

**Comments received for the Draft Resilience Action Plan
via the Online Comment Form**

Number	Comment	Response
1	I hope to see more to support biking in the beautiful state of Florida! We can see so much and enjoy from a bike... if we can be safe. Drivers are too fast and dangerous in too many areas.	Thank you. Your feedback is appreciated.
2	My name is Alicia Steinmetz, and I have resided just off of State Road A1A (west) in the Summer Haven area for 21 years, specifically on the north end of the Summer Haven River. The segment of State Road A1A, from Matanzas Inlet bridge to Marineland, where the Summer Haven River parallels A1A in some areas is now especially vulnerable to extreme high tides, hurricanes and tropical storms. The barrier beach dune system which historically provided protection of State Road A1A in this area was completely destroyed by Hurricane Ian in September 2022. This is not only a beautiful area in Florida, but is a hurricane evacuation route and connects Flagler Beach to the more northern beaches of St. Augustine, Vilano and Ponte Vedra in St. Johns County. As a result of the ocean breaching the dune system, the Summer Haven River has been filled in with beach sand and is no longer flowing from the mouth at Matanzas Inlet to the its confluence with the Intracoastal Waterway 2.3 miles south. County efforts are currently underway to examine potential solutions for minimizing detrimental impacts to the area. I believe that FDOT should be an integral stakeholder in this effort to identify the best possible solutions for protection of the area. The Summer Haven River is also an ecologically and recreationally vital area to St. Johns County. Please find attached a biological summary of the area.	This will be forwarded to the district.
3	The City of St. Petersburg appreciates the acknowledgment of many vulnerabilities identified in the draft RAP, especially those identified to comply with the statutory requirements in its development. The City respectfully requests that vulnerabilities associated with the stresses associated with increasing heat as a result of climate change is also included as a vulnerability, either in this version of the RAP or an RAP update, as mentioned on page 23. It would allow for added recommended strategies that could address SHS construction materials adaptation and/or maintenance and operations adaption for workers along the SHS, as an example. The City is supportive of the Statewide Workforce Development Program and the Department's efforts to increase the availability of skilled transportation construction workers and believes there is alignment between that Program and the RAP.	Thank you. Your feedback is appreciated. Additional hazards will be considered in future work.
4	The City of St. Petersburg appreciates the recognition within the RAP as to importance of the Planning within the phases of project implementation that could improve transportation network resilience. In particular, the City supports the inclusion of added, climate-associated risk management factors within the decision-making framework. We believe it could lead to increased funding for and implementation of more sustainable transportation infrastructure, including but not limited to roundabouts and dedicated infrastructure for bicyclists and pedestrians that also work to improve roadway safety.	Thank you. Your feedback is appreciated.
5	The City of St. Petersburg appreciates the recognition for additional community collaboration and outreach as the RAP is transitioned to implementation. A specific effort should be undertaken to ensure the outreach is equitable and has specific strategies to intentionally seek input from people who may have been traditionally underserved by prior decisions and policies associated with transportation infrastructure.	Thank you. Your feedback is appreciated.
6	The FDOT Resilience Action Plan serves as a foundation for addressing and preparing for the effects of climate change in our state, including sea level rise and other climate hazards such as high winds and storm surge. The strategies outlined and potential design changes offer the state and City of St. Petersburg a blueprint for protecting our greatest vulnerabilities. We encourage continued integration and regional approaches be considered.	Thank you. Your feedback is appreciated.

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7	The City of Saint Petersburg also appreciates the alignment to NOAA sea level rise projections High-Intermediate and Low, which offer standardization for understanding the potential impacts to our area.	Thank you. Your feedback is appreciated.
8	Currently all the potential impacts are water related (rainfall, storm surge, SLR, and tidal flooding). I would like to suggest that we also consider heat as a stressor for future vulnerability assessments.	Hazards used were based on Florida Statute for the RAP. Additional hazards will be considered in future work.
9	Finally, I would like to suggest when we are prioritizing projects based on their physical vulnerability to flooding , we also consider their critical social and economic factors that that are important to each community such as proximity to major economic centers, disadvantaged populations, employment density, evacuation route status, truck volume, etc.	This will be considered in the Resilience Improvement Plan.
10	In the Data and Tools section there is mention of developing and enhancing tools. I would like to suggest FDOT research and consider using the USDOT's Resilience and Disaster Recovery Tool Suite to assist with Cost/Benefit Analysis. Attached an overview for your reference. Also, would it be possible to consider piloting a project in conjunction with FDOT District with Central Office as the lead. Regardless, of the tool. It would be very helpful to have consistent C/B tools across the State.	This will be considered in the Resilience Improvement Plan.
11	One area that's been very challenging when Hillsborough TPO conducted our vulnerability assessment is finding unit cost for resilience treatments. It would be very helpful to have consistent cost for Florida vetted by FDOT to draw from for future vulnerability assessments.	This is addressed in Technical Assistance.
12	One idea I wanted to run by you is to see if the benefit/cost analysis tools and prioritization tools in the <u>Transition to Implementation - Data and Tools section</u> of the <u>Resilience Action Plan</u> could utilize the RDR tool? I feel it would be really helpful if we could agree on the palette of tools to use region or statewide.	This can be researched in future work.
13	Thank you for including recommending coordination with the ETAT on to include resilience impact as a part of the ETDM project review process. What is the time frame for implementing this into the review process? Also, Integrating resilience information into the AOI tool will be extremely helpful as well to local jurisdictions.	Will follow up with commenter.
14	Thank you for the opportunity to comment on the RAP. The plan provides a good framework and guidance for MPOs to coordinate our transportation resiliency efforts at the state a regional level.	Thank you. Your feedback is appreciated.
15	The RAP noted that projects not in the Work Program and not included in the Appendix A can be further developed and prioritized with local agencies and MPOs. Attached is our HTPO's prioritized list from our Resilient Tampa Bay Transportation Project. The project included Hillsborough, Pinellas, and Pasco, but we are only submitting the Hillsborough list and map. The data from the other counties are there for reference only. Please let me know if you have any questions or would like additional clarification on the list.	Will follow up with commenter.
16	The Traffic Operations and Emergency Management section strategies notes the increased use of ITS/TSM&O and the growth in electric vehicle usage. Some planning research and literature has brought up concerns about the reliability of the electric grid as we increase electric consumption in this area. This is especially concerning in Florida if we depend on it for communication and refueling during storm events. Is there existing research on this and can the Department consider future research to address electric grid reliability and perhaps alternative sources such as wind and solar?	Will follow up with commenter.
17	It appears that Maps 1-4 show this segment of A1A as vulnerable to all hazard types.	Thank you. Your feedback is appreciated.

Number	Comment	Response
18	<p>My name is Amanda Sapala, AICP with Gresham Smith. I am the consultant PM for FDOT D2 project 447604-1 - the design of a trail on SR A1A from Marineland to Matanzas Inlet in St. Johns County. We just conducted our public involvement on 05/18, and we received comments through 06/02. Over 50% of written comments received for our project, and the majority of conversations during the public meeting discussed resiliency for A1A. This segment of A1A saw intense flooding and dune breaches during Hurricanes Ian and Nicole. The below letter from one citizen is reflective of the general sentiment of the comments we heard: I hope this email finds you well. I am writing on behalf of our board and members. Our organization was formed to restore and maintain the Summer Haven River, a critical environmental and recreational asset. The 2.3-mile river runs adjacent to the proposed Marineland to Matanzas Path. The river provides public access through the 24-acre Helen Mellon Schmidt Public Park at the north end of the river where it connects to Matanzas Inlet. There are also other public access locations along the river route and adjacent to the proposed Marineland to Matanzas Path. Over a number of years and through a number of storms, we have been working with St. Johns County, the St. Augustine Port Waterway and Beach District, the State of Florida and the Florida Inland Navigation District, as well as residents, businesses, educational and environmental groups, to restore and maintain the river and park. Because the river is now mainly clogged with sand from breaches from the ocean, we are losing all the benefits the River provides. Ultimately, we are concerned that as the sand volume in the river increases, the ocean moves across that sand and closer to A1A (the Evacuation Route). I would be happy to provide you with any documentation you might require. Without protection from the ocean, the Summer Haven River, homes and rental properties, as well as A1A all along the Marineland to Matanzas Path are being threatened. While one of the most vulnerable areas is just north of Marineland, there are other areas, particularly in front of the Summer Island Subdivision, where the lack of dunes leaves A1A and the development wide open to the ocean- even in non-tropical events. I believe you have corresponded with George Snow regarding this concern. We can provide photos and videos of these occurrences, even as recent as last month. Would you like this information? We would love to discuss possible ways we might work together with you and other partners to protect the river, A1A and the proposed Marineland to Matanzas Path from the ocean. From looking at the documents, it appears the Marineland to Matanzas Path cost estimate for construction and planning is currently \$9.9-\$13 M. Do you have any plans of how you will protect the trail from the ocean for tropical, non/tropical and king tide events? If so, can you share them? We know ocean overtopping of A1A in this area happens with increasing frequency due to lack of dune,</p>	Will be forwarded to district.
19	Recommend adding SR A1A from Marineland to Matanzas Inlet (see FM 447064-1 for limits)	This can be researched in future work.

