

## Green Infrastructure Program Before You Begin

### PLEASE READ BEFORE PROCEEDING

- **Limit your use of bullets and other formatting.**
- **Copy and paste as needed.**
- **Log into your account at [https://www.GrantRequest.com/SID\\_5833?SA=AM](https://www.GrantRequest.com/SID_5833?SA=AM) to access saved and submitted requests.**
- **Add mail@grantapplication.com to your safe senders list to ensure you receive all system communications.**
- **Anticipate a notice of application receipt within 24 hours of submission**

## General Information

### Applicant Information

#### Organization

Northeast Shores Development Corporation (NSDC)

#### Executive Officer Title

Board President

#### Executive Officer First Name

Caroline J.

#### Executive Officer Last Name

Peak

#### Executive Officer Address

P.O. Box 19069, Cleveland OH 44119

#### Executive Officer Phone

440.895.5200

#### Executive Officer Extension

0

#### Executive Officer E-mail Address

cjpeak@yahoo.com

#### Project Manager Title

Real Estate Portfolio Manager, New Village Corporation(working as agent for NSDC)

#### Project Manager First Name

Arleesha

#### Project Manager Last Name

Wilson

#### Office Address

11327 Shaker Blvd., 500W, Cleveland OH 44104  
PM #2: Jamar Doyle, Executive Director, Greater Collinwood Development Corp., 15614 St. Clair Avenue, Cleveland, OH 44110, 216.383.9772, JDoyle@greatercollinwood.org

**Office Phone**

216.830.2770

**Extension**

**Alternate Phone**

**E-mail**

AWilson@clevelandnp.org

Project Information

**Parcel Numbers**

114-19-001 & 114-19-002

**Green Infrastructure SCM's Proposed**

bioretention & underground chambers

**Watershed of Project**

Euclid Creek

**Project Start Date**

January 01, 2020

**Project End Date**

November 30, 2020

**Total Project Cost**

281667.07

**Requested Grant Amount**

244057.07

**Project Title**

LaSalle Parking Lot Green Retrofit

**Project Address**

819-829 & 837-839 E. 185th St., Cleveland, OH 44119

Green Infrastructure SCM's Data.

**Provide acre measurements to the nearest hundredth**

List each proposed SCM and denote the square footage footprint of each (e.g., Rain Garden – 400 SF).

For "Rain Harvesting", indicate "0" square feet.

- 1) Underground Chambers
- 2) Bioretention

List each proposed SCM and denote the drainage area to each to nearest hundredth of an acre.

- 1) 0.267 acres
- 2) 0.44 acres

**Pre-Construction Impervious Acres**

0.707

**Post-Construction Impervious Acres:**

0.689

**Change in Impervious Acres**

-0.02

**Impervious Acres Draining to each SCM(s)**

- 1) 0.26 acres
- 2) 0.43 acres (water will overflow into SCM#1)

**\*Pre-Construction – Average Annual Runoff (in.) of Project Area**

35.34

**Post-Construction - Average Annual Runoff (in.) of Project Area**

7.05

**Annual Runoff Reduction (gal/yr.)**

(Runoff Reduction (in.) / 12 x Treated Drainage Area (acre) x 325,851.433 = gal/yr.)

473349

Existing Conditions Results (EPA National Stormwater Calculator Report). For proposed projects that are only adding SCMs to the existing land use, this will serve as your *baseline scenario* and you do not need to upload a report for "Improvements Meeting Minimum Title IV Standards Results" (see below).

Use [\\*Analysis using the US EPA Stormwater Calculator](#) and upload the results here

National stormwater calculator.pdf

**Provide the following map:**

**Show existing project discharge points and corresponding drainage areas and drainage patterns, including offsite areas that drain into the project area. As applicable, show the limits of existing forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.**

### Existing Conditions Map

Site Plan 2-LaSalle Pre.pdf

Improvements Meeting Minimum Title IV Standards Results (EPA National Stormwater Calculator Report). The "Existing Conditions Results" and this report must be submitted if a new or re-development project is being proposed that incorporates SCMs. This report will serve as your baseline scenario.

Use [\\*Analysis using the US EPA Stormwater](#) and upload the results here

**Provide the following map:**

**Show proposed project discharge points and corresponding drainage areas and drainage patterns, including offsite areas that drain into the project area. As applicable, show the limits of existing forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.**

### Post-Development Map with required Title IV SCMs only.

Site Plan 2-LaSalle Post.pdf

### Improvements with Proposed SCMs Results (EPA National Stormwater Calculator Report)

Use [\\*Analysis using the US EPA Stormwater Calculator](#) and upload the results here

National stormwater calculator\_VER\_1.pdf

**Provide the following map:**

**Show proposed project discharge points and corresponding drainage areas and drainage patterns, including areas that drain into the project area. As applicable, show the limits of proposed forest, meadow, lawn, and impervious areas and the percentage of the project area comprised by each.**

**For each proposed SCM, show the following:**

- **The total drainage area**
- **The impervious drainage area, including the % of the sites total Impervious area**
- **The actual size of the practice (square feet)**

## Post-Development Map with SCMS

Site Plan 2-Parking Lot Exhibit.pdf

### Project Narrative

Project Narrative

#### Project Introduction

Introduction (100 word maximum) Provide a brief introduction to the organization that would be delivering the proposed GIG project.

NSDC is a non-profit community development corporation in existence since 1994 and has made a noticeable impact in its target area of North Collinwood. NSDC has joined Greater Collinwood Development Corporation (GCDC), a partner CDC also in the Collinwood neighborhood, allowing for expanded/shared North and South Collinwood service area and the movement of existing NSDC staff to the GCDC organization and payroll. GCDC will manage the proposed project in partnership with a consultant from New Village Corporation, the real estate subsidiary of Cleveland Neighborhood Progress.

#### Project Summary

Describe the GIG project. Include the following information:

- Objectives and Outcomes;
- Proposed design and installation;
- Drawings or figures of the site and GIG project;
- How the SCM will function;
- Other relevant project details; and,
- Current photos of the GIG project site. If awarded, design documents must be submitted to the District for review, comment, and approval prior to site work.

The project's goal is to build on the success of multiple green infrastructure projects implemented in the Collinwood Arts District through the continuation of sustainable, artistic, economically transformational projects. This existing parking lot and soon to be razed buildings (LaSalle Tavern, a residential structure and separate garage) next to the recently refurbished LaSalle Theater will provide much needed stormwater control along E. 185th Street. As identified in the 2017 MCI-LLSES Project Definition Memorandum (I/I TM), this site is located within the Shawnee/Pawnee Area. Although separate storm and sanitary sewers are constructed in the Shawnee/Pawnee Area, the

I/I TM investigation illustrated the area acts more like a combined sewer. The I/I TM identified the area has wet weather capture rates similar to a combined sewer system with 54% of the impervious surfaces entering the sanitary sewers during small and medium storms. Additionally, the I/I TM stated the area had numerous problems with basement backup. The owners of the LaSalle Theater have also experienced basement backups since purchasing the theater in August 2016.

Furthermore, in the I/I TM, dye testing and CCTV was summarized from past studies for the Shawnee/Pawnee Area. The owners of the LaSalle additionally performed CCTV investigation in 2017 to identify potential basement backup issues. This limited investigation documented the connection of the garage downspout from the garage roof connected to the existing sanitary sewer located onsite, which seemed to be flowing in pipes towards E. 185th Street under the LaSalle Tavern. Since the three buildings will be razed by November 2019, the existing sanitary and storm sewers in the site will be removed back to the right-of-way line on E. 185th. This will remove any potential I/I from these three buildings. The proposed design will pave over these three razed buildings and allow for runoff to sheet flow into a centralized bioretention that will then overflow into an underground chamber. For the roof drainage of the LaSalle Theater, limited CCTV investigation was inconclusive on connections of stormwater to the sanitary sewers on site. However, this investigation did show that the northern roof downspout is connected to the sewers on Kildeer Avenue. The southern roof and roof for the AC units have stormwater runoff flowing from multiple internal and external downspouts to the concrete area between the LaSalle Theater & LaSalle Tavern. External downspouts would be rerouted to the proposed underground chambers. The one downspout internal to the building will be disconnected at its current connection with the exterior catch basin. This large downspout will be redirected to the proposed underground chamber. The I/I TM stated that the proposed relief sewer should manage a 5-year, 6-hour storm event (2.20 inches with a peak one-hour intensity of 1.4 inches). The proposed design would manage stormwater from the capturable impervious surfaces for that rain event. Utilizing the National Stormwater Calculator, this equates to approximately 423,794 gallons of stormwater control. However, since the project is located in a separate sewer system and we do not have all the information needed to prove I/I volumes, we estimated the stormwater control gallons at 54% or 228,849 gallons of stormwater controlled within the Shawnee/Pawnee Area.

The Cuyahoga County Landbank will be razing the buildings onsite in late 2019. Basements will be cracked or removed with sand or stone backfill. Sandy soils have been encountered on site. The 42 space parking lot does not require BMPs as per code, since the site was 100% impervious. But, this project will be a great addition to the existing Green Infrastructure Tour that was created in the Waterloo area.

Other stops along the green infrastructure tour have been built. The green infrastructure tour currently includes:

- Street Tree Planting,
- Bioretention,
- High-flow rate Bioretention,
- Pervious Concrete Paving,
- Infiltration Basin,
- Stormwater reuse for urban agriculture.

This green retrofit will be seen by thousands of Clevelanders. The revitalized LaSalle Theater currently has multiple events annually. These events range in size from 600 to 40 participants. It has 5 residential apartments located on the second floor and two businesses located on the ground level. The GCDC manages the property and the rental spaces, which are occupied. A private catering company, A Taste of Excellence, currently programs the facility. With all of this activity, the GCDC and NSDC has the income to provide long term maintenance of these SCMs.

This project will utilize a green infrastructure element not already implemented along the corridor. To this end, the design team will utilize inventive green infrastructure and include the needed public greenery required for an urban event space. Typical urban event spaces need outdoor areas for show intermissions and gathering spaces. The design of the bioretention cell and landscape frontage along E. 185th street provides an outside "garden" for the Theater. Users exit these doors during intermission to get fresh air and rest. Existing gutters and downspouts from the LaSalle building will be redirected to drop water into underground chambers. Stormwater will then overflow into existing storm sewer connections on Chickasaw Avenue or on E. 185th.

## Project Summary Photos

Upload a zip or pdf file containing up to five(5) photos

Pre-development photo log.pdf

## Ability to Provide Long Term Maintenance

Describe the plans for long-term maintenance, addressing ALL the following questions:

- Who owns the land where the GIG project will be located? Does the applicant have site control?
- What is the anticipated design life expectancy of the green infrastructure features for which GIG funding is requested?
- Who is responsible to provide on-going maintenance for the design life of the project and how will maintenance be ensured?
- Provide an anticipated list of routine maintenance tasks/activities, schedule, and estimated annual cost to ensure continued performance of the GIG project.

The property is currently owned by the NSDC and we will permanently maintain the property, with the assistance of GCDC and LaSalle AMC TCE, LLC, the owner of adjacent theatre building which will have use of the parking lot (NOTE: NSDC is the General Partner in the LLC). We have site control and are in good standing with the District.

NSDC is the proud owner and manager of four other similar green parking lots and retains the services of several contractors who maintain current landscaping, bioretention, pervious concrete, infiltration basin and parking lot and will use these existing service providers under a shared maintenance agreement with GCDC. NSDC will utilize these services to maintain this lot as

well. Additionally, NSDC has asked the support of GCDC with assistance in review of the maintenance plan for the porous pavement and dry wells. This green parking lot is part of an ongoing mission of the City of Cleveland and the North Shore Collinwood Neighborhood to be more sustainable.

Typical life span of porous pavement and dry wells are 20 to 30 years depending strongly upon design and maintenance.

Anticipated routine maintenance will be approximately \$600 to \$1,200 per year and includes:

- Vacuum underground chambers as needed (typically once every 5 years);
- Refresh mulch, weed, replace dead plants and remove sediment as needed in the bioretention.

