3.3 FEASIBILITY EVALUATION

"There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth; remote, never wholly known. Nothing anywhere else is like them."

– Marjory Stoneman Douglas

Introduction

Determination of feasibility is perhaps the most important step in this planning process. Through extensive research and analysis, compiled with broad public and stakeholder input, an evaluation of the ROGG's conceptual design in an objective and unbiased approach can be accomplished.

'The feasibility of designating a trail shall be determined on the basis of an evaluation of whether or not it is physically possible to develop a trail along a route being studied, and whether the development of a trail would be financially feasible.' Section 5(b) of the National Trails System Act, administrated by the National Park Service.

Though a definition exists by which the NPS evaluates potential National Historic Trails for feasibility, a clear, nationally accepted set of criteria does not exist for determination of feasibility for trails/paths. Through the input of public participants, stakeholders, steering committee members, and extensive research, comprehensive criteria have been developed to evaluation proposed concepts for the ROGG. This section will define and apply the criteria to proposed concepts, in addition to evaluating potential routing alternatives. Based on results of the feasibility evaluation, a preferred route will be identified for further analysis.

The follow two sections are included in this evaluation:

- **Criteria and Application** – This section introduces comprehensive feasibility criteria and applies it to conceptual alternatives for path development.
- **Alternative Route Evaluation** – This section evaluates path routing alternatives for each mile of the ROGG Study Area and identifies a preferred route.

3.3.1 Criteria and Application

Determining feasibility should be an objective and transparent process based on reliable research and analysis for a comprehensive criteria. In the case of the ROGG, feasibility was determined based on extensive research of the Study Area's existing conditions and refinement of publicly developed concepts. Determination of feasibility is based on a point scale system with the highest scoring cross-section having a high degree of feasibility. Six categories were identified and include:

- **User Experience** - This category includes considerations of a user's experience such as authenticity of an Everglades experience, diversity of scenery and level of comfort while using the path;
- **Environmental Impacts** - This category includes potential impacts to environmental concerns as a direct or indirect result of the development or use of the path. This category includes potential impacts to wetlands, water quality and lack of compatibility with existing or proposed Everglades restoration efforts or with the mission or management plan of a public land unit;
- **Cultural Impacts** - This category includes two elements; heritage and archaeological resources which includes the broad tangible and intangible historical elements found within the Study Area;
- **Attributes** - This category includes four elements that capture wide-reaching topics important to the success of a trail or path; potential partnerships, aesthetics of design in the context of the path user and non-user, opportunities to provide educational experiences or information, innovation of the proposed concept in the area of design, reduction of impacts and benefits, and constructability of the concept;
- **Transportation** - This category goes beyond the required elements of safety which any concept would be required to fully met or exceed and instead focuses on perceived safety for users, connectivity to destinations such as significant resources, amenities and transit, and ease of public universal accessibility;
- **Cost** - This category includes two considerations of cost; range of construction costs based on four levels, Level 1 (under $750,000 per mile), Level 2 ($750,000-$1.5m per mile), Level 3 ($1.5m - $2m per mile) and Level 4 (over $2m per mile); and estimates of annual and life-cycle operations and maintenance costs.

Draft - November 2014

Path Section Alternatives

Within these six categories, 18 individual criterion elements were evaluated for each conceptual typical cross-section. The feasibility criteria matrix to the left contains the evaluation of all proposed conceptual cross-sections. Cross-sections with fatal flaws in select locations are included in the matrix for further evaluation and comparison to other concepts but were not considered for use as alternative route options. Points are assigned on the following scale:

- 0 points for complete lack of element,
- 1 point for low or negative assessments,
- 3 points for medium or neutral assessments,
- 5 points for high or maximum positive assessments.

A breakdown of each typical cross-section follows this section.

In addition to the evaluation of each conceptual typical cross-section by the established feasibility criteria, unique situations were considered where a proposed concept is incompatible with the site or defined guideline/plan for a specific reason. These situations are defined as fatal flaws and typically contain design characteristics that violate a defined goal, code, initiative or requirement. As such, the following fatal flaws have been identified and will be utilized to determine a preferred alternative route along with the concept's overall feasibiltiy score:

- Significant impact to wetlands;
- Lack of Everglades restoration compatibility;
- Potentially high level of maintenance required to maintain a safe, accessible path surface and route;
- Lack of compatibility with public land unit's mission or management plan;
- Lack of bicycle or pedestrian mode ability;
- High number of required highway or driveway crossings.

Following the evaluation of each typical cross-section, feasibility for route alternatives are determined by assessing all feasible alternatives and selecting the cross-section with the highest score as a preferred alternative. Routing alternatives are determined for the entire length of the ROGG Study Area.

