Transportation Services Department Rail Activation Management Program (RAMP)

Final Report to Program Management Team



RAMP Status as of July 17, 2019

Status Definitions

- Item is complete it is expected that no further reporting will be required.
- Item is on the original schedule or on a credible recovery schedule that enables achievement of the revenue service date; and, there are no quality /effectiveness issues of concern without a plan in place to address them.
- There is deviation from the schedule, recovery required; and/or, there are quality/effectiveness issues of concern that will be difficult to address; executive support or decision-making may be required.
- Not yet applicable.



10 Critical Elements

#	Element	Status	Comments
1	Vehicles (34)		Platform edge camera view & missions
2	Station Occupancy Permits (13)		Missing 9 elevator licenses
3	Tunnel Ventilation System (TVS)		
4	TOCC / SCADA		
5	Power / Catenary		
6	Safety Assurance		
7	СВТС		Final software patch required for station hold issue
8	Practice Plan		. '
9	Maintenance Readiness & Winter Operations		
10	Integrated Project Close-Out Execution		

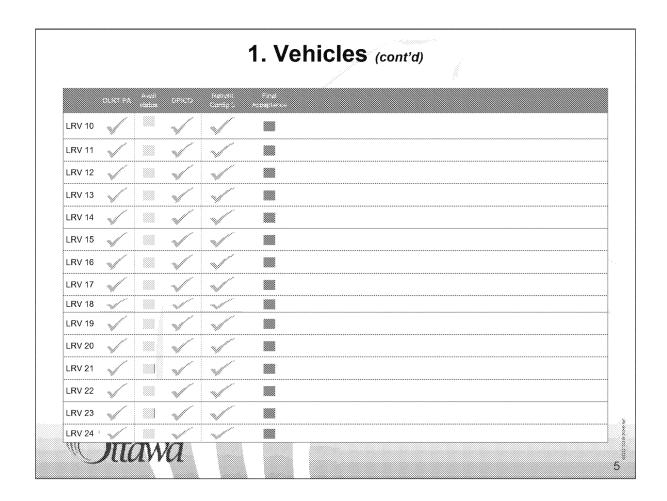


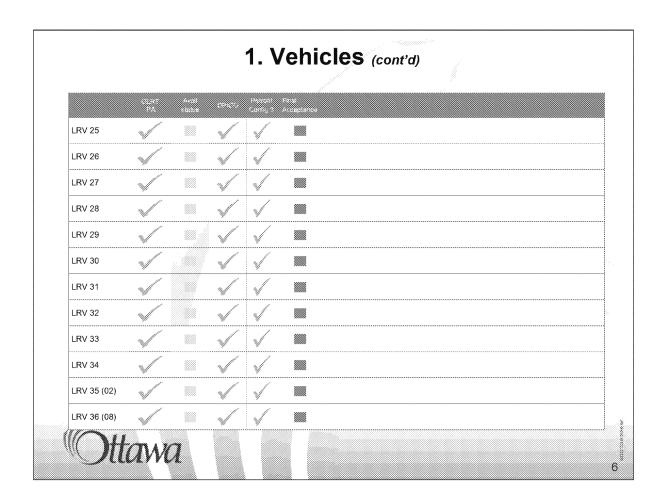
Go / No Go List

- Improvement the system from opening on the current scheduled date ("Go")
- Off track; significant possibility that this will prevent the system from opening on the current scheduled date ("No Go")

Theme	Criteria for Start of Service	Status	Comments
Safety	No outstanding safety defects		depending on Alstom update ())
	No reliability issues that degrade safe operation		
People	Staff & stakeholders: Fully mobilized		Conditional on RTM Letter (
	Civil and Class 5 track work: 100%		Tamping speed restriction
Guideway	Bus network and bus loops fully functional		
	No major impacts to customer experience		Elevators
	Fire systems: 100%		
Stations	Lighting systems: 100%		
	Elevators & escalators: 100%		Elevators
	Thirty-four trains including Bill of Sale		HVAC (AC)
Vehicles	Trains ready as per Vehicle Minimum Operating Standard		
	No major impacts to customer experience		
Systems	Radio; tunnel ventilation system, train control, and traction power are 100% operational		Train control - Thales
	System performance during Trial Running is sufficiently robust/resilient to absorb service impacts		Thales
Maintenance	Contractual requirements fulfilled, RTM mobilized		RTM Letter

