

# EVALUATION OF POTENTIAL TRAFFIC CALMING MEASURES MONTROSE STATION ROAD

TOWN OF CORTLAND, NEW YORK

MAY 4, 2006

Adler Consulting, Inc.

235 Main Street

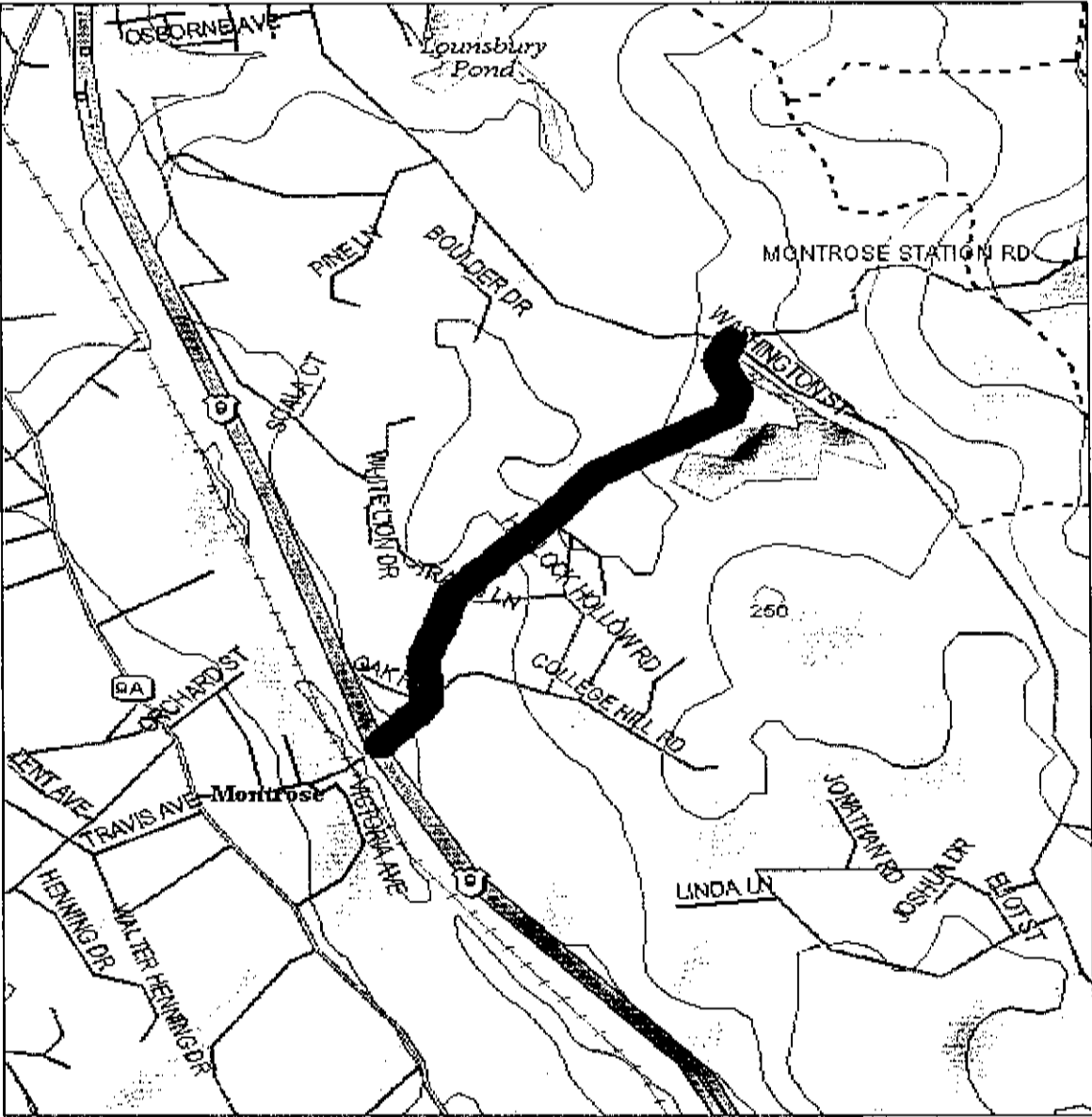
White Plains, NY 10601-2401

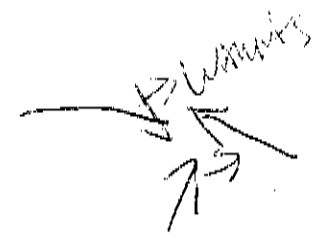
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# STUDY AREA





## PROJECT DESCRIPTION

- This project involves extensive evaluation of traffic conditions and potential traffic calming measures on Montrose Station Road from Washington Street to Metro North Railroad.
- Specific measures have been identified based on the study, which will address prevailing geometric and operational concerns and enhance safety.

