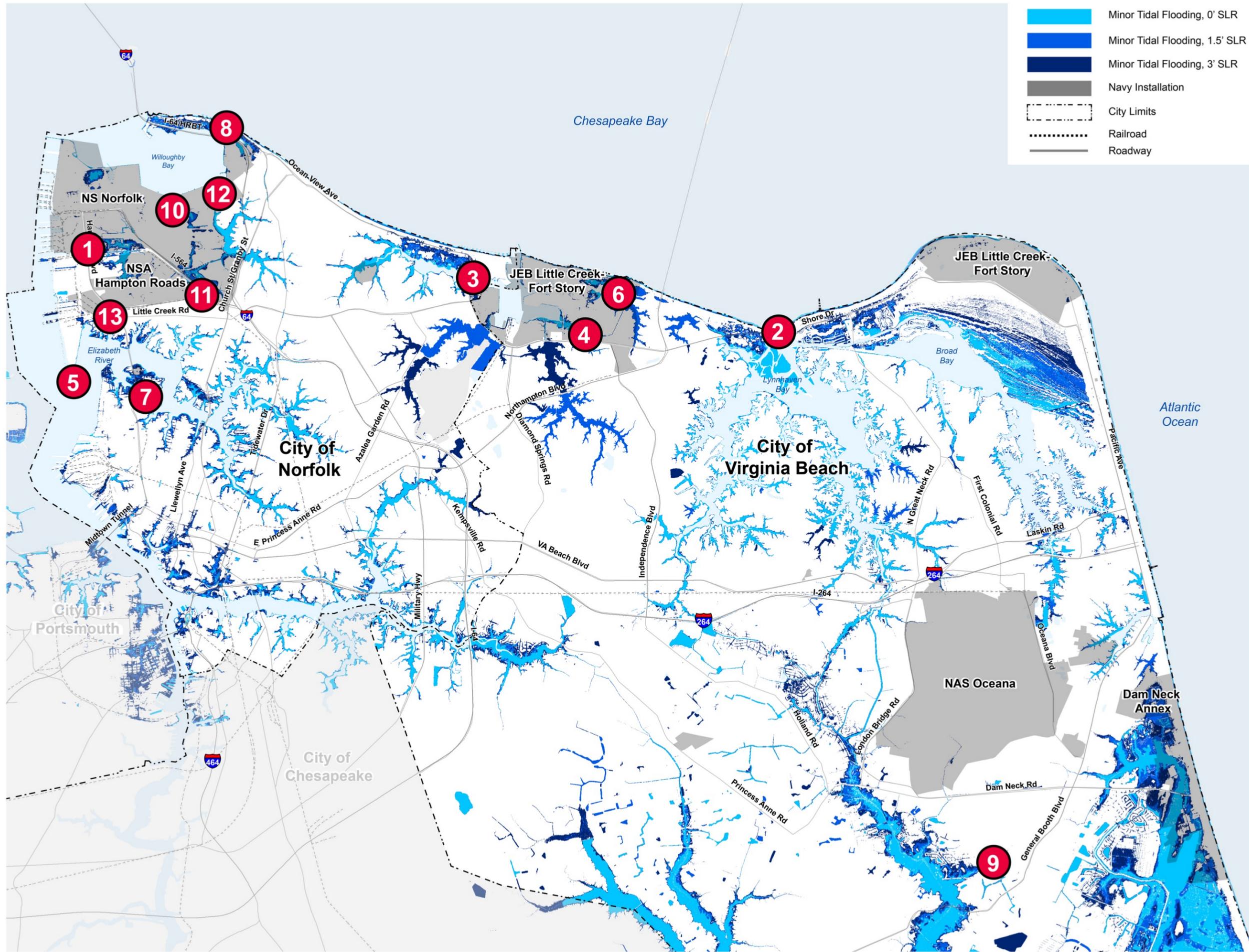
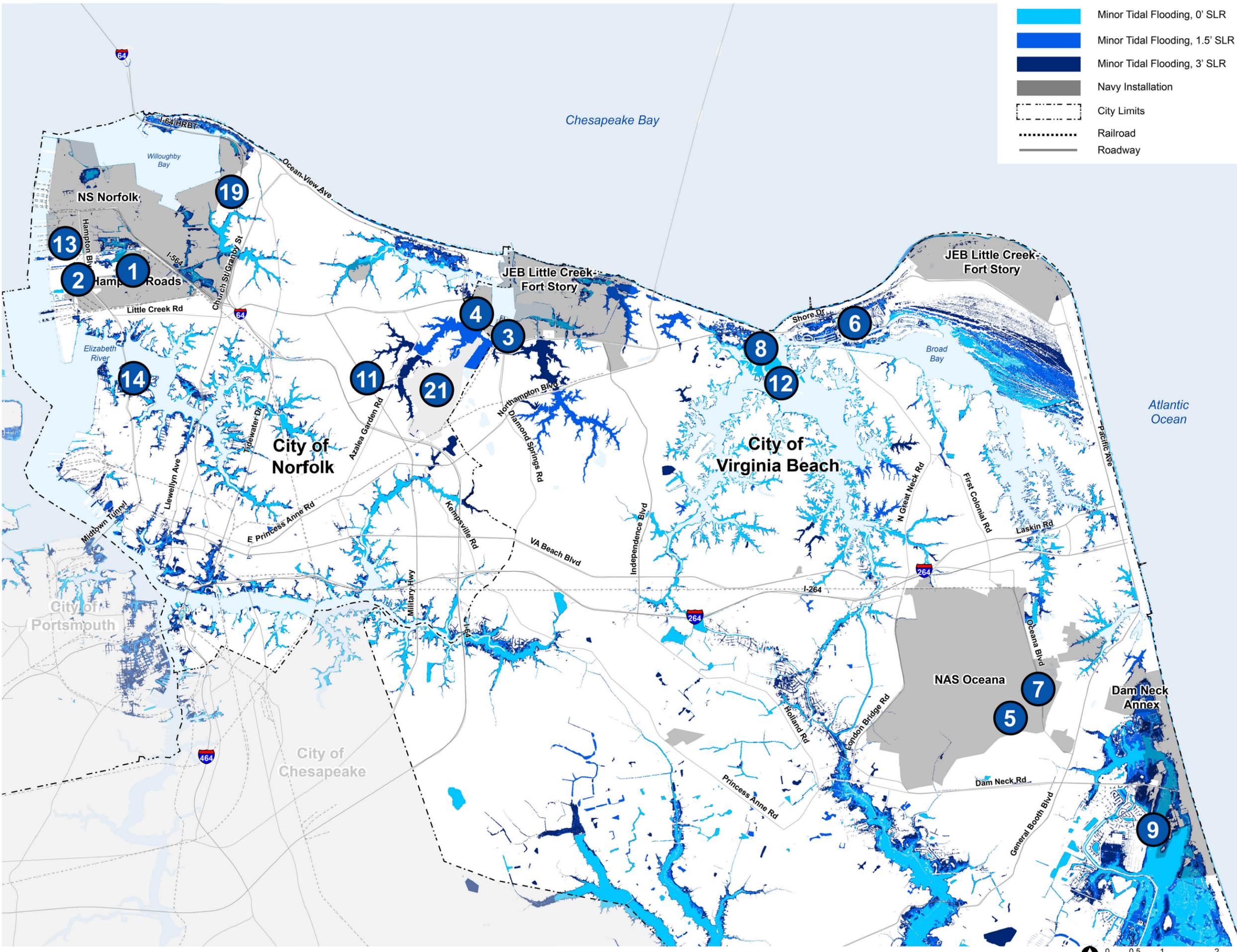
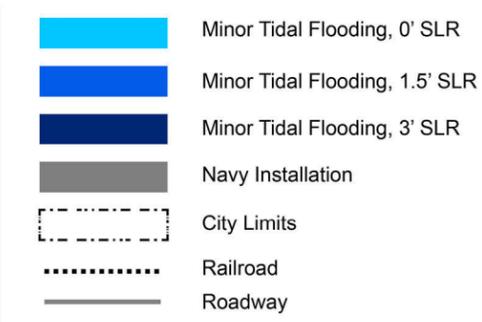


