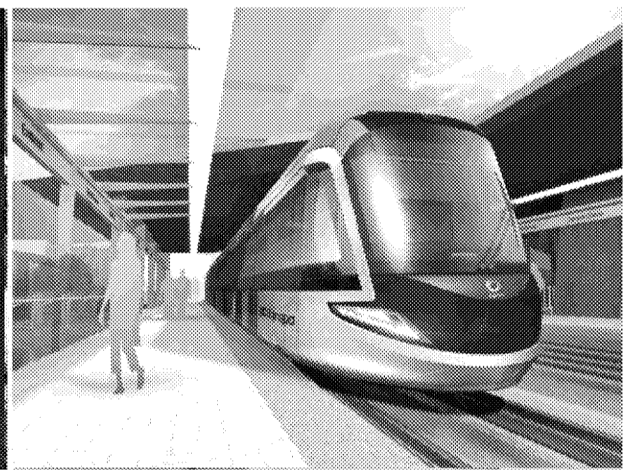
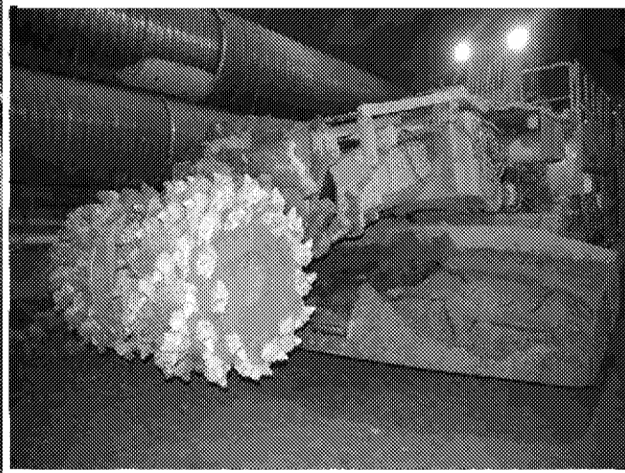
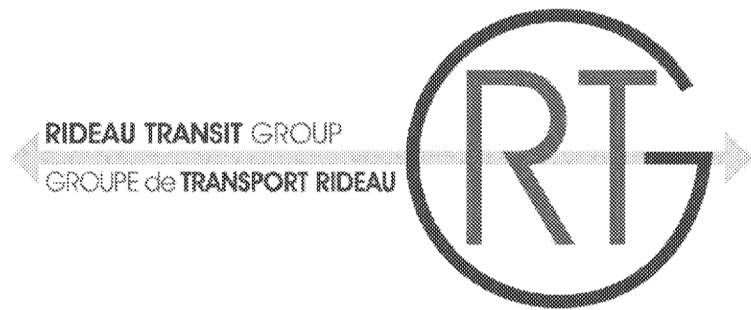


September 26, 2018



CONFEDERATION LINE PROJECT: TUNNEY'S PASTURE TO BLAIR STATION



AGENDA

- 1. Review and Approval of Minutes from Previous Meeting**
- 2. Executive Summary**
- 3. Design and Construction Status**
 - 3.1 Health & Safety
 - 3.2 Quality/Environmental
 - 3.3 Schedule
 - 3.4 Delay claim in negotiation with the City
 - 3.5 Payment Milestones & Milestone Trigger Events Status
 - 3.6 Safety Requirements and Safety Auditor
 - 3.7 Active Works on Site
 - 3.8 Three (3) Months Look-Ahead
 - 3.9 Sinkhole Insurance Claim
 - 3.10 Photos
- 4. Vehicles and Systems**
 - 4.1 Vehicle Assembly and Testing
 - 4.2 Vehicle and Systems – Schedule and CBTC readiness
 - 4.3 Integration Testing
 - 4.4 Vehicles and Systems – Photos
- 5. Variation Enquiry Summary**
- 6. Financial Matters**
 - 6.1 Dashboard (Key Metrics)
 - 6.2 Construction Costs. Ability to pay
 - 6.3 SPV Costs
 - 6.4 Costs Paid to Partners
 - 6.5 Financing
 - 6.6 Swap Mismatch
 - 6.7 Delay Liquidated Damages & Short Term Debt Compensation
 - 6.8 Short Term Debt Compensation/LDs
 - 6.9 Stage 2
 - 6.9 Project Co Stage 1 Cash Flow During Delay
- 7. Stage 2**
 - 7.1 Belfast MSF expansion
 - 7.2 Vehicles
- 8. Other Matters**
 - 8.1 Budget



2. EXECUTIVE SUMMARY

- **Payment Milestones and Revenue Service Availability**

- Milestone 12 (Substantial Completion) scheduled for May 7th, 2018 is now scheduled to be achieved by November 6th, 2018, according to the last updated schedule.
- The New Revenue Service Availability Date is November 30th, 2018 however this has not been agreed to by the City. While it will enable the PA required service level (15 coupled vehicles required) to be achieved it will not include all the vehicles. To date the City has not indicated they are willing to entertain any temporary deviations from the PA prescribed Substantial Completion requirements. However in a meeting held 21 Sept indications are that they are now prepared to discuss and consider options including entering revenue service with less than the full fleet of vehicles.

- **Delay Claim**

Litigation Privileged

- **Design and Construction Schedule**

- The City has publically stated that they are concerned about schedule and the likelihood of the proposed 30 Nov RSAD. RTG/OLRTC continue to be transparent with the City regarding progress and T&C metrics and progress is discussed in regular meetings with the City.
- The most critical activities are the underground stations (Rideau in particular), systems installations, Testing and Commissioning, vehicles dynamic PICO, vehicles modifications and retrofits, CBTC and integration testing.
- Double consist vehicles (coupled LRVs) are running the length of the entire guide, and loop tests are being carried out from uOttawa to Blair. LRV's are being used for Alstom/Thales testing as well as City Operator training.



2. EXECUTIVE SUMMARY

- *Vehicles and Systems*

- The last vehicle (LRV 34) is under assembly and will be completed in July. Vehicles modifications and retrofitting is still a concern. Alstom has provided a retrofitting schedule which OLRTC has rejected. Discussions are underway.
- There are 23 vehicles provisionally accepted for CBTC installation and Testing and thirteen (13) vehicles CBTC ready. Thales continues to carry out dynamic PICOs in the units.
- Last vehicle Final Acceptance has slipped from the end of July to end August in the last schedule update.

- *Financials*

- As at the end of Aug 2018, construction invoicing is falling behind the financial model curve by \$ Financial Information - Project. SPV cost is below the approved 2018 budget.

Insurance

- As of 24 May, RTG is charging OLRTC liquidated damages for the delay in achieving Revenue Service as per the Construction Contract. The amount of liquidated damages is the sum of SPV costs, unavoidable RTM costs, Long Term Debt service and equity distribution. The LD charges do not yet include a reduction as Lender's consent to do so has not been provided.



3. DESIGN AND CONSTRUCTION STATUS





3.1 HEALTH & SAFETY

- The project went over 7.5 million person hours worked by end of August '18.
- 9842 people have received orientation to date.
- The Ministry of Labour (MOL) performed 2 inspections In May. That resulted in 3 orders being issued. All orders were dealt with expeditiously with none outstanding.
- 30 of 31 Perfect Days for the month of August. OLRTC is diligently promoting and enforcing safety regulations.

Monthly Safety Statistics Report

Project: OLRT

Month: August

Year: 2018

Item	Monthly Totals			Yearly Totals			Project Totals		
	OLRT-C	Sub-Contractors	Total	OLRT-C	Subcontractors	Total	OLRT-C	Sub-Contractors	Total
Hours Worked	39,501	146,158.00	185,659	333,254	784,964	932,569	2,353,169	5,205,503	7,558,672
Number of Workers (FTE)	209	842	1,051	FTE#		5,378			
Lost Time Injury (LTI)	2	0	2	2	1	3	0	15	15
No Lost Time Injury (NLTi)-Medical Aids	0	0	0	0	2	2	6	159	165
Fatalities	0	0	0	0	0	0	0	0	0
Lost Days	0	0	0	0	0	0	0	70	70
First Aids	1	0	1	1	1	2	5	83	88
Modified Work Cases ¹	0	0	0	0	4	4	3	39	42
Injury Rates									
LTI Rate						0.02			0.03
NLTi Rate						0.04			0.38
Fatalities Rate						0.00			0.00
Total Injury Rate						0.10			0.41



3.1 HEALTH & SAFETY

- OLRT continues to outperform the industry rate group average for Group 732 (Heavy Civil Construction) as shown in IHSA's latest publication in 2016.

Group 732- Lost Time Injury Rate Comparison based on Yearly Totals between IHSA and OLRT

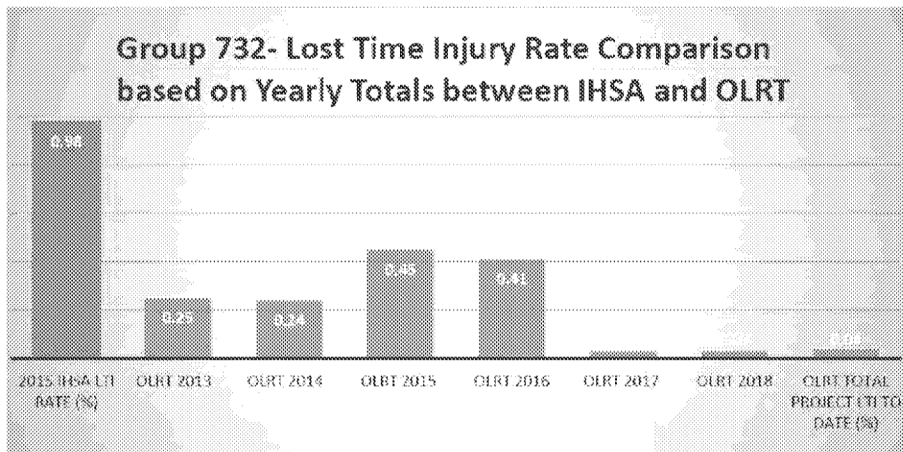


Figure 1: OLRT Cumulative LTI Rate by Calendar Year compared to the latest IHSA Publication of lost-time injury rates of Group 732 (Heavy Civil Construction).

Group 732 - Total Injury Rate Comparison on the Project between of IHSA vs OLRT

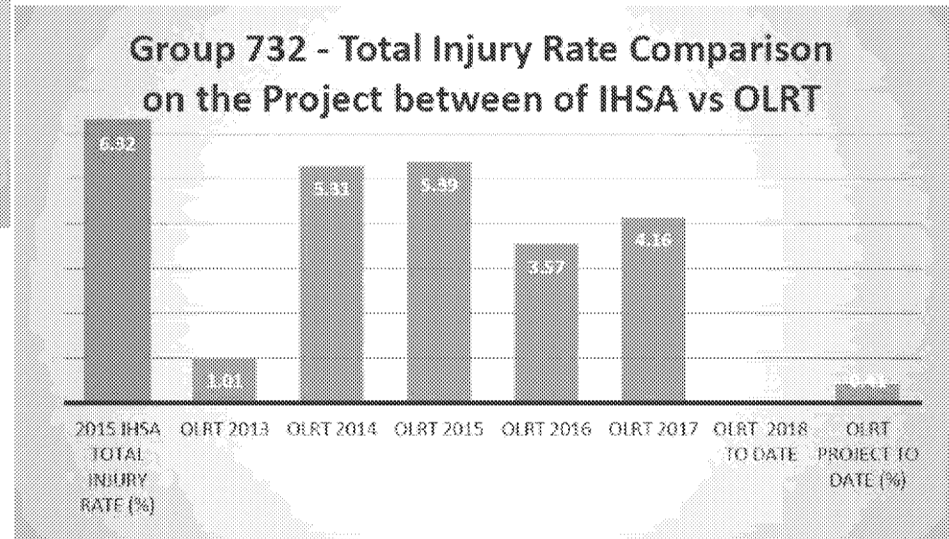


Figure 2: OLRT total injury rate per year of construction operation compared to the latest IHSA Publication of 2015 total injury rates of Group 732 (Heavy Civil Construction).



3.1 HEALTH & SAFETY

On September 12th the City, with support and cooperation from OLRTC and RTG carried out a very successful Full Scale Rescue exercise in Lyon Station.

The exercise replicated a person jumping on the track in front of a passenger occupied vehicle, the collision between the person and vehicle, and the subsequent actions by OFS, OPS, paramedics, SCU and OPS forensics.