# INVESTIGATIVE STUDIES

- Field inspection
  - geometrics and signage
- Automated Traffic Recorder (ATR) survey
  - speed and volumes
- Accident study
  - number of accidents and accident rate

# EXISTING GEOMETRIC CONDITIONS

- Preponderance of winding curves
- Sight distance limited at a number of locations
- Roadway widths less than 20 feet in some locations
- Limited horizontal clearance at a number of locations
- Steep grade by Oak Road
- Sharp curve near Washington Street
- Town-wide general speed limit of 30 mph

# MONTROSE STATION ROAD



# INTERSECTION WITH WASHINGTON STREET

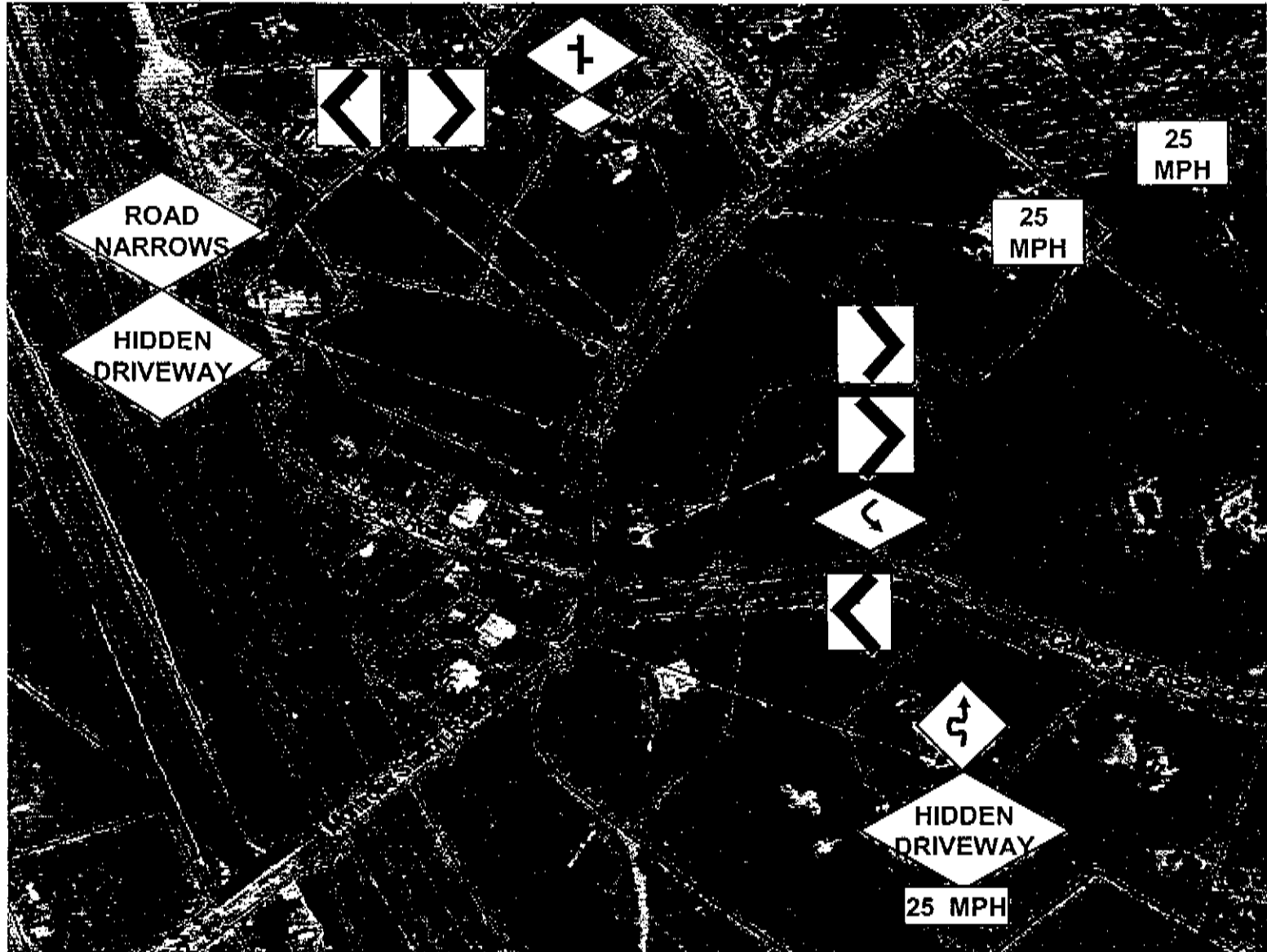


# INTERSECTION WITH OAK ROAD

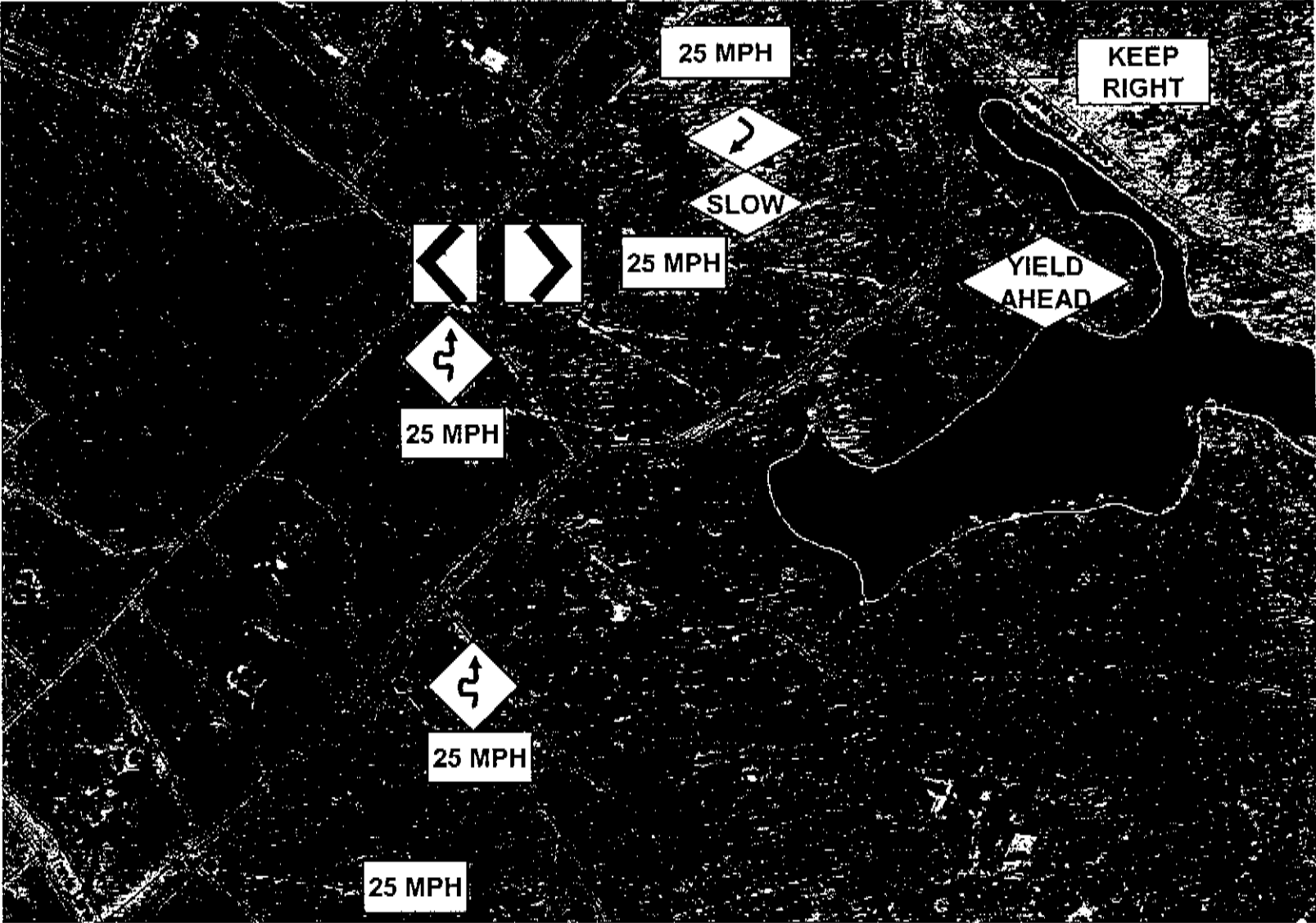




# EXISTING SIGNAGE (WEST OF TRAVIS LANE)



# EXISTING SIGNAGE (EAST OF TRAVIS LANE)



## **EXISTING SIGNAGE**

Current signage is appropriately placed, but supplemental signage, either in the form of additional signs or signs that attract more attention would be beneficial.