1. Vehicles 34 LRVs Safety Certified by Thales Type Test TD08 indicates non-compliance with interior noise levels. OLRT-C re-assessing : - mitigate or request relief Overall Work Completed; HPU, Calipers, NVR, Doors, HVAC, PA/PIS/HSDR, roof arches, mudflaps, cabdoor/wipers – City audit occurring July 19th HSDR requires re-test (Scheduled for July 17) LRV 1 LRV 2 N/A N/A LRV 3 LRV 4 LRV 5 LRV 6 LRV 7 LRV 8 N/A N/A LRV 9 4

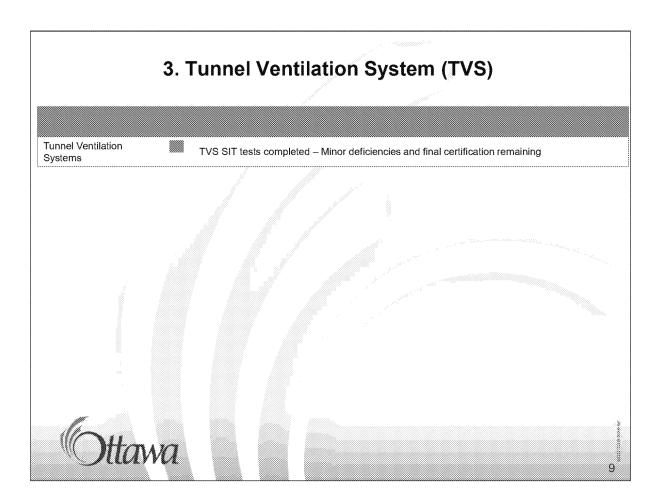


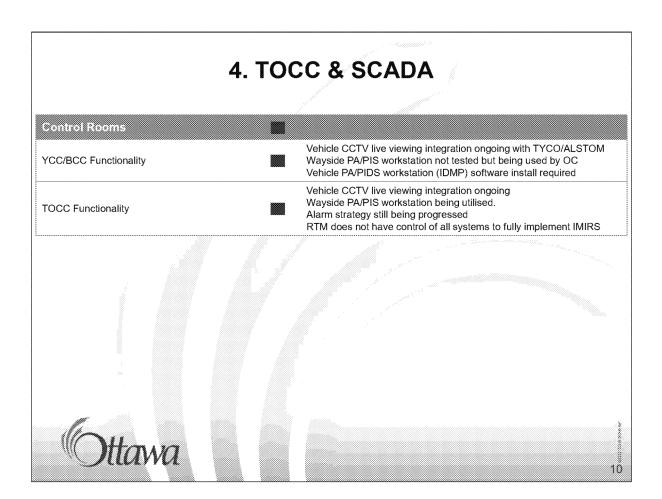


2. Occupancy permits

		<u> </u>
Stations - E	ast	Status
Blair		Occupancy permit issued by BCS Mar 19/19 conditional on adhering to the following 5 conditions prior to being able to open for public: 1) Construction related elements including additional verification / process to be satisfied (OFS, TSSA, etc.); 2) Items such as site hoarding, site cleanliness to be resolved; 3) Floors, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 4) escalators are to remain in a stopped position until approval granted in writing by BCS and TSSA; 5) A final inspection is to be arranged for the 4 outstanding non-occupancy related deficiencies.
Cyrville		Occupancy permit issued by BCS Mar 19/19 conditional on adhering to the following 4 conditions prior to being able to open for public: 1) Construction related elements including additional verification / process to be satisfied (OFS, TSSA, etc.); 2) items such as site hoarding, site cleanliness to be resolved; 3) Floors, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 4) A final inspection is to be arranged for the 1 outstanding non-occupancy related deficiency.
St. Laurent		Occupancy permit issued by BCS Apr 2/19 conditional on adhering to the following 5 conditions prior to being able to open for public: 1) Construction related elements including additional verification / process to be satisfied (OFS, TSSA, etc.); 2) items such as site hoarding, site cleanliness to be resolved; 3) Floors, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 4) Escalators are to remain in a stopped position; 5) A final inspection is to be arranged for the 1 outstanding non-occupancy related deficiency.
Tremblay		Occupancy permit issued by BCS Mar 19/19 conditional on adhering to the following 4 conditions prior to being able to open for public: 1) Construction related elements including additional verification / process to be satisfied (OFS, TSSA, etc.); 2) items such as site hoarding, site cleanliness to be resolved; 3) Floors, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 4) A final inspection is to be arranged for the 4 outstanding non-occupancy related deficiencies.
Hurdman		Occupancy permit issued by BCS Mar 20/19 conditional on adhering to the following 5 conditions prior to being able to open for public: 1) Additional verification process to be satisfied (OFS, TSSA, etc.); 2) Items such as site hoarding, site cleanliness to be resolved; 3) escalators are to remain in a stopped position until approval granted in writing by BCS and TSSA;4) Floors, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 5) A final inspection is to be arranged for the 5 outstanding non-occupancy related deficiencies.
Lees		Occupancy permit issued by BCS Mar 19/19. Additional inspection carried out June 27 note "Previous noted occupancy conditions are resolved with respect to Building Code Services involvement". There are still non-occupancy related deficiencies. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
