

Appendix C
Maintenance Responsibility Table

This Maintenance Responsibility Table sets out as a general guide, for the convenience only of the Parties to the Project Agreement, the allocation of maintenance responsibilities with respect to the Stage 1 Light Rail Transit System (System). However, this Maintenance Responsibility Table is not intended to specifically or exhaustively define the allocation of responsibilities for Maintenance on the System nor is it to be construed as a detailed or complete list of Maintenance responsibilities for the System. In the event of any conflict between the Project Agreement (including this Schedule 15-3) and the Maintenance Responsibility Table the provisions of the Project Agreement including this Schedule 15-3 shall prevail. For further certainty, all New System Infrastructure shall be the responsibility of Project Co, unless expressly stated otherwise in the Project Agreement.

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
LRT Systems & Power	✓	
Subsystems	✓	
LRT Vehicles	✓	
• Vehicles	✓	
• Non-Revenue Vehicles	✓	
Traction Power	✓	
• Traction Power substations	✓	
• Traction Power rectifier units	✓	
• Rectifier transformer	✓	
• Substation AC switchgear & protection devices	✓	
• Substation DC switchgear & protection devices	✓	
• HVAC	✓	
• Substation Grounding System	✓	
• DC feeder system	✓	
• Battery subsystem	✓	
• Auxiliary power equipment	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
<ul style="list-style-type: none"> • Fire/Smoke Detection 	✓	
<ul style="list-style-type: none"> • Intrusion alarm subsystem 	✓	
<ul style="list-style-type: none"> • Lightning protection 	✓	
<ul style="list-style-type: none"> • Negative disconnect switch 	✓	
<ul style="list-style-type: none"> • Positive disconnect switch 	✓	
<ul style="list-style-type: none"> • Telephone equipment [Footnote 1] 	✓	✓
<ul style="list-style-type: none"> • Protective devices and metering 	✓	
<ul style="list-style-type: none"> • Cable and raceway subsystem 	✓	
<ul style="list-style-type: none"> • Substation foundation 	✓	
<ul style="list-style-type: none"> • Negative return rail overvoltage detection 	✓	
<ul style="list-style-type: none"> • Tie in equipment to Hydro Alignment Supply points /demarcation 	✓	
Overhead Catenary System	✓	
<ul style="list-style-type: none"> • OCS, supporting systems and foundations 	✓	
<ul style="list-style-type: none"> • Cathodic Protection 	✓	
<ul style="list-style-type: none"> • Lightning protection 	✓	
<ul style="list-style-type: none"> • Feeder and reinforcing Cables 	✓	
<ul style="list-style-type: none"> • Switch heaters 	✓	
Train Control and Signaling System	✓	
<ul style="list-style-type: none"> • Vital Microprocessor Interlocking Systems 	✓	
<ul style="list-style-type: none"> • Non-vital control logic 	✓	
<ul style="list-style-type: none"> • Vehicle location system 	✓	
<ul style="list-style-type: none"> • Onboard logic processor 	✓	
<ul style="list-style-type: none"> • ATP 	✓	
<ul style="list-style-type: none"> • Grounding 	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
<ul style="list-style-type: none"> • Fuses and electrical protection 	✓	
<ul style="list-style-type: none"> • Local control panels 	✓	
<ul style="list-style-type: none"> • Event recorders 	✓	
<ul style="list-style-type: none"> • Wayside switch indicators 	✓	
<ul style="list-style-type: none"> • Mainline switch machines 	✓	
<ul style="list-style-type: none"> • Track switch heaters 	✓	
<ul style="list-style-type: none"> • Relays 	✓	
<ul style="list-style-type: none"> • Control circuitry and software 	✓	
Train position detection and associated signalling	✓	
<ul style="list-style-type: none"> • Instrument houses, cases and junction boxes 	✓	
<ul style="list-style-type: none"> • Wayside LRT signal equipment 	✓	
<ul style="list-style-type: none"> • Batteries 	✓	
<ul style="list-style-type: none"> • Yard switch machines 	✓	
Communications and Control Systems	✓	
<ul style="list-style-type: none"> • Communication System 	✓	
<ul style="list-style-type: none"> • Public address (PA) 	✓	