CTV Ottawa @ctvottawa · Sep 12

Police, paramedics and firefighters are conducting a training exercise at Lyon LRT station starting at 5 p.m. this evening [ctv.news/0AzmkD](#) #ottnews



Queen Street closed for emergency training exercise Wednesday

Don't be alarmed if you see emergency vehicles in the area of Lyon and Queen streets Wednesday evening: it's just a training exercise.

[ottawa.ctvnews.ca](#)





3.2 QUALITY/ENVIRONMENTAL

Quality:

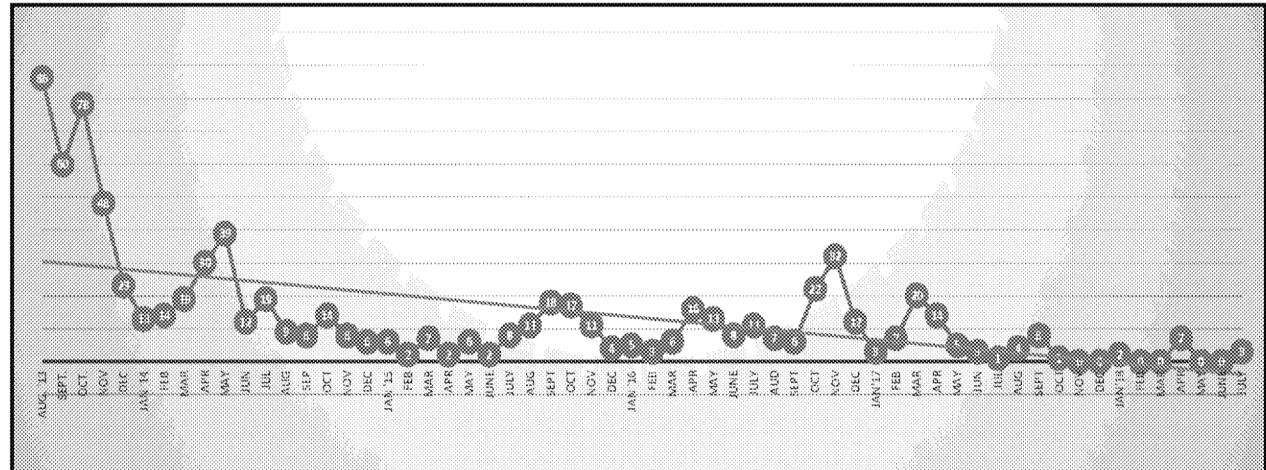
There are no contentious NCR's to date. RTG continues to carry out regular audits of OLRTC, with the City as invited witness. Data to p/e August '18 shown below:

NCR ISSUED BY	TOTAL NCR	OPEN	PROCESS	DOCUMENTATION	EQUIPMENT	MATERIAL	PERSONNEL	COMMENTS
OLRTC	795	98 (*)	392	31	10	234	128	*Awaiting contractor response & OLRTC verifications

Environmental:

The metrics as at p/e August '18 continue to demonstrate that OLRTC has been achieving its environmental protection requirements and the construction staff proactively implement the necessary measures to prevent environmental deficiencies.

Number of New Deficiencies Reported





3.2 QUALITY/ENVIRONMENTAL

Excerpt from OLRTC
weekly newsletter
highlighting
management's
commitment to
environmental
awareness

Environmental Moment

Please remember when cutting concrete to protect the storm sewer as this is considered a spill.

We should be taking measures to prevent this from entering the sewers and to clean up the cutting as they will migrate with rainwater.

Some of these measure can be to insert filter cloth on the catch basin grate, the use of a pressure washer and a shop vac to collect the slurry.

If you have any questions, please don't hesitate to contact Cory van Hoof, Environmental & Sustainability Manager.





3.3 SCHEDULE

1. Substantial Completion (06 Nov was 31 Aug)

- Requires the Substantial Completion Certificate from the Independent Certifier (IC) confirming that Substantial Completion is in accordance with PA (includes Project Close Out exercise validating PA compliance)

2. Trial Running (12 Nov to 23 Nov was 21 Sept to 02 Nov) (System essentially ready for Revenue Service Commencement).

Prerequisites are:

- commissioning and preliminary Operation of the System to ensure Integration and ability for the Operation of the System;
- compliance with the test and commissioning requirements;
- compliance at that time with the Safety Requirements, as approved by the Safety Auditor (who is under contract to the City).

3. Revenue Service Availability (30 Nov was 02 Nov) achieved when Trial Running successful and:

- receipt by the City of the Bill of Sale for the Vehicles;
- staff training of staff provided by the City with respect to the Operation of the System has been completed and the requisite number of staff have been certified;
- Substantial Completion of the Civic Works.

All the above as evidenced by the issuance by the Independent Certifier of a certificate acknowledging Revenue Service Availability (the "Revenue Service Availability Certificate").

4. Final Completion

- Contingent of delivery of all elements including last vehicle – tentatively now scheduled from mid-January.



3.3 SCHEDULE

General Overview of OLRTC's Schedule update:

- Progress is being made on all fronts over all disciplines.
- Critical path activities remain and float is at or near zero in most activities. Critical activities include:
 - Rideau Station permanent power and Tunnel Ventilation System
 - Alstom Vehicle Modifications and Retrofits
 - Thales CBTC Installation, Testing & Commissioning
 - SCADA (Supervisory Control And Data Acquisition)
- The new Project Management team has had a positive influence. They continue to implement:
 - micromanage the schedule with overlapping tasks and disciplines
 - ensure strong supervisory staff
 - bring in subject matter experts (to run SITs and SATs, carry out inspections, etc)
 - daily “Visual Board” meetings for construction and systems continues



3.3 SCHEDULE

Eastern Stations:

Facilities: The 7 eastern stations are nearing building are virtually complete and occupancy permits are imminent. Architectural finishes are ongoing (wood ceilings, glazing, painting, finishes, etc) however these are minor .

Systems: SCADA connectivity work is on critical path (does not impact occupancy)

Underground Stations:

Civil works complete. Final finishes underway at Lyon. Parliament and Rideau progressing well, however facility construction remains and is behind original schedule. Architectural finishes, lighting, etc completion of Rideau by 30 November will be a challenge.

Art installations (ceiling) will impact Parliament completion.

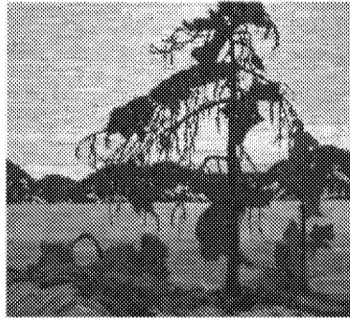
Western Stations:

Architectural, M&E work on going. Systems installation advancing. Zone 1 CBTC testing.

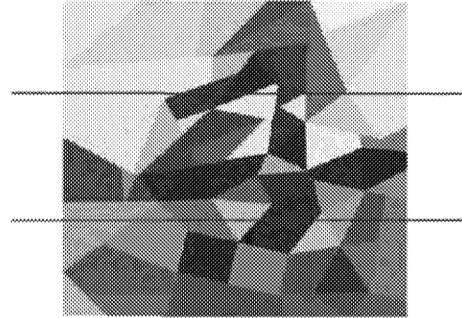
Art installation at Tunney's impacting completion.



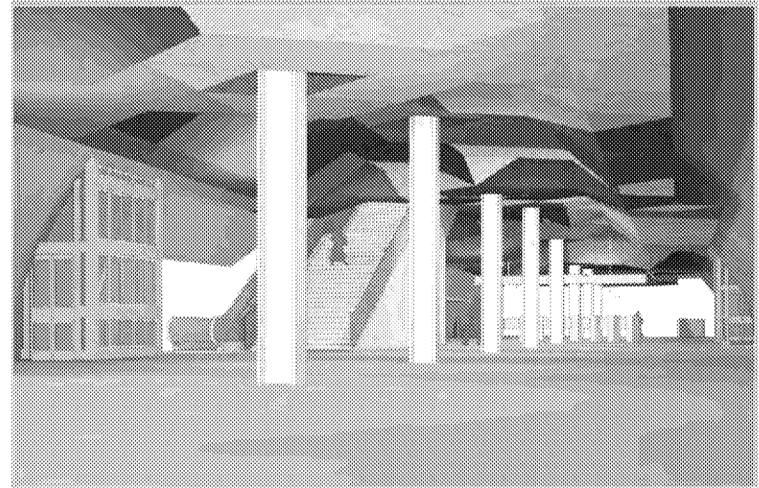
3.3 SCHEDULE – PARLIAMENT ART



Tom Thomson, The Jack Pine, 1916-17



Abstracted and divided into thirds

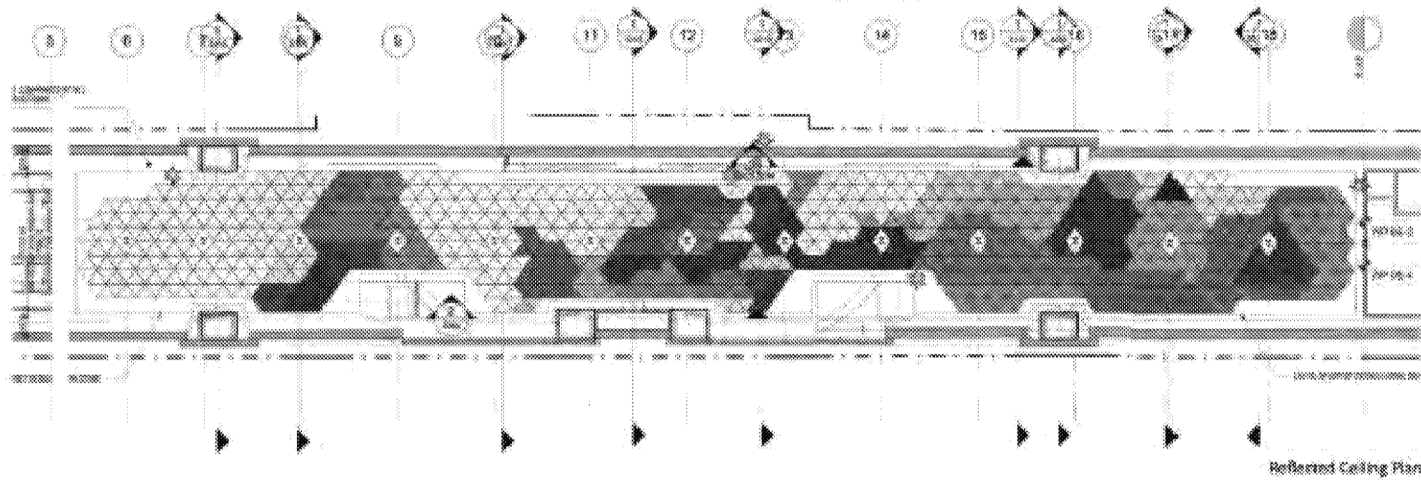


3.0 Proposed Artwork Location

3.1 Location

The artwork will be installed on the ceiling of this concourse level of Parliament station.

3.2 Location Drawings





3.3 SCHEDULE

Key areas that RTG are tracking include :

- Completion of the Maturity Level 3 tests in the East to facilitate integration tests and City training;
- Rideau TVS;
- Safety Auditor documentation submittal progress;
- CBTC and SCADA s/w roll outs;
- LRV modifications and retrofits.



3.4 DELAY CLAIM IN NEGOTIATION WITH CITY

Litigation Privileged



3.5 PAYMENT MILESTONE STATUS

Milestone 11 – Completion of Station Bundle #1: The achievement of this milestone as defined, was attained on 09 March '18 (07 Oct '17 was PA date) with an agreed list of deferred items.

The deferred activities consist of architectural finishes, glazing, porcelain panels, landscaping, mechanical and electrical items, seasonal items, TSSA certification of conveyance systems (to avoid initiation of warranty).

Milestone 12 – Substantial Completion – now shown as 06 November with RSA scheduled for 30 November. If the City agrees to the revised date for RSA, which involves starting service with the less than the full complement of LRVs, RTG will commence negotiations on partial Substantial Completion framework and payment, on a modified RTM monthly service payment structure.

RTG issued a remedial plan to the LTA as Milestone 12 is a trigger event (identified as 21-Jun-18). We are monitoring the remedial plan triggers as some are in jeopardy of being missed.