## Visibility and Public Outreach

What audiences will be exposed specifically to the green infrastructure components of this project (neighbors, students, community groups, public)?

- Describe how these audiences will interact with the GIG project and include methods of exposure, frequency, and education components.

The historic LaSalle Theatre, constructed in 1927 as a historic single screen theatre building, was the showplace and public meeting place of its day. By the 1990s the theater operation was disbanded, and the property languished and fell into disrepair under various owners until NSDC saved it from demolition. NSDC, as managing member of LaSalle AMC TCE LLC, largely completed Phase I of the restoration work on the 22,000-square foot property between October 2016 and March 2018.

The property will have a second life as a new public showplace, the LaSalle Arts and Media Center. The center is an event space for meeting and banquet rentals, live music and theatre performances, art exhibitions, music recording, educational presentations, and other community gatherings. Recent events have included a spring concert for a local charter school, a 30th anniversary/fundraiser for Enterprise Community Partners and several planned gatherings/concerts/recitals this fall. In addition, the project included the rehabilitation of three (3) street level retail storefronts and five (5) upstairs affordable apartments.

Interpretative signage

This grant will include educational interpretive signage. The signs will be designed to educate the public about green parking lots and the benefits within the watershed. Signs will be highly visible to not only local residents, but visitors from out of state and located within the bioretention area and along E. 185th street. Thousands of visitors each year attend events at the LaSalle or the Collinwood Arts District from as far away as New York City and California. Most recently, the City of Detroit visited to see and discuss the new green infrastructure parking lots on Waterloo (sponsored by the Kresge Foundation).

## Tasks and Deliverables



Submit a schedule of GIG project tasks and deliverables with start dates and end dates for the significant benchmarks with project completion date defined.

schedule.docx

## Letters of Support

- Applications must include one letter of support from the applicable councilperson.
- Applications must include a letter of support from each non-municipal project partner named in the application. Please note this applies to non-municipal partners only. Please do not include letters of support from various municipal departments unless specifically required.
- Applications proposing work on publicly-owned property, including within the right-of-way, must include a letter of support from the applicable public office with control over the property. For the City of Cleveland, a GIG project in the right-of-way in the City of Cleveland must include a support letter from the Mayor's Office of Capital Projects.
- Do not include any letters of support beyond those specified above. The Sewer District does not want extraneous letters of support.

LOS\_Polensek\_LaSalle Green Infrastructure.pdf

## Budget

Budget Information

### Budget Summary

The Budget Summary and Budget represent the green infrastructure components of the project exclusively. Include details on the provider for all in-kind services and/or materials including specific material cost and hourly rate. If there is a volunteer component, please identify the source of volunteers.

The LaSalle Theater rehabilitation is finalizing the last pieces of the project in order to transform the E. 185th corridor. The city has already spent millions on the rehabilitation and has another \$48,000 cash to finish up the project, including the parking lot. The existing lot buildings are being demolished by the Cuyahoga County Landbank in 2019. They will also compact the subgrade.

## GIG PROJECT INCOME

NEORSD Anticipated

NEORSD Committed

NEORSD Total

NEORS D Description

Foundations Anticipated

Foundations Committed

Foundations Total

Foundations Description

Government Grants or  
Contracts Anticipated

Government Grants or  
Contracts Committed

Government Grants or  
Contracts Total

Government Grants or  
Contracts Description

Organizational Budget Anticipated

Organizational Budget Committed

Organizational Budget Total

Organizational Budget Description

In-kind Support  
Anticipated

In-kind Support  
Committed

In-kind Support  
Total

In-kind Support  
Description

Other Anticipated

Other Committed

Other Total

Other Description

## **GIG PROJECT EXPENSES**

### **Professional Services**

NEORSD Request

58765

Other Funding

Total

58765

Line Item Description

Design & CA Support Services, including survey, design, calculations, interpretation sign design, on

#### **Labor**

NEORSD Request

Other Funding

Total

Line Item Description

#### **Plants**

NEORSD Request

Other Funding

Total

Line Item Description

**Equipment Rental**

NEORSD Request

Other Funding

Total

Line Item Description

**Materials**

NEORSD Request

185292.07

Other Funding

37610

Materials Total

Line Item Description

**Other**

NEORSD Request

185292.07

Other Funding

37610

**Other Total**

222902.07

**Line Item Description**

Construction


**Upload Engineer's Estimate (If applicable)**

Cost Estimate.pdf

Tasks & Deliverables

September 6, 2019 .....NEORSD Grant Due. EDG to upload;  
September 20, 2019 – October 30, 2019 .....Landbank to raze three buildings on site;  
October 2019 thru December 2019 .....NEORSD review of grant applications;  
  
December 31, 2019 .....Notice of grant approval;  
January 31,2020 .....contract between CNVDC & NEORSD;  
  
January 1, 2020..... contract with EDG & MEP subconsultant;  
April 30, 2020..... Survey, infiltration testing, and design finalized;  
May 29, 2020 review of construction drawings and specifications the District and WCDC & Permits  
submitted;  
  
June 2020 .....Permits approved; NEORSD Approval;  
June 25, 2020 ..... Issue CD's and project manual for Contractor Bidding/Quoting;  
July 2020 ..... Construction contractor selected;  
August 2020 ..... Construction begins;  
November 2020 Construction Completion; As Built Drawings; Final Drainage Report; O&M manual;  
Interpretation signage to be sent to NEORSD for review and approval;  
November 2020O&M Training session with CNVDC; Installation of Interpretation signs and ribbon  
cutting with event.

2020 LaSalle Parking Lot Retrofit

		<b>PARKS GROUP</b> Cleveland, Ohio		Date: 9/4/2019				Item Requested for NEORSD GIG Grant Reimbursement
		Project Title: <b>LaSalle Theatre Parking Lot Green Retrofit</b>				Project No.		
Prepared by: W. Troyer		Approved By: K. Holmok		Description: Class 3 Opinion of probable costs for construction				
<b>PHASE DESCRIPTION: Conceptual Plan</b>				NO.	UNIT	UNIT	SUBTOTAL	
				UNITS	MEAS.	COSTS	COST	
<b>Item #</b>								
SPEC	Project Educational Signs	2	EA	\$1,000.00		\$2,000.00	\$2,000.00	
SPEC	General Conditions & Mobilization, asphalt demo	1	LS	\$5,985.00		\$5,985.00	\$5,985.00	
D-22	SWPP	1	LS	\$550.00		\$550.00	\$550.00	
D-42	Downspout disconnection (external)	1	LS	\$1,800.00		\$1,800.00	\$1,800.00	
D-42	Downspout disconnection (internal to building)	1	LS	\$2,785.00		\$2,785.00	\$2,785.00	
SPEC	Storm sewer connection to e. 185TH existing sewers	1	LS	\$2,875.00		\$2,875.00	\$2,875.00	
SPEC	Underground Storage with gravel	1	LS	\$28,500.00		\$28,500.00	\$28,500.00	
SPEC	Bioretention (on top of underground storage)	779	SF	\$25.00		\$19,462.50	\$19,462.50	
ODOT 203	Excavation and Embankment, Including all Excavation Hauled)	1	LS	\$7,650.00		\$7,650.00	\$7,650.00	
ODOT 653	Asphalt Pavement with stone	2023	SY	\$32.00		\$64,743.11	\$64,743.11	
ODOT 653	Concrete Walk	500	SF	\$6.00		\$3,000.00	\$3,000.00	
SPEC	Concrete Curb Stop	42	EA	\$90.00		\$3,780.00		
SPEC	ADA Signage & Handicap Marker	2	EA	\$200.00		\$400.00		
641	Parking Lot Markings	1	LS	\$950.00		\$950.00		
SPEC	Concrete drive apron	2	EA	\$2,500.00		\$5,000.00		
SPEC	Columns	10	EA	\$600.00		\$6,000.00		
SPEC	Fencing - Privacy	96	LF	\$55.00		\$5,280.00		
SPEC	Fencing - parking lot	230	LF	\$40.00		\$9,200.00		
ODOT 661	Landscaping	1	LS	\$5,746.00		\$5,746.00	\$5,746.00	
SPEC	Lighting	2	EA	\$3,500.00		\$7,000.00		
				<b>Subtotal</b>		\$182,706.61		
Contingency (20%)		1	LS	\$36,541.32		\$36,541.32	\$36,541.32	
Design & CA Support Services, including survey, design, calculations, interpretation sign design, one public O&M session, and as builts and review with the District		1	LS			\$58,765.00	\$58,765.00	
Permits (2%)		1	LS	\$3,654.13		\$3,654.13	\$3,654.13	
				<b>PROJECT COSTS SUBTOTAL</b>		<b>\$281,667.07</b>		
<b>Requested construction items for Grant (items in green)</b>								
				<b>NEORSD GIG Grant Request</b>				<b>\$244,057.07</b>

The above Opinion of Probable Project Costs is based on available information and the Landscape Architect's experience and qualifications. This opinion represents the Landscape Architect's best judgment based on experience with the construction of similar projects. The Landscape Architect has no control over the cost of labor, materials, equipment or services furnished by others or over competitive bidding or market conditions and, therefore, does not guarantee that this project cost estimate will approximate the actual project costs.

**ASSUMPTIONS**

- Cost estimates and ranges are developed to the Association for the Advancement of Cost Consulting International (AACE) Class 3 estimate level. Construction cost estimates a. utilize ODOT 2018 prices, and local public bid prices for similar work. Unit costs include direct, indirect costs, contractor overhead and profit.
- b. Excavation and Haul: It is assumed that soil is clean fill and any contaminated soils will be remediated by the Landbank.
- c. Assumed Soil Conditions: Sandy
- d. No bedrock conflicts
- e. No existing utility conflicts, repairs or upgrades are known.
- f. Maintenance costs are not included
- g. The cost estimate does not include fire and all risk insurance.

LANDSCAPE ARCHITECT:

SEAL

*Katherine Glantz Holmok*

Signature  
 Katherine Glantz Holmok, ASLA



9/4/2019

Date



CITY OF CLEVELAND

Office of the Council

[www.clevelandcitycouncil.org](http://www.clevelandcitycouncil.org)

**Michael D. Polensek** COUNCIL MEMBER, WARD 8

COMMITTEES: *Safety - Vice Chair* • Utilities • Rules

September 3, 2019

Northeast Ohio Regional Sewer District  
GJM Administration Building  
3900 Euclid Avenue  
Cleveland, Ohio 44115

RE: NEORS D Green Infrastructure Grant for LaSalle Arts and Media Center

Dear NEORS D Grant Committee:

As Councilman representing Cleveland's 8th Ward, I am writing you to express my full support for request for funding through the NEORS D Green Infrastructure Grant for green infrastructure improvements at the historic LaSalle Arts and Media Center, located at 821 E. 185<sup>th</sup> Street, Cleveland 44119 as sponsored by the Greater Collinwood Development Corporation (GCDC) in association with the Board of the Northeast Shores Development Corporation (NSDC).

NSDC is listed as the owner of the property and has operated in the neighborhood since 1994 to promote community revitalization, notably in the Waterloo Arts District. An MOU was established with GCDC (then dba the Collinwood Nottingham Villages Development Corporation) to allow for an expanded North and South Collinwood service area. In addition, GCDC will manage the project in partnership with New Village Corporation, the real estate subsidiary of Cleveland Neighborhood Progress.

The proposed green infrastructure will allow us to build on the success of multiple green infrastructure projects such as we implemented in the Collinwood Arts District and continue the momentum of sustainable, artistic, economically transformational projects in the neighborhood. It will also provide much-needed storm water control along E. 185<sup>th</sup> Street, improve the quality of life for visitors and residents, and dovetail with the City of Cleveland and the North Shore Collinwood Neighborhood's ongoing mission of sustainability.

