

Lower Road Rail Corridor  
**RAIL USE ADVISORY COUNCIL MEETING**  
April 26, 2023



# Lower Road Rail Corridor – General Approach

- Understand who lives along the Corridor and could serve as potential users of an Interim Trail facility
- Develop estimates of **Interim Trail usage** (trips) and benefits, including:
  - Potential consumer spending
  - Potential health related benefits
  - Potential property value impacts
- Develop estimates of potential **Restoration of Rail service usage** (trips) and benefits, including:
  - Develop estimates of annual on-board Passenger Rail spending
  - Potential health related benefits and Estimates of potential property value impacts
  - Offer general comments and observations on other potential rail related impacts, either possible development/economic impacts and quality-of-life benefits
- Present IMPLAN Modeling results for State of Maine economic impacts associated with the construction and ongoing maintenance costs from **ALL** Scenarios under consideration

# Lower Road Rail Corridor – Scenarios

- **Scenario 1** - Interim Trail includes the removal of the track and ties and building an Interim Trail on the rail bed
- **Scenario 2** – Rail with Trail (RWT) includes an Interim Trail but with preservation of rail infrastructure for possible restoration of Rail Service(s)
- **Scenario 3** - Restoration of Rail Service
- Scenarios modeled using IMPLAN to estimate economic impacts associated with Capital costs of construction and ongoing Maintenance costs:
  - The latter refer specifically to costs for maintaining the trail and/or rail infrastructure **only** and do not include any operation costs for potential rail service

SUMMARY OF VHB COST ESTIMATES

Lower Road Corridor Option		Capital Costs	Annual Maintenance Costs
Interim Trail	<u>Stonedust/Gravel</u>	\$34,200,000	\$93,800 - \$147,400
	Paved	\$42,900,000	\$80,400 - \$134,000
Rail with Trail	<u>Stonedust/Gravel</u>	\$146,300,000	\$93,800 - \$147,400
	Paved	\$151,800,000	\$80,400 - \$134,000
Restoration of Rail Service	Freight	\$55,000,000	\$2,747,000
	Passenger	\$363,000,000	\$3,015,000

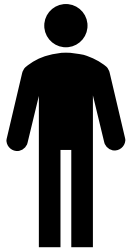
# Lower Road Rail Corridor

Miles in Length



33.5

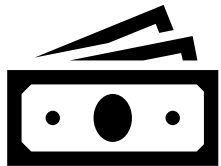
Within a half-mile radius of the proposed Corridor



