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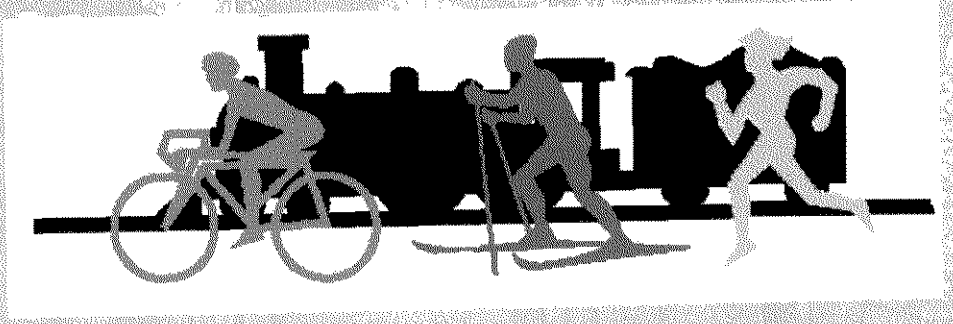
Engineering and Construction Services



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

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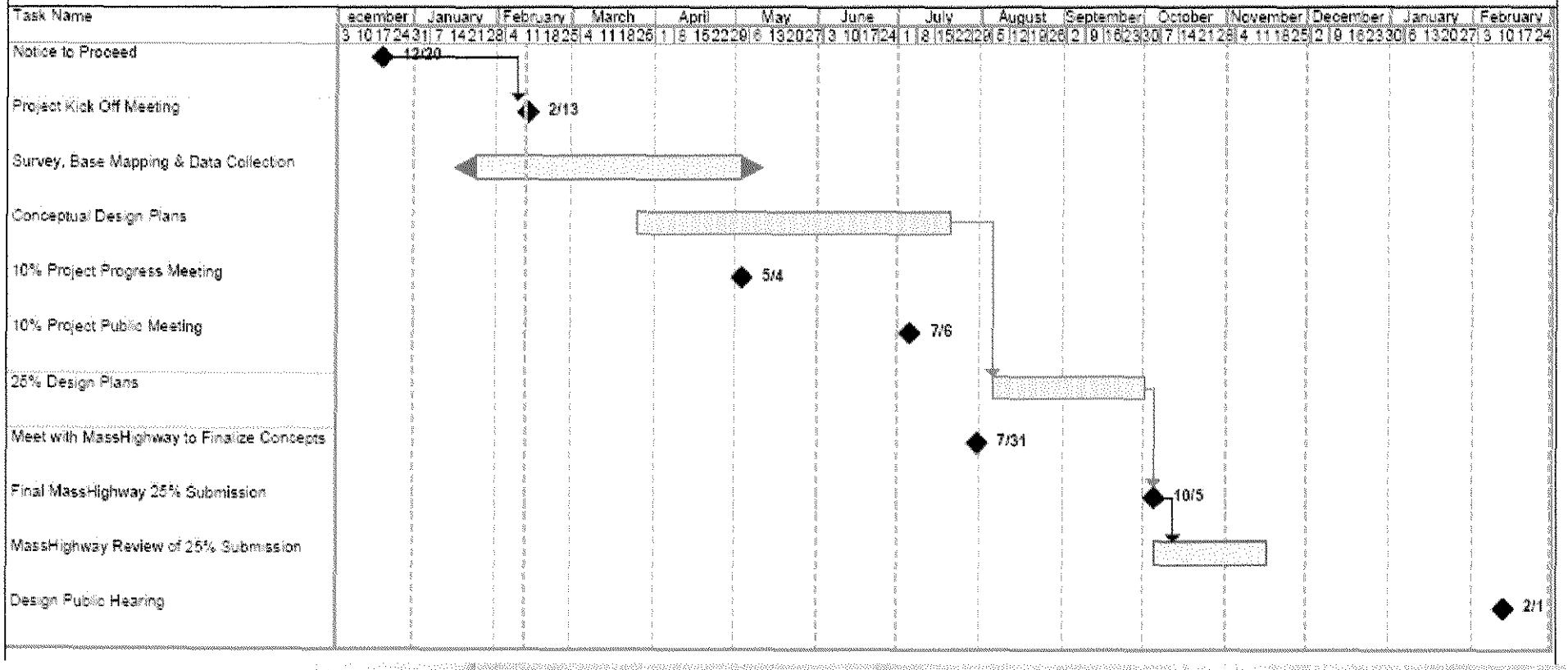
Project Schedule

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



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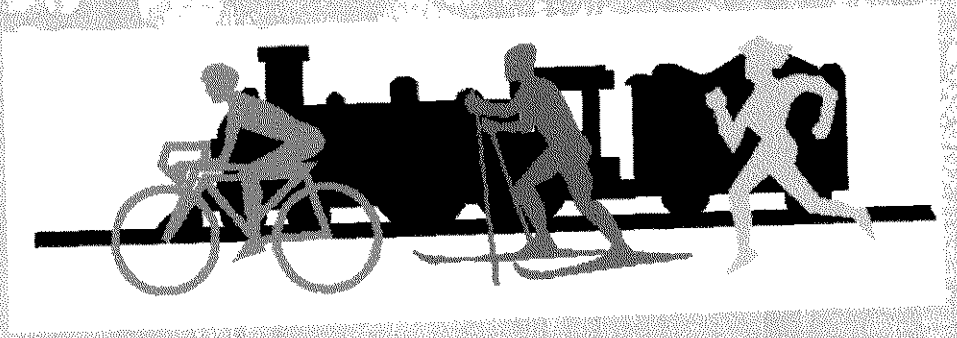
Engineering and Construction Services



Typical Trail Cross Section

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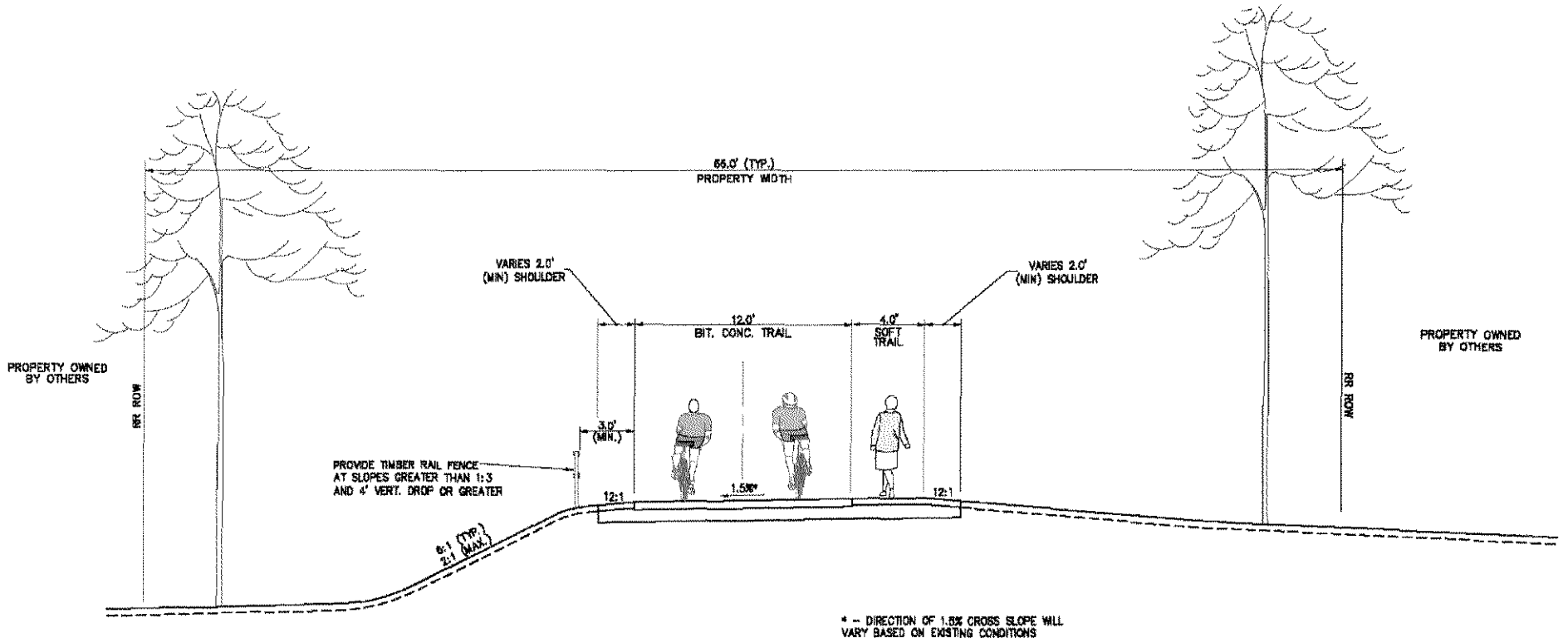
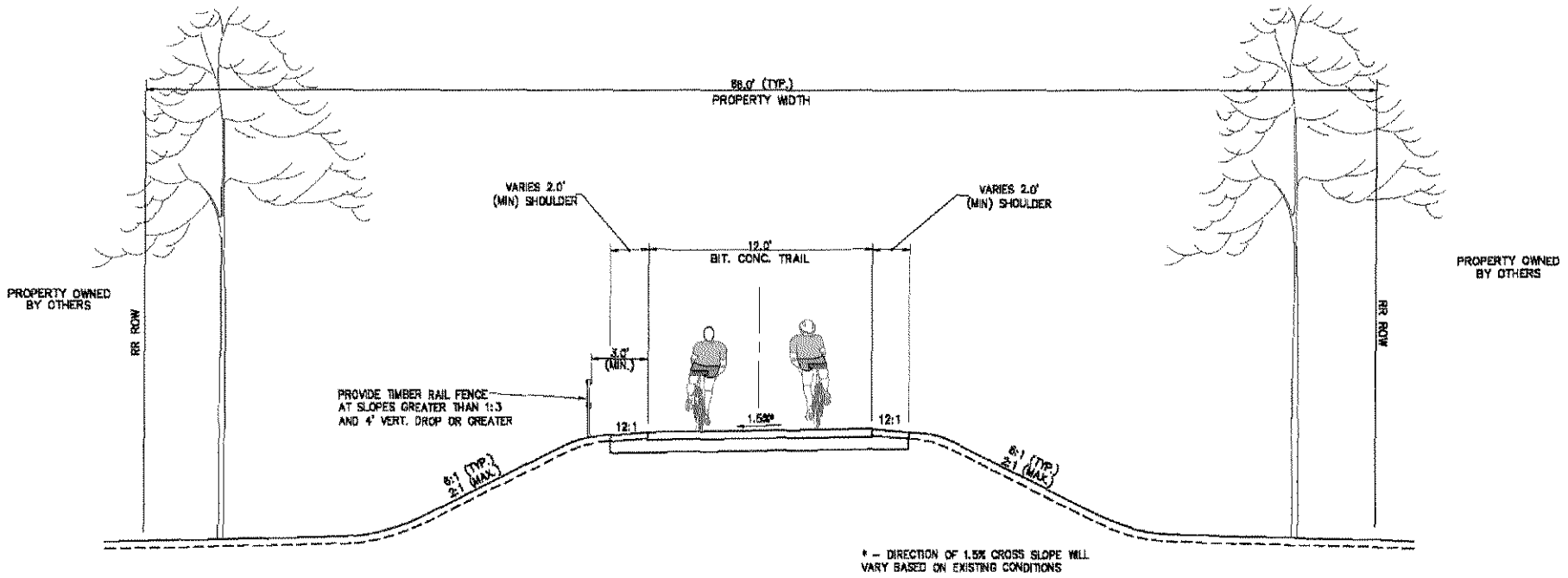
Stoneham, MA 02180
www.gpinet.com



