ITS Program 2018/2019

BC Ministry of
Transportation and Infrastructure

June 1, 2018

OUTLINE

- What is the ITS Program in BC?

- The 2017/2018 Program

  - Program Update

- The 2018/2019 Program

  - Projects Selected

- Looking Forward

WHAT IS THE ITS PROGRAM?

- Long-term stable funding to facilitate prioritized ITS deployment,

- Pilot innovative ideas prior to broader deployment,

- Conduct planning in several ITS areas to guide future investments, and

- Address opportunities for federal partnerships, integrating systems with other municipalities and public agencies.

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THE 2017/2018 ITS PROGRAM (FIRST YEAR)

PROGRAM UPDATE

Project Name	% Complete	Carryover to 2018/2019	TOTAL Project Cost
Automated Traffic Management System (ATMS) – Message Multiple Dynamic Message Signs (DMS)	On-hold	0	$40,000
Condition-based Retrofit using seismic & Structural Health Monitoring	25%	$17,000	$25,000
CVSE Nordel Inspection Station WIM & AVI Bases Design & Installation in Conjunction with AFB	85%	$83,000	$105,000
Fibre Optic Network Management	On-hold	$150,000	$150,000
Hwy 3 – Princeton to Stirling Creek Bridge: Black Ice Detection and Warning	75%	$166,000	$266,000
Hwy 97 – Mound Rd to Chevron Corner: Fog Detection and Warning	25%	$136,200	$146,200
ITS Testbeds, and Transportation Innovation and Data Labs	100%	0	$125,000
Lions Gate Bridge: Counterflow Renewal Planning	50%	$150,000	$250,000
Total		$702,200 (75%)	$1,107,200

☐ Delayed due to RTMC Remediation ☐ On-Hold due to RTMC Remediation

Fog Detection and Warning

•ATMS – Message Multiple DMS Deployment
•BCSIMS - Seismic & Structural Health Monitoring of Vulnerable Bridges for Condition-based Retrofit

•CVSE Nordel Inspection Station - WIM and AVI Bases Design
•Lions Gate Bridge - Counterflow Renewal
•ITS Active AURORA Testbed
•Fibre Optic Network Management

