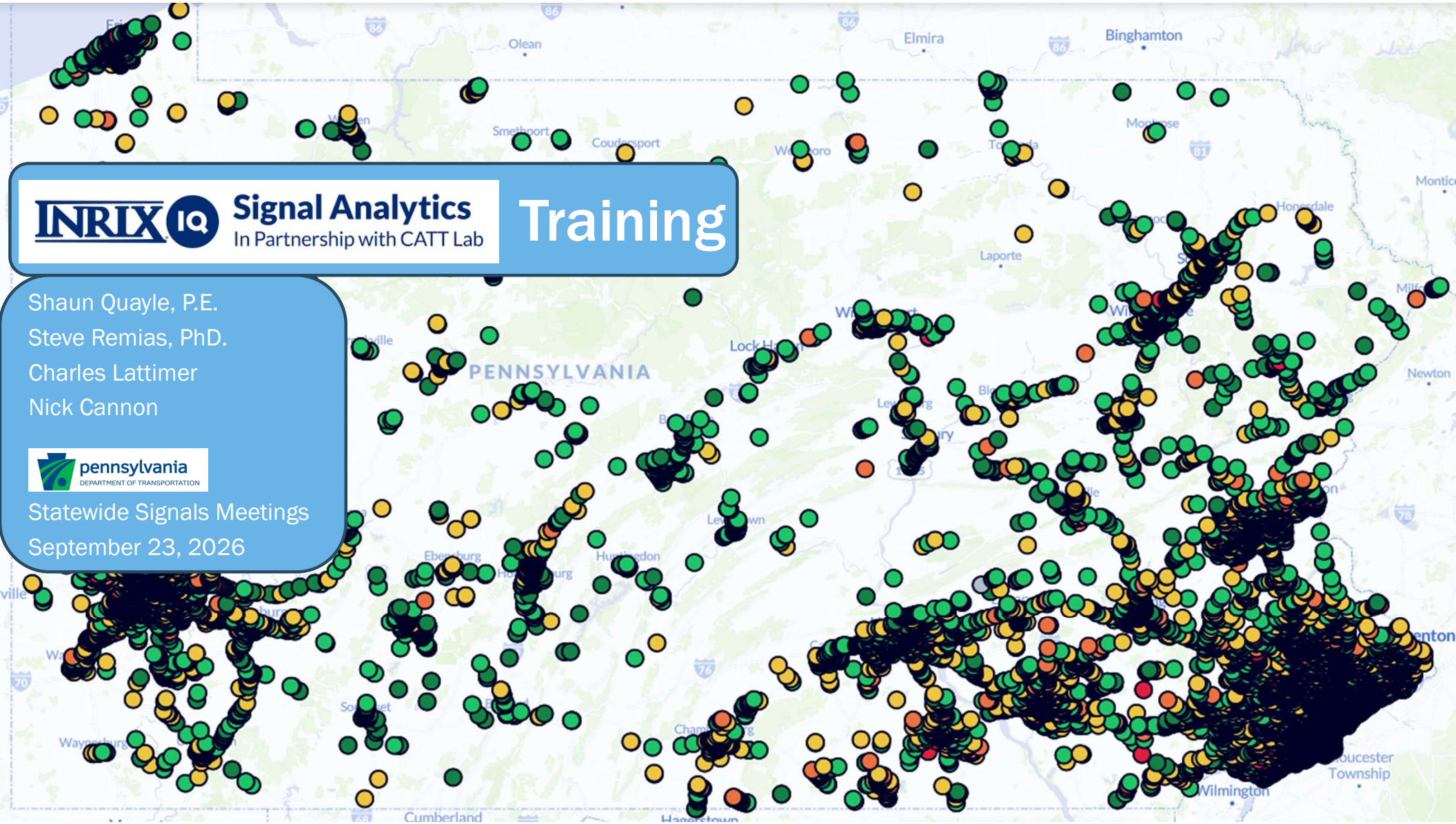


INRIX IQ Signal Analytics
In Partnership with CATT Lab

Training

Shaun Quayle, P.E.
Steve Remias, PhD.
Charles Lattimer
Nick Cannon

pennsylvania
DEPARTMENT OF TRANSPORTATION

Statewide Signals Meetings
September 23, 2026

INRIX/CATT Lab Team Contacts



Shaun Quayle, P.E. (FL)
Traffic Engineer &
INRIX Customer Success Director
Shaun.Quayle@inrix.com



Steve Remias, PhD.
INRIX Signal Analytics Product Lead
Steve.Remias@inrix.com



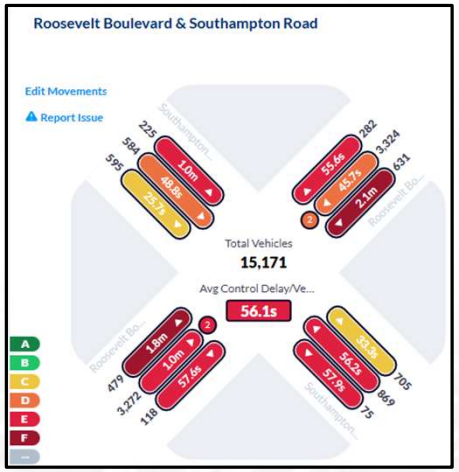
Charles Lattimer, P.E.,
CATT Lab (RITIS)
Signal Analytics Product Lead
lattimer@umd.edu

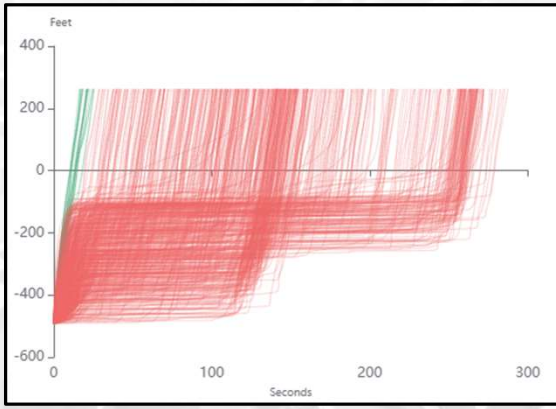


Nick Cannon
PennDOT Customer Success Manager
Nick.Cannon@inrix.com

INRIX Session Agenda

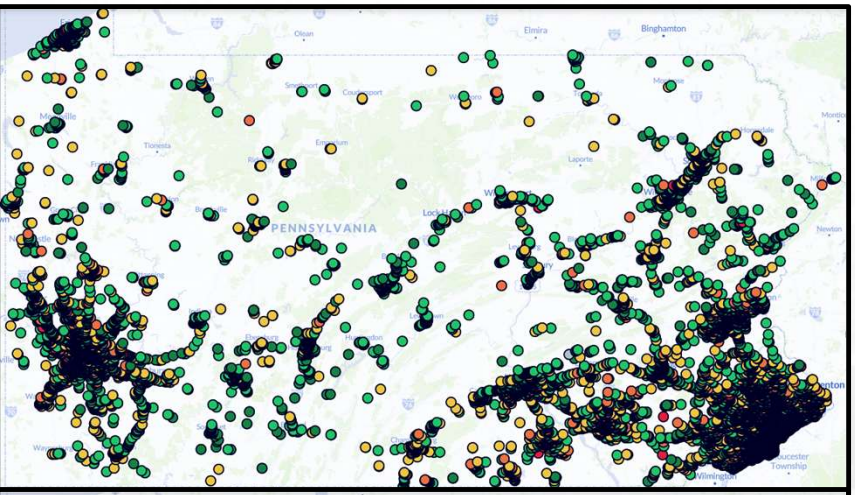
- Introduction, Purpose, Goals (PennDOT)
- Getting Access & Logging In (INRIX)
- Signal Analytics Overview & Best Practice Guide (INRIX)
- PennDOT/WRA Project Examples Using Signal Analytics
- *Signal Analytics Exercises & Competition*
  - INRIX – Corridor delay, most increasing delay, highest split failures

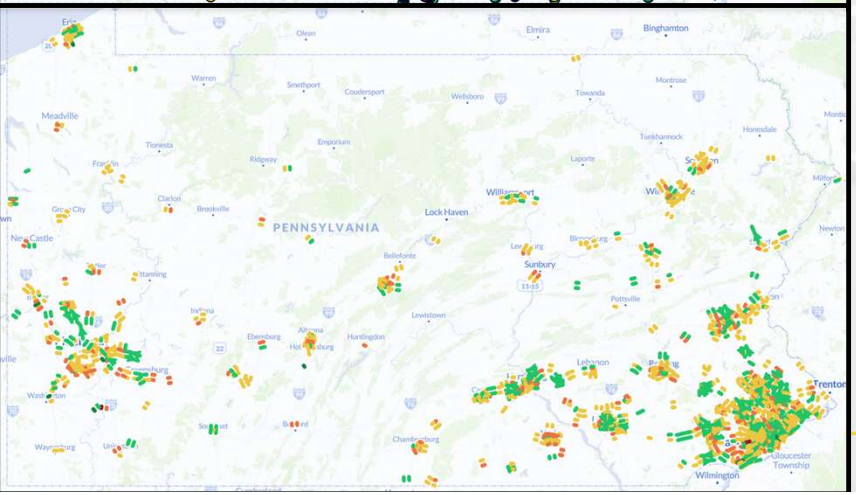




pennsylvania
DEPARTMENT OF TRANSPORTATION

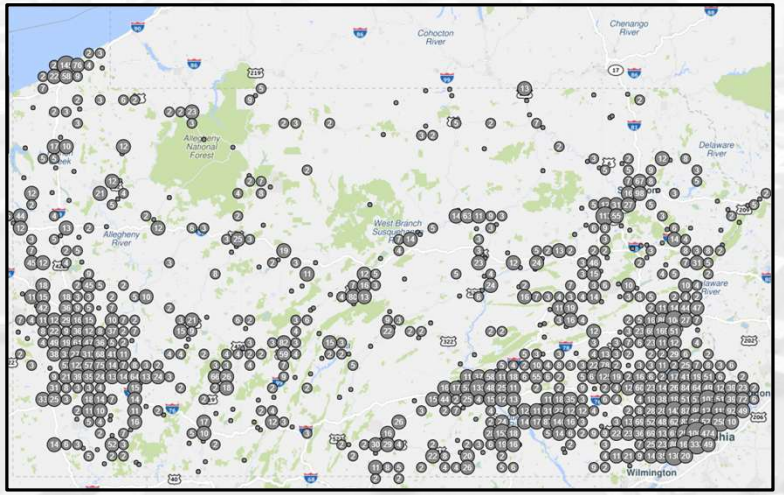
Introduction, Purpose, & Goals





Green Light – Go

Pennsylvania's Municipal Signal Partnership Grant Program



INRIX

Probe Data Advantage

Knowledge Is King

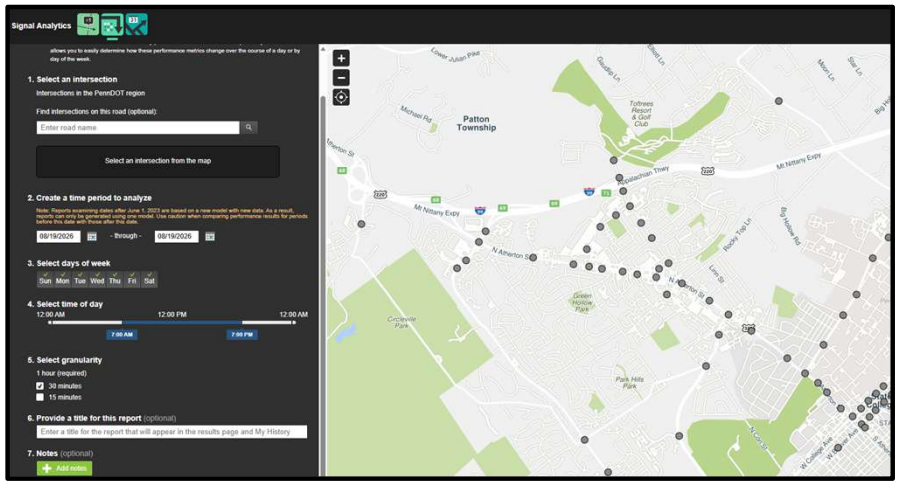
- Validate complaints with historical operations data and determine if an isolated event or recurring
  - Leverage additional tools when needed (PennDOT TIRe, RITIS Trip Analytics, Synchro, etc.)
- Probe data reporting isn't impacted by faulty detection or setup
- Helps develop a targeted game plan for the field based on data, not assumptions. May be able to skip the field view altogether if you have access through the UCC.
  - Isolate when the issue specifically occurs
  - Diagnose the root cause, whether it is a timing, operational, or equipment issue
  - Implement data-driven changes
- Verify improvements with before-and-after performance metrics

Faster field visits. Better decisions. Proven results.

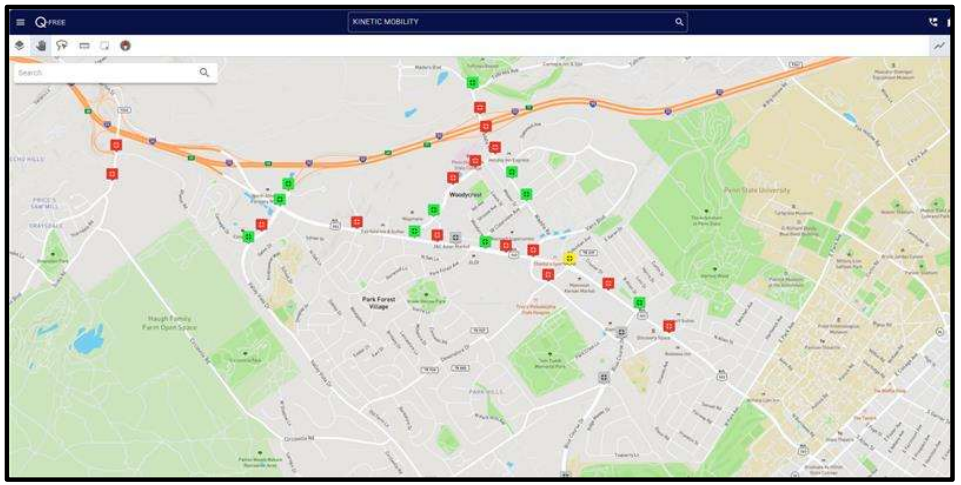
Probe Data Advantage

Paired with ATMS/UCC: A Powerful 1-2 Combination

- Identify issues through data-driven monitoring and analytics
- Mitigate directly from the operator workstation, enabling rapid response and minimizing disruption
- Monitor performance and make targeted adjustments in the following days to ensure sustained improvements



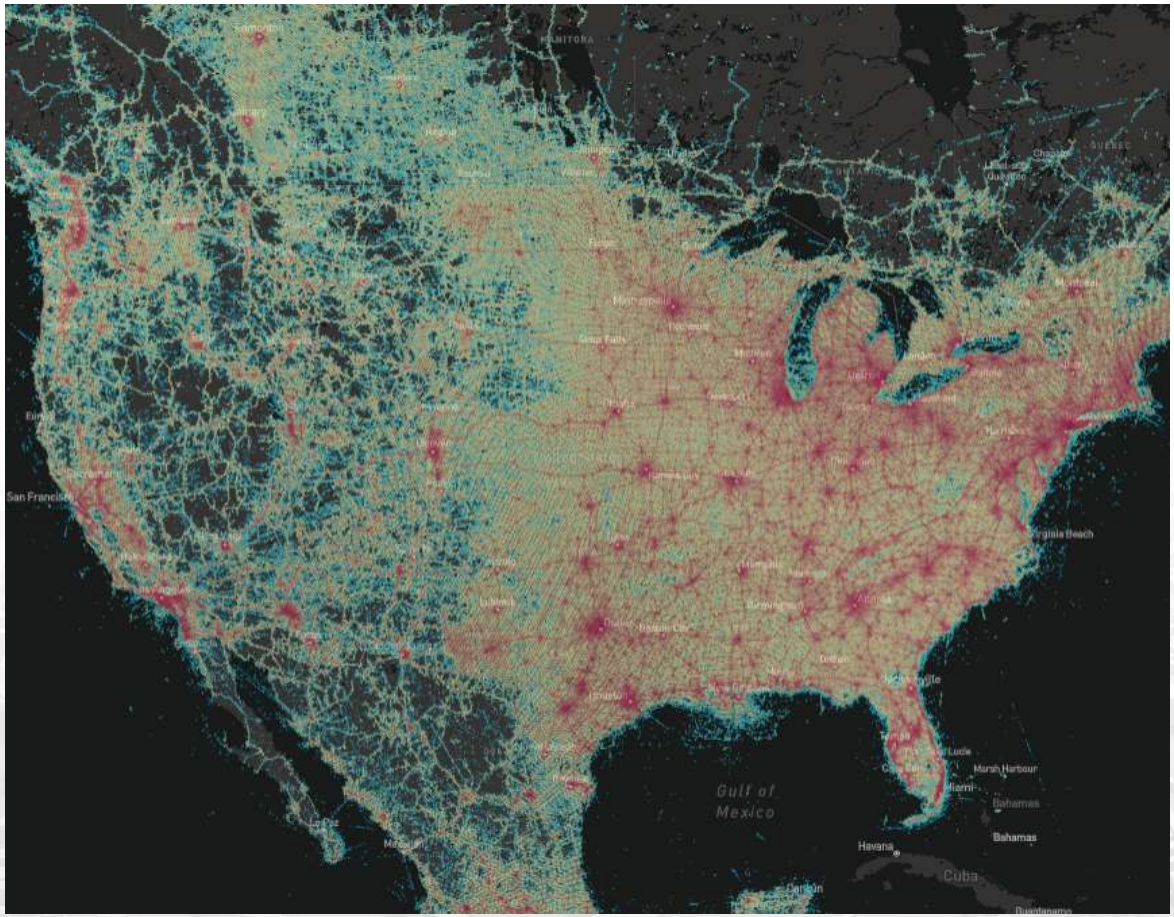
Signal IQ via RITIS

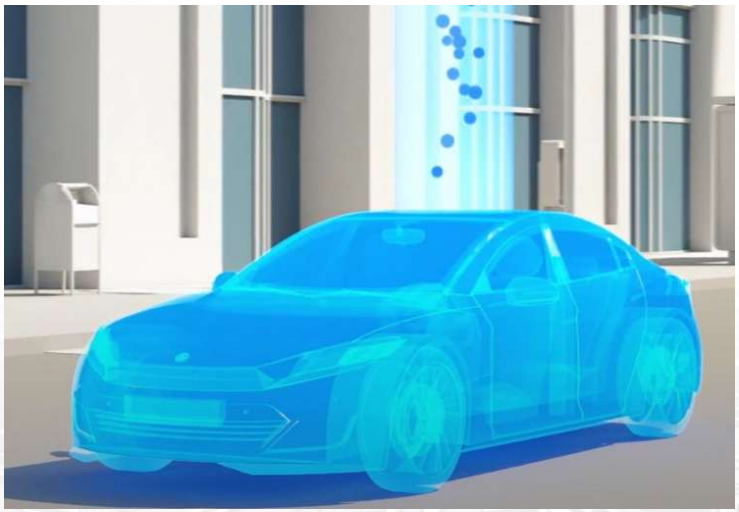


Q-Free ATMS

INRIX is All Cloud-Based GPS Data –

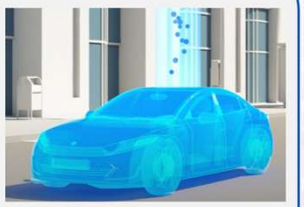
No Equipment, No IT, No Field Maintenance





INRIX IQ Signal Analytics
In Partnership with CATT Lab

All Pennsylvania Signalized Intersections & TSAMS Corridors


Probe Vehicle Data


Observed Travel Times


Signal Performance Metrics

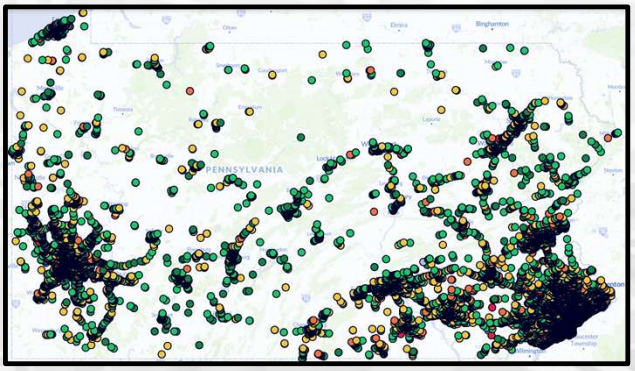
Signalized Intersections



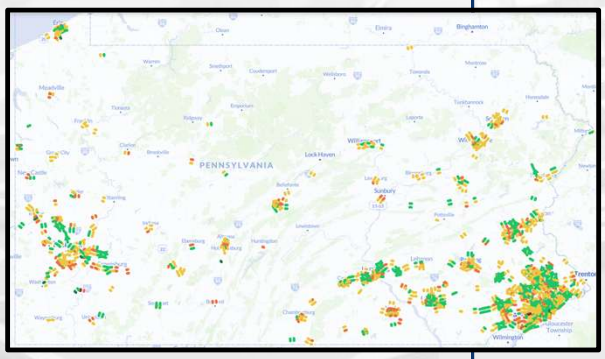
Metrics

- Travel Time
- Approach Speed
- Control Delay
- Level of Service
- Turn Ratios
- INRIX Obs. Veh. Count
- 3+ Min. Delay (Split Fail)
- Stops/Arrivals on Green
- Time-Space Diagram

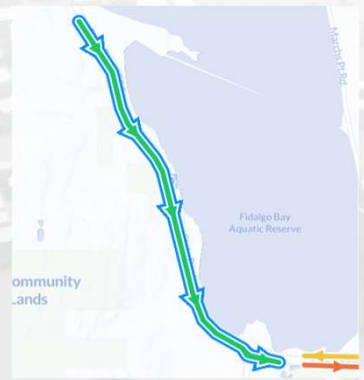
Corridors



14,259 Signals



2,902 TSAMS Corridors
(Unlimited between Subscribed Intersections)



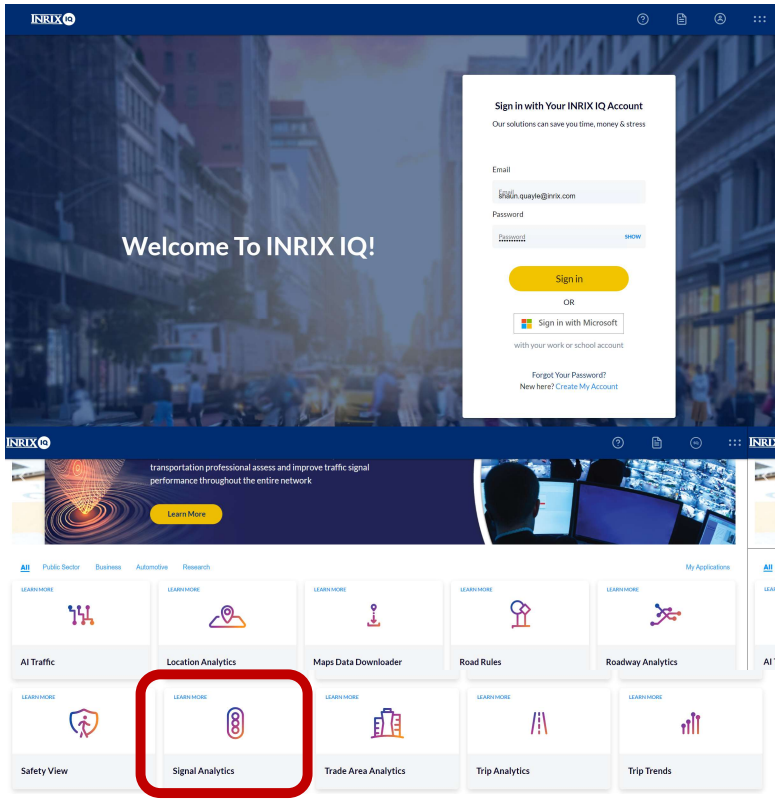
Metrics

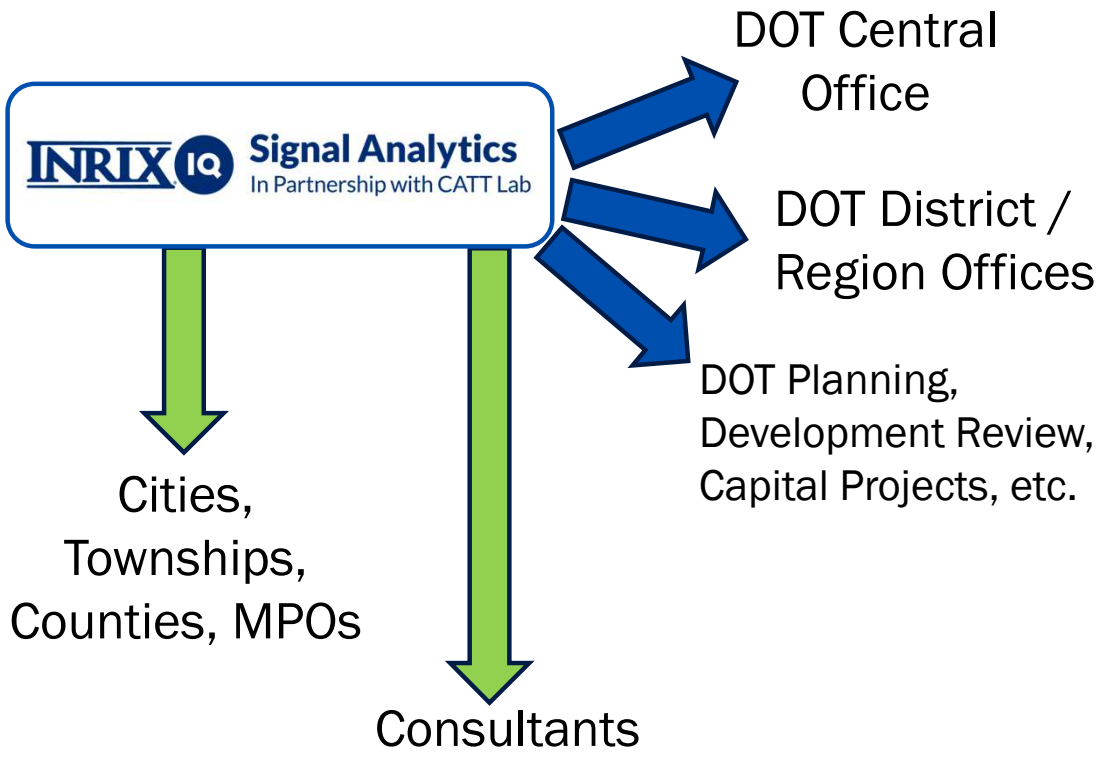
- Travel Time
- End to End # of INRIX Trips
- Time-Space Diagram
- Travel Time Index
- Level of Travel Time Reliability
- Planning Time Index
- Free Flow Travel Time

