Committee Report

CONSENT CALENDAR

February 5, 2021

HOUSE OF REPRESENTATIVES

REPORT OF COMMITTEE

The Committee on Transportation to which was referred HB 423,

AN ACT establishing a commission to study the implementation of enhanced automation of traffic lights. Having considered the same, report the same with the recommendation that the bill OUGHT TO PASS.

Rep. Ted Gorski

FOR THE COMMITTEE

Original: House Clerk
Cc: Committee Bill File

COMMITTEE REPORT

Committee:	**Transportation**
Bill Number:	**HB 423**
Title:	**establishing a commission to study the implementation of enhanced automation of traffic lights.**
Date:	**February 5, 2021**
Consent Calendar:	**CONSENT**
Recommendation:	**OUGHT TO PASS**

STATEMENT OF INTENT

This bill amends RSA 236 (by inserting after section 8) to establish a commission to study the implementation of enhanced automation of lights. The members of this commission will include 3 members from House (appointed by the Speaker of the House), 3 members of the Senate (appointed by President of the Senate, 1 representative from the Department of Safety (appointed by Commissioner of Department of Safety), the Commissioner of the Department of Safety (or designate) and representative of the adaptive traffic signal control systems industry (appointed the Governor). The commission shall report their findings on or before November 1, 2021.

Vote 18-1.

Rep. Ted Gorski
FOR THE COMMITTEE

Original: House Clerk
Cc: Committee Bill File

CONSENT CALENDAR

Transportation

HB 423, establishing a commission to study the implementation of enhanced automation of traffic lights. **OUGHT TO PASS.**

Rep. Ted Gorski for Transportation. This bill amends RSA 236 (by inserting after section 8) to establish a commission to study the implementation of enhanced automation of lights. The members of this commission will include 3 members from House (appointed by the Speaker of the House), 3 members of the Senate (appointed by President of the Senate, 1 representative from the department of safety (appointed by Commissioner of Department of Safety), Commissioner of the Department of Safety (or designate) and representative of the adaptive traffic signal control systems industry (appointed the Governor). The commission shall report their findings on or before November 1, 2021.

Vote 18-1.

Original: House Clerk

Cc: Committee Bill File

Voting Sheets

HOUSE COMMITTEE ON TRANSPORTATION

EXECUTIVE SESSION on

BILL TITLE: 423 establishing a commission to study the implementation of enhanced automation of traffic lights

DATE: 2/15/21

LOB ROOM: 301-303

MOTION: (Please check one box)

X☐ OTP ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # _________ *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. Gagne_______________ Seconded by Rep. O'Hara__________________Vote: 18-1______

MOTION: (Please check one box)

☐ OTP ☐ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # _________ *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. ___________________ Seconded by Rep. _____________________ Vote: __________

MOTION: (Please check one box)

☐ OTP ☐ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # _________ *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. ___________________ Seconded by Rep. _____________________ Vote: __________

MOTION: (Please check one box)

☐ OTP ☐ OTP/A ☐ ITL ☐ Retain (1st year) ☐ Adoption of Amendment # _________ *(if offered)*

☐ Interim Study (2nd year)

Moved by Rep. ___________________ Seconded by Rep. _____________________ Vote: __________

CONSENT CALENDAR: __X___ YES _____ NO

Minority Report? ______ Yes ____X__ No If yes, author, Rep: ________________ Motion_______

Karel A. Crawford

Respectfully submitted: ____

Rep Karel Crawford, Clerk

STATE OF NEW HAMPSHIRE
OFFICE OF THE HOUSE CLERK

1/22/2021 10:08:26 AM
Roll Call Committee Registers Report

2021 SESSION

TRANSPORTATION COMMITTEE

Bill #: HB 423 **Motion:** OTP **AM #:** **Exec Session Date:** 2/5/21

Members	YEAS	Nays	NV
Walsh, Thomas C. Chairman	X		
Gagne, Larry G. Vice Chairman	X		
Crawford, Karel A. Clerk	X		
Smith, Steven D.	X		
Hill, Gregory G.	X		
Aron, Judy F.	X		
Ankarberg, Aidan	X		
Gorski, Ted	X		
O'Hara, Travis J.	X		
Pitaro, Matthew	X		
Sykes, George E.	X		
Cleaver, Skip J.		X	
~~Fenton, Donovan W.~~ Rep. Pimentel	X		
Pickering, Daniel R.	X		
Rich, Cecilia	X		
Telerski, Laura D.	X		
Fox, Dru	X		
Stevens, Deb	X		
Veilleux, Daniel T.	X		
TOTAL VOTE:	18	1	