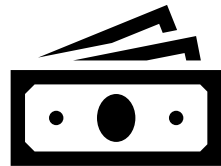
18,732  
residents



8,361  
Households

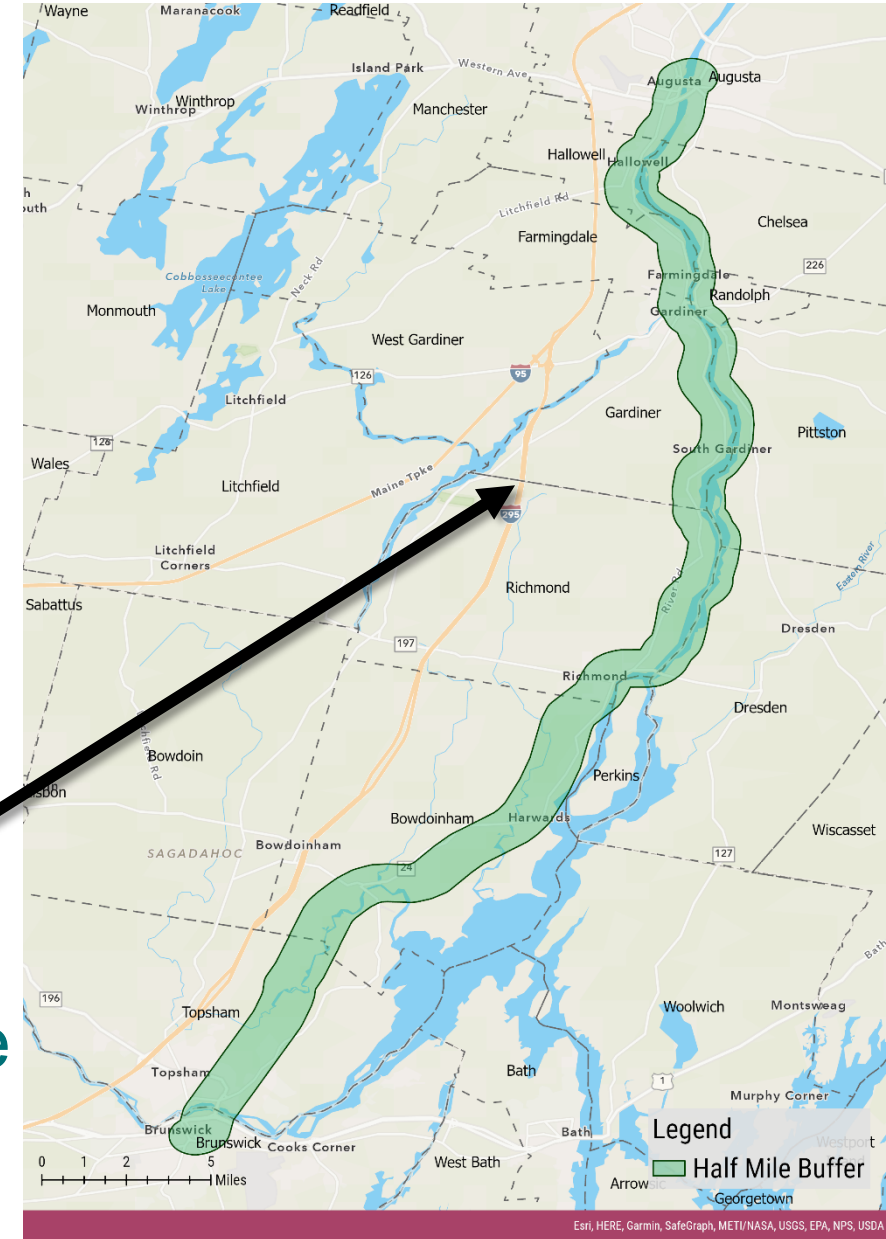


\$59,425  
Median HH  
Income



\$39,565 Per  
Capita Income

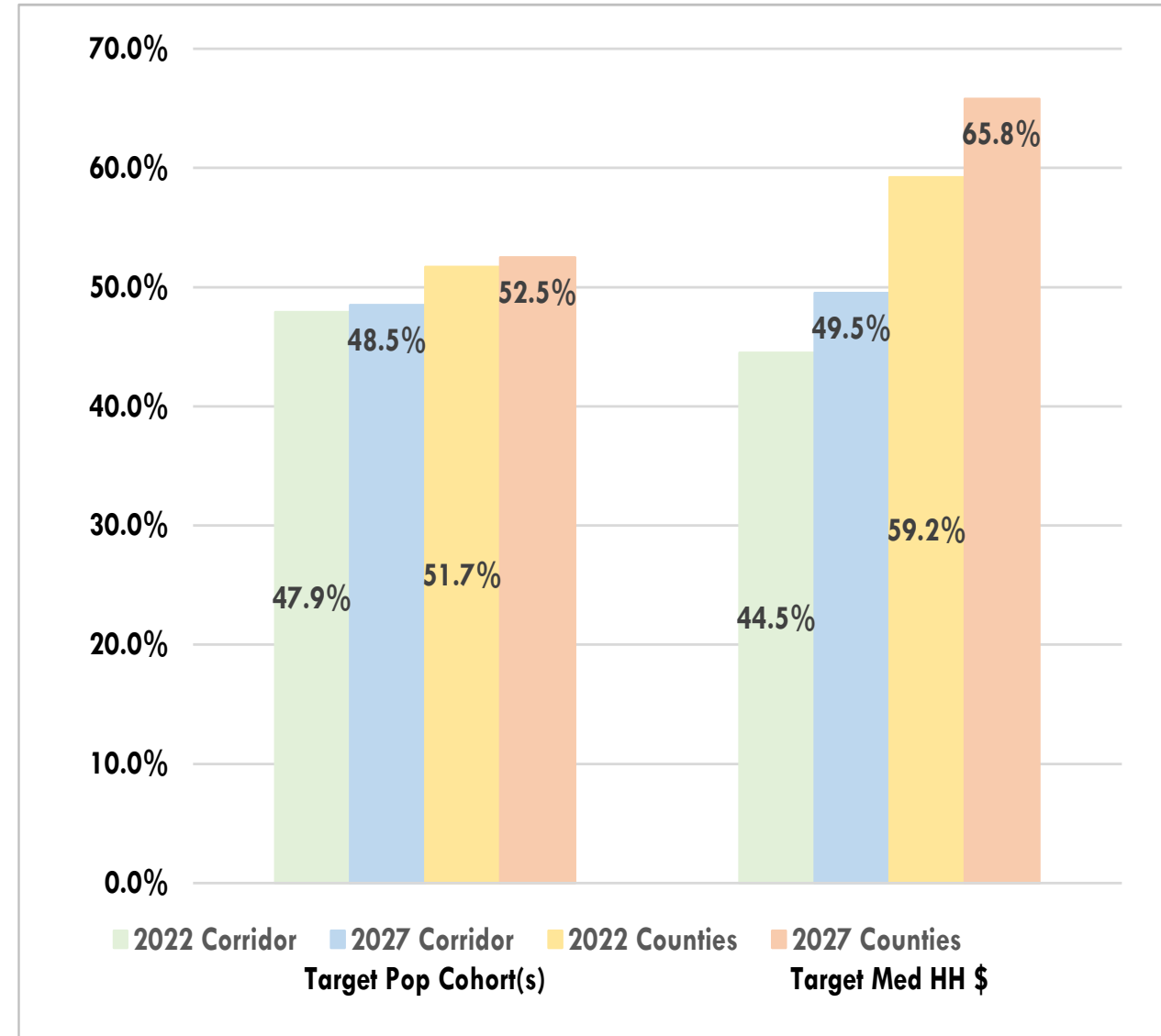
## Lower Road Rail Corridor Study Area Map



