December 15, 2014

The City of St. Petersburg
Engineering & Capital Improvements Department
7th Floor
Municipal Services Center
One Fourth Street North
St. Petersburg, FL 33701

Attn: Raul Quintana, City Architect

Re: Stage II Design Concept Submission for the St. Petersburg Pier

Dear Mr. Quintana and Selection Committee Members:

To accomplish the vision for a new and revitalized St. Petersburg Pier, the ASD/Rogers Partners/Ken Smith Landscape Architect design honors the pier’s robust, eclectic history while transforming the Pier into a 21st century public place.

Our proposal does more than replace the aging icon, it extends the urban and recreational features of St. Petersburg into the bay itself through a multitude of flexible programs and experiences for both tourists and the local community – from children to seniors, nature lovers to boaters, fishermen to fine diners. It is a hub for activity, not only at the pier head, but all along its length, creating a true bay-side city experience.

The Pier does not take you to a place – the pier is the place. It is THE PIER PARK.

We are honored to have been selected to submit a Design Concept Stage II submission for the new St. Petersburg Pier.

Sincerely

ASD/Rogers Partners/Ken Smith Landscape Architect

John Curran, AIA
Project Director
ASD

Robert M. Rogers, FAIA
Lead Designer
Rogers Partners

Ken Smith, FASLA
Lead Landscape Architect
Ken Smith Landscape Architect
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APPRAoch

The St. Petersburg Pier has been an essential icon in the city since the late 1800s. Throughout its history, it has existed in many forms – the original and highly successful Railroad Pier of 1889, the Electric Pier, the Municipal Pier, the Million-Dollar Pier, and finally the most recent iteration, known simply as “The Pier.” Each pier had its own set of programs and uses, some more ambitious than others, but all focused primarily on sightseeing and recreation. The ones that succeeded appealed to both visitors and residents, and were active day and night, throughout the year.

Sadly, the 1973 Inverted Pyramid never enjoyed that kind of success. Today, the St. Petersburg Pier remains central to the city’s identity, but it serves no other purpose. Once a focal point in the day-to-day life and activity of St. Petersburg, it has long been underutilized, a victim of unrealistic programming ambitions and a lack of connectivity to the fabric of the city. To accomplish the vision for a new and revitalized pier, we must create a place that embraces the dual role of The Pier as both an icon for the city and an integral part of the vitality of downtown St. Petersburg – a place for tourists and everyday visitors alike.

Our proposal reconnects The Pier to the daily life of the city, tying into the city’s transportation and recreation systems (bike paths, jogging trails, parking location, and public transit systems) as well as the overlay of new transport options like the Looper Trolley and a potential high-speed ferry. Rather than a singular and heavily programmed destination at the pier head, our proposal is a platform for a multitude of smaller and more flexible programs and experiences for both tourists and the local community – from children to seniors, nature lovers to boaters, fishermen to fine diners. It is a hub for activity, not only at the pier head, but all along its 1,380-foot length. The Pier does not take you to a place – The Pier is the place. It is THE PIER PARK.

LONG-TERM VISION

The Pier Park provides a program- and amenity-rich design for The Pier and the plands that is a complete project unto itself. The City of St. Petersburg will achieve not only a new pier and iconic pier head structure, but also an immersive new landscape that spans from the uplands out onto The Pier, a new upland plaza with interactive water play area; a multi-modal transit stop; an expanded Spa Beach protected by a new reef breakwater and augmented with new changing rooms, restrooms, and beach playground; an environmental center with both indoor and outdoor experiential components; several unique flexible programming zones with differing scales and characters; and a variety of floating docks that encourage access to the water for boating, swimming, and fishing.

Beyond this, we also provide a long-term vision plan that could be realized in a modest second phase. This long-term vision enhances connectivity with the city and bay, extending the language established in Phase 1 across the uplands and all the way to Beach Drive, as well as introducing new waterfront amenities at the marina. It formally incorporates our vision for the pier with improvements being contemplated in the waterfront master plan.
CONNECTING TO THE CITY

The Pier Park experience begins on the uplands. The Looper Trolley delivers passengers to the eastern edge of the north parking lot, where a potential high-speed ferry location can also be accommodated. Drivers, walkers, bikers, and boaters converge at a multi-modal transit stop east of the north parking lot, where visitors can pick up a bicycle at the bike share station, wait for a tram that loops at a leisurely pace to the end of the Pier and back, walk a short distance to kayak or personal motorized watercraft rental locations, delve deeper into the shady landscape of the coastal thicket as it extends out onto the Pier, jog or simply stroll.

The transit stop signifies a change: from this point on, visitors leave the land behind. This is a landscape over water. While service and emergency vehicles, as well as the tram, can pass comfortably along The Pier Park paths, there are no roads. Service access to the pier head is limited to early mornings and late evenings, and trams amble slowly through the space. The pier allows for multiple circuits depending on mode (shuttle, bike, foot) and desire (straight to pier head or rent a kayak? or just take the grandkids to the water play area and the beach, and then grab a bite to eat?).

The second phase of work further amplifies The Pier Park’s interconnectedness with the city. A new nature walk will offer a shortcut from Beach Drive north of the Art Museum, crossing North Straub Park and connecting to the Pier via a boardwalk through a rich constructed coastal thicket. New transient/courtesy boat slips at the entrance to the Central Yacht Basin will provide yet another way to arrive.
The Pier Experience: More than Just Transit to the Pier Head

What makes the 1,380-foot-long trip to the end of the pier worth taking? The entire pier must be the destination, with program and amenities dispersed along the way.

In The Pier Park, the programs identified by the Pier Working Group are distributed from the uplands to the pier head. They are positioned based on the suitability of the program to its location, taking into account the relationship of the program to water – its height above the water, the required depth of water – and to land.

The Pier Park is a relatively conventional structure, constructed of typical concrete piles and cast-in-place concrete slabs, and conceived as a flexible platform for program. Its series of unique and varied spaces, both hardscape and softscape, offer water and power connections for food carts, barge restaurants, tents, and other plug-and-play, temporary programs. Strategically placed among these spaces are a minimal number of permanent anchor program elements that create unique visitor experiences, while also facilitating the occupation of the remainder of the pier with flexible program opportunities. This approach enables The Pier Park to swell with program and activity when the situation allows, but also to succeed as a more passive park.

A variety of floating docks augment the permanent structure of the pier with an array of options for getting down to the water for boating, fishing, swimming, and education.

While the pier head contains an iconic structure and destination programs – both indoor and outdoor casual dining, as well as a highly flexible outdoor event space – The Pier Park transforms the pier from a place of transport to a destination in and of itself. No longer a path to an icon, the entirety of The Pier Park will become iconic in the landscape of St. Petersburg.
Both tourists and local residents will find countless ways to engage with The Pier Park. Grandparents and grandkids might visit for a just a couple of hours, never passing the tilted lawn – parking in the parking lot, enjoying Spa Beach and Spa Beach playground, getting lunch at a food truck in the Welcome Plaza, playing in the interactive fountain, and then heading home. A school group might weave through the Coastal Thicket, arrive at the Environmental Center, and spend half a day learning, both inside and outside, about the bay, the Pier Piling Habitat, the Seagrass Habitat, and the constructed reef breakwater before climbing back on the school bus. Beginning kayakers could go to the boathouse, rent a kayak, and grab a bite to eat, while avid fishermen could spend the whole day at the pier head. Boaters might pull right into the new transient slips at the Central Yacht Basin, purchase provisions at the Waterfront Market, and head back out on the water. Concertgoers and festival enthusiasts could go straight out to the Event Plaza and the Lawn Bowl, while a date night might take you to the Waterfront Restaurant and then out to the pier head for a craft fair, a film screening and a drink at the Overlook Bar and Grill.
RESPITE

The Pier Park creates many places of respite along its length. Permanent program spaces provide air-conditioned interiors; their roof overhangs offer protection from sun, wind, and rain. Two significant landscape zones – the Coastal Thicket and the Cultural Grove – also give shade and shelter. Scattered throughout the pierscape are a variety of other sheltering devices, from the covered transit stop, to a tilted lawn plane with shaded plaza beneath, to furniture-scale solutions along the pathways and in the plazas.

APPROACH TO THE PIER HEAD

What Happened to the Inverted Pyramid?

A new pier head building takes its cues from both the failures and the successes of the Inverted Pyramid. The space contained far more program than such a location could possibly sustain. Yet it did have one truly memorable program element – the viewing platform and rooftop cafe, which gave visitors the ability to get up high for amazing views back to the city and out over the bay.

Understanding that the best part of being at the end of the pier is the experience of those views, our proposal maintains the four original caissons and cores of the Inverted Pyramid, using them to carry visitors up to a large elevated viewing platform and a modestly-sized casual restaurant and bar. The cores are clad in mirror stainless steel, and the entire construct is wrapped in a diaphanous shade structure of tensile fabric ribbons, stretched over an aluminum truss frame. This multifaceted construct changes as one moves around it, shape-shifting, opening and closing. Illuminated by the sun during the day, and lit at night, it is a glowing, inconstant, dynamic icon for the city.
PHASE ONE
1. TRAM STOP
2. BIKE SHARE STATION
3. WELCOME PLAZA
4. CULTURAL GROVE
5. INTERACTIVE WATER PLAY
6. COASTAL THICKET WALK
7. PLAYGROUND
8. CHANGING ROOMS
9. HAMMOCK POINT
10. EXPANDED SPA BEACH
11. SEAGRASS HABITAT
12. TILTED LAWN
13. DECK SEATING/BOATHOUSE
14. KAYAK AND PADDLE BOAT RENTAL SLIP
15. CONSTRUCTED REEF BREAKWATER
16. ENVIRONMENTAL CENTER: WET CLASSROOM
17. PERSONAL MOTORIZED WATERCRAFT SLIP
18. EVENT PLAZA
19. LAWN BOWL
20. OVERLOOK BAR & GRILL
21. WATER LOUNGE
22. FISHING PIER AND CONVENIENCE DOCK
23. BAIT SHACK/CLEANING STATION

PHASE TWO
24. COURTESY / TRANSIENT SLIPS
25. WATERFRONT RESTAURANT & MARKET
26. COVERED EVENT SPACE
27. HIGH-SPEED FERRY STOP LOCATION
28. EXPANDED COASTAL THICKET
29. PEDESTRIAN CONNECTION TO BEACH DRIVE
BASIS FOR THE PROGRAM

Although perceived as an icon fundamental to the identity of the city, The Pier’s use and economic viability is being re-evaluated as part of The Pier’s redevelopment. Seen by many as an under-utilized resource, the quest to build a new St. Petersburg Pier is integrally tied to the needs and wants of its current and potential users.

In determining the most viable options for programming at the new Pier Park, the City of St. Petersburg convened a Pier Working Group (PWG) and also engaged Lambert Advisory to help test the results of previous studies and outreach and to confirm the overall program both from a financial and social standpoint. The program presented by the ASD, Rogers Partners and KSLA team is based on our review of the PWG recommendations, Lambert Advisory’s Real Estate Market Assessment and research and investigation conducted by our economic development consultant, Retail & Development Strategies. Based on that information, we developed a program that incorporates the required elements of the PWG findings as well as many of the optional ones. We believe the program we developed will provide engaging and diverse activities for community and visitors and the surrounding areas.

The PWG program describes an observation and viewing area as critical to the success of any program at The Pier. It requires a range of dining options, from casual to destination. It requires pedestrian options for mobility including cycling, walking and jogging paths as an integral part of The Pier experience. The new pier must provide improved circulation from the pier uplands to the pier head utilizing a variety of transportation options. Water features such as fishing, and courtesy and transient dockage for both motorized and non-motorized watercraft should be available to visitors and residents. The new pier should have an environmental education element, flexible event space and performance area.

As described in our design strategy, our approach to addressing these program requirements is based on ensuring that The Pier experience itself is an enjoyable, with program and amenities dispersed along the way in “zones” of activities. While the pier head will accommodate dining, sight-seeing, performance and other special events, our approach incorporates program elements throughout the pier. The elements of our program are listed below and are described in detail in the pages that follow. This robust yet measured programming strategy offers a range of activities that are both engaging and economically beneficial to the city.