3.5 PAYMENT MILESTONE STATUS (..cont'd)

Milestone Update

Payment Milestones			
Description	RTG Contract PA Schedule 19	CC Baseline Schedule or Actual date	+/- (Calendar days)
9 Completion of Station Bundle #4 (St Laurent, Cyrville & Blair)	20-Dec-16	Complete	-31
10 2017 Readiness	12-Apr-17	Complete	-99
11 Completion of Station Bundle #1 (Tunney's Pasture, Bayview & Le Breton)	17-Oct-17	09-Mar-18	-143
12 Substantial Completion of Fixed Facility and Vehicle Completion	07-May-18	06-Nov-18*	-183

*terms to be negotiated

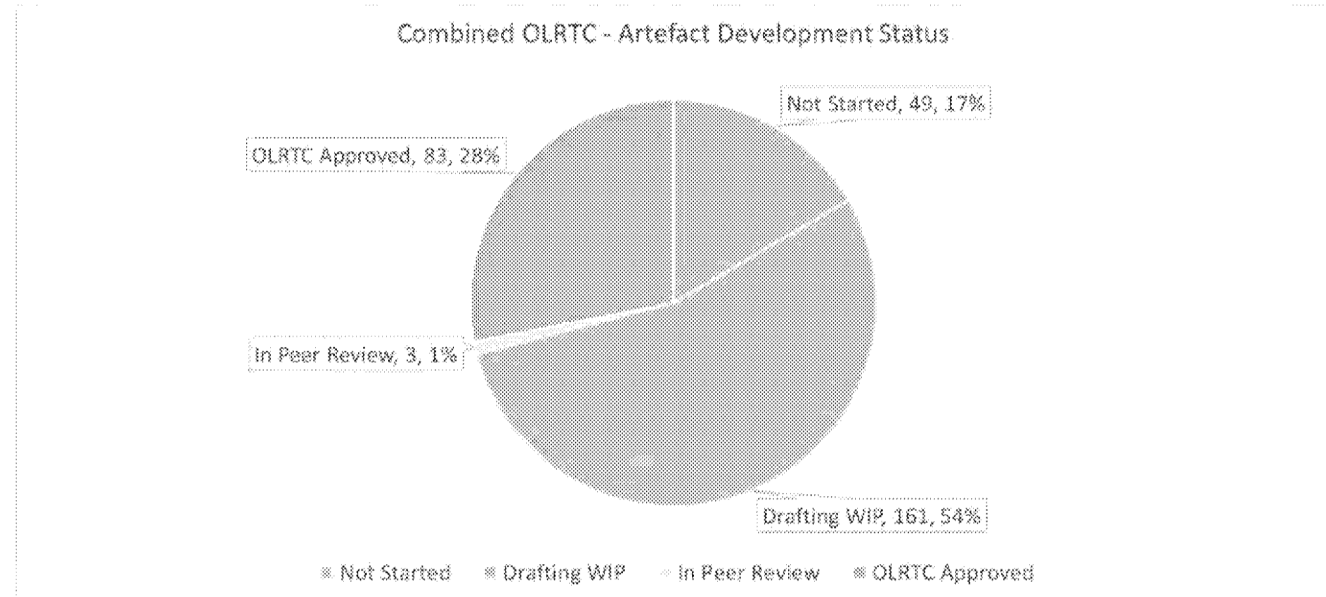


3.6 SAFETY REQUIREMENTS & SAFETY AUDITOR

PA 1.559 “Revenue Service Availability” conditions include that compliance at that time with the Safety Requirements, as approved by the Safety Auditor is achieved. OLRT-C continue in accordance with the City Safety Auditor agreed, weekly updated, Route Book Plan and Schedule.

Status:

- 31 Documents require SONO (Statement Of No Objection) by the City
- So far 0 formally SONO'd of 9 no. Submitted (submitted 10 weeks ago)
- Total 296 documents to produce by OLRTC, these do not need to be SONO's (see pie chart to the right)





3.7 ACTIVE WORKS ON SITE

HYW 417:

- Final deficiencies rectification to be completed in October. (not including the post RSA HW417 works)

MSF & MSF Expansion:

- MSF Expansion work in progress. Building almost enclosed. Wheel lathe installed and under pre-commissioning test, shed track complete, MSF track and OCS work in progress, control room expansion 80% complete.

SEGMENT 2:

- Tunnel 5 (Rideau to East Portal) – installation of jet fans complete. Lyon & Parliament Station M&E and Architectural work ongoing. Rideau – Architectural, systems installation, M&E, masonry, elevator & escalator installation, station entrance construction all underway. CBTC testing 45% complete.

SEGMENT 1:

- Tunney's Pasture, Bayview and Pimisi Stations construction continues with mostly architectural and landscaping works. Some M&E works, peripherals installation, escalator and elevator install/testing ongoing. CBTC testing over 85% complete.*

SEGMENTS 3-4-5:

- uOttawa, Lees, Hurdman, Tremblay, St. Laurent, Cyrville and Blair stations architectural finishes and systems installation and testing ongoing. T&C (integration tests beginning). Wood ceiling installation essentially complete, architectural finishes ongoing. CBTC testing 93% complete.*

*remaining tests require enter guideway – full system testing.



3.8 THREE (3) MONTH LOOK-AHEAD

MSF Building, Yard, Connector & MSF Expansion:

- SITs and SATs (System Integration and Acceptance tests); LRV mods and retrofits (complete); system commissioning, MSF expansion construction; Trial Running.

Tunnel and Underground Stations:

- Lyon Station: SITs and SATs (System Integration and Acceptance tests); architectural finishes.
- Parliament Station: SITs and SATs (System Integration and Acceptance tests); architectural finishes.
- Rideau Station: Mechanical, electrical, systems installations and architectural finishes. SITs and SATs (System Integration and Acceptance tests); architectural finishes.
- Obtain occupancy permits

Above Ground Stations:

- Complete systems installation/testing and architectural finishes.
- Obtain occupancy permits

Guideway:

- Track & OCS deficiency rectifications.

General:

- Testing and Commissioning/Systems integration testing.
- Handover to RTM.



3.9 SINKHOLE INSURANCE CLAIM

Insurance



3.10 PHOTOS





Tunney's Pasture Station



- Fare gate installation ongoing.
- Final lighting installations underway.



- Glazing installation nearing completion.
- CBTC testing ongoing for Zone 1.
- Entrance lantern assembly underway



Bayview Station



- W5 glazing installation ongoing.
- Fare gate installation ongoing.
- Entrance lantern assembly underway.
- South landscaping from O-Train Line 2 ongoing.



- Wood ceiling installation underway.
- Final lighting installations underway
- System peripheral installations ongoing.



Segment 1 Guideway East of Tunney's Station



- Diamond crossover east of Tunney's station.

- Guideway approaching Tunney station.





Segment 1 Guideway West of Bayview Station



- Trackwork east of Bayview Road Bridge.



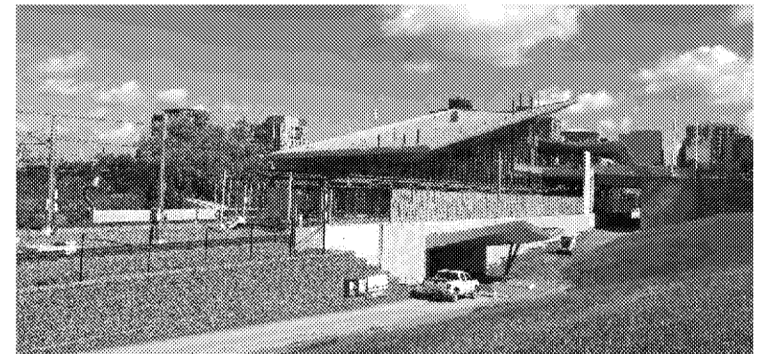
Segment 1 Guideway West of Pimisi Station



- Trackwork between Bayview & Pimisi Station



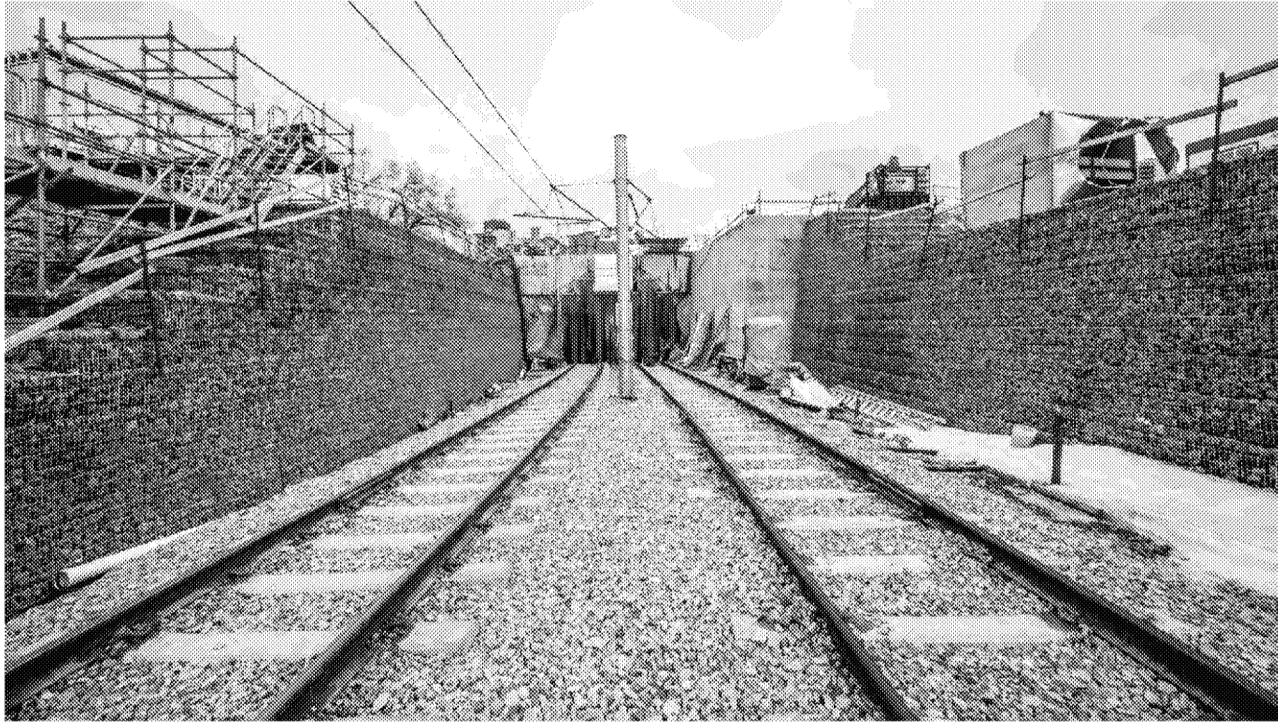
Pimisi Station



- Wood ceiling installation ongoing.
- Glazing installation ongoing.
- Landscaping in progress.
- Entrance lantern assembly and faregate installation underway
- Lighting and wayfinding installation in progress.



Segment 1 Guideway West of West Portal





West Portal



- Guideway East portal to Lyon station



Lyon Station



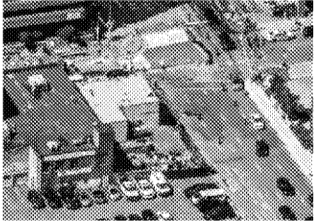
- Architectural finishing ongoing.
- Acoustic panel installation in progress for concourse ceilings.
- Escalator enclosing with SST panels underway.

- Utility cabinet installation ongoing.
- Porcelain tile installation at platform level complete.
- Wayfinding installation underway.





Lyon Station West Entrance



- Wood ceiling panel installation ongoing at grade Level.
- Ceiling acoustic panel installation underway.



Lyon Station East Entrance (Place de Ville)



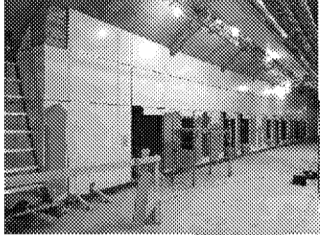
- Ceiling acoustic panels installation underway.

- Wood ceiling panel installation ongoing at grade Level.





Parliament Station



- Systems installations ongoing in COMMs room.
- MCCs, fans, dampers and silencers installed for TVS system.
- TVM housing complete at concourse level.

- CCTV and PA devices installation ongoing.
- Acoustic panel installation for ceiling underway.





Parliament Station West - Mid Entrance

- Porcelain tile finishing in entrance corridor.
- Acoustic panel installation complete in the corridor.
- Interlock paver stone installation ongoing at street level.



