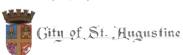


Final Master Plan & FY2011 Grant Applications Summary July 14, 2011 | FINAL





Creating Compelling Environments to Live, Work, and Play





The Purpose of this Document

The Halback Design Group Team has completed the third of three major tasks in the "Reconnecting the Castillo and the Bayfront" planning study. This focused on the development of a **phased master plan to implement alternative transportation improvements**.

This document is designed as an executive summary to review the project as a whole, the phased master plan, and the next steps. Considerable attention is given to the Phase 1 Pedestrian Improvements, which compose the \$2.5 million grant request for FY2011 Paul S. Sarbanes Transit in Parks funding.

Table of Contents

Planning Process Overview	3
Step 1 - Data Collection, Research, Assessment, and Framework	3
Step 2 - Public Participation & Outreach	3
Step 3 - Development of Alternative Designs & Preferred Option	4
Step 4 - Final Master Plan & Preliminary Design Phase	5
Project Approvals	5
Phased Master Plan	6
Phase 1 Mobility Improvements	7
Orange Street Improvements	7
South Castillo Drive Improvements	8
Avenida Menendez West Side: Pedestrian Bulb Outs	9
Avenida Menendez East Side: Bayfront Park	9
Opinion of Probable Costs	11
Future Phases	12
Phase 2: Visitor Center Connection	12
Phase 3: SRA1A, "The Corridor"	12
Next Steps	13
FY2011 Grant Applications	13
Implementation Grant Application	13
Planning Grant Application	13
Support for the Community's Efforts	14
Upcoming Items to be Addressed during Construction	15











The Paul S. Sarbanes "Transit in Parks" Grant Program

The following synopsis of the grant program is provided by the Federal Transit Administration:

The Paul S. Sarbanes Transit in Parks Program was established to address the challenge of increasing vehicle congestion in and around our national parks and other federal lands. America's national parks, wildlife refuges, and national forests were created to protect unique environmental and cultural treasures, but are now facing traffic, pollution and crowding that diminishes the visitor experience and threatens the environment. To address these concerns, this program provides funding for alternative transportation systems, such as shuttle buses, rail connections and even bicycle trails. The program seeks to conserve natural, historical, and cultural resources; reduce congestion and pollution; improve visitor mobility and accessibility; enhance visitor experience; and ensure access to all, including persons with disabilities. The program is administered by the U.S. Department of Transportation, together with the Department of the Interior and the U.S. Forest Service.



Next Steps

On May 9, 2011, the City of St. Augustine, on behalf of the Castillo de San Marcos National Monument, submitted two grant applications for FY2011 funding through the Paul S. Sarbanes Transit in Parks program. It is expected that the City will hear about the success of these applications by the end of 2011.

If Phase 1 Pedestrian Improvements receive funding, they are expected to be completed around late 2012.

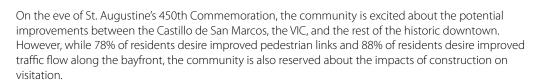
Data Collection, Research, Assessment, and Framework

Please refer to the Data Collection, Research, Assessment & Framework for Planning and Design Phase Executive Summary, dated October 4, 2010, for more information.

This planning process began with an extensive data collection phase, which focused on a variety of issues including previous planning exercises, historic precedents along the bayfront, current traffic patterns (vehicular, trams, bicycles, and pedestrians, among others), and the condition of the seawall.

Public Participation & Outreach
Starting at the beginning of the project and continuing for over 10 months, public participation and outreach has proved to be

an integrally important component of the planning project.



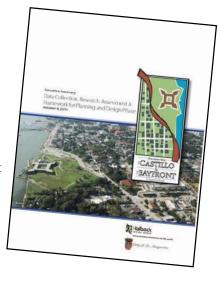
The following four priorities and issues were developed through the public participation process: **450th Commemoration Impacts:** The bayfront improvements must not impact the 450th celebration itself, and the City Commission has expressed the desire to minimize any impacts on the celebration.

Construction Burn Out: The community has experienced well over 5 years of travel delays and construction caused by the Bridge of Lions Rehabilitation. The community is excited to have this iconic bridge back open, with construction having completed in June 2011. There is concern about additional traffic delays that SR A1A reconstruction would create.

