



**Department of Transportation and Public Works
(DTPW)**

***STATION #5:
TRANSIT MODES COMPARISON***

5

December 12, 2017



Transit Modes Comparison



Alternative	1	2	3	4	5
Name	Rapid Transit Service / Connected Autonomous Vehicles (RTS / CAV)	Connected Autonomous Vehicles (CAV)	Light Rail Transit (LRT)	Heavy Rail Transit (HRT / Metrorail) At Grade*	No Build
Project Development Duration (Years)	2 - 3	3 - 4	4 - 6	6 - 8	NA
Service Frequency	5 - 10 Minute Peak / 15 Minute Off-Peak	On Demand	10 Minute Peak / 15 Minute Off-Peak	9 Minute Peak / 12 - 15 Minute Off-Peak	5 - 10 Minute Peak / 15 Minute Off-Peak
Line Length (Miles)	20	20	20	20	20
Speed Range (MPH)	20 - 45	30 - 65	30 - 45	30 - 45	20 - 45
Right-of-Way	Semi-Exclusive	Shared Lanes	Semi-Exclusive	Semi-Exclusive	Semi-Exclusive
Stop Spacing (Miles)	0.5 - 2	On Demand with Express Service	0.5 - 2	0.5 - 2	0.5 - 2
Guideway Infrastructure	Dedicated Lanes	Smart Roadway and Infrastructure	At-Grade with Overhead Power Line	At-Grade with Overhead Power Line	Dedicated Lanes
Other Infrastructure	Stations, Level Boarding, Durable Roadway Paving	High Number of Vehicles, ITS, Boarding Zones	Stations, Power Generation and Maintenance Facility	Stations, Power Supply	Existing
Preliminary Total Capital Cost (Millions)	\$ 200 - 250	TBD	\$ 500 - 900	\$ 700 - 1,200	NA
Operating Cost (per Revenue Hour)	\$ 100 - 150	Variable	\$ 180 - 230	\$ 230 - 270	\$ 100 - 150
Passenger Capacity (per train)	100 - 300	Variable	250 - 300	450 - 600	60 - 100

* Elevated Heavy Rail Transit (HRT / Metrorail) was not reevaluated due to the cost feasibility of the alternative.