Number	Comment	Response
20	The Conservancy of Southwest Florida is writing on behalf of our over 6,500 supporting families. We write as you finalize the Florida Department of Transportation (FDOT) Resilience Action Plan (RAP), which is considering vulnerabilities of roadways to flooding, storm surge, and sea level rise. We write to ensure that as agencies plan future projects on this roadway, that you also consider incorporating large mammal crossing structures along this area of eastern Collier County. We would like to state for the record that our evaluation of the 'US 41 Collier Resiliency Study' has identified many concerns, including potential incompatibility with Everglades Restoration. For the purposes of this letter, we are focusing our comments through the lens of wildlife protection and habitat connectivity that may be a future result of FDOT's RAP review. We wish to emphasize one critical component to consider when looking at potential future bridging and culverting elements: construction of conveyance under US 41 presents an important opportunity to enhance wildlife connectivity for the region. Even in the absence of such structures, standalone wildlife underpasses are needed in this area. Roads, like US 41, significantly contribute to habitat loss and fragmentation, and these are the greatest threats to the endangered Florida panther and many other species of native wildlife. Vehicle strikes on roads are the leading human cause of mortality for panthers. Segments along US 41 are already considered panther mortality hot spots based on the analysis done by the Panther Recovery Implementation Team (PRIT) Transportation Subteam. Given the importance of this region to panthers and the evidence of panthers traversing this roadway, both the US Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWC) have previously recommended the construction of a wildlife crossing with the associated fencing along US411, and such a structure is already a conservation recommendation associated with the Picayune Strand Restoration Project Southwest Protection Feature. FDOT staff has also reviewed bridges along US 41 that could warrant replacement or repair into the future. Where opportunities arise, inclusion of wildlife crossing elements should be considered. While these comments should not be construed as our only feedback, we request that wildlife crossing improvements be a priority in conjunction with any future projects along US 41. Feel free to contact me if you have any questions or would like to discuss further. Thank you for considering our comments.	Plan strategies consider multiple areas within the document.
21	It is a great start. There are additional strategies that need to also be considered.	Thank you. Your feedback is appreciated.
22	Rigid pavement systems have been shown to be resilient to inundation conditions due to spreading the loads which reduces strength requirements from base material. Some of these strategies for enhanced resiliency to flooding are concrete pavement overlays, traditional concrete, roller compacted concrete as well as full depth reclamation.	Thank you. Your feedback is appreciated.
23	The concrete industry is ready to partner with you to further develop strategies. We have research to share and people willing to contribute to this effort.	Concrete is referenced in the RAP as a pavement type.
24	Were extreme heat days considered in risk assessments?	This will be considered in the Resilience Improvement Plan.
25	Easy to navigate	Thank you. Your feedback is appreciated.
26	What strategy is being considered for "roadway elevation" projects?	Roadway elevation is referenced in the RAP.
27	Can you provide the list of RAP projects, including project cost details (including methodology of how cost was determined at this planning level)?	The project list is posted at https://www.fdot.gov/planning/policy/resilience/resilience-action-plan . The plan describes how costs were estimated as well.
28	The Broward MPO vulnerability assessment identified more vulnerable roadways than what is listed in the RAP project list. Is the department looking for additional projects to include in its RAP list?	Additional projects will be included in development of the federal Resilience Improvement Plan.
29	State Rt A1A is the only possible evacuation route between Palm Coast and State Rt 206. Protecting this route should be the primary focus, even if it means shoring up a dune system that is swiftly disappearing due to repeated northeast storms and hurricanes.	This will be forwarded to the district.
30	Stop talking about possibilities and running endless studies and get the job done before there is nothing left to protect	Thank you. Your feedback is appreciated.
31	Can you provide more details, please, on the sources of the 1% flood map? How is rainfall taken into account?	The FEMA Flood Insurance Rate Map (FIRM) data were used for flooding. guidance on data sources.
32	Include overall strategy on Environmental Protection associated benefits and consideration of existing restoration efforts, in the context of Resilience, and as aligned with FTP's goal of ""transportation solutions that enhances Florida's Environment"".	Thank you. Your feedback is appreciated.
33	It would be important to include a list of acronyms	Acronyms are defined within the report.

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34	Page 10 - Partner Agencies listed do not mention Water Management Districts. In certain parts of the state, coordination with WMDs are important, as part of stormwater management goals/priorities, and determination of overall flood risks.	This is part of interested organizations mentioned in Action Plan Development.
35	Page 11 - bring precipitation trends relevant to Florida and not SE US	Not available at this time. The Florida Flood Hub is developing rainfall projections specific to Florida.
36	Page 12, risks of rainfall driven flood / inundation are not fully capture into FEMA FIRMs. Hydrologic models for FEMA flood maps do not incorporate the assessment of future conditions and are only produced to represent current risk. It will be important to utilize advanced flood models, as they are advanced by the Florida Hub, to better characterize rainfall driven flooding risks, and also risks associated with reduced soil storage resulting from higher average wet season groundwater levels.	Data from the Florida Flood Hub can be considered in future updates of the RAP.
37	Page 13, Paragraph 3: Could you please provide further explanation on why Category 2 and 4 hurricanes were not included in the analysis?	Areas potentially impacted by Categories 2 and 4 hurricanes are captured in Category 3 and Category 5 areas, respectively.
38	Page 18 - Interesting approach used as part of Project prioritization. Perhaps integrate into this initial assumption, in future planning efforts, a more robust approach to characterize risks, based on numerical estimates of flood risks (coordinate with Florida Hub who is also developing statewide flood modeling tool.	The methodology for project prioritization will be reviewed and adjusted as needed in future work.
39	Page 23, Table: Could you please provide more specific information about the timeline indicated in the schedule?	Information not available
40	Page 28, Paragraph 2: Regarding the adjustment of protection designs to reflect potential hazards (bullet points #1), it would be beneficial to provide examples similar to bullet point #2."	Thank you. Your feedback is appreciated.
41	Page 9, Paragraph 1 refers to FEMA floodplain projections. The FEMA floodplain are not technically projections as they are defined based on existing conditions only and do not incorporate future projections.	Edited 'projections' to 'data'
42	Pages 26-17, includes an approach to estimate benefits associated with the proposed adaptation strategies, along with specific performance measures	Thank you. Your feedback is appreciated.
43	Safety, mobility, and accessibility are mentioned throughout the document as part of FDOT's existing project considerations and states (on page 20) that 'The Department incorporates resilience into project development, design, construction, operations, and maintenance activities. Typically, resilience improvements are not implemented separately from other roadway or bridge improvements. A resilience-only project is one in which the primary goal of the project is to improve the resilience of the facility, as opposed to increasing capacity, for example. A capacity project could have resilience enhancements added, but resilience is not the primary goal. FDOT would expect to include resilience enhancements in existing projects or projects being pursued for safety, mobility, or accessibility reasons.' The overall idea and safety and accessibility should be mentioned earlier on in the document. One place could be brought into the first sentence of the introduction that mentions only mobility and states 'The Florida Department of Transportation (FDOT) is committed to providing a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.' These three terms should be added to the list key terms used in the plan. Ideally, the factors would also be included as part of the prioritization of projects, or to the very list references to documents where existing projects are based on these criteria should be refenced. If an analysis proves doing so shows redundant results, include a statement like ('Tidal flooding is not included as a separate hazard because it reflects an increasing sea level and could be considered duplicative.') on page 18 should be included.	Thank you. Your feedback is appreciated.
44	We suggest adding a column to identify Counties and Cities within the Appendix. It would be beneficial to include a column with the baseline operational performance of the projects in terms of the specific prioritization criteria (one column for each of the three) before the adaptation strategy column to show the specs being enhanced of an extant roadway and/or bridge.	This will be considered in future work.
45	Were socioeconomic data considered? Equity is shown as part of the FTP diagram and page 4, but it not discussed elsewhere in the plan. The safety and proximity of roads to communities where vulnerable and socioeconomically disadvantaged populations might be present should be considered and discussed.	This will be considered in the Resilience Improvement Plan.
46	Does the report look only at SHS roads, or did it consider any key linkages outside the SHS system?	This plan assessed only the SHS to meet the requirements of the Florida Statutes.