FDOT Seawall PD&E Study: The Florida Department of Transportation is currently leading a preliminary design and engineering study on the 1960s seawall along Avenida Menendez. The study is looking again at the seawall integrity and ADA access / overall safety along the bayfront. Basic FDOT improvements will likely include typical metal railings and ADA ramp switchbacks, both of which can impede views and historic character along the bayfront. The City Commission expressed their desire to maintain control of the look and vision for this important civic space.

Focus on Alternative Transportation: The community recognizes that this city of 13,000 has a large task to support the 4+ million tourists who visit the Nation's Oldest City each year. Therefore, the community is looking to improve alternative mobility, through expanded sidewalks, new bike lanes, new trolley / public transit stops, and improved mobility for carriages.

It is also important to note that the project's website has been a well utilized resource in the community, making this project one of the most open and accessible planning projects in St. Augustine's nearly 450 year history. Since the website was launched in October 2010, over 1,000 individual visits to the website have been logged.





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Planning Project Overview

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Development of Alternative Designs & Preferred Option

Please refer to the Development of Alternative Design Options Executive Summary, dated February 7, 2011, for more information.

During the alternative design phase, over 12 options were developed for community discussion and input. Each of these included a 3D rendering showing a before and after "fly through" of the corridor. This allowed the community and stakeholders to better understand impacts to traffic flow, pedestrian connections, alternative transportation options, and even visual corridors between the Castillo de San Marcos to and from downtown.

Several schemes were created envisioning bicycle lanes, dedicated transit (i.e. carriage) lanes, lane reductions (north-bound), traffic-calming improvements, and enhanced pedestrian connections with new crosswalks and wider

sidewalks. Two options that received the most feedback and interest are described below:

Alternate 8 - 2 south bound lanes, 1 north bound lane, and a dedicated horse carriage pathway

Alternate 8 looked at accommodating the same volume of vehicular traffic that currently uses A1A (Avenida Menendez / South Castillo Drive) in a more compact roadway design. Two lanes are critical for southbound traffic, as the left lane is an extended queuing lane for the Bridge of Lions when the drawspan is raised. However, only one lane is needed to z the north bound traffic if "friction" and conflict or decision points are minimized.



ABOVE: Alternate 8 rendering.

One of the main friction points is horse carriage traffic. These slow moving vehicles (~5 mph) currently travel north along the bayfront, switch into the left lane during the S-curve at Cuna Street, and turn left onto Orange Street, thereby blocking traffic in the left lane while waiting for an opening. This alternative recommends that the carriages travel south-bound in a dedicated pathway adjacent to the sidewalk. While the data shows that only three lanes are needed for the current volume of traffic, many in the community expressed concerns with eliminating a lane of north-bound traffic. The community seems interested in exploring this option in more detail.

Alternate 12 - 2 south bound lanes, 2 north bound lanes, and a dedicated horse carriage pathway

Alternate 12 was developed in response to the concerns raised in Alternate 8. While the community liked the dedicated carriage pathway and the extended queuing lane developed in number 8, this option maintained two northbound travel lanes. The large bayfront park that was developed in alternate 8 is minimized in this alternative, and the roadway encroaches on park land along the Castillo de San Marcos, which was an issue of great concern.

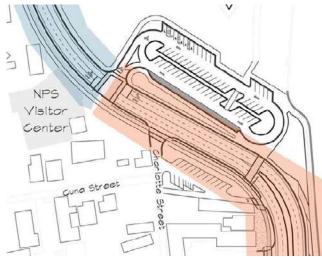


Planning Project Overview

Based on the input from the City Commission and the community on #8 and #12, alternate '12A' was developed. At the February 14, 2011, Commission meeting, the City Commission initially voted 4-1 to select alternate '12A' as the preferred alternative to advance into the final master plan phase. Alternate 12A mixed alternate 8 and 12:

From West Castillo Drive to the NPS parking lot

- Alt. 8: This orientation minimizes additional encroachment on the historic earthworks surrounding the Castillo de San Marcos while expanding sidewalks, adding bike lanes, and moving the same amount of vehicular traffic as the existing roadway.



From the NPS parking lot to the Bridge of Lions

- Alt. 12: Note that alternate 12 has many of the same elements in alternate 8, only with two north-bound lanes.