**City Hall** 601 Lakeside Avenue N. E., Room 220, Cleveland, OH 44114 • **Phone** (216) 664-4236 • **Fax** (216) 664-3837  
**Email** [mpolensek@clevelandcitycouncil.org](mailto:mpolensek@clevelandcitycouncil.org)



I wish to “Thank you” for your consideration. Please feel free to contact me with any additional questions. I may be reached at my office at (216) 664-4236v or via email at [mpolensek@clevelandcitycouncil.org](mailto:mpolensek@clevelandcitycouncil.org).

Sincerely yours,

*Michael D. Polensek*

Michael D. Polensek  
Councilman, Ward 8

CC: Mr. Jamar Doyle, Exec. Dir., Greater Collinwood Development Corporation  
Ms. Linda Warren, Neighborhood Progress

# National Stormwater Calculator Report

## Site Description

LaSalle

Parameter	Current Scenario	Baseline Scenario
Site Area (acres)	0.55	0.55
Hydrologic Soil Group	C	C
Hydraulic Conductivity (in/hr)	.1	.1
Surface Slope (%)	2	2
Precip. Data Source	KIRTLAND-HOLDEN 2	KIRTLAND-HOLDEN 2
Evap. Data Source	KIRTLAND-HOLDEN 2	KIRTLAND-HOLDEN 2
Climate Change Scenario	None	None
% Forest	0	0
% Meadow	0	0
% Lawn	20	0
% Desert	0	0
% Impervious	80	100
Years Analyzed	13	13
Ignore Consecutive Wet Days	False	False
Wet Day Threshold (inches)	0.10	0.10
LID Control	Current Scenario	Baseline Scenario
Disconnection	0	0
Rain Harvesting	0	0
Rain Gardens	0	0
Green Roofs	0	0
Street Planters	0	0
Infiltration Basins	100 / 5	0
Porous Pavement	0	0

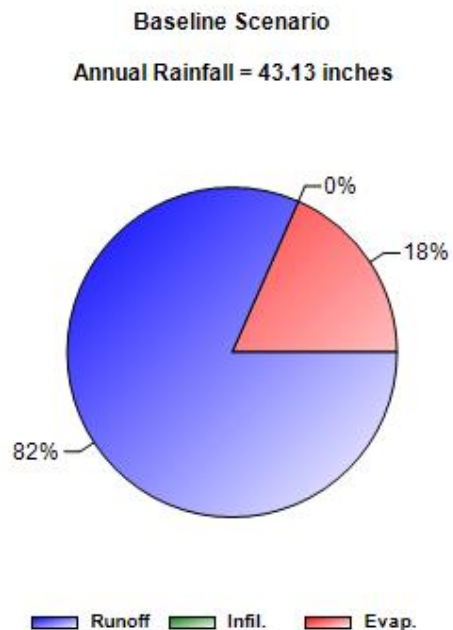
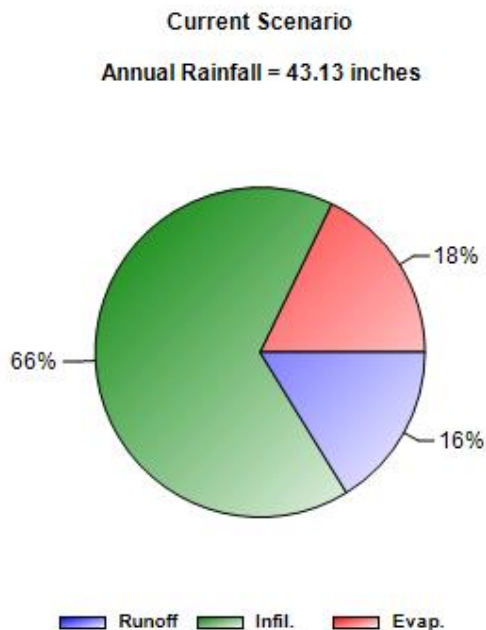
% of impervious area treated / % of treated area used for LID

# National Stormwater Calculator Report

## Summary Results

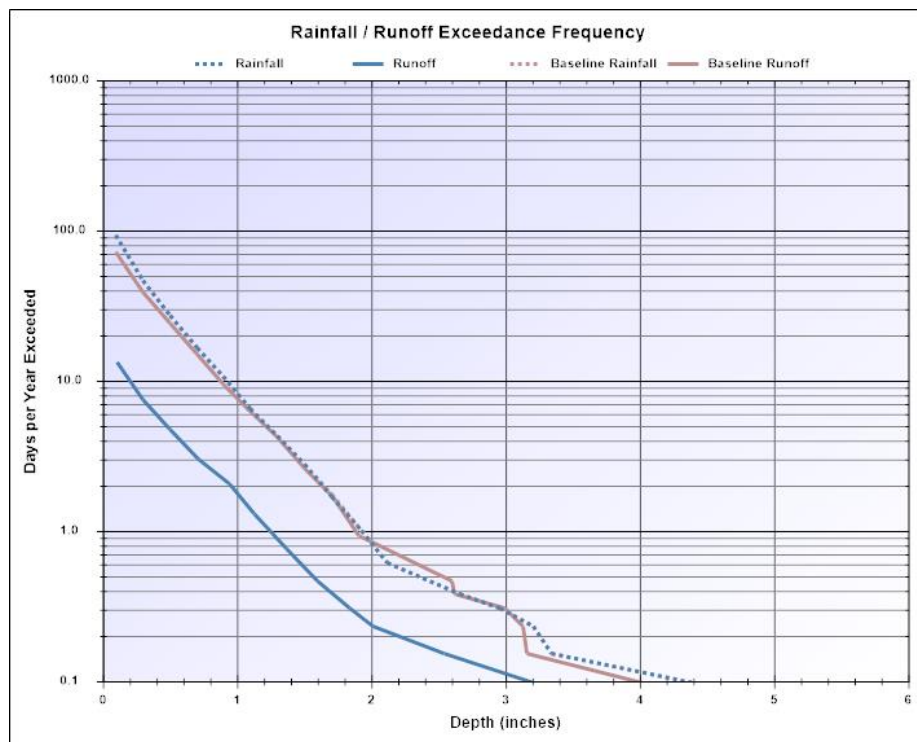
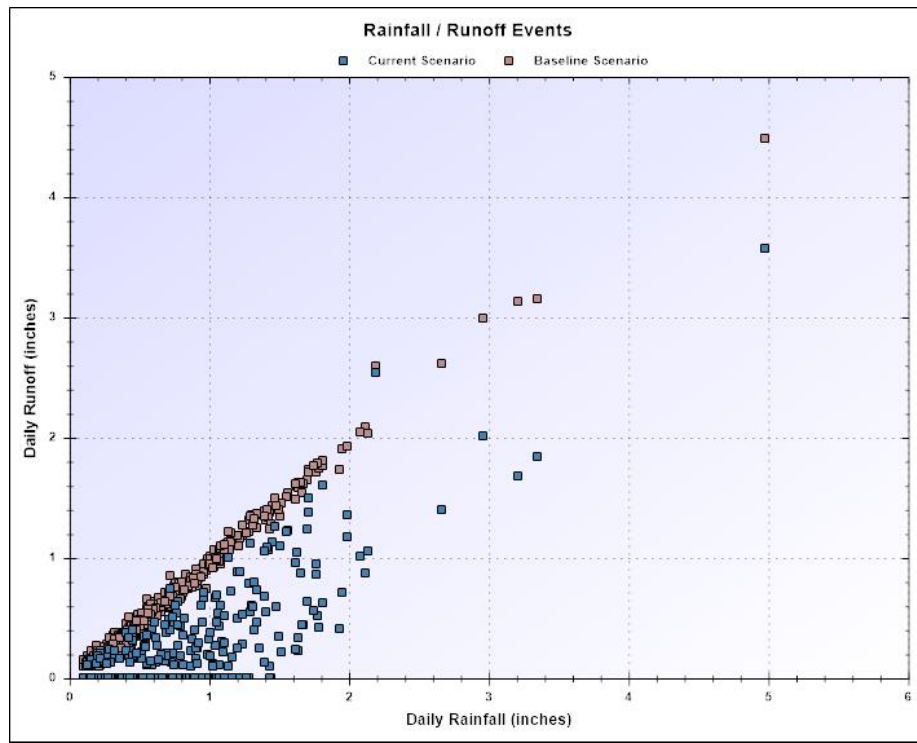
LaSalle

Statistic	Current Scenario	Baseline Scenario
Average Annual Rainfall (inches)	43.13	43.13
Average Annual Runoff (inches)	7.05	35.34
Days per Year With Rainfall	93.02	93.02
Days per Year with Runoff	13.38	71.80
Percent of Wet Days Retained	85.62	22.81
Smallest Rainfall w/ Runoff (inches)	0.13	0.10
Largest Rainfall w/o Runoff (inches)	1.44	0.21
Max. Rainfall Retained (inches)	1.53	0.48



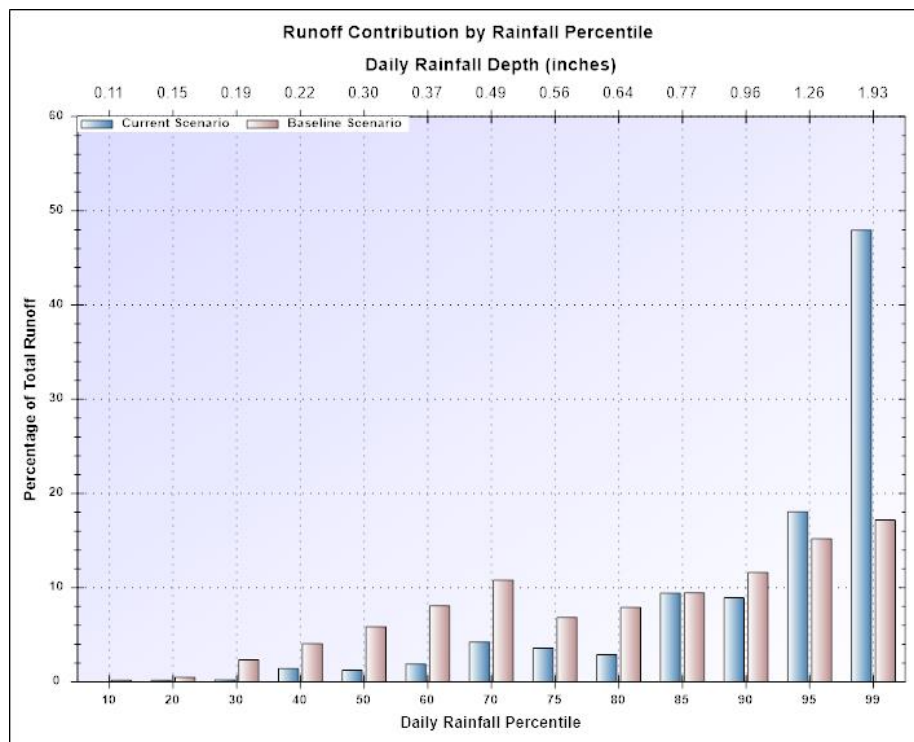
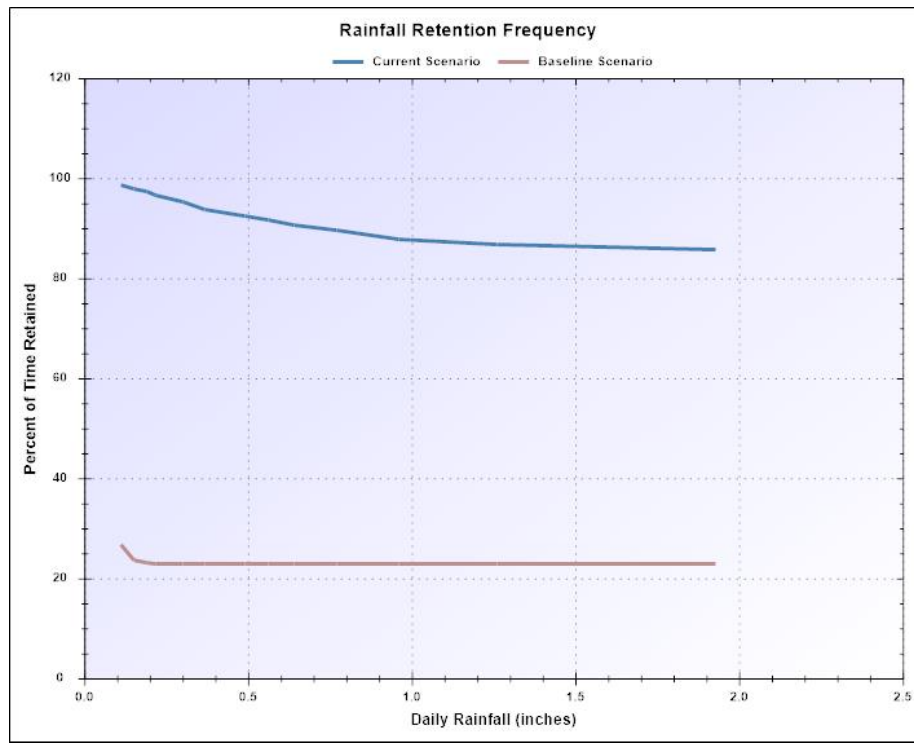
# National Stormwater Calculator Report

