Highway Factors Group Attachment – Final Design Report, Transportation Project P.I.N. 9125.5, Reconstruction Project Intersection of NYS-30/30A and Intersection NYS-30/443, August 2008

Schoharie, NY

HWY19FH001

(199 pages)

TRANSPORTATION

PROJECT REPORT

FINAL DESIGN REPORT

P.I.N. 9125.05

Reconstruction Project

Intersection of NYS Route 30 & 30A
&
Intersection NYS Route 30 & 443

Town of Schoharie
Schoharie County

August 2008

U.S. Department of Transportation
Federal Highway Administration

NEW YORK STATE DEPARTMENT OF TRANSPORTATION
DAVID PATERSON, Governor ASTRID C. GLYNN, Commissioner

It is the policy of the NYSDOT to use metric units for all projects to be let for construction after September 30, 1996. This project is being designed using metric units and the text of this report uses metric units.

The following table of approximate conversion factors provides the relationship between metric and inch-pound units for some of the more frequently used units in highway design. The table allows one to calculate the Inch-Pound Unit by multiplying the corresponding Metric Unit by the given factor.

	Metric Unit	x	Factor	=	Inch-Pound Unit
Length	kilometer (km)	X	0.621	=	miles (mi)
	meter (m)	x	3.281	=	feet (ft.)
Area	hectare (ha)	x	2.471	=	acres (a)
	square meter (m^2)	x	1.196	=	square yards (sy)
	square meter (m^2)	x	10.764	=	square feet (sf)
Volume	cubic meter (m^3)	x	1.308	=	cubic yards (cy)
	cubic meter (m^3)	x	35.315	=	cubic feet (cf)
Speed	kilometer per hour (km/h)	x	0.621	=	miles per hour (mph)
	meter per second (m/s)	x	3.281	=	feet per second (ft/s)

PROJECT APPROVAL SHEET

(Pursuant to SAFETEA-LU Matrix)

A. IPP Approval: The project cost and schedule are consistent with the Regional Capital Program. The IPP was signed by:

[redacted]
Regional Director — 5/17/93 Date

B. Public Hearing Certification (23 USC 128): A public hearing was held on June 3, 2008 in accordance with 23 USC 128.

[redacted]
Project Manager — 9/19/08 Date

C. Recommendation for Design Approval: The project cost and schedule are consistent with the Regional Capital Program.

[redacted]
Regional Planning and Program Manager — 9/30/08 Date

D. Recommendation for Design, & Nonstandard Feature Approval: All requirements requisite to these actions and approvals have been met, the required independent quality control reviews separate from the functional group reviews have been accomplished, and the work is consistent with established standards, policies, regulations and procedures, except as otherwise noted and explained.

[redacted] — 10-1-08 Date

E. Nonstandard Feature Approval: The nonstandard features have been adequately justified and it is not prudent to eliminate them as part of this project.

[redacted]
Deputy Chief Engineer — 12/09/08 Date

F. Design Approval: The required environmental determinations have been made and the preferred alternative for this project is ready for final design.

[redacted]
Deputy Chief Engineer — 12/09/08 Date

LIST OF PREPARERS

Group Director Responsible for Production of the Design Approval Document:

James R. McDuffee, P.E., Principal, Delta Engineers

Description of Work Performed by Firm: Directed the preparation of the Design Approval Document in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.

Note: *It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.*

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ABBREVIATIONS

AADT	-	Average Annual Daily Traffic
AASHTO	-	American Assoc. of State Highway Transportation Officials
ACC/MVKM	-	Accidents per Million Vehicle Kilometers
ADAAG	-	Americans with Disabilities Act Accessibility Guideline for Buildings & Facilities
BIN	-	Bridge Identification Number
COE	-	Corps of Engineers
DHV	-	Design Hourly Volume (Two-Way)
DDHV	-	Directional Design Hourly Volume (One-Way)
DR	-	Design Report
EPA	-	Environmental Protection Agency
EPM	-	Environmental Procedures Manual
ETC	-	Estimated Time of Completion
FEMA	-	Federal Emergency Management Agency
FHWA	-	Federal Highway Administration
HAL	-	High Accident Location
HSD	-	Headlight Sight Distance
LOS	-	Level of Service
NEPA	-	National Environmental Policy Act
NHS	-	National Highway System
NWI	-	National Wetlands Inventory
NYSDEC	-	New York State Department of Environmental Conservation
NYSDOT	-	New York State Department of Transportation
PE	-	Permanent Easement
PIN	-	Project Identification Number
PS&E	-	Plans, Specifications and Estimate
RMM	-	Reference Mile Marker
ROW	-	Right-of-Way
SDL	-	Safety Deficient Location
SEQR	-	State Environmental Quality Review
SH	-	State Highway
SPDES	-	Stormwater Pollutant Discharge Elimination System
SR	-	State Route
SSD	-	Stopping Sight Distance
USCG	-	United States Coast Guard

PREFERRED ALTERNATIVE

Based upon the analyses of comments received as a result of agency and public reviews of the Draft Design Report, the comments received at Public Information Meetings and the Public Hearing, and the studies described in the Draft Design Report, the New York State Department of Transportation has selected the following alternatives at the respective intersections:

NYS Route 30 / 30A - Alternative #1

Alternative #1 will involve the reconstruction of approximately 460m of NYS Route 30A and 640m of NYS Route 30, to form a new "T" type intersection. The realignment of the intersection will eliminate non-standard horizontal and vertical geometries in the vicinity of the intersection. This alternative also includes the addition of left turn lanes along NYS Routes 30 and 30A. Residential and commercial driveways near the intersection will be reconstructed for better definition and conformance with the appropriate driveway standards.

Alternative #1 eliminates the existing non-standard horizontal geometry within the project area. The horizontal curve passing through the intersection on the northwest and southern legs will be flattened to a 437m radius. Flattening the curve, along with vertical improvements, will increase the sight distance to above minimum standards.

An approximately 60-year old concrete box culvert crossing under NY Route 30A will be replaced with a new box culvert. Also, the western driveway to the "Apple Barrel" will be relocated to connect with NYS Route 30 across from the new intersection.

Abandoned sections of roadway within the project limits will be removed, regraded to match the surrounding terrain, and turf will be reestablished.

The proposed pavement reconstruction section will consist of bituminous concrete pavement over granular subbase.

Refer to Appendix H for the preliminary plans, profiles, and typical sections.

Environmental Commitments and Mitigation Measures:

To meet the requirements of the State Pollutant Discharge Elimination System (SPDES) permitting, a proposed stormwater treatment basin is planned near the northwest quadrant of the relocated intersection.

The construction of Alternative #1 has been determined to be in compliance with Executive Order 11990 of the President of the United States, Protection of Wetlands, dated May 24, 1977. Based upon the analyses which have been performed, there is no practical alternative to avoid construction in wetlands, and the construction of Alternative #1 includes all practical measures to minimize harm to wetlands which may result from such use.

A wetland mitigation site is planned for creation in the northeast intersection quadrant to mitigate impacts created by the construction of this Alternative, and also Alternative #1 at NYS Route 30 / 443.

A review of the proposed project by the State Historic Preservation Officer concluded that

the project will have an adverse effect on properties eligible for inclusion in the National Register of Historic Places based upon impacts to archeological information contained within the Raymond Dale and James Holloway sites. Following this determination, in accordance with 36 CFR Part 800, a Memorandum of Agreement (MOA) for Data Recovery of Significant Archaeological Information has been executed for the adverse impacts to the cultural resources at the project site.

Erosion and Sediment Control practices will be incorporated into the project plans in accordance with NYSDOT and New York State Department of Environmental Conservation standards.

NYS Route 30 / 443 – Alternative #1

Alternative #1 will involve the reconstruction of approximately 390m of NYS Route 30 and 425m of NYS Route 443, to form a new "T" type intersection. The realignment of the intersection will eliminate the existing closely spaced redundant intersections. This alternative also includes the addition of a left turn lane along NYS Route 30 for traffic turning onto NYS Route 443. The realignment of approximately 120m of Covered Bridge Road and 110m of Vrooman Cross Road will also be completed to connect to the realigned/reconstructed NYS Route 443.

Intersection sight distance will be improved to provide greater than that required, and the stopping sight distance along the realigned NYS Route 443 will be increased.

Driveways along Vrooman Cross Road will be slightly reconfigured to provide better definition at its intersection with NYS Route 443.

The proposed pavement reconstruction section will consist of bituminous concrete pavement over granular subbase.

A parking area is planned along Covered Bridge Road, to facilitate those visiting the adjacent covered bridge.

Refer to Appendix I for the preliminary plans, profiles, and typical sections.

Environmental Commitments and Mitigation Measures:

To meet the requirements of the State Pollutant Discharge Elimination System (SPDES) permitting, a proposed stormwater treatment basin is planned near the southeast quadrant of the relocated intersection.

The construction of Alternative #1 has been determined to be in compliance with Executive Order 11990 of the President of the United States, Protection of Wetlands, dated May 24, 1977. Based upon the analyses which have been performed, there is no practical alternative to avoid construction in wetlands, and the construction of Alternative #1 includes all practical measures to minimize harm to wetlands which may result from such use.

Also, a wetland mitigation site is planned for creation in the northeast intersection quadrant of the NYS Route 30 / 30A intersection to mitigate impacts created by the construction of this Alternative, and also Alternative #1 at NYS Route 30 / 30A.

Construction limits will not impact the archeology existing within the Vroman I archeological site adjacent to Covered Bridge Road. Given this avoidance, work at this intersection will have “no effect” on properties in, or eligible for inclusion in, the National Register of Historic Places.

Erosion and Sediment Control practices will be incorporated into the project plans in accordance with NYSDOT and New York State Department of Environmental Conservation standards.

HEARING CERTIFICATION

CERTIFICATE IN ACCORDANCE WITH TITLE 23
UNITED STATES CODE 128
NY 30/30A & NY 30/443 INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY
PROJECT IDENTIFICATION NUMBER 9125.05

Notice was published in the Times Journal on April 30, 2008, The Daily Gazette on May 1, 2008 and again on May 28, 2008 in both publications with respect to the above project. The notice stated that a public hearing would be held at the Schoharie Fire Station located at 137 Grand Street, Schoharie, NY between the hours of 5:30 pm and 8:00 pm on Tuesday June 3, 2008. The Department has also issued press releases to the local media and distributed outreach letters to those along the project corridor

I hereby certify that the hearing was held at the location indicated, all material presented was duly recorded and full reconsideration has been given to the economic and social effects of the location, its impact on the environment and its consistency with the goals and objectives of such urban planning as has been promulgated by the community.

This hearing consisted of a formal presentation which was preceded and followed by an "open forum" format. Copies of the transcripts, brochures and pamphlets, photos and/or depictions of displays, presentation summaries, etc. that document that this public hearing conformed with the regulations are attached to the copy of this certification being transmitted to FHWA.

[redacted]

Ronald J. Romanosky – Project Engineer
Region 9, Binghamton, New York

7/10/08
Date

1

CHAPTER I - INTRODUCTION

Purpose: This project provides for intersection reconstruction and safety - related work for two intersections located in the Town of Schoharie, Schoharie County, New York.

This report has been prepared to document the need, describe the type and extent of improvements required, and to discuss the social, economic and environmental consequences which may result from the proposed action. This report presents the project objectives, design alternatives and environmental considerations for review and evaluation by the public and interested advisory and regulatory agencies, and will serve as a decision-making tool for the NYSDOT in choosing the best solution to address the transportation needs identified herein.

NYS Route 30 / 30A Location: The first intersection includes NYS Route 30 (SH 5086 Gallupville-Vrooman, SH 9298 Oakhill) and NYS Route 30A (SH 5195 Vrooman-Howes Cave). This intersection site is located approximately 0.80 kilometers east of the Interstate 88 Exit 23 interchange, and approximately 2.58 kilometers north of the Schoharie Village boundary line.

NYS Route 30 / 443 Location: The second intersection site includes NYS Route 30 (SH 5086 Gallupville-Vrooman, SH 5444 Schoharie-Middleburg) and NYS Route 443 (SH 5086 Gallupville-Vrooman). This intersection site is located nearly 2.4 kilometers south of the NYS Route 30 / 30A intersection along NYS Route 30 and approximately 180 meters north of the Schoharie Village boundary line.

Conditions & Needs, NYS Route 30 / 30A Intersection: The NYS Route 30 / 30A intersection is a Y-type intersection in the vicinity of non-standard horizontal and vertical alignments along NYS Route 30. The area was the scene of twenty-seven accidents in the three-year period from May 1, 1998 to April 30, 2001. This area appeared on the 2006 High Accident Location (HAL) list as a Safety Deficient Location (SDL).

Objectives, NYS Route 30 / 30A Intersection: The project objectives are to provide geometric, operational, and safety improvements that reduce vehicular conflicts and improve traffic flow using cost effective techniques.

Conditions & Needs, NYS Route 30 / 443 Intersection: The NYS Route 30 / 443 intersection is a series of complicated, closely spaced multi-leg intersections along Route 30. Two intersecting roads are legs of Route 443, and the third is a local road. The area was the scene of nineteen accidents in the three-year period from May 1, 1998 to April 30, 2001. Fourteen of these accidents occurred within the intersection area. This area appeared on the 2006 HAL list as a Safety Deficient Location (SDL).

Objectives, NYS Route 30 / 443 Intersection: The project objectives are to improve area geometry, safety, traffic flow, and reduce vehicular conflicts by condensing the intersection into a typical Stop controlled intersection.

NYS Route 30 / 30A Alternatives: The following design alternatives for the proposed project are evaluated in this report:

- Null (Do Nothing) Alternative
- Build Alternative 1 – “T” NYS Route 30 into NYS Route 30A at new location – improve approach geometry along NYS Route 30A from the west and NYS Route 30 from the east

- Build Alternative 1B – "T" NYS Route 30 into NYS Route 30A near existing intersection location – improve approach geometry along NYS Route 30A from the west and NYS Route 30 from the east
- Build Alternative 1C – "T" NYS Route 30 into NYS Route 30A at new location – no improvement to approach geometry along NYS Route 30A from the west nor NYS Route 30 from the east
- Build Alternative 2 – Replace existing intersection with modern roundabout

NYS Route 30 / 443 Alternatives: The following design alternatives for the proposed project are evaluated in this report:

- Null (Do Nothing) Alternative
- Build Alternative 1 – "T" NYS Route 443 into NYS Route 30; eliminate redundant intersection legs
- Build Alternative 2 – Replace existing intersection with modern roundabout

Environmental Classification: This project is being progressed by the NYSDOT in conjunction with the FHWA as a NEPA Class II Action, and is being processed as a Categorical Exclusion with Documentation, in accordance with Title 23 771 of the Code of Federal Regulations (23 CFR 771). In accordance with Part 15 of New York Codes, Rules and Regulations (NYCRR), this is a Non-Type II (EA) Project.

The SEQR lead agency for the project is the NYSDOT. The NEPA lead agency for this project is the FHWA.

Contact: Further information regarding this project or the contents of this report may be obtained by contacting:

Mr. Ronald Romanosky, Consultant Manager
Region 9 Design
NYS Department of Transportation
44 Hawley Street
Binghamton, NY 13901-3200

Correspondence regarding this project should refer to PIN 9125.05.

CHAPTER II – PROJECT IDENTIFICATION, EVOLUTION, CONDITIONS, AND NEEDS AND OBJECTIVES

II.A. Project Identification

II.A.1. Project Type – The proposed project includes the reconstruction of two intersections and associated reconstruction on the approaches.

II.A.2. Project Description/Location

II.A.2.a.1 NYS Route 30 / 30A Intersection Description

II.A.2.a.1 (1) Route Number – NYS Routes 30 and 30A

II.A.2.a.1 (2) Route Name – n/a

II.A.2.a.1 (3) SH number and official highway description – SH 9298 Oakhill, SH 5195 Vrooman-Howes Cave, and SH 5086 Gallupville-Vrooman

II.A.2.a.1 (4) There are no bridges within the project limits.

II.A.2.a.1 (5) Municipality – Town of Schoharie

II.A.2.a.1 (6) County – Schoharie

II.A.2.a.1 (7) Length and Termini – from approximately 550m west of the existing NYS Route 30/30A intersection along NYS Route 30A, to approximately 330m east of the existing intersection (RMM 30A 9501 1003 to RMM 30 9502 1286), for a length along NYS Route 30A/30 of approximately 880m.

II.A.2.a.1 (8) Other Pertinent Description Information – two structures eligible for inclusion on the National Register of Historic Places are located within the project limits – a private home currently owned by “Pennington” located along NY 30 - east side, and a private home owned by “Desmond” located along NY 30A – north side. Also, a third private home (owned by “Price”) along NY 30 – west side, that is listed within the National Register of Historic Places also exists within the project area. Two cultural resource sites determined eligible for inclusion on the National Register exist within the project area.

II.A.2.a.2 NYS Route 30 / 443 Intersection Description

II.A.2.a.2 (1) Route Number – NYS Routes 30 and 443

II.A.2.a.2 (2) Route Name – n/a

II.A.2.a.2 (3) SH number and official highway description – SH 5444 Schoharie-Middleburg and SH 5086 Gallupville-Vrooman

II.A.2.a.2 (4) BIN Number and Feature Crossed – n/a

II.A.2.a.2 (5) Municipality – Town of Schoharie

II.A.2.a.2 (6) County – Schoharie

II.A.2.a.2 (7) Length and Termini – from approximately 80m south of the existing NYS Route 30/443 intersection, to approximately 304m north of the existing intersection (RMM 30 9502 1273 to RMM 30 9502 1275), for a length along NYS Route 30 of approximately 384m.

II.A.2.a.2 (8) Other Pertinent Description Information – one structure eligible for inclusion on the National Register of Historic Places (Colonel Peter Vrooman frame house) exists within the project limits (along covered bridge road southeast of NY 443 on East bank Fox Creek). One cultural resource site determined eligible for inclusion on the National Register exists within the project area.

II.A.2.b. Regional Map - Refer to the regional map on page 3 of Chapter II of this report.

II.A.2.c. Project Map - Refer to the project maps on pages 4 and 5 of Chapter II of this report.

II.B. Project Evolution

NYS Route 30 / 30A Intersection

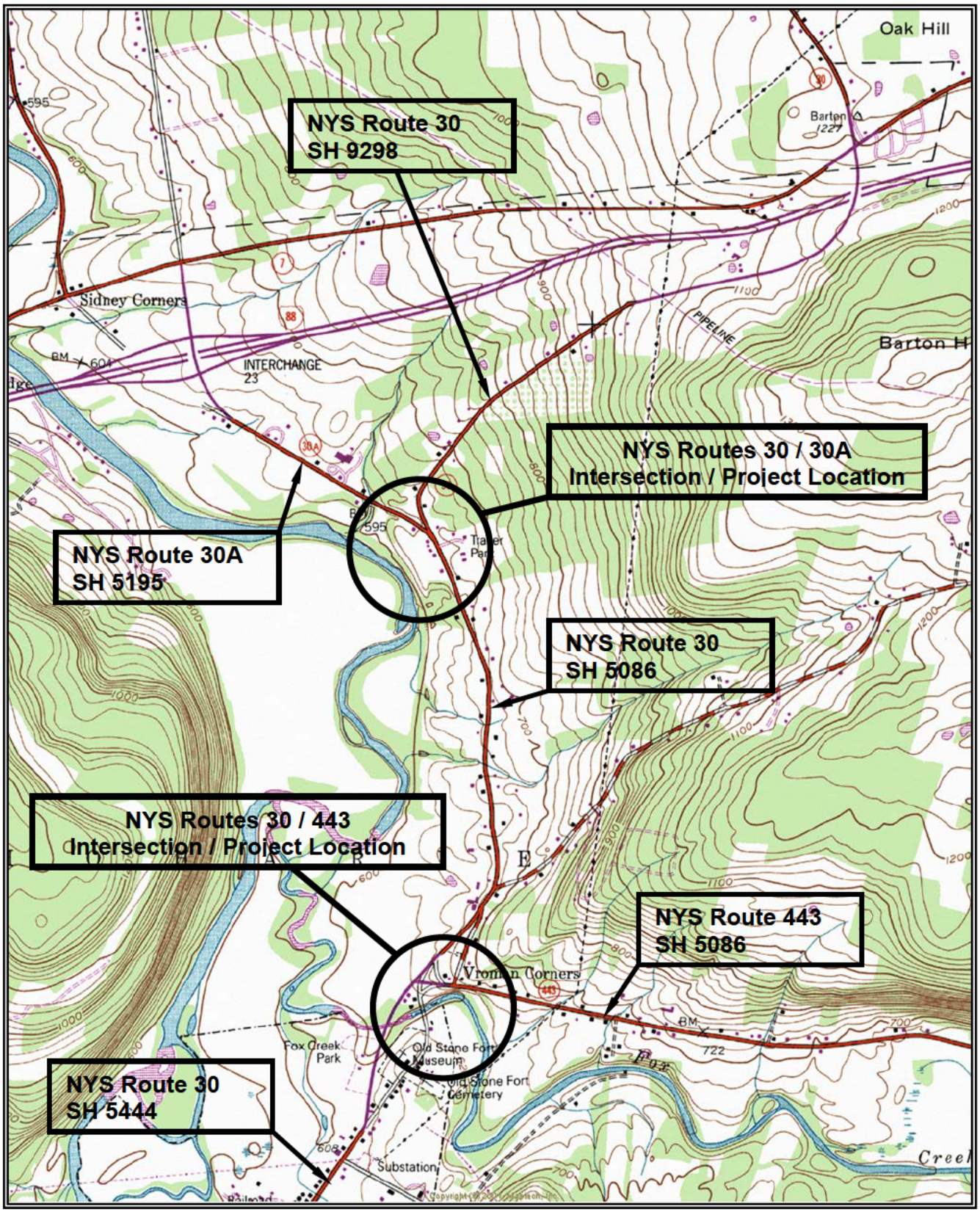
A portion of NYS Route 30 within the project limits was originally constructed in 1931. A second portion was originally constructed in 1940. NYS Route 30 was reconstructed in 1962. NYS Route 30A within the project limits was originally constructed in 1931 and reconstructed in 1962. Both roadways provide primarily south to north travel.

NYS Route 30 / 443 Intersection

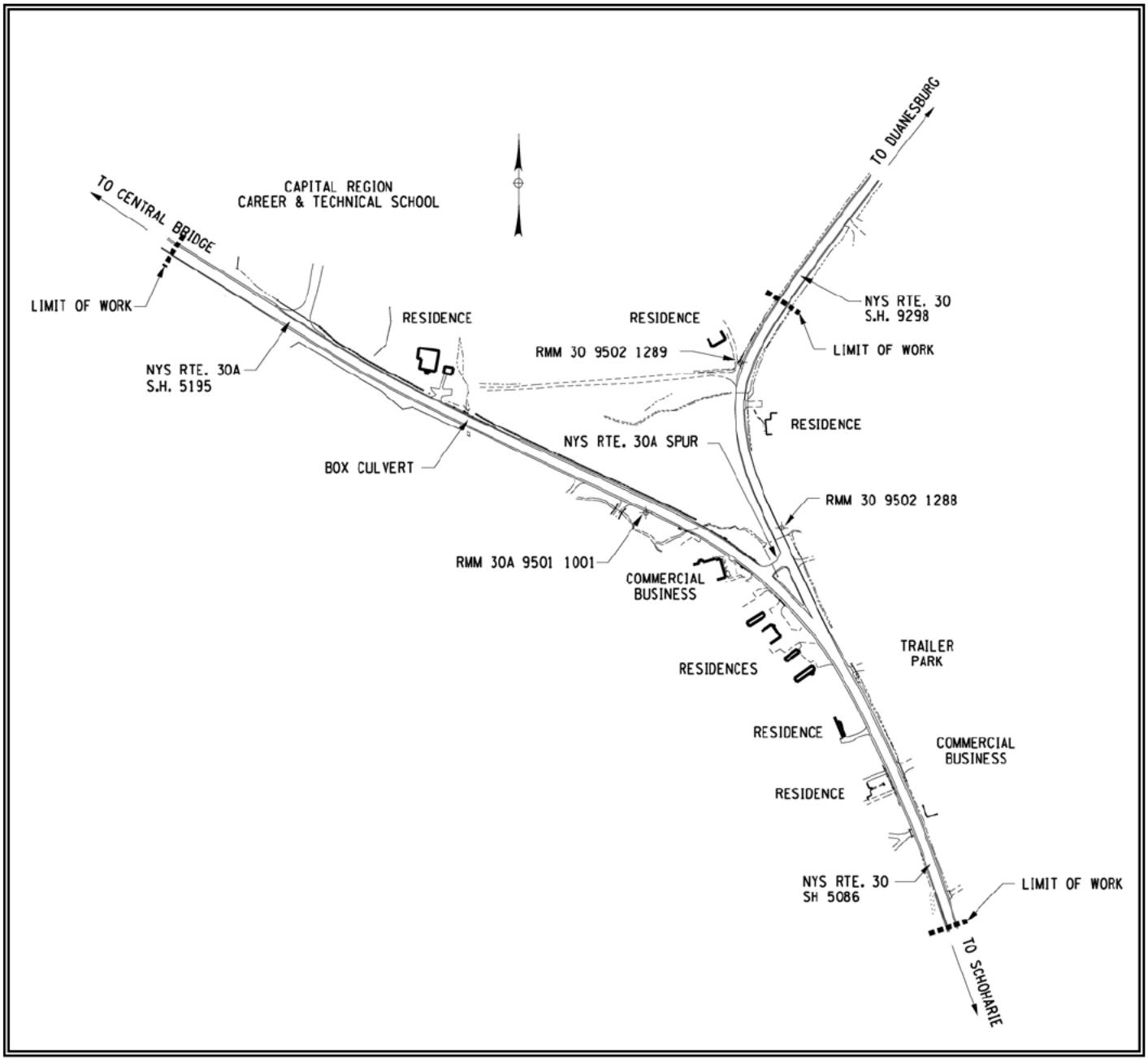
NYS Route 30 within the project limits was originally constructed in 1931 and reconstructed in 1953. It was also partially reconstructed in 1962. NYS Route 443 was originally constructed in 1931, reconstructed in 1953, and again in 1962. NYS Route 30 provides south to north travel, and NYS Route 443 provides west to east travel.

The need to provide safety improvements for the two intersections was identified in September of 1993, following an accident history analysis. The study indicated the accident rate for both intersections was more than twice the state average for T-type intersections. The project was programmed by NYSDOT Region 9 and included in the Statewide Transportation Improvement Plan. The Scope Summary Memorandum was completed and approved by the Regional Director in May 1998. Preliminary engineering studies began in October of 1998, but were halted in May of 1999. The stoppage was a result of a rescheduling of the Region's Capital Improvement Program. In July of 2004, preliminary studies resumed, with a current project letting date in February 2010.

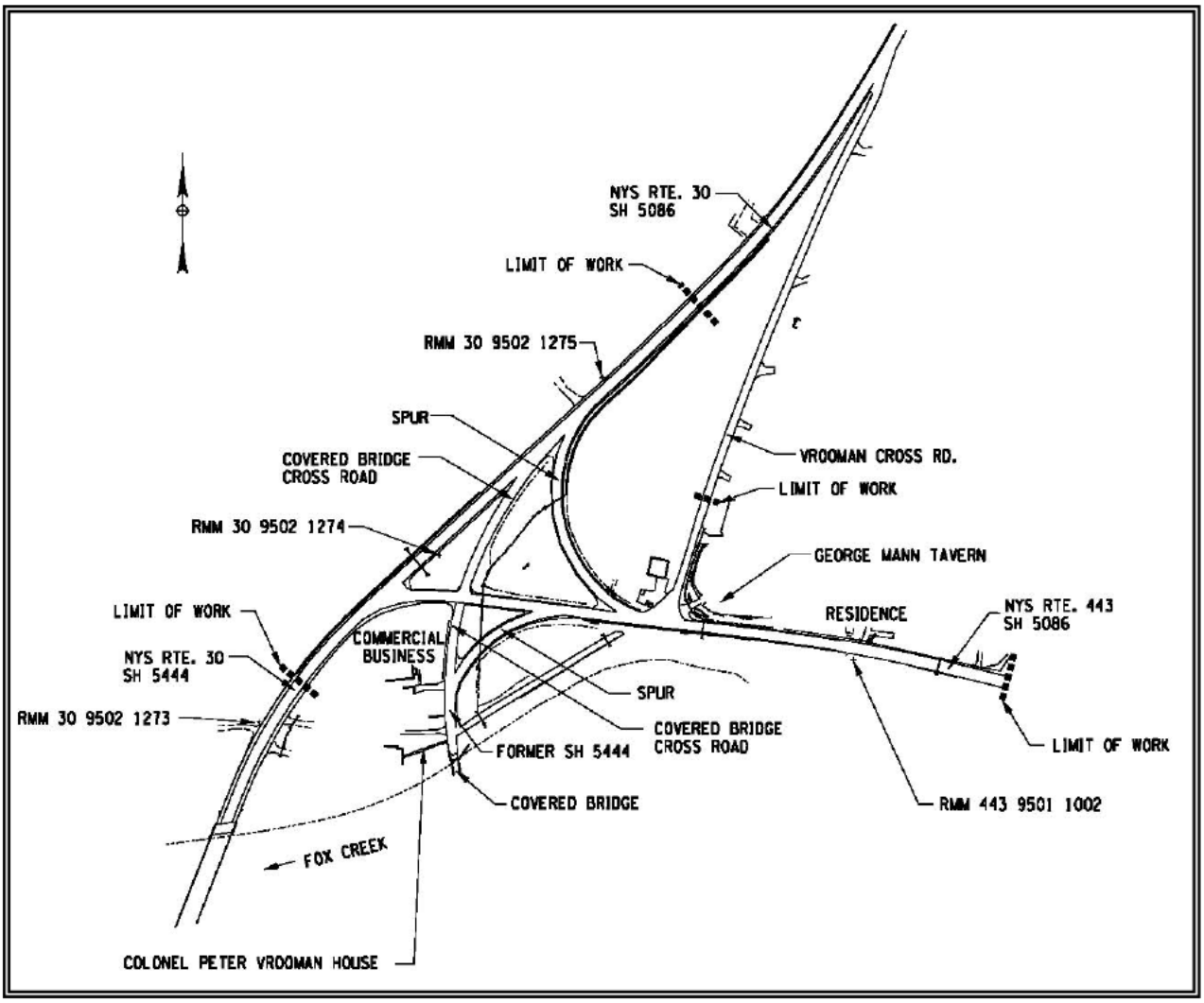
NYSDOT Region 9 is administering this project.



REGIONAL MAP



PROJECT MAP
NYS Routes 30 / 30A
Intersection
Town of Schoharie
Schoharie County
PIN 9125.05
Scale 1:4000



PROJECT MAP
NYS Routes 30 / 443
Intersection
Town of Schoharie
Schoharie County
PIN 9125.05
Scale 1:5000

II.C. Conditions and Needs

II.C.1. Transportation Conditions, Deficiencies and Engineering Considerations

II.C.1.a. Functional Classification and National Highway System -

II.C.1.a.(1) Functional Class: NYS Routes 30 and 30A are classified as Rural Arterials. NYS Route 443 is classified as a Rural collector. Vrooman Cross Road is a local street. The unnamed road (referred to as Covered Bridge Road in this document) from NYS Route 443 to the covered bridge is also a local road.

II.C.1.a.(2) NHS: The highways are not on the National Highway System (NHS).

II.C.1.a.(3) Qualifying or Access Highway: NYS Route 30A, and the portion of NYS Route 30 south of the 30/30A intersection are listed as Access Highways in the "Official Description of Designated Qualifying and Access Highways in New York State, April 2006".

II.C.1.a.(4) Interstate System: The highways are not on the Interstate System. The highways are not part of the 4.9 m vertical clearance network.

II.C.1.b. Ownership and Maintenance Jurisdiction - NYSDOT owns and maintains NYS Routes 30, 30A, and 443. The Town of Schoharie owns and maintains Vrooman Cross Road and the Covered Bridge Road.

II.C.1.c. Culture, Terrain, and Climatic Conditions -

II.C.1.c.(1) Area Type: The project is in a rural area with interspersed residential and commercial development.

II.C.1.c.(2) Terrain: The terrain in the project area is rolling.

II.C.1.c.(3) Unusual Weather Conditions: There are no unusual climatic conditions that would affect the design of the roadway.

II.C.1.d. Control of Access – There is no control of access within the project limits. There are commercial and residential driveways within the project limits. Driveways within these limits were evaluated as part of the development of this report for their conformance with the NYSDOT Policy and Standards for Entrances to State Highways.

II.C.1.e. Existing Highway Section

II.C.1.e.(1) Right of Way width - The existing right-of-way along NYS Route 30 within the NYS Routes 30 / 30A project limits varies between 15.1m and 21.1m. Existing right-of-way along NYS Route 30A within the NYS Routes 30 / 30A project limits varies between 18.2m and 24.3m. The existing right-of-way along NYS Route 30 within the NYS Routes 30 / 443 project limits varies from 24.1m to 31.3 m. Existing right-of-way along NYS Route 443 varies between 15.1 m and 54.2 within the project limits. Existing right-of-way along Covered Bridge Road varies between 15.1 m and 110.6 m within the project limits. Existing right-of-way along

Vrooman Cross Road is 15.1 m.

II.C.1.e.(2) Lanes and Shoulders
In the vicinity of the NYS Routes 30 / 30A intersection, NYS Route 30 south of the intersection consists of 3.6m through lanes and 1.1m paved shoulders. North of the intersection, NYS Route 30 has 3.3m through lanes and 0.4m paved shoulders. NYS Route 30A has 3.6m through lanes and 1.0m paved shoulders.

In the vicinity of the NYS Routes 30 / 443 intersection, NYS Route 30 typically consists of 3.6m through lanes and 2.7m paved shoulders. NYS Route 443 has 3.7m through lanes and 0.4m paved shoulders. Vrooman Cross Road consists of 2.7m through lanes with minimal gravel shoulders.

II.C.1.e.(3) Curb – There is no curbing within the project limits on any roadway.

II.C.1.e.(4) Median - There are no roadway medians within the project limits.

II.C.1.e.(5) Grades and curves

NYS Route 30 / 30A Intersection

NYS Route 30 - The maximum grade is 6.0%. The minimum radius is 116m.
NYS Route 30A – The maximum grade is 4.9%. The minimum radius is 318m.

NYS Route 30 / 443 Intersection

NYS Route 30 – The maximum grade is 3.8%. The minimum radius is 350m.
NYS Route 443 – The maximum grade is 6.6%. The minimum radius is 91m.
Vrooman Cross Road – The maximum grade is 6.4%. The minimum radius is 60m.

II.C.1.e.(6) Intersection Geometry and Conditions
NYS Routes 30 / 30A Intersection - NYS Routes 30 and 30A form a Y-type intersection. The first Route 30 leg is tangential to a curve on Route 30A. Approximately 130m west of the first leg, the second Route 30 leg is skewed roughly 19.5 degrees to the same Route 30A curve. Existing non-standard horizontal and vertical alignments along Route 30A pose sight distance limitations at the Route 30 / 30A intersection. A commercial building is situated 6.9m from the southbound Route 30A edge of travel way, severely limiting horizontal sight distance.

NYS Routes 30 / 443 Intersection - The NYS Route 30 / 443 Intersection is a complicated, multi-leg intersection. There are three intersecting roadway segments within this area connecting NYS Route 30 to NYS Route 443. The three connections all support two-way traffic, and are within 200m of each other. A 350m radius curve along NYS Route 30 beginning within 20m of the intersection compromises horizontal sight distance for vehicles making turns at the southern leg of NYS Route 443. Along NYS Route 443, two different segments connect NYS Route 443 with the former SH 5444. The former SH 5444 is now a dead end entrance to a museum and Historic Covered Bridge over

Fox Creek, terminating just north of the covered bridge, which no longer serves vehicular traffic. Stopping sight distance is also deficient along NYS Route 443 in the vicinity of its intersection with Vrooman Cross Road, due to a non-standard vertical curve.

Refer to the Project Maps on pages 4 and 5 of Chapter II for the geometric configurations of the existing intersections.

II.C.1.e.(7) Parking Regulations and Parking Related Conditions - There are no restrictions posted within the project limits.

II.C.1.e.(8) Roadside Elements:

(a) Snow Storage, Sidewalks, Utility Strips, Bikeways, Bus Stops – Snow storage is provided along the edge of existing shoulders. There are no utility strips, bikeways, or bus stops located within the project area.

(b) Driveways
NYS Route 30 / 30A Intersection - There are 20 driveways within the NYS Route 30 / 30A intersection project area: Thirteen on NYS Route 30, and seven on NYS Route 30A. Three of the thirteen on NYS Route 30 are north of the intersection. Many of the driveways are located near the existing intersection, and are points of conflict between through traffic and intersection turning traffic. Based on field observations, several of these driveways are poorly defined, and exceptionally wide. Others, including three commercial drives, have limited sight distance. The sight distance is limited because of the proximity of a commercial building to the roadway (6.9m from edge of traveled way) along a non-standard horizontal curve.

NYS Route 30 / 443 Intersection - Twelve driveways exist within the NYS Route 30 / 443 intersection project area: one on NYS Route 30, three on NYS Route 443, six on Vrooman Cross Road, and two on Covered Bridge Road. Two of the driveways connect with Vrooman Cross Road at its intersection with NYS Route 443.

It should be noted that some of the existing driveways are not in conformance with the NYSDOT “Policy and Standards for the Design of Entrances to State Highways,” 2003 at both intersections. All driveways will be evaluated in further detail during the final design phase.

(c) Clear Zone - The existing clear zone width is 3.6 m along NYS Route 30A, 1.6 m along NYS Route 30 south of the intersection, 2 m on NYS Route 30 north of the intersection, and 3 m along NYS Route 443. The widths are based on field measurements taken to unprotected items (utility poles, landscaping retaining walls, non-traversable slopes, etc.)

II.C.1.f. Abutting Highway Segments and Future Plans for Abutting Highway Segments

PIN 9125.06 – a vendor placed paving project is planned for spring/summer 2008 from near the western project limit along NY 30A (RM 30A 9501 1002) and continuing west. This project consists of milling off 1.5” of pavement and

replacing with a new superpave pavement course. There are no other plans for other projects along NY Routes 30, 30A, or 443 which would have any influence on the design of this project.

II.C.1.g. Speeds and Delay -

II.C.1.g.(1) Existing Speed Limit
The current posted speed limit within the project limits at the NYS Route 30 / 30A intersection is 55 MPH. The current posted speed limit within the project limits at the NYS Routes 30 / 443 intersection is 50 MPH.

II.C.1.g.(2) Actual Operating Speed - A radar speed study conducted by the Regional Traffic Operations Group showed that the off-peak 85th percentile operating speed was 82 km/h (51 MPH) at the NYS Route 30 / 30A intersection, and 87 km/h (54 MPH) at the NYS Route 30 / 443 intersection. The speed study was conducted on September 17, 2002. The day was sunny and the pavement was dry during the speed study. For additional information, see Regional Traffic Engineering and Safety Memo dated November 8, 2002 in Appendix B.

II.C.1.g.(3) Travel Speed and Delay Runs for Existing Conditions - Through field observations, it was determined that there are no substantial delays to traffic traveling through the project limits. Therefore, a delay study was not performed.

II.C.1.g.(4) Travel Time and Delay Runs Estimates - Through field observations, it was determined that there are no substantial delays to traffic traveling through the project limits. Therefore, a delay study was not performed.

II.C.1.h. Traffic Volumes - Refer to Appendix D for traffic flow diagrams.