INRIX

Easy to Share Access to Agency Partners/Consultants

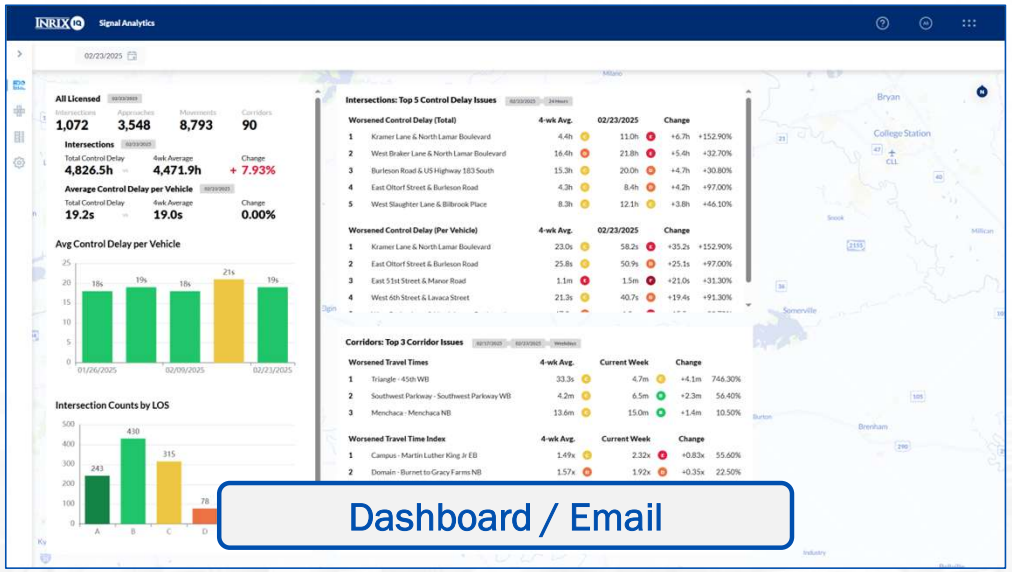
Bookmark IQ.INRIX.COM



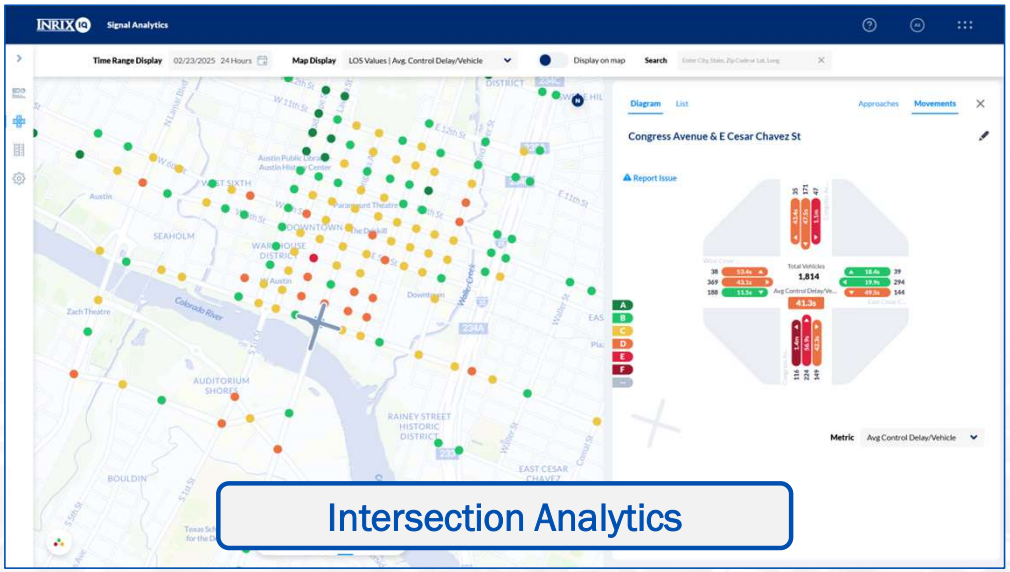


INRIX IQ Signal Analytics In Partnership with CATT Lab Users

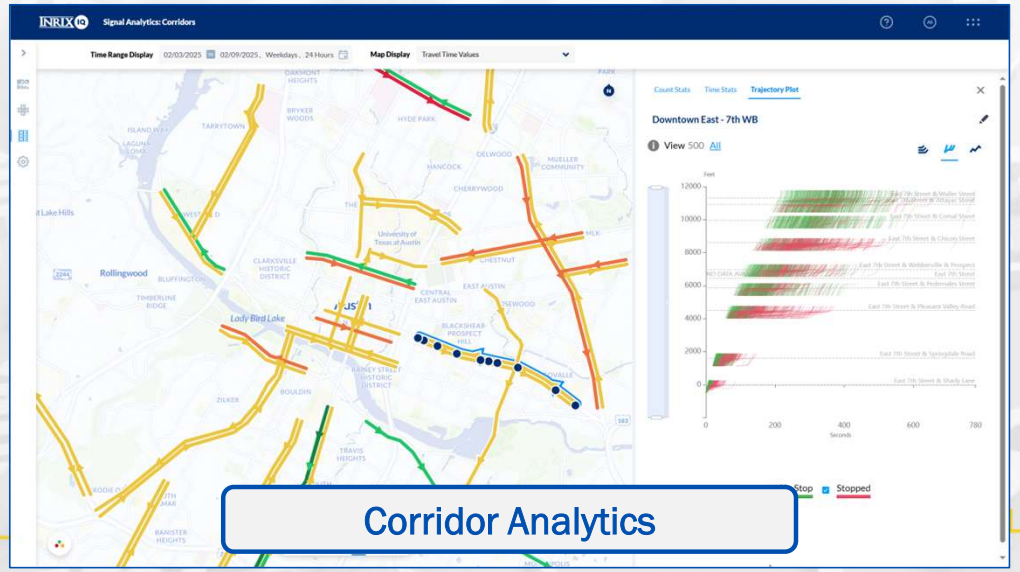




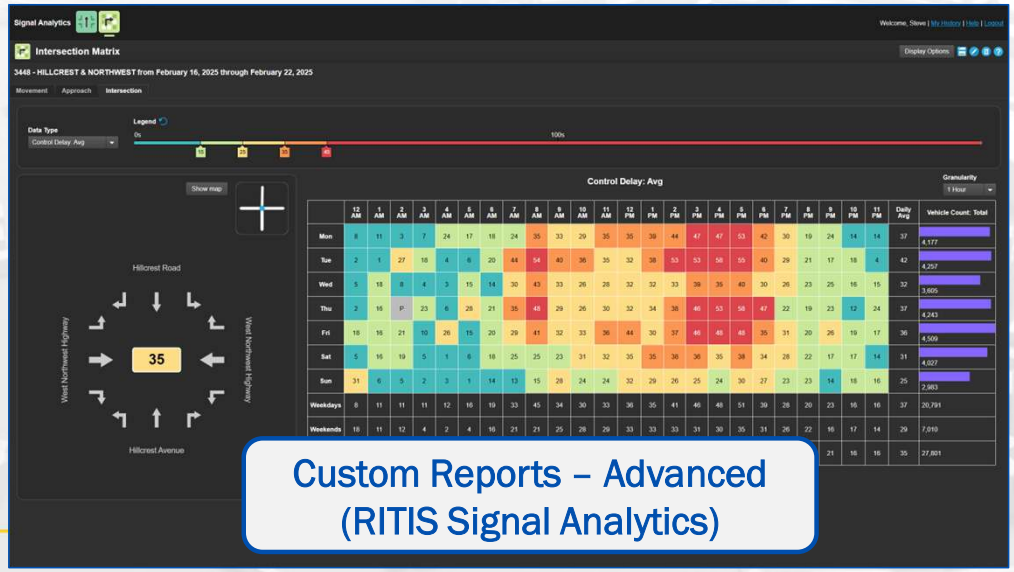
Dashboard / Email



Intersection Analytics



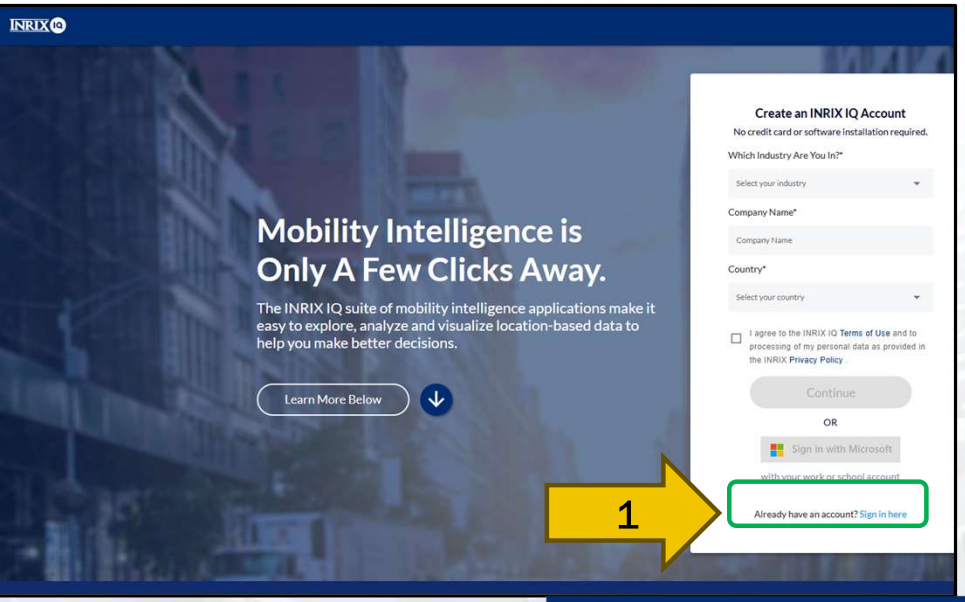
Corridor Analytics



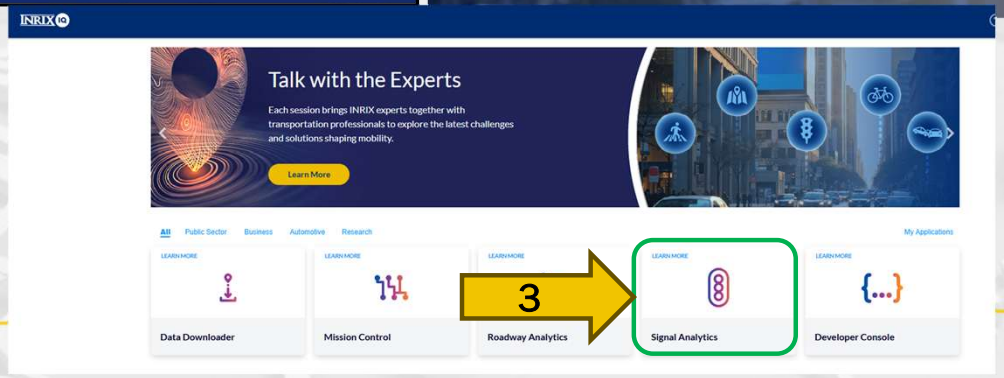
Custom Reports – Advanced
(RITIS Signal Analytics)

Signing In to INRIX IQ

Bookmark = https://iq.inrix.com/signals/ -- Chrome is Recommended Browser







Current PennDOT INRIX IQ Account Holders

Bookmark = https://iq.inrix.com/



Adam Stettler
astettler@pa.gov

Alexa Janikowski
ajanikowski@wrallp.com

Alison Loch (INRIX Test user)
amloch+penndot@outlook.com

Alison Pevec
apevec@pa.gov

Amanda Jurado
c-ajurado@pa.gov

Amitabh Misra
amitabh.misra@swri.org

Anthony Chiodo
anchiodo@pa.gov

Ava Swann
aswann@pa.gov

Ben Flanagan
beflanagan@pa.gov

Bhanu Ghosh
c-bghosh@pa.gov

Blake Sherwood
blsherwood@pa.gov

Bo Smith
jsmith2@wrallp.com

Bob Kretschmer
rokretschm@pa.gov

Brandy Warner
brawarner@pa.gov

Bryon Chigoy
bchigoy+PennDOT@wrallp.com

Chad Martin
chad.martin@kci.com

Chad Reese
creese@wrallp.com

Charlotte Perveiler
cperveiler@wrallp.com

Chris Lucia
clucia@wrallp.com

Christine Reid
chrreid@pa.gov

Christopher Jaros
cjaros@spcregion.org

Christopher Surovy
csurovy@pa.gov

Chuck Imbrogno
imbrogno@spcregion.org

Cory Poff
cpoff@pa.gov

Dan Fedio
dafedio@pa.gov

Dan Fox
dafox@pa.gov

Dan Fritz
dfritz@wrallp.com

Dennis Olivero
doliviero@pa.gov

Donny Lynch
dlynch@catabus.com

Edward Orzehowski
eorzehowsk@pa.gov

Emily Chilzer
emchilzer@pa.gov

Evan Schoss
eschoss@spcregion.org

George White
geowhite@pa.gov

Greg Frisby
gfrisby@wrallp.com

Hank Alward
halward@pa.gov

Heather Cogliano
hcogliano@pa.gov

James Knowlton
james@norusinnovation.com

James Perri
japerri@pa.gov

Jason Petch
jaspetch@pa.gov

Jeff Fuhr
jfuhr@pa.gov

Jeffrey Moore
jsmoore@wrallp.com

Joe Lyons
joselyons@pa.gov

John Albeck
c-jalbeck@pa.gov

John Norman
jonorman@pa.gov

John Pfeiffer
jopfeiffer@pa.gov

Jon Bowman
c-jobowman@pa.gov

Jonathan Coons
jcoons@pa.gov

Jonathan Tate
jtate@pa.gov

Joseph Platt
jplatt@tpdinc.com

Kevin Lewis
kevlewis@pa.gov

Kirk Schrecengost
kirkschrec@pa.gov

Krishnan Viswanathan
kviswanathan@wrallp.com

Luke Williams
lwilliams2@wrallp.com

Main Yang
myang@catabus.com

Marco Sarabia
msarabia@wrallp.com

Margo Wolfgang
mawolfgang@pa.gov

Mark Pemu
MPEMU@pa.gov

Martin Leff
mleff+PennDOT@wrallp.com

Matthew Clouser
maclouser@pa.gov

Maurice Lee
maulee@pa.gov

Michael Ashbaugh
micashbaug@pa.gov

Michael Buck
michbuck@pa.gov

Michael Centi
mcenti@pa.gov

Michael Smith
mijsmit@pa.gov

Mindy Laybourne
mlaybourne+PennDOT@wrallp.com

Nancy Hirsch
NHirsch@spcregion.org

Nate Smith
nsmith@wrallp.com

Nathaniel Crawford
nathacrawf@pa.gov

Nick Kukosky
nkukosky@pa.gov

Nick Streets
nstreets@wrallp.com

Noah Forbeck
nforbeck@pa.gov

Noah Soriano
nsoriano@catabus.com

Olivier Leroy
oleroy@wrallp.com

PA PDD
ra-pddo01dispatch@pa.gov

PD Dist
pd-dist2-0rtmc@pa.gov

PD6 PA
pd-district6-0rtmc@pa.gov

PTC Geo Analytics Program
PTCGeoAnalyticsProgram@paturnpike.com

Patrick McCourt
pmccourt@pa.gov

Paul Zipprich
pazipprich@pa.gov

PennDOT STMC
stmc@pa.gov

Pierce Sube
piercsube@pa.gov

RA PDD
ra-pddistrict5-0toc@pa.gov

RA PDWZTCCERTPGM
RA-PDWZTCCERTPGM@pa.gov

Rachel Goff
rgoff@wrallp.com

Rahul Solanki
c-rasolank@pa.gov

Raymond Eppler
reppler@pa.gov

Rickey Barnett
rbarnett@pa.gov

Rocco DePietro
rdepietro@pa.gov

Ron Ogden
rogden@pa.gov

Ryan McNary
rymcnary@pa.gov

Sam Bosa
sbosa@wrallp.com

Sam Boso
sboso+PennDOT@wrallp.com

Scott Benedict
scbenedict@pa.gov

Scott Berg
scberg@pa.gov

Scott Thompson-Graves
sthompson-graves+PennDOT@wrallp.com

Shawn Stille
sstille@pa.gov

Signals Demo PennDOT
Signals_Demo+PennDOT@inrix.com

Steve Gault
sgault@pa.gov

Sudipta Tirtha
stirtha@wrallp.com

Summer Koziel
skoziel@pa.gov

Thomas Pichiarella
tpichiarel@pa.gov

Todd Lenich
tlenich@wrallp.com

Tom Edinger
tedinger@dvrpc.org

Tosan Adoki
tadoki@wrallp.com

Tosan Adoki
jadoki@wrallp.com

Wendy Muchisky
wmuchisky@pa.gov

William Fives
wfives@pa.gov

William R Wilson
wrwilson@pa.gov

Zach Hollingshad
zhollingshad@spcregion.org

Zahra Pourabdollahi
zpourabdollahi+PennDOT@wrallp.com

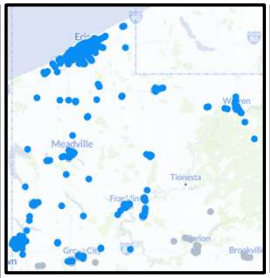
INRIX

Signal Groups

Group Name

Search

Group	Intersections
Corridors	14272
District 01	588
District 02	336
District 03	315
District 04	626
District 05	1408
District 06	6174
District 08	1733
District 09	441
District 10	294
District 11	1789
District 12	568



District 01

Signal Group Name

District 01

588 Intersections

0 Corridor

Intersections and Corridors

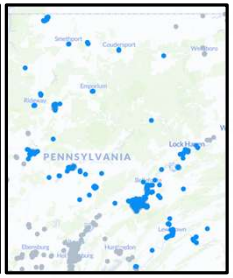
View and edit individual intersections and

Assign Users

Search

Name

Hank Alward



District 02

Signal Group Name

District 02

336 Intersections

0 Corridors

Intersections and Corridors

View and edit individual intersections and c

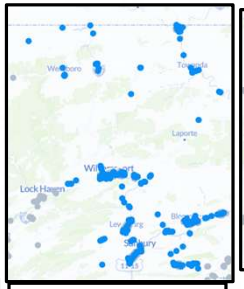
Assign Users

Search

Name

Nathaniel Crawford

Ron Ogden



District 03

Signal Group Name

District 03

315 Intersections

0 Corridor

Intersections and Corridors

View and edit individual intersections an

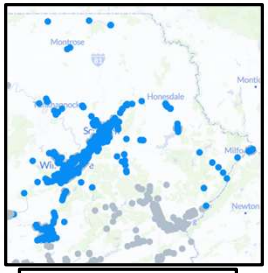
Assign Users

Search

Name

Blake Sherwood

Shawn Stille



District 04

Signal Group Name

District 04

626 Intersections

0 Corridors

Intersections and Corridors

View and edit individual intersections and

Assign Users

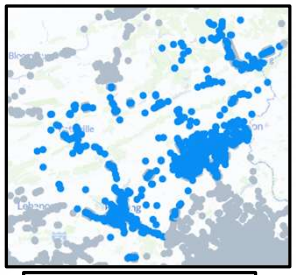
Search

Name

Bob Kretschmer

John Pfeiffer

Paul Zipprich



District 05

Signal Group Name

District 05

1408 Intersections

0 Corridors

Intersections and Corridors

View and edit individual intersections and co

Assign Users

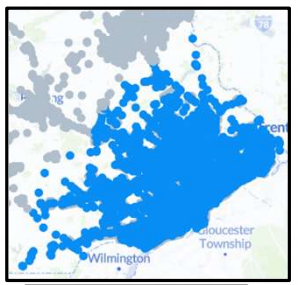
Search

Name

Adam Stettler

Christopher Surovy

Jonathan Coons



District 06

Signal Group Name

District 06

6174 Intersections

0 Corridors

Intersections and Corridors

View and edit individual intersections and co

Assign Users

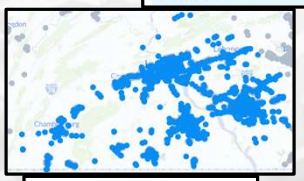
Search

Name

Kevin Lewis

Margo Wolfgang

Michael Smith



District 08

Signal Group Name

District 08

1733 Intersections

2 Corridors

Intersections and Corridors

View and edit individual intersections and co

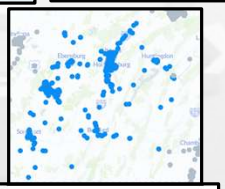
Assign Users

Search

Name

Cory Poff

Dennis Olivero



District 09

Signal Group Name

District 09

441 Intersections

0 Corridor

Intersections and Corridors

View and edit individual intersections and

Assign Users

Search

Name

Scott Berg



District 10

Signal Group Name

District 10

294 Intersections

0 Corridor

Intersections and Corridors

View and edit individual intersections and

Assign Users

Search

Name

Kirk Schrecengost



District 11

Signal Group Name

District 11

1789 Intersections

0 Corridor

Intersections and Corridors

View and edit individual intersections and

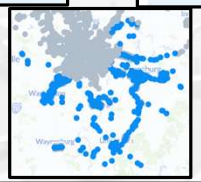
Assign Users

Search

Name

Mark Pemu

Noah Forbeck



District 12

Signal Group Name

District 12

568 Intersections

0 Corridors

Intersections and Corridors

View and edit individual intersections and co

Assign Users

Search

Name

Emily Chilzer

Centre County - CATABus

Signal Group Name

Centre County - CATABus

141 Intersections

64 Corridors

Intersections and Corridors

View and edit individual intersections and co

Assign Users

Search

Name

Donny Lynch

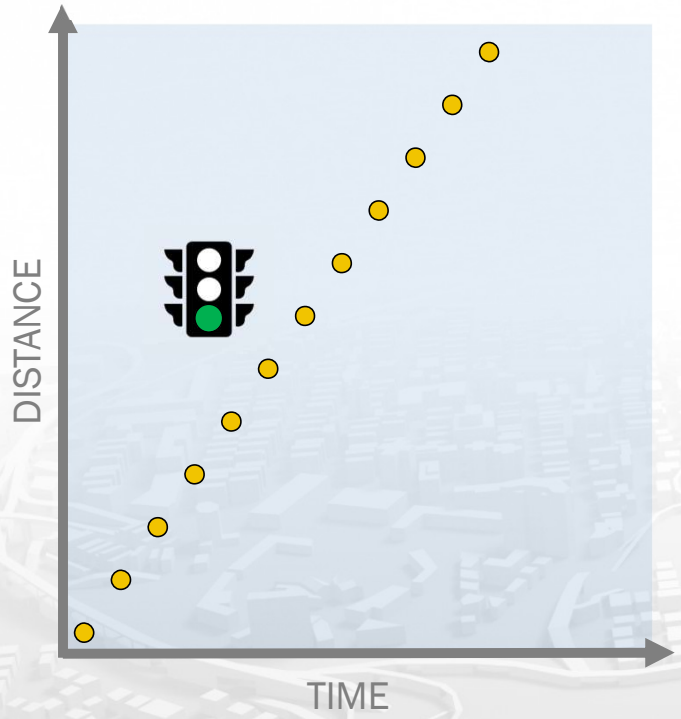
Main Yang

Noah Soriano

INRIX IQ
Signal Analytics
In Partnership with CATT Lab

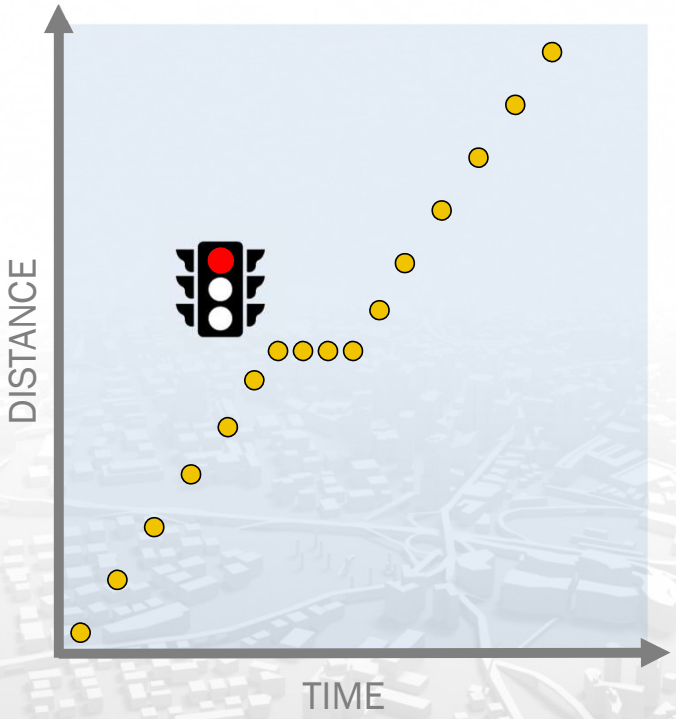
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42 sec
ARRIVAL ON GREEN