<ul style="list-style-type: none"> • Passenger information display system (PIDS) 	✓	
<ul style="list-style-type: none"> • Closed circuit television (CCTV) 	✓	
<ul style="list-style-type: none"> • Workstations 	✓	
<ul style="list-style-type: none"> • Monitors 	✓	
<ul style="list-style-type: none"> • Application Servers 	✓	
<ul style="list-style-type: none"> • Database Servers 	✓	
<ul style="list-style-type: none"> • Network Recorders 	✓	
<ul style="list-style-type: none"> • Intrusion access control system (IAC) 	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
<ul style="list-style-type: none"> • Telephone and Intercom System 	✓	
<ul style="list-style-type: none"> • SCADA 	✓	
<ul style="list-style-type: none"> • Train control 	✓	
<ul style="list-style-type: none"> • LRT Consoles 	✓	
<ul style="list-style-type: none"> • LRT Signalling Room 	✓	
<ul style="list-style-type: none"> • Radio communication systems [Footnote 2] 		✓
<ul style="list-style-type: none"> • Fare collection [Footnote 3] 	✓	✓
<ul style="list-style-type: none"> • Master clock 	✓	
Cathodic Protection/Stray Current	✓	
<ul style="list-style-type: none"> • Structures and materials 	✓	
<ul style="list-style-type: none"> • Coating systems 	✓	
<ul style="list-style-type: none"> • Cathodic protection 	✓	
<ul style="list-style-type: none"> • Stray current corrosion prevention systems 	✓	
Miscellaneous System Infrastructure		
<ul style="list-style-type: none"> • Uninterruptible power supplies and battery banks 	✓	
<ul style="list-style-type: none"> • Lighting controls 	✓	
<ul style="list-style-type: none"> • Guideway intrusion detection and monitoring system 	✓	
<ul style="list-style-type: none"> • Emergency equipment 	✓	
<ul style="list-style-type: none"> • Motor control centers 	✓	
<ul style="list-style-type: none"> • Emergency generators 	✓	
<ul style="list-style-type: none"> • DC power disconnects, transfer switches, and ground switches 	✓	
<ul style="list-style-type: none"> • Safety and monitoring system 	✓	
<ul style="list-style-type: none"> • Dynamic information signs 	✓	
<ul style="list-style-type: none"> • Passenger information signs 	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
<ul style="list-style-type: none"> Public address system – Stations 	✓	
<ul style="list-style-type: none"> Public address system – Vehicles 	✓	
Trackwork (including Tracks)		
<ul style="list-style-type: none"> Track, running rails (including railhead profiling, track adjustment and levelling, and noise and vibration mitigation) 	✓	
<ul style="list-style-type: none"> Ties/transition ties, electrical insulation and impedance bonds 	✓	
<ul style="list-style-type: none"> Turn outs, switches, crossovers, etc. 	✓	
<ul style="list-style-type: none"> Ballast (including tamping) 	✓	
<ul style="list-style-type: none"> Removal of debris and contaminants from switches, turnouts, and track and rail head 	✓	
<ul style="list-style-type: none"> Maintenance of way equipment 	✓	
<ul style="list-style-type: none"> Track heaters and controls 	✓	
<ul style="list-style-type: none"> Noise and vibration control measures 	✓	
<ul style="list-style-type: none"> Ice and snow removal from Tracks, switches & catenaries, and drainage structures 	✓	
Alignment		
<ul style="list-style-type: none"> Guideway walkways 	✓	
<ul style="list-style-type: none"> Railbed 	✓	
<ul style="list-style-type: none"> Service and Track access roads/driveways/walkways 	✓	
<ul style="list-style-type: none"> Grading, erosion control and ditch cleaning 	✓	
<ul style="list-style-type: none"> Drainage control and systems including Catch Basins, Ditch Inlets, Manholes, Sewers and Culverts (including stormwater quality and quantity management ponds) [Footnote 4] 	✓	
<ul style="list-style-type: none"> Fencing [Footnote 5] 	✓	
<ul style="list-style-type: none"> Illumination 	✓	
<ul style="list-style-type: none"> Signing (warning, guidance, location, identification, regulatory, operational and others) 	✓	
<ul style="list-style-type: none"> Custodial Maintenance Alignment: 	✓	