TYPICAL SECTION – PAVED TRAIL WITH ADJACENT SOFT TRAIL



TYPICAL SECTION – PAVED TRAIL

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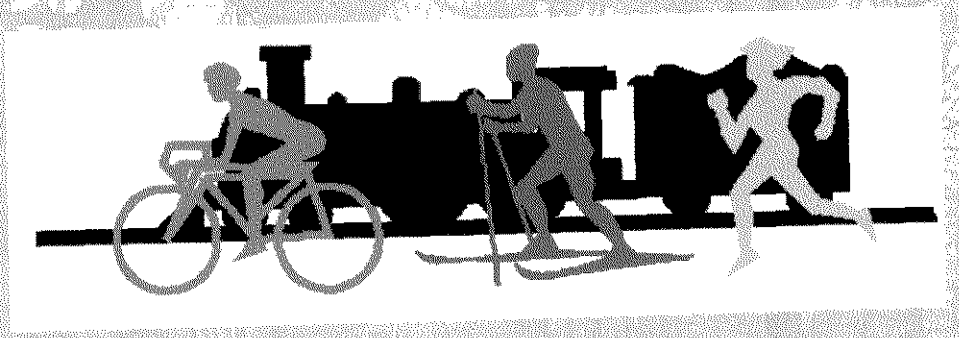
Engineering and Construction Services



Overall Project Alignment

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Stoneham, MA 02180
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10% PUBLIC MEETING
BRUCE FREEMAN RAIL TRAIL
ACTON/CARLISLE/WESTFORD, MA

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10% PUBLIC MEETING
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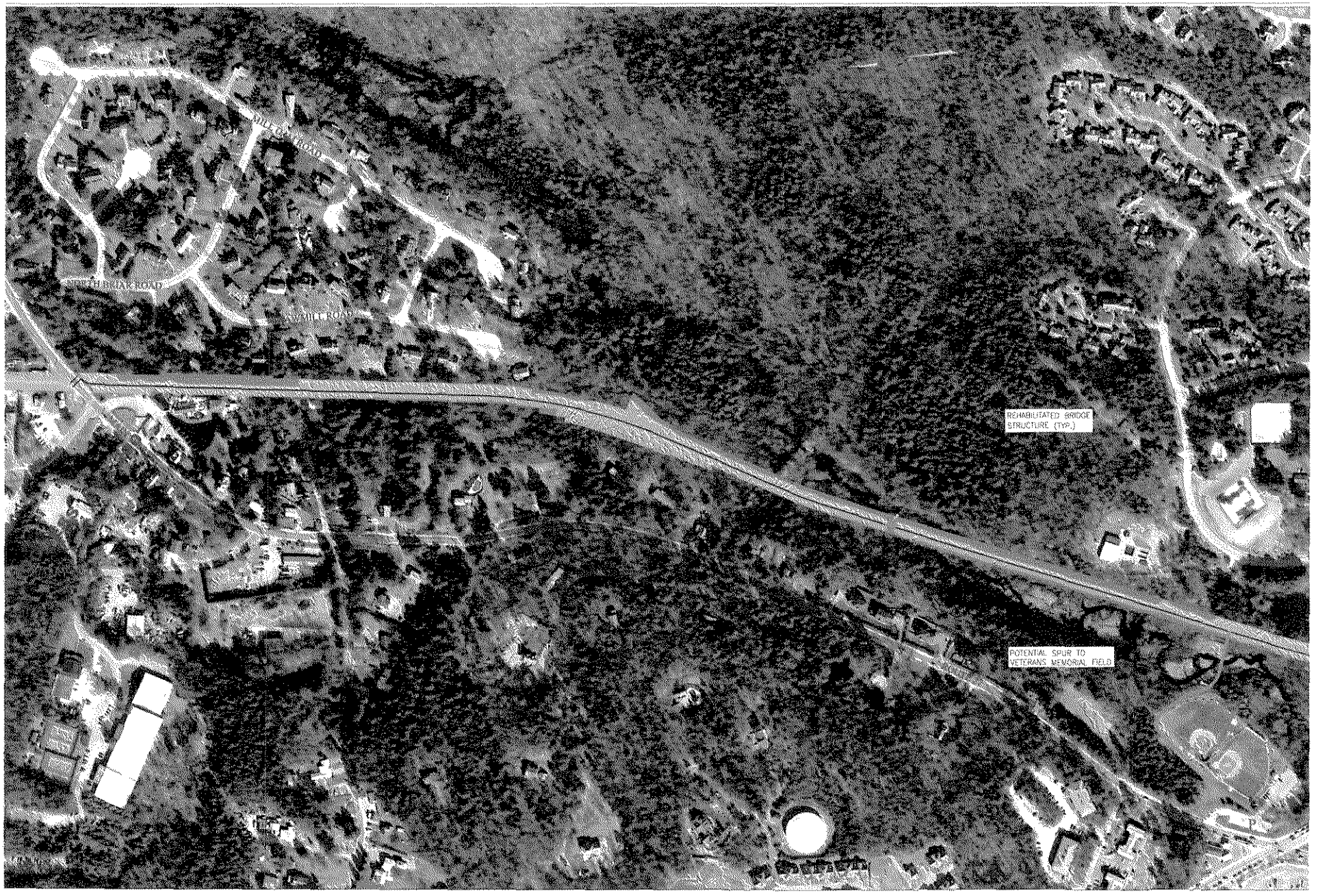

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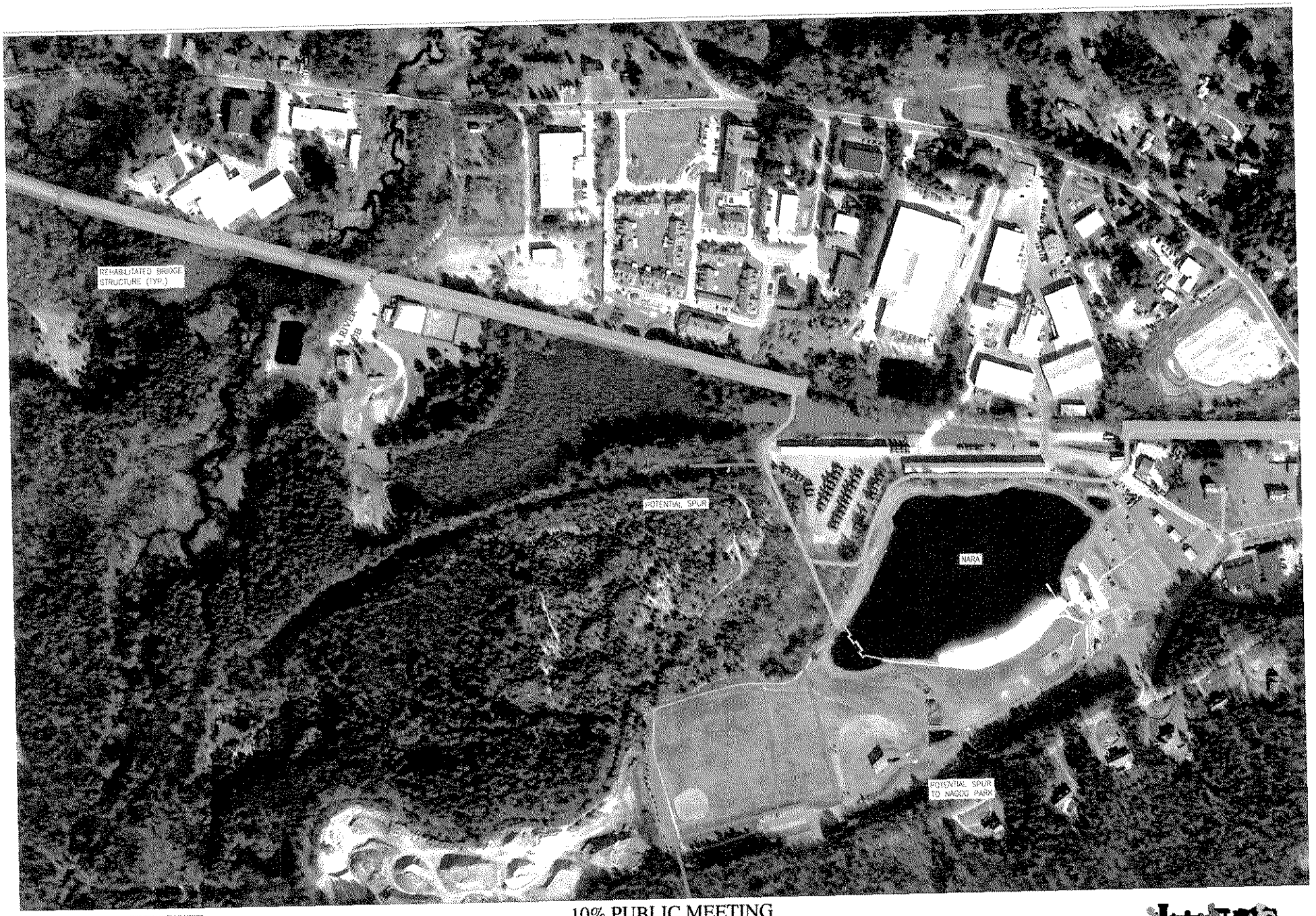
10% PUBLIC MEETING
BRUCE FREEMAN RAIL TRAIL
ACTON/CARLISLE/WESTFORD, MA