Point Scale:
0 = None/ Extreme
1= Low/ Negative
3 = Medium/ Neutral
5 = High/ Positive

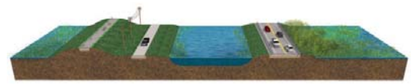
Criteria	Section	No Build Alternative	A				B														C						
			1	2	3	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7
			Top of Levee	Toe of Levee	North of Canal	Floating Path	Barrier and Canal	Filled Canal	Sheet Pile	Cantilevered	Lanes Shift - North Side	On-Road Bike Lanes	Lanes Shift- South Side	Fill in Maintained ROW	Expand Shoulder	On Proposed Bridges	Board-walk Next to Bridge	Separate Bridge	Board-walk Bridge	Widened Bridge	Low Board-walk	High Board-walk	New Berm	New Berm w/ Culverts	New Berm Gabion Walls	Old Tamiami Road	Loop Road
User Experience																											
Authenticity of Everglades Experience		1	1	1	3	3	1	1	1	1	1	1	1	1	1	1	3	3	5	1	5	5	3	3	3	3	5
Diversity of Cultural and Natural Scenery		1	1	1	3	3	3	3	3	3	1	1	1	3	3	1	1	3	3	3	5	5	3	3	3	3	5
Comfort		0	3	3	5	3	3	1	1	1	1	1	1	3	3	1	3	3	5	1	5	5	5	5	5	3	3
Environmental Impacts																											
Wetlands		3	5	5	1	1	5	1	1	1	1	3	1	1	1	1	1	1	3	1	1	3	1	1	1	5	5
Compatibility (Restoration/ Management)		5	3	3	1	1	5	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	1	5	5	0	5
Water Quality		3	3	3	3	1	5	1	1	1	1	3	1	3	3	3	3	3	3	3	3	3	5	5	5	3	3
Cultural Impacts																											
Heritage Resources		3	5	5	3	1	3	1	1	1	3	3	3	1	1	3	3	1	3	1	1	1	1	1	1	3	3
Archaeological Resources		3	5	5	3	1	5	1	1	1	3	3	3	1	1	3	3	1	3	1	1	1	1	1	1	3	3
Attributes																											
Potential Partnerships		1	3	3	5	1	3	1	1	1	3	3	3	3	3	5	3	3	3	5	3	3	1	3	3	5	3
Aesthetics of Design		1	3	3	5	3	3	3	1	3	1	1	1	3	3	1	5	3	5	1	5	5	3	3	3	3	3
Educational Opportunities		1	3	3	5	5	3	3	3	3	1	1	1	3	3	1	3	3	5	1	5	5	3	5	5	5	3
Innovation		1	3	3	3	5	3	3	3	5	1	1	1	3	3	1	3	3	5	1	5	5	3	5	5	3	3
Constructability		0	0	5	0	0	5	0	0	0	0	1	0	3	5	0	0	1	0	0	1	1	3	1	1	0	5
Transportation																											
Perceived Safety		0	3	5	5	1	3	3	3	3	1	1	1	3	3	1	3	3	5	1	3	5	5	5	5	5	3
Connectivity to Destinations (Resources, Amenities and Transit)		3	1	1	3	1	3	1	1	1	3	3	3	3	3	1	1	3	3	3	3	3	3	3	3	3	1
Ease of Universal Public Accessibility		0	3	3	3	1	3	3	3	3	3	1	3	3	5	1	3	3	3	1	5	5	5	5	5	5	1
Cost																											
Typical Construction Cost		5	5	5	5	0	5	1	0	0	3	3	0	1	5	0	0	0	0	0	0	0	3	3	0	0	5
Operations and Maintenance Costs		5	1	5	5	1	5	3	1	1	5	5	5	3	3	5	1	3	3	3	3	1	3	3	3	3	3
Total Points (of possible 90):		**36**	**51**	**62**	**61**	**32**	**66**	**31**	**26**	**30**	**35**	**38**	**32**	**44**	**52**	**32**	**42**	**43**	**60**	**30**	**57**	**59**	**52**	**60**	**57**	**55**	**62**

Draft - November 2014

3.3.2 Criteria Scoring

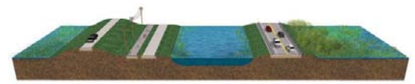
Typical cross-sections were evaluated for feasibility using a six part criterion with 18 elements. The following section summarizes the results for each cross-section to better understand the strengths and weakness of feasibility for each.