MAINTENANCE RESPONSIBILITY TABLE		Project Co	Region/Other
• Debris collection and disposal		✓	
• Snow and ice clearing, removal, sanding and salting		✓	
• Landscaping		✓	
• Vegetation control		✓	
• Grass control		✓	
• Weed Control/ Brush Cutting		✓	
• Tree and shrub maintenance		✓	
• Vandalism & graffiti		✓	
• Pest Control		✓	
Retaining Walls:			
Name:	Location		
Station Platform Areas (30 m radius from end of platform)	All Station Platforms	✓	
Retaining Walls to Private Property (unless otherwise noted)	Throughout alignment behind sidewalks outside of station areas		✓
Waterloo Spur	Various locations	✓	
Huron Spur	Various locations	✓	
Courtland Avenue - Hayward to Balzar	On west side of LRT corridor	✓	
Hydro One Corridor	Courtland Avenue to end of Phase 1 alignment	✓	
Operations, Maintenance and Storage Facility (OMSF):		✓	
• Service and access roads/driveways		✓	
• Paving, parking lots and signing		✓	
• Entrances, Pedestrian walkways and sidewalks		✓	
• Stairways, elevators & escalators		✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
• Grading and erosion control	✓	
• Drainage control	✓	
• Fencing	✓	
• Illumination	✓	
• Noise control measures and noise walls	✓	
• Signing (warning, guidance, location, identification, regulatory, operational, etc.)	✓	
• Structural- footings, floors, walls, ceilings, chimneys, beams, columns, roof, insulation, etc.	✓	
• Wall components, doors, frames, windows, glazing systems, entry systems, finishes, etc.	✓	
• Washrooms, locker rooms, offices, storage space, etc.	✓	
• Interior finishes – floor & wall coverings, painting and finishes	✓	
• Plumbing – Water & sewer services, waste water	✓	
• Electrical – wiring, service, conduits, illumination, etc.	✓	
• OMSF Mechanical systems:		
• Telephone and radio communications system wiring within complex [Footnote 1]	✓	✓
• Utility services (Hydro, water, sewer, heating and any others) including service invoices [Footnote 1]		✓
• Heating Ventilating and Air Conditioning (HVAC) system and air filtration.	✓	
• Automatic door systems for vehicle entry and exit	✓	
• Waterproofing and building drainage control	✓	
• Security – locks, guards, CCTV, alarms, monitoring, intrusion detection, video recording and others.	✓	
• Fire Protection and safety measures (includes standpipes)	✓	
• Office furniture and equipment	✓	
• Emergency Generators and UPS	✓	
• Automotive service vehicles	✓	
Custodial Maintenance – Operations, Maintenance and Storage (OMSF) Facility:	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
• Debris collection and disposal	✓	
• Snow and ice clearing, removal, sanding and de-icing	✓	
• Oil and grit separator	✓	
• Landscaping	✓	
• Vegetation control	✓	
• Grass control	✓	
• Weed Control/ Brush Cutting	✓	
• Tree and shrub maintenance	✓	
• Vandalism & graffiti	✓	
• Pest Control	✓	
• Daily Washroom cleaning and supplies	✓	
• Cleaning of offices, furniture, walls, floors, windows, maintenance and general purpose areas	✓	
• Operations, Maintenance and Service Facility (OMSF):	✓	
• Monthly utility charges [Footnote 1]		✓
• Vehicle and System maintenance equipment including hydraulic lifts, forklifts and other specialized equipment	✓	
• Workshop equipment including lubrication systems, compressors, air dryers, vacuum systems, sumps, etc.	✓	
• Hi-rail and recovery vehicles	✓	
• Vehicle wash systems	✓	
• Vehicle paint booth	✓	
• Storage Yard and Shed:	✓	
• System: Track, catenaries, switches, etc.	✓	
• Waste removal and recycling, such as wheel shavings, coolant disposal, oil recycling	✓	
• Service and access roads/driveways	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
<ul style="list-style-type: none"> • Snow and ice clearing of Track, catenaries, switches, etc. 	✓	
<ul style="list-style-type: none"> • Central Control Facility (CCF): 	✓	
<ul style="list-style-type: none"> • Telephone and communication system [Footnote 1] 	✓	✓
<ul style="list-style-type: none"> • Monthly telephone service charges 		✓
<ul style="list-style-type: none"> • Furniture and layout 	✓	
<ul style="list-style-type: none"> • Hardware and software 	✓	
<ul style="list-style-type: none"> • Cooling or heating for Project Co installed equipment 	✓	
<ul style="list-style-type: none"> • Communications between equipment and backbone communications modem 	✓	
<ul style="list-style-type: none"> • Custodial building responsibilities 		✓
<ul style="list-style-type: none"> • HVAC 	✓	
LRT Stops:		
<ul style="list-style-type: none"> • Structural 	✓	
<ul style="list-style-type: none"> • Plumbing [Footnote 1] 	✓	✓
<ul style="list-style-type: none"> • Electrical [Footnote 1] 	✓	✓
<ul style="list-style-type: none"> • Shelter 	✓	
<ul style="list-style-type: none"> • LRT Stop furnishings, including passenger benches, refuse containers, cabinets, sign boards, bike racks and others. 	✓	
<ul style="list-style-type: none"> • Roof and water protection 	✓	
<ul style="list-style-type: none"> • Platform: Stairs, floors, walls, furniture and finishes 	✓	
<ul style="list-style-type: none"> • Passenger information systems 	✓	
<ul style="list-style-type: none"> • Signing (warning, guidance, location, identification, regulatory, operational, and others) 	✓	
<ul style="list-style-type: none"> • Utilities Cost, including Traction Power [Footnote 1] 		✓
<ul style="list-style-type: none"> • Advertising [Footnote 6] 		✓
<ul style="list-style-type: none"> • Advertising frames, hardware and fixed assets [Footnote 6] 	✓	