GPI Greenman-Pedersen, Inc.

10% PUBLIC MEETING
BRUCE FREEMAN RAIL TRAIL
ACTON/CARLISLE/WESTFORD, MA

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10% PUBLIC MEETING
BRUCE FREEMAN RAIL TRAIL
ACTON/CARLISLE/WESTFORD, MA

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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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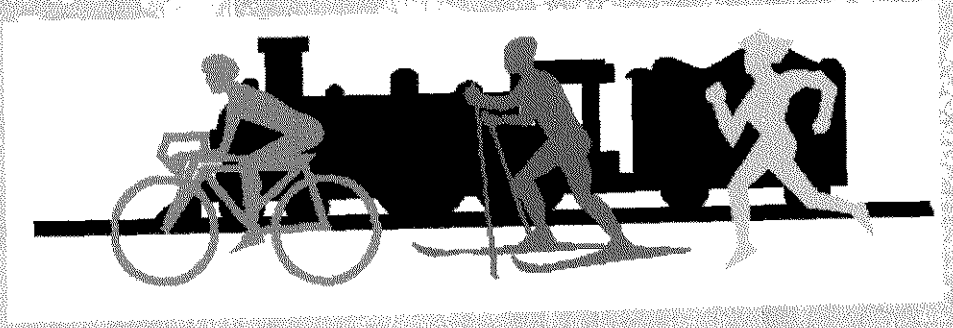

Roadway Crossing

Alternatives at Route 2a/119

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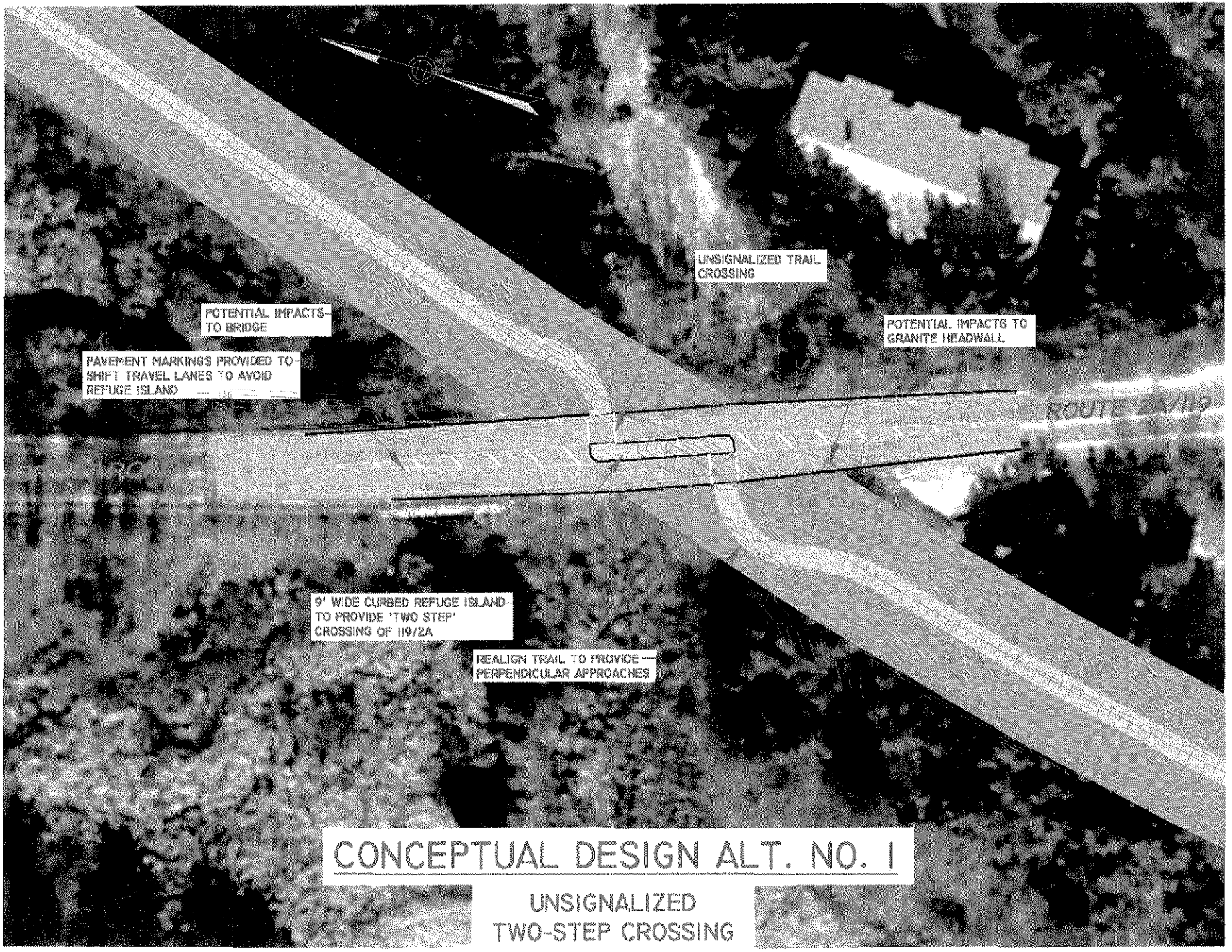
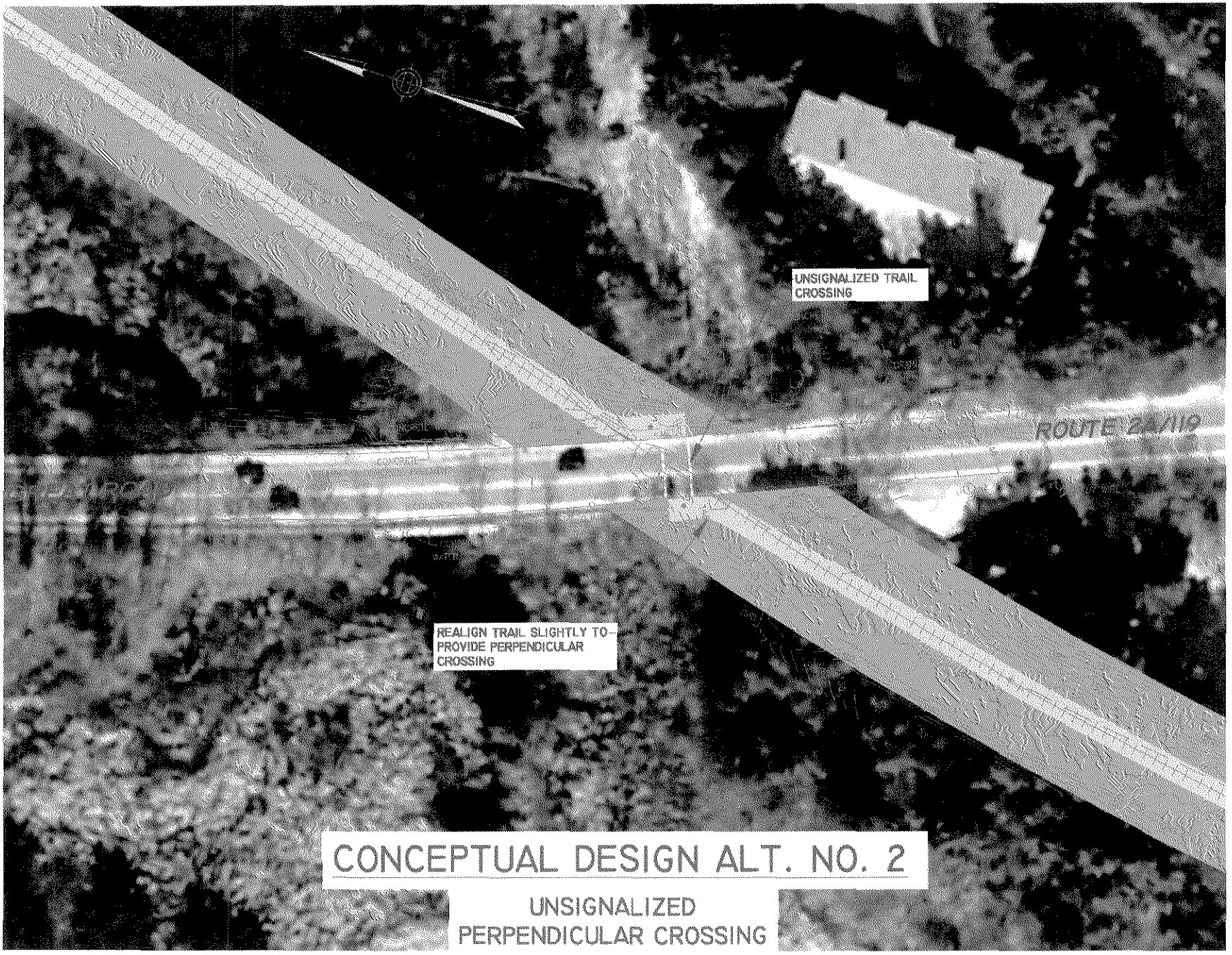