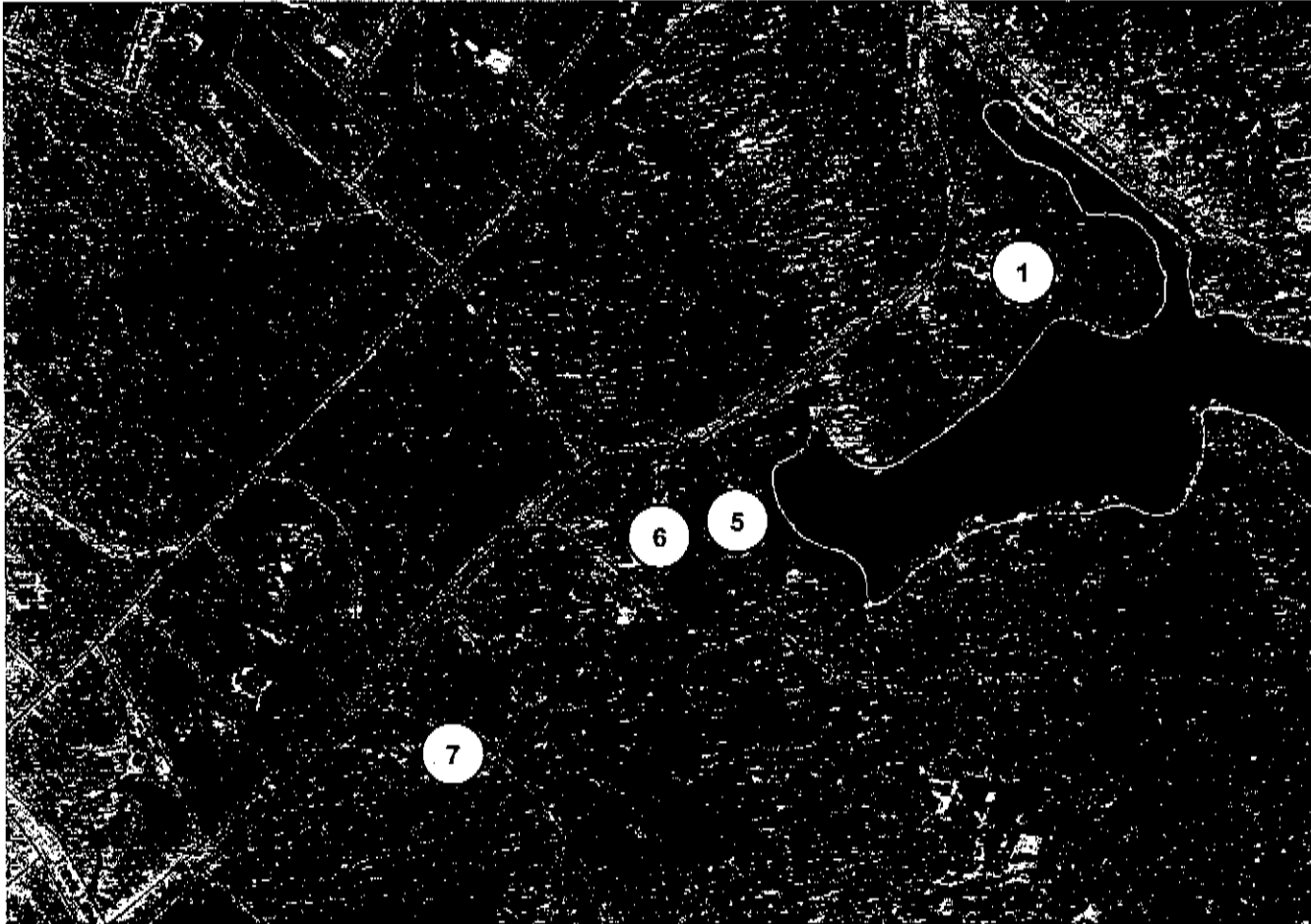
# EXISTING OPERATING CONDITIONS

- ATR placed just east of Travis Lane
- Summary of ATR data
  - Total daily, two-way weekday traffic = 1,500 vehicles
  - Morning peak hour (7:00 to 8:00 a.m.) = 152 vehicles
  - Afternoon peak hour (2:30 to 3:30 p.m.) = 143 vehicles
  - Average speed of vehicles = 36 mph
  - 85<sup>th</sup> percentile speed of vehicles = 42 mph
  - 80% of motorists exceed the 30 mph speed limit