# Lower Road Rail Corridor – Interim Trail

- Prior studies of Interim Trail facilities have indicated that use is particularly high among:

- **Population** – aged over 45 years
  - **48.5%** of Corridor population
  - 50.7% of the 4-County region population
- **Median Household Income** – highest among households with median incomes > \$61,000
  - **49.5%** of Corridor households
  - 65.8% of the 4-County region households



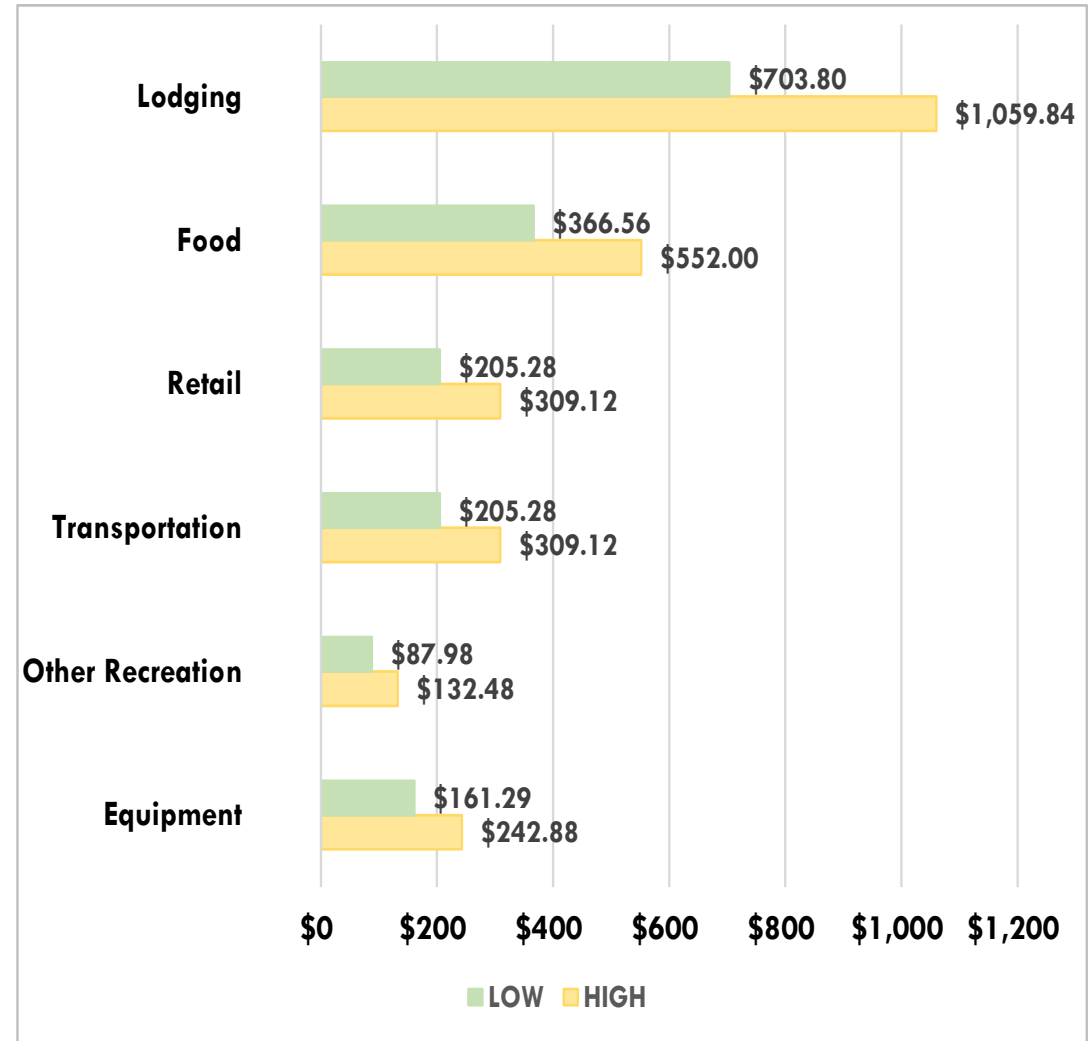
# Lower Road Rail Corridor – Interim Trail