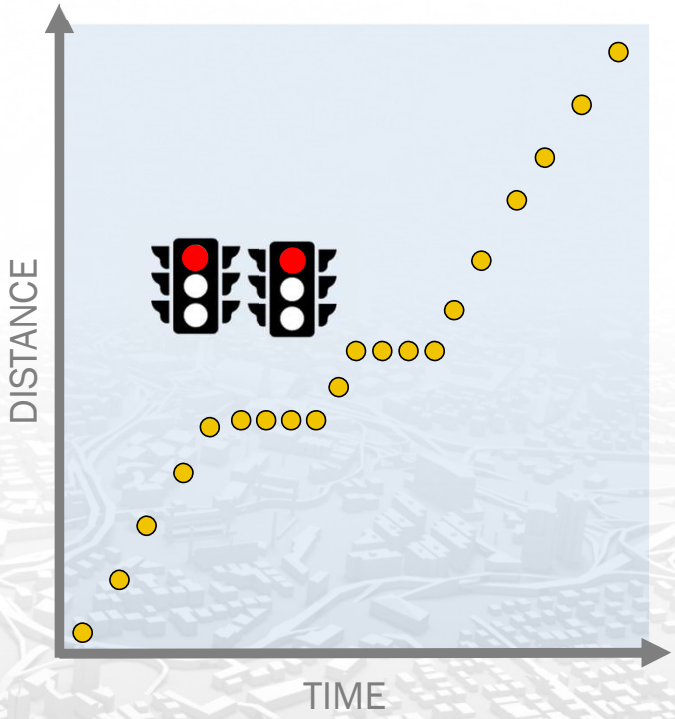
2

61 sec
ARRIVAL ON RED



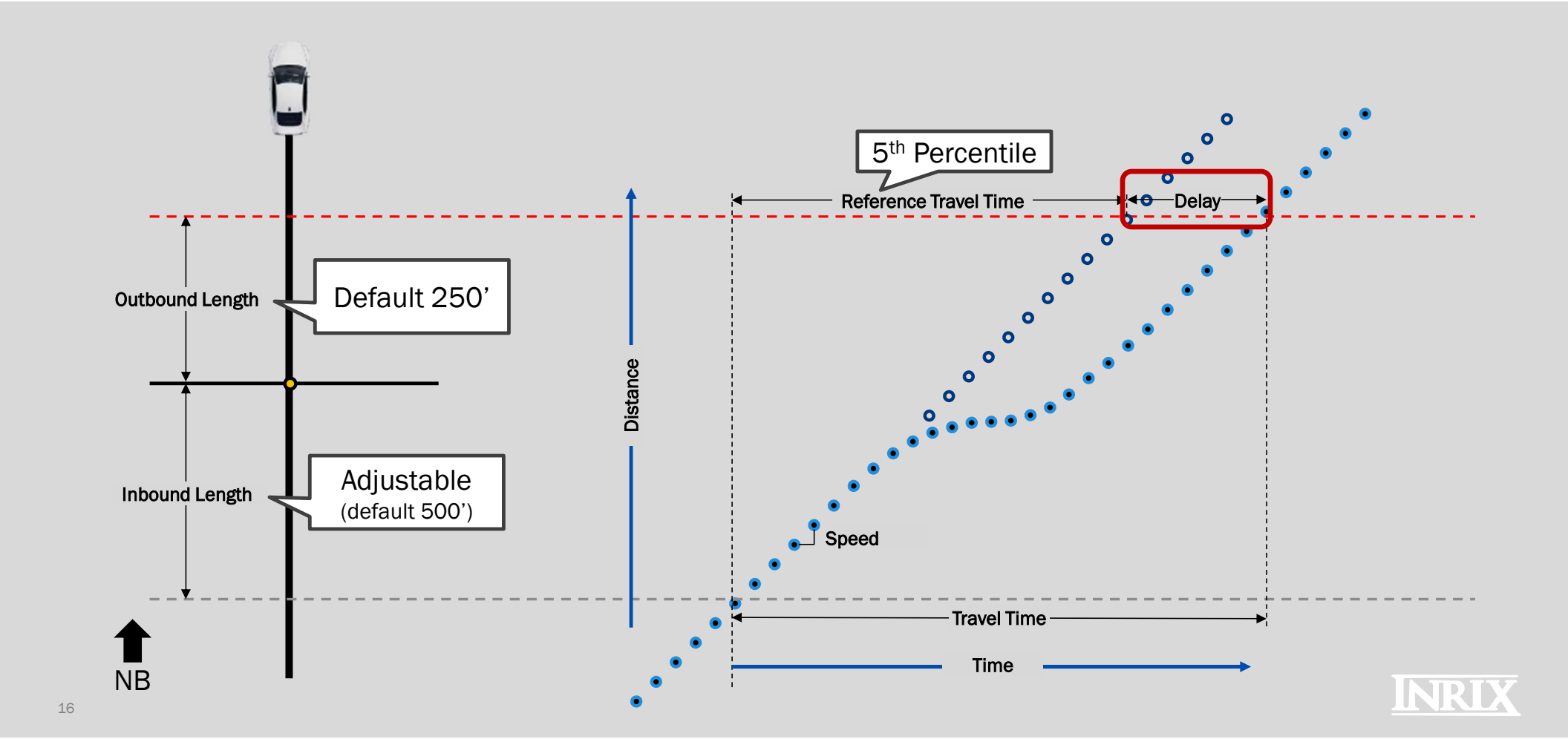
3

100 sec
SPLIT FAILURE

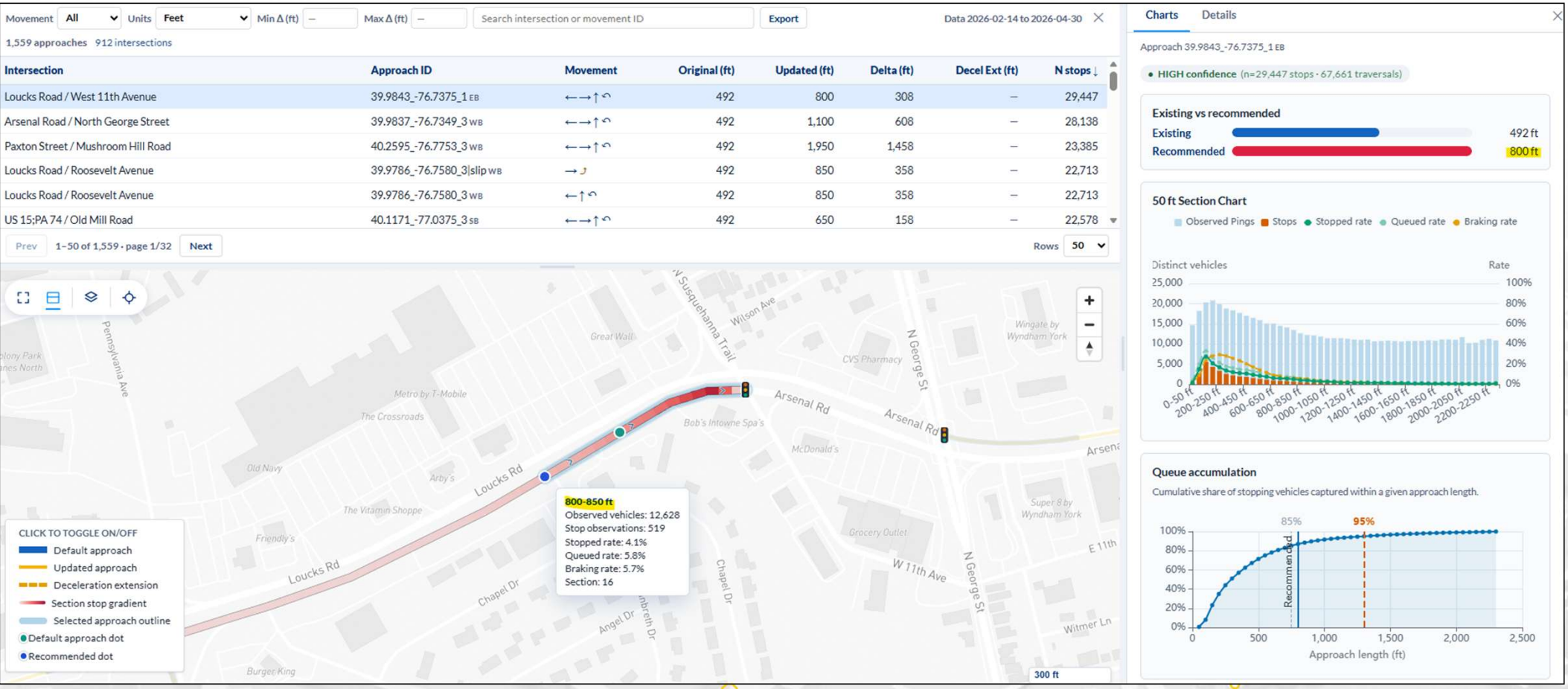


INRIX

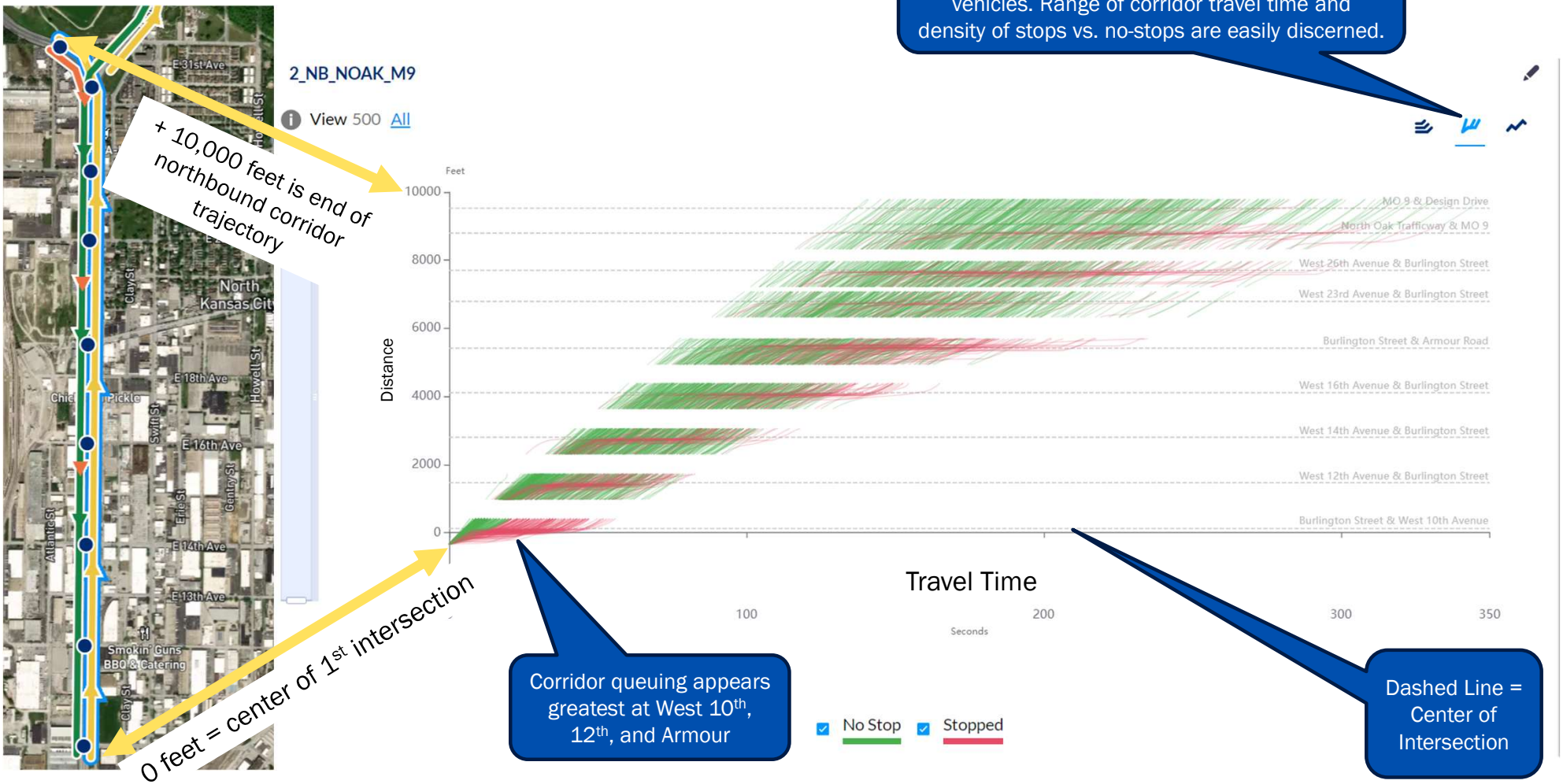
Developing the Metrics



Automation Boundaries Update



Corridor Queuing & Queue Lengths

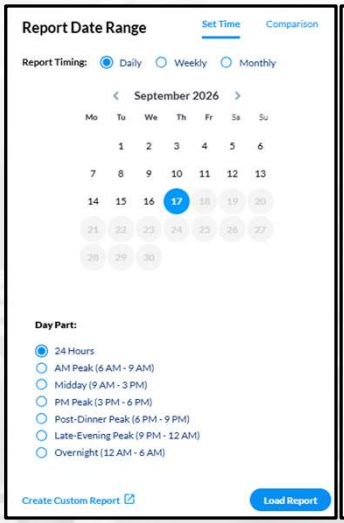


Signal Analytics In Partnership with CATT Lab — Analysis Time Period Options

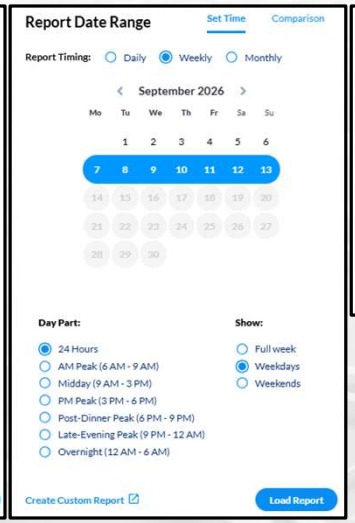
Intersections



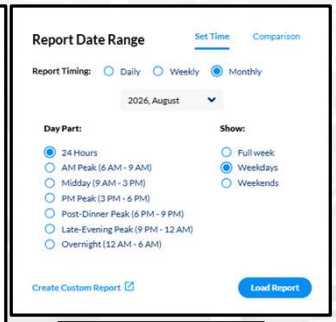
1 DAY



WEEKLY

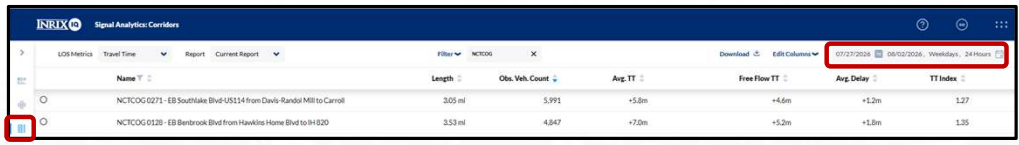


MONTHLY

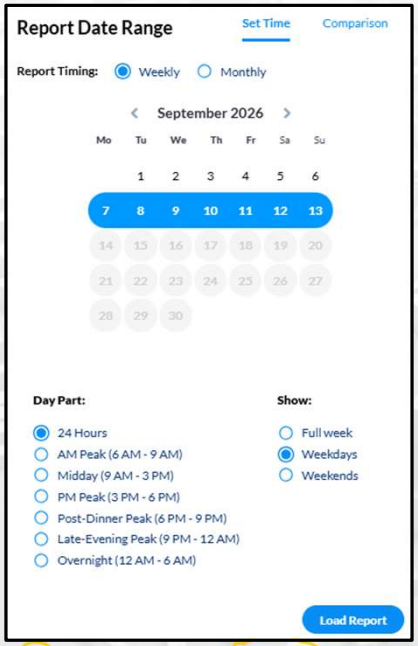




Corridors

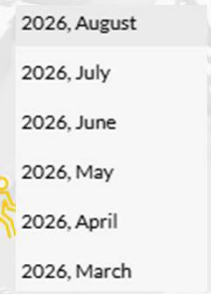


WEEKLY



MONTHLY





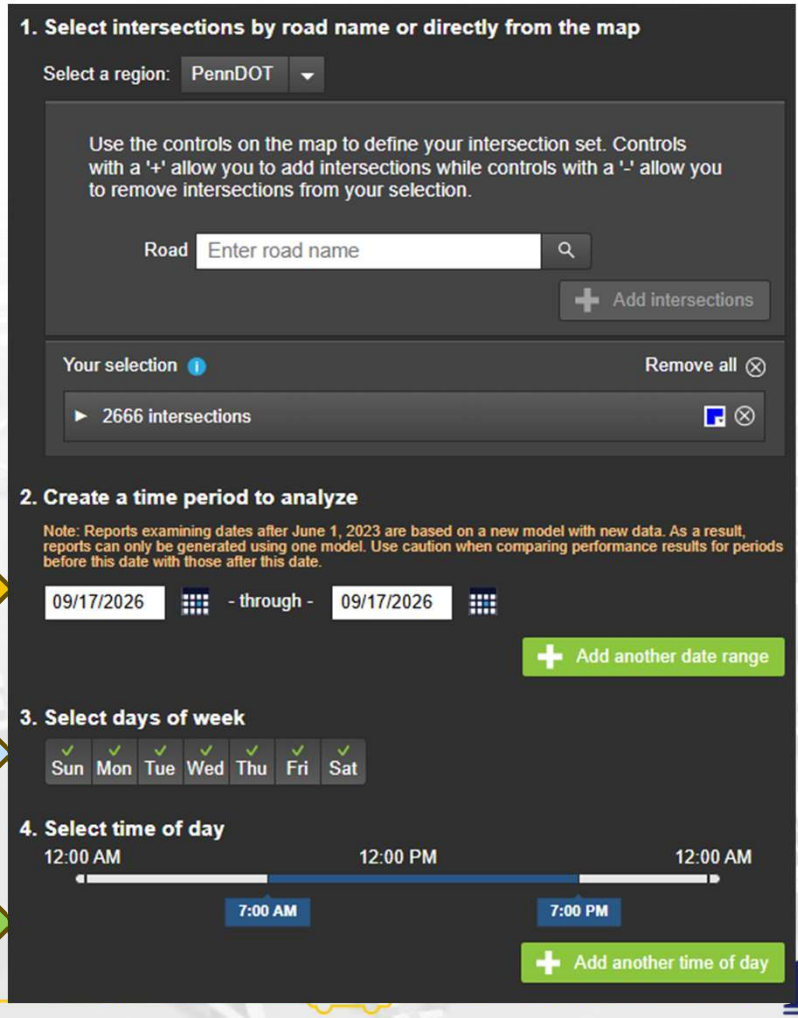
Analysis Time Period Options

Intersections

Select day or days, up to 30 continuous days

Select analysis days of week

Select analysis time of day
(down to 15 minute time slice & increments)

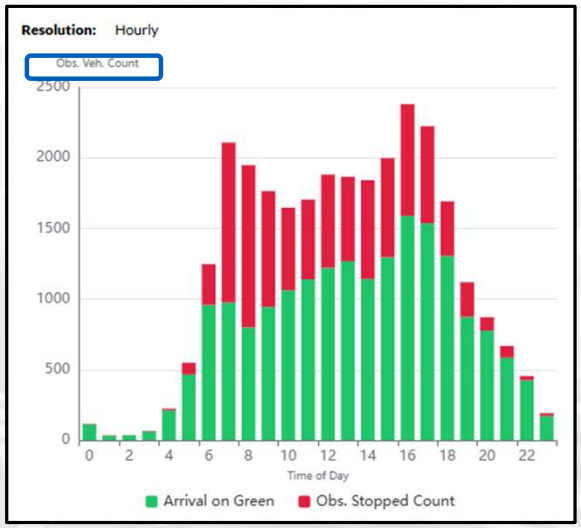


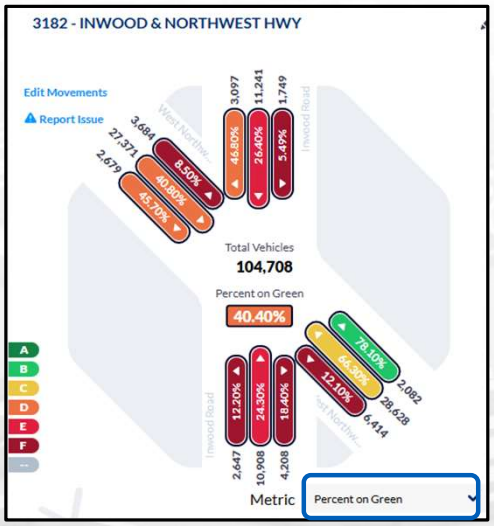
Intersection Key Performance Measures

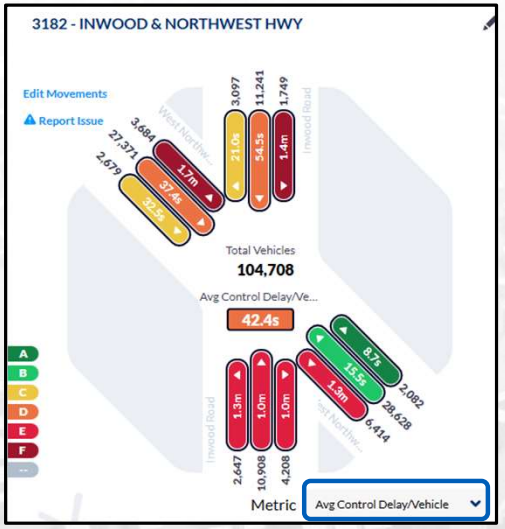
INRIX IQ Signal Analytics

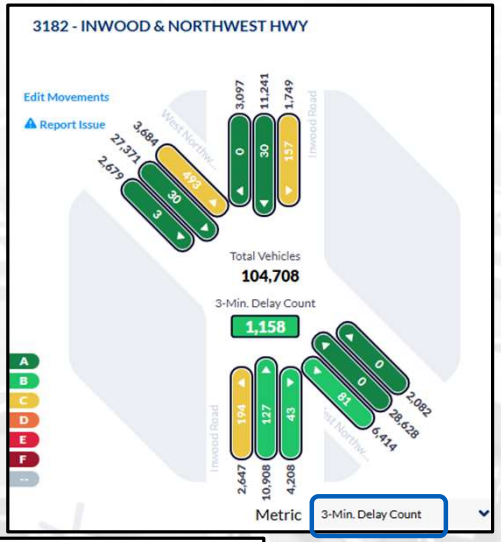
Observed Volume | **% Arrival on Green (Stops)** | **Avg Delay** | **Split Fails** (3+ Min Delays)

Sample Rate = Profile









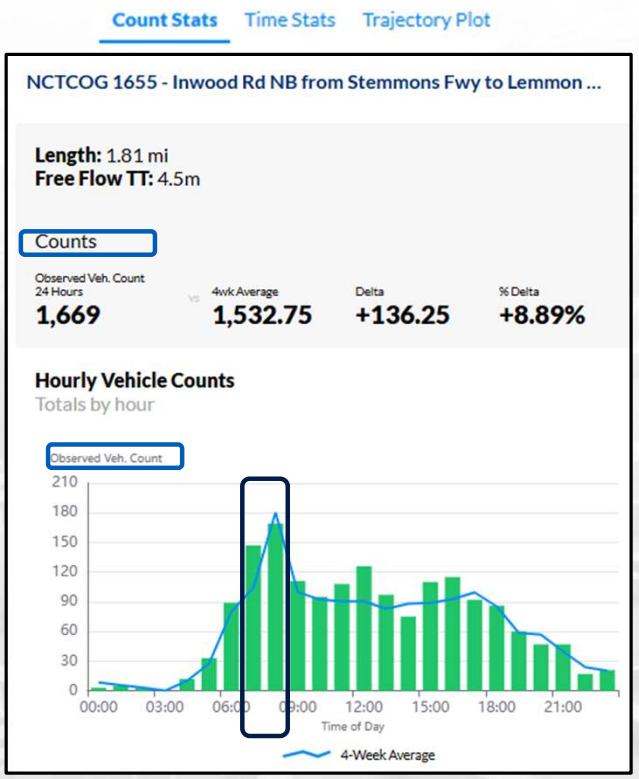
Intersection	Corridor	Obs. Veh. Count	POG	Avg. Ctrl. Delay	3MD Count	3MD %
3182 - INWOOD & NORTHWEST HWY	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	104,708	40.40%	42.4s	1,158	1.11%
3135 - MIDWAY & NORTHWEST HWY	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	72,395	37.90%	39.0s	548	0.76%
3127 - AIRDROME & LEMMON	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	17,733	53.90%	30.1s	0	0.00%
3147 - INWOOD & UNIVERSITY	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	47,469	44.40%	29.0s	391	0.82%
6504 - RECORD CROSSING ROAD & SOUTHWESTERN MEDICAL	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	8,518	35.20%	25.3s	3	0.04%
2976 - MOTOR ST & MAPLE AVE	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	17,039	43.00%	25.2s	41	0.24%
2863 - INWOOD & SOUTHWESTERN MEDICAL	NCTCOG 1655 - Inwood Rd SB from Loop 12 NW Hwy to Stemmons Fwy	61,073	55.10%	22.4s	90	0.15%

Corridor Key Performance Metrics

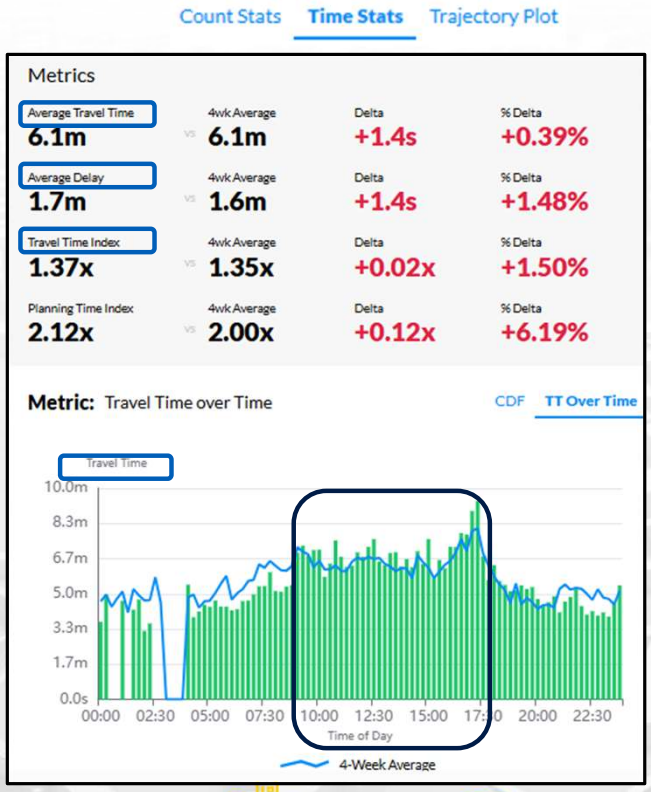
INRIX IQ Signal Analytics

Throughput

(End to End Demand Profile)

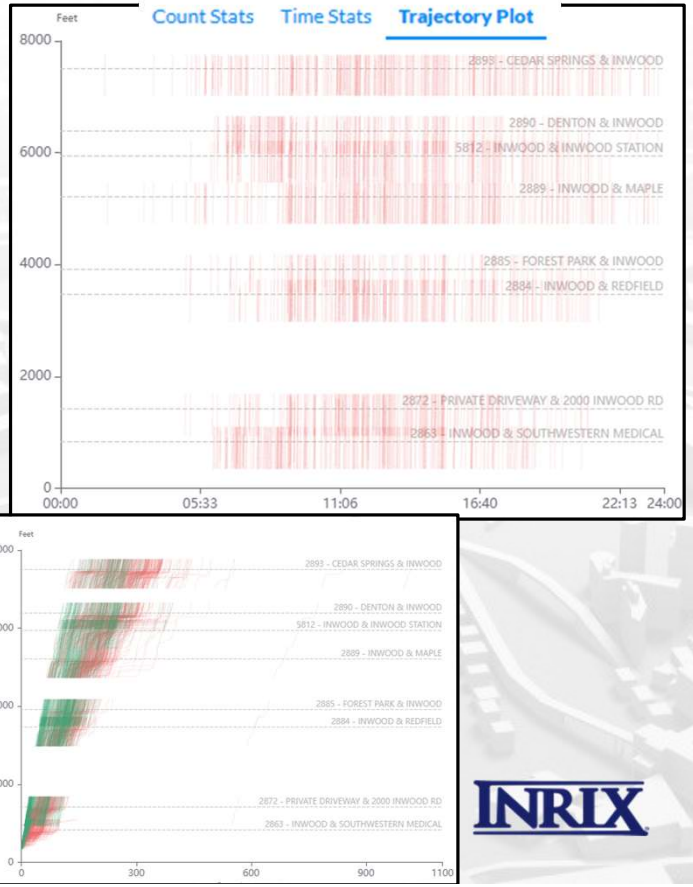


Travel Time, Delay, Reliability



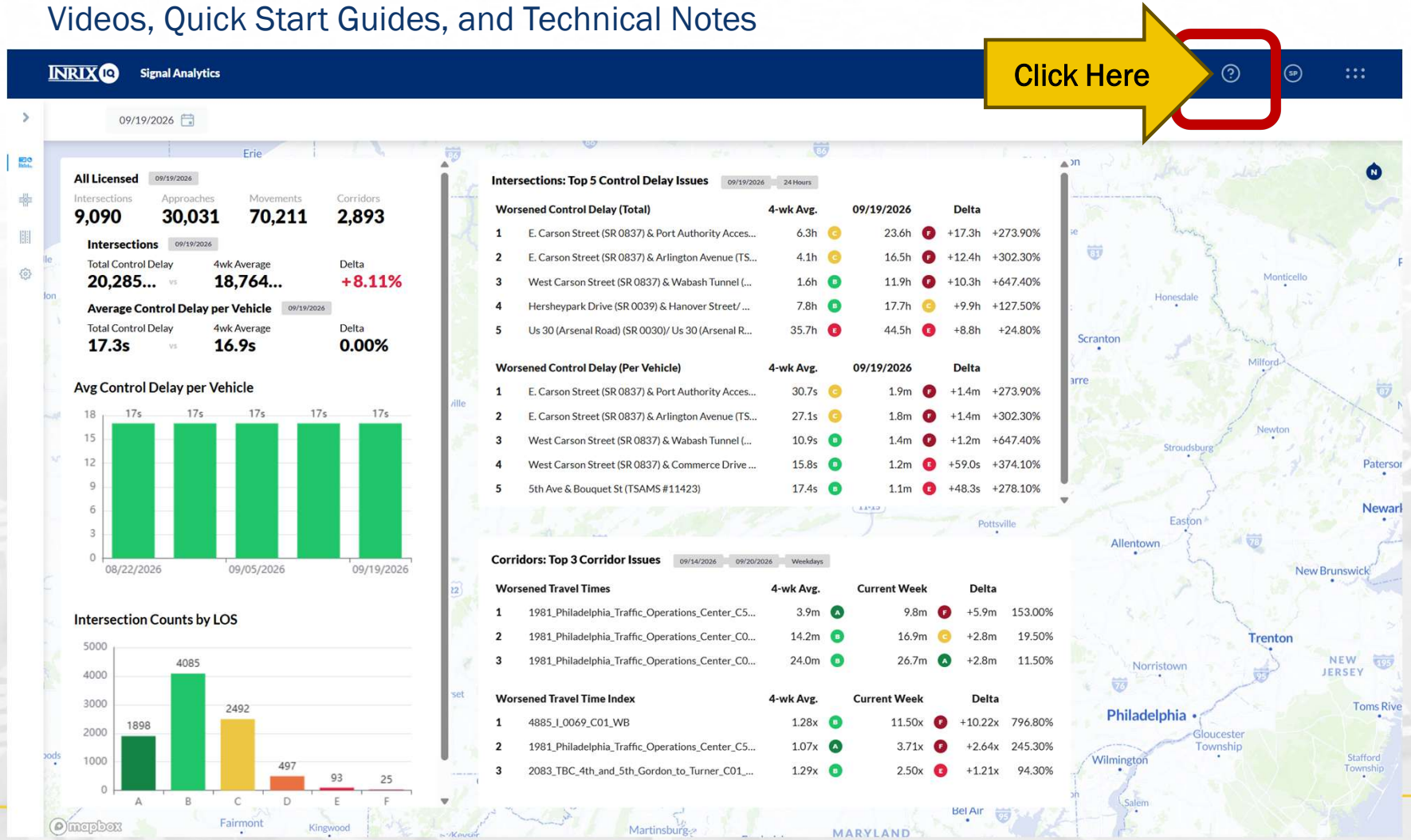
Stop Rate

(1 - % on Green)



HELP MENU

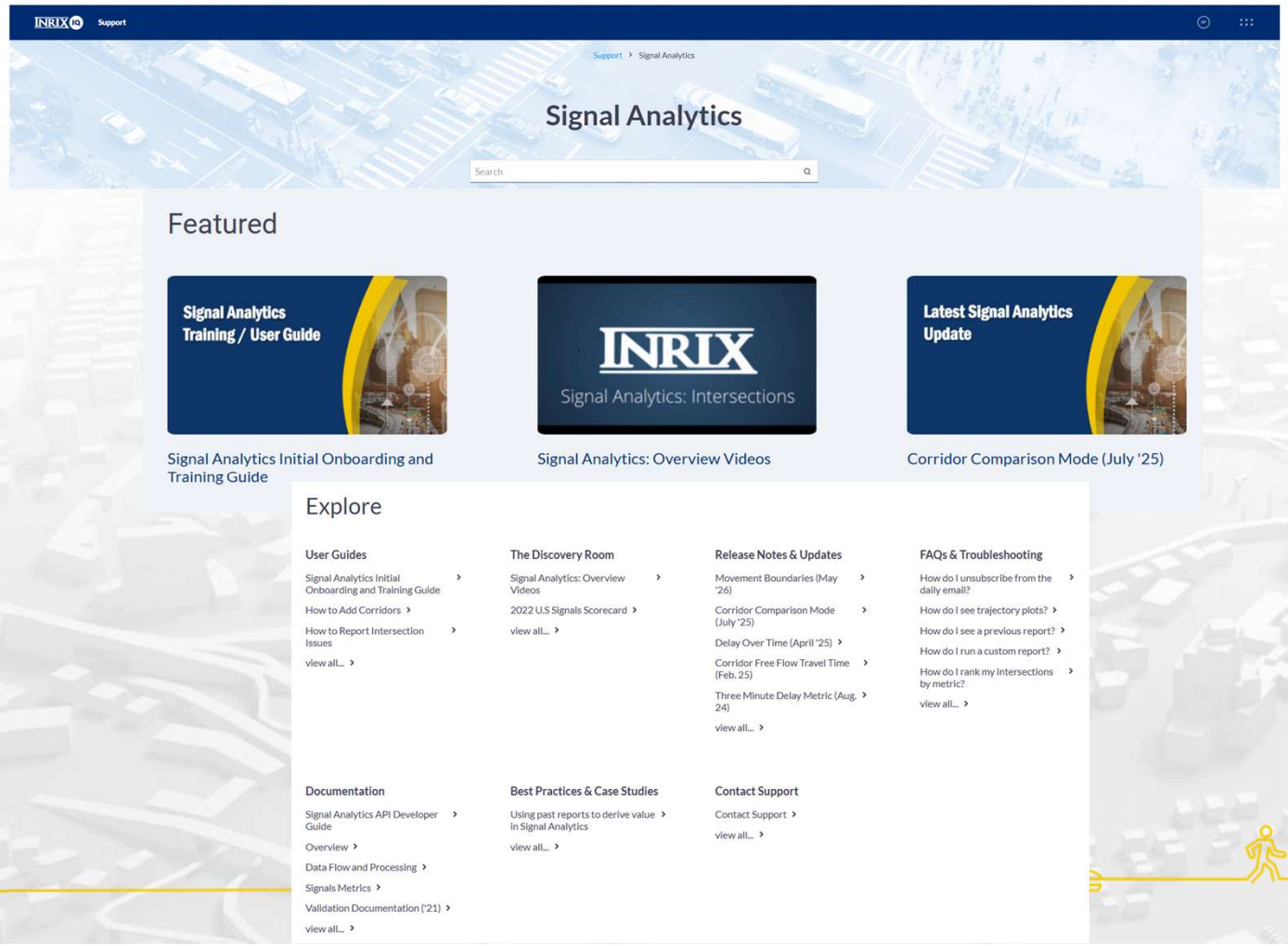
Videos, Quick Start Guides, and Technical Notes



INRIX

HELP MENU https://iq.inrix.com/support/product/360003316657/

Videos, Quick Start Guides, and Technical Notes



INRIX IQ Signal Analytics
In Partnership with CATT Lab

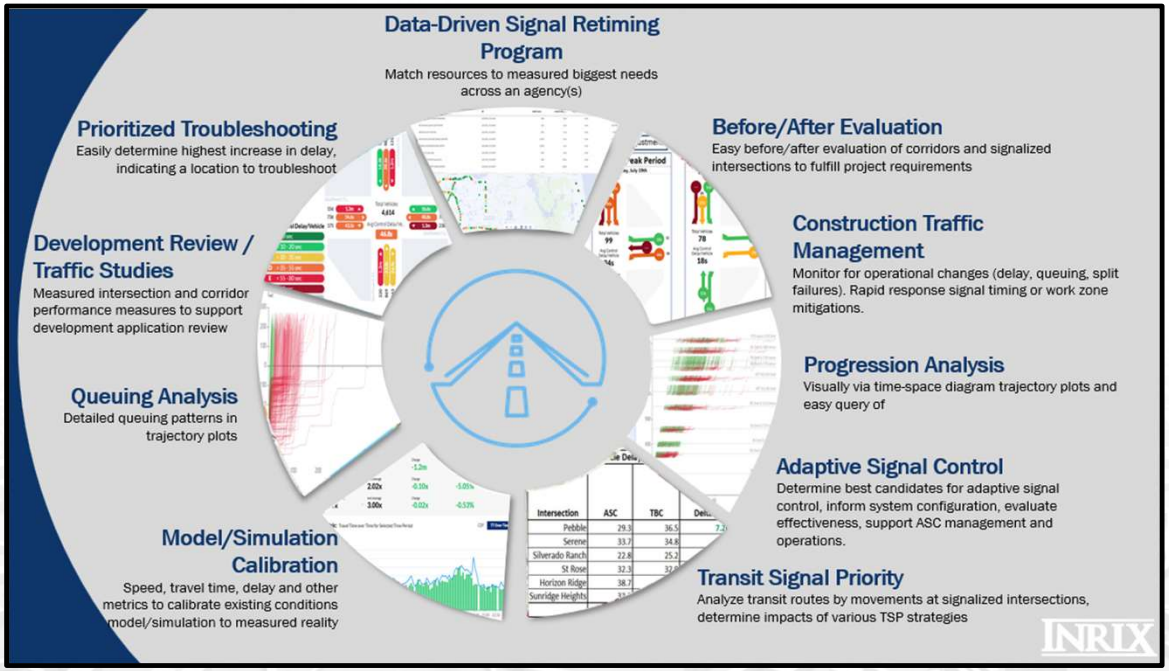
Project Types

CHECK ON COMPLAINTS
Validate location, movement, and recent performance.
Confirm problem and give context.

