THE LOWCOUNTRY LOWLINE

CONCEPTUAL Master plan

DESIGNED FOR:

THE CITY OF CHARLESTON THE FRIENDS OF THE LOWCOUNTRY LOWLINE

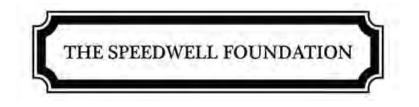
PREPARED BY:

DESIGNWORKS DESIGN DIVISION, CITY OF CHARLESTON



The City of Charleston

DesignWorks, Landscape Architecture and Urban Planning



SPECIAL THANKS TO OUR MAJOR DONORS:

The Darla Moore Foundation **Evening Post Industries** Greystar Real Estate Partners Frank Hagood Associates John M. Rivers Jr. Foundation Raven Cliff Co., LLC The Speedwell Foundation

LOWCOUNTRY LOWLINE

Friends of the Lowcountry Lowline



Design Division, City of Charleston

FROM THE CHAIRMAN OF THE FRIENDS OF THE LOWLINE BOARD

Dear Community:

Around ten years ago, when a couple of us bumped over the former railroad crossing at Mount Pleasant Street and looked south down the abandoned, weed-choked Norfolk-Southern right-of-way, it was difficult to picture the Lowline.

Some had suggested that the location, the convergence of King and Meeting Streets with Morrison Drive, might one day be the new gateway to Charleston. The defunct rail line could play an important role in this vision but the challenge seemed monumental.

With me that day was Mike Messner, an ardent advocate for parks and public greenspace. Mike became the driving force behind the Lowline. I barely knew him at the time, but over the course of our work together we've become good friends and partners.

First, there was the multi-year challenge of striking a deal with the railroad for the corridor. Mike waded right into the fight negotiating an extraordinary deal for the Friends and all the citizens of Charleston.

As we publish this Conceptual Master Plan, we can see the Lowline coming to life before our very eyes. When we began working on it we could barely glimpse how many ways it could benefit Charleston.

In addition to providing a safe, desirable place to walk, run or ride a bike, the Lowline will re-knit neighborhoods severed by I-26. It will help with Charleston's stormwater and tidal problems. It will be a venue for community art, for outdoor performances and concerts, for meeting people. The Lowline will in essence be Charleston's high road – an inclusive place that brings diverse people together, north, south, east and west.



We are thrilled to release this Conceptual Master Plan, which represents the dedication and work of the entire Lowline team (our nonprofit as well as that of Mayor Tecklenburg and City of Charleston staff). The collaborative effort is a point of pride for me and for all of us on the Lowline team.

And very soon, the Lowcountry Lowline will be a big point of pride for all of Charleston.

Very truly yours,

Tom Bradford

SPECIAL THANKS TO OUR BOARD MEMBERS:

Board Members: Barney Blackeney, W. Andrew Gowder Jr., D. Frank Hagood, Winslow Hastie, Harry Lesesne, Michael Messner, Ron Owens, Scott Parker, Rev. Matthew Rivers; Scott Watson, Todd Wigfield, Mimi Van Wyck

Executive Assistant to the Board: Megan Mills

LETTER FROM THE MAYOR OF THE CITY OF CHARLESTON

Dear Citizens of Charleston:

I'm excited to announce the completion of this Conceptual Master Plan for the Lowcountry Lowline. When constructed, the Lowline will repair the long-ignored physical divide that runs along the center of the peninsula, converting it into an active multi-use pathway system and a linear park of various widths. It will serve and connect neighborhoods from the Upper Peninsula to Marion Square.

Charleston will join the rank of cities that have converted abandoned rail corridors in their city centers, but ours will be done in a way that reflects Charleston's unique needs and character. The project addresses our top city-building priorities: affordable housing, transportation and flooding.

- Flooding: implements recommendations of the Dutch Dialogues, captures and stores runoff from I-26, revitalizes Newmarket Creek, ties into to the King/Huger drainage project, and uses previous pavers in hardscape areas.
- Transportation: fills a missing link in the bicycle-pedestrian network, provides a safe way to move around away from automobile conflicts, reknits neighborhoods, and supports the preferred alignment of the planned Lowcountry Rapid Transit system.
- Affordable Housing: we are developing nearly 70 units of affordable housing on the Lowline, it will reduce household transportation costs for nearby residents, it is located within close proximity to hundreds of Charleston Housing Authority properties, and it opens a connection to the Cooper River Bridge area (where another 250 affordable housing units are planned or under construction).

The Lowline continues our City's legacy of constructing a vibrant public realm that has demonstrated civic and economic value. It will be for residents and visitors, for those on and off the peninsula. The City has played a key role in the delivery of this plan and the project as a whole.

We acquired and secured the land, and tested for potential environmental contamination. We have negotiations with the South Carolina Department of Transportation to ensure their properties are used for Lowline open space and parking, and that areas below I-26 are improved, enlivened, safe and activated as part of the project. I've directed relevant City staff to work closely with the Friends of the Lowline on planning and implementation strategies, which has led to the production of this



Conceptual Master Plan.

This project will involve a wide-variety of funding sources and will be implemented in phases. Sources of capital will include philanthropy, grants, and development incentives. More importantly, look for ways you can be directly involved in the project through fundraising, volunteerism and advocacy. It's now time to put ideas into action and seize the many opportunities provided by this transformative project.

Most sincerely yours,

Mayor, City of Charleston

SPECIAL THANKS TO CITY COUNCIL AND CITY DEPARTMENTS:

City Council Members: Marie Delcioppo; Kevin Shealy; Jason Sakran; Robert M. Mitchell; Karl L. Brady, Jr.; William Dudley Gregorie; Perry K. Waring; Michael S. Seekings; A. Peter Shahid, Jr.; Harry Griffin; Ross A. Appel; Carol Jackson

Department Leaders: Jason Kronsberg, Parks Department; Jacob Lindsey, Department of Planning, Preservation, and Sustainability; Keith Benjamin, Department of Traffic and Transportation

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WHAT IS THE LOWLINE?

THE LOWLINE IS...

PUBLIC INFRASTRUCTURE FNHANCING THE LIVES OF ALL THE CITIZENS OF CHARLESTON.

... THE CENTRAL SPINE OF A REGIONAL PARK AND MOBILITY SYSTEM CONNECTING DOWNTOWN TO WEST ASHLEY, NORTH CHARLESTON, AND MT. PLEASANT

...TRANSFORMING AN ABANDONED RAIL LINE AND NEGLECTED HIGHWAY CORRIDOR INTO A PLACE SUPPORTING AND EXPRESSING THE EIGHT SURROUNDING NEIGHBORHOODS.

... MAXIMIZING THE STORAGE AND TREATMENT OF STORMWATER, ADDRESSING CITY-WIDE FLOODING.

... A CONTINUOUS GREEN CORRIDOR ENHANCING **BIODIVERSITY** AND PROVIDING PLACES FOR ACTIVE AND PASSIVE **RECREATION**.

... UNIQUE TO CHARLESTON.

CORE PRINCIPLES



SOCIAL RESILIENCE

- AFFIRM THE EQUALITY OF ALL PEOPLE
- PROVIDE EASY ACCESS TO ALTERNATIVE MODES OF TRANSPORTATION
- ENCOURAGE INCLUSIVE SOCIAL GATHERING AND UNIFICATION



CULTURAL RESILIENCE

- BE AUTHENTICALLY CHARLESTON
- CELEBRATE OUR CITY'S UNIQUE HISTORY
- COMBAT DISPLACEMENT OF LOCAL **RESIDENTS BY SUPPORTING LOCAL** NEIGHBORHOODS



ENVIRONMENTAL RESILIENCE

- EMBRACE WATER AND STORE RUNOFF SUSTAINABLY
- STRENGTHEN ECOLOGICAL FUNCTIONS OF THE PENINSULA
- PROMOTE HEALTH AND WELLNESS FOR HUMANS AND NATURE ALIKE



ECONOMIC RESILIENCE

- CREATE VALUE IN THE URBAN CORE
- BE FINANCIALLY SELF-SUSTAINING
- PROVIDE OPPORTUNITIES FOR LOCAL BUSINESSES

NORTH CHARLESTON

WEST ASHLEY

> THE LOWLINE WILL BE THE **CENTRAL SPINE OF A LINEAR** PARK SYSTEM CONNECTING DOWNTOWN TO WEST ASHLEY, NORTH CHARLESTON, AND MOUNT PLEASANT.

REGIONAL CONTEXT





PENINSULA CONTEXT

THE LOWLINE IS PART OF THE BROADER PARK SYSTEM ON THE CHARLESTON PENINSULA. IT WILL ADD SIGNIFICANT OPEN SPACE AND WILL PROVIDE IMPORTANT CONNECTIVITY BETWEEN EXISTING PARKS.

> RAVENEL BRIDG

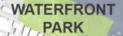
CHARLESTON MARKET

WATERFRONT PARK

HITE POINT GARDEN

MOUNT PLEASANT





WHITE POINT GARDEN



CHARLESTOWNE

THE LOWLINE EXTENDS ALONG TWO MILES **OF THE PENINSULA FROM MARION SQUARE** TO THE PLANNED TRANSIT HUB AT MOUNT PLEASANT STREET.

THE LOWLINE WILL CONNECT AND ENHANCE THE EIGHT SURROUNDING NEIGHBORHOODS.

JAMES ISLAND

Ο W N E R S H I P

The Lowline was originally intended to be a trail along the 40' wide former rail corridor that was purchased by the City of Charleston and the Friends of the Lowline in 2017. This purchase extended from Mt. Pleasant Street to the North, and to just below Spring Street on the South.

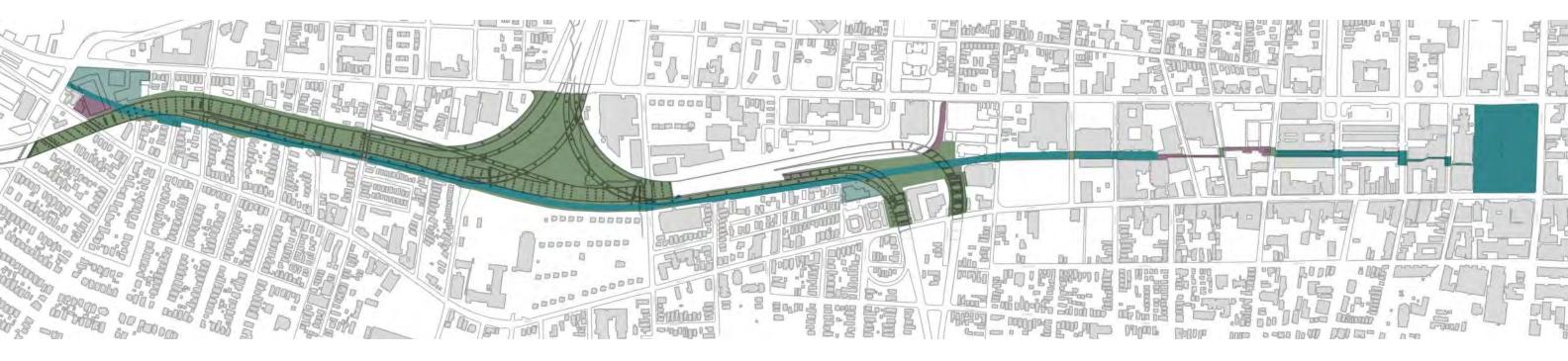
After studying the area further, it was clear that this area could be expanded through a combination of approaches.

In the 1970s, the City of Charleston entered into a lease agreement with the South Carolina Department of Transportation (SCDOT) to lease land beneath parts of the overpass to create the "I-26 Linear Park" with paved trails, a playground, and sports courts. The plan shown in this conceptual master plan has expanded that leased area to include all of the area beneath SCDOT elevated highways. This plan more than doubles the acreage of the original 1-26 Linear Park and enables the Lowline to be a truly engaging park with multiple uses, not simply a linear greenway park.

Before the Friends of the Lowcountry Lowline (The Friends) secured the right to purchase the rail corridor from Norfolk Southern, some sections of the former line south of Spring Street were sold off to private owners. Working together with these owners through a combination of easement agreements, the Lowline can extend further south all the way to Marion Square, as a series of alleys that snake between buildings.