A1 Top of Levee



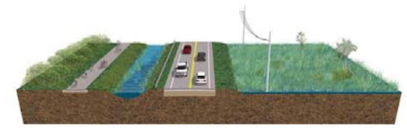
1. **User Experience:** This concept has a low score for authenticity of the Everglades due to the levee not being a natural land feature. This also limits the diversity of the natural and cultural scenery due to the need to maintain the slopes of the levee. Comfort is medium due to its separation from U.S. 41 but lack of ability to provide amenities for trail users on the levee.
2. **Environmental Impacts:** The concept has low impacts to existing wetlands due to existing levee, however, may require additional coordination to ensure no impacts to Everglades restoration efforts where the existing levee is proposed to be removed and ensuring position impact to water quality.
3. **Cultural Impacts:** The concept has low to no impacts on existing cultural resources due to the existence of the levee.
4. **Attributes:** The concept provides opportunities for partnership with SFWMD, exhibits medium levels of aesthetics due to its simplistic design and innovative use of existing infrastructure and educational opportunities with proximity to natural areas. Constructability is none due to the need for approval from SFWMD for a hard-surface path surface on top of a levee.
5. **Transportation:** The concept has a medium level of perceived safety due to shared facilities with vehicle traffic. Ease of universal accessibility is medium due to potential slope issues and connectivity to destinations is low because of the isolation of the levee from attractions.
6. **Cost:** This concept has one of the lowest construction costs due to the need to simply pave the existing gravel base of the existing maintenance roadway. Maintenance and operating costs may be exceedingly high due to the resurfacing required to maintain a smooth path surface from damage caused by levee maintenance equipment.

A2 Toe of Levee



1. **User Experience:** This concept has a low score for authenticity of the Everglades due to the levee not being a natural land feature. This also limits the diversity of the natural and cultural scenery due to location of the toe of the levee. Comfort is medium due to its separation from U.S. 41 but lack of ability to provide amenities for trail users on the levee.
2. **Environmental Impacts:** The concept has low impacts to existing wetlands due to existing levee, however, may require additional coordination to ensure no impacts to Everglades restoration efforts where the existing levee is proposed to be removed and ensuring positive impact to water quality.
3. **Cultural Impacts:** The concept has low to no impacts on existing cultural resources due to the existence of the levee.
4. **Attributes:** The concept provides opportunities for partnership with SFWMD, exhibits medium levels of aesthetics due to its simplistic design and innovative use of existing infrastructure and educational opportunities with proximity to natural areas. Constructability is high because the ability to pave the path surface with ample room for equipment and minimum permitting requirements.
5. **Transportation:** The concept has a high level of perceived safety due to separated facilities with vehicle traffic. Ease of universal accessibility is medium due to potential slope issues and connectivity to destinations is medium because of the isolation of the levee but ability to provide amenities along the pathway.
6. **Cost:** This concept has one of the lowest construction costs due to the need to simply provide a paved pathway with little to no grading or fill. Maintenance and operating costs may be low due to separation of trail facility from vehicle and levee maintenance equipment and ease of access from existing gravel maintenance roadway.

A3 North of Canal



1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to proximity to existing natural areas and diversity of scenery. Comfort is high due to its separation from U.S. 41 but ability to provide ample space for user amenities.
2. **Environmental Impacts:** The concept has the potential to have significant impacts to wetlands and water quality due to its proximity to these sensitive lands. Compatibility with Everglades restoration is low due to the potential impediment of existing water flow from north to south by the pathway.
3. **Cultural Impacts:** The concept may have medium impacts to existing cultural resources which may be undocumented on the north side of the existing canals.
4. **Attributes:** The concept provides several potential partnership opportunities simply be routing and connecting the pathway through various land units and exhibits high levels of aesthetics due to its simplistic design and educational opportunities with proximity to natural areas. Constructability is none because the extensive permitting would be required in addition easements and approvals to route the pathway through park units.
5. **Transportation:** The concept has a high level of perceived safety due to separated facilities with vehicle traffic. Ease of universal accessibility is medium due to potential access point limitations and connectivity to destinations is medium because of the isolation of the route from attractions.
6. **Cost:** This concept has a lowest construction cost due to minimum construction material needs. Maintenance and operating costs may be low due to limitation of user to path uses only and construction techniques.

A4 Floating Path

1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to proximity to canal and existing natural areas and diversity of scenery. Comfort is medium due to instability of the floating path.
2. **Environmental Impacts:** The concept has the potential to have significant impacts to wetlands, water quality and Everglades restoration efforts due to its interaction with and impacts on the existing canal. During times of drought, the path may be rendered useless if substantial floating surface is not maintained.
3. **Cultural Impacts:** The concept may have significant impacts to existing cultural resources including visual and physical impacts to the existing canal which is historical register eligible.
4. **Attributes:** Though the educational opportunities are high due to proximity to the canal and innovation is high due to design techniques, the potential for partnerships is low and constructability is none due to significant impacts to the canal, permit requirements and difficult in construction.
5. **Transportation:** Due to instability in surface and changing elevations, perceived safety and universal access are very low. Connectivity is difficult due to the fixed location of the path and elevation changes of the water surface.
6. **Cost:** This concept has a high cost potential due to the materials and construction techniques required. Operational and maintenance costs may be significant as well to maintain access, surface and function of the floating path and keep the surface free of obstructions.