Traffic volume data for the NYS Route 30 / 30A and NYS Route 30 / 443 intersections was obtained on January 6, 1999 via conducting manual turning movement traffic counts at the following intersections:

- NYS Route 30 and NYS Route 30A
- NYS Route 30 and NYS Route 443

AADT, DHV, and DDHV volumes were determined from the 2005 NYSDOT Traffic Data Report. In assessing the past AADT data within this report, it is evident that wide swings in growth percentage occurs among the various roadway segments within the corridor, from -4.2% along NYS Route 443 between the two most recent count years of 2001 and 2004, to +6.0% along NY Route 30 between the two most recent count years of 2000 and 2003. Given that the 6% growth was not observed in either of the adjacent segments of NY Route 30, nor on NYS Route 443 or NYS Route 30A, it is believed that this growth percentage is an anomaly that is not expected to recur in the future.

Given that the various AADT percentages yielded no conclusive trending that could be used to project future volumes, a 1.3% annual growth factor was used for forecast the AADT volumes to 2007, 2009 (ETC) and 2029 (design year). This annual percentage was also applied to the 1999 turning movement count data.

The 1999 existing traffic volumes, forecast design year traffic volumes, Average Annual Daily Traffic (AADT), Design Hour Volumes (DHV), and Directional Design Hour Volumes (DDHV) are summarized in Tables II-1a and II-1b below and on Figures 1 through 4 within Appendix D.

Table II-1a
Existing and Forecast Traffic Volumes
Intersection of NYS Route 30 and NYS Route 30A

Year	AADT	DHV	DDHV
Existing (2007)			
NYS Route 30A Northwestern Leg	7,484	1,123	606
NYS Route 30 Southern Leg	9,835	1,475	797
NYS Route 30 Northeastern Leg	1,493	224	121
2009 (ETC)			
NYS Route 30A Northwestern Leg	7,680	1,152	622
NYS Route 30 Southern Leg	10,093	1,514	818
NYS Route 30 Northeastern Leg	1,532	230	124
2029 (ETC+20)			
NYS Route 30A Northwestern Leg	9,944	1,492	805
NYS Route 30 Southern Leg	13.067	1,960	1,058
NYS Route 30 Northeastern Leg	1,984	298	161

Other data Intersection of NYS Routes 30 / 30A:
Directional Distribution = 54%
Daily Trucks = 7% NYS Route 30, 5% NYS Route 30A
ETC= Estimated Time of Completion

Table II-1b
Existing and Forecast Traffic Volumes
Intersection of NYS Route 30 and NYS Route 443

Year	AADT	DHV	DDHV
Existing (2007)			
NYS Route 30 Northern Leg	9,835	1,475	797
NYS Route 30 Southern Leg	9,262	1,389	750
NYS Route 443 Eastern Leg	1,902	285	154
2009 (ETC)			
NYS Route 30 Northern Leg	10,093	1514	818
NYS Route 30 Southern Leg	9,504	1426	770
NYS Route 443 Eastern Leg	1,952	293	158
2029 (ETC+20)			
NYS Route 30 Northern Leg	13,067	1,960	1,058
NYS Route 30 Southern Leg	12,306	1,846	997
NYS Route 443 Eastern Leg	2,527	379	205

Other data Intersection of NYS Routes 30 / 443:
Directional Distribution = 54.0%

Daily Trucks = 7% NYS Route 30, 6% NYS Route 443
ETC= Estimated Time of Completion

II.C.1.i. Level of Service

The intersection of NYS Route 30/NYS Route 30A is a Y-type intersection and its proximity to non-standard horizontal and vertical alignments result in an unusual configuration. NYS Route 30 approaches NYS Route 30/30A at a skew from the northeast and a spur connecting NYS Routes 30 and 30A is located within 305 meters of the primary intersection. Existing traffic volumes indicate the predominant traffic flows are on NYS Route 30A (northwestern leg) and NYS Route 30 (southern leg). The existing configuration forms three separate intersections and all three intersections are controlled by Stop signs on the minor street approaches.

The intersection of NYS Route 30/NYS Route 443 is also a Y-type intersection with an unusual configuration and redundant legs. NYS Route 443 approaches NYS Route 30 at a skew from the northeast and there are two additional spurs connecting NYS Routes 30 and 443 located within 185 meters of the primary intersection. The existing configuration forms five separate intersections and all five of the intersections are controlled by Stop signs.

Descriptions of the various LOS thresholds for unsignalized intersections are included in Appendix D. The results of the capacity analyses are summarized in Table II-2.

Table II-2 – Level of Service Summary				
Intersection	**2007 Existing**		**2029 Design Year (ETC + 20)**	
	AM	**PM**	**AM**	**PM**
NYS Route 30/NYS Route 30A Southbound Left-turn Westbound Left/Right	A (8.2) C (15.3)	A (8.0) B (10.6)	A (8.5) C (21.0)	A (8.3) C (18.1)
NYS Route 30A/Spur Southbound Left-turn Westbound Left/Right	A (8.0) B (10.3)	A (7.9) B (13.0)	N/A	N/A
NYS Route 30/Spur Eastbound Left-turn Southbound Left/Right	A (7.4) A (9.2)	A (9.0) A (7.3)	N/A	N/A
NYS Route 30/NYS Route 443 Southbound Left-turn Westbound Left/Right	A (8.1) C (18.6)	A (8.3) C (15.8)	A (8.5) D (27.2)	A (8.9) C (29.0)
NYS Route 30/Spur Southbound Left-turn Westbound Left/Right	A (8.0) B (10.5)	A (8.1) B (10.6)	N/A	N/A
NYS Route 30/Covered Bridge Cross Road Southbound Left-turn Westbound Left/Right	A (8.0) A (1.3)	A (8.1) A (1.3)	N/A	N/A
NYS Route 443/Spur Eastbound Left-turn Southbound Left/Right	A (9.4) A (7.5)	A (9.5) A (7.4)	N/A	N/A
NYS Route 443/Covered Bridge Cross Road Eastbound Left-turn Southbound Left/Right	A (9.2) A (7.4)	A (9.3) A (7.3)	N/A	N/A

[1] Level of Service (delay in seconds per vehicle)

As shown in Table II-2, all of the intersections operate at acceptable levels of service D or better during the a.m. and p.m. peak hours for the existing (2007) and 2029 design year conditions.

II.C.1.j. Non-Standard Features and Other Non-Conforming Features

II.C.1.j.(1) Non Standard Features – Based on roadway classification, traffic volumes, and design speeds, the following non-standard features currently exist:

TABLE II-3a – EXISTING NON-STANDARD FEATURES ROUTE 30/30A INTERSECTION			
Highway Feature	**Design Criteria**	**Existing NYS Route 30**	**Existing NYS Route 30A**
Lane Width	3.6 m	3.3 m [2]	
Shoulder Width	1.8 m [1] / 2.4 m	0.4 m	1.0 m
Maximum Grade	4%	6.0%	4.9%
Horizontal Curvature	437 m	116 m	318 m
Stopping Sight Distance Based on horizontal elements	185 m	172 m [3] 71 m [4] 95 m [5]	144 m [6] 159 m [7]
Based on vertical elements	185 m	143 m [8] 132 m [9] 54 m [10] 55 m [11]	102 m [12] 53 m [13] 146 m [14]
Horizontal Clearance	2.4 m	1.7 m	
Pavement Cross Slope	1.5 to 2.0 %	0.0 to 5.8 %	0.0 to 3.5%
Rollover Between Lanes At edge of traveled way	 4.0% max. 8.0% max.	 4.3% max. 21.9% max.	 4.9% max. 15.3% max.

[1] – 1.8m shoulder along Route 30 north of intersection
[2] – Along Route 30 north of intersection
[3] – NB traffic just south of intersection (trellis / building corner)
[4] – NB traffic north of intersection (curve / trees)
[5] – SB traffic north of intersection (curve / trees)
[6] – SB traffic approaching intersection (trellis / building corner)
[7] – Potential future issue for SB traffic (tree canopies, outside of ROW)
[8] – Crest curve at intersection
[9] – Crest curve just north of intersection
[10] – Sag curve 100 m north of intersection
[11] – Sag curve 150 m north of intersection
[12] – Crest curve near BOCES entrance
[13] – Sag curve just south existing box culvert
[14] – Second sag curve just south of box culvert

TABLE II-3b – EXISTING NON-STANDARD FEATURES ROUTE 30/443 INTERSECTION			
Highway Feature	**Design Criteria**	**Existing NYS Route 30**	**Existing NYS Route 443**
Lane Width	3.6 m		3.3 m
Shoulder Width	2.4 m	1.2 m	0.5 m
Maximum Grade	4% (Route 30) 6% (Route 443)		6.6%
Horizontal Curvature	437 m	350 m	91 m
Stopping Sight Distance Based on vertical elements	185 m		78 m [1] 90 m [2]
Horizontal Clearance Without barrier With barrier	 3.0 m 2.4 m		 2.3 m 1.2 m
Pavement Cross Slope	1.5 to 2.0 %	0.4 to 5.1 %	0.0 to 5.2 %
Rollover Between Lanes At edge of traveled way	 4.0% max. 8.0% max.	 7.7% max. 9.0% max.	

[1] – Crest curve at Route 443 / Vrooman Cross Road intersection
[2] – Sag curve 170 m east of Route 443 / Vrooman Cross Road intersection

TABLE II-3c – EXISTING NON-STANDARD FEATURES ROUTE 30/443 INTERSECTION			
Highway Feature	**Design Criteria**	**Vrooman Cross Road**	**Covered Bridge Road**
Lane Width	3.0 m	2.7 m	
Horizontal Curvature	79 m	60 m	
Pavement Cross Slope	1.5 to 2.0 %	0.9 to 7.4 %	0.7 to 5.0 %
Rollover Between Lanes At edge of traveled way	 4.0% max. 8.0% max.	 11.2% max. 26.0% max.	

II.C.1.j.(2) Other Non-Conforming Features - There are no existing non-conforming features within the project limits at either intersection.

II.C.1.k. Safety Considerations, Accident History and Analysis - The need to provide safety improvements for the two intersections was identified in September of 1993, following an accident history analysis. The study indicated the accident rate for both

intersections was more than twice the state average for T-type intersections.

The NYS Route 30 / 30A intersection is a Y-type intersection in the vicinity of non-standard horizontal and vertical alignments along NYS Route 30. The area was the scene of twenty-seven accidents in the three-year period from May 1, 1998 to April 30, 2001. This area appeared on the 2006 HAL list as a SDL.

The NYS Route 30 / 443 intersection is a series of complicated, closely spaced multi-leg intersections along Route 30. Two intersecting roads are legs of Route 443, and the third is a local road. The area was the scene of nineteen accidents in the three-year period from May 1, 1998 to April 30, 2001. Fourteen of these accidents occurred within the intersection area. This area appeared on the 2006 HAL list as a SDL.

The Regional Transportation Systems Operator completed an updated accident analysis on 6/23/08, with the results being similar to the earlier analysis and the recommendations from the 1998-2001 accident analysis being deemed as still valid.

Refer to Appendix C for the accident analyses.

II.C.1.l. Pavement and Shoulder Conditions - The pavement condition is generally good, with no evidence of cracking.

II.C.1.m. Guide Railing, Median Barriers and Impact Attenuators - Guide railing ranges from cable rail to box beam on weak posts at the NYS Route 30 / 30A intersection, project area. The guide rail is located along roadways that will be realigned as part of the project. New rail will be included in the project where appropriate. At the NYS Route 30 / 443 project area, guide railing is box beam on weak posts. The guide railing is in good shape and will be reset to the standard height after the roadway improvements are made, all as part of this project.

II.C.1.n. Traffic Control Devices - There are no signalized intersections within the project limits. All of the intersections are controlled by stop signs along the secondary roadway. Signs and pavement markings in the area are in good shape.

II.C.1.o. Structures - There are no bridges within the project limits.

II.C.1.p. Hydraulics of Bridges and Culverts - There are no bridges within the project limits. There is a concrete box culvert (approximate opening 2.0 m wide x 2.5 m high) crossing NYS Route 30A in the project limits, located approximately 343 meters north of the NYS Routes 30 / 30A intersection. Field observations noted the culvert to be in fair condition. Debris was not found within it nor any evidence of inadequate capacity noted. Based upon the additional loading requirements that will be added as a result of increasing the roadway profile at this location, together with the nearly 60 year age of the structure, it is proposed that this culvert be replaced as part of the project. Appropriate investigations for determining the final size of the new culvert will occur as the project progresses.

Another small concrete box culvert (approximate opening 1.25 m wide x 0.6 m high) crosses NYS Route 30A approximately 60m northwest of the existing intersection. This culvert will be replaced with a circular culvert as part of the project.

II.C.1.q. Drainage Systems -

II.C.1.q.(1) Type – Existing drainage is a combination of open ditches, cross culverts, closed systems, and driveway pipe at both intersection project areas.

II.C.1.q.(2) Condition/Deterioration – Most of the drainage systems appear to function as expected. A few of the ditches are overgrown with weeds and brush but no overtopping or lack of adequate capacity is evident.

There is a forty-eight inch steel pipe approximately 225 meters north of the NYS Route 30 / 30A intersection that has been partially crushed. It appears the crush was an intentional part of the construction to allow for a smooth roadway section crossing over it. The pipe appears to be oversized, as no overtopping or lack of capacity is evident. This culvert will be replaced as part of the project.

In the NYS Route 30 / 443 intersection project area, a culvert crossing NYS Route 443 near the Vrooman Cross Road intersection outlets at the top of a steep 15m high bank. Fox Creek is situated at the bottom of this bank. Field observations note the pipe outlet is sticking out of the bank approximately 0.4 meters. Bank erosion and pipe / roadway undermining were evident, as two of the guide rail posts were not supported. It is anticipated that this problem will be resolved by NYSDOT maintenance forces prior to construction of this project, with this culvert being ultimately replaced as part of the project.

II.C.1.q.(3) Deficiencies/Needs – Ditches will be regraded and culverts to remain will be cleaned as part of the project where appropriate.

II.C.1.r. Geotechnical Conditions – Borings were completed by NYSDOT in February and March, 2005. It was determined that no unusual soil conditions exist within the project limits. Groundwater readings in the area of a proposed wetland mitigation site have been taken by NYSDOT in 2007 and 2008 to establish the proposed wetland floor elevation.

II.C.1.s. Utilities – Overhead electric and telephone are throughout the NYS Route 30 / 30A intersection project area. There is a 200mm CIP sanitary sewer line crossing NYS Route 30A near the northwest termini will be impacted, at least to adjust the manholes on each side of NYS Route 30A. As-built drawings will be reviewed during the upcoming detailed design phase and the full extent of work will be determined. In the area of the NYS Route 30 / 443 intersection, overhead electric and telephone run parallel to and cross NYS Route 443.

II.C.1.t. Railroads - There are no railroads within a kilometer of the project limits.

II.C.1.u. Visual Resources – The area around both intersections is predominantly rural residential together with a few commercial establishments. Vegetation varies from manicured grass yards to wooded areas. Wooded hills are visible from both project sites.

II.C.1.v. Provisions for Pedestrians and Bicyclists – In the area of the NYS Route 30 / 30A

intersection, bicyclists and pedestrians are accommodated within the travel lane or shoulder. In the area near the NYS Route 30 / 443 intersection, bicyclists and pedestrians are accommodated within the shoulder of NYS Route 30 and the travel lane and shoulder along NYS Route 443. There are no sidewalks or bike paths along NYS Routes 30, 30A, or 443 within the project limits. No major pedestrian generators are in the immediate area. Based on the guidelines provided in the Highway Design Manual, sidewalks are not warranted. There are no bike routes or paths within the project limits and the Vehicle and Traffic Law permits bicyclists to use the roadway and/or its shoulders and pedestrians to use the shoulders.

II.C.1.w. Planned Development for Area - The transportation needs addressed by this project are independent of other transportation needs or mobility problems in the region. The movement of people and goods will be unaffected by this project. There are no planned developments for the area.

II.C.1.x. System Elements and Conditions - This project will not affect other regional projects. It is not a planned detour route for any upcoming project. No unusual traffic increase is expected for this section of roadway upon its completion, or the completion of other projects in the area.

II.C.1.y. Environmental Integration

If pedestrian facilities are developed in the future in the vicinity of the NYS Route 30 / 30A intersection, an abandoned section of road offers a possible enhancement opportunity. The road is now just a partially mowed grass path through the woods, leading from NYS Route 30 to a small stream, terminating about 20 meters north of the proposed NYS Route 30A alignment. The path could be extended to the NYS Route 30A roadway and allow pedestrians and cyclists a shortcut through the woods to NYS Route 30.

II.C.1.z. Miscellaneous

The Schoharie County Sheriff has requested that this project consider changes to Vrooman Cross Road to eliminate the 'short cut convenience'. The Town of Schoharie designated (and signed as such) Vrooman Cross Road for local traffic several years ago. Based upon feedback during the public hearing for this project, the roadway will remain open. NYSDOT may revisit this location if future problems or concerns are discovered in this area.

II.C.2. <u>Needs</u>

II.C.2.a. Project Level Needs -

II.C.2.a.(1) Safety Needs

The accident history rates at both intersection locations are significantly higher than the statewide average, and are summarized as follows:

NYS Route 30 / 30A

(1998-2001)

Overall accident rate = 3.37 MVKm (1.70 MVKm statewide avg.)

Non-intersection accident rate = 2.87 MVKm (1.28 MVKm statewide avg.)
Intersection accident rate = 0.32 MEV (0.19 MEV statewide avg.)

(2005-2007)

Intersection accident rate = 0.38 MEV (0.10 MEV statewide avg.)

NYS Route 30 / 443

(1998-2001)

Overall accident rate NYS Route 30 = 2.10 MVKm (1.70 statewide avg.)
Overall accident rate NYS Route 443 = 2.21 MVKm (1.70 statewide avg.)
Non-intersection accident rate = 1.33 MVKm (1.28 MVKm statewide avg.)
Intersection accident rate = 0.67 MEV (0.19 MEV statewide avg.)

(2005-2007)

Intersection accident rate = 0.58 MEV (0.22 MEV statewide avg.)

II.C.2.a.(2) Environmental Needs – While no specific environmental needs or enhancement exists, there are several opportunities for inclusion of environmental initiative features, including increased wildflower plantings and landscape plantings to improve roadside appearance. New or rehabilitated historic markers for the Colonel Peter Vrooman House, and the covered bridge crossing Fox Creek, and retrofits of existing highway drainage systems with a created wetland and stormwater management facilities are additional environmental initiative measures that can be incorporated into this project.

II.C.2.b. Transportation Plans - This project is listed in the Statewide Transportation Improvement Plan with a high priority.

II.D. Project Objectives

The project objective is to correct geometric and safety deficiencies at both intersection locations using cost effective measures to reduce the accident rates to an acceptable level within the project area.

CHAPTER III - ALTERNATIVES

III.A. Design Criteria

III.A.1. Design Standards - NYSDOT Highway Design Manual Chapter 2. The design speed at each intersection is based on a November 8, 2002 speed study from the Regional Traffic Engineer. The memo is documented in Appendix B of this report.

III.A.2. Critical Design Elements

Table III – 1
Design Criteria vs. Existing and Proposed Conditions Route 30 / 30A Intersection

PIN:	9125.05	NHS (Y/N):	N
Route No. & Name:	NYS Route 30 NYS Route 30A	Functional Class:	Rural Arterial
Project Type:	Reconstruction	Design Classification (AASHTO Class)	Rural Arterial
% Trucks:	7% Route 30 5% Route 30A	Terrain:	Rolling
AADT (existing):	9.835 Route 30 southern leg 1,493 Route 30 northern leg 7,484 Route 30A	Truck Access Route:	NYS Route 30A – yes NYS Route 30 south of 30A - yes NYS Route 30 north of 30A – no

	Element	Standard Criteria	HDM § Reference	Existing Conditions	Proposed Conditions
1	Design Speed (see note 1)	100 km/h	2.7.2.1 A	82 km/h 85th%	100 km/h
2	Lane Width	3.6 m	2.7.2.1 B	3.3 m [2] to 3.6 m (Route 30) 3.6 m (Route 30A)	3.6 m
3	Shoulder Width	1.8 m (Route 30) 2.4 m (Route 30A)	2.7.2.1 C	0.4 to 1.1 m [2] (Route 30) 1.0 m [2] (Route 30A)	1.8 m (Route 30) 2.4 m (Route 30A)
4	Bridge Roadway Width (total)	Full Approach width	BM Table 2.1	NA	NA
5	Grade	4% Max.	2.7.2.1 E	6.0% [2] (Route 30) 4.9% [2] (Route 30A)	6% max. [2] (Rte 30) 4% max. (Rte 30A)
6	Horizontal Curvature	437 m @ e=6.0%	2.7.2.1 F	116 m [2] (Route 30) 325 m [2] (Route 30A)	437 m @ e=6.0%
7	Superelevation Rate	6.0 % max.	2.7.2.1 G	0.2% to 5.6% (Route 30) 0.6% to 6.0% (Route 30A)	6.0% max.
8	Stopping Sight Distance Based on horizontal elements Based on vertical elements	185 m 185 m	2.7.2.1 H	71 m min. [3] (Route 30) 53 m min. [3] (Route 30A)	185 m min.
9	Horizontal Clearance Without barrier With Barrier	3.0 m min. 2.4 m min.	2.7.2.1 I	1.7 m [2] (Route 30) >3.0 m (Route 30A) >2.4 m	3.0 m min. 2.4 m min.
10	Vertical Clearance	4.3 m min.	BM 2.4.1	>4.3 m	4.3 m min.
11	Pavement Cross Slope	1.5 % to 2.0 %	2.7.2.1 K	0.0% to 5.8% [2] (Route 30) 0.0% to 3.5% [2] (Rte 30A)	2.0%

12	Rollover Between Lanes At edge of traveled way	4.0% max. 8.0% max.	2.7.2.1 L 2.7.2.1 L	4.3% max. (Route 30) [2] 4.9% max. (Rte 30A) [2] 21.9% max. (Route 30) [2] 15.3% max. (Rte 30A) [2]	4.0% max. 8.0% max. 4.0% max. 8.0% max.
13	Structural Capacity Replace (LRFD Specs): Replace (NYSDOT Specs): Rehabilitation:	AASHTO HL-93 Live Load, and NYS Design Permit Vehicle AASHTO MS23 (HS 25) Live Load AASHTO MS18 (HS 20) Live Load	BM 2.6.1 BM 2.6.2	NA	NA
14	Level of Service	NA	2.6.14	NA	NA
15	Control of Access	NA	2.6.15	NA	NA
16	Pedestrian Accommodations	NA	2.6.16	NA	NA
17	Median Width With left turn lanes Without left turn lanes	NA	2.7.2.1.O	NA	NA

[1] – The Regional Traffic Engineer has concurred with the selected design speed.
[2] – Non-standard feature
[3] – Non-standard feature, see Table II-3a for locations

Table III – 2a
Design Criteria vs. Existing and Proposed Conditions Route 30 / 443 Intersection

PIN:	9125.05	NHS (Y/N):	N
Route No. & Name:	NYS Route 30	Functional Class:	Rural Arterial
Project Type:	Reconstruction	Design Classification (AASHTO Class)	Rural Arterial
% Trucks:	7% Route 30	Terrain:	Rolling
AADT (existing):	9,835 Route 30 northern leg 9,262 Route 30 southern leg	Truck Access Route:	NYS Route 30 south of 30A - yes

	Element	Standard Criteria	HDM § Reference	Existing Conditions	Proposed Conditions
1	Design Speed (see note 1)	100 km/h	2.7.3.1 A	87 km/h 85th%	100 km/h
2	Lane Width	3.6 m	2.7.3.1 B	3.6 m	3.6 m
3	Shoulder Width	2.4 m	2.7.3.1 C	1.2 m [2]	2.4 m
4	Bridge Roadway Width (total)	Full Approach width	BM Table 2.1	NA	NA
5	Grade – max.	4%	2.7.3.1 E	3.8%	Retain existing
6	Horizontal Curvature	437 m @ e=6.0%	2.7.3.1 F	350 m [2]	450 m
7	Superelevation Rate	6.0 % max.	2.7.3.1 G	Varies 0.4% to 5.1%	6.0% maximum
8	Stopping Sight Distance (Horizontal & Vertical)	185 m min.	2.7.3.1 H	185 m min.	Retain existing

9	Horizontal Clearance Without barrier With Barrier	3.0 m min. 2.4 m min.	2.7.3.1 I	3.0 m 2.4 m	3.0 m min. 2.4 m min.
10	Vertical Clearance	4.3 m min.	BM 2.4.1	>4.3 m	4.3 m min.
11	Pavement Cross Slope	1.5 % to 2.0 %	2.7.3.1 K	0.4% to 5.1% [2]	2.0%
12	Rollover Between Lanes At edge of traveled way	 4.0% max. 8.0% max.	 2.7.3.1 L 2.7.3.1 L	 7.7% max. [2] 9.0% max. [2]	 4.0% max. 8.0% max.
13	Structural Capacity Replace (LRFD Specs): Replace (NYSDOT Specs): Rehabilitation:	 AASHTO HL-93 Live Load, and NYS Design Permit Vehicle AASHTO MS23 (HS 25) Live Load AASHTO MS18 (HS 20) Live Load	 BM 2.6.1 BM 2.6.2	 NA	 NA
14	Level of Service	NA	2.6.14	NA	NA
15	Control of Access	NA	2.6.15	NA	NA
16	Pedestrian Accommodations	NA	2.6.16	NA	NA
17	Median Width With left turn lanes Without left turn lanes	NA	2.7.2.1.O	NA	NA

[1] – The Regional Traffic Engineer has concurred with the selected design speed.
[2] – Non-standard feature

Table III – 2b
Design Criteria vs. Existing and Proposed Conditions Route 30 / 443 Intersection

PIN:	9125.05	NHS (Y/N):	N
Route No. & Name:	NYS Route 443	Functional Class:	Rural Collector
Project Type:	Reconstruction	Design Classification (AASHTO Class)	Rural Collector
% Trucks:	6% Route 443	Terrain:	Rolling
AADT (existing):	1,902 Route 443	Truck Access Route:	No

	Element	Standard Criteria	HDM § Reference	Existing Conditions	Proposed Conditions
1	Design Speed (see note 1)	100 km/h	2.7.3.1 A	82 km/h 85th%	100 km/h
2	Lane Width	3.6 m	2.7.3.1 B	3.3 m [2]	3.6 m
3	Shoulder Width	2.4 m	2.7.3.1 C	0.5 m [2]	1.0 m min. [2]
4	Bridge Roadway Width (total)	Full Approach width	BM Table 2.1	NA	NA
5	Grade – max.	6%	2.7.3.1 E	6.6% [2]	6%
6	Horizontal Curvature	437 m @ e=6.0%	2.7.3.1 F	91 m [2]	252 m [2] @ e=6.0%
7	Superelevation Rate	6.0 % max.	2.7.3.1 G	Varies 1.7% to 5.2%	6.0% maximum

8	Stopping Sight Distance Based on horizontal elements Based on vertical elements Intersection Sight Distance	185 m min. 185 m. min 210 m. min.	2.7.3.1 H	185 m min. 78 m min. [3] 108 m min. [3]	185 m min. 130 m [2] 210 m
9	Horizontal Clearance Without barrier With Barrier	3.0 m min. 2.4 m min.	2.7.3.1 I	2.3 m [2] 1.2 m [2]	3.0 m min. 2.4 m min.
10	Vertical Clearance	4.3 m min.	BM 2.4.1	>4.3 m	4.3 m min.
11	Pavement Cross Slope	1.5 % to 2.0 %	2.7.3.1 K	0.0% to 5.2% [2]	2.0%
12	Rollover Between Lanes At edge of traveled way	 4.0% max. 8.0% max.	 2.7.2.1 L 2.7.2.1 L	 7.1% max. 6.5% max.	 4.0% max. 8.0% max.
13	Structural Capacity Replace (LRFD Specs): Replace (NYSDOT Specs): Rehabilitation:	 AASHTO HL-93 Live Load, and NYS Design Permit Vehicle AASHTO MS23 (HS 25) Live Load AASHTO MS18 (HS 20) Live Load	 BM 2.6.1 BM 2.6.2	 NA	 NA
14	Level of Service	NA	2.6.14	NA	NA
15	Control of Access	NA	2.6.15	NA	NA
16	Pedestrian Accommodations	NA	2.6.16	NA	NA
17	Median Width With left turn lanes Without left turn lanes	NA	2.7.2.1.O	NA	NA

[1] – The Regional Traffic Engineer has concurred with the selected design speed.
[2] – Non-standard feature
[3] – Non-standard feature, see Table II-3b for locations.

Table III – 2c
Design Criteria vs. Existing and Proposed Conditions Route 30 / 443 Intersection

PIN:	9125.05	NHS (Y/N):	N
Route No. & Name:	Vrooman Cross Road Covered Bridge Road	Functional Class:	Local rural road
Project Type:	Reconstruction	Design Classification (AASHTO Class)	Local rural road
% Trucks:	7%	Terrain:	Rolling
ADT (existing):	Vrooman Cross Road – Covered Bridge Road -	Truck Access Route:	No

Element	Standard Criteria	HDM § Reference	Existing Conditions	Proposed Conditions

1	Design Speed (see note 1)	50 km/h	2.7.4.1 A		50 kmh
2	Lane Width	3.0 m	2.7.4.1 B	2.7 m [2] Vrooman Cross Road 3.0 m Covered Bridge Road	3.0 m
3	Shoulder Width	0.6 m	2.7.4.1 C	0.6 m	0.6 m
4	Bridge Roadway Width (total)	Full Approach width	BM Table 2.1	NA	NA
5	Grade – max.	10%	2.7.4.1 E	6.4% Vrooman Cross Road 4.6% Covered Bridge Road	5.9% Vrooman Cross Road 8.1% Covered Bridge Road
6	Horizontal Curvature	79 m @ e=6.0%	2.7.4.1 F	60 m [2] Vrooman Cross Road 259 m Covered Bridge Road	125 m Vrooman Cross Road 90 m Covered Bridge Road
7	Superelevation Rate	6.0 % max.	2.7.4.1 G	Varies 3.4% to 5.8% (VC Rd.) Varies 0.7% to 5.0% (Cov Br Rd.)	6.0% maximum
8	Stopping Sight Distance (Horizontal & Vertical)	65 m min.	2.7.4.1 H	65 m min.	65 m min.
9	Horizontal Clearance Without barrier With Barrier	2.0 m min. 1.2 m min.	2.7.4.1 I	2.0 m (both) 1.2 m (both)	2.0 m min. 1.2 m min.
10	Vertical Clearance	4.3 m min.	BM 2.4.1	>4.3 m	4.3 m min.
11	Pavement Cross Slope	1.5% to 2.0%	2.7.4.1 K	0.9% to 7.4% [2] (VC Rd.) 0.7% to 5.0% [2] (Cov Br Rd.)	2.0%
12	Rollover Between Lanes At edge of traveled way	4.0% max. 8.0% max.	2.7.4.1 L 2.7.4.1 L	11.2% max. [2] (VC Rd.) 2.8% max. (Cov Br Rd.) 26% max [2] (VC Rd.) 4.4% max. (Cov Br Rd.)	4.0% max. 8.0% max.
13	Structural Capacity Replace (LRFD Specs): Replace (NYSDOT Specs): Rehabilitation:	AASHTO HL-93 Live Load, and NYS Design Permit Vehicle AASHTO MS23 (HS 25) Live Load AASHTO MS18 (HS 20) Live Load	BM 2.6.1 BM 2.6.2	NA	NA
14	Level of Service	NA	2.6.14	NA	NA
15	Control of Access	NA	2.6.15	NA	NA
16	Pedestrian Accommodations	NA	2.6.16	NA	NA

17	Median Width With left turn lanes Without left turn lanes	NA	2.7.2.1.O	NA	NA

[1] – The Regional Traffic Engineer has concurred with the selected design speed.
[2] – Non-standard feature

III.A.3. Other Controlling Parameters

Table III – 3
Other Controlling Parameters

Element		Reference to Standard	Criteria	Proposed Condition
A	Design Vehicle	HDM Section 5.7.1	WB-20: Truck Access; Largest vehicle – frequent use: Others	WB-20 NY 30A NY 30 south of NY 30A NY 443 WB-15 NY 30 north of 30A SU Covered Bridge Road Vrooman Cross Road
B	Level of Service (non-Interstate)	HDM Section 5.2	D	D (minimum)
C	Design Storm: Culverts = Storm Drainage Systems = Ditches =	HDM Chapter 8 HDM Chapter 8 HDM Chapter 8	50 years 5 years 10 years	50 years 5 years 10 years

III.B. Alternatives Considered

Project alternatives were developed to meet the project objectives. The alternatives were developed using the engineering design criteria in Section III.A of this report. All reasonable alternatives were considered.

The range of alternative solutions considered include:

NYS Route 30 / 30A

THE NO-BUILD "NULL" ALTERNATIVE. The Null Alternative provides for only the continued maintenance of the area, including the severely skewed intersection and nearby non-standard geometrics. Accidents would continue to occur at rates significantly higher than the statewide average. This alternative would not provide any safety improvements and does not meet the project objectives.

ALTERNATIVE #1 – "T" NYS Route 30 into NYS Route 30A. This alternative proposes construction of a "T" type intersection, the addition of left turn lanes along NYS Routes 30 and 30A, and realigning the approach roadways to eliminate non-standard horizontal and vertical geometries in the vicinity of the intersection. Several driveways near the intersection will be reconstructed for better definition and conformance with the appropriate driveway standards.

This alternative is considered feasible, addresses all of the project objectives in Section II.D of this report, and is considered the preferred alternative.

ALTERNATIVE #1B – "T" (modified) NYS Route 30 into NYS Route 30A. This alternative proposes construction of a tight "T" type intersection at the existing intersection location, the addition of left turn lanes along NYS Routes 30 and 30A, and similar realigning of the approach roadways to eliminate non-standard horizontal and vertical geometries in the vicinity of the intersection as with Alternative #1. Several driveways near the intersection will be reconstructed for better definition and conformance with the appropriate driveway standards. Given that the resulting "T" intersection would continue to leave a non-standard curve in place along NYS Route 30 entering the new intersection, as well as non-standard stopping sight distance along NYS Route 30, and the new intersection would consist of poor geometry. Strong objections were raised by Town officials related to this alternative at a meeting held in October, 2005. Given the above concerns with this alternative, it is not considered as a feasible alternative. A conceptual plan of this Alternative is included within Appendix J.

ALTERNATIVE #1C – "T" NYS Route 30 into NYS Route 30A. Similar to Alternative #1, this alternative proposes construction of a "T" type intersection, the addition of left turn lanes along NYS Routes 30 and 30A, and some minor realigning the approach roadways to eliminate some of the non-standard horizontal and vertical geometries at the intersection. The work along NYS Route 30 and NYS Route 30A is minimized to that necessary to construct the left turn lanes and the "T" intersection. Since this alternative would not address non-standard horizontal and vertical curves that would exist at the western work limit along NYS Route 30A and the eastern work limit along NYS Route 30, this alternative is not considered as a feasible alternative. A conceptual plan of this Alternative is included within Appendix J.

ALTERNATIVE #2 – Roundabout. This alternative proposes to construct a modern roundabout at the intersection of Route 30 and 30A. A modern roundabout typically has a lower accident rate than a conventional intersection design, however, it would require more ROW in the area to build not only the roundabout itself but also the approach roadways. A modern roundabout does not require a completely flat terrain, however, the rolling terrain of the project site would require significant earthwork and the entrance grade to the roundabout would require extending the project limits. Because the site is located in a sensitive archeological area, as well as the fact that the accident analysis concluded most of the accidents at the project location are due to geometric deficiencies and not the intersection itself, it was determined the more severe impacts of constructing a roundabout do not justify the minimal safety benefit at this location. In addition, the predominant traffic movement is along NYS Route 30 and NYS Route 30A and a roundabout would increase delay through the intersection. This alternative is not considered feasible due to these reasons, and no plans were developed for this alternative.

NYS Route 30 / 443

THE NO BUILD "NULL" ALTERNATIVE. The Null Alternative provides for only the continued maintenance of the complicated closely spaced, multi-leg intersection. Accidents would continue to occur at rates significantly higher than the statewide average. This alternative would not provide any safety improvements and does not meet the project objectives.

ALTERNATIVE #1 – "T" NYS Route 443 into NYS Route 30. This alternative proposes construction of a "T" type intersection and realigning NYS Route 443 in the vicinity of the intersection. The relocation of the intersection will provide standard intersection distance, eliminate the redundant intersections, and provide improved sight distance along NYS Route 443. Driveways along Vrooman Cross Road will be slightly reconfigured to provide better

definition at its intersection with NYS Route 443. This alternative is considered feasible, addresses all of the project objectives in Section II.D of this report, and is considered the preferred alternative.

ALTERNATIVE #2 – Roundabout. This alternative proposes to construct a modern roundabout at the intersection of Route 30 and 443. A modern roundabout typically has a lower accident rate than a conventional intersection design, however, it would require more ROW in the area to build not only the roundabout itself but also the approach roadways. A modern roundabout at this location would require significant earthwork in a very sensitive archeological and historical area. The entrance grade to the roundabout from 443 would require extending the project limits and affecting a property listed on the historical register. Because the site is located in a sensitive cultural resource area, as well as the fact that the accident analysis concluded most of the accidents at the project location are due to geometric deficiencies and redundant intersection legs, not the intersection itself, it was determined the more severe impacts of constructing a roundabout do not justify the minimal safety benefit at this location. In addition, the predominant traffic movement is along Route 30 and a roundabout would increase delay through the intersection. This alternative is not considered feasible due to these reasons, and no plans were developed for this alternative.

III.C. Feasible Alternative

III.C.1. Description of Feasible Alternative –

NYS Route 30 / 30A

Alternative #1 eliminates the existing non-standard geometries. The new intersection will be a conventional "T", and will include a left turn lane for SB travelers along NYS Route 30A turning north onto NYS Route 30. This left turn lane will be shadowed by a left turn lane for NB travelers along NY Route 30 turning into the "Apple Barrel" business. The curve passing through the intersection on the northwest and southern legs will be flattened to a 437m radius. Flattening the curve, along with vertical improvements, will increase the sight distance to above minimum standards. The total length of planned roadway work at this intersection is approximately 1100m (640m on NYS Route 30 and 460m on NYS Route 30A).

The nearly 60-year old concrete box culvert crossing under NY Route 30A at approximate 1+288 will be replaced with a new box culvert. Also, the western driveway to the "Apple Barrel" will be relocated to connect with NYS Route 30 across from the new intersection.

Abandoned sections of roadway within the project limits will be removed, regraded to match the surrounding terrain, and turf will be reestablished.

To meet the requirements of the State Pollutant Discharge Elimination System (SPDES) permitting, a proposed stormwater treatment basin is planned near the northwest quadrant of the relocated intersection.

Also, a wetland mitigation site is planned for creation in the northeast intersection quadrant to mitigate impacts created by the construction of this Alternative, and also Alternative #1 at NYS Route 30 / 443.

Refer to Appendix H for the preliminary plans, profiles, and typical sections.

NYS Route 30 / 443

Alternative #1 condenses closely spaced redundant intersections into a single conventional "T" intersection. Intersection sight distance will be improved to provide greater than that required, and the stopping sight distance along the realigned NYS Route 443 will be increased. A left turn lane for SB travelers along NYS Route 30 turning onto NYS Route 443 has been incorporated. The total length of roadway work at this intersection is approximately 1040m (386m on NYS Route 30, 424m on NYS Route 443, 120m on Covered Bridge Road, and 110m along Vrooman Cross Road).

To meet the requirements of the State Pollutant Discharge Elimination System (SPDES) permitting, a proposed stormwater treatment basin is planned near the southeast quadrant of the relocated intersection.

A parking area is planned along Covered Bridge Road, to facilitate those visiting the adjacent covered bridge.

The Town of Schoharie is also currently considering relocating their Town Hall to the area between Covered Bridge Road and Fox Creek.

Refer to Appendix I for the preliminary plans, profiles, and typical sections.