- Local Annual Use (trips) from 63,750 to 96,000 annually
- Out-of-State Use (trips) from 14,663 to 22,080 annually
- Spending at average of \$118 from Out-of-State

– **Low Estimate** – approximately **\$1.73 million or \$1,730/1,000 trips**

– **High Estimate** – approximately **\$2.61 million or \$2,605/1,000 trips**

**Estimated Annual Spending (\$1,000's) by Category**

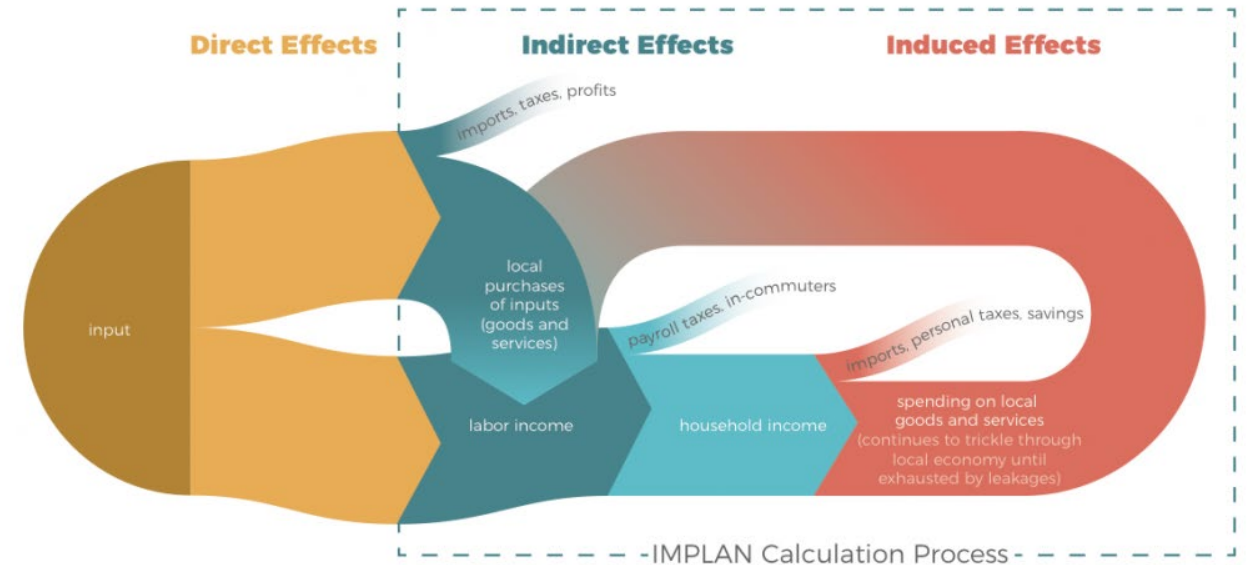


# Lower Road Rail Corridor – IMPLAN Overview

RKG utilized the IMPLAN econometric model to understand the potential direct, indirect, and induced impacts of spending by users and construction and on-going maintenance associated with the different use scenarios.