CONCEPTUAL DESIGN ALT. NO. 1

UNSIGNALIZED
TWO-STEP CROSSING

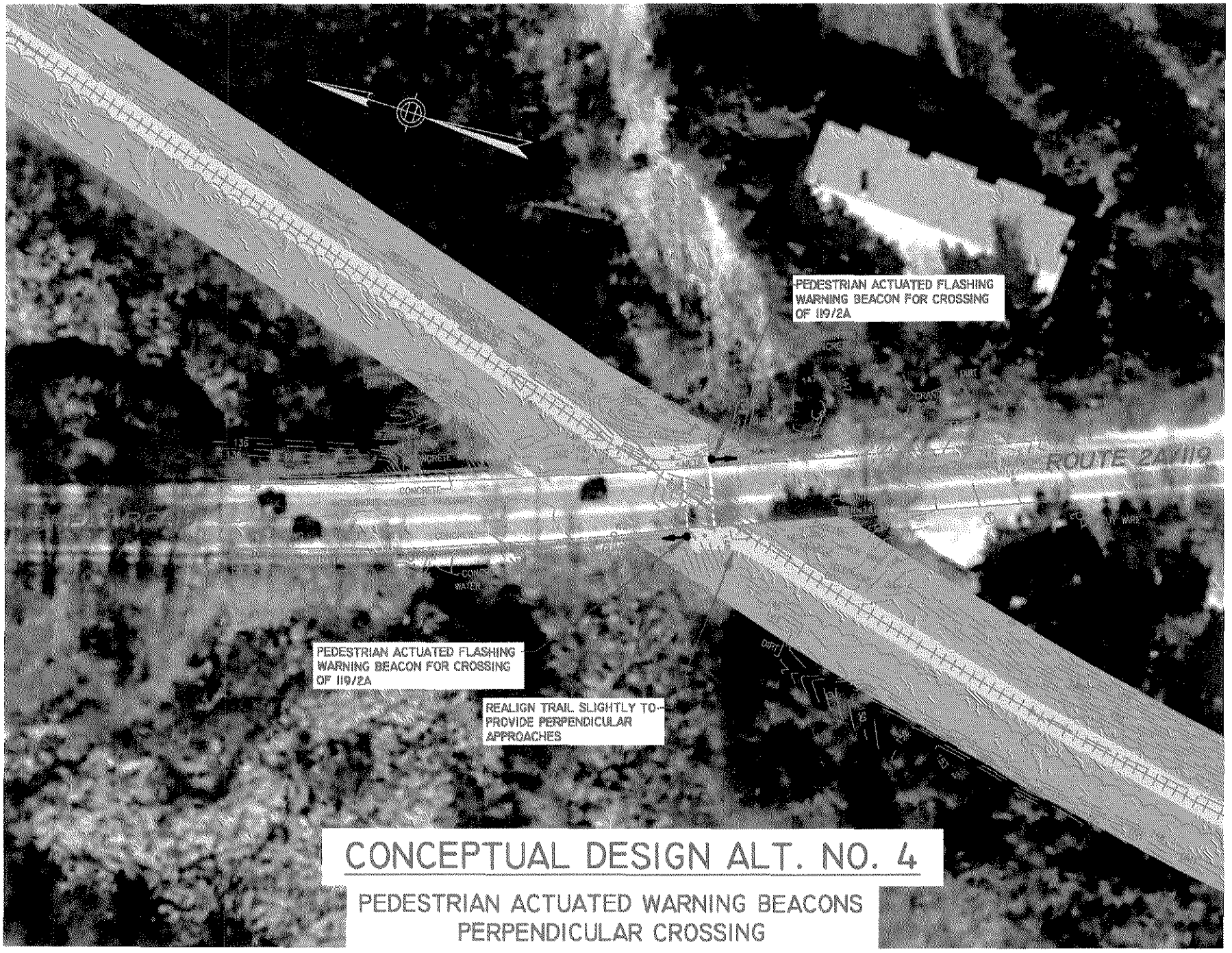


CONCEPTUAL DESIGN ALT. NO. 2

UNSIGNALIZED PERPENDICULAR CROSSING

CONCEPTUAL DESIGN ALT. NO. 3

UNSIGNALIZED
SKEWED CROSSING

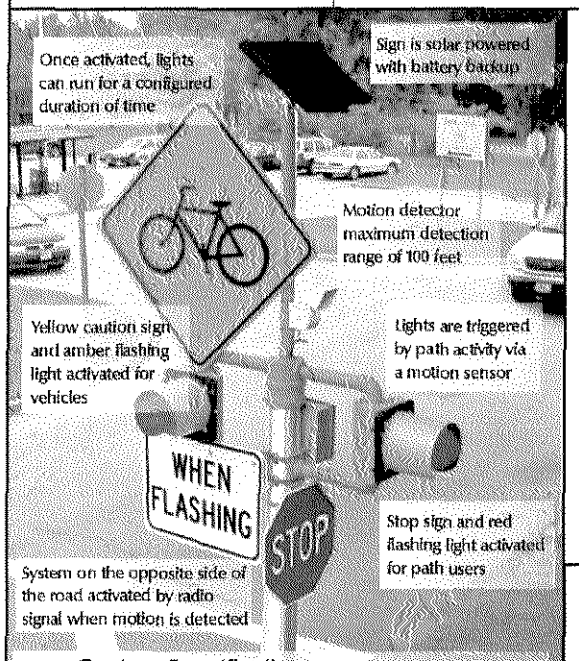


CONCEPTUAL DESIGN ALT. NO. 4

PEDESTRIAN ACTUATED WARNING BEACONS
PERPENDICULAR CROSSING

Cross Alert Systems

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.



