

GPI

Engineering and Construction Services



Town of Acton

10% Public Meeting

Bruce Freeman Rail Trail

PRESENTATION

June 12, 2007

Greenman-Pedersen, Inc.

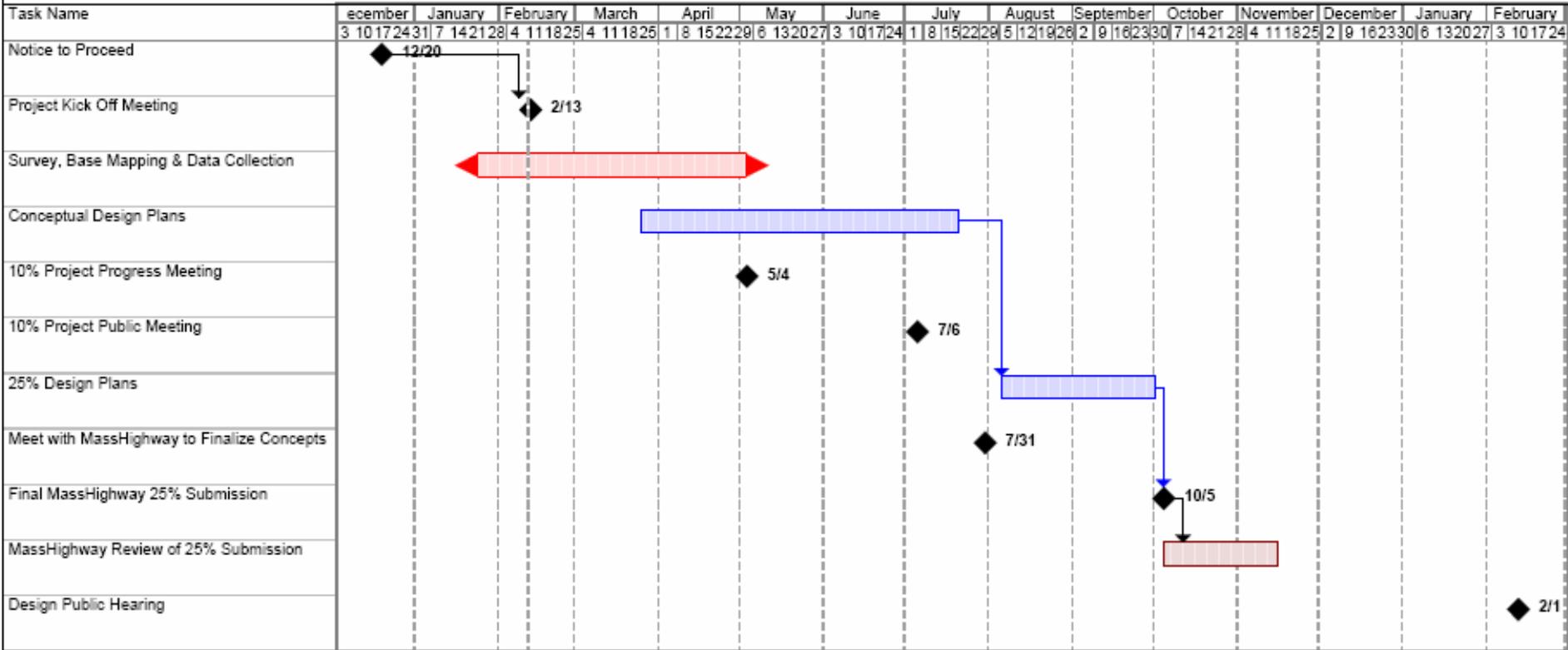
105 Central Street
Stoneham, MA 02180

www.gpinet.com



Project Schedule

Design and Engineering Services Bruce Freeman Rail Trail Town of Acton, MA



Greenman-Pedersen, Inc.

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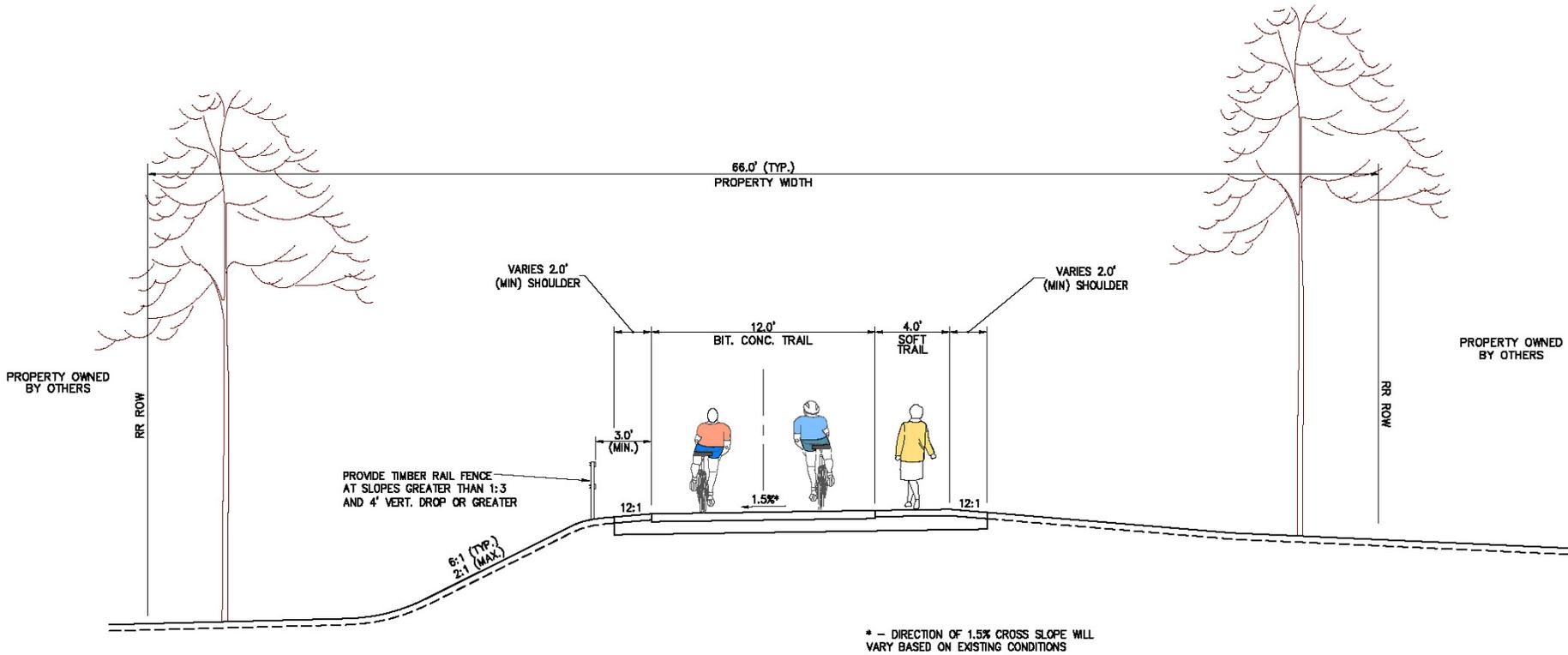
Typical Trail Cross Section



