

VERO BEACH MUSEUM OF ART
Renovation and Risk Analysis
FINAL REPORT

April 9, 2021



I. BACKGROUND

HISTORY

The Vero Beach Museum of Art ("VBMA") is a non-profit organization, founded in 1978 and located in Vero Beach, Florida. The current museum is located within Riverside Park, along the scenic Indian River and serves more than 75,000 residents and visitors annually. The organization's mission is focused on providing cultural leadership by presenting world-class exhibitions, collecting exceptional works of art, and offering diverse and innovative programs in art education. The Vero Beach Museum of Art original structure at the current site was developed in 1986. Due to the continued success of the institution, the building underwent several major additions. The original building was oriented with an east west axis. The first addition early in the institution added a foundry yard and later the space was enclosed to better support the school. Then in 1999, further renovations and additions resulted in added gallery space, reorientation of the entry to the north to align with the parking and exterior elements such as the porte cochere. Then in 2006 and 2008, the sculpture gardens were added south and north of the building to further enhance the patron experience. Later in 2010, some minor additions such as vestibules were added. The last major improvement and addition was in 2012 that created the institution's Exhibition Building that provided much needed back off house support for storage, conservation, shops and logistics.

Over the years, these additions and programmatic additions have been very valuable in supporting the growing institution. However, when a building gets constructed in numerous additions, it gets to a point that the building begins to present inefficiencies in not only the building systems but also in the general programmatic objectives of the institution. Furthermore, the patron experience is reduced due to the inherent space inefficiencies that build over the numerous additions and different architectural visions of each successive renovation. Lastly, when a building receives numerous renovations over a significant time period, the building codes and construction techniques change resulting in varying degrees of quality, and lastly each renovation interface is always the weakest link in the construction of a building. Numerous repairs and ongoing operations of the facility support these challenges.

As a result, VBMA has been contemplating a more extensive renovation and addition of space that supports the successful programs of the institution. **The major objectives of a renovation would be to double the museum's gallery space, create a 600-seat sloped floor auditorium to support highly popular lectures and presentation series, doubling of Art Zone space, the relocation of staff to allow the prime real estate in the building that administration currently uses to be available for the patrons, and enhance the patron services by creating better café and event rental space plus provide bigger museum store opportunities.** All these items will provide an enhanced experience to the guests and to again take advantage of the phenomenal location of the building.

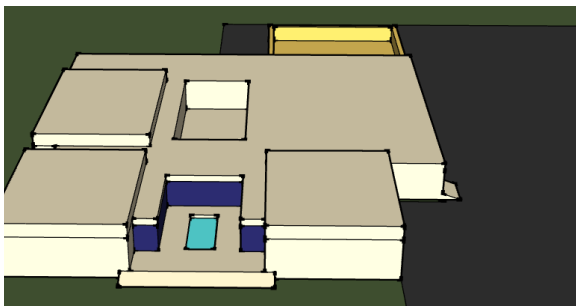
The objective of this study analysis is to identify the primary risk factors, translate them to what would be good design practice to mitigate or in the case of renovation of the existing structure, what would be the mitigation options and possible magnitude of costs in order to get some comparative analysis to understand the cost – benefit of the options and most importantly understanding the great value of renovating the current building.



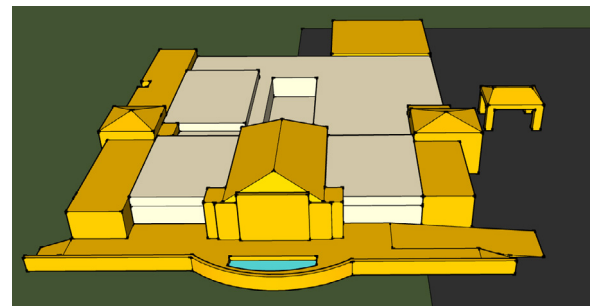
This report will focus on the following sections to outline our research into the risk categories; the climate hazards that VBMA is exposed to, the mitigation strategies that can be implemented to reduce the risk of damage to VBMA and the varying cost of these options.

Legends Project Development was asked to prepare a report that identifies the climate hazards which pose a risk to the mission and ongoing operations of VBMA as well as propose mitigation strategies to consider. The location of the museum presents ongoing operational challenges due to the climate risks inherent with its proximity to the coast, and flood prone site. The museum itself has undergone several renovations and additions over the years, which has led to inconsistent building systems and an overall “patchy” feel. In concurrence with developing options for reducing the risks from climate hazards, LPD will also address the museum’s overall design challenges associated with the current facility, and with input from VBMA, propose options for improvements. The museum lacks a physical cohesiveness that has led to inefficiencies and inadequacies for programming. Since opening in 1986, there have been several additions and renovations to the building and site occurring in 1999, 2007 and 2012.

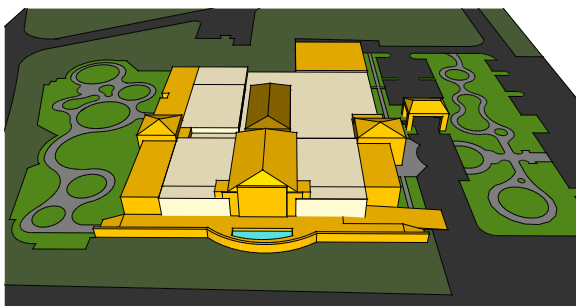
In order to provide the value analysis, LPD has outline two other hypothetical options of what a museum of same programing would be new at another location or reconstructed on site with inherent design for current coastal design practices versus new retrofit options now available in the market. The report will include order of magnitude pricing for each option provided to make informed quantitative decisions at a conceptual level of project development.



