



2019 Development Charge Study: Historical Service Standards

Development Charges Stakeholders Sub-Committee

City of Hamilton

September 13, 2018

Agenda



- Service Standards
 - Service Standards
 - Service Standard Example
 - Transit Service Standard
 - Draft Service Standards
 - Comparison of Service Standards to 2014
 - Service Standard Valuation Drivers
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Service Standards



- The D.C.A. Service Standard calculation provides an upper limit ceiling on the amount of the charge which can be imposed
- The calculation includes both quality and quantity measures and provides for the “average over the past 10 years” – This involves reviewing capital inventories in detail over past 10 years
- This calculation is not required for water, wastewater and storm services as they are required to follow environmental legislation. Similarly, resulting from Bill 73, this calculation is no longer required for Transit service.
- Impacts – generally lowers collection levels and may provide for spiral downwards if a municipality does not keep up with construction of services in line with the pace of growth

Service Standard Example



Service: Paramedics Facilities
Unit Measure: sq.ft. of building area

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 Building Value (\$/sq.ft.)	Value/ft ² with land, site works, etc.
Station #1 - 35 - 43 John Street North	1,700	1,700	1,700	1,700	1,700	1,700	4,046	4,046	4,046	4,046	\$221	\$270
Station #3 Ambulance, 965 Garth St.	1,887	1,887	1,887	1,887	1,887	1,887	1,887	1,887	1,887	1,887	\$287	\$343
Station #4 Ambulance, 729 Upper Sherman	3,867	3,867	3,867	3,867	3,867	3,867	3,867	3,867	3,867	3,867	\$256	\$309
Station #7 Ambulance, 225 Quigley Rd.	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	1,038	\$297	\$354
Station #9 Ambulance, 125 Kenilworth Ave. N.	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	1,435	\$256	\$309
Station #10 Ambulance, Norfolk Ave.	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	1,364	\$282	\$337
Station #12 Ambulance, 199 Highway 8 Stoney Creek	-	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	2,983	\$234	\$284
Station #15 Ambulance, 415 Arvin Ave.	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	2,519	\$284	\$340
Station #17 Ambulance, 363 Isaac Brock St.	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	\$284	\$340
Station #18 Ambulance, 2636 (2640) Highway 56 Binbrook	-	2,737	2,737	2,737	2,737	2,737	2,737	2,737	2,737	2,737	\$247	\$299
Station #19 Ambulance, 3302 Homestead Rd.	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	1,483	\$307	\$365
Station #20 Ambulance, 365 Wilson St. W.	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	1,996	\$323	\$383
Station #21 Ambulance, Garner Rd., Ancaster	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	3,124	\$256	\$309
Station #23 Ambulance, Memorial Square	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	\$250	\$302
Station #24 Ambulance, 265 Parkside Dr.	2,098	2,098	2,098	2,098	2,098	2,098	2,098	2,098	2,098	2,098	\$422	\$492
Station #25 Ambulance, 361 Old Brock Rd.	-	878	878	878	878	878	878	878	878	878	\$254	\$306
Station #26 Ambulance, Lynden	-	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	1,204	\$254	\$306
Station #30 Ambulance, 489 Victoria Ave. N.	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	18,558	\$226	\$276
Station #32 Ambulance, 1000 Limeridge Rd.	-	-	7,060	7,060	7,060	7,060	7,060	7,060	7,060	7,060	\$260	\$313
Stoney Creek Mountain Training Facility (Shared Building B)	-	-	8,091	8,091	8,091	8,091	7,280	7,280	7,280	7,280	\$316	\$364
Total	45,044	52,845	67,996	67,996	67,996	67,996	69,531	69,531	69,531	69,531		

Population	514,917	515,641	519,949	522,456	526,269	529,038	532,521	536,917	541,846	544,730
Per Capita Standard	0.0875	0.1025	0.1308	0.1301	0.1292	0.1285	0.1306	0.1295	0.1283	0.1276

10 Year Average	2009-2018
Quantity Standard	0.1225
Quality Standard	\$315
Service Standard	\$39

D.C. Amount (before deductions)	10 Year
Forecast Population	65,046
\$ per Capita	\$39
Eligible Amount	\$2,511,426

Service Standard Example



Service: Paramedics Facilities
Unit Measure: Value of facilities (\$)