- **Direct Impacts** - Direct impacts refer to the initial dollar investment into the economy.
  - **equal to user spending, the estimated construction cost, and on-going operations/maintenance.**
- **Indirect Impacts** - The indirect impacts refer to the “inter-industry impacts of the input-output analysis.”
  - **spending by workers building, operating, or maintaining the facility as well as business-to-business spending to buy equipment & supplies, rent space, pay their employees, etc.**
- **Induced Impacts** - The induced impacts refer to the impacts of spending by the employees generated by the direct and indirect impacts.

## IMPLAN Model Diagram



Source: IMPLAN Economic Impact Analysis

# Lower Road Rail Corridor – Interim Trail

- RKG measured the economic impact of user spending and how those additional dollars could impact the State of Maine’s economy.
- The IMPLAN measure of **Value Added** is the contribution to gross state product (GSP), or labor income plus taxes on production and imports.
  - **Total User Spending** leads to:
    - Total Output (direct, indirect, induced)
    - Total Labor Income (direct, indirect, induced)
    - Total Employment (direct, indirect, induced)
    - Total **Value Added** either at **\$1.56M** (low) or **\$2.36M** (high).

Lower Road Rail Corridor - Annual User Spending	Factor	IMPLAN Modeling	
		Low Estimate	High Estimate
Annual Users		63,750	96,000
Out-of-Town Users	23%	14,663	22,080
<b>IMPLAN Modeling Results</b>		<b>Low Estimate</b>	<b>High Estimate</b>
Total User Spending		\$1,730,175	\$2,605,440
Total Output		\$2,669,690	\$4,020,237
Total Labor Income		\$932,282	\$1,403,904
Total Employment		23	35
<b>Total Value Added</b>		<b>\$1,564,590</b>	<b>\$2,356,087</b>

Source: IMPLAN and RKG (2023)



# Lower Road Rail Corridor – Interim Trail and Passenger Rail

## Potential Health Benefits of Interim Trail Use

- According to studies by the CDC, many adults are at health risk from limited physical activity estimated at 24.8% of the adult population (45+ years) = **2,254** persons.

## Potential Health Benefits of Passenger Rail

- Although unquantified in this analysis, if Passenger Rail service were available to the communities along the Corridor, it is possible that there may be some modest improvement in public health (**and resulting cost savings**) as some passengers may, on occasion, opt to walk or bicycle to a transit station (if developed and within a reasonable proximity) and presuming there is proper sidewalk and/or bike path connectivity.

**9,087 - People over 45 in the Corridor**

**X**

**24.8% as Insufficiently Active and Inactive**

**=**

**2,254 as Insufficiently Active and Inactive**

**X**

**5% (113 adults) become more physically active as a result of the facility**

**=**

**Increased physical activity results in potential health benefits of \$287,331**

# Lower Road Rail Corridor – Interim Trail

## Potential Property Value Benefits

- Within the Lower Road Rail Corridor there was a total of:
  - **3,784** single family units sold over the 2018 to January 2023 time period
  - The average sales price per unit was **\$286,132** – varying by community
  
- Studies vary in estimating what impacts proximity to green space, or in this instance an interim trail may have, but the following is applied in this analysis.
  - **At 2.5%** - average impact of **\$7,153**
  - **At 5%** - average impact of **\$14,307**
  - **Average = \$10,730**

Summary Residential Sales by Location - Lower Road Rail Corridor					
Single Family Residential (2018 through January 2023)					
Location	# of Units	Sales Price	Average / Unit	at 2.5%	at 5%
Augusta	1,049	\$210,693,326	\$200,852	\$5,021	\$10,043
Hallowell	158	\$42,871,752	\$271,340	\$6,784	\$13,567
Farmingdale	156	\$35,238,655	\$225,889	\$5,647	\$11,294
Gardiner	389	\$85,486,520	\$219,760	\$5,494	\$10,988
Pittston	161	\$40,375,776	\$250,781	\$6,270	\$12,539
Richmond	217	\$50,960,256	\$234,840	\$5,871	\$11,742
Dresden	91	\$25,647,772	\$281,844	\$7,046	\$14,092
Woolwich (1)					
Bowdoinham	134	\$42,259,502	\$315,369	\$7,884	\$15,768
Topsham	454	\$153,220,002	\$337,489	\$8,437	\$16,874
Brunswick	975	\$395,969,291	\$406,122	\$10,153	\$20,306
<b>Totals or Averages</b>	<b>3,784</b>	<b>\$1,082,722,852</b>	<b>\$286,132</b>	<b>\$7,153</b>	<b>\$14,307</b>

Source: VHB, Redfin and RKG (2023)

no data reported

**Note** – Any potential increase in property values would most likely be realized as a residential property were to come on the market as a for sale property, with an Interim Trail cited as a “locational amenity”. RKG does not necessarily consider that local assessing departments would unilaterally increase the property’s estimated valuation without some market basis such as comparable sales activity.