It is also important to note that a new vehicular lighted intersection at the NPS parking lot would create a safe crossing opportunity between the proposed visitor center and the Castillo. This light, along with all new ights, will be interconnected to move vehicles efficiently through the corridor. The existing trolley stop south of this new intersection will be moved to a new joint trolley drop off in the NPS parking lot.

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Final Master Plan & Preliminary Design Phase

Following the selection of alternate '12A', additional discussion by the Commission focused on the impacts of improvements on the 450th Commemoration. Concerns about construction burn out and access along A1A, which are discussed more on page 3, resulted in a reevaluation of the project.

Phase 1 was developed to meet the immediate needs for improved pedestrian circulation, without impacting the 450th. This document describes Phase 1 in more detail. It was approved at the April 11, 2011, Commission meeting by a vote of 5-0.



Project Approvals

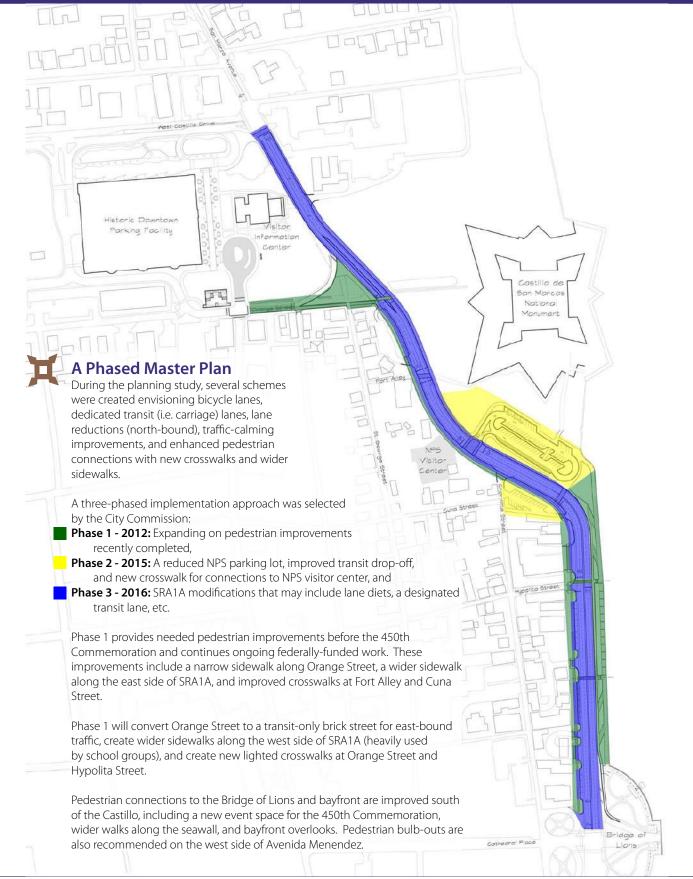
Below is a brief listing of the approvals that the Reconnecting the Castillo & the Bayfront project received: **City Commission, April 11, 2011:** Phase 1 pedestrian improvements and future phasing concept approved by 5-0 vote. This vote also approved the City's application for construction funding of Phase 1 and additional planning funding for Phases 2 and 3.

Castillo de San Marcos National Monument, May 2, 2011: Gordie Wilson, Superintendent, provided full approval of the Phase 1 pedestrian improvements. This approval was a critical component as it permits the City to pursue additional funding in the Sarbanes Transit in Parks program. Mr. Wilson also provided support to the additional planning funding request.

North Florida Transportation Planning Organization, June 9, 2011: The local TPO formally approved the planning exercise as being in accordance with the 2011/2012 Unified Planning Work Program. TPO staff and board members have been updated throughout the project. Due to the focus on A1A and the bayfront, the Halback Design Group team also worked closely with the TPO on the simultaneous planning project for bicycle infrastructure in downtown St. Augustine.

HARB Opinion of Appropriateness, April 21, 2011: Phase 1 pedestrian improvements received a 4-0 approval of an Opinion of Appropriateness. Final construction documents will need to be presented for a full Certificate of Appropriateness.

