Appendix E
Local Service Policy

Appendix E: Local Service Policy

Introduction

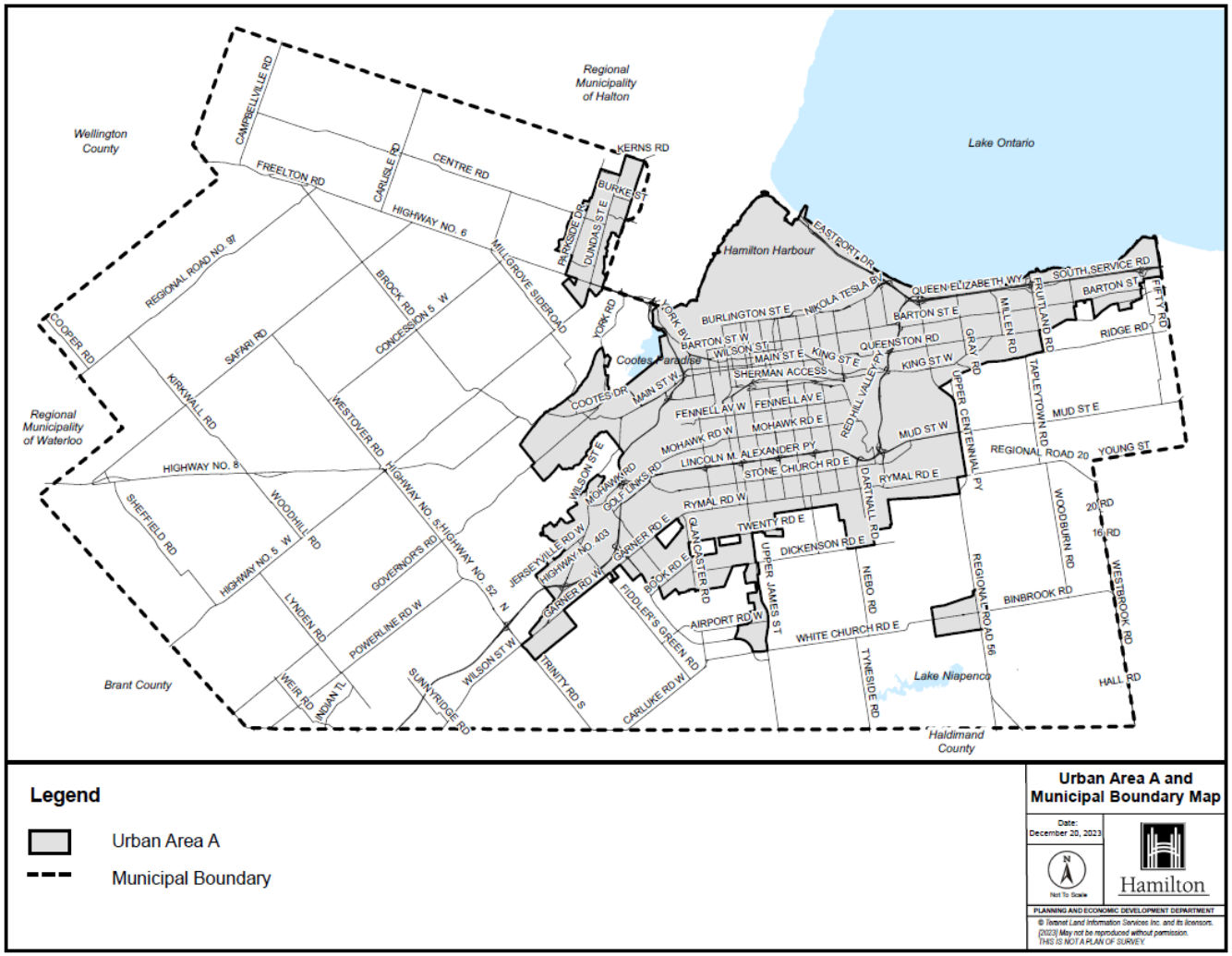
Definitions:

"Urban Area" means the area within the City that is identified as the urban area in Schedule E of the Urban Hamilton Official Plan, as amended.

"Urban Area A" means the lands within the Urban Area, identified in Map E-1 and which are not subject to any expansion resulting from an amendment to the urban boundary in the Urban Hamilton Official Plan.

"Urban Area B" means any lands added to the Urban Area as a result of any amendment to the Urban Hamilton Official Plan expanding the Urban area beyond Urban Area A.

Map E-1
Map of Urban Area A and Municipal Boundary



For development within Urban Area A, the local service policy set out herein would apply.

For development within Urban Area B, the following would be a direct developer responsibility:

- All costs required to service the development and/or to connect the development area with existing infrastructure, including without limitation all water, wastewater, stormwater, transit, transportation works (in accordance with the Complete Street definition), any utility relocation/conversion costs, and land acquisition costs to meet City standards will be a developer responsibility, unless otherwise provided herein.
- In conjunction with the above bullet, the scope to service the development and/or connect the development area would be identified within approval authority accepted studies to support development areas.
- For projects occurring within Urban Area A, with an oversizing component, that are required to service development within Urban Area B, the oversizing component is a direct developer responsibility.
- Downstream and/or upstream water and wastewater infrastructure located within Urban Area A required to support development within Urban Area B would be a direct developer responsibility.
- Section E.3 of the local service policy applies to development within Urban Area B.

Based on the above, and to be clear, developments occurring within Urban Area B will be required to pay the City-wide development charges (D.C.s) for all services except for stormwater, water linear, and wastewater linear.

If the development within Urban Area B will be serviced with municipal water and/or wastewater, the water and/or wastewater treatment D.C. will apply. If the development within Urban Area B will not be serviced with municipal water or wastewater, the water or wastewater treatment D.C. will not apply, as set out in Table E-1.

Table E-1

Service	Inside Urban Area A	Within Urban Area B – Connecting to Municipal Water/Wastewater*	Within Urban Area B – Not Connecting to Municipal Water/Wastewater
Services Related to a Highway	✓	✓	✓
Public Works	✓	✓	✓
Transit Services	✓	✓	✓
Fire Protection Services	✓	✓	✓
Policing Services	✓	✓	✓
Parks and Recreation	✓	✓	✓
Library Services	✓	✓	✓
Long-Term Care Services	✓	✓	✓
Child Care and Early Years Programs	✓	✓	✓
Provincial Offences Act Services including By-law Enforcement	✓	✓	✓
Public Health Services	✓	✓	✓
Ambulance	✓	✓	✓
Waste Diversion	✓	✓	✓
Wastewater Facilities	✓	✓	
Wastewater Linear Services	✓		
Water Supply and Treatment	✓	✓	
Water Linear Services	✓		
Stormwater Services	✓		

* Certain projects may be oversized for developments within Urban Area B and may need to be directly funded by the developer as set out in the local service policy.