TREATMENT EFFECTIVENESS
Easy before/after measured results.

RANKING / PRIORITIZATION
See relative performance of all signals & TSAMS corridors.
Data-driven importance & context

PROACTIVE SIGNALS
Use emails & platform to find locations operating poorly or in need of investigation



INRIX

PROACTIVE SIGNAL MANAGEMENT – INRIX E-MAIL SUMMARIES

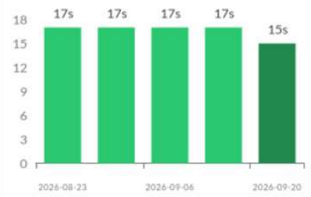
Your Intersection Performance Report by INRIX | 2026-09-20 Inbox ×

no-reply@inrix.com
to me

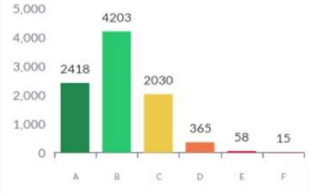
All Licensed 2026-09-20 Pennsylvania Department of Transportation

Intersections	Approaches	Movements
9,089	29,686	66,888

Average Control Delay per Vehicle



Intersection Counts LOS

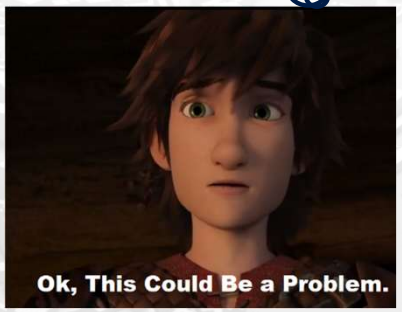


Intersections: Top 5 Control Delay Issues 2026-09-20 24 Hrs

Worsened Control Delay (Total)	4-wk Avg	2026-09-20	Change	
1 E. Carson Street (SR 0837) & Arlington…	2.4h C	8.7h E	+6.3h	+264%
2 SR 222 (SR 0222) & Cedarbrook Rd/Kr…	7.7h B	13.9h C	+6.1h	+79%
3 E. Carson Street (SR 0837) & Port Aut…	4.0h C	8.8h E	+4.8h	+119%
4 Roosevelt Blvd (SR 0001) & Bingham …	2.5h A	6.2h B	+3.7h	+146%
5 Wilmington-West Chester Pike (SR 02…	5.2h B	8.3h C	+3.1h	+60%

Worsened Control Delay (per Vehicle)	4-wk Avg	2026-09-20	Change	
1 E. Carson Street (SR 0837) & Arlington…	22s C	80s E	+58s	+264%
2 Chestnut St & Matlack St (TSAMS #98…	10s B	46s D	+35s	+343%
3 E. Carson Street (SR 0837) & Port Aut…	27s C	60s E	+32s	+119%
4 Market Street (SR 0045) & North third …	30s C	61s E	+30s	+100%
5 16th St & Spruce St (TSAMS #12747)	40s D	61s E	+22s	+55%





Investigate if 40% or higher & cause unknown

Find Stuck On Detection

Intersections: Top 5 Control Delay Issues	2022-01-08	24 Hrs			
Worsened Control Delay (Total)		4-wk Avg	2022-01-08	Change	
1	Scholls Ferry Rd & 125th - North Dakota St	197.8h B	298.4h C	+100.6h	+51%
2	Scholls Ferry Rd & Murray Blvd	388.2h C	462h D	+73.7h	+19%
3	Cornell Rd & 25th Ave	240.8h B	312.5h C	+71.7h	+30%
4	Tualatin Sherwood Road & Boones Ferry Road	309.3h C	377.4h C	+68.2h	+22%
5	Scholls Ferry Road & Nimbus Avenue	103.6h A	157.5h B	+53.9h	+52%

Intersections: Top 5 Control Delay Issues	2022-01-09	24 Hrs			
Worsened Control Delay (Total)		4-wk Avg	2022-01-09	Change	
1	Scholls Ferry Rd & 125th - North Dakota St	161.6h B	256.8h C	+95.2h	+59%
2	Tualatin Sherwood Road & Boones Ferry Road	222.6h C	263.5h C	+40.9h	+18%
3	Baseline Rd & 185th Ave	304.4h C	332.7h C	+28.3h	+9%
4	Scholls Ferry Road & 121st Avenue	125.3h B	146.4h B	+21h	+17%
5	Scholls Ferry Road & Roy Rogers Road	94.6h B	115.2h B	+20.6h	+22%



From: Mark Leavitt <mleavitt@beavertonoregon.gov>
Sent: Thursday, January 13, 2022 12:27 PM
To: Shaun Quayle <Shaun_Quayle@co.washington.or.us>
Subject: [EXTERNAL] RE: Ped button stuck on Murray-Allen

Shaun,

Scholls @ 125th we discovered a hung up Loop card. It was reset. Now Murray @ Allen we didn't find any issues. No calls on the controller and the DC isolator card had no recall, and no button was stuck. Are you still seeing any issues there?

Catch Contractor Damaged Detection

Intersections: Top 5 Control Delay Issues	2022-02-19	24 Hrs			
Worsened Control Delay (Total)	4-wk Avg	2022-02-19		Change	
1	Tualatin Sherwood & Pacific Hwy 99	672.6h C	957h D	+284.5h	+42%
2	Murray Blvd & Walker Rd	328.2h C	381.2h C	+53.1h	+16%
3	Scholls Ferry Rd & Murray Blvd	442.2h C	470.4h C	+28.2h	+6%
4	Scholls Ferry Road & Roy Rogers Road	179.4h C	205.6h C	+26.1h	+15%
5	Baseline Rd & 185th Ave	369.4h C	394.4h C	+24.9h	+7%

Intersections: Top 5 Control Delay Issues	2022-02-20	24 Hrs			
Worsened Control Delay (Total)	4-wk Avg	2022-02-20		Change	
1	Tualatin Sherwood & Pacific Hwy 99	423.2h C	658.6h D	+235.4h	+56%
2	Greenburg Rd & Washington Square Rd	98.8h B	151.9h C	+53.1h	+54%
3	Hall Blvd & Scholls Ferry Rd	298.3h C	338.2h D	+39.9h	+13%
4	Scholls Ferry Road & Roy Rogers Road	135.1h B	171.2h C	+36.2h	+27%
5	185th Ave & Walker Rd	215.8h C	242.8h C	+27h	+13%



Thanks Shaun,

Looks like the project damaged loops on one side of the split phase and because they share time its starving the other side.

I'll follow up with Matt Meier. And keep you cc'ed.

Patrick Mahedy
Signal Manager (Central), ODOT Region 1
123 NW Flanders St, Portland OR 97209

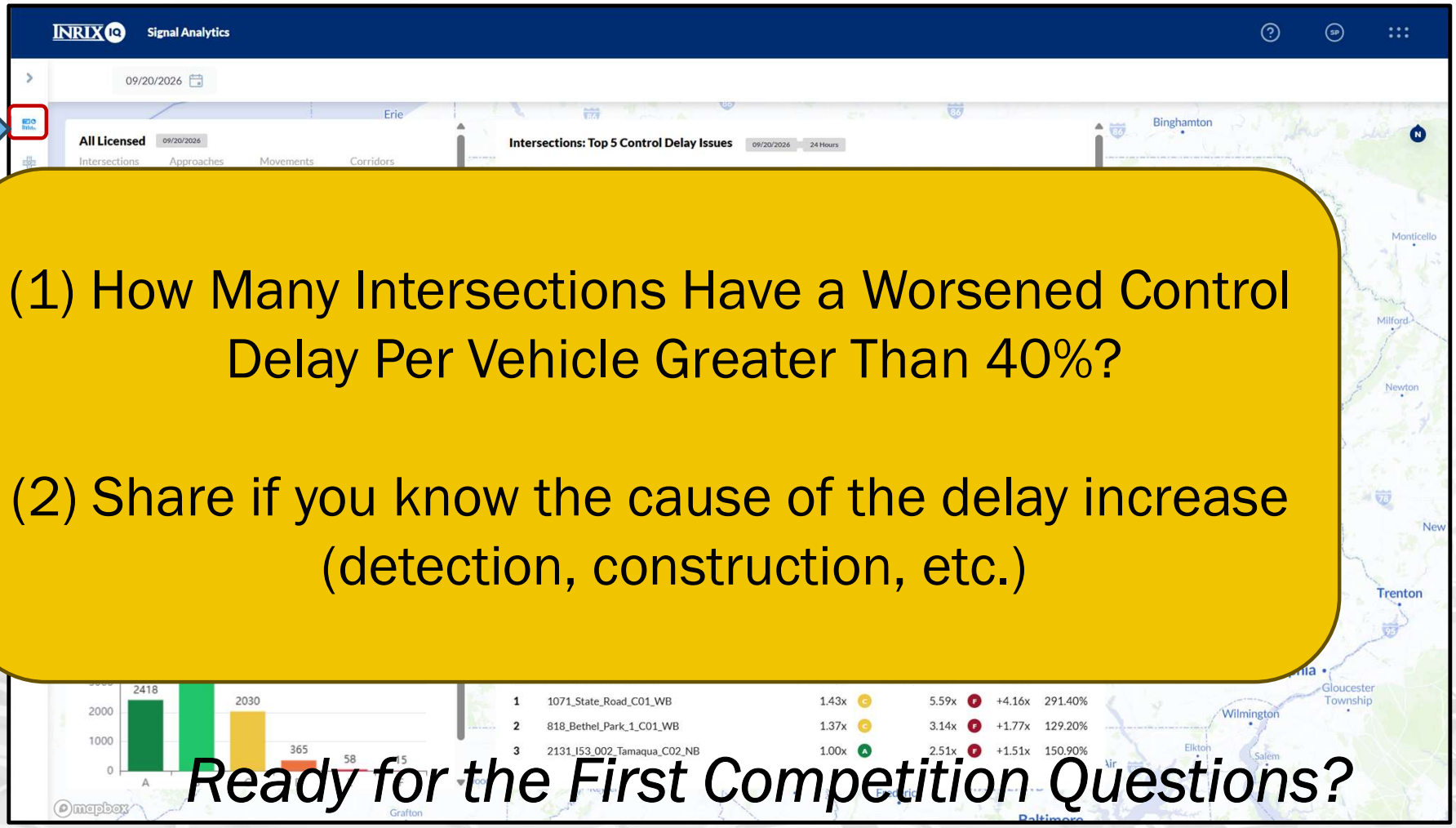
Subject: FW: [EXTERNAL] Your Signal Performance Report by INRIX | 2022-02-19
Hi Pat,

FYI, something to monitor. Not sure if the increase in delay (+42%) at 99W/TSR on Saturday was related to a kno
event. Whenever we see delay at +30% for multiple days we start to pay attention as there could be an issue wit

Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/

Dashboard



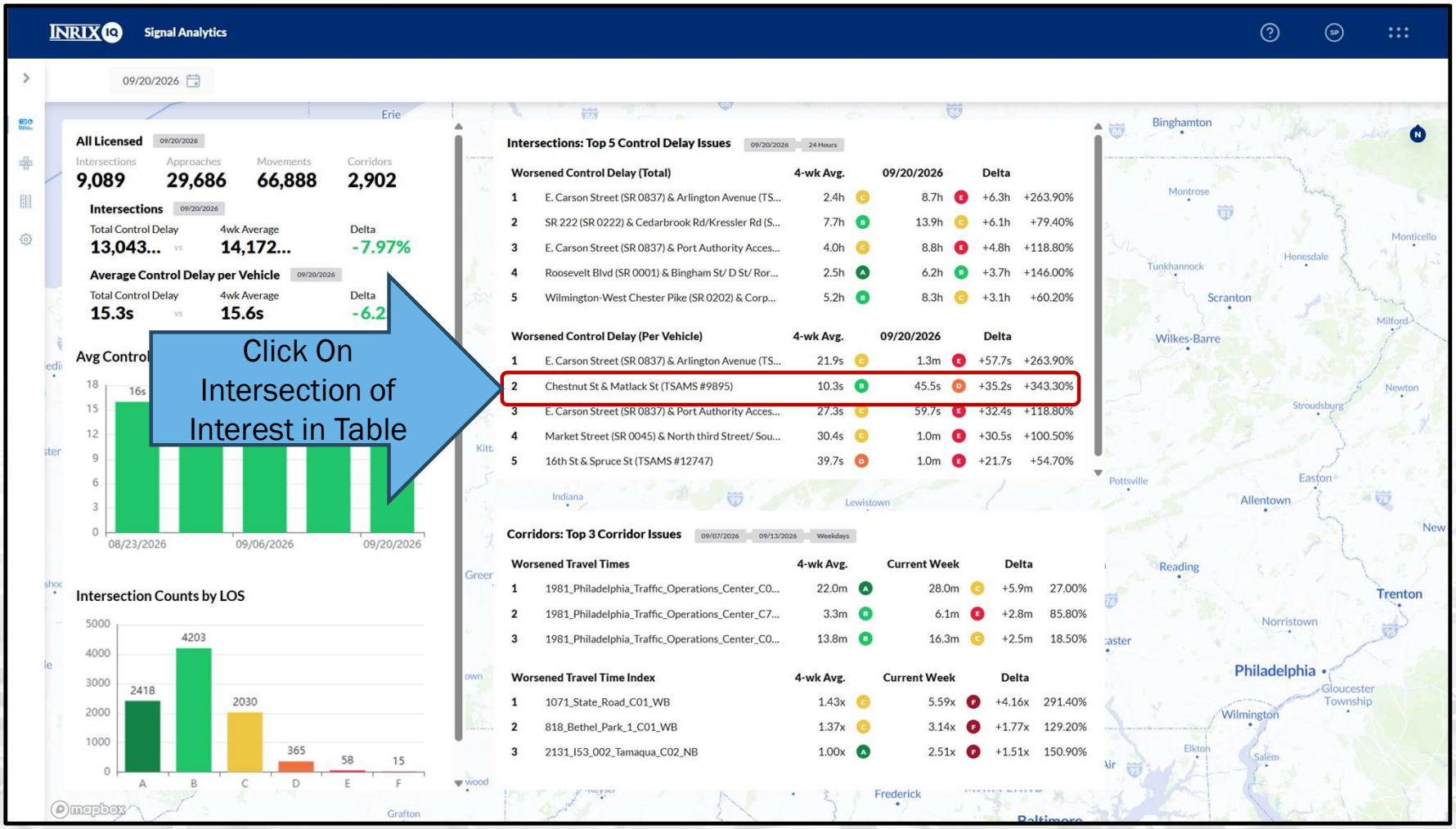
(1) How Many Intersections Have a Worsened Control Delay Per Vehicle Greater Than 40%?

(2) Share if you know the cause of the delay increase (detection, construction, etc.)

Ready for the First Competition Questions?

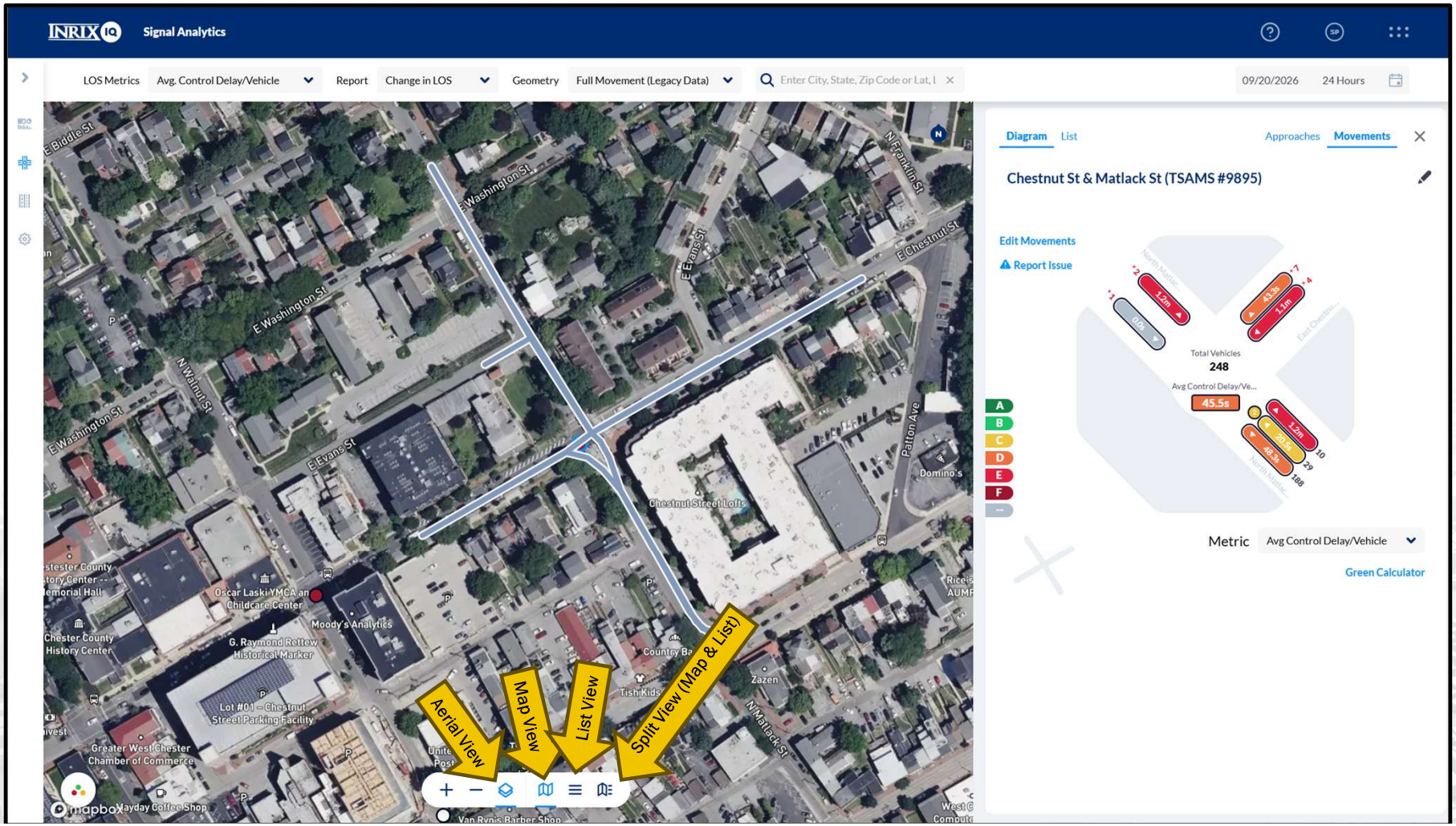
Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



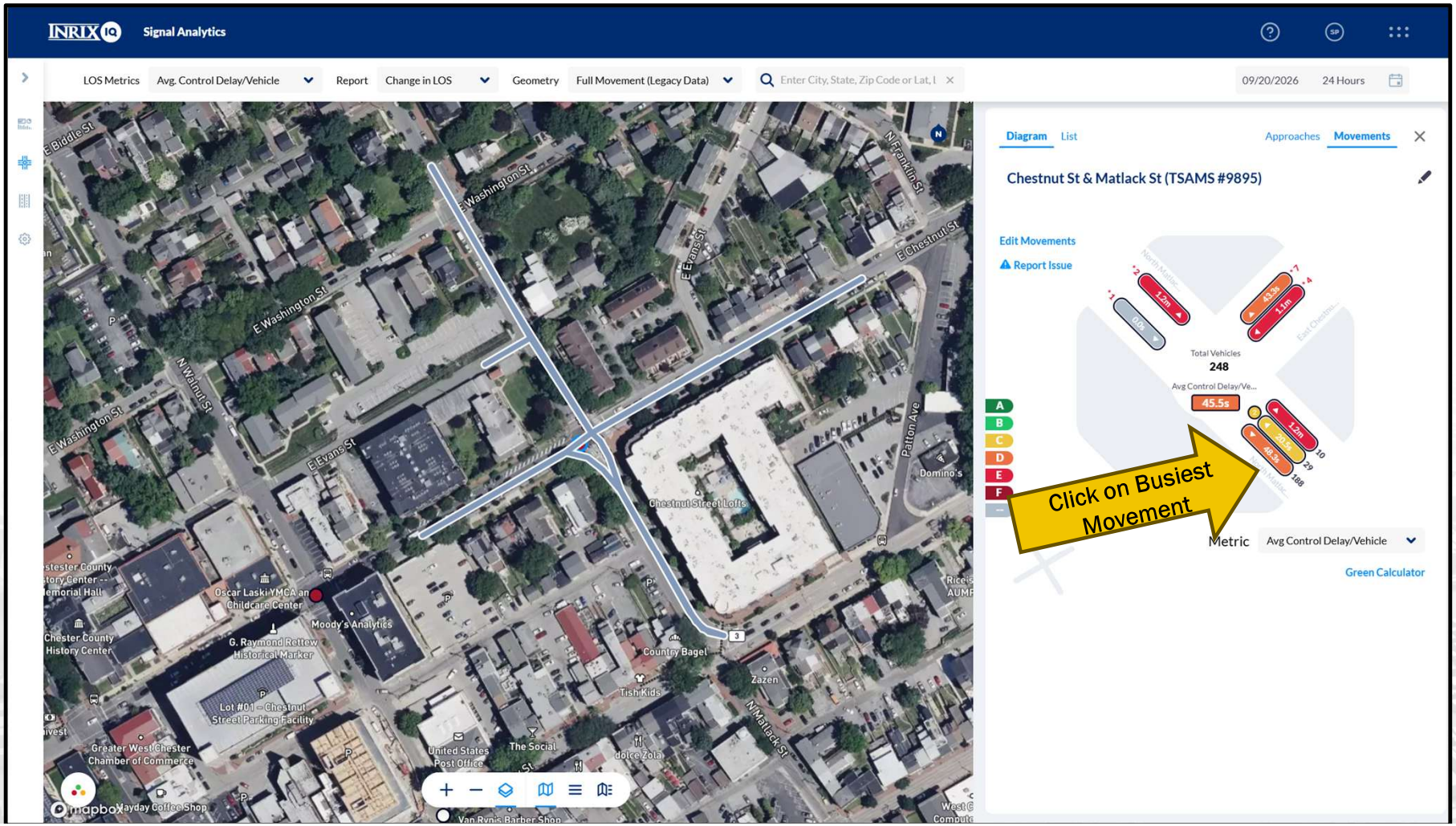
Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



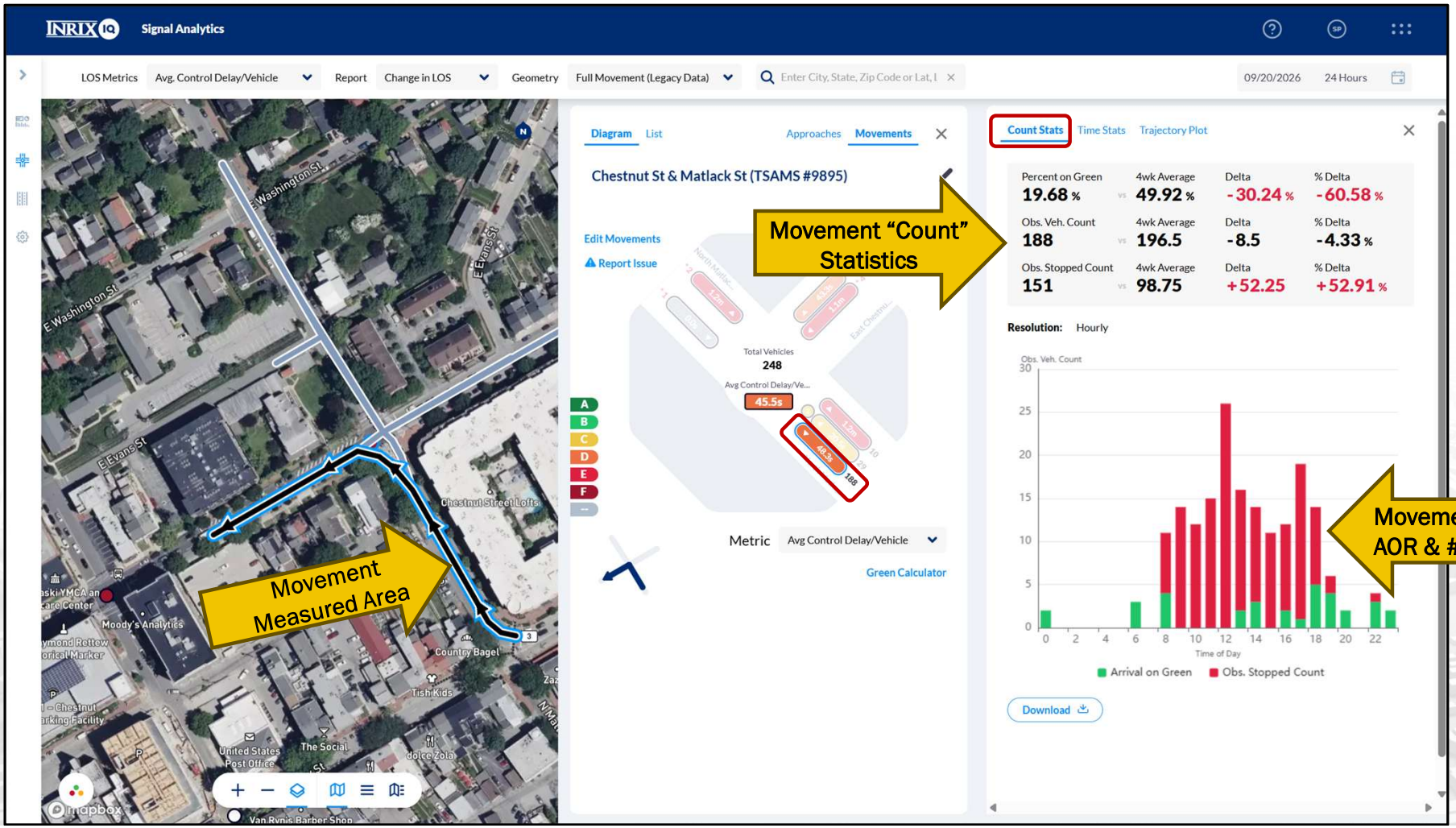
Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



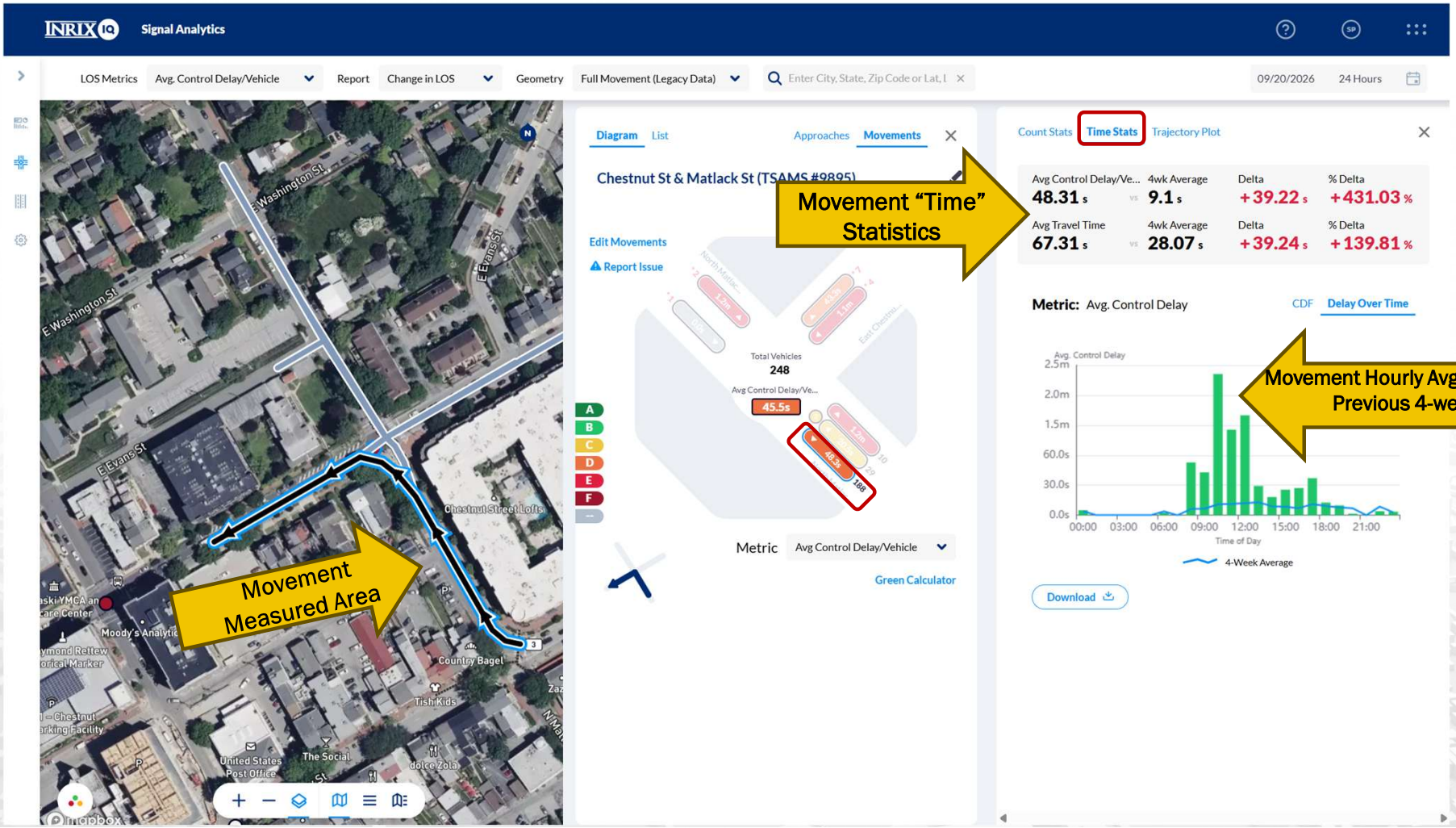
Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