## LaSalle



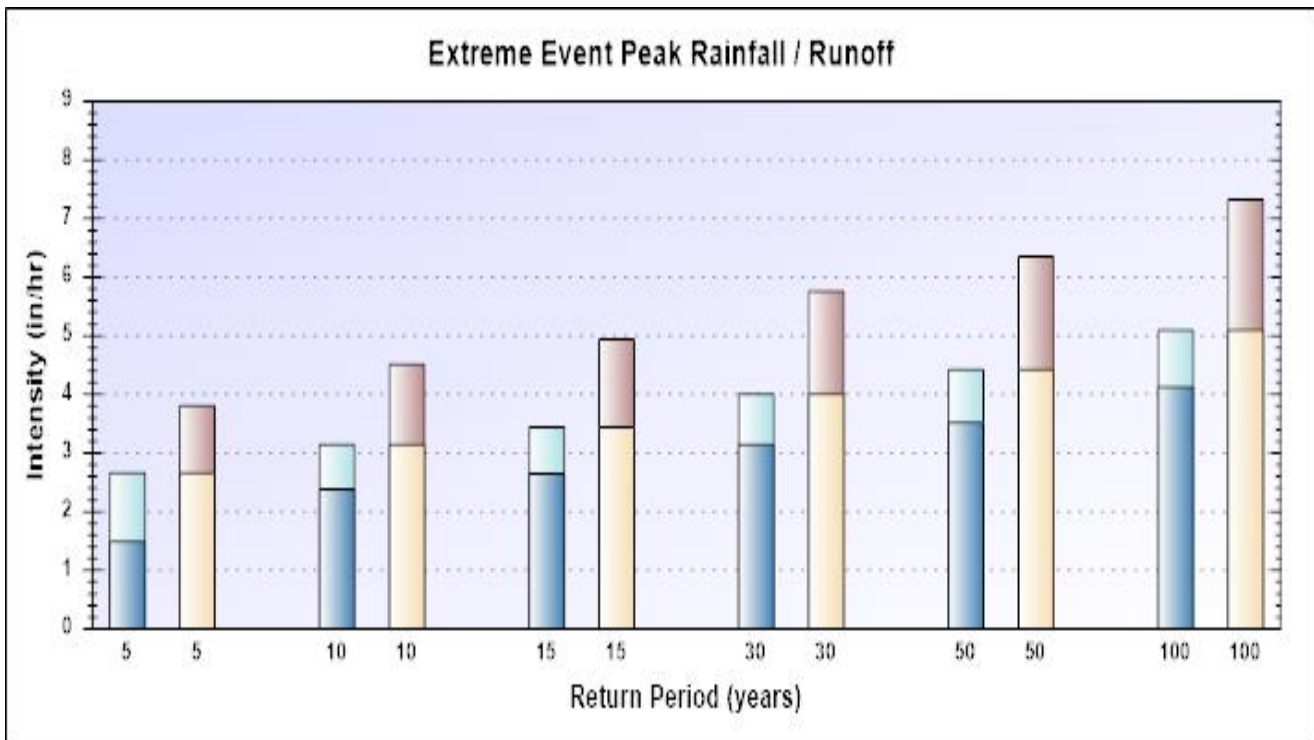
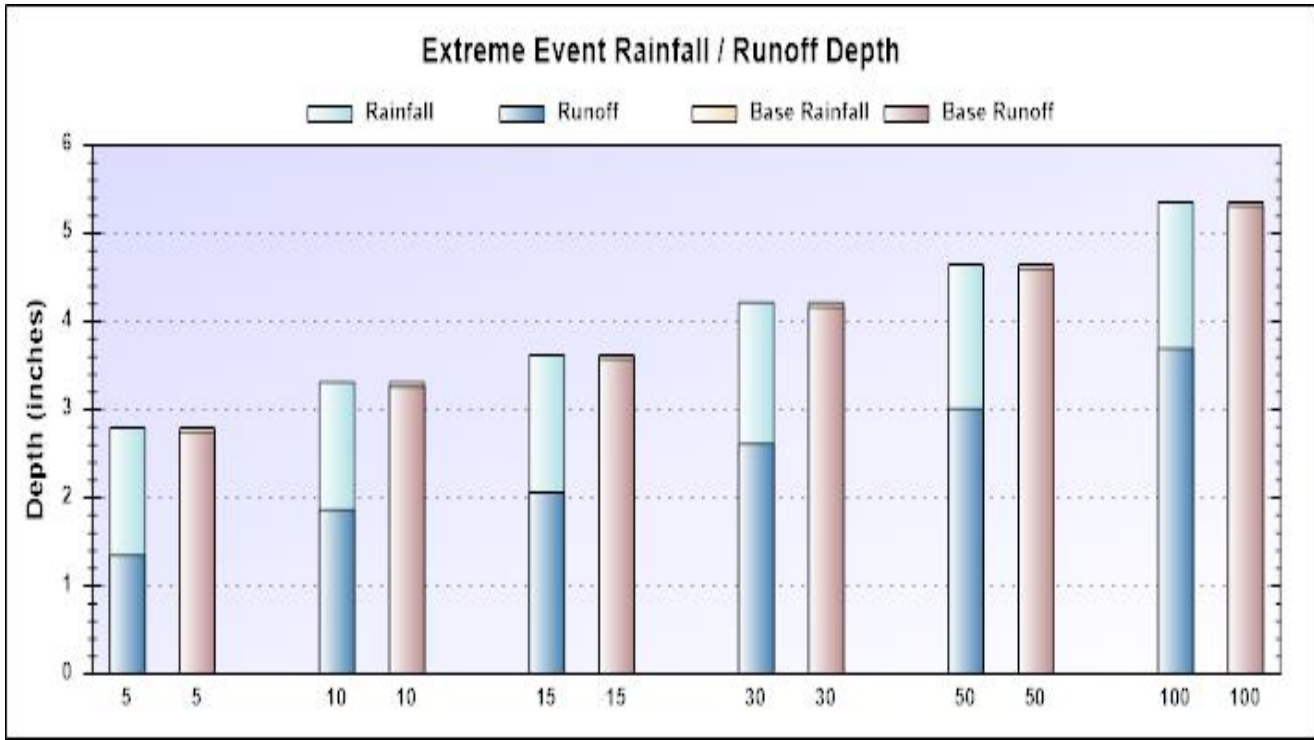
# National Stormwater Calculator Report

## LaSalle



# National Stormwater Calculator Report

LaSalle



# National Stormwater Calculator Report

## Estimate of Probable Costs

LaSalle

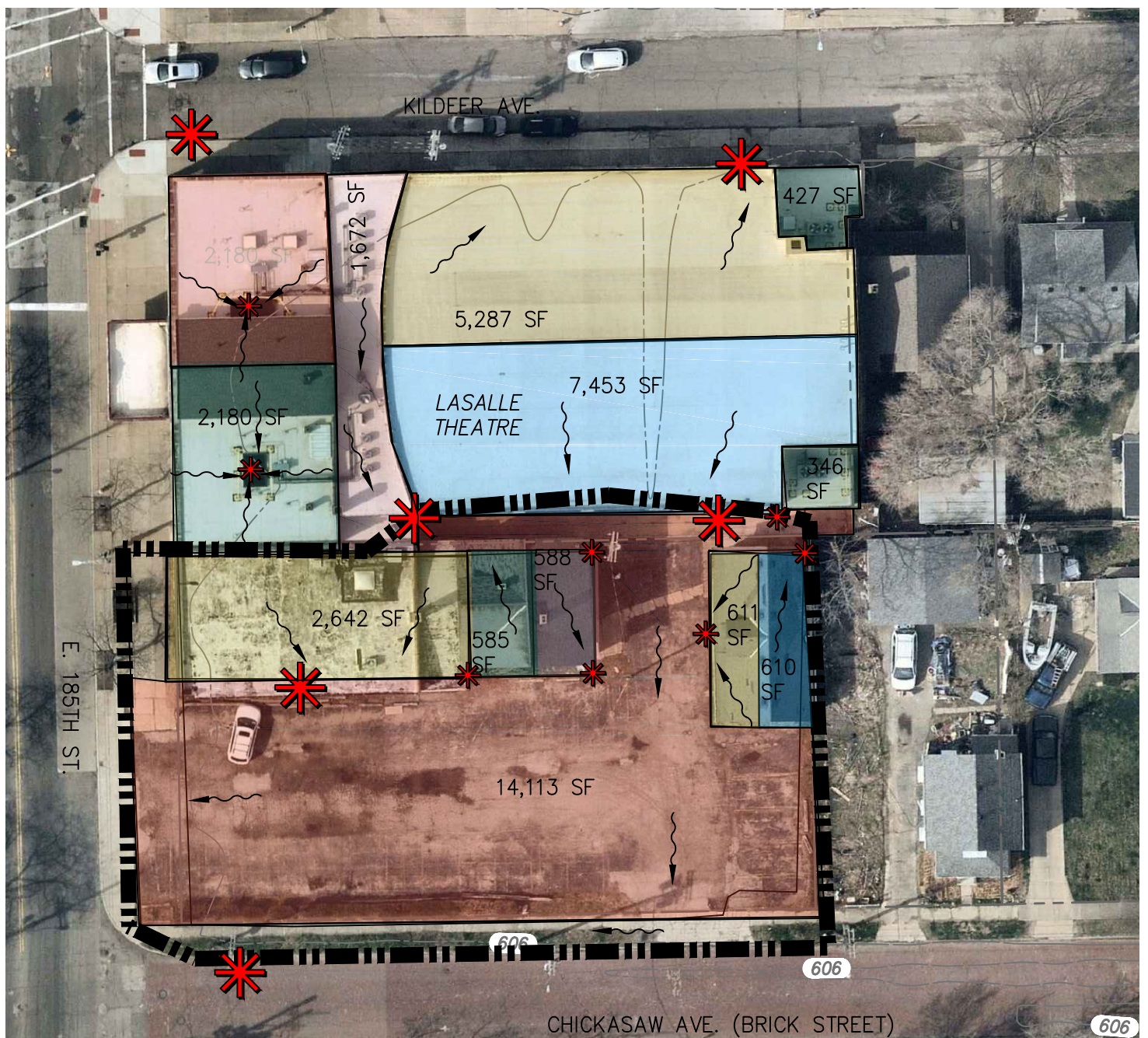
### Capital Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	\$ - \$	\$ - \$	\$ - \$
Rainwater Harvesting	\$ - \$	\$ - \$	\$ - \$
Rain Gardens	\$ - \$	\$ - \$	\$ - \$
Green Roofs	\$ - \$	\$ - \$	\$ - \$
Street Planters	\$ - \$	\$ - \$	\$ - \$
Infiltration Basins	\$ 18,300 - \$ 24,800	\$ - \$	\$ 18,300 - \$ 24,800
Permeable Pavement	\$ - \$	\$ - \$	\$ - \$
Total	\$ 18,300 - \$ 24,800	\$ - \$	\$ 18,300 - \$ 24,800




