



TOWN OF MERRIMACK INTER-DEPARTMENT COMMUNICATION

DATE: February 29, 2024
AT (OFFICE): DPW Administration

TO: Paul Micali, Town Manager

FROM: Dawn B. Tuomala, PE, LLS, CWS
DPW Director

RE: **Continental Boulevard – (State Section – NH Route 101A to Industrial Drive)
Estimated Maintenance Costs**

As requested, due to discussion at the recent House Public Works and Highways meeting an amendment, presented by Representative Abbott, proposes to give responsibility for maintenance and all responsibility for Continental Boulevard to the Town of Merrimack. As a result of this amendment this review of the actual costs to the Town of Merrimack has been developed. In addition, there have been multiple traffic studies conducted on Continental and the surrounding Town roads. A comparison has been made between 2010/2011 and 2022/2023 traffic counts. The result indicates that Continental Blvd is a major commuter route for the State Highway System between NH Route 101A (Amherst Road) and the F.E. Everett Turnpike.

Existing Pavement Conditions:

This section of Continental Blvd is 12,835 feet (2.43 miles) long having a total pavement area of 735,408 square feet. The paved section of Continental Boulevard has a variable width. The road goes from 2 to 4 lanes or more at the signalized intersections along with paved shoulders.

Turning onto Continental Blvd from NH Route 101A there are several turning lanes onto and off of Continental Blvd with the shoulders, overall the pavement width is about 92 feet. After the intersection with Naticook Road, Continental Blvd. quickly turns into 2 lanes (with shoulders), ranging between 44 to 66 feet in width, until the road reaches Camp Sargent Road. Just before the Camp Sargent Road signaled intersection the road turns into a 4 lane Highway. At this point the pavement width including the shoulders is 70 feet. Continental Blvd then remains a four lane highway to Industrial Drive.

According to the State of NH, this section of Continental Boulevard is scheduled to be repaved in 2025. The last time the road was repaved was in 2017 at a cost of \$1.6 million for this section of Highway. If it were to be redone next year, in 2025, the cost will be over \$1.85 million dollars for the same section of road. In order to keep up with the present paving schedule set by the State of NH, this would require that the road to be repaved every 8 years. The entire Town of

Merrimack's annual paving budget is well under this estimated 1.85 Million Dollars required for Continental Blvd. In order to be able to maintain just this section of Highway, would prohibit any other roads in Merrimack from being taken care of in a timely manner.

Drainage:

Continental Blvd. falls within the Town of Merrimack's Municipal Separate Storm Sewer System (MS4) program under the EPA Region 1 MS4 General Permit for Drainage. This will require that all 41 catch basins will need to be cleaned on an annual basis. These closed catch basins systems then drain into a total of 11 outfalls.

In addition to the closed system, there are 16 cross culverts under Continental Blvd ranging in size from 15" diameter to 42" diameter. At least three of the pipes are known to be made of metal (CMP) and should be inspected for corrosion. Replacement of any of these pipes would require a wetland permit from NHDES and would likely need to be contracted out as they are deeper than any equipment that the Town owns can reach. As we learned from the Amherst Road and DW Highway culvert projects carrying Naticook Brook, the replacement costs for each could be in the \$500,000 plus range.

Street Lights: There are 14 street lights along this section. An average yearly cost of \$160/fixture equates to \$2,240 per year. In addition, if the lights became ours, we would need to replace them with LED fixtures to be compatible with all of the others in Town. This would result in an initial cost of approximately \$2,800.

Traffic Signals: Traffic signals currently owned and maintained by the State in this section are located at Industrial Drive, Camp Sargent Road/Fidelity, and Tinker Road. Annual maintenance of the signal controllers, traffic loops, LED bulbs, and electricity costs would be approximately \$3,000 per year. The signals at Tinker Road were replaced in 2018 and should be in fine condition. Prior to estimating a cost for the replacement of the infrastructure for each of the signals each would need to be evaluated for determining the useful life of the existing system.

Winter Maintenance:

In the past decade a majority of the Town of Merrimack's expansion has occurred in the north eastern section of Town and along Daniel Webster Highway as opposed to the section along Continental Blvd. In the past 5 years there have been a number of staffing reductions first due to Covid. Since then, there has been a reduction in the workers applying to fill the empty positions resulting in many open positions. While we are presently close to being fully staffed there continues to be open vacancies. Presently with 186 miles of road to maintain the staff are barely able to keep up with the current demands.