Public Hearing

HOUSE COMMITTEE ON TRANSPORTATION

PUBLIC HEARING ON

BILL TITLE: 423 establishing a commission to study the implementation of enhanced automation of traffic lights

DATE:

LOB ROOM: 301-303 **Time Public Hearing Called to Order: 2:00 pm**

Time Adjourned: 2:38 pm

Committee Members: Reps. Walsh, Gagne, Crawford, Smith, Hill, Aron, Ankarberg, Gorski, O'Hara, Pitaro, Sykes, Cleaver, Fenton, Pickering, Rich, Telerski, Fox, Stevens and Veilleux

Bill Sponsors:
Rep. Torosian

TESTIMONY

Use asterisk if written testimony and/or amendments are submitted.

*Rep. Torosian: Rock 14: Intent to start with a commission to see what the cost will be. Have ltraffic lights talk to each other.

*DOT William Lambert, PE Traffic Engineer/Adm

Rep. Torosian answering questions below:

Q - Rep. Sykes: 1. Line 17 more info on what is meant by enhanced automation? A. Where would it be most effected and local lights where you a can get more efficiencies?
2. Any thought about studying other systems in the future? Will signals be able to talk to the cars?
A. Would like to get this off the ground to see where it will go.

Q - Rep. Pitaro: Is the sunset giving enough time:? A. ChairmanWalsh: they only have so much time to complete the work.

Q - Rep. Sykes: Line 9 3 senators will never be appointed, will you amend that line?
A - yes

William Lambert DOT speaking:

Has written testimony, just went over it, we do have adaptive signal controls in Lebanon, NH

Q - Rep. Hill: Route 3 intersection in Tilton, Is it your belief that this bill is misguided?
A. Lambert: anything to improve traffic flow
Rep. Gorski: Would you share this information?
A. Lambert start workshops to share some best practices among communities
Q - Rep. Pitarro Study of 2009 was that a study for the state
A - yes

Alex Koutroubas American Council of Engineering Companies of NH request amendment add a Professional engineer to the commission and an engineer from municipal aspect

Note: Committee member in large font are absent

House Remote Testify

Transportation Committee Testify List for Bill HB423 on 2021-01-29

Support: 5 Oppose: 0 Neutral: 1 Total to Testify: 3

Export to Excel

Name	City, State Email Address	Title	Representing	Position	Testifying	Non-Germane	Signed Up
Lambert, Bill	william.r.lambert@dot.nh.gov	State Agency Staff	Department of Transportation	Neutral	Yes (0m)	No	1/25/2021 1:49 PM
Koutroubas, Alex	alex@dennehybouley.com	A Lobbyist	American Council of Engineering Companies of NH	Support	Yes (0m)	No	1/29/2021 7:40 AM
Torosian, Peter	FlyBirdAir@aol.com	An Elected Official	Rockingham County District # 14	Support	Yes (0m)	No	1/29/2021 10:36 AM
Janigian, John	John.Janigian@leg.state.nh.us	An Elected Official	Myself	Support	No	No	1/29/2021 1:47 PM
Gould, Rep.Linda	lgouldr@myfairpoint.net	An Elected Official	Myself	Support	No	No	1/25/2021 6:38 PM
Rathbun, Eric	ericsrathbun@gmail.com	A Member of the Public	Myself	Support	No	No	1/29/2021 12:35 AM

Testimony

New Hampshire DOT
Department of Transportation

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

Victoria F. Sheehan
Commissioner

William Cass, P.E.
Assistant Commissioner

January 29, 2021

The Honorable Thomas Walsh, Chair
House Transportation Committee
Legislative Office Building Room 203
107 North Main Street
Concord, NH 03301

Re: HB 423 establishing a commission to study the implementation of enhanced automation of traffic lights

Dear Rep. Walsh:

I would like to submit the following testimony regarding the subject bill on behalf of the Department of Transportation. The Department of Transportation, Bureau of Traffic is responsible for maintaining and operating nearly 450 intersection traffic control signals on state highways. In addition, there are several hundred traffic signals under local jurisdiction maintained and operated by as many as twenty municipalities.

The Department of Transportation welcomes any effort to improve mobility on state highways and would look forward to working with the proposed commission. The Bureau of Traffic has a long history of operating traffic signal systems and coordinating with municipal partners and the purpose of this correspondence is to provide a brief summary of past, current, and projected activity in this area.