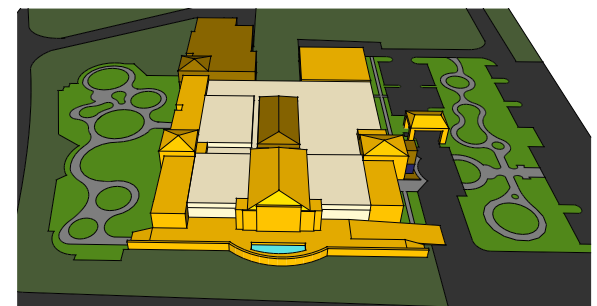
1986
ORIGINAL BUILDING



1999
ADDED GALLERY SPACE, REALIGNED
NORTH ENTRY WITH PARKING LOT
AND ADDED PORTE COCHERE



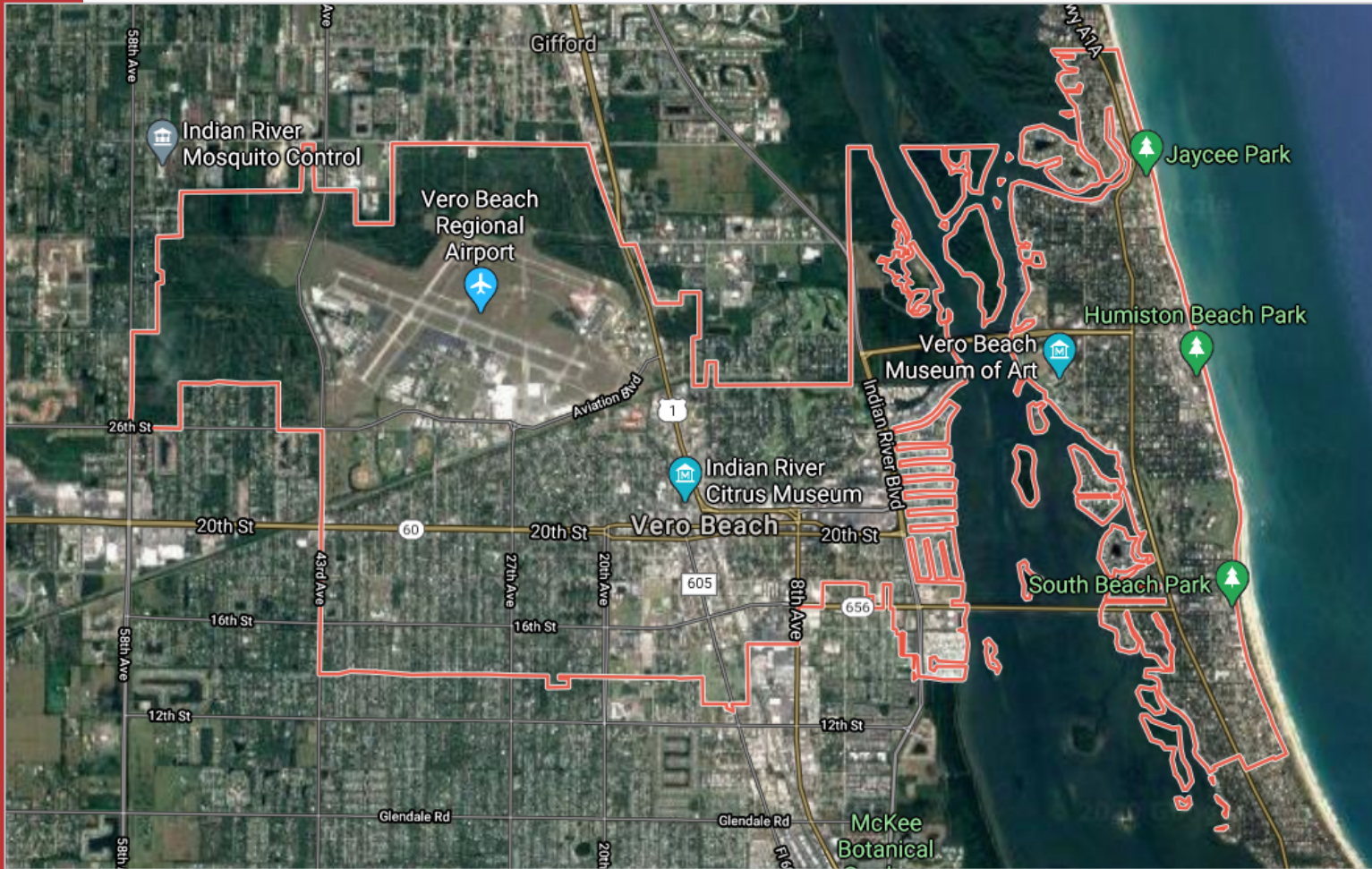
2007-2010
ADDITION OF THE ALICE AND JIM
BECKWITH SCULPTURE GARDEN (2007)
AND EXPANSION OF THE BECKWITH
SCULPTURE GARDEN (2010)



2012-CURRENT
ADDITION OF THE
EXHIBITION BUILDING (2012)



II. ENVIRONMENTAL HAZARDS



Vero Beach Museum of Art is located within Indian County, FL in the City of Vero Beach and sits approximately 5' above sea level with a finished floor elevation (FFE) of 7.14 ft. There are several environmental primary risk factors that the current site is prone to which include Hurricane force winds, flooding and storm surge.