This would make it very difficult to take on the maintenance of Continental Boulevard without adding staff. An Equipment Operator II would need to be added to the payroll including benefits, with an annual average cost of \$90,000. Additionally, the normal yearly maintenance this would average out to be \$22,000 per year. Using average number of storms per year, material cost (sand/brine/salt) for this section would be \$6,000 per year. They would also need to have another 10-wheel dump truck costing approximately \$220,000 every 12 to 15 years.

Spring Sweeping:

The Town’s MS4 permit requires sweeping of all municipal roads. The added cost for the contractor to sweep this section would be \$1,500 per year.

Line Striping:

Re-striping the yellow and white lane lines, and the road words and symbols would cost \$5,000 per year.

Misc Road Maintenance: Items such as roadside mowing, ditch line maintenance, sign maintenance, and shoulder pavement and gravel maintenance need to be performed yearly. Approximate annual cost is \$6,000.

Annual Maintenance Summary Table:

Activity	Annual Cost
Drainage Maintenance (MS4 Requirements)	\$9,000
Street Lights – (14 lights @ 160 ea)	\$2,240
Traffic Signals – (yearly maintenance)	\$3,000
Winter Maintenance	\$118,000
Spring Sweeping	\$1,500
Line Striping	\$5,000
Misc Road Maintenance	\$6,000
ANNUAL MAINTENANCE COST	\$144,740

Long Term Capital Investment Plan (CIP) Cost (per 20 years):

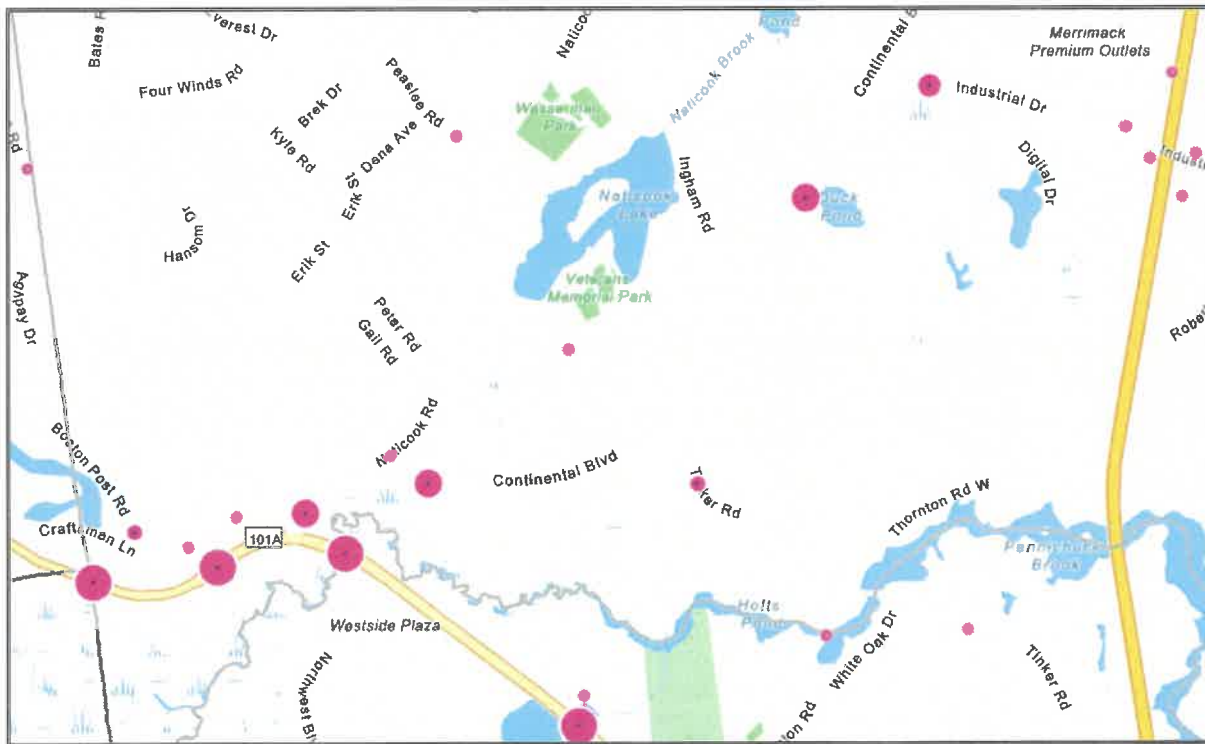
Activity	Long Term Capital Costs (20 years)
Drainage Maintenance	\$2,500,000
Street Lights – to switch to LED Lights (14)	\$2,800
Traffic Signals Replacement	To be Determined
10 Wheel Dump Truck	\$220,000
Paving (every 8 years) – High Strength	\$4,600,000
TOTAL LONG TERM CIP COST	\$7,322,800/20 years
AVERAGE ANNUAL CIP COST	\$366,140/YR AVE COST