uOttawa		Occupancy permit issued by BCS Mar 19/19. Additional inspection carried out June 27 note "Previous noted occupancy conditions are resolved with respect to Building Code Services involvement". There are still non-occupancy related deficiencies. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
		Note – Or 5 requires updated wiechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.

		2. Occupancy Permits (cont'd)
State Transferrid Visi		Status
Rideau		Occupancy permit issued by BCS on April 29/19 conditional on adhering to the following 5 conditions prior to being opened to the public: 1) The OLRT system requires additional verification/process to be satisfied (OFS, TSSA, etc.), 2) removal of the following items; trailer at the East entrance; construction fencing (East entrance & platforms); temporary signage @ elevator(s), 3) site cleanliness (presence of construction material, tools, tarps, etc.) 4) Escalators ESRI 13 & 14 to be running prior to the station opening for revenue service (i.e. prior to public access to the station) & remain operational in conformance with the alternative solution requirements specific to these two escalators, 5) Fire alarm system demonstrations noted are completed. There are still non-occupancy related deficiencies. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
Parliament		Occupancy permit issued by BCS on April 10/19 Additional inspection carried out July 5 th identifying following remaining items prior to open for public: 5) Fire shutter at Sun Life to remain in closed position; 6) Final inspection to be arranged for . There are still non-occupancy related deficiencies. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
Lyon		Occupancy permit issued by BCS on April 8/19 Additional inspection carried out June 28 th confirming permit conditions for occupancy have been addressed. There are still non-occupancy related deficiencies. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
Pimisi		Occupancy permit issued by BCS on Feb 27/19 Additional inspection carried out June 28th confirming permit conditions for occupancy have been addressed. There are still outstanding non-occupancy (C.1.3.3.) related items to be reinspected. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
Bayview	****	Occupancy permit issued by BCS on Mar 12/19 Additional inspection carried out July 5th confirming permit conditions for occupancy remain: 1) All construction hoarding and fencing is to be removed; 2) Construction trailers are to be removed in a timely fashion; 3) All floor, halls, lobbies and required means of egress are to be free of loose materials and other hazards; 5) Final inspection to be arranged. The 6 Outstanding non-occupancy (C.1.3.3.) related items to be re-inspected. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record.
Tunney's Pasture Bus loop/buildings		Occupancy permit issued by BCS Mar 27/19 Additional inspection carried out July 5 th confirming permit conditions for station occupancy have been addressed. There are still outstanding non-occupancy (C.1.3.3.) related items to be reinspected. Note – OFS requires updated Mechanical and Electrical Code Conformance Letters (CCLs) by Professionals of record. Occupancy has not been obtained for the bus loop ancillary buildings