### Maintenance Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	\$ - \$	\$ - \$	\$ - \$
Rainwater Harvesting	\$ - \$	\$ - \$	\$ - \$
Rain Gardens	\$ - \$	\$ - \$	\$ - \$
Green Roofs	\$ - \$	\$ - \$	\$ - \$
Street Planters	\$ - \$	\$ - \$	\$ - \$
Infiltration Basins	\$ 100 - \$ 2,200	\$ - \$	\$ 100 - \$ 2,200
Permeable Pavement	\$ - \$	\$ - \$	\$ - \$
Total	\$ 100 - \$ 2,200	\$ - \$	\$ 100 - \$ 2,200

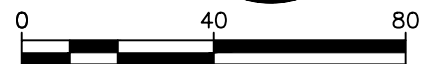
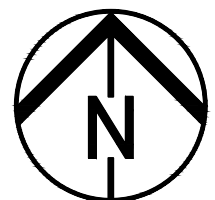




**LEGEND**

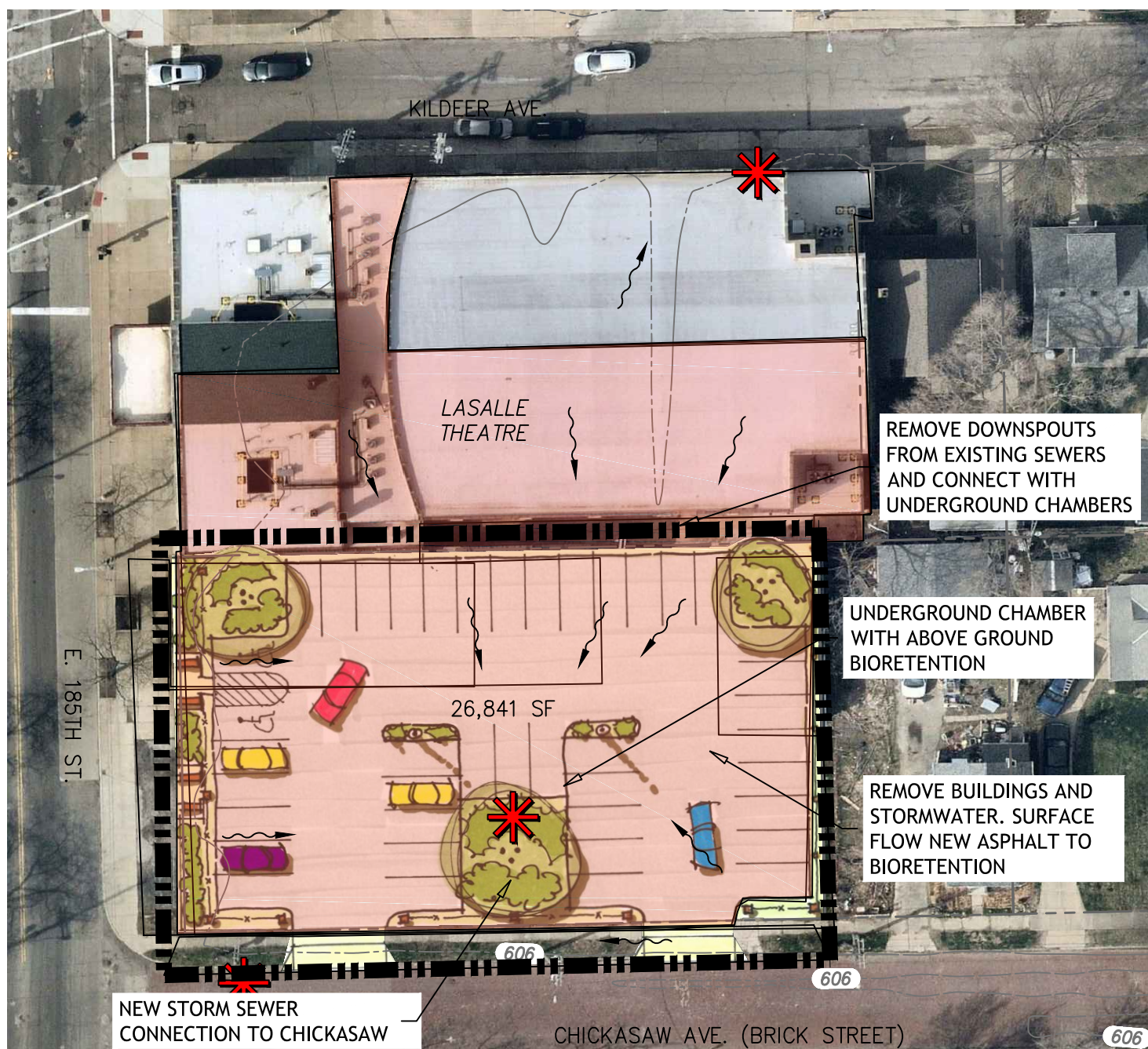
-  PROJECT LIMITS
-  FLOW DIRECTION
-  DOWNSPOUT/CATCH BASIN

**LASALLE GREEN PARKING LOT RETROFIT  
PRE-DEVELOPMENT  
DRAINAGE MAP**



GRAPHIC SCALE IN FEET





**LEGEND**



PROJECT LIMITS

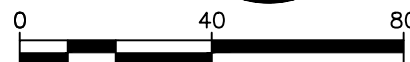
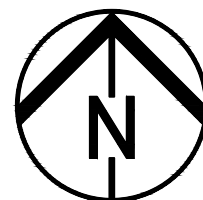


FLOW DIRECTION



DOWNSPOUT/CATCH BASIN

**LASALLE GREEN PARKING LOT RETROFIT  
PRE-DEVELOPMENT  
DRAINAGE MAP**



GRAPHIC SCALE IN FEET

# National Stormwater Calculator Report

## Site Description

LaSalle

Parameter	Current Scenario	Baseline Scenario
Site Area (acres)	0.55	0.55
Hydrologic Soil Group	C	C
Hydraulic Conductivity (in/hr)	.1	.1
Surface Slope (%)	2	2
Precip. Data Source	KIRTLAND-HOLDEN 2	KIRTLAND-HOLDEN 2
Evap. Data Source	KIRTLAND-HOLDEN 2	KIRTLAND-HOLDEN 2
Climate Change Scenario	None	None
% Forest	0	0
% Meadow	0	0
% Lawn	20	0
% Desert	0	0
% Impervious	80	100
Years Analyzed	13	13
Ignore Consecutive Wet Days	False	False
Wet Day Threshold (inches)	0.10	0.10
LID Control	Current Scenario	Baseline Scenario
Disconnection	0	0
Rain Harvesting	0	0
Rain Gardens	0	0
Green Roofs	0	0
Street Planters	0	0
Infiltration Basins	100 / 5	0
Porous Pavement	0	0

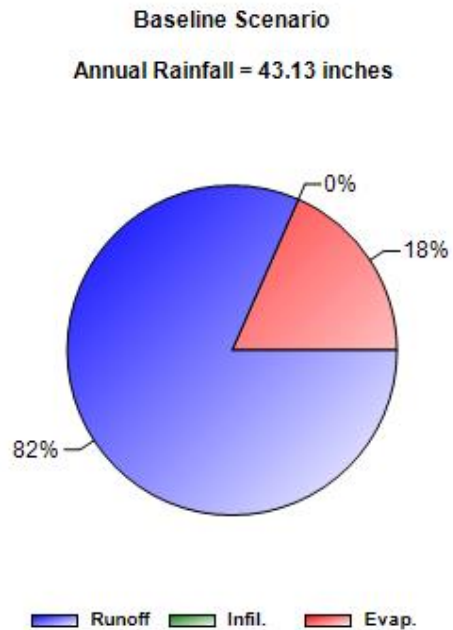
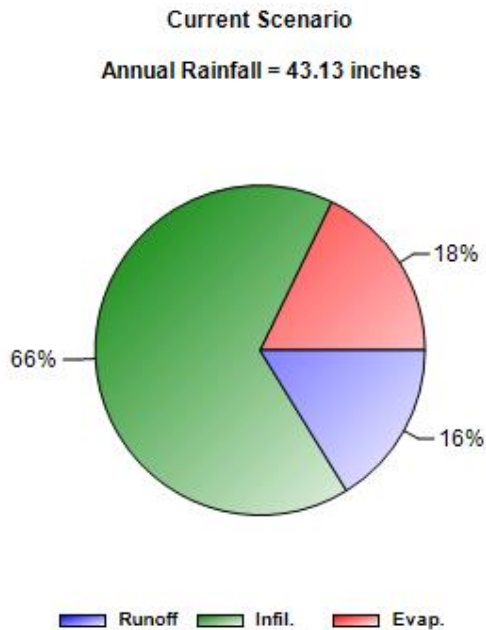
% of impervious area treated / % of treated area used for LID

# National Stormwater Calculator Report

## Summary Results

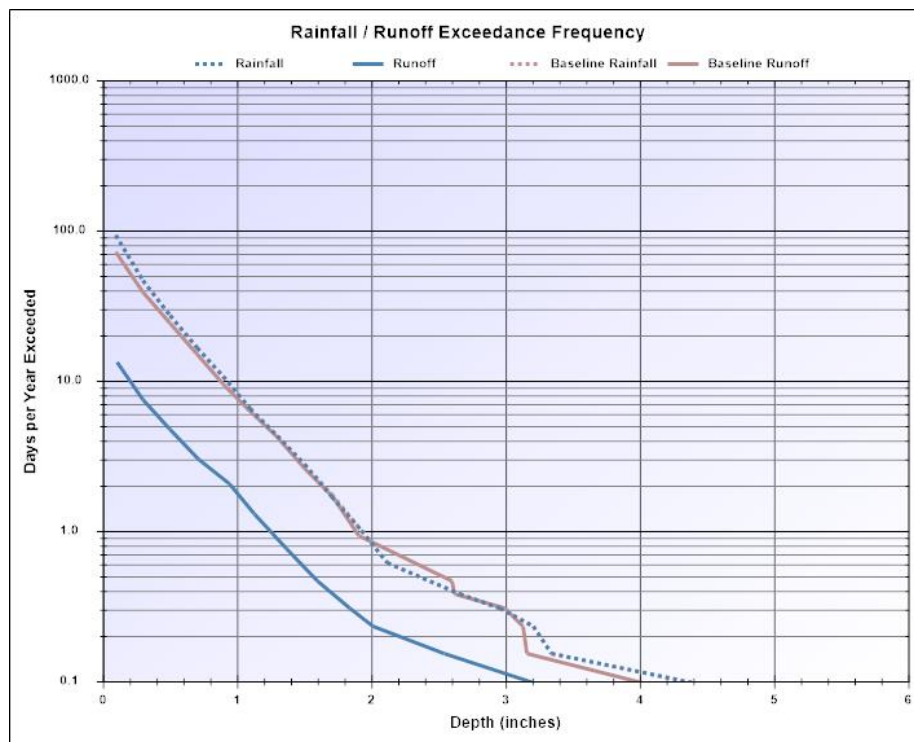
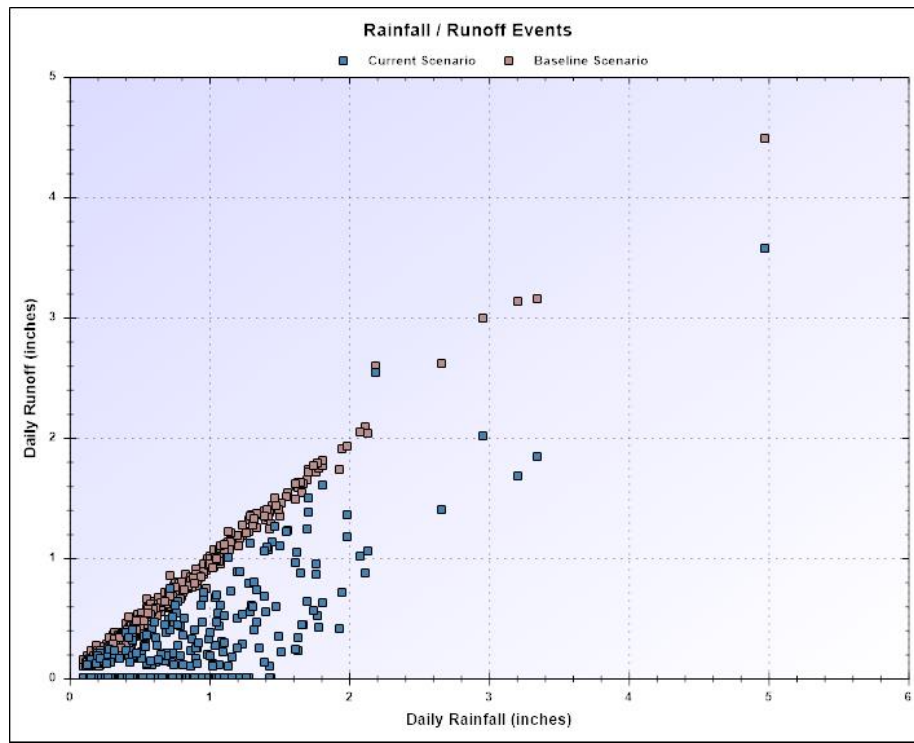
LaSalle