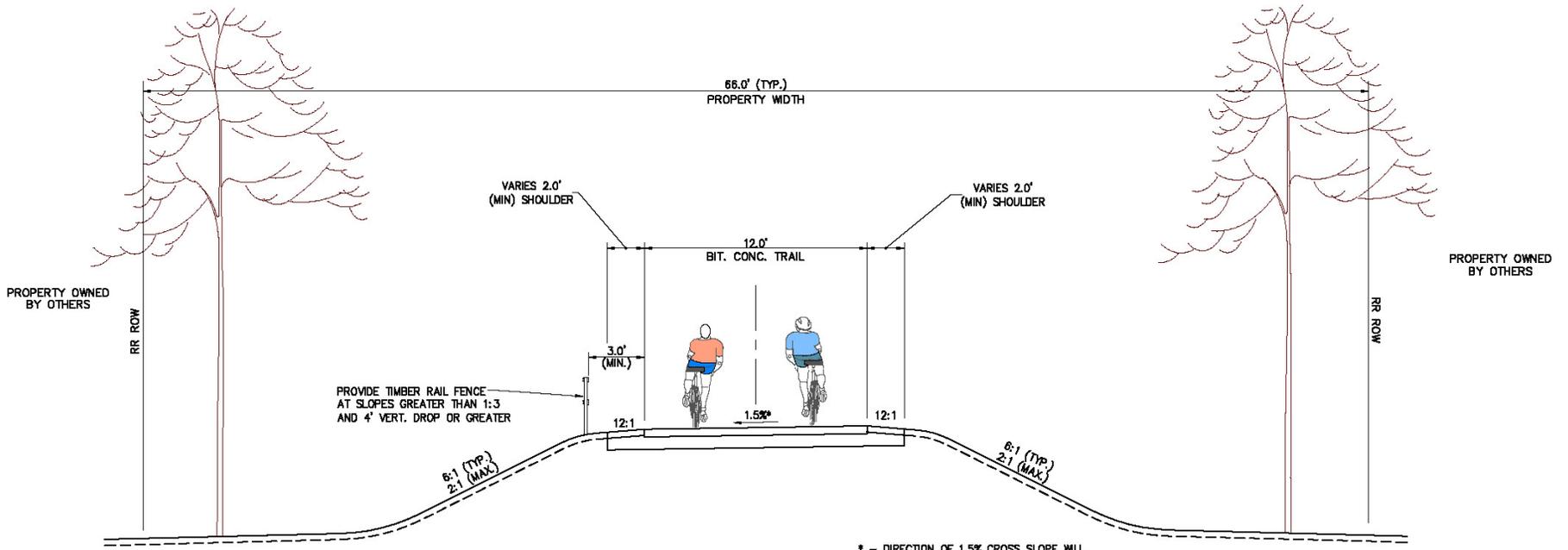
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TYPICAL SECTION – PAVED TRAIL WITH ADJACENT SOFT TRAIL



* - DIRECTION OF 1.5% CROSS SLOPE WILL VARY BASED ON EXISTING CONDITIONS

TYPICAL SECTION - PAVED TRAIL

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Overall Project Alignment



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PROPOSED REHABILITATED
BRIDGE STRUCTURE (TYP.)