# ACCIDENT HISTORY

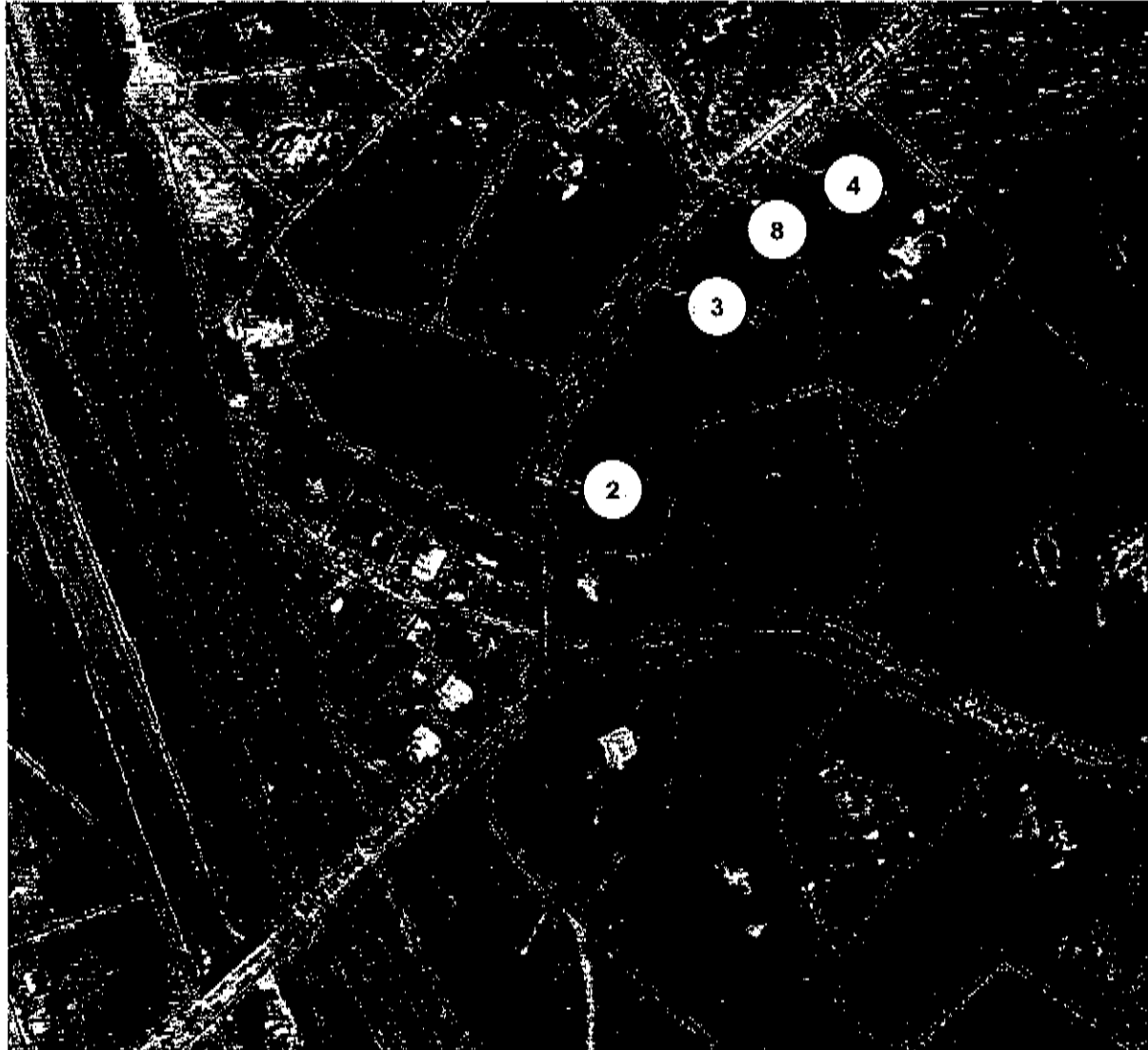
- Eight (8) accidents in the 32 month period for which data was available (March 1, 2003 to October 31, 2005)
- Average accident rate of 7.9 accidents per MVM
  - higher than statewide average accident rate for 2-lane roadways (3.66 accidents per MVM)
- One (1) fatal accident and three (3) injury accidents
- Sight distance limitations do not appear to have resulted in significant safety hazard
- Speed and slippery pavement conditions may have been contributing factors in some cases

# ACCIDENTS (EAST OF TRAVIS LANE)



- ① Fixed object-went off road- DWI (injuries)
- ⑤ Fixed object-went off road- DWI (injury)
- ⑥ Fixed object-went off road- Deer (injury)
- ⑦ Fixed object-went off road- unsafe speed (fatality)

# ACCIDENTS (WEST OF TRAVIS LANE)



- ② Fixed object-went off road
- ③ Head On – ticket for crossing double yellow line (injuries) -wet pavement
- ④ Fixed object – went off road (ice)
- ⑧ Sideswipe – vehicle malfunction (blowout in snowy/icy pavement)

# GENERAL RECOMMENDATIONS

- Education - Flyer
- Enforcement
- Smart Machines
- Interactive Speed Signs
- Reduction of speed limit
  - petition State DOT
  - replacement of stand-alone 25 mph warning signs with 25 mph regulatory signs
  - replacement of supplementary 25 mph warning signs with 20 mph supplementary warning signs