Draft - November 2014

B1 Barrier and Canal

1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41, cable barrier and canal, all man-made features. Diversity of scenery is medium as the area is currently maintained ROW. Comfort is medium due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has minimum environmental impact due to the area already being maintained ROW. The trail may help to improve water quality by serving as a catch basin for pollutants from U.S. 41. This concept is compatible with Everglades restoration efforts and may help to educate users of the restoration.
3. **Cultural Impacts:** The concept may have limited impacts to existing cultural resources due to the route being disturbed lands already, however, undocumented resources may be present near the canal.
4. **Attributes:** The concept has medium levels of potential for partnerships with the nearby tribes and FDOT, the aesthetics and innovation are simple but low impact, education opportunities are present but not extensive while constructibility is high use to ease of access, disturbance of ROW and low impact construction techniques needed.
5. **Transportation:** Perceived safety is medium due to the separation of the facility from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is highly potential.
6. **Cost:** This concept has a low cost to construct due to the lack of need to heavily grade the corridor or provide fill. Operations and maintenance costs may be minimum due to the potential to partner with adjacent land owners and ease to access the path.

B2 Filled Canal

1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41, guardrail barrier and canal, all man-made features. Diversity of scenery is medium due to access to the canal. Comfort is low due to the proximity to U.S. 41 and the canal.
2. **Environmental Impacts:** The concept has the potential to have significant impacts to wetlands, water quality and Everglades restoration efforts due to its encroachment on the existing canal. This concept has extremely limited application in locations where plugging of existing canals is needed.
3. **Cultural Impacts:** The concept may have significant impacts to existing cultural resources including visual and physical impacts to the existing canal which is historical register eligible.
4. **Attributes:** The educational opportunities are medium due to proximity to the canal and innovation and aesthetics is medium due to design techniques, the potential for partnerships is low and constructability is none due to significant impacts to the canal, permit requirements and difficult in construction.
5. **Transportation:** Perceived safety is medium due to the separation of the facility from U.S. 41, connectivity is low due to isolation of the path from other connections between the existing guardrail and canal.
6. **Cost:** This concept has a high cost to construct due to amount of fill needed for the canal and mitigation costs. Operations and maintenance costs may be medium and focused on impacts from erosion and subsidence of the fill.

B3 Sheet Pile

1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41, guardrail barrier and canal, all man-made features. Diversity of scenery is medium due to access to the canal. Comfort is low due to the proximity to U.S. 41 and the canal.
2. **Environmental Impacts:** The concept has the potential to have significant impacts to wetlands, water quality and Everglades restoration efforts due to its encroachment on the existing canal.
3. **Cultural Impacts:** The concept may have significant impacts to existing cultural resources including visual and physical impacts to the existing canal which is historical register eligible.
4. **Attributes:** The educational opportunities are medium due to proximity to the canal and aesthetics is low due to design techniques, and requirement of railing along the canal edge. The potential for partnerships is low and constructability is none due to significant impacts to the canal, permit requirements and difficult in construction.
5. **Transportation:** Perceived safety is medium due to the separation of the facility from U.S. 41, connectivity is low due to isolation of the path from other connections between the existing guardrail and canal.
6. **Cost:** This concept has an extreme cost to construct due to amount of fill, construction techniques required and mitigation costs. Operations and maintenance costs may be high and focused on impacts from subsidence of the fill and maintenance to the sheet pile wall and railing.

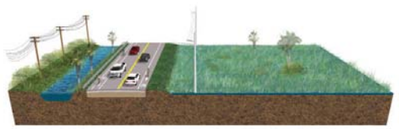
B4 Cantilevered

1. **User Experience:** The cantilevered concept has a low score for authenticity of the Everglades due to proximity to U.S. 41, guardrail barrier, railing and canal, all man-made features. Diversity of scenery is medium due to access to the canal. Comfort is low due to the proximity to U.S. 41 and the canal.
2. **Environmental Impacts:** The concept has the potential to have significant impacts to wetlands, water quality and Everglades restoration efforts due to its encroachment on the existing canal.
3. **Cultural Impacts:** The concept may have significant impacts to existing cultural resources including visual and physical impacts to the existing canal which is historical register eligible.
4. **Attributes:** The educational opportunities are medium due to proximity to the canal and aesthetics is medium and innovation is high due to design techniques, and requirement of railing along the path's edge. The potential for partnerships is low and constructability is none due to significant impacts to the canal, permit requirements and difficult in construction.
5. **Transportation:** Perceived safety is medium due to the separation of the facility from U.S. 41, connectivity is low due to isolation of the path from other connections between the existing guardrail and canal.
6. **Cost:** The has an extreme cost to construct due to amount of fill, construction techniques required and mitigation costs. Operations and maintenance costs may be high and focused on impacts from subsidence of the fill and maintenance to the sheet pile wall and railing.