Description	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Station #1 - 35 - 43 John Street North	459,000	459,000	459,000	459,000	459,000	459,000	1,092,328	1,092,328	1,092,328	1,092,328
Station #3 Ambulance, 965 Garth St.	647,366	647,366	647,366	647,366	647,366	647,366	647,366	647,366	647,366	647,366
Station #4 Ambulance, 729 Upper Sherman	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809	1,194,809
Station #7 Ambulance, 225 Quigley Rd.	367,472	367,472	367,472	367,472	367,472	367,472	367,472	367,472	367,472	367,472
Station #9 Ambulance, 125 Kenilworth Ave. N.	443,349	443,349	443,349	443,349	443,349	443,349	443,349	443,349	443,349	443,349
Station #10 Ambulance, Norfolk Ave.	459,700	459,700	459,700	459,700	459,700	459,700	459,700	459,700	459,700	459,700
Station #12 Ambulance, 199 Highway 8 Stoney Creek	-	847,180	847,180	847,180	847,180	847,180	847,180	847,180	847,180	847,180
Station #15 Ambulance, 415 Arvin Ave.	856,377	856,377	856,377	856,377	856,377	856,377	856,377	856,377	856,377	856,377
Station #17 Ambulance, 363 Isaac Brock St.	387,697	387,697	387,697	387,697	387,697	387,697	387,697	387,697	387,697	387,697
Station #18 Ambulance, 2636 (2640) Highway 56 Binbrook	-	818,219	818,219	818,219	818,219	818,219	818,219	818,219	818,219	818,219
Station #19 Ambulance, 3302 Homestead Rd.	541,150	541,150	541,150	541,150	541,150	541,150	541,150	541,150	541,150	541,150
Station #20 Ambulance, 365 Wilson St. W.	764,298	764,298	764,298	764,298	764,298	764,298	764,298	764,298	764,298	764,298
Station #21 Ambulance, Garner Rd., Ancaster	965,235	965,235	965,235	965,235	965,235	965,235	965,235	965,235	965,235	965,235
Station #23 Ambulance, Memorial Square	856,523	856,523	856,523	856,523	856,523	856,523	856,523	856,523	856,523	856,523
Station #24 Ambulance, 265 Parkside Dr.	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318	1,032,318
Station #25 Ambulance, 361 Old Brock Rd.	-	268,665	268,665	268,665	268,665	268,665	268,665	268,665	268,665	268,665
Station #26 Ambulance, Lynden	-	368,299	368,299	368,299	368,299	368,299	368,299	368,299	368,299	368,299
Station #30 Ambulance, 489 Victoria Ave. N.	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008	5,122,008
Station #32 Ambulance, 1000 Limeridge Rd.	-	-	2,209,780	2,209,780	2,209,780	2,209,780	2,209,780	2,209,780	2,209,780	2,209,780
Stoney Creek Mountain Training Facility (Shared Building B)	-	-	2,945,028	2,945,028	2,945,028	2,945,028	2,649,800	2,649,800	2,649,800	2,649,800
Total	14,097,302	16,399,665	21,554,473	21,554,473	21,554,473	21,554,473	21,892,573	21,892,573	21,892,573	21,892,573
Population	514,917	515,641	519,949	522,456	526,269	529,038	532,521	536,917	541,846	544,730
Per Capita Standard	27.38	31.80	41.45	41.26	40.96	40.74	41.11	40.77	40.40	40.19

10 Year Average	2009-2018
Service Standard \$ per Capita	\$39

Transit – Service Level Update as per Bill 73



- Methodology for determining the planned level of service set out in the regulations
- In past D.C. studies, were required to provide historical service standard
- New forward looking service standard based on ridership - the detailed analysis is provided by Dillon and will be included as an Appendix to the D.C. background study
- Methodology requires ridership forecasts and ridership capacity for all modes of transit over future 10 years, identification of excess capacity which exists at the end of 10 years, identification of whether new ridership is from existing or planned development

Transit

Total Person Trips Forecast



The total A.M. peak period person-trips reflecting all modes for trips with an origin and/or destination in Hamilton were derived from Hamilton's demand forecasting model for the year's 2011 and 2031. From this model, two total person-trip values were pulled for the A.M. peak period:

- 253,124 person-trips in 2011
- 320,352 person-trips in 2031

Using linear interpolation, the number of person-trips for each year between 2011 and 2031 were calculated. These values were combined with the transit existing (2016) and targeted 2031 transit mode share used to forecast transit ridership.

