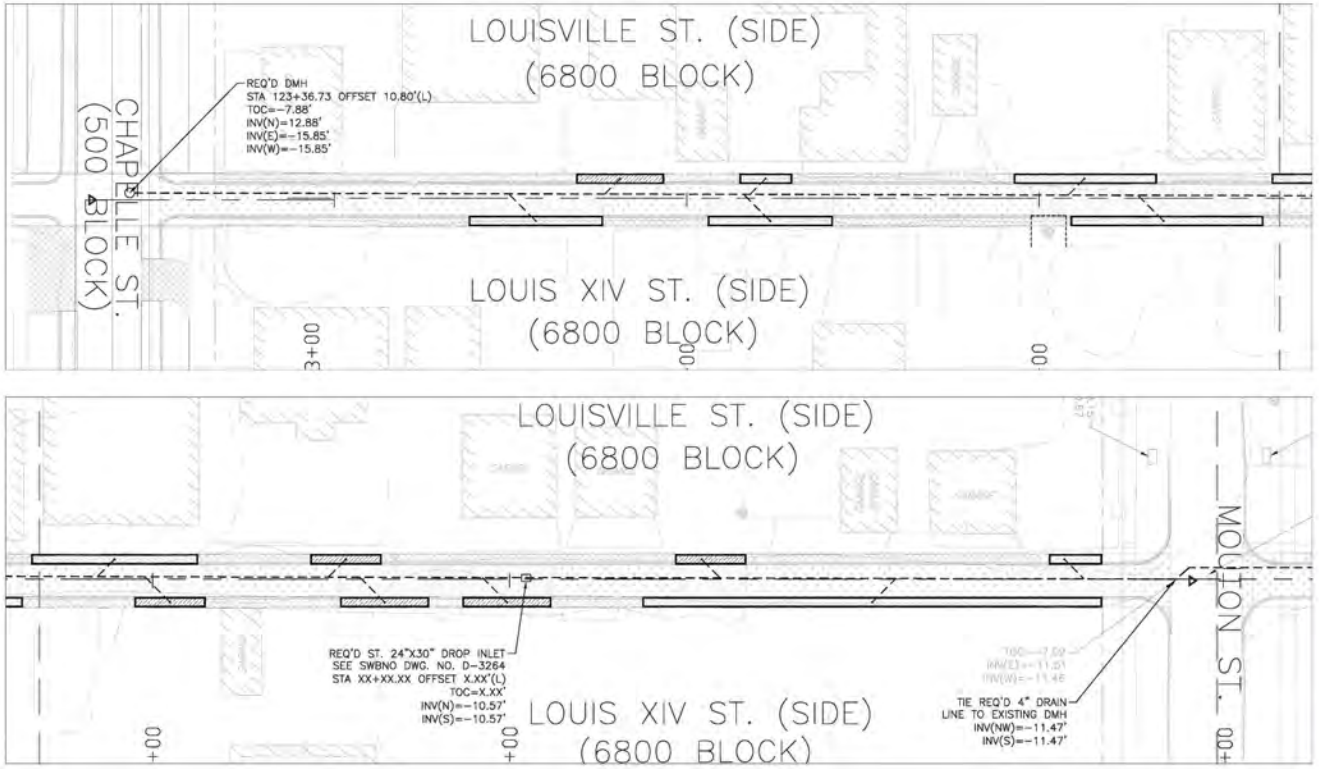
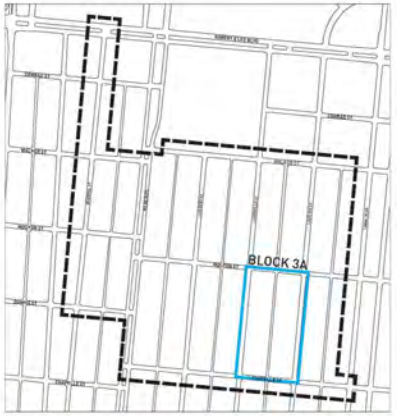
2B COLBERT ST & LOUISVILLE ST ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS





LEGEND

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- RESTORED LANDSCAPE
- BIOSWALE
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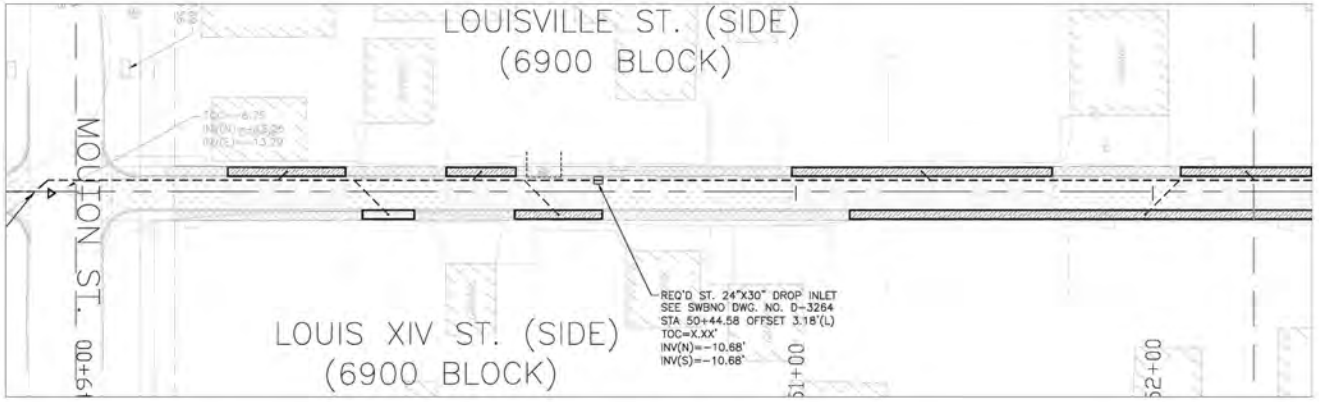
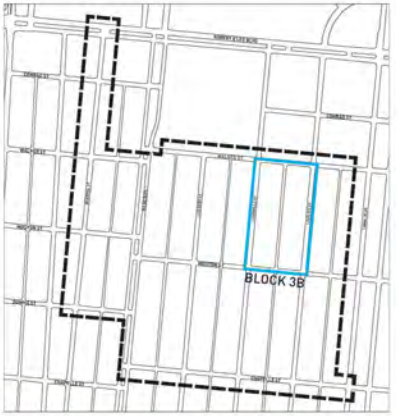
3A LOUISVILLE ST & LOUIS XIV ST ALLEY

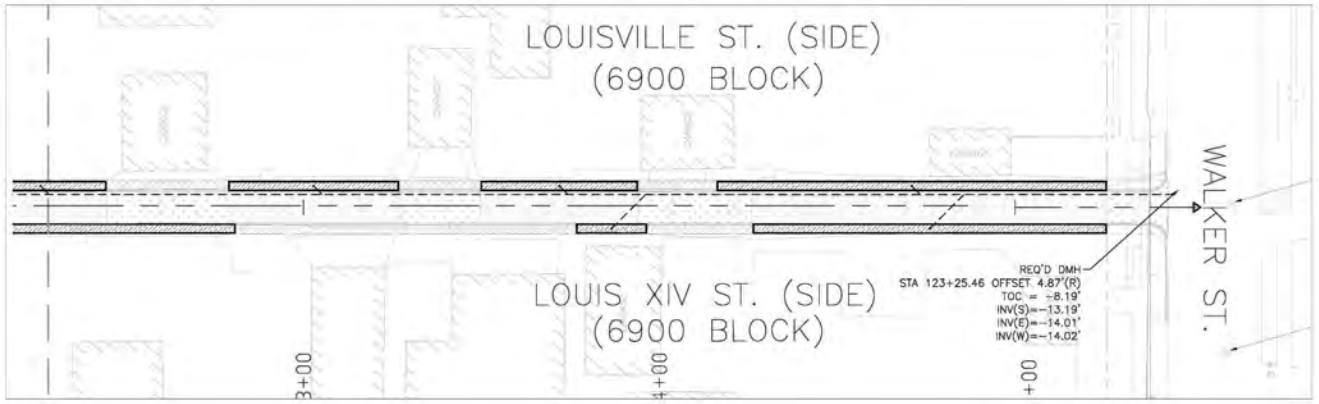
LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS

Gaea







LEGEND

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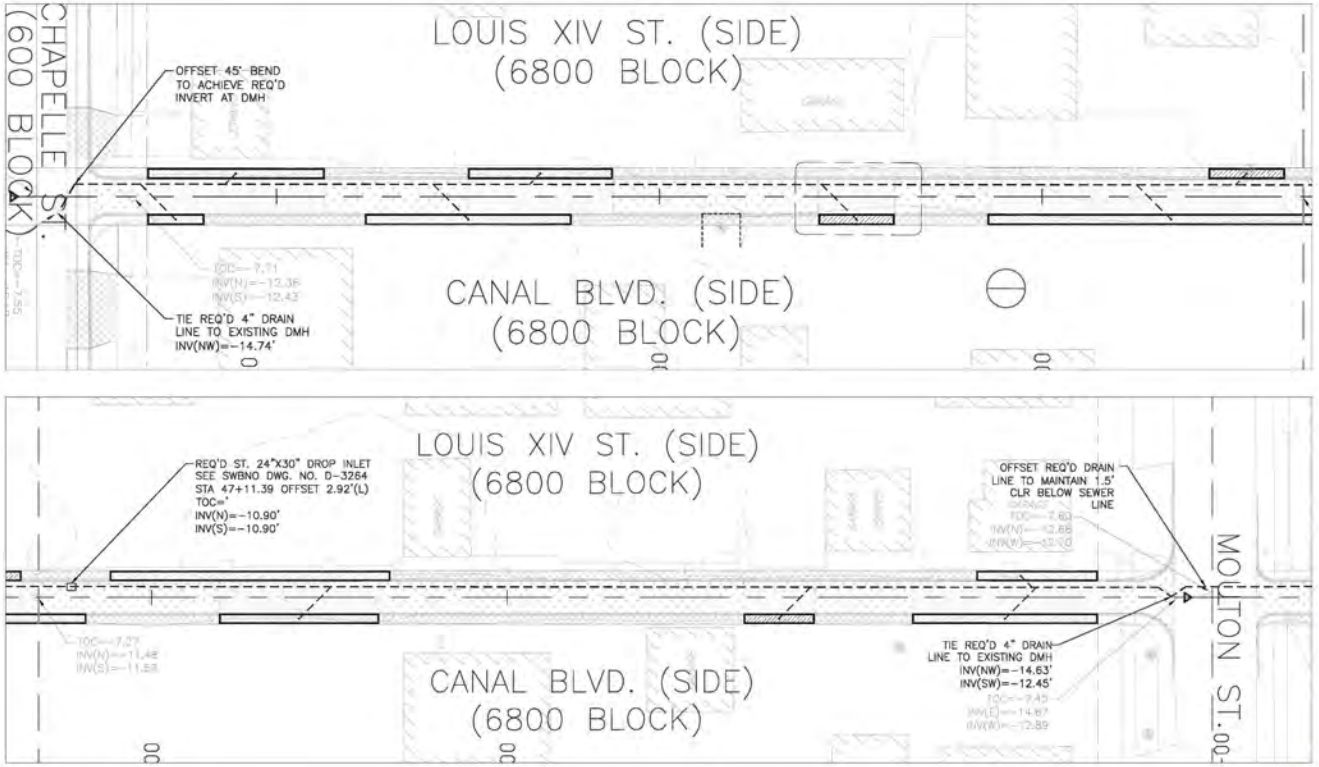
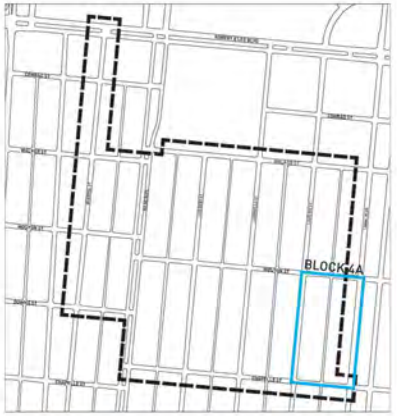
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

3B LOUISVILLE ST & LOUIS XIV ST ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS





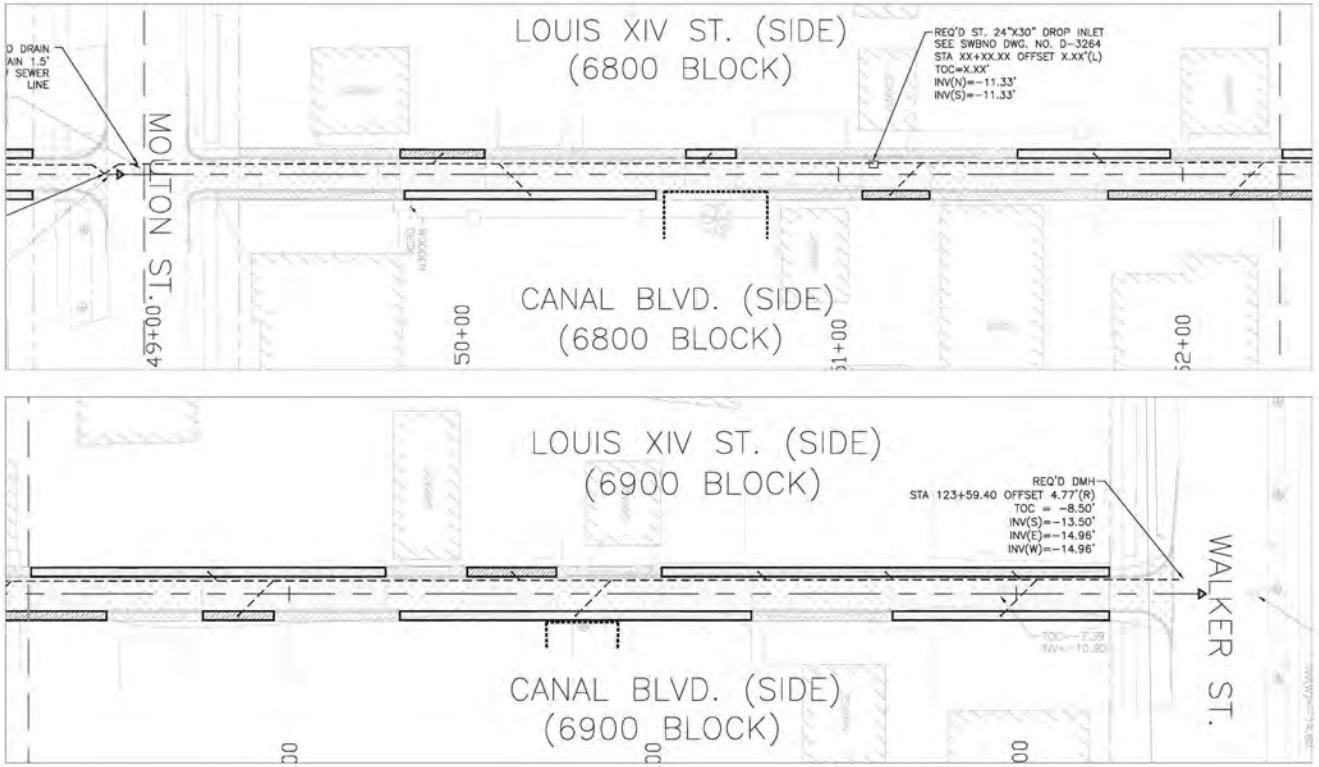
LEGEND

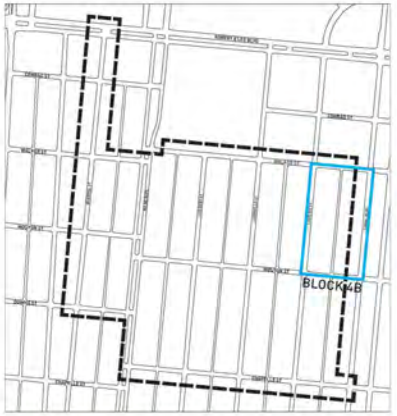
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

4A LOUIS XIV ST & CANAL BLVD ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS





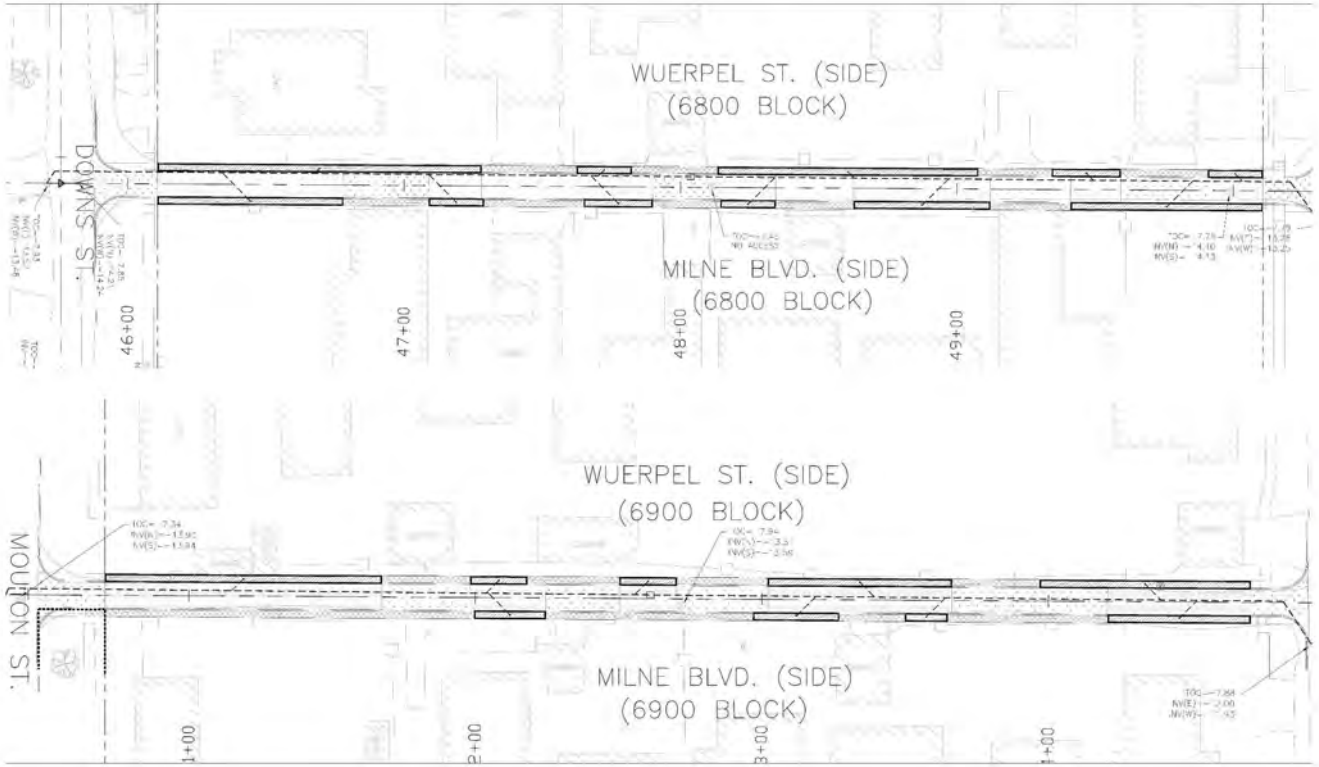
LEGEND

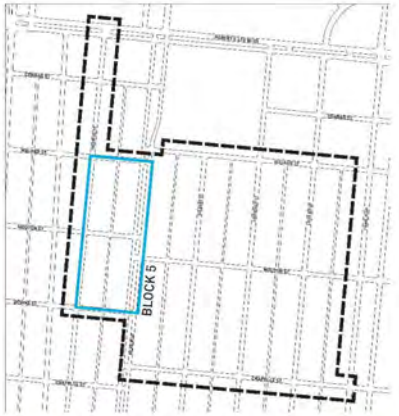
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

4B LOUIS XIV ST & CANAL BLVD ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS





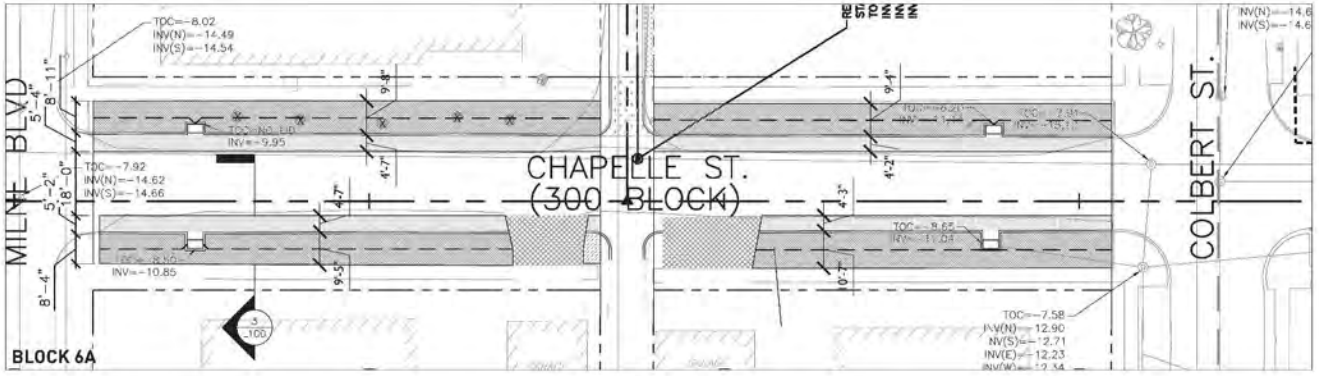
LEGEND

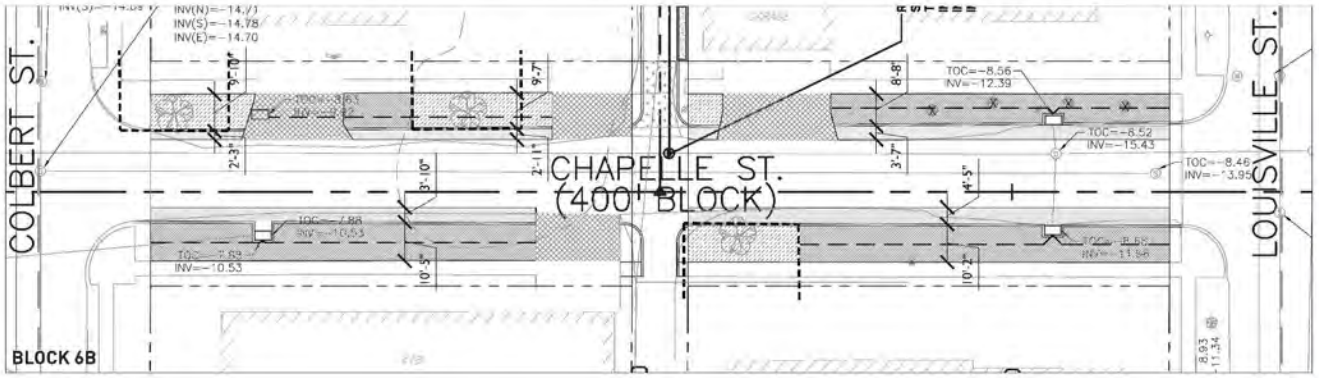
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREE(S) TO BE REMOVED
- TREE PROTECTION FENCE

5 WUERPEL ST & MILNE BLVD ALLEY

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP AND MICHAELS





LEGEND

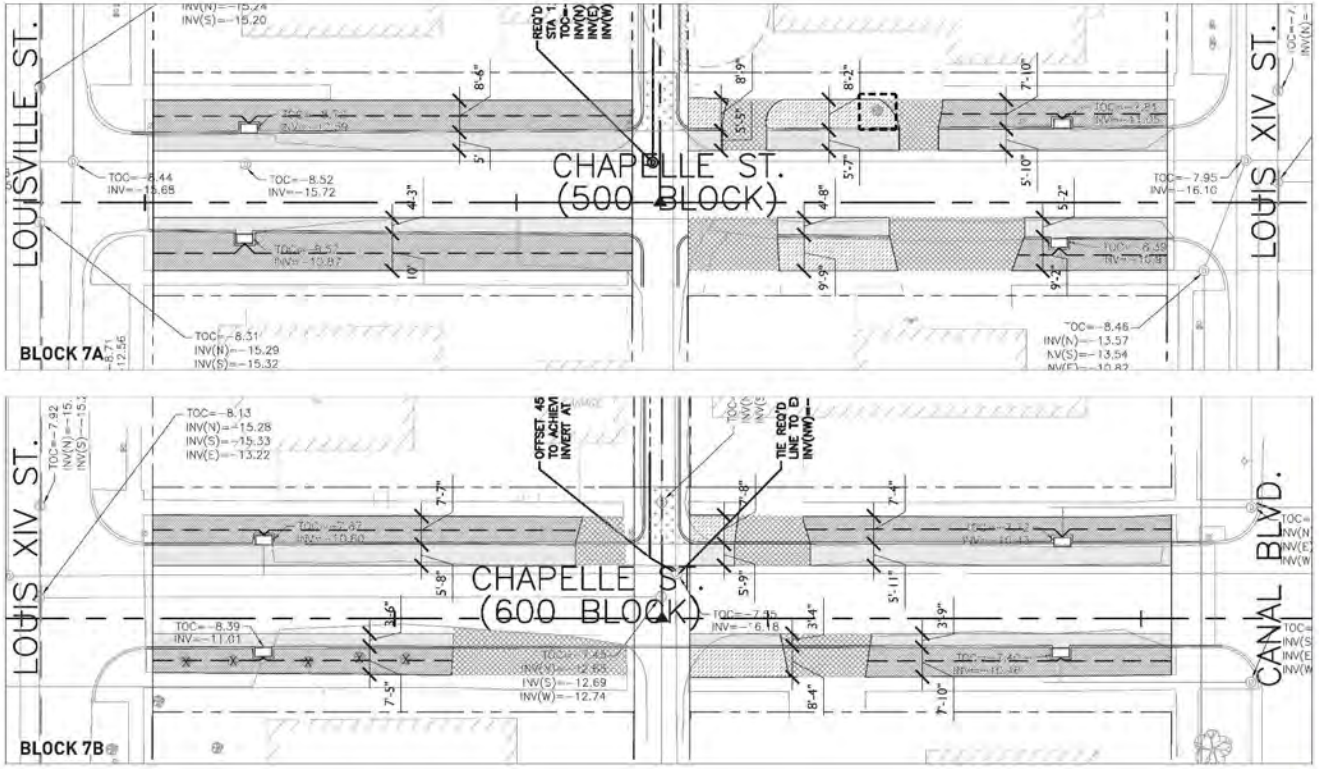
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREES TO BE REMOVED
- TREE PROTECTION FENCE