B5 Lane Shift-North Side

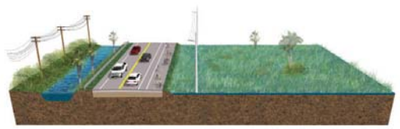
1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41 and guardrail. Diversity of scenery is low as the area is currently maintained roadway. Comfort is low due to the proximity to vehicle traffic at high speeds, noise and lack of separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 roadbed. The concept is neutral in compatibility to Everglades restoration in that it may not impact nor improve current conditions. Water quality may be negatively impacted by the increase in asphalt surface to the roadbed.
3. **Cultural Impacts:** The concept is neutral to impacts to cultural resource as the expanded roadbed would be on disturbed ROW embankment in most locations.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are low due to the path being directly adjacent to U.S. 41 traffic. Constructibility is none due the requirement of a variance from FDOT to reduce the width of separation required between the nearest travel lane and the path.
5. **Transportation:** Perceived safety is low due to the lack of separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a medium potential.
6. **Cost:** This concept has a medium cost to construct due to the cost of expanding the existing roadbed. Operations and maintenance costs may be minimum due to the potential to partner with FDOT and high durability of material.

B6 On- Road Bike Lanes



1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41 and guardrail. Diversity of scenery is low as the area is currently maintained roadway. Comfort is low due to the proximity to vehicle traffic at high speeds, noise and lack of separation from U.S. 41 and lack of pedestrian facilities.
2. **Environmental Impacts:** The concept has medium environmental impact due potential impacts to wetlands required to widen the U.S. 41 roadbed one foot in each side and widen bridge crossings. The concept is neutral in compatibility to Everglades restoration in that it may not impact nor improve current conditions. Water quality may be negatively impacted by the increase in asphalt surface to the roadbed and lack of area to filter stormwater runoff.
3. **Cultural Impacts:** The concept is neutral to impacts to cultural resource as the expanded roadbed would be on disturbed ROW embankment in most locations.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are low due to the path being directly adjacent to U.S. 41 traffic. Constructibility is low due the need to widen bridge crossings which require extensive permitting and impacts.
5. **Transportation:** Perceived safety is low due to the lack of separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a low due to lack to pedestrian and handicap routes.
6. **Cost:** The concept has a medium cost to construct due to the cost of expanding the existing roadbed and potentially widen bridges. Operations and maintenance costs may be minimum due to the potential to partner with FDOT and high durability of material.

B7 Lane Shift-South Side



1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41. Diversity of scenery is low as the area is currently maintained roadway. Comfort is low due to the proximity to vehicle traffic at high speeds, noise and lack of separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 roadbed. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions. Water quality may be negatively impacted by the increase in asphalt surface to the roadbed.
3. **Cultural Impacts:** The concept is neutral to impacts to cultural resource as the expanded roadbed would be on disturbed ROW embankment in most locations.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are low due to the path being directly adjacent to U.S. 41 traffic. Constructibility is none due to the requirement of a variance from FDOT to reduce the width of separation required between the nearest travel lane and the path.
5. **Transportation:** Perceived safety is low due to the lack of separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a medium potential.
6. **Cost:** This concept has a extreme cost to construct due to the cost of expanding the existing roadbed and maintaining existing lane widths. Operations and maintenance costs may be minimum due to the potential to partner with FDOT and high durability of material.

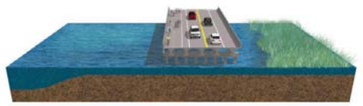
B8 Fill in Maintained ROW

1. **User Experience:** Concept B8 has a low score for authenticity of the Everglades due to proximity to U.S. 41. Diversity of scenery is medium as the route borders wetlands. Comfort is medium due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 embankment. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions. Water quality impact may be neutral as well with a slight potential to improve stormwater runoff from U.S. 41.
3. **Cultural Impacts:** The concept may have impacts to cultural resource as the concept would require widening the roadway embankment in areas which may disturb undocumented resources.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are medium due to the path being near U.S. 41 traffic. Constructibility is medium due to additional retaining and fill needed to maintain existing roadway embankment limits.
5. **Transportation:** Perceived safety is medium due to the separation from U.S. 41, connectivity is medium for ease to connecting attractions and universal access is a medium potential.
6. **Cost:** This concept has a high cost to construct due to the cost of expanding the existing roadway embankment and retaining wall where required. Operations and maintenance costs may be medium due to the potential to partner with FDOT and high durability of material.

B9 Expand Shoulder

1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41. Diversity of scenery is medium as the route borders wetlands. Comfort is medium due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 embankment. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions. Water quality impact may be neutral as well with a slight potential to improve stormwater runoff from U.S. 41.
3. **Cultural Impacts:** The concept may have impacts to cultural resource as the concept would require widening the roadway embankment in areas which may disturb undocumented resources.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are medium due to the path being near U.S. 41 traffic. Constructibility is high due the ease of providing additional fill to the existing roadway embankment, however, providing significant fill may be difficult.
5. **Transportation:** Perceived safety is medium due to the separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a high potential with the additional width to provide gentle slopes.
6. **Cost:** This concept has a low cost to construct due to the minimum cost of providing additional fill and pathway but may have mitigation costs. Operations and maintenance costs may be medium due to the potential to partner with FDOT and high durability of material.