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47	Missed first few minutes, maybe you covered this. How were 1-100 year flood zones determined? What data/modeling?	The FEMA Flood Insurance Rate Map (FIRM) data were used for flooding.
48	Jennifer, I have a question regarding Jupiter inlet and the CRA plan to include an interlocal agreement CRA resolution 1-23 with TCRPC and FDOT RAP. The CRA plan includes a riverwalk that leads to what is formerly known and the Sperry Property aka Suni Sands. There is currently a request to put this property on the National Historical Registration due to the Archeological Human Remains and Cultural Artifacts and path of the Celestial Railroad. The Town of Jupiter Board of Historical Preservation stated in their opinion subsequent ruling to preserve all 10+ acres on Historical grounds to the Jaega and the possible Taino green basalt tool artifacts found on property. My question is if FDOT has jurisdictional and regulatory powers and The FDOT RAP takes into account historical preservation with exemptions to certain rules that may impact FDOT RAP with regards to the flood requirements of this Sperry Property 961 a1a and adjacent or abutting properties, then has an assessment been done or started by FDOT to address the tribal and historical concerns with regards to the riverwalk and this property? Regards, Daniel J. Williams Taino	The RAP included only an analysis of potential flooding on the State Highway System, including FDOT-owned and maintained facilities. The assessment mentioned here would need to be carried out by the city as part of the permitting process. This will be forwarded to District.
49	Should circulation modelling data support the water quality benefits of causeway removal, the FDOT Resilience Action Plan should contemplate causeway removal as an Adaptation Strategy option, particularly for State Roads 520 and 528 over the Banana River. This strategy aligns with FDOT's objectives of reestablishing previously severed hydrological connections, improving water quality, enhancing habitat, and enhancing ecosystem services. Decision-making processes involving major infrastructure changes like causeway removal require careful analysis of scientific data and collaboration between authorities, scientific experts, and community stakeholders to achieve the shared vision of a clean and healthy Indian River Lagoon system and resilient, reliable, and safe transportation. The following strategies are included in STRATEGY FRAMEWORK: "Analyze the community and environmental impacts or co-benefits from transportation resilience investments and strategies, such as reestablishing previously severed hydrological connections, improving water quality, enhancing habitat, enhancing ecosystem services, and increasing the efficiency of energy, water, and wastewater systems." "Collaborate with additional research and data partners, including universities across Florida, the Transportation Research Board, the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and local municipalities."	Thank you. Your feedback is appreciated.
50	Coastal wave attenuation is the identified Adaptation Strategy for the three projects in Brevard County (District 5). While this can be an effective measure to mitigate the impacts of coastal hazards, causeway removal (where appropriate) is another approach that can help restore natural coastal processes and improve water quality. It allows for the reestablishment of flow and sediment transport, which can positively influence shoreline stability and ecosystem health. Consideration of both strategies and their respective impacts will help ensure the best outcome.	Thank you. Your feedback is appreciated.
51	Easy to use. Very informative.	Thank you. Your feedback is appreciated.

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52	<p>FDOT STRATEGY FRAMEWORK POLICIES & PROCEDURES states: “Throughout these processes, there is opportunity for greater collaboration with local governments to cohesively address local road and SHS improvements consistent with community visions, including considerations of building future facilities farther from areas affected by disruptive shocks and stresses.” There is one community vision that unites all of Brevard County. That is a clean, healthy Indian River Lagoon system. Existing modelling revealed that causeways are causing compartmentalization of IRL waters and interfering with circulation. Such disruptions can negatively impact water quality and have adverse effects on sea grasses and overall ecosystem health. If additional circulation modelling of the IRL system supports the premise that causeways are contributing significantly to these issues, it would be prudent to consider causeway removal in the FDOT Resilience Action Plan. Should circulation modelling data support the water quality benefits of causeway removal, the FDOT Resilience Action Plan should contemplate causeway removal as an Adaptation Strategy option, particularly for State Roads 520 and 528 over the Banana River. This strategy aligns with FDOT’s objectives of reestablishing previously severed hydrological connections, improving water quality, enhancing habitat, and enhancing ecosystem services. Decision-making processes involving major infrastructure changes like causeway removal require careful analysis of scientific data and collaboration between authorities, scientific experts, and community stakeholders to achieve the shared vision of a clean and healthy Indian River Lagoon system and resilient, reliable, and safe transportation. The following strategies are included in STRATEGY FRAMEWORK: “Analyze the community and environmental impacts or co-benefits from transportation resilience investments and strategies, such as reestablishing previously severed hydrological connections, improving water quality, enhancing habitat, enhancing ecosystem services, and increasing the efficiency of energy, water, and wastewater systems.” “Collaborate with additional research and data partners, including universities across Florida, the Transportation Research Board, the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers, and local municipalities.”</p>	Thank you. Your feedback is appreciated.
53	<p>Do any of the projects listed include use of nature-based/green infrastructure, landscaping and hardscaping? These are not always applicable to each project but should be a consideration for each resiliency project. Nature-based approaches are the most appropriate and some of the lowest-cost type of strategies to employ.</p>	This will be research for future work.
54	<p>Will the comments I made verbally during one of the RAP online presentations be included? Allison Yeh's comments from the Hillsborough TPO are worth considering, and expand on some of the thoughts I had shared during previous sessions, so I will second her comments especially with regards to developing an easy-to-use, consistent statewide tool/methodology for assessing return on investment or projecting cost/benefit analyses for potential projects. Criticality factors, numbers of people, jobs and transportation facilities impacted by an event, and economic impacts also need to be factored into the statewide assessment in addition to flooding vulnerability. Additional hazards that can have widespread impacts on our transportation system and other critical infrastructure should also be considered (such as heat, wildfires, smoke, etc.).</p> <p>Thanks for getting back to us on the idea of using the tool offered by the Volpe Center, or developing other methods for use in Florida.</p>	This will be considered in the Resilience Improvement Plan.
55	Alignment of permit timing is off; permit processes are complicated; locals need streamlined processes	Thank you. Your feedback is appreciated.

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56	<p>State Road A1A is very susceptible to flooding in the area between Matanzas Inlet and Marineland, which is about 16 miles south of Saint Augustine. That stretch of A1A is bordered on the east by the Summer Haven River, which was filled with sand when the dune system on the east edge of the river, which separated the river from the Atlantic ocean, was washed into to the River by a series of strong storms. The lack of a dune system and the river being filled with sand have enhanced the flood danger for A1A. There is no dune to stop wave action and the resulting westward flow of the ocean towards A1A. Correspondingly, the river, being filled with sand, cannot accept and divert ocean surge towards Matanzas Inlet to the north or towards the Intracoastal Waterway to the south. Nature's shock absorber between the ocean and A1A has been removed. To address the situation, I suggest:</p> <ol style="list-style-type: none"> 1. Remove enough sand from the river, by a combination of dredge and land based excavation, to restore a meaningful depth (approximately 7 feet of water at dead low tide) in the original channel throughout the entire length of the river. 2. Use the removed sand to construct a robust dune along the beach, extending from the rock revetment in north Summer Haven southward to approximately the Flagler County line. 3. Vegetate the new dune and maintain it with scheduled renourishment from FIND dredging of the ICW and interim replacement of sand and vegetation as needed to address weather and tidal events. Such actions would not only protect that section of A1A, but would also provide numerous environmental, economic, recreational, and other benefits. I would be pleased to provide additional information, if you wish to contact me. 	<p>This will be forwarded to the district.</p>
57	<p>Comments from Fort Lauderdale in light of recent April 12 Flash Flood:</p> <ol style="list-style-type: none"> 1. Need a conversation about priorities in emergencies related to timely response to flooding on state roads (State Road 84, Broward Blvd, A1A) 2. Appreciation for permission to discharge stormwater into the FDOT system but continuing need to have an ILA or MOU supporting these discharges under extreme rain events that don't trigger an emergency declaration at the local, state or federal level. 	<p>Added "agency coordination" after "detection" to second bullet on page 29. Added "and other transportation modes" after "entities" on page 33.</p>
58	<p>How can we see the maps generated? Will shapefiles be made available?</p>	<p>Added "The RAP Data Viewer on the Resilience Action Plan website allows users to view and download data. Link to viewer web page." on page 22.</p>
59	<p>Broward County appreciates the opportunity to provide review and comments on the 2023 FDOT Resilience Action Plan. The County appreciates the positive partnership and on-going collaborations with the District 4 and Central Office staff as part of priority projects, and technical investigations. The County would like to emphasize that resilience is one of our top priorities and that any better understanding we can achieve of the complicated systems we have in Broward is a significant achievement. We acknowledge how important our roadways are, especially as a way to link residents to critically important facilities, such as hospitals, as well as evacuation routes in times of emergency. County will provide comment on both of those items below.</p>	<p>Thank you. Your feedback is appreciated.</p>
60	<p>The County identified several limitations of the vulnerability ranking approach used during its review, but recognizes how difficult it is to develop a methodology for assessing the vulnerability of an asset and then ranking it by a set of criteria for the entire State. The County does not believe that a one-size-fits-all solution to this problem exists, and perhaps weighting the criteria being applied may provide a better assessment. If you were to consider storm surge, the west coast of Florida will have far more impact than the east coast and should perhaps be weighted more heavily on the west coast. However, as storm surge is an acute problem, engineering and designing for it may not serve the best cost-benefit relationship. Consideration should be given to weighting all criteria equally, or adjusting for location or condition specific impacts. The first limitation is that flood depth variability is not considered. Therefore, a low or medium tier area could have a higher modeled maximum flood depth than a high tier area. In addition, a locations presence in storm surge zone 3 is considered as one of the criteria for a high tier vulnerability ranking, this automatically eliminates many low lying inland/ western communities in Broward County that are projected to be permanently inundated within the 50-year planning horizon under NOAA Intermediate-High, and NOAA High, sea level rise scenarios. Storm surge, while important, would only be an acute impact during times of storms.</p>	<p>FDOT will continue to evaluate in future work to refine this process.</p>