- Mid entrance elevator cabs assembly in progress in shafts.





Parliament Station East Entrance (Morguard)



- Acoustic ceiling panel installation underway.
- Door frame Installations in Progress at landing entrance.

- Porcelain tile installation in progress.
- Façade glazing installation ongoing.





Rideau Station



- Ceiling installation at platform and concourse level nearing completion.
- Elevator installations ongoing in shafts.
- Faregates topping slab poured.
- Wire pulling through ceiling conduits at platform level ongoing.

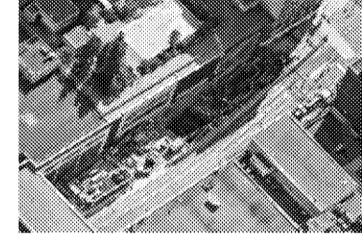
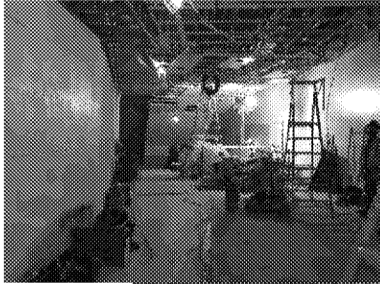


- All escalators installed with commissioning in progress.
- Conduit installations in progress for traction power, station power and COMMs.
- Porcelain tile installation at concourse, platform and staircases ongoing.





Rideau Station West Entrance



- Acoustic panel ceiling installation underway.
- Porcelain tile installations in progress on walls at retail concourse.
- Escalator commissioning ongoing.

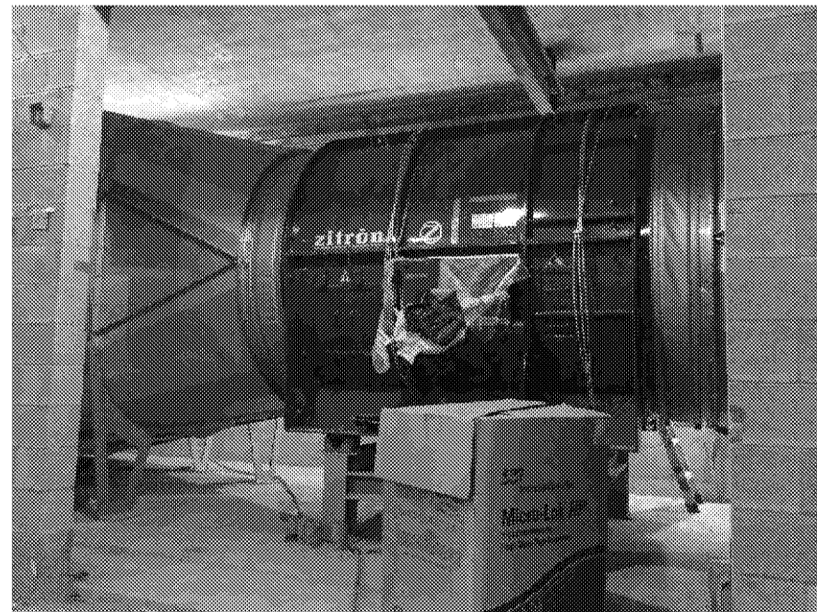


Rideau Station West TVS



- West TVS shaft paving and reinstatement complete.

- Electrical fans installation ongoing.





Rideau Station Mid Entrance



- Ceiling framing installation ongoing.
- Floor porcelain tile installations complete of mid entrance adit.

- Elevators assembly in progress.





Rideau Station HVAC Shaft



- HVAC shaft paving and reinstatement complete at street level.



- Ventilation connections of the air handling unit is complete in HVAC room.



Rideau Station East Entrance (Bank of NS)



- Porcelain tile and ceiling installation in progress on walls of public areas.
- Escalator commissioning underway.



- Ceiling framing complete in the concourse connection.
- Wire pulling in progress throughout ceiling.



East Portal to Ottawa U Station



- Trackwork, OCS, WRU, GIDS and tunnel lighting complete for this section of tunnel.
- Jet fan installations imminent in fan niches.



- Backfilling complete atop cut-and-cover section of tunnel at East Portal.



Ottawa U Station



- Wood ceiling installation underway.
- Utility cabinet and faregate installation ongoing.

- Entrance lantern assembly underway.
- Landscaping ongoing.
- Final lighting installation underway.





Segment 3 Guideway – west of Uottawa Station



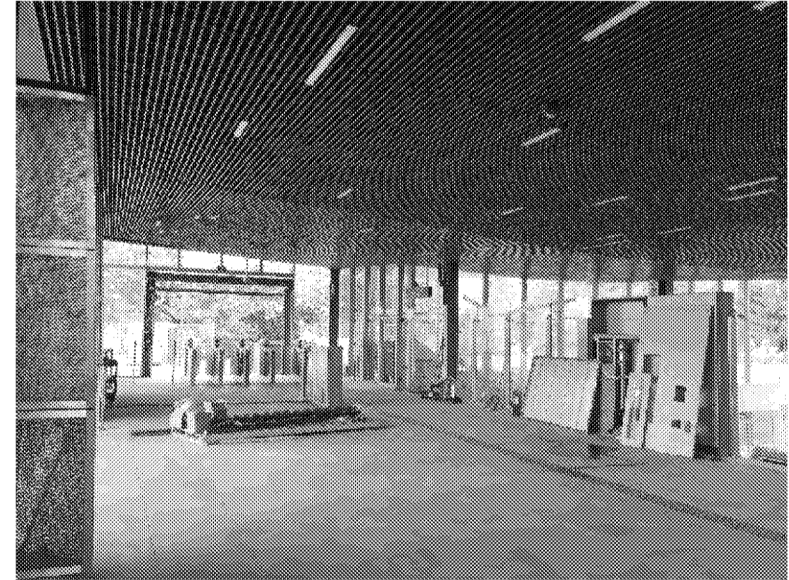


Lees Station

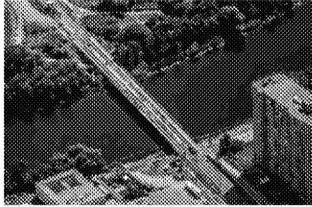


- Glazing installations in progress.
- Wood ceiling installation ongoing.
- Entrance lantern assembly and fare gates installation underway.

- Systems peripheral installations nearly complete.
- Elevator installations nearing completion.
- Landscaping ongoing.



Segment 3 Guideway – East of Lees Station



- Elevated guideway east of Rideau River Bridge



Hurdman Station



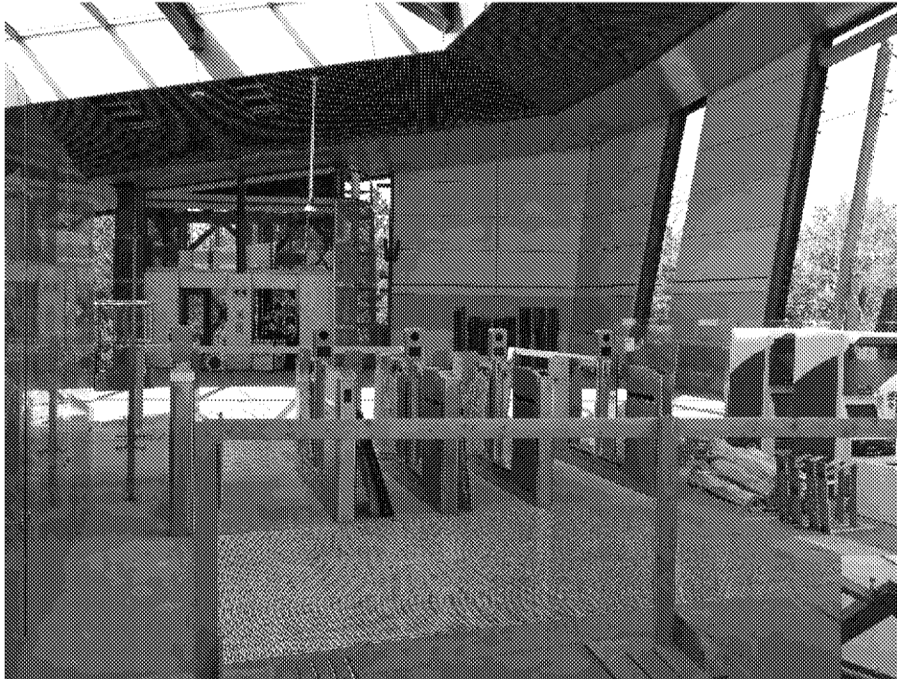
- Glazing installation ongoing.
- Lantern assembly underway.
- Landscaping and paver stone and artwork installations in progress for MUP.

- Signage and lighting installation ongoing.
- Elevator entrance façade installation underway.
- Wood ceilings complete.
- Station Comms SIT testing ongoing.





Tremblay Station



- Fare gate installation complete.
- Station Comms SIT testing ongoing.
- Landscaping ongoing.

- Lantern assembly underway.
- Signage, wayfinding and lighting installations in progress.





St. Laurent Station



- Fare gates installed.
- Entrance lantern assembly ongoing.
- Signage and wayfinding in progress.

- Station Comms SIT testing ongoing.
- TVS SIT testing underway.
- Glazing installation nearing completion.





Cyrville Station



- Station Comms SIT testing ongoing.
- Peripheral installations Complete

- Entrance lantern assembly in progress.
- Signage and wayfinding in progress.
- Fare gate installation complete.





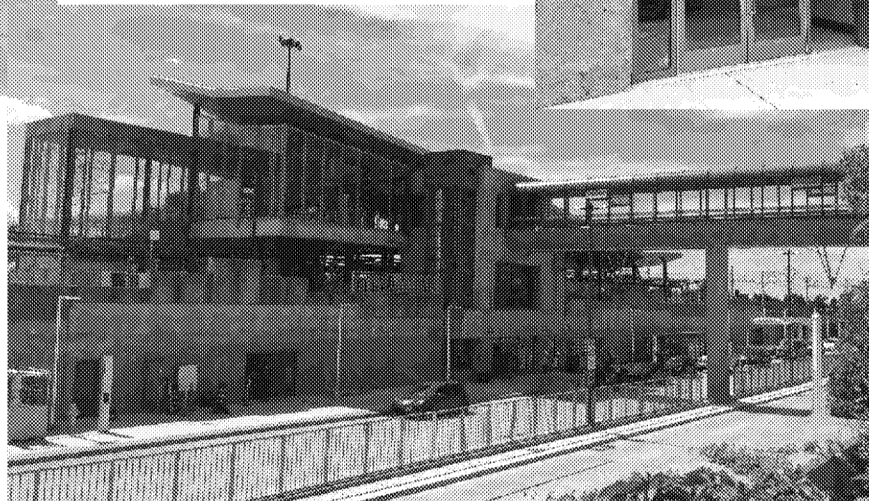
Blair Station



- Signage and wayfinding in progress.
- Entrance lantern assembly underway.

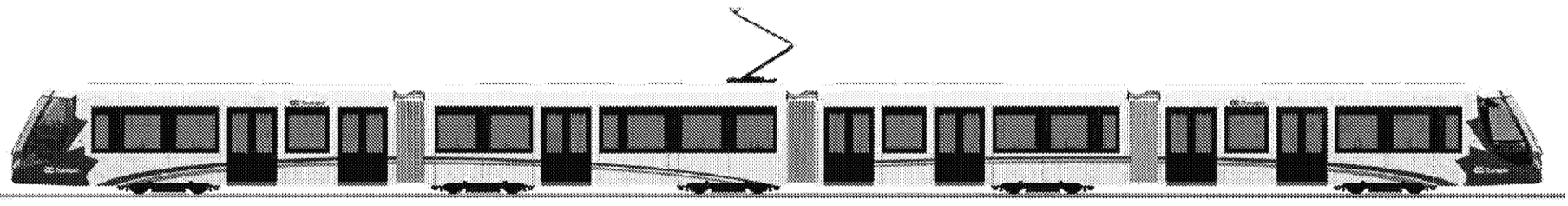


- Station Comms SIT testing ongoing.
- Final landscaping ongoing for north bus loop.