The pedestrian alleys that run parallel to King Street from Ann Street to Hudson Street are examples of where this type of development has already occurred. Hudson Alley is an especially great example of how businesses can engage with this newly created pedestrian street frontage.

THROUGH PARTNERSHIPS WITH PRIVATE OWNERS AND SCDOT, THE LOWLINE IS ABLE TO REACH ITS FULL POTENTIAL.



KEY

SCDOT OWNED LAND

CITY OWNED OR CONTROLLED LAND

CITY OWNED LAND IMPORTANT FOR ACCESS

PRIVATE OWNERSHIP

SCALE COMPARISONS: EXISTING PENINSULA PARKS

THE LOWLINE WILL BE THE SECOND LARGEST PARK ON THE PENINSULA.





HAMPTON PARK 60 ACRES



BRITTLEBANK PARK 17 ACRES



MARION SQUARE 6 ACRES



WATERFRONT PARK 4 ACRES

13

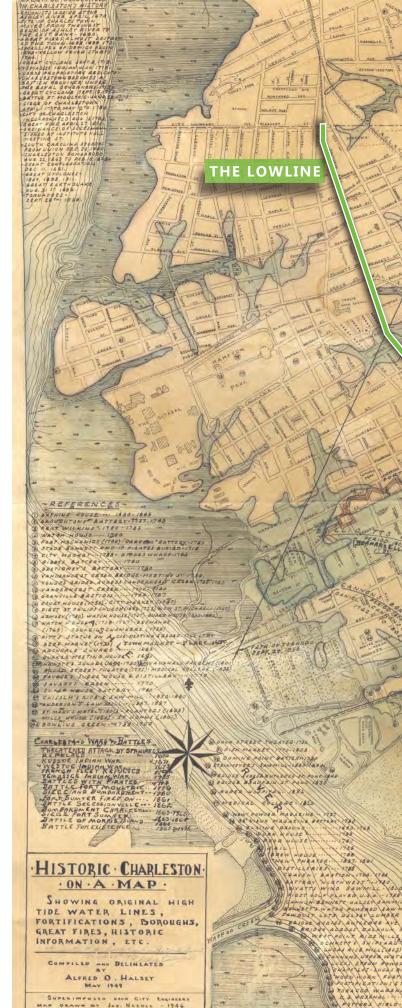
THE HALSEY MAP, 1949¹

Known as The Halsey Map, the map at right was created in 1949 by Alfred O. Halsey. It shows the growth of the City of Charleston since its founding and includes mapped features of historical events through the years.

Over the years, many creeks have been filled to create new land for the growing City of Charleston. It is in these places where Charleston continues to face some of the most persistent flooding.

Since the Lowline traverses many of the drainage areas of these old creeks, it provides an opportunity to help with flooding in these areas - if the Lowline is able to infiltrate and store stormwater on site, it will be less total volume of water that drains towards these old creek beds at peak times and during storm events. This will help these areas to have less flooding over time.

The Halsey Map identifies two fortifications that the Lowline crosses - one from the Revolutionary War, just north of Marion Square, and one from the War of 1812 on modern day Line Street.





SITE HISTORY

THE RAILROAD

·····• <u>1827</u>

The South Carolina Canal and Rail Road Company is chartered by the state legislature. The company aims to connect inland markets to the port of Charleston by rail.

••••••••<u>1830</u>

The "Best Friend of Charleston" takes it's inaugural journey down the rail line on Christmas Day. It becomes the first locomotive in the nation to have regularly scheduled passenger rail service.

·····• <u>1894</u>

The South Carolina Canal and Rail Road Company becomes the Southern Railway.

·····• <u>1982</u>

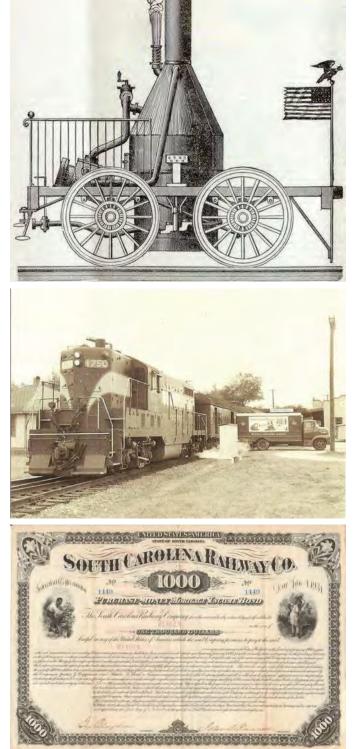
Southern Railway becomes Norfolk Southern Corporation.

·····• <u>2004</u>

The rail line is used for the last time to transport newsprint for the Post and Courier newspaper.

·····• <u>2017</u>

After years of negotiations, the City of Charleston and the Friends of the Lowcountry Lowline purchase the rail right-of-way from Norfolk Southern.



<u>From Top</u>: The Best Friend of Charleston, the first train to run on the tracks of the Lowline²; The Grove Street Station³; A bond for the South Carolina Railway Company⁴

SITE HISTORY

Interstate 26 begins construction in Columbia, and progresses towards Charleston. The segment through downtown Charleston is one of the last to be completed, with many homes and businesses demolished to make room for the new highway.

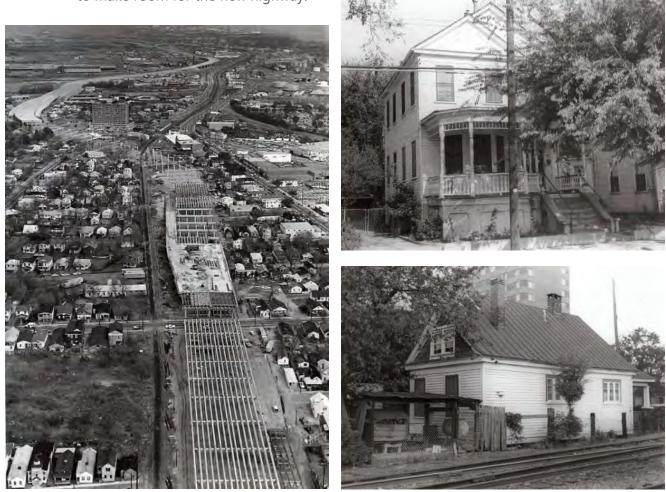


Image of I-26 being constructed⁵



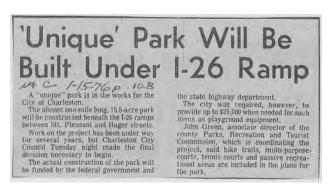
The images of houses were taken by SCDOT to document the structures and properties that would be affected by the construction of I-26. <u>From Top Right:</u> 693 King Street⁶; 82 Fishburne Street⁷; 35 Mount Pleasant Street⁸

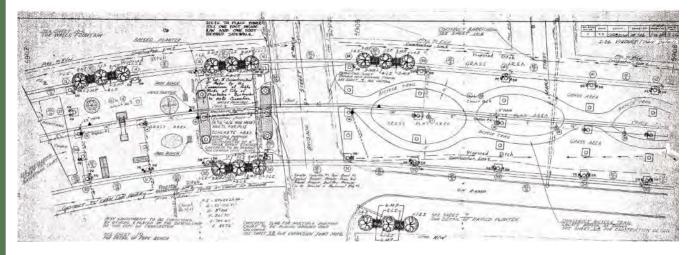
SITE HISTORY

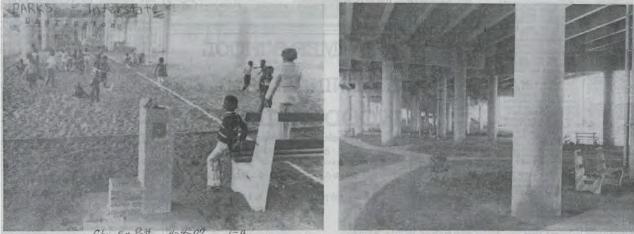
THE I-26 LINEAR PARK

·····• 1976

The City of Charleston and newly elected Mayor Joseph P. Riley, Jr. create the I-26 Linear Park beneath the interstate. Though underutilized this park provided sports courts, sidewalks, and a playground for neighborhood residents. The lease agreement between the City of Charleston and SCDOT is an important precedent for the lease that the Lowline is seeking for recreational use of the land beneath the overpasses of I-26.







INCOMPLETE, BUT FUN – Pre-schoolers from the St. Matthew's Church Head Start Center are delighted with the nearly complete park under 1-28. The mile-

1.4.4.7. long park between Mount Pleasant and Huger streets was designed by the Charleston County Park, Recrea-tion and Tourist Commission, financed by state and

federal funds and will be operated by the Charleston Department of Leisure Services. The park includes playgrounds, tennis and basketball courts, picnic

This page, from top: A clipping from the Charleston Evening Post, May 17, 1977¹¹; a clipping from the Charleston Evening Post, May 9, 1980¹²

Opposite page, from top: A clipping from the News and Courier, January 1, 1976⁹; original plans for the park by the City of Charleston; a clipping from the Charleston Evening Post, April 4, 1977¹⁰.





ses. Critics have labeled the park a haven for drug pushers and other undesirables. Mayor Joseph P. Riley Jr. contends that the park has helped to lessen crime in the area rather than encourage it. Riley called a press conference Thursday afternoon

cussions from construction of a similar park near her Radclifteborough home. Speaking Tuesday before the city Real Estate Com-mittee, Fielding said the 1-26 park had deteriorated significantly since opening three years ago and that it

park created under Interstate Highway 26 between Huger and Mount Pleasant streets. The 15-acre park is

feared that a proposed park near her property would be subject to the same deterioration and that her own safety would be threatened. Riley said Fielding was "very unfair" and called

See PARK, Page 2-B, Col. 1

N E I G H B O R H O O D S

The Friends and the City of Charleston recognize this is an important and transformative project that will affect all neighborhoods along the Lowline. However, as demonstrated in other cities, the introduction of significant public improvements like the Lowline can exacerbate challenges such as gentrification. While these neighborhoods are already experiencing gentrification, the City and several non-profit organizations are focused on providing affordable housing for all citizens and combating gentrification.

Addressing affordability in the communities surrounding the Lowline is critical to the success of the project. The City is constructing affordable housing on two sites near the Lowline, which will add to the significant number of affordable housing units in the area. The Lowline will reduce transportation costs by providing access to new cycling and pedestrian routes, which is one of many strategies for improving housing affordability. Currently, the vast majority of affordable housing on the peninsula is within a half mile of the Lowline.

The Lowline is committed to promoting affordable housing and resources as the project moves forward. The Friends are working collaboratively with the City and related community organizations to find better ways to inform residents of existing resources and to develop new strategies to address housing affordability and gentrification in the communities surrounding the Lowline.

To find out more about the City's affordable housing initiatives, visit https://www.charleston-sc. gov/233/Housing-Community-Development.



COMMUNITY VOICES

The Friends are committed to making the Lowline a park that is created by the community and for the community. In March 2020, the COVID pandemic derailed the traditional public engagement process. In the face of this, the Lowline debuted a new interactive website with all of the information that would have gone into public meetings. They released videos, created an online survey, activated their Instagram account,

reached out to community leaders, and went door-to-door in surrounding neighborhoods to distribute information.

The Friends continue to coordinate community clean up days for the future Lowline in partnership with local non-profit organizations. They are planning COVID-appropriate events that will activate the Lowline in the near term.





Megan Mills, a former founding board member, and current Executive Assistant to the Board. Above, she is shown facilitating a meeting with the skating community to talk about their skate park (left), and hosting an information session during a community cleanup event (right).

STAY CONNECTED!

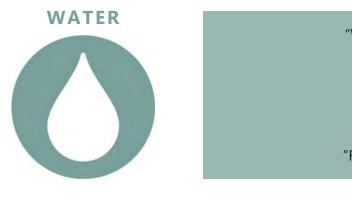
https://lowcountrylowline.org/

@lowcountrylowline



@thelowline Y

COMMUNITY FEEDBACK REFLECTED IN THE CONCEPTUAL **MASTER PLAN FOR THE LOWLINE INCLUDE:**



"I really hope the Lowline will equally serve walkers, runners, and cyclists, in part by keeping them apart from one another."