MAINTENANCE RESPONSIBILITY TABLE	Project Co	Region/Other
• Illumination – poles and fixtures	✓	
• Storm water drainage [Footnote 4]	✓	
• Roof	✓	
• Custodial maintenance of Stations:	✓	
• Debris collection and disposal	✓	
• Snow and ice clearing, removal, sanding and de-icing	✓	
• Cleaning – floors, walls, windows, vandalism & graffiti, etc.	✓	
• Washroom cleaning and supplies	✓	
• Illumination – cleaning & bulb replacement	✓	
• Landscaping including planters	✓	
• Vegetation control	✓	
• Grass control	✓	
• Weed Control/ Brush Cutting	✓	
• Tree and shrub maintenance	✓	
• Graffiti and vandalism	✓	
• Pest Control	✓	

[Footnotes:]

- 1) The Region shall be responsible for the service / usage charges related to all utilities during the Maintenance Term. Project Co shall be responsible for all infrastructure required up to the demarcation point established pursuant to Schedule 15-2 and / or as may be agreed to with the utility service provider.
- 2) Regarding Radio System, Project Co will be responsible for purchasing and maintaining radios for LRVs, Operating personnel and for non-revenue equipment which is compatible with the Region’s existing radio system infrastructure. The Region will program the radios for Project Co’s use. Project Co will be responsible for installing the radio equipment required to meet their operational requirements. The Region will be responsible for maintaining the radio systems infrastructure (base station, etc.)

- 3) The Region shall be responsible for all Preventive and Corrective Maintenance along with all Life Cycle Preservation and Rehabilitation of all of the Fare Collection Equipment.
- 4) Regional/City Services
 - a) Sanitary:
 - b) Watermain:
 - c) Storm sewers:
- 5) Project Co shall be responsible for maintenance of the fencing installed throughout the Lands, with the exception of the fencing that falls beyond the maintenance demarcation of the existing retaining walls of which the Region/City remains responsible for maintenance.
- 6) Surface Maintenance,
 - a) "Surface" means the part of the municipal road, street, or pathway required for the passage of vehicles / pedestrians within the Municipal ROW intended for Public use and includes: the travelled lanes and shoulders whether they are paved or not, a boulevard, sidewalk or median and any appurtenances necessary for the illumination and drainage of the municipal road, street or pathway surface and the conveyance and safety of the motorists / pedestrians.
 - b) The Maintenance and Repair of the Surface, in addition to the requirements provide in Schedule 15-3 Appendix A, B, and C, includes all summer operations, such as pothole repairs / patching, crack sealing, depression / settlement repairs, sidewalk patching, catch basin and storm sewer cleanout, and all winter operations such as plowing, snow removal, sanding, spring cleanup, and bridge deck washing.
 - c) See Schedule 1, Appendix 2 which includes Property Request Plans illustrating the Lands and New Municipal Infrastructure.
 - d) Generally, Project Co shall be responsible for the Maintenance and Repair of the Surface in the Lands, with exception:
 - i) of surfaces that are clearly demarcated as the Region or City's Maintenance responsibilities;
 - ii) New Regional Infrastructure upon the completion of the design, construction, and maintenance term as provided in Schedule 15-2, Part 1, Article 23;
 - iii) The Region shall be responsible for the sale of the advertising and / or retail space. Project Co shall be responsible for the infrastructure that supports the advertising and / or retail space as defined in the Schedule 15-2.