E.1 Local Service Policy for Stormwater Drainage Systems

Stormwater runoff "minor" systems are designed and implemented to accommodate drainage to avoid property damage and flooding and to minimize inconvenience to the public from 1-in-5-year rainfall events. Minor systems typically comprise underground piping, maintenance holes, catch basins, and outfall structures in addition to a rural type of drainage system consisting of ditches and culverts.

Stormwater runoff "major" systems are designed and implemented for flood control to avoid loss of life, injuries, and significant damage to property from events greater than a 1-in-5-year return period, producing unusual high-intensity rainfall and/or a large volume of run-off. Major systems can be large diameter underground piping, open channels, road overland flow route, stormwater facilities, natural streams, or any combination thereof, capable of conveying run-off, from events up to and including a 1-in-100-year return period, to the ultimate receiving stream or water body.

In addition to the City's Major/Minor systems there are also class of works related to source water management and use of natural systems. These have been articulated in the City's Green Standards and Guidelines (2023). The definitions of these practices per the Green Standards and Guidelines are as follows:

Low Impact Development (LID):

- Stormwater management approach that seeks to manage precipitation at source through better site design and use of LID practices.
- Typically includes a suite of site design strategies to mimic the area's natural hydrology through stormwater infiltration, evapotranspiration, rainwater harvesting, filtration, and detention.
- LID practices can include those such as bio-swales, permeable pavement, rain gardens, green roofs, and exfiltration systems, etc. LID practices often employ vegetation and soil in their design, however not always, and the specific form may vary considering local conditions and community character.

Green Infrastructure (GI):

- Natural and human-made elements that provide ecological and hydrological functions and processes. GI can include components such as natural heritage features and systems, parklands, stormwater management systems, street trees, urban forests, natural channels, permeable surfaces, and green roofs.

Natural Infrastructure/Assets:

- The term "natural infrastructure" refers to naturally occurring landscape features and/or nature-based solutions that promote, use, restore or emulate natural ecological processes.

In summary, LID practices are human-made measures to off-set the impacts of development, while Natural infrastructure considers the water management services provided by natural features or nature-based solutions. Green Infrastructure considers both concepts and embodies these into a more holistic term.

The following should be read in conjunction with the City's Comprehensive Development Guidelines and Financial Policies and Storm Drainage Policy, as amended.

E.1.1 Storm Sewers

1. The developer is responsible for the full cost of all storm sewer mains up to and including 1,200 mm diameter in size (the local service component).

2. Storm sewers larger than 1,200 mm diameter in size are considered trunk sewers for the purposes of oversizing and are eligible for D.C. contribution-based flat rates outlined in the City's Financial Policies for Development.

   Storm sewer sizing to be designed to City standard criteria for minimum velocity (0.8 m/s) and slope (0.2 %), to convey the 5-year event assuming a 5-year downstream boundary water level, without surcharging. Elliptical pipes are to be converted to equivalent circular diameter for oversizing calculation. Oversizing as a result of lower than standard velocity/slope/hydraulic grade line due to site design conditions is the responsibility of the local development and is not D.C.

eligible (excluding industrial lands as per the City's *Comprehensive Development Guidelines and Financial Policies Manual*).

3. Storm sewers conveying an event larger than a 5-year return period (i.e., major system flows) are not eligible for D.C. contributions unless required to do so by the City. In some areas, a storm sewer system may not be viable, and the major overland system may not be able to safely convey the runoff resulting from a 1-in-100-year design storm event. In this case a relief sewer or alternate conveyance mechanism may provide the additional capacity required and be funded through D.C.s.

4. The construction of storm sewers deemed to be temporary are not eligible for D.C. contributions.

5. Installation of private drain connections or private systems is considered a local service component and is the developer's responsibility.

6. The construction of on-site open watercourse and overland flow routes for conveyance internal to a development is considered a local service component and is not eligible for D.C. contributions. The construction of downstream off-site outlets to service more than one development, including open watercourses and/or culverts and storm sewers, identified through the City's Stormwater Master Plan, a Master Plan, a Master Drainage Plan, a Watershed/ Subwatershed Study or a Block Plan or Neighbourhood Plan, has been included in the D.C. Background Study and is eligible for D.C. contributions.

E.1.2 Stormwater Management Facilities

1. Stormwater Management Facilities (S.W.M.) in Series: If the stormwater management plan for local development involves two or more S.W.M. facilities in series, conveyance of the controlled 100-year peak flow between facilities in series is not D.C. eligible for oversizing (the connecting works are not considered to be part of the S.W.M. facility and outlet structure and appurtenances). If, however, local five-year flows are added to the storm sewer between the facilities in series, then the potential oversizing (compared to the sewer without any local inflow) is D.C. eligible.

2. Centralized stormwater management facilities (e.g., wet ponds and dry ponds) identified through the City's Stormwater Master Plan, a Master Plan, a Master Drainage Plan, or a Watershed/Subwatershed Study have been included in the D.C. Background Study and are eligible for D.C. contributions.

3. A stormwater management facility not identified in an approved City Stormwater Master Plan, a Master Plan, a Master Drainage Plan, or a Watershed/ Subwatershed Study is deemed a local service. Notwithstanding this, an unidentified stormwater management facility may be eligible for D.C. contributions provided it can be demonstrated that it is a centralized public facility servicing a catchment area through an approved neighbourhood stormwater study.

4. Stormwater quality treatment by mechanical means (i.e., oil/grit separators) is not eligible for D.C. contributions.

5. LID practices and GI are not eligible for D.C. contributions.

6. Stormwater management facilities serving only non-residential areas (i.e., industrial, commercial, institutional) are not eligible for D.C. contributions.

7. For stormwater facilities which benefit both residential and non-residential lands, only the residential portion will be eligible for D.C. contributions. The portion servicing the non-residential land uses shall be the financial responsibility of the developer.

8. Where a centralized (communal) facility serves both residential and non-residential parcels, the cost is established based on the ratio of the areas served and factored by the respective runoff coefficients. Note that the non-residential area, if commercial, may also be required to provide lot-level quality controls, depending on location; however, this component (LID and/or GI) would not be eligible for D.C. contributions.

9. The construction of stormwater facilities deemed by the City to be temporary as part of the phasing of development is not eligible for D.C. contributions. Such a facility may be considered for D.C. contribution in the future if it is subsequently

determined to be a permanent municipal facility forming part of the City's centralized system.

10. The developer is responsible to acquire lands for stormwater management facilities External to a Development. The City will not act as a third-party agent in the negotiation and acquisition of lands for stormwater management facilities on behalf of private interest, unless otherwise approved by Council.

