



COLORADO

Transportation
Investment Office

CTIO VMS, LUS, and VTMS Signage and Responsibility Guide

November 16, 2022

Variable Message Signs

Variable Message Signs (VMS), also known as Dynamic Message Signs (DMS), Variable Message Boards (VMB), or Changeable Message Signs (CMS), are a valuable and effective information tool used to disseminate information to motorists related to construction activities, incident management, traveler information, and maintenance activities. In addition, they can be effective for large special events that significantly impact traffic flow.



For more information, please refer to the [Colorado Department of Transportation Variable Message Sign \(VMS\) Statewide Guidelines](#)

Lane Use Signs (LUS)



Colorado DOT Denver, Colorado, United States



Lane-use control signals are special overhead signals placed over a certain lane or lanes. They permit or prohibit drivers to use the lane beneath the signal.



VMS vs. LUS Usage

The VMS are used for regular messaging and incidents. The LUS are used primarily during an event, but they can be used for various messaging. The reasoning behind this is so the public doesn't become desensitized to seeing the LUS's illuminated and disregard the messaging.



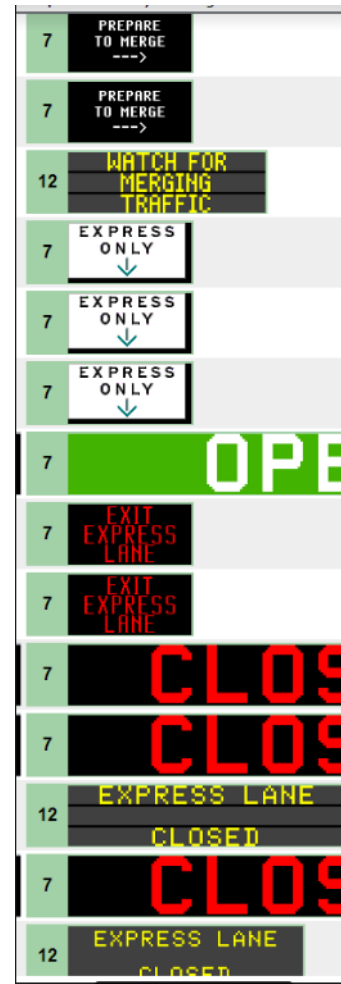
Variable Toll Message Signs (VTMS) Toll Rate Dynamic Pricing Signs (TRDPS)

Variable Toll Message Signs (VTMS) display the rates to travel to a location identified adjacent to this amount.



WB MEXL

Due to its unique circumstance WB MEXL presents some confusion due to the closing plan that is activated between 4:45PM and 5:00PM. That plan does show conflicting messages to discourage drivers from entering the lane at the start and as customers traverse further into the corridor it displays closed messaging to allow the travelling public in the lane to clear out.



MP 238.4

Idaho Springs to Empire

Operations & Maintenance

Maintenance (VTMS Signs)

Dynalectric	CDOT Maintenance	CTIO Maintenance
11	13	14

Outstanding Items				
Failure Date	Corridor	Mile Marker	Issue/Comments	Entered By
7/29/22	WB MEXL	234.5	LUS has comms failed status/RTS ticket has been created.	A.F.
8/9/22	EB MEXL	240.75	Not displaying message/Ticket has been created.	R.S.
8/13/22	EB MEXL	231.8	LUS has comms failed status and is blank(waiting on parts)	A.F.
9/20/22	SEG 2	218.75	The VTMS I-25 NB north of 84th is blank at mm 218.75.	CL
9/26/22	SEG 2	221.9	VMS at 221.9 E. of 104th is not working I have put in a ticket with maintenance. Ticket # 18489	R.S.
9/26/22	SEG 2	217.2	VMS at 217.2 N. of US-36 is not working I have put in a ticket with maintenance. Ticket # 18496	R.S.
9/27/22	SEG 2	218.75	NB VTMS is down. Maintenance ticket has been entered.	A.F.
9/27/22	SEG 2	221.5	NB VTMS is down. Maintenance ticket has been entered.	A.F.

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8/13/22	EB MEXL	231.8	LUS has comms failed status and is blank(waiting on parts)	A.F.
10/3/22	EB MEXL	241.85	Front camera failed alarm. ETC team will be on site to troubleshoot issue this week.	A.F.