Transit

Transit Mode Share



2016 Transit Mode Share

- The 2017 Transportation Master Plan identifies an existing (2016) local transit mode share of 6.73%.

2031 Transit Mode Share Target

- 2017 TMP provides for 12% total transit share by 2031. To achieve this, development of the B.L.A.S.T. network and GO Transit rail expansion to West Harbour and Confederation Stations are required as well as HSR service levels to support rapid transit.
- 12% mode share includes GO Transit trips



Transit

2031 A.M. Peak Period Transit Mode Share based on 2016 Transportation Tomorrow Survey and Hamilton Emme Model

	Origin in Hamilton	Destination in Hamilton	Origin and Destination in Hamilton	Origin and/or Destination in Hamilton	Distribution of Transit Trips (HSR & GO)	2031 Transit Mode Share
-						
Local Transit Only	17,329	18,736	16,158	19,907	94.2%	11.3%
Local Transit + GO	783	435	0	1,218		
GO Only	1,288	4	0	1,292	5.8%	0.7%
Total Transit	19,400	19,175	16,158	22,417		12%

- 2031 mode share for HSR Trips was calculated using existing ratio of HSR and GO Transit Trips in Hamilton (based on 2016 Transportation Tomorrow Survey)
- 2031 A.M. peak period transit mode share adjusted to 11.3%

Transit

2031 HSR Bus-Only Transit Mode Share



- LRT in Hamilton is not D.C. Eligible, therefore ridership from the LRT corridor was removed and a 2031 HSR bus-only mode share target was identified.
- Projected A.M. peak LRT ridership is 4,760, which represents a 1.5% mode share
- Subtracting this from the 11.3% HSR mode share, the 2031 HSR bus-only mode share is adjusted to 9.8%

Transit

2028 HSR Bus-Only Transit Mode Share



2028 transit mode share is based on the following

- Ridership forecasts were conducted by HSR between 2019 and 2024. Based on this forecast, projected 2024 HSR bus-only mode share is 6.7%
- Linear interpolation was used between 2024 and 2031 to calculate 2028 HSR bus-only ridership. Based on this calculation, 2028 HSR bus-only mode share should grow to 8.5%

Transit

Summary of Projected Local HSR Transit Ridership and Mode Share



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total A.M. Peak Period Person Trips (from Emme model)	253,124	256,485	259,847	263,208	266,570	269,931	273,292	276,654	280,015	283,377	286,738	290,099	293,461	296,822	300,184	303,545
Total Local A.M. Peak Period Ridership	18,166	18,093	18,016	17,974	18,078	18,462	18,981	19,426	19,922	22,519	25,117	27,714	29,836	31,957	34,078	36,200
A.M. Peak Period HSR Bus Ridership	18,166	18,093	18,016	17,974	18,078	18,462	18,981	19,426	19,922	21,567	23,213	24,858	26,504	28,149	29,794	31,440
A.M. Peak Period HSR L.R.T. Ridership										952	1,904	2,856	3,332	3,808	4,284	4,760
A.M. Peak Period HSR Bus Mode Share	6.7%	6.6%	6.5%	6.4%	6.4%	6.4%	6.5%	6.6%	6.7%	7.2%	7.6%	8.1%	8.5%	9.0%	9.4%	9.8%
A.M. Peak Period HSR L.R.T. Mode Share										0.3%	0.6%	0.9%	1.1%	1.2%	1.4%	1.5%
Total Mode Share	6.7%	6.6%	6.5%	6.4%	6.4%	6.4%	6.5%	6.6%	6.7%	7.5%	8.3%	9.0%	9.6%	10.2%	10.8%	11.3%