11. Oversizing – Downstream Constraints: If local development improves an existing downstream constraint to conveyance, e.g., mitigation or removal of historically observed/recorded surface or subsurface flooding due to inadequate capacity of existing culverts and/or sewers downstream, then a portion of this work may be D.C. eligible subject to a detailed study that the developer shall provide at their cost.

12. 100-Year Control: City policy dictates that the controlled 100-year outlet flow from a stormwater management facility is required to be conveyed in an enclosure to the development outlet, and potentially also beyond the development limit, to the receiving watercourse. This is considered by the City to be part of the outlet works, which are the responsibility of the development. (Note: current City practice is to request the development to enclose the 100-year peak flow between the S.W.M. block and the outlet, and not spill onto City roads). If the S.W.M. facility outlet pipe size exceeds 1,200 mm in diameter to convey the controlled 5-year flow, then there may be a City share in accordance with the oversizing policy.

13. Rural Settlement Areas (R.S.A.): For Rural Settlement Areas, and other areas outside the Urban Boundary, the stormwater management system is deemed a local service component, and stormwater management infrastructure is not eligible for D.C. contributions.

14. Airport Employment Growth District (A.E.G.D.) lands:

    - The neighbourhood dry ponds serving roads with 26 m or greater right-of-way (R.O.W.), are partially D.C. eligible on account of also controlling runoff from subject public roads. The City estimates the share to be 5% of the total area

of road R.O.W. contributing. Notwithstanding, non-residential stormwater management facilities are currently excluded from the City stormwater D.C.

15. City Standard: Proposed stormwater management facilities not to serve drainage areas exceeding 40 ha (based on limits associated with overland runoff conveyance in road R.O.W.s).

16. Public Roads/Single Applicants: In the case of a public road draining to a non-centralized facility under single applicant, the developer would construct the stormwater management facility, and the City assumes and maintains the facility; notwithstanding this, it would not be D.C. eligible.

17. Underground Tanks: Underground storage tanks are not D.C. eligible.

18. Mixed Use Buildings: In mixed use buildings, where the residential square foot area is equal to or more than the non-residential area, the facility is assigned to the residential section of the D.C.

19. Commercial Lands: When a commercial parcel or parcels is nested within a predominantly residential area, and serviced by a residential S.W.M. facility, the commercial parcels are required to manage their own runoff (i.e., quality control) and are assigned a zero share of the centralized/communal quantity control volume.

E.1.3 Land for Stormwater Management Facilities

1. Calculation of Land Area: The footprint (area of land) for stormwater management facilities in the D.C. Background Study is the larger of the footprint required by:

    a. 6% of the drainage area for a wet pond (quality and quantity) facility; or

    b. 4% of the total contributing drainage area for a dry pond (quantity only) facility or a footprint area determined by a supporting study. An exception to this is lands within the Fruitland-Winona Secondary Plan (i.e., Stoney Creek Urban Boundary Expansion (S.C.U.B.E.)) where 10% of the drainage area was used to establish the footprint.

2. Valuation of Land: The value of land for stormwater management facilities in the D.C. Background Study have been established as follows:

    a. Land designated in the Official Plan for development in Ancaster and Waterdown – $1,074,300/acre ($2,654,600/ha);

    b. Land designated in the Official Plan for development in Hamilton, Stoney Creek, Dundas, Glanbrook – $953,900/acre ($2,357,100/ha);

    c. Land located outside the Urban Boundary shall be based on Open Space value established by an independent real estate appraisal to be obtained at the cost of the developer.

3. D.C. contributions allocated to land costs for stormwater management facilities shall be limited to lands within an approved block net of any identified setbacks and buffers (e.g., Ministry of Transportation (M.T.O.), the City's Natural Heritage System).

4. Land Footprint Contingency: Land cost will be based on actual stormwater management footprint size at the established land value as outlined in Clause 1.3.2. The Land Footprint Contingency will be used to compensate for facilities with a footprint size larger than identified on the individual project.

5. Engineering fees are not eligible for D.C. contributions for land acquisition costs.

6. Tailwater Impacts on Land: If local downstream grades beyond the development limits create tailwater conditions at a S.W.M. facility outlet (e.g., flat topography), the land area requirements to achieve the required stormwater volumes will be more and, therefore, will increase the cost of the facility above the average cost for a facility using the unitary relationships. Detailed studies are required to identify potential candidate facilities to which this condition applies, in order to be able to include this higher cost in the D.C. In the absence of studies, the City has estimated that S.W.M. facilities for which this is potentially a condition, and for sizing allocated 10% of the contributing drainage area (e.g., S.C.U.B.E. facilities) versus 6% per the current standard size.

7. Land costs are adjusted annually for inflation using the Statistics Canada Quarterly, Non-Residential Construction Price Index (Table 18-10-0135-01) for

the most recent year-over-year period as set out in the *Development Charges Act, 1997* (D.C.A.) and reviewed with every D.C. study.

E.1.4 Capital Costs of Stormwater Management Facilities

1. Capital costs assigned to the individual projects are based on $112/m^3 of total volume for the first 6,500 m^3, and $56/m^3 of total volume for the balance of storage volume in excess of 6,500 m^3. The costs are adjusted annually for inflation using the Statistics Canada Quarterly, Non-Residential Construction Price Index (Table 18-10-0135-01) for the most recent year-over-year period as set out in the D.C.A. and reviewed with every D.C. study.

2. Bedrock Impacts: If local conditions dictate that part of a facility excavation is required to be in rock, this will increase the cost of the facility above the average cost for a facility. An allowance has been made to increase the unit cost for rock excavation for these facilities, based on actual costs, up to a maximum of $112/m^3.

3. Frontage Calculation: Facility frontage calculation has been updated using historical actual costs. Pond frontage costs will be limited to a maximum of 120 m at $2,090/m (aboveground and underground works).

4. Capital costs will be paid based on tendered prices in accordance with the City's Financial Policies, to an upset limit established based on the required total storage at the unit cost as outlined in Clause E.1.4.1.

5. Stormwater Management features eligible for D.C. contribution include the following:

    a. Erosion and Sediment control;

    b. Excavation (excludes cost to haul surplus material off site and/or placement and compaction of surplus material within subdivision);

    c. Fine grading;

    d. Decanting areas;

    e. Forebay structures, pond liner, cooling trenches, equalization pipes etc.;

f. Outlet control structures within the facility block excluding the headwall;

g. Inlet control structures (e.g., flow splitter maintenance hole and headwall) excluding the inlet conveyance pipe upstream of the forebay headwall and main cell;

h. Emergency spillways;

i. Maintenance access roads;

j. Landscaping and pond signage; and

k. Bollards

6. Engineering fees (design engineering and soft costs) to a maximum of 10% and construction costs are included in the capital cost assigned to individual projects in the D.C. Background Study.