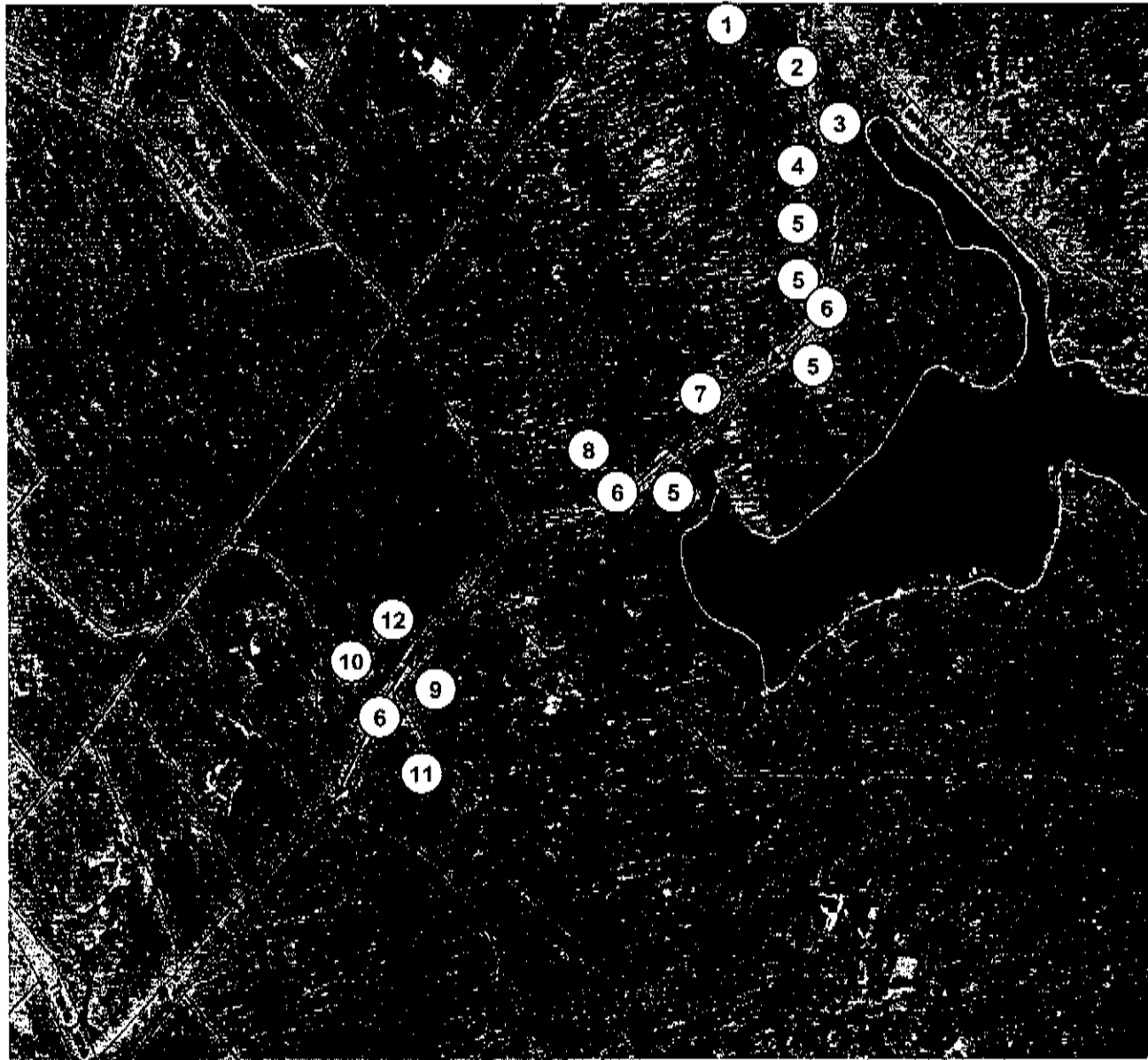
## **SUGGESTED PHYSICAL IMPROVEMENTS**

- Reconfigure and channelize the intersection of Washington Street with Montrose Station Road;
- Remove obstructions from edge of roadway
- Install a serpentine-road warning sign and a “LIMITED SIGHT DISTANCE” sign with a supplementary “NEXT 1 MILE” panel at both ends of Montrose Station Road
- Install reflectors along the curved sections of Montrose Station Road
- Install intersection-ahead warning signs and “SCHOOL BUS STOP” warning signs at suitable locations
- Install grooved pavement on Montrose Station Road approximately 300 feet east of Travis Lane