"I love the idea of splitting bikers and walkers, including splitting the bikers by direction. I agree that's a challenge on the bridge currently and see this design as very intelligent."

"Looking forward to having a safe walk/bike path for the peninsula."

GREEN SPACE



"The green spaces that are shown in the renderings look really pretty. Please make sure they can stay green"

"I hope the focus of the Lowline will be nature and plant life, rather than business and making money. People need fresh air, and to spend time in nature."

"Some way to learn from the green space would be excellent as well as weaving in pollinator friendly plants."

"Please integrate the current skate park. It is beneficial to the youth community"

"Dog park! And generous amounts of trash cans."

"I prefer the passive activities to the active. But a playground would be great."

"Water garden/flooding relief"

"Interactive water feature"

"Flooding remediation feature"



PROGRAMMING





CONCEPTUAL MASTER PLAN

THE CONCEPTUAL MASTER PLAN REPRESENTS THE **VISION** FOR THE LOWLINE.

THE CREATION OF THIS VISION WAS A **COLLABORATIVE PROCESS** THAT UNCOVERED MANY UNEXPECTED OPPORTUNITIES.

THE LOWLINE RESPONDS TO ADJOINING **NEIGHBORHOODS**, RESULTING IN **THREE DISTINCT DISTRICTS** ALONG ITS LENGTH: THE URBAN CORE, THE PARKS, AND THE NORTH CENTRAL CORRIDOR.



URBAN CORE

- THE URBAN CORE DISTRICT OF THE LOWLINE RUNS FROM MARION SQUARE TO LINE STREET.
- THIS DISTRICT CURRENTLY HAS THE MOST DIVERSE MIX OF USES AND THE HIGHEST DENSITY ON THE PENINSULA
- THE LOWLINE IN THE URBAN CORE IS ENVISIONED TO BE A SERIES OF ALLEYS
- SOME PORTIONS OF THE LOWLINE ALREADY EXIST AS ALLEYS BETWEEN MARY AND HUDSON STREETS
- THE SIDE STREETS THAT CONNECT KING AND MEETING STREETS WILL BECOME IMPORTANT ACCESS POINTS. IMPROVEMENTS TO THESE CONNECTING STREETS WILL BE INCLUDED IN THE LOWLINE
- THIS NETWORK OF INTERCONNECTED PEDESTRIAN WALKWAYS WILL ENHANCE THE ENTIRE DISTRICT



THE PARKS

- THE PARKS DISTRICT RUNS FROM LINE STREET TO ROMNEY STREET
- IT IS BOOKENDED BY TWO NEW PARK SPACES: NEWMARKET PARK TO THE NORTH AND LOWLINE PARK TO THE SOUTH
- LOWLINE PARK IS A LARGE OPEN SPACE DESIGNED FOR EVENTS AND GATHERINGS
- NEWMARKET PARK IS AN ENHANCED SALT- AND FRESH-WATER ECOSYSTEM
- NEWMARKET PARK PROVIDES A NATURAL AMENITY FOR THE PUBLIC TO ENJOY WHILE ALSO ENHANCING STORMWATER MANAGEMENT FOR THE SURROUNDING NEIGHBORHOODS



THE NORTH CENTRAL CORRIDOR

- THE NORTH CENTRAL CORRIDOR RUNS FROM ROMNEY STREET TO THE PLANNED TRANSIT HUB ON MOUNT PLEASANT STREET
- THE NORTH CENTRAL CORRIDOR PROVIDES AREAS FOR ACTIVE AND PASSIVE RECREATION IN "THE COLUMNS" BENEATH THE ELEVATED HIGHWAY
- THE COLUMNS ALSO PROVIDES AMPLE SPACE TO HOST A NEIGHBORHOOD MARKET
- THIS DISTRICT WILL INCLUDE POCKET PARKS WHERE NEIGHBORHOOD STREETS END INTO THE LOWLINE PROPERTY
- THE POTENTIAL TRANSIT ORIENTED REDEVELOPMENT OF THE PARKS DEPARTMENT PROVIDES AN OPPORTUNITY TO CREATE A NEW PEDESTRIAN DISTRICT AT THE NORTH END OF THE LOWLINE





WATER

FLOODING AND WATER MANAGEMENT ARE A **TOP PRIORITY** FOR THE CITY OF CHARLESTON AND THE FRIENDS.

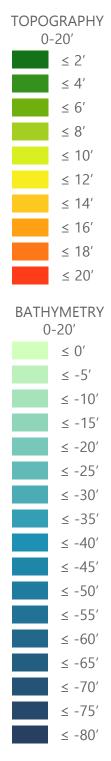
THE LOWLINE WILL FOLLOW THE RECOMMENDATIONS FROM THE **DUTCH DIALOGUES** CHARLESTON REPORT.

THE LOWLINE WILL PLAY A SIGNIFICANT ROLE IN THE FUTURE OF **WATER MANAGEMENT** FOR THE PENINSULA.

THE LOWLINE PROVIDES 40 ACRES OF OPEN SPACE ENABLING THE IMPLEMENTATION A VARIETY OF STRATEGIES THAT **EMBRACE AND MANAGE** WATER.

STORMWATER STORAGE ON THE LOWLINE **OPENS STORMWATER CAPACITY** IN THE SURROUNDING NEIGHBORHOODS.

ELEVATION MAP¹³



KING STREET, ONE OF THE OLDEST ROADS ON THE PENINSULA, FOLLOWS THE NATURAL RIDGE.



THE OLD RAIL LINE MOSTLY FOLLOWS THE NATURAL RIDGE OF THE PENINSULA, EXCEPT WHERE IT CROSSES NEWMARKET CREEK, CREATING AN IMPOUNDMENT. NATURAL RIDGE LOWLINE WATER FLOWS

WATER FLOWS

DRAINAGE BASINS

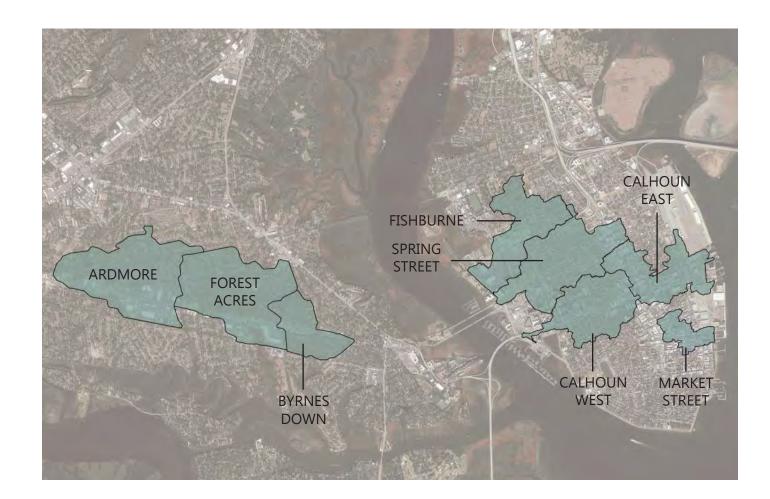
WHAT IS A DRAINAGE BASIN?

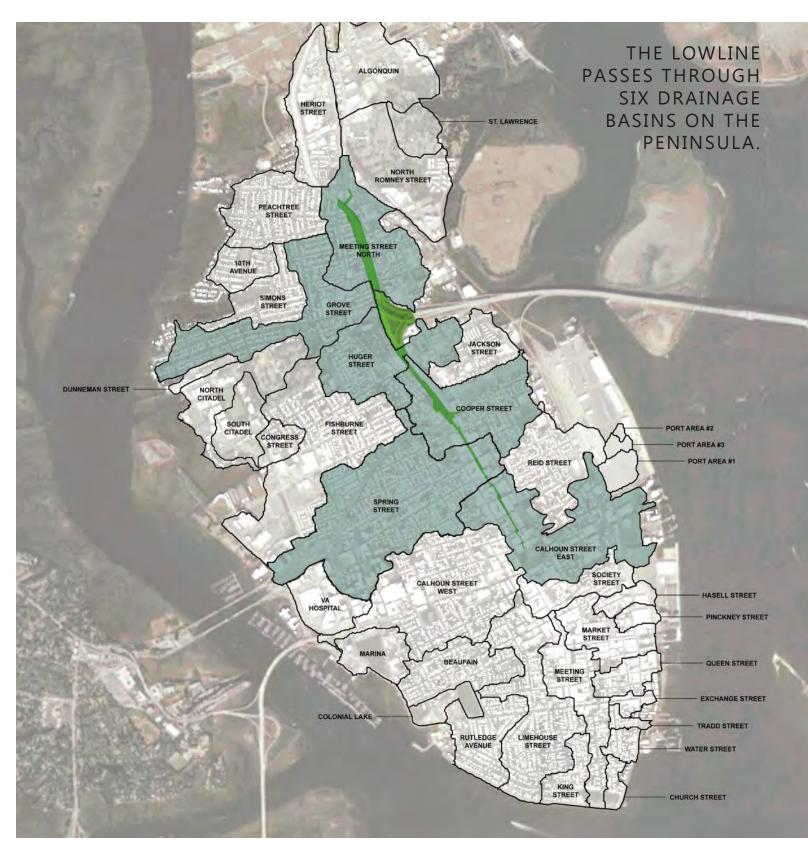
A drainage basin is an area within which stormwater collects and drains to a common outlet. A drainage basin is defined by the topography of an area. The peninsula of Charleston is divided into many different drainage basins, shown in the image on the opposite page.

ONGOING DRAINAGE PROJECTS

Since the early 2000's the City has invested millions of dollars making improvements to the stormwater drainage system. They have made progress, but there is still much to be done. The Lowline will function as both usable park space and public infrastructure that manages flooding.

YEAR	PROJECT	COST
2020	SPRING/ FISHBURNE	\$154,000,000
2018	MARKET STREET	\$30,000,000
2017	FOREST ACRES	\$15,000,000
2007	BYRNES DOWN	\$6,700,000
2001	CALHOUN EAST	\$15,800,000
2000	ARDMORE	\$5,000,000
	TOTAL:	\$226,500,000





HOW MUCH WATER?

BASIN NAME	RUNOFF FROM THE 10- YEAR 24-HOUR STORM (IN ACRE-FEET)
MEETING STREET NORTH	60
GROVE STREET	60
HUGER STREET	52
COOPER STREET	65
SPRING STREET	135
CALHOUN STREET EAST	87

MARION SQUARE:

WHAT IS THE 10-YEAR, 24-HOUR STORM?

In Charleston, the 10-year, 24-hour storm means that there is a 10% chance every year that within a 24-hour period, we will have 6.41 inches of rain.

WHAT IS AN ACRE-FOOT?

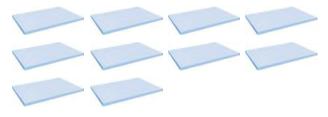
An acre-foot is a volume unit used in stormwater calculations.

Marion Square is six acres (see graphic below). If it were filled with one foot of water, it would be holding six acre-feet. If it were filled with three feet of water, it would be holding 18 acre-feet.

THIS PAGE ILLUSTRATES THE RUNOFF VOLUMES FROM THE TABLE OPPOSITE. FOR EACH BASIN, THE **ACRE-FEET OF RUNOFF IS TRANSLATED INTO HOW** MANY MARION SQUARES (1 FOOT DEEP) WOULD BE **REQUIRED TO ACCOMMODATE THE RUNOFF.**

MEETING STREET NORTH

60 Ac-ft = 10 Marion Squares (1 foot deep)



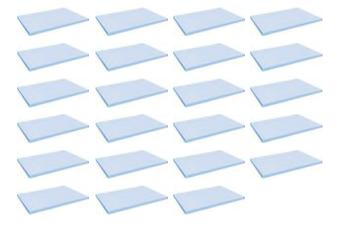
HUGER STREET

52 Ac-ft = ~9 Marion Squares (1 foot deep)



SPRING STREET

135 Ac-ft =~23 Marion Squares (1 foot deep)



THROUGH SEVERAL DIFFERENT STRATEGIES, THE LOWLINE HAS THE POTENTIAL TO ALLEVIATE RUNOFF.