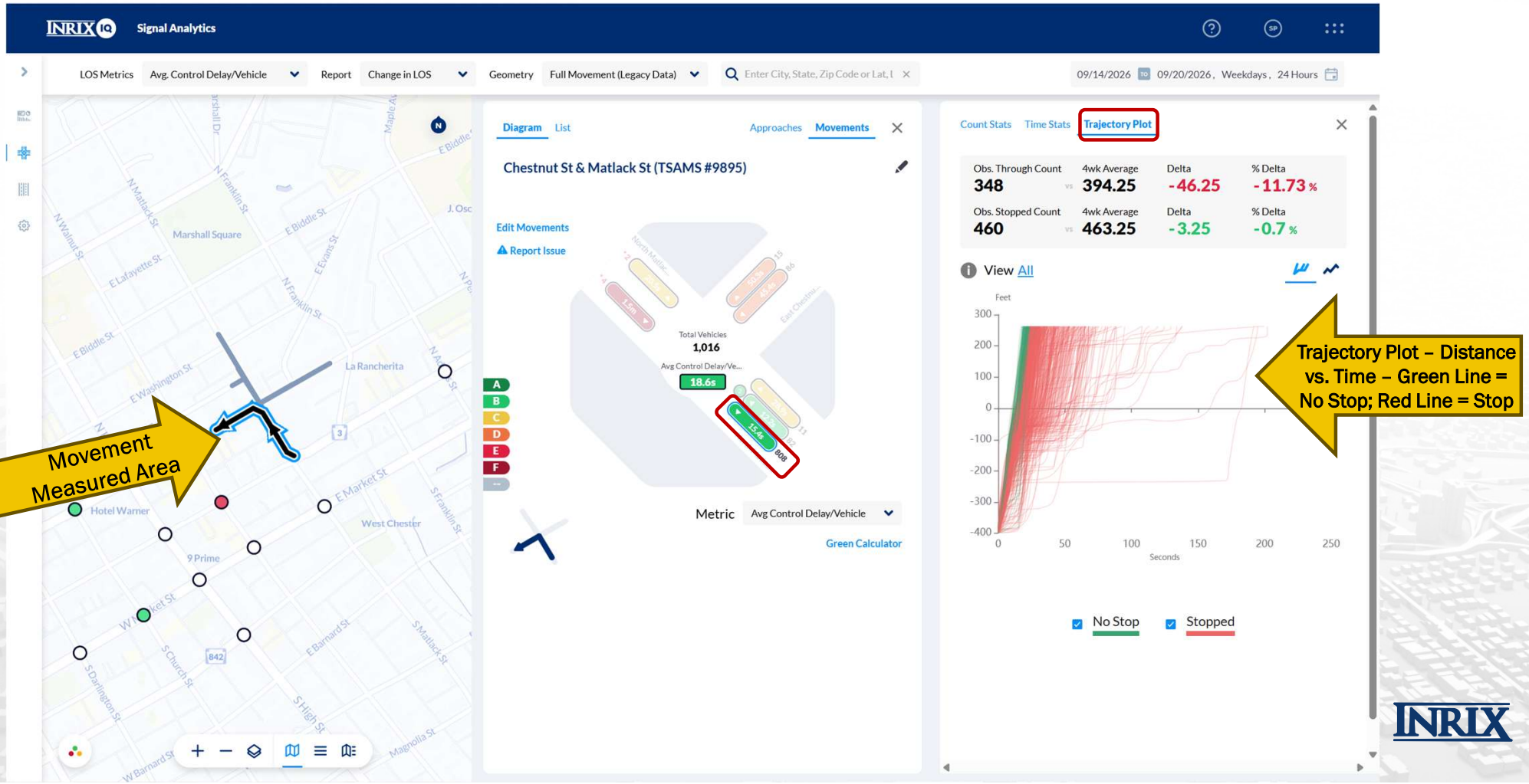
Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



Exercise #1 – Navigate to Signal Analytics Dashboard & Read Out

https://iq.inrix.com/signals/



PENNDOT LOCAL PROJECT EXAMPLE WITH SIGNAL ANALYTICS

INRIX

Use Case: Closely Spaced Congested Intersection Pair

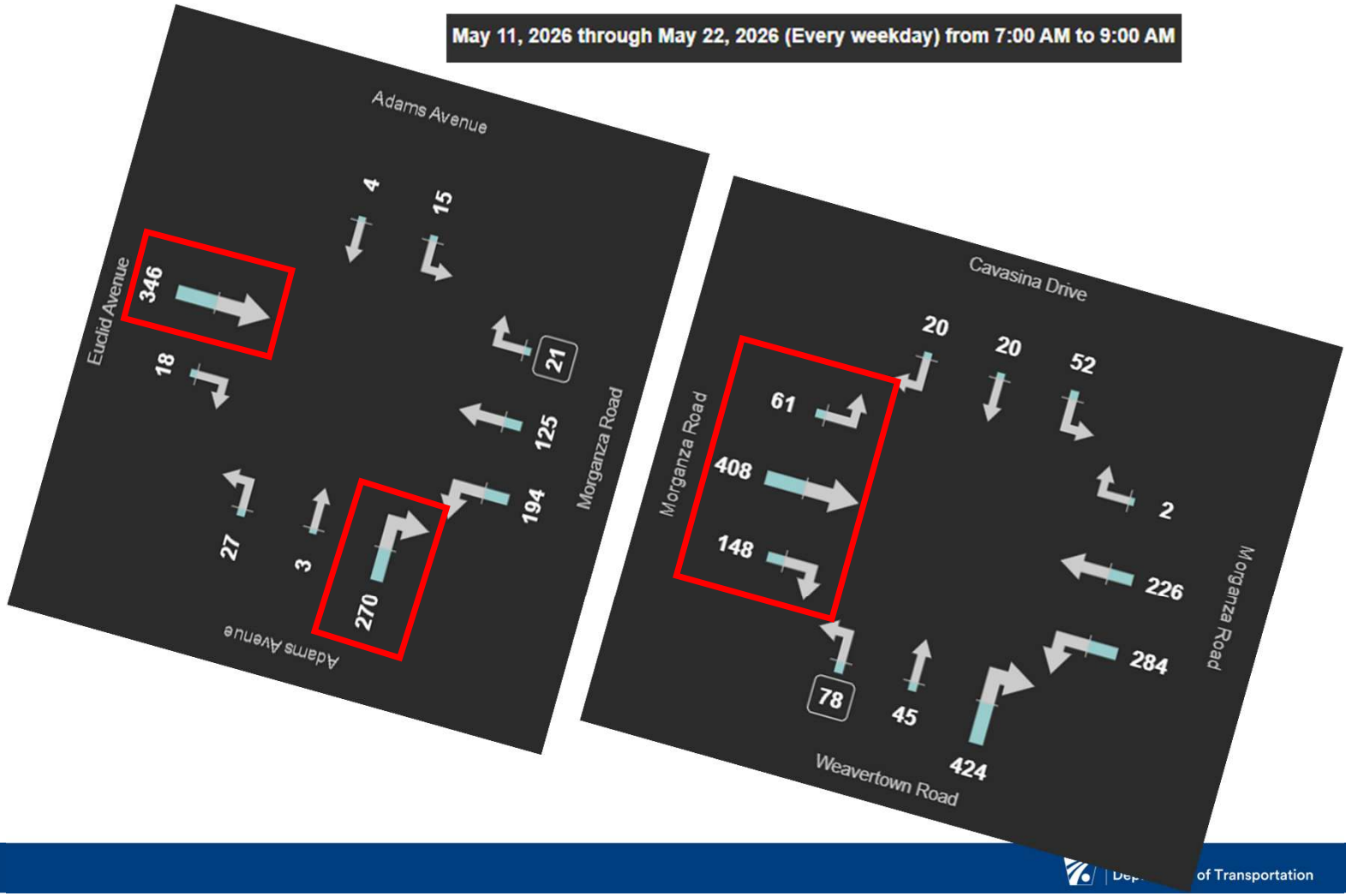
Problem:
Frequent complaints reported on multiple approaches. Following recent hardware failures, controllers were upgraded to modern GPS-enabled units; however, the intersection remains uncoordinated due to the history of equipment issues, hasn't gone through a full retiming since 2010. No future signal project in the works.

Approach:
Field equipment was reviewed to confirm detection and coordination readiness. Retiming uses the 2010 Synchro model/counts supplemented with PennDOT TIRe, RITIS Trip Analytics, and Signal IQ data to allow for low-cost modern signal timing upgrades.

Given the intersection's diverse demands and history of complaints, Signal IQ will be used to evaluate before-and-after performance.



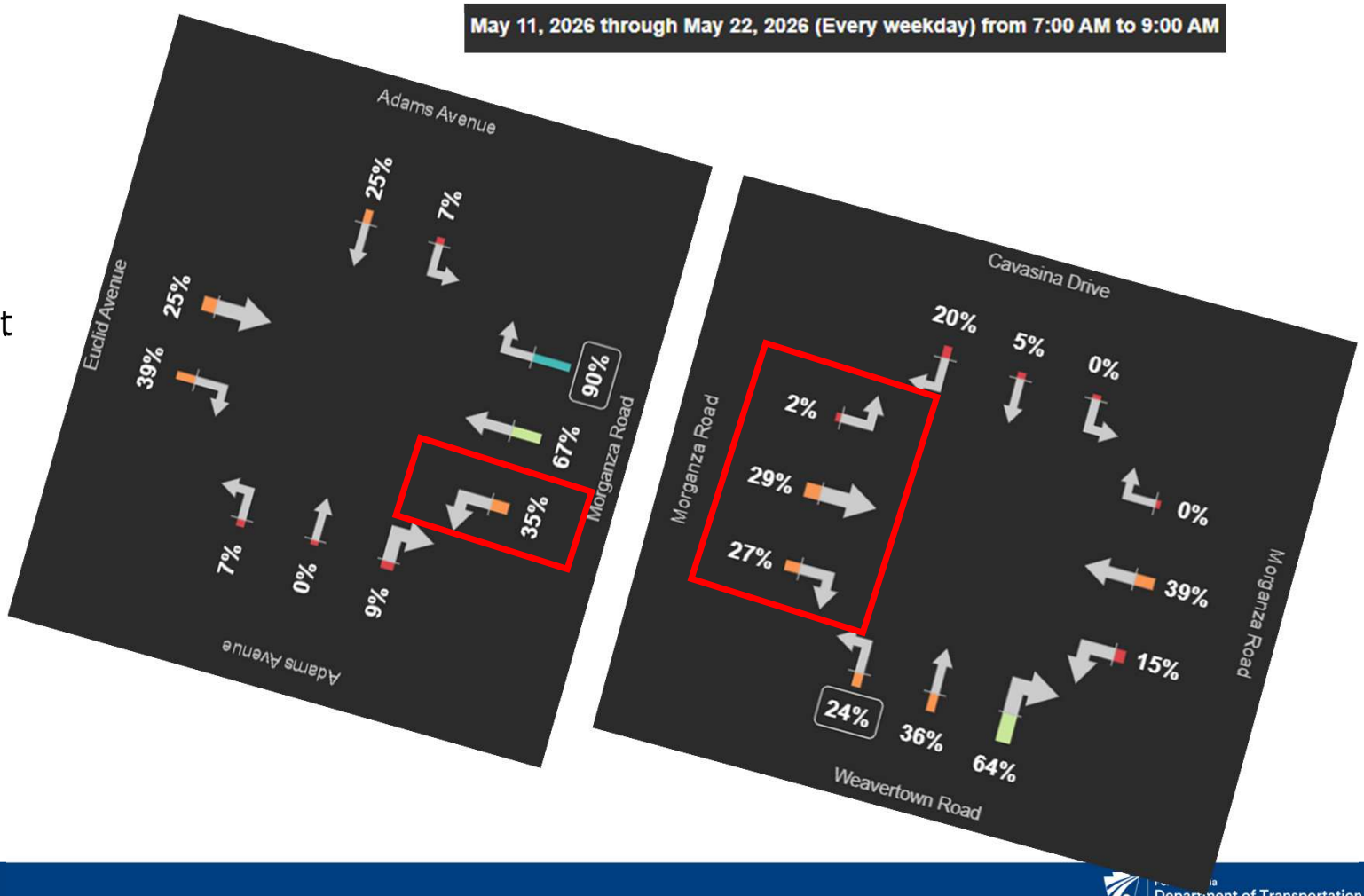
The Challenge:
Signal probe data highlights competing movement demands, while Trip Analytics is being used to evaluate eastbound (EB) trajectories and support optimal progression development.



The Challenge:
Signal probe data highlights competing poor operations.



The Potential:
Signal probe data highlights poor internal Percent on Green (POG) aka Arrival on Green. Reminder, signals are not coordinated together.



Use Case: D-12 Regional Operations Plan (ROP) Support

Problem:
Need to identify potential signal related projects for ROP or future planning efforts.

Identify a Need:
A key component to a project need would be operations. Used Signal Analytics to identify operational needs.

Methodology:
- Pull May 2026 Overall Control Delay for all District 12 Signals.
- Pull peak operations (AM, Midday, PM, and Saturday MD)
- Only consider LOS D (35 seconds) or worse
- Rank delays by peak and then add up ranks to score
- Consider intersection rank into planning process

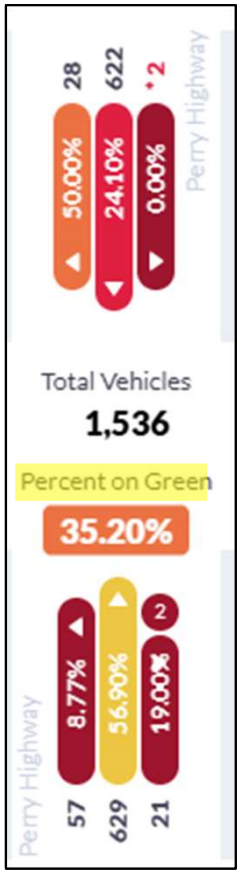
Note: A lot of the highly ranked intersections tend to get recent CCC

County	Intersection	AM Control Delay	MD Control Delay	PM Control Delay	Sat Control Delay	AM District Rank	MD District Rank	PM District Rank	Sat District Rank	Average Delay District Rank
Westmoreland	3rd St & Pennsylvania Av (TSAMS #15511)	48.2	72.7	55.8	78.2	7	1	9	1	1
Washington	Washington Road (SR 0019) & East Mcmurray Road (SR 1002) (TSAMS #7841)	43.7	66.2	69.5	60.1	12	2	2	3	2
Washington	Morganza Road (SR 1009) & Cavasina Road/ Weavertown Road (SR 1025) (TSAMS #7830)	49.5	59.7	71.0	53.2	5	3	1	5	3
Washington	Park Ave (SR 0018) & S Main St/ South St (TSAMS #15712)	58.0	56.1	54.0		2	6	10		4
Westmoreland	SR 0201 (SR 0201) & Finley Road (TSAMS #7980)		54.6	56.9	56.4		7	8	4	5
Westmoreland	2nd St & Pennsylvania Av (TSAMS #15512)	48.3	59.5	48.8	66.7	6	4	12	2	6
Greene	Greene Street (SR 0019) & Morris Street (SR 3015) (TSAMS #6405)	57.2	53.2	43.9		3	8	21		7
Westmoreland	South Main SReet (SR 0119)/ South Main Street (SR 0119) & Euclid Avenue/ Mount Pleasant Street (TSAMS #8158)	62.1	43.5	60.4	39.0	1	24	3	25	8
Westmoreland	Main St (SR 0031) & Church St (TSAMS #15727)	39.5	52.5	60.3	48.7	15	9	4	8	9
Westmoreland	Vincent Hall Road (SR 4033) & Old William Penn Highway/ Sardis Road/ Vincent Hall Road (SR 4033) (TSAMS #8184)	47.9	48.3	57.3	45.7	8	12	7	13	10
Westmoreland	SR 0030 (SR 0030) & Center Highway (SR 4023)/ Robbins Station Road (SR 3047)/ SR 0030 (SR 0030) (TSAMS #7967)	46.5	43.7	58.9	47.8	11	23	5	10	11
Washington	Locust Avenue (SR 1009) & Ramp B (SR 8013)/ Ramp Ba (SR 8015) (TSAMS #8960)	51.4	49.0	47.1	45.8	4	10	14	12	12
Washington	Washington Road (SR 0019) & Strabane Square/ Trinity Point Drive (TSAMS #7859)		48.4	44.6	52.0		11	20	6	13
Westmoreland	SR 0201 (SR 0201) & Pricedale Road (SR 3003)/ Ramp C (SR 8020)/ Ramp D (SR 8020) (TSAMS #7981)		45.4	45.3	50.4		16	16	7	14
Washington	East Mcmurray Road (SR 1002) & Valley Brook Road (SR 1010) (TSAMS #7843)	46.6	39.3	58.3	43.4	9	34	6	16	15
Fayette	Main Street (SR 2040) & Gallatin Avenue (TSAMS #6371)	37.4	57.1	40.6		19	5	34		16
Washington	Mckean Avenue (SR 0088) & Fifth Street (TSAMS #7924)		44.0				21			17
Westmoreland	SR 0030 (SR 0030)/ SR 0030 (SR 0030) & North Huntington Square/ Norwin Avenue (TSAMS #8768)		40.7	42.3	48.2		29	29	9	18
Washington	Euclid Avenue (SR 0980)/ Morganza Road (SR 1009) & Adams Avenue/ Adams Avenue (SR 0980) (TSAMS #7914)	41.3	37.4	53.4	41.1	13	42	11	21	19
Fayette	New Salem Road (SR 4006) & Matthew Drive (TSAMS #7826)		44.1	42.1	42.8		19	30	19	20

EXAMPLE - SIGNAL RETIMING

Southbound US 19 PM Peak Complaint

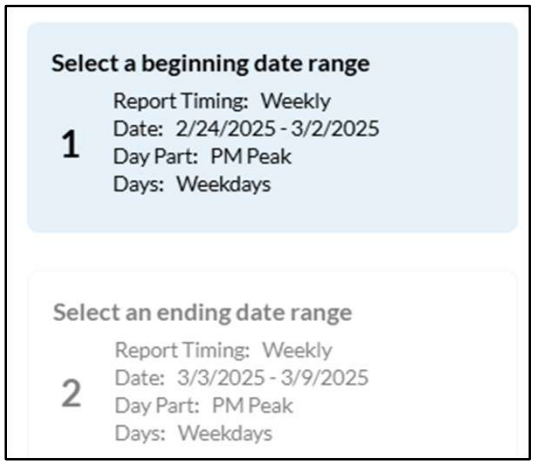
- **Issue:** During the PM peak, southbound queues were spilling back and blocking side-street vehicles from exiting. This occurred during the highest-demand "peak of the peak" period.
- **Analysis:** Recent land-use changes degraded progression. **Signal IQ indicated a low Percent on Green.**
- **Solution:** Adjusting offset settings to improve southbound coordination, enhance progression, and reduce queue spillback.



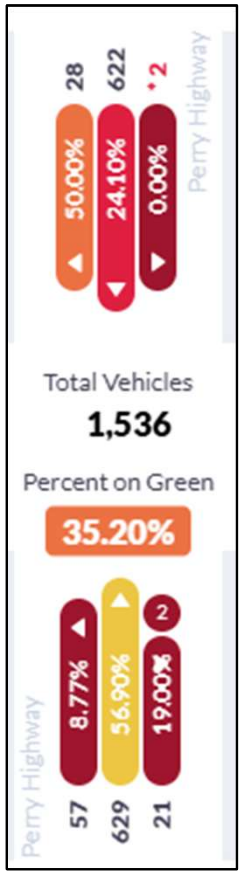
EXAMPLE - SIGNAL RETIMING

Adjusted Signal Programming

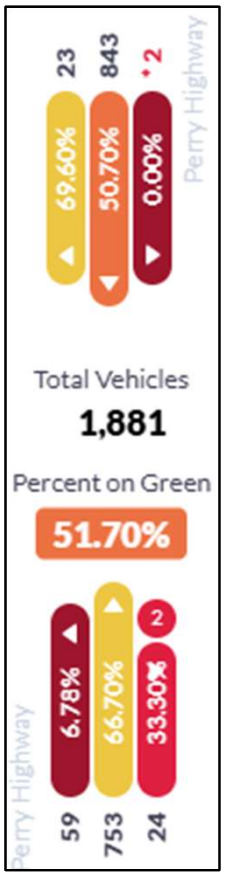
- Implemented signal timing adjustments focused on improving southbound PM peak progression.



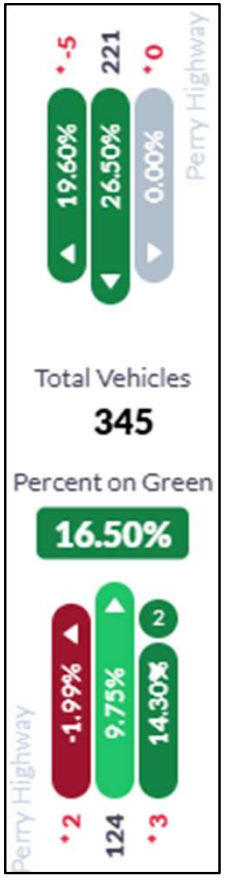
Before



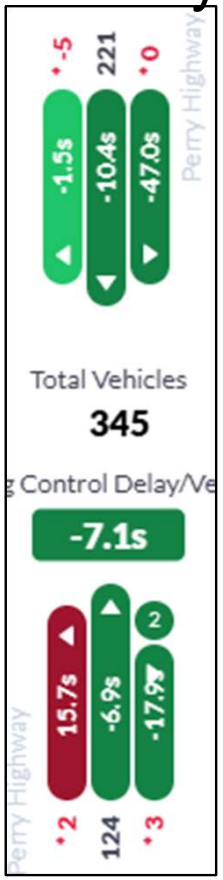
After



Change



Change in Delay



EXAMPLE – SIGNAL RETIMING

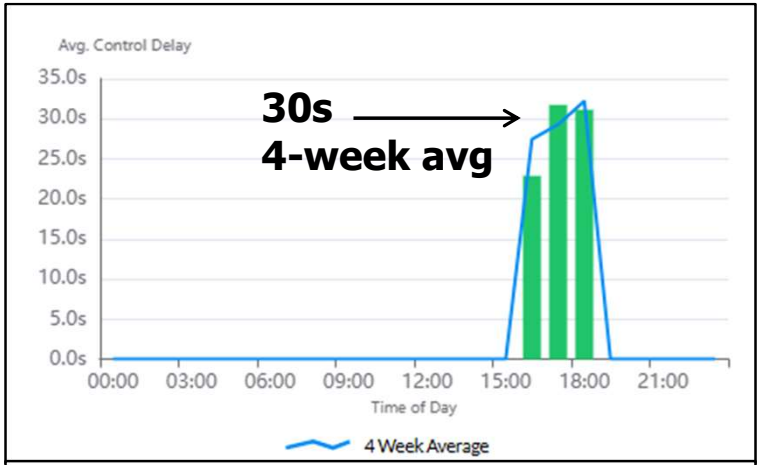
Expand on the Performance Metrics

- Correlating volume with observed improvements to quantify benefits
  - PennDOT ATR counts indicate that US 19 carries approximately **2,700 commuters at 4 PM** and **2,900 commuters at 5 PM** during the PM peak.
  - With an average delay reduction of **7.1 seconds per vehicle**, the two-hour PM peak yields approximately **11 vehicle-hours saved per day**.
  - These can be used to develop a **Benefit–Cost (B:C) ratio**, providing a clear metric for evaluating the effectiveness of signal timing improvements.

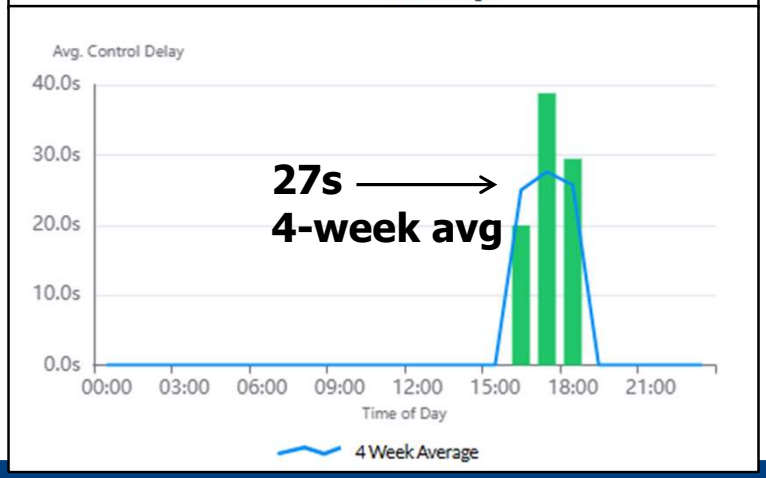
EXAMPLE - MODEL CALIBRATION

Signal Analytics Delay Statistics (Day and 4-Week Avg)

US 19 NB Approach at Rochester Rd



US 19 SB Approach at Rochester Rd



HCM Signalized Intersection Capacity Analysis
110: US 19 & Rochester Rd/Wisconsin Ave 10/24/2025

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	596	40	265	73	39	90	468	1281	73	49	1016	540
Future Volume (vph)	596	40	265	73	39	90	468	1281	73	49	1016	540
Ideal Flow (vphpl)	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924	1924
Lane Width	11	11	11	11	11	13	11	12	12	12	12	12
Grade (%)		-1%			-7%			1%			-1%	
Total Lost time (s)	5.3	5.3	4.0	5.3	5.3	4.0	4.0	4.0		4.0	4.0	5.3
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	*0.63	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3377	1869	1543	1811	1925	1749	2193	3535		1801	3638	1614
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3377	1869	1543	1811	1925	1749	2193	3535		1801	3638	1614
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	621	42	276	76	41	94	488	1334	76	51	1058	562
RTOR Reduction (vph)	0	0	85	0	0	82	0	3	0	0	0	46
Lane Group Flow (vph)	621	42	191	76	41	12	488	1407	0	51	1058	517
Confl. Peds. (#/hr)							1					1
Heavy Vehicles (%)	2%	0%	3%	1%	0%	0%	1%	2%	3%	2%	1%	1%
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	3	8	1	7	4	5	1	6		5	2	3
Permitted Phases			8			4						2
Actuated Green, G (s)	26.7	21.9	52.4	10.4	5.6	13.0	30.5	79.7		7.4	56.6	83.3
Effective Green, g (s)	29.7	24.9	58.4	13.4	8.6	19.0	33.5	82.7		10.4	59.6	89.3
Actuated g/C Ratio	0.20	0.17	0.39	0.09	0.06	0.13	0.22	0.55		0.07	0.40	0.60
Clearance Time (s)	8.3	8.3	7.0	8.3	8.3	7.0	7.0	7.0		7.0	7.0	8.3
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	8.0		2.0	8.0	2.0
Lane Grp Cap (vph)	668	310	600	161	110	221	489	1948		124	1445	960
v/s Ratio Prot	c0.18	0.02	c0.07	0.04	0.02	0.00	c0.22	0.40		0.03	c0.29	0.11
v/s Ratio Perm			0.05			0.00						0.21
v/c Ratio	0.93	0.14	0.32	0.47	0.37	0.05	1.00	0.72		0.41	0.73	0.54
Uniform Delay, d1	59.1	53.4	31.9	64.9	68.1	57.6	58.2	25.1		66.9	38.4	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.70		1.13	0.75	0.44
Incremental Delay, d2	19.0	0.1	0.1	0.8	0.8	0.0	34.1	1.7		0.6	2.6	0.2
Delay (s)	78.2	53.4	32.0	65.7	68.9	57.6	83.7	19.2		75.9	31.4	8.2
Level of Service	E	D	C	E	E	E	F	B		E	C	A
Approach Delay (s)		63.5			62.7			35.8			25.0	
Approach LOS		E			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			38.7		HCM 2000 Level of Service				D			
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			150.0		Sum of lost time (s)				18.6			
Intersection Capacity Utilization			76.0%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

Use Case: Redevelopment Creating Excessive Delays

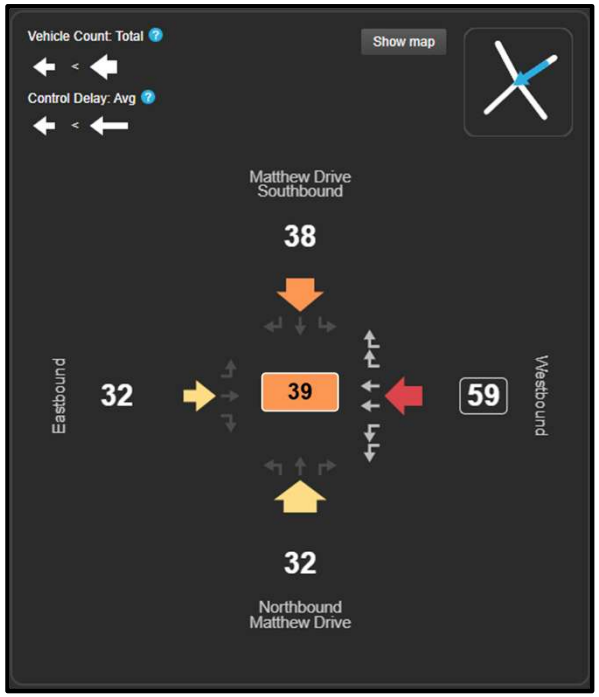
Problem:
Area has seen recent redevelopment including a popular fast-food restaurant. Intersection operations are free and experiences SBL and WB delays with WBR (Channelized) or WBL blocking each other.



Solution:
Probe data suggests the signal should be more responsive to reduce queue spillback and lane blockage. While increasing passage time may reduce gap-outs, the primary issue appears to be inefficient green time allocation. Trajectory and probe data indicate this is not a through corridor. Reduce splits proportionally across movements and prioritize faster service to fully utilize available lane and storage capacity.