7. Performance monitoring or development impact monitoring of S.W.M. facilities are not eligible for D.C. contributions.

8. Facility Volume Contingency: Eligible capital cost will be based on the required total storage volume at the established capital cost rate as outlined in Clause E1.4.1. The Facility Volume Contingency will be used to compensate for facilities larger in size than identified on the individual project.

9. Stormwater management facilities eligible for D.C. contributions must be publicly tendered in accordance with the City's Financial Policies for Development.

10. D.C. contribution for land value and capital cost are independent.

E.1.5 Culverts and Bridges

1. Culverts and Bridges (as related to road infrastructure): The responsibility for the cost of stormwater conveyance infrastructure associated with road infrastructure, as part of new development or redevelopment, is to be determined as follows:

    a. The costs of stormwater infrastructure items (excluding land) shall be direct developer responsibilities as a local service for:

i. all crossings (new or extended or replacement) up to the 20 m local cross-section width for roads that are required to service the development.

b. The costs of stormwater infrastructure items shall be eligible for inclusion in a stormwater D.C. for:

i. new crossings (e.g. culverts/bridges) for roads greater than 20 m, where the D.C.-eligible portion is the fraction calculated by the length in excess of the width of 13.0 m (defined by the standard 8.0 m width of pavement, plus 2 x 0.5 m curbs, and plus 2 x 2.0 m sidewalks required for a local road), divided by the total length (i.e., the City cost share is 13 m divided by the total length of the proposed crossing in m).

ii. Extensions to culverts/bridges for road R.O.W.s greater than a 20 m R.O.W., and length of crossings greater than 13 m, 100% D.C. eligible.

Summary of D.C. Eligibility for Culverts/Bridges

Road Type	Road Right-of-Way Width	Culvert/Bridges[1]	Oversizing of Storm Sewers and Ditches for Conveyance and/or Treatment (A.E.G.D.)[2]	Contributing to Neighbourhood S.W.M. (A.E.G.D.)	Existing Culvert/Bridge Upgrades to meet City Design Standards[3]
Urban Local	20 m				
Urban Collector	26 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	In A.E.G.D., a 26 m road is 100% developer responsibility; not D.C. eligible	Not D.C. eligible	A portion is D.C. eligible
Urban Arterial Minor	32 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	Subject to study, oversizing of stormwater conveyance elements greater than 26 m may be D.C. eligible	5% of road R.O.W. assumed to contribute to facility, D.C. eligible	A portion is D.C. eligible
Urban Arterial Major	40 m	Length greater than 13 m is D.C. eligible, costed as a fraction of the total length	Subject to study, oversizing of stormwater conveyance elements greater than 26 m may be D.C. eligible	5% of road R.O.W. assumed to contribute to facility, D.C. eligible	A portion is D.C. eligible

Road Type	Road Right-of-Way Width	Culvert/Bridges[1]	Oversizing of Storm Sewers and Ditches for Conveyance and/or Treatment (A.E.G.D.)[2]	Contributing to Neighbourhood S.W.M. (A.E.G.D.)	Existing Culvert/Bridge Upgrades to meet City Design Standards[3]
Rural Local	20 m	N/A			A portion is D.C. eligible
Rural Collector	20 m	N/A			A portion is D.C. eligible
Road Widening for Development	varies				Extensions to existing culverts bridges beyond the minimum 13 m length are D.C. eligible

Notes:
[1] slopes on culvert ends are assumed common for urban roads hence the weighting is proposed to use pavement/curb/sidewalk width only.
[2] For A.E.G.D. only, road-specific Low Impact Development (LID) Best Management Practices will require an update to City Standards. Notwithstanding this, non-residential stormwater management facilities are currently exempted from the City's stormwater D.C.
[3] Existing culvert/bridge upgrades will be subject to study to determine remaining service life of existing culvert/bridge and D.C. eligible portion.

E.1.6 Watercourses

1. Watercourses: Local development is responsible for any watercourse realignment and/or enclosures within its development limits. Local development is responsible for conveyance of upstream external flows through its development. Watercourse works to accommodate runoff from the development, external to the development, identified in City Master Drainage Plans and/or other related studies are D.C. eligible, proportionate to growth serviced by the watercourse.

2. Watercourse Enclosures: Watercourses enclosed by the development are not subsequently eligible for storm sewer oversizing under the D.C.

E.1.7 Combined Sewer Watershed

1. Current City practice is to control the future land use 100-year peak flow to pre-development land use 2-year levels, and required storage is the responsibility of development and not D.C. eligible. Potential for D.C.-eligible projects has been added as provisional items. Future studies will define locations for these provisional items.

2. New stormwater outlets potentially created through studies will be D.C. eligible where new development may be serviced by new separate storm sewers and a new suitable outlet. Stormwater costs will be shared 50/50 between the City (existing) and new development. The City will identify candidate locations subject to future study.

E.1.8 Miscellaneous

1. Off-site System Monitoring (holistic):

    - Local monitoring of stormwater infrastructure built within the local development is the responsibility of the local developer. In addition, any off-site system monitoring required by a specific development as a condition of Site Plan/Draft Plan Approval is the responsibility of the local developer.
    - Holistic monitoring of more than one development (i.e., typically based on guidance/recommendations in a Secondary Plan or Tertiary Plan Area) is D.C. eligible (included in list of D.C.-eligible studies) and is currently proposed

as a minimum for Greensville, S.C.U.B.E., and the A.E.G.D. lands. Estimated costs for a seven- to 10-year duration of multi-disciplinary monitoring is $2 M per study area, based on recent similar studies in the Greater Golden Horseshoe area.

E.2 Local Service Policy for Water and Wastewater

Utilizing the City's development assumptions, the water and wastewater infrastructure required to service these areas was identified. To determine if a project is a D.C.-related project, the following two categories were considered:

Category 1 – Projects External to Proposed Development Lands (i.e., on existing road allowance and servicing more than one development)

The following project descriptions fall into Category 1 and will be fully or partially allocated to D.C.s:

- New infrastructure or upgrades to existing City infrastructure required to service more than one potential proposed development and/or development property, whether in a Greenfield area or Intensification area. This includes upgrades to infrastructure that is upstream (water) or downstream (wastewater) of multiple developments.
    - For the purposes of allocating costs, If an upgrade is triggered by growth (single or multiple potential development) and that planned growth is less than or equal to the approved Traffic Survey Zone growth, the upgrade will be all or partially allocated to D.C.s.
    - In the case that a development plans to have more growth than is planned for (by approved Traffic Survey Zones and system capacity) and if the infrastructure upgrade is as a result of growth over and above what is approved, that additional oversizing shall be the responsibility of the developer triggering the update (direct developer).
        - This may include watermains for transmission, distribution and looping.
- New infrastructure projects that physically lie outside of a proposed development, but only service a single development – refer to **Category 2** (for the direct developers responsibilities) whereby the cost to extend the service is a 100% direct developer responsibility (net of any D.C. contribution based on minimum

size). For example, a new sewer on an existing road right of way (external to development) to service a new building on land not already serviced, with no additional developments potentially draining to the new sewer.