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*

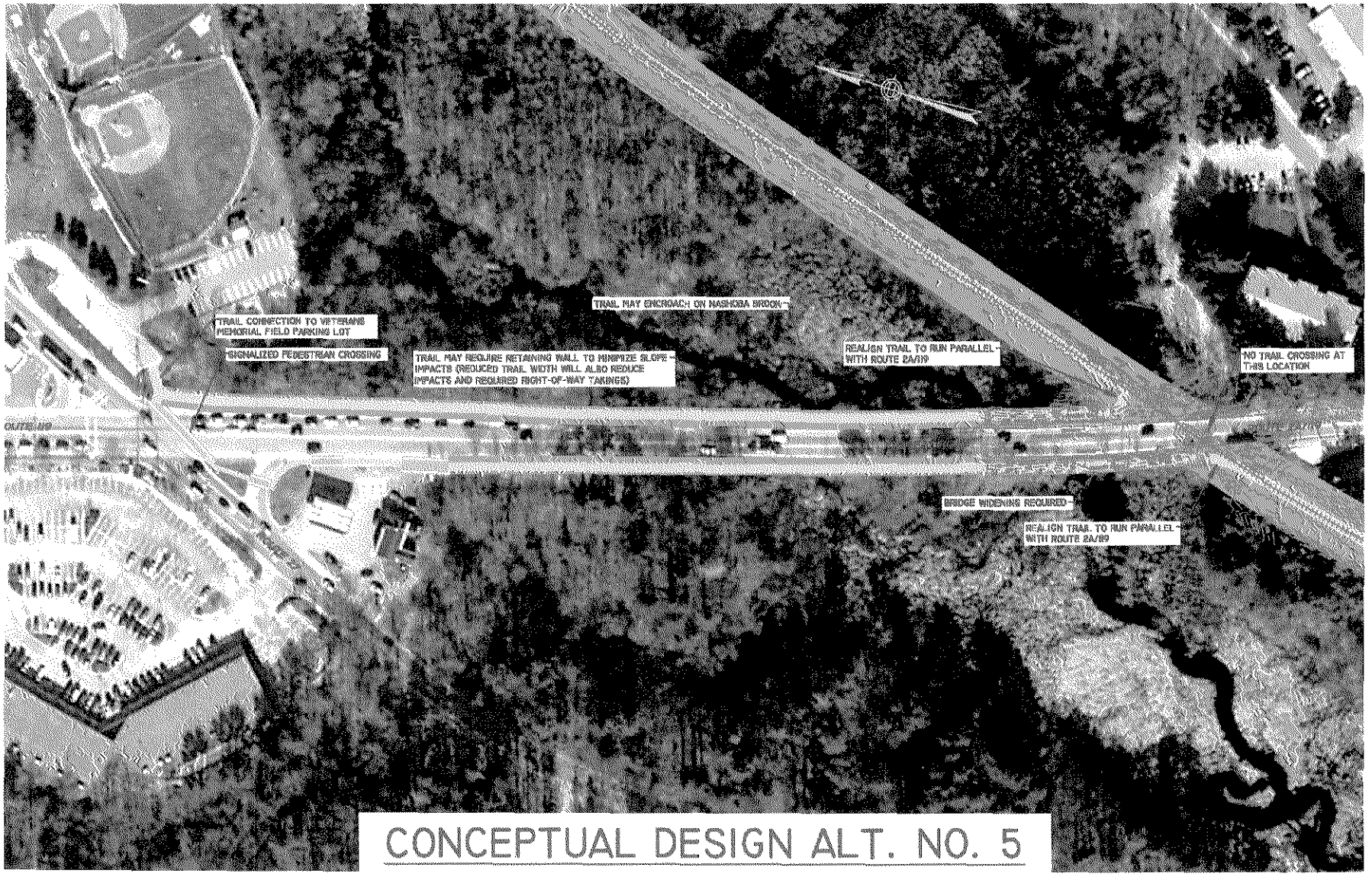
Installation notes

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

Follow State DOT guidelines for installation requirements

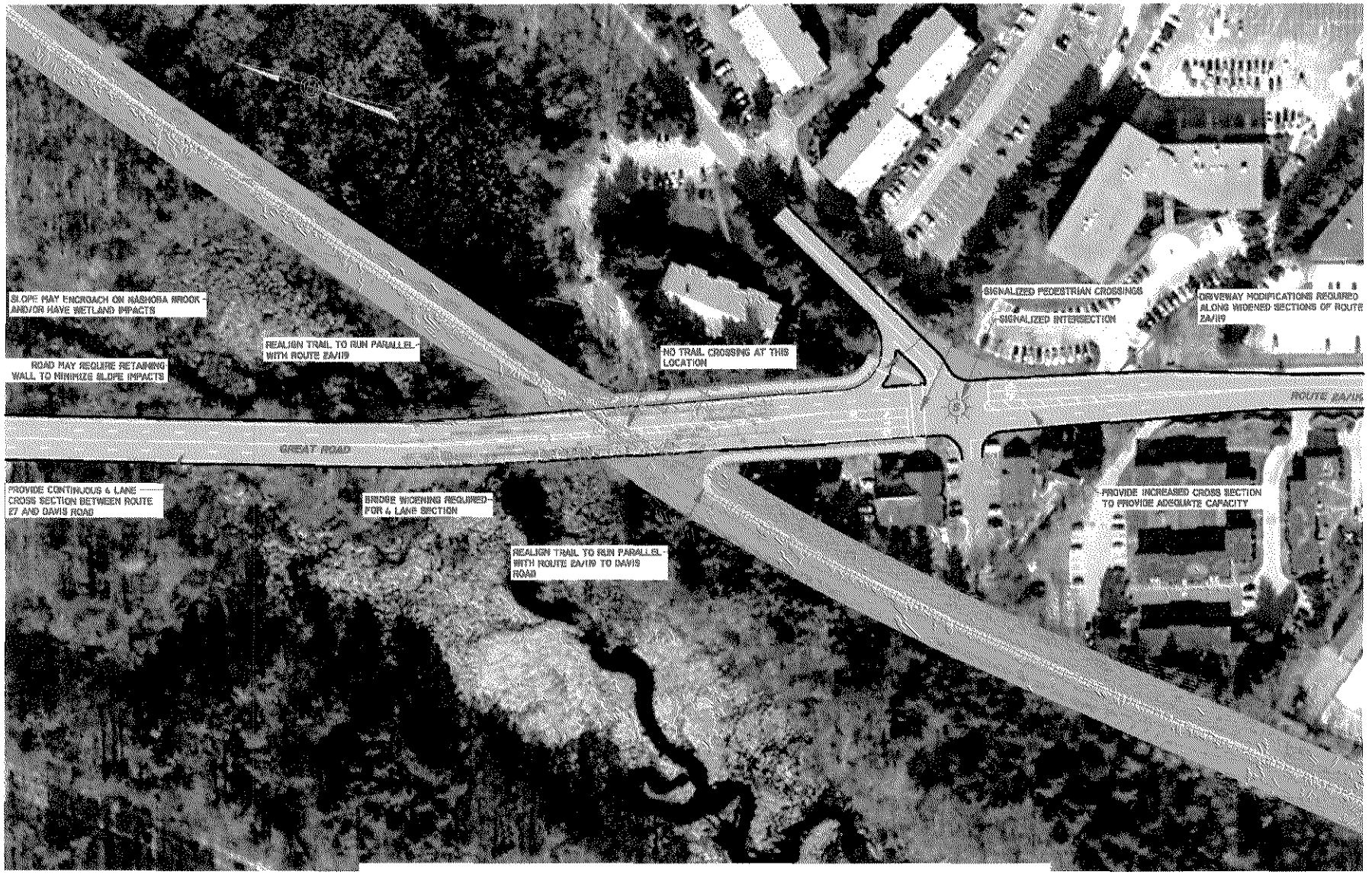
Cross Alert offers an optional maintenance program