The estimated annual maintenance cost for Continental is:

Annual Maintenance Cost	\$144,740
Annual CIP Cost	\$366,140
Total Annual Cost	\$510,880

All prices were compiled using current costs with no inflation. As shown in the charts above for the Town of Merrimack to take over the responsibility of Maintenance of this section of Continental Blvd. will put a major burden on the Town.

The State section of Continental Blvd serves as a major connector between NH Route 101A and the F.E. Everett Turnpike. The majority of the users of this road are commuters from other Towns/cities in the region that are navigating between NH Route 101A to the F.E. Everett Turnpike. They take this route due to the fact it is a quick connection to and from the Turnpike and so that they can avoid the multitude of lights that are now along NH Route 101A that slows them down especially during the morning and the evening commutes. See the attached traffic analysis that was completed on Continental Blvd and the surrounding Town Roads connecting to Continental Blvd. between the years of 2010 and 2023.



NRPC Traffic Count Locations

NRPC Traffic Count

Total Weekday Vehicles

- 25,001-50,000
- 15,001-25,000
- 10,001-15,000
- 5,001-10,000
- 0-5,000

As shown on the map above NH Route 101A has counts over 25,000 weekday Vehicles. This is closely followed by Continental Blvd. having between 15,000 to 25,000 weekday Vehicles. Looking at the Town Roads they collectively are under the 5,000 weekday Vehicles. This visualization alone shows that the Town of Merrimack residents do not have as a significant

impact on Continental as does the through impact coming from NH Route 101A and Industrial Drive which are both State Maintained Highways.

In addition to the commuting traffic traveling through to F.E. Everett Turnpike, commuters are also using Continental Blvd as a connection to Tinker Road. This provides them access around all of the traffic lights on NH Route 101A and also another way to get onto the Turnpike. This is evident in the chart below. There is also traffic flow that occurs crossing over to Tinker Road that does not have any impact to Continental Blvd. Tinker was also taken prior when the tolls were still in place.

The chart below makes a comparison between the side roads and the potential impact to Continental Blvd. This chart shows that the Town of Merrimack does not have a significant impact on this area and that it hasn't increased significantly. All of the traffic counting stations have remained in the same locations during the years.

TRAFFIC COUNTS COMPARING 2010/2011 TO 2022/2023 TOTAL WEEKDAY VEHICLES

2010-2011				2022-2023				Difference between Dates
Site ID	Description	Year of Count	Total Weekday Vehicles	Site ID	Description	Year of Count	Total Weekday Vehicles	
297058	Continental Blvd N. of NH101A	2010	17,515	297058	Continental Blvd N. of NH101A	2022	18,337	822
297027	Naticook Rd N. of Continental Blvd, Merrimack	2014	4,036	297027	Naticook Rd N. of Continental Blvd, Merrimack	2023	3,618	(418)
297023	Continental Blvd E. of Naticook Rd	2010	13,744	297023	Continental Blvd E. of Naticook Rd	2022	15,265	1,521
297026	Tinker Rd S. of Continental Blvd, Merrimack	2010	4,403	297026	Tinker Rd S. of Continental Blvd, Merrimack	2022	5,548	1,145
297044	Tinker Rd N. of Continental Blvd, Merrimack	2011	1,991	297044	Tinker Rd N. of Continental Blvd, Merrimack	2023	1,942	(49)
297003	Continental Blvd N. of Camp Sargent Rd, Merrimack	2011	16,021	297003	Continental Blvd N. of Camp Sargent Rd, Merrimack	2023	16,487	466
297029	Industrial Dr S. of Continental Blvd, Merrimack	2010	7,989	297029	Industrial Dr S. of Continental Blvd, Merrimack	2022	10,158	2,169

LEGEND	
	Merrimack Town Road
	NH DOT Maintained Road

The chart above indicates that two of the Town of Merrimack Roads have realized a slight reduction in the amount of traffic. Naticook Road going north has 418 less vehicles per day. Also Tinker Road going North saw a 49 vehicle reduction of the Town Roads going north into the center of Merrimack.