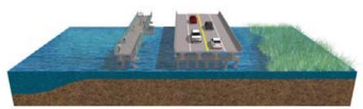
B10 On Proposed Bridges



1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41 and location on a man-made structure. Diversity of scenery is low as the route is on a bridge while comfort is low due to lack of separation from U.S. 41 and lack of amenities for users.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 bridge. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and relies on currently proposed bridge routes. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept is neutral in impacts to cultural resource as the concept follows currently proposed bridge routes.
4. **Attributes:** The concept has high levels of potential for partnership based on involvement with FDOT and ACOE. The aesthetics, innovation and education opportunities are low due to location on a bridge. Constructibility is none due to the limited ROW widths and required additional wetland mitigation and permitting needed.
5. **Transportation:** Perceived safety is low due to the lack of separation from U.S. 41, connectivity is low for lack of ability to connect to attractions and universal accessibility is low due to lack of pedestrian and access route.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of expanding a vehicle bridge for path use, mitigation costs and construction techniques. Operations and maintenance costs may be low due to durability of materials and potential partnership with FDOT.

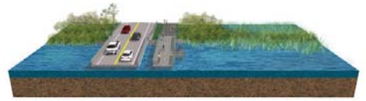
Draft - November 2014

B11 Board-walk Next to Bridge



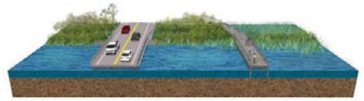
1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to separation from U.S. 41 and potential to have look-out and fishing facilities. Diversity of scenery is low as the route is on a pedestrian bridge while comfort is medium due to separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to add the pedestrian bridge. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions by transversing existing bridged areas. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept is neutral in impacts to cultural resource as the concept follows current U.S. 41 alignment.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT and ACOE. The aesthetics may be high dependent on bridge design, while innovation and education opportunities are medium due to location on a bridge. Constructibility is none due to the limited ROW widths and required additional wetland mitigation and permitting needed for a pedestrian bridge.
5. **Transportation:** Perceived safety is medium due to separation from U.S. 41, however, isolation on bridge may decrease safety. Connectivity is low for lack of ability to connect to attractions and universal accessibility is neutral as it is dependent on boardwalk surface material.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of constructing a pedestrian bridge, mitigation costs and construction techniques. Operations and maintenance costs may be high due limited access to maintain bridge without environmental impacts.

B12 Separate Bridge



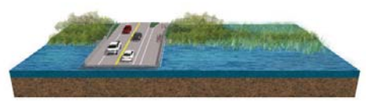
1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to separation from U.S. 41 and potential to have look-out and fishing facilities. Diversity of scenery is medium as the route may be short and close to canal while comfort is medium due to separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to add the pedestrian bridge. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and would bridge existing canals. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept may be high in impacts to cultural resource as the concept would require construction of new bridges in areas that may have minimum previous disturbance.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with FDOT. The aesthetics and innovation may be medium dependent on bridge design, while education opportunities are medium due to location on a bridge. Constructibility is low due to the limited ROW widths and required additional wetland mitigation and permitting needed for a pedestrian bridge.
5. **Transportation:** Perceived safety is medium due to separation from U.S. 41. Connectivity is neutral due to typically short bridge distances and universal accessibility is neutral as it is dependent on bridge surface material.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of constructing a pedestrian bridge, mitigation costs and construction techniques. Operations and maintenance costs may be medium due to access from existing roadway bridges and short spans.

B13 Board-walk Bridge



1. **User Experience:** This concept has a high score for authenticity of the Everglades due to separation from U.S. 41 and potential to have viewsheds away from the highway. Diversity of scenery is medium as the route may be short and close to canal while comfort is high due to separation from U.S. 41 and potential short span of the boardwalk.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to add the pedestrian bridge. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and would bridge existing canals. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept may be medium in impacts to cultural resource as the concept would require construction of new boardwalks in areas that may have minimum previous disturbance, however construction techniques may limit this.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with adjacent land units. The aesthetics and innovation may be high based on context sensitive design and construction techniques, while education opportunities are high due to proximity away from U.S. 41. Constructibility is none due to the require of extensive permits, mitigation needs and potential easements outside of ROW.
5. **Transportation:** Perceived safety is high due to separation from U.S. 41. Connectivity is neutral due to typically short bridge distances and universal accessibility is neutral as it is dependent on bridge surface material.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of constructing a boardwalk and mitigation costs. Operations and maintenance costs may be medium due to access from existing roadway bridges and short spans.