Black Ice Detection and Warning
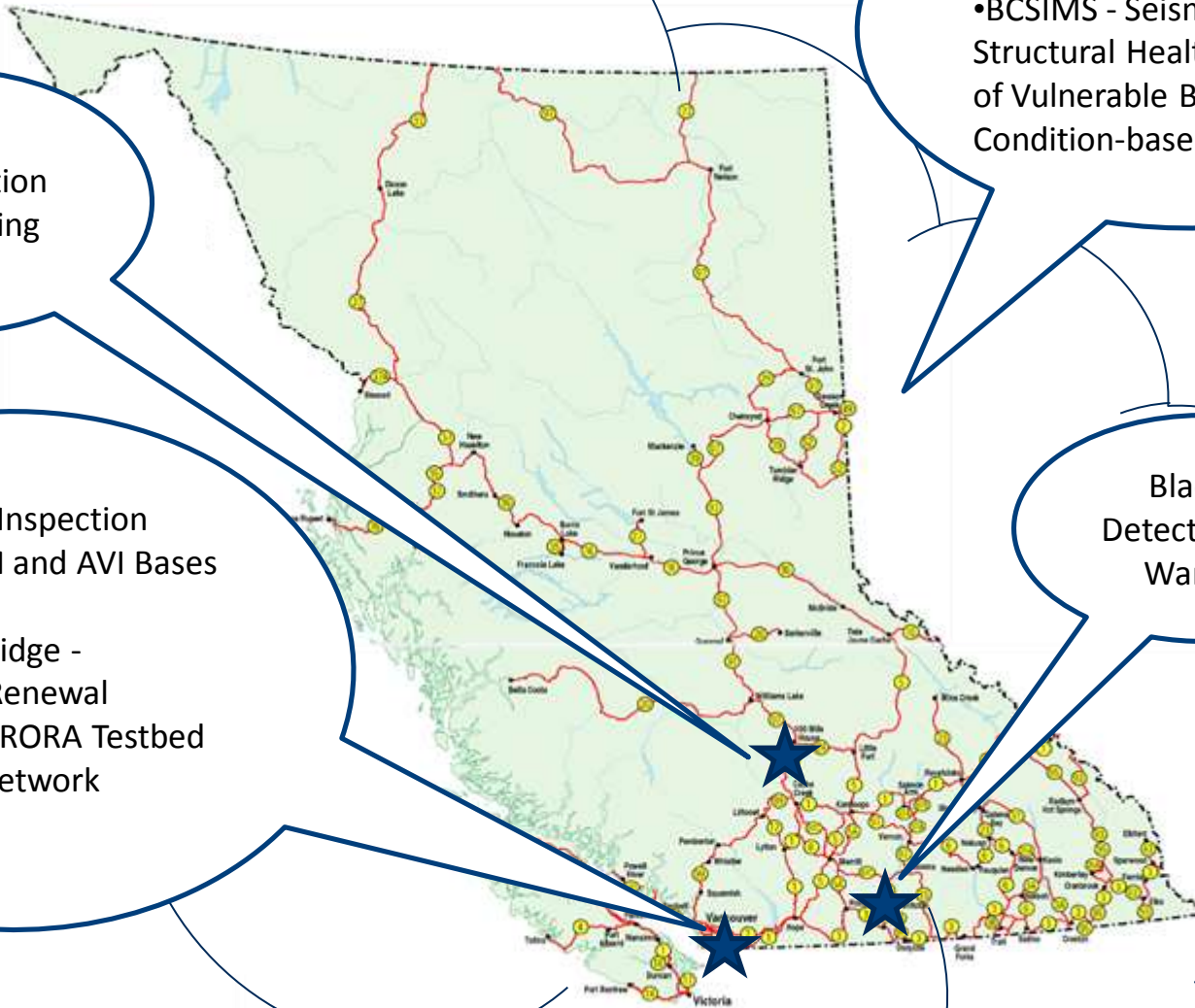
PHOTOS

Site Visit for Hwy 97 – Fog Detection and Warning

CVSE Nordel Inspection Station WIM & AVI

Equipment Install for ITS Testbeds, and Transportation Innovation and Data Labs

Site Layout for Hwy 3 – Black Ice Detection and Warning

THE 2018/2019 ITS PROGRAM (SECOND YEAR)

OUTREACH

- This year, to reach a broader audience an email was sent:
  - Describing "What is ITS?", and
  - How the ITS Program could provide unique opportunities for improvement
- Discussions also occurred with
  - Highway Department Regional Directors and District Managers,
  - CVSE,
  - Pacific Gateway Branch,
  - Engineering Services,
  - etc.

2018/2019 Projects Selected

Project Name	Type	Capital	Annual Operational Cost	
			Ops & Maint.	Resources
BCSIMS Migration and Enhancements	Deployment	$800,000	$375,000	1 FTE
Highway 3 – Pedestrian-Cyclist Activated Bridge Lighting	Planning	$50,000		
Highway 3 – Whipsaw Creek Bridge safety ITS deployment	Deployment	$550,000	$85,000	0.5 FTE
Highway 37A – Automated Avalanche Detection System	Planning & Deployment	$1,300,000	$156,000	1.5 FTE
Highway 5 – Automated Highway Closure System	Planning	$100,000		
Highway 5 – Zopkios Truck Queue Detection System	Planning	$100,000		
Highway 91 – Weigh2GoBC Enhancement (Nordel Inspection Station, Alex Fraser Bridge) *	Deployment	$700,000	$54,000	minimal
Provincial Wildlife Detection System Review	Planning	$100,000		
Transportation Futures Partnership with UBC (Connected/Automated vehicles)	Planning	$150,000		
Contingency (~4%)		$150,000		
TOTAL		$4,000,000	$670,000	

* Weigh2GoBC is expected to run into 2019/2020 at an additional capital cost of $700,000

