

# APPENDIX E HIGH RISK STRUCTURES

Hazard – type of hazard

Name – name of facility

Facility Type – type of facility

Damage Ratio – percentage of losses expected based on the defined hazard event used in the risk assessment

Loss to Structure – estimated economic losses to the facility based on the risk assessment.

Prominent Vulnerability – General characteristics that add to a buildings vulnerability to a certain hazard. These may include:

- Well defined building types (fall into categories).
- Individual structures have been seen and scored; damage curves are adjusted by score.
- Most structures are on predominantly flat land or gently sloping ground.
- Facilities are well maintained.
- Hazard level and exposure value for each individual structure is unique.

## ST. THOMAS

Hazard	Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
Earthquake	DOE Complex	Government Building	1.00	\$14,191,260	UNREINFORCED MASONRY
	Ivanna Eudora Kean High School	School	1.00	\$34,755,137	UNREINFORCED MASONRY
	Office of Management and Budget	Government Building	1.00	\$2,851,242	UNREINFORCED MASONRY
	West Indian Corporation Dock	Port	1.00	\$2,660,861	UNREINFORCED MASONRY
	St Thomas Assemblies of God Church	Refuge	1.00	\$2,458,636	UNREINFORCED MASONRY
	Tutu Fire Station - Lima	Fire Station	1.00	\$2,431,318	UNREINFORCED MASONRY
	Department of Public Works	Government Building	1.00	\$2,270,602	UNREINFORCED MASONRY
	VI Fire Service (Ft. Christian)	Fire Station	1.00	\$1,862,603	UNREINFORCED MASONRY
	Government House	Government Building	1.00	\$10,608,539	UNREINFORCED MASONRY
	Lt. Governors House	Government Building	1.00	\$8,592,916	UNREINFORCED MASONRY
	Crime Prevention/Community Relations Bureau	Police Station	0.99	\$422,345	UNREINFORCED MASONRY

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Hazard	Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Zone A Police station	Police Station	0.99	\$9,227,794	UNREINFORCED MASONRY
	Queen Louise home	Hospital/Clinic	0.95	\$1,037,116	UNREINFORCED MASONRY
	Property Procurement	Government Building	0.94	\$6,689,467	UNREINFORCED MASONRY
	VI Legislature	Government Building	0.94	\$5,058,909	UNREINFORCED MASONRY
	WAPA Administration Building	Government Building	0.90	\$6,425,784	UNREINFORCED MASONRY
	Bluewater Bible College	Refuge	0.86	\$21,090,525	UNREINFORCED MASONRY
	WAPA Fuel Tanks	Utility	0.83	\$6,458,179	Not to Code
	Chief of Police	Police Station	0.83	\$1,126,875	UNREINFORCED MASONRY
	WAPA Subbase Plant	Power Stations	0.81	\$24,452,797	Highly Irregular
	Sea View Nursing Home	Hospital/Clinic	0.80	\$3,494,714	Precode on Slope
	Charlotte Amalie High School	School	0.79	\$40,034,670	Precode and Irregular
	Lucinda Millin Home for the Elderly	Hospital/Clinic	0.71	\$7,253,342	Precode
	Fire/Police Station	Fire Station	0.66	\$437,602	Trailer w/o foundation
	Mangrove Lagoon Treatment Plant	Utility	0.65	\$35,571,087	Irregular or on slope
	East End Health Clinic	Hospital/Clinic	0.63	\$370,891	Located in re-entrant corner of building
	Bovoni	Utility	0.63	\$727,901	Irregular, precode
	Public Safety - Zone C	Police Station	0.62	\$254,951	Precode on corner of building
	WAPA	Utility	0.61	\$236,049	Precode
<b>Hurricane</b>	WAPA Administration Building	Government Building	0.94	\$6,729,478	Poor Condition, 3 Story Wood Frame
	Property Procurement	Government Building	0.94	\$6,729,478	Poor Condition, 3 Story wood frame
	Bassanio David Police Dept.	Police Station	0.81	\$401,546	Precode
	VI Fire Service (Ft. Christian)	Fire Station	0.78	\$1,445,724	Precode
	Crime Prevention/Community Relations Bureau	Police Station	0.75	\$317,578	Precode