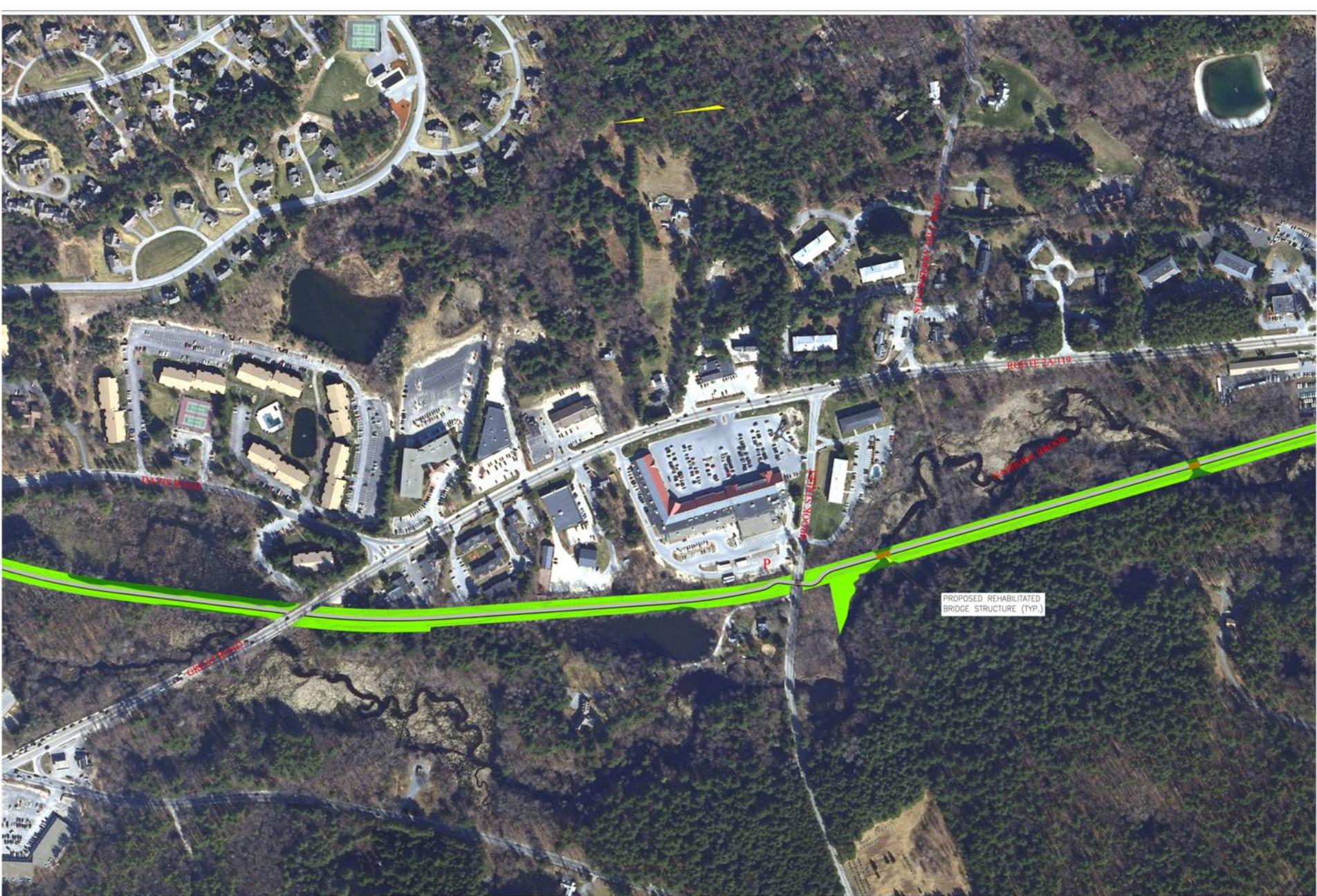
EAST ACTON VILLAGE GREEN

GREAT POND

ICE HOUSE POND

POTENTIAL SPUR TO MORRISON
PROPERTY (RECREATIONAL AREA)









REHABILITATED BRIDGE
STRUCTURE (TYP.)

NAGOG RIVER

POTENTIAL SPUR

NARA

POTENTIAL SPUR
TO NAGOG PARK





Parking/Trail Access Points

- Acton Indoor Sports Parking Lot
- Colonial Spirits Parking Lot
- East Acton Village Green/Morrison Property
- Powers Gallery Easement
- Gould's Plaza Parking Lot
- Veterans Memorial Field Parking Lot
- NARA Parking Lot
- NAGOG Park
- North of Rex
- Carlisle Line Parking Lot