III.C.2. Engineering Considerations for Feasible Alternative

NYS Route 30 / 30A Intersection Alternative #1 – During development of this report, the project was extended approximately 60 m to the north along NYS Route 30A to remove a nonstandard vertical curve and allow for standard superelevation transition locations between the new curves along NYS Route 30A. It should be noted this curve is at the entrance to the Capital Region Career & Technical School (BOCES, Schoharie Campus). The extension allowed the curve near the commercial business to be shifted as well, improving sight distance at the business drives and the neighboring residential drives. Along NYS Route 30, the alignment was extended to the northeast to completely eliminate an existing non-standard curve, rather than "reverse compounding" the new alignment from it. Maintenance and protection of traffic will be a priority during final design, but the alternative provides an opportunity to build a large section of the roadway without substantially impacting existing traffic.

NYS Route 30 / 443 Intersection Alternative #1 – The proposed NYS Route 30 / 443 intersection was determined after several iterations of using intersection skew angle, minimum standard curve, and several different vertical scenarios. Use of a minimum standard 100 kmh design speed curve (437m) along NYS Route 443 would require several ROW takes in order to maintain standard stopping sight distance along NYS Route 443 at the Vrooman Cross Road intersection. The profile along NYS Route 443 is based on maximizing the sight distance along NYS Route 443 while minimizing impacts to the George Mann Tavern property, Fox Creek, and other adjacent properties. Concrete gutter will be utilized east of the NYS Route 443 / Vrooman Cross Road intersection for the same reason. Connecting one of the existing legs to NYS Route 443 was investigated but discarded due to lack of adequate sight distance. The location of the dead end road to the covered bridge was then set based on standard superelevation transition location (as the road approaches NYS Route 443), and maximizing the intersection sight distance looking east along NYS Route 443.

III.C.2.a. Special Geometric Features -

III.C.2.a (1) Non-Standard Features:

NYS Route 30 / 30A Alternative #1 proposes a non-standard grade along the northern most portion of NYS Route 30, above the NYS Routes 30 /30A intersection. This grade (6%) is a short extension of the existing grade to which the project is matching at the termini. While this feature is technically a non-standard grade, it is at a location where speeds are lower (within 165m of the intersection), and is considered acceptable for up to a 70 kmh design in rolling terrain. The standard criteria grade of 4% cannot be achieved at this location, due to the proximity of the NYS Route 30 / 30A intersection. The proposed roadway along NYS Route 30A and NYS Route 30 south of the intersection has been raised as much as possible without requiring extensive additional ROW takes, relocation of a well, impacts to a historic property between BOCES and the new intersection, and significant driveway modifications along the same.

NYS Route 30 / 443 Alternative #1 proposes one non-standard horizontal and two-non standard vertical curves along NYS Route 443. The horizontal and one of the vertical curves are near the project eastern NYS Route 443 termini. The current curvature is not a direct contributing factor to the project objectives of improving area geometry, safety, traffic flow, and reducing vehicular conflicts by condensing the intersection into a typical Stop controlled intersection. Although non-standard, the proposed curves will improve sight distance and bring the safe operating speed (80 kmh) of the area considerably closer to the 85th% speed of 87 kmh. Increasing the horizontal curve radii and sight distance to standard criteria would lengthen the project; require construction of a retaining wall along an adjacent property, relocation of a commercial driveway on the same property, and most likely require the taking of a storage building (old commercial business) on a different parcel.

The second vertical curve is a sag curve located to the east of the NYS 443 intersection with Vrooman Cross Road. Although non-standard, the improved sag curve will improve sight distance and bring the safe operating speed (80 kmh) of the area considerably closer to the 85th% speed of 87 kmh. Increasing the vertical curve length to achieve standard criteria would further increase the project limit along NYS 443, create fill slopes that would impact Fox Creek, and require extensive regrading onto properties along the north side of NYS 443 in this location.

In the same location as the sag vertical curve described above, it is proposed that 1.0m shoulders be constructed, as opposed to the standard of 2.4m. The 1.0m width nearly doubles the existing shoulder width while avoiding all of the impacts to Fox Creek, and minimizing impacts to an adjacent wetland and adjacent properties.

The following tables summarize the justification for the non-standard features.

Table III-4a
NON-STANDARD FEATURE JUSTIFICATION
(In accordance with HDM §2.8)

a. - Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	Grade		
Location:	NYS Route 30, beginning 47m from the NYS Route 30 / 30A intersection and ending 178m from the intersection		
Standard Value:	4%	Design Speed:	100 km/h
Existing Value:	6.1%	Safe Operating Speed:	
Proposed Value:	6%	Safe Operating Speed:	70 km/h
b. - Accident Analysis			
Current Accident Rate:	0 acc / mvm		
Statewide Rate:	1.28 acc / mvm		
Is the non-standard feature a contributing factor?	No		
Potential for Future Accidents and Accident Severity:	Minimal		
c. - Cost Estimates			
Cost to Fully Meet Standards:	Comparable with improvement costs. Significant R.O.W. costs would result due to increased property acquisition, including the possible taking of a portion of a Historic Register eligible property. Other expenditures include well relocation, and added driveway impacts.		
Cost(s) For Incremental Improvements:	Not applicable		
d. - Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
	Develop a relatively flat area approaching the intersection to minimize likelihood of sliding through the intersection during inclement weather, grade the area along NYS Route 30A across from the intersection as an additional safety area should it be needed for errant vehicles, and place advance warning stop ahead signs.		
e. - Compatibility with Adjacent Segments & Future Plans:			
	This grade is an extension of the existing grade, which continues for several hundred meters north of the project limit.		
f. - Other Factors (e.g., Social, Economic & Environmental):			
	The standard criteria grade of 4% cannot be achieved at this location, due to the proximity of the NYS Route 30 / 30A intersection. The proposed roadway along NYS Route 30A and NYS Route 30 south of the intersection has been raised as much as possible without requiring extensive additional ROW takes, relocation of a well, impacts to a historic property between BOCES and the new intersection, and significant driveway modifications along the same. It is at a near stop condition (within 165m of the intersection), and is considered acceptable for up to a 70 kmh design in rolling terrain.		
g. - Proposed Treatment (i.e., Recommendation):			
	Proceed design phase with grade, include changes to profile and grading along NYS Route 30A, and incorporate stop ahead signs into contract plans.		

Table III-4b
NON-STANDARD FEATURE JUSTIFICATION
(In accordance with HDM §2.8)

a. - Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	Horizontal curve radius		
Location:	NYS Route 443, beginning 46m from the NYS Route 30 / 443 intersection and ending 159m from the intersection		
Standard Value:	437 m	Design Speed:	100 km/h
Existing Value:	N/A	Safe Operating Speed:	
Proposed Value:	252 m	Safe Operating Speed:	80 km/h
b. - Accident Analysis			
Current Accident Rate:	2.21 acc / mvm		
Statewide Rate:	1.70 acc / mvm		
Is the non-standard feature a contributing factor?	No		
Potential for Future Accidents and Accident Severity:	Minimal		
c. - Cost Estimates			
Cost to Fully Meet Standards:	Comparable with improvement costs. Significant R.O.W. costs would result due to property acquisition (George Mann Tavern).		
Cost(s) For Incremental Improvements:	Not applicable		
d. - Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
Place advance warning stop ahead signs.			
e. - Compatibility with Adjacent Segments & Future Plans:			
Covered Bridge Road and Vrooman Cross Road intersect NYS Route 443 along this curve. The George Mann Tavern driveway adjoins Vrooman Cross Road nearly at the intersection. Covered Bridge Road ISD is acceptable for 80 kmh. With proposed alignment and profile layout, Vrooman Cross Road ISD will be improved from an existing length of 108 m (70 kmh) to 238 m +, which is acceptable for the design criteria of 100kmh.			
f. - Other Factors (e.g., Social, Economic & Environmental):			
The curve is the flattest that can be constructed, due to grade limitations and the proximity of the H George Mann Tavern property at the NY Route 443 / Vrooman Cross Road intersection. The curve design speed of 80 kmh is very near the 85th percentile operating speed of 87 kmh.			
g. - Proposed Treatment (i.e., Recommendation):			
Proceed design phase with curve and incorporate stop ahead signs into contract plans.			

Table III-4c
NON-STANDARD FEATURE JUSTIFICATION
(In accordance with HDM §2.8)

a. - Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	Stopping sight distance		
Location:	NYS Route 443, beginning 69m from the NYS Route 30 / 443 intersection and ending 249m from the intersection		
Standard Value:	185 m	Design Speed:	100 km/h
Existing Value:	78 m	Safe Operating Speed:	56 km/h
Proposed Value:	130 m	Safe Operating Speed:	80 km/h
b. - Accident Analysis			
Current Accident Rate:	2.21 acc / mvm		
Statewide Rate:	1.70 acc / mvm		
Is the non-standard feature a contributing factor?	No		
Potential for Future Accidents and Accident Severity:	Minimal and decreased likelihood compared to existing conditions, due to improved stopping sight distance, and a flatter approach grade from the east.		
c. - Cost Estimates			
Cost to Fully Meet Standards:	Comparable with improvement costs. Increased R.O.W. costs would result due to property acquisition (George Mann Tavern).		
Cost(s) For Incremental Improvements:	Not applicable		
d. - Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
Place limited sight distance signs.			
e. - Compatibility with Adjacent Segments & Future Plans:			
Vrooman Cross Road intersects NYS Route 443 along this curve. The driveway for the George Mann Tavern adjoins Vrooman Cross Road nearly at the intersection.			
f. - Other Factors (e.g., Social, Economic & Environmental):			
Increasing the curve length to accommodate the standard stopping sight distance would have significant slope impacts to the George Mann Tavern property, most likely requiring construction of a retaining wall, and requiring the relocation of the George Mann Tavern drive.			
g. - Proposed Treatment (i.e., Recommendation):			
Proceed with curve length as suggested by this report.			

Table III-4d
NON-STANDARD FEATURE JUSTIFICATION
(In accordance with HDM §2.8)

h. - Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	Stopping sight distance		
Location:	NYS Route 443, beginning 150m from the NYS Route 443 / Vrooman Cross Road intersection and ending 230m from the intersection		
Standard Value:	185 m	Design Speed:	100 km/h
Existing Value:	90 m	Safe Operating Speed:	62 km/h
Proposed Value:	130 m	Safe Operating Speed:	80 km/h
i. - Accident Analysis			
Current Accident Rate:	2.21 acc / mvm		
Statewide Rate:	1.70 acc / mvm		
Is the non-standard feature a contributing factor?	No		
Potential for Future Accidents and Accident Severity:	Minimal and decreased likelihood compared to existing conditions, due to improved stopping sight distance.		
j. - Cost Estimates			
Cost to Fully Meet Standards:	Comparable with improvement costs. Increased R.O.W. costs would result due to property acquisition (Mcauley and Spindler properties).		
Cost(s) For Incremental Improvements:	Not applicable		
k. - Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
Place limited sight distance signs.			
l. - Compatibility with Adjacent Segments & Future Plans:			
There are no future plans for this section of roadway at this time.			
m. - Other Factors (e.g., Social, Economic & Environmental):			
Increasing the curve length to accommodate the standard stopping sight distance would have significant slope impacts to the Mcauley and Spindler properties, and significant additional modifications to the Mcauley driveway. Slope work would extend into Fox Creek (a Class B waterbody), and additional wetland impacts would result along the south side of the roadway.			
n. - Proposed Treatment (i.e., Recommendation):			
Proceed with curve length as suggested by this report.			

Table III-4d
NON-STANDARD FEATURE JUSTIFICATION
(In accordance with HDM §2.8)

o. - Description of Non-Standard Feature			
Type of Feature (e.g., horizontal curve radius):	Shoulder width		
Location:	NYS Route 443, from intersection with Vrooman Cross Road to eastern work limit		
Standard Value:	2.4 m	Design Speed:	100 km/h
Existing Value:	0.5 m min.	Safe Operating Speed:	
Proposed Value:	1.0 m	Safe Operating Speed:	
p. - Accident Analysis			
Current Accident Rate:	2.21 acc / mvm		
Statewide Rate:	1.70 acc / mvm		
Is the non-standard feature a contributing factor?	No		
Potential for Future Accidents and Accident Severity:	Minimal and decreased likelihood compared to existing conditions, due to improved shoulder width.		
q. - Cost Estimates			
Cost to Fully Meet Standards:	Estimated $30,000. Increased R.O.W. costs would result due to property acquisition (Mcauley and Spindler properties).		
Cost(s) For Incremental Improvements:	Not applicable		
r. - Mitigation (e.g., increased superelevation and speed change lane length for a non-standard ramp radius):			
None proposed.			
s. - Compatibility with Adjacent Segments & Future Plans:			
There are no future plans for this section of roadway at this time.			
t. - Other Factors (e.g., Social, Economic & Environmental):			
Increasing the shoulder width to the standard dimension would have significant slope impacts to the Mcauley and Spindler properties, and significant additional modifications to the Mcauley driveway. Slope work would extend into Fox Creek (a Class B waterbody), and additional wetland impacts would result along the south side of the roadway.			
u. - Proposed Treatment (i.e., Recommendation):			
Proceed with improved shoulder width as suggested by this report.			

III.C.2.a.(2) Non-Conforming Features: There are no existing non-conforming features hence none will be retained.

III.C.2.b. Traffic Forecasts, Level of Service, and Safety considerations

III.C.2.b. (1) Design Year Traffic Forecasts and Level of Service Analysis - Refer to Table II-1a and for NYS Route 30 / 30A Design Year Traffic Forecasts and Table II-1b for NYS Route 30 / 443 Design Year Traffic Forecasts. Refer to Table II-2 for NYS

Route 30 / 30A and NYS Route 30 / 443 Level of Service. As shown in Table II-2, all of the intersections operate at acceptable levels of service D or better during the a.m. and p.m. peak hours of the existing and 2029 design year conditions.

III.C.2.b.(2) Safety and Traffic Control Considerations

NYS Route 30 / 30A Intersection – The planned improvements to reconstruct the intersection to form a "T" intersection, remove the redundant spur, and realign NYS Route 30 will increase sight distance and are expected to reduce accidents and improve safety at this location. A left turn lane for southbound NY Route 30A traffic onto NY Route 30 north will be incorporated. The clear zone will be expanded to the standard 9m for this type of facility. New guide railing will be installed as necessary at the appropriate locations throughout the project. Signs in less than acceptable condition will be replaced in accordance with current standards and warrants, and new signs will be added as appropriate.

NYS Route 30 / 443 Intersection – The planned improvements to realign NYS Route 443 to form a single "T" intersection with NYS Route 30, remove the redundant spurs, and flatten a vertical curve just east of the intersection along NYS Route 443 will increase sight distance and are expected to reduce accidents and improve safety at this location. A left turn lane for SB NY Route 30 traffic onto NY Route 443 will be incorporated. The clear zone will be expanded to the standard 9m for this type of facility. New guide railing will be installed at the appropriate locations throughout the project. Signs in less than acceptable condition will be replaced in accordance with current standards and warrants. Advance stop ahead signs will be added. Investigation of a climbing lane along NYS Route 30 determined that one was not warranted. While the criteria is technically met for a climbing lane, the point at which the heavy trucks speed has been reduced by 15kph is very near the end of the uphill grade, with the crest and ensuing downgrade just beyond the 15kph reduction point. This determination, together with no known accident or operational problems, does not warrant construction of a climbing lane.

III.C.2.c. Pavement - Refer to Appendices H & I for typical pavement sections.

III.C.2.d. Structures - There are no bridges within the project limits.

III.C.2.e. Hydraulics – As mentioned in Chapter II, a box culvert in the vicinity of the NYS Route 30 / 30A intersection will be replaced. Detailed investigations to verify the size and capacity of this box will occur as the project progresses in design.

III.C.2.f. Drainage – It is not anticipated that the construction activities will significantly alter the drainage area or characteristics. New storm drainage systems will be incorporated at each intersection, where necessary. Driveway culverts will be added where appropriate. Existing drainage ditches and culverts to remain will be cleaned.

To meet the requirements of the State Pollutant Discharge Elimination System (SPDES) permitting, stormwater treatment basins and vegetative swales are planned at each intersection location. The proposed treatment has been previously presented to NYSDOT for their concurrence.

III.C.2.g. Maintenance Responsibility – Both reconfigured intersections will remain the

maintenance responsibility of the NYSDOT.

III.C.2.h. Maintenance and Protection of Traffic

NYS Route 30 / 30A Intersection – Approximately two thirds of the construction can occur without affecting traffic, or with lane shifts on existing pavement. There is a small 40-meter segment along NYS Route 30 north of the intersection that will require either temporary widening or short term alternating daily one-way traffic. To construct the remaining northern portion of NYS Route 30A to its termini, the existing roadway can be temporarily widened to the west to maintain two-way traffic or be constructed using alternating one way traffic, with two lanes of travel during non-working hours. The 285-meter long widening would be approximately 7.2 m at its widest point and maintain two 3.3m through lanes, .3m shoulders, and concrete barrier on site.

NYS Route 30 / 443 Intersection – The new intersection, 100 meters of NYS Route 443 approaching it, and a segment of the road to the covered bridge and museum can be built without affecting traffic patterns using shoulder closures only. The remaining 140-meter portion of NYS Route 443 can be built using daily alternating one-way traffic. The road to the covered bridge will be completed after NYS Route 443 traffic has been shifted to the new roadway. Vrooman Cross Road can be constructed under traffic with daily alternating one-way traffic.

III.C.2.i. Geotechnical - The soil conditions at the site were provided by NYSDOT following the analysis of data from several borings taken by NYSDOT at locations prescribed by Delta Engineers. Based on the results of the investigation, no soil related problems are expected that cannot be handled sufficiently during the design phases of the project.

III.C.2.j. Utilities - Utility poles are scattered throughout both project locations. Approximately ten poles will be impacted or are located in the clear zone in the NYS Route 30 / 30A project area, and will need to be permanently relocated. The majority of the utility poles in the NYS Route 30 / 443 project area are out of the clear zone, protected by guide rail, or positioned such that no relocations are necessary. Depending on final sideslope grading to be determined during final design, a few poles may require permanent relocation.

A private sanitary sewer line crosses NYS Route 30A approximately 460m west of the existing intersection with NYS Route 30. Two manholes will require adjustment to match the proposed ditch/backslope grades, and potentially ditch grading will need to be varied slightly to provide adequate cover over the existing line.

A private well is situated within NYSDOT right-of-way at the northwest corner of the NYS Route 443 / Vrooman Cross Road intersection. The concrete cover on the structure is approximately 1.5m in diameter, and situated 6.9m from the edge of westbound travel lane of NYS Route 443. This well will be impacted by construction.

III.C.2.k. Railroads - There are no railroads within the project area.

III.C.2.l. Right-of-Way - Refer to Tables III-5A and III-5B of this report for the proposed right-of-way acquisitions.

Table III – 5A
Right-of-Way – NYS Route 30 / 30A Intersection

Location	Property	Owner	Type of Acquisition	Estimated Acquisition Area
NYS Route 30 / 30A	TM 48-4-21	BOCES	Fee(W/A)	550 sq. m.
	TM 48-4-25.114	Schoharie Business Park Inc	Fee (W/A)	200 sq. m.
	TM 60-1-18	Barton S. & Brideen Finegan	Fee (W/A)	3,145 sq. m.
			PE (drainage)	74 sq. m.
	TM 48-4-20	Morgan J. Desmond Et Al.	Fee (W/A)	635 sq. m.
			PE (drainage)	72 sq. m.
	TM 48-4-19	Arlene Given Price & Robert L. Price	Fee (W/A)	9,243 sq. m.
			PE (drainage)	495 sq. m.
	TM 48-4-18	Arlene G. Price	Fee (W/A)	584 sq. m.
			PE (drainage)	800 sq. m.
	TM 48-6-22	James & Laura Lokenburg	Fee (W/A)	267 sq. m.
	TM 48-6-23	Lloyd W. & Fred H. III Pennington	Fee (W/A)	285 sq. m.
	TM 60-1-15	Robert M. & Susan H. Loden	PE (drainage)	651 sq. m.
	TM 60-1-15	Robert M. & Susan H. Loden	Fee (W/A)	618 sq. m.
	TM 48-6-24	Daniel A. Smith	Fee (W/A)	269 sq. m.
	TM 60-1-2	Valley Enterprises LLC	Fee (W/A)	947 sq. m.
	TM 60-1-10	Hans Schoenecker	Fee (W/A)	512 sq. m.
	TM 60-1-4	Hans Schoenecker	Fee (W/A)	342 sq. m.
	TM 60-1-5	Kenneth A. & Gloria J. Wright	Fee (W/A)	254 sq. m
	TM 60-1-8	Carol Ann Wise	Fee (W/A)	292 sq. m.
	TM 60-1-9	Helen Wise	Fee (W/A)	17 sq. m.
	TM 60-1-7	Leonard & Giancarlo Bracchi	Fee (W/A)	192 sq. m.
	TM 60-1-12	William W. Vojnar Sr.	Fee (W/A)	243 sq. m.
	TM 60-1-11	Eric W. Race	Fee (W/A)	51 sq. m.
	TM 60-1-13	David & Marianne Stasko	PE (drainage)	72 sq. m.
	TM 60-1-17	Theresa A. Wright	Fee (W/A)	37 sq. m.
			PE (drainage)	877 sq. m.

Table III – 5B
Right-of-Way – NYS Route 30 / 443 Intersection

Location	Property	Owner	Type of Acquisition	Estimated Acquisition Area
NYS Route 30 / 443	TM 72-1-10	Gregory Hurd & Larry Stanley	PE (drainage) Fee (W/A)	152 sq. m. 1,407 sq. m.
	TM 60-6-13	Charles Peter & Florence Ann Mcauley	Fee (W/A)	94 sq. m.
	TM 60-6-12	Michael & Valentina Spindler	Fee (W/A)	156 sq. m.
	TM 60-6-15.12	Stephen C. Nicholson	Fee (W/A)	735 sq. m.

III.C.2.m. Landscape Development – Areas disturbed during the project will be regraded, seeded, and restored to their original condition. Existing roadway sections that will no longer be used after completion of this project will be removed, graded for positive drainage and natural look, and seeded.

III.C.2.n. Provisions for Pedestrians, Including Persons with Disabilities – The construction of new pedestrian facilities is not warranted as part of this project. Pedestrians will continue to use the roadway shoulders at both project areas.

III.C.2.o. Provisions for Bicycling - Bicyclists will be accommodated on the proposed paved shoulders.

III.C.2.p. Lighting - No street lighting is warranted.

III.D. Project Costs and Schedule

III.D.1. Costs

Table III – 8 Estimated Project Costs		
Activities	**NYS Route 30 / 30A**	**NYS Route 30 / 443**
Construction Costs	$3,430,000*	$1,780,000*
ROW Acquisition	$124,000**	$32,000**
Subtotal	**$3,554,000**	**$1,812,000**
Total Project Costs		$5,366,000

* Cost Estimate based upon 2008 prices
** Costs provided by NYSDOT in November 2007

The fund source is currently planned as 20% State Funded / 80% Federal Funded.

III.D.2. Schedule

Design Approval: **October, 2008**
PS&E: **November, 2009**
Letting: **February, 2010**
Construction Completed: **2011**

CHAPTER IV - SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

IV.A. Introduction

The purpose of this chapter is to identify any social, economic and environmental consequences of the Preferred Alternative presented in Chapter III; identify any feasible avoidance or mitigation measures; satisfy the applicable social, economic and environmental laws; and identify all permits and approvals needed for the Preferred Alternative.

IV.A.1 National Environmental Policy Act (NEPA) Class and Lead Agency

The subject project is classified as a NEPA Class II – Categorical Exclusion with Documentation - project in accordance with 23 CFR 771. FHWA is the NEPA lead agency.

IV.A.2 State Environmental Quality Review Act (SEQR) Type and Lead Agency

The subject project is classified as a SEQR Non-Type II (EA) Action in accordance with 17 NYCRR Part 15. NYSDOT is the SEQR lead agency.

IV.B. Social, Economic and Environmental Consequences

IV.B.1 Social Consequences

IV.B.1.a. Affected Population

Because of the close proximity of the two intersections, the project area is considered common to both of the intersections. Both intersections are located within a project area which is rural in character and comprised predominantly of agricultural and rural-residential land uses. The population within the immediate project area is relatively sparse with well-spaced residences located along the mainline. The project area is located outside of the primary population center of Schoharie. The proposed project will not have an adverse effect on any individuals, groups of individuals or population centers.

IV.B.1.b. Local Planning

The proposed project will maintain the present transportation system and will not conflict with, nor contradict, any local or regional land use plans.

IV.B.1.c. Community Cohesion

The proposed project will not have an effect on any communities in the general project area.

IV.B.1.d. Changes in Travel Patterns or Accessibility

The proposed project will improve the existing travel patterns by correcting the non-typical intersection geometry and eliminating the redundancy on the approach legs, thereby reducing the potential for conflict points within the intersections. Accessibility approaching, and within, the intersections will be improved through the reduction of the number of approach legs and decision points which currently exist.

IV.B.1.e. Impacts on School Districts, Recreational Areas, Churches or Businesses

The proposed project will not have any impacts to educational facilities, recreation areas, religious institutions or businesses.

IV.B.1.f. Impacts on Police, Fire Protection and Ambulance Access

The proposed project will have a positive impact on emergency response service access approaching and within the intersections. The construction of more conventional intersection types with improved approach geometry will reduce the potential for motorist confusion and indecision when emergency response vehicles are entering or exiting the intersections. The improved approach geometry will result in increased sight distance approaching the intersections to afford more visibility and decision/reaction time for emergency response vehicles accessing the intersections.

IV.B.1.g. Impacts on Highway Safety, Traffic Safety and Overall Public Safety

The proposed project will have positive impacts on highway and traffic safety.

At the NYS Rte. 30/30A intersection the safety benefits will be recognized through the improved approach geometry which will address the non-standard horizontal and vertical alignments. The reconfiguration of the Y-type intersection to a more conventional intersection will reduce the number of potential conflict points for motorists.

At the NYS Rte. 30/443 intersection the reconfiguration of the existing multiple leg approaches to a more conventional intersection will reduce the potential for motorist confusion and indecision. The elimination of the redundant legs at this intersection will reduce the number of potential conflict points.

IV.B.1.h. General Social Groups Benefited or Harmed

IV.B.1.h.(1) Effects on Elderly & Disabled Persons – The proposed project will not have any impacts on elderly or disabled persons.

IV.B.1.h.(2) Effects on Low Income, Minority and Ethnic Groups - This project will not have a disproportionately high and adverse health and environmental effect on minority or low income-income populations.

IV.B.2 <u>Economic Consequences</u>

IV.B.2.a. Impacts on Recreational and Local Economies

The proposed project will not have any impacts on regional or local economies.

IV.B.2.b. Impacts on Existing Highway / Related Businesses

The proposed project will not have any impact on highway-related businesses.

IV.B.2.c. Impacts on Established Business Districts

There are no established business districts within the project areas.

IV.B.2.d. Relocation Impacts

The proposed project will not involve any residential, commercial or industrial relocations.

IV.B.3 Environmental Consequences

IV.B.3.a.(1) Surface Waters

A tributary of the Schoharie Creek falls within the limits of the NYS Route 30 & 30A improvements. This tributary has been classified by the NYSDEC as a Class C/ Standard C stream. A portion of Fox Creek is adjacent to the limits of the NYS Route 30 & 443 improvements. Fox Creek has been classified by the NYSDEC as a Class B/ Standard B stream. No impacts are currently proposed for Fox Creek; however, if it is determined that any work would impact the bed or banks of Fox Creek, then it would be covered under the NYSDEC/NYSDOT Memorandum of Understanding (MOU) regarding Environmental Conservation Law (ECL) Article 15 & 24.

During construction, provisions to maintain water quality during construction will be in accordance with Section 209 "*Soil Erosion and Sediment Control*" of the current NYSDOT Standard Specifications and current New York Guidelines for Urban Erosion and Sediment Control.

IV.B.3.a.(2) Wetlands

Federal Jurisdictional Wetlands

Both the Route 30 & 30A and the Route 30 & 443 project areas were evaluated in November 2002, September 2004, and October 2006 for the presence of federally regulated wetlands in accordance with the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (Manual). The Manual provides a systematic approach to wetland delineation that relies on federally established criteria or "three parameters" (vegetation, soils and hydrology) to identify wetland.

Four federally regulated wetland areas were delineated within the NYS Route 30 & 443 project area. These four areas were delineated as Wetland AA, Wetland BB, Wetland XX and Wetland ZZ. Sixteen federally regulated wetland areas were delineated in the NYS Route 30 & 30A project area. They include wetlands A, B, C, D, E, F, Q, R, S, T, U, V, W, X, Y, and an unnamed ditch. Further details pertaining to each wetland by intersection can be found below. See plans in Appendices H & I for wetland locations.

Route 30 & 30A

Wetland A can be characterized as a mix of forested/ scrub shrub wetland with wet meadow along the edges. Additionally, an unnamed tributary of Schoharie Creek flows through this area. Wetland A is dominated by reed canary grass, silky dogwood (*Cornus amomum*), American elm (*Ulmus americana*), and joe pye weed (*Eupatorium maculatum*). Hydrology and hydric soil

indicators include saturation in the upper 300 mm, oxidized root channels in the upper 300 mm, low chroma soils, and positive FAC-Neutral test.

Wetland B is connected to Wetland A by a culvert under NYS Route 30. Wetland B is a wet meadow with a stream running though it. The area is dominated by reed canary grass, silky dogwood, and blue vervain (*Verbena hastata*). Hydrology and hydric soil indicators include saturation in the upper 300 mm, oxidized root channels in the upper 300 mm, low chroma soils, and positive FAC-Neutral test.

Wetland C/D is a perennial stream corridor. This stream corridor is a tributary of Schoharie Creek and is connected to Wetland T/F and Wetland Q as described below.

Wetland E can be characterized as a mix of wet meadow and scrub shrub wetland. Wetland E is connected to Wetland A by a culvert under NYS Route 30. This wetland is dominated by cattail, reed canary grass, silky dogwood, red-oiser dogwood (*Cornus stolonifera),* and goldenrod species (*Solidago sp*.) Hydrology and hydric soil indicators include drainage patterns, low chroma soils, and positive FAC-Neutral test.

Wetland T/F can be characterized as a mix of forested, scrub shrub, wet meadow, and stream corridor. As mentioned above, Wetland T/F/Q is connected to Wetland C/D. The area is dominated by silky dogwood, red-oiser dogwood, grey dogwood (*Cornus racemosa*), goldenrod species, sensitive fern (*Onoclea sensibilis*), and moneywort (*Lysimachia nummularia*). Hydrology and hydric soil indicators include saturation in the upper 300 mm, low chroma soils, and positive FAC-Neutral test. Wetland Q is characterized as an emergent ditch and is connected to Wetland T/F by a culvert under the NYS Route 30.

Wetland R can be characterized as a wet meadow and roadside drainage ditch. Wetland R is dominated by reed canary grass. Hydrology and hydric soil indicators include drainage patterns, saturation in the upper 300 mm, low chroma soils, and positive FAC-Neutral test.

Wetland S can be characterized as a wet meadow that is associated with roadside drainage. Wetland S is dominated by reed canary grass and beggars-tick. Hydrology and hydric soils indicators include drainage patterns, low chroma soils, and positive FAC-Neutral test. The unnamed ditch in between Wetland R and Wetland F can be characterized as a wet meadow ditch that is dominated by reed canary grass.

Wetland U can be characterized as a wet meadow that contains a mix of cattail, rush species (*Juncus sp*.) and grass species. Hydrology and hydric soil indicators include saturation and oxidized root channels in the upper 300 mm, some areas of inundation, low chroma soils, and positive FAC-Neutral test.

Wetland V can be characterized as a ponded area with wet meadow surrounding the ponded area. Wetland V contains a mix of cattail, reed canary grass, sedge species (*Carex sp*.), and grass species. Hydrology and hydric soil indicators include inundation, saturation in the upper 300 mm, low chroma soils, and positive FAC-Neutral test.

Wetland W/X/Y within the area of impact is primarily roadside drainage ditch. These areas contain a mix of reed canary grass, cattail, green bulrush (*Scirpus atrovirens*), sedge species, joe-pye weed, silky dogwood, and a few weeping willows (*Salix babylonica)*. Hydrology and hydric soil indicators include areas of inundation, saturation and oxidized root channels in the upper 300 mm, low chroma soils, and positive FAC-Neutral test.

It is anticipated that there will be approximately 1,815 sm (0.45 ac) of impact to wetlands within the Route 30 & 30A project area. Additionally, approximately 108 m (352 ft.) of stream and 276 m (906 ft.) of ditch will be impacted. For the construction of the box culvert at the tributary of the Schoharie Creek along the Route 30 & 30A intersection, it is anticipated that the contractor will design and submit during construction, their preferred method, which could be a temporary pipe or temporary adjacent channel. No specific dewatering devices are anticipated at this time. Refer to Table IV-1, Route 30 & 30A Intersection Wetland Impacts, for details pertaining to the impacts.

Route 30 & 443

Both Wetland AA and Wetland BB can be characterized as vegetated drainage ditches that are connected by a culvert under the road. These ditches contain mostly reed canary grass (*Phalaris arundinacea*) and a few cattails (*Typha latifolia*). Wetland AA is a mowed and maintained area. Hydrology and hydric soil indicators include inundation, saturation in the upper 300 mm, low chroma soils, drainage patterns, and positive FAC-Neutral test. The drainage from these two ditch areas drain into Fox Creek.

Wetland ZZ can be characterized as a wet meadow with a culvert and drainage that flows toward Fox Creek. This area contains a mix of reed canary grass, cattail, and beggars-tick (*Bidens connata*). Hydrology and hydric soil indicators include saturation in the upper 300 mm, drainage patterns, low chroma soils, and positive FAC-Neutral test. Wetland XX along the roadside can also be characterized as a wet meadow.

It is anticipated that there will be approximately 220 sm (0.05 ac) of impact to wetlands within the Route 30 & 443 project area. Additionally, approximately 5 m (16 ft.) of stream and 71 m (233 ft.) of ditch will be impacted. Refer to Table IV-2, Route 30 & 443 Intersection Wetland Impacts, for details pertaining to the impacts.

Table IV-1

Route 30 & 30A Intersection Wetland Impacts

Wetland	Type	Impacted Area (sm)	Stream Length (m)	Ditch Length (m)
A	Scrub-Shrub / Forested	293	61	n/a
	Wet Meadow	135	0.0	n/a
B	Wet Meadow	83	17	n/a
C	Stream	107	11	n/a
D	Stream	89	6.1	n/a
E	Scrub-Shrub / Wet Meadow	1.4	0.3	0
F	Scrub-Shrub / Forested	362	12	n/a
	Wet Meadow	182	n/a	n/a
Q	Emergent Ditch	32	n/a	7
R	Wet Meadow/Ditch	69.5	n/a	36
S	Wet Meadow	0.0	n/a	0.0
Unnamed ditch	Wet meadow/ Ditch	0.3	n/a	0.3
T	Forested	0.0	0.0	n/a
U	Wet Meadow	117	n/a	n/a
V	Wet Meadow/ Ponded	0.0	n/a	n/a
W	Wet Meadow / Ditch	263	n/a	138
X	Wet Meadow / Ditch	81	n/a	95
Y	Wet Meadow/ Ditch	0.0	n/a	0.0
Totals				
Square Meters		1815	n/a	n/a
Linear Feet		n/a	352	906
Meters		n/a	108	276
Acres		0.45	n/a	n/a

Table IV-2

Route 30 & 443 Intersection Wetland Impacts

Wetland	Type	Impacted Area (sm)	Stream Length (m)	Ditch Length (m)
AA	Wet Meadow / Ditch	167	n/a	71
BB	Wet Meadow / Emergent Ditch	0.0	n/a	0.0
XX	Wet Meadow	3	n/a	n/a
ZZ	Wet Meadow	50	5	n/a
Totals				
Square Meters		220	n/a	n/a
Linear Feet		n/a	16	233
Meters		n/a	5	71
Acres		0.05	n/a	n/a

It is not proposed that any other federal jurisdictional wetlands will be impacted at either intersection. It is expected that each intersection would be individually permitted by the USACE under Nationwide Permit No. 14 – *Linear Transportation Projects.* If impacts to Fox Creek (Route 30 & 443 intersection) are proposed, then it is anticipated that State jurisdiction under Article 15 would be addressed by the NYSDEC/NYSDOT MOU regarding ECL Article 15 & 24.

Mitigation

Wetland mitigation will be required to compensate for the impacts to the wetlands at both intersections. To mitigate for the total of 2,035 sm (0.50 acres.) of impacts, it is proposed to create 2,697 sm (0.67 ac) of wetland. This will provide replacement of impacted wetland at a 2:1 ratio for forested wetland, a 1.5:1 ratio for scrub shrub wetland, and at a 1:1 ratio for wet meadow/ditch. It is anticipated that the proposed mitigation site will be located at the Route 30 & 30A intersection. The proposed mitigation area is located in-between existing Wetland A and Wetland F (See plans in Appendix H). Overall, the proposed wetland creation would be a combination of forested wetland, scrub shrub wetland, and wet meadow.

State Regulated Wetlands

According to the NYSDEC Freshwater Wetland Map (Schoharie Quadrangle) there are no state-regulated wetlands within either of the project intersection sites.

Executive Order 11990

It has been determined that the proposed project activities will comply with the terms and conditions of Programmatic Executive Order 11990 Finding (EO). This Programmatic EO has been prepared for Transportation Improvement Projects which: (1) are Federally Aided Highway Projects classified as a Categorical Exclusion under 23 CFR 772.117, (2) require only a USACE Section 404 Nationwide Permit for work which will affect waters of the United States, and (3) have been developed in accordance with the procedure for a public involvement / public hearing program approved by FHWA pursuant to 23 CFR 771.111(h)(1).

As discussed above, it is anticipated that Wetlands A, B, C, D, E, F, Q, R, U, W, X, AA, XX, & ZZ, and an unnamed ditch, would be impacted. It is anticipated that the total approximate wetland impacts for both intersections would be 2,035 sm (0.50 ac) of a combination of wet meadow, scrub shrub wetland, and forested wetland. Additionally, 347 m (1,139 ft.) of ditch, and 113 m (368 ft.) of stream would be impacted. Refer to Tables IV-1 and IV-2 for details pertaining to the wetland impacts for each of the individual intersections.

There are no practicable alternatives to the construction proposed in these wetlands. Supporting explanations describing the efforts to avoid impacts follow:

Alternatives were considered to avoid and minimize impacts to wetlands at both intersections. For the NYS Route 30 & 30A intersection, impacts to Wetland U are unavoidable due to a profile grade change (flattening of a crest vertical curve) that is needed to eliminate non-standard sight distance. This profile change also impacts Wetlands D and C, as the roadway elevation is being increased in this area. A secondary but equally important concern in this area is the need to avoid impacts to a sewer line located between the above mentioned wetlands.

The impacts to Wetlands A, E, W, and X were minimized to the maximum extent possible, while still maintaining the standard sight distance around a horizontal curve. The controlling feature limiting a further shift away from these wetlands is a business located directly across the road from Wetland A. Wetland B cannot be avoided, as the driveway location is predicated on acceptable sight distance.

Wetlands R and Q are roadside ditches that are being reshaped to handle stormwater runoff and can not be avoided. Likewise, Wetland F cannot be avoided due to grade and sight distance constraints that limit the window of availability for the roadway realignment. Lastly, impacts to Wetland T were avoided by decreasing the treatment area grading/footprint.

At the NYS Route 30 & 443 intersection, impacts to Wetland XX and ZZ are the result of the creation of a minimum width, standard shoulder. The slopes were steepened to maximum extent allowable at the northern end of NYS Route 443 to decrease impacts to Wetlands XX and ZZ.

The impacts to Wetland AA cannot be avoided due to grade and sight distance constraints along NYS Route 443. The impacts to Wetland BB have been eliminated by relocating the proposed stormwater treatment area to an upland location.

It should also be noted that all slopes in fill have been maximized (typically 2:1) to keep impacts to wetlands to a minimum. Lastly, a Pollution Prevention Plan will be prepared to limit erosion and sedimentation impacts to the wetlands.