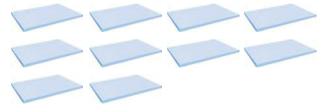


1 LOWLINE = 7 MARION SQUARES



GROVE STREET

60 Ac-ft = 10 Marion Squares (1 foot deep)



COOPER STREET

65 Ac-ft = ~11 Marion Squares (1 foot deep)



CALHOUN STREET EAST

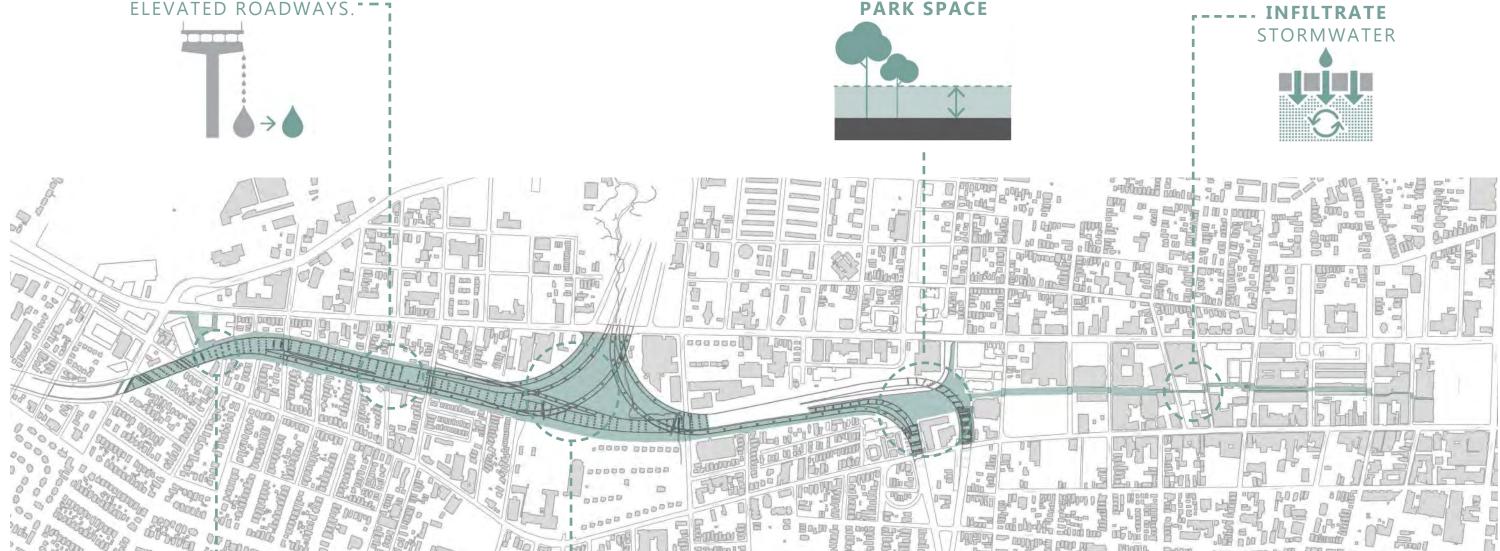
87 Ac-ft =~15 Marion Squares (1 foot deep)



WATER STRATEGIES

CAPTURE AND TREAT RUNOFF FROM ELEVATED ROADWAYS. --

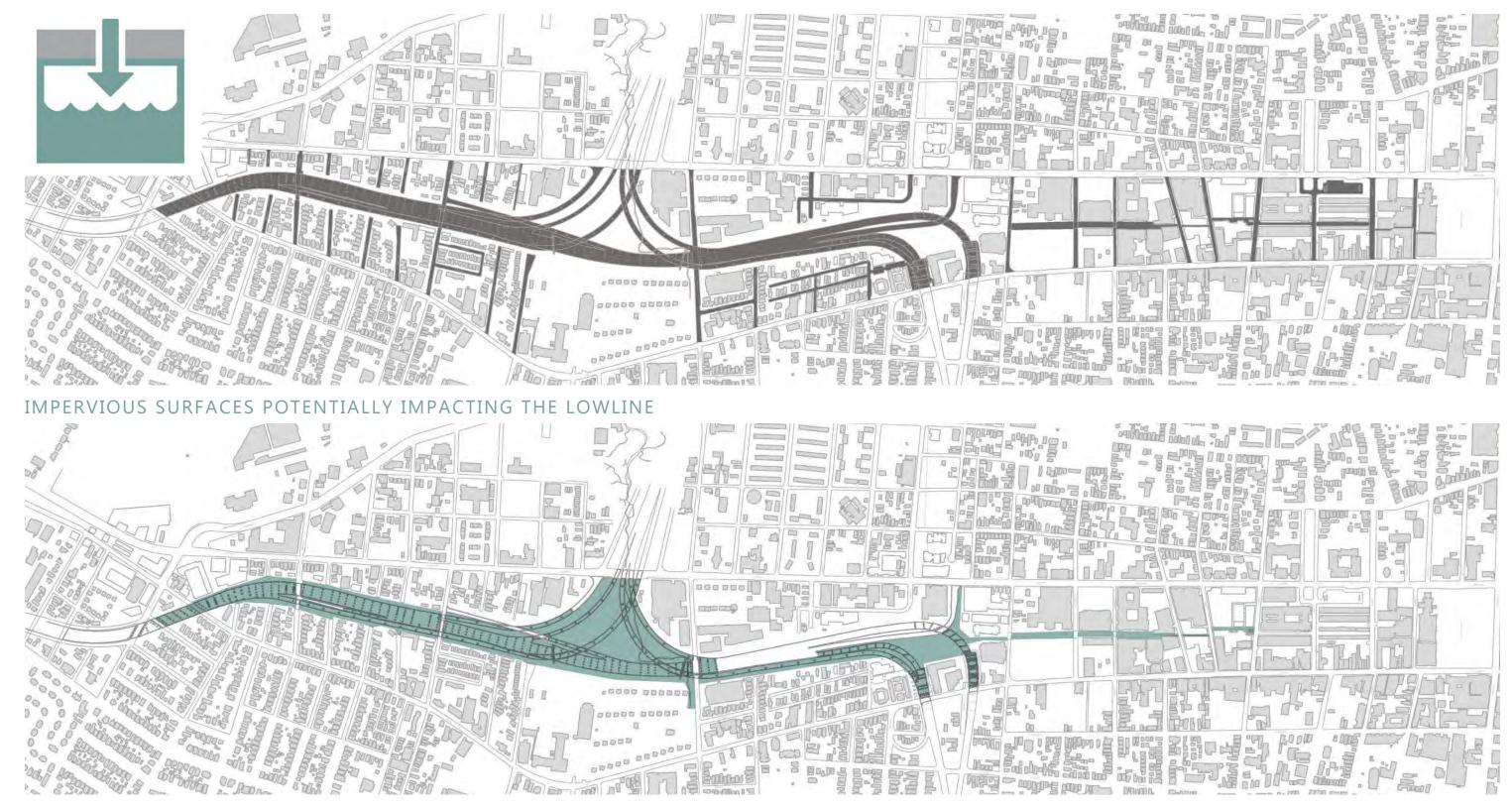






SITE CONDITIONS INCLUDING **ELEVATION, SOILS, AND** WATER TABLE WILL AFFECT THE FEASIBILITY OF THESE STRATEGIES.

TEMPORARY WATER STORAGE



POTENTIAL AREAS FOR WATER STORAGE ALONG THE LOWLINE

STORMWATER WETLANDS: NEWMARKET PARK

The proposed Newmarket Park on the Lowline is a stormwater wetland that functions to detain, retain, and filter stormwater runoff. It also provides the opportunity to create an interactive ecological park that supports wildlife, adds recreation space, and brings public awareness to healthy water management.



This design advocates for the daylighting of Newmarket Creek on Huger Street. The old rail line created an artificial ridge which cut short the natural reach of the creek, causing flooding to the west. By providing an outlet to Newmarket Creek under the Lowline, the flooding at the intersection of King and Huger Streets could be alleviated.













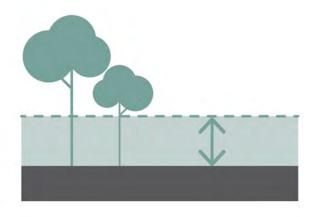
bridge over creek semi-salt tolerant rain garden plants salt marsh

ELEV. +6 ELEV. +4 NATURAL WEIR NEWMARKET CREEK



FLOODABLE PARK SPACE: LOWLINE PARK

THAT FUNCTIONS AS THE LOWLINE PARK COULD -OPEN PARK SPACE IN DRY CONDITIONS, AND WATER STORAGE DURING WET CONDITIONS



Lowline Park provides the opportunity to create a large, open park space with typical park amenities that is allowed to flood in heavy rains to become temporary stormwater infrastructure.





Mill Race Park in Indiana, designed by Michael Van Valkenburgh Associates.



The park is designed to accommodate seasonal flooding from two rivers.



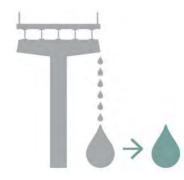


THESE IMAGES SHOW AN IMAGINED LANDSCAPE

CAPTURE AND TREAT RUNOFF

Rain gardens

INFILTRATE STORMWATER



Capturing and treating all runoff created by the elevated roadways is a priority for the Lowline. This will reduce runoff to the adjacent basins.

Runnel



Current Site Conditions: Runoff from the overpass



Bioswales





Current Site Conditions: Rain at Newmarket Park



Stormwater can be infiltrated in several different ways, depending on site conditions. In the urban core, infiltration will likely be limited to smaller rain gardens and permeable paving. Along the North Central Corridor, with more space, bioretention areas, bioswales, and vegetated filter strips can be used.

Permeable paving

Curb cuts to rain gardens





Current Site Conditions: Stormwater from Hurricane Dorian





Retrofitted downspout



MOBILITY

THE LOWLINE IS A NEW **MOBILITY CORRIDOR** ALONG THE SPINE OF THE PENINSULA.

THE LOWLINE PROVIDES SAFE **BICYCLE AND PEDESTRIAN** CIRCULATION ALONG ITS ENTIRE LENGTH, BECOMING AN INTEGRAL PART OF THE CITY'S **PEOPLE PEDAL PLAN**.

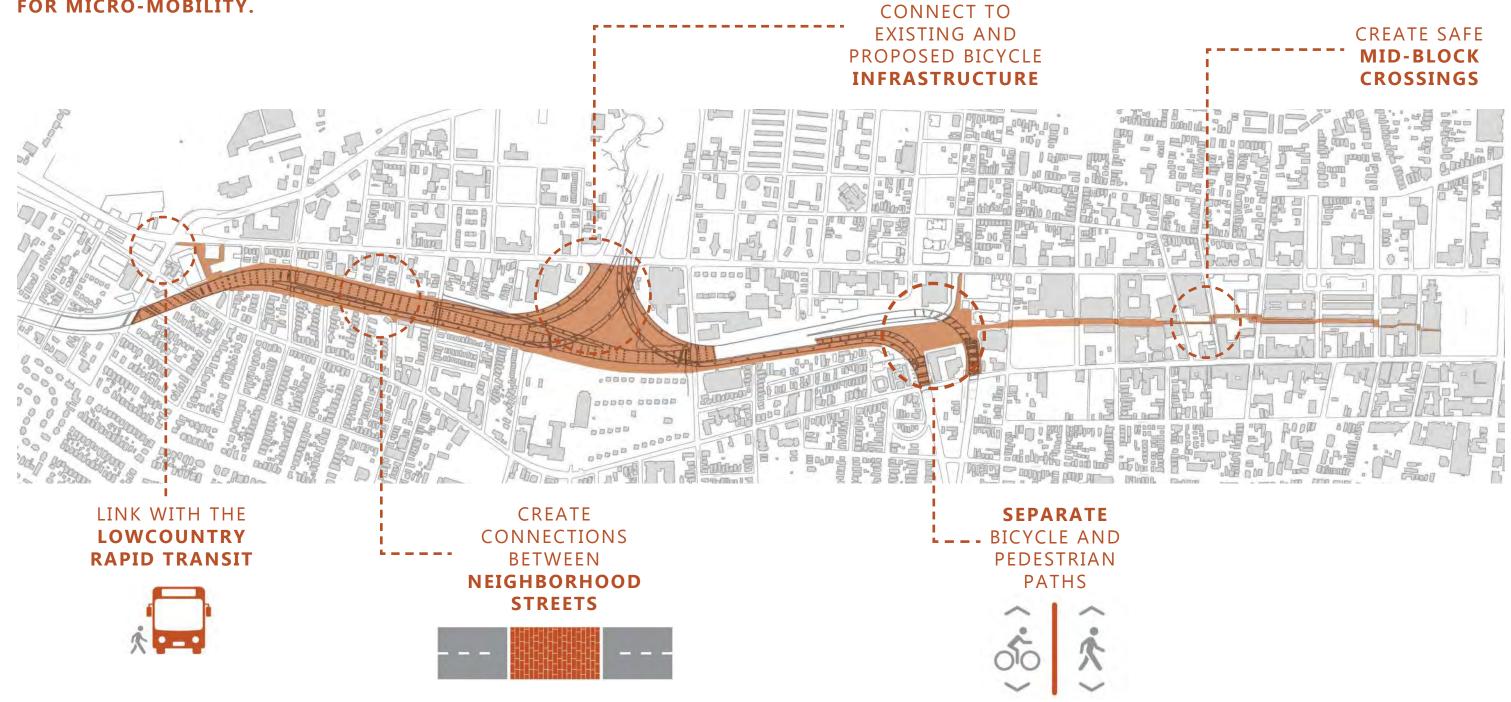
THE LOWLINE CONNECTS TO AND SUPPORTS THE FORTHCOMING LOWCOUNTRY RAPID TRANSIT.