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Roadway Crossing

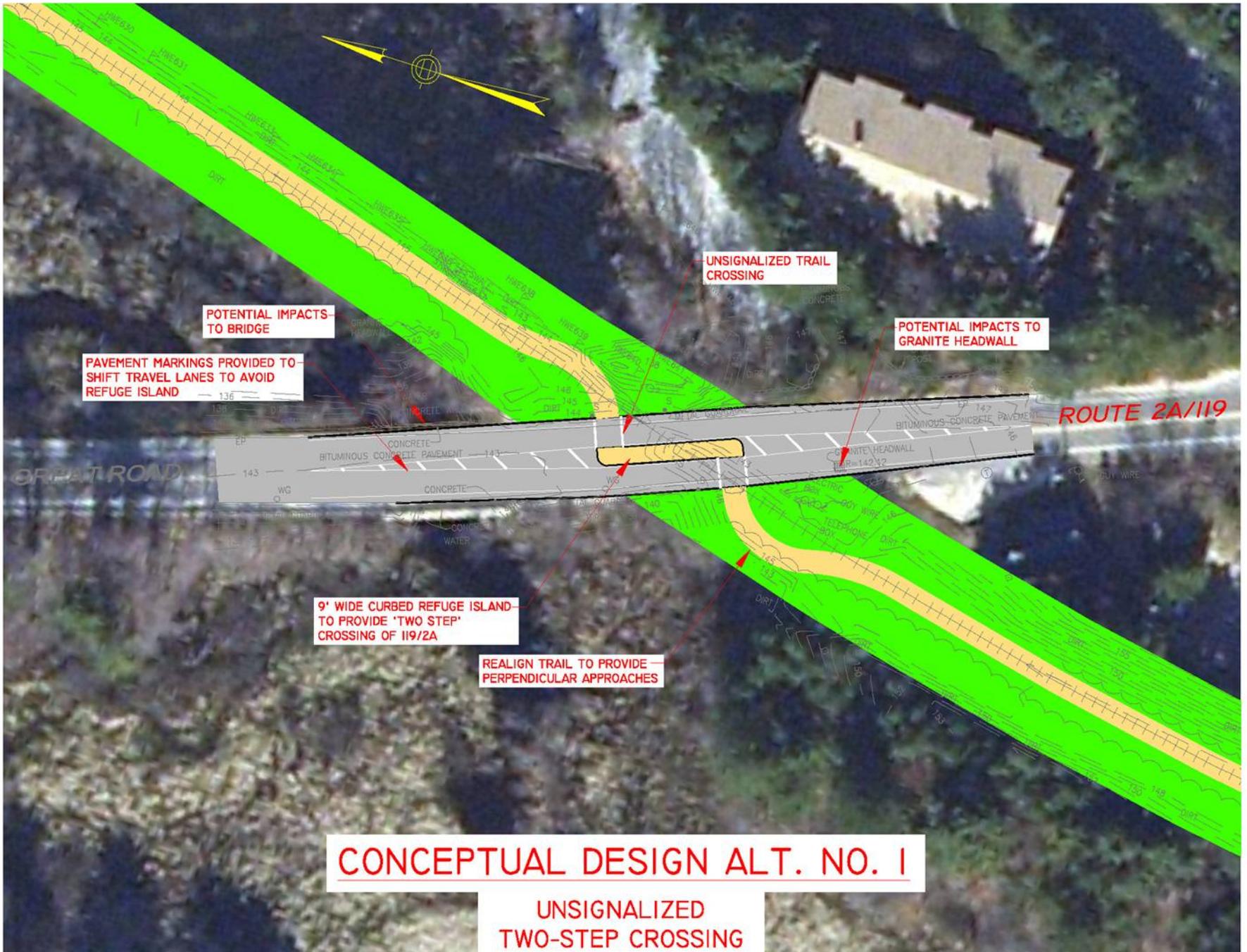
Alternatives at Route 2a/119



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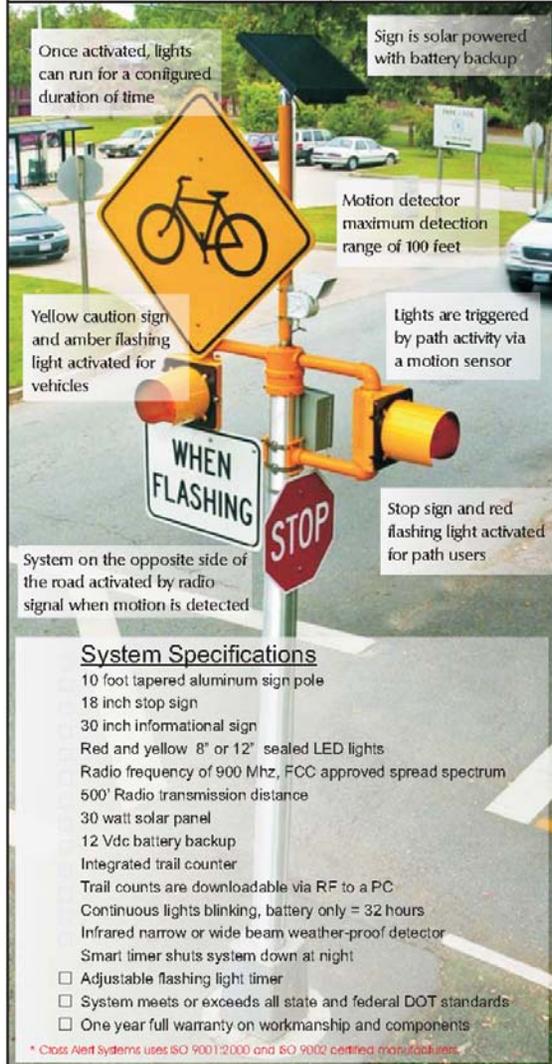
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Cross Alert Systems specializes in technological safety solutions. Our patent pending, motion activated early warning system for recreational path/public road intersections provides an active warning to vehicles that a path user is at or near an intersection. This system provides enhanced visibility at mid-block intersections where the line of sight is poor for vehicles to see oncoming path users.



Once activated, lights can run for a configured duration of time

Sign is solar powered with battery backup

Motion detector maximum detection range of 100 feet

Yellow caution sign and amber flashing light activated for vehicles

Lights are triggered by path activity via a motion sensor

Stop sign and red flashing light activated for path users

System on the opposite side of the road activated by radio signal when motion is detected

System Specifications

- 10 foot tapered aluminum sign pole
- 18 inch stop sign
- 30 inch informational sign
- Red and yellow 8" or 12" sealed LED lights
- Radio frequency of 900 Mhz, FCC approved spread spectrum
- 500' Radio transmission distance
- 30 watt solar panel
- 12 Vdc battery backup
- Integrated trail counter
- Trail counts are downloadable via RF to a PC
- Continuous lights blinking, battery only = 32 hours
- Infrared narrow or wide beam weather-proof detector
- Smart timer shuts system down at night
- Adjustable flashing light timer
- System meets or exceeds all state and federal DOT standards
- One year full warranty on workmanship and components

* Cross Alert Systems uses ISO 9001:2000 and ISO 9002 certified manufacturers.

BENEFITS

VEHICLES ARE FOREWARNED THAT PATH USERS ARE AT OR NEAR THE INTERSECTION

SIGN ONLY FLASHES WHEN PATH USERS APPROACH THE INTERSECTION (ACTIVE WARNING)

REINFORCES EXISTING RIGHT OF WAY RULES

SYSTEM DOES NOT NEED TO BE TIED INTO THE ELECTRIC GRID

PATH USERS DO NOT HAVE TO LEAVE PATH TO TRIGGER SYSTEM (PASSIVE DETECTION)

SYSTEM EMPHASIZES NEED FOR PATH USER TO STOP

INTEGRATED TRAIL COUNTER

System Cost

2-pole intersection, delivered, \$16000*
* price as of 7/1/2005, subject to change

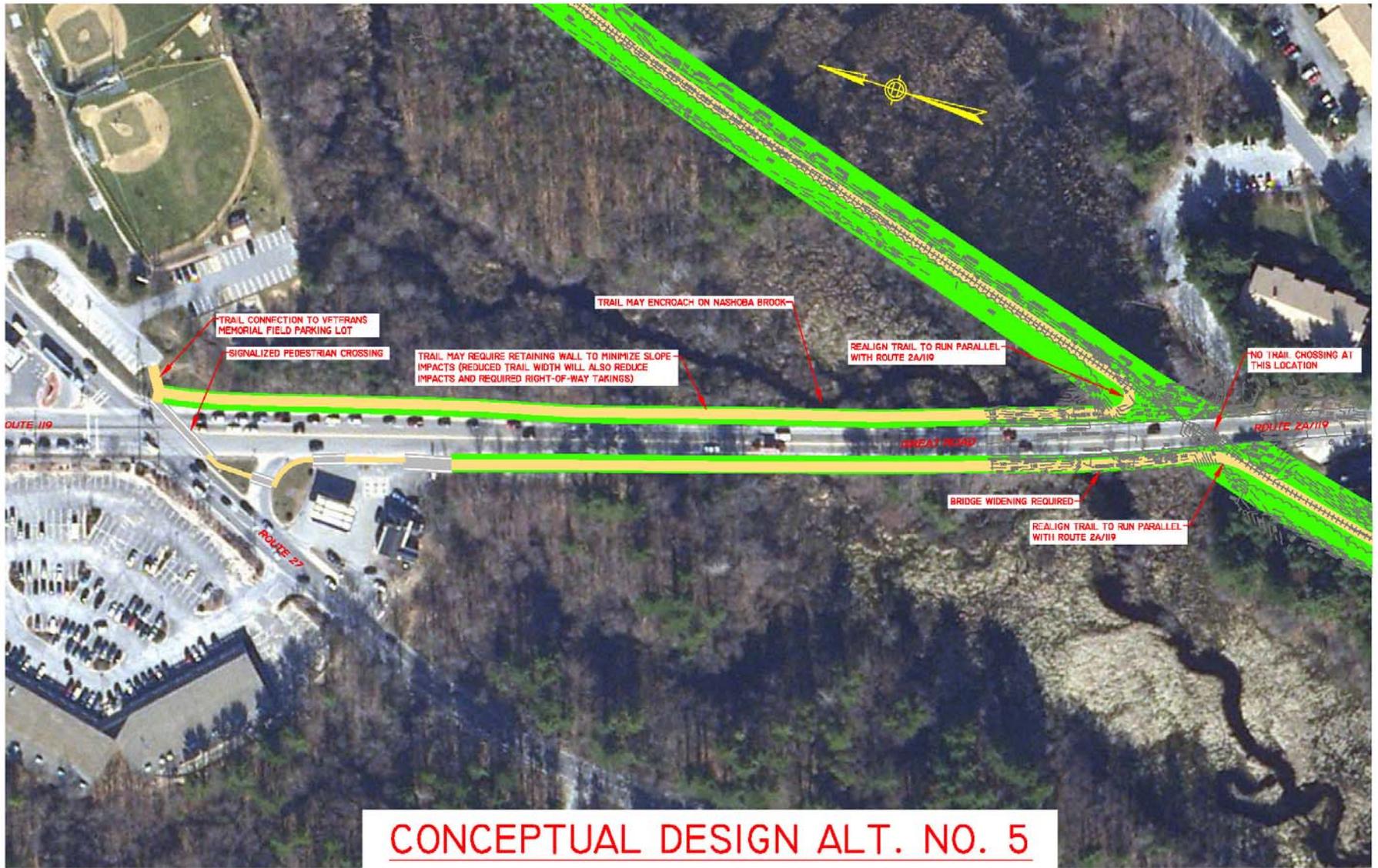
Installation notes

Typical installation cost of approximately \$1200/pole, for labor and material for foundation