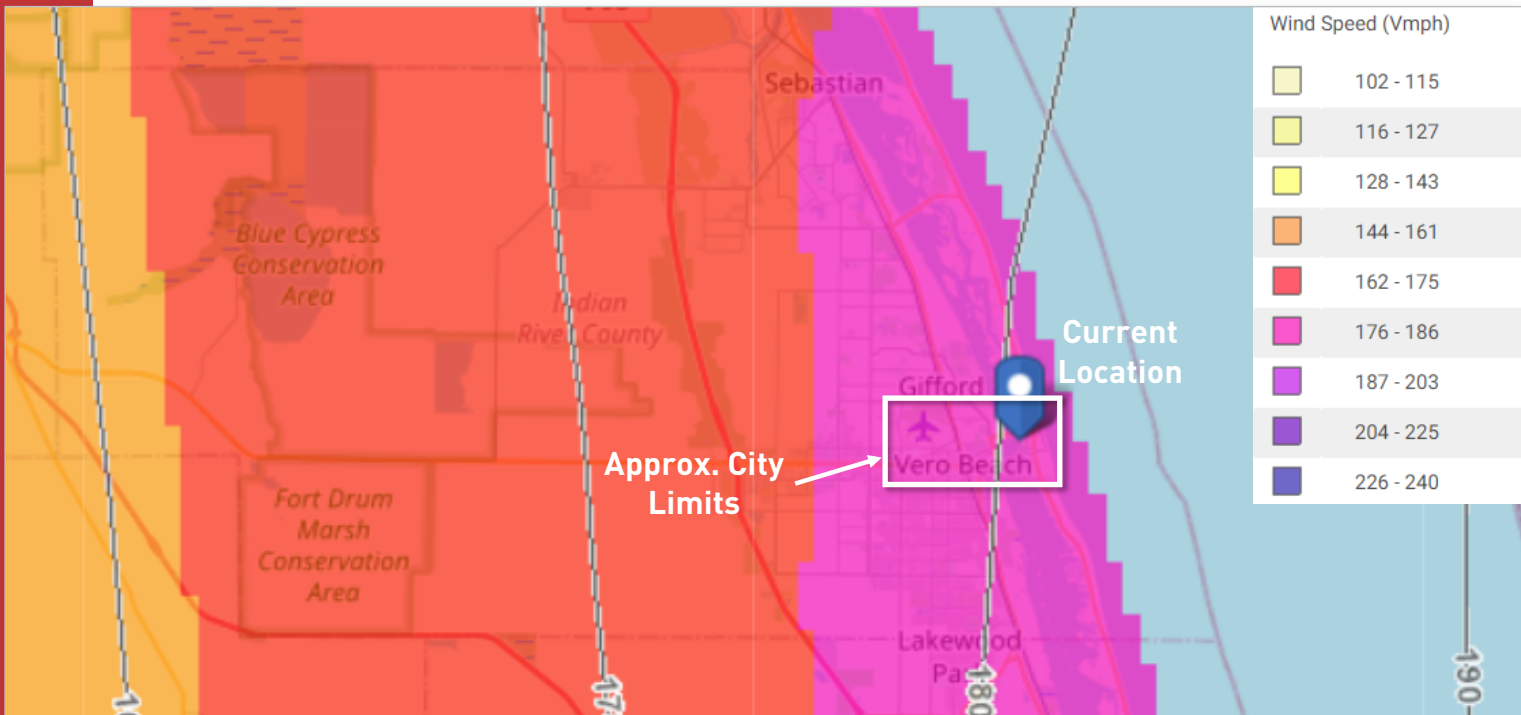
There are multiple climate risk factors to consider in determining development projects in the coastal beach communities near Vero Beach. Most major climate hazards effect this region (as it relates to building code) with the exception of earthquakes. Current data and forecasting are trending toward all these hazards increasing in intensity and potential damage factors in the future. This trend is prompting developers and owners of high value interests to plan and implement mitigation strategies to anticipate greater impact hazards. These current trends are taken into consideration in our analysis.



WIND

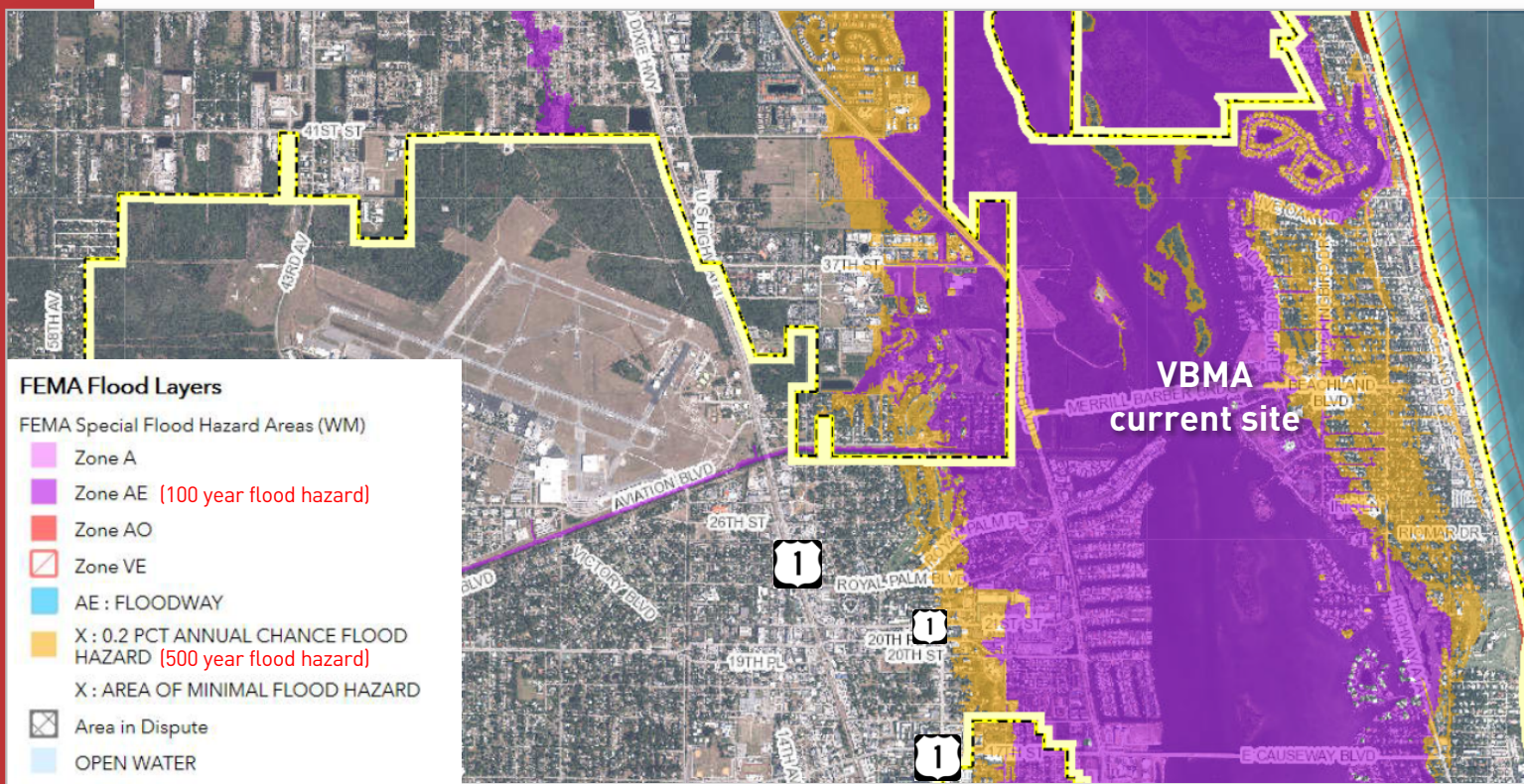
The first and most universal of the climate risk hazards in Vero Beach that dictate design criteria is wind. Wind Risk Categories are used to categorize buildings and structures based on their importance and include considerations such as risk to human life and societal need of the building or structure to function during and following an extreme event. Museums and other public assembly facilities with an occupancy load of 300 or greater fall into Risk Category III. Mapped wind speeds for buildings in the Risk Category III are higher than those in Risk Category I or II because of the potential consequence of failure to human life. As shown on the maps below, all of Vero Beach is within the same impact area and susceptible to the same level of damage. Regardless of the location of VBMA, the same mitigation for wind will be necessary to meet applicable building codes for wind.