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Hazard	Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Department of Public Works	Government Building	0.73	\$1,652,556	Near debris generation source
	VI Legislature	Government Building	0.72	\$3,906,915	On Water's edge, precode foundation
	Bluewater Bible College	Refuge	0.72	\$17,681,827	Large surface area on steep slope
	DOE Complex	Government Building	0.71	\$10,078,012	Precode
	Nisky Moravian Church	Refuge	0.71	\$3,469,564	Large surface area with precode walls
	Office of Management and Budget	Government Building	0.70	\$1,990,205	Precode walls
	Government House	Government Building	0.69	\$7,300,025	Precode walls
	Lt. Governors House	Government Building	0.69	\$5,913,020	Precode walls
	St Thomas Assemblies of God Church	Refuge	0.68	\$1,670,461	Precode walls
	West Indian Corporation Dock	Port	0.68	\$1,797,130	On Water's edge, precode foundation
	Tutu Fire Station - Lima	Fire Station	0.67	\$1,617,592	Precode walls
	Ivana Eudora Keah High School	School	0.65	\$22,702,759	Large exposed area on hillside
	Queen Louise home	Hospital/Clinic	0.64	\$699,474	Precode walls
	Sea View Nursing Home	Hospital/Clinic	0.62	\$2,696,569	Large exposed area on hillside
	Zone A Police station	Police Station	0.59	\$5,508,291	Precode walls
<b>River Flood Losses</b>	Lt. Governors House	Government Building	0.98	\$8,448,766	Precode walls
	Property Procurement	Government Building	0.98	\$7,009,347	Precode walls
	Tutu Fire Station - Lima	Fire Station	0.95	\$2,309,752	Drains to building
	Queen Louise home	Hospital/Clinic	0.95	\$1,038,091	Precode walls
	Crime Prevention/Community Relations Bureau	Police Station	0.95	\$404,451	Poor drainage
	DOE Complex	Government Building	0.85	\$12,062,571	Vulnerable utilities, poor drainage
	VI Legislature	Government Building	0.85	\$4,597,649	Precode walls
	Office of Management and Budget	Government Building	0.85	\$2,423,555	Precode walls

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Hazard	Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	VI Fire Service (Ft. Christian)	Fire Station	0.82	\$1,527,334	Precode walls
	Chief of Police	Police Station	0.80	\$1,092,727	Precode walls
	VI National Guard	Government Building	0.70	\$7,258,221	Poor drainage
	Human Services (food)	Government Building	0.70	\$645,702	Precode foundation
	Public Safety - Zone C	Police Station	0.65	\$267,623	Poor drainage
	Mangrove Lagoon Treatment Plant	Utility	0.65	\$35,513,628	Poor drainage
	Bovoni	Utility	0.65	\$749,476	Poor drainage
	Charlotte Amalie High School	School	0.60	\$30,260,132	Poor drainage
Tsunami	DOE Complex	Government Building	1.00	\$14,675,325	Too close to shore
	Mangrove Lagoon Treatment Plant	Utility	1.00	\$50,850,000	Too close to shore
	AA Farley Justice Center	Government Building	1.00	\$44,025,974	Too close to shore
	AA Farley Justice Center	Police Station	1.00	\$2,948,498	Too close to shore
	WAPA Subbase Plant	Power Stations	1.00	\$49,720,000	Too close to shore
	Lucinda Millin Home for the Elderly	Hospital/Clinic	1.00	\$10,566,234	Too close to shore
	WAPA Administration Building	Government Building	1.00	\$7,396,364	Too close to shore
	Property Procurement	Government Building	1.00	\$7,396,364	Too close to shore
	VI Port Authority (Blyden Dock)	Port	1.00	\$6,420,455	Too close to shore
	VI Legislature	Government Building	1.00	\$5,593,500	Too close to shore
	Office of Management and Budget	Government Building	1.00	\$2,948,498	Too close to shore
	West Indian Corporation Dock	Port	1.00	\$2,751,623	Too close to shore
	VI Fire Service (Ft. Christian)	Fire Station	1.00	\$1,926,136	Too close to shore
	Bovoni	Utility	1.00	\$1,192,370	Too close to shore
	Crown Bay Dock (VIPA)	Port	1.00	\$963,068	Too close to shore