4 VEHICLES & SYSTEMS

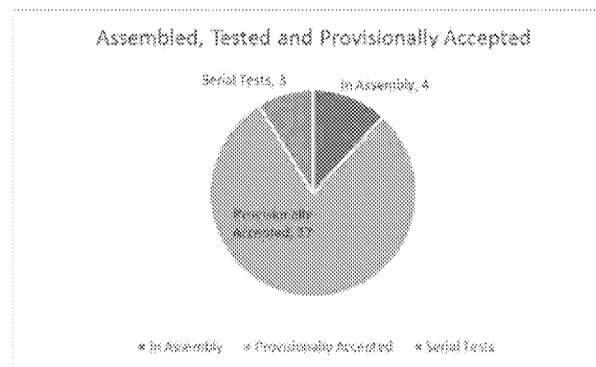




4.1 VEHICLES ASSEMBLY & TESTING

Vehicles

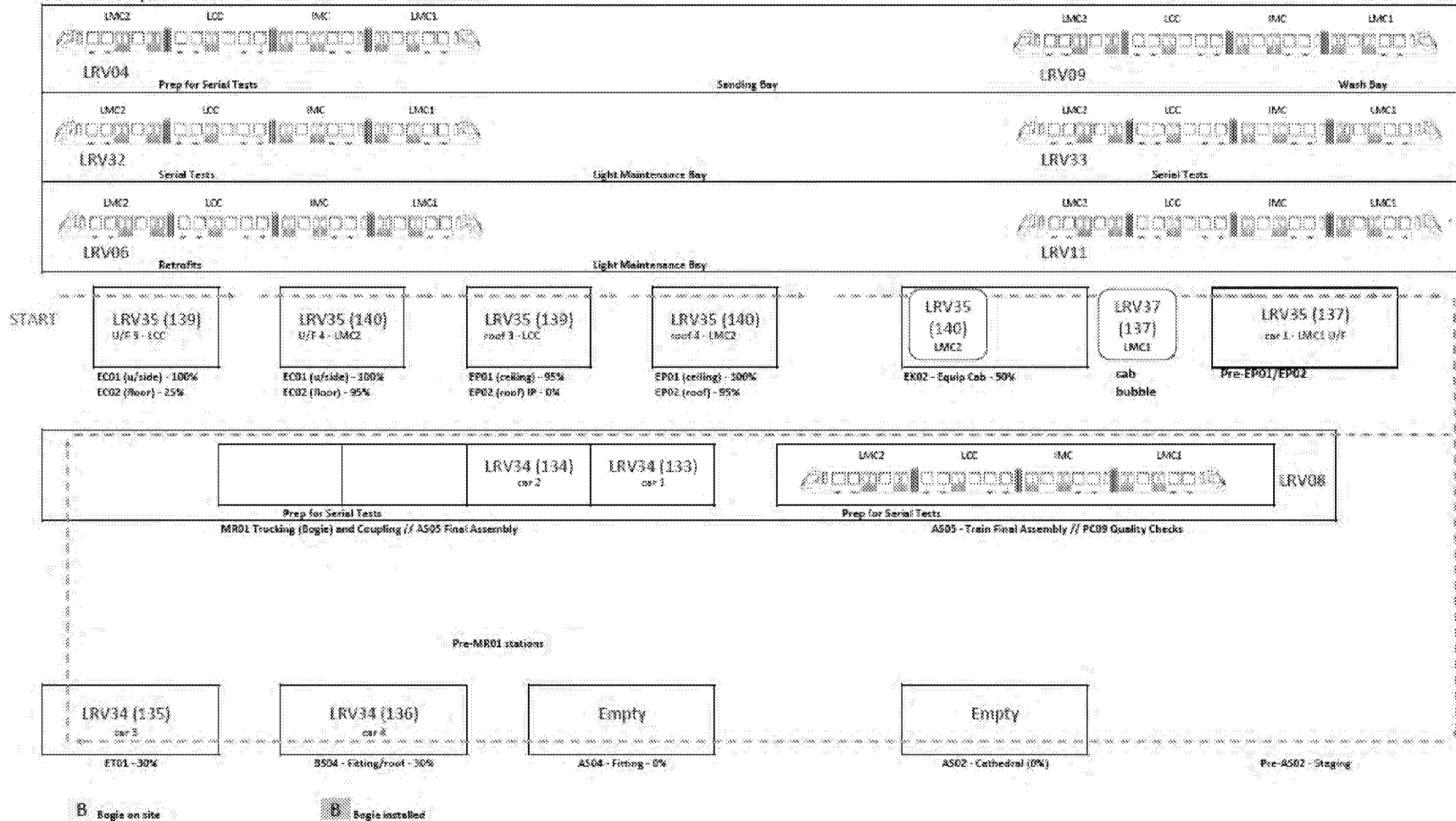
- Vehicles remains one of, if not the most, critical task.
- Total Headcount in the MSF is at 172. Workload is shared between Retrofit and Production. Additional staff has been hired and trained to accelerate the modification and retrofit program.
- Alstom's latest schedule results in the following:
 - 30 vehicles (15 coupled) tested and in Trial Running configuration by 07 November.
 - 32 vehicles (16 coupled) in Revenue Service Configuration by 30 November. The 16th vehicle is the "hot spare"
 - 34 vehicles (17 coupled) by mid January '19 (the 17th LRV is the "maintenance spare")





4.1 VEHICLES ASSEMBLY & TESTING

Date: 21 September 2018



Located in the Shed: LRV32, LRV33 (Serial Tests), LRV02 (Validation Tests)

LRV01, LRV03, LRV22, LRV23, LRV28 (Retrofits)

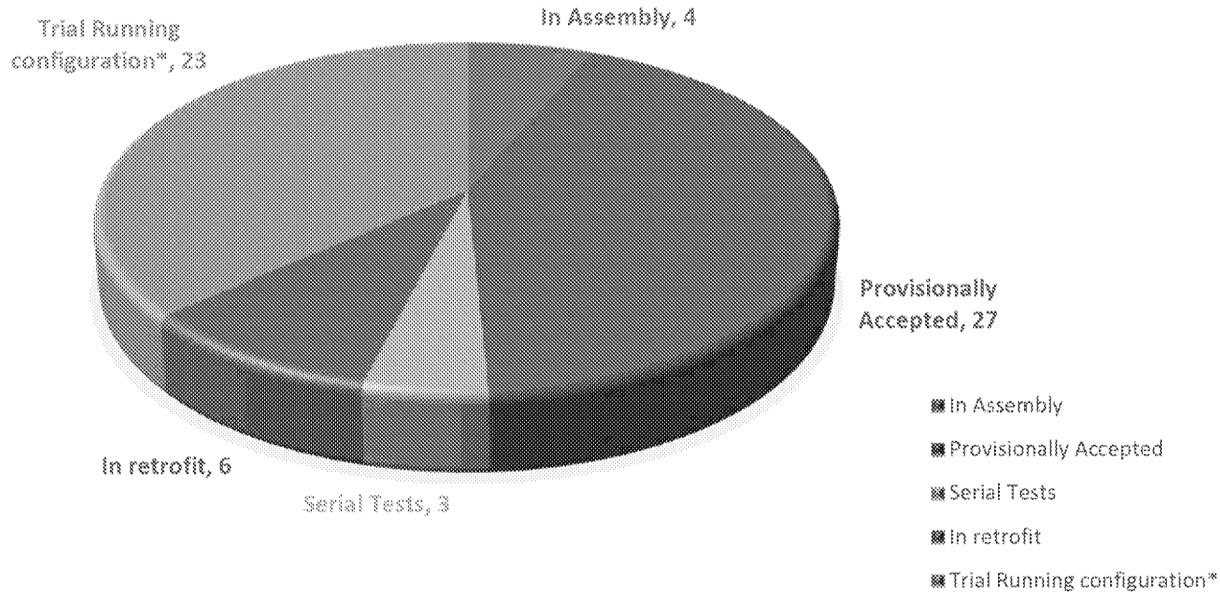
LRV05, LRV10, LRV12, LRV13, LRV14, LRV15, LRV16, LRV17, LRV18, LRV19, LRV20, LRV21, LRV24, LRV25, LRV27, LRV29 (cleared retrofits - Integration Tests)

Located on Mainline: LRV07, LRV26, LRV30, LRV31 (cleared retrofits - Integration Tests)



4.1 VEHICLES ASSEMBLY & TESTING

OVERALL VEHICLE STATUS





4.2 VEHICLES & SYSTEMS - SCHEDULE

Systems

- Post Installation Check Out (PICO) testing and System Integration Testing ongoing.
- All Guideway OCS installed and testing
- General
 - TPSS 3 testing underway.
 - Installation of Wayside Radios, Wayside Antennas, Signal and Transponder TAG and testing underway.
 - P25 and Cellular conduit installation underway. P25 testing in progress.
- Thales progressing well with Maturity level testing.
- Latest SCADA software released and installed. Installation and testing underway. SCADA testing success is critical.
- Next 3 months – Peripherals (CCTV, PIDS, GIDS, HSDR, etc), CBTC and SCADA installation and test.



4.2 VEHICLES & SYSTEMS - SCHEDULE

Summary:

- Zone 3 & 4 – Devices, cable pulls, terminations DPICO's virtually complete
- Zone 2 (tunnel) – Lyon well advanced, Parliament advancing, Rideau critical path as Systems install contingent on construction progress.
- Zone 1 (western stations) – Progressing well, testing underway

Responsible :
Week Ending on :

Magdy Ibrahim
14-Sep-18

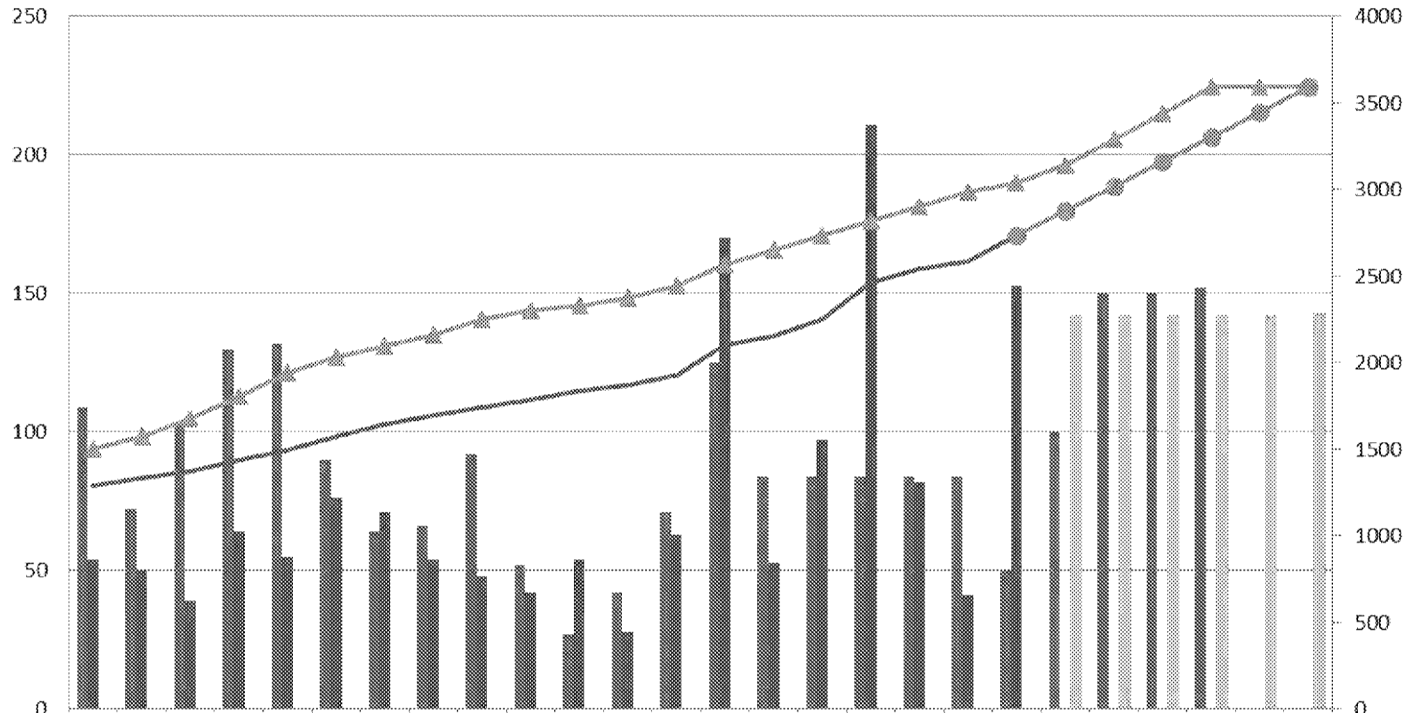
Construction Weekly Report
Communication Dashboard