Follow State DOT guidelines for installation requirements

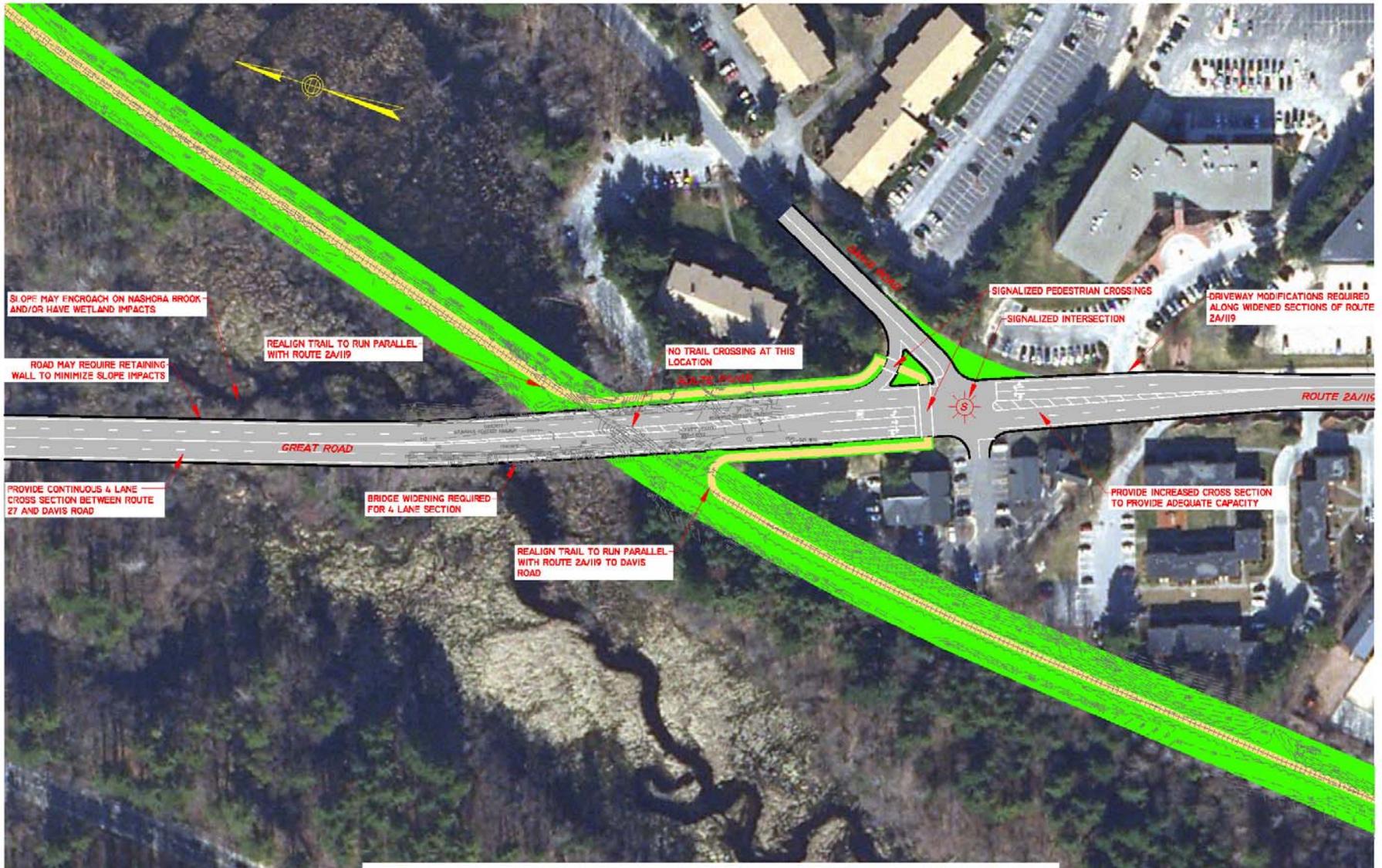
Cross Alert offers an optional maintenance program

Cross Alert Systems, Inc.
 3970 Post Road Second Floor
 Warwick, RI 02886
 1.866.CROSSALERT
 (1.866.276-7725)
 info@crossalert.com
www.crossalert.com