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Hazard	Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Crime Prevention/Community Relations Bureau	Police Station	1.00	\$440,260	Too close to shore
	Human Services (food)	Government Building	1.00	\$953,896	Too close to shore
	WAPA Fuel Tanks	Utility	1.00		Too close to shore
	WAPA	Utility	1.00	\$399,536	Too close to shore
	Ivana Eudora Keah High School	School	1.00	\$35,940,638	Too close to shore
	Charlotte Amalie High School	School	1.00	\$52,153,846	Too close to shore
	Edward Wilmoth Blyden Marine Terminal	Port	1.00	\$15,368,000	Too close to shore
	VI National Guard	Government Building	1.00	\$10,722,570	Too close to shore
	Airport	Airport	1.00	\$22,012,987	Too close to shore
Landslide					
	Sea View Nursing Home	Refuge	0.5	\$ 1,257,125.00	Moderately Susceptible to Landslide
	Bluewater Bible College	Refuge	0.75	\$ 3,390,000.00	Large surface area on steep slope
	St Thomas Assemblies of God Church	Refuge	0.75	\$ 894,277.50	Precode walls
Wildfire				\$ -	
	Bluewater Bible College	Refuge	0.4	\$10,125,974.00	Large surface area on steep slope
	St Thomas Assemblies of God Church	Refuge	0.4	\$ 1,017,000.00	Precode walls
	Charlotte Amalie High School	School	0.6	\$21,564,382.80	Susceptible to wildfire
	Ivanna Eudora Kean	School	0.6	\$31,292,307.60	Susceptible to wildfire
	Bovoni		0.6	\$ -	Susceptible to wildfire (source)
	Wapa	Fuel Tank	0.6	\$ -	Susceptible to wildfire (source)

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## ST. CROIX

Hazard	Facility Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
Earthquake	Governor's Office	Government Building	1.00	\$29,976,482	UNREINFORCED MASONRY
	Alexander Henderson Elementary School	School	1.00	\$15,682,818	UNREINFORCED MASONRY
	Office of the Lt. Governor	Government Building	1.00	\$15,565,166	UNREINFORCED MASONRY
	Alfredo Andrews Elementary School	School	1.00	\$15,445,199	UNREINFORCED MASONRY
	Bethlehem Houses	Refuge	1.00	\$983,454	UNREINFORCED MASONRY
	Property and Procurement	Government Building	0.99	\$2,331,344	UNREINFORCED MASONRY
	Captain Charles A Seales Fire Station	Fire Station	0.99	\$1,598,928	UNREINFORCED MASONRY
	Chief Herbert L Canegata Fire Station	Fire Station	0.99	\$2,425,492	UNREINFORCED MASONRY
	Captain Renceliaz J Cribbs Fire Station	Fire Station	0.99	\$1,775,081	UNREINFORCED MASONRY
	National Guard Headquarters	Government Building	0.91	\$8,387,871	UNREINFORCED MASONRY
	Charles Harwood Clinic	Hospitals/Clinic	0.91	\$45,115,267	UNREINFORCED MASONRY
	Claude O Markae School	School	0.91	\$12,210,038	UNREINFORCED MASONRY
	Ricardo Richards Elementary School	School	0.85	\$5,650,428	UNREINFORCED MASONRY
	Juanita Gardin Elementary School	School	0.83	\$4,217,395	UNREINFORCED MASONRY
	Department of Public Works	Government Building	0.79	\$3,254,783	Irregular precode
	Water Tanks	Utility	0.76	\$6,754,600	Precode
	Patrick Sweeney Police Station	Police Station	0.76	\$7,718,635	Irregular precode
	Water Treatment Plant	Utility	0.71	\$34,978,919	Highly Irregular
	WAPA Water and Power Plant	Power Stations	0.71	\$34,978,919	Highly Irregular
	Fire Dept. HQ	Fire Station	0.65	\$139,902	Precode
Queen Louise Home for Children	School	0.63	\$4,474,377	Precode	
Department of Public Works and Human Services	Government Building	0.62	\$14,024,314	Precode	