Welcome Plaza
Spa Beach
Tiled Lawn and Porch Swings
Coastal Thicket
Boat House and Kayak Slip
The Sea-Dock
Environmental Center: Wet Classroom

Environmental Center: Dry Classroom
Event Plaza
Lawn Bowl
The Pier Park Overlook
The Overlook Bar and Grill
Water Lounge and Fishing Pier
Marina

Environmental Center: Wet Classroom

Environmental Center: Dry Classroom
Event Plaza
Lawn Bowl
The Pier Park Overlook
The Overlook Bar and Grill
Water Lounge and Fishing Pier
Marina

Year Round
First Friday
Food Truck Morning Market
Sunshine Music and Blues Festival
January
Sunshine Music and Blues Festival
February
Local Topia
Coastline Music Festival
All County Music Night
March
ST Petersburg Jazz Festival
Tweedie Street Pete
April
Festival of Speed Boat Show
Marina Arts Festival
Earth Day Street
May
State of Fine Arts
Knots in the Park
ST Petersburg Critical Mass
Aurora Beach Volleyball "Tournament"
June
ST Pete Pride Celebration
Independence Day Fireworks
July
STP "Beach" Beer Festival
August
Sunscreen Film Festival
Pickle Best Street
Blue Ocean Film Festival
Don’t Stop Street
Downtown Food and Wine Fest
Autumn Arts Festival
September
Sundance Film Festival
Pickle Best Street
Blue Ocean Film Festival
Don’t Stop Street
Downtown Food and Wine Fest
Autumn Arts Festival
November
Chill Lounge Night
Rib Fest
Bay Area Festival of Food Wine and Arts
December
ST Petersburg Pride and Salsa Show
The ST Petersburg Holiday Festival of the Arts
Snow Fest
90’s Next Big Thing

CalendAAR OF ST. PETERSBURG EVENTS ON THE PIER PARK
WELCOME PLAZA

TRANSPORTATION HUB
The transportation hub is a covered area with benches that serves as a stop for, and transfer between, the St. Petersburg Looper Trolley and The Pier Park Tram. It also accommodates a Bike Share Station. This node will also serve the High Speed Ferry to and from Tampa if it is implemented in the future.

WELCOME PLAZA
Located in the uplands, the Welcome Plaza is a large, flexible, programmable plaza. This is the first stop for visitors during large festivals that extend onto the pier and into Spa Park; or the point of focus for monthly Food Trucks Around Town rallies, or a farmers market. On typical days, movable tables and chairs provide a spot for a lunch break from the beach, or before you leave the mainland. Also located in the Welcome Plaza is an interactive waterplay area. A series of water jets embedded in the plaza paving provide a place for kids to play and cool off. Together with Spa Beach, the Welcome Plaza area forms a "Kid Zone" perfect for short family visits.
SPA BEACH

Spa Beach is expanded and connected programmatically to the new Welcome Plaza. The seawall at the northeast edge is removed, and the enhanced beach, protected by a new breakwater reef, becomes a chapter in The Pier Park experience, rather than the footnote it currently is.

COMFORT STATION AND CHANGING ROOMS
In close proximity to the beach, a new comfort station with changing rooms is constructed in the vicinity of the existing restrooms. Convenient to the parking and the tram stop, this amenity helps make the short beach visit viable to visitors and local families alike, invigorating the use of the beach.

PLAY AREA
A playground adjacent to the changing rooms keeps kids and grandkids occupied between dips in the water.

SPA BEACH PARK
The remainder of Spa Beach Park will remain intact. The lawn space is a perfect place for a stroll, a picnic, or a game of soccer during your Spa Beach excursion. The lawn is also a great extension to arts festivals and other events held in The Pier Park.

At the north point of Spa Beach Park, by the mouth of the Yacht Basin, a hammock lounge is created between the palms – a place, to spend a quiet afternoon in the shade.
TILTED LAWN AND PORCH SWINGS

At the terminus of the upland portion of The Pier Park is the tilted lawn. Sloping gently upward towards the bay, the lawn creates a foreground that allows the remainder of The Pier Park experience to unfold as you move around it. The tilted lawn provides a soft scape for lounging, or enjoying that picnic snack purchased at a festival or food truck in the Welcome Plaza. An oculus cut thought the lawn structure provides a view to the water, giving visitors their first clue that they are about to leave the mainland.
COASTAL THICKET

A nature walk crosses from the mainland to the mouth of the Pier via a boardwalk through a rich constructed Coastal Thicket. A representational landscape, organized as a linear cut through the uplands, the Coastal Thicket strikes a strong figure against the existing palette of lawn, trees, and parking. It continues eastward, bringing the ecology of the constructed grove out onto the Pier, and becoming a part of a new immersive environmental experience.

The thicket starts at Beach Drive, cutting through North Straub Park, formalizing a desire line worn through the park to Bay Shore Drive and then over the Yacht Basin to Spa Beach Park. The boardwalk drifts in and out, providing quiet overlooks on the marina and the bay and forging connections to programmatic elements on both the shore and the pier.
BOAT HOUSE AND KAYAK SLIP

Getting visitors down to the water, for an “on the bay” experience is crucial to the success of the project. The first of these floating dock get-downs occurs in the first third of The Pier Park, and contains the Boat House, the Reef Walk, the Seagrass Overlook, and the Flight Deck.

The Boat House provides an opportunity for visitors to rent kayaks, paddle boats, and paddle boards to explore within the protected waters behind the reef and beyond. Nestled below the Flight Deck, the Boat House provides a storage location for the boats at night and off-season. The Boat House deck slopes down into the water, providing a safe launch for novice paddlers.

The Reef Walk extends out from the Boat House deck over the newly constructed breakwater reef. It provides a platform from which to view the habitat created by the reef as part of the environmental education experience.

The Seagrass Overlook extends in the opposite direction from the Boat House deck, running beneath the pier and extending south over the existing sea grass beds. It provides another element in the series of environmental education activities.

The Flight Deck is a slightly sloping deck above the Boat House at the height of the main pier level. Chaise lounges are built into the deck, which lies directly beneath the flight path for Albert Whitted Airport. Visitors lounging on the Flight Deck can watch aircraft take off and land overhead.
THE SEA-DOCK

Midway down The Pier, another floating dock get-down contains a rental concession and launch ramp for personal motorized watercraft (Jet Skis, Sea-Doos, etc.).
Multiple environmental educational experiences (coastal thicket, sea grass beds, breakwater reef habitat, and pier ruin habitat) culminate at the education center, which consists of a wet and a dry classroom.

The wet classroom is a large cut-out in the surface of the new pier. It contains an amphitheater that steps down to the water, providing a setting to discuss the confluence of habitats on display.
ENVIRONMENTAL CENTER: DRY CLASSROOM

The dry classroom is an enclosed space for educational exhibits and structured lessons about the local ecology. It also acts as a place of respite along the pier. Its large roof overhang provides protection from the sun or the occasional storm that sneaks up on you. Its enclosed space is air-conditioned, offering a place for visitors to cool off when needed. The education center is also a mid-pier venue that can be used for events, meetings, or parties, providing an additional revenue stream to The Pier Park.
EVENT PLAZA

A second flexible, programmable plaza is located on the pier itself, and is suitable for a wide array of programs – the rally point for Drum Majors for Justice, the terminus of the Tweed Ride, or the concession area for the concert on the Lawn Bowl.

PLUG IN PROGRAMS: PLAZA
The Event Plaza also provides a location and infrastructure for temporary “plug-in programs” such as arts festivals and street fairs. This allows The Pier Park to “swell-up” with program for large events and provides the flexibility of adding vendors and amenities on weekends, seasonally, or permanently at some point in the future, as The Pier Park’s visitation increases.

PLUG IN PROGRAM: WATER
The Events Plaza also provides a waterside location, with infrastructure to allow program to “plug in” from the water on a temporary or ongoing basis, depending on the season and demand. These could include an attraction like a Tall Ship, an amenity like New York’s Oyster and Cocktail Boat at Pier 25, or a floating bar barge.
LAWN BOWL

The Lawn Bowl provides a passive green space most of the time – a Great Lawn, a place to see and be seen, a place to just relax out on the pier.

The Lawn Bowl is also the perfect space for a small event. Spread out a blanket and bring a picnic lunch while the ensemble plays during Jazz Fest, or visit the sculpture display during the Fine Arts Festival, or see your favorite film during Movies in The Pier Park.

The Lawn Bowl also transforms into a venue for larger touring acts and music festivals. The Lawn Bowl is designed to accommodate a temporary stage and some 3,800 general admission attendees, while the Overlook provides skybox seats above.
THE PIER PARK OVERLOOK

The Overlook Platform builds upon the best aspect of the Inverted Pyramid; the view. The existing caissons and stair/elevator cores are preserved to get visitors up to the view. A stepped viewing platform below a fabric ribbon shade canopy provides a perch to have a drink and a snack and take in the views of The Pier Park and St. Pete beyond. In addition to this passive everyday use, the Overlook Platform provides the skybox experience for concerts and large events in the Lawn Bowl. It can also act as a venue for small events, the perfect spot for an evening party or sunset wedding.
OVERLOOK BAR AND GRILL

Hanging below the viewing platform is the Overlook Bar and Grill. A casual dining location, it is positioned to succeed where the inverted pyramid never quite could. A single, appropriately sized space, it helps provide the experience visitors looked for at the pyramid: go to the top, see the view, have a beer and a snack, and move on. The viability of the location’s success is bolstered by the ability to cater events on and serve visitors to the Overlook Platform.
WATER LOUNGE AND FISHING PIER

The third and last get-down is the terminus of The Pier Park. This floating dock houses the Water Lounge, the Fishing Deck, The Bait Shack, and the Convenience Dock.

The Water Lounge is a place to be on the bay. A gracious stairway leads down to a deck on, and in, the water. Seating steps and built-in lounges surrounding the ankle-deep pool allow the visitor who isn’t prepared for swimming, or ready to invest in a beach day, to roll up their pants and get their feet wet.

You can’t have The Pier Park without fishing. Although there are many places to throw a line over along The Pier Park, the Fishing Deck puts fisherman on the water, beyond all the action. Be prepared if you hook the giant grouper that live around the caissons!

The Bait Shack provides a concession opportunity at the pier’s end. Located between the Convenience Dock and the Fishing Deck to serve both land-loving and sea-going anglers, the Bait Shack provides last minute bait and tackle supplies and a cleaning station for the days catch. A floating breakwater off the fishing deck acts as a convenience dock for the area’s many boaters, allowing for a quick tie-up to drop people off at The Pier Park, or to pick up last minute supplies at the Bait Shack. The breakwater provides protection from the wave action that has frustrated boaters trying to visit The Pier for years.
MARINA

Transient Slips provide access to The Pier Park by boat. Located in the area envisioned in the Master Plan, beyond the Central Yacht Basin breakwater, it provides protected dockage for visitors.

The Waterfront Restaurant is a destination restaurant. A short walk to Beach Drive, available parking and proximity to the Marina and transient slips make this a prime location.

A Provisions Market, run as an annex to the restaurant, will provide prepared foods and sundries to boaters from the marina and picnickers in The Pier Park.

The large roof of the Marina restaurant creates a covered terrace outside of the restaurant. It can be used for shaded outdoor seating for diners, or as a private event space providing another revenue stream for the restaurant.

A large dock-side deck extends from the restaurant to the transient slips, enhancing the waterfront experience and offering a great spot for cocktails.
IMPLEMENTING AND SUSTAINING PIER PARK

Our team’s proposed plan for the new Pier Park incorporates central principles of environmental sustainability both to protect the aquatic plants and animals in the bay as well as improving the landside of the site. However, we also recognize that another aspect of sustainability – the economic and financial sustainability over time – is a long-term goal. Our team reached out to Retail & Development Strategies (RDS), a specialized real estate and development consulting company with a focus on redevelopment strategies, revenue development for destination sites and retail/concessions for downtown/commercial districts, resorts, museums and destination visitor attractions. They have assisted the team in evaluating the Lambert report and identifying key programmatic and concession opportunities for Pier Park.

As public revenues have become stretched thin over the past fifteen years. Many cities have difficulty providing adequate subsidies for operating and maintenance costs once the capital investment has been made. The sources of funding for The Pier Park have been identified and planned, but we believe that it is equally important to consider sources of funding to subsidize for operating and maintenance costs once the capital investment has been made. The consultants recognize that there are many elements to be considered in how to best implement and maintain The Pier Park in the future. We also recognize that this approach may require time to develop conceptually in order to succeed in St. Petersburg. But we also recognize that the old model of sole responsibility for the Pier resting on the City and a limited range of activities should be restructured if the project is to be sustainable over time.

The ongoing annual financial subsidy that has traditionally been provided for the Pier must be restructured to reduce the City’s obligations.

The proposed plan fosters and identifies locations in the new Pier Park at which revenue producing public amenities can be provided, both to activate the space and to generate ongoing revenues to benefit The Pier Park.

The anticipated level of both operating and maintenance costs should be realistically considered, and should incorporate sound business practices and accountability for all amenity concessions granted by the City – these include food and beverage operations, event revenues, fishing permitting and services, marina-based activities and any land-side uses allowed within the final plan.