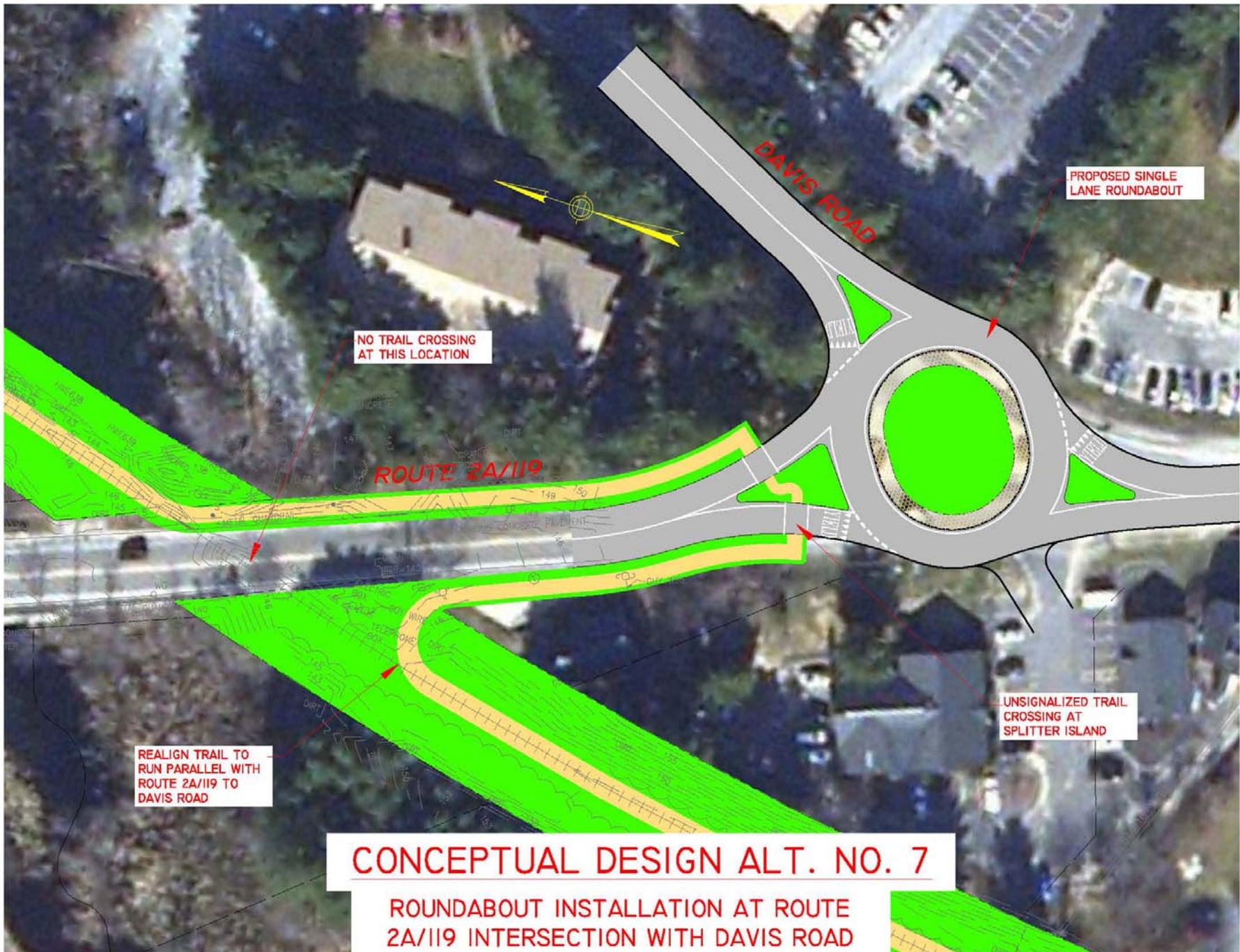
CONCEPTUAL DESIGN ALT. NO. 5

SIGNALIZED CROSSING AT ROUTE 2A/27 INTERSECTION



CONCEPTUAL DESIGN ALT. NO. 6

SIGNALIZED CROSSING AT
DAVIS ROAD INTERSECTION



PROPOSED SINGLE LANE ROUNDABOUT

NO TRAIL CROSSING AT THIS LOCATION

ROUTE 2A/119

DAVIS ROAD

UNSIGNALIZED TRAIL CROSSING AT SPLITTER ISLAND

REALIGN TRAIL TO RUN PARALLEL WITH ROUTE 2A/119 TO DAVIS ROAD

CONCEPTUAL DESIGN ALT. NO. 7

ROUNDABOUT INSTALLATION AT ROUTE 2A/119 INTERSECTION WITH DAVIS ROAD



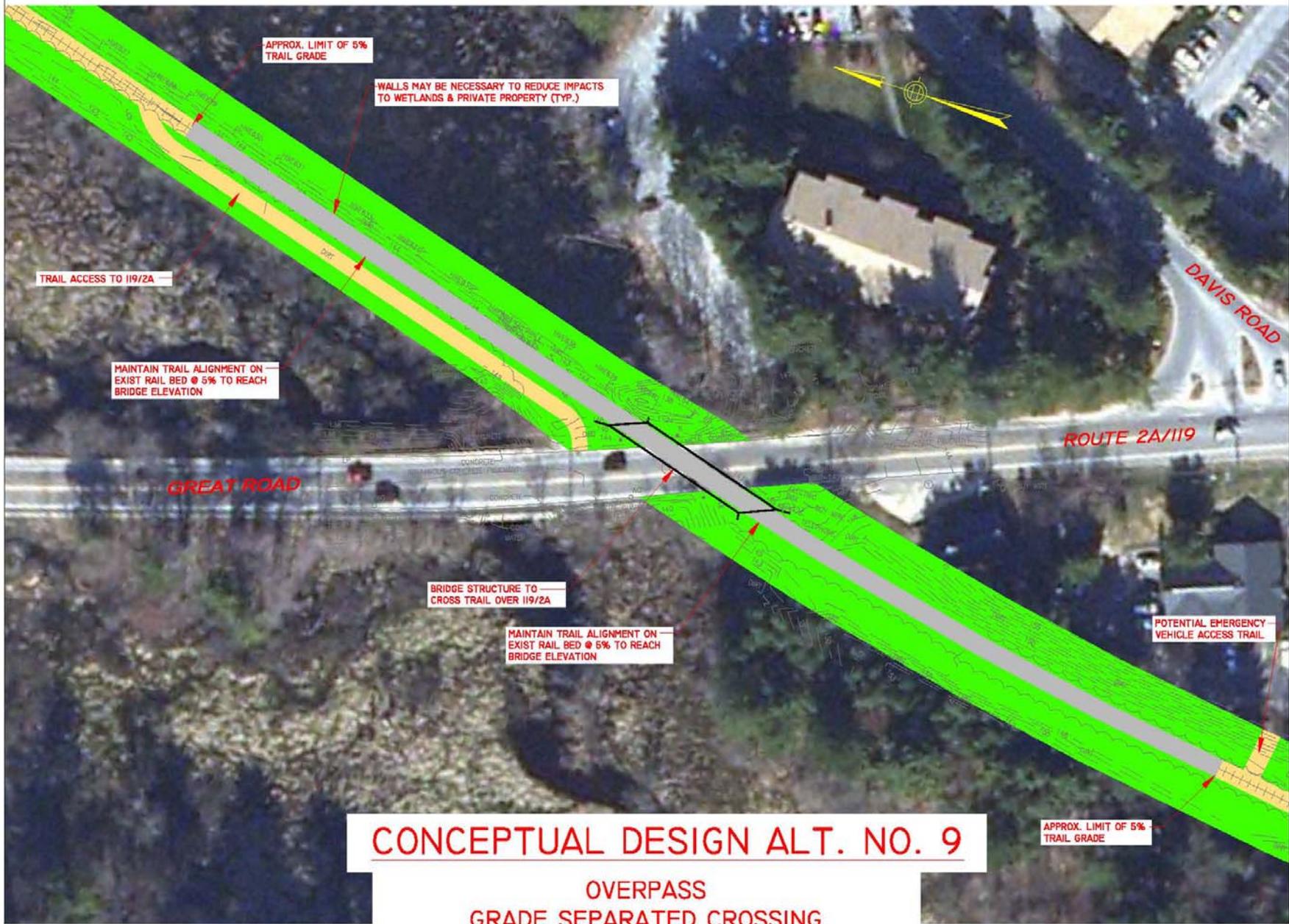
SIGNALIZED/GATED TRAIL CROSSING

ROUTE 2A/119

REALIGN TRAIL SLIGHTLY TO PROVIDE PERPENDICULAR CROSSING