CURRENT LOCATION:	Wind	Elevation	1 ft with respect to North American Vertical Datum of 1988 (NAVD 88)
	181 Vmph		



FLOODING

Flood hazard areas identified on the flood map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone X (shaded) are also shown on the flood hazard map below, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).



For simplicity of site evaluation, one can look at the delineation of the 100-year flood zone which in the area is a floor 6' above sea level. The first finished floor (FFE) for VBMA is at 7.14', which is 13.68 inches (or 1.14 feet) above the 100 year flood zone (1% chance of flooding within any given year). Represented in the next FEMA graphic, the existing museum is indicated as mostly out of the flood zone but does show some encroachment. This graphic produced by FEMA does not account for knowledge of the exact finish floor elevation. Most of the museum is indicated in Zone "X", however, the graphic depicts some of the existing floor area encroaching into Zone "AE". Since the existing museum 1st floor is uniform at EL 7.14', it is safe to assume the entire finished portion of the building lies out of the 500-yr flood zone.



FEMA SPECIAL FLOOD HAZARD AREA MAP 100 YEAR & 500 YEAR (PROPOSED MAP)



FEMA Preliminary Flood Areas

Preliminary Special Flood Hazard Areas (9/29/2017)

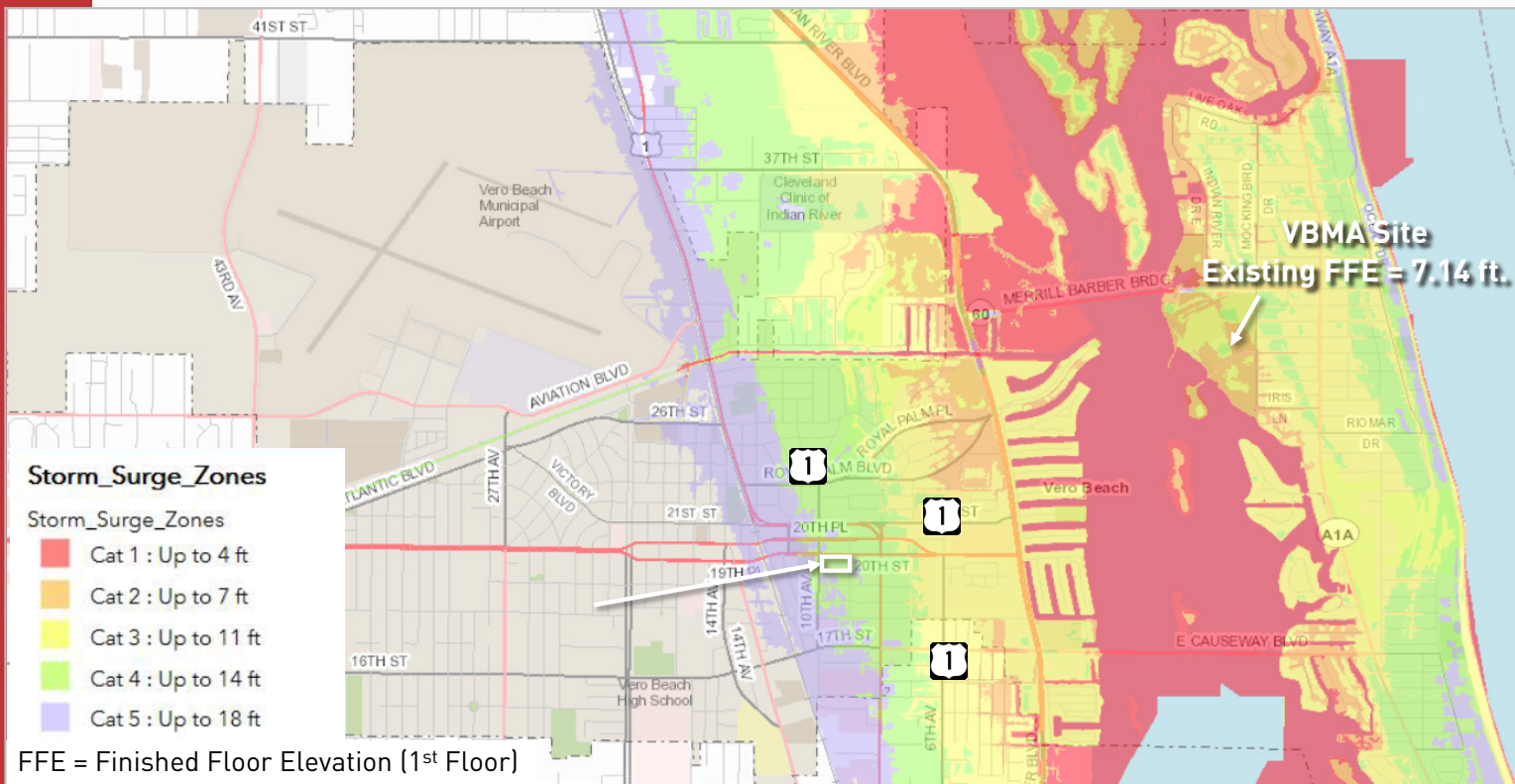
- Zone A
- Zone AE (100 year flood hazard)
- Zone AO
- Zone VE
- Zone AE: Floodway
- Zone X: 0.2 Pct Annual Chance Flood Hazard (500 year flood hazard)
- Zone X: Area of Minimal Flood Hazard
- Open Water

*VBMA FFE (1st Floor) = 7.14 ft.
(13.86" (or 1.14') Above 100 year
flood hazard)*