Zone	Station	Devices			Cable Pulls			Termination			PICO		
		Total	Complete	Remaining	Total	Complete	Remaining	Total	Complete	Remaining	Total	Complete	Remaining
Z4	Blair	211	100%	0	248	100%	0	248	100%	0	248	100%	0
Z4	Cyrvil	156	96%	6	178	99%	2	178	95%	9	178	96%	8
Z3	St.Laurent	316	97%	10	391	100%	1	391	97%	13	391	93%	26
Z3	Tremblay	155	100%	0	184	100%	0	184	98%	4	184	99%	2
Z3	Hurdman	194	100%	0	239	100%	0	239	97%	8	239	100%	0
Z2A	Lees	159	98%	3	192	100%	0	192	100%	0	192	88%	23
Z2A	Uottawa	176	100%	0	209	100%	0	209	100%	0	209	99%	3
Z2B	Rideau	602	35%	394	642	24%	488	642	0%	642	642	0%	642
Z2B	Parliament	504	53%	235	504	80%	101	504	56%	222	504	3%	487
Z2B	Lyon	497	85%	73	537	100%	0	537	92%	43	537	45%	296
Z1	Pimisi	230	74%	59	270	94%	17	270	85%	40	270	74%	69
Z1	Bayview	160	75%	40	200	100%	0	200	73%	55	200	67%	66
Z1	Tunneys	230	78%	50	270	100%	0	270	74%	70	270	54%	125
Total		3590	76%	852	4064	88%	489	4064	73%	1099	4064	57%	1743



4.2 VEHICLES & SYSTEMS - SCHEDULE

1 - COMM's Devices Installed



	May/04/18	May/11/18	May/18/18	May/25/18	Jun/01/18	Jun/08/18	Jun/15/18	Jun/22/18	Jun/29/18	Jul/06/18	Jul/13/18	Jul/20/18	Jul/27/18	Aug/03/18	Aug/10/18	Aug/17/18	Aug/24/18	Aug/31/18	Sep/07/18	Sep/14/18	Sep/21/18	Sep/28/18	Oct/05/18	Oct/12/18	Oct/19/18	Oct/26/18	
Planned	109	72	103	130	132	90	64	66	92	52	27	42	71	125	84	84	84	84	84	84	50	100	150	150	152	0	0
Actual	54	50	39	64	55	76	71	54	48	42	54	28	63	53	97	211	82	41	153								
Forecast Period																						142	142	142	142	142	143
Planned Cummul	1503	1575	1678	1808	1940	2030	2094	2160	2252	2304	2331	2373	2444	2569	2653	2737	2821	2905	2989	3039	3139	3289	3439	3591	3591	3591	
Actual Cummul	1287	1337	1376	1440	1495	1571	1642	1696	1744	1786	1840	1868	1931	2101	2154	2251	2462	2544	2585	2738							
Forecast Cummul																					2738	2880	3022	3164	3306	3448	3591



4.2 VEHICLES & SYSTEMS - SCHEDULE

Maturity Level	Description
0	No train testing -including PICOs, switch moves, signal aspect testing and communications between wayside and central subsystems
1	One Manual train testing – including train tracking, wayside & guideway correspondence (One train per isolated test area, points under legacy protection, clamped, or commissioned for CBTC)
2	One Controlled Train testing without the Points being clamped
3	Multiple train operation
4	Whole System

- A train must complete the Dynamic PICO tests prior to being used in a SAT testing and can be used to conduct Maturity Level 2 test or higher. Maturity levels are defined from low numerical number (eg. 0) to a high numerical number (eg. 3) and are applicable to the complete CBTC System as a whole.
- Note that it is not necessary to proceed to a particular Maturity Level (other than Level 0) prior to completing all associated tests in the previous Maturity Level (minimum set of tests can be defined that must pass in order to get to the next maturity level).