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61	<p>County would also like to comment on the lack of consistency with Florida State requirements. For example, the State’s Resilient Florida Program requires the inclusion of the NOAA 2017 Intermediate-high scenario for 2070, which for Southeast Florida corresponds to roughly 3.3 feet of rise since 2000. The Southeast Florida Regional Climate Change Compact’s (Compact) Unified Sea Level Rise Projection Report provides this as one of the scenarios to plan for regionally and has been adopted by all County Compact Members. If these standards cannot be met statewide, they should be consistent with other County and Municipal construction projects in District 4 and District 6 that are using the 3.3 feet of sea level rise for future planning scenarios especially on long life cycle investments. It is also noted that there is no consideration given for compound flooding, the intensification of rainfall, and increased groundwater levels. The County has incorporated all of these into the model runs for the Broward Countywide Risk Assessment and Resilience Plan. The Broward County integrated model considers the role that SFWMD structures and operations influence ground and surface waters, as well as the impact of future hydrological conditions will have on our region. These simply cannot be accounted for in a bathtub style model.</p>	<p>Thank you. Your feedback is appreciated. This can be considered for future versions of RAP.</p>
62	<p>The list of projects provided in Appendix A, do show the areas that will suffer the highest impacts from the assessment conducted by FDOT. However, it does not address other areas with the same or higher levels of impact as shown by other studies or when other factors are considered. As roadways are the vital link between critical and regionally significant assets, they must provide an expected level of service and require a comprehensive assessment of all potential impacts from climate change. Increased groundwater elevations and sea level rise will continue to flood roads during higher tides, without any rainfall input. For example, roads such as Dania Beach Boulevard that serve multiple roles, such as a key economic driver for the City of Dania Beach, as the access point to military infrastructure, and as an evacuation route, will become largely impassable due to groundwater levels exceeding the ground surface elevation. Dania Beach Boulevard is not the only instance of this occurring but serves as an excellent example. The County can provide documentation where roadway elevation is surpassed by groundwater elevation by request. As rainfall intensifies, flooding will worsen. As shown by the April 12th event, many of the State facilities were severely impacted by the rainfall and remained closed or impassible for significant amounts of time (SR 84, Broward Blvd, Davie Blvd, etc.). The County understands that this storm was particularly significant, however, flooding is common in many of these areas during lesser storms, just the duration of inundation is less. It should be noted that none of these facilities appear on your Appendix A, yet are routinely impacted by rainfall.</p>	<p>Thank you. Your feedback is appreciated. Information will be provided to the District.</p>

Number	Comment	Response
63	<p>Applegreen Electric would like to provide some feedback in response to the DRAFT Resilience Action Plan, which addresses the vulnerabilities of the State Highway System to flooding, storm surge, and sea level rise, and identifies potential investment needs. We firmly believe that as the adoption of electric vehicles (EVs) continues to grow, there will be a substantial increase in the demand for EV charging infrastructure along evacuation routes during emergency situations. This is particularly important because individuals may need to travel significant distances during evacuations, and they may not have had sufficient time to fully recharge their vehicles before leaving their homes. Additionally, some EV owners may not have access to a home charger or a fast DC charger capable of providing a substantial charge within a short timeframe (10-15 minutes). To ensure the successful evacuation of EV owners, we strongly recommend sufficient consideration of the following:</p> <ol style="list-style-type: none"> 1. Identify strategic locations: Determine key points along the evacuation routes where EV charging stations can be installed. These locations should be easily accessible and strategically placed to ensure coverage along essential evacuation routes. 2. Ultrafast charging infrastructure: Install fast-charging stations that can quickly recharge EVs, allowing for efficient and rapid evacuation, thus minimizing delays. 3. Consider backup power supply: Ensure that the charging stations have backup power capabilities, such as battery storage or backup generators, to ensure continued operation during power outages or disruption. 4. Collaboration with utility companies: Collaborate with utility companies to assess the capacity of the power grid along evacuation routes and determine any necessary upgrades or reinforcements to support the EV charging infrastructure during emergency situations. 5. Communication and public awareness: Launch public awareness campaigns to educate EV owners and the general public about the availability of emergency charging stations along evacuation routes. Clearly communicate the locations of EV charging stations along evacuation routes through signage. This will enable EV owners to easily locate and utilize these resources during emergency situations. 6. Real-time information: Implement a system that provides real-time information on the availability and status of charging stations along the evacuation routes. This can help EV owners plan their journeys accordingly. <p>Thank you.</p>	Addressed in EV Infrastructure Deployment Plan
64	<p>Floodings occur at times due to lack of maintenance. There should be added maintenance schedules to help decrease the number of flooding events. Specifically, corridors with an abundance of trees and/or other vegetation, should be maintained prior to the rainy season, and before anticipated major storm events, and after the storm events. This should decrease the number of flooding occurrences.</p>	Added "and maintenance" after "frequent inspections" in fifth bullet on page 30
65	Include federal agencies in the list of partners.	Federal partners are included in Community Collaboration
66	Include federal agencies in the list that FDOT works in partnership with.	Federal partners are included in Community Collaboration
67	Include the number of briefings and participants.	Final report includes these numbers.
68	Include the number of comments received, reviewed, and addressed.	Final report includes these numbers.
69	<p>Regarding raising road bases, on page 28 the section on design strategies reads: "Harden infrastructure during the construction process, such as raising road bases to address rising groundwater levels.." Could RAP consider any construction strategies to mitigate impacts on low lying existing properties' access connections while raising road bases to meet projections of sea level rise?</p>	This concept is considered in the RAP.
70	<p>The maps and tools seem as though they can be enhanced by using different colors, instead of the different shades of the same color. It seems that by having them different colors would delineate the lines/areas of coverage better.</p>	Colors were chosen for accessibility and to allow a reader to know which data is being conveyed.
71	did the plan consider increase of the water table and its impact? or is it just sur\face flooding	This will be considered in future work.
72	Great job in conducting a comprehensive vulnerability assessment of the SIS.	Thank you. Your feedback is appreciated.
73	<p>I think it is important to include a historical events component to the Statewide Database that identifies SIS assets that are chronically damaged from flooding and storm surge and to include the costs of repair. I also suggest producing a map that depicts these assets in relation to future SLR, flooding and storm surge threats already depicted in the plan. This date will be important for evaluation of whether road segments need to be relocated and whether relocation is a cost-effective strategy.</p>	This is being considered for updates to the RAP and data viewer.

Number	Comment	Response
74	In conjunction with partners and local governments, FDOT should identify criteria to evaluate at what point reconstruction, elevation etc. are not cost-effective solutions for certain road segments--e.g. along AIA in St. Johns County, Highway 98 in Franklin County etc.	Thank you. Your feedback is appreciated.
75	Will any roads be relocated?	This will be determined in future work.
76	Page 16, Tidal Flooding Table – please elaborate on what baseline elevation is used for the tidal stations and how that relates to road flooding and tidal flooding exposure.	Tidal flooding data was acquired from NOAA. The baseline elevation used by NOAA for tide gauges is Mean Sea Level (MSL).
77	Page 17 Map 3 – what is used as baseline elevation for tidal elevation, e.g.. MHW or seasonal high tide?	The baseline elevation is Mean Sea Level (MSL). Sea level rise is measured against MSL.
78	Page 17 Map – Map appears to indicate surface flooding but roads will not be able to drain properly before tidal levels reach road elevation so exposure numbers will be underestimated. Consider adding buffer between road elevation and tidal elevation used.	This will be determined in future work.
79	Page 20 – was harmonization to adjacent areas included in cost and if yes, any variation between urban and non-areas?	This will be determined in future work.
80	Page 26 – Consider reaching out to stakeholders in affected areas by priority alerting them that an adaptation project may be forthcoming, which may impact current road design.	Thank you. Your feedback is appreciated.
81	My name is Jay Ginn a lifelong resident of Summer Haven, Florida. I write to you today and thank you for soliciting our feedback regarding the planning of the trails through Summer Haven. I believe this particular spot is one of the most beautiful and stunning locations on the entire East Coast of Florida. The Summerhaven river flowing along the east side of A1A and intercoastal waterway to the west. Unfortunately the dune line along the east side of the Summerhaven river has been breached during storm events in recent years. These breaches fill the Summerhaven river with sand. The sand filled river adversely affects the environment throughout the entire Summer Haven watershed. The Eastern ocean dunes, along with a flowing river, not only provides for the pristine environmental conditions that exist in Summer Haven, but they also protect Highway A-1-A and the homes along A1A from storm events. I most sincerely ask that strong consideration be given to coordinating the preservation of the dune line east of the Summer Haven river with the building of this new trail. Future generations will forever Be thankful that a coordinated effort between the local citizens and government entities was able to recognize the value of this unique area and take enlightened steps towards protecting it. Thank you again for the opportunity to provide input. There is a robust organization called Friends of the Summerhaven river which can provide you with support and information that may be most helpful.	This will be referred to the District.
82	Please allow city and county governments the ability to download the GIS data.	Added "The RAP Data Viewer on the Resilience Action Plan website allows users to view and download data. Link to viewer web page." on page 22.
83	Hello, Local city planning impacts FDOT roads and highways. With so much suburban sprawl, large parking lots that are not permeable, allow rainfall to overflow retention ponds that then flood roads that block vehicular traffic. I witnessed this during Ian. Local city planning that assumes the automobile as the only means of transportation places citizens, especially our older or handicapped Floridians in a terrible position. If a person cannot drive, how are they going to evacuate? Floridians need transportation options, not just for evacuation, but for convenience, safety, and cost. Thank you.	Thank you. Your feedback is appreciated.
84	"Storm Surge Zones" are underrepresented or entirely omitted along the Florida East Coast south of Cape Canaveral, as well as the eastern shoreline of Lake Okeechobee. It is unclear whether this is a map scale issue, or whether incorrect application of data produced this result.	This was addressed in revisions to the database.
85	Audubon urges FDOT to ensure that its resiliency planning is informed by and complements these existing efforts to ensure continuity across state agencies. We also encourage FDOT to continue coordinating with relevant agencies, such as the SFWMD, and the US Army Corps of Engineers (USACE), to make certain plans are harmonious and not duplicative, as well as foster a culture of collaboration for a resilient Florida.	Thank you. Your feedback is appreciated.
86	FDOT should develop a plan for strategic abandonment in areas where resiliency projects are neither fiscally responsible nor offer a long term, sustainable solution.	This is addressed generally in Planning strategies and will be considered further in the Resilience Improvement Plan.