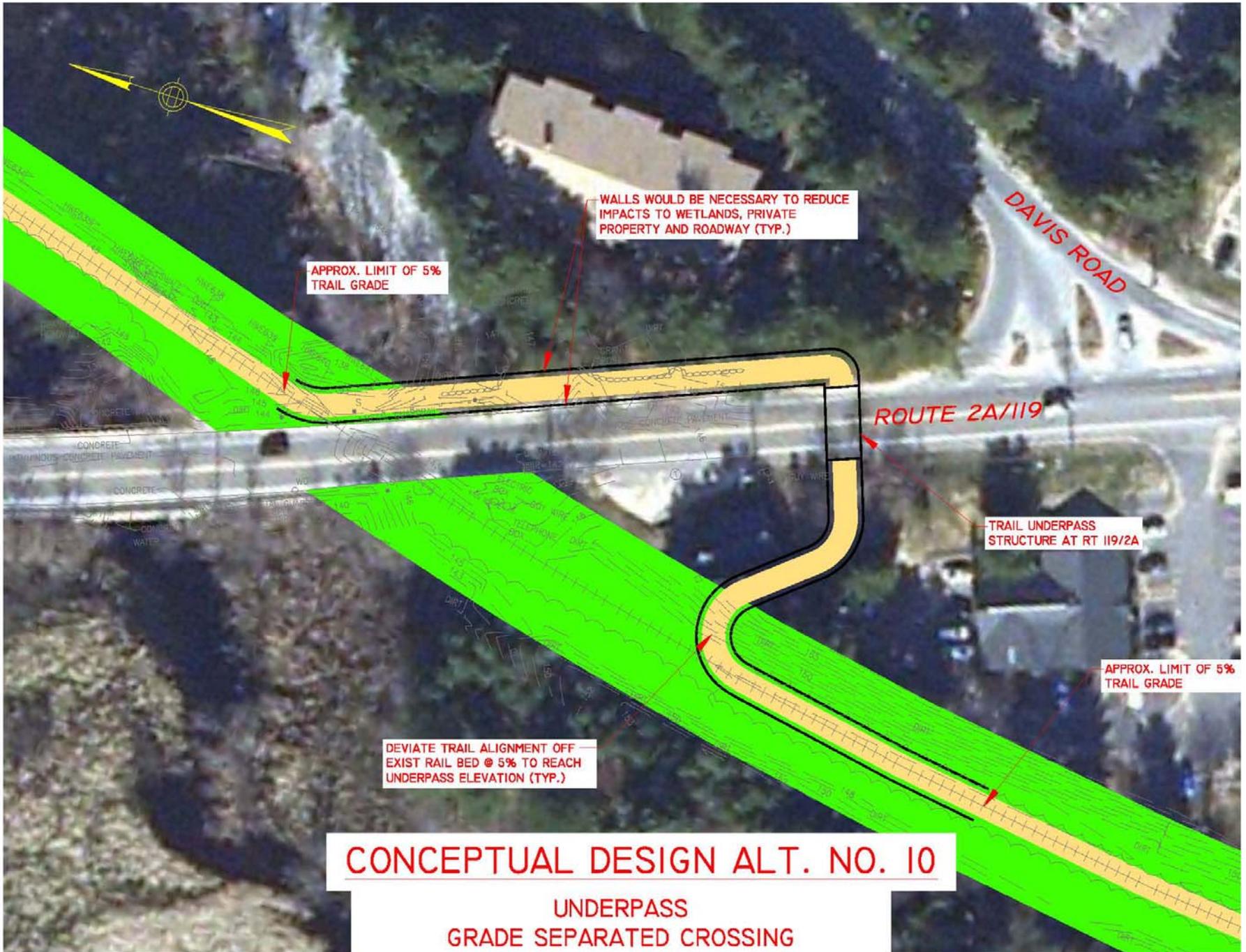
CONCEPTUAL DESIGN ALT. NO. 8

SIGNALIZED/GATED PERPENDICULAR CROSSING



CONCEPTUAL DESIGN ALT. NO. 9

OVERPASS
GRADE SEPARATED CROSSING



WALLS WOULD BE NECESSARY TO REDUCE IMPACTS TO WETLANDS, PRIVATE PROPERTY AND ROADWAY (TYP.)

APPROX. LIMIT OF 5% TRAIL GRADE

ROUTE 2A/119

TRAIL UNDERPASS STRUCTURE AT RT 119/2A

APPROX. LIMIT OF 5% TRAIL GRADE

DEVIATE TRAIL ALIGNMENT OFF EXIST RAIL BED @ 5% TO REACH UNDERPASS ELEVATION (TYP.)

CONCEPTUAL DESIGN ALT. NO. 10

UNDERPASS GRADE SEPARATED CROSSING

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Route 2a/119 Crossing Concepts to Advance