- According to our records, the first traffic signals were introduced on state highways in the 1950's. At that time, intersection traffic signal control was more of an urban issue. The majority of traffic signals were installed in urban centers, primarily Manchester. As the number of intersections of state highways controlled by traffic signals continued to increase through the 1960's and 1970's, the Department of Transportation established a dedicated traffic signal maintenance section, led by a traffic signal engineer recently retired from the City of Manchester.
- Traffic signal coordinated systems began to surface in the 1980's as suburban sprawl, especially along commercial corridors, began to string multiple traffic controlled signals in close proximity along fixed corridors. These coordinated systems were typically controlled by one master controller, programmed locally based on average traffic conditions. The timing plans remained fixed until there was a trigger that prompted reevaluation of the timings. As technology improved, there may have been communication from the master controller back to the NHDOT Bureau of Traffic, typically to a proprietary software application on a dedicated computer. There was never an assigned position to "manage" traffic on these coordinated systems so that the software applications were seldom utilized and eventually the recurring cost of the remote communication was eliminated.
- In 2009, the Bureau of Traffic requested a traffic signal operations assessment by the Federal Highway Administration Resource Center to provide a baseline of existing conditions and to identify areas of improvement. The operations assessment yielded a number of relevant observations and recommendations:
    - Identified that the Ten Year Plan (TYP) does not include "active traffic signal operations and maintenance".

  - Noted that the NHDOT had a good foundation in the commitment and dedication of staff, but staffing inadequate for system inventory.
  - Determined that NHDOT was "not well positioned to proactively manage signal systems due to functional and communications limitations, lack of staffing and training, and limited program documentation and measurement".
  - The primary performance measure was response to citizen complaints, which results in a program of "fighting fires".
- Following the 2009 FHWA operations assessment, the Bureau of Traffic reorganized the traffic signal staff to change the focus from a strictly maintenance focus to more of a systems management and operation focus. This included creation of a new Senior Traffic Operations Engineer to oversee the section and the addition of two more traffic signal technicians, all three positions being reclassification of other positions within the bureau. There were a number of goals associated with this structural change that the Bureau of Traffic continues to work on, including:
  - Developing a reliable inventory of traffic signal assets, including components within the traffic signal cabinets.
  - Develop appropriate and measurable performance measures.
  - Identify opportunities to use emerging traffic signal technologies, particularly those related to traffic detection and traffic signal system efficiency.
  - Improve training and certification of traffic signal technicians.
- The Bureau of Traffic has implemented Adaptive Signal Control in a number of locations where increased capacity by adding highway infrastructure is impractical and/or where the advantages of fixed coordinated traffic signal systems have been maxed out. These locations include Lebanon, NH 120 from I-89 to the Dartmouth-Hitchcock Medical Center and Seabrook, US 1 through the intersection with NH 107. It is important to understand the differences between fixed coordinated systems and adaptive signal control. The differences can be very involved, but for the purpose of this communication, the primary points of interest are:
  - All intersection traffic control signals are somewhat adaptive. When fully operational, all traffic signals in New Hampshire are fully actuated, meaning that traffic signal detection exists for all approach lanes. If there is no traffic at an intersection, the traffic signal will "rest" green on the major traffic movement, typically the major road through movements. When a conflicting movement is "called", the controller will provide a programmed minimum time for that movement. If there is a queue of vehicles waiting for the green light, each successive vehicle will "extend" the green time to a programmed maximum. With regular traffic, the controller will progress through a programmed series of phases so that all approaches are served in a "cycle".
  - Coordinated traffic signal systems are generally programmed with fixed times in a "progression" with the timings based on average traffic conditions. Typically, the coordinated timings are limited to peak, or near peak, traffic conditions where it is important to maximize efficiency to minimize overall delay along the coordinated corridor. Each intersection within the signal will retain some measure of actuation relative to actual conditions within the parameter of the programmed progression. Coordinated signal systems operate best when the major road and each intersecting minor road or driveway contribute regular traffic to and through the system. During periods of lighter traffic at either end of the peak traffic condition, it can appear that the system is inefficient as there may be times with the major road platoon is inconsistent and drivers waiting to make left turns from the major road or enter the system from the minor road may not understand why they are waiting when there is no traffic on the major road. Coordinated traffic signal systems need to be updated to reflect current traffic volumes on a regular basis, typically at least every three years, in order to maintain the integrity of the system timings.