Draft Service Standards



SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED							
Service Category	Sub-Component	10 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Services Related to a Highway	Roads	\$22,055.60	0.0092	lane km of roadways	2,397,348	per lane km	1,900,817,775
	Bridges, Culverts & Structures	\$3,021.00	0.0007	Number of Bridges, Culverts & Structures	4,315,714	per item	260,358,843
	Traffic Signals	\$250.50	0.0010	No. of Traffic Signals	250,500	per signal	21,588,842
	Facilities	\$952.77	1.6712	sq.ft. of building area	570	per sq.ft.	82,112,577
	Vehicles and Equipment	\$184.36	0.0023	No. of vehicles and equipment	80,157	per vehicle	15,888,698
	Active Transportation - Terminals	\$17.80	0.0563	sq.ft. of terminal space	316	per sq.ft.	1,534,057
	Active Transportation - Shelters	\$16.70	0.0021	No. of Shelters/Pads	7,952	per item	1,439,256
Fire	Fire Facilities	\$197.44	0.4755	sq.ft. of building area	415	per sq.ft.	17,015,972
	Fire Vehicles	\$122.13	0.0002	No. of vehicles	610,650	per vehicle	10,525,530
	Fire Small Equipment and Gear	\$37.42	0.0086	No. of equipment and gear	4,351	per Firefighter	3,224,968
Police	Police Facilities	\$278.28	0.6260	sq.ft. of building area	445	per sq.ft.	23,983,005
	Police Vehicles	\$16.30	0.0004	No. of vehicles and equipment	40,750	per vehicle	1,404,783
	Police Small Equipment and Gear	\$21.70	0.0045	No. of equipment and gear	4,822	per Officer	1,870,171
Parking	Parking Spaces	\$263.81	0.0090	No. of spaces	29,312	per space	17,159,785
	Parking Meters	\$4.37	0.0051	No. of Meters	857	per meter	284,251
	Parking Facilities	\$85.34	0.0599	sq.ft. of building area	1,425	per sq.ft.	5,551,026
Airport	Airport Facilities	\$291.51	0.0029	acres of land	100,521	per sq.ft.	18,961,559
Parks	Parkland Development	\$447.94	0.0115	Acres of Parkland	38,951	per acre	29,136,705
	Parkland Amenities	\$560.40	0.0334	No. of parkland amenities	16,778	per amenity	36,451,778
	Parkland Amenities - Buildings	\$4.81	0.0501	sq.ft. of building area	96	per sq.ft.	312,871
	Parkland Trails	\$20.73	0.0001	Linear Kilometres of Paths and Trails	207,300	per lin m.	1,348,404
	Parks Vehicles and Equipment	\$0.26	0.0001	No. of vehicles and equipment	2,600	per vehicle	16,912

Draft Service Standards



SUMMARY OF SERVICE STANDARDS AS PER DEVELOPMENT CHARGES ACT, 1997, AS AMENDED							
Service Category	Sub-Component	10 Year Average Service Standard					Maximum Ceiling LOS
		Cost (per capita)	Quantity (per capita)		Quality (per capita)		
Recreation	Indoor Recreation Facilities	\$1,852.13	4.0265	sq.ft. of building area	460	per sq.ft.	120,473,648
	Indoor Recreation Facilities - Buildings Within Parks	\$178.09	0.4141	sq.ft. of building area	430	per sq.ft.	11,584,042
	Recreation Vehicles and Equipment	\$0.53	0.0001	No. of vehicles and equipment	5,300	per vehicle	34,474
Library	Library Facilities	\$392.97	0.7327	sq.ft. of building area	536	per sq.ft.	25,561,127
	Library Collection Materials	\$66.53	2.0094	No. of library collection items	33	per collection item	4,327,510
	Library Vehicles	\$2.36	0.00001	No. of vehicles and equipment	214,545	per vehicle	153,509
Ambulance	Paramedics Facilities	\$38.61	0.1225	sq.ft. of building area	315	per sq.ft.	2,511,426
	Paramedics Vehicles	\$27.60	0.0005	No. of vehicles and equipment	55,200	per vehicle	1,795,270
Homes for the Aged	Long Term Care Facilities	\$305.30	0.6387	sq.ft. of building area	478	per sq.ft.	19,858,544
Social Housing	Social Housing	\$1,604.83	10.71	sq.ft. of building area	149.84	per sq.ft.	104,387,772
Provincial Offences Act	Provincial Offences Act Facilities	\$22.48	0.0421	sq.ft. of building area	533.97	per sq.ft.	1,462,234
Health	Health Facilities	\$95.84	0.1975	sq.ft. of building area	485	per sq.ft.	6,234,009
	Health Vehicles	\$0.74	0.000002	No. of vehicles	390,898	per vehicle	48,134
Social Services	Social and Child Services Facilities	\$94.63	0.2647	sq.ft. of building area	357	per sq.ft.	6,155,303
Waste Diversion	Waste Diversion - Facilities - Stations/Depots	\$392.32	0.8589	sq.ft. of building area	457	per sq.ft.	25,518,847
	Waste Diversion - Vehicles & Equipment	\$79.39	0.0004	No. of vehicles and equipment	198,475	per vehicle	5,164,002
	Waste Diversion - Carts & Containers	\$20.18	1.3441	No. of items	15	per Item	1,312,628