Both as a planning goal and as an operating principle, the uses and spaces in The Pier Park should allow/encourage adaptation and addition of carefully selected future improvements; the beauty of the views and proximity to the water will remain as characteristics of the plan, but unless new elements (both temporary and permanent) can be added, there will be little incentive to encourage local residents to return for multiple visits (and opportunities to spend both time and money) at Pier Park. Our concept strongly encourages repeated visits by area residents, whether for passive recreation or programmed events, dining opportunities and special catered occasions such as weddings and family celebrations.

To the extent possible, Pier Park should serve multiple markets, not just visitor and tourist markets; this can be done by using elements such as food and beverage services, less costly improvements for programmed events for residents, the potential to explore commercial activities such as a small specialty grocery store to serve new downtown residents and boaters, event attendees, people coming for a picnic or stroll and provisioning for short stay boaters and water-based visitors.

Although it has traditionally been a governmental obligation to provide for parks, fiscal realities across the country have required new types of solutions for management and operations, and we believe The Pier Park should be approached in the same way.
Articulating the goals of reconnecting St. Petersburg and its people to the waterfront and breathing new life into The Pier, the landscape design of The Pier Park provides an important counter-point to its architecture. Featuring an overlay of three ecological systems—the Coastal Thicket, the Cultural Grove and the Seagrass Beds—the landscape design creates vibrant spaces evocative of regional and local landscapes to activate and transform the pier. As a natural edge, the Coastal Thicket serves as a lush backdrop for the active areas of The Pier Park and frames views back towards the city and out to the bay. The Cultural Grove extends the urban landscape of the surrounding neighborhood into The Pier, anchoring and connecting it to the city. Lastly, the introduction of the artificial reef and breakwater to the east of Spa Beach allows for the protection of existing underwater seagrass beds, allowing this important ecological habitat to flourish.

CULTURAL GROVE
Along the southern edge of The Pier Park, the Cultural Grove corridor is an extension of the formalized language of the adjacent urban landscape into The Pier Park. Planted along the vehicular access on 2nd Avenue, a grove of crape myrtle trees forms a colorful and iconic canopy for The Pier. In direct contrast with the wild tangle of the Coastal Thicket, the Cultural Grove is comprised of singular crape myrtle (Lagerstroemia spp.) trees interspersed with the existing live oaks, palms, and Japanese yews that are already present on site. As the grove marches across The Pier and leaves the street, the crape myrtles are organized in north-south lines, allowing unrestricted views across the pier towards the north and south while forming a layered effect in the east-west directions.
THE WELCOME PLAZA
As the major gateway to The Pier Park, the Welcome Plaza is framed by the Coastal Thicket and Cultural Grove at the intersection of the three ecological systems. Shaded by the crape myrtles that dot its southern portion, the Welcome Plaza is an open event space that includes an interactive water feature with water jets for children and families to play in. Softening the plaza and providing visual interest, these jets might be programmed with different scenarios where the height of the jets form ‘wedges’ of water that change in slope direction and height. The open event space of the Welcome Plaza is designed to be paved with light colored gravel aggregate, a tough surface that accommodates a variety of uses such as concerts, fairs, food trucks, farmers markets and others. This paving extends under the tram canopy, tying the Welcome Plaza and Tram Station together.

THE COASTAL THICKET
Along the pier’s northern edge runs the Coastal Thicket, a shaded nature walk that meanders through a lush and wild native upland maritime hammock, a signature moment of the new Pier Park. Focusing on pedestrian movement, views and social interaction, it features a zig-zagged boardwalk with multiple converging and diverging pathways and overlooks. The Thicket reaches back towards the city, linking up with the waterfront esplanade and pedestrian areas along Bay Shore and Beach Drives, and bringing North Straub Park into the narrative of the pier. Extending The Pier Park’s Cultural Quadrant to encompass the Museum of Fine Arts across the way, this linkage creates a significant shortcut that offers a compelling alternative to the there-and-back nature of the existing pier access.

Varying in width from 50 to 75 feet, the Coastal Thicket has an enveloping and immersive quality reminiscent of the maritime upland forests found across the region. Making accessible the power of these landscapes to the urban community, the density of the thicket changes as one moves through it. Gently sloping in elevation at 5% maximum slopes, the accessible wooden pedestrian boardwalk also varies in width from 8 to 15 feet and brings people up to and over the water. Gaps within the thicket as well as overlooks that project over the water afford moments of surprise and delight as the wildness of the thicket parts to reveal dramatic views and vistas to the city and the bay.

THE PLANT PALM EATE
The plant palette of the Coastal Thicket reflects St. Petersburg’s natural resources and is a functioning ecological community with sufficient soil mass and plant diversity to sustain substantial plantings, in spite of the constraints of the weight limitations imposed by the pier structure. Partially built on the existing green spaces and partially on new planter platforms where it extends over the existing seawall, the thicket is lifted up out of the intertidal zone to ensure plant growth and success. Consisting of a community of native species that evoke a Coastal Oak Hammock such as cabbage palm (Sabal palmetto), sand live oak (Quercus geminata), live oak (Quercus virginiana) and saw palmetto (Serenoa repens), the plants of the Coastal Thicket are well-suited to use on the waterfront. Salt tolerant and able to withstand future storm surge events, these plants are also recognizable as belonging to the Floridian palette to further enhance appreciation of the natural landscape and ecology.

THE PORCH SWINGS AND HAMMOCKS
Porch swings installed beneath the Tilted Lawn and hammocks to the north of Spa Beach draw on the cultural tradition of leisure in the landscape of St. Petersburg. Whimsical and comfortable as well as satisfying, the porch swings and hammocks add to the diversity of seating options on The Pier.

THE SEAGRASS HABITAT
Intersecting the mass of the Coastal Thicket and Cultural Grove is the expanded Seagrass Habitat. Responding to the interests of waterfront stewardship and the desire to preserve existing wildlife habitats and augment water quality within the North Yacht Basin, the inclusion of the artificial reef and breakwater is intended to reduce destructive wave action on the existing underwater seagrass beds to the east of Spa Beach. Rather than artificially planting additional seagrasses that may fail to establish under existing conditions, the breakwater protects and encourages their growth, creating ideal conditions in which to thrive. Where the footprint of the Coastal Thicket intersects the natural line of the seagrass habitat, the line of the seagrass bed will be respected and remain free of any new construction, avoiding disruption of the habitat and reducing bay bottom shading.
The proposed Pier Park design integrates three-ecologically significant components that will provide an interactive recreational and educational experience. These ecological components will offer visitors a close-up glimpse of southwest Florida’s most critical coastal upland and sensitive marine habitats while appreciating the local urban amenities. Historically, coastal development and urbanization has severely diminished vital marine resources. The Pier Park design proposes not only the preservation of existing resources, but the creation of new habitats through creative environmentally engineered solutions.

The contemporary design of The Pier Park affords accessibility to visitors arriving from iconic downtown St. Petersburg or by way of the coastal waters of Tampa Bay. Beginning on the landward extent of the proposed pier design, a coastal hammock or “coastal thicket” will be created featuring many native vegetative species including live oaks (Quercus virginiana), cabbage palms (Sabal palmetto) and saw palmetto (Serenoa repens). This unique linear habitat feature will extend from the existing uplands onto the pier through the construction of a specially engineered planter. The contiguous design provides a nature walk experience to visitors while softening the transition from land to the pier. Other native plant species will be incorporated into the coastal thicket, as well as accented throughout the redesigned park area, and may include: buttonwood (Conocarpus erectus), silver buttonwood (Conocarpus erectus sericeus), sand live oak (Quercus geminata), seagrape (Coccoloba uvifera), southern wax myrtle (Myrica cerifera), Spanish bayonet (Yucca aloifolia), blanket flower (Gaillardia pulchella), cucumber sunflower (Helianthus debilis), prickly pear cactus (Opuntia stricta), lantana (Lantana sp.), and yaupon holly (Ilex vomitoria). The native plantings and associated identification placards/signs will provide recreational and educational opportunities for visitors, as well as potential foraging, perching, and nesting habitat to many coastal song birds, sea birds, and wading birds. Aside from avian photo opportunities, visitors may observe butterflies and other insects feeding on native flowering plants.

The proposed design of The Pier Park has minimized, to the greatest practicable extent, the overall construction footprint within the waters of Tampa Bay in consideration of existing sensitive marine resources. One of the most critical of these marine resources is the seagrass beds situated in the shallow waters adjacent to the existing pier. As part of the new Educational Center, the proposed pier design also features viewing areas at different elevations over the water to provide various vantage points where visitors can peer into the shallows at the seagrass habitat. At these viewing areas, visitors may also observe several species of marine fish foraging over the seagrass beds or near the support pilings that were strategically left from the existing pier. Although man made, the remnant pilings provide important fisheries habitat and suitable substrate that continues to support many epiphytic marine organisms, such as oysters.

As part of the Educational Center’s viewing area, the exposed section of pier from the proposed new design may facilitate the expansion of adjacent and/or reestablishment of the nearshore seagrass beds within the shallow waters previously shaded by the existing pier. Additionally, the new pier design proposes the construction of a breakwater that will not only serve to protect the existing beach from erosion, but will provide quiescent conditions supporting the expansion of seagrass that has historically been limited by exposure to excessive wind driven wave energy and tidal current velocities. Typical seagrass species endemic to the region that may be recruited include shoalgrass (Halodule wrightii), turtlegrass (Thalassia testudinum), and manatee grass (Syringodium filiforme). Beach goers will also benefit from the calm waters created by breakwater.

The breakwater will extend from the north side of the proposed pier design and will be constructed from deleterious free material salvaged from the demolition of the existing pier. Similar to the remnant support pilings from the existing pier, the concrete based material will provide suitable substrate for the establishment of epiphytic marine organisms creating an artificial reef. The engineered artificial reef structure will attract and support several species of marine fish. Aside
from the ecological benefits provided by the breakwater, recreational enthusiasts can enjoy various activities including kayaking, canoeing, and paddle boarding – not to mention the fishing.

In general, environmental resource permitting (ERP) issues with the state (Florida Department of Environmental Protection – FDEP) and federal (U.S. Army Corps of Engineers – USACE) regulatory agencies will be associated with Public Interest criteria and studies of the resource areas will include:

- benthic community assessment within the footprint of construction activities;
- shoreline monitoring;
- navigation and navigational impacts; and
- water quality and sediment contaminant issues

A numerical modeling flushing study may be required to demonstrate that water quality will not be degraded as a consequence of this project and that it meets or exceeds state water quality standards. In addition a wave impact study on the breakwater may be necessary to assess vulnerability to a variety of storm scenarios.

Public noticing, as a result of permitting activities, will likely trigger a formal consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries (NMFS) for endangered species concerns under Section 7 of the Endangered Species Act (ESA) and impacts to Essential Fish Habitat as required by the Magnuson-Stevens Fishery Conservation and Management Act of 1996, respectively. Species of concern include, but are not limited to, the West Indian Manatee (Trichechus manatus), smalltooth sawfish (Pristis pectinata), and sea turtles (Chelonia mydas, Eretmochelys imbricata, Lepidochelys kempii, Dermochelys coriacea, Caretta caretta). The overall project plan and extent of the Federal and State permitting requirements can be influenced by the consultation findings of the FWS and NMFS, and the concurrence/consultation review process by these agencies can take several months.

The concept of a living ecosystem integrated with the proposed pier structures with seagrass enhancement provides many ecological benefits including water quality improvements and marine flora and fauna habitat, as well as improving shoreline stabilization. Based on this concept of overall ecological benefit, it is not anticipated that the ERP process with state (FDEP) and/or federal (USACE) regulatory agencies will run into too many obstacles. However, due to the slightly increased footprint of the proposed pier design, there can be no guaranties for successfully obtaining the necessary permits.

The general idea behind the design is to enhance the natural environment surrounding the pier, which should maintain favor with the regulatory as well as the local community. The proposed coastal thicket and improvements to natural seagrass communities will enhance the ecosystem function. Finally, the added enhancement to the biological communities will provide a more ecologically sensitive and aesthetically pleasing approach for resilience and coastal storm protection.

This section provides a discussion of the sustainability efforts the design and construction team will pursue for the St. Petersburg Pier. The team is presenting a highly integrated project concept that demonstrates a commitment to sustainability. The new pier will be sustainably designed, energy efficient, environmentally conscious and healthy for the residents, employees, and visitors.

The project will have tangible and interactive features that are sustainability-focused elements of the project. First, a constructed reef built from recycled pier piles, cores and caissons of the old inverted pyramid building will provide habitat to local fauna and offer a major attraction to families. Next, a new series of thicket and grove habitats will offer a connection to local flora while at the same time provide an area of respite from the sun. Shaded walkways circulate through the thickets. Last, some of the old piles have significant bay habitat that will be presered and made visible, along with augmenting the sea grass beds. These features will converge at the outdoor environmental center.