Oct. 4th

The tables displayed are examples of Outstanding Item logs that the CTIO Operations Team record to track the status of Issues.

Signs that Roadway Technical Services (RTS) manage from I-70 to the eastern plains.

VTMS: 26

VMS: 564

LUS: 360 (This includes the signs directly over the lanes and the side-mounted LUS. There are 284 directly over lanes)

Sep. 28th

C-470 EXPRESS LANES CORRIDOR



11 VTMS Signs

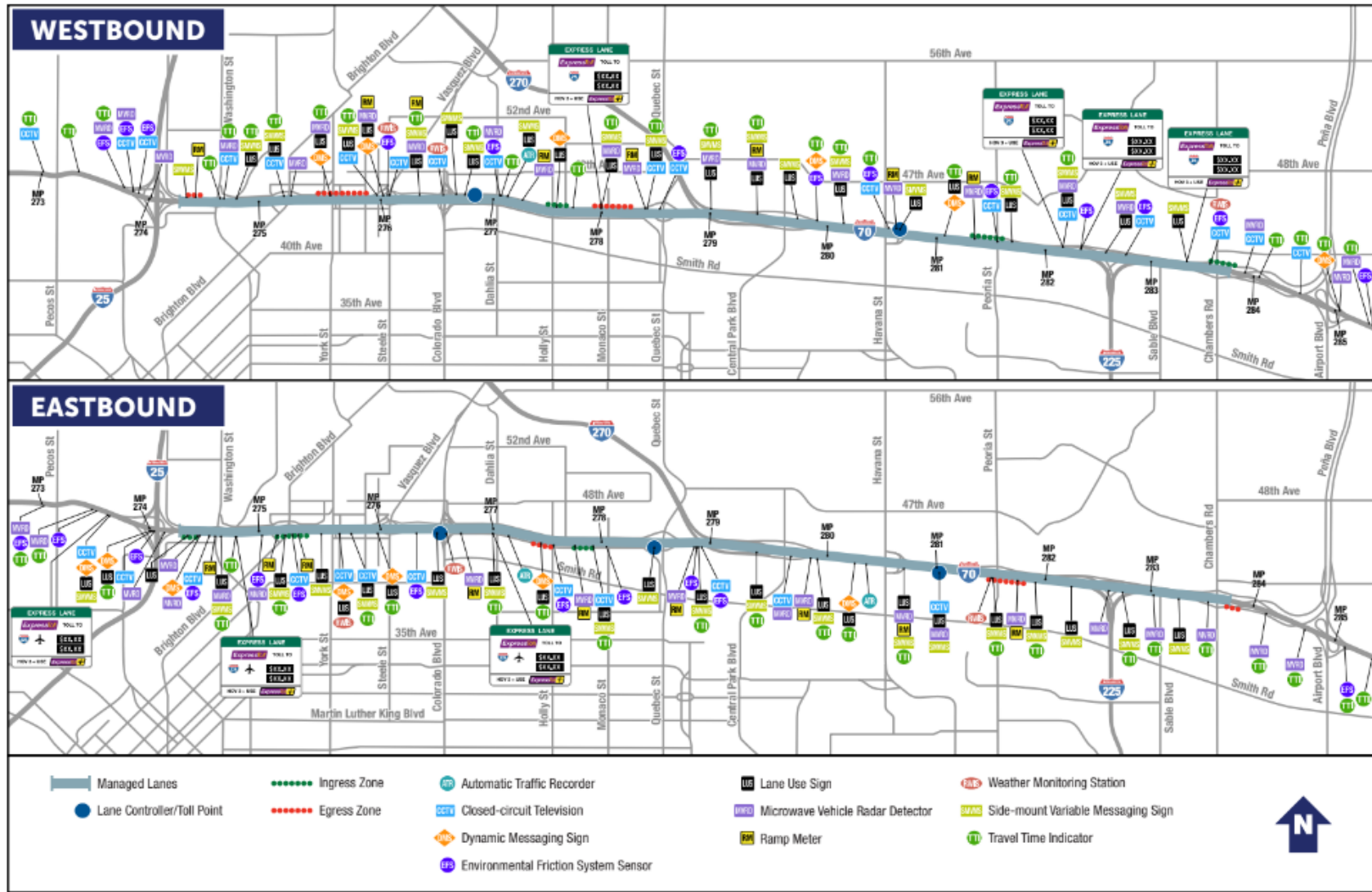
Maintenance

Dynalectric

Monitoring

CTIO Operations

CENTRAL 70 EXPRESS LANES CORRIDOR



7 VTMS Signs

Maintenance
CTIO Maintenance

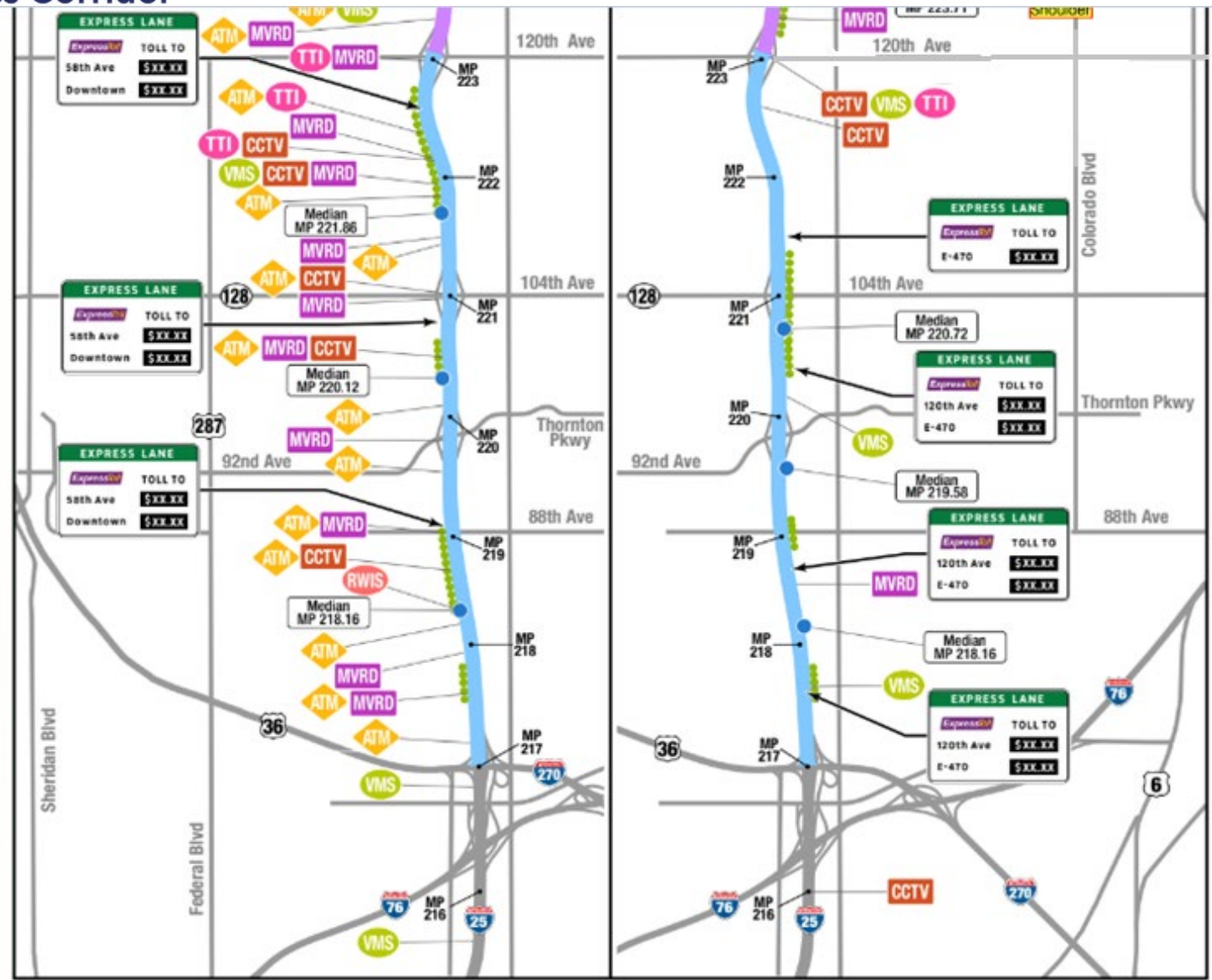
Monitoring
CTIO Operations

Intelligent Transportation Systems (ITS) carry a two-year warranty from Final Project Acceptance - Project Team responsible for major component repair.