One of the largest increases on Continental Blvd. occurs just East of the Naticook Road, tracking 1,521 vehicles per day. This result is probably due to the fact that the Exit 10 and Exit 11 tolls have been removed during this time. This assumption can be made since there are fewer vehicles coming from Naticook Road and there are 822 additional vehicles coming from or going to NH Route 101A. Instead the commuters are now traveling through to get to the Turnpike. Tinker Road going south has also realized an increase and as stated before this is more than likely due to the commuters not wanting to deal with all of the lights on NH Route 101A (Amherst Street).

The other increase is on Industrial drive with a 2,169 vehicle increase. This could be due to the mall and/or a combination of commuter traffic due to the toll elimination. In any event there has not been a significant change coming from the Town of Merrimack residents.

The removal of said tolls is being used as a bargaining chip to pass State maintenance costs of an important state highway to the Town. The city of Nashua received the new Exit 2 in 1999 which was designed to be a tolled ramp – the Department of Transportation spent millions of dollars installing infrastructure to support the ramp tolls at exits one and two and mainline southbound including tunnels, retaining walls, bridges, and roadways only to have the final toll installation eliminated. The turnpike counted on the revenue that would have been received to pay for the Nashua expansion and future projects; now without that revenue, the State is looking to defer costs to the residents of Town of Merrimack to help with Turnpike's fiscal issues.

One other potential future cost impact that would be transferred to the Town would be reacting to chloride levels in MVD well 3. For many years, the town section of Continental Boulevard has been a no/limited salt route. Reacting to increasing chloride levels in well 3, NHDOT/Turnpikes did a pilot program during the winter of 2009 to reduce salt use on their section (notices were posted with message boards and signs) but have since reverted to maintaining a high level of service on the road, presumably due to its importance in the State road network.

Should you have any questions please let me know,

Dawn

CC: File

**Continental Boulevard
State Section: NH Route 101A to Industrial Drive**



Prepared by: Merrimack Public Works Department

Dawn Tuomala, Director

BACKGROUND

- The State has passed an Amendment that would give responsibility for the below section of Continental Boulevard (12,835 feet) to the Town of Merrimack



PROJECTED COST

- This Amendment means that the Town of Merrimack will inherit responsibility for all maintenance of this section of Continental Blvd. road which includes:



Annual Maintenance Summary Table:

Activity	Annual Cost
Drainage Maintenance (MS4 Requirements)	\$9,000
Street Lights – (14 lights @ 160 ea)	\$2,240
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Misc Road Maintenance	\$6,000
ANNUAL MAINTENANCE COST	\$144,740

The cost of paving this section of road alone is 1.85 million dollars which is more than the paving budget for the entire town

Long Term Capital Investment Plan (CIP) Cost (per 20 years):