*Transit is now based on a forward looking service standard based on the amendments to the DCA

Comparison of Service Standards



Service Category	Sub-Component	2014 D.C. Study		2019 D.C. Study
		Maximum Ceiling LOS	Utilized	Maximum Ceiling LOS
Services Related to a Highway	Services Related to a Highway	958,468,059	743,866,065	1,900,817,775
	Bridges, Culverts & Roundabouts	108,997,984		260,358,843
	Traffic Signals	19,898,725		21,588,842
	Active Transportation - Terminals	Previously combined with Services Related to a Highway		1,534,057
	Active Transportation - Shelters			1,439,256
Public Works Facilities, Fleet and Equipment	Depots and Domes	56,117,480	12,343,500	82,112,577
	Fleet	16,790,304	9,331,520	15,888,698
Fire	Fire Facilities	19,519,649	19,890,874	17,015,972
	Fire Vehicles	11,779,913	3,705,216	10,525,530
	Fire Small Equipment and Gear	2,827,135	542,325	3,224,968
Police	Police Facilities	24,411,373	24,808,438	23,983,005
	Police Vehicles	598,830	598,830	1,404,783
	Police Small Equipment and Gear	2,010,749	2,010,700	1,870,171
Parking	Parking Spaces	8,858,524	12,577,100	17,159,785
	Parking Meters	139,695		284,251
	Parking Facilities	3,776,922		5,551,026
Airport	Airport Facilities	9,374,519	8,870,872	18,961,559
Parks	Parkland Development	20,874,878	36,355,184	29,136,705
	Parkland Amenities (Buildings)	Previously combined with Park Amenities		312,871
	Parkland Amenities	20,949,623		36,451,778
	Parkland Trails	884,564		1,348,404
	Parks Vehicles and Equipment	Previously combined with Fleet		16,912

Comparison of Service Standards



Service Category	Sub-Component	2014 D.C. Study		2019 D.C. Study
		Maximum Ceiling LOS	Utilized	Maximum Ceiling LOS
Recreation	Indoor Recreation Facilities	76,364,238	57,053,713	120,473,648
	Indoor Recreation Facilities - Buildings Within Parks	Previously combined with Park Amenities		11,584,042
	Recreation Vehicles and Equipment	Previously combined with Fleet		34,474
Library	Library Facilities	11,387,469	11,972,568	25,561,127
	Library Vehicles	74,745		153,509
	Library Collection Materials	5,156,862		4,327,510
Ambulance	Ambulance Facilities	1,018,073	1,070,608	2,511,426
	Ambulance Vehicles	179,903	179,900	1,795,270
Long Term Care	Long Term Care Facilities	10,827,142	6,816,663	19,858,544
Social Housing	Social Housing	66,700,535	13,891,500	104,387,772
Provincial Offences Act	Provincial Offences Act Facilities	867,037	867,037	1,462,234
Health	Health Facilities	2,857,306	768,700	6,234,009
	Health Vehicles	44,331		48,134
Social Services	Social & Child Services	4,007,342	723,704	6,155,303
Waste Diversion	Waste Diversion - Facilities - Stations/Depots	Previously Ineligible		25,518,847
	Waste Diversion - Vehicles & Equipment			5,164,002
	Waste Diversion - Carts & Containers			1,312,628

Service Standard Valuation Drivers



- Increase in land values for facilities
- Inclusion of land values and updated detailed costing for Services Related to a Highway
- Inflation from 2014 values (12.4%)
- Actual/tender costs provided by the City for specific projects
- Inclusion of Waste Diversion service (newly eligible as per Bill 73)
- Transit based on forward looking service standard (vs. historical average)

Next Steps



- Finalize Capital Forecasts (Fall 2018)
- Draft Background Study prepared (Fall 2018)
- Staff to receive DC Policy opinions from external stakeholders (sub-committee direction – agriculture, downtown, etc.) (Late Fall 2018)
- Final Background Study released to public (Dec 2018 / Jan 2019)
- Draft By-law (Policy) prepared and released (early 2019)
- Public Meeting (Spring 2019)
- Council Considers By-law for adoption (Spring 2019)
(current D.C. By-law expires July 5, 2019)