- 1 Hampton Boulevard complete street
- 2 Shore Drive complete street
- 3 Pretty Lake storm surge barrier (USACE)
- 4 East Amphibious Drive stormwater management improvements near Boone Clinic
- 5 Lafayette River outer surge barrier - Tanner Point (NIT) to Lamberts Point alignment (USACE)
- 6 Chubb Lake and Lake Bradford management improvements and easement
- 7 Lexan Avenue & Hampton Boulevard drainage improvements
- 8 Willoughby Spit dune raising (USACE)
- 9 Nimmo Parkway improvements
- 10 Floodwall on Willoughby Bay shoreline (USACE)
- 11 Elizabeth River Trail extension
- 12 Mason Creek tide gate upgrades
- 13 Rail/roadway grade separation, Terminal Boulevard

	Minor Tidal Flooding, 0' SLR
	Minor Tidal Flooding, 1.5' SLR
	Minor Tidal Flooding, 3' SLR
	Navy Installation
	City Limits
	Railroad
	Roadway



**Projects**

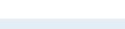


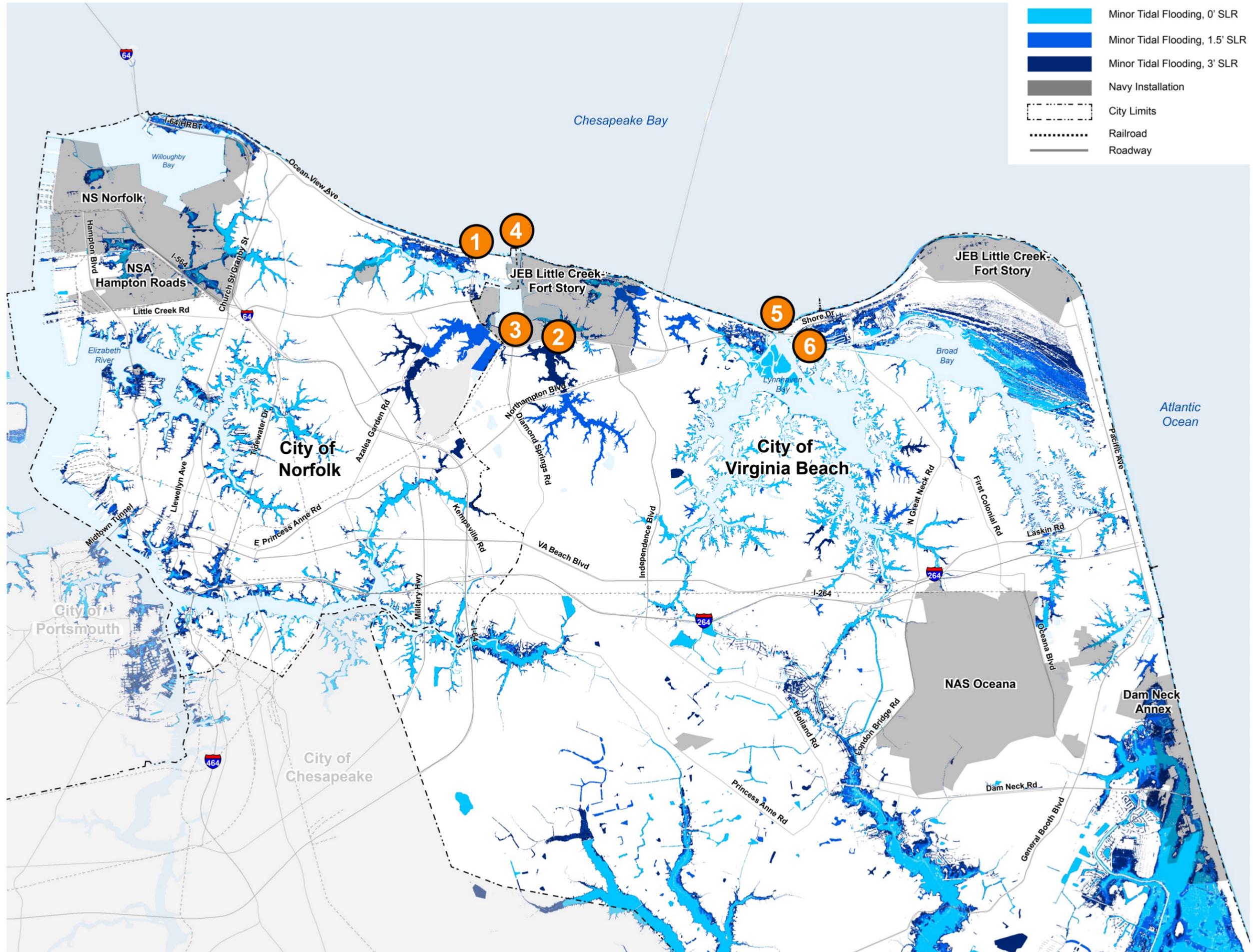
- Study options for stormwater improvements to Glenwood neighborhood and Captain Slade Cutter Park
- Create a stormwater management plan for Hampton Boulevard's west side
- Conduct joint technical hydrology/hydraulic study to determine cause of Amphibious Drive Flooding
- Study Shore Drive roadway flooding at Gate 1
- Conduct Oceana Main Gate flood impact study
- Conduct vulnerability assessment study (Fire Station 1/EMS 22 First Landing)
- Conduct Oceana Boulevard/Bells Road drainage study
- Pleasure House Point Tide gates/backflow preventers/berm and trail
- Develop Lake Tecumseh and Lake Redwing management strategy
- Develop a resilient underpass pump system served by a renewable energy source equipped with back-up battery storage (**not mapped**)
- Evaluate Norview Avenue drainage conditions
- Expand marsh/wetlands restoration at Pleasure House Point
- Pursue a joint study to assess viability of expanded ferry service to NSN adjacent to VA Port and NSN Gate 6
- Study options to reduce Lafayette River Annex vulnerabilities
- Conduct vulnerability assessment of all WTPs and WWTPs to determine future access and flooding impacts (**not mapped**)
- Study feasibility of micro-grid concept for NS Norfolk, NSA Hampton Roads and VA Port for improved power resiliency (**not mapped**)
- Evaluate renewable energy agreements allowing Navy to connect to existing solar arrays; explore options for back-up battery storage (**not mapped**)
- Study options for replacing all on-base fuel-based generators with solar powered generators equipped with back-up battery storage (**not mapped**)
- Pursue a joint study to address neighborhood cut-through movements near NSN Gates 10 and 12
- Study options for a regional transit hub and expanded transit service to support DoD (**not mapped**)
- Pursue a study to evaluate impacts of Norfolk International Airport expansion on military operations