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Hazard	Facility Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Wastewater Treatment Plant	Utility	0.61	\$13,352,279	Precode
	Police Station/DPNR	Police Station	0.60	\$16,366,176	Precode
<b>Hurricane</b>	Property and Procurement	Government Building	0.84	\$1,982,790	Precode walls
	Alexander Henderson Elementary School	School	0.81	\$12,646,967	Precode
	Ricardo Richards Elementary School	School	0.80	\$5,282,843	Precode
	Office of the Lt. Governor	Government Building	0.77	\$11,942,026	Precode
	Captain Charles A Seales Fire Station	Fire Station	0.77	\$1,234,788	Precode
	Charles Harwood Clinic	Hospitals/Clinic	0.76	\$37,396,182	Precode
	Claude O Markae School	School	0.73	\$9,860,208	Precode
	Red Cross	Refuge	0.73	\$1,889,251	Precode
	Chief Herbert L. Canegata Fire Station	Fire Station	0.70	\$1,717,859	Precode
	Juanita Gardin Elementary School	School	0.70	\$3,566,114	Precode
	Governor's Office	Government Building	0.70	\$20,996,786	Precode
	Captain Renceliaz J Cribbs Fire Station	Fire Station	0.69	\$1,233,759	Precode
	Alfredo Andrews Elementary School	School	0.68	\$10,431,597	Precode
	Bethlehem Houses	Refuge	0.67	\$659,263	Precode
	National Guard Headquarters	Government Building	0.65	\$5,948,421	Precode
<b>River Flood Losses</b>	Governor's Office	Government Building	0.98	\$29,376,952	On drainage path
	Ricardo Richards Elementary School	School	0.98	\$6,510,905	Poor drainage
	Lagoon Street Complex	Government Building	0.65	\$2,312,258	Poor drainage
	Ann Schrader Comand Police Station	Police Station	0.65	\$676,193	Poor drainage
<b>Coastal Flood Losses</b>	Lagoon Street Complex	Government Building	0.90	\$3,186,392	Poor Drainage
<b>Tsunami</b>	Henry E Pochlsen Airport	Airport	1.00	\$56,500,000	Too close to shore
	Ingerborg Nesbitt Clinic	Hospitals/Clinic	1.00	\$23,002,838	Too close to shore
	Wastewater Treatment Plant	Utility	1.00	\$22,600,000	Too close to shore
	Ann E Abramson Pier	Dock	1.00	\$3,955,000	Too close to shore
	Lagoon Street Complex	Government Building	1.00	\$3,661,200	Too close to shore

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Hazard	Facility Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Crallows Bay Warf	Dock	1.00	\$2,260,000	Too close to shore
	Gordon A Finch Molasses Pier	Dock	1.00	\$1,695,000	Too close to shore
	Frederiksted Fisherman's Pier	Dock	1.00	\$113,000	Too close to shore
	Sewage Pumps	Utility	0.57	\$14,308,442	Too close to shore
	Water Pumps	Utility	0.38	\$56,959	Too close to shore
	Water Tanks	Utility	0.17	\$1,526,961	Too close to shore
	Queen Louise Home for Children	School	1.00	\$7,290,701	Too close to shore
	Herbert Griggs Home for the Aged	Refuge	1.00	\$8,910,857	Too close to shore
	WAPA Water and Power Plant	Power Stations	1.00	\$50,850,000	Too close to shore
	WAPA	Government Building	1.00	\$3,260,564	Too close to shore
	Governor's Office	Government Building	1.00	\$30,998,982	Too close to shore
	Office of the Lt. Governor	Government Building	1.00	\$16,096,095	Too close to shore
	Property and Procurement	Government Building	1.00	\$2,430,234	Too close to shore
	National Guard Headquarters	Government Building	1.00	\$9,504,914	Too close to shore
	Emile Henderson Fire Station	Fire Station	1.00	\$2,810,875	Too close to shore
	Chief Herbert L. Canegata Fire Station	Fire Station	1.00	\$2,528,375	Too close to shore
	Captain Charles A Seales Fire Station	Fire Station	1.00	\$1,666,750	Too close to shore
	Captain Renceliaz J Cribbs Fire Station	Fire Station	1.00	\$1,850,375	Too close to shore
	Container Port	Dock	1.00	\$1,695,000	Too close to shore
<b>Wildfire</b>					
	Patrick Sweeny Police Station		0.6	\$ 6,318,607.80	In a susceptible area
	Anna's Hope Detention Center	Government	0.5	\$ 9,164,300.00	In a susceptible area
	Captain Renceliaz J Cribbs Fire Station	Fire	0.4	\$ 740,150.00	In a susceptible area
	Charles Harword Clinic	Hospital	0.6	\$30,729,078.60	In a susceptible area

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Hazard	Facility Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
	Juan Luis Hospital	Hospital	0.4	\$23,590,144.00	In a susceptible area
	Herbert Griggs Home for Aging	Refuge	0.6	\$ 5,346,514.20	In a susceptible area
	Bethlehem House	Refuge	0.4	\$ 406,800.00	In a susceptible area
	Red Cross	Shelter	0.4	\$ 1,069,302.80	In a susceptible area
	Ricardo Richards School	School	0.4	\$ 2,748,160.00	In a susceptible area
	Alfredo Andrews School	School	0.4	\$ 6,388,814.40	In a susceptible area
	Charles Emmanuel School	School	0.5	\$ 9,583,222.00	In a susceptible area
	Alexander Henderson	School	0.5	\$ 4,587,800.00	In a susceptible area
	Queen Louise Home	Refuge/Special needs	0.5	\$ 31,640.00	In a susceptible area
	OMB	Government	0.4	\$ 6,487,104.00	In a susceptible area
	DPW	Government	0.4	\$ 2,105,958.40	In a susceptible area