Highway 37A - Automated Avalanche Detection System
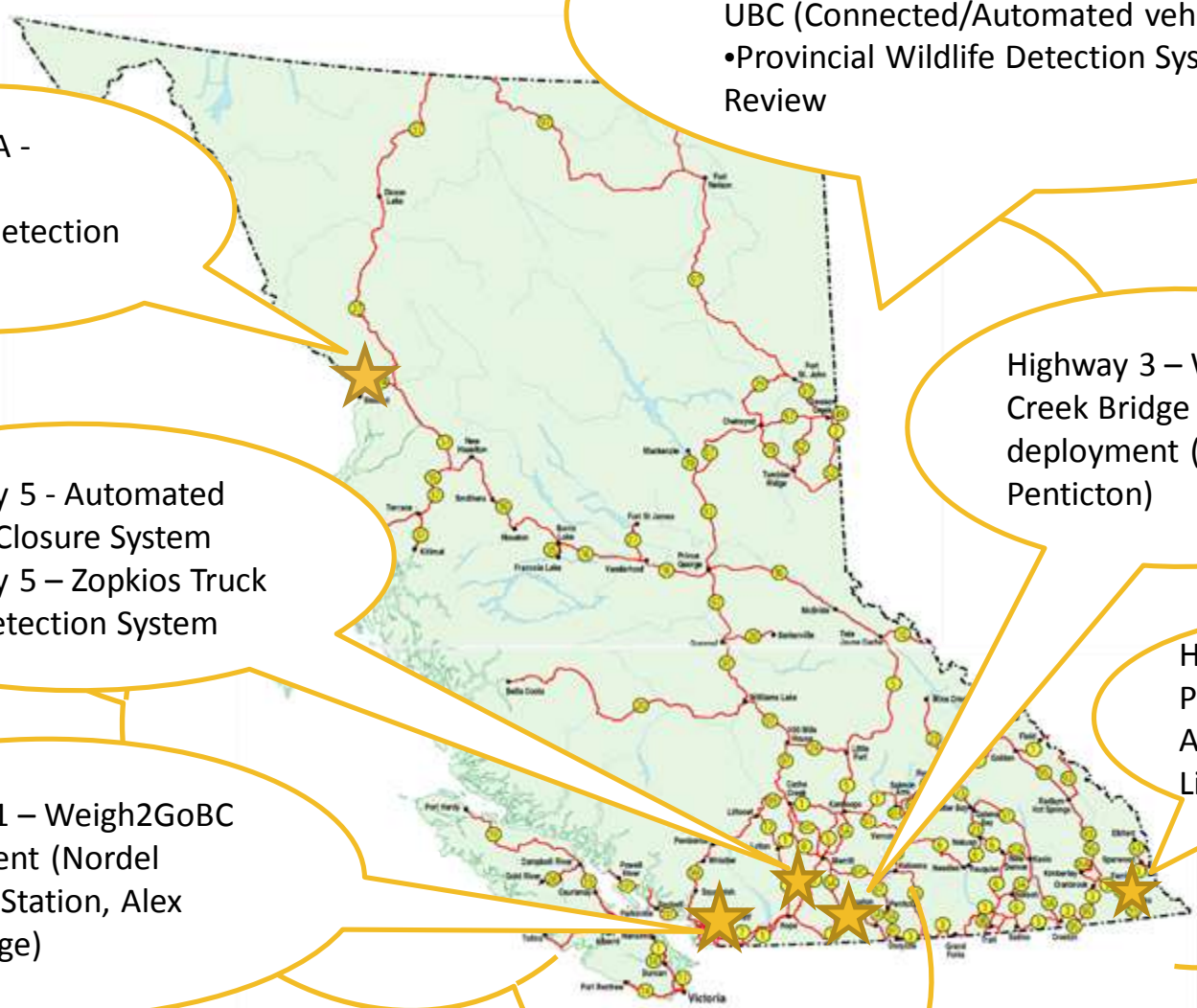
• BCSIMS Migration and Enhancements
• Transportation Futures Partnership with UBC (Connected/Automated vehicles)
•Provincial Wildlife Detection System Review

Highway 3 – Whipsaw Creek Bridge safety ITS deployment (West of Penticton)

• Highway 5 - Automated Highway Closure System
• Highway 5 – Zopkios Truck Queue Detection System

Highway 3 – Pedestrian-Cyclist Activated Bridge Lighting

Highway 91 – Weigh2GoBC Enhancement (Nordel Inspection Station, Alex Fraser Bridge)

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PROGRAM RISKS

SHORT TERM RISKS

- Timely initiation of projects (developing project teams, distribution of project funds),
- Training inexperienced project and technical managers,
- Work load for ITS Engineering and IMB (technical roles and managing program).

LONG TERM RISKS

- Determining governance and ownership of ITS deployments,
- On-going operational costs,
- Resources to support operations,
- Rehabilitation and Renewal costs.

RISK MITIGATION - 2018/2019

- Lessons learned from 2017/2018:
  - Robust project monitoring with ITS project managers including detailed cost and project progress tracking,
  - Established program governance structure.
- Projects short-listed for 2018/2019 are independent of the RTMC Audit Remediation.
- IMB and ITS Engineering are increasing staff and contractor resources to support the ITS Program and RTMC Audit Remediation.
- Growing ITS community of expertise is taking shape within the Ministry.

LOOKING FORWARD

- Long term stable funding has supported multiple pilot projects.

- Opportunity for ITS planning before larger ITS announcements

- Growing ITS community of expertise is taking shape within the Ministry.