



# *Chester 41848*

## **Route 102 / Route 121 Safety Improvements**



## **Selectmen's Meeting Presentation August 23, 2018**



# Agenda

- Existing conditions
- Project history
- Project scope
- Roundabout basics
- Initial design concepts
- Project schedule

# Existing conditions

- Traffic volume:
  - 8,600 / 6,500 vpd on Route 102
  - 4,500 / 3,600 vpd on Route 121
  - Long delays on Route 121
  - Need to plan for Exit 4A
- Speed limit: 35 mph at intersection

# Existing conditions

- Crashes: 64 in 10 years
  - Severity – 13 with injuries
  - Failure to yield or stop
  - Right angle
  - Sideswipes along 102

# Project history

- Road safety audit conducted 2011
  - Short, medium, long term options
- Short-term: making stop signs visible
- Medium-term: flashing beacons

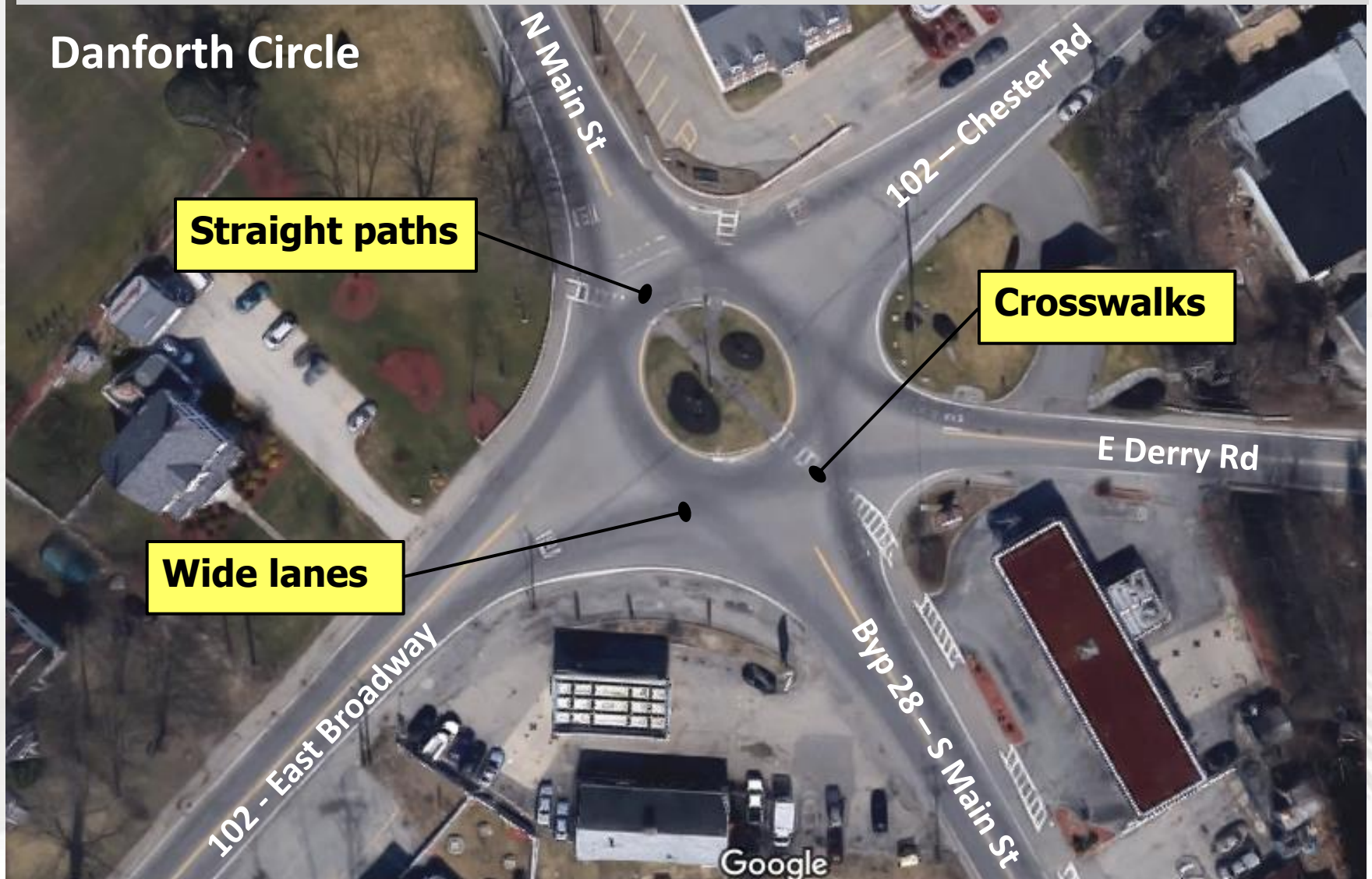
# Project scope

- Long-term options
  - All-way stop
  - Traffic signal
  - Roundabout
- Goal: provide safe and efficient traffic operations
  - For current and future conditions
  - For all modes