**Studies**



- 1 Coordinate dune/beach nourishment from East Ocean View across JEB Little Creek to Chesapeake Beach
- 2 Explore options for reusing Chesapeake-Elizabeth WWTP for stormwater storage
- 3 Explore options for the relocation of Harsco Black Beauty Abrasives Supplier
- 4 Consider options for a Little Creek Inlet storm surge barrier
- 5 Consider options for a Lynnhaven River Inlet storm surge barrier
- 6 Consider options for a Long Creek surge barrier

	Minor Tidal Flooding, 0' SLR
	Minor Tidal Flooding, 1.5' SLR
	Minor Tidal Flooding, 3' SLR
	Navy Installation
	City Limits
	Railroad
	Roadway



**Conversations**

Scored Projects

New Project #	Project Name	Installation Readiness	DoD Personnel Readiness	Co-Benefits	System Performance and Design	TOTAL SCORE	Funding Status	Project Lead	Project Partner	Project Reference #
1	Hampton Boulevard complete street	9	4	3	3	19	Unfunded	City of Norfolk	Navy, VDOT, VA Port	N/A
2	Shore Drive complete street	9	4	3	3	19	Unfunded	City of Virginia Beach		N/A
3	Pretty Lake storm surge barrier (USACE)	9	4	1	4	18	Unfunded	City of Norfolk		USACE Norfolk CSRM EIS, May 2018
4	East Amphibious Drive stormwater management improvements near Boone Clinic	9	4	1	4	18	Unfunded	City of Virginia Beach; U.S. Navy		N/A
5	Lafayette River outer surge barrier - Tanner Point (NIT) to Lamberts Point alignment (USACE)	9	4	1	2	16	Unfunded	City of Norfolk	USACE, Navy	USACE Norfolk CSRM
6	Chubb Lake and Lake Bradford management improvements and easement	6	4	2	4	16	Partially Funded	City of Virginia Beach	Navy	7.053.000 (active)
7	Lexan Avenue & Hampton Boulevard drainage improvements	9	4	0	3	16	Unfunded	City of Norfolk		Hampton Boulevard Drainage Study, Blakeway Corporation, May 2016
8	Willoughby Spit dune raising (USACE)	6	4	2	2	14	Unfunded	City of Norfolk	USACE, Navy	Originally USACE Norfolk CSRM, no longer considered viable per USACE for economic reasons.
9	Nimmo Parkway improvements	6	4	2	1	13	VII B is partially funded.	City of Virginia Beach		2.110.000 (Active)
10	Floodwall on Willoughby Bay shoreline (USACE)	6	2	1	2	11	Unfunded	USACE	City of Norfolk	Originally USACE Norfolk CSRM, no longer considered viable per USACE (on a Navy base, issues with economic feasibility)
11	Elizabeth river trail extension	3	4	1	0	8	Unfunded	City of Norfolk		N/A
12	Mason Creek tide gate upgrades	3	2	1	2	8	Unfunded	Navy	City of Norfolk	N/A
13	Rail/roadway grade separation, Terminal Boulevard	3	4	0	0	7	Unfunded	City of Norfolk	VDOT	HRTPO 2040 LRTP Reference #: 2040-114