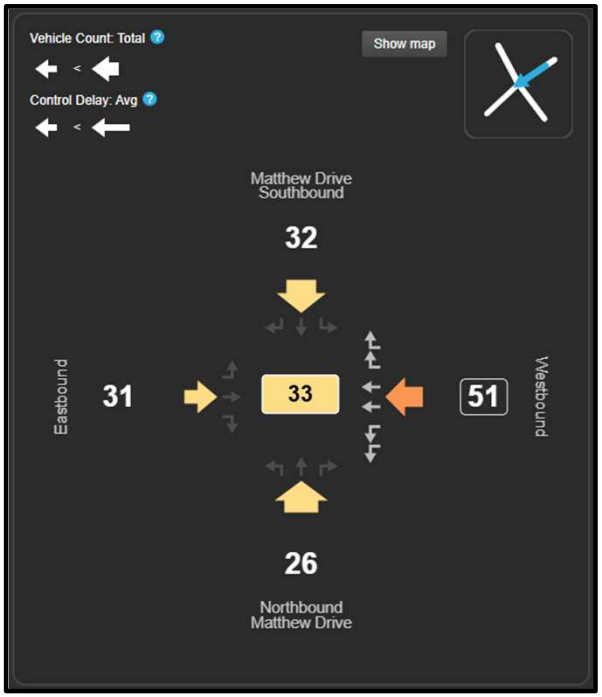
10 AM to 5 PM Weekday Control Delay Comparison (Before and After)

Before: June 8 – June 26 (3 Weeks)



Department implemented basic timing changes on July 15th.

After: July 27 – August 14 (3 Weeks)



15% Overall Delay Improvement

10 AM to 5 PM Weekday Control Delay Comparison (Before and After)
WB Approach Delays

Before: June 8 – June 26 (3 Weeks)

	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	Daily Avg
Mon	53	45	59	51	46	64	44	52
Tue	56	47	72	56	62	47	50	56
Wed	36	59	58	60	61	62	59	58
Thu	45	52	86	65	62	59	48	63
Fri	62	61	84	68	65	48	64	64
Weekdays	52	52	72	60	60	55	54	59
All days	52	52	72	60	60	55	54	59

After: July 27 – August 14 (3 Weeks)

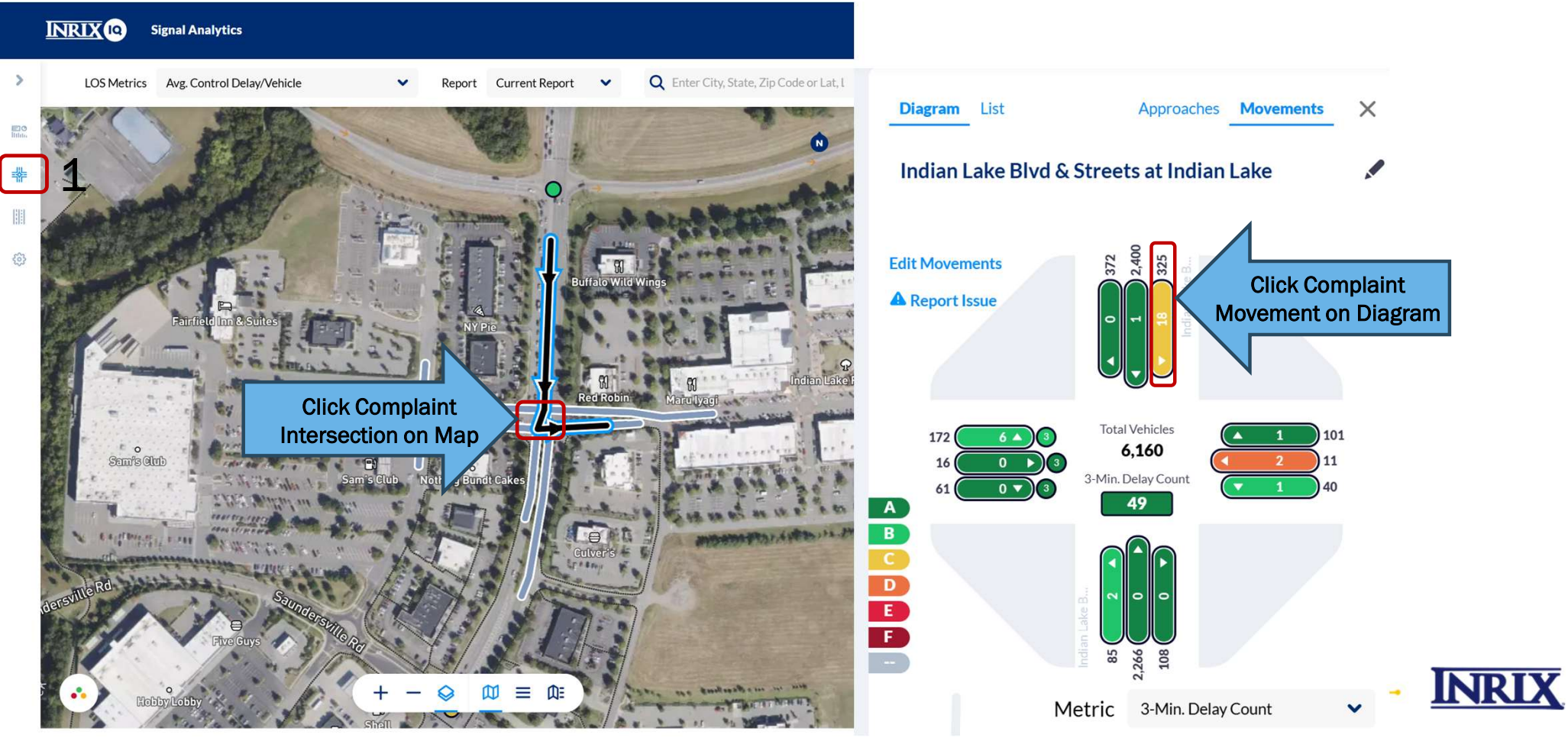
	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	Daily Avg
Mon	55	39	53	47	44	41	44	47
Tue	58	43	55	50	48	53	52	51
Wed	42	39	53	57	45	44	53	48
Thu	49	53	51	45	44	50	46	48
Fri	33	60	61	73	58	56	50	60
Weekdays	50	47	55	55	48	48	49	51
All days	50	47	55	55	48	48	49	51

Lower delays and more stable/consistent performance

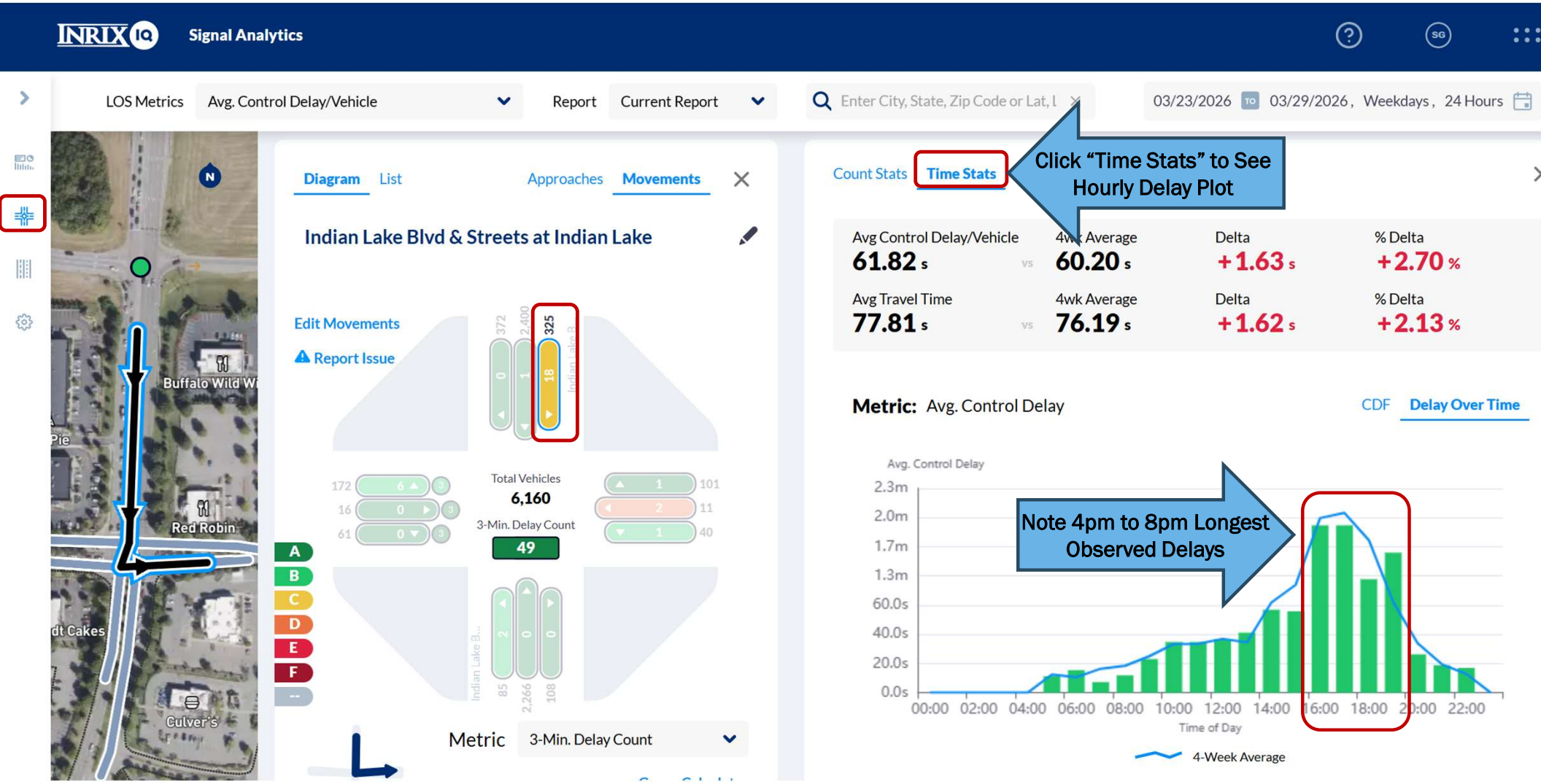
ADDRESSING A COMPLAINT

Complaint – Problem with Light, Waiting 10 Minutes!

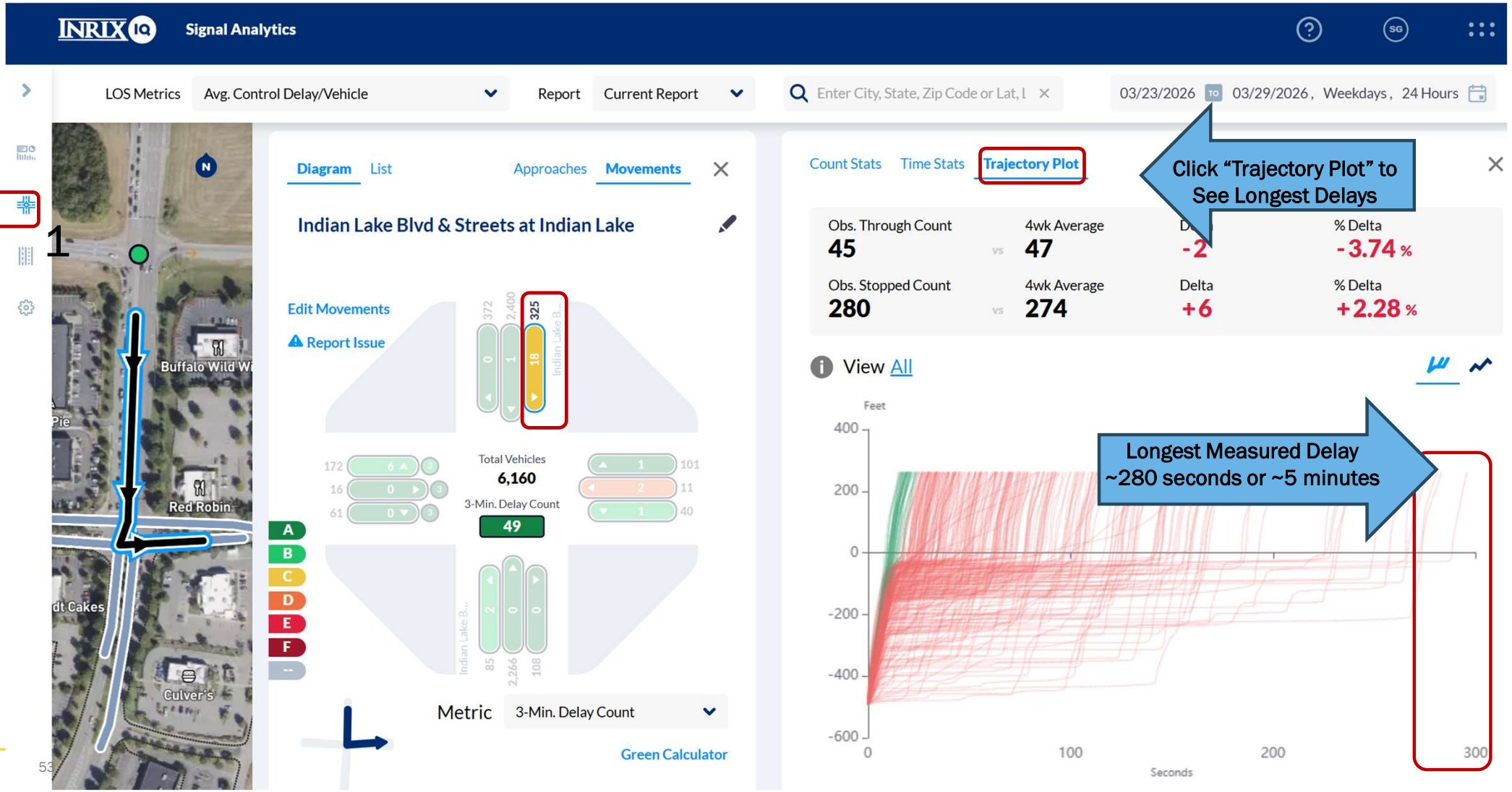
Fictious – For Demo Purposes



Complaint – Problem with Light, Waiting 10 Minutes!



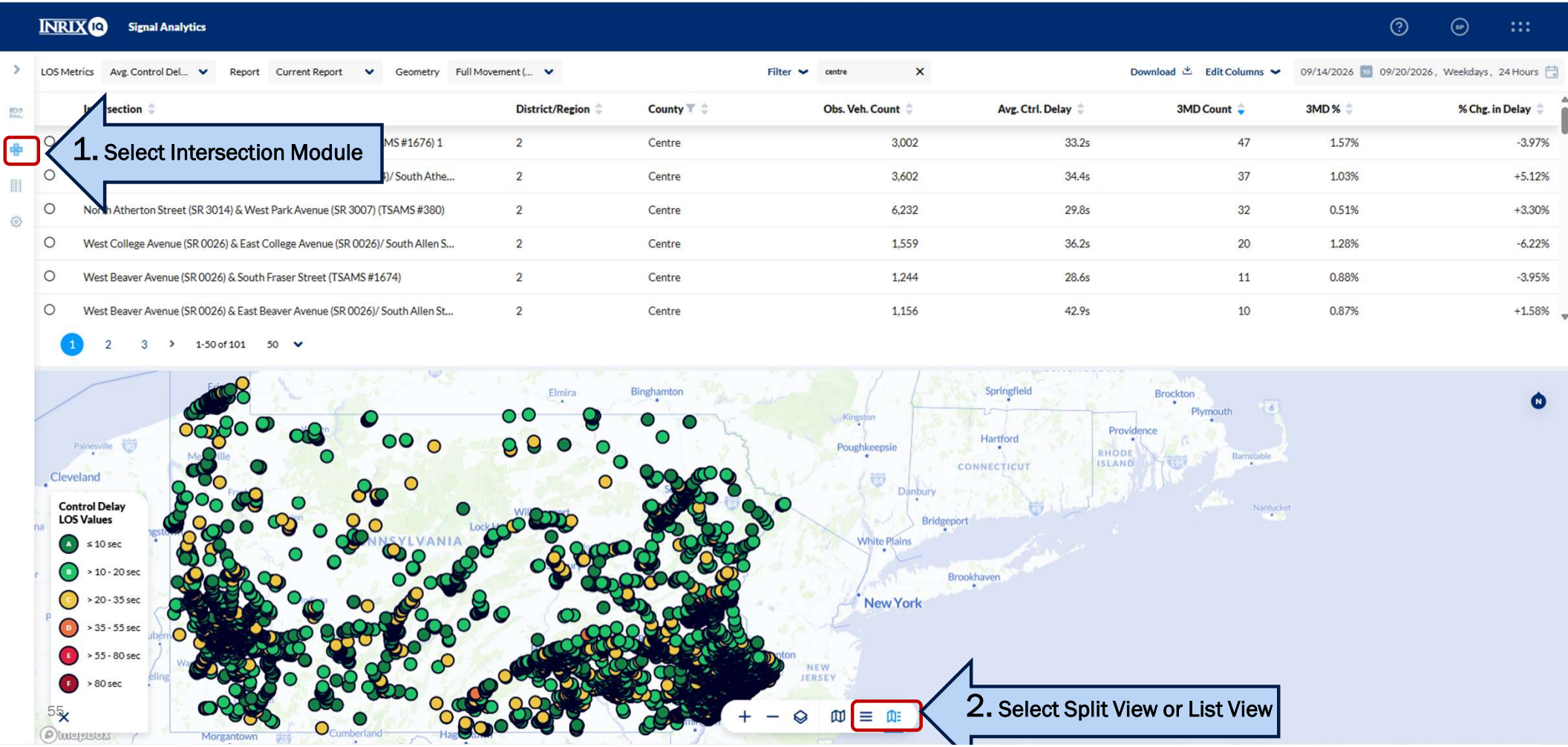
Complaint – Problem with Light, Waiting 10 Minutes!



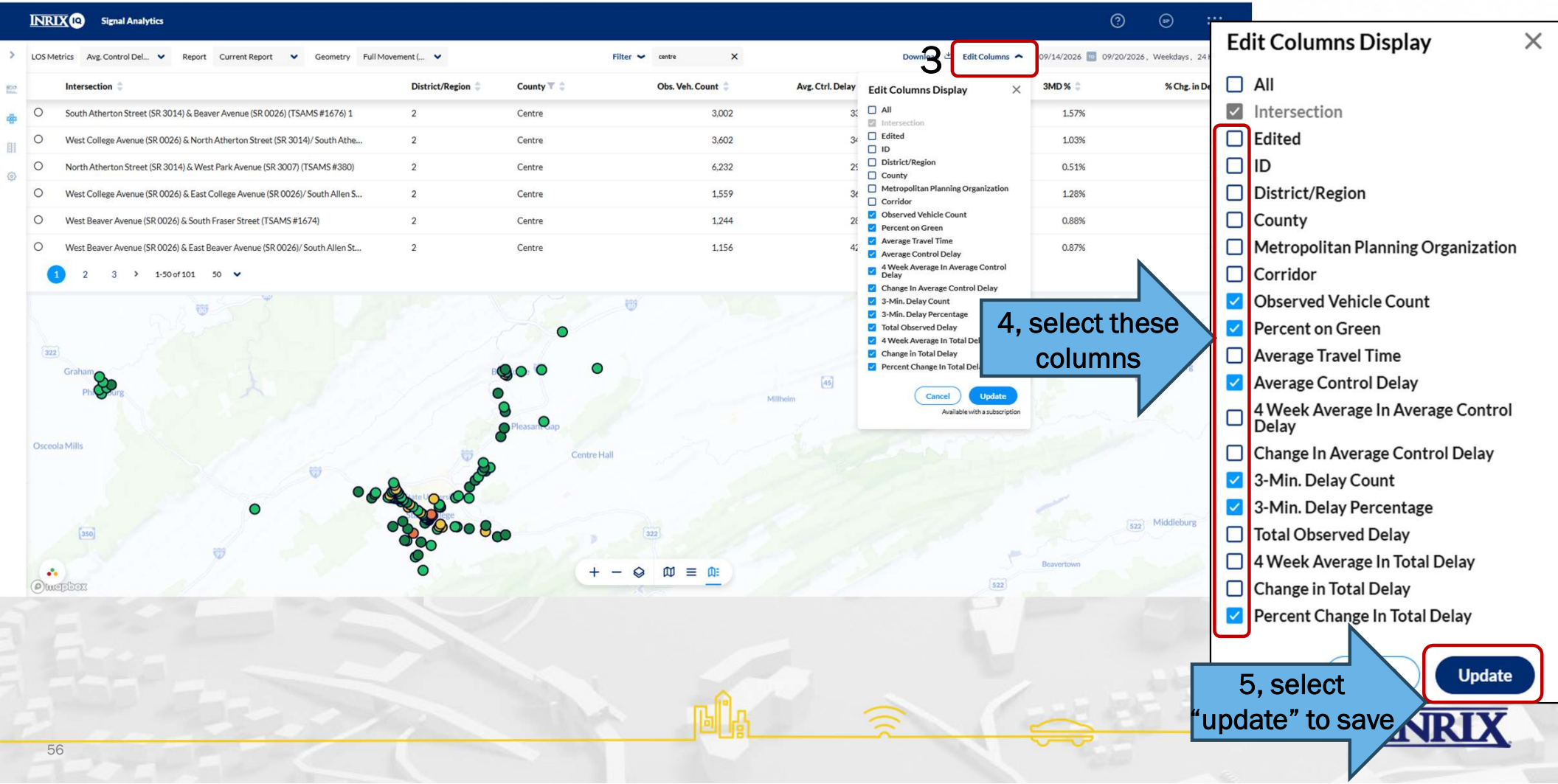
RANKING BY SPLIT FAILURES –
SMALL SHIFT IN GREEN TIME = BIG BENEFITS

INRIX

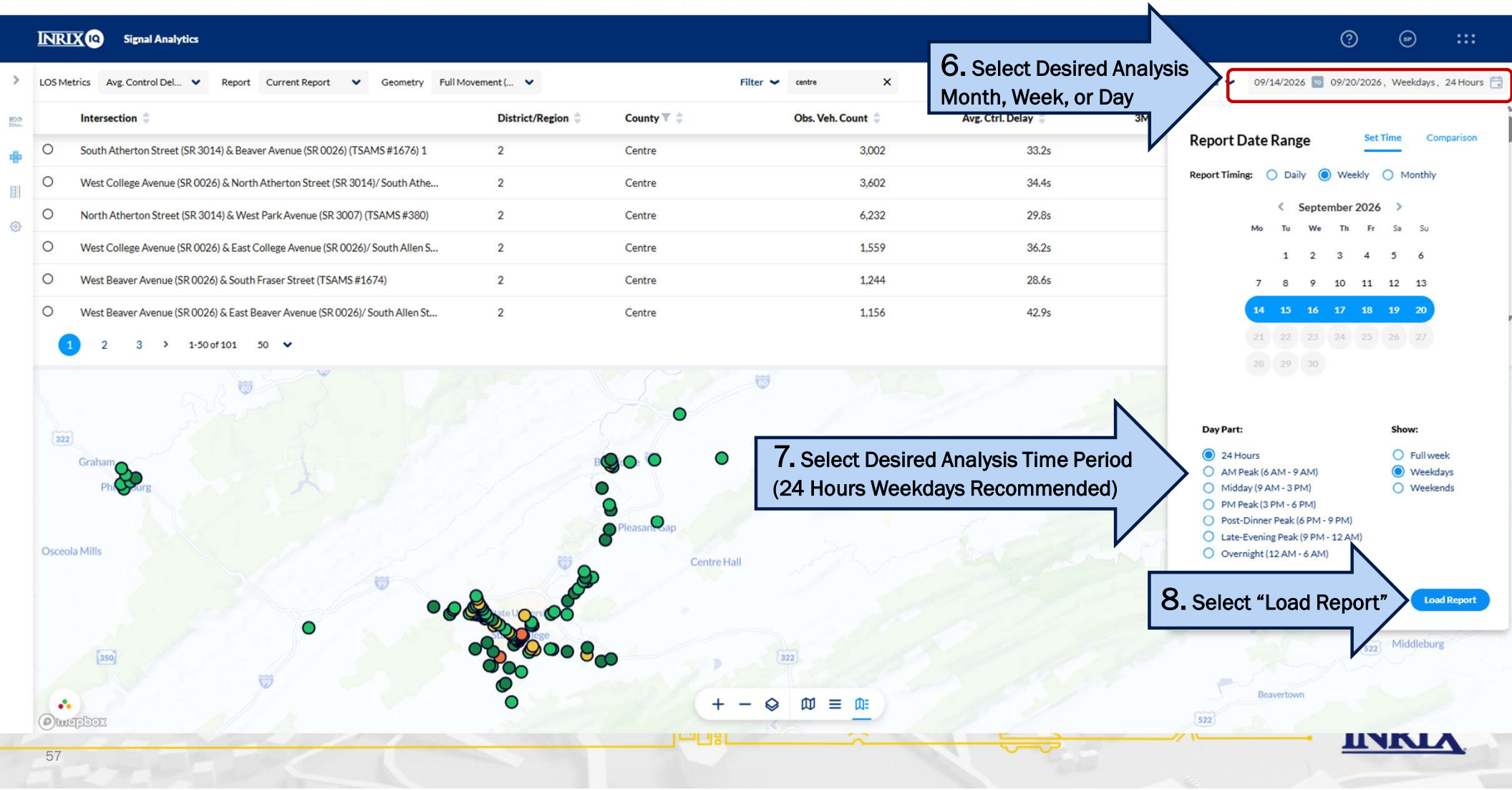
How to Rank Order Your Intersections



Configuring Display Columns – Intersections List or Split View



How to Rank Order Your Intersections



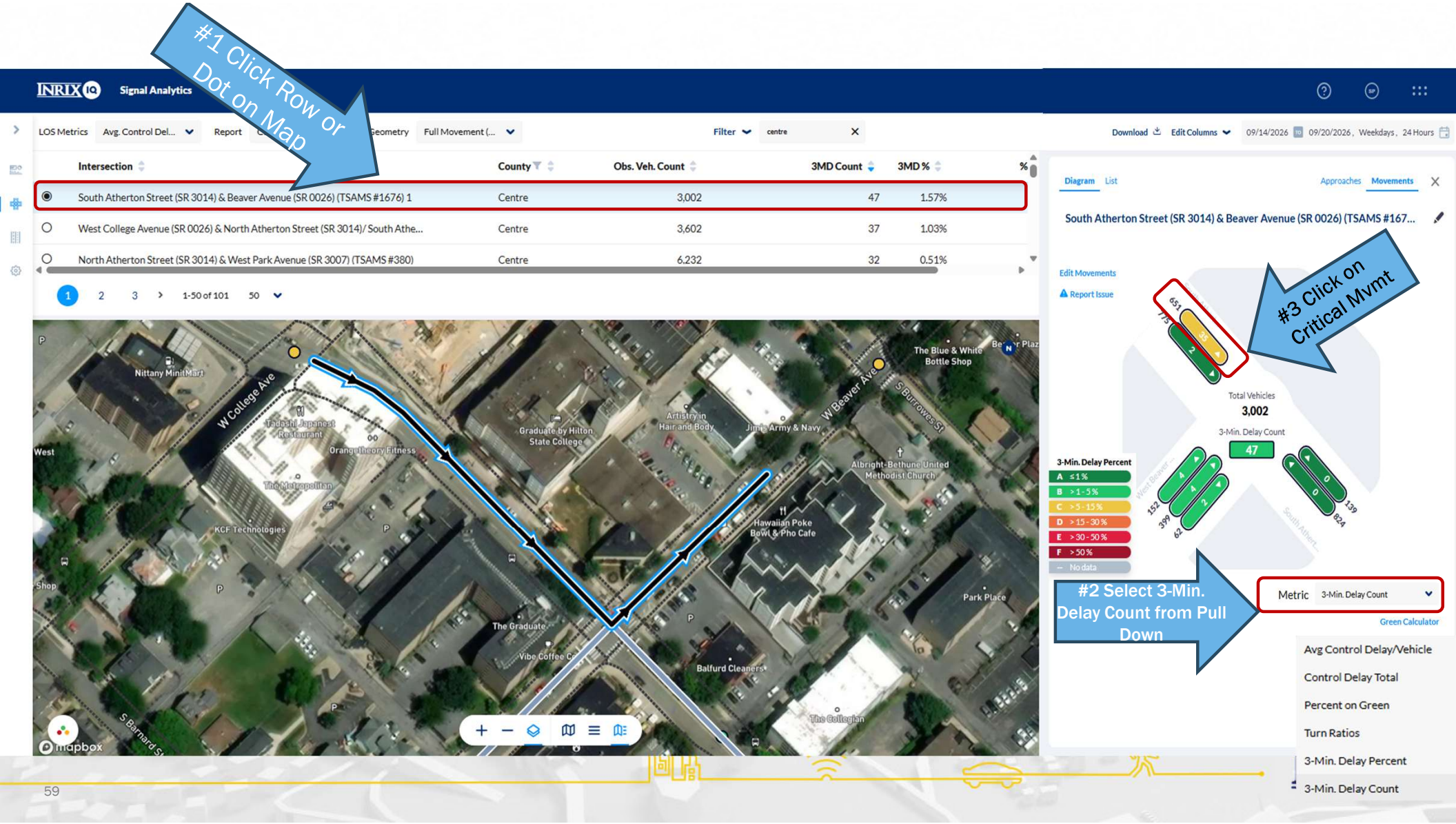
How to Rank Order Your Intersections

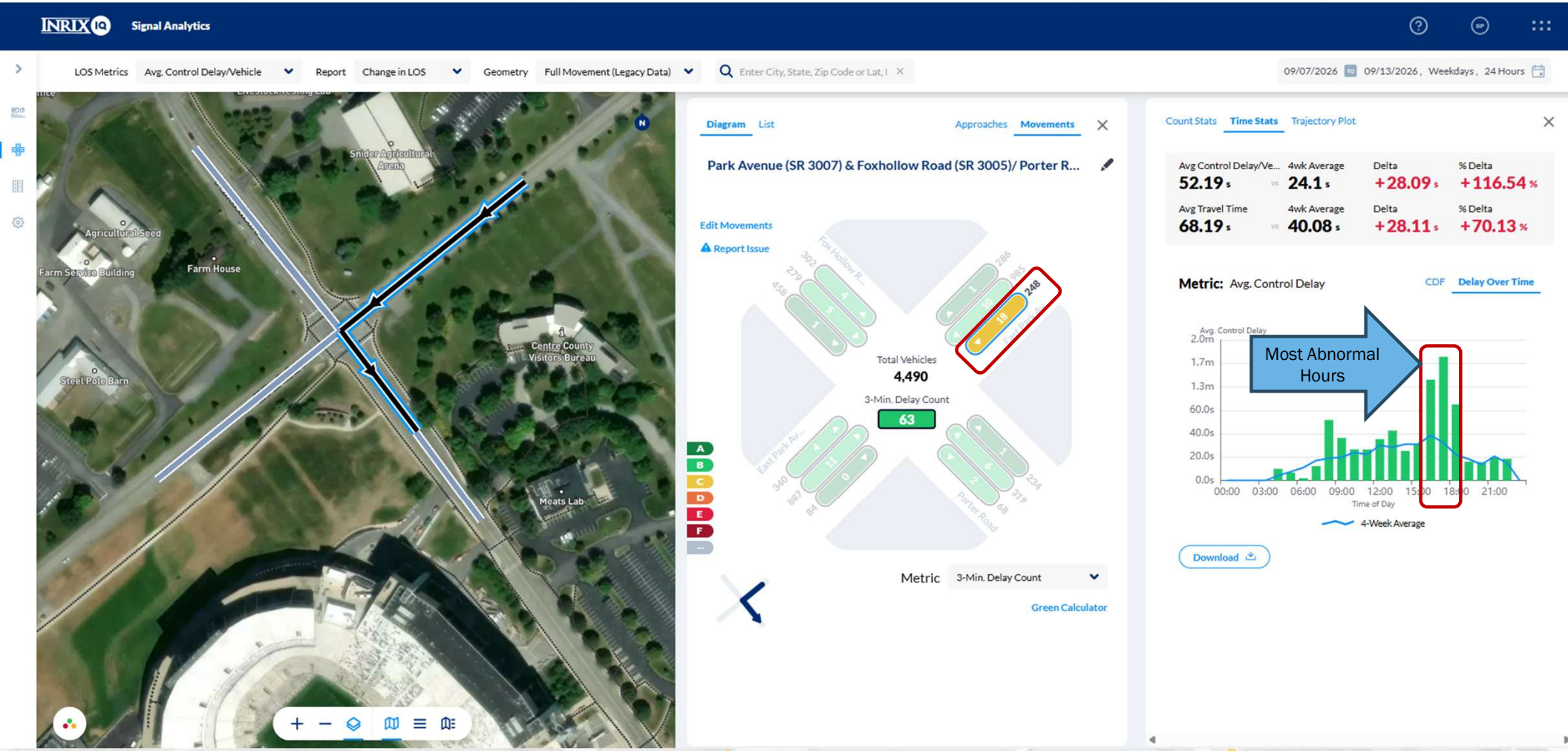
Weekdays, September 14-18, 2026 – 24 Hours – By 3MD Count (Split Failure Count)