Number	Comment	Response
87	FDOT should expand the resilience planning process to include critically important county road linkages, lending resources and expertise to local governments whenever feasible. The Resilience Action Plan addresses improvements to the State Highway System. However, the reality is that in many parts of Florida, county-built and maintained roadways, causeways, and bridges form the primary transportation linkages in areas vulnerable to storm surge, flooding, and sea level rise.	The first RAP was focused on meeting statutory requirements that called for an SHS assessment. Expanding to include other types of roads can be addressed in future updates. The assets to be assessed during the RIP are anticipated to be the SHS, SIS (excluding hubs but including rail, connectors, military access, intermodal terminals.), the National Highway System, and the National Freight Network.
88	Impacts on socially and economically vulnerable communities should be considered during project prioritization, planning, and implementation. This includes offering technical assistance to smaller counties and municipalities that serve these communities.	Thank you. Your feedback is appreciated.. This will be continue to be addressed in future work .
89	Sea level rise across open waters of bays and estuaries should be included in the RAP in addition to sea level rise projections on land to properly account for impacts on bridges and causeways.	Sea level rise on bays and estuaries was considered. The map was adjusted for visualization. Showing the current extent of the water bodies helped for general understanding. The database provides more detail.
90	The draft plan does a good job of outlining project prioritization while allowing flexibility for improvements to the plan as new data becomes available.	Thank you. Your feedback is appreciated.
91	The RAP and hazard analysis should differentiate between “bridges” and “causeways.” Causeways are far more vulnerable to sea level rise and storm surge impacts and should be a priority for resiliency retrofits.	FDOT’s classification system uses roads and bridges. The RAP follows the classification system.
92	Developing Prioritization Tiers: Pg 18 We recommend you consider the 0.2% annual chance flood event as standard practice for critical facilities, despite its statistical infrequency. If such data is not available statewide, consider flagging this data gap for consideration by the Florida Flood Hub or other data providers.	Thank you. Your feedback is appreciated.
93	Pg 18 We recommend that tidal flooding be considered for developing prioritization tiers. The failure to include tidal flooding eliminates the opportunity to highlight those centerlines and bridges that will be negatively impacted under the shortest time horizon. This added clarity would allow for prioritization due to this criteria, amongst others. If such data is not available statewide, consider flagging this data gap for consideration by the Florida Flood Hub or other data providers.	Thank you. Your feedback is appreciated. This can be researched in future work.
94	Pg 18 We recommend that depth and frequency flooding be considered in developing the prioritization tiers. The current vulnerability tiers do not contemplate the depth or frequency of flooding. Even the 1% flood return interval data does not consider that those areas well within the limits of the 1% annual chance floodplain have much higher annual probabilities of flooding.	Thank you. Your feedback is appreciated. This can be researched in future work.
95	It is also not obvious that exposure to all three hazards is quantitatively worse than being exposed to just two or even a single hazard if exposed to a significant depth of flooding or a comparatively high frequency of flooding. If such data is not available statewide, consider flagging this data gap for consideration by the Florida Flood Hub or other data providers.	Thank you. Your feedback is appreciated. This can be researched in future work.
96	Pg 23 We applaud the suggestion that “future vulnerability should incorporate water hazard inundation depth...”	Thank you. Your feedback is appreciated.
97	Florida’s Resilience Story: Pg 9 We recommend providing a list of other plans in the state that address resilience as this would be a helpful reference but also supports efforts to take an integrative approach.	This is generally addressed in the RAP.
98	Largely, the maps in this document are effectively integrated and well-sized, with a helpful use of colors and appropriate use of legends. To advance effectiveness and to make these maps and other figures more quickly and easily digestible to a wide variety of readers, we recommend more descriptive captions and titles. Visually, through the use of colors, imagery, and figures, this document is curated in a manner that allows for deeper engagement and comprehension for the reader. To further advance readability that is inclusive of wider audiences, we suggest you consider font size, ADA accessibility compatibility, and the display of information in both paper and electronic formats.	Adjustments made accordingly.

Number	Comment	Response
99	Transition to Implementation: Pg 32/33 We recommend you consider the inclusion of the Florida Flood Hub in either the Data and Tools and/or Community Collaboration implementation areas. Pg 32 Data and Tools section: We suggest you consider adding information and incorporating verbiage to strengthen commitment and approach of incorporating up-to-date data, up-to-date projections, or forward-looking data.	Added "The RAP Data Viewer on the Resilience Action Plan website allows users to view and download data. Link to viewer web page." on page 22.
100	Vulnerability Assessment: Identifying Potential Impacts Pg 12/13 It is important to consider using forward-looking sources of rainfall flooding (which is not currently considered by FEMA Flood Insurance Rate Maps) in determining the hazards and impacts for the purposes of the vulnerability assessment. Also, Flood Insurance Rate Maps fail to capture small drainage areas and pluvial flooding. These "blind spots" would have systematic impacts across this analysis, particularly in non-coastal areas that would not be "picked up" by one or more of the other hazard factors.	Thank you. Your feedback is appreciated.
101	Pg 13 Throughout the document, there has been an important inclusion of background information when presenting technical and scientific information. Regarding the 1% and 0.2% annual chance of floods, please consider adding background information for the reader. This can include briefly detailing what the terms mean and how they can be misinterpreted. Additionally, it will be helpful for the reader to understand that there are other return periods that are often considered.	Thank you. Your feedback is appreciated.
102	Pg 13 There are opportunities to advance updated data integration of Rainfall Flooding. Please consider incorporating a detailed plan of how to obtain up-to-date data that includes the ongoing changes of flood hazard zones. Further, consider the importance of including projections for future conditions, as well as considerations for more return periods.	Thank you. Your feedback is appreciated.
103	Pg 14-19 We recommend clarifying that the Centerline Miles and Bridges Exposed to the various hazards are not a running total. Although 1,820 Centerline Miles are Exposed to the 1% Annual Chance Return, they are not considered in the 0.2% annual Chance Return statistics.	Thank you. Your feedback is appreciated.
104	We applaud your effort to distinguish and avoid double counting but recommend that language be included to highlight the approach by which you count the exposed assets.	Thank you. Your feedback is appreciated.
105	Last bullet addressing coordination with local governments should also include within and adjacent property owners.	This will be addressed through District outreach.
106	Need to integrate property owners in coordination discussions for infrastructure changes	This will be addressed through District outreach.
107	Under "Drainage assets such as outfalls and culverts"- need include direct and adjacent property owners in 2nd sentence to assist with tracking existing and programming new infrastructure.	This will be addressed through District outreach.
108	Under Community Collaboration add the collaborators of within and adjacent property owners.	This will be addressed through District outreach.
109	Had FDOT considered the new FEMA flood maps that are about to be approved soon?	We used currently available data sources but will review new data sources when they become available
110	Does project prioritization address environmental justice?	All projects consider environmental justice in the review process. This area is also addressed generally in the plan.
111	Why is sea level rise being evaluated as a stand-alone risk rather than a change in background conditions that will exacerbate the other risks?	We used currently available data sources but will review new data sources when they become available. FDOT will be looking to the Flood Hub to provide guidance on data sources.
112	The Broward MPO appreciates the opportunity to review the Department's Resilience Action Plan. Our comments below are intended to provide constructive feedback to further improve the Resilience Action Plan.	Thank you. Your feedback is appreciated.
113	1) Section 339.157(2)(a)(3) requires the Department to develop a "prioritization criteria". The three (3) RAP criteria include (1) 100-year floodplain, (2) Storm Surge (Category 3 hurricane), and (3) two-foot sea level rise. These criteria are exceedingly simplified and narrowly focused. Recommend the Department include additional criteria including a risk-based approach, potential economic, environmental, and social impacts associated with different risk scenarios, cost-effectiveness, and feasibility/constructability of improvements in its RAP prioritization criteria.	Thank you. Your feedback is appreciated. This will be considered in the Resilience Improvement Plan.
114	2) Section 339.157(2)(a)(4) requires a project list "with the associated costs and timeline". The RAP project list indicates "unfunded" in the timeline column. Revise all "unfunded" to indicate a timeline (fiscal year) as required. Consider funding coordination with the Broward MPO and Broward County.	Thank you. Your feedback is appreciated.