## **SUGGESTED PHYSICAL IMPROVEMENTS**

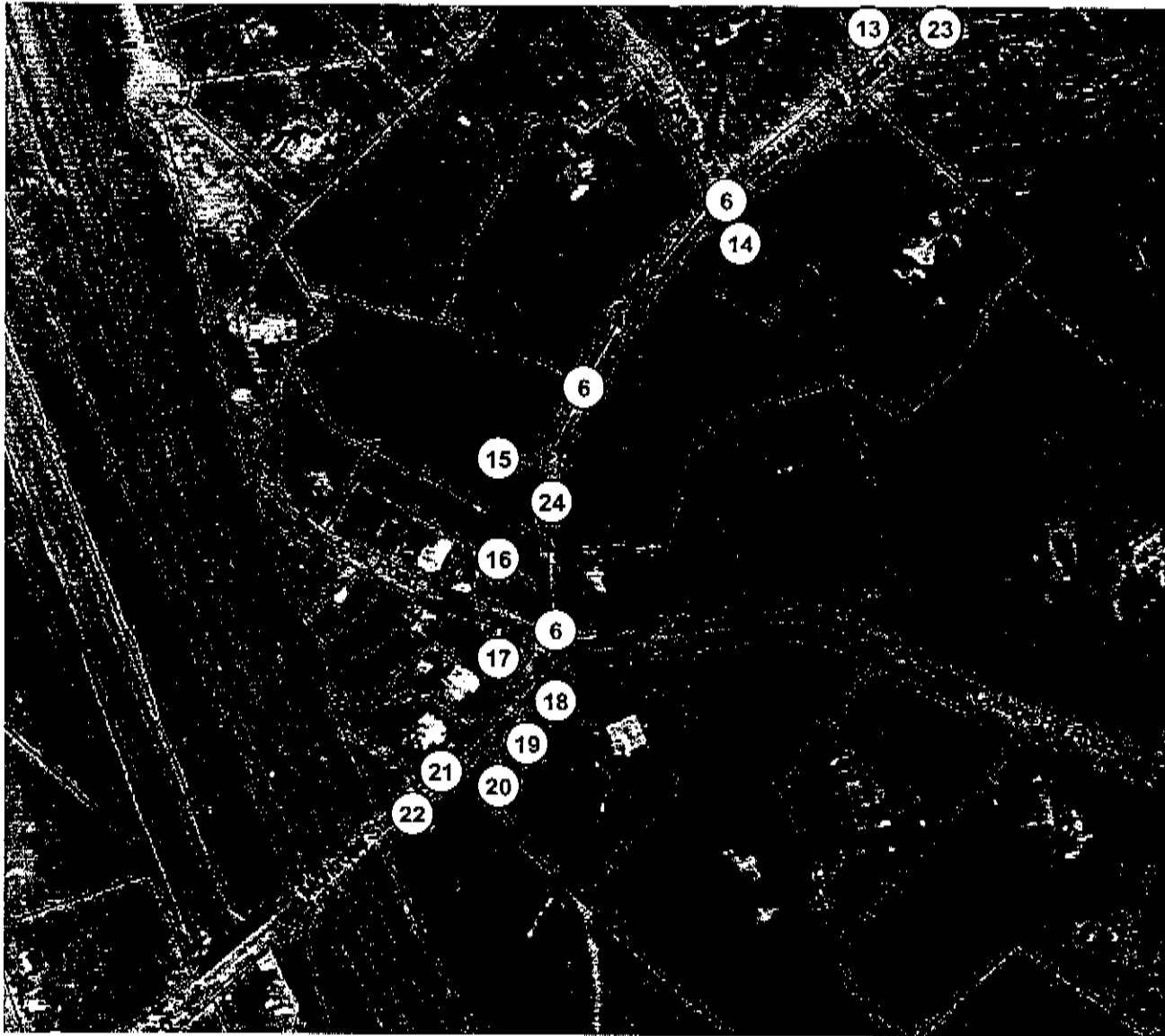
- Install a guide rail on the northwest side of Montrose Station Road, approximately 200 feet to the southwest of the driveway to Number 93
- Widen Montrose Station Road at selected locations
- Install flashing beacons with warning signs on either side of Oak Road
- Increase sight distance at Oak Road and Washington Street
- Install a hard shoulder on the south side of Montrose Station Road, west of Oak Road
- Install a road-narrows warning sign, immediately to the west of Route 9 overpass

# PHYSICAL IMPROVEMENTS ILLUSTRATED



- ① Remove rocks to provide at least 200 feet sight distance
- ② Stripe roadway, put in mountable island with an "YIELD" sign
- ③ Remove loose rocks and one tree within 5 feet of roadway
- ④ Replace existing sign with "serpentine road" and "low sight distance" signs
- ⑤ Remove end of loose rock within 5 feet of roadway
- ⑥ Install reflectors in pavement
- ⑦ Remove rock outcrop within 5 feet of roadway
- ⑧ Install "Driveway" and "School Bus Stop" signs
- ⑨ Install "Driveway" sign
- ⑩ Install guide rail
- ⑪ Remove tree and loose stone wall within 5 feet of road
- ⑫ Install "Driveway" sign

