

Region of Waterloo  
Stage 1 Light Rail Transit Project

Definitions, Acronyms, Cited References

Article 2

Acronyms

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**ARTICLE 2 ACRONYMS**

**2.1 Acronyms**

(a) The following are a list of acronyms used within Schedules 15-2 and 15-3

AAR	Association of American Railways
AASHTO	American Association of State Highway and Transportation
AAT	Actual Arrival Time
AATCC	American Association of Textile Chemists and Colorists
aBRT	adapted Bus Rapid Transit
ABS	Automatic Block Signaling
AC	Alternating Current
ADM	Arrow Diagramming Method
ADT	Actual Departure Time
AGC	Automatic Gain Control
AHCW	Automatic Highway Crossing Warning
AHJ	Authority having Jurisdiction
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
AODA	Accessibility for Ontarians with Disabilities Act
APC	Automated Passenger Counter
APTA	American Public Transit Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Association of Civil Engineers
ASME	American Society of Mechanical Engineers

ASQ	American Society for Quality
ASTM	American Society of Testing and Materials
ATC	Automatic Train Control
ATIS	Advanced Traveler Information System
ATP	Automated Train Protection
ATPA	American Public Transit Association
ATS	Automatic Train Supervision
AVL	Automated Vehicle Location
AWG	American Wire Gauge
BCI	Bridge Condition Index
BICSI	Building Industry Consulting Services International
BLS	Blue Light Station
BRT	Bus Rapid Transit
BTU	British Thermal Units
C/CIL	Critical/Catastrophic Items List
CAD	Computer Aided Dispatch
CADD	Computer Aided Design and Drafting
CAEAL	Canadian Association of Environmental and Analytical Laboratories
CANBAS	Canadian Bridge Analysis System
CBTC	Communications Based Train Control
CCER	Central Communications Equipment Room
CCF	Central Control Facility
CCR	Central Control Room
CCS	Central Control System

CCTV	Closed Circuit Television
CEL	Certiifiable Elements Lists
CENELEC	European Committee for Electro-technical Standardization
CER	Communication Equipment Room
CHBDC	Canadian Highway Bridge Design Code
CIH	Certified Industrial Hygienist
CLTPF	Completed LRT Trips Performance Factor
CM	Configuration Management
CN	Canadian National Railway
CP	Chlorosulfurated Polyethylene
CPI	Consumer Price Index
CPM	Critical Path Method
CPTED	Crime Prevention through Environmental Design
CROR	Canadian Rail Operating Rules
CRRS	Certificate of Revenue Ready Status
CSA	Canadian Standards Association
CSS	Central Supervising Station
CTIC	Cooperative Telecommunication Infrastructure Committee
CTS	Communication Transmission System (as per Schedule 15-2 Article 10)
CTS	Cable Transmission System (as per Schedule 15-2 Article 16)
CWE	Current Working Estimate
CWR	Continuous Welded Rail
DB	Design-Build (includes variations around Operate-Maintain with or without Finance)

dBA	Decibel
DBFOM	Design-Build-Finance-Operate-Maintain
DC	Direct Current
DDD	Dedicated Diagnostic Display
DDT	Dependability Demonstration Test
DFO	Department of Fisheries and Oceans
DMIS	Database Management Information Systems
DSA	Daily System Availability
DSO	Demonstrated System Operation
DSSPF	Daily Scheduled Service Performance Factor
DTM	Digital Terrain Model
DTS	Data Transmission Subsystem
DVR	Digital Video Recorder
EA	Environmental Assessment
EAC	Estimate at Completion
EBITDA	Earnings Before Income Tax, Depreciation and Amortization
ECP	Engineering Change Proposals
EFB	Electric Flash Butt
EIA	Electronic Industries Association
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EMS	Emergency Medical Services
EMS	Energy Management System (as per Schedule 15-2 Article 7)
EOR	Engineer of Record