Intersection	District/Region	County			3MD Count	3MD %	% Chg. in Delay
South Atherton Street (SR 3014) & Beaver Avenue (SR 0026) (TSAMS #1676) 1	2	Centre			47	1.57%	-3.97%
West College Avenue (SR 0026) & North Atherton Street (SR 3014)/ South Athe...	2	Centre	3,602	34.4	37	1.03%	+5.12%
North Atherton Street (SR 3014) & West Park Avenue (SR 3007) (TSAMS #380)	2	Centre	6,232	29.8s	32	0.51%	+3.30%
West College Avenue (SR 0026) & East College Avenue (SR 0026)/ South Allen S...	2	Centre	1,559	36.2s	20	1.28%	-6.22%
West Beaver Avenue (SR 0026) & South Fraser Street (TSAMS #1674)	2	Centre	1,244	28.6s	11	0.88%	-3.95%
West Beaver Avenue (SR 0026) & East Beaver Avenue (SR 0026)/ South Allen St...	2	Centre	1,156	42.9s	10	0.87%	+1.58%
North Atherton Street (SR 3014) & Blue Course Drive (T-989)/ Clinton Avenue (...	2	Centre	4,786	22.4s	9	0.19%	-0.67%
West College Avenue (SR 0026) & South Fraser Street (TSAMS #1671)	2	Centre	1,481	40.2s	8	0.54%	-12.19%
East College Avenue (SR 0026) & South Pugh Street (TSAMS #40)	2	Centre	1,092	36.5s	8	0.73%	-6.20%
North Atherton Street (SR 3014) & Macadam Approach To Bus Depot (TSAMS #...	2	Centre	3,181	11.5s	7	0.22%	-19.75%
East Beaver Avenue (SR 0026) & South Pugh Street (TSAMS #370)	2	Centre	1,061	39.8s	6	0.57%	+3.97%
University Drive (SR 3022) & Curtin Road (TSAMS #335)	2	Centre	2,180	26.1s	6	0.28%	+0.56%
Waddle Rd (T-528) & Colonnade Blvd (T-530) (TSAMS #10352)	2	Centre	3,329	27.5s	6	0.18%	-2.91%
West College Avenue (SR 0026) & Blue Course Drive (T-989) (TSAMS #340)	2	Centre	3,071	35.3s	5	0.16%	+4.80%

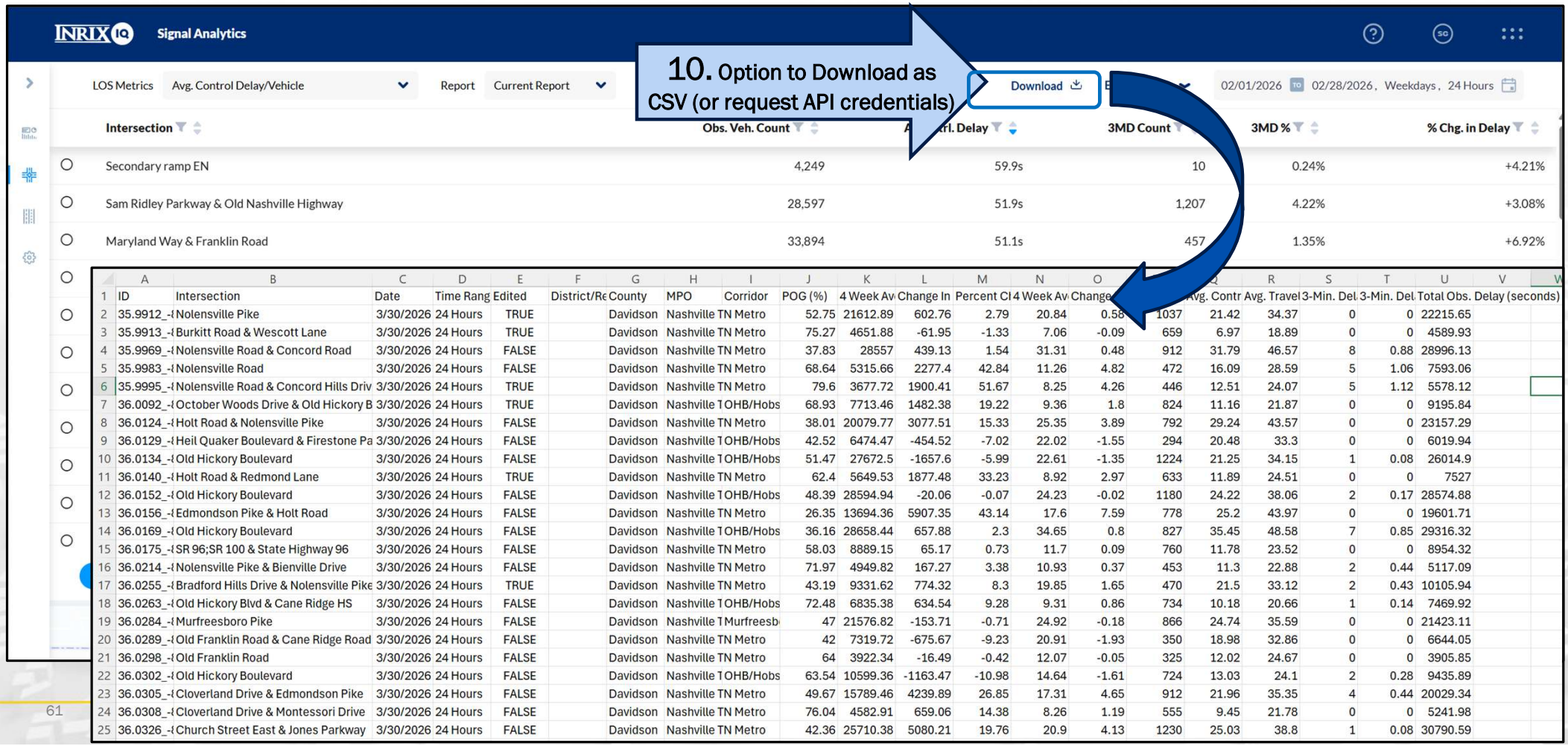
1 2 3 › 1-50 of 101 50


#1 Click Row or Dot on Map
INRIX IQ
Signal Analytics
LOS Metrics
Avg. Control Del...
Report
Geometry
Full Movement (...
Filter
centre
Download
Edit Columns
09/14/2026
09/20/2026, Weekdays, 24 Hours
Intersection
County
Obs. Veh. Count
3MD Count
3MD %
South Atherton Street (SR 3014) & Beaver Avenue (SR 0026) (TSAMS #1676) 1
Centre
3,002
47
1.57%
West College Avenue (SR 0026) & North Atherton Street (SR 3014)/ South Athe...
Centre
3,602
37
1.03%
North Atherton Street (SR 3014) & West Park Avenue (SR 3007) (TSAMS #380)
Centre
6,232
32
0.51%
1-50 of 101
50
Nittany MiniMart
W College Ave
Tadashi Japanese Restaurant
Orangetheory Fitness
The Metropolitan
KCF Technologies
Graduate by Hilton State College
Artistry in Hair and Body
Jimmy Army & Navy
W Beaver Ave
S Burrowes St
The Blue & White Bottle Shop
Albright-Bethune United Methodist Church
Hawaiian Poke Bowl & Pho Cafe
Park Place
The Graduate
Balfurd Cleaners
The Collegian
S Barnard St
mapbox
Diagram
List
Approaches
Movements
South Atherton Street (SR 3014) & Beaver Avenue (SR 0026) (TSAMS #167...
Edit Movements
Report Issue
#3 Click on Critical Mvmt
Total Vehicles
3,002
3-Min. Delay Count
47
3-Min. Delay Percent
A ≤1%
B >1-5%
C >5-15%
D >15-30%
E >30-50%
F >50%
No data
#2 Select 3-Min. Delay Count from Pull Down
Metric
3-Min. Delay Count
Green Calculator
Avg Control Delay/Vehicle
Control Delay Total
Percent on Green
Turn Ratios
3-Min. Delay Percent
3-Min. Delay Count


INRIX IQ
Signal Analytics
LOS Metrics
Avg. Control Delay/Vehicle
Report
Change in LOS
Geometry
Full Movement (Legacy Data)
Enter City, State, Zip Code or Lat, l
09/07/2026
09/13/2026, Weekdays, 24 Hours
Snider Agricultural Arena
Agricultural Seed
Farm Service Building
Farm House
Steel Pole Barn
Centre County Visitors Bureau
Meats Lab
Diagram
List
Approaches
Movements
Park Avenue (SR 3007) & Foxhollow Road (SR 3005)/ Porter R...
Edit Movements
Report Issue
Total Vehicles
4,490
3-Min. Delay Count
63
Metric
3-Min. Delay Count
Green Calculator
Count Stats
Time Stats
Trajectory Plot
Avg Control Delay/Ve...
52.19 s
4wk Average
24.1 s
Delta
+28.09 s
% Delta
+116.54 %
Avg Travel Time
68.19 s
4wk Average
40.08 s
Delta
+28.11 s
% Delta
+70.13 %
Metric: Avg. Control Delay
CDF
Delay Over Time
Most Abnormal Hours
Avg. Control Delay
2.0m
1.7m
1.3m
60.0s
40.0s
20.0s
0.0s
00:00
03:00
06:00
09:00
12:00
15:00
18:00
21:00
Time of Day
4-Week Average
Download

Option to Download Results

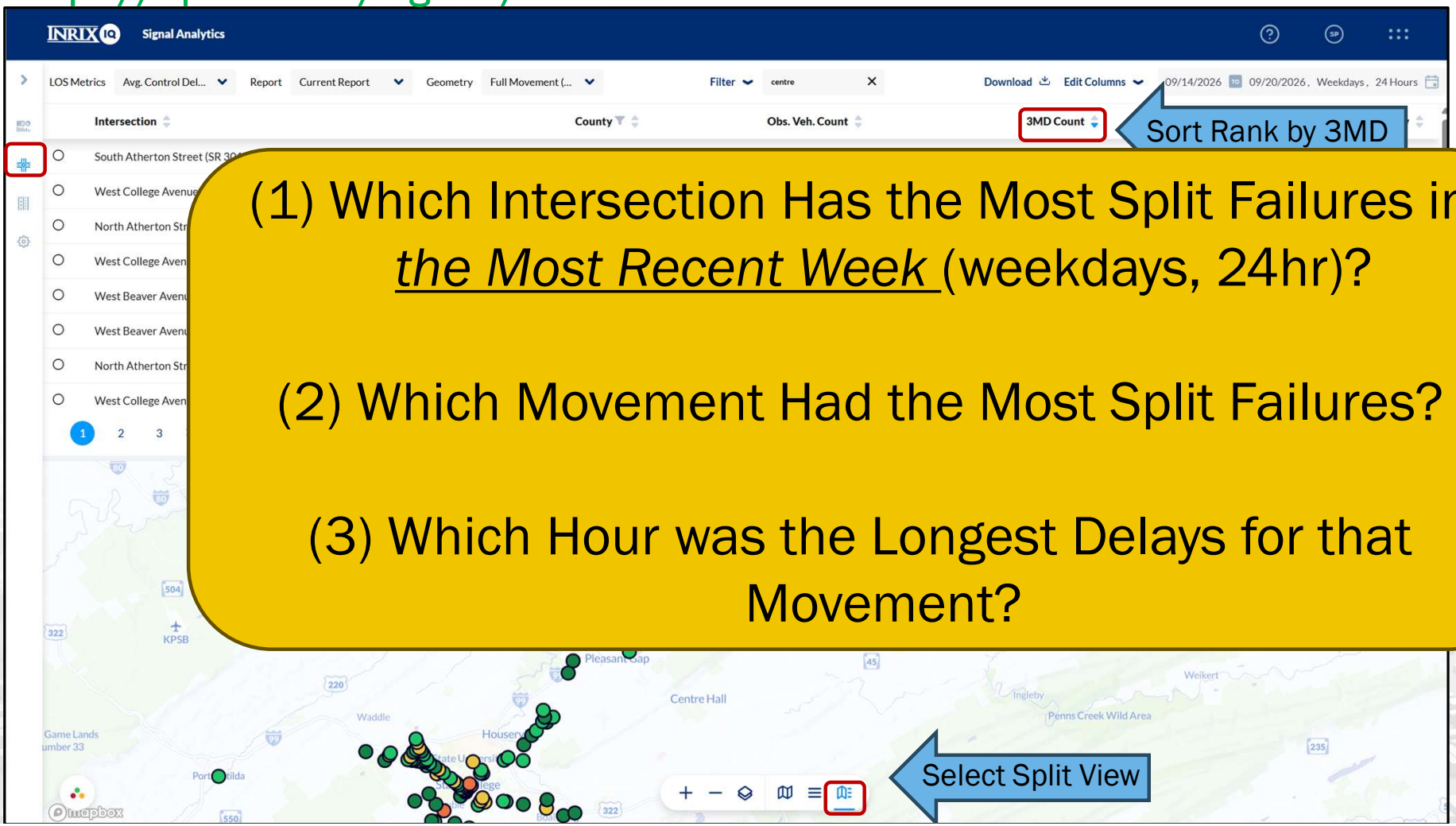
Weekdays, February 2026 – 24 Hours



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	ID	Intersection	Date	Time Rang	Edited	District/Re	County	MPO	Corridor	POG (%)	4 Week Av	Change In	Percent Cl	4 Week Av	Change		Avg. Contr	Avg. Travel	3-Min. Del	3-Min. Del	Total Obs.	Delay (seconds)
2	35.9912_-(	Nolensville Pike	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TN Metro	52.75	21612.89	602.76	2.79	20.84	0.58	1037	21.42	34.37	0	0	22215.65	
3	35.9913_-(	Burkitt Road & Wescott Lane	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TN Metro	75.27	4651.88	-61.95	-1.33	7.06	-0.09	659	6.97	18.89	0	0	4589.93	
4	35.9969_-(	Nolensville Road & Concord Road	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	37.83	28557	439.13	1.54	31.31	0.48	912	31.79	46.57	8	0.88	28996.13	
5	35.9983_-(	Nolensville Road	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	68.64	5315.66	2277.4	42.84	11.26	4.82	472	16.09	28.59	5	1.06	7593.06	
6	35.9995_-(	Nolensville Road & Concord Hills Driv	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TN Metro	79.6	3677.72	1900.41	51.67	8.25	4.26	446	12.51	24.07	5	1.12	5578.12	
7	36.0092_-(	October Woods Drive & Old Hickory B	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TOHB/Hobs	68.93	7713.46	1482.38	19.22	9.36	1.8	824	11.16	21.87	0	0	9195.84	
8	36.0124_-(	Holt Road & Nolensville Pike	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	38.01	20079.77	3077.51	15.33	25.35	3.89	792	29.24	43.57	0	0	23157.29	
9	36.0129_-(	Heil Quaker Boulevard & Firestone Pa	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	42.52	6474.47	-454.52	-7.02	22.02	-1.55	294	20.48	33.3	0	0	6019.94	
10	36.0134_-(	Old Hickory Boulevard	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	51.47	27672.5	-1657.6	-5.99	22.61	-1.35	1224	21.25	34.15	1	0.08	26014.9	
11	36.0140_-(	Holt Road & Redmond Lane	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TN Metro	62.4	5649.53	1877.48	33.23	8.92	2.97	633	11.89	24.51	0	0	7527	
12	36.0152_-(	Old Hickory Boulevard	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	48.39	28594.94	-20.06	-0.07	24.23	-0.02	1180	24.22	38.06	2	0.17	28574.88	
13	36.0156_-(	Edmondson Pike & Holt Road	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	26.35	13694.36	5907.35	43.14	17.6	7.59	778	25.2	43.97	0	0	19601.71	
14	36.0169_-(	Old Hickory Boulevard	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	36.16	28658.44	657.88	2.3	34.65	0.8	827	35.45	48.58	7	0.85	29316.32	
15	36.0175_-(	SR 96;SR 100 & State Highway 96	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	58.03	8889.15	65.17	0.73	11.7	0.09	760	11.78	23.52	0	0	8954.32	
16	36.0214_-(	Nolensville Pike & Bienville Drive	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	71.97	4949.82	167.27	3.38	10.93	0.37	453	11.3	22.88	2	0.44	5117.09	
17	36.0255_-(	Bradford Hills Drive & Nolensville Pike	3/30/2026	24 Hours	TRUE		Davidson	Nashville	TN Metro	43.19	9331.62	774.32	8.3	19.85	1.65	470	21.5	33.12	2	0.43	10105.94	
18	36.0263_-(	Old Hickory Blvd & Cane Ridge HS	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	72.48	6835.38	634.54	9.28	9.31	0.86	734	10.18	20.66	1	0.14	7469.92	
19	36.0284_-(	Murfreesboro Pike	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TMurfreesb	47	21576.82	-153.71	-0.71	24.92	-0.18	866	24.74	35.59	0	0	21423.11	
20	36.0289_-(	Old Franklin Road & Cane Ridge Road	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	42	7319.72	-675.67	-9.23	20.91	-1.93	350	18.98	32.86	0	0	6644.05	
21	36.0298_-(	Old Franklin Road	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	64	3922.34	-16.49	-0.42	12.07	-0.05	325	12.02	24.67	0	0	3905.85	
22	36.0302_-(	Old Hickory Boulevard	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TOHB/Hobs	63.54	10599.36	-1163.47	-10.98	14.64	-1.61	724	13.03	24.1	2	0.28	9435.89	
23	36.0305_-(	Cloverland Drive & Edmondson Pike	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	49.67	15789.46	4239.89	26.85	17.31	4.65	912	21.96	35.35	4	0.44	20029.34	
24	36.0308_-(	Cloverland Drive & Montessori Drive	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	76.04	4582.91	659.06	14.38	8.26	1.19	555	9.45	21.78	0	0	5241.98	
25	36.0326_-(	Church Street East & Jones Parkway	3/30/2026	24 Hours	FALSE		Davidson	Nashville	TN Metro	42.36	25710.38	5080.21	19.76	20.9	4.13	1230	25.03	38.8	1	0.08	30790.59	

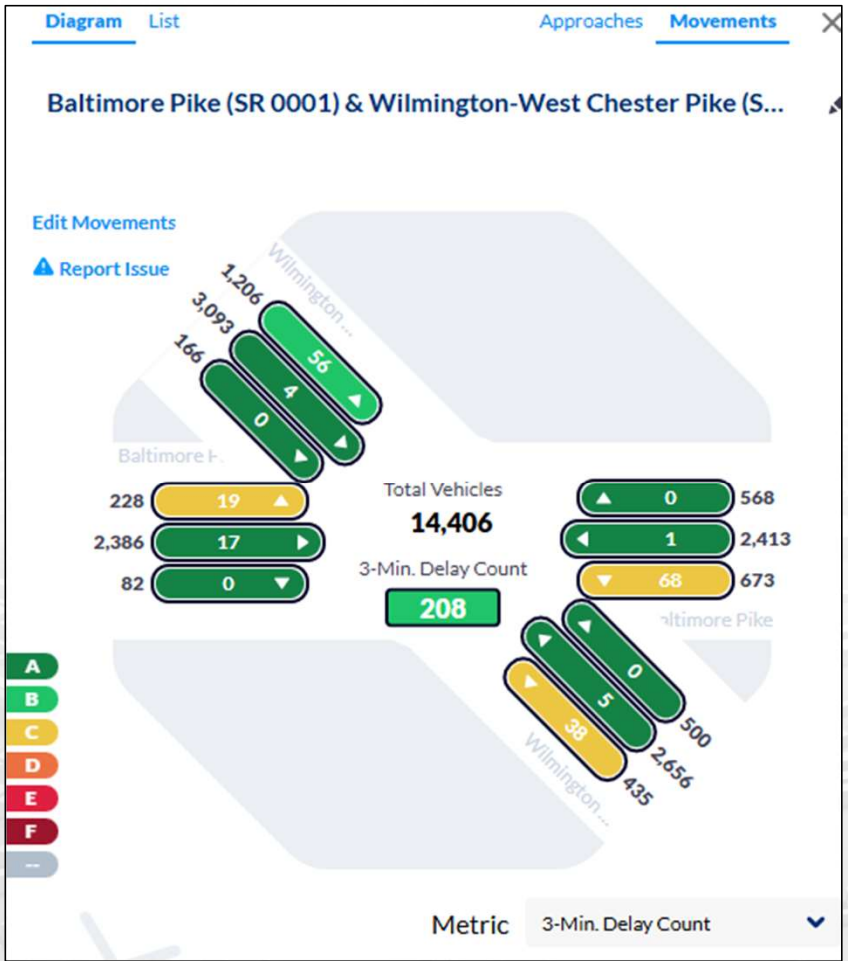
Exercise #2 – Navigate to Intersection Module & Split Mode

https://iq.inrix.com/signals/intersections

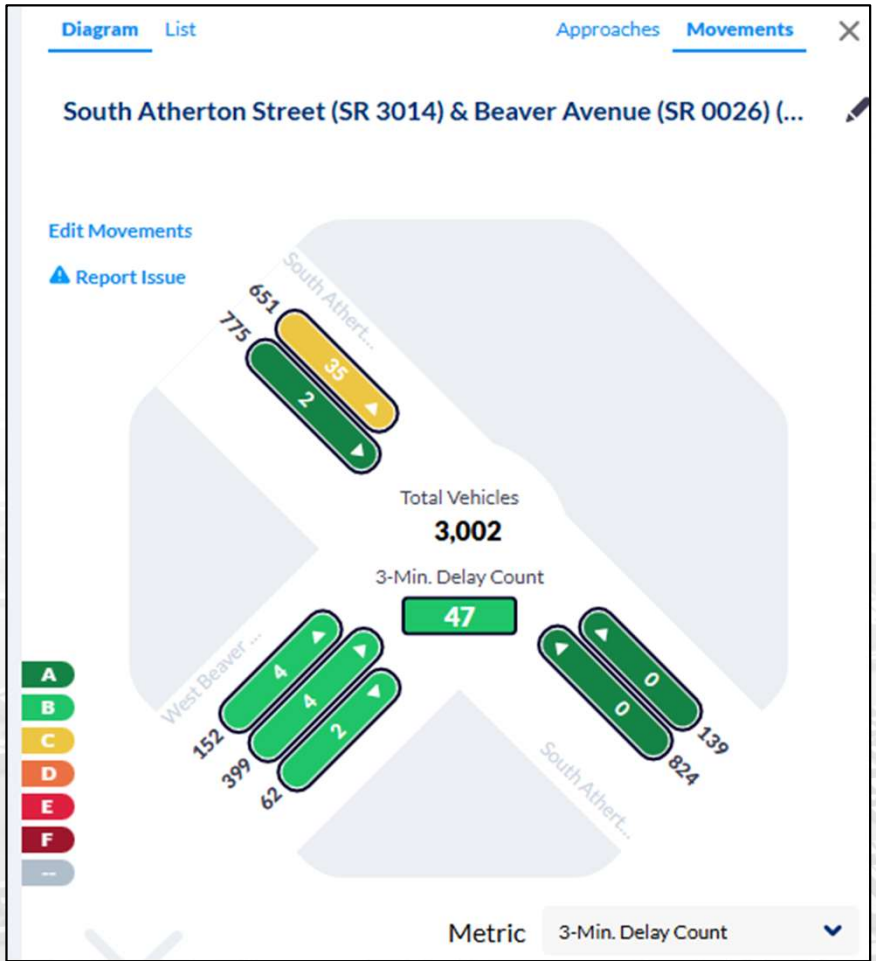


Balanced vs. Unbalanced Split Failures

BALANCED



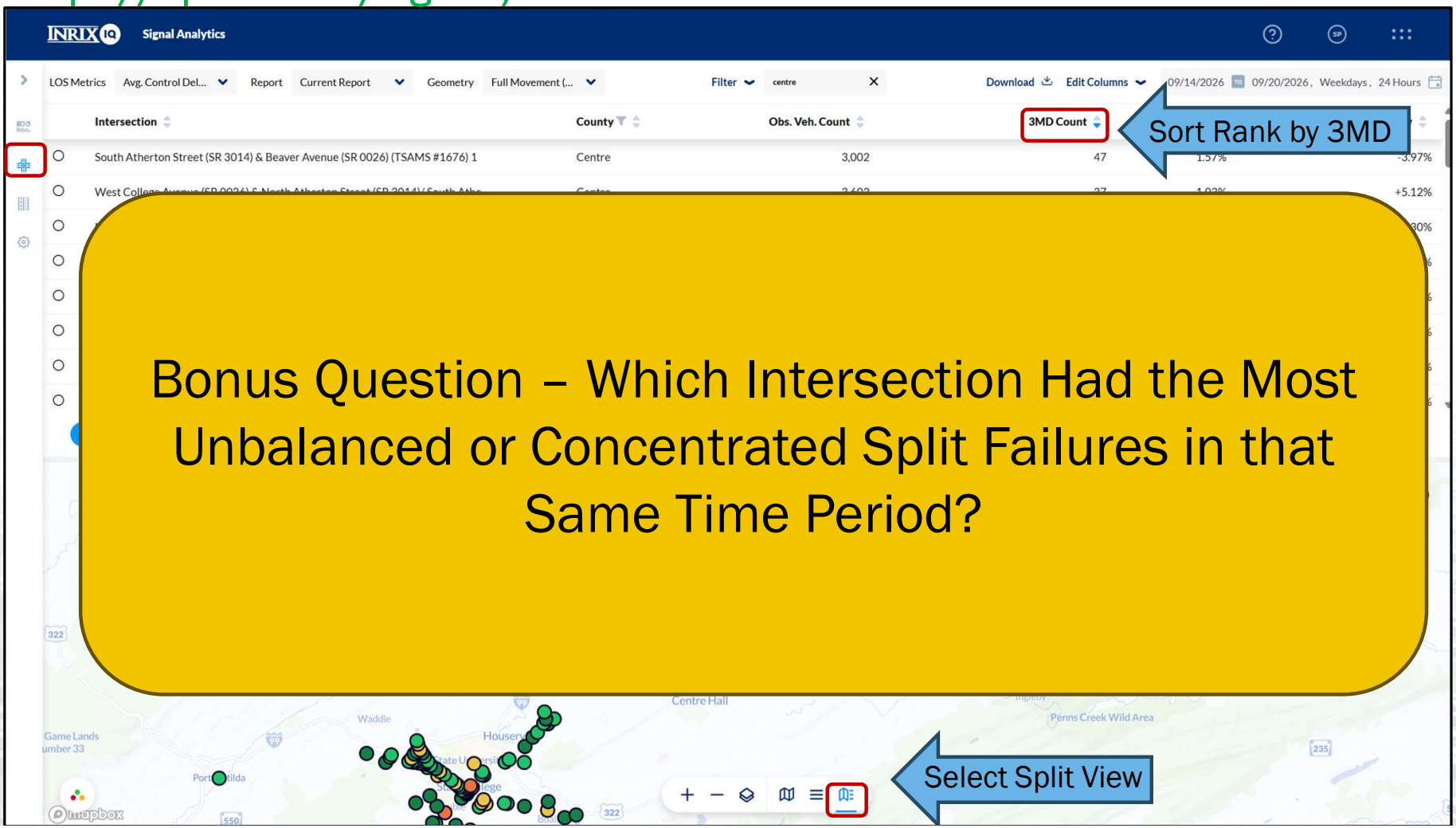
UNBALANCED



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Exercise #2 – Navigate to Intersection Module & Split Mode

https://iq.inrix.com/signals/intersections

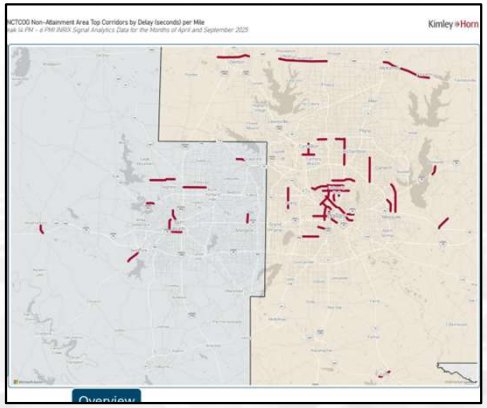


Regional Prioritization Examples with INRIX Signal Analytics

TRAFFIC SIGNAL RETIMING CORRIDOR SELECTION PROCESS



Traffic Signal Retiming Corridor Selection



pennsylvania
DEPARTMENT OF TRANSPORTATION

Year 11 (2026)