IV.B.3.a.(3) Coastal Zone

The project area is not located in a coastal zone.

IV.B.3.a.(4) Navigable Waters

The proposed project will not involve any work that will affect navigable waters.

IV.B.3.a.(5) Wild, Scenic and Recreational Rivers

Based on review of the National Park Service website (http://www.nps.gov/rivers/wildriverslist.html), there are no wild or scenic rivers within the project corridors.

IV.B.3.a.(6) Flood Plains

According to the Flood Insurance Rate Map (FIRM) for the Town of Schoharie, a small portion of the NYS Route 30 & 30A project limits and a small portion of the NYS Route 30 & 443 project limits appear to be located within the 100-year floodplain; however, the proposed work will not result in changes to the character of the floodplain, nor will it result in any loss of flood storage.

IV.B.3.b. Water Source Quality

IV.B.3.b.(1) Groundwater

The proposed stormwater collection system will be designed to include all necessary temporary and permanent measures to avoid potential contamination to groundwater by surface contaminants. Based on the preliminary design of the proposed roadway improvements, the project will not involve any special provisions for protection of, or recharge of groundwater sources.

IV.B.3.b.(2) Storm Water Discharge

Based on the preliminary design of the intersection improvements, it is anticipated that a SPDES Notice of Intent (NOI) will be required to be filed for the proposed project. As such, a stormwater management plan will be developed in accordance with SPDES requirements. A preliminary plan has been previously developed and reviewed with various NYSDOT Region 9 personnel – the major components of this plan are depicted within the plans in Appendices H & I.

IV.B.3.b.(3) Sole Source Aquifers

Based on the United States Environmental Protection Agency (EPA) list of designated sole source aquifers, the project sites are not located over, nor do they drain to any sole source aquifers.

IV.B.3.c. General Ecology and Wildlife

The project areas for the NYS Route 30 & 30A intersection and the NYS Route 30 & 443 intersection generally consists of existing roadway, maintained lawn and some wetland areas.

The surrounding areas for both project intersections are generally developed with a few single-family homes. The areas along the right-of-way consist primarily of mowed and maintained lawn areas. Fox Creek is located adjacent to the Route 30 & 443 intersection and a tributary of the Schoharie Creek crosses the Route 30 & 30A project intersection.

Vegetative communities identified within the project limits consist of a combination of wet meadows, upland roadside meadows, maintained upland lawn, forested upland, agricultural fields, and forested/scrub shrub wetlands.

Various grasses, common dandelion (*Taraxacum officinale*), poison ivy (*Toxicodendron radicans*), birds-foot trefoil (*Lotus corniculatus*), white clover (*Trifolium repens*), common plantain (*Plantago major*), Queen Anne's lace (*Daucus carota*), bedstraw species (*Galium sp*.) goldenrod species (*Solidago sp*.), aster species (*Aster sp.*), and Virginia creeper (*Parthenocissus quinquefolia*) are some of the species identified in the mowed lawn and upland meadow communities.

Smooth sumac (*Rhus glabra*), black locust (*Robinia pseudoacacia*), grey dogwood, eastern redcedar (*Juniperus virginiana*), white pine (*Pinus strobus*), sugar maple (*Acer saccharum*), weeping willow, spruce (*Picea sp.),* and box elder (*Acer negundo*) saplings are some of the tree species identified within the project area.

The dominant species identified in the wetland areas are described in detail in Section IV.B.3.a. - Surface Waters/ Wetlands.

Both the U.S. Fish and Wildlife Service (USFWS) and the NYSDEC Natural Heritage Program were contacted on October 9, 2006 regarding the presence of State and Federally-listed endangered and threatened species within the project corridors.

The USFWS responded on October 19, 2006, stating that except for occasional transient individuals, no federally listed or proposed endangered and threatened species under USFWS jurisdiction are known to exist within the project areas (see correspondence in Appendix G). Additionally, no habitat in the project area is currently designated or proposed critical habitat. The USFWS also noted that although the federally listed endangered Indiana bat (*Myotis sodalis*) could be present in the project area, they are in such small numbers that they would not be impacted by the proposed project.

The NYSDEC Natural Heritage Program responded on October 25, 2006, stating that they have no known occurrences of rare or state listed animals or plants, significant natural communities, or other significant habitats on or in the immediate vicinity of the project (see correspondence in Appendix G).

Based on review of the NYSDEC website, there are no Critical Environmental Areas within the project areas.

The project is not expected to have an adverse effect on the general ecology and wildlife of the area.

IV.B.3.d. Historical and Cultural Resources

See plans in Appendices H & I for locations of the historic and cultural resources discussed below.

IV.B.3.d.(1) Historical Resources

Initial coordination and consultation with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) was established for this project in 1995. In correspondence between the NYSOPRHP and NYSDOT during the spring of 1995, it was the opinion of the NYSOPRHP that two properties within the project limits were eligible for inclusion in the State and National Register of Historic Places. The properties were identified as the lands of Buildings "H" and "O". Building H is the residence currently owned by the Pennington's along the east side of Route 30 north of the Route 30/30A intersection. Building O, known as the Peter Vrooman House, is located near the intersection of NYS Routes 30 and 443. In addition, two other locations (Buildings "K" and "F") were also identified as historically registered sites of potential concern. However, while Building K was identified as being located within the project limits, it was later found not to be eligible for the National Registry of Historic Places, therefore requiring no additional work. Building F, now owned by Price (formerly the Sternbergh House), is located on the west side of Route 30 approximately 150 meters north of the intersection with Route 30A. This site has been on the National Register of Historic Places since 1985.

In 2005-2006, the *Cultural Resources Site Examination Report* for the *Raymond Dale Site (NYSM#11612),* the *James Holloway Site (NYSM#11613)*, and the *Eva Coursen Site (NYSM#11614)* also identified the Abraham Sternberg House (now owned by the Desmonds), located on the north side of Route 30A, approximately 500 m west of the Route 30 intersection, as a structure eligible for inclusion on the National Register.

IV.B.3.d.(2) Cultural Resources

In 1995 the NYSOPRHP also concurred with a recommendation from the NYS Education Department for the completion of additional Stage 2 archeological investigations at the "Vrooman I" and " Vrooman II" sites, which were identified in the vicinity of the proposed project at the intersection of Routes 30 and 443.

A cultural resources site examination was performed by the NYS Education Department during the fall of 1998. The site examination resulted in the preparation of a *Cultural Resources Site Examination Report* for *the Vrooman I Site (NYSM#10146 and 10148)* and *the Vrooman II Site (NYSM#10147)* with issuance on April 9, 1999. The Cultural Resources Site Examination Report recommended that the Vrooman I Site, located along the southwest corner of the intersection adjacent to the northern bank of Fox Creek, be eligible for inclusion in the National Register of Historic Places for its contribution to the understanding of the prehistory and history of the Town of Schoharie. It was also stated by the primary investigator that as long as work did not extend beyond 2.25 meters of the existing roadway edge and a temporary fence was installed to protect the area, no additional work would be needed. It is in fact anticipated that the impact area for the proposed project will not extend further than the 2.25 meters noted, and therefore no additional work is needed. Furthermore, the Vrooman II Site, located along the western side of Route 30, was not recommended to be eligible for inclusion in the National Register, and therefore no additional work was recommended.

Cultural resources site examinations were also performed by the NYS Education Department during the spring of 2005 at the intersection of NYS Route 30/30A. The site examination resulted in the preparation of a *Cultural Resources Site Examination Report* for the *Raymond Dale Site (NYSM#11612),* the *James Holloway Site (NYSM#11613)*, and the *Eva Coursen Site (NYSM#11614),* with issuance in August, 2006.

The Cultural Resources Site Examination Report recommended that the Raymond Dale Site, located along the south side of NYS Route 30A approximately 320 meters west of the existing NYS Route 30/30A intersection, be eligible for inclusion in the National Register of Historic Places. It was recommended that the site should be mitigated through data recovery if it could not be avoided. Since this site will be affected by the proposed alternative, NYSDOT developed a data recovery plan and a Memorandum of Agreement (MOA) with the State Historic Preservation Office (SHPO) (Refer to Section IV.B.3.d.(3) below).

The James Holloway site is located on the southern edge of NYS Route 30A, approximately 465 meters west of the intersection with Route 30. This site was also found to be eligible for inclusion in the National Register of Historic Places. It was recommended by the primary investigator that the site should be mitigated through data recovery if it could not be avoided. Since this site will be affected by the proposed alternative, NYSDOT recently developed a data recovery plan and MOA with SHPO for this site as well (Refer to Section IV.B.3.d.(3) below).

The Eva Coursen site is located between NYS Route 30 and 30A, approximately 150 meters northwest of the intersection. Through the investigation, this site was not found to be eligible for the National Register of Historic Places and therefore does not require any additional work.

IV.B.3.d.(3) Memorandum of Agreement (MOA)

As stated above, in accordance with 36 CFR Part 800, a Memorandum of Agreement (MOA) for Recovery of Significant Archaeological Information has been executed for the adverse impacts to the cultural resources at the project site (Refer to Appendix G for a copy). As such, the Section 106 process in now complete and the requirements of 36 CFR Part 800 have been satisfied for all historic and cultural resources associated with this project.

IV.B.3.e. Visual Resources

The proposed project will not result in any significant changes to visual resources or key views within the project area, nor will it have any significant changes to visual resources of any adjacent public or private areas.

IV.B.3.f. Parks and Recreational Facilities

There are no parks or recreational areas located at the project site.

IV.B.3.g. Farmland Assessment

Agricultural District No. 22 is located immediately along the westerly side of NYS Rte. 30 at the NYS Rte. 30/443 intersection. This Agricultural District extends in a northerly direction parallel to NYS Rte. 30 from the NYS Rte. 30/443 intersection to a location beyond (north of) the NYS Rte. 30/30A intersection. However, since the project will not acquire more than one acre from an actively operated farm within this district, or more than 10 acres from the district as a whole, the NYS Agricultural and Markets Law does not apply.

IV.B.3.h. Air, Noise and Energy

IV.B.3.h.(1) Clean Air Act (CAA)

The Clean Air Act Amendments of 1990 have resulted in a new conformity process for assessing Federal Transportation Plans, Programs, and Projects to determine if they conform to the purposes of the State Implementation Plan (SIP). This project is located in Schoharie County, which is classified as non-attainment for ozone.

The proposed project will not result in air quality impacts since the proposed alternative will not increase traffic volumes by more than 10%, reduce source-receptor distances by 10% or greater, decrease vehicle average speeds by more than 20%, or change any other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards. Therefore, microscale and mesoscale air quality analyses are not be required as part of this project.

IV.B.3.h.(2) Noise

The necessity of conducting a traffic noise analysis within the proposed project's corridor was investigated in accordance with the provisions and procedures of the policies stated in the Federal-Aid Policy Guide, Subchapter H, Part 772 (23 CFR 772) "Procedures for the Abatement of Highway Traffic Noise and Construction Noise".

The proposed project will not result in noise impacts since the proposed alternative will not result in the increase of traffic, increase the number of through-lanes, or result in significant horizontal or vertical alignment changes.

IV.B.3.h.(3) Energy

The proposed project will not result in a significant impact on energy use since it will not result in significant changes to traffic volumes, land use, travel patterns, or vehicle speeds.

A detailed air quality analysis is not necessary since this project would not increase traffic volumes, permanently reduce source-receptor distances or change other existing conditions to such a degree as to jeopardize attainment of the National Ambient Air Quality Standards.

IV.B.3.i. Contaminated Materials Assessment

A hazardous waste/contaminated material screening was performed to identify existing or potential environmental concerns associated with the project areas. The screening procedure consisted of a review of existing information about past and current land use, a review of state and federal regulatory databases, a review of information available from local governmental agencies (assessor, building department, etc.), and a thorough site inspection of the project areas.

Based upon the review of information pertaining to the past and current land use, review of regulatory databases, local governmental agency information, the site inspection of the project corridor, and the proposed roadway improvements associated with the NYS Rte. 30/30A and NYS Rte. 30/443 intersections, including Vrooman Cross Road, no areas have been identified as impacting the project corridor relative to hazardous waste or contaminated materials. As a result, no additional environmental assessments are recommended at this time.

IV.B.3.j. Construction Impacts

The anticipated construction impacts from the proposed project include minor visual, noise, air and traffic disruptions during construction operations. There are no long-term impacts to the environment anticipated as a result of the proposed construction operations.

IV.B.3.j.(1) Borrow Areas

The proposed project will not involve any excavations that could be classified as mining, or any unusual excavation and borrow operations requiring special permitting. The construction contractor will be responsible for determining appropriate sites for required borrow material and will be subject to all applicable state and local permitting with respect to off-site borrow areas.

IV.B.3.j.(2) Spoil Areas

The proposed project will not require the disposal of any known regulated hazardous wastes, nor will it involve any unusual circumstances for the disposal of solid waste material that will require special permitting. The construction contractor will be responsible for determining appropriate sites for the disposal of excavated material and will be subject to all applicable state and local permitting with respect to off-site spoil areas.

IV.B.3.k. Anticipated Permits, Approvals and Coordination

It is anticipated that the proposed project will require the following permits:

- Section 404-Nationwide #14 – *Linear Transportation Projects*
- NYSDEC 401 Water Quality Certification
- NYSDEC State Pollution Discharge Elimination System (SPDES) Permit
- Impacts to the bed or banks of Fox Creek, if proposed for the Route 30 & 443 intersection, would be covered under the NYSDEC/NYSDOT Memorandum of Understanding (MOU) regarding Environmental Conservation Law (ECL) Article 15 & 24.

IV.B.4 Indirect/Secondary and Cumulative Impacts

IV.B.4.a. Indirect/Secondary Impacts

The proposed project will not have an effect on growth within the project area, nor will it affect traffic volumes, access or highway classifications. The proposed intersection improvements will be completed within the same roadway corridor as currently exists and will not bisect or isolate any individuals or groups of individuals. There are no indirect or secondary impacts that will result from this project.

IV.B.4.b. Cumulative Impacts

There are no other proposed projects planned for the general project area that, when combined with the subject project, would result in cumulative impacts to the environment.

CHAPTER V - EVALUATION AND COMPARISON OF ALTERNATIVES

As discussed previously in Chapter III of this document, the only feasible alternative is Alternative # 1 at both locations. The null no-build alternatives and others investigated would not meet project objectives and are not considered feasible.

The preferred alternative is Alternative #1 at both locations. These alternatives meet the project objectives of correcting geometric and safety deficiencies using cost effective measures to reduce the accident rates to an acceptable level within the project area.

CHAPTER VI - SUMMARY AND ANALYSIS OF COMMENTS RECEIVED

VI.A. Summary and Analysis of Public Hearing Comments

A Public Hearing was held for this project on June 3, 2008 at the Schoharie Fire Station Niagara Engine Company #6 building in Schoharie, NY. This meeting was an "Open Forum", followed by a formal presentation, after which representatives from NYSDOT and Delta Engineers were available to receive comments and answer any questions.

The responses contained on the following pages refer to pages within the official Public Hearing Transcript and written comments received either during the Public Hearing meeting itself or within the stated comment period. The Transcript along with a copy of the written comments received can be found within Appendix F.

PIN 912505 NY 30/30A/443
Public Hearing Comment Resolution

Pg. 33, Line 24, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –
   Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.

Pg. 35, Line 9, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –
   Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.
2. Septic system concern –
   The farthest point of slope "shaving" is approximately 31' (9.5m+/-) from the edge of the existing road, and approaching this offset the depth of excavation would be shallow. If you have any plan information for this septic system, please provide a copy of them to us at your earliest convenience so we can determine if any impact is likely. Should an impact appear likely, we will assess possibilities to slightly modify the design to avoid an impact. Follow-up, Clough Harbor Associates will survey this area further. [redacted] was contacted on July 7, 2008 at which time he gave a more detailed location of his concern. This location has been forwarded to Delta Engineers. Following survey, avoidance measures will be taken.

Pg. 36. Line 16, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –
   Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.
2. Disruption of historic environment and habitat –
   The impacts to this property, along with other historic or historic-eligible properties, have been discussed with the New York State Office of Parks, Recreation and Historic Preservation, more commonly known as SHPO. SHPO has determined that this project will not have an adverse effect on your property. We will continue to investigate ways to minimize/mitigate any impacts during the upcoming design process.

Pg. 37, Line 25, [redacted] –

1. Does not feel dead ending Vrooman Cross Road is necessary –
   The Department has reconsidered this work and is willing to leave Vrooman Cross Road in its existing configuration. With the addition of a left turn lane on NY 30 and the reconfiguration of NY 443 it is expected that Vrooman Cross Road will no longer be used as a 'short-cut'. It should be noted however that if future problems or concerns are discovered in the area, the DOT may revisit this option.

Pg. 41, Line 8, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –

Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.

2. Speed Limit Reduction –

Traffic operations study No. 905-0116, completed in November of 2005, determined that the 85th percentile speed in this area was 55 mph and thus denied a request for a reduced speed limit. Research and experience show that artificially reducing speed limits have little effect on overall traffic speeds and, in fact, can actually increase accident potential by introducing undesirable speed differences between vehicles. However, realistic limits do provide a sound basis for enforcement. At this time it appears that increased enforcement would be the appropriate action. The area studied encompassed NY 30 from NY 30A to the Village of Schoharie line.

Pg. 42, Line 25, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –

Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.

Pg. 43, Line 12, [redacted] –

1. Overloaded trucks and excessive speed –

Although these are valid concerns, they are beyond the DOT control. It is recommended that this concern be brought to Law Enforcement's attention for possible additional enforcement.

Pg. 43, Line 24, [redacted] –

1. Install a three color signal at the NY 30 & 443 intersection –

Region 9 Traffic Operations has performed a review of this request and concluded that a three color signal at this location is not warranted based on traffic volumes and accident data.

Pg. 45, Line 2, [redacted] –

1. Reduce speed limit from I-88 to the Village of Schoharie line –

Traffic operations study No. 905-0116, completed in November of 2005, determined that the 85th percentile speed in this area was 55 mph and thus denied a request for a reduced speed limit. Research and experience show that artificially reducing speed limits have little effect on overall traffic speeds and, in fact, can actually increase accident potential by introducing undesirable speed differences between vehicles. However, realistic limits do provide a sound basis for enforcement. At this time it appears that increased enforcement would be the appropriate action. The area studied encompassed NY 30 from NY 30A to the Village of Schoharie line. Because the speed study performed in 2005 is representative of the findings in the 2002 project study and conditions have not changed it not necessary to analyze the section of NY 30A between NY 7 and NY 30. In 2002 it was determined that the 85th percentile speed on NY 30A was 51 MPH which is below the posted speed limit of 55 MPH.

2. Risks associated with Barton Hill Road –

Region 9 Traffic & Safety has reviewed this location. The most recent check of reported accidents at the NY 30/Barton Hill Road intersection shows only one accident in the three year period between 1/05 & 12/07.

3. Proposed roadway is too close to well –
   The proposed edge of roadway adjacent to the well on your property has been shifted approximately 10' (3m+/-) closer to the well house, with the nearest point now being approximately 23' (7m+/-) from the well house. The new roadway will remain banked away from your property.
4. Access bridge crossing small waterway -
   As we discussed during the hearing, given the somewhat recent construction of this bridge, it is not reflected on our current mapping. We will be having our surveyors locate this feature in the near future for depiction within our mapping. However, based upon a site visit following the public hearing, it appears that the bridge will be impacted by the proposed construction. If this is confirmed, you will be compensated for the loss of this bridge as part of the fair market dollar value to be offered to you (following an independent appraisal from a NYS certified appraiser) during the property rights acquisition process.
5. Outdated accident data –
   A review of the most current available accident data (1/05 to 12/07) concluded that the original accident analyses are still representative of the accident patterns and a full analysis is not required. The Region 9 Traffic & Safety Engineer has concurred that the original recommendations are still valid.

Pg. 48, Line 8, [redacted] –

1. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –
   Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.
2. Reduce speed limit from I-88 to the Village of Schoharie line –
   Traffic operations study No. 905-0116, completed in November of 2005, determined that the 85th percentile speed in this area was 55 mph and thus denied a request for a reduced speed limit. Research and experience show that artificially reducing speed limits have little effect on overall traffic speeds and, in fact, can actually increase accident potential by introducing undesirable speed differences between vehicles. However, realistic limits do provide a sound basis for enforcement. At this time it appears that increased enforcement would be the appropriate action. The area studied encompassed NY 30 from NY 30A to the Village of Schoharie line. Because the speed study performed in 2005 is representative of the findings in the 2002 project study and conditions have not changed it not necessary to analyze the section of NY 30A between NY 7 and NY 30. In 2002 it was determined that the 85th percentile speed on NY 30A was 51 MPH which is below the posted speed limit of 55 MPH.

Pg. 49, Line 18, [redacted] –

1. Traffic volumes have increased
   The volumes listed in the Design Report are slightly greater than actual traffic counts taken in 2007.

<u>Written Comments Received following Public Hearing</u>

[redacted]

1. Negative impact on wildlife –
   As part of our environmental studies that have accompanied the development of this project, we have discussed and requested feedback related to the potential

effect of the project on wildlife and fish from both the US Fish and Wildlife Department, and the New York State Department of Environmental Conservation Natural Heritage Program. No species of concern or protection reside in the project area. We do acknowledge that displacements to songbirds and small animals may occur during construction. We believe that the proposed wetland mitigation site, located very near the wooded areas being disturbed, will help restore this habitat.

2. Access Bridge –

As we discussed during the hearing, given the somewhat recent construction of this bridge, it is not reflected on our current mapping. We will be having our surveyors locate this feature in the near future for depiction within our mapping. However, based upon a site visit following the public hearing, it appears that the bridge will be impacted by the proposed construction. If this is confirmed, you will be compensated for the loss of this bridge as part of the fair market dollar value to be offered to you (following an independent appraisal from a NYS certified appraiser) during the property rights acquisition process.

3. Negative impact on historic environment –

The impacts to your property, along with other historic or historic-eligible properties, have been discussed with the New York State Office of Parks, Recreation and Historic Preservation, more commonly known as SHPO. SHPO has determined that this project will not have an adverse effect on your property. We will continue to investigate ways to minimize/mitigate any impacts during the upcoming design process.

4. Truck Route prohibiting trucks on NY 30 between NY 7 and Route 30A –

Region 9 Traffic & Safety has reviewed this request and concluded that a truck route at this location is not warranted based on accident data from 01/03 to 12/07.

[redacted] –

1. Drying up of Brook running through property –

The current plan was preliminarily designed to allow as much “treatment” of stormwater as possible – a required under permitting guidelines. We will investigate ways to continue to let overland water cross under NY Route 30 and remain in the existing watercourse, while still meeting stormwater permitting requirements.

[redacted]

1. Investigate sites for Archeology –

All areas within the Area of Project Effect have been investigated by professional archaeologists and architectural historians in compliance with 36 CFR Part 800, of the federal regulations implementing Section 106 of the National Historic Preservation Act of 1966 as amended. A data recovery report for two archaeology sites that were discovered during these investigations should be completed this summer.

[redacted] –

1. Take into consideration reducing speed limit –

Traffic operations study No. 905-0116, completed in November of 2005, determined that the 85th percentile speed in this area was 55 mph and thus denied a request for a reduced speed limit. Research and experience show that artificially reducing speed limits have little effect on overall traffic speeds and, in

fact, can actually increase accident potential by introducing undesirable speed differences between vehicles. However, realistic limits do provide a sound basis for enforcement. At this time it appears that increased enforcement would be the appropriate action. The area studied encompassed NY 30 from NY 30A to the Village of Schoharie Line.

2. Spend 'Millions' elsewhere –

   This is one of Region 9's top priority safety projects as set by the Regional Safety Sub-committee.

3. Existing 3 large trees on property –

   The proposed roadway is in a shallow fill (approximately 1' (0.3m) at its highest point) in front of the Spindler property, so no cutting into the existing bank is planned. Rather, the roadway sideslope will be graded to match into the existing bank no more than 10 feet (3m+/-) outside of the existing pavement edge, and no closer than 20 ft (6m+/-) from the nearest of the 3 large tree trunks. As a result, we do not anticipate any damage to the root systems of these trees.

4. 'Cutting' into septic system –

   Since the small amount of grade change is a fill, rather than a cut, we do not anticipate any damage to your septic system, particularly since all slope grading should all be completed very nearly within the existing highway boundary.

5. Spring run-off –

   Following construction, stormwater runoff will continue to run down the driveway toward the road, and then be turned into a shallow roadway swale / concrete gutter running along NY Route 443, and then into a new catch basin located to the west of the driveway.

APPENDICES

APPENDIX A

NEPA Assessment Checklist

NEPA CHECKLIST

PIN and Project Title: PIN 9125.05 – Intersection Improvements at NYS Route 30/30A and NYS Route 30/443, Town of Schoharie, Schoharie County, New York.

Project Description and Purpose:

The proposed project involves the reconfiguration and reconstruction of two intersections and their approaches (NYS Rts 30/30A and NYS Rts 30/443). The primary purpose of the project is to improve safety and operations at the intersections and reduce redundancy and poor geometry on the approaches.

I.	THRESHOLD QUESTION	YES	NO
1.	Does the project involve unusual circumstances as described in 23 CFR §771.117(b)?		X

- If YES, the project does not qualify as a Categorical Exclusion and an EA or EIS is required. You may STOP COMPLETING THE CHECKLIST.
- If NO, go on.

II.	AUTOMATIC CATEGORICAL EXCLUSION		
2.	Is the project an action listed as an Automatic Categorical Exclusion in 23 CFR §771.117 c (C List)? and/or is the project an element-specific project classified by FHWA as a Categorical Exclusion on July 22, 1996		X

- If YES to question 2, the project qualifies for a C List Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report) A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).

  (Note - Even if YES to question 2, there may be specific environmental issues that still require an action such as an EO 11990 Wetland Finding or a determination of effect on cultural resources. The project is still an Automatic Categorical Exclusion but the necessary action must be taken, such as obtaining FHWA's signature on the wetland finding - refer to the appropriate section of the Environmental Procedures Manual for guidance.)

- If NO to question 2, go on.

III.	PROGRAMMATIC CATEGORICAL EXCLUSION		
3.	Is the project on a new location or does it involve a change in the functional classification or added mainline capacity (add through-traffic lanes)?		X
4.	Is this a Type I project under 23 CFR 772 (Procedures for Abatement of Highway Traffic Noise and Construction Noise)?		X
5.	Does the project involve more than two ha (five acres) of clearing, grubbing, grading or excavation of vegetated areas (other than ditch cleaning) adjacent to an existing water body or regulated wetlands; or if the project is located within the limits of a sole source aquifer, is the drainage pattern being altered?		X

		YES	NO
6.	Does the project involve changes in travel patterns?		X
7.	Does the project involve the acquisition of more than minor amounts of temporary or permanent strips of right-of-way (a minor amount of right-of-way is defined as no more than 10 percent of a parcel for parcels under 4 ha (10 acres) in size, 0.4 ha (1 acre) of a parcel 4 ha to 40.5 ha (10 to 100 acres) in size and 1 percent of a parcel for parcels greater than 40.5 ha (100 acres in size)?	X	
8.	Does the project require a Section 4(f) evaluation and determination in accordance with the FHWA guidance ?		X
9.	Does the project involve a commercial or residential displacement?		X
10.	If Section 106 applies, Does FHWA's determination indicate an opinion of adverse effect ?	X	
11.	Does the project involve any work in wetlands requiring Nationwide Permit #23 ?		X
12.	Does the project involve any work in wetlands requiring an **Individual** Executive Order 11990 Wetland Finding?		X
13.	Has it been determined that the project will significantly encroach upon a flood plain based on preliminary hydraulic analysis and consideration of EO 11988 criteria as appropriate?		X
14.	Does the project involve construction in, across or adjacent to a river designated as a component proposed for inclusion in the National System of Wild and Scenic Rivers?		X
15.	Does the project involve any change in access control?		X
16.	Does the project involve any known hazardous materials sites or previous uses with potential for hazardous material remains within the right-of-way?		X
17.	Does the project occur in an area where there are Federally listed endangered or threatened species or critical habitat?		X
18.	Is the project, pursuant to EPM Chapter 1A and Table 2 and Table 3 of 40 CFR Parts 51 and 93, non-exempt or does it exceed any ambient air quality standard?		X
19.	Does the project lack consistency with the New York State Coastal Zone Management Plan and		

	YES	NO
policies of the Department of State, Office of Coastal Zone Management?		X
20. Does the project impact or acquire any Prime or Unique Farmland as defined in 7 CFR Part 657 of the Federal Farmland Protection Policy Act and are there outstanding compliance activities necessary ? (Note: Interpret compliance activity to mean completion of Form AD 1006)		X

- If NO for questions 3-20, go on to answer question 21.
- If YES to any question 3-20, project will not qualify as a Programmatic Categorical Exclusion. Answer questions 21 and 22 for documentation only and go on to question 23.

21. Does the project involve the use of a temporary road, detour, or ramp closure?		X

- If NO for questions 3-20 and NO to question 21, the project qualifies as a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo is to be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report) A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others (see sample DETERMINATION memo attached).

- If YES to question 21, the preparer should complete question 22 (i-v). If questions 3-20 are NO and 21 is YES, the project will still qualify as a Programmatic Categorical Exclusion if questions 22 (i-v) are YES.

22. Since the project involves the use of a temporary road, detour or ramp closure, will all of the following conditions be met?

i. Provisions will be made for pedestrian access, where warranted, and access by local traffic and so posted.

ii. Through-traffic dependent business will not be adversely affected.

iii. The detour or ramp closure, to the extent possible, will not interfere with any local special event or festival.

iv. The temporary road, detour or ramp closure does not substantially change the environmental consequence of the action.

v. There is no substantial controversy associated with the temporary road, detour or ramp closure.

- If questions 3-20 are NO, 21 is YES and 22 (i-v) are YES, the project qualifies for a Programmatic Categorical Exclusion. You may STOP COMPLETING THE CHECKLIST. The checklist should be included in the appendix of the Final Design Report (or Scope Summary Memorandum/Final Design Report). The CATEGORICAL EXCLUSION DETERMINATION memo should be sent to the appropriate Main Office Design liaison unit with a copy of the Final Design Report (or Scope Summary Memorandum/Final Design Report). A copy of the CATEGORICAL EXCLUSION DETERMINATION memo must also be sent to the Office of Budget and Finance, Project and Letting Management, and others.
- If questions 3-20 are NO, 21 is YES and any part of 22 is NO, go on to question 23.

23. Is the project section listed in 23 CFR §771.117 (d) (D List) or is the project an action similar to those listed in 23 CFR § 771.117(d)?	X	

- For those questions which precluded a Programmatic Categorical Exclusion, documentation should be provided for any YES response to questions 3-20 or a NO response to any part of questions 22 (i-v). This documentation, as well as the checklist, should be included in the Design Approval document, i.e., Final Design Report, etc., to be submitted to the Main Office/FHWA design liaison unit for submission to the FHWA Division for classification of the project as a D List Categorical Exclusion.

Documentation for "YES" responses to Questions 3-20

7. *Q: Does the project involve the acquisition of more than minor amounts of temporary or permanent strips of right-of-way (a minor amount of right-of-way is defined as no more than 10 percent of a parcel for parcels under 4 ha (10 acres) in size, 0.4 ha (1 acre) of a parcel 4 ha to 40.5 ha (10 to 100 acres) in size and 1 percent of a parcel for parcels greater than 40.5 ha (100 acres in size)?*
   A: Yes - See Design Report Section III.C.2.I. – Right-of-Way, for documentation.

10. *Q: If Section 106 applies, does FHWA's determination indicate an opinion of adverse effect?*
    A: Yes – however, a Memorandum of Agreement (MOA) for Recovery of Significant Archaeological Information has been executed for the adverse impacts to the cultural resources at the project site (Refer to Appendix F of the Design Report for a copy). As such, the Section 106 process in now complete and the requirements of 36 CFR Part 800 have been satisfied for all historic and cultural resources associated with this project.

APPENDIX B

Design Speed Study

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MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: D. Ligeikis, Acting Regional Design Engineer

FROM: Daniel Paddick, Regional Traffic Engineer [redacted]

SUBJECT: PIN 912505, OPERATING SPEED STUDY AND ROADSIDE REVIEW
INTERSECTION OF NY 30 AND NY 443
INTERSECTION OF NY 30 AND 30A
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

DATE: November 8, 2002

A radar speed study was performed at the above project sites on September 17, 2002. The weather was sunny and the pavement dry.

Intersection of NY 30 and NY 443:

The posted speed limit is 50 mph. The 85th percentile speed was determined to be 87 km/h (54 mph). It is our opinion that the operating speed in the project area is 87 km/h which is generally in conformance with the posted speed limit. There is no roadside development in this area that would warrant a lower speed limit. The project should use a design speed which reflects this operating speed.

Signs in the project area are in good condition, and generally in conformance with the MUTCD. Pavement markings are in good condition. Driveways in the project vicinity conform to standards. Sight distance from the stop bar on NY 443 to the south on NY 30 needs improvement. Trees block the line of sight on the inside of the horizontal curve.

Intersection of NY 30 and NY 30A:

The posted speed limit is 55 mph. The 85th percentile speed was determined to be 82 km/h (51 mph). It is our opinion that the operating speed in the project area is 82 km/h which is less than the posted speed limit due to the sharp horizontal curve in this area. It is expected that if the curve is flattened as part of this project, the 85th percentile operating speed will increase.

The roadsides near the subject intersection are tight, landscaping, businesses and shrubbery all block horizontal distance thru the curve. There is a small commercial business on the inside of the horizontal curve with driveway access having minimal sight distance that should be addressed as part of this project. The intersecting roadway, NY 30A, is highly skewed and has a steep down grade approaching the intersection that should be addressed if possible during design.

DP:DB

c: C. Riedel, Safety Capital Projects Bureau, 5-314
C. Debnar, Regional Design Quality Control

APPENDIX C

Accident Analysis

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

To: J. Foglietta, Regional Design Engineer, Region9

From: J. Mancuso, Regional Transportation Systems Operator, Region 9

Subject: **PIN 912505 – ACCIDENT UPDATE**
NY ROUTES 30/30A/ 443 INTERSECTION IMPROVEMENTS
SCHOHARIE COUNTY

Date: June 23, 2008

A review of the most current available accident data, (January 1, 2005 to December 31, 2007) along with the four most current HAL listings, indicates that the original accident analyses dated November 8 and November 13, 2002 are still representative of the accident patterns within the project limits and a full analysis of the new data is not required.

At the NY 30/30A intersection, the areas from RM 30 9502 1288 to 1290 and RM 30A 9501 1000 to 1003 appear on the 2006 HAL list as an SDL. At the NY 30/443 intersection the area from RM 30 9502 1276 to 1279 appears on the 2006 Hal list as an SDL. These locations do not appear on any of the older PIL lists. The intersection accident rate at NY 30/30A is 0.38 accidents per Million Entering Vehicles (MEV). The comparable statewide average intersection accident rate is 0.10 accidents/MEV. The intersection accident rate at NY 30/443 is 0.58 accidents/MEV. The comparable statewide average for a similar facility is 0.22 accidents/MEV.

One fatality occurred during the three year period. The accident occurred on NY 30A in front of the 'Apple Barrel' store near RM 30A 9501 1001. A north bound vehicle drifted into the south bound lane striking a vehicle head on. The cause for the northbound vehicle to cross over to the south bound lanes is not clear.

Based on this review of the most current accident data available, the recommendations in the original accident analyses are still valid.

JM:RJR

c: R. Romanosky, Consultant Job Manager
J. McDuffee, Project Manager, Delta Engineers
File

Copy - Clerk
Deborah Dewhurst copy

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: D. Ligeikis, Acting Regional Design Engineer

FROM: Daniel Paddick, Regional Traffic Engineer [redacted]

SUBJECT: PIN 912505, ACCIDENT ANALYSIS
INTERSECTION OF NY 30 AND NY 30A
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

DATE: November 13, 2002

The study area is composed of 1.0 km of NY 30 and 0.6 km of NY 30A which form a 'Y' intersection. The through movement is on the southerly leg of NY 30 to NY 30A which continues northwest to connect with I88 while NY 30 continues in a northeast direction to connect with NY 7. Southbound vehicles on NY 30 are controlled by a Stop sign at the intersection with NY 30A. The volumes indicate that the traffic on the northerly leg of NY 30 is slightly higher than the segment of NY 30A. There were no accidents reported on the northeast portion of NY 30, within 0.6 km of the intersection with NY 30A.

The 0.6 km segment of NY 30 and NY 30A surrounding the intersection of NY 30 and NY 30A (RM 30 9502 1286 to 1288 and NY 30A 9501 1000 to 1003) was the scene of twenty-seven accidents in the three year period from May 1, 1998 to April 30, 2001. There were four intersection accidents related to the intersection of NY 30 and NY 30A. There were also four accidents related to the 'Apple Barrel' driveway, which is on the inside of the horizontal curve opposite the intersection of NY 30 and NY 30A. Of the total twenty-seven accidents, eight resulted in injury, the remaining nineteen resulted in property damage only. This severity distribution is normal. There were no accidents involving pedestrians or bicycles in the study.

The overall accident rate on NY 30 and NY 30A is 3.37 Million Vehicle Kilometers (MVKm). The comparable statewide average accident rate is 1.70 MVKm. The non intersection accident rate on NY 30 and NY 30A is 2.87 accidents per MVKm. The corresponding comparable statewide average accident rate for non intersection accidents only is 1.28 MVKm. The intersection accident rate at the junction of NY 30 and NY 30A is 0.32 accidents per Million Entering Vehicles. The comparable statewide average accident rate is 0.19 accidents per MEV.

The areas from RM 30 9502 1286 to 1290 and NY 30A 9501 1000 to 1002 appear on the most recent HAL list as a SDL. These locations correspond to the intersection of NY 30 and NY 30A. These locations do not appear on any of the older PIL lists, nor do they appear on the 'Bad Actor' listing. There have not been any Highway Safety Investigation studies completed in this project location in the past five years. As a result of a complaint received about inadequate sight distance at the Apple Barrel driveway, a letter was sent

to the property owner on February 13, 2001 requesting he remove commercial items from the highway right-of-way.

The study area is composed of three legs, and all twenty-seven accidents reported were on the southerly leg of NY 30 and the portion of NY 30A to the northwest. There were no accidents reported on the 0.6 km portion of NY 30 northeast of the intersection. Fourteen of the total twenty-seven accidents involved deer being struck in the roadway. Eleven of these deer hits occurred at RM 30A 9501 1001 to 1003. The resulting accident rate of deer hits alone is 3.15 accidents per MVKm, which exceeds the comparable statewide average. This is the cause of this segment appearing on the most recent HAL as a SDL.

Four accidents involved vehicles entering and leaving NY 30A from the 'Apple Barrel' store, which is located on the inside of a horizontal curve opposite the intersection of NY 30 with NY 30A. Sight distance thru the horizontal and vertical curves at this location is not good. Landscaping extends out to the edge of a minimal shoulder in front of the store which makes sight distance even worse. Three of the four accidents involved a northbound vehicle rear-ending a vehicle stopped to turn left into the driveway and the fourth accident involved a northbound vehicle striking a vehicle turning left onto NY 30A northbound from the driveway.

Four accidents involved the intersection of NY 30 and NY 30A. Two of these accidents involved the 'secondary' connection from the northeast portion of NY 30 to NY 30A. One of these accidents was caused by confusion of the operator of a vehicle southbound on NY 30A who believed he missed the NY 30 intersection, and backed up on NY 30A to access the connection. He was rear-ended by another southbound vehicle on NY 30A. Another accident at this same leg of the intersection involved a vehicle attempting to enter NY 30A from the secondary connection, which is stop controlled, and being struck by a northbound vehicle. Of the two accidents at the primary intersection of NY 30 and NY 30A, one was a rear-end of a southbound vehicle stopped at the stop sign. It is described in the accident report as a typical stop-start accident. Sight distance to the north on NY 30A from the stop bar is hindered by the roadway geometry and the skew of the intersection which makes judging gaps more difficult, which can lead to stop-start accidents. The other accident at this location was a conflict between a vehicle turning left from NY 30A onto NY 30 southbound, who was struck by a northbound vehicle on NY 30.