EP	Ethylene Propylene
EPP	Emergency Preparedness Program
EPR	Environmental Project Report
ESA	Environmental Site Assessment
ESD	Electrostatic Discharge
ETC	Estimate to Complete
ETEL	Emergency Telephone
ETS	Emergency Trip Station
EUSERC	Electric Utility Service Equipment Requirements Committee
FA	Fleet Availability
FAA	Federal Aviation Administration
FACP	Fire Alarm Control Panel
FAT	Factory Acceptance Testing
FCC	Fire Commissioner of Canada
FCNC	Fare Collection Network Computer
FD	Fire Department
FDC	Fire Department Connection
FFPF	Fleet Functionality Performance Factor
FHA	Fault Hazard Analysis
FHV	Fire Hose Valve
FLS	Fire/Life Safety
FLSC	Fire/Life Safety Committee
FLSC	Fire/life Safety Committee
FLSP	Fire/Life Safety Program/Plan

FMEA	Failure Mode and Effect Analysis
FMEA	Failure Modes and Effects Analysis
FRA	United States of America Federal Railway Administration
FRP	Fibreglass Reinforced Plastic
FSAT	Final System Acceptance Test
FTA	Federal Transit Administration
GEC	General Engineering Consultant
GEXR	RailAmerica Inc. (Goderich-Exeter Railway)
GIS	Geographic Information System
GPS	Global Positioning System
GRCA	Grand River Conservation Authority
GRT	Grand River Transit
GTFS	General Transit Feed Specification
HA	Hazard Analysis
HASP	Health and Safety Plan
HDTV	High Definition Television
HMMP	Hazardous Material Management Program
HV	High Voltage
HVAC	Heating, Ventilation, and Air Conditioning
I/O	Input/Output
IA	Independent Assurance
ICD	Interface Control Documents
ICEA	Insulated Cable Engineers Association)
ICP	Incident Command Post



IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IETF	Internet Engineering Task Force
IFC	Issued for Construction
IMS	Integrated Management System
INCOSE	The International Council of Systems Engineering
IO	Infrastructure Ontario
ISDP	Integrated System Demonstration Program
ISO	International Organization for Standardization
IT	Information Technology
ITP	Inspection and Test Plan
ITS	Intelligent Transportation System
JHA	Job Hazard Analysis
JSA	Job Safety Analysis
Kcmil	Thousand Circular Mil
KPH	Kilometer per Hour
kV	Kilovolt
LAN	Local Area Network
LED	Light Emitting Diodes
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Design
LLRU	Lowest Level Replaceable Unit
LOS	Level of Service

LRT	Light Rail Transit
LRV	Light Rail Vehicle
Lux	Illuminance or Luminous Emittance
LVC	Length of Vertical Curve
MAE	Multiple Account Evaluation
MCIP	Member Canadian Institute of Planners
MDS	Monitoring and Diagnostic System
MDT	Mobile Data Terminals
MDTP	Maintainability Demonstration Test Plan
MEF	Metro Ethernet Forum
MIPF	Maintenance and Inspection Performance Factor
MIS	Maintenance Tracking Systems
MMPF	Monthly Maintenance Payment Factor
MOE	Ministry of Environment
MOPF	Monthly Operations Payment Factor
MOT	Maintenance of Traffic
MOW	Maintenance-of-Way
MPH	Miles per Hour
MQAQC	Manager of Quality Assurance and Quality Control
MRV	Maintenance and Recovery Vehicle
MSE	Mechanically Stabilized Earth
MTBF	Mean Time Between Failure
MTO	Ontario Ministry of Transportation
MUTCD	Manual on Uniform Traffic Control Devices

MVDE	Maximum Vehicle Dynamic Envelope
MW	Mega Watts
N	Newtons
NB	Northbound
NBC	National Building Code
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NST	National Standard Thread
O&M	Operations and Maintenance
O.Reg	Ontario Regulation
OAA	Ontario Association of Architects
OBC	Ontario Building Code
OCC	Operation Control Center
OCS	Overhead Contact System
OEM	Original Equipment Manufacturers
OESC	Ontario Electrical Safety Code
OHA	Operating Hazard Analysis
OHSA	Occupational Health and Safety Act
OLS	Ontario Land Surveyor
OMAPF	Operations Management and Administration Performance Factor
OMSF	Operations, Maintenance and Storage Facility
OPSD	Ontario Provincial Standard Drawing