B14 Widened Bridge



1. **User Experience:** This concept has a low score for authenticity of the Everglades due to proximity to U.S. 41. Diversity of scenery is medium due to short span of bridge while comfort is low due to lack of separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 bridge. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and relies on currently proposed bridge routes. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept may be high in impacts to cultural resource as the concept would require construction of new bridges in areas that may have minimum previous disturbance.
4. **Attributes:** The concept has high levels of potential for partnership based on involvement with FDOT. The aesthetics, innovation and education opportunities are low due to location on a bridge. Constructibility is none due to the limited ROW widths and required additional wetland mitigation and permitting needed.
5. **Transportation:** Perceived safety is low due to the lack of separation from U.S. 41, connectivity is medium due to short span of typical bridges and universal accessibility is low due to lack of pedestrian and access route.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of expanding a vehicle bridge for path use, mitigation costs and construction techniques. Operations and maintenance costs may be low due to durability of materials and potential partnership with FDOT.

C1 Low Board-walk

1. **User Experience:** This concept has a high score for authenticity of the Everglades due to separation from U.S. 41 and potential to have viewsheds away from the highway. Diversity of scenery is high as the route may transverse sensitive lands while comfort is high due to separation from U.S. 41 and potential short span of the boardwalk.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to construct the boardwalk. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and would bridge existing canals. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept may be high in impacts to cultural resource as the concept would require construction of new boardwalks in areas that may have minimum previous disturbance, however construction techniques may limit this.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with adjacent land units. The aesthetics and innovation may be high based on context sensitive design and construction techniques, while education opportunities are high due to proximity away from U.S. 41. Constructibility is low due to the require of extensive permits, mitigation needs and potential easements outside of ROW.
5. **Transportation:** Perceived safety is medium due to separation from U.S. 41 and lack of railing. Connectivity is neutral due to typically short bridge distances and universal accessibility is high as surface elevation have a gentle slope.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of constructing a boardwalk and mitigation costs. Operations and maintenance costs may be medium due to materials durability and construction.

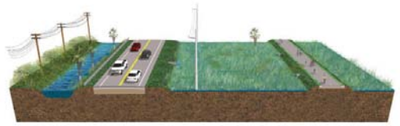
C2 High Board-walk

1. **User Experience:** This concept has a high score for authenticity of the Everglades due to separation from U.S. 41 and potential to have viewsheds away from the highway. Diversity of scenery is high as the route may transverse sensitive lands while comfort is high due to separation from U.S. 41 and potential short span of the boardwalk.
2. **Environmental Impacts:** The concept has medium environmental impact due minimum impacts to wetlands required to construct the boardwalk. The concept is neutral in compatibility to Everglades restoration in that it does not impact nor improve current conditions and would bridge existing canals. Water quality impact may be neutral as well.
3. **Cultural Impacts:** The concept may be high in impacts to cultural resource as the concept would require construction of new boardwalks in areas that may have minimum previous disturbance, however construction techniques may limit this.
4. **Attributes:** The concept has medium levels of potential for partnership based on involvement with adjacent land units. The aesthetics and innovation may be high based on context sensitive design and construction techniques, while education opportunities are high due to proximity away from U.S. 41. Constructibility is low due to the require of extensive permits, mitigation needs and potential easements outside of ROW.
5. **Transportation:** Perceived safety is high due to separation from U.S. 41 and presence of railing. Connectivity is neutral due to typically short bridge distances and universal accessibility is high as surface elevation have a gentle slope.
6. **Cost:** This concept has an extreme cost to construct due to the high cost of constructing a boardwalk and mitigation costs. Operations and maintenance costs may be high due to materials durability but constrained access.

C3 New Berm

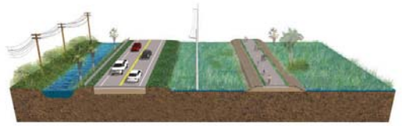
1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to separation from U.S. 41. Diversity of scenery is medium as the route borders wetlands. Comfort is high due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 embankment. The concept is may have negative impacts to compatibility in Everglades restoration due to impediment of water flow. Water quality impact may be improved with a potential to improve stormwater runoff from U.S. 41.
3. **Cultural Impacts:** The concept may have impacts to cultural resource as the concept would require widening the roadway embankment in areas which may disturb undocumented resources.
4. **Attributes:** The concept has low levels of potential for partnership. The aesthetics, innovation and education opportunities are medium due to the path being near U.S. 41 traffic. Constructibility is medium due the ease of access, however, providing significant fill may be difficult.
5. **Transportation:** Perceived safety is high due to the separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a high potential with the additional width to provide gentle slopes.
6. **Cost:** This concept has a medium cost to construct due to the cost of providing additional fill and pathway but may have mitigation costs. Operations and maintenance costs may be medium due to the potential to partner with FDOT and high durability of material.