Planning & Zoning Board, January 4, 2011: Alternates 7, 8, 9, and 10 were approved by a 6-0 vote as being consistent with the Comprehensive Plan. It is important to note that these options were the basis of Alternates 11, 12, and 12A. Also note that Phase 1 pedestrian improvements do not directly impact the roadway.





Orange Street Improvements

The Orange Street connection is designed to create a clear, pedestrian-focused route between the VIC (where most visitors arrive and park) and the Castillo de San Marcos National Monument, which is the top destination in downtown.

East-bound traffic from Cordova Street (intersection at the VIC) and South Castillo Drive will be restricted to sightseeing trams, public transit, and horse carriages. While the community needed the west bound traffic to remain open to all traffic, the community has continually supported closing the east-bound traffic allowing a safer connection for visitors to St. Augustine.

- **Red Brick = Visitor Connection:** The wide asphalt roadway will be narrowed and bricked, continuing the brick used in the VIC and creating a visual connector to St. George Street and the Castillo.
- **Expanding Sidewalks:** Sidewalks on either side of Orange Street are further widened, expanding on the pedestrian improvements that were recently completed in May 2011.
- Reestablishing the Cubo Line: The northern wall of the historic city, the 'Cubo line,' will be finished between the Santo Domingo redoubt (at the intersection of Orange and Cordova) and the City Gates. The resulting line will stretch from the Castillo to the redoubt, recreating this link and directing visitors to downtown and the fort.
- **Additional Safe Crossing Opportunities:** The existing crosswalks on SRA1A are located at Fort Alley and Cuna Street. While the ongoing pedestrian improvements are installing wider, brick crosswalks at these locations, these improvements do not address the 650+ people each day who cross between the VIC and Fort Alley. To provide additional safe opportunities for pedestrians to connect between the east and west sides of SRA1A, additional lighted pedestrian crossings are proposed at Orange and Hypolita Streets. Interconnection of these lights is a critical component to aid traffic flow along SRA1A.





South Castillo Drive Improvements

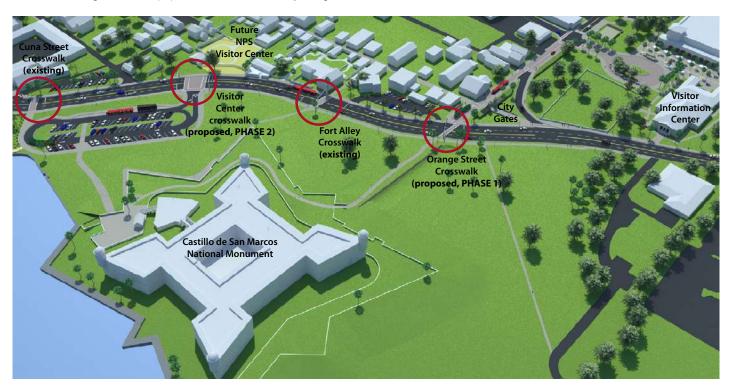
Throughout the planning process, the need to **expand sidewalks along the west side** of South Castillo Drive (SRA1A) was continually noted. This 5' sidewalk is highly utilized by school groups, which park buses at the VIC and walk along the narrow sidewalk to the first lighted crosswalk at Fort Alley (300' south of Orange Street).

Since the community did not want to adjust the roadway prior to the 450th Commemoration to accomplish the objective, the City is planning to work with private business owners to create wider sidewalks. This should address the unique 'pedestrian-to-pedestrian' conflicts identified by the transportation planner in the 2010 planning study. Field observations showed that pedestrians were actually walking in the roadway to bypass other pedestrians on the sidewalk.

RIGHT: View along Orange Street from the Visitor Information Center towards the City Gates, St. George Street, and the Castillo de San Marcos.

BELOW: Birds eye view of the Orange Street improvements, expanded sidewalks along South Castillo Drive, and the additional safe crossings at Orange Street and the proposed NPS Visitor Center (currently in design).







Avenida Menendez West Side: Pedestrian Bulb-Outs

South Castillo Drive turns into Avenida Menendez near the southern edge of the fort parking lot. In the late 1950s and early 1960s, the original 1833 seawall was demolished and a new seawall was constructed 80' east to allow the two-lane Bay Street to be expanded to four 12' lanes. The resulting corridor is vehicular-focused, with undersized pedestrian facilities for the 2.5 million visitors who visit St. Augustine each year.