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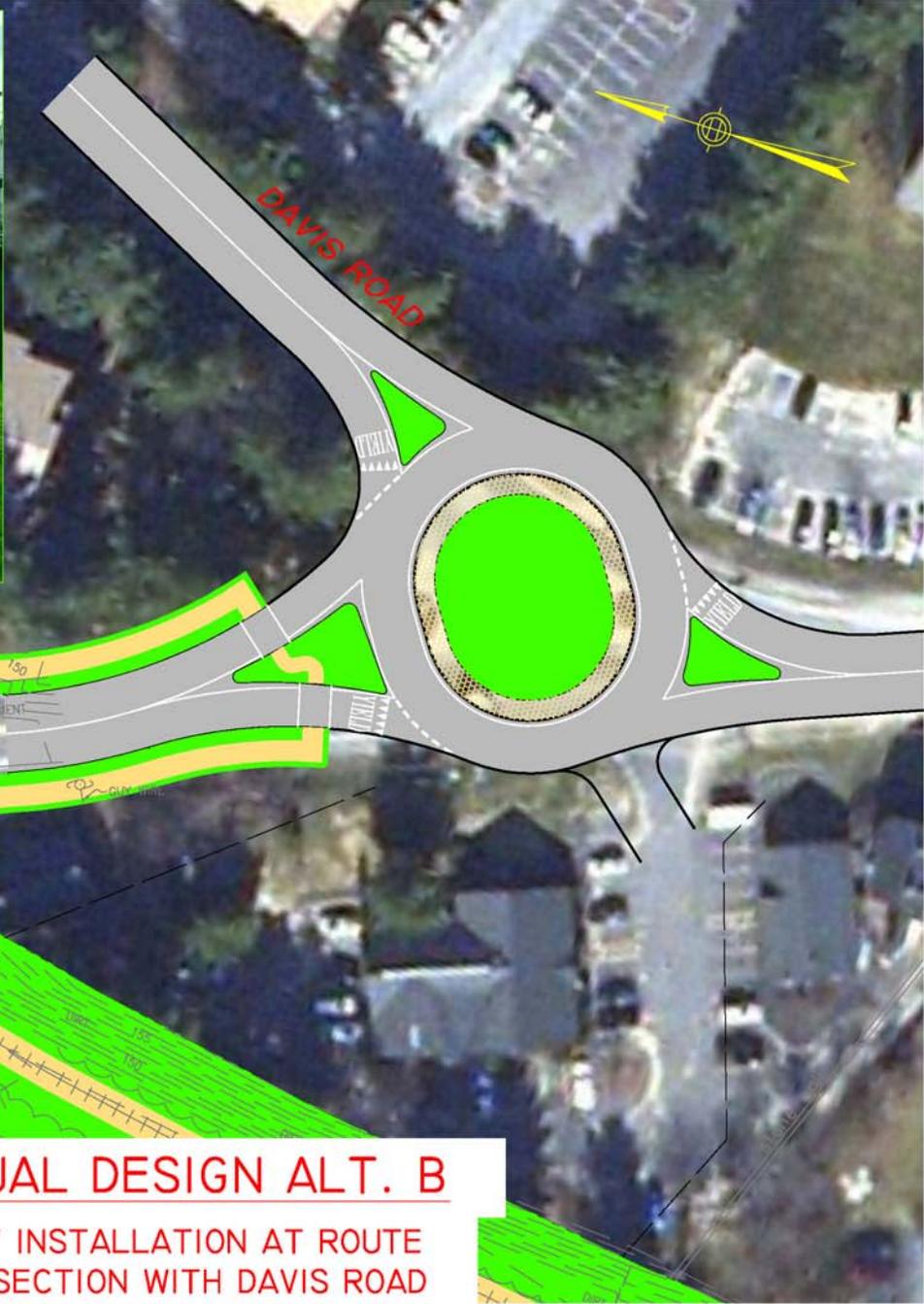
CONCEPTUAL DESIGN ALT. A

**OVERPASS
GRADE SEPARATED CROSSING**

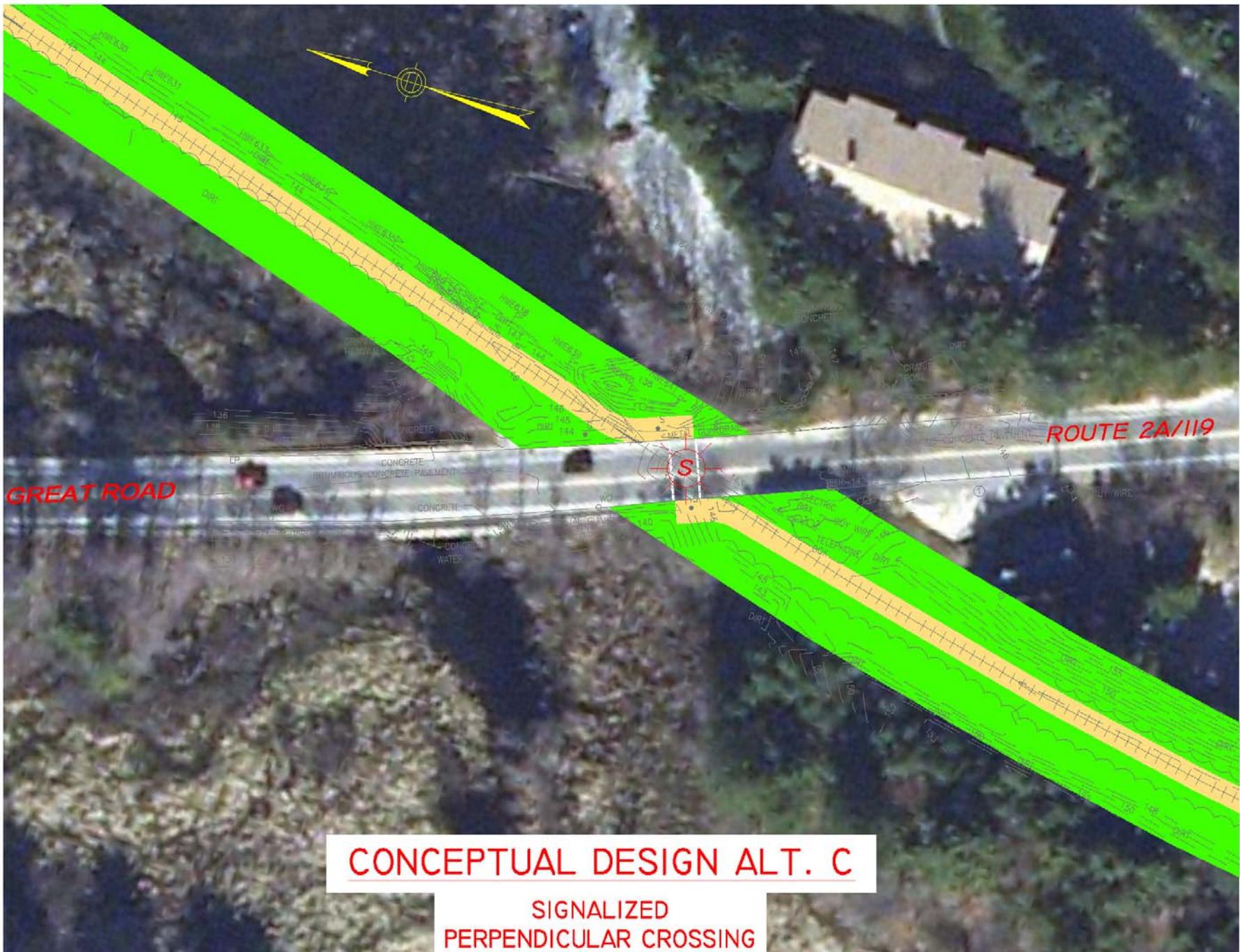




DO
NOT
PASS



CONCEPTUAL DESIGN ALT. B
ROUNDBOUT INSTALLATION AT ROUTE 2A/119 INTERSECTION WITH DAVIS ROAD



GREAT ROAD

ROUTE 2A/119

CONCEPTUAL DESIGN ALT. C

**SIGNALIZED
PERPENDICULAR CROSSING**





DO
NOT
PASS

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Public Input:

Concerns?

Questions?

Feedback?



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