6 CHAPELLE ST - BLOCK 6 A & B

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN MOSSOP MICHAELS

Gaea



LEGEND

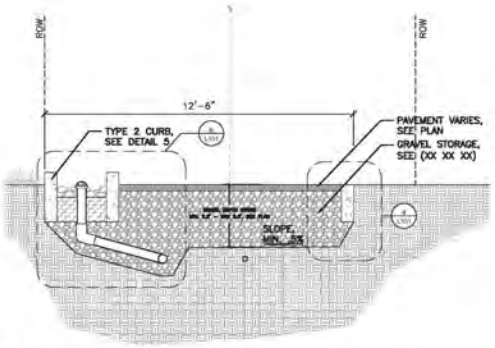
- POROUS PAVEMENT
- GRAVEL PAVEMENT
- RESTORED CONCRETE
- RESTORED LANDSCAPE
- BIOSWALE
- TREES TO BE REMOVED
- TREE PROTECTION FENCE

7 CHAPELLE ST - BLOCK 7 A & B

LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

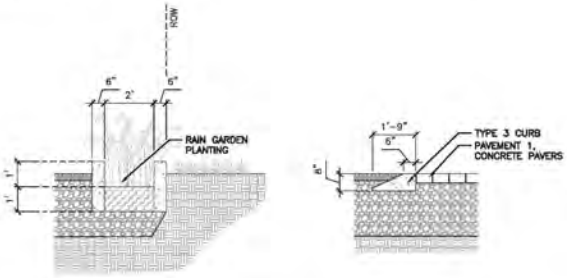
SPACKMAN MOSSOP MICHAELS

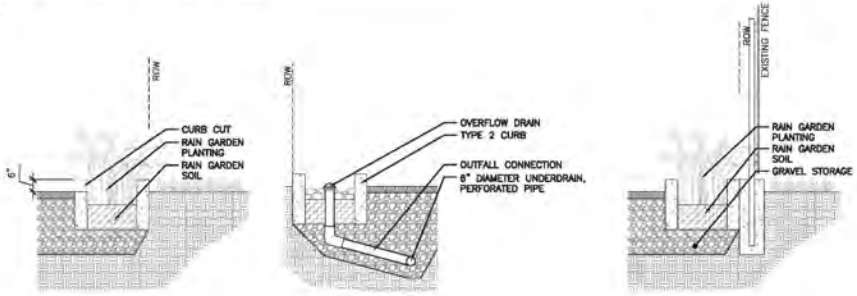
Gaea



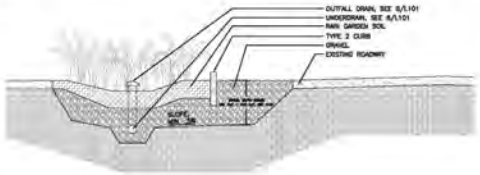
1 TYPICAL SECTION OF ALLEY

2 CURB AND PAVEMENT DETAILS





3 BIOSWALE DETAILS



4 RAIN GARDEN DETAIL

DETAIL DRAWINGS
LAKEVIEW DRAINAGE UPDATES & GREEN INFRASTRUCTURE

SPACKMAN
MOSSOP =
MICHAELS