- Pedestrian Bulb-Outs: Sidewalk widening on the west side of South Castillo Drive continues along Avenida Menendez (A1A) through a series of pedestrian bulb outs (see below). Current asphalt width includes two 12' lanes and an 8' parking lane for a total crossing distance of 32' to the central median. Pedestrian bulb-outs will help to define on-street parking and will reduce crossing distance by 8'.
- Additional Street Trees: Additional street trees are proposed in the west sidewalk to improve the microclimate of this space.



Avenida Menendez East Side: Bayfront Park

On the east side, the proposed Bayfront Park will help to reconnect the waterfront to the city and the Castillo de San Marcos.

- **Expanded Seawall Walk & ADA Access:** Along the seawall, existing chain railing is replaced with a secure metal railing placed on a granite cap. The seawall walk is widened from 8' to 13', allowing people to gather along the walk without blocking other pedestrians. ADA ramps are also incorporated adjacent to the two crosswalks, providing direct access to the seawall walk. The resulting walks create another north-south connection to complement St. George Street.
- h Maintaining Parking, Moving Carriages: While on-street parking is maintained, horse queuing shifts to the VIC and the Plaza. Today, carriages traveling through the Bridge of Lions intersection impact traffic coming off of the bridge as they queue along the bayfront. Now, carriages remain in the left lane, resulting in fewer conflicts.



waterfront.

El Césped Gathering Lawn: Between the Hypolita Street and Baya Lane (i.e. Hilton) crosswalks is a new central gathering space, 'El Césped.' Acting as a large bulb-out defining on-street parking on either end, this elevated lawn is surrounded by large seating steps providing informal seating for parades, picnics, and fireworks. This area can also be used as a small event space for 450th Commemoration celebrations.

Bayfront Overlooks: As evidenced in a series of historic photographs and Sanborn Insurance maps, there has traditionally been a series of boardwalks, docks, and overlooks along the seawall between the Bridge

ries of boardwalks, docks, a local real estate broker. Courtesy of the St. Augustine Historical Society.

BOTTOM: Seawall walk expansion and 'El Césped', a gathering lawn.

TOP: Perspective rendering of the city, circa 1889. Prepared by D J Ritchie,

of Lions and the Castillo. Since the expansion of the seawall and A1A in the 1950s and 1960s, there has been no way for the public to walk out over the water, which is a desire noted by many visitors in the 2010 Destination Master Plan for St. Augustine and St. Johns County (PGAV). This plan proposes a series of overlooks to interpret the many different overlooks that once graced the city's



xisting



ABOVE: Rendering of the view from the Bridge of Lions, towards the Castillo de San Marcos. The 'Bayfront Overlooks' allows residents and visitors to once again interact with the water, over 50 years after the previous piers and overlooks were removed.



Opinion of Probable Project Costs

Below is a summarized opinion of probable project costs for Phase 1 improvements, which consist of the Orange Street and Bayfront Park elements. It is important to note that this is only an opinion as prepared by the Halback Design Group Team for budgeting purposes only. Costs may vary during actual bidding of the project.

Seawall / Bayfront

General - items include, but are not limited to:

minor concrete & structural repair, demolition, earthwork, MOT, new curb & gutter, granite cap, railings, promenade, walk connection, steps/ramp, bioswale retaining wall (18"), landscape & irrigation

El Césped - items include, but are not limited to:

steps, engineered fill, turf $\&\,irrigation$

Lighting & Electrical Service - items include, but are not limited to:

general electrical service, bollard lights, pole lights

Allowances for Overlooks, Timeline, etc. - items include, but are not limited to:

piers & piles, time line / signage, site furnishings

Seawall / Bayfront Construction Subtotal \$1,425,000.00

West Sidewalk Improvement

General - items include, but are not limited to:

median landscape / irrigation, crosswalk, pedestrian signal - Hypolita Street, sidewalk widening, curb/bulb-outs

Lighting & Electrical Service - items include, but are not limited to:

median lighting, west side lighting

Allowances for Site Furnishings, etc. - items include, but are not limited to:

landscape / irrigation, furniture, signage

West Sidewalk Construction Subtotal \$ 390,000.00

Orange Street Improvements

General - items include, but are not limited to:

crosswalk, pedestrian signal - Orange Street, brick street, sidewalk widening

Allowances for Site Furnishings, Cubo Line - items include, but are not limited to:

cubo line completion, signage, site furniture

Orange Street Construction Subtotal \$ 385,000.00

Other Project Costs

General - items include, but are not limited to:

design fees, permitting, surveying, professional services

Other Project Costs Subtotal \$ 300,000.00

Overall Project Total \$2,500,000.00

A more detailed opinion of probable project costs was included in the FY2011 grant application (see page 13). All total, this \$2.5 million estimate was used to develop the grant request.