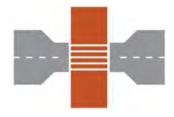
THE LOWLINE HELPS **TRANSFORM** THE WAY PEOPLE MOVE AROUND THE LOWCOUNTRY.

MOBILITY STRATEGIES

THESE STRATEGIES WILL BE IMPLEMENTED ALONG THE ENTIRE LENGTH OF THE LOWLINE TO ENSURE A SAFE, EFFECTIVE NEW CORRIDOR FOR MICRO-MOBILITY.







LOWCOUNTRY RAPID TRANSIT

The forthcoming Lowcountry bus rapid transit system (LCRT) will enter downtown Charleston at Mount Pleasant Street. The preferred alignment shown at right was selected for further study by the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) in June 2020¹⁴.

The transit hub at Mount Pleasant Street provides an opportunity for redevelopment of the city-owned parcel where the Parks Department is currently housed. Connecting the Lowline to the transit hub provides an engaging setting for people to disembark from the bus rapid transit system and continue their journey down the Peninsula by bike or foot via the Lowline.





PROPOSED LCRT STOPS ALONG THE LOWLINE WITH 1/4 MILE RADIUS

TRANSIT HUB + GATEWAY

PEOPLE PEDAL PLAN



The City of Charleston's People Pedal Plan is a new vision for a robust urban bikeway system on the Charleston Peninsula. Such a system will benefit all modes of travel, including automobiles. The urban bikeway network will be composed of segments and intersections of various types. This is the first comprehensive bicycle infrastructure study for the Peninsula and is a vital first step in creating a multi-modal transportation system.

The Lowline will become the key central spine of this peninsula-wide plan, enhancing connections for multi-modal transportation by providing safe and comfortable paths for cyclists and pedestrians alike.



Example of a painted bike lane with a bike box at the Example of a separated two-way cycle track. intersection.



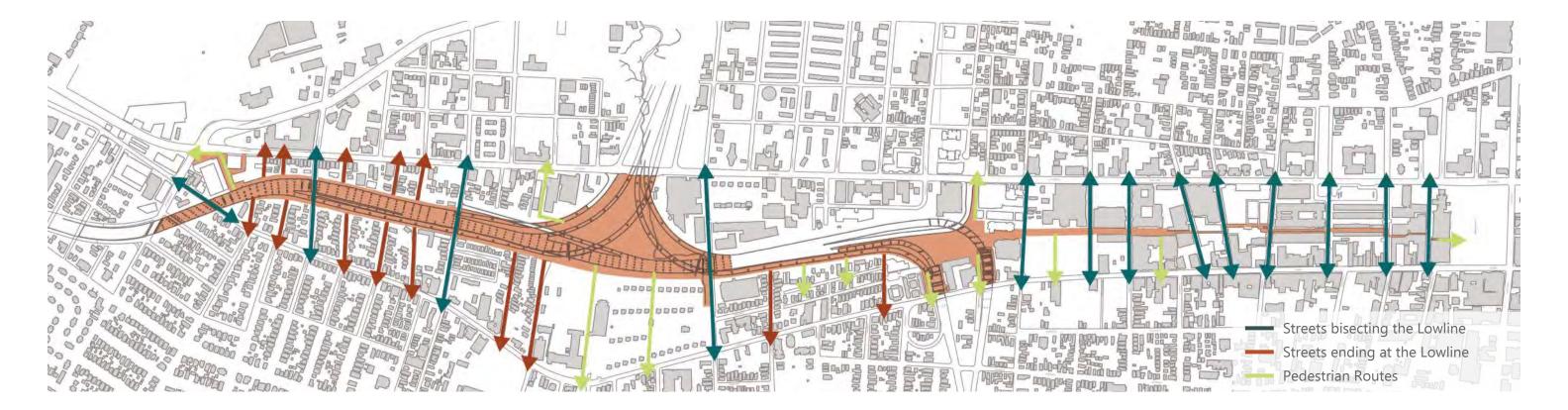




NEIGHBORHOOD CONNECTIONS



I-26 and the Norfolk Southern rail corridor separated the neighborhoods to the east and west. The Lowline aims to reinforce neighborhood connections by filling the gaps between dead-end streets, encouraging pedestrian and bicycle access along and across the Lowline. The Lowline will function as the central spine of the Peninsula.





wide. • The paths will be separated by a 6' minimum

- conflict
- There will be designated crossings to allow for safe access across the bikeway.

In certain areas where the Lowline is narrow and in conflict with SCDOT restrictions, these criteria may be adjusted.

12' PLANTED PEDESTRIAN PATH BIKEWAY MEDIAN

50 NORFOLK NORFOLK SCDOT

SOUTHERN

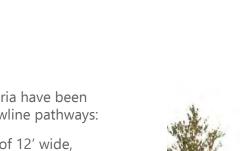
RAIL CORRIDOR

The following minimum design criteria have been established for the design of the Lowline pathways:

- The bikeway will be a minimum of 12' wide, allowing for two 6' lanes of travel.
- The pedestrian path will be a minimum of 10'
- planted median to minimize pedestrian-bicyle





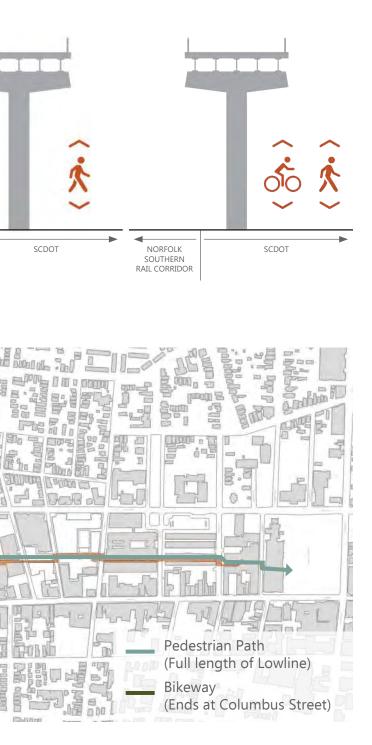


BIKEWAY AND PEDESTRIAN PATH

SOUTHERN RAIL CORRIDOR

WHERE IS THE PATH?

When the Lowline was originally imagined, it was assumed that the limitation would be the Norfolk Southern rail right-of-way. As the process has developed, it has become evident that through additional leases from SCDOT, the Lowline can extend under the overpass. This has allowed greater flexibility in the design of the Lowline north of Huger Street. Three possible scenarios are illustrated below.



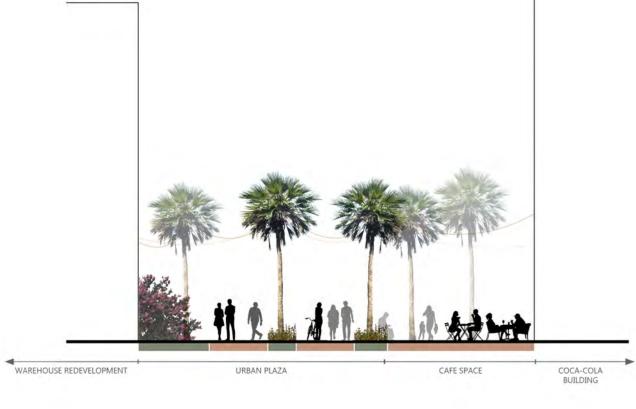
SECTIONS

The following sections illustrate what is envisioned for the Lowline in different districts.



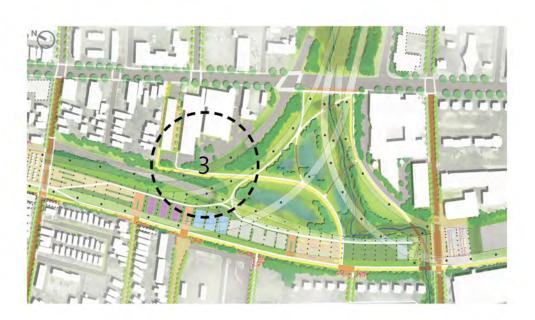


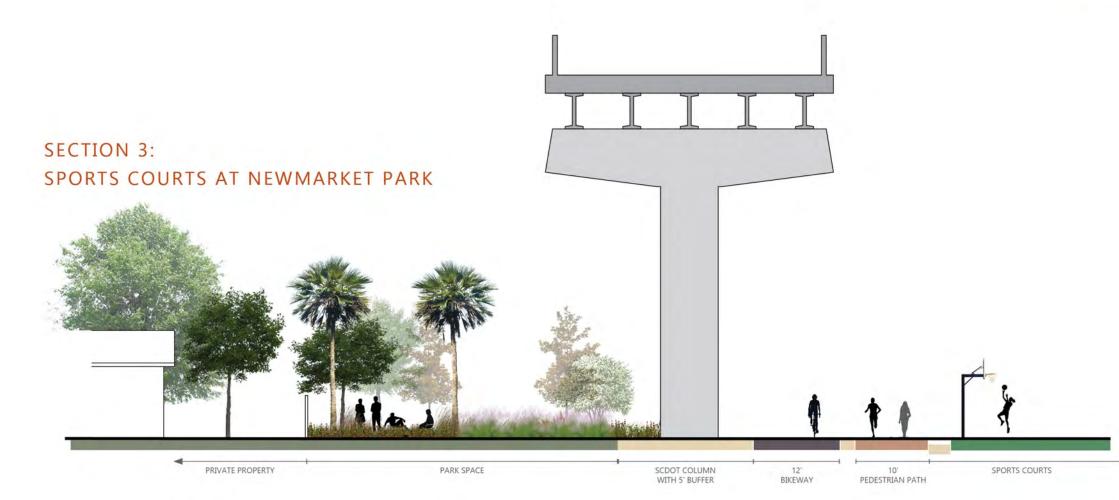
SECTION 1: PLAZA AT MT. PLEASANT STREET





SECTIONS







へ· 、 、 、 、 SECTION 5: WOOLFE STREET **SECTION 4**: NORTH OF LOWLINE PARK SCDOT COLUMN WITH 5' BUFFER PARK SPACE I-26 ROADWAY