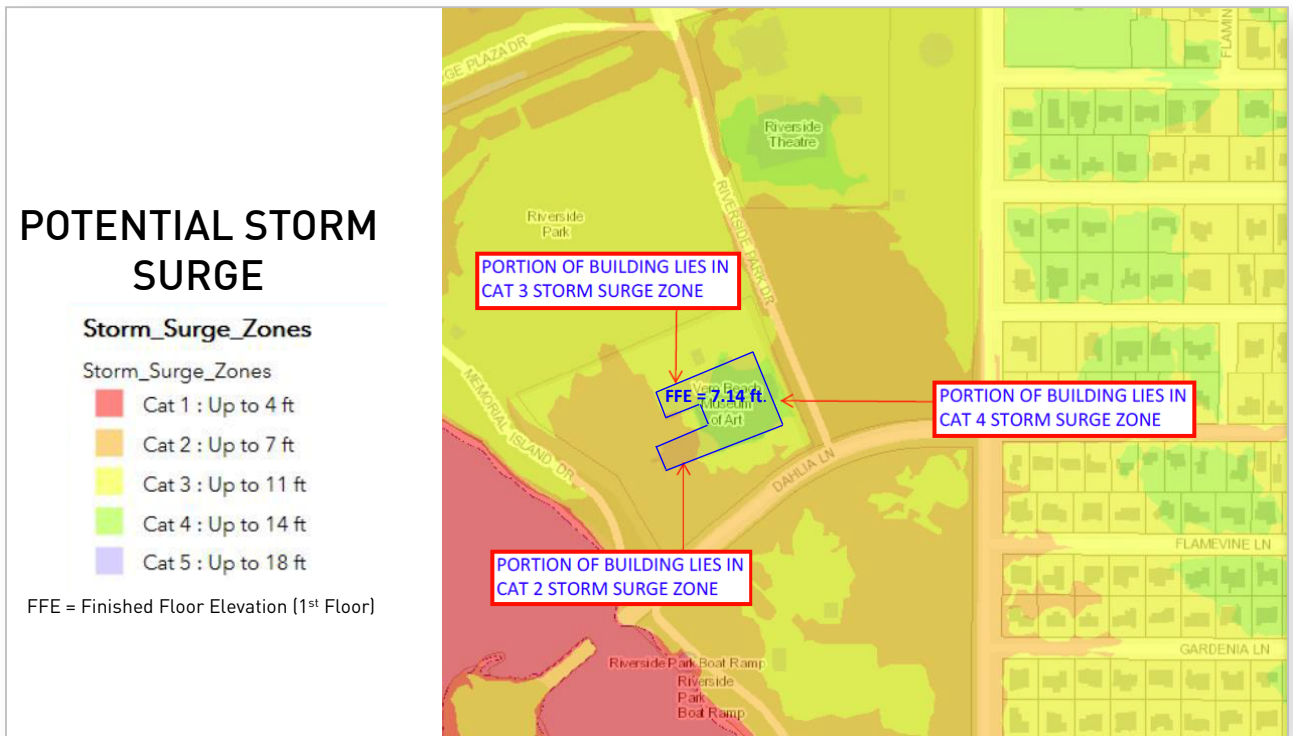


STORM SURGE

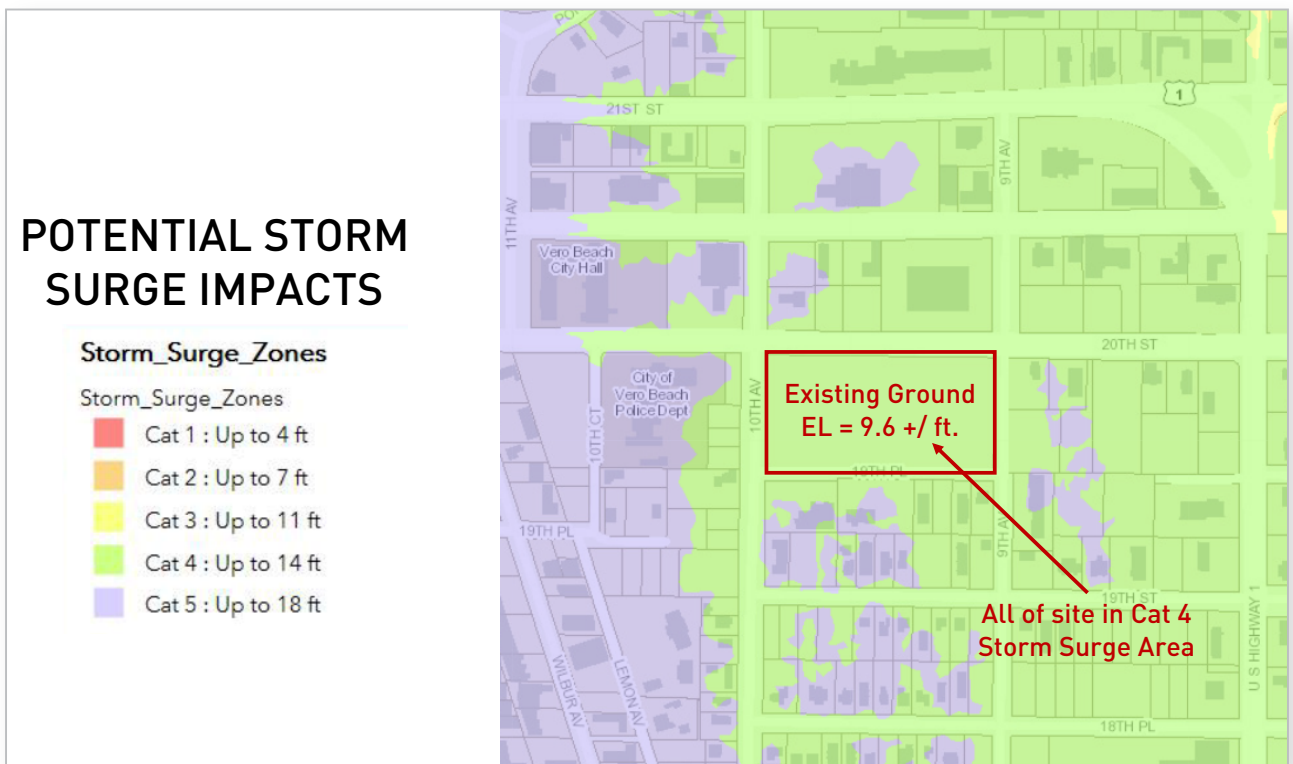
Of all the climatic risks of being on a barrier island, the most damage is from storm surge. It's the one item other than wind (which closely associated with surge) that mitigation and design considerations should be incorporated into any future renovation strategy and costing. Storm surge is produced by water being pushed toward the shore by the force of winds moving around a cyclonic storm (Hurricane). The impacts on storm surge from the rain produced by a storm are minimal in comparison to the water being forced toward the shore by the wind. Storm surge arrives prior to a hurricane's landfall, and the greater the hurricane's intensity, the sooner the surge arrives and higher the elevation of water rises. Storm surge can be devastating to coastal regions, causing flooding, severe beach erosion, and property damage along the immediate coast. Furthermore, water can rise very rapidly due to storm surge, posing a serious threat to people and property remaining in inundation areas. The map below illustrates the level of storm surge impacts within the city of Vero Beach based on Hurricane Storm Strength (Cat 1 through Cat 5).