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



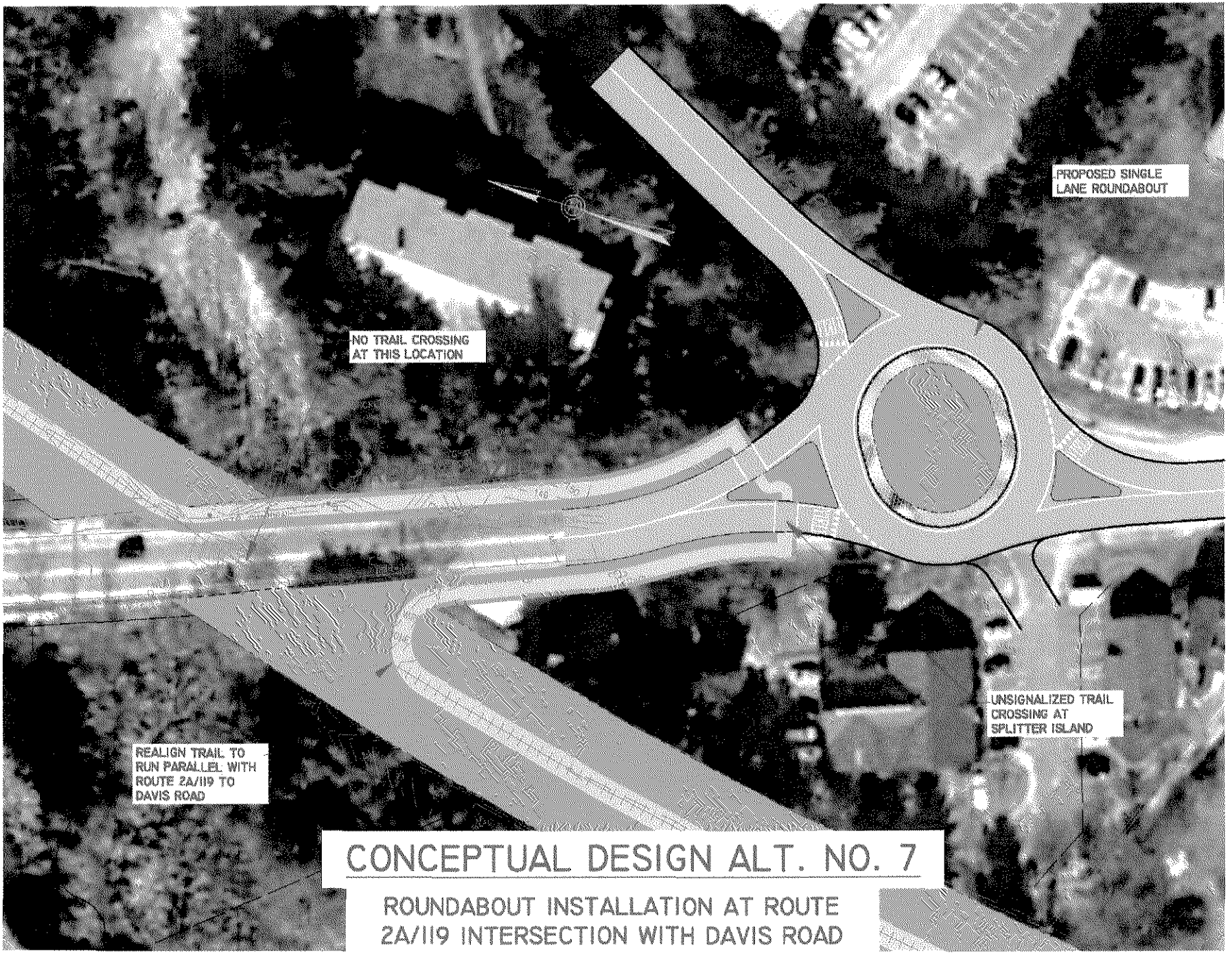
CONCEPTUAL DESIGN ALT. NO. 5

SIGNALIZED CROSSING AT ROUTE 2A/27 INTERSECTION



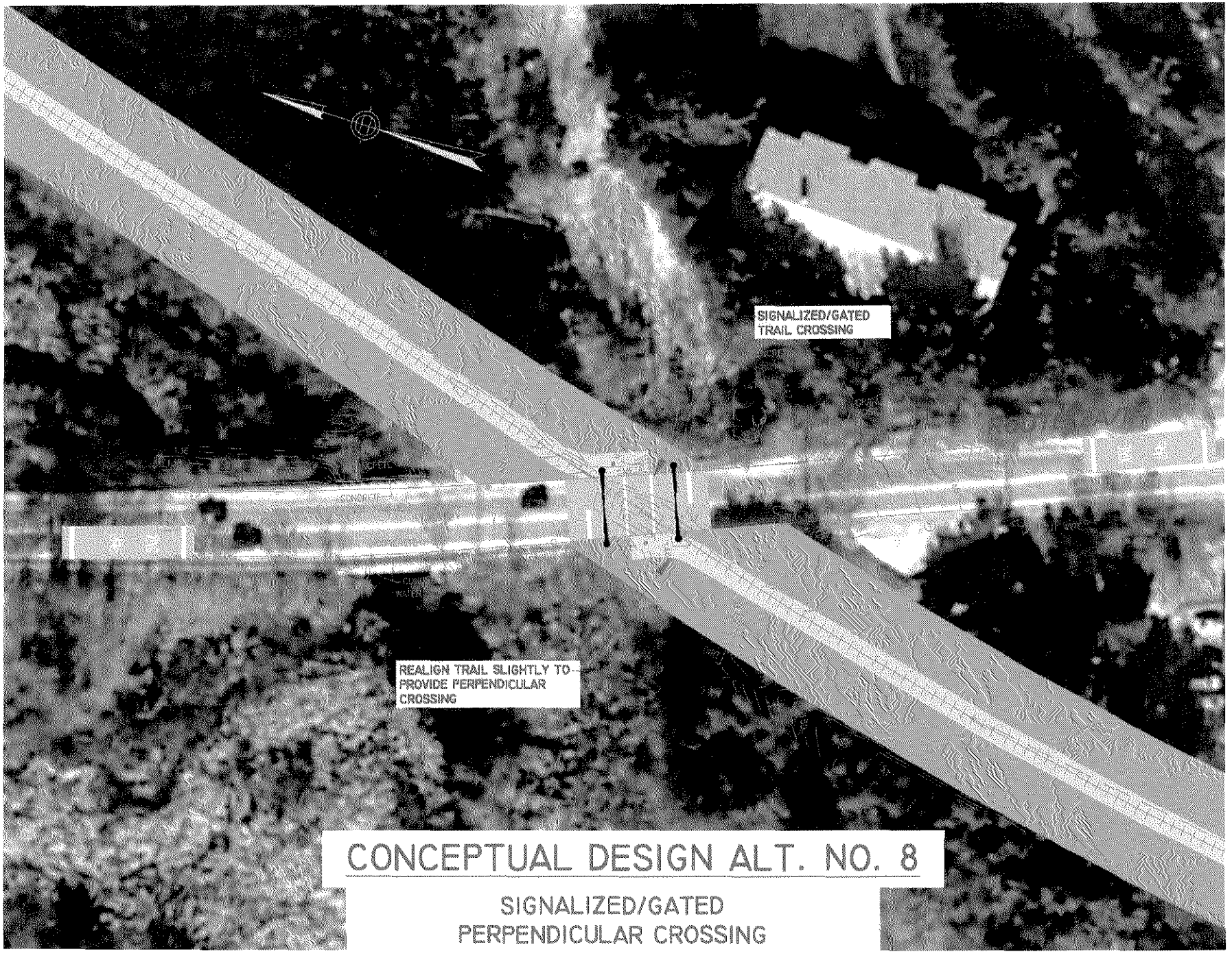
CONCEPTUAL DESIGN ALT. NO. 6

SIGNALIZED CROSSING AT
DAVIS ROAD INTERSECTION



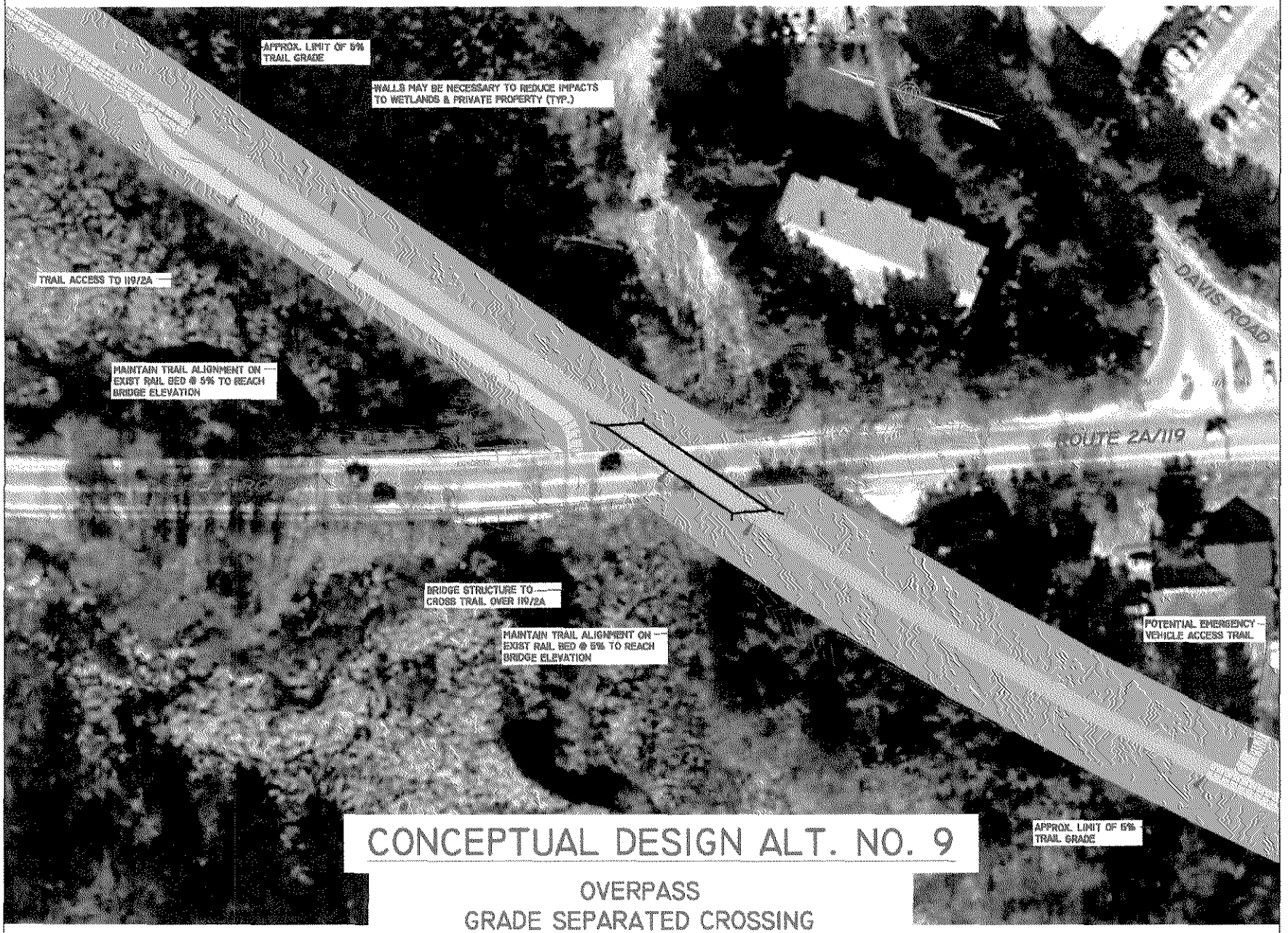
CONCEPTUAL DESIGN ALT. NO. 7

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



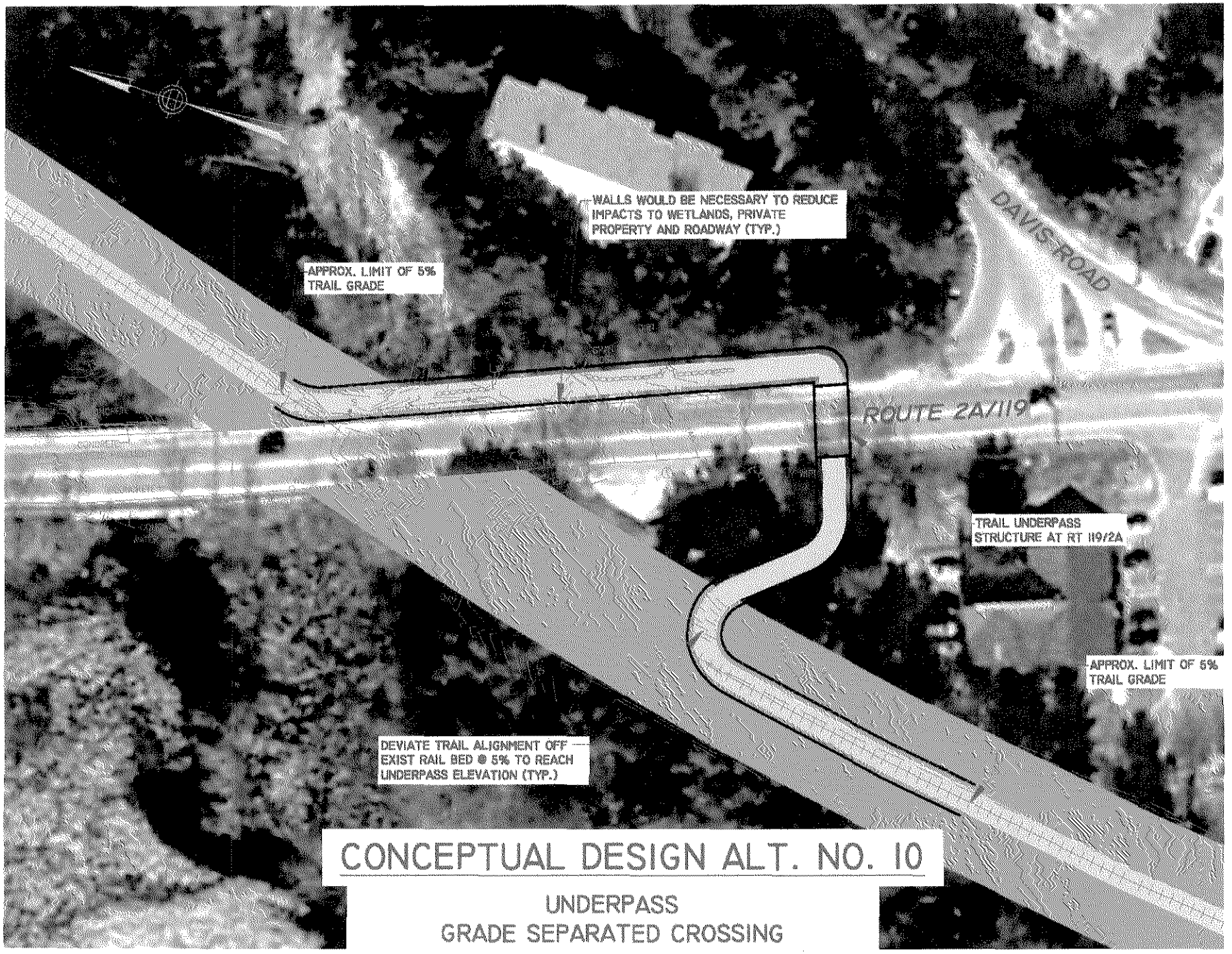
CONCEPTUAL DESIGN ALT. NO. 8