Stormwater on the pier and its built structures will be collected for reuse in irrigation, toilet-flushing, and other graywater applications.

This project shall be a minimum of LEED Silver certified under the LEED 2009 BD+C program. There are seven categories in the LEED certification guidelines: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, Innovation in Design Process and the additional Regional Priority Credits.

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Prerequisite 1 Fundamental Commissioning of the Building Energy Systems. A third party Commissioning Agent will be engaged by the City for purposes of providing both services for the building energy related systems including heating, ventilation, air condition, and refrigeration (HVAC & R), lighting and domestic hot water systems. The Commissioning Agent will verify the building systems are installed, calibrated and performing to the building owner’s Project requirements.

Prerequisite 2 Minimum Energy Performance. The project will demonstrate a minimum 10% improvement compared to the baseline building performance calculated using the performance rating method in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007. A whole building energy simulation will be performed for the project to demonstrate energy cost savings compared to the ASHRAE standard.

Prerequisite 3 Fundamental Refrigerant Management. The HVAC systems intended for this project will not use CFC-based refrigerants.

Credit 1 Optimize Energy Performance. A whole building energy simulation will be performed for the project to demonstrate energy cost savings compared to the ASHRAE standard. Strategies under consideration for the project to realize energy efficiency include a high performance envelope, efficient, energy efficient lighting, Energy Star® appliances, and highly efficient HVAC systems. Given available funding, it could be possible to incorporate on-site renewable energy systems on the buildings; these could contribute to hot water or electricity generation.

Credit 2 On-Site Renewable Energy. Given available funding, it could be possible to incorporate on-site renewable energy systems on the buildings; these could contribute to hot water or electricity generation.

Credit 3 Enhanced Commissioning. The City can engage a Commissioning Agent to perform Enhanced Commissioning services for all energy-using building systems. The Commissioning Agent’s role includes reviewing the owner’s Energy Management Plans, creating, distributing and implementing a commissioning plan, and performing design reviews of the design development and construction documents.

Credit 4 Enhanced Refrigerant Management. Long-life, high efficiency mechanical equipment will be specified for the HVAC systems, and the refrigerants specified for the systems will have low ozone-depletion and global warming potentials. Final equipment selection will determine the achievement of this credit.

Credit 5 Measurement and Verification. A measurement and verification protocol can be developed to help ensure long-lasting energy savings and building performance. The system can aid in retro-commissioning and serve to help tenants understand their contributions to energy savings, if designed to do so.

Credit 6 Green Power. The City can consider a purchase of green power for the Pier amounting to 35% of the annual energy use on a 2-year contract.

Materials and Resources

Through the demolition and construction phase of the Project, the contractor will be instructed to divert construction and demolition waste related to the Project from area landfills and procure materials that have recycled content and/or are sourced regionally.

Prerequisite 1 Storage and Collection of Recyclables. The proposed project exceeds the minimum requirements for allotting space for recyclable material storage. Comprehensive waste management will be enabled by integrating waste and recycling receptacles throughout the site.

Credits 2.1 and 2.2 Construction Waste Management. Prior to the start of demolition, the Contractor will prepare a Construction Waste Management plan. The Contractor will be required to divert as much demolition debris and construction waste from area landfills as possible with a minimum requirement to achieve at least 75% diversion and a goal of 95% diversion.

Credits 4.1 and 4.2 Recycled Content 10% (post-consumer & pre-consumer). The Project specifications will require materials to include pre- and post-consumer recycled content. During construction, material submittals will include a reporting form indicating pre- and post-consumer recycled content percentages. The Contractor will track the recycled content for each material with an overall Project goal to achieve at least 20% recycled content material value based on total Project material costs.

Credits 5.1 and 5.2 Regional Materials, 10% (20%) Extracted, Processed and Manufactured Regionally. The Project specifications will require for a portion of the materials to be extracted, harvested, recovered and manufactured within a 500 mile radius of the job site. The Contractor will track the source location for each material with an overall Project target to achieve at least 20% regional materials based on total Project material costs.

Credit 6 Rapidly Renewable Materials. The Project team is investigating the use of at least 2.5% of purchased material to be rapidly renewable, based on overall Project material costs. However, given the program of this project, the applicability of the types of materials meeting this criteria is limited and it is unlikely that this credit will be met.

Credit 7 Certified Wood. The Project specifications will indicate that a minimum of 50% of purchased wood installed in the Project be FSC certified wood. See is available as an FSC timber product.

Indoor Environmental Quality

The air quality will be monitored during the construction phase of the Project and also prior to occupancy. Low emitting materials and filtration will be applied throughout construction to maintain and improve air quality. The building occupants will have control over their indoor environment through access to individual lighting controls.
Prerequisite 1 Minimum IAQ Performance The building mechanical systems will be designed to meet or exceed the requirements of ASHRAE Standard 62-2007 sections 4 through 7.

Prerequisite 2 Environmental Tobacco Smoke ("ETS") Control The buildings will be non-smoking as per Florida’s 2003 state constitutional amendment.

Credit 1 Outdoor Air Delivery Monitoring The project HVAC design can incorporate permanent CO2 sensors and measuring devices to provide feedback on the performance of the HVAC system. Devices will be programmed to generate an alarm when the conditions vary by 10% from a set point.

Credit 2 Increased Ventilation The project team can the option of increased ventilation rates that are 30% above ASHRAE 62-2007. It is possible that this may adversely affect energy savings and is therefore under consideration.

Credit 3.1 Construction IAQ Management Plan (during construction) The specifications will include the requirements for the contractor to develop an Indoor Air Quality Management Plan for the construction and pre-occupancy phases of the Project to meet exceed the recommended Control Measures of the SMACNA IAQ Guidelines for Occupied Buildings Under Construction 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3).

Credit 3.2 Construction IAQ Management Plan (before occupancy) The Contractor will schedule a building flush-out after the completion of construction and prior to occupancy. The contractor may decide to conduct baseline IAQ testing in place of flush-out to demonstrate that contaminant maximum concentrations are not exceeded.

Credits 4.1 Low-Emitting Materials, Adhesives & Sealants The specifications will include requirements for adhesives and sealants to meet low Volatile Organic Compounds (VOC) criteria for adhesives and sealants.

Credits 4.2 Low-Emitting Materials, Paints & Coatings The specifications will include requirements for paints and coatings to meet low VOC criteria for paints and coatings.

Credits 4.3 Low-Emitting Materials, Flooring Systems The specifications will include requirements for hard surface flooring materials to be FloriScore certified and for carpet systems to comply with the Carpet Institute Green Label program.

Credits 4.4 Low Emission Materials, Composite Wood and Agrifiber Products The specifications will include requirements for composite wood and agrifiber products (and laminating adhesives used with these products) to contain no added urea-formaldehyde.

Credit 5 Indoor Chemical and Pollutant Source Control The buildings will be designed to minimize and control the entry of pollutants into the building and to contain chemical use areas. Air filtration is included at the air handling units. Full height walls will be specified in areas with exhaust requirements and doors to janitor closets are specified to have spring-loaded hardware to automatically close.

Credit 6.1 Controllability of Systems, Lighting The design will provide individual lighting controls for regularly occupied spaces. The controls also include occupancy/vacancy sensors and daylight dimming controls. Multi-occupant user spaces such as community rooms or recreation spaces will have multi-level lighting controls for modifying light levels as necessary for the various uses.

Credit 6.2 Controllability of Systems, Thermal Comfort The design will provide for controls for multi-occupant spaces and for individual working areas.

Credit 7.1 Thermal Comfort Design The project will be designed to meet ASHRAE 55-2004 Thermal Comfort Conditions for Human Occupancy.

Credit 7.2 Thermal Comfort Verification The City could engage the building staff to participate in an occupant comfort thermal survey. A plan for corrective action would also be developed if the survey indicates that more than 20% of occupants are dissatisfied with the thermal comfort in the building.

Credit 8.1 Daylight and Views, Daylight for 75% of the spaces The project team will endeavor to meet the requirements of this credit and provide for adequate daylighting of all regularly occupied spaces.

Credit 8.2 Daylight and Views, Views for 90% of the spaces The project program and arrangement of windows in regularly occupied spaces are likely to meet the credit requirements. Final programming plans will be used to determine credit compliance.

Innovation & Design Processes The Project team has identified several possible ID credits which are listed below, (limited to five ID credits total).

Credit 1.1 Green Housekeeping A green housekeeping plan can be implemented for both buildings to help maintain the high indoor environmental quality. The plan will be developed to meet the LEED for Existing Buildings Operations & Maintenance (EBOM) requirements for green cleaning.

Credit 1.2 Green Building Education The buildings and site eco-education areas can demonstrate sustainable design features with a green education program. Strategies that have been discussed so far are signage, tours and a website.
PERMIT COMPLIANCE

In general, environmental resource permitting (ERP) issues with the state (Florida Department of Environmental Protection – FDEP) and federal (U.S. Army Corps of Engineers – USACE) regulatory agencies will be associated with Public Interest criteria and studies of the resource areas will include:

- benthic community assessment within the footprint of construction activities;
- shoreline monitoring;
- navigation and navigational impacts; and
- water quality and sediment contaminant issues

A numerical modeling flushing study may be required to demonstrate that water quality will not be degraded as a consequence of this project and that it meets or exceeds state water quality standards. In addition a wave impact study on the breakwater may be necessary to assess vulnerability to a variety of storm scenarios.

Public noticing, as a result of permitting activities, will likely trigger a formal consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries (NMFS) for endangered species concerns under Section 7 of the Endangered Species Act (ESA) and impacts to Essential Fish Habitat as required by the Magnuson-Stevens Fishery Conservation and Management Act of 1996, respectively. Species of concern include, but are not limited to, the West Indian Manatee (Trichechus manatus), smalltooth sawfish (Pristis pectinata), and sea turtles (Chelonia mydas, Eretmochelys imbricata, Lepidochelys kempii, Dermochelys coriacea, Caretta caretta). The overall project plan and extent of the Federal and State permitting requirements can be influenced by the consultation findings of the FWS and NMFS, and the concurrence/consultation review process by these agencies can take several months.

The concept of a living ecosystem integrated with the proposed pier structures with seagrass enhancement provides many ecological benefits including water quality improvements and marine flora and fauna habitat, as well as improving shoreline stabilization. Based on this concept of overall ecological benefit, it is not anticipated that the ERP process with state (FDEP) and/or federal (USACE) regulatory agencies will run into too many obstacles. The new Pier and Floating Docks covers approximately 5,000 SF more area over the water than the existing Pier but due to the tactful design approach around existing sea grasses we anticipate a positively flowing permitting process.

The general idea behind the design is to enhance the natural environment surrounding the pier, which should maintain favor with the regulatory as well as the local community. The proposed coastal thicket and improvements to natural seagrass communities will enhance the ecosystem function. Finally, the added enhancement to the biological communities will provide a more ecologically sensitive and aesthetically pleasing approach for resilience and coastal storm protection.

DURABILITY AND MAINTENANCE

As stated in many areas of our design, the entire project is designed with a minimum 75-year lifespan for all components. Besides the poured in place concrete structures, specific care has been taken to utilize structural aluminum when exposed metallic structures are used. Additionally, all rails are made of aluminum minimizing the deterioration of these essential components.

We have discussed the tensile fabric canopy structure with Bird Air, a specialty structural fabric manufacturer, who would likely be approached to produce the ribbon canopy on a design build basis. Bird Air has indicated that they are comfortable with both the environment and the application. Bird Air is still monitoring their initial installations to determine the maximum lifespan of their product; their first permanent membrane structure, built in 1973, is still in use and performing today. They suggest that the owner plan for one possible replacement in the structures anticipated 75-year lifespan.
PIER CONSTRUCTION

1. PIER (OVERALL)
   a. Pilings
      The pier will be designed to have a functional design life of 75 years, and using a 100-year return period design storm event (wind, water level, wave, etc.). The components of the Pier structure shall conform to the latest editions of the codes and standards listed in the “Metocean and Structural Concept level Design Basis” document.

   The pier is located in an extremely aggressive corrosive environment. Our design will consider this environmental classification and will choose construction materials and details that are recommended for this type of environment. In addition, we will adhere to FDOT and AGI recommendations for the protection of the structure against corrosion, such as using adequate reinforcing steel concrete cover, placement of reinforcing steel to control cracking, approved concrete mix and admixtures (such as silica fume and calcium nitrates), using three levels of protection for post-tensioned structures, specifying approved coatings for structural steel and sacrificial thickness, etc.