The map below shows VBMA storm surge zone, however the finished floor elevation lies at 7.14' putting it at the very low end of the Cat 2 Storm Surge Zone.



One can see if a new site were selected inland, the category does improve one additional level to two levels due to the mix of categories at the existing site. But in simplest terms, the surge height is improved on average about 3 feet lower that one would need to mitigate inland for the same storm. Inland would also gain some benefit of also slightly higher elevation but nothing significant until you are very far inland towards I-95.



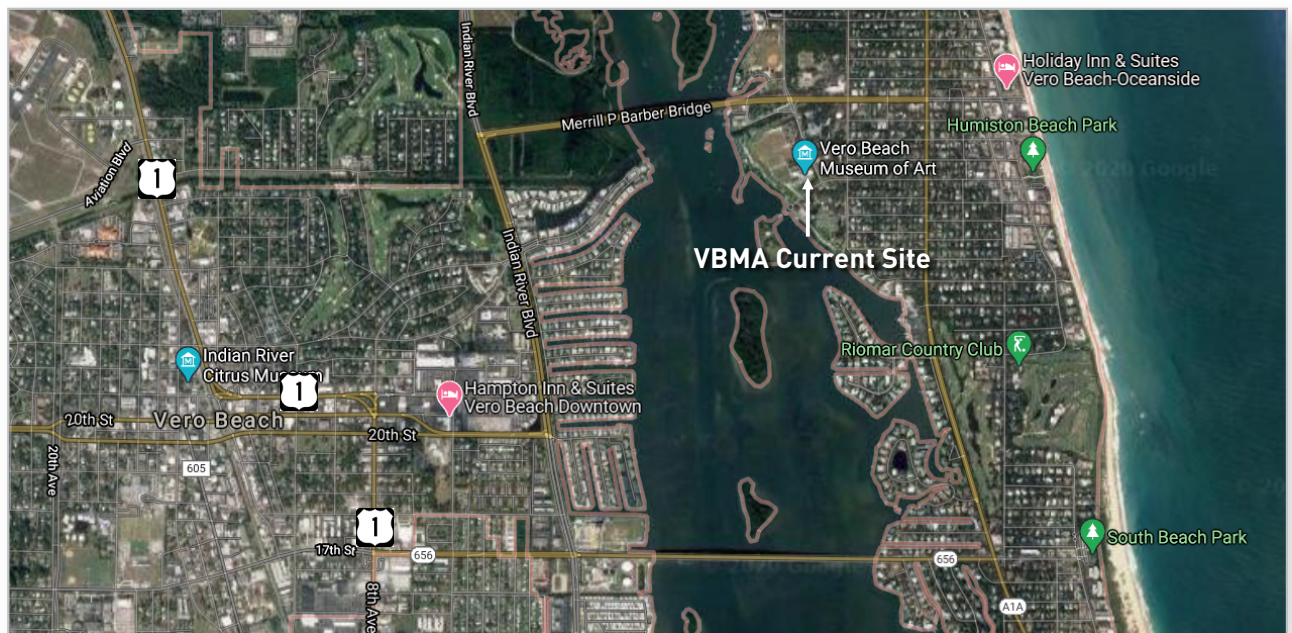
III. MITIGATION STRATEGIES

In order to mitigate the effects of natural occurring climate hazards such as wind, flooding and storm surge; several strategies can be explored.

1. New museum structure at a new property inland from the current site with some reduced climatic risk category
2. Re-purposing the existing museum for only administration and education functions while building a new facility for public programming on or near the current site that design would incorporate risk mitigation.
3. Renovation of the existing museum for enhancement programming with mitigation focused on installing physical barriers

ANALYSIS - NEW MUSEUM ON INLAND PROPERTY

First and most rational cost option is consideration at a site on the mainland to relocate the current facility. The potential site would sit away from the direct impacts of climate hazards associated with the current site on the barrier island. Most reasonable locations for this purpose of this analysis would fall into the Cat 4 storm surge zone and currently sits at an elevation of around 9 feet. Inland sites also typically are located outside of the special flood hazard zones that the museum currently sits within. When one considers this alternative, further mitigation of the climate risk for inland option which would include the new facility being built with an added level of infill of approximately 5' (combination of fill and structure) to raise the FFE to an appropriate level above Cat 4 storm surge flood levels (up to 14'). The mitigation for this facility does not include preventing up to Cat 5 hurricanes. In order to achieve this level of protection, you would need to consider an elevated structure with parking/storage below acting as a "sacrificial floor" for catastrophic storm surge,



NEW FACILITY INLAND

Hazard	Mitigation Recommendation	Level of Protection
Wind	Address per building code	Per building code for Level IV facilities
Flood	None	Outside of all special flood zones
Storm Surge	Elevate finished floor elevation using added infill (approximately 5')	Protects to a Cat 4 level storm surge (up to 14')



ANALYSIS - NEW FACILITY / EXISTING SITE

Very similar in concept to a relocation to inland, this alternative considers the benefit of the same barrier island location, but mainly focuses on new construction for all the additional space program, and consider the cost of constructing new with an elevated structure that can have the sacrificial floor. Taking advantage of the spaces around the current museum, a new supplemental facility could be built to address specific program elements. Storm surge protection could be raised up to a Cat 5 for this new facility by elevating the FFE of the structure above the risk impact elevation. Architecturally, investment in the higher structure rather than a flood wall could be more appealing. Even though “hybrid” option would reduce the need to shut down and relocate exhibitions and permanent collections in the event of a hurricane, the challenge with this option that in order to maximum existing / adjacent facilities like the art storage / exhibition building, it would create more day to day operational issues of movement of art and materials versus the just having to address storm related preparations.

NEW FACILITY / EXISTING SITE		
Hazard	Mitigation Recommendation	Level of Protection
Wind	Address per building code	Per building code for level IV facilities
Flood	None	Above the 100 year flood zone level (6') NOT 500 year
Storm Surge	New Facility FFE built above first level (typically 13')	Protects to a Cat 5 level storm surge (up to 18')



BASELINE - MAJOR RENOVATION

In order to meet future programmatic demands, the institution must consider the initial goals set out in this report to determine how to mitigate climatic risks to a significant capital investment. A major renovation, just like any new construction would use current building code and require a certain level of mitigation for current best practices and protection measures against climate hazards. These measures would include installing hurricane force protection glazing on all windows and skylights on the building, as well as replacing all doors to hurricane standards. The code requirements are primarily intended to prevent bodily harm from projectiles caused by hurricane force winds, but not flooding and storm surge, or even asset protection.