Number	Comment	Response
115	3) Section 339.157(2)(a)(5)(b) requires “a systemic review of the department’s policies, procedures, manuals, tools, and guidance documents to identify revisions”. The eight bullets on page 25 of the RAP do not identify specific revisions resulting from the “230 FDOT staff” effort of analyzing existing policies, procedures, manuals, tools, and guidance documents. Recommend the Department provide the full analysis conducted by FDOT staff as an attachment to the report with a timeline for the revisions to FDOT documents to address / incorporate climate impact mitigation and adaptation into policies, procedures, manuals, etc. Page 25 states “FDOT already is implementing many strategies and actions related to resilience as part of its day-to-day operations. This plan highlights existing strategies that should receive greater emphasis, as well as new strategies for implementation during the next few years.” Recommend the Department identify in the RAP which strategies listed are being implemented today versus which strategies listed will be implemented in the next few years under each phase (pages 26-30: Planning, PD&E, Design, Materials, and Construction, Traffic Operations & Emergency Management, and Asset Management & Maintenance). In addition, the RAP strategies are stated as “may,” which implied it’s optional. Recommend that the RAP strategies be expressed as a mandatory obligation of the Department and its commitment to sustainability and resilience.	Thank you. Your feedback is appreciated.
116	4) The hazards identified in Step 1 on page 12 (rainfall flooding, storm surge, sea level rise, and tidal flooding) are exacerbated by high groundwater table in Southeast Florida (as well as other locations in Florida). When the ground is already saturated due to these hazards, there is less capacity to absorb additional water. Recommend the Department incorporate Broward County’s Department of Resilient Environment inundation model and other datasets in the Department’s RAP GIS database for a more accurate assessment of the SHS as required by Section 339.157(2)(a) “assessment ... using existing data for current and forecasted future events”.	This will be considered in future work.
117	5) RAP Project List: Projects in Broward County with a “medium” tier vulnerability do not appear to be based on future conditions as identified in Broward MPO’s vulnerability study and Broward County’s Department of Resilient Environment datasets and analyses. These “medium” tier projects are affected by all three hazards: 100-year flood plain, two feet of sea level rise, and storm surge. Recommend the Department revise the table from “medium” tier to “high” tier for all projects located in Broward County.	This will be considered in future work.
118	6) RAP Project List: The “Adaptation Strategies” for the projects in Broward County are inadequate and do not address all known existing and future hazards. Please provide the analyses or studies to support the “Adaptation Strategies” in the project list for Broward County projects. The Broward MPO developed a Resilience Framework Toolbox, in collaboration with the Department, that includes a comprehensive list of adaptation and mitigation strategies. Also, recommend that the Department include the robust and comprehensive work completed and on-going with the Southeast Florida Regional Climate Change Compact.	Thank you. Your feedback is appreciated.
119	7) Nature-based solutions were discussed in the RAP, but it is unclear which projects identified in the RAP Project List are nature-based. Recommend that the Department prioritize nature-based solutions and strategies and reflect accordingly in the RAP Project List.	This will be considered in future work.
120	8) The RAP “Implementation” section (page 32) does not include a timeline, milestones, responsibilities, and deliverables for executing the Action Plan. Recommend the Department include an Implementation Schedule as required by Section 339.157(3), which requires the Department to update the Governor, the President of the Senate, and the Speaker of the House of Representatives every three years on its progress.	Thank you. Your feedback is appreciated.
121	9) The following appear to be excluded from the RAP: Section 339.157(2)(a)(2), “Evaluate alternatives for retrofitting existing systems and infrastructure.” Section 339.157(2)(a)(5), “The department shall develop a cost estimate and schedule to enhance existing data to include site-specific details and existing criteria to improve the needs prioritization. Recommend the Department to adequately address these statutory requirements.	Thank you. Your feedback is appreciated.
122	10) The Broward MPO identified 248 vulnerable corridors in rank order totaling 1,077 lane miles. Recommend including Broward MPO’s 248 vulnerable corridors in the RAP Project List.	The RAP project list followed identified methodology for this first Plan.
123	11) The RAP did not include other hardening strategies such as mast arm conversions (in Broward County, there are 15 span wire signals on critical facilities along evacuation routes and within a 1-mile buffer of a hospital), traffic signal control boxes, and other technologies that are vulnerable to hazards.	Thank you. Your feedback is appreciated.
124	12) The RAP provided strategies but did not include “actions” as required by Section 339.157(1).	Thank you. Your feedback is appreciated.

Number	Comment	Response
125	13) The proposed RAP may be too high-level and vague in both content and format to serve as an effective guide to investment and implementation of mitigation.	Thank you. Your feedback is appreciated.
126	14) It is unclear what projects and scenarios were used in the Department's vulnerability assessment. In conclusion, we greatly appreciate the opportunity to provide input and insights on the Resilience Action Plan. We hope that our comments and recommendations will prove helpful in further refining and enhancing the quality of the Resilience Action Plan. We are available to discuss any questions or concerns you may have and look forward to continued collaboration in this important matter.	Thank you. Your feedback is appreciated.
127	Our organization was formed to restore and maintain the Summer Haven River, a critical environmental, economic, historic and recreational asset. The 2.3-mile river runs adjacent to the proposed FDOT Trail Marineland to Matanzas Path just north of Marineland in St. Johns County. The river provides public access through the 24-acre Helen Mellon Schmidt Public Park at the north end of the river where it connects to Matanzas Inlet. There are also other public access locations along the river route and adjacent to the proposed FDOT Marineland to Matanzas Path.	This will be referred to the District.
128	1. Based on results from hydrologic and hydraulic modeling incorporating compounding of effects conducted for a countywide risk assessment and resilience plan and other modeling and its knowledge of past storms and April 2023 rainfall event, Broward County has expressed concern over the lack of "blue" areas in Map 4. High, Medium, & Low Vulnerability Geographic Areas: Areas of 1- Hazard Locations on p. 19. Suggest revising the paragraph under the Statewide Database heading to delete "the" before "assets" in the first sentence (so not all inclusive) and add text (1) emphasizing the vulnerability assessment completed for the Resilience Action Plan is statewide and based on use of geospatial data available statewide, and (2) recognizing there are local and regional partners with resilience-related data/modeling specific to their areas.	Page 22, first sentence: delete "the" before "assets"
129	2. First sentence in first paragraph: Suggested changes: "The database comprises the information used to conduct the statewide vulnerability assessment and identify the associated priority tiers."	Page 22, second paragraph, edit first sentence to: "The database comprises the information used to conduct the statewide vulnerability assessment and identify the associated priority tiers."
130	1. <i>First bullet:</i> Suggest this change given projects with a purpose and need not exclusively focused on resilience: "Integrate resilience strategies...into project alternatives to address support purpose and need."	Edited 'address' to 'support'
131	2. <i>Suggest this change:</i> "Conduct technical analyses of future conditions, such as potential exposure to sea level rise, flooding, changes in precipitation, storm surge, and other hazards as input to the PD&E process."	Left as is.
132	1. <i>Fourth bullet:</i> Would clarify wording: "Facilitating connections to technical and financial resources from federal, and other state, and regional agencies, such as (e.g., the Federal Highway Administration,... and Florida's water management districts) and with local municipalities [or local governments to include counties] . 2. "Offering training and technical support...into transportation plans, projects,"	Page 31, 5th bullet: add "plans" after "transportation"
133	1. Suggest this addition: <u>State</u> Agency Coordination since the paragraph below the heading focuses exclusively on state agencies. Or, could add mention of coordination with other agencies (e.g., presentation on plan/planning process at SFWMD resiliency coordination forum). 2. First sentence: Suggest this change for clarity: "To ensure agency coordination...the state's Chief Resilience Officer..." 3. adding mention of the FDEP Sea Level Impact Projection (SLIP) studies and supporting tool.	Left as is.
134	The reviews came with compliments for a well laid out plan and a good start.	Thank you. Your feedback is appreciated.
135	<i>First bullet in third paragraph:</i> Suggest this addition: Backflow preventers and pumps to stop <u>or reduce</u> tidal or rainfall flooding."	Added "or reduce" between stop and tidal.
136	<i>First sentence in second paragraph:</i> Suggest this deletion so the statement is accurate (i.e., D4 and D6 have been engaged with Southeast Florida Regional Climate Change Compact for over 10 years): "Building on more recent partnerships with regional resilience entities...."	Deleted "more recent"
137	<i>First sentence:</i> Suggest these changes given use of precise numbers: Florida... more than 22.2 million residents as well as more than 137 million out-of-state visitors each year in ____." [whatever year that was] Is 22.2 million residents for the same year as the 137 million out-of-state visitors?	Left as is.
138	<i>Fourth bullet:</i> Would not use "shocks and stresses" wording in one sentence and "other disruptions" in the next.	Left as is.
139	In the second sentence in the second paragraph, is the SIS Cost Feasible Plan being referenced the SIS 2045 Cost Feasible Plan since the SIS 2050 CFP has not been finalized/adopted? In the second sentence in the fourth paragraph, would revisit the "project development, design, construction" wording since project development typically includes design and construction.	Left as is.