Scored Studies

New Study #	Project Name	Installation Readiness	DoD Personnel Readiness	Co-Benefits	System Performance and Design	TOTAL SCORE	Funding Status	Project Lead	Project Partner	Project Reference #
1	Study options for stormwater improvements to Glenwood neighborhood and Captain Slade Cutter Park	9	4	3	3	19	Unfunded	City of Norfolk	Navy, VDOT, VA Port	N/A
2	Create a stormwater management plan for Hampton Boulevard's West Side	9	4	2	3	18	Unfunded	City of Norfolk	Navy, VDOT, VA Port	N/A
3	Conduct joint technical hydrology/hydraulic study to determine cause of Amphibious Drive flooding	9	4	1	4	18	Unfunded	Navy	USACE, Navy, USCG	N/A
4	Study Shore Drive roadway flooding at Gate 1	9	4	1	4	18	Unfunded	City of Virginia Beach		N/A
5	Conduct Oceana Main Gate flood impact study	9	4	0	2	15	Unfunded	Navy	City of Virginia Beach	N/A
6	Conduct vulnerability assessment study (Fire Station 1/EMS 22 First Landing)	6	6	2	1	15	Unfunded	City of Virginia Beach		N/A
7	Conduct Oceana Boulevard/Bells Road drainage study	9	4	0	2	15	Unfunded	City of Virginia Beach	Navy	N/A
8	Pleasure House Point Tide gates/backflow preventers/berm and trail	6	4	2	2	14	Unfunded	City of Virginia Beach	Navy	N/A

New Study #	Project Name	Installation Readiness	DoD Personnel Readiness	Co-Benefits	System Performance and Design	TOTAL SCORE	Funding Status	Project Lead	Project Partner	Project Reference #
9	Develop Lake Tecumseh and Lake Redwing management strategy	3	4	2	2	11	Unfunded	City of Virginia Beach	Navy	N/A
10	Develop a resilient underpass pump system served by a renewable energy source equipped with back-up battery storage	6	2	0	1	9	Unfunded	City of Norfolk	Navy	N/A
11	Evaluate Norview Avenue drainage conditions	0	4	1	4	9	Unfunded	City of Norfolk; ORF		N/A
12	Expand marsh/wetlands restoration at Pleasure House Point	0	4	2	3	9	Unfunded	City of Virginia Beach		N/A
13	Pursue a joint study to assess viability of expanded ferry service to NSN adjacent to VA Port and NSN Gate 6.	3	4	0	1	8	Unfunded	City of Norfolk; HRT	Navy, VA Port	N/A
14	Study options to reduce Lafayette River Annex vulnerabilities	3	4	0	1	8	Unfunded	Navy	City of Norfolk	N/A
15	Conduct vulnerability assessment of all WTPs and WWTPs to determine future access and flooding impacts.	3	2	1	2	8	Unfunded	HRSD		N/A
16	Study feasibility of micro-grid concept for NS Norfolk, NSA Hampton Roads and VA Port for improved power resiliency.	3	2	0	1	6	Unfunded	City of Norfolk	Navy	N/A
17	Evaluate renewable energy agreements allowing Navy to connect to existing solar arrays; explore options for back-up battery storage	3	2	0	1	6	Unfunded	Navy		N/A
18	Study options for replacing all on-base fuel-based generators with solar powered generators equipped with back-up battery storage.	3	2	0	1	6	Unfunded	Navy		N/A
19	Pursue a joint study to address neighborhood cut-through movements near NSN Gates 10 and 12.	3	2	0	0	5	Unfunded	City of Norfolk	Navy	N/A
20	Study options for a regional transit hub and expanded transit service to support DoD	0	2	0	1	3	Unfunded	City of Norfolk; HRT	Navy; City of Virginia Beach	N/A
21	Pursue a study to evaluate impacts of Norfolk International Airport expansion on military operations.	0	2	0	1	3	Unfunded	City of Norfolk; ORF	Navy	N/A

**Conversations (Not Scored)**

New Conversation #	Project Name	Funding Status	Project Lead	Project Partner	Project Reference #
1	Coordinate dune/beach nourishment from East Ocean View across JEB Little Creek to Chesapeake Beach.	Unfunded	City of Virginia Beach	Navy	N/A
2	Explore options for reusing Chesapeake-Elizabeth WWTP for stormwater storage	Unfunded	Navy		N/A
3	Explore options for the relocation of Harsco Black Beauty Abrasives Supplier	Unfunded	Navy		N/A
4	Consider options for a Little Creek Inlet storm surge barrier	Unfunded	City of Virginia Beach	USACE, Navy, USCG	N/A
5	Consider options for a Lynnhaven River Inlet storm surge barrier	Unfunded	City of Virginia Beach	Navy	N/A
6	Consider options for a Long Creek surge barrier	Unfunded	City of Virginia Beach		N/A