4.2 VEHICLES & SYSTEMS - SCHEDULE

ZONE 1

THALES

T&C SIG DASHBOARD

DATE

22/01/2018 09/10/2018

ZONE

ZONE1

MATURITY LEVEL

All

TESTER

All

REVIEWER

All

SUBSYSTEM

All

TEST READY

305

TEST PERFORMED

258

TESTS PERFORMED RESULT

Passed 247 Failed 4

SAFETY TEST

Passed 286 Failed 7

TESTS PLANNED VS PERFORMED

● Cumulative Performed ● Cumulative Planned ● Threshold

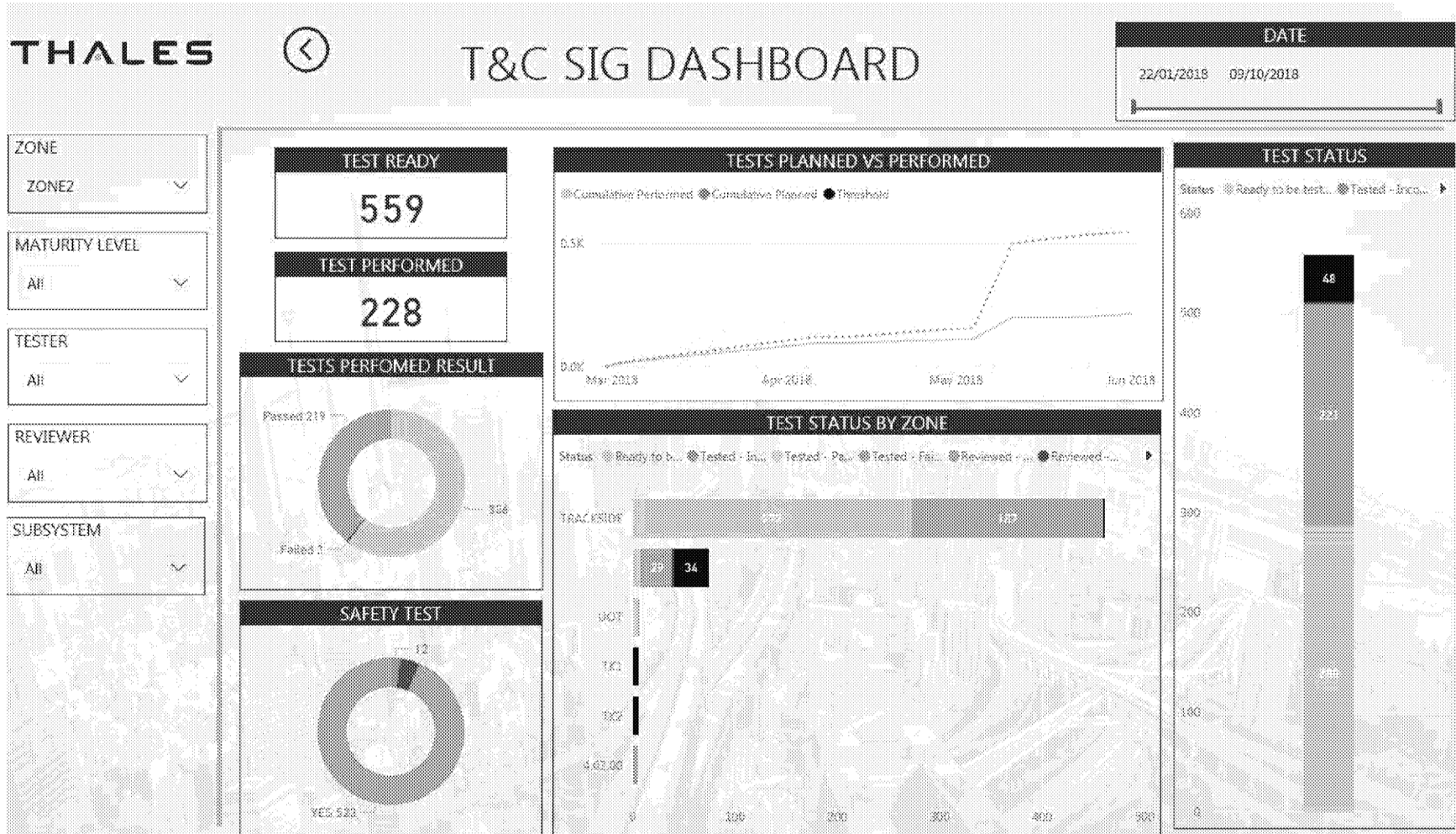
TEST STATUS BY ZONE

TEST STATUS



4.2 VEHICLES & SYSTEMS - SCHEDULE

ZONE 2





4.2 VEHICLES & SYSTEMS - SCHEDULE

ZONE 3

THALES

T&C SIG DASHBOARD

DATE
22/01/2018 - 09/10/2018

ZONE
ZONE3

MATURITY LEVEL
All

TESTER
All

REVIEWER
All

SUBSYSTEM
All

TEST READY

565

TEST PERFORMED

524

TESTS PERFORMED RESULT

Passed 500
Failed 24

SAFETY TEST

YES 21
NO 1

TESTS PLANNED VS PERFORMED

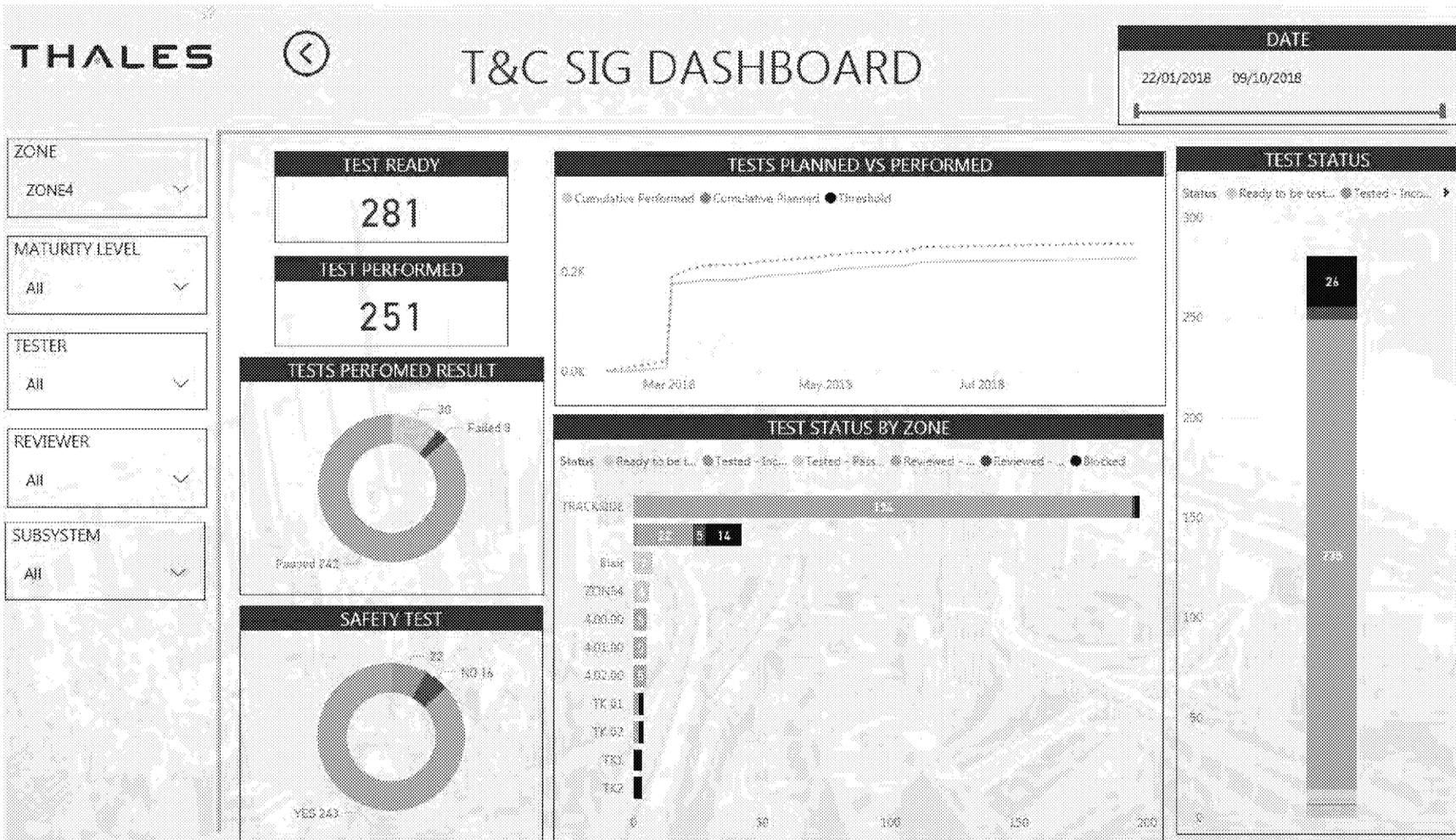
TEST STATUS BY ZONE

TEST STATUS



4.2 VEHICLES & SYSTEMS - SCHEDULE

ZONE 4



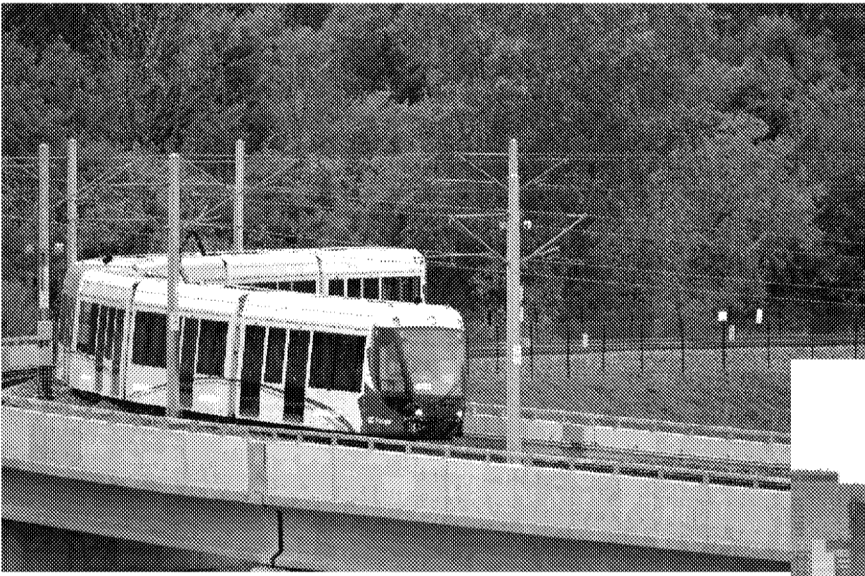


4.3 VEHICLES & SYSTEMS - PHOTOS





4.3 VEHICLES & SYSTEMS - PHOTOS





5. VARIATION ENQUIRY SUMMARY

Period ending August '18

SUMMARY REPORT		
VARIATIONS		
Type	Submitted Total Estimate Cost	City Approved Costs
Highway 417	\$3,060,879	\$3,467,767
Direct Compensation Event	\$14,010,091	\$11,866,922
Other	\$106,103,405	\$59,564,103
Sub Total	\$123,174,376	\$74,898,792
Stage 2	\$363,699,970	\$363,362,014
Total	\$486,874,346	\$438,260,805

Included in summary above, Variation Notices (promoted by Project Co)		
VN	\$22,848,627	\$18,557,119
Included in summary above, Variation Directives (as directed by City)		
VD	\$90,720,962	\$60,920,550
Included in summary above, Innovation Proposals (Initiated by Project Co)		
IP	-\$1,969,440	-\$1,046,020
Included in summary above, Stage 2 Works		
Stage 2	\$363,699,970	\$363,362,014



5. VARIATION ENQUIRY SUMMARY

Period ending August '18

SUMMARY REPORT				
Initiated by	Estimated Cost		Accepted Cost	
	\$	% of total	\$	% of total
RTG	\$22,848,627	5%	\$18,557,119	4%
City of Ottawa	\$464,025,719	95%	\$419,703,686	96%
Total	\$486,874,346	100%	\$438,260,805	100%

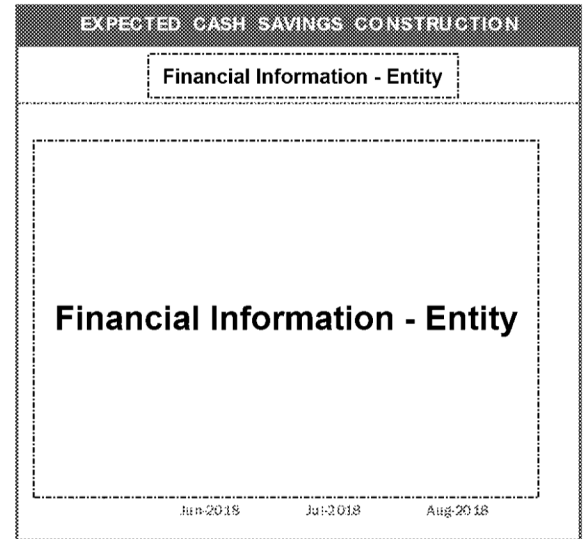
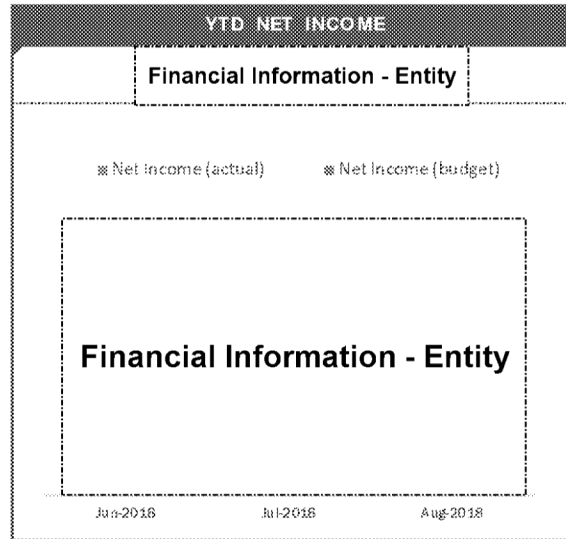
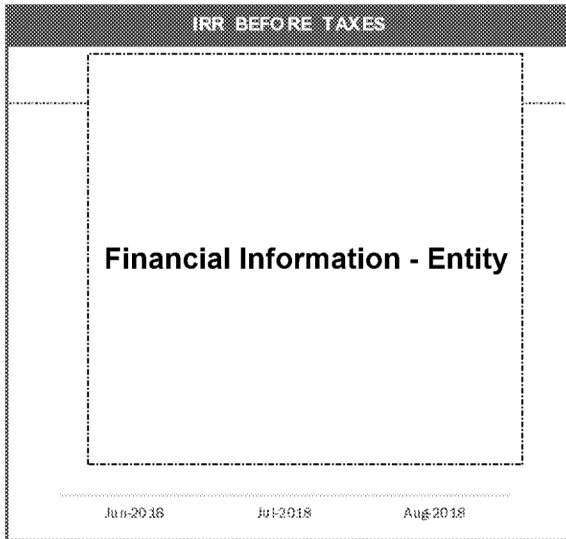


6. FINANCIAL MATTERS





6.1 DASHBOARD

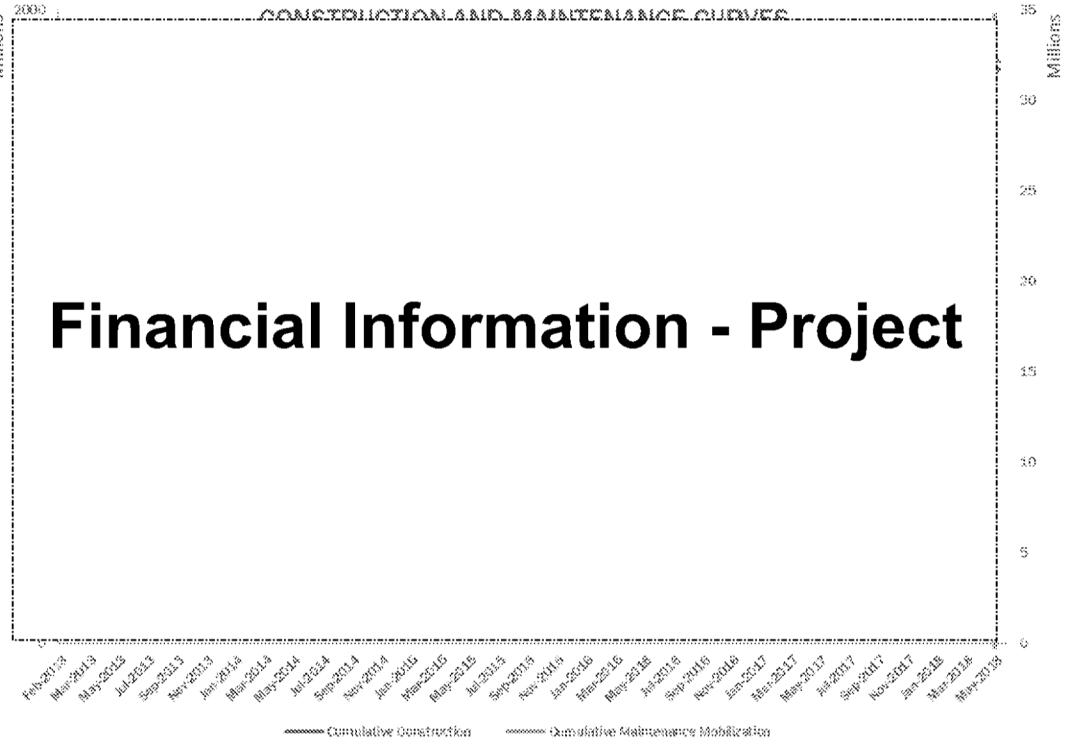




6.2 CONSTRUCTION COSTS

- Construction progressing at S-Curve (99% vs. 100%), \$[] remaining
- Cash allowance at approximately 93%
- Maintenance mobilization as per S-Curve (100%)

Construction Costs	Actual	PTD	Financial Close	Forecast Construction
Construction	Financial Information - Project			
Cash Allowance				
Variations				
Maintenance				
Mobilization				





6.3 SPV COSTS

Pure SPV costs 21% below budget YTD. For 2018 we expect pure SPV costs to be 14% below budget (20% below financial close model).

- Savings: low legal costs and T&C/Integration reduced External Advisors costs (\$) , Office () , no communication (\$) , Independent Certifier () , or contingency used (\$) reduced the Miscellaneous costs by , staff costs ()
- Overages: Financing

SPV COSTS	ACTUAL YTD		BUDGET YTD		VARIANCE		ACTUAL + 2018		2018		VARIANCE		FC MODEL		VARIANCE	
					\$	%	2018 FCST	BUDGET	\$	%	2018	\$	%	2018	\$	%
Staff																
External Advisors																
Financing																
Office																
Miscellaneous																
TOTAL																

Financial Information - Entity

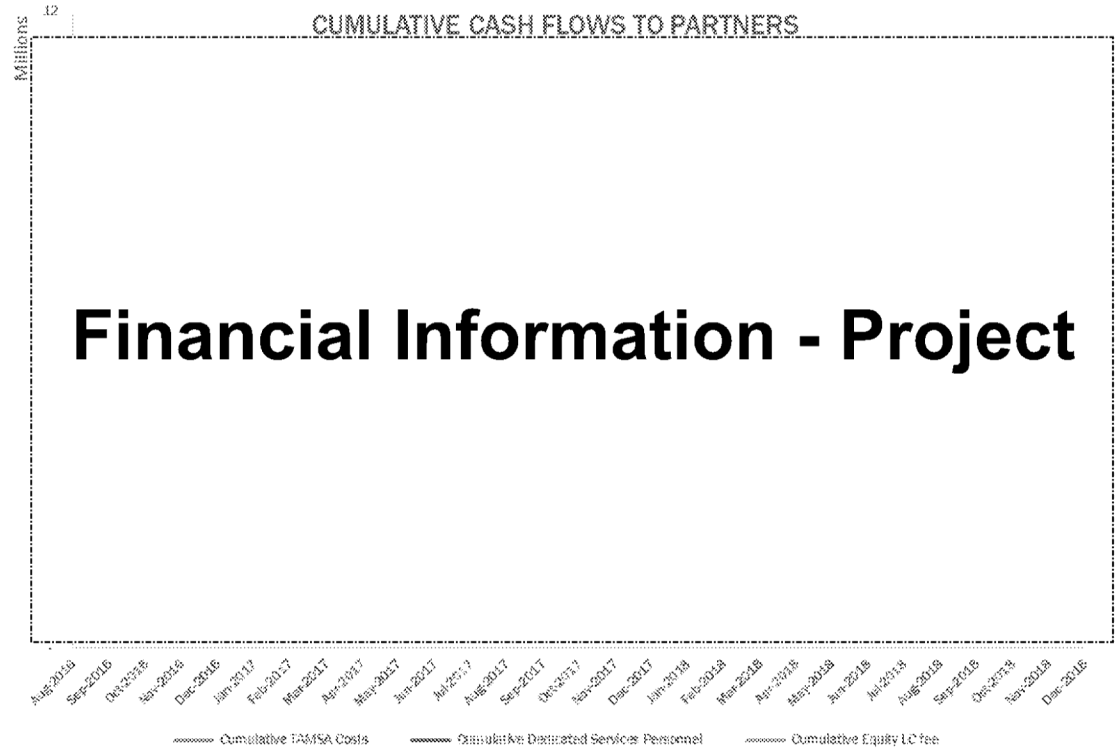


6.4 COSTS PAID TO PARTNERS

Project to date, Partners have been paid:

- \$ [Financial Information - Project] for Equity letter of credit fees
- \$ [Financial Information - Project] under the Technical Assistance and Management Service Agreement
- \$ [Financial Information - Project] for primary service personnel

Costs will continue to be paid to partners during delay in accordance with the TAMSA Agreement





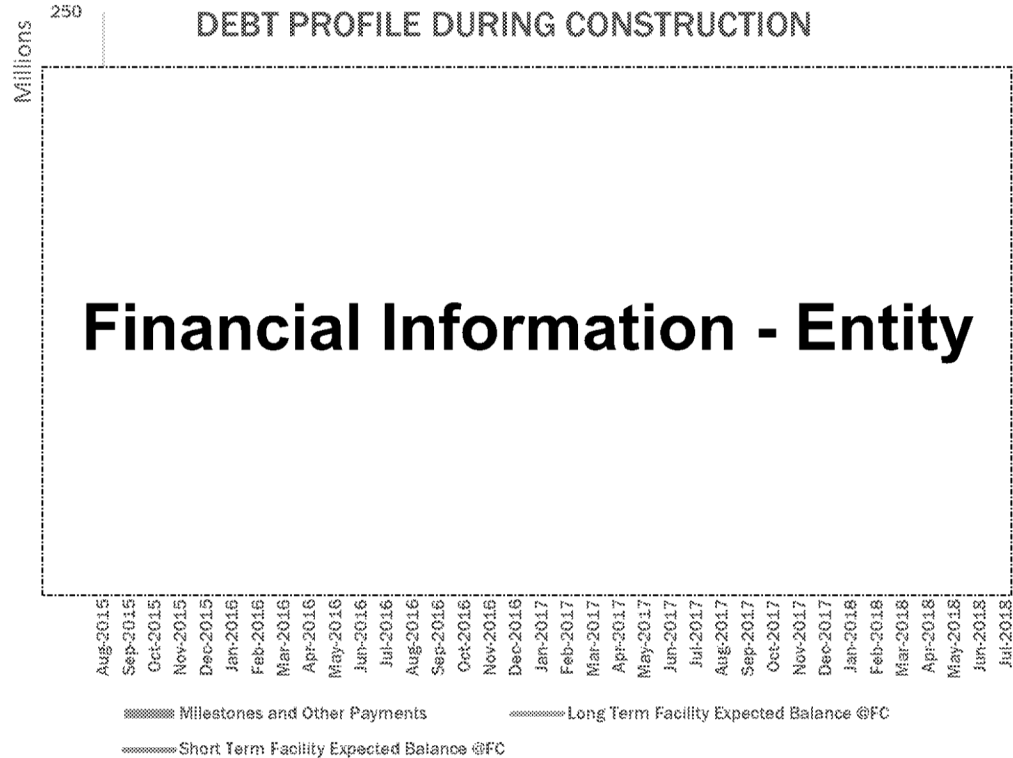
6.5 FINANCING

Compliance:

- Guarantor financial statements provide to Admin Agent.
- Two outstanding construction liens, totalling ~179k. One (\$38k) from 2017 and one from July 2018 (\$141k). Payment to DBJV was reduced by lien amounts.

Current Debt Balance:

- On 2018/8/30, ST facility balance was \$ [Financial Information - Entity] (vs. \$ [Financial Information - Entity] at FC)
- Maximum available \$ [Financial Information - Entity], \$ [Financial Information - Entity] remaining
- LT debt balance: \$ [Financial Information - Entity]





6.6 SWAP MISMATCH

- The SWAP was initially designed with a 1 month over-hedge following each scheduled Milestone Payment Date. The SWAP expired in May of 2018 (expected end of construction and repayment of Short Term Debt).
- Overall, the hedge proved to be ineffective due to the variable interest rate being slightly lower than the hedge rate of 3.55%, throughout the entire construction period.

6.7 Delay Liquidated Damages

- Board originally agreed to reduced LDs for the SPV and RTM components of the LDs

Solicitor Client Privileged

- Consent being sought with lenders (no consent received at this time)
- Additional insurance premium in the amount of \$ Financial Information - Page for the extension of builders risk policy to the end of December 2018 received by Project Co in late May

Solicitor Client Privileged

- Project Co no longer in a position to offer reduction of SPV component of LDs under these circumstances.
- Project Co notified that reduction will not be available
- RTM component of LD reduction may still apply subject to lender consent

LD Category	Full LD per CC (Daily)	Proposed Reduced LDs	Reduction
SPV			
RTM			
LT Debt			
Capital Payment			
Total			

Financial Information - Project



6.8 Short Term Debt Compensation/LDs

- Both Milestone 12 (Substantial Completion) and Revenue Service Availability Payment (\$ [Financial Information - Project] and \$ [Financial Information - Project] respectively) outstanding due to construction delays
- As per FC model, Project Co to charge ALL interest costs on short-term debt effective July 1st. NRMDD no longer applies. Short Term Debt Interest costs of approximately \$ [Financial Information - Entry] per month being charged to DBJV
- LDs of approximately \$ [] per month also being charged to recover missed Monthly Service Payments and fund SPV costs, Long Term Debt Interest Costs and Capital Payments to Equity Partners



6.9 STAGE 2

- Construction invoices totalling \$51.3M as of end of August 2018. FC forecast \$ [Financial Information - Project] (\$ [] behind curve)
- ICI (\$ [Financial Information - Project] of debt drawn to pay eligible costs) reached at end of April 2018 and certified by I/C
- As of Aug 2018, funding being provided by City. 4 City payments totalling \$22.5M received to date.
- EWP #1 – EWP #3 fully invoiced (~\$ [Component pricing]), EWP #4 ~70% completed (\$ [Financial Information - Project] of \$ [Component pricing]), EWP #5 ~ 88% completed (\$ [Financial Information - Project] of \$ [Component pricing])

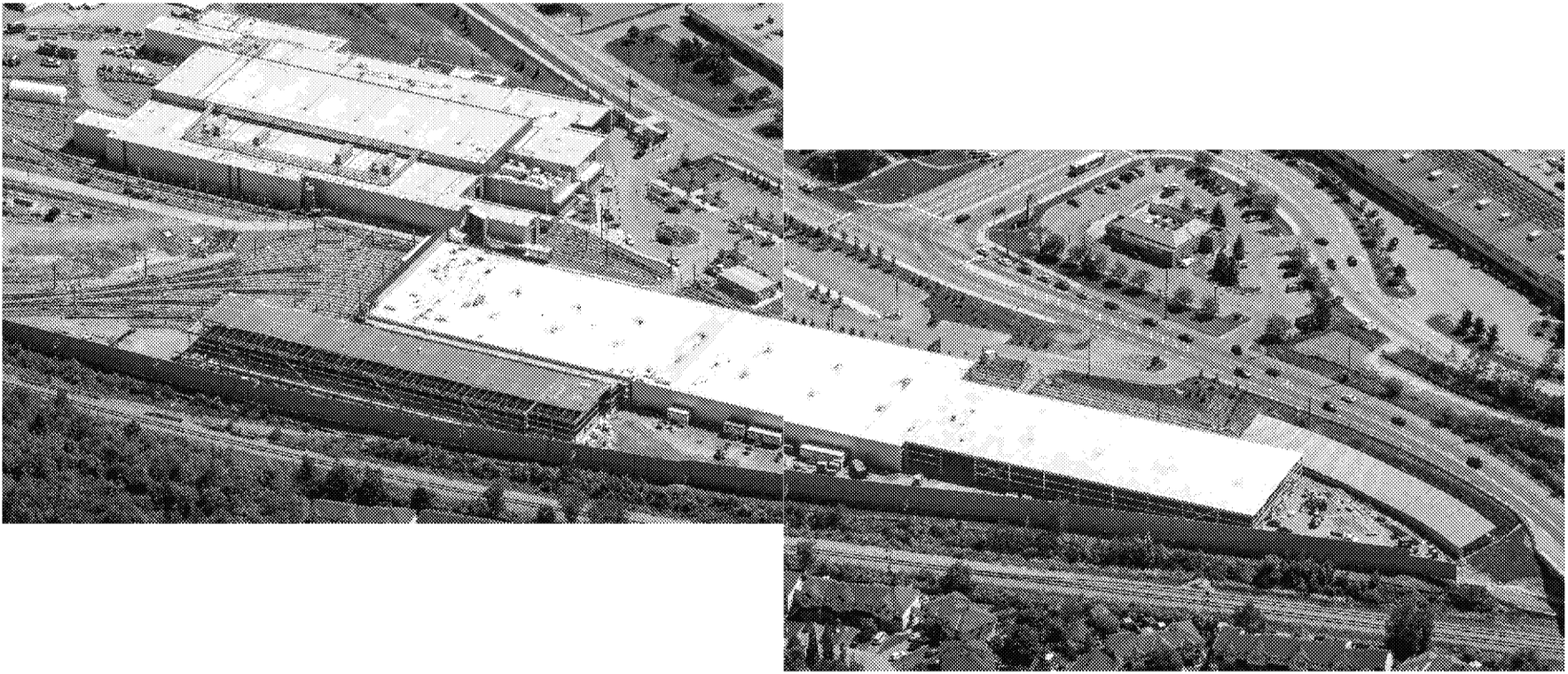


6.10 Project Co Stage 1 Cash Flow During Delay

- LDs recovered from DBJV sufficient to fund SPV, RTM LDs, LT Debt Interest Expenses.
- Project Co able to pay constructor with current construction forecast provided substantial completion achieved in October and RSA in November
- In the event that short-term debt limit is reached, Project Co has ability to deny construction payment. All RTM, SPV and LT Debt costs funded using LDs from DBJV.



7. BELFAST MSF EXPANSION





7.1 BELFAST MSF EXPANSION

- The steel structure, roofing, electrical, fire protection and drainage works for the train shed extension are completed. The NMSF steel structure is complete with roofing underway and masonry and mechanical works ongoing. The 3m control room extension is nearly completed with exterior cladding and internal fit-out underway.
- The yard electrical works are ongoing. New gas switch heaters infrastructure works are ongoing. OCS underground complete except for a 5 meter section to connect to the NMSF.
- The project critical path is the same as previous months, passing through the yet to be executed Thales Contract, fabrication and installation of the yard equipment.
- Some activities are behind schedule, others ahead – the schedule has been revised accordingly. No delays to substantial completion have been reported by the Contractor.
- ICI (Initial Capital Investment) was achieved.



MSF Expansion Stage 2



- Façade composite panel installation in the shed.
- Cable pulling for peripherals in the shed in progress.

- New MSF installation of double wheel lathe ongoing.
- M&E works underway.
- Roof and building envelope complete.
- Painting ongoing.

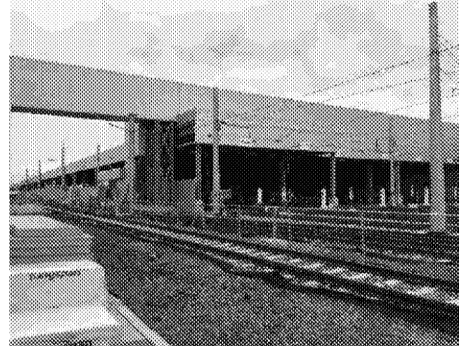




MSF Expansion Stage 2



- Temporary wheel truing pit complete. Machine installed.
- Final commissioning of single wheel lathe in October.



- Composite panel installation at walkway and staircases complete.
- Ceiling installation complete in the walkway (OHWS).
- Asphalt paving complete for access road along Bypass Track # 11





MSF Expansion Stage 2



- 3m extension YCC/BCC raised flooring installation complete.
- Ceiling framing, fire alarm system and smoke detectors complete.

- Ballast profiling and tamping ongoing for trackworks to new MSF building.





8. OTHER MATTERS

➤ Budget