The current elevation of the first floor sits outside of the 100 year flood zone, therefore not at a high risk for non-storm surge flooding. Currently, the existing floor elevation barely covers the risk of a Cat 2 storm surge event, so to mitigate the storm surge, the only feasible way to mitigate or add a factor of safety for this climate risk is to provide a barrier. As in the alternative options of new museum, elevating the structure would be the typical way to increase safety. In fact, this is how the institution currently deals with potential weather-related threats now, by moving valuable art to the second level of the exhibition building. However, this does not help with catastrophic loss of the building components at lower elevations. The elevation around the site is at roughly 4' above sea level. A category 3 storm surge produces anticipated water up to 11' above sea level.

As part of this report, we have contemplated some options and ideas for the purposes of setting some conceptual design objectives and to get a baseline costs for the comparison analysis that follows in the report.

BARRIER / STORM SURGE MITIGATION

To consider premiums for mitigating the most significant climatic risks, the most obvious solution and straightforward solution is to address with a barrier system. Barriers can and should entail a combination of solutions that are most appropriate for the area and space needed to be installed. Options start with items as simple as using the landscape to incorporate berms / levee protection to provide increase height of water retention and create a diversion track for any moving water. The landscape option would be most cost effective but is not practical for the totality of the site and would not representative a true cost premium for mitigation. Because projection recommendation would be to have something that adds up to a 7' barrier at some locations (which would offer protection up to a Cat 3 storm surge), we looked into options of temporary fill in for when storm preparation is necessary. For any barrier, temporary or landscape, going higher than 7 feet is not recommend as it starts to exponentially get more expensive not only due to the high cost, but because it also eliminates sight lines to the museum.

For temporary options two concepts were explored for the purposes of setting design criteria and premium estimates. The first concept is a system implemented at Whitney Museum in Lower Manhattan when they were confronted with the risks that came apparent after Hurricane Sandy. Whitney is a very urban setting and much of the mitigation and costs they had to incorporate would not be applicable to our site / setting. However, one of the temporary barrier concepts implemented was a vertical slotted post stanchion system with slats to insert. For storm preparation, a team would bolt in the post at earlier constructed inserts, followed by dropping in the slats to provide the structural barrier to storm surge. This strategy is used at plazas and in front of curtainwalls where balance of the building where solid wall exists, or storm doors installed would not need the barrier in front.



IV. COST ANALYSIS

VBMA has provided a vision of program spaces that would be incorporated into the facility in the event of a renovation or a new facility. The program proposed takes into consideration what exists currently, and what is desired to address ongoing inefficiencies but also with future plans in mind. Breaking down the various types of spaces within a proposed facility or renovation, allows us to develop cost metrics associated to each space.

RENOVATION PROGRAM			
Program	Existing Program Area	New Program Area	Delta
Gallery Space	10,081	19,268	9,187
Education	4,381	4,640	259
Art Zone	1,000	2,000	1,000
Public/Event	17,082	17,082	0
Auditorium	3,722	9,862	6,140
Public Toilet	875	1,480	605
Office/Admin	7,904	9,397	1,493
Food & Beverage	1,480	4,000	2,520
BOH/Storage	23,404	21,639	-1,765
Studio/Foundry	5,906	5,906	0
Subtotal	75,835	95,274	19,439

The renovation plan would consist of adding café, event space and offices to the west end of the building as well as a new auditorium on the southeast corner. The renovation would anticipate keeping the recently added exhibition space and would not include this in the overall cost of work.

Art Zone would expand to approximately 2,000 SF. Initial design study should investigate keeping ceramics wing with reorganization and physical upgrades limited to code / wind.



To do an analysis for the inland facility, the program for the new facility would take all of the program that is included in the vision for the renovation and include in the new building further inland.

NEW FACILITY INLAND PROGRAM

Storage/Shpg/MNT	20,439 SF
Offices	9,397 SF
Education	5,640 SF
Galleries	16,065 SF
Food/Bev/Store	4,000 SF
Auditorium	9,862 SF
Public/Event	21,285 SF
Public Toilets	1,480 SF
Demo/Repairs	7106 SF
Total Building Program	95,274 SF

NEW FACILITY / EXISTING SITE

Galleries	16,065 SF
Food/Bev/Store	4,000 SF
Auditorium	9,862 SF
Public/Event	14,900 SF
Public Toilets	1,480 SF
Storage/Shpg/MNT	4,088 SF
Total Building Program	50,394 SF

In the option of new program on site using new construction, in this hybrid option, the existing museum would continue to operate the program for education, administrative and storage uses, while the new facility would be built for the public functions such as gallery spaces, auditorium and event spaces. This alternative is only to determine the value comparison with the renovation.

After identifying the program and determining the risk factors and mitigation strategies for VBMA, we developed cost estimates for various options. Determining cost estimates at a conceptual level relies heavily on comparable projects that share similar components such as VBMA such as gallery spaces, public gathering areas, auditoriums, high level finishes, hazard mitigation, high profile design team etc. Below are several comparable projects that were used in forming the cost metrics for our estimates.



COST ANALYSIS COMMENTARY

NEW FACILITY INLAND ALTERNATIVE

Relocating VBMA further inland would require the purchase of land for a new site. Using recently sold properties as well as current real estate listings, we developed an estimate range for the cost for a tract of appropriate size in Vero Beach. Any inland property option has inherent challenge that it is not in a well-known cultural or attraction district as the current site and likely would not have the walk appeal that being in a park area provides. The construction costs analysis includes replacing the entire program of the current facility as well as the desired additional program that is reflected in the renovation. Design fees and soft costs are proportionately higher for a larger building. All mitigation costs are included in the overall construction cost of the museum and along with the location away from the coast. Being farther from the coast and being able to construct from scratch, this does offer the best possible protection from any environmental hazards but at a significant premium.