# Lower Road Rail Corridor – Interim Trail Scenarios

- Based on the input costs, IMPLAN modeling estimates how a dollar re-circulates (**Value Added**) in the State of Maine economy, as well as wages and employment

- Infrastructure Costs** = the Interim Trail (paved path) investment of \$42.90M returns \$37.14M

- The Rail with Trail (paved path) investment of \$151.80M returns \$131.42M

- Maintenance Costs** = minor variations between path options

**Note** that these refer specifically to costs, for maintaining the trail and/or rail infrastructure

*only*

Lower Road Rail Corridor - Selected Summary Impacts by Alternative	Input Dollars (1)	Total Value Added	Wages and Employment	
			Wages (2)	Employ (3)
<b>Infrastructure/Construction Impacts (one-time)</b>				
Interim Trail (stonedust/gravel)	\$34,200,000	\$29,609,167	\$22,057,085	388
Interim Trail (paved)	\$42,900,000	\$37,141,323	\$27,668,098	486
<b>Ongoing and Annual Maintenance Impacts</b>				
Interim Trail (stonedust/gravel)	\$120,600	\$93,468	\$64,656	1.13
Interim Trail (paved)	\$107,200	\$83,083	\$57,472	1.00
<b>Infrastructure/Construction Impacts (one-time)</b>				
Rail With Trail (stonedust/gravel)	\$146,300,000	\$126,661,435	\$94,355,307	1,660
Rail With Trail (paved)	\$151,800,000	\$131,423,143	\$97,902,499	1,722
<b>Ongoing and Annual Maintenance Impacts</b>				
Rail With Trail (stonedust/gravel)	\$120,600	\$93,468	\$64,656	1.13
Rail With Trail (paved)	\$107,200	\$83,083	\$57,472	1.00

Source: IMPLAN and RKG (2023)

(1) - direct user spending (**ongoing**) - capital construction (**one-time**) - annual maintenance (**ongoing**)

(2) - reflects sum of estimated Statewide **labor income** - direct, indirect and induced

(3) - reflects sum of estimated Statewide employment - direct, indirect and induced

**NOTE** - per VHB, annual maintenance costs for an interim trail with or without rail are the same

# Lower Road Rail Corridor – Passenger Rail Upgrade

- **Infrastructure Costs** = the investment of \$363.00M to upgrade for Passenger Rail use returns \$314.27M to the State of Maine economy
- **Maintenance Costs** = the annual expenditure of \$3.02M returns \$2.34M (these **do not include** any operational costs for the rail service)

Lower Road Rail Corridor - Selected Summary Impacts by Alternative	Input Dollars (1)	Total Value Added	Wages and Employment	
			Wages (2)	Employ (3)
<b>Passenger Rail Upgrade</b>				
Infrastructure/Construction Impacts (one-time)	\$363,000,000	\$314,272,732	\$234,114,671	4,118
Ongoing and Annual Maintenance Impacts	\$3,015,000	\$2,336,701	\$1,616,400	29

Source: IMPLAN and RKG (2023)

(1) - direct user spending (**ongoing**) - capital construction (**one-time**) - annual maintenance (**ongoing**)

(2) - reflects sum of estimated Statewide **labor income** - direct, indirect and induced

(3) - reflects sum of estimated Statewide employment - direct, indirect and induced

# Lower Road Rail Corridor – Passenger Rail Upgrade

## Unquantified Potential Fiscal/Economic and Quality-of-Life Benefits include:

- Commuter rail provides a number of potential fiscal/economic and quality-of-life benefits, particularly for communities in less urbanized areas
- Opportunities for Transit Oriented Development (TOD) within a half-mile radius of potential future rail stations
- Increased mobility and convenient transportation options
- Improved access to employment, education, and essential services



TOD plan and development in Brookhaven NY (credit: VHB)