-

WOOLFE ST. PLAYHOUSE

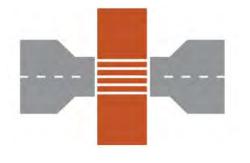
SKYGARDEN APARTMENTS

15'-2" WALKWAY

12' BIKEWAY 6' 10' PLANTED PEDESTRIAN PATH MEDIAN PRIVATE PROPERTY

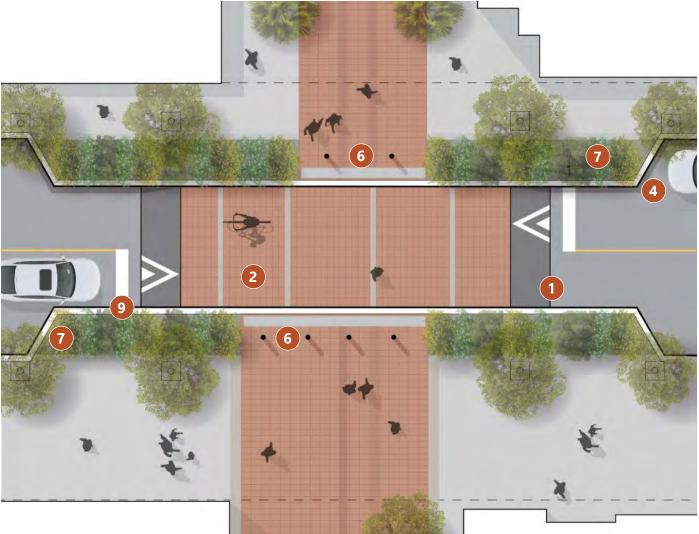


MID-BLOCK CROSSINGS



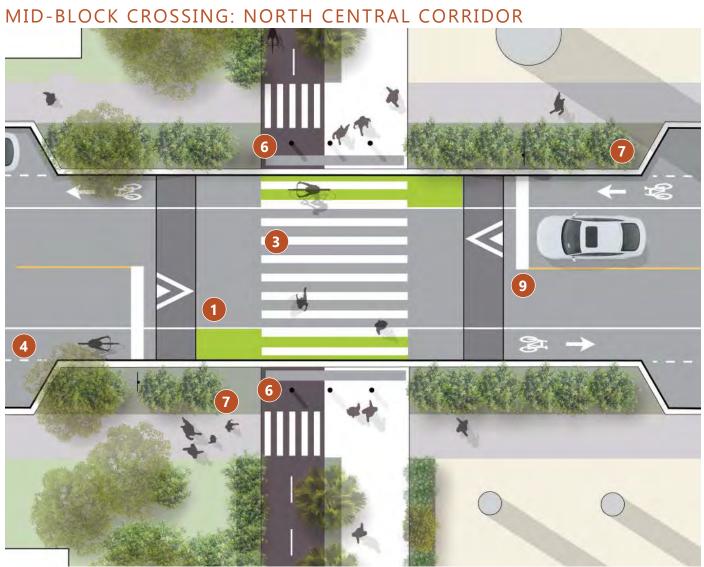
To provide the safest mid-block crossings, the City of Charleston should acquire from SCDOT the ownership of all streets that cross the Lowline. This allows streetscape improvements including street trees to be implemented on all streets bisecting the Lowline.

MID-BLOCK CROSSING: URBAN CORE



MID-BLOCK CROSSINGS COULD INCLUDE:

- **1. RAISED SPEED TABLES**
- **2. SPECIALTY PAVING**
- **3. PAINTED CROSSWALKS**
- **4. NARROW VEHICLE LANES**
- 5. SIGNAGE
- 6. BOLLARDS



7. PLANTED CURB EXTENSIONS 8. PEDESTRIAN ACTIVATED SIGNALS 9. PAINTED STOP LINES FOR CARS



PLANTING

THE LOWLINE IS ENVISIONED TO BE A LUSH, **BOTANICALLY DIVERSE CORRIDOR** FOR PEOPLE TO ENJOY.

THE PLANTING WILL BE TRUE TO CHARLESTON.

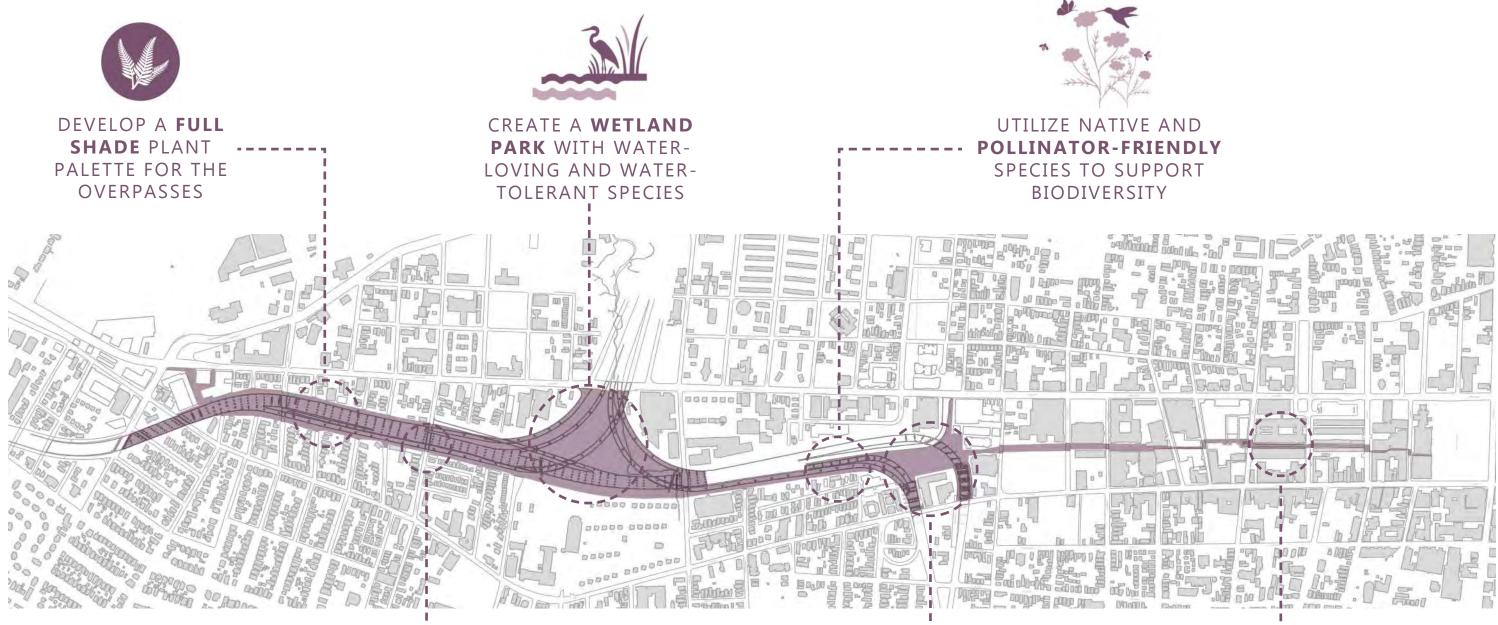
THE GREENING OF THE LOWLINE WILL PROVIDE A SPONGE FOR STORMWATER AND A FILTER FOR POLLUTANTS.

THE PLANTING WILL SUPPORT AND ENHANCE **ECOSYSTEM SERVICES**.

THE DESIGN IS INTENDED TO BE LOW MAINTENANCE WITH SELECT AREAS RECEIVING MORE CARE.

THE PLANT PALETTE WILL HONOR THE CITY'S RICH HORTICULTURAL HISTORY.

PLANTING STRATEGIES



MAXIMIZE USE OF FULL SUN AREAS FOR PLANTING



PROVIDE SPACES FOR PEOPLE TO ENGAGE WITH NATURE



EMPLOY A TRADITIONAL AND HISTORICAL PLANT PALETTE FOR A CONGRUOUS URBAN CORE



SUN-SHADE ANALYSIS

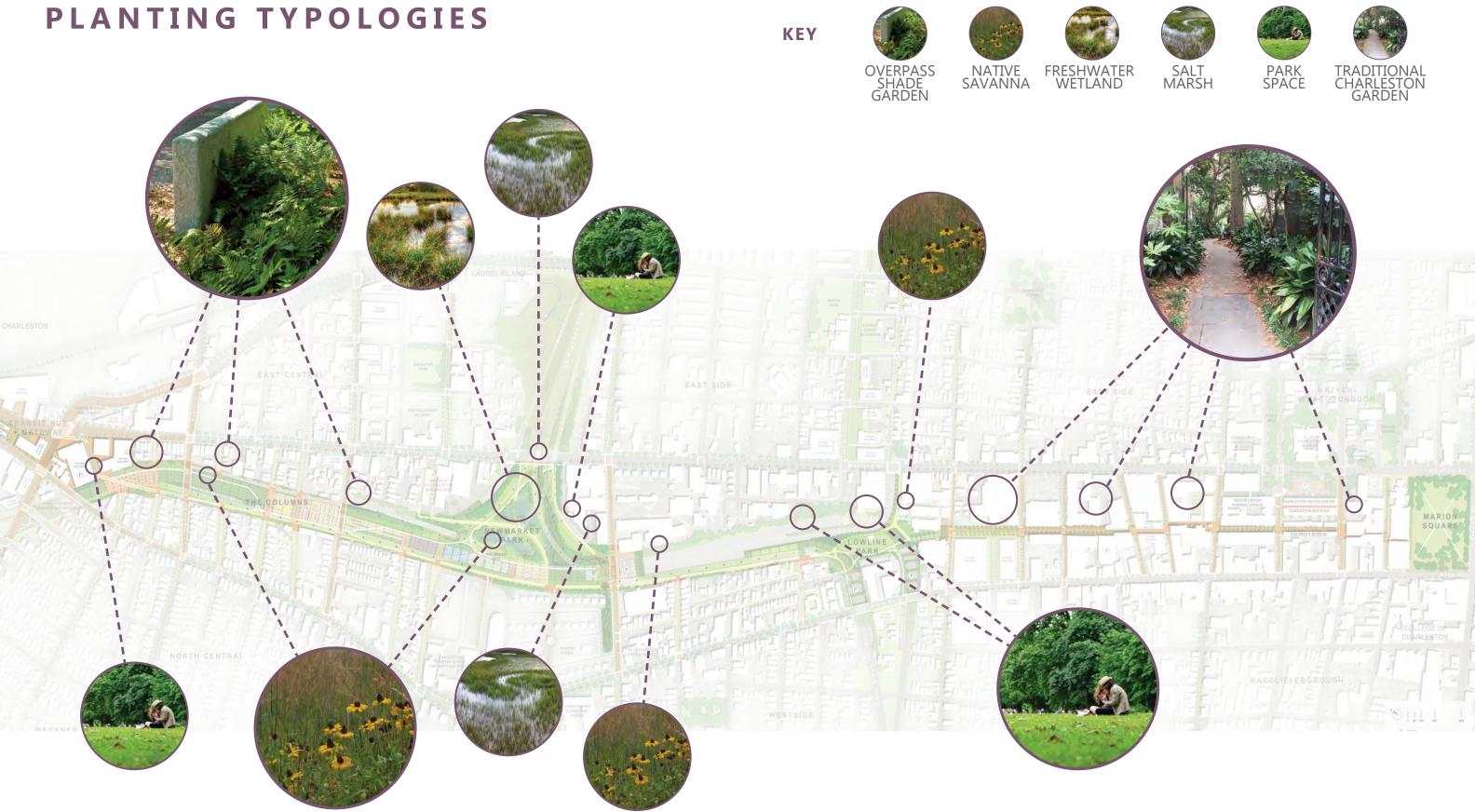


The following diagram shows the approximate sun/shade patterns that will guide the planting design along the Lowline corridor. The design will maximize the use of areas with full/mostly full sun exposure for planting areas, leaving heavily shaded space under the overpasses for social gathering and programming purposes.