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Phase 2: Visitor Center Connection (2015)

Phase 2 focuses on pedestrian and transit improvements for the proposed National Park Service visitor center, which will be placed on land recently transferred from the State of Florida and the City of St. Augustine (see the yellow property below). Phase 2 improvements include the following:

- New Traffic Signal and Crosswalk at the Visitor Center: A new crosswalk and lighted intersection is proposed between the new visitor center and the entrance of the reconfigured National Park Service parking area. This crosswalk is equidistant from the existing Cuna Street and Fort Alley crosswalks, and it gives a much needed and safe crossing opportunity. This new light also enables the Bridge of Lions, Visitor Center, and West Castillo intersections to be interconnected and synchronized to improved traffic flow along A1A.
- Reconfigured NPS Lot: The NPS lot is modified to reduce the two existing entrances to one central entrance. The reduced footprint allows for restoration of the "glacis," which are the historic earthen banks around the Castillo.
- M Joint Transit Drop Off: The new lot also has a joint transit and bus drop off on the city side of the parking area, which provides direct access to the businesses in the downtown core, the new NPS visitor center, and the Castillo de San Marcos.



Bicycle Lanes: 4' bicycle lanes (5' along parking) should be incorporated, by law, in any roadway redesign. There is sufficient space in the right-of-way along Avenida Menendez. However, the coordination with the Castillo de San Marcos will be key to fit this infrastructure along South Castillo Drive.

Reduced Lane Widths: Standardized lane widths of 10'-0" are recommended along the entire A1A corridor. Currently, lane widths vary from 12'+ to less than 10', creating confusing contraction or expansion areas.

Expanded Bridge of Lions left turn lane: The south-bound lanes can be redesigned to create a queuing lane for the Bridge that stretches to the new Castillo lot parking light.



FY2011 Grant Applications

On May 9, 2011, the City of St. Augustine submitted two grant applications for the FY2011 Paul S. Sarbanes Transit-in-Parks program. One is an implementation grant aimed at the Phase 1 improvements described in the previous pages. The second is a planning grant to address a number of issues that were identified during the current planning study.



Implementation Grant Application

The implementation grant is for \$2.5 million, which is approximately 10% of the entire national funding in the Transit in Parks program. This funding request for Phase 1 pedestrian improvements continue ongoing federally-funded work and prepare the city to host additional visitors to St. Augustine during the 450th Commemoration.



Planning Grant Application

Through the "Reconnecting the Castillo & the Bayfront" planning process, the community discovered additional issues needing further analysis to prepare for the 450th Commemoration. The scope of this proposed project will focus on four key items:

SRA1A Transportation Management: This task will continue planning efforts on SRA1A. This additional work will focus on utilizing the right-of-

way to maximize efficient pedestrian movement (cars, walking, bicycling, trolleys, carriages, and buses). Given the current limited amount of space allocated to the excessive projection of pedestrian visitors, permanent and temporary solutions such as lane closures, dedicated lanes for high capacity vehicles, intersection reconfigurations, pedestrian crossings and location reductions of conflicts between pedestrians and vehicles will be explored.

Downtown Parking Study: This task investigates best parking strategies, including utilization of existing public and private parking lots within downtown,

and parking facilities within surrounding areas to provide access to the Castillo and the city, while minimizing the impact on St. Augustine's historic character. This task critically links with the following task.

450th Commemoration Transit System: To effectively maximize the proposed parking system, a temporary shuttle and circulator transit system must be developed to accommodate off-site parking to be located outside the downtown core. This type of system is utilized in most major cities for sporting and entertainment events (Super Bowl, Olympics, World Cup), including college and university towns across the country. The City anticipates teaming with the Sunshine Bus Company (public transit for St. Johns County) for these services.