Station	Comms System	Comments and % completed
All	System Wide	Wayside PA/PIDS-Vehicle integration test 17th July GIDS: CBTC integration complete; deficiency resolution ongoing IAC-CCTV integration still outstanding for MSF HSDR/ automatic missions - not available until September Manual missions being finalised Various other minor deficiencies being tracked:
State	FDAS, CCTV, PIS, GIDS, IAC, Telephone, HSDR, SCADA	
Cyrulle	FDAS CCTV PIS GIDS IAC, Telephone, HSDR, SCADA	
	FDAS, CCTV, PIS, GIDS, IAC, Telephone, HSDR, SCADA	
Tremblay	FDAS CCTV PIS GIDS IAC, Telephone, HSDR, SCADA	
Hurdbah	FDAS CCTV PIS GIDS IAC, Telephone, HSDR, SCADA	
Lette	FDAS CCTV PIS GIDS IAC, Telephone HSDR SCADA	
a Creative	FDAS CCTV PIS GIDS IAC, Telephone, HSDR SCADA	
Fidelia	FDAS CCTV PIS GIDS IAC Telephone, HSDR SCADA	
Parliament Lyon	FDAS, CCTV, PIS, GIDS, IAC, Telephone, HSDR, SCADA FDAS, CCTV, PIS, GIDS, IAC,	
Pinne	Telephone, HSDR, SCADA FDAS, CCTV, PIS, GIDS, IAC, Telephone, HSDR, SCADA	
Sayanu	FDAS CCTV PIS GIDS IAC Telephone HSDR SCADA	
Turneys	FDAS, CCTV, PIS, GIDS, IAC, Telephone, HSDR, SCADA	
	FDAS CCTV PIS GIDS IAC. Telephone, HSDR SCADA	

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At Tocc & Scada (con't) VolP: VolP calls from ETELS functioning over SIP Trunk / new RTG gateway. Calls from SCU to ETELS now also traversing new gateway. Cleanup of firewall rules pending. Next Train Arrival API: Revised prediction files received. Inconsistencies remain and feedback provided to RTG. Input from Thales still outstanding. T&CS capturing files from SFTP and monitoring for consistency. Testing occurring Jul 17th APC Reporting (End State): Discussions ongoing regarding additional required data to be able to interpret Aistom APC feed. Release date for Aistom APC fix pending.

5. Power & Catenary				
Power Supply and Distribution				
TPSS #1 incl. OCS (Tunney's Pasture)	-	TPSS 1 SAT, energized. OCS in service.		
TPSS #2 incl. OCS (Pimisi)	2//	TPSS 2 SAT, energized. OCS in service.		
TPSS #3 incl. OCS (Parl to Rideau)	1	TPSS 3 SAT, energized, OCS in service.		
TPSS #4 incl. OCS (East of UOttawa)	1	TPSS 4 SAT, energized. OCS in service.		
TPSS #5 incl. OCS (Hurdman)	4//	TPSS 5 energized. OCS in service.		
TPSS #6 incl. OCS (East of Tremblay)	1	TPSS 6 in service. OCS in service. DC feeder for track 2 has intermittent failures		
TPSS#7 incl. OCS (Cyrville)	- 1/	TPSS 7 in service. OCS SAT with minor deficiency.		
TPSS #8 incl. OCS (Blair)		TPSS 8 in service. OCS in service.		
TPSS #9 incl. OCS (MSF)	*//	In service, SATs complete for TPSS and OCS		
TPSS #10 incl. OCS (MSF)	**************************************	In service, SATs complete for TPSS and OCS		
System-Wide Integration		Assurance evidence to be reviewed with SEMP and ISA. TPSS failure tests 17, 18 July		
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6. Safety Assurance

Compliance with Safety Requirements

TIR not scheduled. ESAC review indicates outstanding work:

ISA final sign-off will occur at RSA

SEMP/ISA Audit on June 14 and 15 to review ESAC status

Demonstrating Compliance for Substantial Completion	(al June 10)				Paratar Paratar
Safety Assurance, Railway Level: Deliverables SONOs	51 of 51 14 of 21	51 of 51 14 of 21	51 of 51 14 of 21	100% 67%	
Systems Assurance, System Level: Deliverables SOROs	45 of 49 0 of 3	45 of 49 0 of 3	49 of 49 0 of 3	100% 66%	
System Assurance Hazards	347 of 348	347 of 348	347 of 348	99%	