FULL SUN/ MOSTLY FULL SUN PART SUN/ PART SHADE FULL SHADE/ MOSTLY FULL SHADE

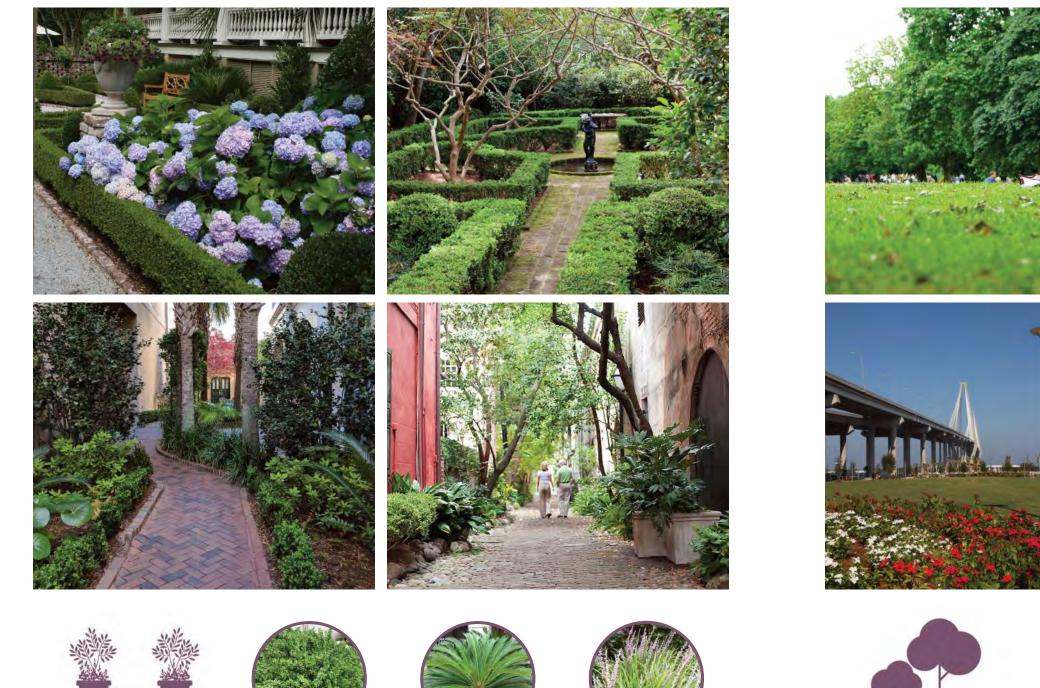








TRADITIONAL CHARLESTON GARDEN





REPRESENTATIVE SPECIES

Boxwood



Sago Palm



Liriope



REPRESENTATIVE SPECIES

Turf

PARK SPACE





Live Oak



Azalea

WETLANDS

SALT MARSH











REPRESENTATIVE SPECIES Spartina Cordgrass

Black Needle Rush







REPRESENTATIVE SPECIES

Sweetgrass











REPRESENTATIVE SPECIES



Iris



White Star Sedge







REPRESENTATIVE SPECIES

Dwarf Palmetto



OVERPASS CORRIDOR

NATIVE SAVANNA









Butterfly Milkweed

OVERPASS SHADE GARDEN





Ferns



Fatsia



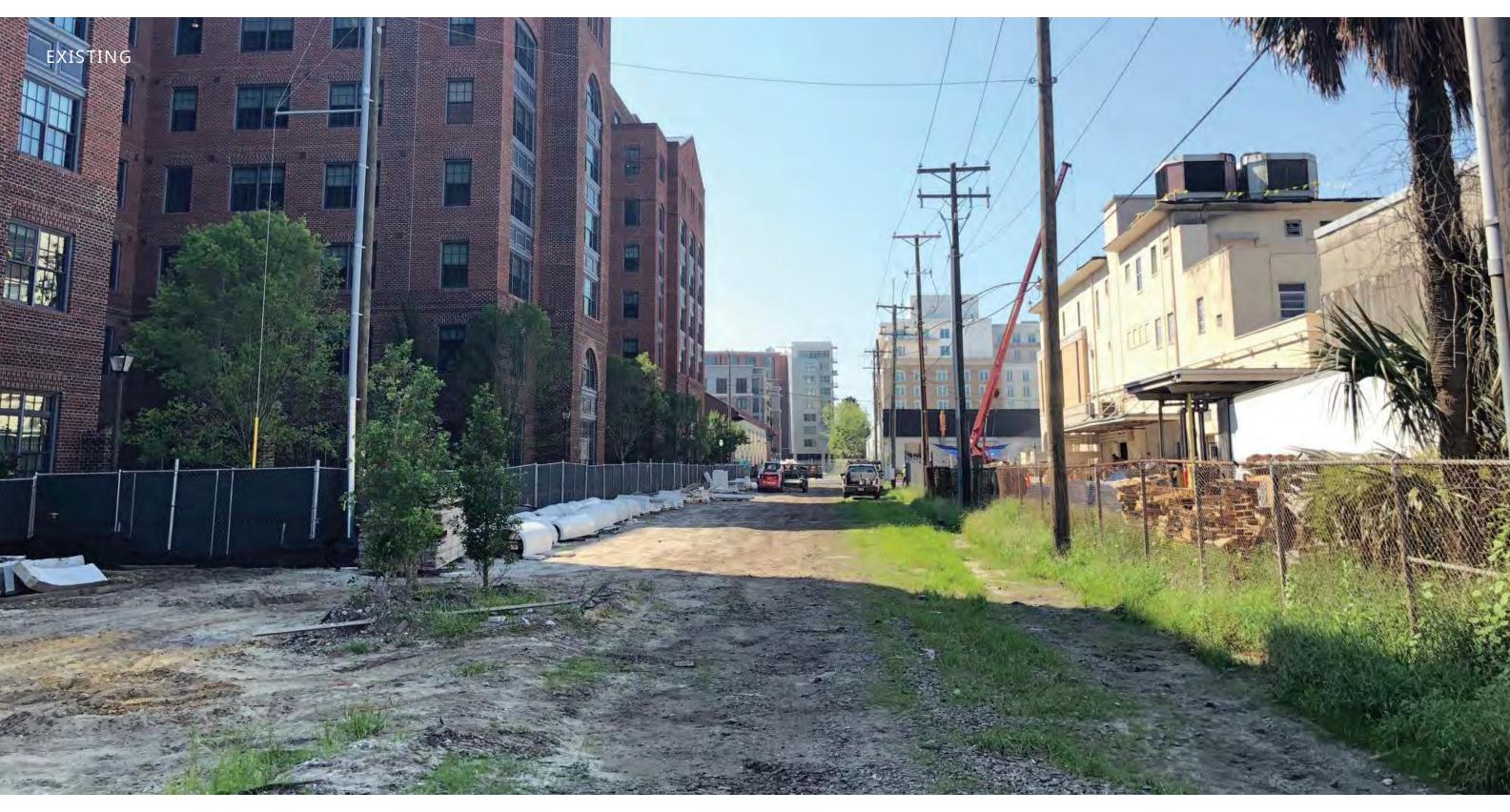
BEFORE & AFTER

THE FOLLOWING RENDERINGS SHOW THE TRANSFORMATION OF THE LOWLINE.

RENDERING VIEWPOINTS



- **1** URBAN CORE RENDERING
- 2 LOWLINE PARK RENDERING
- **3** NEWMARKET PARK RENDERING
- 4 BIKEWAY AND PATH RENDERING
- 5 THE COLUMNS RENDERING



URBAN CORE



URBAN CORE



LOWLINE PARK



LOWLINE PARK

NEWMARKET PARK



NEWMARKET PARK





BIKEWAY AND PATH



BIKEWAY AND PATH



THE COLUMNS



THE COLUMNS



PROGRAMMING

THE FRIENDS INTEND TO IMPLEMENT A SELF-**SUSTAINING** BUSINESS MODEL FOR THE OPERATION OF THE LOWLINE.

THE LOWLINE IS DESIGNED TO GENERATE REVENUE FOR MAINTENANCE AND OPERATIONS.

THE LOWLINE WILL PROVIDE SPACE FOR BOTH ACTIVE AND PASSIVE RECREATION.

THERE WILL BE GATHERING AND SOCIAL SPACES DESIGNED FOR, AND WITH, THE NEIGHBORHOODS.

PROGRAMMING WILL BE SPECIFIC TO EACH **DISTRICT**, RESPONDING TO THE EXISTING NEIGHBORHOODS.

THE URBAN CORE

Green Space and Trees

Public Plazas









Outdoor Dining

Hospitality



Pop-up Retail

Museums

Retail and Shopping









Historic/Cultural Institutions

Historical Markers



Alleys





Outdoor market



Walking and Bike Paths









Sports Courts







Beer Garden



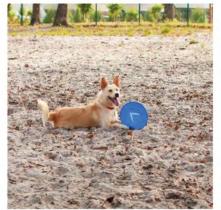
Dog Park

nd

Public Art









Active Recreation



Large Events









Passive Recreation

THE NORTH CENTRAL CORRIDOR

Public Transportation

Public Plazas





Social Gathering

Playground



Active Recreation



Outdoor Dining





Food Trucks

Outdoor Games



Neighborhood Market





Dog Park



IDENTITY

AS A KEYSTONE PIECE IN THE LARGER GREEN SPACE NETWORK OF CHARLESTON, THE LOWLINE WILL HAVE SOME ELEMENTS THAT PROVIDE A UNIQUE AND **RECOGNIZABLE** IDENTITY.

THIS IDENTITY WILL **HONOR** THE SITE'S HISTORY, RESPECT THE HISTORIC NEIGHBORHOODS AND CELEBRATE THIS **NEW PUBLIC PARK**.

COMPONENTS OF IDENTITY

GRAPHICS

Creating a unique and instantly recognizable logo is the first step in developing the graphics that will cement the identity of the Lowline in the public consciousness. The Lowline website, marketing materials, and signage will coordinate and relate to this logo and to each other. Style, fonts, and colors are examples of graphic components that will be consistent for Lowline materials.

PLANTING

IDENTITY

The planting along the Lowline will strongly contribute to its identity both as a public space that improves the ecologic functioning of the Peninsula, and as a historic gateway for horticultural diversity. The plantings will establish a gardenesque character for the site, providing shade, improved air quality, and immersion in the natural world. The Lowline will also function as an informal arboretum of the coastal southeast, showcasing a variety of native and ornamental trees.

HISTORY + CONTEXT

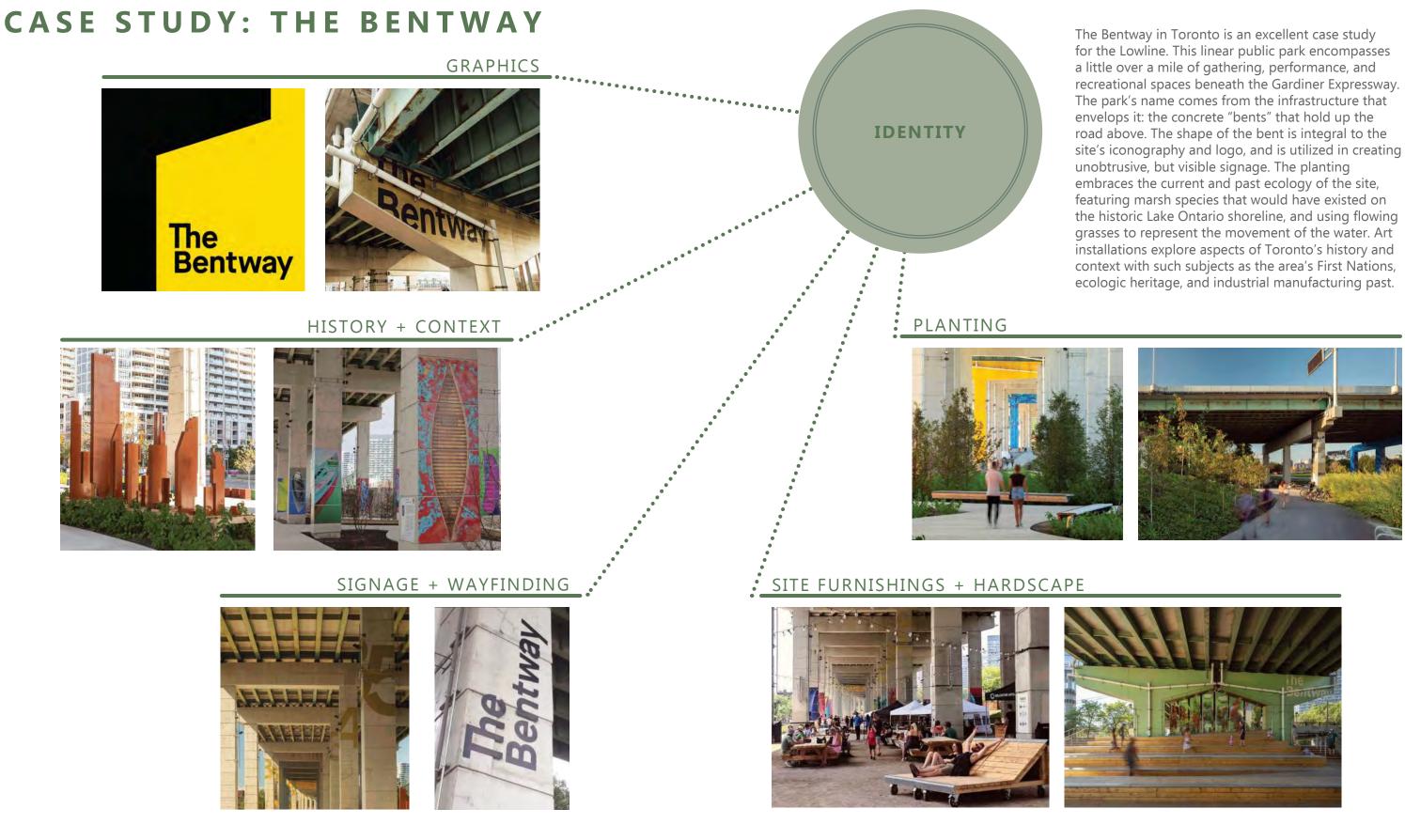
The history of the Norfolk Southern rail line and the first official passenger rail in America is an important part of the Lowline's story that will be revealed through symbology in the graphics and material design, as well as through more explicitly educational platforms such as the website and informational kiosks. However, in addition to highlighting the past, the Lowline will be firmly anchored in its present context, expressing the *genius loci* of the neighborhoods through which it passes.