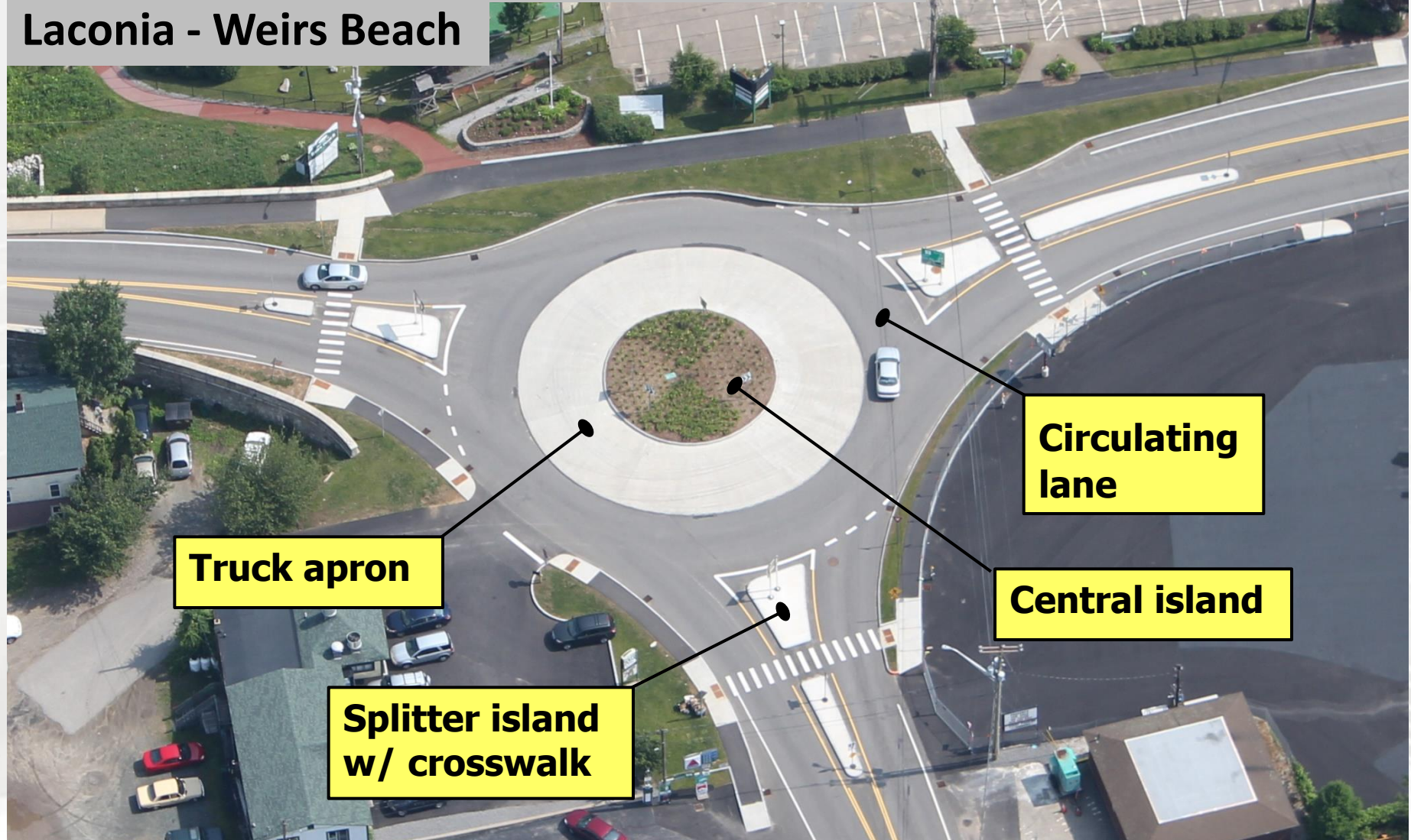
# Traffic Circles vs. Roundabouts

## Danforth Circle



# Roundabout features

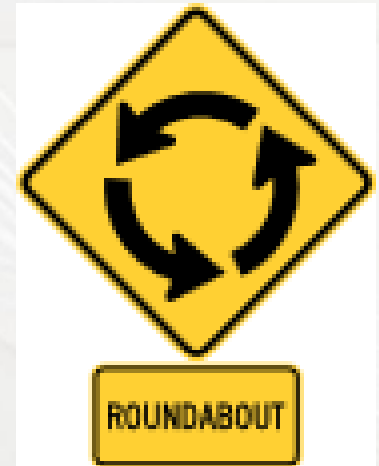
Laconia - Weirs Beach





# Roundabout Rules of the Road

- Slow down – designed for 15-20 mph
- Watch for peds in crosswalk
- Look left / yield to traffic in roundabout
- Proceed through roundabout
- Watch for peds in crosswalk



# How Do Roundabouts Improve Safety?

- Vehicles yield on entry
  - Small size keeps speeds low
  - Paths are deflected
  - Fewer conflict points
- 
- Reduced chance of crashes
  - Reduced severity

# Roundabout Performance

- 75% fewer injuries
- 90% fewer SI and fatalities
- Better traffic operations
- Safer bike/ped environment