SIGNALIZED/GATED
PERPENDICULAR CROSSING



CONCEPTUAL DESIGN ALT. NO. 9

OVERPASS
GRADE SEPARATED CROSSING



CONCEPTUAL DESIGN ALT. NO. 10

UNDERPASS
GRADE SEPARATED CROSSING

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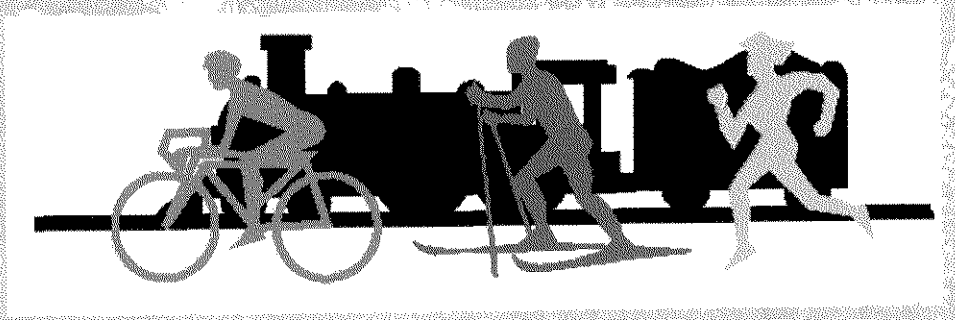
Engineering and Construction Services



Route 2a/119 Crossing

Concepts to Advance

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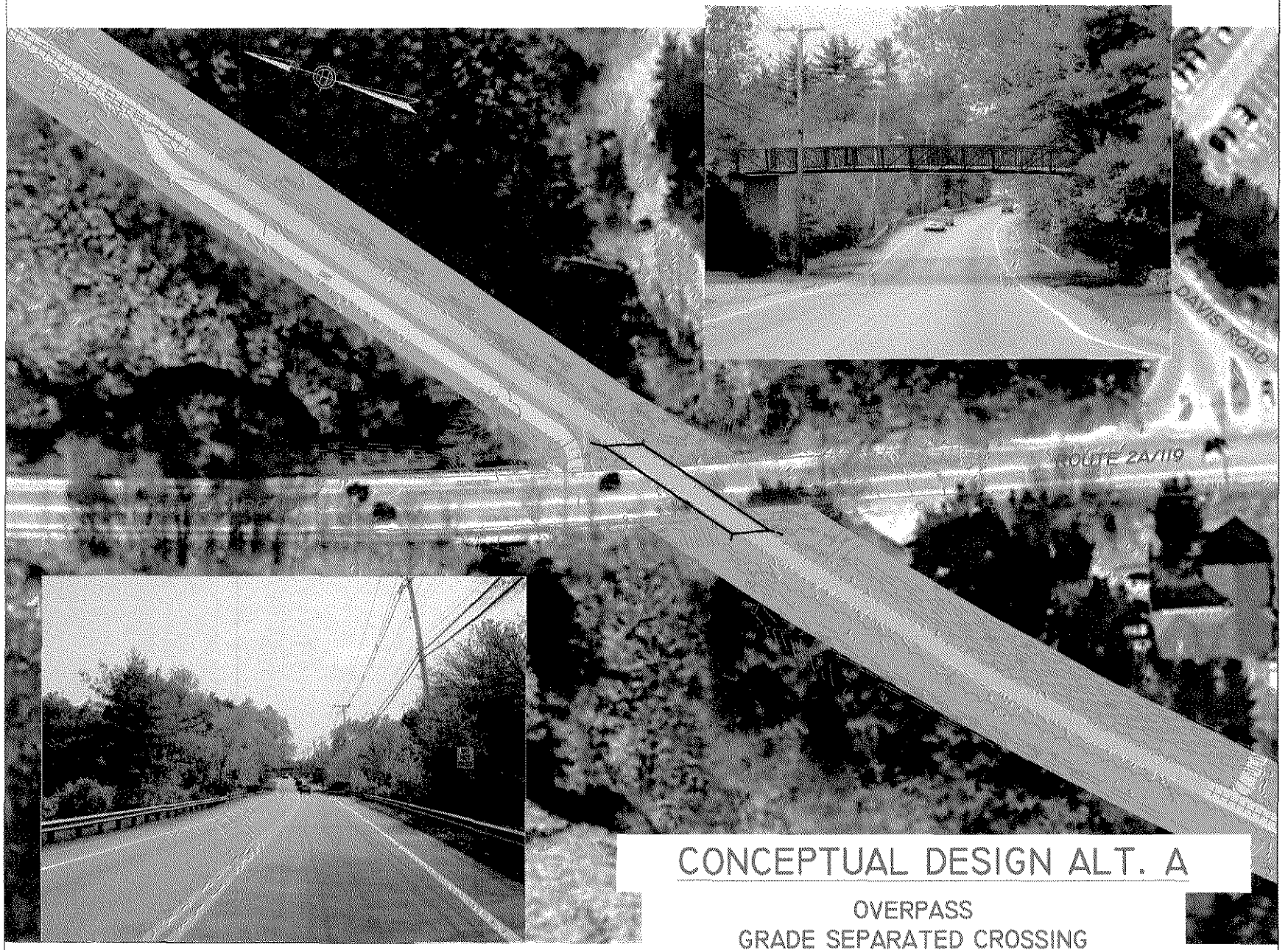
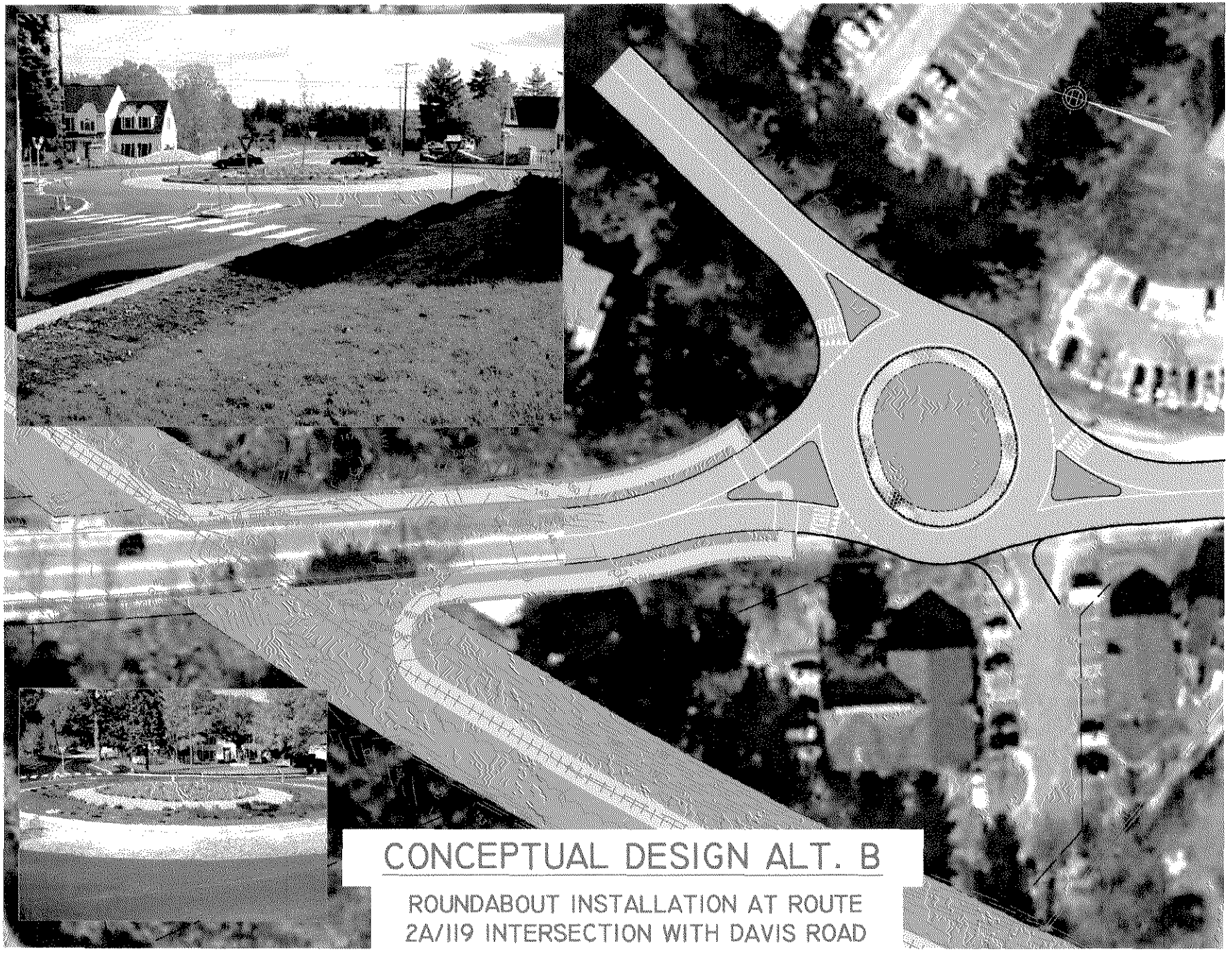