C4 New Berm w/ Culverts



1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to separation from U.S. 41. Diversity of scenery is medium as the route borders wetlands. Comfort is high due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 embankment. The concept is may have positive impacts to compatibility in Everglades restoration due potential sheet flow of water downstream from berm. Water quality impact may be improved with a potential to improve stormwater runoff from U.S. 41.
3. **Cultural Impacts:** The concept may have impacts to cultural resource as the concept would require widening the roadway embankment in areas which may disturb undocumented resources.
4. **Attributes:** The concept has medium levels of potential for partnership from agency interested in restoration. Aesthetics may be medium while innovation and education opportunities are high due to construction techniques and separation from U.S. 41. Constructibility is medium due the ease of access, however, providing significant fill may be difficult.
5. **Transportation:** Perceived safety is high due to the separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a high potential with the additional width to provide gentle slopes.
6. **Cost:** This concept has a medium cost to construct due to the cost of providing additional fill and pathway but may have mitigation costs. Operations and maintenance costs may be medium due to the potential to partner with FDOT and high durability of material.

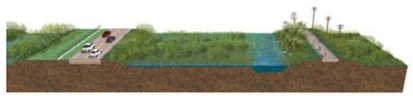
C5 New Berm Gabion Walls



1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to separation from U.S. 41. Diversity of scenery is medium as the route borders wetlands. Comfort is high due to the separation from U.S. 41.
2. **Environmental Impacts:** The concept has high environmental impact due impacts to wetlands required to widen the U.S. 41 embankment. The concept is may have positive impacts to compatibility in Everglades restoration due potential sheet flow of water downstream from berm. Water quality impact may be improved with a potential to improve stormwater runoff from U.S. 41.
3. **Cultural Impacts:** The concept may have impacts to cultural resource as the concept would require widening the roadway embankment in areas which may disturb undocumented resources.
4. **Attributes:** The concept has medium levels of potential for partnership from agency interested in restoration. Aesthetics may be medium while innovation and education opportunities are high due to construction techniques and separation from U.S. 41. Constructibility is medium due the ease of access, however, providing significant fill may be difficult.
5. **Transportation:** Perceived safety is high due to the separation from U.S. 41, connectivity is medium for ease to connect to attractions and universal access is a high potential with the additional width to provide gentle slopes.
6. **Cost:** This concept has a extreme cost to construct due to the cost of providing additional fill, gabion walls, and pathway but may have mitigation costs. Operations and maintenance costs may be medium due to the potential to partner with FDOT and high durability of material.

Draft - November 2014

C6 Old Tamiami Road



1. **User Experience:** This concept has a medium score for authenticity of the Everglades due to the former roadway's separation from U.S. 41. Diversity of scenery is medium with the need to remove existing invasive. Comfort is medium due to its separation from U.S. 41 but lack of ability to provide amenities for trail users on the levee.
2. **Environmental Impacts:** The concept has low impacts to existing wetlands due to existing levee, however, will have significant impacts on Everglades restoration efforts where the existing roadbed is proposed to be removed and ensuring positive impact to water quality.
3. **Cultural Impacts:** The concept is neutral in impacts to cultural resource as the concept follows existing roadway alignment.
4. **Attributes:** The concept provides significant opportunities for partnership with SFWMD, exhibits medium levels of aesthetics due to its simplistic design and innovative use of existing infrastructure and educational opportunities with proximity to natural areas. Constructability is none due to the impacts on Everglades restoration, construction costs, and mitigation.
5. **Transportation:** The concept has a high level of perceived safety due to separated facilities with vehicle traffic. Ease of universal accessibility is high and connectivity to destinations is medium because of the isolation of the former roadbed but ability to provide amenities along the pathway.
6. **Cost:** This concept may have an extreme construction cost due to extensive clearing needed and installation of additional drainage to encourage sheet flow. Maintenance and operating costs may be medium due to ease of access from existing roadbed.

C7 Loop Road

1. **User Experience:** This concept has a high score for authenticity of the Everglades due to the separation from U.S. 41. Diversity of scenery is high with many highly scenic viewsheds. Comfort is medium due to its separation from U.S. 41 but lack of ability to provide amenities for trail users on the levee.
2. **Environmental Impacts:** The concept has low impacts to existing wetlands due to existing roadway alignment and minimum impacts on Everglades restoration efforts. Water quality may be impacted by stormwater runoff from gravel roadway.
3. **Cultural Impacts:** The concept is neutral in impacts to cultural resource as the concept follows existing roadway alignment.
4. **Attributes:** The concept provides some opportunities for partnership, exhibits medium levels of aesthetics due to its simplistic design and innovative use of existing infrastructure and educational opportunities with proximity to natural areas. Constructability is high due to limited needs for improvements and existing access from current alignment.
5. **Transportation:** The concept has a medium level of perceived safety due to shared facilities with vehicle traffic. Ease of universal accessibility is low due to lack of accessible or pedestrian routes and connectivity is low due to lack of connections to attractions.
6. **Cost:** This concept may have an low construction cost due to lack of significant improvements needed. Maintenance and operating costs may be medium due to need to maintain a smooth gravel surface.

Draft - November 2014