- For Category 1 projects there will always be a local Direct Developer cost contribution based on the development's frontage in accordance with the Financial Policies for Development and authority through the Planning Act whether or not the development is able to or needs to take benefit of the service (e.g. reverse frontage development). Local cost recoveries will be made on a site-specific basis based on frontage and/or drainage area.

Category 2 – Projects Within Proposed Development Lands – The following project descriptions fall into Category 2:

- Water and sewer infrastructure that is required to directly service the proposed development lands.
- Water and sewer infrastructure that is required to directly service the proposed development lands *and* potentially "oversized" in consideration (capacity, looping or fire protection) of additional proposed developable lands that are normally serviced via proposed development property.

In regard to Category 2 projects, the developer is required to pay for the full cost of the installation of sanitary sewers and watermains up to and including the sizes listed below. This is described as the Direct Developer Contribution.

Note: projects external to the proposed development lands that service only one property are considered Category 2.

The minimum sizes are provided from the City's Development Policies:

Sanitary Sewer	450 mm diameter
Watermain	300 mm diameter

Facilities (Water Pumping Station, Water Reservoir or Elevated Tank, Wastewater Pumping Station)

- No minimum size/capacity.
- Facilities to service single proposed development lands will be Direct Developer Contribution.

- Facilities servicing multiple developments/service areas will be allocated to D.C. categories only (D.C., Benefit to Existing and Post Period Benefit).

Water Treatment/Wastewater Treatment – Treatment upgrades to be included in D.C. categories only (D.C., Benefit to Existing and Post Period Benefit).

Should the size of the local infrastructure be required to be greater than the minimum local servicing sizes (i.e., to support external development), D.C. contributions shall be made. The City shall contribute, through the D.C. fund, towards the cost to install the infrastructure on a "Flat Rate" basis. "Flat Rate" is defined as the cost difference between the size required for external development and the minimum size, noted above in the City's Development Policies.

Projects identified are sized based on the City's engineering guidelines for design and to accommodate the future population and employment demand/flow within the proposed drainage/service areas.

The D.C. capital program identified in this document demonstrates the calculated cost splits on a project-by-project basis.

E.2.1 Funding for Municipal Extensions

In cases where a new watermain or sewer is installed by a developer that benefits and enables a new connection to an existing, unserviced property, a flat rate contribution is made back to the developer. Additional details of this funding methodology related to Direct Developer (or "Developer Initiated") projects including projects external to the development lands are found in the 2007 City Report:

TOE02005b/FCS02026b/PED07248 - Funding Methodology for Municipal Infrastructure Extensions Review and Update

E.2.2 Capacity Allocation

As growth and re-development progresses over time, the City requires a means to determine the amount of spare capacity within the water distribution and wastewater collection systems that are to be allocated to any potential development application. Additionally, the City must also determine a reasonable period of time in which this allocated capacity is to be made available prior to development.

The capacity will be allocated to projects in the order in which the Construction Plans are approved. In the event that multiple projects are approved at the same time, the identification, selection and prioritization of the project given in the City's Infrastructure Staging of Development Program will prevail.

This policy is intended to be used as a guide for conveyance only (not treatment) and is subject to review and update by the City moving forward.

E.2.3 Co-ordinated Projects with Transportation Requirements

Water and wastewater projects external to proposed development lands (i.e., on existing road allowances and/or existing roads) that fall into Category 1 and that are initiated as a result of identified transportation requirements are eligible for inclusion in the D.C. at the same D.C.-eligible percentage as the associated road.

Service connections (water and/or wastewater connections – public portion) will be constructed to each land parcel when an existing dwelling unit exists. Property owners that require more than one service connection will be required to pay for the cost of the additional service connections prior to construction. Benefitting property owners shall contribute towards the cost to install the infrastructure on a "flat rate" basis. The "flat rate" will be established by the City at the beginning of each year.

E.3 Local Service Policy for Parkland Development

The developer's responsibilities related to parkland are generally described in Option 1 (sections 3.3 and 4.3) of the *Park and Open Space Development Guide*, latest version. Whether the developer chooses to develop under Option 1 or 2 of this guide is at the discretion of the developer and the City and requires entering into agreements as detailed in the *Park and Open Space Development Guide*. The direct developer responsibilities are the same regardless of which option is followed; the generality of the guide does not restrict the requirements as detailed in the local service policy below.

All parkland construction must adhere to the City of Hamilton's *Construction and Material Specifications Manual*, latest edition. This includes but is not limited to all soil testing, soil compaction, asphalt, concrete, and granular requirements.

E.3.1 Recreational Trails

1. Recreational trails (trails, multi-use trails, pathways, sidewalks) that are external to development and that do not form part of the municipality's active transportation network, and their associated infrastructure (landscaping, bridges, trail surface, etc.), are included in parkland D.C.s.

2. Recreational trails (trails, multi-use trails, pathways, sidewalks) that are internal to development and that do not form part of the municipality's active transportation network, and their associated infrastructure up to base condition, are a direct developer responsibility as a local service provision under section 59 of the D.C.A.

3. Recreational trails outside of road allowances, including granular base and surfacing are a direct developer responsibility as a local service provision under section 59 of the D.C.A. and include the following:

    a. Recreational trails that are part of the City's Recreational Trails Master Plan which fall in the subdivision area, with materials as indicated in the Plan.

    b. Recreational trails that are part of the City's Pipeline Trail Master Plan which fall in the subdivision area, with materials as indicated in the Plan.

    c. Recreational trails around stormwater management ponds that may link to maintenance truck access or other trails/pathways to provide additional recreation opportunities for residents.

    d. The base condition works for the open space areas that contain trails shall be the same as the works required for parkland in section 2.a).

