Request for Research Funding for FY 2019-2020			
Requesting Office	SMO	**Priority**	8 of 11
Proposed Title	Investigation into the contributing factors to the corrosion of steel reinforced concrete structures at elevations greater than 12 feet above the mean high water line		
Justification	Research is needed to determine what effect airborne chlorides and other influences have on the durability of coastal bridge structures. Specifically looking at the long term apparent diffusion coefficient (Dapp) due to chloride being deposited from ocean spray, as well as other contributing factors. We have seen an existing bridge structure exhibiting severe corrosion problems at elevations sixty feet above the mean high water line and it is critically important to determine what the corrosion processes are and whether we can anticipate corrosion damage on similar structures around the State. Laboratory test specimens have been in exposure since 2011 at one of our Principal Investigator test facilities which would be beneficial to incorporate them into this research, since they already have eight years of exposure to atmospheric deposited chlorides.		
Impact	Without this research, the Department will not know the potential influencing factors contributing to corrosion above the mean high water line.		
Affected Offices	State Materials Office- Structures Group		
Existing Work	None		
Keywords Used In Existing Work Search **(Cannot leave blank)**	corrosion, high elevation, above mean high water line		
Related Contracts (Give contract numbers)	None		
Funding Request	$200,000	**Anticipated Duration**	2 years
Project Manager	Ron Simmons	**Contracting Method**	Direct contract with Florida Atlantic University
Urgency	3	Currently, at least one structure is exhibiting corrosion approximately 50 feet above the mean high water line. This elevation has traditionally been considered very low risk for corrosion to occur.	
Implementability	3	Multiple phases are not anticipated. Findings from research will better equip Department personnel in addressing corrosion concerns at higher elevations.	

Project Benefits (Succinct, complete explanation)

Ensure Department personnel are prepared to evaluate corrosion issues when they occur at elevations 12 feet or above the mean high water line. May also provide information to implement preventative efforts.

Project Benefits **(Select all that apply and explain)**	**Quantifiable Benefits (units, dollars, etc…if applicable)**	**Methodology or Data Sources Used to Determine Quantifiable Benefits. If not applicable, please give justification of project benefits**
o Materials Enhancement		
o Materials Savings		
o Time Savings		
o Lives Saved/Injuries Prevented		
o Other (Explain)	knowledge	

*Comments should explain and support urgency, financial benefit, and implementability scores