Statistic	Current Scenario	Baseline Scenario
Average Annual Rainfall (inches)	43.13	43.13
Average Annual Runoff (inches)	7.05	35.34
Days per Year With Rainfall	93.02	93.02
Days per Year with Runoff	13.38	71.80
Percent of Wet Days Retained	85.62	22.81
Smallest Rainfall w/ Runoff (inches)	0.13	0.10
Largest Rainfall w/o Runoff (inches)	1.44	0.21
Max. Rainfall Retained (inches)	1.53	0.48



# National Stormwater Calculator Report

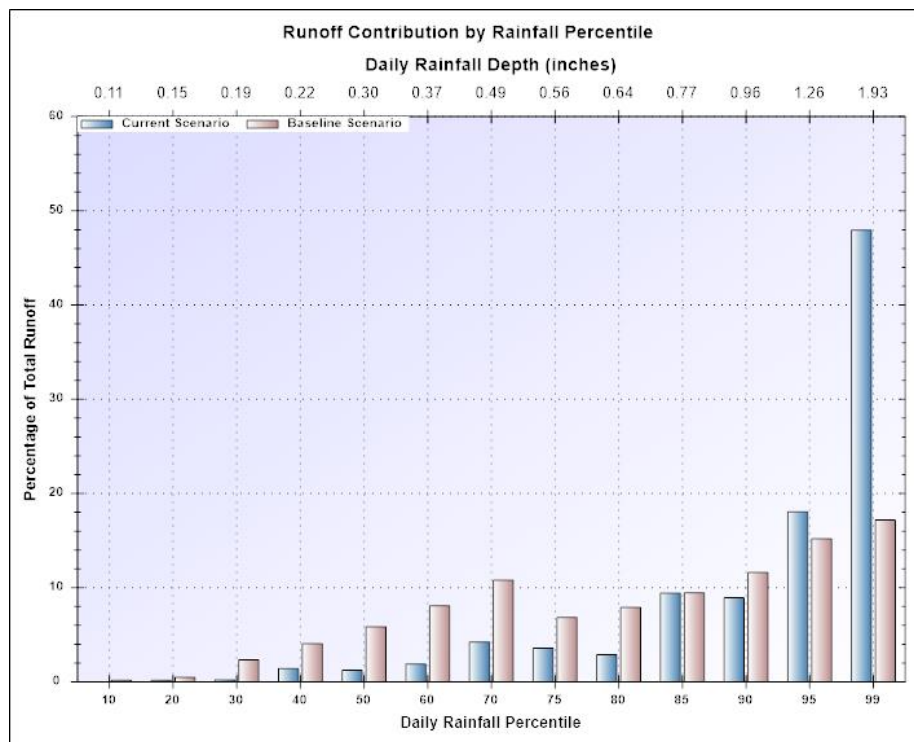
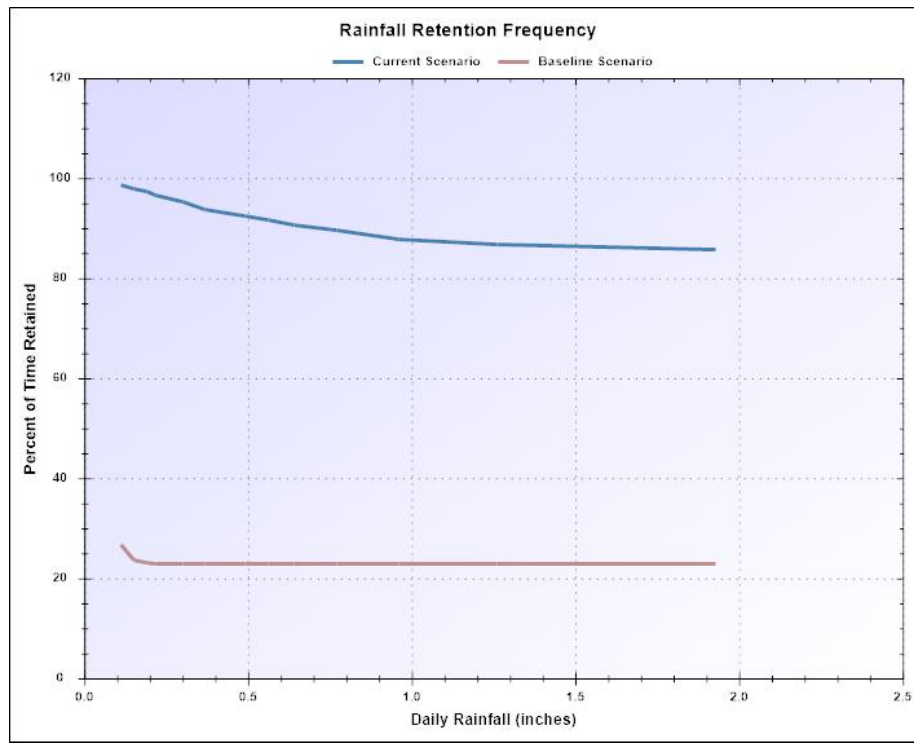
## LaSalle





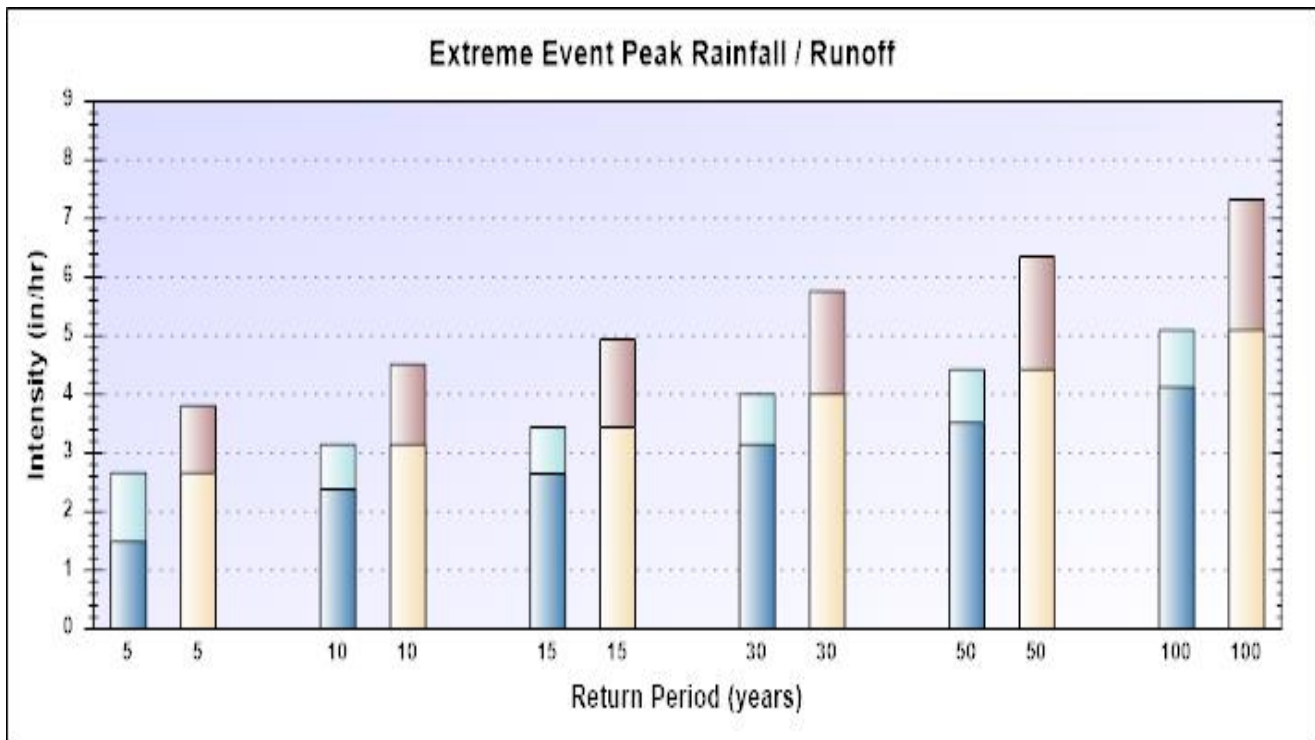
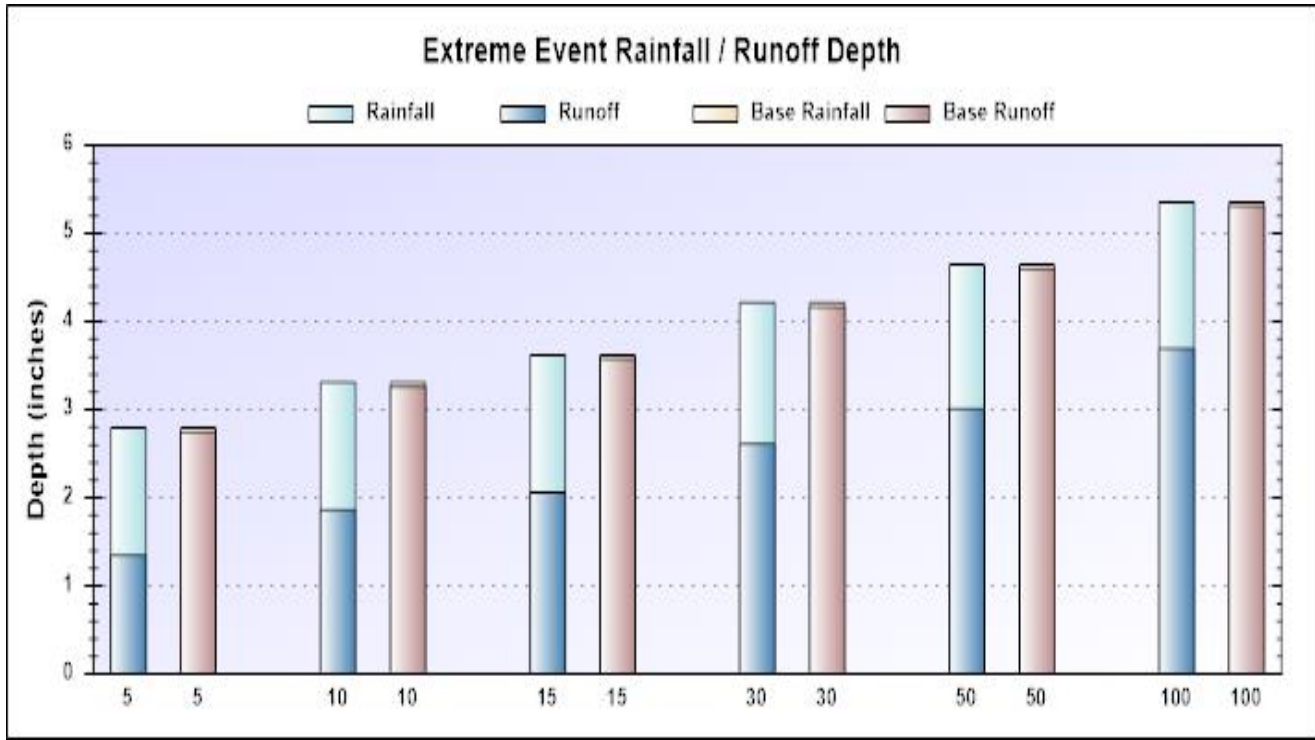
# National Stormwater Calculator Report