SIGNAGE + WAYFINDING

All signage and directional cues will be in keeping with the coherent graphic language developed for the Lowline, as well as being straightforward and user-friendly. Icons and glyphs will be simple, visible, and uncluttered to convey information efficiently. The signage will inform Lowline users of where they are geographically, while also conveying transition through the unique and varied districts which the Lowline encompasses. Users will feel secure in knowing where they are, where the Lowline is, and where the Lowline makes connections to the greater transportation network.

SITE FURNISHINGS + HARDSCAPE

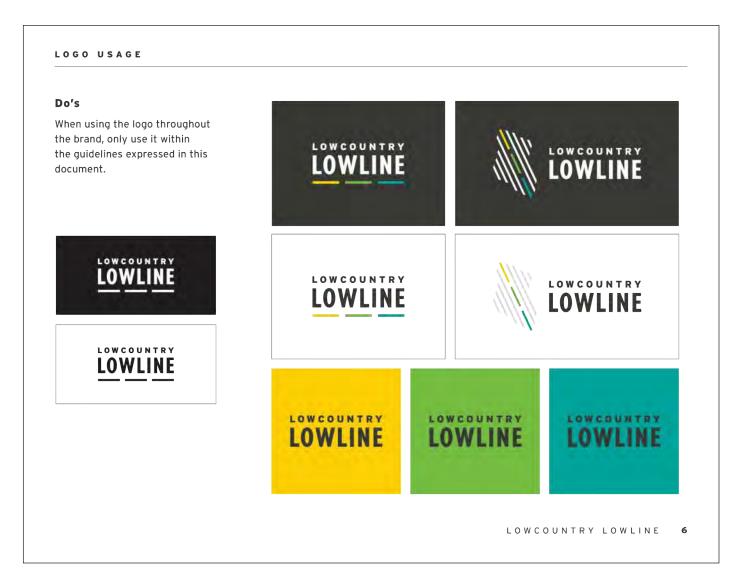
The furnishings along the Lowline--including benches and other seating, lighting, pavement types, planters, bicycle racks, and even trash receptacles--are part of the statement the Lowline makes about its identity and purpose as a transportation and green space network in the Lowcountry. The materials and furnishings will be congruous with the particular district in which they are located, augmenting that district's unique flavor and honoring its historic, cultural, and geographic context. The furnishings will elevate principles of social and ecologic sustainability, create a safe and comfortable environment for users, be aesthetically pleasing, and integrate respectfully into the existing fabric of the city.



LOWLINE BRANDING

The Friends recently completed a branding exercise with Obviouslee Marketing. Obviouslee helped the Lowline to create new logos, colors, fonts, icons, and brand guidelines.

These pages show the result of that work, and show a few of the logos, graphics and icons that will come to represent the Lowline. This is an important first step in creating a tangible identity for the Lowline, and will tie in nicely with other built elements of the Lowline as the project moves into future phases.



COLOR PALETTE	
Color Terms Defined	
Pantone (aka PMS or "spot color") colors should be used when printing on paper and only when the printer has been specified to use PMS ink. They should never be used on the web or for anything being printed in	
CMYK. CMYK (aka "4-color") colors should be used for printing on paper, apparel and other collateral, and only when the printer has been specified to use CMYK Ink.	CHARCOAL CEMENT PMS: 447 C PMS: 447 C (15%) CMYK: 69/59/64/54 CMYK: 12/9/0/0 R08: 59/55/59 R08: 221/221/220 HEX: 37837 HEX: 00000C
RGB and HEX colors are used for digital applications.	
Always double check with your printer to clarify appropriate color profile and file format for any print project.	YELLOW GREEN TEAL
	FMS:109 C FMS:368 C FMS:327 C CMYK:10/60/00 CMYK:92/20/00 CMYK:100/4/20/00 R08:254/209/3 R08:18/168/67 RG8:0163/194 HEX:768C43 HEX:00A39A
	LOWCOUNTRY LOWLINE
COLOR PALETTE	
Balance This is a visual guide of weight given to	
each of the brand colors. Charcoal is weighted heavily because	
It can be used as a background color in certain circumstances like cover pages or divider slides and is the main color for typography. The rest of the brand colors are weighted evenly to show equal representation of each section of the Lowcountry Lowline.	снавелас. Зуч
Concrete is to be used as a supporting color and should not be used as heavily as the four other primary brand colors.	
	LOWCOUNTRY LOWLINE
T Y P O G R A P H Y	
Fonts	
The fonts used in the logo are Gill Sans Nova Condensed Bold and Interstate Black. Gill Sans Nova Condensed Bold should be used for headlines with standard	Gill Sans Nova Condensed Bold abcdefghijklmnopqrstuvwxyz 1234567890
letter spacing. Interstate Black should be used for subheads or callouts with wide letter spacing and all caps. And Interstate Regular is a complementary	
	INTERSTATE BLACK Abcdefghijklmnopqrstuvwxyz
fort to the logo that can be used for body copy with standard letter spacing. See usage example on page 15.	abcdefghijklmnopqrstuvwxyz 1234567890
font to the logo that can be used for body copy with standard letter spacing.	





APPENDIX

IMPLEMENTATION RESOURCES

This master plan is intended to be a framework plan from which further research and design is developed. The following documents have been commissioned by the Friends and the City of Charleston to support the implementation of this conceptual master plan.

STORMWATER STRATEGY AND COST ESTIMATE

Prepared by Kimley Horn, released August 2020

This document was prepared by Kimley Horn based on the design principles and stormwater strategies laid out in this conceptual master plan document. The work was needed to further refine what was possible from a stormwater standpoint, and to begin to think about funding strategies based on the initial cost estimate. As of August 2020, based on the existing master plan document, the Lowline is estimated to cost \$36.5 million, of which \$12.5 million is dedicated to stormwater infrastructure.

LOWLINE AFFORDABLE HOUSING REPORT

Prepared by the City of Charleston Design Division, released August 2020

This report provides a capacity and massing study for a City-owned parcel along the Lowcountry Lowline. It identifies critical opportunities and essential off-site improvements to ensure the site is positioned for public-private development.

DESIGN GUIDELINES AND PHASING STRATEGY

Prepared by the City of Charleston Design Division, released November 2020

This document guides the detailed design and phased implementation of the project. Flexible design guidelines help provide more information in advance of Design Review Committee submittal. The phasing strategy outlines a geographically segmented approach to use coordination strategies, incentives and various sources of funding to get the work done. The document also provides guidance to shape an agreement with the South Carolina Department of Transportation for parking and recreation uses of their property.

PUBLIC ENGAGEMENT REPORT

Prepared by Friends of the Lowcountry Lowline, forthcoming

This report is intended to summarize the findings of the public outreach and survey conducted by the Friends of the Lowcountry Lowline beginning in March 2020.

THE LOWLINE HISTORY PROJECT

Prepared by Friends of the Lowcountry Lowline, forthcoming

The Lowline History Project is intended to provide rich historical detail to the Lowline Corridor. The project intends to understand the history of the Lowline site, the people who built and used the railroad, and the fabric of the surrounding neighborhoods. The Lowline itself will provide an outdoor museum experience that can provide permanent and temporary exhibit spaces for historical and contemporary cultural activities.

They provide more detail and depth to the ideas generated during the master planning process. They are intended to complement and expand the work presented here. Links to these documents can be found on the Lowcountry Lowline website (https://lowcountrylowline.org/).

END NOTES

¹ Halsey, Alfred O., <u>Historic Charleston on a Map</u>, digital scan, South Carolina Historical Society, accessed October 22, 2020.

² Best Friend of Charleston, digital scan, accessed August 26, 2020, https://railroad. lindahall.org/essays/locomotives.html.

³ Andrews, George, <u>Grove Street Station sees the last day of SAL passenger service to</u> Charleston, photograph, Abandoned Rails, accessed August 26, 2020, https://www. abandonedrails.com/charleston-subdivision.

⁴ South Carolina Railway Co. bond 1881, digital scan, 9 x 12.5 in, accessed August 26, 2020, http://www.oldstocks.com/south-carolina-railway-co-bond-1881/.

⁵ Aerial Photo, photograph, The Post and Courier, accessed October 18, 2020, https:// www.postandcourier.com/news/local_state_news/why-highways-were-designed-to-runthrough-black-communities-sc-faces-historic-dilemma-again/article_576f3fce-0976-11eb-a46c-635e6fad5d38.html

⁶ South Carolina Department of Transportation, <u>I-26 Photo 1013</u>, photograph, The Margetta Childs Archives, Historic Charleston Foundation, accessed October 21, 2020, https://lcdl.library.cofc.edu/lcdl/catalog/lcdl:56291?tify={%22view%22:%22info%22}

⁷ South Carolina Department of Transportation, <u>I-26 Photo 0993</u>, photograph, The Margetta Childs Archives, Historic Charleston Foundation, accessed October 21, 2020, https://lcdl.library.cofc.edu/lcdl/catalog/lcdl:56271

⁸ South Carolina Department of Transportation, I-26 Photo 0174, photograph, The Margetta Childs Archives, Historic Charleston Foundation, accessed October 21, 2020, https://lcdl.library.cofc.edu/lcdl/catalog/lcdl:55452?tify={%22view%22:%22info%22}

⁹ "'Unique' Park Will Be Built Under I-26 Ramp", News and Courier (Charleston, SC), January 15, 1976, digitized microfilm, The South Carolina Room, Charleston County Library.

¹⁰ "Incomplete, But Fun", Evening Post (Charleston, SC), April 4, 1977, digitized microfilm, The South Carolina Room, Charleston County Library.

¹¹ "Interstate Park", Evening Post (Charleston, SC), May 17, 1977, digitized microfilm, The South Carolina Room, Charleston County Library.

¹² "Riley Rebuts Charges Against I-26 Park", Evening Post (Charleston, SC), Mary 9, 1980, digitized microfilm, The South Carolina Room, Charleston County Library.

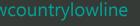
¹³ Waggoner & Ball, <u>Elevation Peninsula</u>, Dutch Dialogues Charleston, accessed August 21, 2019.

¹⁴Lowcountry Rapid Transit, Proposed Station Areas, Berkeley-Charleston-Dorchester Council of Governments, accessed September 4, 2020.



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HTTPS://LOWCOUNTRYLOWLINE.ORG





DesignWorks



LOWCOUNTRY LOWLINE