   The pier structure will be supported on piles. The Geotechnical Report prepared by Terracon on March 5, 2013, recommended two types of foundations: drilled shafts and driven piles. The report recommended 18-inch driven piles which are a very economical system. However, FDOT guidelines specify the use of 24-inch driven piles in extremely aggressive environments and we are going to evaluate both types (18 inches and 24 inches) in the final design. scour analysis will be included in the calculations of the pile capacity. The drilled shafts are usually more expensive than driven piles, but they have larger loading capacities (vertical and horizontal). The utilization of drilled shafts will be evaluated. Our current design utilized 24-inch driven piles.

   b. Deck Structure
      Two superstructures systems have been evaluated for the piers: two-way flat slab and one way slab supported on beams. Both superstructures are supported on piles. Our team will evaluate the use of reinforced concrete slabs and/or post-tensioned slabs. The maximum grid of pile supports are 15 feet x 25 feet. The superstructure, wood and concrete. This is a longitudinal structure where the maximum span length will be determined depending of the material selected during the final design. Our current design is utilizing a 15 x 25 pile grid system with a two-way slab as well as poured in place concrete beams as side walls and stabilizers. The structure configuration will be carefully reviewed to establish proper locations for permanent expansion joints as well as construction control joints.

   c. Railings
      Architectural railings will be evaluated and special connection details will be developed to address dissimilar material issues that may cause corrosion.

2. NATURE WALK
   The Nature Walk structure will be supported on piles. Prestressed piles will support the superstructure (18” or 24”). Our team will evaluate the use of 24” driven piles in extremely aggressive environment versus 18” piles. Scour analysis and wave action will be included in the calculations of the pile capacity. Two materials are used for the boardwalk superstructure, wood and concrete. This is a longitudinal structure where the maximum span length will be determined depending of the material selected during the final design. Our current design is utilizing a 15 x 25 pile grid system with a two-way slab as well as poured in place concrete beams as side walls and stabilizers. The structure configuration will be carefully reviewed to establish proper locations for permanent expansion joints as well as construction control joints.

3. MARINA ZONE
   a. Restaurant and Shade Structure
      This building will be supported on prestressed piles. Due to the proximity of adjacent structures, special considerations to protect adjacent structures will be considered in our design, as well as recommendations to control undesirable levels of noise and vibrations. A review will be conducted to evaluate potential construction vibrations due to pile driving operations. The development of specifications will include measures for vibration monitoring and control during construction operations. See TLC analysis for the building.

4. SPA BEACH ZONE
   a. New Changing Rooms/ Restrooms: Standard Spread Footings

5. WELCOME PLAZA
   a. Tram Station / Bike Share Station Canopy: Standard Spread Footings

6. FLOATING DOCKS
   Floating docks are considered as a viable and cost effective alternative for this project in lieu of fixed docks. The floating docks will be used in combination with the fixed docks and gangway ramps. The floating docks will float on the surface of the water, rising and falling with changes in the water level, and will facilitate accessibility, boarding and disembarking. However, flexible ramps (gangways) that connect fixed piers with floating docks will be required. Two materials that are commonly used for the floating docks are wood and aluminum both will be evaluated in the final design. Our proposal utilizes wood predominantly for the floating docks with the use of aluminum for rail and structural elements.

7. ENVIRONMENTAL CENTER
   The structure will be supported on prestressed piles. Our team is proposing a concrete structure conforming to the latest editions of the codes and standards listed in the “Metocean and Structural Concept level Design Basis” document. The design of this structure and large cantilever will use 3-D structural analysis for the different loading conditions including wind and seismic.

8. LAWN BOWL
   Our team recommends the use of a concrete structure supported on piles. The uses of transfer beams supported on piles are anticipated to support the different deck elevations of this area. Special loading considerations will be used in this design for landscaping and live load use.

14. PIER HEAD BUILDING
   The new structure will utilize the four existing caissons that are supporting the existing inverted pyramid. Each caisson consists of twenty HP 14x73 steel piles encapsulated in concrete and within a steel sheet pile cofferdam. Ardaman’s geotechnical report prepared in 1969 states that the original caisson was designed to support a vertical load of 3,820 kips (load per column). Our team is proposing a concrete structure supporting a 3-D steel canopy conforming to the latest editions of the codes and standards listed in the “Metocean and Structural Concept level Design Basis” document. The design of this structure will use 3-D structural analysis for the different loading conditions including wind and seismic. See subsequent sections on Building Structure.
The concrete volume and steel reinforcement estimates for the lawn bowl can be found in the table below:

### Lawn Bowl

- **Volume:**
  - **Concrete:** 290,000 cubic feet
  - **Steel:** 900 tons

- **Reinforcement:**
  - **Bars:** 90,000 linear feet
  - **Rebar:** 1,500 tons

### Pier Head Building

- **Overall Structure:**
  - **Concrete Slab:** 25,000 square feet
  - **Steel Columns:** 20 tons
  - **Concrete Beams:** 3,000 cubic feet

Due to the relatively large anticipated superimposed dead load from the soil layer and landscaping, the lawn bowl shall be supported on a concrete one way slab with a concrete girder and beam system spanning between the precast piles. Depending on the final pile layout, a two way slab system with column line girders can be studied as a potential alternative. As the lawn bowl slab peels up and over the pier level slab, the column line girders must span from the underside of the lawn bowl to the lawn edge, thus creating a second level of framing above the pier level. A series of concrete columns, aligned directly above the new pier support piles and down the length of the pier slab walkway, shall be used to provide support for the cantilevered. As the lawn bowl slab transitions into first floor of the pier head structure, an expansion joint will be required to separate the two structures. The pier head side of the slab can then be supported on structural steel framing which cantilevers off the core columns (see section 14 for further info.) The team anticipates that a suitable span width for the structure beneath the lawn bowl is a 25 square grid. The grid will help control the amount of gravity loads imposed on any single pile and will allow for more manageable concrete girder sizes. To save on overall structural depth, the concrete girders can be upturned above the slab and into the soil. A continuous concrete edge beam can be used to help balance the load distribution and differential deflection. The overall footprint of the lawn bowl and surrounding areas is approximately 50,000 square feet.
which will span from end to end of the pier head and will be constructed of aluminum pipe shapes. The elevator cores will remain as the main lateral and gravity load supporting system of the new structure, which has a smaller wind area than that of the existing pier head. This reduced demand in wind resistance is of critical importance to the structural integrity of the remaining building elements. The existing structure, according to the structural report’s provided, is not capable of conforming to the current wind code without additional analysis. Considering the potential complexities of bringing the existing pier head structure up to the current wind codes, it will be advantageous to reduce the wind area demand. The existing core columns may require axial and flexural reinforcement for support of the new floor spaces.

The canopy will consist of a perforated fabric and stainless steel cable system. The cables will be draped around the aluminum trusses and tied down to the concrete substructure. Tension forces, ranging from 3 kips to 10 kips, will be applied to the cables to achieve the desired canopy sag. The fabric perforations will allow wind loads to pass through the canopy without transferring undesired loads to the cable and concrete substructure.

The steel and aluminum tonnage estimates for the pier head can be found in the table below.

3. ENVIRONMENTAL CENTER BUILDING

a. Structure

Due to the long exposed roof extension canopy of the Environmental Center Building, aluminum beams and columns shall be used. The interior column and structure could be constructed out of structural steel, but shall be aluminum to match the exterior conditions. The structure’s columns shall be aluminum pipe sections. The taller columns will require larger diameter pipes to deal with buckling and lateral deflection from the out-of-plane wind loads, pushing against the face of the building. As for the lateral system, the sloped roof can be used to transfer lateral loads in the short direction. Aluminum moment frames can be used to handle wind in the long direction. An aluminum braced frame can be introduced to help control lateral deflections. The columns shall be anchored to the concrete flat slab structure below the building. The total roof footprint is approximately 8,150 square feet with roughly 2,200 square feet of cantilevered roof.

The anticipated aluminum tonnage is as follows:

- Roof Framing: 30 tons
- Columns: 15 tons
- Total Weight: 45 tons

4. RESTAURANT

a. Structure

Due to the long exposed roof extension canopy of the Restaurant Building, aluminum beams and columns shall be used. The interior column and structure could be constructed out of structural steel, but shall be aluminum to match the exterior conditions. The structure’s columns shall be aluminum pipe sections. As for the lateral system, the Aluminum moment frames or braced frames will be required to handle wind in the long and short directions. The columns shall be anchored to the concrete flat slab structure below the building. The total roof footprint is approximately 25,800 square feet with roughly 15,000 square feet of exterior canopy roof.

The anticipated aluminum tonnage is as follows:

- Roof Framing: 65 tons
- Columns: 25 tons
- Total Weight: 90 tons
BUILDING CODE AND LIFE SAFETY

**Occupancy** – The primary occupancy group classification for The Pier Park is A5 Assembly Occupancy. This is due to the primary use of the new Pier Head structure as a premier performance venue. This occupancy classification typically has the most stringent constraints and the project is accommodating these requirements.

**Proposed Finished Floor Elevation** – The primary finished floor elevation of the new pier structure that is utilized for vehicles and occupiable space is 11’ – 0” above mean sea level. This elevation places the horizontal structure of the Pier 2 feet above the Base Flood Elevation of 8’ – 0” above mean sea level.

**Occupant Load Calculations and Egress Analysis** – The Pier Head Venue is an outdoor performance venue that is inherently smoke protected because it is an exterior condition. The occupant load at the Pier Head is being calculated by usable floor or lawn space at seven square feet/person and the fixed seating quantity at the upper level balcony.

As stated in Section 1028.6.3 of the Florida Building Code 2010, we are permitted to calculate egress width at .06 in Smoke Protected venues. Based on Occupant Load calculations we are required to have 25’ of egress width and the project can accommodate 48’ egress capacity. Additionally, The Pier Park is designed providing two distinct exit paths to the mainland. One 24’ path on the south and one 24-foot path on the north.

**Vehicular Parking and Service Delivery** – The existing upland parking has been maintained and has new enhanced landscaping. Service trucks have the ability to drive directly to the Pier Head. Furthermore, Accessible Drop Off at the Pier Head can also be accommodated. Please see the Vehicular and Fire Truck Access Diagram below.

**Fire Department Access** – The above Vehicular Access Diagram illustrates the access route for Fire Trucks. Fire Trucks will have the ability to loop the entire Pier.
UTILITIES

Water
• This area is serviced by the City of St. Petersburg
• Water availability for the level of development being considered will not be an issue
• Water main adjustments will be due to site development requirements, and to provide adequate potable capacity and required fire flow for the project
• Installation of new 1,500 LF 12-inch water main required
• Installation of new 7,400 LF 6-inch water main required
• All new water mains are restrained
• Of the new water mains, 1,100 LF 12-inch and 400 LF 6-inch are attached to the bridge
• Seven (7) new fire hydrants are required
• Fire protection within the building (s) will require fire pumps

Wastewater
• This area is serviced by the City of St. Petersburg
• Wastewater availability for the level of development being considered will not be an issue
• Wastewater line adjustments will be due to site development requirements, and to provide adequate capacity for the project
• A new 15 HP 6-ft diameter, 10-ft deep Sanitary Sewer Pump Station is anticipated
• Installation of 2,500 LF of new 6-inch force main is anticipated
• All new water mains are restrained
• Of the new force mains, 1,100 LF are attached to bridge

Electric Power
• Electric power to the project location is provided by Duke Energy
• The existing system capacity is anticipated to be able support the proposed level of development
• The existing facilities that service the existing pier will be utilized.

Communication
• This area is serviced by a number of communication companies.
• The existing facilities that service the existing pier will be utilized.

BUILDING SYSTEMS

1. Pier (Overall)
   a. Utilities
      i. General Power Distribution. Duke Energy will be the electrical utility company providing electricity to the Pier Facilities. Duke will provide primary power to pad mounted transformers located near various elements of the pier facility. All services to structures will be separately metered by the utility company. The required utilities for these various elements of the pier facility will be fed through these meters.
      ii. General Water Distribution. The City of St. Petersburg will provide potable water and fire service to the Pier Facilities. Primary service lines will be provided from the east at the uplands and run under the new pier approach. Each structure will have a separate water meter to allow the city to monitor usage internal to the pier facility. The required utilities for the various elements of the pier facility will be fed from these water meters.
      iii. General Waste Water: The City of St. Petersburg will provide sanitary sewer service for the Pier Facilities. Primary collection lines will be provided from the east at the uplands and run under the new pier approach. Each structure with waste water outfalls will have a separate connection per pier element.
   b. Lighting
      i. General Lighting concept will be developed with the designers to select area lighting and landscape lighting fixtures. In general, all lighting fixtures will utilize LED technology as a light source. The site lighting will have a programmable control system. There will be a separate electrical service in two locations to serve the general pier lighting in order to minimize voltage drop. These services will be 100 Ampere, 480/277 volt with a NEMA 4x panel for feeding all required lighting branch circuits. Each service point will also have a 480-120/208 step down transformer and branch panel to serve receptacles located at points to connect seasonal lighting and other seasonal features.