Number	Comment	Response
140	Page 1, Footnote 1: "Roadway facilities...however, they may or may not be at risk due to elevation."	Deleted footnote.
141	Page 6, Community Stakeholders, third sentence in first paragraph: "During the a Florida Metropolitan Planning Partnership meeting...."	Left as is.
142	Page 13, Rainfall Flooding, picture caption: Hurricane Ian	Caption updated.
143	Page 13, Storm Surge, fifth sentence (semicolon rather than comma for clarity): "During hurricanes, storm surge is routinely anticipated along Florida's coasts; riverine areas and even lakes, particularly Lake Okeechobee, can be impacted by the push of water from wind."	Left as is.
144	Page 22, Statewide Database, second sentence in paragraph: "A cost estimate and schedule...was were also developed."	Left as is.
145	Page 22, Database, second sentence in first paragraph: "A Geographic ...and mapping and data are access applications are provided to retrieve and display information."	Left as is.
146	Page 23, Potential Enhancements to the Database: In last sentence in second bullet, "...include elevation data into in the existing Roadway Characteristics Inventory." In second sentence in third bullet, "Statewide coordination and coordination with regional and local agencies is are needed...."	Edit made.
147	Page 26, Strategies, first bullet: "Develop, monitor, and regularly report on existing and new performance measures on the resilience of the SHS."	Edit made.
148	Page 31, Technical Assistance, second bullet: Add comma: "Developing guidance...and adaptive planning, design...."	Edit made.
149	Page 33, Community Collaboration, fourth bullet: "local governments" rather than "local municipalities"?	Edit made.
150	Resilience is also addressed in other plans, including text box: Consider replacing "FDOT's Transportation Asset Management Plan" with "Florida Transportation Plan" since the TAMP is referenced in text above but the FTP is not.	Edit made.
151	The paragraph under the Planning heading broadly encompasses planning activities. Suggest adding a strategy focused on furthering incorporation of resilience in system level/long range transportation plans and promoting alignment/integration on resilience across plans of multiple partners.	Added strategy: "Further incorporate resilience in system level and long range transportation plans and promote alignment and integration across partner plans."
152	Would make it clear that the Intermediate-Low, Intermediate-High, and High are NOAA <u>sea level rise</u> projections.	Deleted reference to projections.
153	For the Nature Based Solution example you shared: It is great to see prioritization of beach dune systems being elevated. Will movement of roads be considered in the plans with the consideration of SLR and storm surge flooding create a scenario where you can't have both a road and the beach if the road remains in the same place.	These decisions will be made on a project by project basis.
154	Thank you for answering the Nature based solutions question. How do you evaluate the timing of managed retreat or relocation if you only look at SLR scenarios without timing estimates?	These decisions will be made on a project by project basis. Timing would be considered during project development.
155	Will your data sets be changed once Flood Hub completes their statewide data sets?	Current data was used. FDOT will coordinate with the Flood Hub to continue to ensure current data is used in the future.
156	Has identifying projects that address resiliency for the purposes of reporting on resiliency in the MPO Transportation Improvement Programs and LRTPs been developed. How is coordination between MPOs and FDOT being addressed for such reporting?	Transition to Implementation includes reference to "Develop a process to monitor implementation...and identify needed adjustments to strategies."

Number	Comment	Response
157	<p>For resilience, ensure that shoulders or bike lanes are on all highways: Dear FDOT, Regarding resilience, we consider resilience to not only mean the survival of the roadway but also the ability of the roadway to handle transportation during difficult moments. One key feature of handling transportation, especially during weather emergencies, is adequate space on the road to permit travel during unusually high activity and/or blockages from crashes, or obstructions on the roadway. One way to ensure resilience during these stressful moments is to provide bike lanes, or shoulders, on all major highways. The extra space of a bike lane/shoulder allows an informal breakdown lane for vehicles, which allows an outside lane to keep flowing. Please see the pictures below, taken in July 2020, which show how a bike lane was used on US 301, in Sarasota, Florida, when a Covid testing center led to unusual activity on that road. The lane was used as a parking/standing lane for vehicles waiting to turn off US 301.....and its presence allowed continued use of all 3 lanes of southbound traffic, including the use of the lane closest to the bike lane. Indeed, traffic on US 301 continued to move at its normal speed and volume. Of course, if this had been a hurricane, and traffic had been intense, any broken-down vehicles could have been moved to the bike lane, thus allowing continued use of all travel lanes. FDOT has, unfortunately, missed opportunities to maintain emergency traffic resilience on some recent projects. A 9-mile project on River Road, in south Sarasota County, substituted multi-use trails for bike lanes, thus making this corridor less useful in future hurricane evacuations. At Florida Walks and Bikes, we were saddened by FDOT's decision to allow multi-use trails to be substituted for bike lanes; Instead, we argue that it should not be an either/or proposition. We argue that proper road design, as was recommended by AASHTO for decades, includes a bike lane/shoulder "and" sidewalks/trails for pedestrians and slower cyclists. We have also enclosed a document, "Benefits of Bike Lanes", which refers to several FDOT studies which show how bike lanes/shoulders actually reduce crashes.....a factor that could be critical during periods of high use.</p>	Thank you. Your feedback is appreciated.
158	Has there been coordination with local building officials to implement resiliency strategies into the Florida building code?	This is outside the purview of FDOT.
159	<p>Overall it's a well-thought-out document, but it omits one critical element related to climate change resilience altogether. Resilience planning in the context of climate change must address both adaptation to changing conditions and mitigation to reduce future impacts. This document only addresses adaptation measures and leaves a glaring hole with respect to addressing the root cause of climate change. The reality is that "business as usual" scenarios that reflect the current state of fossil fuel use present existential problems for the major population centers in our state. No amount of adaptation will be sufficient for 6-12 feet of sea level rise, which is likely in the next 100 years if we do not change course now. In Florida, the number one source of greenhouse gas emissions that cause climate change comes from the transportation sector. But nowhere in this document does it address the fact that we must aggressively transition away from fossil fuel-based transportation to electrification. This is vital as it relates to our ability to mitigate the impacts of climate change. It is also vital as it relates to our understanding of future vulnerabilities. Electrification of the transportation sector requires a massive infrastructure investment. It also presents different adaptation challenges related to the vulnerability of EVs to flooding and storm surges. By omitting these issues, you are leaving out a core aspect of our planning needs - possibly the most important aspect. Given the level of vulnerability to climate change that we face in Florida, our state should be a world leader in advancing clean technologies to transition away from the burning of fossil fuels. Instead, we have let politics blind us to this critical aspect of planning. I hope you and our state leadership will amend that tragic mistake. If we don't, we will miss a key component of our future safety. We will also miss what is likely to be the most significant driver of economic growth globally. Investments in the clean energy transition make sense for our safety, our environment, our health, and our economy.</p>	FDOT is developing a Carbon Reduction Strategy. See https://www.fdot.gov/planning/policy/carbon-reduction-strategy .
160	1. Number of briefings? 2. Number of participants? 3. Acknowledging compatibility and consistency with local roads would be a good way to incorporate local jurisdictions and stakeholders. 4. Number of comments?	Information was updated.
161	Colors chosen for Category 1 and Category 3 are too close in the shade range.	Thank you. Your feedback is appreciated.
162	Graphic obscures part of Hillsborough and Pasco	Updated
163	hard to differentiate, use different colors rather than color gradient	Thank you. Your feedback is appreciated.
164	Looking for a deeper dive into these types of solutions overall	Thank you. Your feedback is appreciated.

Number	Comment	Response
165	Roundabouts are unmentioned in this document. D1 includes roundabouts as a viable resiliency strategy, as seen in the many new roundabouts along US 41 and other facilities in D1. This document has this picture but no policy recommendation or explanation of the benefits of roundabouts as hazard mitigation infrastructure.	FDOT considers roundabouts inherently resilient since they do not require signals or signage, and can be fully functional as soon as debris is cleared. FDOT began requiring intersections to be evaluated for roundabouts in 2013.
166	These colors are very difficult to decipher between on the map	Thank you. Your feedback is appreciated.
167	Was the Sea Level Scenario Sketch Planning Tool used to determine Sea Level Rise levels?	The sea level rise data for the RAP originates from NOAA which is also the source for sea level rise data in the Sketch Planning Tool.
168	Sea level rise is predicted to be about 1' per century or less. Any planning that assumes more than that is speculation and a waste of tax payers money. See this article based on past data. Sea Level Is Stable Around the World... The Good News the Media Don't Want Us to Hear By P Gosselin	Thank you. Your feedback is appreciated.
169	We are Terry and Valerie Parker, our home is located at 9181 Gene Johnson Road, St. Augustine, FL 32080. The photos above were taken Sunday, June 4th, 2023 at high tide. Photo #1 our yard. #2 Gene Johnson Road, #3 our driveway. During this high tide water reached the edge of A1A in front of SummerIsland Subdivision. Prior the breach and loss of the Summer Haven dune, water flowed in from the Matanzas Inlet into the Summer Haven river and continued southward into the ICW. We would like to stress the point that with no dune to protect the Summer Haven river, many residents of Summer Haven experience flooding on a regular basis. Without a dune, water flows directly into the Summer Haven river from the ocean breach and toward A1A. Prior to the breach of the dune which filled the river in with sand, preventing the natural flow, flooding did not occur. We have owned our home for over 30 years and the flooding problem started after the original breach. It makes sense that if water comes from two directions, the ocean breach and the inlet, it would cause the water to rise rapidly and as a result flooding occurs. In the past the water was only flowing one way and could exit, but now it just accumulates and rises rapidly on a regular basis.	This will be referred to the District.
170	1. Add Florida Flood Hub to the list in the 4th bullet under 'Community Collaboration'	Added "Florida Flood Hub"
171	Recommend splitting CRO and FDEP into a separate bullet and highlighting Governor's EO 23-06 which includes direction for those actors for "Coordinating with the Florida Department of Transportation to ensure it identifies and considers water quality and flood mitigation benefits when developing and implementing its resilience planning." [May also need to consider where else this directive fits with the 'Strategies' sections on Pages 26-28; certainly a strong tie-in with bullet 4 on pg. 27 that might be explicitly linked to EO 23-06 coordination as well]	Created additional bullet before current bullet 2 with this text: "Strengthen collaboration with Florida's Chief Resilience Officer and the Florida Department of Environmental Protection to advance the Governor's Executive Order 23-06 which includes direction for such coordination "to ensure [FDOT] identifies and considers water quality and flood mitigation benefits when developing and implementing its resilience planning."
172	Throughout the document state agencies have included the word "Florida" in their name, but document does not reflect that convention here. Make consistent throughout.	Remove from current bullet 2: "including the Chief Resilience Officer, Department of Environmental Protection," This becomes bullet 3. Edited Bullet 3 to "Strengthen coordination with statewide partners including the Florida Department of Economic Opportunity, and Florida Division of Emergency Management, and with water management districts to share data, leverage staff and funding resources, and advance policies and investments that support multiple goals."
173	Precipitation text graphic – is there not a more Florida-specific measure available? Worst case, can you put some more context into this by providing the change in inches?	The Florida Flood Hub is developing rainfall projections specific to Florida. This data can be incorporated in RAP updates when it is available.
174	Sea Level Rise text graphic – strike "THE SAME AMOUNT THEY ROSE IN THE LAST 100 YEARS" as it doesn't add anything to the report	Deleted "they rose" and substituted "as".
175	Tidal Flooding text graphic – I went to sealevelrise.org and the linked source material and I couldn't yield the same % increase from the data. Recommend finding another statistic and making sure it is grounded in some unit of measurement rather than simply a % for context	Change source to 2017 State of U.S. High Tide Flooding with a 2018 Outlook https://www.ncdc.noaa.gov/monitoring-content/sotc/national/2018/may/2017_State_of_US_High_Tide_Flooding.pdf This is the ultimate source of that statistic.
176	A little confused that you say here you use an alternate approach to utilizing NOAA (2022) projections, but references to the Intermediate High scenario keeps being linked to the assessment. This should be consistent one way or another throughout.	Deleted reference to projections.
177	Add the Florida Flood Hub to the list under the 4th bullet.	Edited as suggested.