Before



Nashua Rd

111A

Old Bridge St

111A

Main St

**Roundabout Example:**  
**Pelham**  
**NH 111A at Nashua Rd**

Google earth





**Design**

**111A**



**Nashua Rd**

**Old Bridge St**

**111A**

**Main St**

**Pelham  
NH 111A at Nashua Rd**





After

Pelham  
NH 111A at Nashua Rd

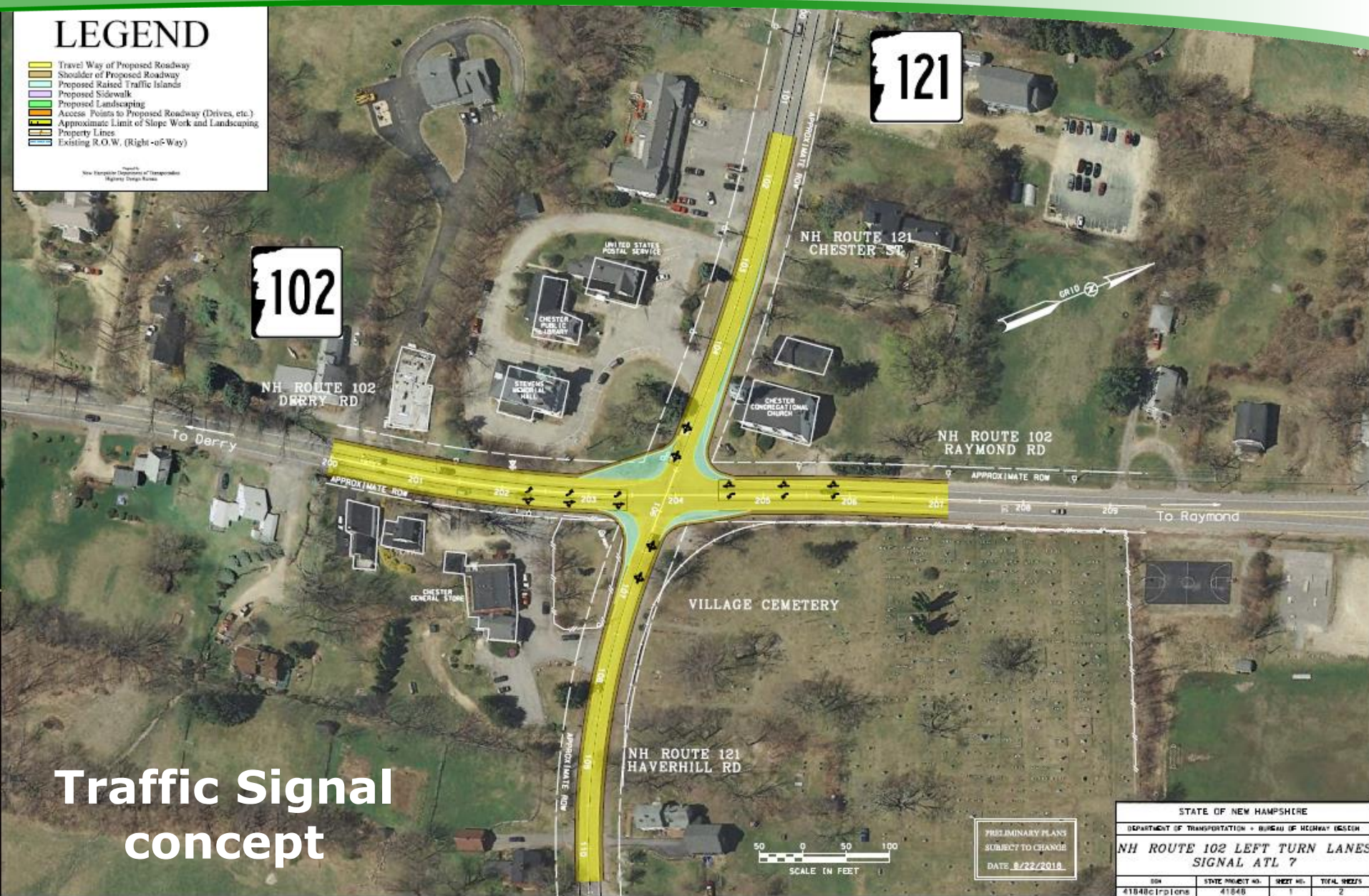


# LEGEND

- Travel Way of Proposed Roadway
- Shoulder of Proposed Roadway
- Proposed Raised Traffic Islands
- Proposed Sidewalk
- Proposed Landscaping
- Access Points to Proposed Roadway (Drives, etc.)
- Approximate Limit of Slope Work and Landscaping
- Property Lines
- Existing R.O.W. (Right-of-Way)

Prepared by:  
New Hampshire Department of Transportation  
Highway Design Bureau

## Traffic Signal concept



PRELIMINARY PLANS  
SUBJECT TO CHANGE  
DATE 8/22/2018

STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
NH ROUTE 102 LEFT TURN LANES SIGNAL ATL 7			
SIN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
41848c1a10ns	41848	1	2