St. George Street Pedestrian Connection Improvements: Every transit trip begins and ends with a pedestrian excursion. St. George Street is the key pedestrian facility within historic St. Augustine, providing access from the VIC, where the shuttle system drops off and picks up, to the new NPS visitor center. Improvements are needed to guarantee safe and convenient access to the visitor center from the fort (east) and St. George Street (west).



ABOVE: Following the opening of the multi-modal transportation facility at the VIC, the City was interested in a downtown shuttle system. A short-lived Cordova Street route was not highly utilized, but there are definite opportunities with the increased visitation for the 450th to opening up access to the Castillo and downtown.

Next Steps



Support for the Community's Efforts

The "Reconnecting the Castillo and the Bayfront" has received letters of support and congratulations from many different agencies, public servants, and representatives. A sampling of the support is provided below:

"All of the Phase 1 improvements are consistent with the intent of the Sarbanes Grant program and enhance pedestrian access and safety to the National Monument. We appreciate the patience and creativity the City and Halback Design Group have demonstrated to make this grant application a significant improvement to our community."

Gordon J. Wilson, Superintendent, Castillo de San Marcos National Monument

"St. Augustine, our nation's oldest city, hosted approximately 3 million visitors in 2007 and the Castillo de San Marcos...hosted more than 615,000 visitors in the same year. Unfortunately, parking capacity in this historic area is inadequate and I strongly support the City of St. Augustine's plan to implement pedestrianoriented improvements along SRA1A..."

Congressman John L. Mica, 7th District Florida

"Quality transportation programs benefiting residents and tourists in Saint Johns County are important to me as a U.S. Senator. If funded, this grant will be used for pedestrian improvements...it will create expanded sidewalks, transit-only connections, and bayfront improvements all in time for the 450th Commemoration set to take place stating in 2012."

Senator Bill Nelson, Florida

"The impressive efforts of the citizens of St. Augustine coupled with the extensive public participation in this process will allow your city to maximize the far-reaching efforts of education and prosperity this celebration will bring."

Senator Marco Rubio, Florida

"The Department appreciates the continued coordination with the City of St. Augustine in their efforts to improve the mobility along the bay front in the historic area of St. Augustine...Should the City be successful in identifying additional resources or in obtaining grant funds, our projects can be coordinated to ensure minimal overlap of resources and thereby providing additional benefits to the public."

James Bennett, P.E., Urban Transportation Development Manager, Florida **Dept. of Transportation**

"As champions for mobility options and pedestrian-friendly solutions, we too are excited about the prospect of making this an area that can truly serve the needs of both residents and tourists looking to access downtown and the waterfront."

Catherine Brown, Executive Director, Council on Aging / Sunshine Bus Company

"The University of Florida supports the City of St. Augustine's implementation grant request...The improvements called for in the Phase 1 Implementation of the City's "Reconnecting the Castillo and the Bayfront" project will greatly improve transportation safety and enhance the downtown historic district, which is particularly critical as the community prepares for the 450th anniversary of the founding of St. Augustine."

Ed Poppell, Vice President for Business Affairs and Economic **Development, University of Florida**





Upcoming Items to be Addressed during Construction

With the planning process complete, there are a number of items and issues that will need to be addressed in the coming months if the City is successful in obtaining the grant funding for construction. These include, but are not limited to, the following:



Signal Warrants and FDOT Approval

In order to place signalized pedestrian crossings at Orange Street and Hypolita Street, a signal warrant study will be required in coordination with the Florida Department of Transportation (FDOT). The purpose of this study is to collect data and provide traffic and pedestrian projection analysis to determine the potential future need for a traffic signal at Orange Street and Hypolita Street. This study builds off of the data

gathered in the planning study and will be prepared based on a methodology reviewed with FDOT staff that will identify the data and assumptions that will be applied in the analysis. Per the methodology, the report will provide traffic and pedestrian data and analysis consistent with the procedures set forth in the Manual on Uniform Traffic Control Devices (MUTCD) and the Manual on Uniform Traffic Studies (MUTS).