2. Marina Zone
   a. Restaurant and Shade Structure
   i. Water
      1. Water Distribution
         a. The domestic water piping system inside the building shall be distributed to various pieces of equipment and plumbing fixtures through an adequately sized system of Type L copper tubing and fittings. Domestic water piping system shall be sized using 4 PSI / 100 ft. uniform friction head loss criteria. The piping system velocity shall not exceed 8 FPS (feet per second), in order to reduce pressure drop, noise, and water hammer.
         b. Water heating for the building will consist of solar analysis to provide solar water heating panels with solar storage and supplemental/redundant electric water heating. Dependent on the solar analysis, if not viable, electric storage type water heater shall be installed in the building to provide hot water to the janitor’s closets and lavatories & kitchen. Hot water shall be stored and distributed at 120°F. When required due to heater location, recirculation pumps shall be provided.
         c. Each mechanical room with AHU equipment shall have hose bibs and floor drains provided.
         d. Each gang toilet room located on all floors shall have a hose bibb provided below counter top lavatory and at 100’ intervals in exterior areas for maintenance use.
         e. Each toilet room located on all floors shall have floor drains with trap seals.
         f. Water hammer arrestors shall be provided on both hot and cold water piping at each fixture or groups of fixtures.
   2. Plumbing Fixtures
      a. All plumbing fixtures shall be commercial grade. Accessible fixtures shall be provided as specified by the Uniform Federal Accessibility Standards (UFAS).
b. Water closets shall be vitreous china with manual flush valves, designed for 128 gallons per flush.
c. Urinals shall be vitreous china with manual type flush valves, designed for 125 gallon per flush.
d. Lavatories shall be vitreous china; countertop, drop-in type, under mount at solid surface or stone or wall mounted with ADA approved trim. Faucets shall be single lever type with 0.5 GPM discharge.
e. Electric water coolers shall be self-contained units with bi-level dispensers meeting ADA mounted requirements.
f. Mop sinks shall be floor mounted cast stone units with stainless steel wall mounted splashguards and wall mounted faucets.
g. Provide floor drains with trap seals in all toilet rooms, janitor closets, and mechanical rooms.
h. Provide access panels for all non-accessible ceilings containing valves.
i. Commercial Kitchen fixtures will be provided in kitchen areas.

ii. HVAC
1. Conditioned air will be supplied by a thirty (30) ton Variable Refrigerant Flow system. The VRF will have heat recovery allowing the units to heat and cool simultaneously, as required.
   a. Indoor Units
      i. There will be multiple, various types of indoor units, cassettes, fan coils, wall mounted, connected to condensers. The refrigerant piping will be copper. All underground refrigerant piping will be installed in a PVC sleeve.
      ii. A dedicated outside air unit, with energy recovery where possible, will be ducted to all areas to provide outside air. These units will be located in separate a mechanical room.
   2. Air distribution
      a. Air distribution will come directly from the various indoor units.
      b. Exposed outside air ductwork shall deliver air via sidewall mounted supply grilles.
   3. Exhaust
      a. All toilet areas will be exhausted at the rate of 50cfm per water closet and/or urinal or 2cfm per square foot, whichever is greater.
      b. All janitor's closets will be exhausted at a rate of 2cfm per square foot.
      c. Exhaust air will be removed from the spaces through ceiling mounted exhaust grilles with inline fans located above accessible areas. Exhaust will exit the building through a louver in an exterior wall or a low profile louvered penthouse type relief on the roof.
   d. Kitchen Hood Exhaust: The kitchen areas are anticipated to include cooking exhaust. This will use the 75o exhaust air being taken from the building to pre treat the incoming air for use in the HVAC system.
   e. All janitor's closets will be exhausted at a rate of 2cfm per square foot.
   f. Exhaust air will be removed from the spaces through ceiling mounted exhaust grilles with inline fans located above accessible areas. Exhaust will exit the building through a louver in an exterior wall or a low profile louvered penthouse type relief on the roof.

   3. Exhaust
      a. All janitor's closets will be exhausted at a rate of 2cfm per square foot.

   4. Special systems
      a. Exhaust air energy recovery
         i. This will be utilized based on the requirements of and/or exceeding ASHRAE Standard 90.1. This will use the 75o exhaust air being taken from the building to pre treat the incoming outside air to certain air handlers.
      b. Use ceiling mounted fans for air movement.
      c. Mixed Air Ventilation
         i. For months November through March, mixed air ventilation can be utilized depending on the building structure. For the mixed air ventilation, cooler air will enter the building at a higher level mixing with the warmer tempered air, decreasing the space temperature.
   5. Temperature Controls
      a. A Direct Digital Control (DDC) System will control the HVAC systems with complete graphical interface installed on a computer workstation in the building. Custom graphic files shall be created with the use of a graphics generation package furnished with the system. The system shall also be remotely accessible via building LAN system and telephone modem. The system software shall be web based.
      b. Electronic actuators shall be used on all controllers.
      c. A normally closed motorized damper interlocked with the air handler supply fan will control via CO2 sensors (interior and exterior) the outdoor air intake quantity.
      d. Space temperature sensors with CO2 sensors will control heating and cooling for each zone.

   iii. Power
      1. Power will be provided by a 600 Ampere, 120/208 volts service. The electrical service would consist of distribution panels to service large loads such as HVAC, cooking equipment and branch circuit panels. The branch circuit panels would serve small appliance, lighting and miscellaneous loads.
   iv. Stormwater
      1. Stormwater will be collected from the building's horizontal areas and routed to a cistern for reuse.
   v. Wastewater
      1. Sanitary Sewer, Vent, and Condensate Drain Piping
         a. A sanitary sewer drainage system shall be provided to serve all plumbing fixtures and floor drains.
         b. The below ground sanitary sewer system shall be constructed using service weight cast iron soil pipe and fittings with "hub and spigot" gasketed joint.
         c. The above ground sanitary and vent system shall be constructed using service weight cast iron soil pipe and fittings with "no-hub" joints with heavy-duty couplings and copper type DWV piping with soldered joints.
         d. Condensate drain piping shall be of the same materials utilized for sewer and vent piping.
         e. Cleanouts shall be provided as required per code and at the base of all stacks.
         f. A grease interceptor will be provided as required per code.
      1. Fire Protection
         i. Sprinkler System Design
            1. All enclosed spaces and exterior, covered walkways shall be 100% sprinklered in accordance with current NFPA codes. The scope of work for this project shall include providing a complete and operable wet pipe sprinkler system. The entire building shall be provided with concealed sprinklers in areas with ceilings and upright sprinklers in areas without ceilings. Sprinklers within special areas shall be layout in accordance with the spacing criteria as set forth by NFPA 13 for each occupancy classification.
            2. Sprinkler System Design Criteria for all public spaces and offices.
               Occupation Classification: ___________________________  Ordinary Hazard Group I
               Density: __________________________________________ 30 GPM/sq. ft.
               Hydraulic Remote Area: _____________________________ 1500 sq. ft.
               Outside Hose Stream Allowance: _____________________ 100 GPM
               Duration of Supply: __________________________________ 30 minutes
               Maximum Coverage per Sprinkler: ______________________ 225 sq. ft.
            3. Sprinkler System Design Criteria for all mechanical rooms, electrical rooms and telecom rooms
               Occupation Classification: ___________________________ Ordinary Hazard Group I
               Density: __________________________________________ 35 GPM/sq. ft.
               Hydraulic Remote Area: _____________________________ 1500 sq. ft.
               Outside Hose Stream Allowance: _____________________ 250 GPM
               Duration of Supply: __________________________________ 60 – 90 minutes
1. **HVAC**
   a. All toilet areas will be exhausted at the rate of 50 cfm per water closet and/or urinal or 2 cfm per square foot, whichever is greater.
   b. All janitor’s closets will be exhausted at a rate of 2 cfm per square foot.
   c. Exhaust air will be removed from the spaces through ceiling mounted exhaust grilles with inline fans located above accessible areas. Exhaust will exit the building through a louver in an exterior wall or a low profile louvered penthouse type relief on the roof.
   d. Water hammer arrestors shall be provided on both hot and cold water piping at each fixture or group of fixtures.
   e. Hot water will be provided by instantaneous heater for lavatories and showers.

2. **Plumbing Fixtures**
   a. All plumbing fixtures shall be commercial grade. Accessible fixtures shall be provided as specified by the Uniform Federal Accessibility Standards (UFAS).
   b. Water closets shall be vitreous china with manual flush valves, designed for 1.28 gallons per flush.
   c. Urinals shall be vitreous china with manual type flush valves, designed for 0.125 gallon per flush.
   d. Lavatories shall be vitreous china; counter top, drop-in type, under mount at solid surface or stone or wall mounted with ADA approved trim. Faucets shall be single lever type with 0.5 GPM discharge.
   e. Electric water coolers shall be self-contained units with bi-level dispensers meeting ADA requirements.
   f. Mop sinks shall be floor mounted cast stone units with stainless steel wall mounted splashguards and wall mounted faucets.
   g. Provide floor drains with trap seals in all toilet rooms, janitor closets, and mechanical rooms.
   h. Provide access panels for all non-accessible ceilings containing valves.

3. **Sprinkler Piping**
   i. Provide cement lined ductile iron piping below grade. All exterior site piping shall be buried with a standard, permanent, bright colored, continuous printed plastic tape and 14 gauge tracer wire.
   j. Provide concrete thrust blocks as required at all fittings, valves, and changes in direction.
   k. Provide Schedule 40 and Schedule 10 seamless black steel piping with malleable fittings above grade.
   l. Provide galvanized Schedule 40 piping for drainage of piping system.
   m. Hangers, supports, and all sleeves shall be installed as required per NFPA 13.

4. **Water Distribution**
   a. The domestic water piping system inside the building shall be distributed to various pieces of equipment and plumbing fixtures through an adequately sized system of Type L copper tubing and fittings. Domestic water piping system shall be sized using 4 PSI / 100 ft. uniform friction head loss criteria. The piping system velocity shall not exceed 8 FPS (feet per second), in order to reduce pressure drop, noise, and water hammer.
   b. Each toilet room located on all floors shall have floor drains with trap seals.
   c. Water hammer arrestors shall be provided on both hot and cold water piping at each fixture or group of fixtures.
   d. Hot water will be provided by instantaneous heater for lavatories and showers.
   e. Water will be provided by a 30A, 120/208 volt services feeding NEMA 4X branch circuit panels. The branch circuit panels will feed lighting and miscellaneous loads required to operate the structures.
   f. Power will be provided by a 30A, 120/208 volt services feeding NEMA 4X branch circuit panels. The branch circuit panels will feed lighting and miscellaneous loads required to operate the structures.
   g. Power will be provided by Transformers in the nearest adjacent buildings.
   h. Lighting will be selected with the building architects and landscape architects. The lighting will have LED lamp sources inasmuch as possible. Programmable lighting control will be provided to control lighting functions.

5. **Sanitary Sewer and Vent Piping**
   i. A sanitary sewer drainage system shall be provided to serve all plumbing fixtures and floor drains.
   j. The below ground sanitary sewer system shall be constructed using service weight cast iron soil pipe and fittings with “hub and spigot” gasketed joint.
   k. The above ground sanitary and vent system shall be constructed using service weight cast iron soil pipe and fittings with “no-hub” joints with heavy-duty couplings and copper type DWV piping with soldered joints.
   l. Cleanouts shall be provided as required per code and at the base of all stacks.
   m. Power will be provided by Transformers in the nearest adjacent buildings.
   n. Lighting will be selected with the building architects and landscape architects. The lighting will have LED lamp sources inasmuch as possible. Programmable lighting control will be provided to control lighting functions.

6. **Environmental Center - wet classroom**
   a. Power
   b. Lighting
   c. Power will be provided from the environmental center building Transformer.
   d. Lighting will be selected with the building architects and landscape architects. The lighting will have LED lamp sources inasmuch as possible. Programmable lighting control will be provided to control lighting functions.

7. **Environmental Center - dry classroom**
   a. Power
   b. Lighting
   c. Power will be provided by a 600 Ampere, 120/208 volts service. The electrical service would consist of distribution panels to service large loads such as HVAC, and branch circuit panels. The branch circuit panels would serve small equipment, lighting and miscellaneous loads.
   d. Lighting
   e. Lighting will be selected with the building architects and landscape architects. The lighting will have LED lamp sources inasmuch as possible. Programmable lighting control will be provided to control lighting functions.
functions.

b. HVAC

c. i. Conditioned air will be supplied by a fifteen (15) ton Variable Refrigerant Flow system. The VRF will have heat recovery allowing the units to heat and cool simultaneously, as required.