OPSS	Ontario Provincial Standard Specification
OPT	On Time Performance
OPT	Operational Performance Test
PA	Public Address
PCBs	Polychlorinated Biphenyls
PCC	Point of Compound Curvature
PCL	Programmable Logic Controller
PDM	Precedence Diagramming Method
PE and/or P.Eng:	Professional Engineer
PEI	Passenger Emergency Intercom
PEO	Professional Engineer of Ontario
PFTP	Platform Fare Transaction Processor
PHA	Preliminary Hazard Analysis
PI	Passenger Information
PID	Passenger Information Display
PIS	Passenger Information System
PIW	Public Infrastructure Work
PIVP	Product Improvement Verification Program
PLC	Programmable Logic Controller
PM and/or CM	Program Management and/or Construction Management
PMP	Project Management Plan
POP	Proof of Payment
PQS	Professional Quality Surveyor

PRC	Point Reverse Curve
PRS	Point of Reverse Spiral
PSHSR	Pre-Start Health and Safety Review
PVC	Polyvinylchloride
PVIP	Product Improvement Verification Program
QA/QC	Quality Assurance/Quality Control
QC	Quality Control
RAMS	Reliability, Availability, Maintainability, and Safety
RDA	Route Daily Availability
RFI	Request for Information
RGMS	Regional Growth Management Strategy
ROC	Rail Operations Center
ROW	Right-of-Way
RT	Rapid Transit
RTMP	Regional Transportation Master Plan “Moving Forward 2031”
RTU	Remote Terminal Unit
SA	Station Availability
SAM	System Availability Monitoring
SAMP	Systems Assurance Monitoring Plan
SAT	System Acceptance Testing
SAT	Scheduled Arrival Time
SB	Southbound
SC	Security Committee
SCADA	Supervisory Control and Data Acquisition

SCC	Standards Council of Canada
SCP	Station Command Post
SCRT	Safety Certification Review Team
SDAA	System Dependability Allocation Analysis
SDT	Scheduled Departure Time
SEMP	System Engineering Management Plan
SI	Systems Integrator
SIL	Safety Integrity Level
SIT	Subsystem Integration Testing
SOMMP	System Operations and Maintenance Management Program
SOP	Standard Operating Procedure
SP	Standpipe
SPT	Standard Penetration Test
SSCRT	Safety and Security Certification Review Team
SSMP	System Safety and Security Management Plan
SSP	System Safety Program
SSPF	Scheduled Service Performance Factor
SSPP	System Safety Program Plan
STW	Special Trackwork
SVP	Software Verification Program
TAC	Manual of Uniform Traffic Control Devices for Canada
TBD	To Be Determined
TCRP	Transit Cooperative Research Program
TES	Traction Electrification System

TMS	Transit Management System
ToR	Top of Rail
TPAP	Transit Project Assessment Process
TPFS	Traction Power Feeder System
TPITP	Third Party Inspection and Testing Program
TPS	Traction Power System
TPSS	Traction Power Substation
TRB	Transportation Research Board
TSM	Transit Management System
TSP	Transit Signal Priority
TTC	Toronto Transit Commission
TV	Ticket Validators
TVA	Threat and Vulnerability Assessment
TVM	Ticket Vending Machine
TWC	Train to Wayside Communications
UFC	Uniform Fire Code
UL	Underwriters' Laboratories
UNI	User Network Interface
UPS	Uninterruptable Power Supplies
USGS	Unified Soil Classification System
Vac	Alternating Current Volts
VCE	Vehicle Clearance Envelope
Vdc	Direct Current Volts
VMS	Variable Message Signs

VOIP	Voice over IP
VTA	Verification, Test and Acceptance
VTAC	Verification, Test, Acceptance and Commissioning
VTAC Plan	Verification, Test and Acceptance Plan
WBS	Work Breakdown Structure
WID	Wayside Intrusion Detection
WLAN	Wireless Local Area Network
WSIB	Workplace Safety and Insurance Board