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## ST. JOHN

Hazard	Facility Name	Facility Type	Damage Ratio	Loss to Structure	Prominent Vulnerability
Earthquake	Emmaus Roman Catholic Church	Refuge	1.00	\$8,991,582	UNREINFORCED MASONRY
	Morris F de Castro Clinic	Hospital/Clinic	1.00	\$1,965,376	UNREINFORCED MASONRY
	Zulu Company Fire Station	Fire Station	1.00	\$936,623	UNREINFORCED MASONRY
	Department of Human Services	Government Building	0.99	\$2,081,316	UNREINFORCED MASONRY
	Guy Benjamin Elentary School	School	0.99	\$16,234,265	UNREINFORCED MASONRY
	Julius Sprague Elementary School	School	0.91	\$9,701,993	UNREINFORCED MASONRY
	Administrator's Offices	Government Building	0.90	\$2,036,915	Irregular precode
	Potable Water Tank	Utility	0.79	\$52,447	On steep slope
	WAPA Administration/Power Plant	Power Station	0.76	\$11,263,992	Precode
	PD Motor Vehicles Inspection Station	Police Station	0.74	\$610,979	Precode
	WAPA Water Tank	Utility	0.70	\$819,376	Precode
	Bethany Moravian Church	Refuge	0.67	\$6,884,427	Irregular precode
	Sewage Treatment Plant	Utility	0.61	\$16,597,797	Irregular
	Seventh Day Adventist Church	Refuge	0.59	\$1,986,158	On steep slope
Hurricane	Morris F de Castro Clinic	Hospital/Clinic	0.82	\$1,608,693	Precode
	Zulu Company Fire Station	Fire Station	0.79	\$741,153	Precode
	Julius Sprague Elementary School	School	0.73	\$7,770,070	Lots of debris
	Guy Benjamin Elentary School	School	0.72	\$11,794,841	Precode
	PD Motor Vehicles Inspection Station	Police Station	0.72	\$596,988	Precode
	Emmaus Roman Catholic Church	Refuge	0.71	\$6,407,265	Precode walls

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	Department of Human Services	Government Building	0.68	\$1,417,001	Large roof spans
<b>River Flood</b>	Emmaus Roman Catholic Church	Refuge	0.98	8,811,750.53	Precode walls
	Julius Sprague Elementary School	School	0.98	10,454,388.11	Poor drainage
	National Park Service/ARC	Government Building	0.65	5,285,162.08	Poor drainage
	Sewage Treatment Plant	Utility	0.65	17,756,813.75	Poor drainage
	Police Department	Police Station	0.60	1,958,713.15	Poor drainage
<b>Coastal Flood</b>	National Park Service/ARC	Government Building	0.90	\$7,283,182	Too close to shore
	WAPA Water Tank	Utility	0.88	\$1,035,756	Precode
	Sewage Treatment Plant	Utility	0.85	\$23,220,449	Low mean elevation
	WAPA Administration/Power Plant	Power Station	0.80	\$11,801,452	Low mean elevation
<b>Tsunami 2014</b>	WAPA Administration/Power Plant	Power Station	1.00	\$15,255,000	Too close to shore
	Julius Sprague Elementary School	School	1.00	\$11,031,620	Too close to shore
	National Park Service/ARC	Government Building	1.00	\$8,368,457	Too close to shore
	WAPA Desalinization Plant	Utility	1.00	\$3,293,143	Too close to shore
	Administrator's Offices	Government Building	1.00	\$2,350,764	Too close to shore
	Department of Human Services	Government Building	1.00	\$2,169,600	Too close to shore
	WAPA Water Tank	Utility	1.00	\$1,217,143	Too close to shore
	Zulu Company Fire Station	Fire Station	1.00	\$968,571	Too close to shore
	PD Motor Vehicles Inspection Station	Police Station	1.00	\$856,540	Too close to shore
	Port	Pier	1.00	\$2,825,000	Too close to shore
	Sewage Treatment Plant	Utility	1.00	\$28,250,000	Too close to shore
	Emmaus Roman Catholic Church	Refuge	1.00	\$9,298,286	Too close to shore

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	Police Department	Police Station	1.00	\$3,375,875	Too close to shore
	VITEMA/DPW	Emergency Response	1.00	\$5,036,571	Too close to shore
<b>Wildfire</b>	Police Inspection		0.6	\$519324	In a susceptible area
	Seventh day Adventist Church	Refuge	0.6	\$2092114	In a susceptible area
	Depart of Human Services	Government	0.6	\$1301760	In a susceptible area
	WAPA Administration	Government	0.6	\$9153000	In a susceptible area