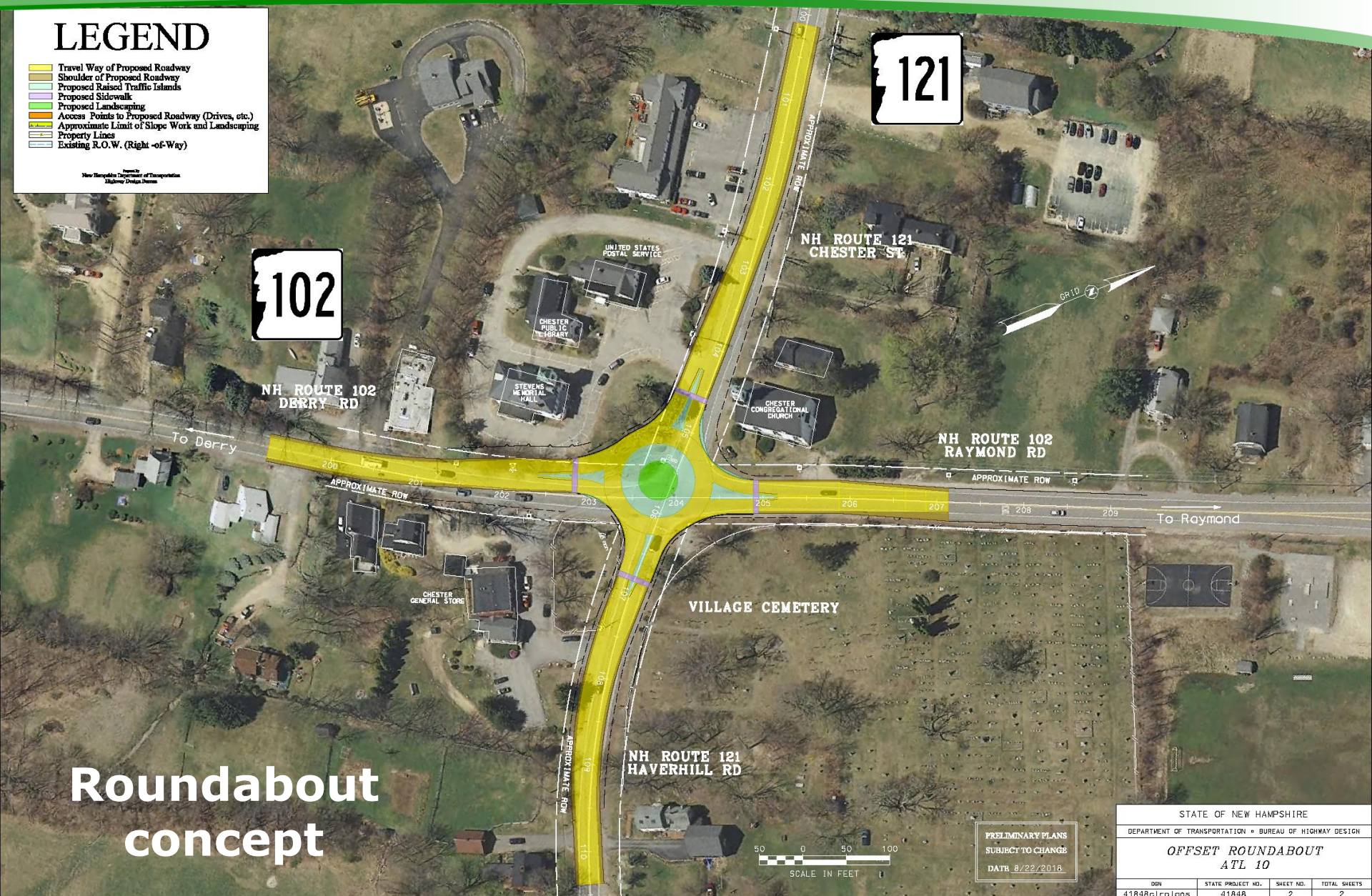
**Traffic Signal  
concept**



# LEGEND

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Source:  
New Hampshire Department of Transportation  
Highway Design Series