In addition to the above, all improvements to the land within the recovery area along Castillo Drive and Avenue Menendez will be subject to FDOT review. This includes the new pedestrian



ABOVE: The proposed signal at Orange Street requires a signal warrant.

features, landscaping and amenities to be implemented in association with the improvements. This review will ensure that there is no impact to site distance, vehicle recovery distance, and potential points of conflict.

Further discussion between FDOT and the City of St. Augustine regarding long term maintenance and operations of the seawall and adjacent bayfront park are recommended.



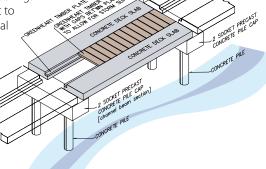
Waterfront Improvement Additional Engineering Coordination

In order for the waterfront portion of the project (including the bayfront overlooks and seawall improvements) to move forward, ATM and the Halback Design Group team recommend the following tasks be completed:

1. Initiate a **geotechnical investigation** including a series of borings and soil analysis in the nearshore and upland areas adjacent to the seawall. This information will be utilized for any structural design elements of overwater walkways and pilings as well as any seawall improvements/repairs.

 Expand and complete a bathymetric survey of the water areas adjacent to the seawall to determine exact water depths for design purposes.

3. Complete a detailed wind/wave/surge analysis to determine the wave and wind forces that would affect any over water or floating structures adjacent to the seawall. Information from the



Next Steps

- bathymetric survey will be utilized to determine wave dynamics and breaker heights.
- 4. Coordinate with FDOT and NPS to review any **seawall condition reports**, recommendations, or future plans for the seawall. FDOT is currently working on an analysis of the seawall condition and recommendations are expected soon.
- 5. If FDOT is not planning on further evaluations of the seawall, conduct a detailed seawall inspection that would include excavation of tie back locations to **determine subsurface conditions** of the seawall.
- 6. Once the engineering elements described above are complete, the engineer and the City can begin the permitting process. Since vessels will not be moored to the viewing platforms, the recommended permitting approach will be to submit an application to FDEP, with the intent that FDEP will also be able to issue the ACOE authorization. The recommended permit application package will consist of engineering drawings of the structures, results of the environmental resources assessment, and the permit application.



Coordination with the NPS Visitor Center

The proposed National Park Service (NPS) visitor center across the street from the Castillo de San Marcos National Monument is of special importance to improving pedestrian connections between the fort property and the rest of downtown. As the NPS design team refines plans, it is important for work along the A1A corridor to take into account viewsheds between the Visitor Center and the Castillo, access points, and overall circulation. The new visitor center should fit seamlessly into the network of new sidewalks and pathways, leading to a better visitor experience.



Coordination with 450th Plans

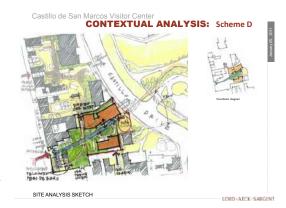
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kelifbition Space Assessment

There are additional planning efforts that could impact the final design and construction plans for the Phase 1 Pedestrian Improvements. For instance, the City of St. Augustine is

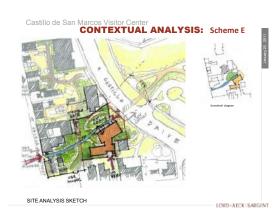
to create 450th exhibition and event space. This may take shape as an expanded Visitor of downtown St. Augustine, temporary tent facilities, or a series of outdoor event spaces including "El Césped" along the bayfront. Infrastructure needs identified by this plan, such as electrical outlets, temporary water and sewer connections, and signage should be accomodated in the design.





ABOVE: Scheme 'D' for Visitor Center | One of the multiple schemes developed for the new National Park Service visitor center on the west side of A1A, adjacent to the Colonial Spanish Quarter living history museum. Connections to St. George Street and across SR A1A (South Castillo Drive) are extremely important. The planning grant will analyze both connections. (From Lord-Aeck-Sargent)

BELOW: Scheme 'E' for Visitor Center | An additional scheme for the NPS visitor center, again showing the importance of the St. George Street connection. The multi-modal transportation facility at the VIC is north of these sites. (From Lord-Aeck-Sargent)





For more information on the "Reconnecting the Castillo & the Bayfront" project, visit the project website: www.halback.com/rcb/project.html -or- www.staugustinegovernment.com

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