E.3.2 Parks (City-Wide Parks, Community Parks, Neighbourhood Parks & Parkettes)

1. Park development to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:

    a. Clearing and grubbing; tree removals as per the subdivision's tree preservation and removals plan.

b. Topsoil stripping, screening, and stockpiling.

c. Rough grading (pre-grading) to allow for positive drainage of the park, with minimum slopes of 2%. If necessary, this may include some minor drainage tile work and grading as per the overall subdivision grading design, complete with any required swales or catch basins. Runoff from the development property shall not drain into the park unless approved by the Manager, Environment Services, Public Works.

d. Spreading of topsoil to a 150 mm depth (import topsoil if existing on-site is insufficient to reach required depth).

e. Seeding of site with City-approved seed mix; maintenance of seed until acceptance by City.

f. Parks shall be free of any contaminated soil or subsoil.

g. Parks shall not be mined for fill.

h. Parks shall be conveyed free and clear of all encumbrances.

i. 100% of 1.5 m chain link perimeter fencing to the City standards to separate the development lands from the City lands or lands to be dedicated to the City, unless the perimeter fencing is on land that will be dedicated to the City to fulfil the requirement of parkland dedication under the *Planning Act*, in which case the cost shall be shared 50/50.

j. When park parcels cannot be developed in a timely manner, they shall be graded to ensure positive drainage and seeded to minimize erosion and dust. These shall be maintained by the developer until construction commences thereon.

k. The park block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.

l. Required heritage features within the park, as set out within the Planning approval conditions.

2. Sports facilities, creative play structures/equipment, sun shelters, multi-purpose courts, walkways, plantings, site furnishings, and other amenities (including associated utilities) within parks are included in the parkland D.C.s.

3. Servicing stubs to parkland are not required under the local service policy for parkland; however, they are included in the transportation D.C.s and local service policy. All park-servicing calculations shall follow the criteria outlined in the City of Hamilton's *Engineering Guidelines for Servicing Land under Development Applications*, latest edition (https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development).

4. Where parkland ownership is fragmented (one park block owned by multiple developers), only the final developer shall have the option to fully develop the park (i.e., Option 2 in the *Park and Open Space Development Guide* (https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/park-and-open-space-development) will not be permitted by the City). All developers, however, will still be required to complete all direct developer responsibilities to base condition (i.e., Option 1 of the *Park and Open Space Development Guide* will be required for the park block fragment that they own).

E.3.3 Open Space (General Open Space & Natural Open Space)

General Open Space

1. General Open Space shall include golf courses, community gardens, picnic areas, beaches, remnant parcels of open space lands, and urban plazas, squares and core spaces. These areas do not function as parks but are used for both active and passive recreational activities.

2. General Open Space to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:

    a. Clearing and grubbing; tree removals as per the subdivision's tree preservation and removals plan.

    b. Topsoil stripping, screening, and stockpiling.

c. Rough grading (pre-grading) to allow for positive drainage of the General Open Space, with minimum slopes of 2%. If necessary, this may include some minor drainage tile work and grading as per the overall subdivision grading design, complete with any required swales or catch basins. Runoff from the development property shall not drain into the park unless approved by the Manager, Environment Services, Public Works.

d. Spreading of topsoil to 150 mm depth (import topsoil if existing on-site is insufficient to reach required depth).

e. Seeding of site with City-approved seed mix; maintenance of seed until acceptance by City.

f. General Open Space shall be free of any contaminated soil or subsoil.

g. Parkland shall not be mined for engineering fill and replaced with fill or topsoil.

h. General Open Space shall be conveyed free and clear of all encumbrances.

i. 100% of 1.5 m chain-link perimeter fencing of General Open Space to the City standard located on the public property side of the property line as required by the City.

j. When General Open Space parcels cannot be developed in a timely manner, they shall be graded to ensure positive drainage and seeded to minimize erosion and dust. These shall be maintained by the developer until construction commences thereon.

k. The General Open Space block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.

l. Required heritage features within the General Open Space as set out within the Planning approval conditions.

3. Sun shelters, walkways, plantings, site furnishings, and other amenities (including associated utilities) within General Open Space are included in the parkland D.C.s.

Natural Open Space

1. Natural Open Space shall include lands with significant natural features and landscapes such as woodlots, hazard lands, forested slopes, creek/ravine corridors, the Niagara Escarpment, environmentally sensitive areas (of natural and scientific interest), and areas of wildlife habitat. These areas perform important biological and ecological functions and provide passive recreational opportunities.

2. Where Natural Open Space is to be left as existing in the plan of subdivision, Natural Open Space to base condition is a direct developer responsibility as a local service provision under section 59 of the D.C.A. and includes the following:

    a. Ensure that the area is not damaged or removed, and that the space is kept free of construction debris and garbage during construction.

    b. The Natural Open Space block shall not be used for topsoil or other construction material, equipment storage, or sales pavilions.

    c. Required heritage features within the Natural Open Space as set out within the Planning approval conditions.

    d. Where naturalization or restoration works are required, only native plants shall be utilized.

    e. Where private lots back onto channels, 100% of 1.5 m chain-link perimeter fencing to the City standard shall be located on the public property side of the property line as required by the City.

3. For Natural Heritage Systems, refer to section E.4 of this local service policy.

E.4 Local Service Policy for Natural Heritage System (N.H.S.)

The City contains many natural areas and features that contribute to the municipality's beauty, unique character and quality of life. A systems approach has been used to develop a Natural Heritage System (N.H.S.) within the City, which consists of Core Areas, Linkages, the Greenbelt Plan N.H.S. and the Niagara Escarpment Plan Area (as per the City's Official Plan).

Core Areas are the most important components of the N.H.S. in terms of biodiversity, productivity, and ecological and hydrological functions and comprise key natural heritage features, key hydrologic features and local natural areas, as follows:

- Key hydrologic features:
    - Permanent and intermittent streams
    - Lakes (and their littoral zones)
    - Seepage areas and springs
    - Wetlands
- Key natural heritage features:
    - Significant habitat of endangered and threatened species
    - Fish habitat
    - Wetlands
    - Life Science Areas of Natural and Scientific Interest
    - Significant valley lands
    - Significant wildlife habitat
    - Sand barrens, savannahs, and tallgrass prairies
    - Alvars
- Local Natural Areas
    - Environmentally significant areas
    - Unevaluated wetlands
    - Earth Science Areas of Natural and Scientific Interest.

Linkages are natural areas such as old fields, meadows, thickets, successional habitat, hedgerows, riparian vegetation and woodlands that ecologically connect Core Areas.

Developer responsibility as a local service provision would include but not be limited to:

a) Planting internal to the development as required by the City as part of the creation of a vegetation protection zone that protects the features and functions of the N.H.S. and achieves the goal of natural, self-sustaining vegetation.

b) Implementation of mitigation measures as outlined within approved Environmental Impact Statements, Linkage Assessments, other studies (i.e., subwatershed studies, Secondary Plans) or as required by the City, Conservation Authorities or other authorities having jurisdiction (i.e., Niagara Escarpment Commission, Ministry of Natural Resources and Forestry). These

measures may be located internal or external to the development and would include but not be limited to plant salvage, habitat restoration and management, plantings, monitoring, invasive species control, stewardship/education, and species at risk requirements.

c) Fencing internal to the development at the boundary of the approved vegetation protection zone associated with the N.H.S. features. This fencing is to be to the City's standards.

d) Non-traditional fencing, such as dense plantings and bollards, to delineate the boundaries of the protected areas and prevent encroachment.

e) Compensation planting requirements for tree removal according to the City's standards.