Of the eight accidents described in the previous two paragraphs, six of them involved a vehicle traveling north on NY 30 onto NY 30A northbound, striking a turning vehicle either as a right-angle accident or a rear-end accident. It is not known yet if this curve is non standard, or if the crest vertical curve has non standard sight distance. It is clear that there is a lack of adequate horizontal sight distance thru this area both and a result of the geometry and a result of the configuration of the intersection. Attached is a TE 164 which shows that reconstruction of the intersection combined with addition of a left turn lane and improvements to the sight distance result in accident reductions having a present worth of $1.792 million assuming a 20 year service life and a 4% rate of return.

There were three accidents that appear related to horizontal curvature in the study area, two are attributed to RM 30 9502 1288 and the third to RM 30A 9501 1002. One vehicle

lost control, left the roadway and hit a utility pole. Another vehicle edged over the centerline thru a curve and sideswiped an on-coming vehicle. The third involved a vehicle who lost control, left the roadway, and hit trees. A second accident involved a vehicle leaving the roadway and hitting trees, but the accident does not cite horizontal curvature. During design of this project, the clear zone should be evaluated, and fixed objects removed. It is assumed that the curve will either be brought up to standards, or eliminated as a part of the intersection reconstruction. Attached is a TE 164 which shows that horizontal curve reconstruction or elimination and removal of fixed objects from the roadside results in an accident reduction benefit having a present worth of $0.548 million, assuming a 20 year service life and a 4% rate of return.

The project scope is to reconstruct the intersection. As a part of the intersection reconstruction, the horizontal curve on NY 30 to NY 30A will be addressed. Adequate intersection sight distance should be strived for, as well as an adequate clear zone. The design of the new configuration of the intersection will be heavily influenced by topographic field conditions, mainly grade.

DP:DB

c: C. Riedel, Safety Capital Projects Bureau, 5-314
C. Debnar, Regional Design Quality Control
D. Devadoss, Project Engineer, Design

*TE 164 (7/75)

Page No. _____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER: 912505

EVALUATION OF ALTERNATE NO: _____

STUDY PERIOD: From 5 / 1 / 98 To 4 / 30 / 01 No. of Yrs. 3

LOCATION

Route No. or Street Name: NY 30 | State Highway No.: | From or At Reference Marker: 30 95021288

At Intersection With (If Applicable) Route No. or Street Name: NY 30A | State Highway No.: | To Reference Marker: 30A 95010100

PROJECT DATA

PROPOSED IMPROVEMENT:

Intersection reconstruction, intersection sight distance improvements, addition of left turn lane on NY 30/30A

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor 85 %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: _____
b. Future Accident Rate: _____
c. Difference (a - b): _____
d. Calculated RF (c ÷ a): _____ %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Accident reduction factor is derived from a combination of the following ARF's:
- Realignment of intersection results in reduction of 41% of all intersection related accidents
- Improving intersection sight distance results in 30% reduction of all intersection accidents
- Addition of left turn lane results in 87% reduction of LT's and RE's

Present worth assuming a 20 year service life and 4% ROR is about $1.792 million

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity					100%
b. actual					
c. expected					
d. difference					
e. significance					

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal	_____	x	_____	= $	_____
Injury	_____	x	_____	=	_____
F & I	_____	x	_____	=	_____
PDO	_____	x	_____	=	_____
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost÷Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 8/3 YRS x VCF 1.11 x BEFORE COST/ACCIDENT $52 400 = $ $155 104

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 8/3 yrs x VCF 1.11 x (1.00 − .85 RF) x AVG. COST/ACC. $52 400 = $ $23 266

ESTIMATED ANNUAL SAFETY BENEFITS (A − B) = $ 131 838

*TE 164 (7/75)

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER: 912505

EVALUATION OF ALTERNATE NO: _____

STUDY PERIOD: From 5 / 1 / 98 To 4 / 30 / 01 No. of Yrs. 3

LOCATION

Route No. or Street Name	State Highway No.	From or At Reference Marker
NY 30		30 95021288
At Intersection With (If Applicable) NY 30A		To Reference Marker: 30A 95011002

PROJECT DATA

PROPOSED IMPROVEMENT:

Horizontal curve reconstruction or elimination, clear zone improvements on NY 30/30A

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor 52 %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: _____
b. Future Accident Rate: _____
c. Difference (a - b): _____
d. Calculated RF (c ÷ a): _____ %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Accident reduction factor is derived from a combination of the following ARF's:
- Realignment or elimination of horizontal curve results in reduction of 52% of all curve related off-road accidents
- Improving clear zone (removing fixed objects) results in 55% reduction of all off-road accidents

Present worth assuming a 20 year service life and 4% ROR is about $ 0.548 million

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity					100%
b. actual					
c. expected					
d. difference					
e. significance					

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost÷Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 4/3 YRS X VCF 1.11 X BEFORE COST/ACCIDENT $52 400 = $ $77 552

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 4/3 yrs X VCF 1.11 X (1.00 – .52 RF) X AVG. COST/ACC. $52 400 = $ $37 225

ESTIMATED ANNUAL SAFETY BENEFITS (A – B) = $ 40 327

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MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: D. Ligeikis, Acting Regional Design Engineer

FROM: Daniel Paddick, Regional Traffic Engineer [redacted]

SUBJECT: PIN 912505, ACCIDENT ANALYSIS
INTERSECTION OF NY 30 AND NY 443
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

DATE: November 8, 2002

The subject intersection is composed of three individual closely spaced intersections along NY 30 in the vicinity of RM 30 9502 1274. Two intersecting roads are legs of NY 443, and the third is a local road. It is clear on-site that the intersection(s) could easily be condensed into a typical Stop controlled 'T' intersection.

The 1.0 km segment of NY 30 studied in the vicinity of the intersection (RM 30 9502 1271 to RM 30 9502 1276) was the scene of nineteen accidents in the three year period from May 1, 1998 to April 30, 2001. There were seven intersection accidents included in the NY 30 accidents. The abutting 1.0 km segment of NY 443 was the scene of four accidents in the same three year study period. Of the total twenty-three accidents, three resulted in injury, the remaining twenty resulted in property damage only. This severity distribution is normal. There were no accidents involving pedestrians or bicycles in the study.

The overall accident rate on NY 30 is 2.10 Million Vehicle Kilometers (MVKm). The comparable statewide average accident rate is 1.70 MVKm. The non intersection accident rate on NY 30 is 1.33 accidents per MVKm. The corresponding comparable statewide average accident rate for non intersection accidents only is 1.28 MVKm. The accident rate for the 1.0 km segment of NY 443 is 2.21 accidents per MVKm, and is comparable to the average statewide rate of 1.70 accidents per MVKm. The intersection accident rate at the junction of NY 30 and NY 443 is 0.67 accidents per Million Entering Vehicles. The comparable statewide average accident rate is 0.19 accidents per MEV.

The area from RM 30 95021274 to 1276 appears on the most recent HAL list as a PIL. There are two variations of the same location (RM 1272 to 1275 and again RM 1275 to 1277) which appear as SDL's. This location does not appear on any of the older PIL lists, nor does it appear on the 'Bad Actor' listing. There have not been any Highway Safety Investigation studies completed in this project location in the past five years, however there is an on-going study covering the abutting section of NY 443.

Of the total nineteen accidents occurring on the 1.0 km segment of NY 30 studied, fourteen of them occurred at RM 1274, which corresponds to the intersection with NY 443. Seven of these fourteen are related to intersection turning maneuvers at NY 443 and the remaining seven occurred on NY 30 in the vicinity of the intersection and involved several

common contributing factors. Three accidents resulted from animal actions. Two accidents involved southbound vehicles which lost control on NY 30 during slippery pavement conditions, left the roadway and struck ditches and guide rail. Two accidents involved driveways, one vehicle backing out of a residence being struck by an on-coming vehicle, and one at the post office. The accident at the post office is attributed to confusion of the operator due to the presence of a DOT flagger which resulted in the operator pulling out in front of another vehicle. There are no obvious patterns in these linear accidents. During design of the project, horizontal sight distance should be checked and improved thru the horizontal curve just south of the intersection and ditches should be graded to insure traversability.

Of the seven accidents on NY 30 involving turning vehicles into and out of NY 443, one was a head-on type accident involving a vehicle westbound on NY 443 approaching NY 30 northbound being struck by a vehicle turning from NY 30 southbound onto NY 443 eastbound. This movement is capable at a fairly high speed due to the skew of the leg of NY 443. There were two rear-end accidents involving vehicles stopped on NY 443 trying to enter NY 30. One of these accidents occurred at the northerly leg of NY 443 and involved two vehicles stopped to turn right onto NY 30 northbound. This intersection is highly skewed. The other accident occurred on the southerly leg between two vehicles stopped at the stop sign to turn left onto NY 30 southbound. One rear-end accident occurred on NY 30 as two vehicles were stopped to turn left, a third vehicle was unable to stop and rear-ended the second stopped vehicle, causing him to strike the first stopped vehicle. Three accidents were right angle conflicts between a left turning vehicle pulling out of the southerly leg of NY 443 headed to NY 30 southbound, who were struck by northbound vehicles. Intersection sight distance improvements should be made by this project. Reconstruction of the intersection to a conventional 'T' intersection and addition of a left turn lane on NY 30 along with sight distance improvements assuming a 20 year service life and a 4% rate of return would have a present worth benefit of approximately $1.531 million.

The remaining five accidents attributed to NY 30 occurred in the segment of RM 1275 to 1276 and are three deer hits, a rear-end of a vehicle stopped to turn into a driveway, and a two car accident involving a vehicle that lost control during slippery conditions and slid over the centerline striking an on-coming vehicle.

Four non intersection accidents occurred on NY 443 within the study limits, evenly distributed over the 1.0 km segment. There were two accidents involving animals, one vehicle that lost control due to an insect entering the car and stinging the driver, and the last was a vehicle that lost control during slippery conditions, struck a utility pole, mail boxes, and a tree before overturning. During design of the project, the existing clear zone should be reviewed, hazardous fixed objects removed, and ditches graded to be traversable.

DP:DB

c: C. Riedel, Safety Capital Projects Bureau, 5-314
C. Debnar, Regional Design Quality Control
D. Devadoss, Project Engineer, Design , p.s next project site to follow

TE 164 (7/75)

Page No. _____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER	903617
EVALUATION OF ALTERNATE NO:	
STUDY PERIOD	From 5/1/98 To 4/30/01 No. of Yrs. 3

LOCATION

Route No. or Street Name	State Highway No.	From or At Reference Marker
NY 30		30 | 9502 | 1274
At Intersection With (If Applicable) Route No. or Street Name: NY 443	State Highway No.	To Reference Marker

PROJECT DATA

PROPOSED IMPROVEMENT:

Intersection reconstruction, intersection sight distance improvements, addition of left turn lane on NY 30

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor 83 %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: _____
b. Future Accident Rate: _____
c. Difference (a - b): _____
d. Calculated RF (c ÷ a): _____ %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Accident reduction factor is derived from a combination of the following ARF's:
- Realignment of intersection results in reduction of 41% of all accidents
- Improving intersection sight distance results in 30% reduction of all accidents
- Addition of left turn lane results in 87% reduction of LT's and RE's

Present worth assuming a 20 year service life and 4% ROR is about $1.531 million

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity					100%
b. actual					
c. expected					
d. difference					
e. significance					

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost÷Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 7/3 YRS X VCF 1.11 X BEFORE COST/ACCIDENT $52 400 = $ $135 716

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 7/3 yrs X VCF 1.11 X (1.00 – .83 RF) X AVG. COST/ACC. $52 400 = $ $23 072

ESTIMATED ANNUAL SAFETY BENEFITS (A – B) = $ 112 644

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: David Ligeikis, Regional Planning & Program Manager

FROM: Robert A. MacMonigle, Regional Traffic Engineer

SUBJECT: PIN 9125.05.121, ACCIDENT DATA AND ANALYSIS
NY 30/NY 30A INTERSECTION IMPROVEMENT
NY 30/NY 443 INTERSECTION IMPROVEMENT
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

DATE: September 8, 1993

The area around the NY 30/NY 443 intersection (RM 30 9502 1271 to RM 30 9502 1277 and RM 443 9501 1000 to RM 443 9501 1003) was the scene of nineteen accidents in the three years from December 1, 1989 to November 30, 1992. There were no fatalities. There were four personal injury accidents and fifteen property damage only accidents. This severity distribution is normal. There were four intersection accidents.

The overall accident rate for this area was 3.06 accidents per million vehicle miles (MVM). The statewide average accident rate for all accidents on rural two lane roadways is 2.98 accidents per MVM. The non-intersection accident rate was 2.42 accidents per MVM. The statewide average non-intersection accident rate for two lane rural roadways is 2.02 accidents per MVM. There was a segment of one lane traffic with a temporary signal in this area in the summer of 1991 due to a NYSDOT construction zone. There were five accidents directly related to this construction zone. There were four accidents at the temporary signal and one miscellaneous accident inside the construction zone.

Only one portion of NY 30 or NY 443 near this intersection has appeared in the last four PIL lists (various twenty-four month periods ending 9/30/88 through 12/31/91). The segment of NY 30 from RM 30 9502 1273 to RM 30 9502 1276 appeared on the PIL list for the period ending 12/31/91.

The reduction index of this PIL listing was not high enough to warrant a Highway Safety Improvement Program (HSIP) study. A study was performed, however, in October of 1990 due to citizen complaints. It stated that benefits would be obtained through reconstruction of the

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of return, and the elimination of sixty-one percent of the geometry related accidents results in annual safety benefits of $52,600. This is equivalent to a present worth of about $714,000. The sixty-one percent reduction factor is for Improvement Code 400 from the Accident Reduction Tables.

Since the intersection improvement and the geometric improvement do not use any of same accidents in their respective benefit calculations, these benefits are cumulative. If both improvements are done, the sum of these benefits will be experienced.

There was one fatality in the study. It happened near RM 30 9502 1287. It was a left turn accident near a driveway. A southbound vehicle attempted a left turn into a driveway. This vehicle was struck by a northbound vehicle. This was the only driveway-related accident in this area.

This area was also the scene of four deer-vehicle collisions. Due to the nature of the surrounding area, deer are to be expected. It is our opinion that "Deer Crossing" signs are not warranted.

There were no other patterns or clusters. Pending the identification of any non-standard features, we have no further comments for this area.

RAM:RFF

cc: J. Barnack, Safety Program Management Bureau 5-314
F.T. Moorhead, Regional Design Engineer
C. Debnar, Regional Design Quality Assurance
J. Gdovin, Project Manager, Construction

intersection.

No portion of this area appeared in the War on Utility Pole Accidents "Bad Actors" listing. There were no utility pole accidents.

The intersection of NY 30 and NY 443 was the scene of four accidents. The intersection accident rate for this intersection was about 0.46 accidents per million entering vehicles (MEV). The statewide average intersection accident rate for similar intersections is 0.19 accidents per MEV. This intersection is a confusing multi-leg intersection. The collective accident rate for all the legs is more than double of that which would be expected at a "normal" T-intersection. Relocating or reconstructing this intersection to form a simple T-intersection would have safety benefits. The intersection could be either stop controlled or controlled with a flashing signal. Assuming a twenty year service life, a four percent rate of return, and reduction of the accident rate to the statewide average results in annual safety benefits of $50,900 for a stop controlled intersection. This is equivalent to a present worth of about $692,000. A reconstructed intersection with a flashing signal would provide annual safety benefits of about $33,700. This is equivalent to a present worth of about $458,000.

This area was the scene of four deer-vehicle collisions. Due to the nature of the surrounding area, deer are to be expected. It is our opinion that "Deer Crossing" signs are not warranted.

There were no other patterns or clusters. Pending the identification of any non-standard features, we have no further recommendations for this area.

The area around the NY 30/NY 30A intersection (RM 30 9502 1286 to RM 30 9502 1291 and RM 30A 9501 1000 to RM 30A 9501 1002) was the scene of seventeen accidents in the three years from December 1, 1989 to November 30, 1992. There was one fatality. There were seven personal injury accidents and nine property damage only accidents. This severity distribution is normal. There were five intersection accidents.

The overall accident rate for this area was 3.88

accidents per MVM. The statewide average accident rate for all accidents on rural two lane roadways is 2.98 accidents per MVM. The non-intersection accident rate was 2.74 accidents per MVM. The statewide average non-intersection accident rate for two lane rural roadways is 2.02 accidents per MVM.

Portions of NY 30 and NY 30A near this intersection have appeared in the last four PIL lists (various twenty-four month periods ending 9/30/88 through 12/31/91) as follows:

Period ending	RM		RM
12/31/89	30 9501 1287	to	1289
12/31/90	30 9501 1286	to	1289

Neither of these listings had a reduction index high enough to warrant an HSIP study.

No portion of this area appeared in the War on Utility Pole Accidents "Bad Actors" listing. There were no utility pole accidents.

The intersection of NY 30 and NY 30A was the scene of five accidents. The intersection accident rate for this intersection was about 0.68 accidents per MEV. The statewide average intersection accident rate for similar intersections is 0.19 accidents per MEV. This is an overly complicated Y-type intersection. The accident rate is more than double of that which would be expected at a "normal" T-intersection. Reconstructing this intersection to a simple T-intersection would have safety benefits. The intersection could be either stop controlled or controlled with a flashing signal. Assuming a twenty year service life, a four percent rate of return, and reduction of the accident rate to the statewide average results in annual safety benefits of $77,700 for a stop controlled intersection. This is equivalent to a present worth of about $1,055,000. A reconstructed intersection with a flashing signal would provide annual safety benefits of about $63,700. This is equivalent to a present worth of about $865,000.

There is a sharp horizontal curve on the southbound approach to this intersection (near RM 30 9502 1288). Four accidents were directly related to this deficiency. Flattening this curve would provide safety benefits. Assuming a twenty year service life, a four percent rate

TE 164 (7/75)

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER: 9 1 2 5 0 5

EVALUATION OF ALTERNATE NO: A

STUDY PERIOD	From	To	No. of Yrs.
	12/01/89	11/30/92	3|0

LOCATION

Route No. or Street Name: NY 30 | State Highway No.: | From or At Reference Marker: 3 0 9 5 0 2 1 2 7 4

At Intersection With (If Applicable) | Route No. or Street Name: NY 443 | State Highway No.: | To Reference Marker:

PROJECT DATA

PROPOSED IMPROVEMENT:

Reconstruct intersection to design standards. (stop controlled)

Volume correction factor based on 1% per year growth and a twenty year service life.

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor ____ %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: 0.46
b. Future Accident Rate: 0.19
c. Difference (a - b): 0.27
d. Calculated RF (c ÷ a): 0.59 %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Reconstruction to design standards will reduce the accident rate to the statewide average for a T-intersection with a Stop sign. (No left turn)

Present worth assuming a 4% rate of return and a twenty year service life is about $692,000.

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity	0.81	32.28	33.09	66.91	100%
b. actual	0	2	2	2	4
c. expected					
d. difference					
e. significance	No	No	No		

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost÷Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X BEFORE COST/ACCIDENT 58,300 = $ 86,300

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X (1.00-0.59RF) X AVG. COST/ACC. 58,300 = $ 35,400

ESTIMATED ANNUAL SAFETY BENEFITS (A – B) = $ 50,900

TE 164 (7/75)

Page No. _____

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER	9 1 2 5 5
EVALUATION OF ALTERNATE NO:	B

STUDY PERIOD	From	To	No. of Yrs.
	12 /01/89	11 /30/92	3 10

LOCATION

Route No. or Street Name	State Highway No.	From or At Reference Marker
NY 30		3 0 9 5 0 2 1 2 7 4
At Intersection With (If Applicable) — Route No. or Street Name: NY 443	State Highway No.	To Reference Marker

PROJECT DATA

PROPOSED IMPROVEMENT:

Reconstruct intersection to design standards. (flashing signal)

Volume correction factor based on 1% per year growth and a twenty year service life.

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor _____ %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: 0.46
b. Future Accident Rate: 0.28
c. Difference (a - b): 0.18
d. Calculated RF (c ÷ a): 0.39 %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Reconstruction to design standards will reduce the accident rate to the statewide average for a T-intersection with a flashing signal. (No left turn lane)

Present worth assuming a 4% rate of return and a twenty year service life is about $458,000.

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity	0.81	32.28	33.09	66.91	100%
b. actual	0	2	2	2	4
c. expected					
d. difference					
e. significance	No	No	No		

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost ÷ Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X BEFORE COST/ACCIDENT 58,300 = $ 86,300

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X (1.00 - 0.39 RF) X AVG. COST/ACC. 58,300 = $ 52,600

ESTIMATED ANNUAL SAFETY BENEFITS (A – B) = $ 33,700

TE 164 (7/75)

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER	9 1 2 5 0 5
EVALUATION OF ALTERNATE NO:	A
STUDY PERIOD	From: 12/01/89 — To: 11/30/92 — No. of Yrs.: 3.0

LOCATION

Route No. or Street Name	State Highway No.	From or At Reference Marker
NY 30		3 0 9 5 0 2 1 2 8 8
At Intersection With (If Applicable): NY 30 A		To Reference Marker

PROJECT DATA

PROPOSED IMPROVEMENT:

Reconstruct intersection to design standards. (Stop controlled)

Volume correction factor based on 1% per year growth and a twenty year service life.

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor ____ %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: 0.68
b. Future Accident Rate: 0.19
c. Difference (a - b): 0.49
d. Calculated RF (c ÷ a): 0.72 %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Reconstruction to design standards will reduce the accident rate to the statewide average for a T-intersection with a Stop sign. (No left turn lane)

Present worth assuming a 4% rate of return and a twenty year service life is about $1,055,000.

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity	0.81	32.28	33.09	66.91	100%
b. actual	0	2	2	3	5
c. expected	0.04	1.6	1.7	3.3	5
d. difference	0.04	0.4	0.3	0.3	-
e. significance	No	No	No		

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost ÷ Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 5/3 X VCF 1.11 X BEFORE COST/ACCIDENT 58,300 = $ 107,900

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 5/3 X VCF 1.11 X (1.00 − 0.72 RF) X AVG. COST/ACC. 58,300 = $ 30,200

ESTIMATED ANNUAL SAFETY BENEFITS (A − B) = $ 77,700

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER: 9 1 2 - 0 5

EVALUATION OF ALTERNATE NO: B

STUDY PERIOD: From 12/01/89 To 11/30/92 No. of Yrs. 30

LOCATION

Route No. or Street Name: NY 30 | State Highway No. | From or At Reference Marker: 3 0 9 5 0 2 1 2 8 8

At Intersection With (If Applicable) | Route No. or Street Name: NY 30A | State Highway No. | To Reference Marker:

PROJECT DATA

PROPOSED IMPROVEMENT:

Reconstruct intersection to design standards. (Flashing signal)

Volume correction factor based on 1% per year growth and a twenty year service life.

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor ____ %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: 0.68
b. Future Accident Rate: 0.28
c. Difference (a - b): 0.40
d. Calculated RF (c ÷ a): 0.59 %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Reconstruction to design standards will reduce the accident rate to the statewide average for a T-intersection with a flashing signal. (No left turn lane)

Present worth assuming a 4% rate of return and a twenty year service life is about $865,000.

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity	0.81	32.28	33.09	66.91	100%
b. actual	0	2	2	3	5
c. expected	0.04	1.6	1.7	3.3	5
d. difference	0.04	0.04	0.3	0.3	--
e. significance	No	No	No		

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost ÷ Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 5/3 X VCF 1.11 X BEFORE COST/ACCIDENT 58,300 = $ 107,900

B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 5/3 X VCF 1.11 X (1.00 - 0.59 RF) X AVG. COST/ACC. 58,300 = $ 44,200

ESTIMATED ANNUAL SAFETY BENEFITS (A - B) = $ 63,700

TE 164 (7/75)

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION

SAFETY BENEFITS EVALUATION FORM

TRAFFIC & SAFETY IDENTIFICATION NUMBER: 9 1 2 5 0 5

EVALUATION OF ALTERNATE NO: _____

STUDY PERIOD	From	To	No. of Yrs.
	12 01 89	11 30 92	3 0

LOCATION

Route No. or Street Name	State Highway No.	From or At Reference Marker
NY 30		3 0 9 5 0 2 1 2 8 8
At Intersection With (If Applicable) — Route No. or Street Name	State Highway No.	To Reference Marker
		3 0 9 5 0 2 1 2 8 9

PROJECT DATA

PROPOSED IMPROVEMENT:

Flatten horizontal curve.

Volume correction factor based on a 1% per year growth and a twenty year service life.

Present AADT: _____ Future AADT: _____ Volume Correction Factor (VCF): 1.11

REDUCTION CALCULATION

METHOD I (From Reduction Factor Table)
Average Reduction Factor 61 %

METHOD II (Engineering Analysis)

a. Total Accidents: _____
b. Accidents Reduced: _____
c. Calculated RF (b ÷ a): _____ %

METHOD III (For General Upgradings)

a. Existing Accident Rate: _____
b. Future Accident Rate: _____
c. Difference (a - b): _____
d. Calculated RF (c ÷ a): _____ %

BRIEFLY EXPLAIN HOW EXPECTED REDUCTION WAS DERIVED:

Upgrading horizontal alignment to design standards will reduce geometry related accidents by 61% (Improvement Code 400).

Present worth assuming a 4% rate of return and a twenty year service life is about $714,000.

SIGNIFICANCE CHECK OF SEVERITY DISTRIBUTION

	FATAL	INJURY	F & I	PDO	TOTAL
a. % by severity					100%
b. actual					
c. expected					
d. difference					
e. significance					

BEFORE COST PER ACCIDENT CALCULATION

TYPE	NO. ACC.		COST/ACC		ACC. COST
Fatal		x		= $	
Injury		x		=	
F & I		x		=	
PDO		x		=	
TOTAL				$	

BEFORE COST/ACC (Tot. Acc. Cost÷Tot. Acc.) $ _____

SAFETY BENEFITS

A. ESTIMATED ANNUAL ACCIDENT COST WITH NO IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X BEFORE COST/ACCIDENT 58,300 = $ 86,200

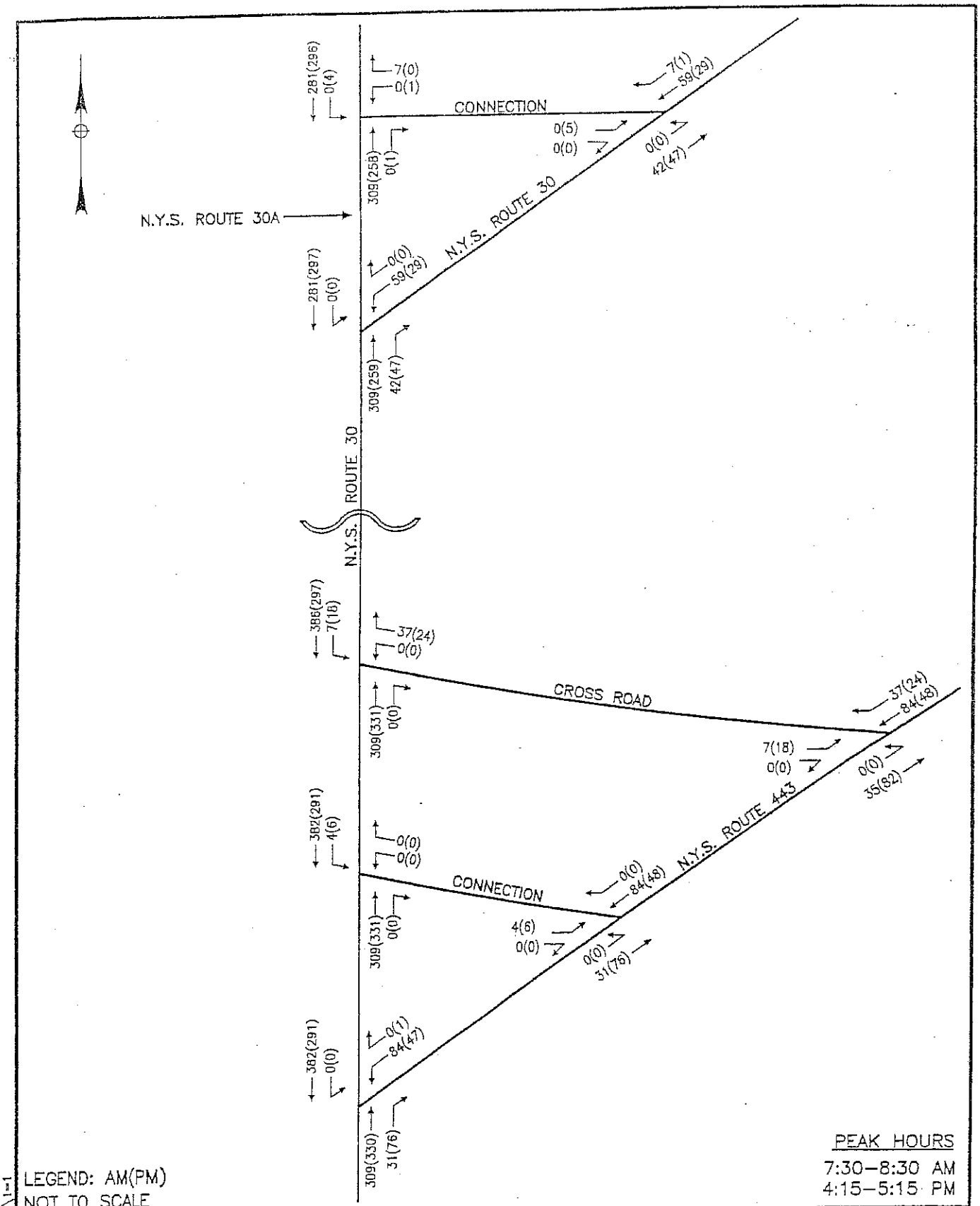
B. ESTIMATED ANNUAL ACCIDENT COST WITH PROPOSED IMPROVEMENT:

ACC/YR 4/3 X VCF 1.11 X (1.00 0.61 RF) X AVG. COST/ACC. 58,300 = $ 33,600

ESTIMATED ANNUAL SAFETY BENEFITS (A – B) = $ 52,600

APPENDIX D

Traffic Flow Diagrams
Level of Service Thresholds



LEGEND: AM(PM)
NOT TO SCALE

PEAK HOURS
7:30–8:30 AM
4:15–5:15 PM

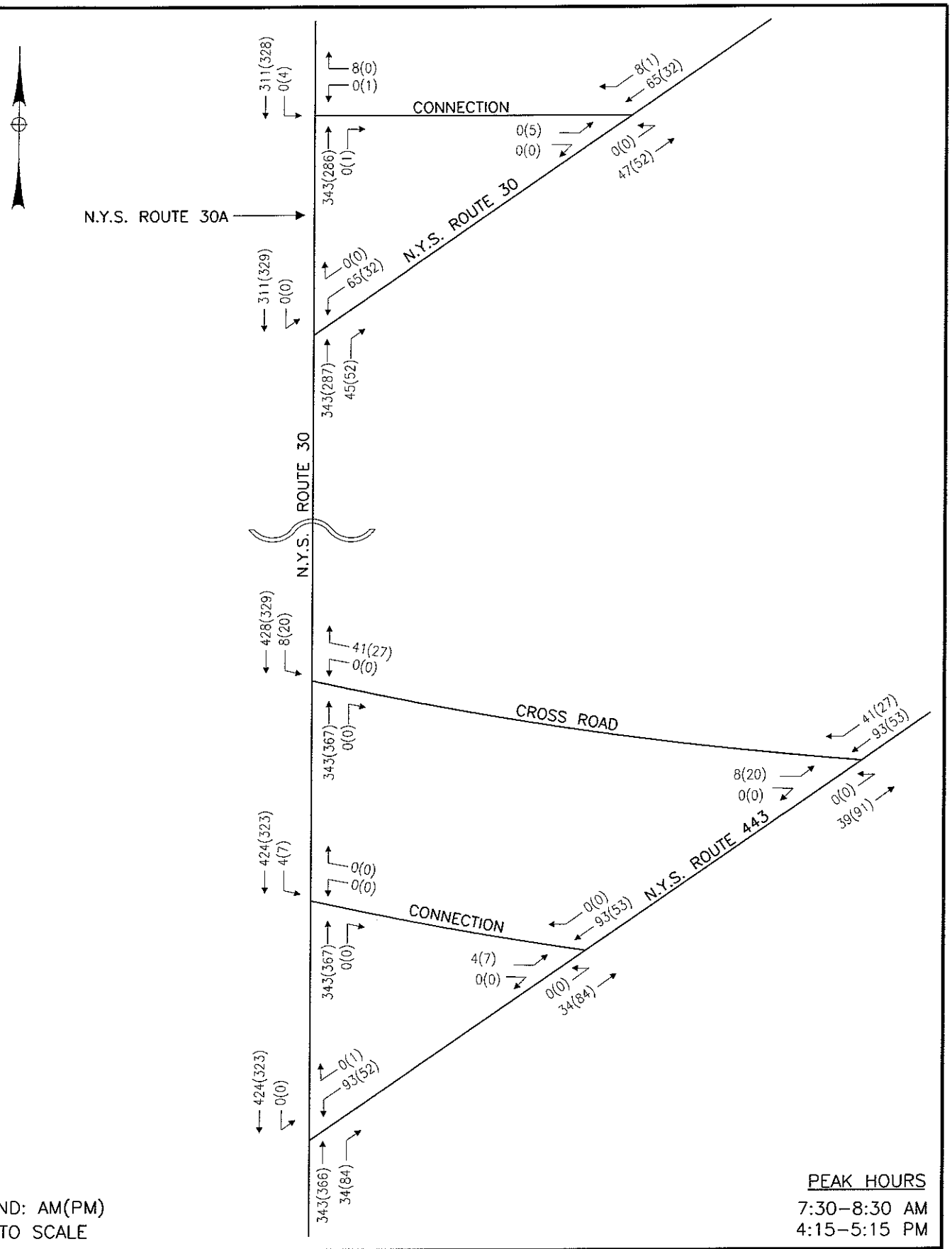
CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
III WINNERS CIRCLE ALBANY, NEW YORK, 12205

1999 EXISTING TRAFFIC VOLUMES

N.Y.S. ROUTE 30 INTERSECTIONS
SCHOHARIE COUNTY, NEW YORK
P.I.N. 9125.05

PROJ NO. 7951–31.00 | FIGURE 1

F:\W\7951\31\99EXTV/SL\1-1



LEGEND: AM(PM)
NOT TO SCALE

PEAK HOURS
7:30–8:30 AM
4:15–5:15 PM

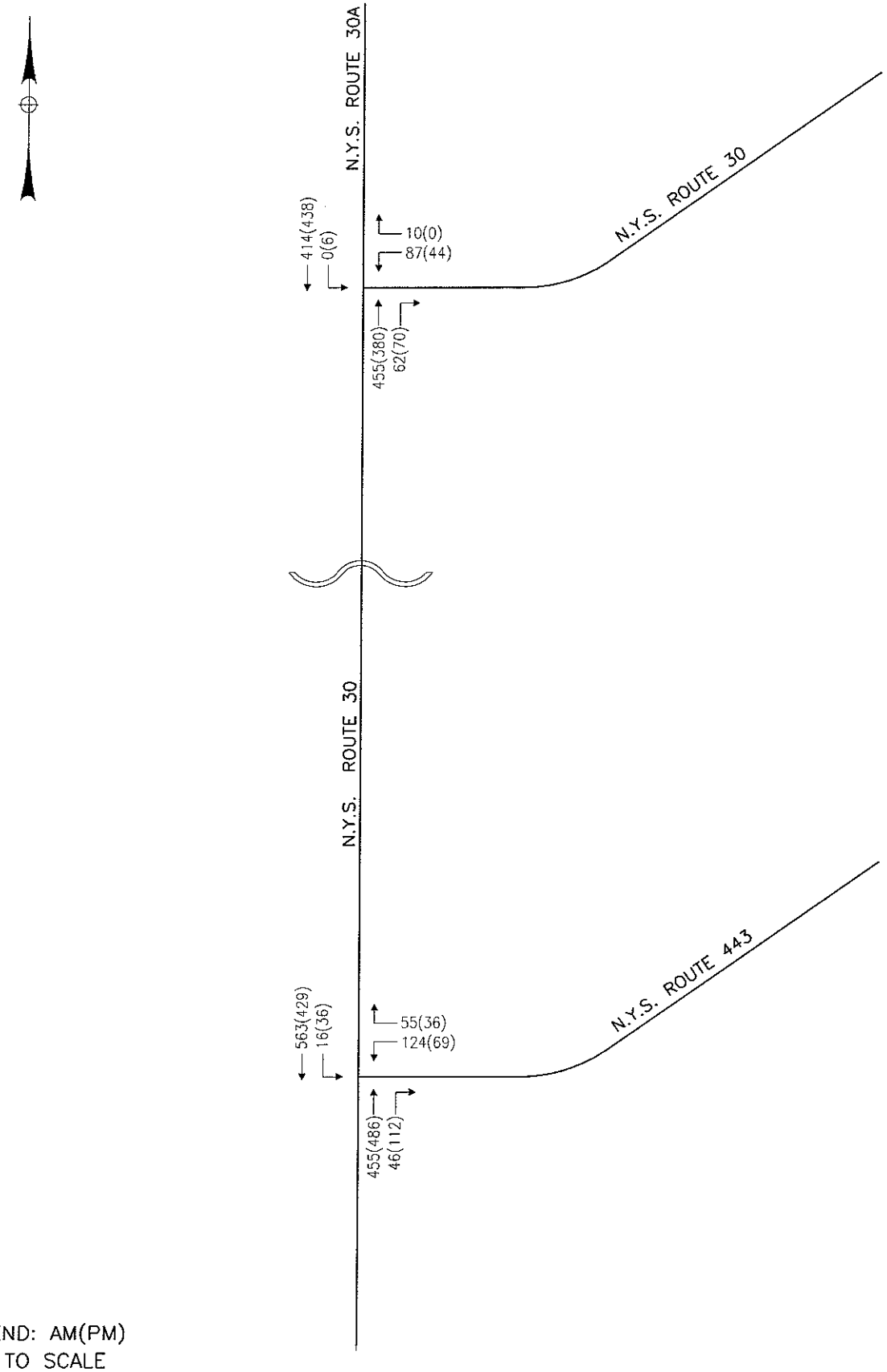
DELTA ENGINEERS

2007 FORECAST TRAFFIC VOL. (EXISTING)

N.Y.S. ROUTE 30 INTERSECTIONS
SCHOHARIE COUNTY, NEW YORK
P.I.N. 9125.05

PROJ NO. 7951–31.00 | FIGURE 2

F:\W:\7951\31\2002TV\SL\1=1



LEGEND: AM(PM)
NOT TO SCALE

PEAK HOURS
7:30–8:30 AM
4:15–5:15 PM

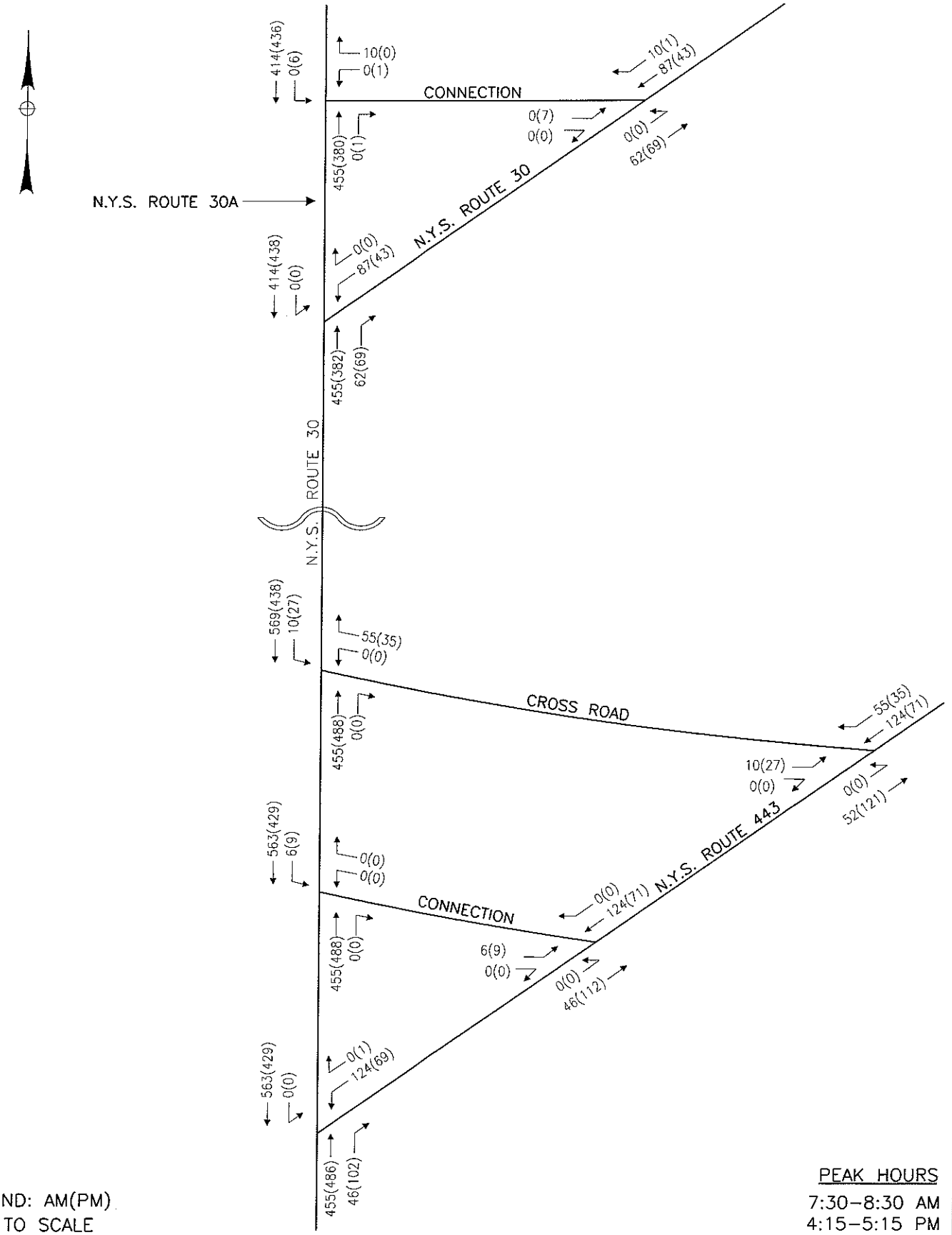
DELTA ENGINEERS

PROJ NO. 7951–31.00 | FIGURE 3

2029 FORECAST TRAFFIC VOLUMES
(BUILD CONDITIONS)

N.Y.S. ROUTE 30 INTERSECTIONS
SCHOHARIE COUNTY, NEW YORK
P.I.N. 9125.05

F:\W:\7951\31\2012TVD/SL\1=1



LEGEND: AM(PM)
NOT TO SCALE

PEAK HOURS
7:30–8:30 AM
4:15–5:15 PM

DELTA ENGINEERS

2029 FORECAST TRAFFIC VOLUMES
(NO–BUILD CONDITIONS)

N.Y.S. ROUTE 30 INTERSECTIONS
SCHOHARIE COUNTY, NEW YORK
P.I.N. 9125.05

PROJ NO. 7951–31.00 | FIGURE 4

F:\W:\7951\31\2002TV\SL\1=1

Unsignalized Intersections:

The methodologies for analyzing unsignalized intersections are described in Chapter 10 of the 1994 *Highway Capacity Manual*, Special Report 209, published by the Transportation Research Board. These procedures are based on the premise that the main street through and right-turn vehicles do not experience delay as they travel through the intersection. Capacity and delay determinations are therefore limited to assessment of the operations of conflicting vehicle movements at the intersection (i.e., the movements from the minor street approaches or the left-turns from the major street to the minor street). These procedures also assume that gaps in conflicting traffic streams are randomly distributed. Level of service for unsignalized intersections is defined in terms of delay, which includes the total elapsed time from the point when a vehicle stops at the back of queue until the vehicle departs the intersection. The table below outlines the delay criteria for each level of service.