BENEFITS

- Strongest potential for climate risk protection for entire facility
- Complete uniform design and program cohesiveness
- New design invigorates donor base
- Highest total cost
- Not ideal site location; away from foot traffic and established location on barrier island
- High land costs
- Loss of existing building
- Recreating new site and new design of entire VBMA program would be challenging

CHALLENGES

NEW FACILITY / EXISTING SITE ALTERNATIVE

This explores retaining the existing building and adding a new structure on the existing with all the new program. This hybrid approach was looked at to see if some of the benefits of the Inland option were possible while using the existing site to address some of the challenges identified for that Inland alternative. What the analysis determined is that this concept did provide a bit better cost value, it was still not significant enough to be considered a viable alternative from the renovations. This alternative has a higher cost per square foot due to the new construction of the more complicated and expensive program areas. However, by keeping the existing facility the overall square footage required is much lower than replacing the entire museum. Just like the renovation, a building conditions assessment and code analysis would need to be performed by an Architect to determine the appropriate reconditioning and level of improvement necessary on the existing building. The new program facility would offer the most protection from storm surge by creating a first floor on structure lifted but its protection would be limited to the new program. Mitigation would still be desired for the existing building and would result in the same mitigation costs as the renovation for the existing structure.

BENEFITS

- High level of protection from climate risks for higher value assets (public/gallery spaces)
- Maintains existing site location
- New building design invigorates donor base

CHALLENGES

- High cost per square foot for new construction of public programmed spaces
- Operating two separate facilities
- Designing to meet contractual art movement criteria from loading dock to gallery.
- Significant potential for “scope creep” (thus cost creep) assuming the existing building will remain untouched



RENOVATION

Renovating the existing facility would offer the lowest costs of the three options and best value. Inherently it also provides the lowest level of risk mitigation. However, of all the alternatives, the net different in the risk categories is only about one level for only one of the climatic risk categories. To address the premiums of mitigating, the indicated research this report outlines, there is a combination of integrating protection into the landscape and provide temporary barrier protection. The premiums for these systems are accounted in the program cost summary for this option.

To assist in validating our cost metric for the renovation, we developed a quantity take-off of each program space based on current market construction rates, mark ups and other factors. The full detailed report is attached in the Appendix section of this report. The contingency allocated for the renovation is at 10% due to the unknown factors associated with that type of construction. Renovating the building will work to, but not completely, alleviate the issues of design inconsistencies and program inadequacies that have arisen due to the number of renovations and additions over the years. The full detailed cost report is attached as "Exhibit A". The dimensions provided in the above floor plan for the recommended program renovation are approximate. For cost analysis purposes we developed a detailed take off per area which is included in the back up appendix information.

BENEFITS

- Lowest overall cost option
- Maintains existing site location
- For the level of renovation proposed, issues from the smaller previous renovations should be addressed

CHALLENGES

- Low impact on climate risk mitigation
- Renovation will result in some systems discontinuity
- Potential for "scope creep" if the untouched spaces feel awkward and outdated following renovation



V. NEXT STEPS

Based on the information gathered in our report, the analysis confirms the value of the major renovation as compared to other alternatives. The additional premiums to protect and mitigate for future climatic risks are within reasonable costs and significantly less than more radical options of relocation or new construction. The inland model was the most expensive due to every program element needing to be recreated other than the art education that is one of the least costly components of the program. Furthermore, there is the cost of land and a less desirable site compared to the inherent positives of being on the barrier island. The proposed hybrid approach provides the increased protection related to climatic risks at a lower net project costs than the inland approach but is still much higher in cost than any renovation. Furthermore, to get the most value out of that option by keeping the current exhibition storage / processing addition, any configuration of this option presents operational issues by having art processed / storage in one building and then move to another building. This goes against all of the standard art handling and installation practices that are contractual.

Next steps in to execute a major renovation are as follows

1. Hire project management support and capital campaign consultant
2. Initiate Architectural selection process
3. Feasibility Assessment / Building Conditions Report
4. Consultant selection for primary design disciplines such as MEP, Structural, code specialist, etc
5. Create concept designs
6. Generate refine concept cost estimates based on updated information
7. Search for 2 to 3 quality construction managers and select for vetting of both cost analysis and subcontractor quality



The early focus for these next steps is to get team members on board and work on a conditions assessment and code analysis on the existing building to develop a more detailed analysis of the facility, its condition and efficiencies. This will allow better cost analysis to determine the value of the renovation option with its additional climatic risks in addition to the risks rectifying the multiple past renovations with its varying degrees of construction quality.

The additional benefit of engaging an architectural and support team is to use this process in the next steps to get more definitive concepts and floorplans developed to not only provide the next level of cost assurance, but to also provide excitement in any capital campaign development.

Lastly, due to the track record of construction trades in the South Florida marketplace, it is never too early to start the process of finding and getting a quality construction manager involved with early studies and ultimately engaged during the design process. VBMA is in a secondary commercial construction market that has its inherent challenges of subcontractor base and labor expertise available. Starting early allows time to get the right construction management team, gives time to engage primary subcontractors into the team and effectively gives VBMA priority as the industry will inevitably get much busier than end of 2020.

The goals going forward in study would be:

1. Double museum gallery space
2. Create 600 seat slope floor auditorium
3. Double Art Zone Space
4. Add (and relocate) office and meeting space to maximum current space for patron services and consolidate staff/offices
5. Create fully functional café that would be destination food service
6. Enhance event rental space and opportunities
7. Provide bigger / more efficient Museum Store
8. Provide modern and efficient Wayfinding for the institution
9. Clean up building systems to allow more operational efficiency and standard quality of construction
10. Integrate architecture with renovations focused on opening and harmonizing with the natural environment



REPORT TEAM



Legends Project Development (LPD), as a subsidiary to Legends Hospitality, LLC was formed in 2014 and has quickly grown into one of the largest owner's representative and project management firms in the country. LPD represents clients across the country and abroad, focusing on large, complex projects such as museums, sports facilities, and concert venues. To assist in the report, we have engaged **MBV Engineering Inc.**, a local Vero Beach civil engineering firm with extensive civil and environmental engineering experience in the Indian River area and Venue Consulting, a cost consultant specializing in museums and other specialized institutional projects across the country and internationally. **Venue Consulting** in addition to working nationally recognized projects, the personnel / cost consultants are **Florida based** with experience in the challenging Florida construction costing environment.

PROJECT TEAM:

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Townes Clemons, Project Manager - LPD

Todd Howler, VP - MBV Engineering

Rodolfo Villamizar, VP - MBV Engineering

Steve Ryan, Principal - Venue

