

Summary

Alternatives Comparison

Impact Category	No-Build Alternative	Build-8 Alternative	Build-8 Managed Alternative	Build-10 Alternative
Mainline	Norfolk: 2 lanes each direction Hampton: 3 lanes each direction	4 lanes each direction throughout	4 lanes each direction throughout Buffer between managed and general purpose lanes	5 lanes each direction throughout
Approach bridges and tunnels	2 lanes each direction (No change)	2 existing bridges: 4 westbound lanes New bridges and tunnel: 4 eastbound lanes	2 existing bridges: 4 westbound lanes New bridges and tunnel: 4 eastbound lanes; buffer between managed and general purpose lanes on new bridges and tunnel	2 existing bridges: 4 westbound lanes New bridges and tunnel: 1 westbound and 5 eastbound lanes; barrier between westbound and eastbound lanes
Interchanges	No change from existing interchanges	Interchanges modified to accommodate higher volumes and widened mainline	Interchanges modified to accommodate higher volumes and widened mainline	Interchanges modified to accommodate higher volumes and widened mainline
Management	All general purpose lanes	All general purpose lanes	One or more lanes managed based on tolls or occupancy	All general purpose lanes
Transit capability	Buses operate with auto traffic	Buses operate with auto traffic	Buses could operate in general purpose or managed lanes	Buses operate with auto traffic
Engineering/Row/Construction Cost	\$0	\$4.4 to \$5.5 billion	\$4.7 to \$5.9 billion	\$5.3 to \$6.7 billion

Environmental Impacts

Impact Category	No-Build Alternative	Build-8 Alternative	Build-8 Managed Alternative	Build-10 Alternative	Notes
Land acquisition (acres)	0	281	287	304	Acreage indicates amount of right-of-way required.
Parks and recreational facilities impacted (number/acres)	0/0	14 / 25	14 / 25	14 / 26	Includes right-of-way required from parklands.
Potential residential relocations	0	261	275	315	Right-of-way acquisition and relocation would be in accordance with state and federal laws.
Potential business displacements	0	16	16	17	
Stream impacts (No. of crossings/linear feet of streams)	0	12 / 18,200	12 / 18,300	12 / 18,500	Includes the extension of existing bridges and culverts, new HRBT approach bridges and tunnel.
Wetlands impacts (acres)	0	52	52	53	Based on National Wetland Inventory (NWI) data.
100-year floodplain impacts (acres)	0	419	436	439	Includes area of new HRBT approach bridges and tunnel.
Threatened and endangered species habitat	0	Short-term impacts to 400 acres	Short-term impacts to 400 acres	Short-term impacts to 415 acres	Potential habitat impacts may occur to sea turtles, shortnose sturgeon and atlantic sturgeon.
Submerged Aquatic vegetation impacts (acres)	0	6	6	6	Any disturbance would require approval from the Virginia Marine Resources Commission.
Historic architectural resources impacts (No. of properties)	0	13	13	13	Impacts would include the displacement of historic buildings in historic districts.
Air quality impacts	0	Minor short-term impacts	Minor short-term impacts	Minor short-term impacts	The retained alternatives meet all applicable air quality conformity requirements.
Noise (No. of sites with noise impacts)	817	1,019	1,017 to 1,019	1,017	Abatement measures such as noise barriers would be considered for noise impacts.