E.5 Local Service Policy for Services Related to a Highway

E.5.1 Overview

This appendix sets out the municipality's general policy guidelines on D.C.s and local service funding for services related to a highway. The guidelines outline in general terms, the size and nature of the engineered infrastructure that is included in the study as a D.C. project, versus infrastructure that is considered as a local service, to be emplaced separately by landowners, pursuant to a development agreement.

The following policy guidelines are general principles by which staff will be guided in considering development applications. Each application, however, will be considered in the context of these policy guidelines on its own merits and having regard to, among other factors, the context of the surrounding area and the location and type of services required as well as their relationship to the proposed development and to the existing and proposed development in the area as per subsection 59 (2) of the D.C.A.

E.5.2 Services Related to a Highway

A highway and services related to a highway are intended for the transportation of people and goods via many different modes including, but not limited to, passenger automobiles, commercial vehicles, transit vehicles, cycling, and walking. A highway shall consist of all land, services, and infrastructure built to support this movement of

people and goods regardless of the mode of transportation in pursuit of a complete street.

The transportation planning paradigm across North America has shifted over the last decade or more. The design and layout, density, and mix of uses within a neighbourhood have become a critical consideration. This new consideration and need to grow the City along regional, sub-regional and community nodes and corridors characterized by denser and more mixed development is supported by highways that accommodate and promote walking, cycling and transit use over auto use and has been identified by the 2017 City of Hamilton Transportation Master Plan (H.T.M.P.), area specific Transportation Master Plans, and the City of Hamilton Official Plan. The overall vision is to create a City which is highly walkable and in which it is easy and convenient to walk, cycle or take transit. The H.T.M.P. has set clear targets to reduce overall vehicle kilometres, reduce trips made by single occupant vehicles, increase trips made by transit, and encourage cycling and walking.

The City of Hamilton Official Plan and the H.T.M.P. put a heavy emphasis on designing corridors, streets and paths with full consideration given to transit, cyclists and pedestrians. Consequently, the design elements of a highway as well as its role and function must change to embrace all categories of the transportation system users and needs to provide a c*omplete street*. The concept of complete streets defines a highway as a transportation facility that provides safe and comfortable travel for a wide variety of users, regardless of mode, level of ability, and age. Complete streets allow safe travel for:

- Pedestrians of all ages and levels of ability;
- Cyclists;
- Automobiles;
- Transit vehicles; and
- Delivery vehicles.

The main premise of complete streets is the recognition that the function of a street (or a highway) goes beyond simply moving vehicles. Rather, streets play an important role in moving people, connecting the community, accommodating pedestrians and cyclists, enabling goods movement, providing a space for public interaction and civic engagement, and providing access for local stores and businesses. A complete street concept has been fully embraced by the City of Hamilton and is fundamental to

transportation policy in the City identified through the key planning documents mentioned earlier. It also translates to the planned capital projects and therefore the local service policy and the D.C. process.

Under this premise, the design of a street is approached with the objective of optimizing the R.O.W. to balance mobility needs and enhance connectivity for all users. Traffic management is a range of measures and infrastructure that help achieve that balance (e.g., traffic signals, roundabouts). Travel Demand Management on the other hand refers to strategies that attempt to reduce or more efficiently manage the demand for travel within the existing transportation network and reduce capital expenditure without further expanding the supply of the network. Examples of Travel Demand Management strategies with impact on highway design, role, and function include:

- Carpooling to increase the occupancy of vehicles. High-occupancy vehicle lanes provided within the road platform are needed to promote better utilization of existing assets by increased auto occupancy.
- Active transportation (walking or cycling) to reduce demand for vehicle travel by shifting commuter travel demand to cycling and walking. This measure is supported by on-road and off-road cycling trails, sidewalks, and multi-use pathways.
- Park and ride facilities at transit stations are designed to “capture” auto users at some critical gateway points and divert them to transit or active transportation modes.

The H.T.M.P. includes the identification of rapid transit initiatives and the implementation of Light Rail Transit corridors which will have effects on the design of these highways as either main Light Rail Transit corridors or the so called “feeder” routes. Several transit priority measures will be required to “prepare” a highway for serving transit effectively. These features will include but will not be limited to:

- High-occupancy vehicle or shared lanes for the exclusive or semi-exclusive use of transit vehicles and private automobiles with more than one occupant. They allow high-occupancy vehicles to have faster travel times than general purpose lanes, encouraging transit use and carpooling. Lanes may be designated as shared lanes only during peak periods.
- Provision of dedicated transit lanes along transit priority routes.

- Transit signals and transit priority signals that use real-time information to either extend a green light or shorten a red light when a bus is approaching to help the bus pass through the intersection without stopping, thus giving priority to transit vehicles at intersections.
- Queue jump lanes with signal priority allow buses to bypass queues at intersections. Transit vehicles have an advanced green and can enter the intersection before other vehicles.
- Architecturally distinctive passenger amenities, bus bays, bus stop infrastructures and terminals located within the road allowance and provided to improve safety and comfort for transit users.

The concept of services related to a highway has evolved and expanded to fully embrace the transportation of people and goods via many different modes including, but not limited to, passenger cars, commercial vehicles, transit vehicles, bicycles and pedestrians. The highway therefore consists of all land and associated infrastructure built to support (or service) this movement of people and goods regardless of the classification of the road (i.e., local, collector or arterial) or the mode of transportation employed, thereby meeting their primary role and function of providing transportation "space" and opportunity for all users. The associated infrastructure to achieve this concept shall include, but is not limited to:

- road pavement, sub-structure and curbs;
- new sidewalks, sidewalks to fill in network gaps, sidewalks associated with the urbanization of roads or sidewalk enhancements and widenings;
- roundabouts, traffic calming features, left and right turn lanes, medians, lay-bys, pedestrian cross-overs;
- grade separation/bridge structures (for any vehicles, railways and/or pedestrians and cyclists);
- grading, drainage and retaining wall features;
- culvert structures;
- storm water drainage systems;
- traffic control systems, signals and related technologies;
- active transportation facilities (e.g., sidewalks, bike lanes, multi-use trails, trails, pathways, cycle tracks, bike share facilities and services, other cycling amenities, etc.);
- sustainable mobility programs;

- transit lanes, queue jump lanes, bus bays, stops and amenities;
- curb extensions between queue jump lanes and bus bays;
- roadway illumination systems;
- boulevard and median surfaces (e.g., sod & topsoil, paving, etc.);
- street trees, streetscaping and landscaping;
- parking lanes and driveway entrances;
- noise attenuation systems;
- signage;
- railings, safety barriers;
- related utilities; and
- temporary works to facilitate the implementation of any of the above.