Train Control Zone 1 Train Control (Tunney's – W Portal) Thales software updated to 5.05. Patch installation outstanding Thales software updated to 5.05. Patch installation outstanding Zone 2 Train Control (W Portal – u0ttawa) Thales software updated to 5.05. Patch installation outstanding Zone 3 Train Control (u0ttawa – E of STL) Thales software updated to 5.05. Patch installation outstanding Zone 4 Train Control (E of STL –Blair) Thales software updated to 5.05. Patch installation outstanding Thales software updated to 5.05. Patch installation outstanding Thales working on design but implementation date unknown

8	3. Practice Plan
System integration Testing	
Zone 1 Tunney's to West Portal	
Zone 2 West Portal to West of Hurdman	
Zone 3 Hurdman to E. of St. Laurent	
Zone 4 East of St-Laurent to Blair	
Zone 5 MSF	
System-Wide Integration	Pre-trial with 15 doubles : not successfully achieved Trial running: min. 4 days after SC Notice
12-Day Trial Running	
Trial Running	Agreement on final details of evaluation process and criteria has been achieved: Trial Running Test Procedure being practised by Trial Running Review Team.
# A A	

9. Maintenance Readiness & Winter Operations Maintenance Readiness IMIRS - Development work for changes related to the PA Scope 5 Variation are currently Contract Management underway. Maintenance and Rehabilitation Plan Revised plan submitted; inspection templates not finalized Equipment needs to be modified and upgraded based on winter snow clearing Maintenance Equipment Delivered experience Maintenance IT Systems (MMS, IMIRS) Data transfers for IMIRS under testing; linked to LRV operating hours. Spare Parts on Hand Spare parts list Maintenance Personnel Winter Colorados Winter Maintenance Plan Submitted 17

10. Integrated Project Close-Out Execution

Demonstrating Compliance for Substantial Completion					
Fig. Scillate made	15 (LRV & SYS)	23 (11 LRV & 12 SYS)	13 (5 LRV & 8SYS)	n/a	
Pre-RSA Cenciencies	400	302	218	n/a	
Minor Descrencies	1161	1141	986	n/a	
	279 of 279	279 of 279	279 of 279	100%	
0.85	277 of 279	279 of 279	279 of 279	100%	
16 Lo	10 of 10	10 of 10	10 of 10	100%	
	201 of 210	201 of 210	201 of 210	96%	
	13 of 13	13 of 13	13 of 13	100%	
Colical NCFs	0	0	0	n/a	
Commissioning Manuals	24 of 24	24 of 24	24 of 24	100%	
SIT Tests SITS checked by V&V	218 of 238 215 of 238	221 of 238 215 of 238	221 of 238 215 of 238	93% 90%	
Safety Assurance, Railway Level Deliverables SONOs	51 of 51 14 of 21	51 of 51 14 of 21	51 of 51 14 of 21	100% 67%	
Systems Assurance, System Level: Deliverables SONOs	49 of 49 0 of 3	49 of 49 0 of 3	49 of 49 0 of 3	100% 0%	
System Assurance, Rezerts	347 of 348	347 of 348	347 of 348	99%	



Data provided by OLRT-C as at July 16, 2019 Note 1: Conditions noted on Permits
Data has not been substantiated by OTC

10. Integrated Project Close-Out Schedule | Close-Out Schedule Basis Chart accepted in principle by RTG, Independent Certifier and City. All task breakdown sheets with scheduled end dates completed. | A process for demonstrating compliance for substantial completion of fixed facilities and vehicles has been developed. Bit-weekly meetings have been initiated whereby each PA schedule is being reviewed for compliance. With construction slippage and with SEMP now actively engaged, current document reviews are not quite mature enough to demonstrate compliance and therefore the schedule has slipped. | Documentation of Revenue Service Availability Requirements | Documentation of task breadown sheets completed, plan accepted and detailed schedule of activities that will support RSA requirements is being finalized in various working groups.