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SEC.)
A	≤ 5
B	> 5 and ≤ 10
C	> 10 and ≤ 20
D	> 20 and ≤ 30
E	> 30 and ≤ 45
F	> 45

It is noted that the level of service delay thresholds vary somewhat from those defining levels of service at signalized intersections. These differences reflect the different driver expectations pertaining to performance of unsignalized versus signalized facilities.

Source: *Highway Capacity Manual, Special Report 209*, Third Edition, Transportation Research Board, 1994: pages 10-2 through 10-12.

APPENDIX E

Project IPP & Scope Summary Memorandum

INITIAL PROJECT PROPOSAL

PIN: 9125.05

PROJECT NAME: NYS ROUTE 30 & 30A INTERSECTION &
NYS ROUTE 30 & 443 INTERSECTION

LEGAL DESCRIPTION: SH 9298 Oakhill Street
SH 5195 Vrooman - Howes Cave
SH 5444 Schoharie - Middleburg

ROUTE/FEATURE: NYS Routes 30, 30A & 443

LIMITS: RM 30-95021273 to RM 30-95021275
RM 443-95011000 to RM 443-95011001
RM 30-95021287 to RM 30-95021290
RM 30A-95011000 to RM 30A-95011001

0.7 CENTER LINE MILES
1.4 LANE MILES (For Pavement Projects Only)

COUNTY: Schoharie MUNICIPALITY: Town of Schoharie

FEDERAL-AID/FUNCTIONAL CLASSIFICATION:

Route 30A: Surface Transportation Program/Minor Arterial
Route 30: Surface Transportation Program/Minor Arterial
Surface Transportation Program/Major Collector
Route 443: Surface Transportation Program/Major Collector

DESCRIPTION OF PROBLEM, PROJECT OBJECTIVE(S), AND PROPOSED SCOPE/SOLUTION(S):

Routes 30 & 30A Intersection:
The problem is that the intersection has an accident rate higher than average with a pattern of right angle accidents. Movements thru the intersection are overly complicated and can be simplified. Also, there is a sharp curve on the sideroad just prior to the intersection which exhibited a pattern of fixed object accidents.

The project objective is to reduce the amount of accidents in the proposed project area by simplifying the existing configuration; thereby resulting in an estimated safety benefit of $1,300,000.

Routes 30 & 443 Intersection:
The problem is that the intersection is a confusing multi-leg intersection. While there are no predominant patterns or concentrations within the intersection, the collective accident rate of all the legs combined was about double of that which would be expected at a "normal" T-type intersection.

The project objective is to reconstruct the intersection in order to simplify the existing multi-leg intersections for an estimated safety benefit of $ 1,800,000.

These intersections are currently under investigation and we are reviewing two possibilities: reconstructing or relocating the intersections.

GOM TYPE: [ ] Pavement [ ] Bridge [X] Safety
[ ] Capacity [ ] Appurtenances [ ] Misc.

ENVIRONMENTAL CLASSIFICATION (if known):

EAP CLASS RECOM. [ ] Class I [X] Class II [ ] Class III

SEQR CLASS RECOM. [X] Type II [ ] Non-Type II
[ ] Subject to Processing

MPO INVOLVEMENT [X] No [ ] Yes: TIP Year ____; Page #____

STIP ACTION REQUIRED (Federal Aid Projects Only)
[X] Add [ ] Amend [ ] Current Entry Satisfactory

NOTES ON SPECIAL CIRCUMSTANCES (public sensitivity, wetlands/coastal zone, political commitment, related to other projects, etc.)

SPECIAL TECHNICAL ACTIVITIES REQUIRED:

A Cultural Resource Screening has been scheduled.

PROBABLE SCHEDULE AND COST (See Program Management):

DESIRED LETTING: July 1996

SCHEDULE QUALIFIERS:

[ ] Public Hearing [ ] 4(f)/106 [ ] Major Permits

[ ] Other _____

[X] Needs Consultant(s) for Design Phases I - VI.

PROBABLE SCHEDULE AND COST, Con't.

		ACTIVITY DURATION	ESTIMATED COST	FUND SOURCE	OBLIGATION DATE FOR PE, ROW, CONST.
SCOPING		8 mo.	$ 0.040	V11	8/93
DESIGN	I-IV	12 mo.	0.125	V11	4/94
	V-VI	12 mo.	0.100	V11	4/94
ROW	Inc.	20 mo.	0.008	V11	8/93
	Acq.	14 mo.	0.019	V11	4/95
CONST.		13 mo.	1.300	V11	6/96
CI		13 mo.	0.156	V11	6/96
OVERRUN			0.039	V11	6/96
TOTAL			1.787		

BASIS OF ESTIMATE:
Planning Estimate

IPP Preparer: Theresa Hawley

DATE: May 11, 1993

Letting Date: 7/96

[RPPM OFFICE COMPLETES INFORMATION BELOW DOUBLE LINE]

PROGRAM DISPOSITION:

[✓] Accepted for SFY 96/97 by (initials) _____
Special Scheduling Considerations: Consultant Designation Process

[ ] Shelved [ ] Other

PROJECT MANAGEMENT GROUP [ ] A [X] B [ ] C
STATEWIDE SIGNIFICANCE [X] NO [ ] YES Why _____

ASSIGNED PROJECT MANAGER:

Name: J. Gdovin Funct. Area: Construction
Phone: (607) 773-7753

ASSIGNED PIN: 9125.05

RPPM REVIEWER [redacted] DATE 5/13/93

APPROVED BY [redacted] DATE 5/17/93
Regional Director

Attachment - Map

4 11 94.03

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: J. T. Brizzell, Regional Director

FROM: F. T. Moorhead, Regional Design Engineer

SUBJECT: *Scope Summary Memorandum*
PIN 9125.05, Intersection Improvements
NYS Routes 30/30A
SH 9298 Oakhill Cut-Off
SH 5195 Vrooman-Howes Cave
Town of Schoharie, Schoharie County

NYS Routes 30/443
SH 5444 Schoharie-Middleburg
SH 5086 Gallupville-Vrooman

DATE: May 22, 1998

The purpose of this memo is to summarize the scope of the subject project and to request its approval. The Planning Meeting was held on May 16, 1994, a Scoping Meeting was held on May 31, 1994 and a second Scoping Meeting was held May 15, 1998.

A. *Conditions/Needs:*
The project was developed to address the following conditions/needs (Please refer to the attached maps for project location):

Traffic Operation and Safety Conditions
The NYS Rte. 30/30A intersection is a Y-type intersection in the vicinity of non-standard horizontal and vertical alignments. The area was the scene of 17 accidents, one a fatality, in the three year period ending November 30, 1992. The area appeared on four PIL lists ending December 31, 1991. Four accidents were directly related to the sharp, R = 117 m, curve just south of the intersection. The projected safety benefits for altering the intersection configuration with a stop condition is $1.055 M and with a flashing signal is $0.865. The safety benefit for correcting the non-standard alignment is $0.714 M. The safety benefits for the intersection and the geometric improvements are cumulative.

The NYS Rte. 30/443 intersection is a complicated multi-leg intersection. The area was the scene of 19 accidents in the three year period ending November 30, 1992. The projected safety benefits for altering the intersection configuration with a stop condition is $0.692 M and with a flashing signal is $0.458 M.

An updated accident analysis was requested on May 7, 1998.

Roadside Appurtenances Conditions
Adequacy of existing clear zones and ditch sections will be evaluated and addressed during Phase I design. Generally road side appurtenances appear adequate.

No portion of the NYS Rte. 30/30A or 30/443 areas appeared in the War on Utility Pole Accidents.

Drainage Conditions
Intersection drainage is controlled by ditches and cross culverts. Drainage will be properly designed to accommodate the needs of the intersection. Preferred ditch sections will be provided.

B. *Project Objectives:*
The project objectives are to provide geometric, operational and safety improvements that reduce vehicular conflicts and improve traffic flow using cost effective techniques.

C. *Design Criteria:*
The design criteria will be in accordance with the *NYS Highway Design Manual*.
NYS Rtes. 30 and 30A are considered rural minor arterials. NYS Rte. 443 is considered a rural major collector. Neither are on the *National Highway System* or are *Designated Truck Access Highways*.

DESIGN CRITERIA FOR NYS ROUTES 30, 30A & 443			
Design Element	NYS Rte. 30 & 30A (Rural)	NYS Rte. 443 (Rural)	Source
Design Speed	100 km	100 km	TE&S Radar 7/20/93
Lane Width	3.6 m	3.6 m	HDM Table 2-2
Sh'dr Width	2.4 m	2.4 m	HDM Table 2-2
Max. grade	4 %	6 %	HDM Table 2-2
SSD	160 m	160 m	HDM Table 2-2
Lateral Clearance	2.4 m	2.4 m	HDM Chapter 2
Pavement Cross Slope	1.5% (min) 2.0% (max)	1.5% (min) 2.0% (max)	HDM Chapter 2
Rollover-CL -EOP	4% (max) 8% (max)	4% (max) 8% (max)	HDM Chapter 2
Horizontal Radius (min)	435 m	435 m	HDM Table 2-2
Superelevation	6%	6%	HDM Table 2-2
Pedestrian Accommodation			HDM Chapter 18

D. *Feasible Alternatives:*
For the NYS Rte 30/30A intersection there is one feasible alternative. Existing traffic volumes indicate Route 30A as being the predominate through movement. It is proposed to "T" NYS Route 30 into Route 30A and provide geometric improvements to the non-standard horizontal and vertical geometry on Routes 30 and 30A in the vicinity of the intersection.

For the NYS Rte. 30/443 intersection there is one primary alternative, that is to "T" Route 443 into Route 30 and eliminate the redundant legs. A parking area near two historic structures will be considered.

These project alternatives provide solutions that satisfy the project objectives in a cost effective, environmentally friendly manner within the established schedule.

E. *Cost Estimate:*

The estimated costs for the proposed improvement, developed with the PEP 9/21/93, are

	Rtes. 30/30A	Rtes. 30/443
Construction	$0.864 M	$0.261 M
ROW Acq.	$0.016 M	$0.008 M
P.E. Costs	$0.172 M	$0.055 M
C.I. Costs	$0.086 M	$0.028 M
Total	$1.138 M	$0.352 M

F. *Additional Information:*

Environmental Classification

As the project is currently scoped, the Environmental Coordinator has classified it as a SEQR Type II. If a Federal permit is required, the FHWA classification would be Class II. The proposed funding source is 100% State funds.

Historical and Cultural Resources

The OPRHP has identified two properties eligible for listing in the State and National Registers of Historic Places in addition to a property that is listed. Two archaeological sites were identified in the vicinity of the project. Additional archaeological survey has been scheduled and is expected by October 1998. The OPRHP recommendation is to avoid encroachments/impacts to the identified sites.

The DR will address the feasibility of providing a parking area proximate to the historic structures near the Rte. 30/443 intersection (covered bridge and house). Landscaping plans will be developed to enhance the aesthetic nature of the project area.

Permits/Approvals

The need for permits/approvals will be determined during preliminary design.

Traffic Data

Turning movement counts are currently not available for this location; they will be generated during preliminary design. Future traffic estimate will be based on ETC+10 and will be developed during Design Phase I. Existing data indicates 7 % trucks on all legs.

Existing Traffic Volumes (AADT)		
NYS Rte. 30		NYS Rte. 30A
Southern Leg	Northeastern Leg	Northwestern split
7505	1300	5771
NYS Rte. 30		NYS Rte. 443
Southern Leg	Northern Leg	East/West
7450	7505	1740

ROW Needs
The NYS Rte. 30/30A intersection improvement will require the acquisition of two minor ROW parcels from private land owners. The NYS Rte. 30/443 intersection will require the acquisition of one parcel from Schoharie County. It is anticipated that ROW acquisition will be considered De Minimis.

Other Documentation Available for Review
Initial Project Proposal
Record Plans
Preliminary Estimate

If during the subsequent design stage, a change is necessary in any of the critical project elements, a new consensus must be established and documented. Additionally, the original Project Management Plan and CSSOA will be revised.

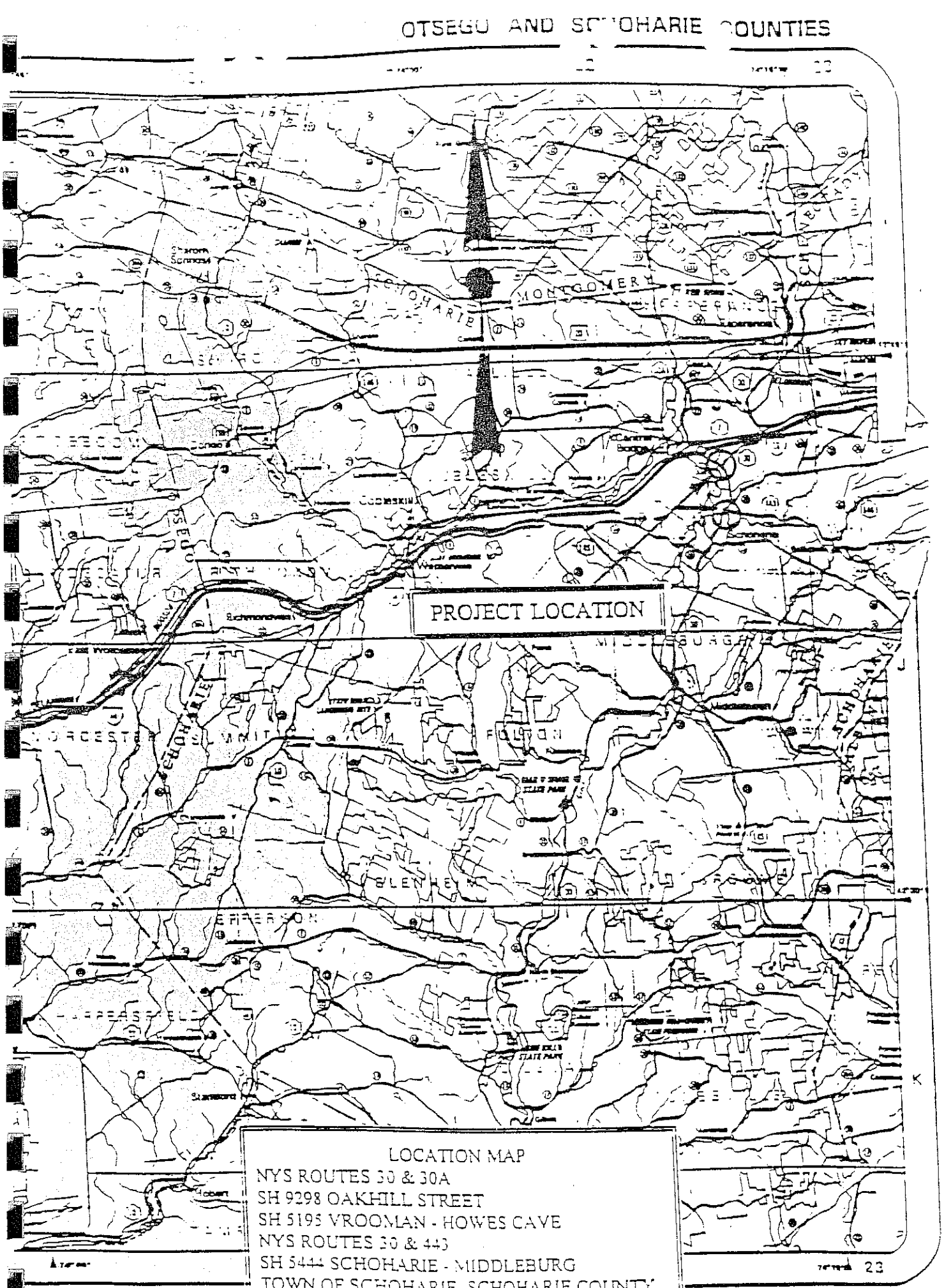
Approval: [redacted] Date: 5/22/98

If there are any questions or comments, please direct them to Matt Stiles 721-8203.

FTM/JLC/MPS

Attachments

c: T. Smith, Project Manager (TE&S)
File (Main, Unit, FTM/Blue)
912505 ssm



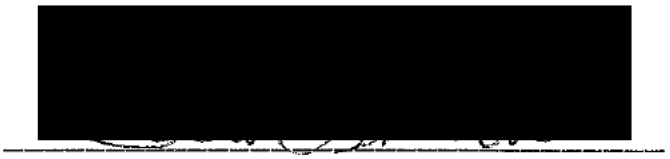
LOCATION MAP
NYS ROUTES 30 & 30A
SH 9298 OAKHILL STREET
SH 5195 VROOMAN - HOWES CAVE
NYS ROUTES 30 & 443
SH 5444 SCHOHARIE - MIDDLEBURG
TOWN OF SCHOHARIE, SCHOHARIE COUNTY
Scale: 1:250 000

* * *

C E R T I F I C A T I O N

I, CAROL SUE MOORE, A COURT REPORTER IN AND FOR THE COUNTY OF SCHOHARIE, STATE OF NEW YORK, DO HEREBY CERTIFY THAT THE FOREGOING IS A TRUE, CORRECT, AND ACCURATE TRANSCRIPT OF THE MINUTES TAKEN BY OF THE FOREGOING PUBLIC HEARING.

DATED: June 10, 2008



CAROL S. MOORE

Court Reporter

* * *

NOTICE OF ENVIRONMENTAL DETERMINATION
NEW YORK STATE DEPARTMENT OF TRANSPORTATION
PIN **912505**
RECONSTRUCTION PROJECT
INTERSECTION OF NYS ROUTE 30 & 30A AND
INTERSECTION OF ROUTE 30 & 443
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

5. The project will not impair the character or quality of important historical, archeological, architectural or aesthetic resources or of existing community or neighborhood character.

6. The project will not cause a major change in the use of either the quantity or type of energy.

7. The project will not create a hazard to human health or safety.

8. The project will not cause a substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses.

9. The project will not create a material demand for other actions which would result in one of the above consequences.

10. The project does not result in the change in two or more elements of the environment, no one of which has a significant effect on the environment, but when considered together result in a substantial adverse impact on the environment.

11. The project does not involve two or more related actions directly undertaken, funded or permitted by the department, none of which has or would have a significant effect on the environment, but when considered cumulatively would meet one or more of the above criteria.

Further information on this project may be obtained from:

Ron Romanosky, Project Manager
NYSDOT - 44 Hawley Street
Binghamton, NY 13901 - (607)721-8662

[redacted] 12/09/08

Daniel D'Angelo, P.E., Deputy Chief Engineer Date

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
REGION NINE
44 HAWLEY STREET
BINGHAMTON, NEW YORK 13901-3200
WWW.NYSDOT.GOV

JOHN R. WILLIAMS, P.E.
REGIONAL DIRECTOR

ASTRID C. GLYNN
COMMISSIONER

May 19, 2008

Dear Local Official:

RE: PUBLIC HEARING, PIN 912505
NY ROUTES 30, 30A & 443 INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

The New York State Department of Transportation is seeking public input for the subject project. This project will address identified safety, geometric and operational deficiencies at these intersections. The project is currently in the design phase during which feasible alternatives are being developed to address identified deficiencies. These alternatives are based on evaluation of current transportation conditions, environmental and social impacts, engineering considerations and previous public input. This public hearing is scheduled for:

Tuesday, June 3, 2008
5:30 p.m. to 8:00 p.m.
Schoharie Fire Station
Niagara Engine Company #6
137 Grand Street, Schoharie, NY

The meeting format will consist of both an open house and formal presentation. From 5:30 p.m. to 6:30 p.m., NYSDOT representatives will be available to discuss the project with interested citizens and public officials in an informal setting. You are encouraged to give opinions, comments and project alternative preferences to staff either orally or in writing. A formal presentation will be given at 6:30 p.m. to present the proposed alternatives, with time provided to address specific questions and comments. The meeting will then revert back to an open house format for the remainder of the evening. A project location map is enclosed for your information. Tentative schedules for right-of-way acquisition and construction will be discussed. Information will also be available regarding Department procedures for the acquisition of property.

A Draft Design Report, containing maps, drawings and other pertinent information, has been prepared and assesses the project's effect on the quality of the environment. This has been developed by the State and written views received as a result of the coordination with Federal, State and local agencies are available for public inspection. Copies are available for review and copying during business hours at the offices of the Town of Schoharie Town Hall, Mary B. Cushing Public Library, Schoharie County Planning and Development Agency; or at the NYSDOT, 44 Hawley Street, 12th floor Design Office, Binghamton, New York, 13901. Additionally, a project website is available at www.nysdot.gov/portal/page/portal/regional-offices/region9/projects.

Public involvement is invaluable in defining and shaping transportation projects for the benefit of the highway user, the community and the general public. Our outreach effort will give the highest priority to the concerns of those in the immediate area of our project. We will seek the participation of other sectors of the general public throughout the project development process. The Department of Transportation encourages your attendance and input as this project progresses. If you cannot attend this meeting and you have any questions or comments, or would like to discuss the project in further detail, please do not hesitate to contact the Project Manager, Ron Romanosky, at (607) 721-8662 or by email to rromanosky@dot.state.ny.us.

Sincerely,

[redacted]

PAMELA M. ESHBAUGH, P.E.
Regional Planning and Program Manager

PME/TM/jab
Attachment

c: Property Owners/Residents
J. Williams, Regional Director
R. Romanosky, Project Manager, Regional Design Office
L. Arrow, Assistant to the Regional Director
D. Hamburg, Regional Public Information Officer
R. Richter, Resident Engineer, Schoharie County
T. Miller, RPPM Office
J. Fitzgerald, RPPM Office
File (Main, Unit)
Blue

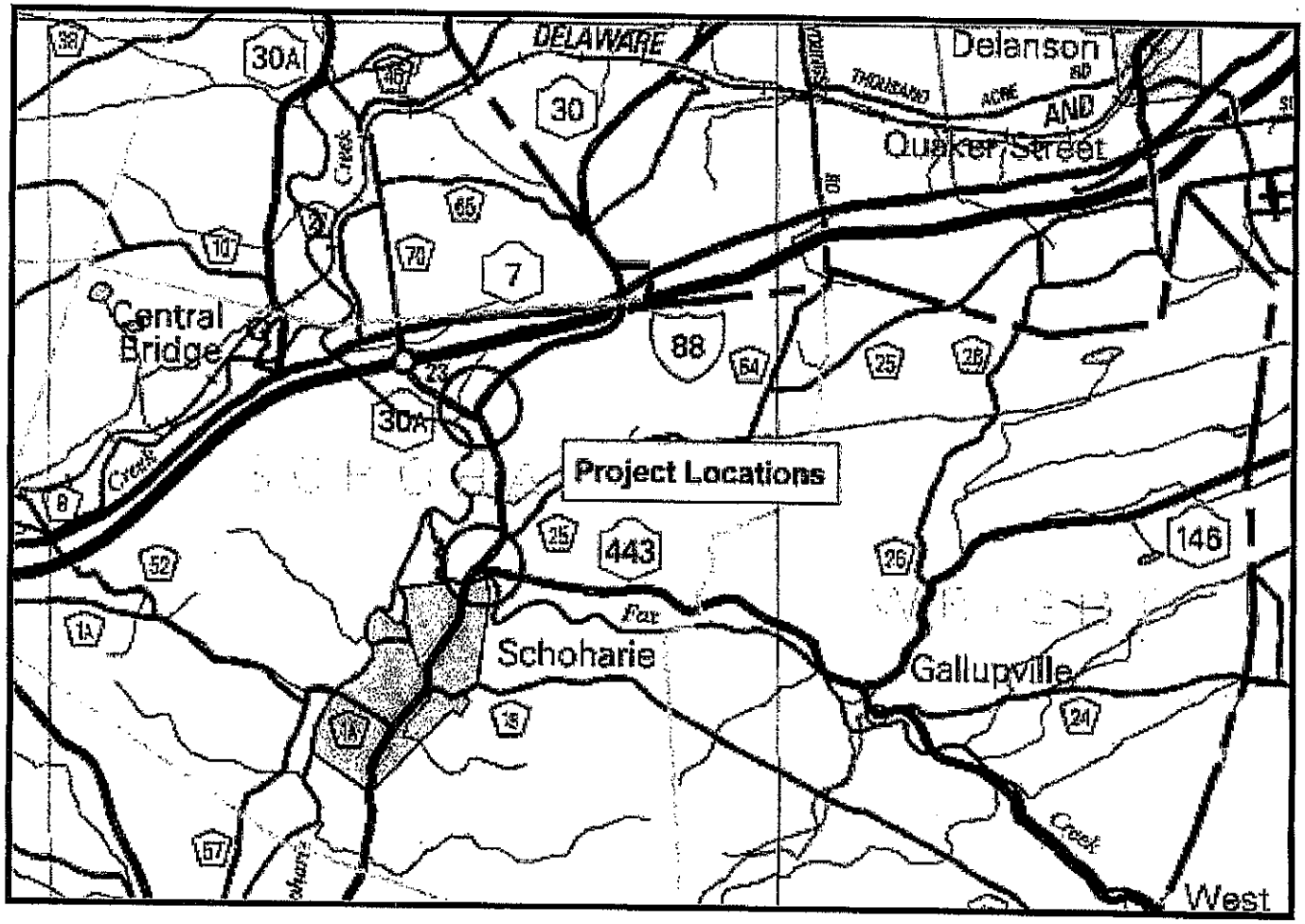
DISTRIBUTION LIST

Town of Schoharie:
Honorable Martin Shrederis, Supervisor
June S. Keyser, Clerk
Anne Hendrix, Historian
William B. Griffen, Chairman, Planning Board
Honorable Alan Tavenner, Councilperson
Honorable Richard A. Sherman, Councilperson
Honorable Mattew Brisley, Councilperson
Honorable Eugene Milone, Councilperson

Schoharie County:
Honorable Ed Van Wormer III, Chairman, Board of Supervisors
Thomas Fagnani, Commissioner, Department of Public Works
M. Indica Jaycox, Clerk
Judith L. Warner, Emergency Management
William Averill, Coordinator, Emergency Medical Services
Harold Zoch, Historian
Alicia Terry, Director, Planning Board
John S. Bates Jr., Sheriff
Patricia Cooper, Director/CSO, Public Transportation
Matthew Brisley, Fire Coordinator
Carle J. Kopecky, Director, Old Stone Fort Museum

School Districts/Colleges:
Charles S. Dedrick, Superintendent, Capital Region BOCES/Career & Tech School
Brian D. Sherman, Superintendent, Schoharie Central School

State and Federal Offices:
Honorable James L. Seward, NYS Senator, 51st District
Honorable Peter Lopez, NYS Assembly, 127th District
Honorable Charles Schumer, US Senator
Honorable Hillary R. Clinton, US Senator
Honorable Michael McNulty, 21st U.S. Congressional District
Robert Davies, Area Engineer, FHWA
Brian Orzel, USACOE, NY District, Reg. Branch, Western Permits
Jerry Fraine, NYSDEC
Ken Markunas, SHPO
Traffic Sgt. James Ryan, New York State Police (Troop G)



PROJECT LOCATION MAP

(Not to scale)

1/8 Orig - Foglietta; Jk
Copy - Romanosky
Pollock

U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: **<u>INFORMATION:</u>** 9125.05 NYS 30/30A/443
Intersection Reconstruction
Town of Schoharie, Schoharie County

Date: December 21, 2007

From: Jeffrey W. Kolb, P.E.
Division Administrator
Albany, New York

In Reply Refer To:
HDO-NY

To: Joseph A. Foglietta, P.E., Regional Design Engineer
New York State Department of Transportation, Region 9
44 Hawley Street
Binghamton, NY 13901

In response to your November 26, 2007 memorandum requesting concurrence that the subject project meets the requirements of a Categorical Exclusion with Documentation, we have reviewed the November 2007 Draft Design Report.

We concur with the Categorical Exclusion with Documentation classification as the applicant has demonstrated that the criteria for Categorical Exclusions in accordance with 23 CFR 771.117 are satisfied, and that significant environmental affects will not result.

If you have any questions, please contact me at (518) 431-4125, ext 250.

[redacted]

Robert M. Davies
Senior Operations Engineer

MOVING THE
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ECONOMY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
REGION NINE
44 HAWLEY STREET
BINGHAMTON, NEW YORK 13901-3200
WWW.NYSDOT.GOV

JOHN R. WILLIAMS, P.E.
REGIONAL DIRECTOR

ASTRID C. GLYNN
COMMISSIONER

October 25, 2007

Honorable Martin Sherederis, Supervisor
Town of Schoharie
PO Box 54, 371 Main Street
Schoharie, New York 12157

Dear Supervisor Sherederis:

**RE: STATUS MEETING, PIN 912505, RECONSTRUCTION PROJECT
NY ROUTES 30/30A & 30/443 INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY**

This is to confirm as per our telephone conversation/email correspondence over the past few days that we have scheduled a status meeting for the above-referenced project for ***Tuesday, October 30, 2007, at 4:00 PM in the Town Hall at 300 Main Street, Schoharie, New York.*** We would like to update you on where we are with the project and what is planned for the near future. The project is currently in Preliminary Design. Feasible alternatives have been developed to address identified deficiencies. These alternatives are based on evaluation of current transportation conditions, environmental and social impacts, engineering considerations and previous input from you and other residents. A public hearing is tentatively scheduled for January 2008.

If you have any questions, please do not hesitate to contact Ron Romanosky at (607) 721-8662 or by email at rromanosky@dot.state.ny.us.

Sincerely,

[redacted]

PAMELA M. ESHBAUGH, P.E.
Regional Planning and Program Manager

PME/TM/jab

c: J. Williams, Regional Director
L. Arrow, Assistant to the Regional Director
D. Hamburg, Regional Public Affairs Coordinator
P. Larson, Consultant Design Unit
R. Romanosky, Consultant Design Unit
D. Mason, Assistant Resident Engineer, Schoharie County
T. Miller, RPPM Office
File (Main, Unit)
Blue

Copies also sent to:

Mr. & Mrs. Robert Loden
PO Box 297
Schoharie, New York 12157

Mr. Morgan Desmond
24 Ingersoll Avenue
Schenectady, New York 12305

Mrs. Katherine Pennington
5838 State Route 30
Schoharie, New York 12157

Mr. & Mrs. Robert Price
423 Ipwich Road
Boxford, Massachusetts 01921

Mr. Martin Sherederis, Supervisor
Town of Schoharie
PO Box 54
371 Main Street
Schoharie, New York 12157

Mr. John O'Donnell
150 State Route 30A
Schoharie, NY 12157

U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: PIN 9125.05, NY Route 30/30A/443, Intersection Improvements Town of Schoharie, Schoharie County

Date: October 2, 2007

From: Amy Jackson-Grove
Acting Division Administrator
Albany, New York

In Reply Refer To:
HDO-NY

To: Joe Pollock, Cultural Resource Coordinator
New York State Department of Transportation, Region 9
44 Hawley Street
Binghamton, NY 13901

Please reference your August 17, 2007 letter requesting our signature of the revised Memorandum of Agreement (MOA) for the subject project. Enclosed please find 2 original copies of the executed MOA. Under separate cover, we have provided a copy of the MOA to the ACHP notifying them that the Section 106 process has been completed.

The requirements of 36 CFR Part 800 have been met for this project.

[redacted]
Robert M. Davies
Senior Operations Engineer

Enclosure

cc: Ruth Pierpont, OPRHP, 05PR04897
Dan Hitt, NYSDOT, EAB, POD 41

MOVING THE AMERICAN ECONOMY

U.S.Department
of Transportation
Federal Highway Administration

New York Division

Leo W. O'Brien Federal Building, Suite 719
Clinton Avenue & North Pearl Street
Albany, NY 12207

October 2, 2007

Ms. Katry Harris
Office of Planning and and Review
Advisory Council on Historic Preservation
The Old Post Office Building, Suite 809
Washington, DC 20004

In Reply Refer To:
HDO-NY

Dear Ms. Harris:

This in reference to PIN 9125.05/05PR04897, NY Route 30/30A/443 Intersection Improvements, Town of Schoharie, Schoharie County. In accordance with Title 36 Code of Federal Regulations Part 806(b)(1)(iv), enclosed you will find an executed Memorandum of Agreement (MOA) for the unavoidable impacts to the Raymond Dale and James Holloway pre-contact Archaeology Sites due to highway realignment and drainage work. These resources have been determined to be eligible for listing in the National Register of Historic Places. Background documentation for this highway project was sent to your office via our September 12, 2007 memorandum advising you of our adverse effect determination. We have received your response dated September 27, 2007 indicating that your participation in consultation to resolve adverse effects is not needed. The MOA is required based on the adverse impact to pre-contact archeological sites.

We have now completed the Section 106 coordination process. This completes the Section 106 process and the requirements of 36 CFR Part 800 have been satisfied for this project. If you have any questions, please contact me at (518) 431-4125 extension 250.

Sincerely,

/S/ ROBERT M. DAVIES

Robert M. Davies
Senior Operations Engineer

Enclosure

cc:
Don Klima, Director, Office of Planning and Review, ACHP
Joe Pollock, Cultural Resource Coordinator, NYSDOT Region 9
Ruth Pierpont, SHPO (05PR04897)

MOVING THE
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ECONOMY

MEMORANDUM OF AGREEMENT FOR RECOVERY OF SIGNIFICANT ARCHAEOLOGICAL INFORMATION

Between
the
Federal Highway Administration
New York State Historic Preservation Office
New York State Department of Transportation
For The
Raymond Dale Archaeology site
And
James Holloway Archaeology Site
PIN 9125.05.121 / 95PR0739
NY ROUTE 30 AND 30A
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

Whereas, in accordance with 36 CFR Part 800, the **Federal Highway Administration (FHWA) and The New York Department of Transportation (NYSDOT)** insures that Conditions 1 through 12 outlined in the **Advisory Council on Historic Preservation's (Council)** "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites," Published in the Federal Register on May 18, 1999 and attached as Appendix 1 to this document shall be satisfied; and

Whereas, in addition to the Council's conditions, the **FHWA and NYSDOT** ensures that the Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State (NYAC, 1994) shall be satisfied; and

Whereas, the **FHWA,** the **New York State Historic Preservation Office (SHPO),** and the **NYSDOT** agree that recovery of significant information from the archaeological site(s) listed above may be done in accordance with the published guidance; and

Whereas, the **FHWA,** the **SHPO,** and **NYSDOT** agree that the **Raymond Dale and James Holloway archaeology sites** are significant and of value chiefly for the information on prehistory or history that they are likely to yield through archaeological, historical, and scientific methods of information recovery, including archaeological excavation, and

Whereas, the **FHWA,** the **SHPO** and the **NYSDOT** agree that it is in the public interest to expend funds to implement this project through the recovery of significant information from **the above mentioned sites** and mitigate the adverse effects of the project; and

Whereas, the **SHPO** has determined that state agencies participating in the undertaking covered by this agreement will satisfy the requirements of consultation and review under New York State Parks, Recreation and Historic Preservation Law, Section 14.09, for this undertaking by adopting the terms and conditions of this agreement, and

Whereas, to the best of our knowledge and belief, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001), are expected to be encountered in the archaeological work;

Now, therefore, the **FHWA and NYSDOT** shall ensure that the following terms and conditions, including the Archaeological Data Recovery Plan of January 12, 2006 that will be attached as Appendix 2 to this document as completed and agreed to by all parties as indicated by appended signatures, shall be implemented in a timely manner and with adequate resources in compliance with the National Historic Preservation Act of 1966 (16 U.S.C. 470).

OTHER TERMS AND CONDITIONS:

- Modification, amendment, or termination of this agreement as necessary shall be accomplished by the signatories in the same manner as the original agreement.