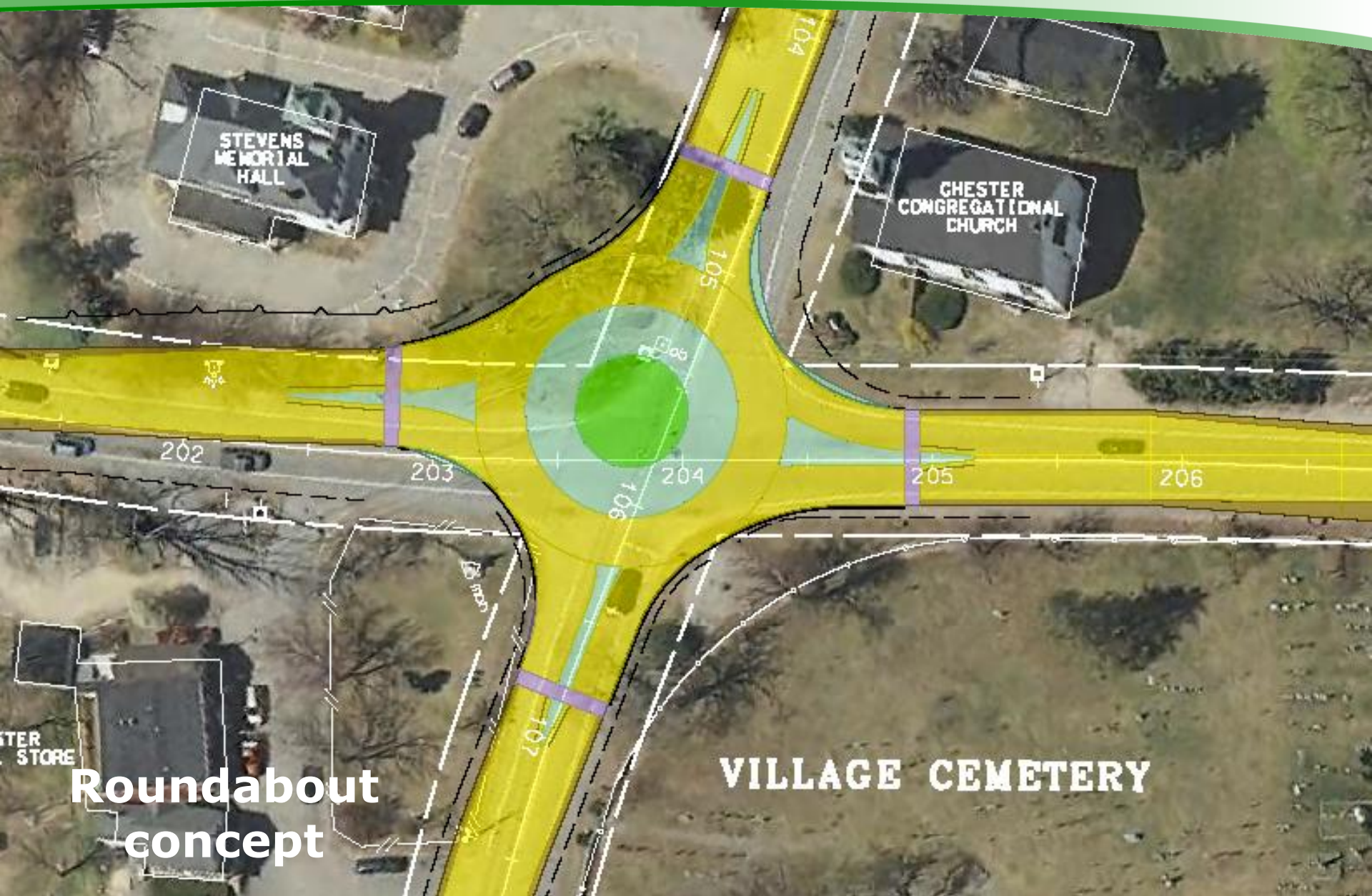
STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN

**OFFSET ROUNDABOUT  
ATL 10**

DDN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
41848c1r1p1s	41848	2	2





# Project schedule

- Survey done summer 2018
- Fall/winter 2018: informational mtg with early details and impacts
- Mid-2019: public hearing for preferred alternative
- 2019 to 2021: detailed design, right of way process

**Questions?**

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