## LaSalle



# National Stormwater Calculator Report

LaSalle



# National Stormwater Calculator Report

## Estimate of Probable Costs

LaSalle

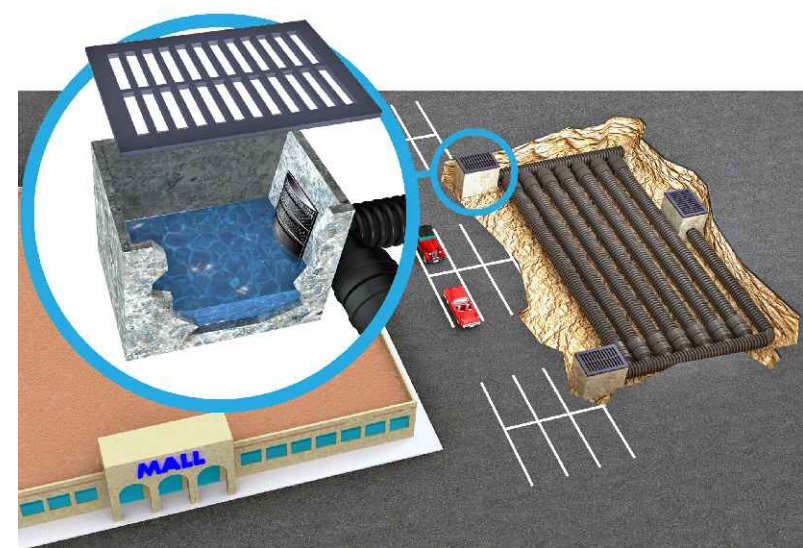
### Capital Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	\$ - \$	\$ - \$	\$ - \$
Rainwater Harvesting	\$ - \$	\$ - \$	\$ - \$
Rain Gardens	\$ - \$	\$ - \$	\$ - \$
Green Roofs	\$ - \$	\$ - \$	\$ - \$
Street Planters	\$ - \$	\$ - \$	\$ - \$
Infiltration Basins	\$ 18,300 - \$ 24,800	\$ - \$	\$ 18,300 - \$ 24,800
Permeable Pavement	\$ - \$	\$ - \$	\$ - \$
Total	\$ 18,300 - \$ 24,800	\$ - \$	\$ 18,300 - \$ 24,800

### Maintenance Costs

LID Control	Current Scenario	Baseline Scenario	Cost Difference
Disconnection	\$ - \$	\$ - \$	\$ - \$
Rainwater Harvesting	\$ - \$	\$ - \$	\$ - \$
Rain Gardens	\$ - \$	\$ - \$	\$ - \$
Green Roofs	\$ - \$	\$ - \$	\$ - \$
Street Planters	\$ - \$	\$ - \$	\$ - \$
Infiltration Basins	\$ 100 - \$ 2,200	\$ - \$	\$ 100 - \$ 2,200
Permeable Pavement	\$ - \$	\$ - \$	\$ - \$
Total	\$ 100 - \$ 2,200	\$ - \$	\$ 100 - \$ 2,200

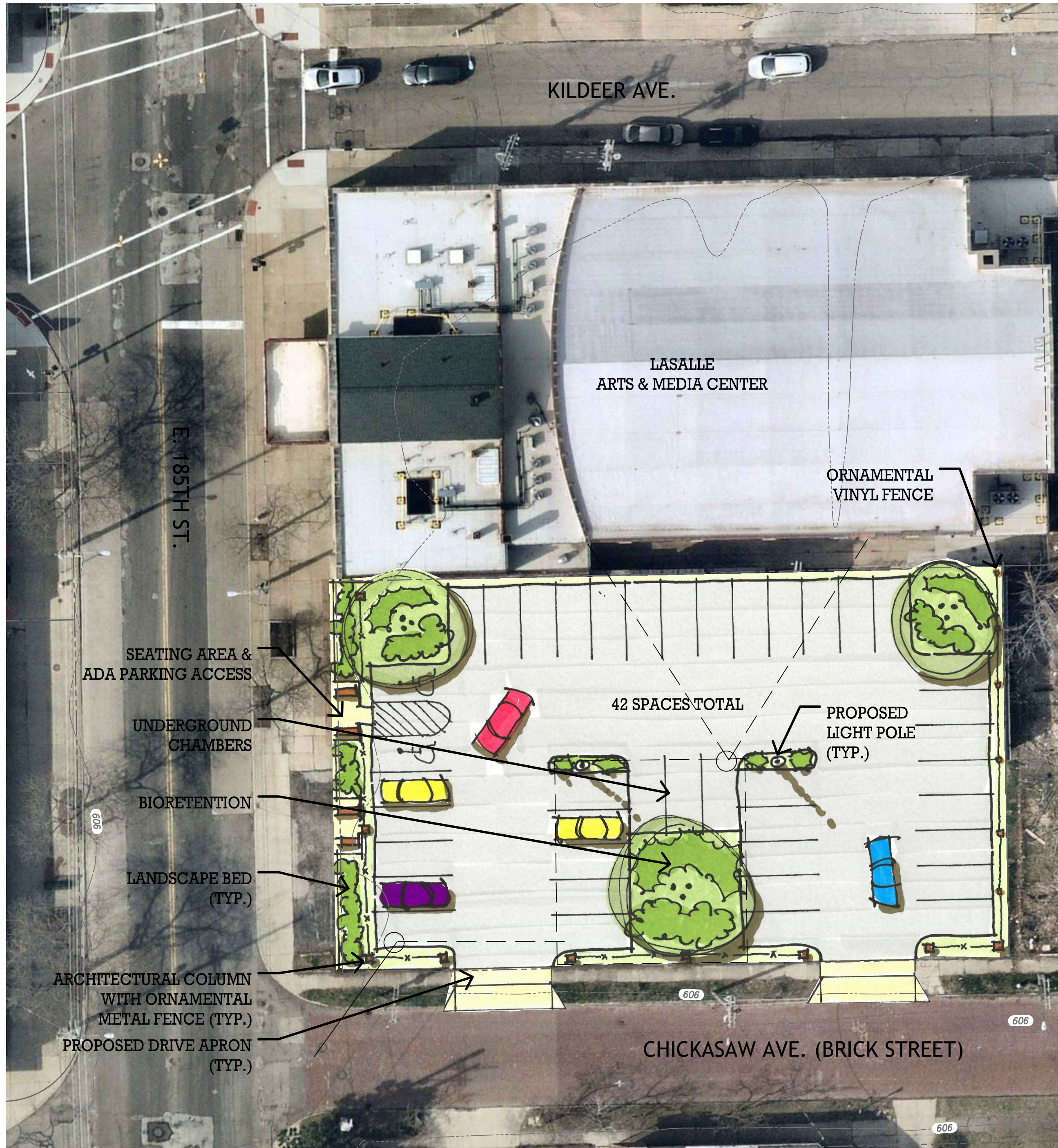




UNDERGROUND CHAMBERS



ABOVE GROUND BIORETENTION



RIVER BIRCH



MAGIC CARPET SPIREA



STELLA DE ORO DAYLILY

E:\NORTHEAST SHORES DEVELOPMENT\14002050\10\NECRS01\GRANT APPLICATION\LASALLE\LASALLE SITE PLAN.ZWING - 8/30/2019 8:43:32 AM



Cleveland  
Neighborhood  
Progress



# LASALLE

ARTS & MEDIA CENTER EXISTING PARKING LOT RETROFIT

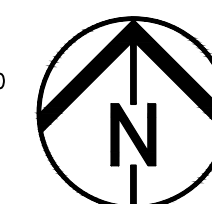






PHOTO LOG		LaSalle Theater Parking Lot Green Retrofit	Project No.
<b>Grant Name:</b> Northeast Ohio Regional Sewer District 2019 GIG		<b>Site Location:</b> PPN # 114-19-001 & 114-19-002 829 E. 185 <sup>th</sup> St., Cleveland, OH 44119	
<b>Photo No.</b> 1	<b>Date:</b>		
<p>The roof of the entire LaSalle Theater drains north into a series of downspouts and catch basins underneath the building to Kildeer Avenue, where it is potentially connected to the separate sanitary sewer (based upon E. 185<sup>th</sup> Lkaeshore SSES Study, URS, 2015). Southern down spouts will be disconnected in the building and stormwater will be controlled with underground chambers. Northern downspouts will be investigated during design to see if they can be rerouted to the south cost effectively.</p>			
<b>Photo No.</b> 2	<b>Date:</b>		
<p>The existing building garage (right) is scheduled to be removed by Cuyahoga County Landbank by November 12, 2019.</p>			

<b>PHOTO LOG</b>	<b>LaSalle Theater Parking Lot Green Retrofit</b>	Project No.
<b>Grant Name:</b> Northeast Ohio Regional Sewer District 2019 GIG	<b>Site Location: PPN # 114-19-001 &amp; 114-19-002</b> 829 E. 185 <sup>th</sup> St., Cleveland, OH 44119	

<b>Photo No.</b> 3	<b>Date:</b>
The parking lot will be used in conjunction with the newly restored LaSalle Theater – which is currently open.	



<b>Photo No.</b> 4	<b>Date:</b>
The parking lot will be used in conjunction with the newly restored LaSalle Theater – which is currently open.	





<b>PHOTO LOG</b>	<b>LaSalle Theater Parking Lot Green Retrofit</b>	Project No.
<b>Grant Name:</b> Northeast Ohio Regional Sewer District 2019 GIG		<b>Site Location:</b> PPN # 114-19-001 & 114-19-002 829 E. 185 <sup>th</sup> St., Cleveland, OH 44119