For road classification information, refer to the City of Hamilton Official Plan and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time (https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development).

E.5.3 Infrastructure

E.5.3.1 Local and Collector Roads (including land)

1. All local roads are considered to be the developer's financial responsibility. For the purposes of D.C. eligibility, the following criteria are applied for Local Roads:

    - Local Residential – up to 8m width of asphalt driving surface and up to 26m road allowance.
    - Local Non-Residential – up to 11m of asphalt driving surface and up to 32m of road allowance.

2. Collector roads, internal to a development, inclusive of approvals, all land and associated infrastructure, including temporary works, are a direct developer responsibility under section 59 of the D.C.A. as the local service component, net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time (https://www.hamilton.ca/build-invest-grow/planning-development/planning-policies-guidelines/comprehensive-development).

In the Airport Employment Growth District (A.E.G.D.) Transportation Master Plan, certain collector roads internal to the development were listed as Schedule C improvements in the implementation plan. These are listed incorrectly and are a direct developer responsibility as outlined in this local service policy.

3. Collector roads, external to development, inclusive of all land and associated infrastructure, including temporary works, needed to support a specific development or required to link with the area to which the plan relates, are a direct developer responsibility under section 59 of the D.C.A. (local service component) net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

E.5.3.2 Arterial Roads

1. New, widened, extended or upgraded arterial roads, inclusive of all associated infrastructure, including temporary works, is included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component) as per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

2. Land acquisition for arterial roads on existing R.O.W. to achieve a complete street: dedication under *Planning Act* provisions (sections 41, 51 and 53) through development lands per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time. In areas with limited development, this in included as part of highway costing funded through D.C.s.

3. Land acquisition for arterial roads on new R.O.W. to achieve a complete street: dedication, where possible, under *Planning Act* provisions (sections 51 and 53) through development for lands up to the collector standard per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time. Land acquisitions for road widenings and/or oversizing beyond the collector standard, or where located in an area with limited development, are included as part of highway costing funded through D.C.s.

4. Land acquisition beyond normal dedication requirements to achieve transportation corridors as services related to highways, including grade separations and infrastructure for the movement of pedestrians, cyclists, public transit and/or railway vehicles, are included as part of highway costing funded through D.C.s.

E.5.3.3 Traffic and Transit Control Systems, Signals and Intersection Improvements on Area Municipal Highways

1. New, widened, extended or upgraded arterial roads, including temporary works, unrelated to a specific development are included as part of highway costing funded through D.C.s net of developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

2. Arterial and non-arterial road improvements related to any private site entrances or entrances to a specific development, including any temporary works, are a direct developer responsibility under section 59 of the D.C.A. (local service component), net of applicable oversizing per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

3. Intersection improvements, new or modified signalization, signal timing and optimization plans, area traffic studies for highways attributed to growth and unrelated to a specific development are included as part of highway costing funded through D.C.s as permitted under subsection 5 (1) of the D.C.A.

E.5.3.4 Streetlights

1. Streetlights on new arterial roads and arterial road improvements are considered part of the complete street and included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component).

2. Streetlights on non-arterial roads external to development needed to support a specific development or required to link with the area to which the plan relates are considered part of the complete street and included as a direct developer responsibility under section 59 of the D.C.A. (local service component).

3. Streetlights on non-arterial roads internal to development are considered part of the complete street and included as a direct developer responsibility under section 59 of the D.C.A. (local service component).

E.5.3.5 Transportation-Related Pedestrian and Cycling Facilities

1. Sidewalks, multi-use trails, trails, pathways, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations, located within City arterial road and provincial highway corridors are considered part of the complete street and included as part of highway costing funded through D.C.s, net of direct developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

2. Sidewalks deemed to be temporary are considered direct developer responsibility (local service component).

3. Sidewalks, trails, pathways, multi-use trails, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations that are located within or linking to non-arterial road corridors internal to development are considered part of the complete street and are a direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

4. Other sidewalks, trails, pathways, multi-use trails, cycle tracks and bike lanes, inclusive of all required land and infrastructure, including related temporary works and grade separations, that are located within non-arterial road corridors external to development and needed to support a specific development or required to link with the area to which the plan relates are a direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

5. Multi-use trails (not associated with a road), inclusive of all land and required infrastructure and including related temporary works and grade separations, that

go beyond the function of a (parkland) recreational trail and form part of the City's active transportation network for cycling and/or walking are included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A.

E.5.3.6 Sustainable Modes Programs including Transportation Demand Management

1. Bike share expansions within existing service areas and in new service areas; cycling amenities including bike racks, lockers, shelters and fix-it stations; pedestrian amenities (e.g., benches); and sustainable mobility programs (e.g., Smart Commute, Travel Demand Management for higher-density developments) are considered part of the complete street and included as part of highway costing funded through D.C.s net of direct developer responsibility (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

E.5.3.7 Noise Abatement Measures

1. Noise abatement measures external and internal to development where it is related to, or a requirement of a specific development are a direct developer responsibility under section 59 of the D.C.A. (local service component).

2. Noise abatement measures on new arterial roads and arterial road improvements abutting an existing community and unrelated to a specific development are included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A.

E.5.3.8 Transit Nodes, Terminals, Lanes and Bus Stop Infrastructure

1. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities (including bus pads and shelters) located within arterial road corridors, and including transit stations or terminals located on lands to serve these road corridors are considered part of the complete street and included in the D.C. calculations as permitted under subsection 5 (1) of the D.C.A., net of direct developer responsibility under section 59 of the D.C.A. (local service component) per the *Financial Policies for Development* and the *Comprehensive Development Guidelines and Financial Policies Manual, 2017*, or as may be amended from time to time.

2. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities located within non-arterial road corridors internal to development are considered part of the complete street and direct developer responsibility under section 59 of the D.C.A. (local service component).

3. Transit node, transit priority measures (e.g., queue jump lanes, transit signal priority) and bus stop infrastructure and amenities located within non-arterial road corridors external to development and needed to support a specific development or required to link with the area to which the plan relates are a direct developer responsibility under section 59 of the D.C.A. (local service component).

E.5.3.9 Infrastructure Assets Constructed by Developers

1. All infrastructure assets constructed by developers must be designed in accordance with the City's engineering standards and policies, including the Comprehensive Development Guidelines and Financial Policies Manual (2019), the Complete Streets Guidelines and the AEGD Eco-Industrial Guidelines.

2. All infrastructure assets shall be conveyed in accordance with the City's engineering standards and policies.