- Disputes regarding the completion of the terms of this agreement shall be resolved by the signatories. If the signatories cannot agree regarding a dispute, any one of the signatories may request the participation of the Council to assist in resolving the dispute.

- If the Data Recovery Plan is not implemented within two years of the execution of this agreement, it shall be updated and submitted to the SHPO for review. Upon the mutual written consent of all signatories, revisions to the Data Recovery Plan shall be adopted and implemented, without necessitating amendments to this agreement.

Federal Highway Administration : [redacted]

Date: 10/02/07

State Historic Preservation Officer: [redacted]

Date: 8/13/07

New York State Department of Transportation ; [redacted]

Date: 5/29/07

Attachments:

Appendix 1 - Advisory Council on Historic Preservation Conditions: Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites.

Appendix 2 - Data Recovery Plan prepared by Brian R. Grills, Public Archaeology Facility, Binghamton University dated October 2006.

Appendix 1

1. The archaeological site(s) should be significant and of value chiefly for the information on prehistory or history they are likely to yield through archaeological, historical, and scientific methods of information recovery, including archaeological excavation.

2. The archaeological site should not contain or be likely to contain human remains, associated or unassociated funerary objects, sacred objects, or items of cultural patrimony as those terms are defined by the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001).

3. The archaeological site should not have long-term preservation value, such as traditional cultural and religious importance to an Indian tribe or a Native Hawaiian organization.

4. The archaeological site should not possess special significance to another ethnic group or community that historically ascribes cultural or symbolic value to the site and would object to the site's excavation and removal of its contents.

5. The archaeological site should not be valuable for potential permanent in-situ display or public interpretation, although temporary public display and interpretation during the course of any excavations may be highly appropriate.

6. The Federal Agency Official should have prepared a data recovery plan with a research design in consultation with the SHPO and other stakeholders that is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation and the Advisory Council on Historic Preservation's Treatment of Archaeological Properties: A Handbook. The Plan should specify:

    (a) The results of previous research relevant to the project.
    (b) research problems or questions to be addressed with an explanation of their relevance and importance.

(c) the field and laboratory analysis methods to be used with a justification of their cost-effectiveness and how they apply to this particular property and these research needs;
(d) the methods to be used in artifact, data and other records management;
(e) explicit provisions for disseminating the research findings to professional peers in a timely manner;
(f) arrangements for presenting what has been found and learned to the public, focusing particularly on the community or communities that may have interests in the results;
(g) the curation of recovered materials and records resulting from the data recovery in accordance with 36 CFR part 79 (except in the case of unexpected discoveries that may need to be considered for repatriation pursuant to NAGPRA); and
(h) procedures for evaluating and treating discoveries of unexpected remains or newly identified historic properties during the course of the project, including necessary consultation with other parties.

7. The Federal Agency Official should ensure that the data recovery plan is developed and will be implemented by or under the direct supervision of a person, or persons, meeting at a minimum the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739).

8. The Federal Agency Official should ensure that adequate time and money to carry out all aspects of the plan are provided, and should ensure that all parties consulted in the development of the plan are kept informed of the status of its implementation.

9. The Federal Agency Official should ensure that a final archaeological report resulting from the data recovery will be provided to the SHPO. The Federal Agency Official should ensure that the final report is responsive to professional standards, and to the Department of the Interior's Format Standards for Final Reports of Data Recovery Programs (41 FR 5377-79).

10. Large, unusual, or complex projects should provide for special oversight, including professional peer review.

11. The Federal Agency Official should determine that there are no unresolved issues concerning the recovery of significant information with any Indian tribe or Native Hawaiian organization that may attach religious and cultural significance to the affected property.

12. Federal Agency Officials should incorporate the terms and conditions of this recommended approach into a Memorandum of Agreement or Programmatic Agreement, file a copy with the Council per § 800.6(b)(iv), and implement the agreed plan. The agency should retain a copy of the agreement and supporting documentation in the project files.

U.S.Department
of Transportation
Federal Highway Administration

New York Division

Leo W. O'Brien Federal Building, Suite 719
Clinton Avenue & North Pearl Street
Albany, NY 12207

September 12, 2007

In Reply Refer To:
HDO-NY

Katry Harris, Historic Preservation Specialist
Office of Planning and Review
Advisory Council on Historic Preservation
The Old Post Office Building, Suite 809
1100 Pennsylvania Avenue, NW
Washington, DC 20004

Dear Ms. Harris:

This in reference to PIN 9125.05/05PR04897, NY Route 30/30A/443 Intersection Improvements, Town of Schoharie, Schoharie County. In accordance with the provisions of 36 CFR 800.6, we advise you that in consultation with the New York State Historic Preservation Officer, we have determined that the subject project will have an *Adverse Effect* due to the unavoidable impacts to the Raymond Dale and James Holloway precontact Archaeology Sites due to highway realignment and drainage work. These resources were determined to be individually eligible for the National Register of Historic Places for the archeology information contained within the site.

In accordance with article 800.6(a)(1), we are enclosing documentation specified in article 800.11(e). Finding documentation, one set of half scale project plans, and a draft Memorandum of Agreement with a data recovery plan is enclosed for your review. Please notify us whether the Council will participate in consultation within 15 days.

If you have any questions, please contact Mr. Robert Davies at (518) 431-4125, extension 250. We cordially request your response by October 1, 2007 per article 800.(a)(1)(iii).

Sincerely,

/S/ ROBERT M. DAVIES

Robert M. Davies
Senior Operations Engineer

Enclosure 800.11(e) Documentation

cc:
Ruth Pierpont, SHPO (05PR04897)
Dan Hitt, NYSDOT, EAB, POD 41
Joe Pollock, Cultural Resource Coordinator, NYSDOT, Region 9
D. Klima, Director, ACHP

MOVING THE
AMERICAN
ECONOMY

U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: PIN 9125.05, NY Route 30/30A/443, Intersection Improvements Town of Schoharie, Schoharie County

Date: September 12, 2007

From: Amy Jackson-Grove
Acting Division Administrator
Albany, New York

In Reply Refer To:
HDO-NY

To: Joe Pollock, Cultural Resource Coordinator
New York State Department of Transportation, Region 9
44 Hawley Street
Binghamton, NY 13901

In reply to your August 17, 2007 request, we concur with the State Historic Preservation Officer that this project will have an *Adverse Effect* on National Register eligible properties because of the unavoidable impacts to the Raymond Dale and James Holloway precontact archaeology sites. We have notified the Advisory Council on Historic Preservation (copy of letter attached).

[redacted]

Robert M. Davies
Senior Operations Engineer

Enclosure

cc: Ruth Pierpont, OPRHP, 05PR04897
Dan Hitt, NYSDOT, EAB, POD 41

MOVING THE AMERICAN ECONOMY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
REGION NINE
44 HAWLEY STREET
BINGHAMTON, NEW YORK 13901
www.nysdot.gov

JOHN R. WILLIAMS, P.E.
REGIONAL DIRECTOR

ASTRID C. GLYNN
COMMISSIONER

August 17, 2007

Robert Arnold, Division Administrator
Federal Highway Administration, New York Division
Leo W. O'Brien Federal Building
Clinton Avenue and North Pearl Street
Albany, New York 12207

RE: PIN 9125.05.121 NY ROUTE 30/30A/443
INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY
05PR04897 (formerly 95PR0739)

Dear Mr. Arnold:

Enclosed please find (3) three copies of a Memorandum Of Agreement (M.O.A.) for the above referenced federal funded project. Please sign all three copies, keep one for your files, and return the remaining two copies to my office within 30 days. The M.O.A. describes the projects adverse effect upon archaeology sites found to be eligible for the National Register of Historic Places and the proposed data recovery of significant information that these sites contain.

In accordance with the implementing regulations of Section 106 of the National Historic Preservation Act of 1966, as amended, the New York State Department of Transportation (NYSDOT) sent a Finding Documentation dated July 2, 2007 to both the SHPO and the Federal Highway Administration (FHWA) detailing the federal undertakings adverse effect upon the Raymond Dale and James Holloway precontact archaeology sites. In a letter dated August 13, 2007 the SHPO concurred with this finding an approved the Data Recovery Plan that is to be implemented for these sites. A copy of the SHPO letter is included with his submission.

The NYSDOT respectfully requests that the FHWA concur with this finding and provide the Advisory Council on Historic Preservation(ACHP) with notification and supporting documentation regarding the adverse effect. When consultation with the ACHP is complete please notify the NYSDOT that the requirements of 36 CFR Part 800 have been met for this project.

Sincerely,

[redacted]

Joseph Pollock
Cultural Resource Coordinator
NYSDOT Region 9

JP/jp
Enclosures
C: Daniel Hitt, EAB
Ron Romanosky, Reg. 9
CRS File

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925

Denise M. Sheehan
Commissioner

October 25, 2006

Nicole E Frazer
Clough, Harbour & Associates
111 Winners Circle
Albany, NY 12205

Dear Ms. Frazer:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to an Environmental Assessment for the proposed Intersection Improvements, Rte 30/Rte 443, Rte 30/Rte 30A and Vrooman Cross Road, site as indicated on the map you provided, located in the Town of Schoharie, Schoharie County.

We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

[redacted]

Jean Pietrusiak, Information Services
New York Natural Heritage Program

Enc.
cc: Reg. 4, Wildlife Mgr.

FAX TRANSMITTAL RE: LISTED SPECIES REQUEST

U.S. FISH AND WILDLIFE SERVICE
New York Field Office
3817 Luker Road, Cortland, NY 13045
Phone: (607) 753-9334 Fax: (607) 753-9699

October 19, 2006

To Ms. Nicole E. Frazer

This responds to your October 9, 2006, request for listed species information in the vicinity of the proposed Route 30/Route 30A/Route 443 and Vrooman Crossing Road improvements located in the Town of Schoharie, Schoharie County, New York.

Although the Federally-listed endangered Indiana bat (*Myotis sodalis*) could be present in the project area, which is approximately 11 miles from an Indiana bat hibernaculum, they are in such small numbers that is unlikely that they would be present and impacted by this proposed project.

Except for the potential for the Indiana bat and occasional transient individuals, no Federally-listed or proposed endangered or threatened species under our jurisdiction are known to exist within the project impact area. In addition, no habitat in the project impact area is currently designated or proposed "critical habitat" in accordance with provisions of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*). Therefore, no further ESA coordination or consultation with the U.S. Fish and Wildlife Service (Service) is required. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally-listed and proposed endangered and threatened species in New York* is available for your information. Until the proposed project is complete, we recommend that you check our website* every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current. Should our determination change and any part of the proposed project be authorized, funded, or carried out, in whole or in part, by a Federal agency, further consultation between the Service and that Federal agency pursuant to the ESA may be necessary

The above comments pertaining to endangered species under our jurisdiction are provided as technical assistance pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact the appropriate New York State Department of Environmental Conservation regional office(s)* and New York Natural Heritage Program Information Services.*

Thank you for your time. If you require additional information please contact me at (607) 753-9334. Future correspondence with us on this project should reference project file 70034.

Sincerely,

[redacted]

Robyn A. River
Endangered Species Biologist

*Additional information referred to above may be found on our website at:
http://www.fws.gov/northeast/nyfo/es/section7.htm

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

WELCOMES YOU TO

A PUBLIC INFORMATION MEETING

FOR

RECONSTRUCTION OF
INTERSECTION OF NYS ROUTE 30 & 30A
&
INTERSECTION OF NYS ROUTE 30 & 443

PIN 9125.05

TOWN OF SCHOHARIE

SCHOHARIE COUNTY

JANUARY 12, 2005 4:00 TO 7:00 PM

CAPITAL REGION BOCES

Capital Region Career & Technical School

174 State Route 30A

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

JOHN R. WILLIAMS
REGIONAL DIRECTOR

JOSEPH H. BOARDMAN
COMMISSIONER

MEETING PURPOSE

The purpose of this meeting is to allow the community to review the project plans, and to comment and ask questions of the NYSDOT Officials and Consultant Personnel. The meeting is an Open House format. Please feel free to review and discuss the project information.

PROJECT OBJECTIVES

The project objective is to correct geometric and safety deficiencies at both intersection locations using cost effective measures to reduce the accident rates to an acceptable level within the project area.

PROPOSED ALTERNATIVES

One feasible alternative was developed for each intersection based on the design criteria developed in Chapter III of the Draft Design Report. A summary of each feasible alternative is given below:

NYS Route 30 / 30A – "T" NYS Route 30 into NYS Route 30A. This alternative proposes construction of a "T" type intersection and realigning the approach roadways to eliminate non-standard horizontal and vertical geometries in the vicinity of the intersection. Several driveways near the intersection will be reconstructed for better definition and conformance with the appropriate driveway standards. Improvements will include drainage, guide rail, signs, and striping.

NYS Route 30 / 443 – "T" NYS Route 443 into NYS Route 30. This alternative proposes construction of a "T" type intersection and realigning NYS Route 443 in the vicinity of the intersection. The relocation of the intersection will provide standard intersection distance, eliminate the redundant intersections, and provide improved sight distance along NYS Route 443. Driveways along Vrooman Cross Road will be slightly reconfigured to provide better definition at its intersection with NYS Route 443. As part of the project, consideration is being given to "dead ending" Vroman Cross Road and constructing a turnaround area for local traffic. The creation of a small parking lot and additional landscaping are proposed on the south side of the Covered Bridge Road. Improvements will include drainage, guide rail, signs, and striping.

Prepared by:

DELTA ENGINEERS

MAINTENANCE AND PROTECTION OF TRAFFIC

During construction activities, traffic will be maintained on-site using staged construction methods. Impacts to pedestrian and bicyclist traffic will be kept to a minimum. Access to businesses and residences along NYS Routes 30, 30A, & 443 will be maintained during construction.

RIGHT-OF-WAY

Right-Of-Way acquisitions will be required at both intersections to accommodate the realigned roadways and provide adequate area for roadway drainage. Narrow strips of property will also be required at several locations to allow for construction and future maintenance activities. No buildings are being proposed for acquisition.

ANTICIPATED SCHEDULE

Begin Construction - Spring 2006

End Construction - Winter 2006

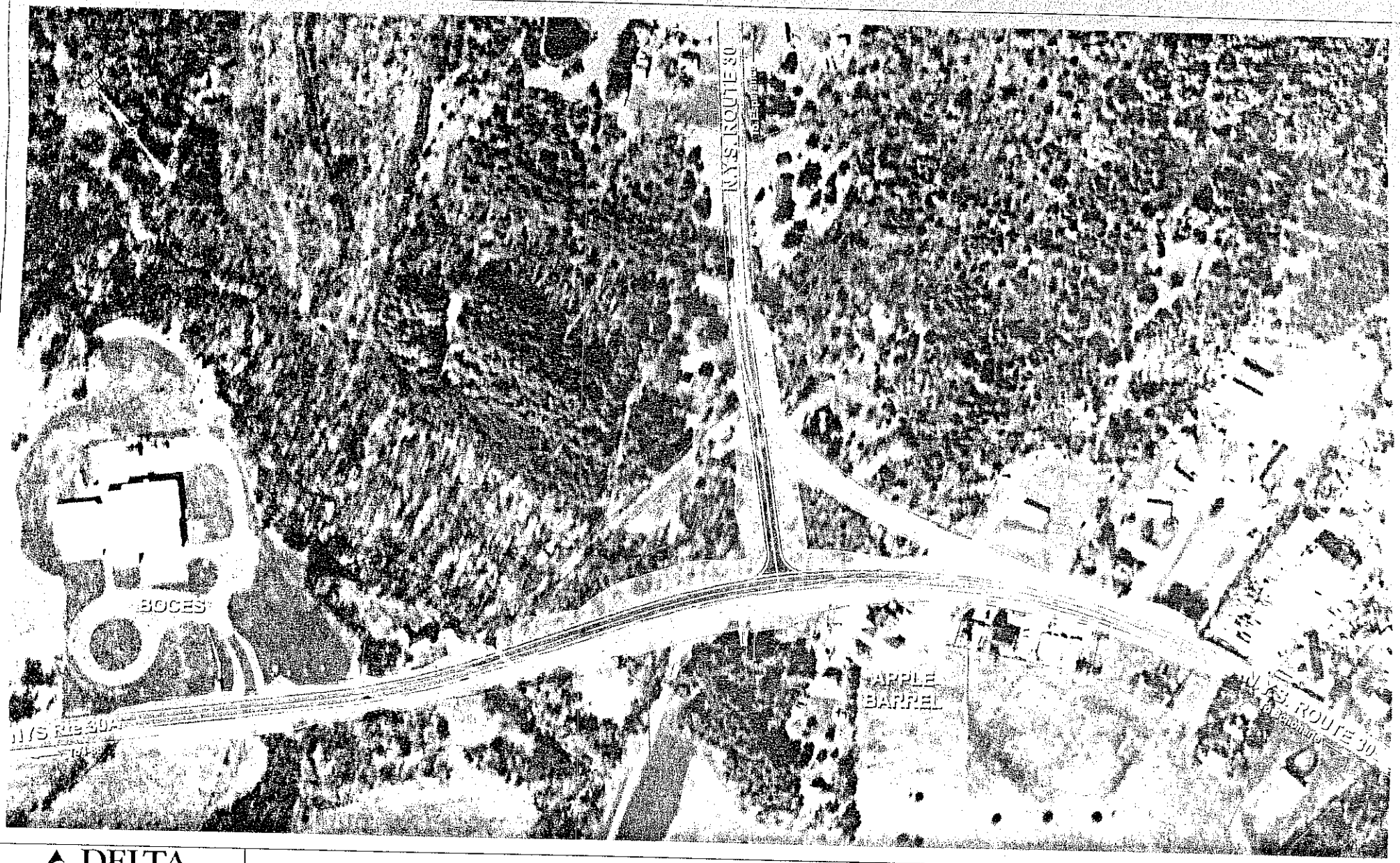
CONTACT INFORMATION

Mr. Peter Larson, PE, Project Manager
New York State Department of Transportation
44 Hawley Street
Binghamton, NY 13901

Phone: 607-721-8206
E-mail: plarson@gw.dot.state.ny.us

Prepared by:

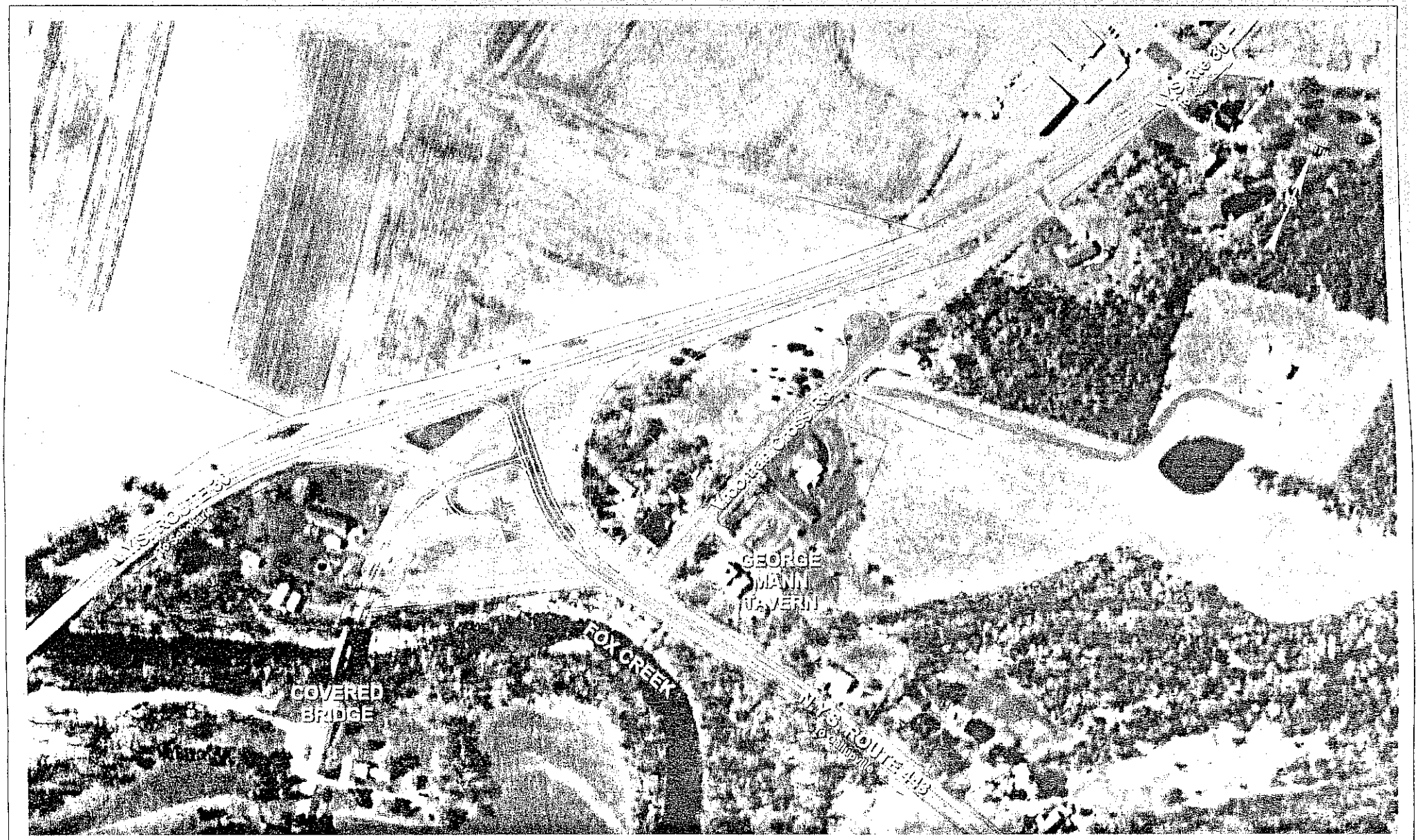
DELTA ENGINEERS



DELTA ENGINEERS

NYS Routes 30 / 30A INTERSECTION IMPROVEMENTS

NEW YORK STATE DEPARTMENT OF TRANSPORTATION



DELTA ENGINEERS

NYS Routes 30 / 443 INTERSECTION IMPROVEMENTS

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

Public Informational Meeting
PIN 9125.05
NYS Route 30/30A Intersection and NYS Route 30/443 Intersection
Town of Schoharie, Schoharie County
January 12, 2005

Name _____ Date _____

Address _____

City/Town _____ State _____ Zip Code _____

TO: Mr. Peter Larson, PE, Project Manager
New York State Department of Transportation
44 Hawley Street
Binghamton, NY 13901-3200

I/We wish to comment about the following aspects of the project:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for your comments.

COMMENT FORM

This form is provided to you for the purpose of making your concerns known to the New York State Department of Transportation. Please indicate your name and address, and state your concerns on this form.

The completed *Comment Form* may be returned this evening to a project representative or mailed to the address below. It may be returned by folding the form so that the return address is clearly visible and affixing a stamp. Please staple or tape the form closed. **PLEASE FORWARD YOUR COMMENTS BY January 19, 2005.**

Thank you for expressing your concerns.

FOLD

From: _____

_____

_____

Stamp

Mr. Peter Larson, PE, Project Manager
New York State Department of Transportation
44 Hawley Street
Binghamton, NY 13901-3200

FOLD

December 20, 2005

Dear Public Official:

RE: OPEN HOUSE / PUBLIC INFORMATIONAL MEETING
PIN 912505, RECONSTRUCTION PROJECT
NYS ROUTES 30/30A & 30/443 INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

The New York State Department of Transportation has announced that an Open House/Public Informational Meeting will be held for the subject project on Wednesday, January 12, 2005, between the hours of 4:00 pm and 7:00 pm at the Capital Region BOCES Schoharie Campus, 174 State Route 30A, located just west of the intersection of Routes 30 and 30A.

The project, as currently proposed, will reconstruct two intersections on Route 30 located in the Town of Schoharie. Please refer to the attached Project Location Map.

In order to provide operational and safety improvements, this project proposes to reconstruct the skewed intersection of Route 30/30A to a more conventional 'T' intersection, which will provide improved sight distance for motorists.

In addition, this project also proposes operational and safety improvements at the multi-legged intersection of Routes 30 and 443 located in the hamlet of Vroman Corners. These improvements include reconstructing the intersection and eliminating the unnecessary connecting roads. Also under consideration is the closure of the north end of Vroman Cross Road.

At this time, construction is expected to begin in the spring of 2006. The estimated construction cost is $1.3 million. The cost and schedule are subject to further adjustments as details of design and overall capital program resources may dictate.

The meeting will be an open house format at which Department representatives will be present to discuss the issues and concerns with property owners and interested citizens on an individual basis. This Open House/Public Information Meeting reflects the Department's continuing efforts to encourage public input in the development of transportation projects. If you have any questions prior to this meeting, or would like to discuss the project in further detail, please do not hesitate to contact the Project Manager, Peter Larson at (607)721-8206 or by e-mail to plarson@dot.state.ny.us.

Sincerely,

DAVID LIGEIKIS, P.E.
Regional Planning and Program Manager

DL/PWL/YSC/jab

c: J. Williams, Regional Director
Y. S. Chandrashekhar, Regional Design Office (Project Engineer)
P. Gendron, Regional Planning and Program Management Office
P. Larson, Regional Design Office (Project Manager)
A. Stiles, Assistant to the Regional Director
S. Cammisa, Regional Public Affairs Coordinator
M. Pawloski, Schoharie County Resident Engineer
Project Outreach File 912505
File (Main, Unit, Blue)

DISTRIBUTION LIST

Town of Schoharie:
Honorable Martin Shrederis, Supervisor
June S. Keyser, Town Clerk
Dan Weideman, Town Superintendent

Schoharie County:
Alicia Terry, Planning and Development
William Averill, Emergency Medical Coordinator
Charlie Stanton, Fire Coordinator
Judith L. Cary, Office of Emergency Management
Wayne Palmatier, Commissioner Public Works
Peter Lopez, County Clerk
John Bates, Sheriff

School Districts:
Carmine C. Giangreco, Superintendent,
Schoharie Central School District

State and Federal Offices:
Honorable Daniel Hooker, 127th State Assembly District
Honorable James L. Seward, 51st State Senatorial District
Honorable Michael McNulty, 21st U.S. Congressional District
David Nardone, District Engineer, FHWA
Traffic Sgt. James Ryan New York State Police (Troop G)

December 20, 2004

Dear Property Owner:

RE: OPEN HOUSE / PUBLIC INFORMATIONAL MEETING
PIN 912505, RECONSTRUCTION PROJECT
NYS ROUTES 30/30A & 30/443 INTERSECTION IMPROVEMENTS
TOWN OF SCHOHARIE, SCHOHARIE COUNTY

The New York State Department of Transportation has announced that an Open House/Public Informational Meeting will be held for the subject project on Wednesday, January 12, 2005 between the hours of 4:00 pm and 7:00 pm at the Capital Region BOCES Schoharie Campus, 174 State Route 30A, located just west of the intersection of Routes 30 and 30A.

The project, as currently proposed, will reconstruct two intersections on Route 30 located in the Town of Schoharie. Please refer to the attached Project Location Map.

In order to provide operational and safety improvements, this project proposes to reconstruct the skewed intersection of Route 30/30A to a more conventional 'T' intersection, which will provide improved sight distance for motorists.

In addition, this project also proposes operational and safety improvements at the multi-legged intersection of Routes 30 and 443 located in the hamlet of Vroman Corners. These improvements include reconstructing the intersection and eliminating the unnecessary connecting roads. Also under consideration is the closure of the north end of Vroman Cross Road.

At this time, construction is expected to begin in the spring of 2006. The estimated construction cost is $1.3 million. The cost and schedule are subject to further adjustments as details of design and overall capital program resources may dictate.

DCK

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

TO: M. E. Ivey, Environmental Analysis Bureau, 5-303 0473

FROM: R. Rennells, Region 9 CRC R. Rennells

JBJECT: 1998-1999 CREP, SECOND, THIRD & FOURTH QUARTERS

DATE: February 23, 1998

Enclosed are materials detailing the cultural resource survey needs of Region 9 for the second, third and fourth quarters of the 98-99 CREP. Please include this work in the 98-99 CREP. The following table is a summary of the requested work:

98-99 CREP: SECOND, THIRD & FOURTH QUARTERS		
PIN	**SURVEY REQUEST**	**DUE DATE**
906641.122	Data Recovery @ Park Creek I & II and Raish Sites	11/98
975179.121	Data Recovery @ Couse-Goat Site	1/99
975207.121	Reconnaissance(Both)	8/98
916620.121	Reconnaissance(Both)	9/98
902115.102	Addendum	9/98
904326.102	Reconnaissance(Both)	9/98
901322.121	Reconnaissance (Both)	9/98
901830.101	Reconnaissance(Both)	8/98
904439.101	Reconnaissance(Both)	8/98
901321.101	Reconnaissance(Both)	9/98
901825.102	Reconnaissance (Both)	11/98
912031.xxx	Reconnaissance(Both)	10/98
912505.121	Addendum, new area & Vrooman I & II Sites	9/98
930656.122	Site Exam, Schoharie Creek I & II, Schoharie Valley School & Railroad Sites	11/98
	Reconnaissance (Both)	

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643

~~Joan K. Davidson~~
~~Commissioner~~
Bernadette Castro
Commissioner

RESOURCE EVALUATION DATE: 17April95 STAFF: RWS

PROPERTY: Vernacular Frame Residences (2) MCD: Schoharie
ADDRESS: see below COUNTY: Schoharie
PROJECT REF: 95PR0739 USN:

I. X Property is individually listed on SR/NR:
name of listing: Sternbergh House

___ Property is a contributing component of a SR/NR district:
name of district: _____

II. X Property meets eligibility criteria.
___ Property contributes to a district which appears to meet eligibility criteria. Pre SRB:___ Post SRB:___ _____
SRB date

Criteria for Inclusion in the National Register:
A. X Associated with events that have made a significant contribution to the broad patterns of our history;
B. ___ Associated with the lives of persons significant in our past;
C. X Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction;
D. ___ Have yielded, or may be likely to yield information important in prehistory or history.

STATEMENT OF SIGNIFICANCE:

The following properties located in the project area are listed/eligible for listing in the State/National Registers as intact representative examples of their type, period and method of construction, and are associated with the settlement and development of the Schoharie Valley during the late 18th/early 19th century:

1. *Sternbergh House--NY 30; West side; North of intersection Cross Rd.--listed NR/SR, 1985.

2. Federal/Greek Revival transitional frame house--NY 30; South side; 500 feet east of intersection NY30A.

3. Col. Peter Vrooman frame house--Unnamed road; West side; Southwest of intersection NY443 and NY 30 on East bank Fox Creek.

Please contact Raymond Smith at 518-237-8643 ext. 260 if you have any questions concerning this determination.

APPENDIX H

Intersection of NYS Route 30 & 30A
Preliminary Plans
Preliminary Profiles
Preliminary Typical Sections

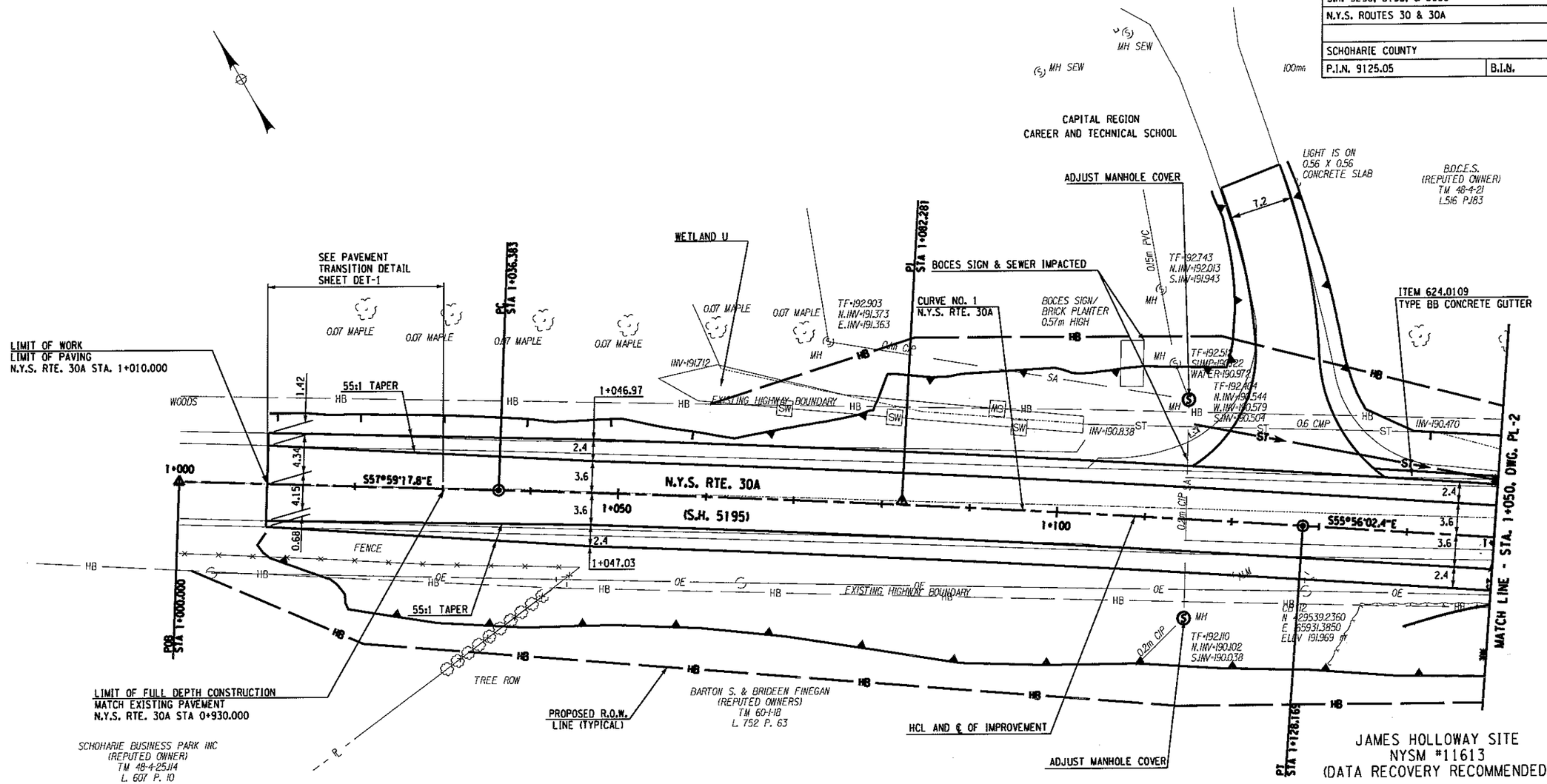
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



CURVE 1 (RTE 30A)
P.C. = 1+036.383
P.T. = 1+128.169
Δ = 2°03'15.4 RT.
R = 2560.000 m
L = 91.786 m
T = 45.898 m
eMAX = 6.00%

PLAN (N.Y.S. RTE. 30A)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A1_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-1

DESIGN
IN CHARGE OF JRM CHECKED BY
JOB MANAGER JRM ESTIMATED BY CJM
DESIGNED BY JLS/NAY DRAFTED BY JRM CHECKED BY

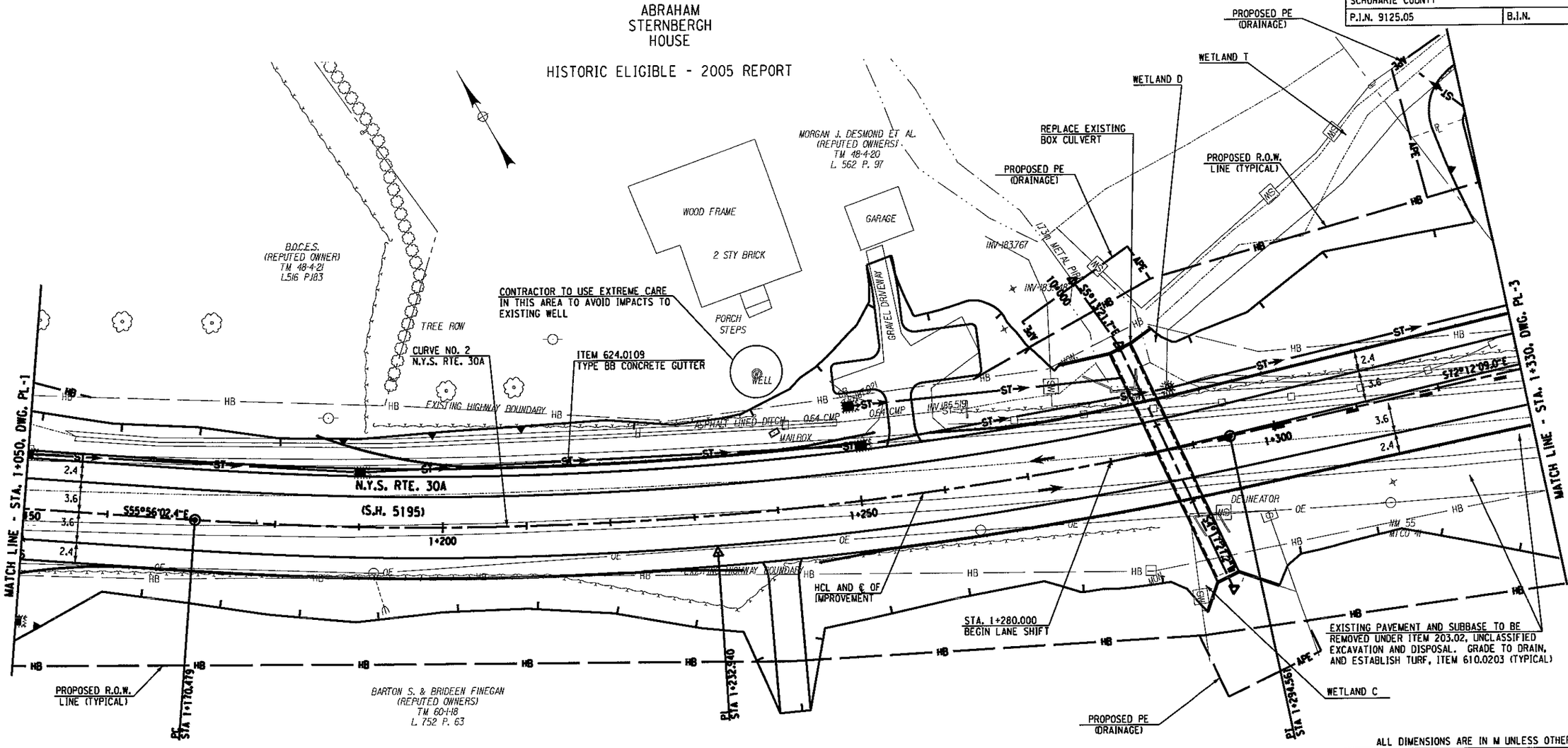
DATE = 7/29/2008
TIME = 8:41:13 AM
FILE NAME = T:\1997\1997.104.000 ROSA\97104.03\NY RTE 30\Drawings\Highway\plans\912505A1_plt.dgn

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086
N.Y.S. ROUTES 30 & 30A
SCHOHARIE COUNTY
P.I.N. 9125.05 B.I.N.