I-25 NORTH

Express Lanes Corridor

Segment 2



7 VTMS Signs

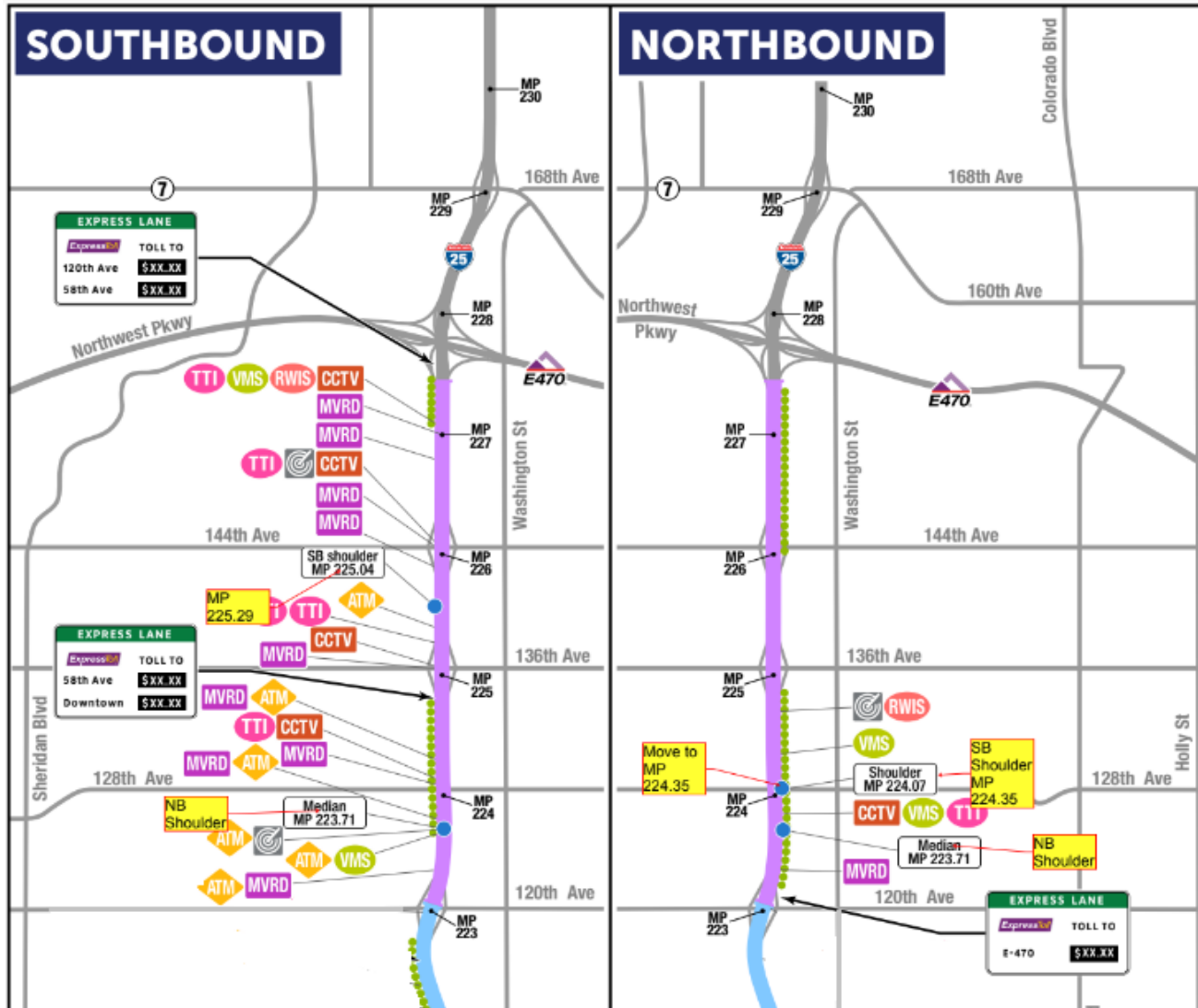
Maintenance
CDOT Maintenance

Monitoring
CTIO Operations

I-25 NORTH

Express Lanes Corridor

Segment 3