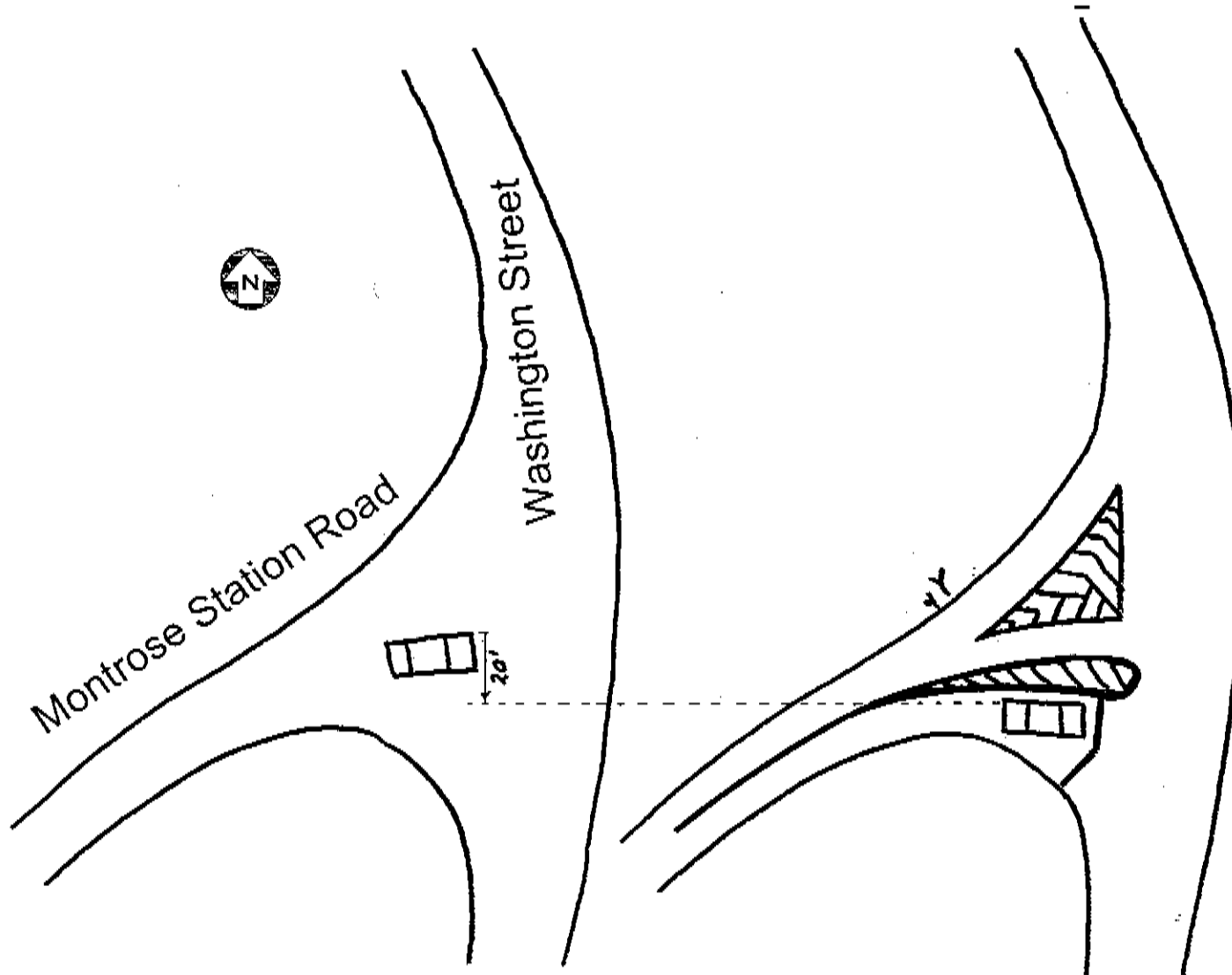
# PHYSICAL IMPROVEMENTS ILLUSTRATED



- ⑥ Install reflectors in pavement
- ⑬ Remove rocks and prune shrubs within 7 feet of roadway
- ⑭ Provide 2 feet shoulder at Travis Lane and relocate utility pole back by 3 feet
- ⑮ Relocate signs onto flashing beacon
- ⑯ Prune vegetation within 7 feet of roadway
- ⑰ Cut rock face back to provide 145 feet of sight distance
- ⑱ Install flashing beacon with "Driveway" and "School Bus Stop" signs
- ⑲ Relocate utility poles 4 feet back from the road
- ⑳ Bury drainage channel to provide hard shoulder
- ㉑ Install "Road Narrows" warning sign
- ㉒ Install "serpentine road" warning sign and "Limited Sight Distance" sign with "Next 1 Mile" supplementary panel
- ㉓ Install real-time speed signs, or grooved pavement
- ㉔ Widen to provide 20 feet road width and 1 foot shoulder

㉕ Seek approval to reduce speed limit to 25 mph and revise signage accordingly

# IMPROVEMENT OF WASHINGTON STREET INTERSECTION





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