<b>Photo No.</b> 5	<b>Date:</b>
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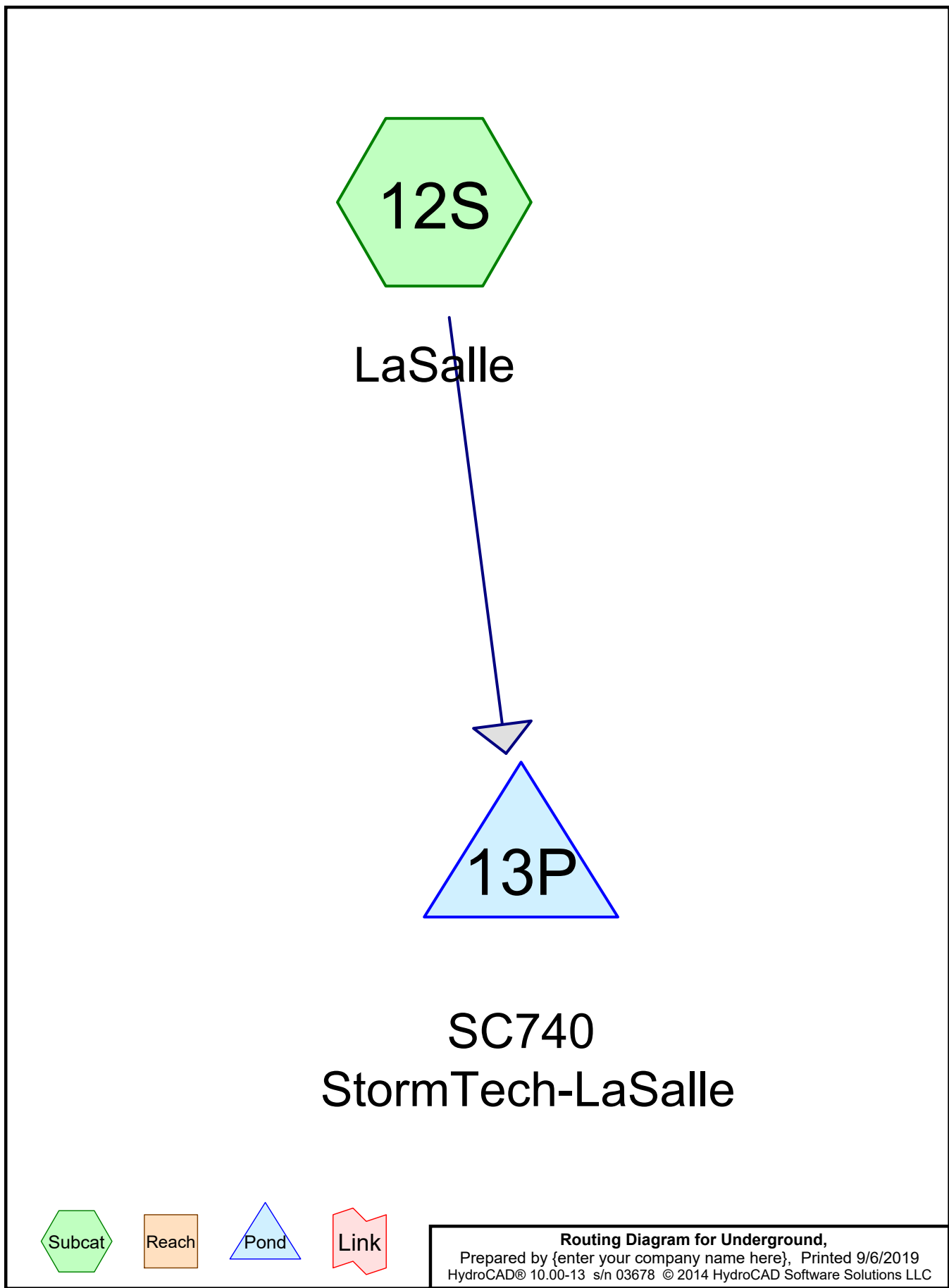
The existing parking lot is nearly 100% impervious surface. The green retrofit will replace tired shrubs along Chickasaw Avenue, include landscaping, bioretention, and underground chambers.



<b>Photo No.</b> 6	<b>Date:</b>
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Once the three southern buildings are removed by the Cuyahoga County Landbank, the underground chambers will be installed to capture and manage the large amount of stormwater from the LaSalle Theater. Doors from the LaSalle exit directly into this space – which will act as an outdoor intermission plaza.





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Page 2

**Area Listing (selected nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
0.017	48	Brush, Good, HSG B (12S)
0.690	98	Paved parking, HSG B (12S)
<b>0.707</b>	<b>97</b>	<b>TOTAL AREA</b>

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**Soil Listing (selected nodes)**

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.707	HSG B	12S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
<b>0.707</b>		<b>TOTAL AREA</b>

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**Ground Covers (selected nodes)**

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.017	0.000	0.000	0.000	0.017	Brush, Good	12S
0.000	0.690	0.000	0.000	0.000	0.690	Paved parking	12S
<b>0.000</b>	<b>0.707</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.707</b>	<b>TOTAL AREA</b>	

**Underground,**

*Type II 24-hr 2-Yr Rainfall=2.44"*

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Page 5

Time span=5.00-95.00 hrs, dt=0.01 hrs, 9001 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 12S: LaSalle**

Runoff Area=0.707 ac 97.60% Impervious Runoff Depth>2.09"  
Flow Length=830' Tc=10.8 min CN=97 Runoff=2.03 cfs 0.123 af

**Pond 13P: SC740 StormTech-LaSalle**

Peak Elev=2.94' Storage=0.050 af Inflow=2.03 cfs 0.123 af  
Discarded=0.05 cfs 0.057 af Primary=0.18 cfs 0.066 af Secondary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.123 af

**Total Runoff Area = 0.707 ac Runoff Volume = 0.123 af Average Runoff Depth = 2.09"**  
**2.40% Pervious = 0.017 ac 97.60% Impervious = 0.690 ac**



**Underground,**

Type II 24-hr 2-Yr Rainfall=2.44"

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**Summary for Subcatchment 12S: LaSalle**

Runoff = 2.03 cfs @ 12.02 hrs, Volume= 0.123 af, Depth> 2.09"

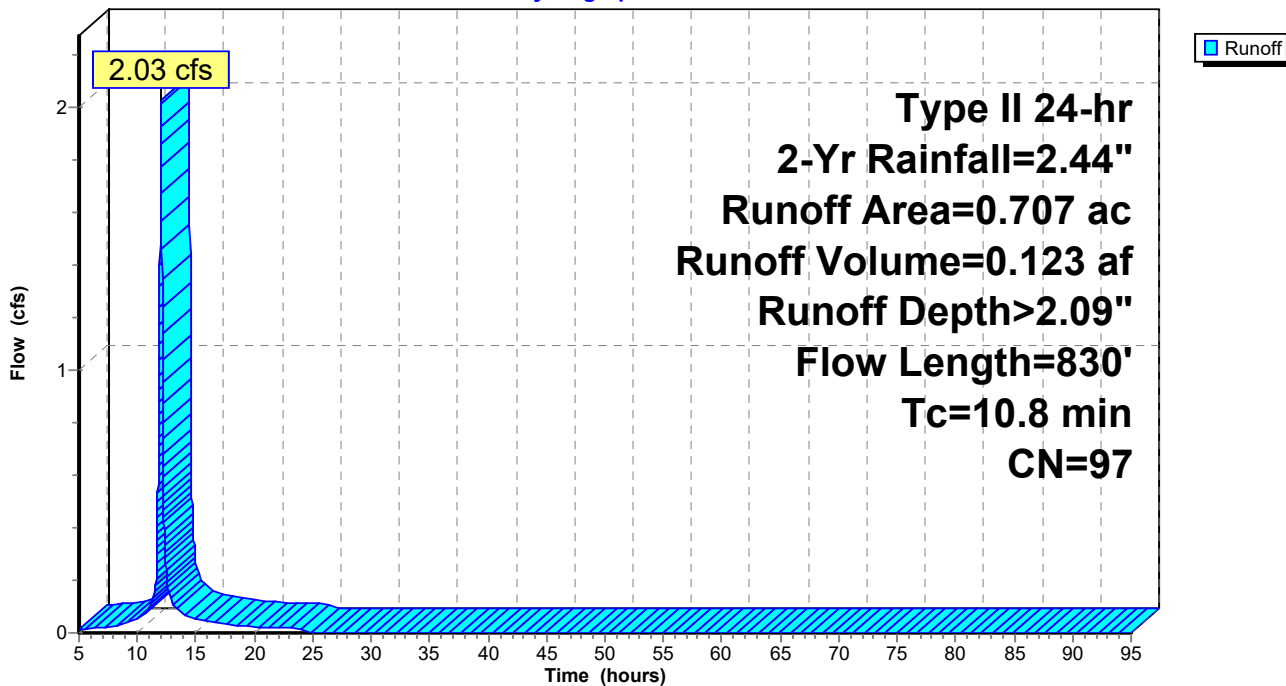
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-95.00 hrs, dt= 0.01 hrs  
Type II 24-hr 2-Yr Rainfall=2.44"

Area (ac)	CN	Description
0.690	98	Paved parking, HSG B
0.017	48	Brush, Good, HSG B
0.707	97	Weighted Average
0.017		2.40% Pervious Area
0.690		97.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	65	0.0150	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.44"
1.9	765	0.1100	6.73		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.8	830	Total			

**Subcatchment 12S: LaSalle**

Hydrograph



**Underground,**

Type II 24-hr 2-Yr Rainfall=2.44"

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**Summary for Pond 13P: SC740 StormTech-LaSalle**

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.707 ac, 97.60% Impervious, Inflow Depth > 2.09" for 2-Yr event  
 Inflow = 2.03 cfs @ 12.02 hrs, Volume= 0.123 af  
 Outflow = 0.23 cfs @ 12.47 hrs, Volume= 0.123 af, Atten= 89%, Lag= 27.1 min  
 Discarded = 0.05 cfs @ 10.22 hrs, Volume= 0.057 af  
 Primary = 0.18 cfs @ 12.47 hrs, Volume= 0.066 af  
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-95.00 hrs, dt= 0.01 hrs / 2  
 Peak Elev= 2.94' @ 12.47 hrs Surf.Area= 0.026 ac Storage= 0.050 af

Plug-Flow detention time= 80.8 min calculated for 0.123 af (100% of inflow)  
 Center-of-Mass det. time= 80.8 min ( 859.7 - 778.9 )

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	0.024 af	<b>25.25'W x 45.16'L x 3.50'H Field A</b> 0.092 af Overall - 0.032 af Embedded = 0.060 af x 40.0% Voids
#2A	0.50'	0.032 af	<b>ADS_StormTech SC-740 x 30 Inside #1</b> Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 5 rows
		0.056 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	<b>2.000 in/hr Exfiltration over Surface area</b>
#2	Primary	0.00'	<b>2.0" Vert. Orifice/Grate C= 0.600</b>
#3	Secondary	3.00'	<b>3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)</b>

**Discarded OutFlow** Max=0.05 cfs @ 10.22 hrs HW=0.04' (Free Discharge)  
 ↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.18 cfs @ 12.47 hrs HW=2.94' (Free Discharge)  
 ↑**2=Orifice/Grate** (Orifice Controls 0.18 cfs @ 8.14 fps)

**Secondary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)  
 ↑**3=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

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Type II 24-hr 2-Yr Rainfall=2.44"

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**Pond 13P: SC740 StormTech-LaSalle - Chamber Wizard Field A**

**Chamber Model = ADS\_StormTech SC-740 (ADS StormTech® SC-740)**

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

Row Length Adjustment= +0.44' x 6.45 sf x 5 rows

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

6 Chambers/Row x 7.12' Long +0.44' Row Adjustment = 43.16' Row Length +12.0" End Stone x 2 = 45.16' Base Length

5 Rows x 51.0" Wide + 6.0" Spacing x 4 + 12.0" Side Stone x 2 = 25.25' Base Width

6.0" Base + 30.0" Chamber Height + 6.0" Cover = 3.50' Field Height

30 Chambers x 45.9 cf +0.44' Row Adjustment x 6.45 sf x 5 Rows = 1,392.4 cf Chamber Storage

3,991.0 cf Field - 1,392.4 cf Chambers = 2,598.6 cf Stone x 40.0% Voids = 1,039.4 cf Stone Storage

Chamber Storage + Stone Storage = 2,431.8 cf = 0.056 af

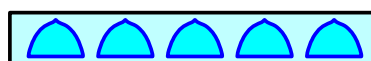
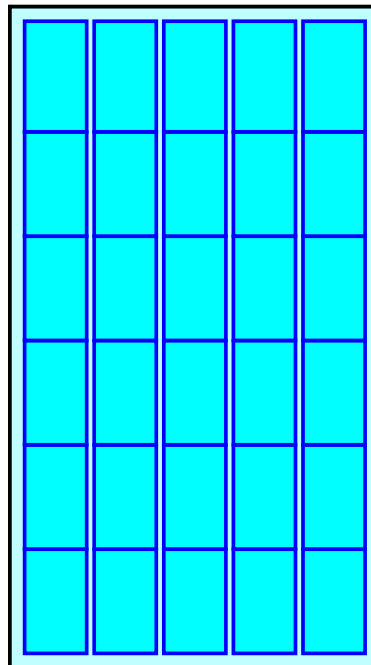
Overall Storage Efficiency = 60.9%

30 Chambers @ \$ 850.00 /ea = \$ 25,500.00

147.8 cy Field Excavation @ \$ 16.00 /cy = \$ 2,365.05

96.2 cy Stone @ \$ 85.00 /cy = \$ 8,180.84

Total Cost = \$ 36,045.88



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Type II 24-hr 2-Yr Rainfall=2.44"

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**Pond 13P: SC740 StormTech-LaSalle**

Hydrograph