Green Light – Go

Pennsylvania's Municipal Signal Partnership Grant Program

Intersection	Avg. Control Delay (seconds)	% Arrival on Green (% No Stop)	3-Min. Delay % (Split Fail %)
Intersection 1	85	6	10.20%
Intersection 2	77	10	4.08%
Intersection 3	71	18	5.26%
Intersection 4	71	10	9.68%
Intersection 5	69	40	6.40%
Intersection 6	67	18	4.06%
Intersection 7	66	28	11.70%
Intersection 8	66	11	2.52%
Intersection 9	66	5	11.00%
Intersection 10	65	17	5.32%
Intersection 11	62	17	2.38%
Intersection 12	60	31	2.18%
Intersection 13	59	24	2.69%
Intersection 14	59	16	7.03%
Intersection 15	58	30	0.52%

Example - Corridors Ranked by Delay Per Mile & LOTTR Reliability

$$\text{Delay Per Mile} = \frac{\text{Avg Travel Time – Free Flow TT}}{\text{Length (Miles)}}$$

$$\text{Level of Travel Time Reliability (LOTTR)} = \frac{\text{80th \%ile Travel Time (Worst Day of Week)}}{\text{50th \%ile Travel Time (Median TT)}}$$

Name	Delay per Mile (seconds)	Travel Time Reliability (LOTTR = 80% TT to 50% TT)	Length (miles)	INRIX Sample - Observed Veh. Trips end to end
Corridor 1	83	1.29	1.52	3759
Corridor 2	77	1.55	1.25	8936
Corridor 3	72	1.29	1.52	4766
Corridor 4	64	1.48	1.71	4317
Corridor 5	59	1.35	1.26	8571
Corridor 6	49	1.29	2.57	4847
Corridor 7	48	1.23	1.99	468
Corridor 8	47	1.22	1.31	763
Corridor 9	40	1.35	3.53	8933
Corridor 10	38	1.25	2.05	953
Corridor 11	38	1.25	1.89	272
Corridor 12	38	1.28	2.98	7708
Corridor 13	38	1.34	4.26	1760
Corridor 14	36	1.23	2.72	6507
Corridor 15	35	1.35	7.35	430
Corridor 16	35	1.29	1.60	9087
Corridor 17	35	1.21	1.72	1596
Corridor 18	35	1.27	5.03	1807
Corridor 19	34	1.23	3.39	459
Corridor 20	34	1.21	1.28	2144
Corridor 21	34	1.20	6.15	311

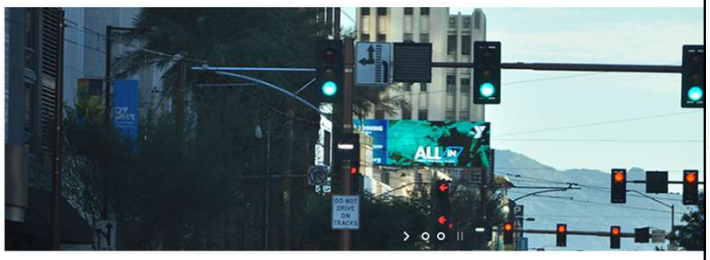
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MARICOPA ASSOCIATION of GOVERNMENTS

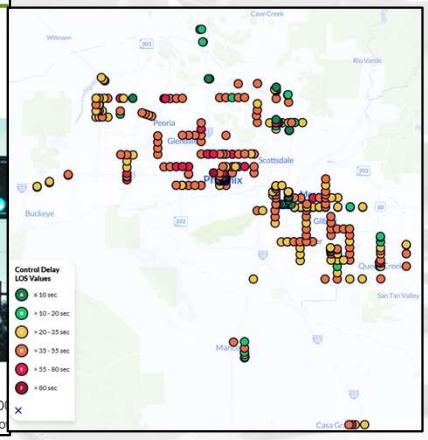
Programs Committees News &

Programs | Transportation | TSMO-ITS | Traffic Signal Optimization Program

Traffic Signal Optimization Program



Since it began in 2004, the Traffic Signal Optimization Program (TSOP) has completed 112 projects that involved over 1,10
the region. Projects launched through this program provide technical assistance to member agencies. This helps to impro



Audience Questions as Heading into Break

Break for 10 minutes

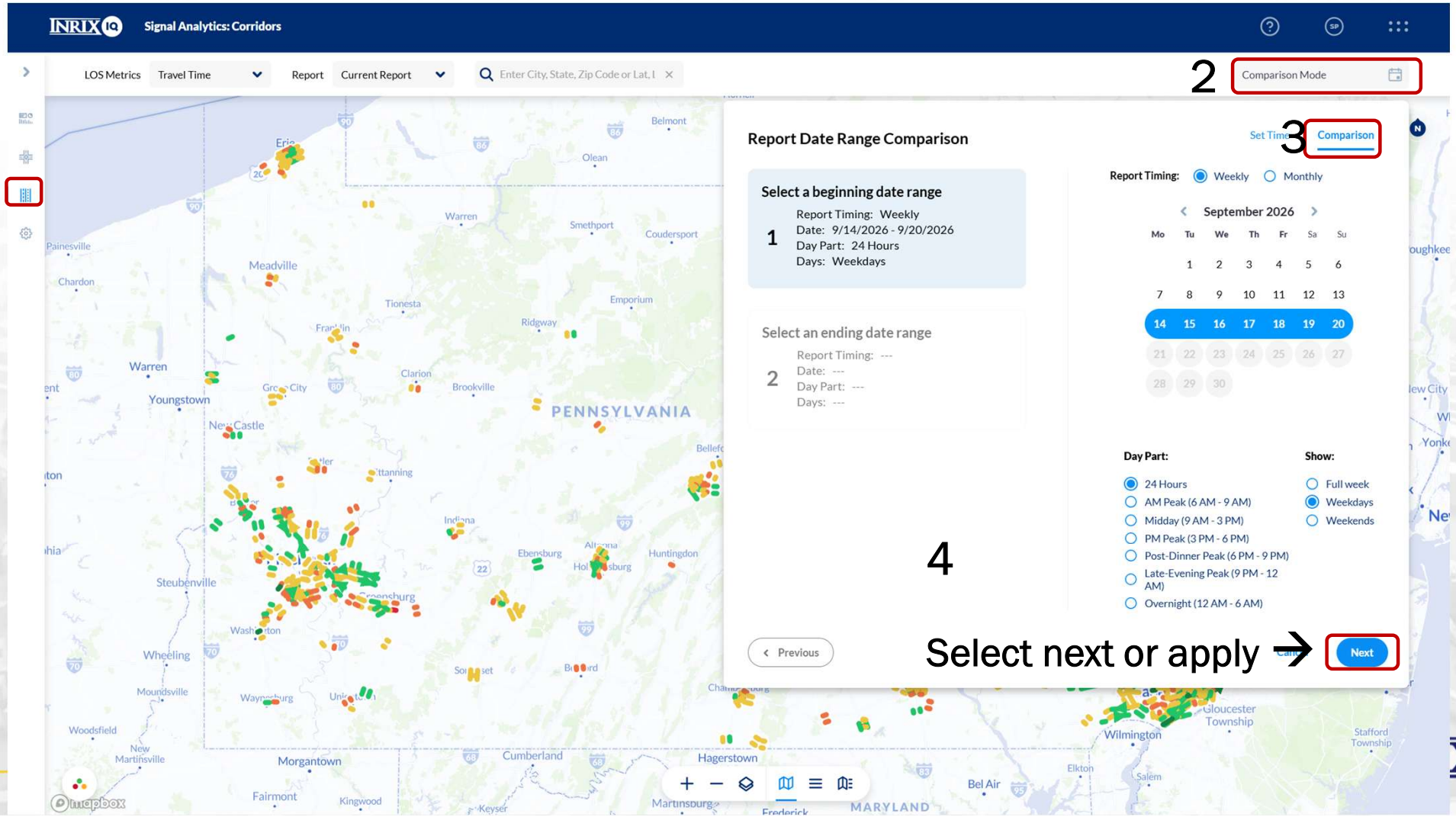
- Most memorable thing you've seen (or done) at a traffic signal?
- Most important improvement needed at PennDOT traffic signals?
- What information would help you keep traffic signals operating better?



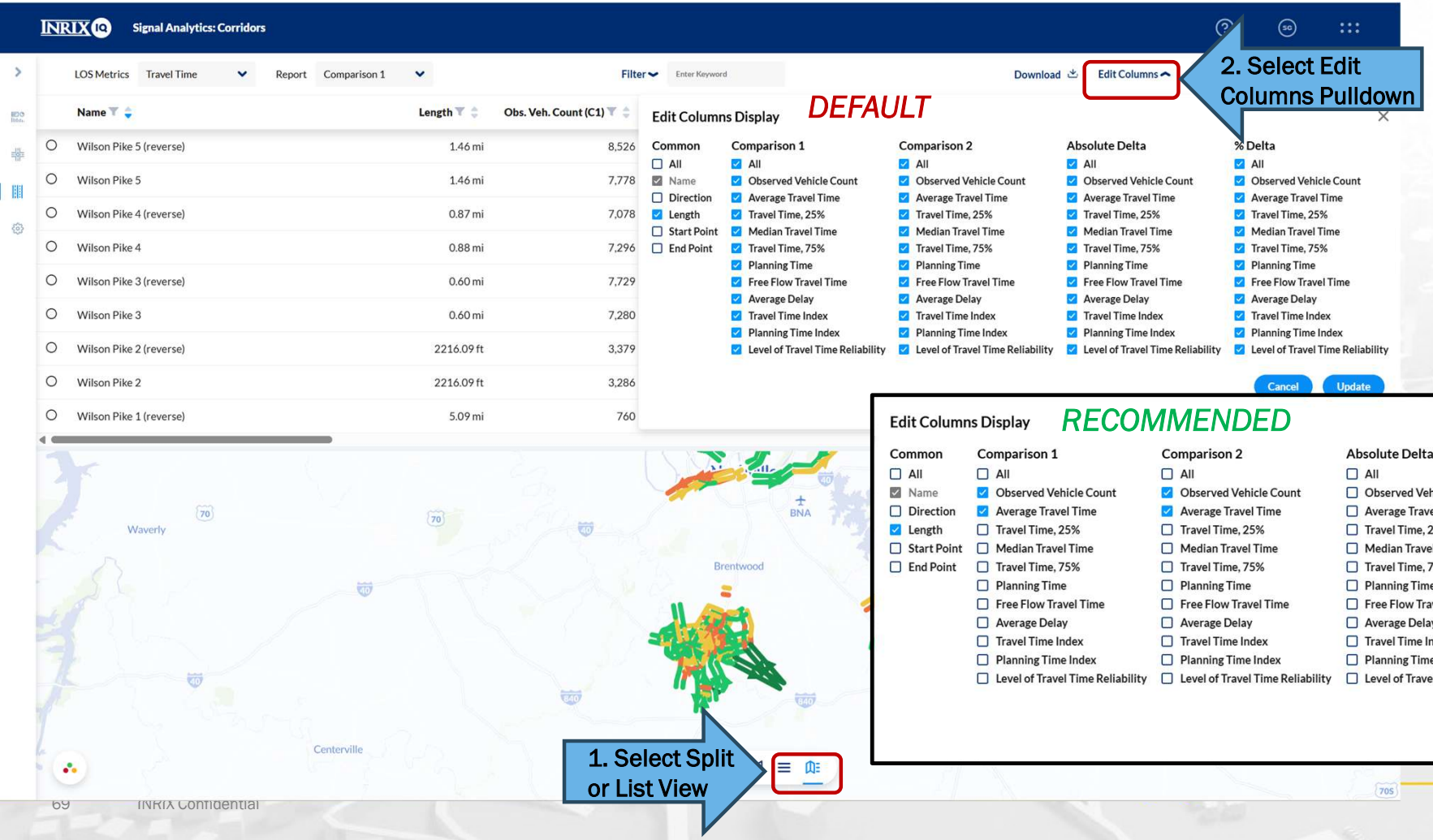
BEFORE/AFTER EVALUATION –
DID MY CHANGES WORK?

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Before & After – Comparison Feature in Corridors

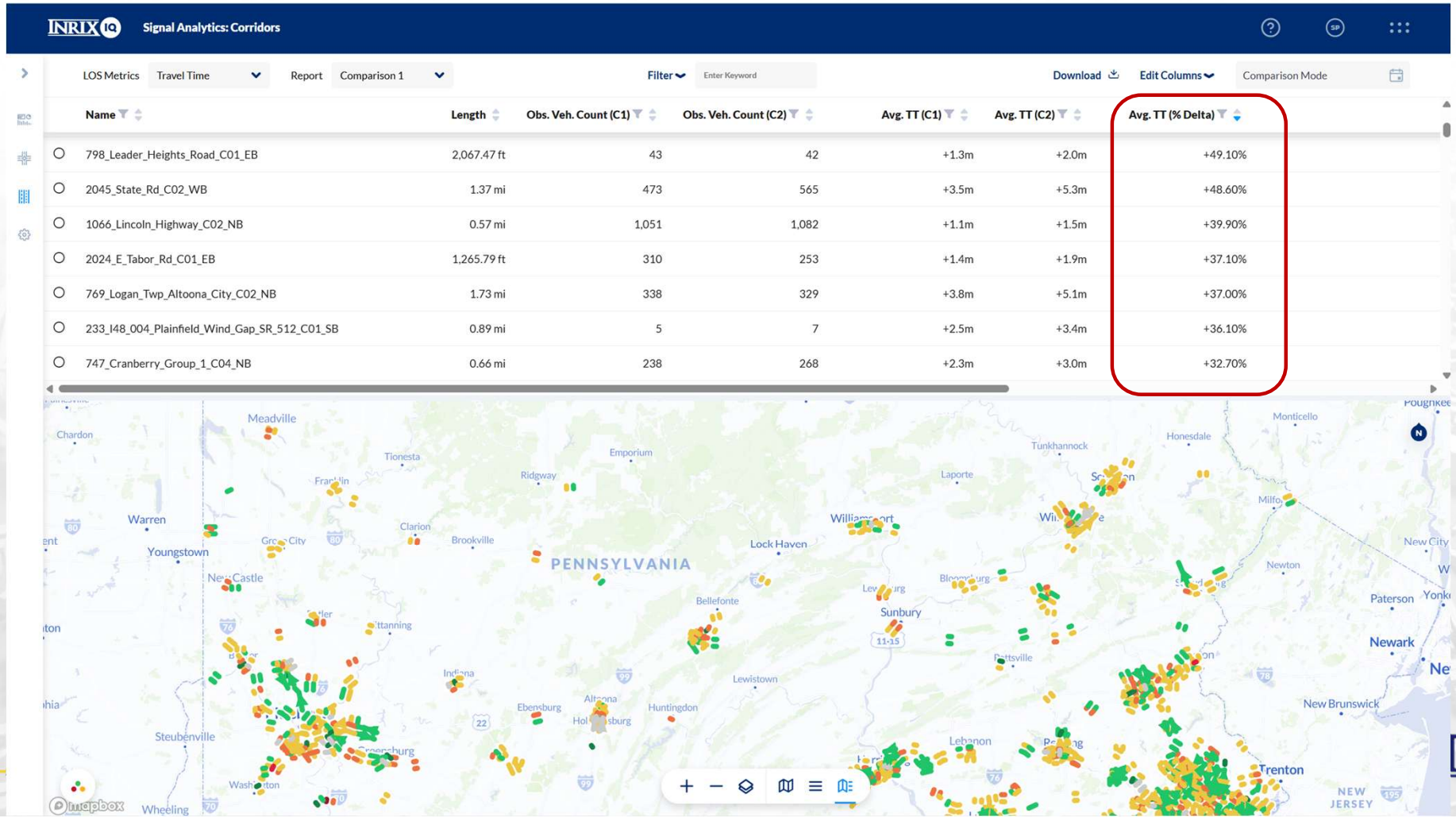


Configure Columns – Corridor Comparison Mode



High Increase in Travel Time

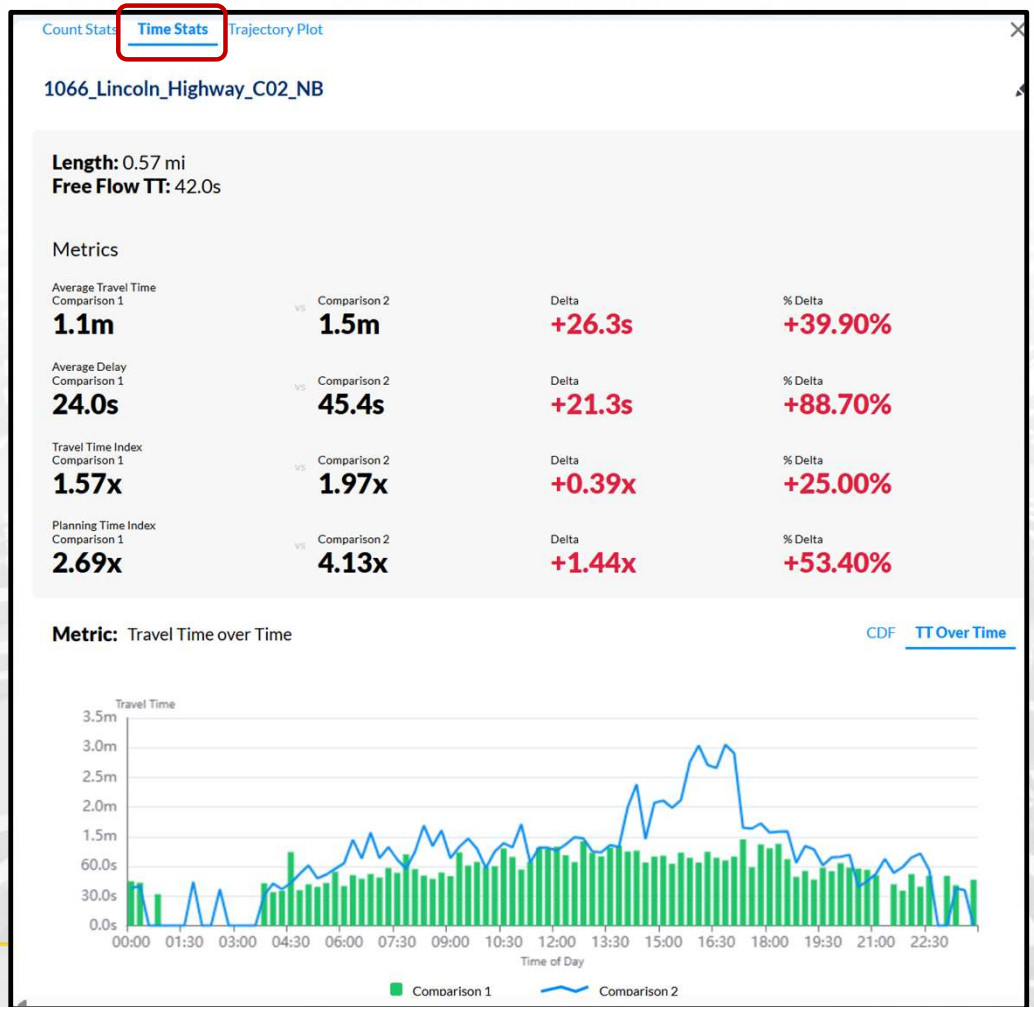
Weekdays week of Sept 9-13, 2026 (C1) versus Weekdays week of Sept 14-18, 2026 (C2) (Week v. Week)



High Increase in Travel Time

Weekdays week of Sept 9-13, 2026 (C1) versus Weekdays week of Sept 14-18, 2026 (C2) (Week v. Week)





Option to Add/Edit Corridors

How to Add Corridors



How To: Add Corridors Within Signal Analytics

Brief Video Summary: Link

Summary

Signal Analytics Corridors is a scalable approach to setup and monitor user defined corridors. Travel Time, Speed, and Reliability Metrics are based on complete start (green mark) to end (red mark) trips. Once the corridors are defined, weekly and monthly reports will be generated based on the user defined start and end point.

General Guidelines

- Make corridors long enough to be meaningful, but not so long that there are little to no trips making it all the way from start to finish.
- Generally, corridor lengths between ½ mile and 3 miles are ideal and avoid spanning major traffic turning locations, like interstate ramps.
- Corridors need to start and end at or near licensed signals in the Signal Analytics tool.
- Multiple corridors can be drawn upon one another, so it's ok to overlap. We recommend no more than two corridors across the same segment.
- Corridors do NOT have to be linear. You are free to pick any start and end point, just make sure there is meaningful travel between start and end points.

Recommendations

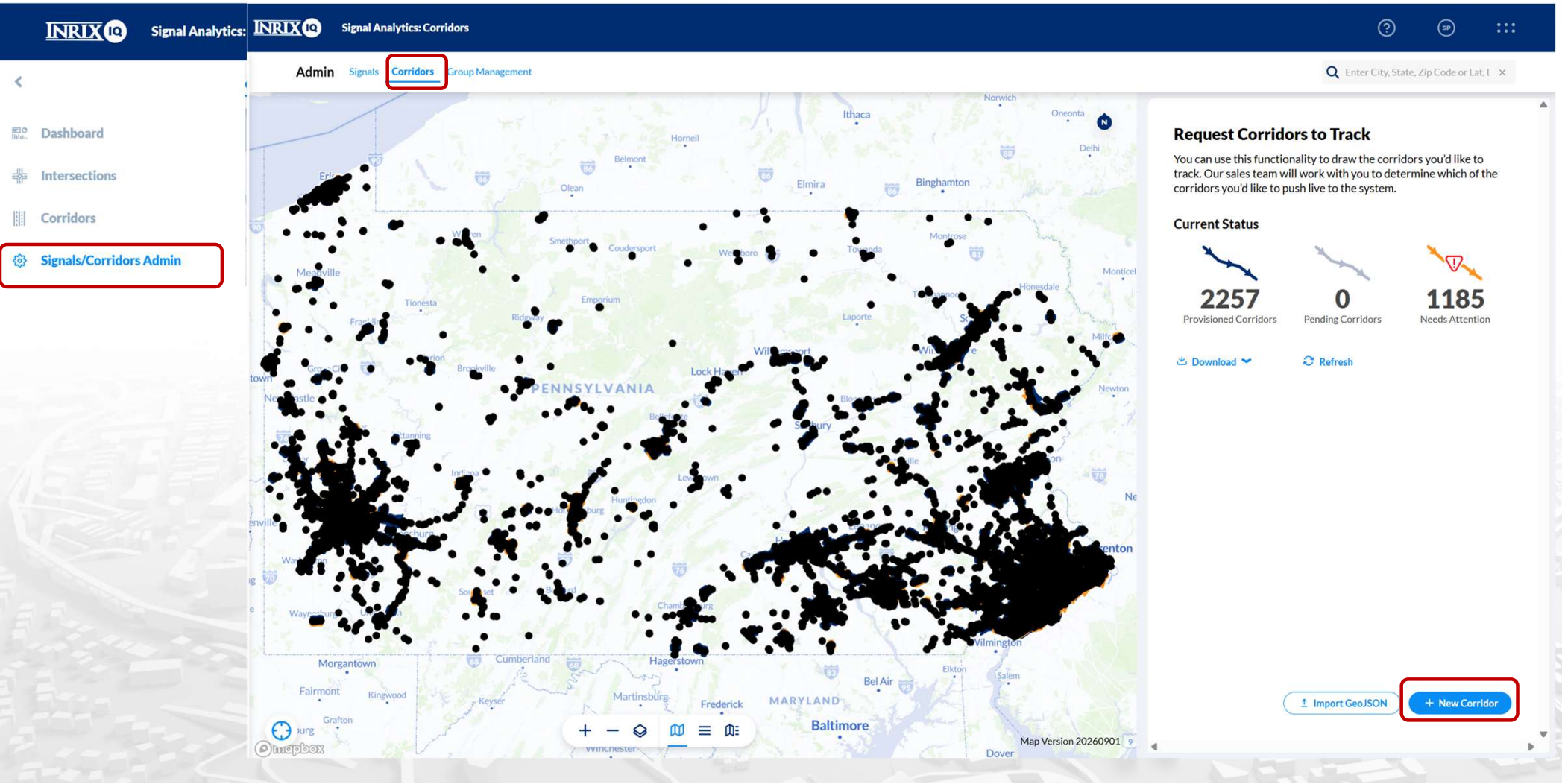
- **Naming –** Naming convention is left to the agencies, but we recommend one of the following:
  - NB Elm Street – Main Street to Michigan Ave
  - Corridor # 1789 – Elm Street
  - Elm Street – Main to Michigan (Inventory Number)
- **Reverse Corridors** – We automatically create the opposite direction of a corridor.
  - Check the starting and ending points of both the original and reverse corridor to ensure they are correct.
  - Be sure to rename the reverse direction corridor (by default "(reverse)" will be added to the end of the original corridor name)
- **Start & End Point Location** - Maximize number of trips captured in your corridor metrics by:
  - Starting downstream of a major intersection (ideal ~100' downstream of crosswalk)
  - Ending upstream of a major intersection (either at stop bar [shown below] to capture last signal delay or beyond standing queue length to avoid last signal delay)





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https://iq.inrix.com/signals/self-serve/corridors



Examples of Before/After Applications of INRIX Signal Analytics

Austin Mobility Report

https://www.austintexas.gov/amd





NATIONAL

Congestion pricing begins in NYC in a high stakes test for the model's U.S. viability

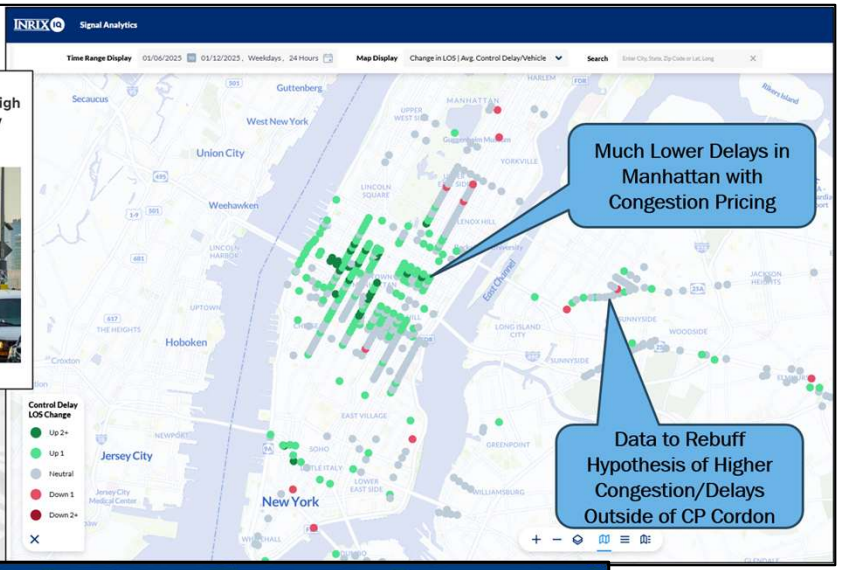
JANUARY 5, 2025 · 10:39 AM ET

By Robbie Griffiths



Traffic enters lower Manhattan after crossing the Brooklyn Bridge, Feb. 8, 2024, in New York.

NEW YORK CITY DOT

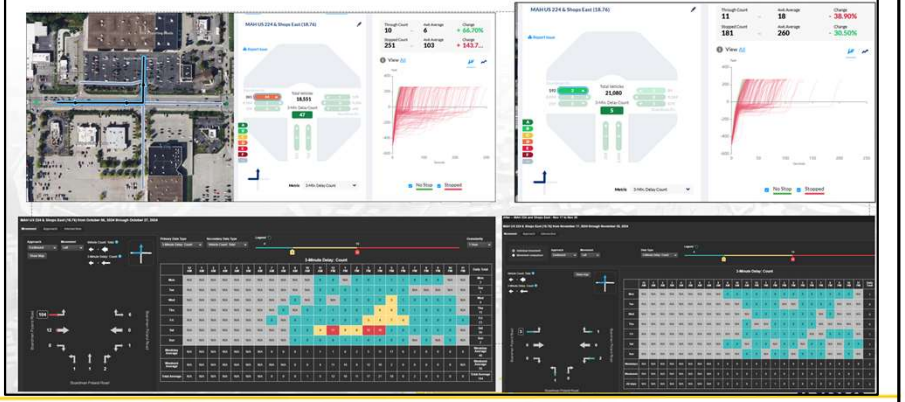


INRIX SPMs Before and After

Department of Transportation

BEFORE

AFTER



EXAMPLE - SIGNAL RETIMING

Adjusted Signal Programming

– Implemented signal timing adjustments focused on improving southbound PM peak progression.





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Best Practice Vision

Daily

- **INRIX Email Summary** review each morning (40% or more on daily, 20% or more on weekly)

Weekly

- **RITIS Late Night Report** – find broken detection proactively
- **Sort by highest split failures** (3MD events in intersection module, split view) –address if easy retiming fix
- **Sort by % change in delay** (intersection module, split view) – spot unusual increases or decreases, investigate

Complaints

- **Investigate** corridor, intersection, movement in Signal Analytics.
  - Is location abnormal performing? Validity to complaint?
  - Use to measure impact to any changes… delay reduces, arrivals on green go up, split failures (3MD) go down?

Project Evaluation

- *Before*, **assess existing conditions**, relative performance to other signals/corridors
- *During and after project*, **assess intersection/corridor changes**… delay down, AOG up, 3MD down?