Number	Comment	Response
178	For clarity, recommend rewording the first sentence to read " To ensure agency coordination throughout the process, FDOT consulted regularly with Florida's Chief Resilience Officer...". In the second sentence recommend adding "led by the Statewide Office of Resilience," between the words "Recovery" and "consisting".	Edited as suggested.
179	If these SLR levels were chosen based on the NOAA scenarios it would be useful to justify the rationale for relying on the NOAA (2022) Intermediate High scenario vs. others here.	Deleted reference to projections.
180	In 2nd paragraph, "regional resiliency entities" should be "regional resilience entities"	Page 6 - changed "resiliency" to "resilience"
181	In the executive summary and throughout relevant parts of the document, I think the fact that specific facilities may not actually be vulnerable because of roadway elevation or other existing resilience improvements should be better emphasized. As such, on this page, I would recommend bringing the footnote up into the main text and clarifying your focus is on exposure rather than vulnerability per se. A footnote is suggested for the third bullet point in that list identifying the specific sea level rise scenario reflected by 2ft of SLR by 2070 (I'm assuming NOAA 2022 Intermediate-High?)	Removed footnote number in first bullet point about centerline miles. Inserted text before the paragraph after those bullets: "It's important to note that roadway facilities and bridges are within a geographic area that may be exposed to hazards, but the facilities themselves may or may not be at risk due to their elevation." Removed footnote at bottom of page. (no footnote recommended - removing other references to projections - see comment 42)
182	Recommend expounding more on what is meant by "working toward risk-based assessment and prioritization." Perhaps include more explicit discussion of expanding from this foundational exposure analysis to identifying potential vulnerability and identifying whether resilience enhancements need to occur in isolation or as part of a larger effort.	Page 32, 3rd bullet under Plan Monitoring: added "that includes new, refined data and considers criticality to identify true vulnerability, a step beyond exposure. This will help identify more resilience enhancements that operate on their own or in combination with other enhancements to bring more resilience to the surrounding community."
183	Third 'Strategies' bullet – add "including updated data and projections generated by the Florida Flood Hub," after "based on the best available data,"	Added phrase as suggested.
184	Are any mitigation ideas (GHG reduction strategies) in this plan? Will they be considered in the Improvement Plan?	FDOT is developing a Carbon Reduction Strategy. See https://www.fdot.gov/planning/policy/carbon-reduction-strategy .
185	Did you consider groundwater and heat "hazards"?	This will be considered in the Resilience Improvement Plan.
186	District 2 is severely lacking in infrastructure projects in the project list. Being coastal and riparian there should be more projects identified for this district.	This will be referred to the District.
187	Environmental Concerns TBRPC would encourage FDOT to add a goal within the "design, materials, and construction" part of their plan about using materials and practices that are not deleterious to habitat health and resilience. Connection - Ecosystems around the state provide significant resilience benefits including shoreline protection, flood mitigation, carbon sequestration, and other services, so threats to water quality and their health negatively impacts our capacity for resilience. Multijurisdictional Consistency The Vulnerability Tiers are also based on those standard depths and so areas are prioritized very generally just based on whether they will have a 2 – foot SLR depth, are in a certain FEMA designated flood zone or will have storm surge based on a CAT 3. This places many inland areas that flood severely from rainfall and riverine prioritized as low risk. The current plan states that NOAA's 2022 SLR projections were not used. Instead, FDOT used standard depth levels (1-5 feet) and centerline miles exposed across the geographic areas to account for differences in SLR rates in different areas. "However, sea level is changing at different rates in different regions, and the amount of sea level rise is not experienced uniformly across the state. To help deal with these differences, the Resilience Action Plan uses an approach to identify affected geographic areas instead of using projections provided by NOAA (2022). Map 3 (Page 17) shows Sea Level Rise for 1, 2, 3, and 5 feet. Centerline miles and bridges in areas exposed to this hazard are also shown". This may result in inconsistencies with local Vulnerability Assessments. Particularly, with prioritizing them...i.e. what may not be a priority to FDOT, may be a critical asset at the local level. TBRPC's concern is this will impact funding or prioritization of mitigation projects locally.	Page 28, bullet 5 Added "that consider the health and resilience of the surrounding environment as well" at the end of the sentence.
188	Great tool.	Thank you. Your feedback is appreciated.
189	It's good to see the FDOT is taking the initiative to develop this RAP. The value of implementing more nature-based/green infrastructure, landscaping and living shoreline strategies can not be underestimated. This should be integral to the planning and design process and all disciplines.	Thank you. Your feedback is appreciated.
190	Please add the County for each project. If a SHS project adjoins a local road/asset, can we partner with the FDOT on funding opportunities?	County information can be considered for future updates. Please consult your local FDOT district about partnering opportunities.

Number	Comment	Response
191	Please add the County location for each project in the Project List. Please allow local governments to download the GIS data from the Data Viewer. We would love to see more case studies/examples of the adaptation strategies. Maybe there could be a link to a new website it not included in the report. Is there a map and/or summary table for tidal flooding impacts to centerline miles and/or bridges? We see the average number of days, but not a summary of impacts to roads/assets.	This will be considered in the Resilience Improvement Plan.
192	Should incorporate more opportunities for nature based solutions. Especially near state parks and other sensitive environments.	Thank you. Your feedback is appreciated.
193	Thank you for this document.	Thank you. Your feedback is appreciated.
194	The draft Resilience Action Plan is thorough and well-organized. (Page 9) Resilience is also addressed in other plans, including RPC resiliency plans, such as the East Central Florida Regional Resiliency Action Plan.	This is covered by the last bullet in the table on page 9
195	Work with nature to be more resilient in the face of climate change to address such issues as sea level rise and intense rain events. The plan should put greater emphasis on the role of nature in mitigating risk. 1. Lower pavement and ROW widths and amount of pavement, reduce runoff and increase pervious areas.	Thank you. Your feedback is appreciated.
196	2. Capture stormwater where it falls using Low Impact Development Techniques.	Thank you. Your feedback is appreciated.
197	3. Save existing native trees and vegetation, plant new native trees and shrubs in corridors to absorb and cleanse stormwater, reduce extreme heat in urban areas and reap benefits of ecosystem services. Select native plants that will fit the location (wet or dry, etc.).	Thank you. Your feedback is appreciated.
198	4. Treasure scenic assets such as vistas, views (such as of oceans and rivers), maintain visual connections (in other words don't build massive containment /hardening structures blocking access or views). Build reefs and islands offshore, plant mangroves, sea grapes at saltwater and estuary shorelines.	Thank you. Your feedback is appreciated.
199	5. Emphasize Green Infrastructure techniques such as pervious pavement and Green Streets, Tree box filters (such as Silva Cells), created wetlands, bioswales incorporating vegetation to slow down, absorb and clean water.	Thank you. Your feedback is appreciated.
200	6. Every stormwater pond should incorporate best green infrastructure practices; not square or geometric shapes, but curved naturalized shorelines and shallow edges with native plantings and trees. This effort may include retrofitting existing ponds. Result: cleaner water downstream... include improves water quality as a goal.	Thank you. Your feedback is appreciated.
201	7. Use science to discourage spread of forest fires. https://www.usgs.gov/science-explorer/climate/wildfire	Thank you. Your feedback is appreciated.
202	8. Arrange the green techniques into categories that complement the development pattern transect of the 'Complete Streets' approach from urban to rural to undeveloped forest.	Thank you. Your feedback is appreciated.
203	9. Establish a landscape management group that will maintain assets with a holistic multi-disciplinary environmental biology/ scientific approach that tracks success of techniques, including staff units with urban and rural forestry experts. Eliminate invasive exotic plants. Expand multi-disciplinary teams to address resilience in design. Include licensed Florida Landscape Architects as equal partners with engineers in transportation project design. https://www.asla.org/resilientdesign.aspx	Thank you. Your feedback is appreciated.
204	Would like to see more emphasis on transit and multimodal projects that operate in the FDOT SHS Network.	Thank you. Your feedback is appreciated.