1. Indoor Units
   a. There will be multiple, various types of indoor units, cassette, fan coils, wall mounted, connected to condensers. The refrigerant piping will be copper. All underground refrigerant piping will be installed in a PVC sleeve.
   b. A dedicated outdoor air unit, with energy recovery where possible, will be ducted to all areas to provide outside air. These units will be located in a separate mechanical room.

2. Air distribution
   a. Air distribution will come directly from the various indoor units.
   b. Exposed outside air ductwork shall deliver air via sidewall mounted supply grilles.

ii. Exhaust

1. All toilet areas will be exhausted at the rate of 50cfm per water closet and/or urinal or 2cfm per square foot, whichever is greater.

2. All janitor’s closets will be exhausted at a rate of 2cfm per square foot.

3. Exhaust air will be removed from the spaces through ceiling mounted exhaust grilles with inline fans located above accessible areas. Exhaust will exit the building through a louver in an exterior wall or a low profile louvered penthouse type relief on the roof.

4. Kitchen Hood Exhaust. The kitchen areas are anticipated to include cooking exhaust. This exhaust will be fabricated from 16 GA galvanized or 18 GA stainless steel ductwork and will include fire protective insulation (similar to 3M Firemaster) where clearance to combustibles is limited from the hood(s) to the exhaust fan(s).

iii. Special systems

1. Exhaust air energy recovery
   a. This will be utilized based on the requirements of and/or exceeding ASHRAE Standard 901. This will use the 75o exhaust air being taken from the building to pre treat the incoming outside air to certain air handlers.

2. Use ceiling mounted fans for air movement.

3. Mixed Air Ventilation
   a. For months November through March, mixed air ventilation can be utilized depending on the building structure. For the mixed air ventilation, cooler air will enter the building at a higher level mixing with the warmer tempered air, decreasing the space temperature.

iv. Temperature Controls.

1. A Direct Digital Control (DDC) System will control the HVAC systems with complete graphical interface installed on a computer workstation in the building. Custom graphic files shall be created with the use of a graphics generation package furnished with the system. The system shall also be remotely accessible via building LAN system and telephone modem. The system software shall be web based.

2. Electronic actuators shall be used on all controllers.

3. A normally closed motorized damper interlocked with the air handler supply fan will control via CO2 sensors (interior and exterior) the outdoor air intake quantity.

4. Space temperature sensors with CO2 sensors will control heating and cooling for each zone.

d. Water

i. Water Distribution
   1. The domestic water piping system inside the Environmental Center Building will be distributed to various pieces of equipment and plumbing fixtures through an adequately sized system of Type L copper tubing and fittings. Domestic water piping system shall be sized using 4 PSI / 100 ft. uniform friction head loss criteria. The piping system velocity shall not exceed 8 FPS (feet per second), in order to reduce pressure drop, noise, and water hammer.

2. Water heating for the Building will consist of solar analysis to provide solar water heating panels with solar storage and supplemental/redundant electric water heating. Dependent on the solar analysis, if not viable, electric storage type water heater shall be installed on the ground floor to provide hot water to the janitor’s closets and lavatories. Hot water shall be stored and distributed at 120oF. When required due to heater location, recirculation pumps shall be provided.

3. Each mechanical room with AHU equipment shall have hose bibs and floor drains provided.

4. Each gang toilet room located on all floors shall have a hose bibb provided below countertop lavatory and at 100’ intervals in exterior areas for maintenance use.

5. Each toilet room located on all floors shall have floor drains with trap seals.

6. Water hammer arrestors shall be provided on both hot and cold water piping at each fixture or groups of fixtures.

ii. Plumbing Fixtures

1. All plumbing fixtures shall be commercial grade. Accessible fixtures shall be provided as specified by the Uniform Federal Accessibility Standards (UFAS).

2. Water closets shall be vitreous china with manual flush valves, designed for 1.28 gallons per flush.

3. Urinals shall be vitreous china with manual type flush valves, designed for .125 gallon per flush.

4. Lavatories shall be vitreous china, countertop, drop-in type, under mount at solid surface or stone or wall mounted with ADA-approved trim. Faucets shall be single lever type with 0.5 GPM discharge.

5. Electric water coolers shall be self-contained units with bi-level dispensers meeting ADA mounted requirements.

6. Mop sinks shall be floor mounted cast stone units with stainless steel wall mounted splashguards and wall mounted faucets.

7. Provide floor drains with trap seals in all toilet rooms, janitor closets, and mechanical rooms.

8. Provide access panels for all non-accessible ceilings containing valves.

9. Commercial Kitchen fixtures will be provided in kitchen areas.

e. Wastewater

i. Sanitary Sewer, Vent, and Condensate Drain Piping
   1. A sanitary sewer drainage system shall be provided to serve all plumbing fixtures and floor drains.

2. The below ground sanitary sewer system shall be constructed using service weight cast iron soil pipe and fittings with “hub and spigot” gasketed joint.

3. The above ground sanitary and vent system shall be constructed using service weight cast iron soil pipe and fittings with “no-hub” joints with heavy-duty couplings and copper type DWV piping with soldered joints.

4. Condensate drain sanitary shall be of the same materials utilized for sewer and vent piping.

5. Cleanouts shall be provided as required per code and at the base of all stacks.

6. A grease interceptor will be provided as required per code.

f. Stormwater

i. The Environmental Center will capture 100% of rainwater from the building roof area. The water shall be collected in rainwater harvesting cistern located on site beneath the Lawn Bowl. The rainwater will be treated and used for irrigation. The down spouts from the building will be connected into one common collection point. TLC recommends using UV rated clear plastic piping for exterior down spouts. This will help demonstrate the rainwater collection usage. The vortex rainwater filter will be installed in the piping system to remove debris from the storm water system and divert clean rainwater to the storage system.

g. Sprinkler System Design
i. All enclosed spaces and exterior, covered walkways shall be 100% sprinklered in accordance with all current NFPA codes. The scope of work for this project shall include providing a complete and operable wet pipe sprinkler system. The entire building shall be provided with concealed sprinklers in areas with ceilings and upright sprinklers in areas without ceilings. Sprinklers within special areas shall be laid out in accordance with the spacing criteria as set forth by NFPA 13 for each occupancy classification.

   Occupancy Classification: -------------------------------------- Light Hazard
   Density:------------------------------------------------------ 10 GPM/sq. ft.
   Hydraulic Remote Area:---------------------------------------- 1,500 sq. ft.
   Outside Hose Stream Allowance:------------------------------- 100 GPM
   Duration of Supply:-------------------------------------------- 30 minutes
   Maximum Coverage per Sprinkler:--------------------------- 225 sq. ft.

2. Sprinkler System Design Criteria for all mechanical rooms, electrical rooms and telecom rooms
   Occupancy Classification: -------------------------------------- Ordinary Hazard Group I
   Density:------------------------------------------------------ 15 GPM/sq. ft.
   Hydraulic Remote Area:---------------------------------------- 1,500 sq. ft.
   Outside Hose Stream Allowance:------------------------------- 250 GPM
   Duration of Supply:-------------------------------------------- 60 – 90 minutes
   Maximum Coverage per Sprinkler:--------------------------- 130 sq. ft.

3. Wet Pipe System - Provide a wet pipe sprinkler system in all interior areas.
4. Dry Pipe System - Provide a dry pipe sprinkler system on all adjoining walkways.

ii. Sprinkler Piping
   1. Provide cement lined ductile iron piping below grade. All exterior site piping shall be buried with a standard, permanent, bright colored, continuous printed plastic tape and 14 gauge tracer wire.
   2. Provide concrete thrust blocks as required at all fittings, valves, and changes in direction.
   3. Provide Schedule 40 and Schedule 10 seamless black steel piping with malleable fittings above grade.
   4. Provide galvanized Schedule 40 piping for drainage of piping system.
   5. Refer to Section 1 Pier (Overall)

iii. Sprinklers
   1. Provide concealed sprinklers in all areas that have ceilings.
   2. Provide upright sprinklers in all areas without ceilings.
   3. Provide durable/additional cage reinforcement @ sprinklers located in Mechanical Rooms.

iii. Flexible Activity Zone
   a. Water
   i. Provide water distribution for all areas.
   b. Power (plug-in programs – plaza and water's edge)
   i. Power will be provided by the Environmental Center building Transformer.
   c. Lighting
   i. Refer to Section 1 Pier (Overall)

iv. Lawn Bowl
   a. Water
   i. Refer to Section 1 Pier (Overall)

b. Power
   i. Power will be provided by a 2000A, 120/208 volt services feeding NEMA 4X branch circuit panels. The branch circuit panels will feed lighting and miscellaneous loads required to operate the structures.

c. Lighting
   i. Refer to Section 1 Pier (Overall)