Activity	Long Term Capital Costs (20 years)
Drainage Maintenance	\$2,500,000
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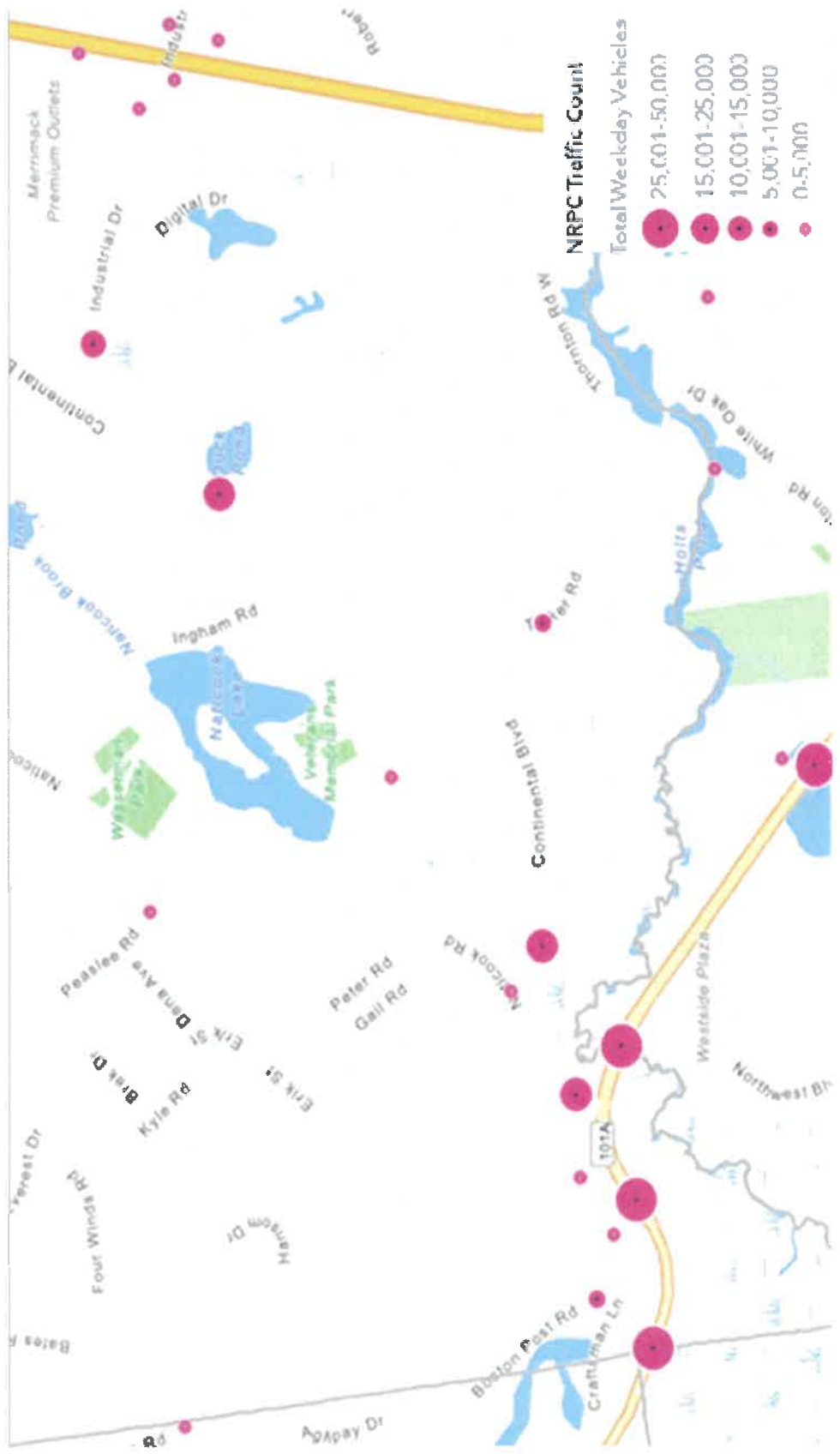
\$510,880 Annually

The estimated annual maintenance cost for Continental is:

Annual Maintenance Cost	\$144,740
Annual CIP Cost	\$366,140
Total Annual Cost	\$510,880

OUR POSITION

- This map illustrates that NH Route 101A has over 25,000 weekday Vehicles. Looking at the Town Roads, they collectively are under the 5,000 weekday Vehicles.
- This visualization alone shows that the Town of Merrimack residents do not have as a significant impact on Continental as does the through impact coming from NH Route 101A and Industrial Drive which are both State Maintained Highways.



OUR POSITION CONTINUED

- The counts below (shown over two different year spans) show that the traffic along that section of Continental Blvd is far greater than any Merrimack road in the same area.

2010-2011			2022-2023			Difference between Dates		
Site ID	Description	Year of Count	Total Weekday Vehicles	Site ID	Description		Year of Count	Total Weekday Vehicles
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NEXT STEPS AND SUPPORT

- Paul Micali (Town Manager) and Dawn Tuomala (DPW Director) will request to present our position to the NH State Senate.
- Any resident that would like to show support for the town, is encouraged to write a letter to any of the town's State Representatives.
- Town Councilors are also encouraged to write letters to our State Representatives and/or the Senator.

DISCOVER A TOWN OR CITY'S REPRESENTATIVE



NH Map

Select a town

Representatives for Merrimack

District 12

Bill Boyd: 139 Joppa Road Merrimack, NH 03054

Robert V. Healey: 68 Back River Road Merrimack, NH 03054

Tim S. McGough: PO Box 1717 Merrimack, NH 03054-1717

Maureen C. Mooney: PO Box 1676 Merrimack, NH 03054-1676

Nancy A. Murphy: 20 Brenda Lane Merrimack, NH 03054-2508

Jeanine M. Nolter: 19 Whittier Road Merrimack, NH 03054-4755

Rosemarie Rung: 21 Ministerial Drive Merrimack, NH 03054-3321

Wendy E. N. Thomas: 10 Wildcat Falls Road Merrimack, NH 03054

State Senator for Merrimack

District 11

Senator Chandley: Legislative Office Building

Room 102-A 33 North State Street Concord NH 03301

QUESTIONS