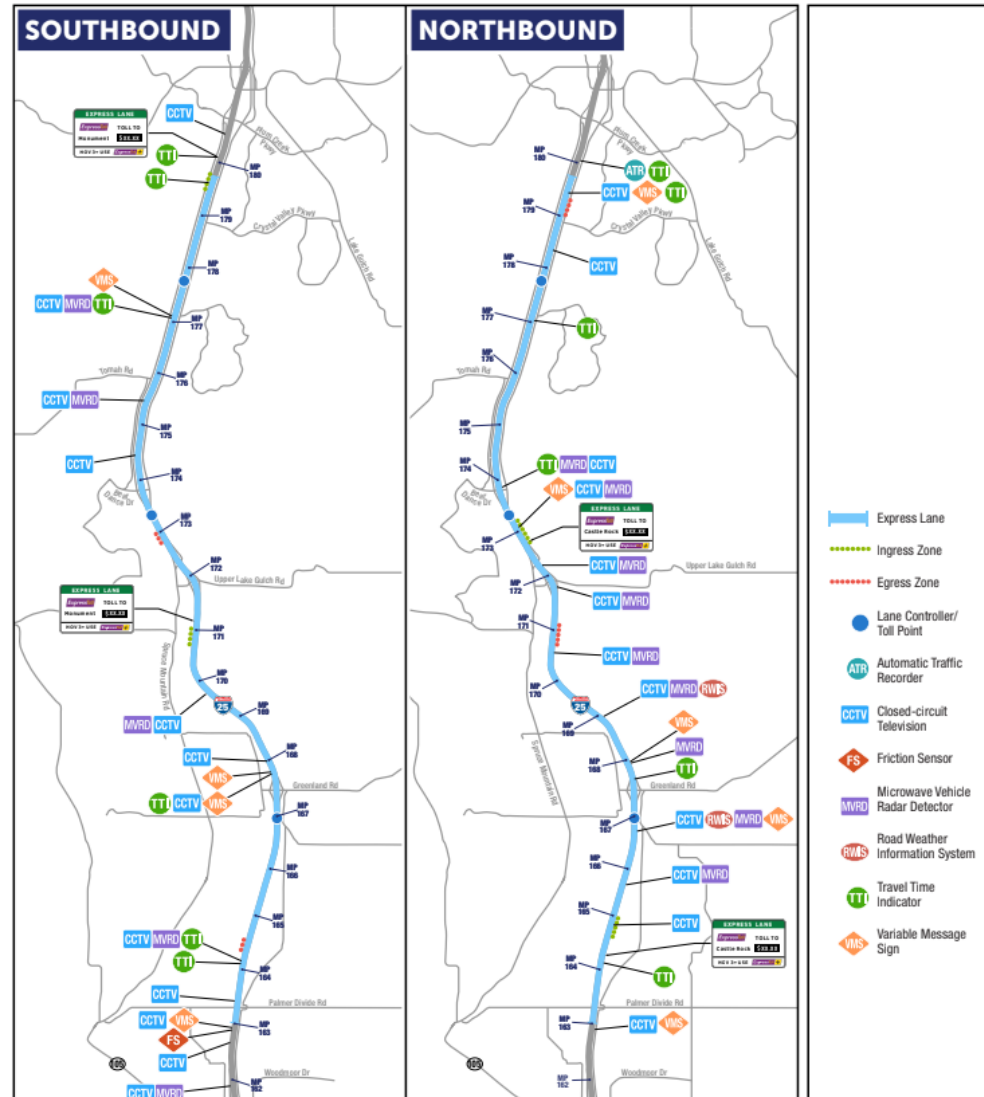
3 VTMS Signs

Maintenance

CDOT Maintenance

Monitoring

CTIO Operations



4 VTMS Signs

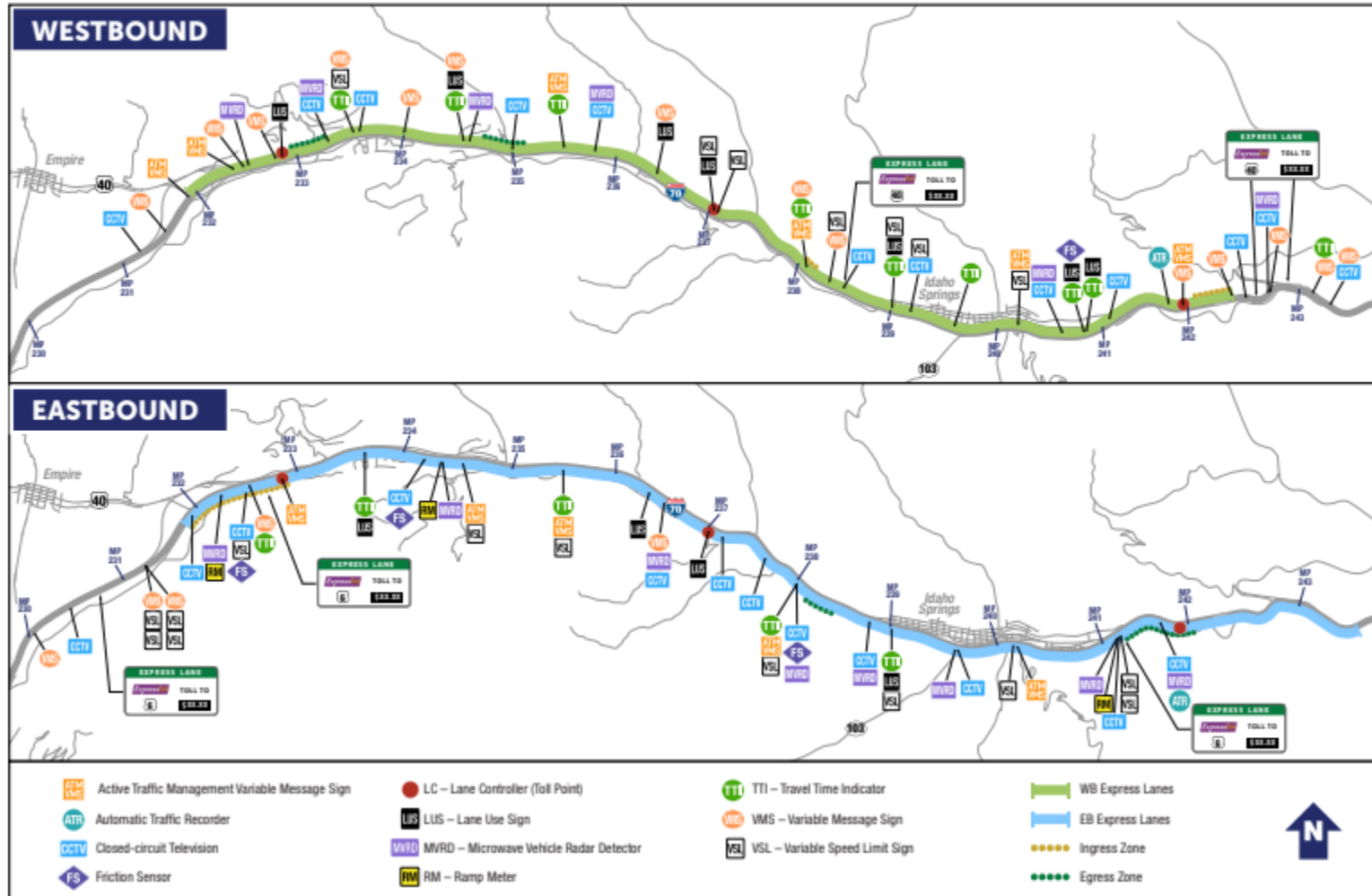
Maintenance

CTIO Maintenance

Monitoring

CTIO Operations

I-70 MOUNTAIN EXPRESS LANES CORRIDOR



WB MEXL (NGLTS)

3 VTMS Signs

Maintenance

CTIO Maintenance

Monitoring

CTIO Operations

EB MEXL (Legacy)

3 VTMS Signs

Maintenance

CDOT Maintenance

Monitoring

CTIO Operations

Questions?