10. Pier Head Building
   a. Overall Structure
   b. Water
      i. Water Distribution
         1. The domestic water piping system inside the Environmental Center Building shall be distributed to various pieces of equipment and plumbing fixtures through an adequately sized system of Type L copper tubing and fittings. Domestic water piping system shall be sized using 4 PSI / 100 ft. uniform friction head loss criteria. The piping system velocity shall not exceed 8 FPS (feet per second), in order to reduce pressure drop, noise, and water hammer.
         2. Water heating for the Environmental Center Building will consist of solar analysis to provide solar water heating panels with solar storage and supplemental/redundant electric water heating. Dependent on the solar analysis, if not viable, electric storage type water heater shall be installed on the ground floor to provide hot water to the janitor’s closets and lavatories & showers. Hot water shall be stored and distributed at 120°F. When required due to heater location, recirculation pumps shall be provided.
         3. Each mechanical room with AHU equipment shall have hose bibbs and floor drains provided.
         4. Each gang toilet room located on all floors shall have a hose bibb provided below counter top lavatory and at 100’ intervals in exterior areas for maintenance use.
         5. Each toilet room located on all floors shall have floor drains with trap seals.
         6. Water hammer arrestors shall be provided on both hot and cold water piping at each fixture or groups of fixtures.
      ii. Plumbing Fixtures
         1. All plumbing fixtures shall be commercial grade. Accessible fixtures shall be provided as specified by the Uniform Federal Accessibility Standards (UFAS).
         2. Water closets shall be vitreous china with manual flush valves, designed for 128 gallons per flush.
         3. Urinals shall be vitreous china with manual type flush valves, designed for 125 gallon per flush.
         4. Lavatories shall be vitreous china; counter top, drop-in type, under mount at solid surface or stone or wall mounted with ADA approved trim. Faucets shall be single lever type with 0.5 GPM discharge.
         5. Electric water coolers shall be self-contained units with bi-level dispensers meeting ADA mounted requirements.
         6. Mop sinks shall be floor mounted cast stone units with stainless steel wall mounted splashguards and wall mounted faucets.
         7. Provide floor drains with trap seals in all toilet rooms, janitor closets, and mechanical rooms.
         8. Provide access panels for all non-accessible ceilings containing valves.
         9. Commercial Kitchen fixtures will be provided in kitchen areas.
   c. HVAC
      i. The cooling load shall be serviced by a sixty (60) ton Water Source Variable Refrigerant Flow System. The VRF will have heat recovery allowing the units to heat, and cool simultaneously, as required. A heat exchanger and pumps will be located in the main mechanical room. The above ground water piping will be routed in Schedule 40 black steel pipe with 2” thick foam insulation with aluminum jacketing in mechanical rooms and other areas, and aluminum jacketing in outdoor locations. Underground piping shall be black steel, pre-insulated piping system.
a. Water source options:
   i. Stainless Steel Cooling Tower located on property (location to be determined)
   ii. Coils located in sea bed surrounding pier head with titanium heat exchanger.
   iii. Reclaimed water, can be researched as possible usage if available on site. Providing flow rates that can be utilized and the water temperature is acceptable.
b. Indoor Units
   i. There will be multiple, various types of indoor units, cassettes, fan coils, and wall mounted.
   ii. A dedicated outside air unit, with energy recovery where possible, will be ducted to all areas to provide outside air. These units will be located in separate a mechanical room.
c. Air distribution
   i. Air distribution will come directly from the various indoor units.
   ii. Exposed outside air ductwork shall deliver air via sidewall mounted supply grilles.
   iii. Exhaust
      1. All toilet areas will be exhausted at the rate of 50cfm per water closet and/or urinal or 3cfm per square foot, whichever is greater.
      2. All janitor's closets will be exhausted at a rate of 2cfm per square foot.
      3. Exhaust air will be removed from the spaces through ceiling mounted exhaust grilles with inline fans located above accessible areas. Exhaust will exit the building through a louver in an exterior wall or a low profile louvered penthouse type relief on the roof.
      4. Kitchen Hood Exhaust: The kitchen areas are anticipated to include cooking exhaust. This exhaust will be fabricated from 16 GA galvanized or 18 GA stainless steel ductwork and will include fire protective insulation (similar to 3M Firemaster) where clearance to combustibles is limited from the hood(s) to the exhaust fan(s).
   iv. Special systems
      i. Exhaust air energy recovery
         a. This will be utilized based on the requirements of and/or exceeding ASHRAE Standard 90.1. This will use the 75k exhaust air being taken from the building to pre-treat the incoming outside air to certain air handlers.
      2. Use ceiling mounted fans for air movement.
      3. Mixed Air Ventilation
         a. For months November through March, mixed air ventilation can be utilized depending on the building structure. For the mixed air ventilation, cooler air will enter the building at a higher level mixing with the warmer tempered air, decreasing the space temperature.
   iv. Temperature Controls
      1. A Direct Digital Control (DDC) System will control the HVAC systems with complete graphical interface installed on a computer workstation in the building. Custom graphic files shall be created with the use of a graphics generation package furnished with the system. The system shall also be remotely accessible via building LAN system and telephone modem. The system software shall be web based.
      2. Electronic actuators shall be used on all controllers.
      3. A normally closed motorized damper interlocked with the air handler supply fan will control via CO2 sensors (interior and exterior) the outdoor air intake quantity.
      4. Space temperature sensors with CO2 sensors will control heating and cooling for each zone.
d. Power
   i. Power will be provided by a 1200 Ampere, 120/208 volts service. The electrical service would consist of distribution panels to service large loads such as HVAC, cooking equipment and branch circuit panels. The branch circuit panels would serve small appliance, lighting and miscellaneous loads. The outside stage area would have a 200 ampere exterior branch panel to provide shower power to events taking place on the pier.
e. Lighting
   i. Lighting will be selected with the building architects and landscape architects. The lighting will have LED lamp sources inasmuch as possible. Programmable lighting control will be provided to control lighting functions.
f. Wastewater
   i. Sanitary Sewer, Vent, and Condensate Drain piping
      1. A sanitary sewer drainage system shall be provided to serve all plumbing fixtures and floor drains.
      2. The below ground sanitary sewer system shall be constructed using service weight cast iron soil pipe and fittings with “hub and spigot” gasketed joint.
      3. The above ground sanitary and vent system shall be constructed using service weight cast iron soil pipe and fittings with “no-hub” joints with heavy-duty couplings and copper type DWV piping with soldered joints.
   ii. Condensate drain piping shall be of the same materials utilized for sewer and vent piping.
   iii. Cleanouts shall be provided as required per code and at the base of all stacks.
   iv. A grease interceptor will be provided as required per code.
g. Stormwater
   i. Stormwater will be collected from the building’s horizontal areas and routed to an outfall in the bay.
h. Fire Protection
   i. Sprinkler System Design
      1. All enclosed spaces and exterior, covered walkways shall be 100% sprinklered in accordance with all current NFPA codes. The scope of work for this project shall include providing a complete and operable wet pipe sprinkler system. The entire building shall be provided with concealed sprinklers in areas with ceilings and upright sprinklers in areas without ceilings. Sprinklers within special areas shall be laid out in accordance with the spacing criteria as set forth by NFPA 13 for each occupancy classification.
      2. Sprinkler System Design Criteria for all public spaces and offices.
         Occupancy Classification: -------------------------- Light Hazard
         Density: --------------------------------------------- .30 GPM/sq. ft.
         Hydraulic Remote Area: --------------------------- 1500 sq. ft.
         Outside Hose Stream Allowance: ------------------ 100 GPM
         Duration of Supply: ------------------------------- 30 minutes
         Maximum Coverage per Sprinkler: ------------------ 225 sq. ft.
   3. Sprinkler System Design Criteria for all mechanical rooms, electrical rooms and telecom rooms
      Occupancy Classification: -------------------------- Ordinary Hazard Group I
      Density: --------------------------------------------- .15 GPM/sq. ft.
      Hydraulic Remote Area: --------------------------- 1500 sq. ft.
      Outside Hose Stream Allowance: ------------------ 250 GPM
      Duration of Supply: ------------------------------- 60 – 90 minutes
      Maximum Coverage per Sprinkler: ------------------ 130 sq. ft.
   4. Wet Pipe System - Provide a wet pipe sprinkler system in all interior areas.
   5. Dry Pipe System - Provide a dry pipe sprinkler system on all adjoining walkways.
ii. Sprinkler Piping
   1. Provide cement lined ductile iron piping below grade. All exterior site piping shall be buried with a standard, permanent, bright colored, continuous printed plastic tape and 14 gauge tracer wire.
   2. Provide concrete thrust blocks as required at all fittings, valves, and changes in direction.
   3. Provide Schedule 40 and Schedule 10 seamless black steel piping with malleable fittings above grade.
   4. Provide galvanized Schedule 40 piping for drainage of piping system.
   5. Hangers, supports, and all sleeves shall be installed as required per NFPA 13.

iii. Sprinklers
   1. Provide concealed sprinklers in all areas that have ceilings.
   2. Provide upright sprinklers in all areas without ceilings.
   3. Provide durable/additional cage reinforcement @ sprinklers located in Mechanical Rooms.

Operating Impacts
a. Total area of air-conditioned space proposed. Phase 1 has 16,750 SF AC space.
b. Total area of proposed leasable space and total common area. There is 13,750 SF leasable space and approximately 275,000 SF of Common space. This number includes open park area as well as building spaces.
c. General description of the proposed use for each space. Please see section 2. Program.
d. Narrative of proposed type of HVAC system and proposed tonnage. See narrative above.
e. Type and number of proposed elevators. There are 2 (3 stop) elevators.
ESTIMATED SCHEDULE AND COST ANALYSIS
Upon award of the project the design team will mobilize immediately into an Advanced Schematic Phase where all assumptions and current design perimeters will be verified. Additional public input sessions will take place with the possibility of inclusion of ideas and editing of design concept. This advancement of schematic design is an intensive two-month period where critical decisions will need to be made in order to move forward in a timely manner.

At the conclusion of Advanced Schematic Design, the Design Team then moves into Design Development. This phase allows the ASD/Rogers Partners/KSLA team to develop the scheme in detail, re-evaluate cost and constructability and finalize all plan development. At the conclusion of Design Development, our Environmental Team led by Stantec can begin the Environmental Permitting Process. Additionally, any cost implications can be addressed and resolved allowing the Design Team to begin final documentation. All building permitting will commence at the conclusion of 100% Construction Documents. It is then anticipated to have a February 2016 construction start and a completion date in early summer of 2017.
The Pier Park project attempts to encompass a full park experience that starts at Beach Drive and moves all the way to the new Pier Head structure. We have established a two-phase project that will allow the City of St. Petersburg to construct this grand idea for a realistic value. However, the focus of this evaluation is on what can be constructed for the $33 million allocated for this project. This is defined as our Phase 1. Phase 1 includes a new Welcome Center and Plaza, an updated Spa Beach with new restrooms and play area, the majority of our coastal thicket, new water play plaza, Environmental Center, Kayak Boat House, new boating and fishing docking, event plazas and the New Pier Head which will become a premier outdoor performance venue. Phase 2 will include much of the work on the west side of the Upland area and will include a new Restaurant and outdoor event Center. The following spreadsheets and back up breakdown illustrates our cost analysis. In summary:

Phase 1 as illustrated on our design documents is valued at $32,990,776.00
Phase 2 as illustrated on our design documents is valued at $2,953,556.00

### Project: St. Petersburg Pier
### Location: St. Petersburg, Fl
### Date: 12/13/14
### Project #: 2014.131

#### Preliminary Design Budget

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<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
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### Preliminary Design Budget

**DESCRIPTION** | QTY | UNIT | UNIT COST | Ph 1 Total | Ph 2 Total | TOTAL COST
--- | --- | --- | --- | --- | --- | ---
**MOISTURE PROTECTION** | | | | | | $2,042,950
Roofing - Environmental Center | 3,000 sf | 12.50 | 37,500 |
Roofing - Kayak Center | 5,500 sf | 12.50 | 68,750 |
Roofing - Pier Head | 6,000 sf | 12.50 | 75,000 |
Roofing - Pier Head - Fabric | 30,750 sf | 75.00 | 2,252,625 |
Roofing - Restaurants | 700 sf | 12.50 | 8,750 |
Roofing - Restaurant | 25,000 sf | 12.50 | 312,500 |

**INTERIOR FINISHES CONSTRUCTION** | | | | | | $115,625
Int Fin - Environmental Center | 3,000 sf | 15.00 | 45,000 |
Int Fin - Restrooms | 700 sf | 25.00 | 17,500 |
Int Fin - Pier Head - Shell | 6,875 sf | 15.00 | 103,125 |
Int Fin - Restaurant - Shell | 6,400 sf | 15.00 | 96,000 |

**SPECIAL CONSTRUCTION** | | | | | | $5,014,000
Specialties | 10,750 | 1.00 | 10,750 |
Equipment | 1 | 10,000.00 | 10,000.00 |
Railings | 6,000 | 125.00 | 750,000 |
Floating Docks | 40,400 sf | 85.00 | 3,394,000 |
BreakWater | 200 | 250.00 | 50,000 |
Artificial Reef | 1 | 250,000.00 | 250,000.00 |
F.F. & E. - N.I.C. | | | | | | $150,000

**MECHANICAL** | | | | | | $141,550
Fire Sprinkler Sys | | | | | | $115,000
Fire Sprinkler Sys - Pier Head | 6 stop | 25,000.00 | 150,000 |

**CONVEYING SYSTEMS** | | | | | | $150,000
Traction Elevator - Pier Head | 6 stop | 25,000.00 | 150,000 |

**ELECTRICAL** | | | | | | $806,750
Electrical Sys - Welcome Center, Canopy Lighting | 7,000 | 5.00 | 35,000 |
Electrical Sys - Environmental Center - Shell | 3,000 | 8.00 | 24,000 |
Electrical Sys - Kayak Center - Shell | 9,550 | 8.00 | 76,400 |
Electrical Sys - Restrooms | 700 | 10.00 | 7,000 |
Electrical Sys - Restaurant - Shell | 6,400 | 8.00 | 51,200 |
Electrical Sys - Pier Head - Shell | 13,750 | 8.00 | 110,000 |
Electrical Sys - Service to Landside | 1,230 | 75.00 | 92,250 |
Electrical - 1-T Cable | 1 | 5,000.00 | 5,000.00 |
Electrical - Security | 1 | 10,000.00 | 10,000.00 |
Electrical - Generator | 1 | 50,000.00 | 50,000.00 |
Electrical - Pier Lighting | 150,000 | 2.50 | 375,000 |
Electrical - Nature Walk Lighting | 15,000 | 1.00 | 15,000.00 |

**Landscape/Irrigation** | | | | | | $675,185
Nature Walk | 1 | 500,000.00 | 500,000.00 |
Pier | 1 | 200,000.00 | 200,000.00 |
Activity Zone | 1 | 50,000.00 | 50,000.00 |
Lawn/Soil, sod | 3,497 cy | 25.00 | 87,425 |
Lawn/Soil, sod | 40,000 sf | 1.00 | 40,000 |
Spa Beach/Reef | 1 | 150,000.00 | 150,000.00 |

Subtotal: | 27,290,766 | 2,953,546 | 27,290,766 |

**CONSTRUCTION MANAGER GENERAL CONDITIONS** | | | | | | $4,608,000
Permitting, Const. Manager Fees, Inc., Bonds, Escalation | 4,608,000 |
Estimate Contingency | 900,000 |

**BUILDING BUDGET TOTAL:** | | | | | | $32,990,766
**TOTAL CONSTRUCTION BUDGET:** | | | | | | $32,990,766
### SCHEDULE OF VALUES

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<th>D</th>
<th>E</th>
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### TOTAL CONSTRUCTION BUDGET

**$33,000,000**
The vision for the new St. Petersburg Pier honors its robust, eclectic history while transforming it into a 21st century public place. It is a hub for activity; not only at the pier head, but all along its length. Flexible programs engage tourists and community alike – from children to seniors, nature lovers to boaters, fishermen to fine diners.

The Pier does not take you to a place – The Pier is the place.

It is THE PIER PARK.
CONNECTING TO THE CITY

SHADE CANOPY FOR COMFORT

NEW OVERLOOK

ONLY GOOD THING IS THE VIEW

KEEP THE VERTICAL ELEMENTS

COASTAL THICKET

PIER SECTION

PIERHEAD EVOLUTION

WATER LOUNGE

EVENT PLAZA

ENVIRONMENTAL CENTER

KAYAK + BOAT

WELCOME PLAZA