- Adaptive traffic signal systems are similar to coordinated traffic signal systems in that they are generally used on a series of intersections in order to provide optimal traffic efficiency. The difference is that they typically will use real time traffic conditions to adjust system phasing and timing to reflect actual traffic conditions. This technology is particularly appropriate for systems where the peak traffic conditions can vary by time of day and/or day of week due to unusual variations. While adaptive traffic signal system control can provide improved efficiency in certain conditions, it is important to note that it has a limited benefit in "saturated" traffic conditions.

With apologies for the lengthy written testimony, I would close by saying that traffic signal operation can be a very complicated subject. In general, improving traffic signal efficiency for any one approach is typically going to increase delay for one or more of the other approaches. In addition, optimal traffic signal operation can only be achieved when all of the system components, most importantly traffic detection, are working correctly and in good repair.

I thank the committee for the opportunity to submit this testimony with respect to HB 305 and would be happy to answer any questions.

Sincerely,

William R. Lambert, PE
Traffic Engineer/Administrator

Cc: Kathleen Mulcahey-Hampson

Archived: Thursday, July 1, 2021 9:41:54 AM
From: Karel Crawford
Sent: Friday, January 29, 2021 12:53:42 PM
To: Karel Crawford
Subject: Fwd: Supplement to HB-423 Establishing a Commission to study the implementation of enhanced automation of traffic lights.
Importance: Normal

Sent from my iPad

Begin forwarded message:

> **From:** "Peter E. Torosian" <flybirdair@aol.com>
> **Date:** January 29, 2021 at 12:45:40 PM EST
> **To:** "housetransportationcommittee@leg.state.nh.us" <housetransportationcommittee@leg.state.nh.us>
> **Subject: Supplement to HB-423 Establishing a Commission to study the implementation of enhanced automation of traffic lights.**
> **Reply-To:** "Peter E. Torosian" <flybirdair@aol.com>
>
> Hello Chairman of House Transportation Committee & Committee Members:
>
> With Regard to HB-423 establishing a commission to study the implementation of enhanced automation of traffic lights.
>
> Please visit the following website: www.rapidflowtech.com
> This site will give you a better idea about how smart light technology will work.
>
> If you have any questions, please contact me at: 603-340-6261 or email: FlyBirdAir@aol.com
>
> Thanks, Rep. Peter Torosian

Bill as Introduced

HB 423 - AS INTRODUCED

2021 SESSION

21-0566
06/08

HOUSE BILL ***423***

AN ACT establishing a commission to study the implementation of enhanced automation of traffic lights.

SPONSORS: Rep. Torosian, Rock. 14; Rep. Janigian, Rock. 8; Rep. True, Rock. 4; Rep. Spillane, Rock. 2; Rep. Gould, Hills. 7

COMMITTEE: Transportation

ANALYSIS

This bill establishes a commission to study the implementation of enhanced automation of traffic lights.

- -

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.
21-0566
06/08

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty One

AN ACT establishing a commission to study the implementation of enhanced automation of traffic lights.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 New Section; Commission Established. Amend RSA 236 by inserting after section 8 the following new section:
236:8-a Commission Established.
I. There is established a commission to study the implementation of enhanced automation of traffic lights.
II. The members of the commission shall be as follows:
(a) Three members of the house of representatives, appointed by the speaker of the house of representatives.
(b) Three members of the senate, appointed by the president of the senate.
(c) One representative of the department of safety appointed by the commissioner of the department of safety.
(d) The commissioner of the department of transportation, or designee.
(e) A representative of the adaptive traffic signal control systems industry, appointed by the governor.
III. Legislative members of the commission shall receive mileage at the legislative rate when attending to the duties of the commission.
IV. The commission shall study the implementation of enhanced automation of traffic lights.
V. The members of the commission shall elect a chairperson from among the members. The first meeting of the commission shall be called by the first-named house member. The first meeting of the commission shall be held within 45 days of the effective date of this section. Four members of the commission shall constitute a quorum.
VI. The commission shall report its findings and any recommendations for proposed legislation to the speaker of the house of representatives, the president of the senate, the house clerk, the senate clerk, the governor, and the state library on or before November 1, 2021.

2 Repeal. RSA 236:8-a, relative to the commission to study the implementation of enhanced automation of traffic lights, is repealed.

3 Effective Date.

I. Section 2 of this act shall take effect November 1, 2021.

II. The remainder of this act shall take effect upon its passage.