CONCEPTUAL DESIGN ALT. A

OVERPASS
GRADE SEPARATED CROSSING

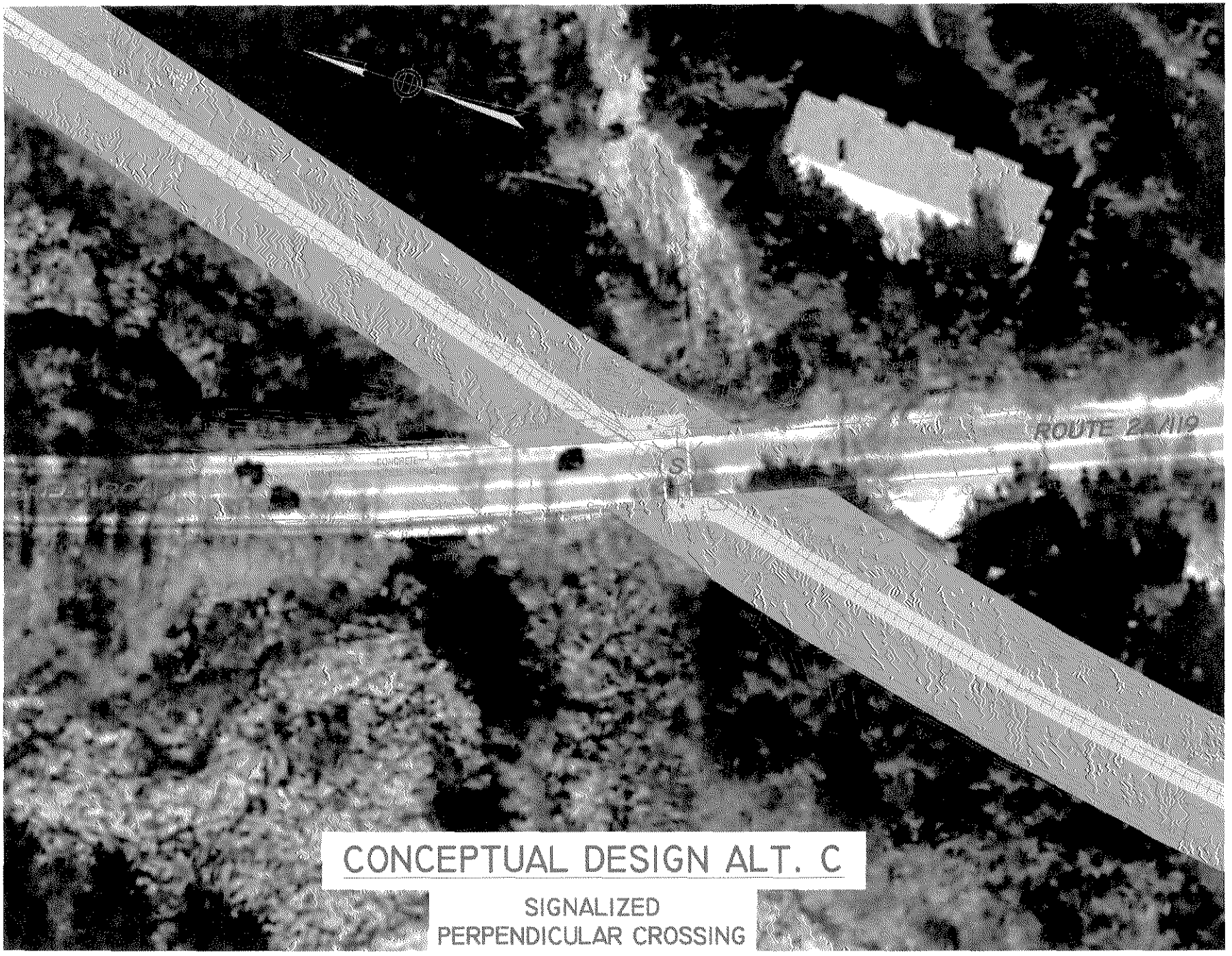
27

DO
NOT
PASS



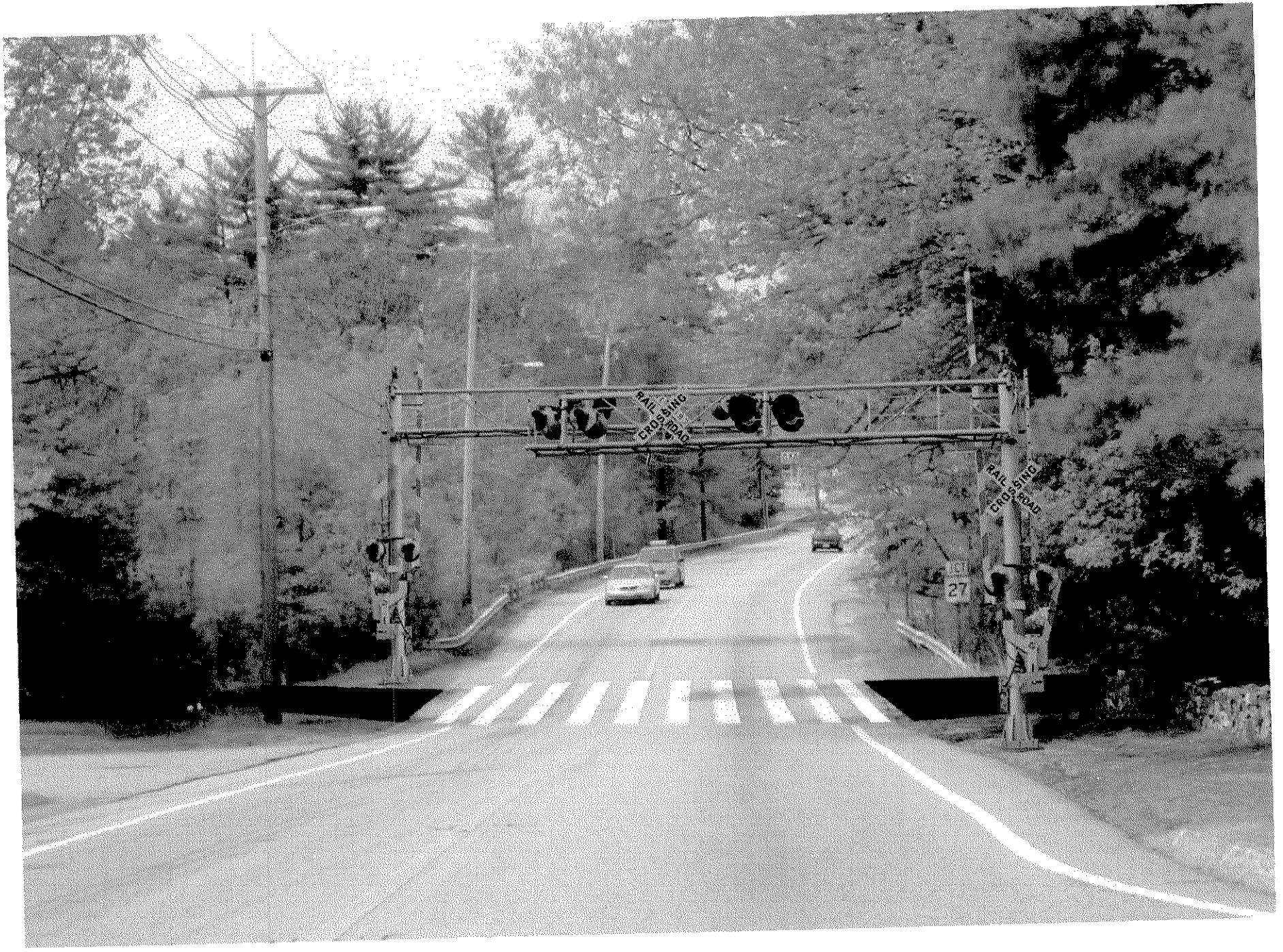
CONCEPTUAL DESIGN ALT. B

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



CONCEPTUAL DESIGN ALT. C

SIGNALIZED
PERPENDICULAR CROSSING


RAIL-ROAD
CROSSING
RAIL-ROAD
CROSSING
27

DO
NOT
PASS

GPI

Engineering and Construction Services

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Stoneham, MA 02180
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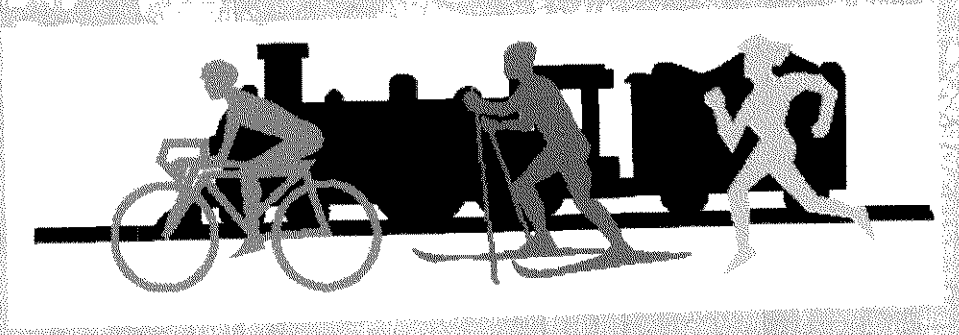

Public Input:

Concerns?

Questions?

Feedback?