# Lower Road Rail Corridor – Passenger Rail Spending

- NNEPRA provided data for on-board spending for passengers of the Downeaster, indicating that approximately 18% made purchases in the café car, averaging \$8/passenger.
- Estimated potential ridership of Lower Road Rail Corridor passenger rail service = 144,540 annually with “on-board” spending = \$215,365 annually
- **Value Added** to State of Maine economy = **\$249,698** annually

IMPLAN Modeling - On-Board Passenger Rail Spending				
Annual Ridership = 144,450 / Annual Spending = \$215,365				
Impact	Employment	Labor Income	Value Added	Output
1 - Direct	3.33	\$113,159	\$145,872	\$215,365
2 - Indirect	0.40	\$25,254	\$37,206	\$69,789
3 - Induced	0.73	\$37,876	\$66,620	\$113,379
<b>Total</b>	<b>4.46</b>	<b>\$176,289</b>	<b>\$249,698</b>	<b>\$398,533</b>

Source: IMPLAN, VHB, NNEPRA and RKG (2023)

**Note** - IMPLAN modeling inputs includes all other food and drinking places which includes airline and transit food services contractors, cafeterias, coffee carts, etc.

While it is possible that passengers could purchase goods and services at businesses near a potential new station/platform, these are not quantified in this analysis and difficult to distinguish from what would otherwise be normal work-day purchases at other businesses along a commuter’s route or if they would foster new development (SF). **At a minimum, such purchases could benefit existing businesses.**

# Lower Road Rail Corridor – Freight Rail Upgrade

- **Infrastructure Costs** = the investment of \$55.00M to upgrade for Freight Rail use returns \$47.62M to the State of Maine economy
- **Maintenance Costs** = the annual expenditure of \$2.75M returns \$2.13M (these **do not include** any operational costs for the rail service)

Lower Road Rail Corridor - Selected Summary Impacts by Alternative	Input Dollars (1)	Total Value Added	Wages and Employment	
			Wages (2)	Employ (3)
<b>Freight Rail Upgrade</b>				
Infrastructure/Construction Impacts (one-time)	\$55,000,000	\$47,617,081	\$35,471,920	624
Ongoing and Annual Maintenance Impacts	\$2,747,000	\$2,128,994	\$1,472,720	26

Source: IMPLAN and RKG (2023)

(1) - direct user spending (**ongoing**) - capital construction (**one-time**) - annual maintenance (**ongoing**)

(2) - reflects sum of estimated Statewide **labor income** - direct, indirect and induced

(3) - reflects sum of estimated Statewide employment - direct, indirect and induced

**Unquantified Potential Benefits** = if part of a designated Free Trade Zone (FTZ), these could include cost-savings to area businesses and companies. Also, increased FTZ utilization by area businesses could foster increased demand for development of proximate warehousing and distribution facilities and thereby positively impact local fiscal and economic conditions.

# Comparative Summary of the Value-Added Impacts

Lower Road Rail Corridor - Selected Summary Impacts by Alternative - Valued Added (constant 2022 \$)	Infrastructure Construction Impacts (1)	Annual Maintenance Impacts (2)	Other Financial Impacts			
			Trail User Expenditures (2)	On-Board Passenger	Potential Health Benefits (3)	Potential Impact on SFDU Sales Value (4)
Interim Trail (stonedust/gravel)	\$29,609,167	\$93,468	\$1,960,338	<i>na</i>	\$287,331	\$10,730
Interim Trail (paved)	\$37,141,323	\$83,083	\$1,960,338	<i>na</i>	\$287,331	\$10,730
Rail With Trail (stonedust/gravel)	\$126,661,435	\$93,468	\$1,960,338	<i>na</i>	\$287,331	\$10,730
Rail With Trail (paved)	\$131,423,143	\$83,083	\$1,960,338	<i>na</i>	\$287,331	\$10,730
Passenger Rail Upgrade	\$314,272,732	\$2,336,701	<i>na</i>	\$249,698	<i>na</i>	<i>na</i>
Freight Rail Upgrade	\$47,617,081	\$2,128,994	<i>na</i>	<i>na</i>	<i>na</i>	<i>na</i>

**Source: IMPLAN and RKG (2023)**

(1) - one-time and reflects sum of direct, indirect and induced Value Added impacts.

(2) - annual and ongoing and reflects sum of direct, indirect and induced Value Added impacts.

(3) - annual and ongoing absolute and **not Value Added impacts**.

(4) - estimated average of potential dollar increase in home sales price - across all communities.

*na* - not applicable or otherwise unquantified in this analysis.