ABRAHAM STERNBERGH HOUSE

HISTORIC ELIGIBLE - 2005 REPORT



JAMES HOLLOWAY SITE
NYSM #11613
(DATA RECOVERY RECOMMENDED)

PLAN (N.Y.S. RTE. 30A)

0 5 10 m

CURVE NO. 2 (N.Y.S. RTE. 30A)
P.C. = 1+170.479
P.T. = 1+294.561
Δ = 16°16'06.7" LT.
R = 437.000 m
L = 124.081 m
T = 62.461 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A2_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-2

IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY
ESTIMATED BY JRM DRAFTED BY JLS/NAY CHECKED BY JRM

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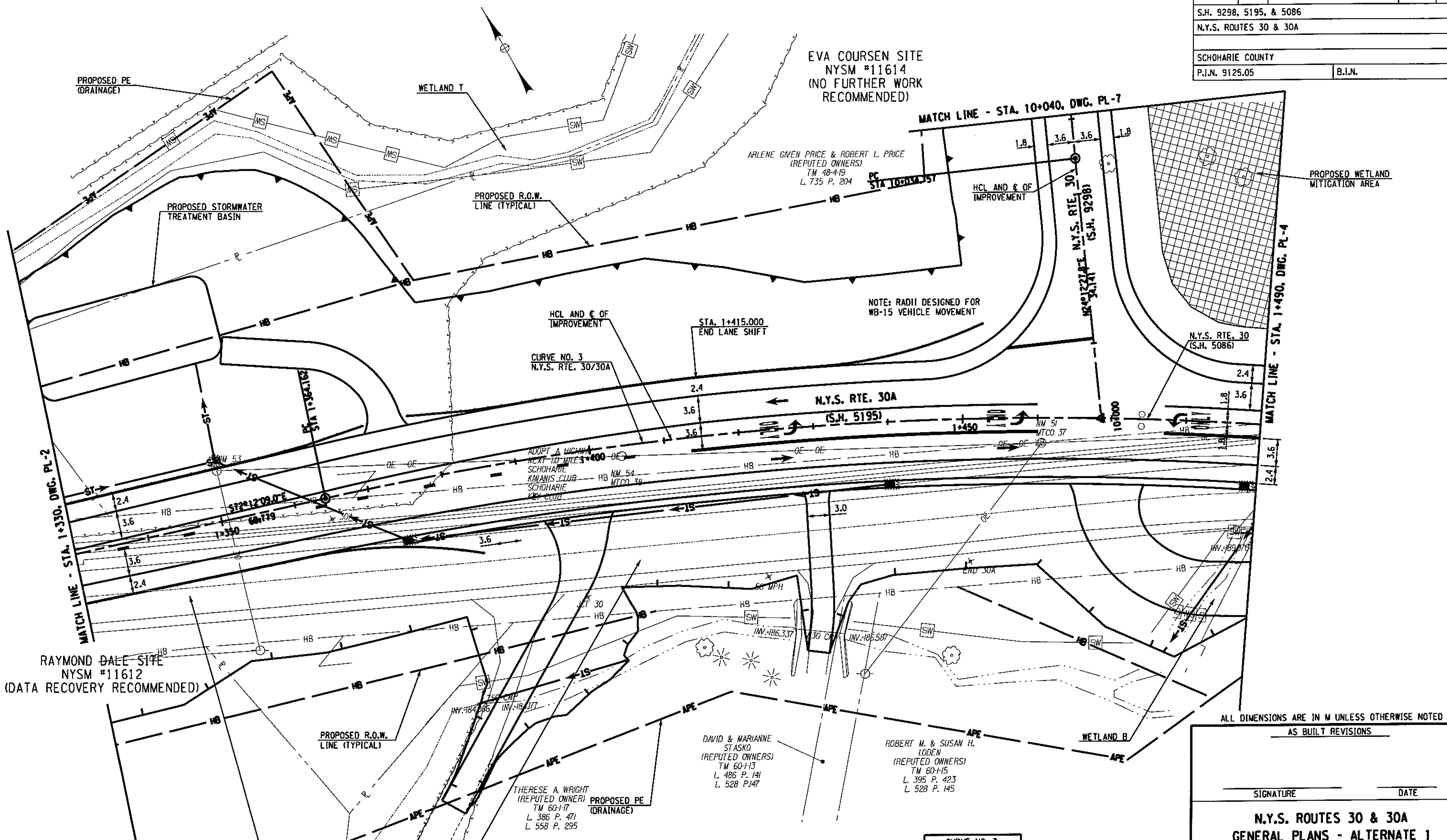
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086
N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY
P.I.N. 9125.05 B.I.N.



EVA COURSEN SITE
NYSM #11614
(NO FURTHER WORK RECOMMENDED)
MATCH LINE - STA. 10+040, DWG. PL-7
PROPOSED PE (DRAINAGE)
WETLAND T
PROPOSED STORMWATER TREATMENT BASIN
PROPOSED R.O.W. LINE (TYPICAL)
ARLENE GIVEN PRICE & ROBERT L. PRICE (REPUTED OWNERS) TM 48-4-19 L. 735 P. 204
HCL AND ℄ OF IMPROVEMENT
PROPOSED WETLAND MITIGATION AREA
N.Y.S. RTE. 30 (S.H. 9298)
N24°12'21.8"E 34.141
NOTE: RADII DESIGNED FOR WB-15 VEHICLE MOVEMENT
STA. 1+415.000 END LANE SHIFT
CURVE NO. 3 N.Y.S. RTE. 30/30A
N.Y.S. RTE. 30 (S.H. 5086)
MATCH LINE - STA. 1+490, DWG. PL-4
N.Y.S. RTE. 30A (S.H. 5195)
PC STA 1+364.162
MATCH LINE - STA. 1+330, DWG. PL-2
S72°12'09.0"E 60.779
RAYMOND DALE SITE
NYSM #11612
(DATA RECOVERY RECOMMENDED)
PROPOSED R.O.W. LINE (TYPICAL)
THERESE A. WRIGHT (REPUTED OWNER) TM 60-1-17 L. 386 P. 471 L. 558 P. 295
PROPOSED PE (DRAINAGE)
DAVID & MARIANNE STASKO (REPUTED OWNERS) TM 60-1-13 L. 486 P. 141 L. 528 P.147
ROBERT M. & SUSAN H. LODEN (REPUTED OWNERS) TM 60-1-15 L. 395 P. 423 L. 528 P. 145
WETLAND B

EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)

PLAN (N.Y.S. RTE. 30A)

0 5 10 m

CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A3_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-3

DATE = 7/29/2008
TIME = 8:43:35 AM
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IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JRM | ESTIMATED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY JRM

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 9298, 5195, & 5086				
N.Y.S. ROUTES 30 & 30A				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		

EVA COURSEN SITE
NYSM #11614
(NO FURTHER WORK RECOMMENDED)

EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)

WETLAND A

PROPOSED WETLAND MITIGATION AREA

LLOYD W. & FRED H. III PENNINGTON (REPUTED OWNERS) TM 48-6-23 L. 544 P. 157

WETLAND E

STA 1+587.350 PI

DANIEL A. SMITH (REPUTED OWNER) TM 48-6-24 L. 767 P. 283

WELL

HCL AND ℄ OF IMPROVEMENT

STA. 1+605.000 BEGIN LANE SHIFT

PROPOSED R.O.W. LINE (TYPICAL)

WETLAND W

MATCH LINE - STA. 1+490. DWG. PL-3

N.Y.S. RTE. 30 (S.H. 5086)

DEAF CHILD AREA NORTH 30

SOUTH 30

REMOVE EXISTING CONCRETE BOX CULVERT

ITEM 624.0109 TYPE BB CONCRETE GUTTER

GRAVEL AREA

APPLE BARREL GIFT SHOP 1 STY WOOD FRAME BLDG

ROBERT M. & SUSAN H. LODEN (REPUTED OWNERS) TM 60-1-15 L. 395 P. 423 L. 528 P. 145

CURVE NO. 3 N.Y.S. RTE. 30/30A

CANOPIES ON TREES MAY IMPACT SIGHT DISTANCE (185 m)

ASPHALT

GRASS AREA

TRAILER

STEPS

2 STY WOOD FRAME

WILLIAM W. VOJNAR SR. (REPUTED OWNER) TM 60-1-12 L. 620 P. 225

MATCH LINE - STA. 1+640. DWG. PL-5

CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

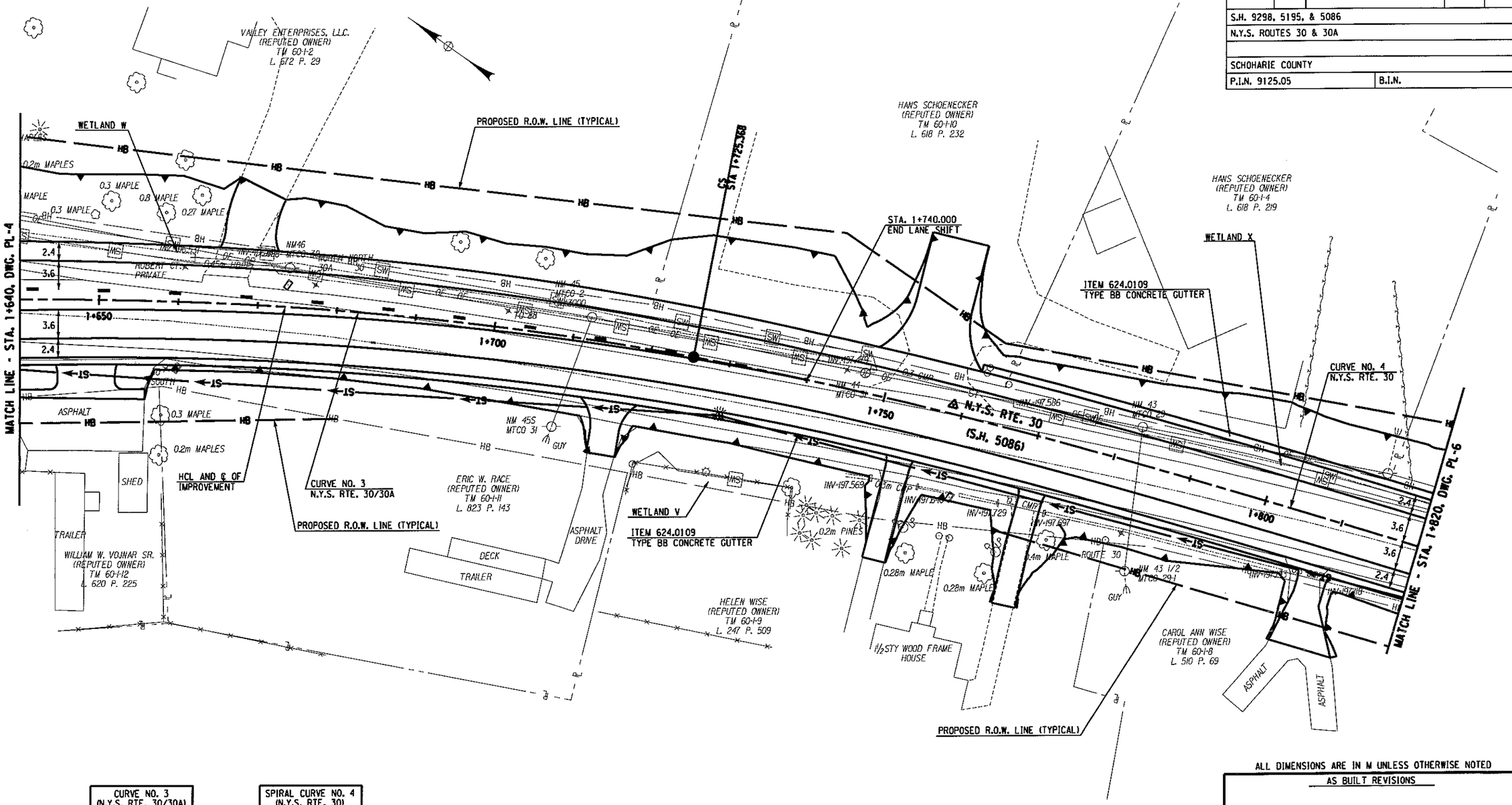
DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A4_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-4

DATE = 8/1/2008
TIME = 9:04:56 AM
FILE NAME = I:\1997\1997.104.000 ROSA\97104.03\NY RTE 30\Drawings\Highway\plans\912505A4_plt.dgn

IN CHARGE OF JRM | ESTIMATED BY JRM | JOB MANAGER JRM | DESIGNED BY CJM | DRAFTED BY CJM | CHECKED BY JLS/NAY | CHECKED BY JRM

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 9298, 5195, & 5086				
N.Y.S. ROUTES 30 & 30A				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		



CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

SPIRAL CURVE NO. 4 (N.Y.S. RTE. 30)
C.S. = 1+725.368
S.T. = 1+825.368
Δ = 6°33'20.1" RT.
ENT. R = 437.000 m
EXIT R = 0.0 m
T_L = 66.713 m
T_S = 33.375 m
L.S. = 100.000 m

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A5_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-5

DATE = 7/29/2008
TIME = 8:44:41 AM
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IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY
DRAFTED BY JLS/NAY CHECKED BY
ESTIMATED BY CJM CHECKED BY
JRM

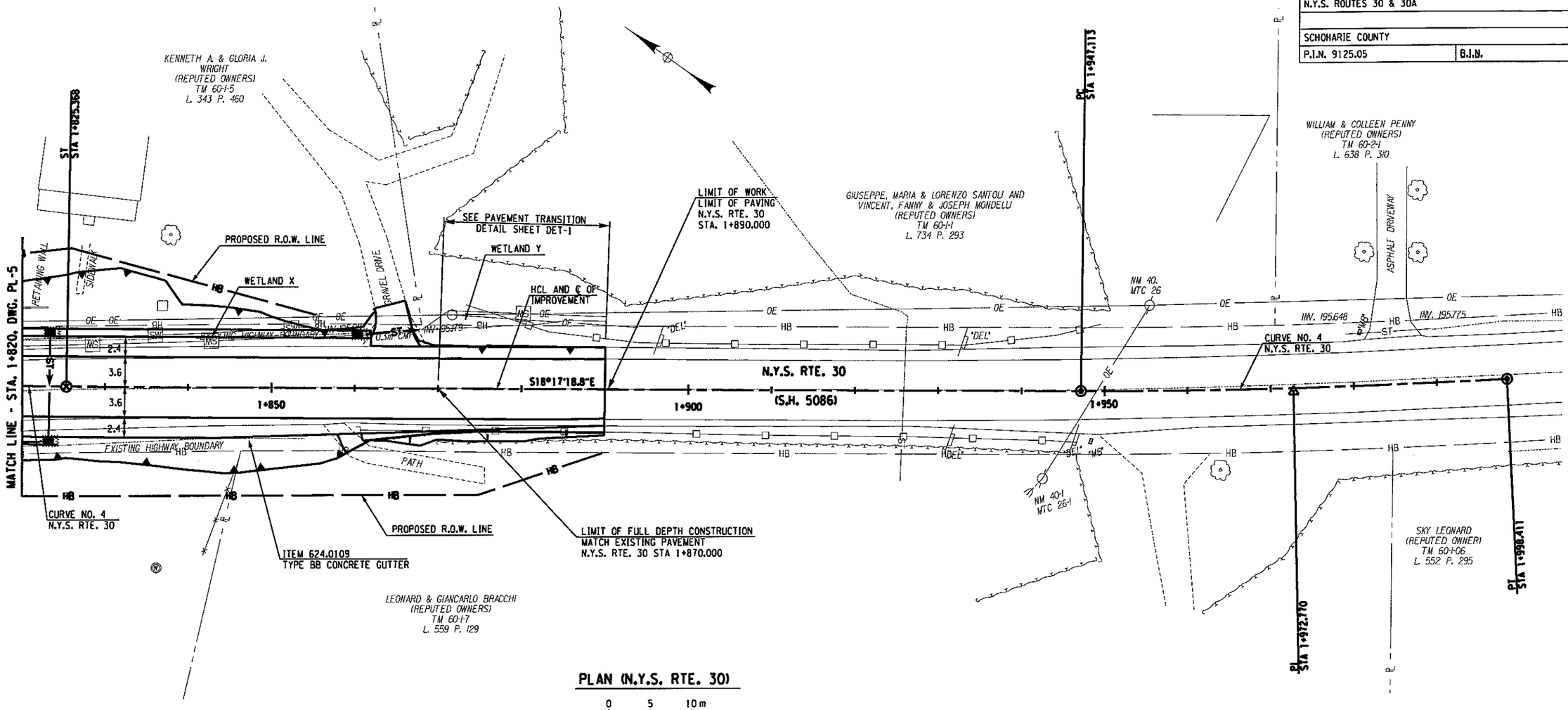
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 30)

0 5 10 m

SPIRAL CURVE NO. 4 (N.Y.S. RTE. 30)
C.S. = 1+725.368
S.T. = 1+825.368
Δ = 6°33'20.1" RT.
ENT. R = 437.000 m
EXIT R = 0.0 m
T_L = 66.713 m
T_S = 33.375 m
L.S. = 100.000 m

CURVE NO. 5 (N.Y.S. RTE. 30)
P.C. = 1+947.113
P.T. = 1+998.411
Δ = 3°21'56.7" LT.
R = 873.250 m
L = 51.298 m
T = 25.656 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A6_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-6

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JRM
DRAFTED BY CJM | ESTIMATED BY JLS/NAY | CHECKED BY JRM

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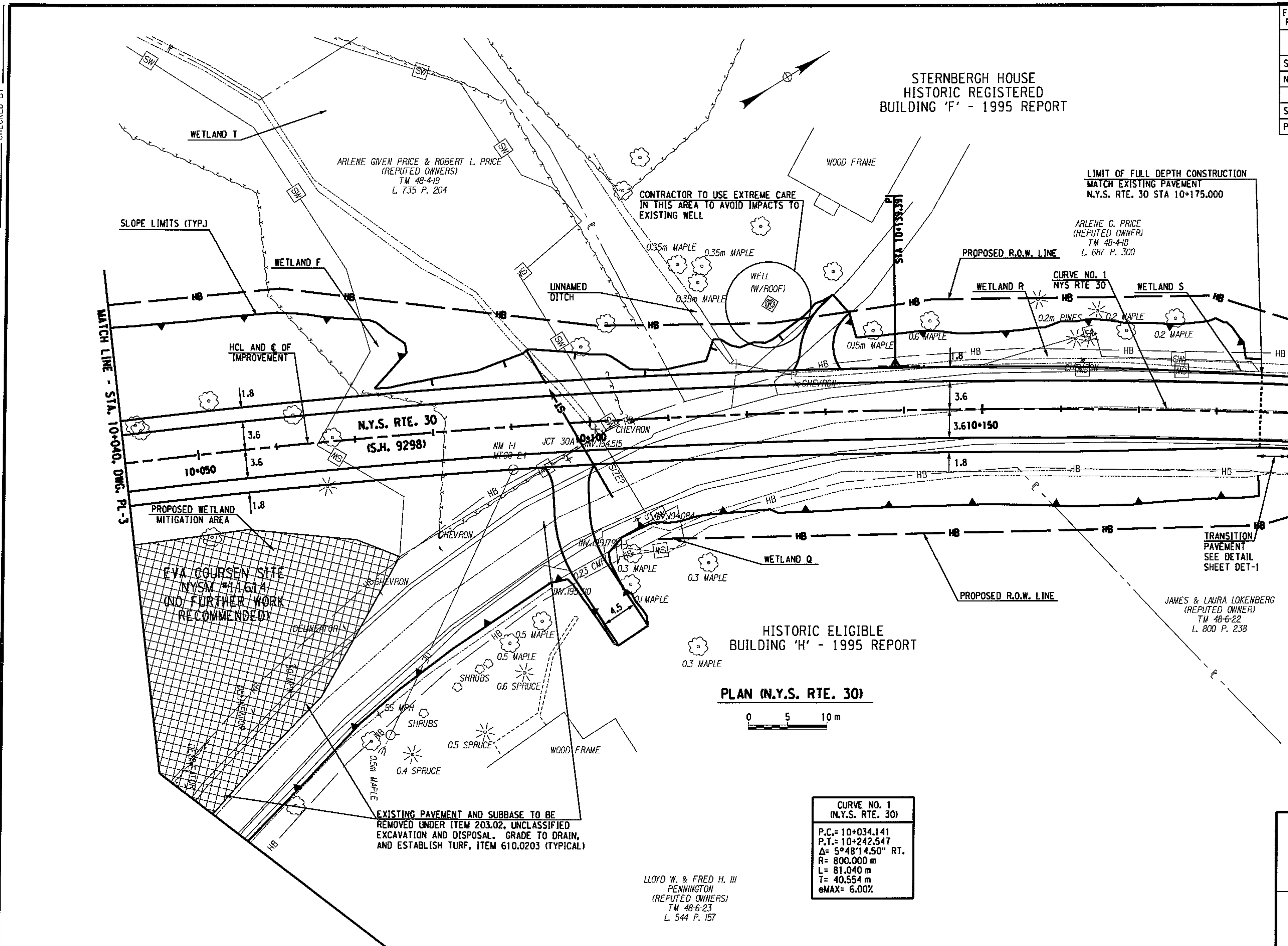
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086
N.Y.S. ROUTES 30 & 30A
SCHOHARIE COUNTY
P.I.N. 9125.05 | B.I.N.



STERNBERGH HOUSE
HISTORIC REGISTERED
BUILDING 'F' - 1995 REPORT
WETLAND T
ARLENE GIVEN PRICE & ROBERT L. PRICE
(REPUTED OWNERS)
TM 48-4-19
L 735 P. 204
WOOD FRAME
SLOPE LIMITS (TYP.)
WETLAND F
CONTRACTOR TO USE EXTREME CARE IN THIS AREA TO AVOID IMPACTS TO EXISTING WELL
WELL (W/ROOF)
UNNAMED DITCH
LIMIT OF FULL DEPTH CONSTRUCTION
MATCH EXISTING PAVEMENT
N.Y.S. RTE. 30 STA 10+175.000
ARLENE G. PRICE
(REPUTED OWNER)
TM 48-4-18
L 687 P. 300
PROPOSED R.O.W. LINE
CURVE NO. 1
NYS RTE 30
WETLAND R
WETLAND S
STA 10+153.951
HCL AND ℄ OF IMPROVEMENT
MATCH LINE - STA. 10+040, DWG. PL-3
MATCH LINE - STA. 10+190, DWG. PL-8
N.Y.S. RTE. 30
(S.H. 9298)
10+050
10+100
10+150
JCT 30A
CHEVRON
PROPOSED WETLAND MITIGATION AREA
EVA COURSEN SITE
NYSM #11614
(NO FURTHER WORK RECOMMENDED)
DELINEATOR
WETLAND Q
TRANSITION PAVEMENT
SEE DETAIL SHEET DET-1
PROPOSED R.O.W. LINE
JAMES & LAURA LOKENBERG
(REPUTED OWNER)
TM 48-6-22
L 800 P. 238
HISTORIC ELIGIBLE
BUILDING 'H' - 1995 REPORT
PLAN (N.Y.S. RTE. 30)
0 5 10 m
55 MPH
SHRUBS
WOOD FRAME
EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)
CURVE NO. 1
(N.Y.S. RTE. 30)
P.C.= 10+034.141
P.T.= 10+242.547
Δ= 5°48'14.50" RT.
R= 800.000 m
L= 81.040 m
T= 40.554 m
eMAX= 6.00%
LLOYD W. & FRED H. III
PENNINGTON
(REPUTED OWNERS)
TM 48-6-23
L 544 P. 157

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE | DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A6_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-7

IN CHARGE OF JRM — JOB MANAGER JRM — DESIGNED BY CJM — CHECKED BY JRM — ESTIMATED BY CJM — DRAFTED BY JLS/NAY — CHECKED BY JRM

DATE = 8/1/2008
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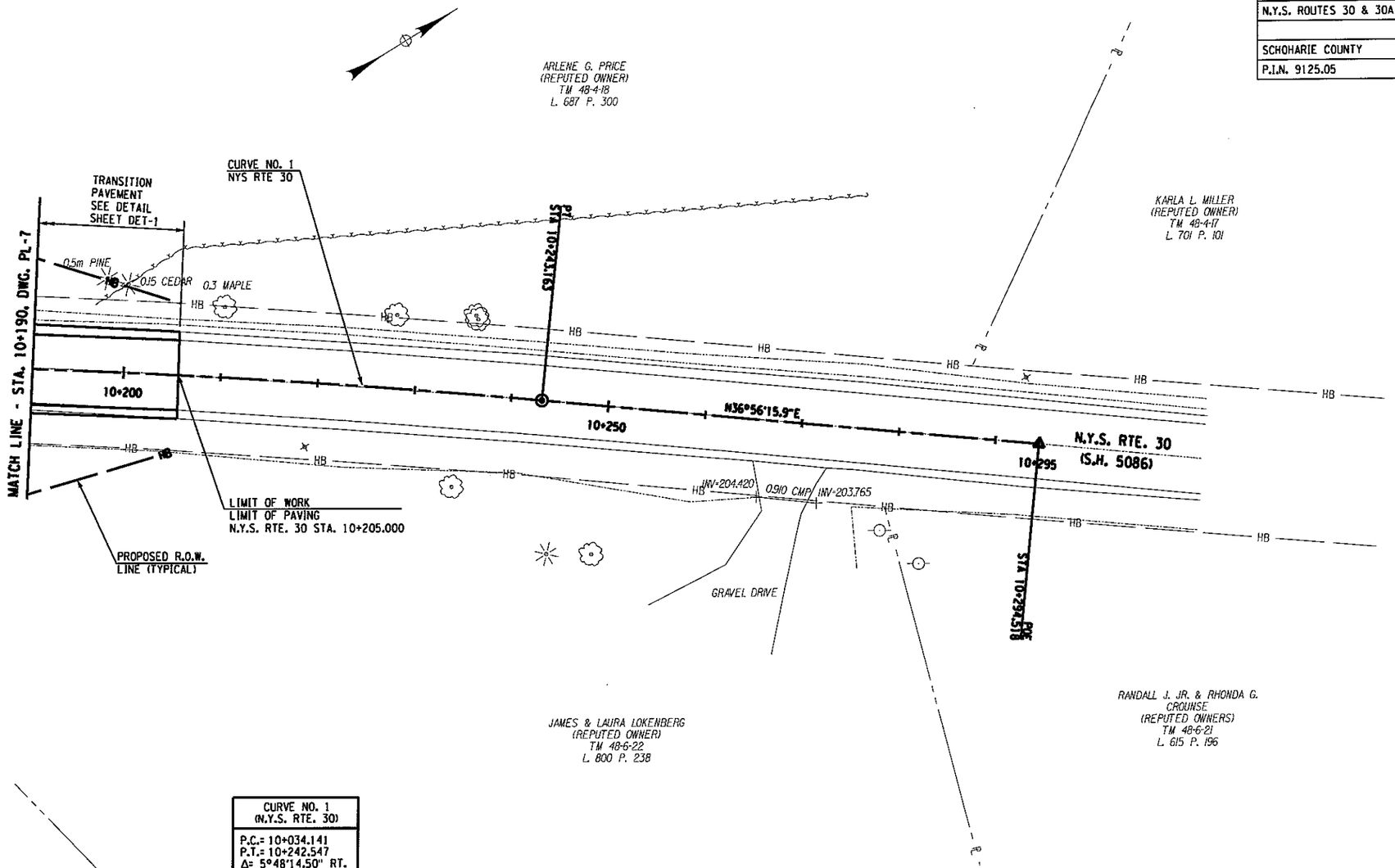
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



CURVE NO. 1 (N.Y.S. RTE. 30)
P.C.= 10+034.141
P.T.= 10+242.547
Δ= 5°48'14.50" RT.
R= 800.000 m
L= 81.040 m
T= 40.554 m
eMAX= 6.00%

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A8_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-8

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DRAFTED BY JLS/NAY ESTIMATED BY CJM

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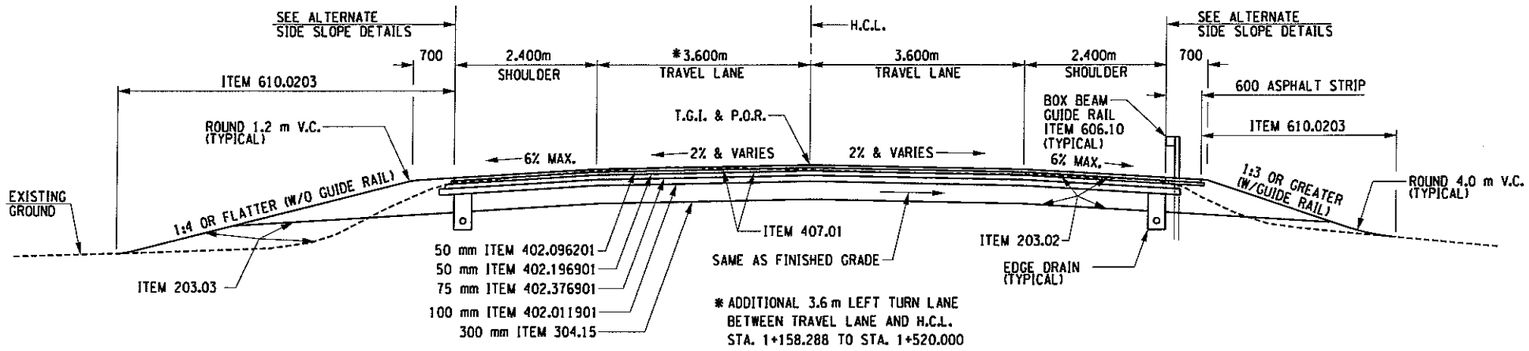
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

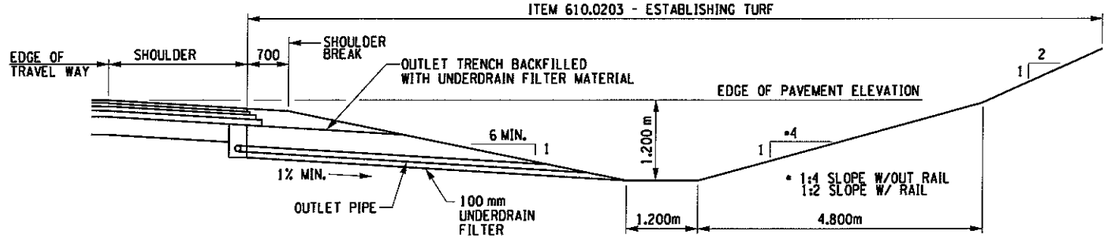
N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

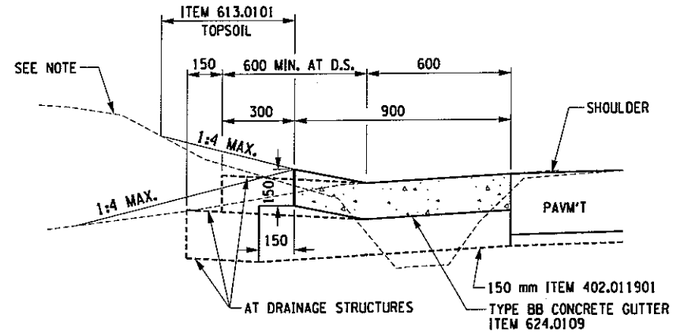
P.I.N. 9125.05 | B.I.N.



NYS RTE 30A 0+925.000 TO 1+353.253
NYS RTE 30 STA. 1+353.253 TO 1+610.000

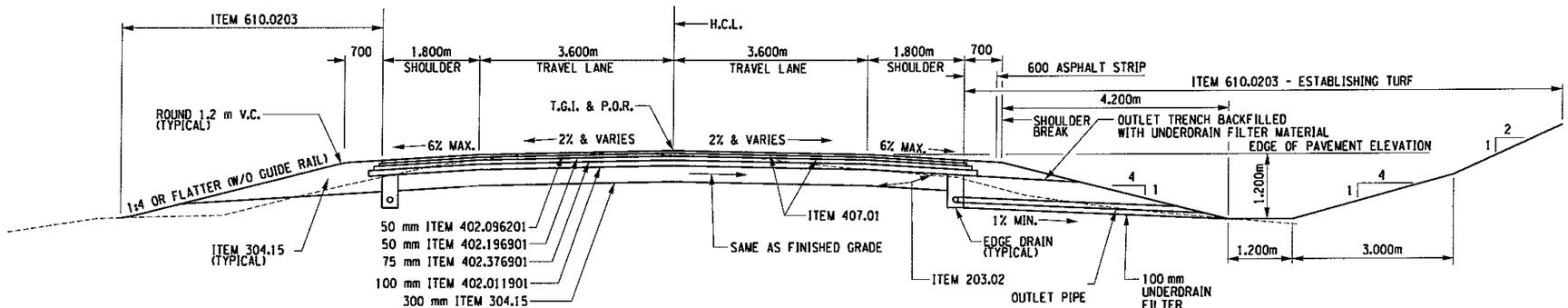


TYPE 1 DITCH DETAIL - ROUTE 30A



NYS RTE 30A STA. 0+990 LT +/- TO 1+080 LT +/-
NYS RTE 30 STA. 1+380 RT +/- TO 1+540 RT +/-

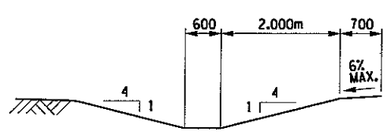
NOTE: BACKSLOPE TO BE FREE OF FIXED OBJECTS FOR A MINIMUM OF 3.0 m



NOTE: TACK COAT, ITEM 407.01, TO BE PLACED BETWEEN ALL LIFTS

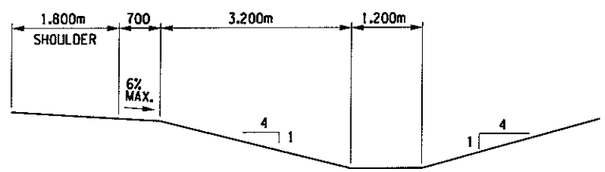
ITEM NO.	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CM
203.03	EMBANKMENT IN PLACE	CM
206.02	TRENCH AND CULVERT EXCAVATION	CM
304.15	SUBBASE COURSE, OPTIONAL TYPE	CM
402.011901	TYPE 2 F9, ASPHALT TREATED PERMEABLE BASE COURSE	MT
402.096201	9.5mm F2, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
402.196901	19mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
402.376901	37.5mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
407.01	TACK COAT	L
605.0901	UNDERDRAIN FILTER TYPE 1	CM
605.1701	OPTIONAL UNDERDRAIN PIPE	M
606.10	BOX BEAM GUIDE RAILING	M
610.0203	ESTABLISHING TURF	SQM
613.0101	TOPSOIL	CM
624.0109	TYPE BB CONCRETE GUTTER	CM

NYS RTE 30 STA. 10+007.279 TO 10+185.000



+128± LT. TO +185.00 LT.

+007.279 TO +100±RT.



+100± RT. TO +185.00 RT.

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
TYPICAL SECTIONS
RTE 30 / 30A INTERSECTION

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A_TYP.DGN	9
DATE	DRAWING NO.
AUGUST 2008	TYP-1

JRM — ESTIMATED BY
CJM — DRAFTED BY
JLS/NAY — CHECKED BY
JRM — DESIGNED BY
JRM — JOB MANAGER
IN CHARGE OF

DATE = 7/23/2008
TIME = 3:48:31 PM
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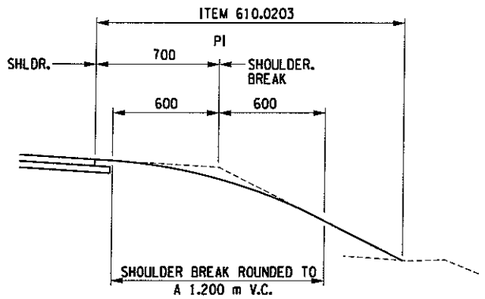
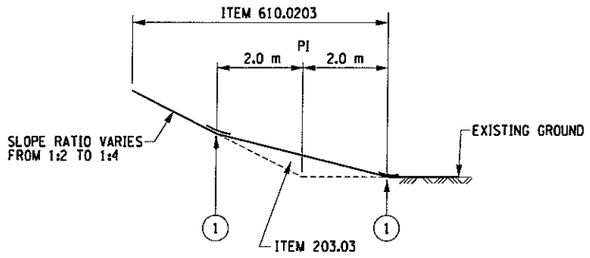
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 9298, 5195, & 5086				
N.Y.S. ROUTES 30 & 30A				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		



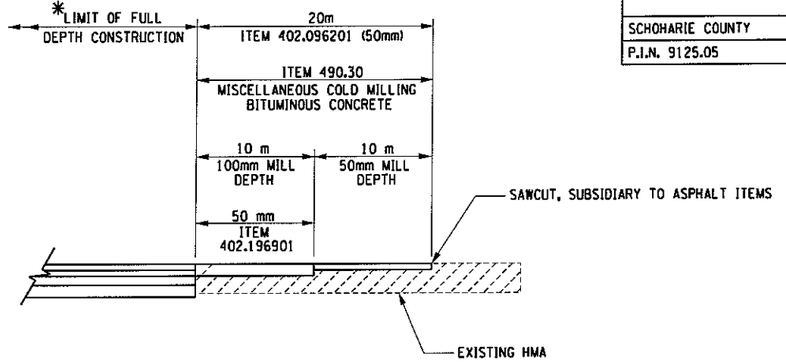
TYPICAL SLOPE ROUNDING DETAIL
TOP OF SLOPE



TYPICAL SLOPE ROUNDING DETAIL
TOE OF SLOPE

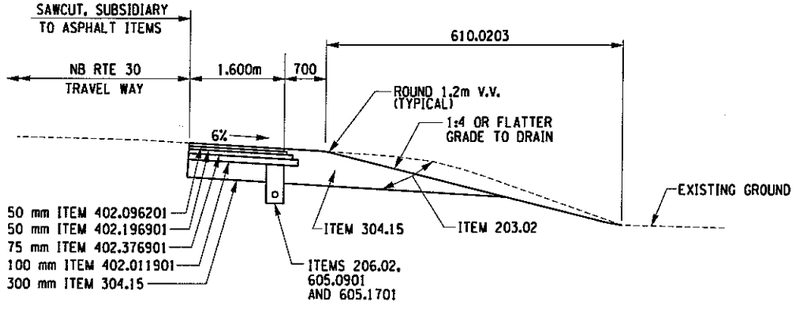
NOTE:
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE ROUNDING DETAILS. THE INTENT IS TO PROVIDE AMPLE AND GENEROUS ROUNDING AT THE TOP AND BOTTOM OF SLOPES.

(1) BLEND TO PROVIDE A SMOOTH SLOPE TRANSITION



* NYS ROUTE 30A STA. 1+010 TO STA. 1+030 (REVERSED)
NYS ROUTE 30 STA. 10+185 TO STA. 10+205
NYS ROUTE 30 STA. 1+870 TO STA. 1+890
NYS ROUTE 30 STA. 0+930 TO STA. 0+950 (REVERSED)
NYS ROUTE 30 STA. 1+294 TO STA. 1+314
NYS ROUTE 443 STA. 10+405 TO STA. 10+425
VROOMAN CROSS ROAD STA. 20+490 TO STA. 20+510 (REVERSED)
COVERED BRIDGE ROAD STA. 99+983.5 TO STA. 100+003.5

TRANSITION TO MATCH EXISTING PAVEMENT DETAIL



NYS RTE 30 SHOULDER
STA. 1+470 ± TO 1+538.8 ±

NOTES:

1. ALL SURFACES OF THE TRANSITION AREA SHALL BE CLEANED AND TACK COATED PRIOR TO HMA PACEMENT.
2. SAW CUTS SHALL BE MADE SO THAT SURFACE SURFACE RUNOFF IS DIRECTED TO THE EDGE OF PAVEMENT.

NOTE: TACK COAT, ITEM 407.01, TO BE PLACED BETWEEN ALL LIFTS

ITEM NO.	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CM
203.03	EMBANKMENT IN PLACE	CM
206.02	TRENCH AND CULVERT EXCAVATION	CM
304.15	SUBBASE COURSE, OPTIONAL TYPE	CM
402.011901	TYPE 2 F9, ASPHALT TREATED PERMEABLE BASE COURSE	MT
402.096201	9.5mm F2, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
402.196901	19mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
402.376901	37.5mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT
407.01	TACK COAT	L
605.0901	UNDERDRAIN FILTER TYPE 1	CM
605.1701	OPTIONAL UNDERDRAIN PIPE	M
610.0203	ESTABLISHING TURF	SQM

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
TYPICAL SECTIONS
RTE 30 / 30A INTERSECTION

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A_TYP_DET.DGN	9
DATE	DRAWING NO.
AUGUST 2008	DET-1

IN CHARGE OF JRM | ESTIMATED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY CJM | DESIGNED BY JRM | JOB MANAGER JRM

DATE = 7/23/2008
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

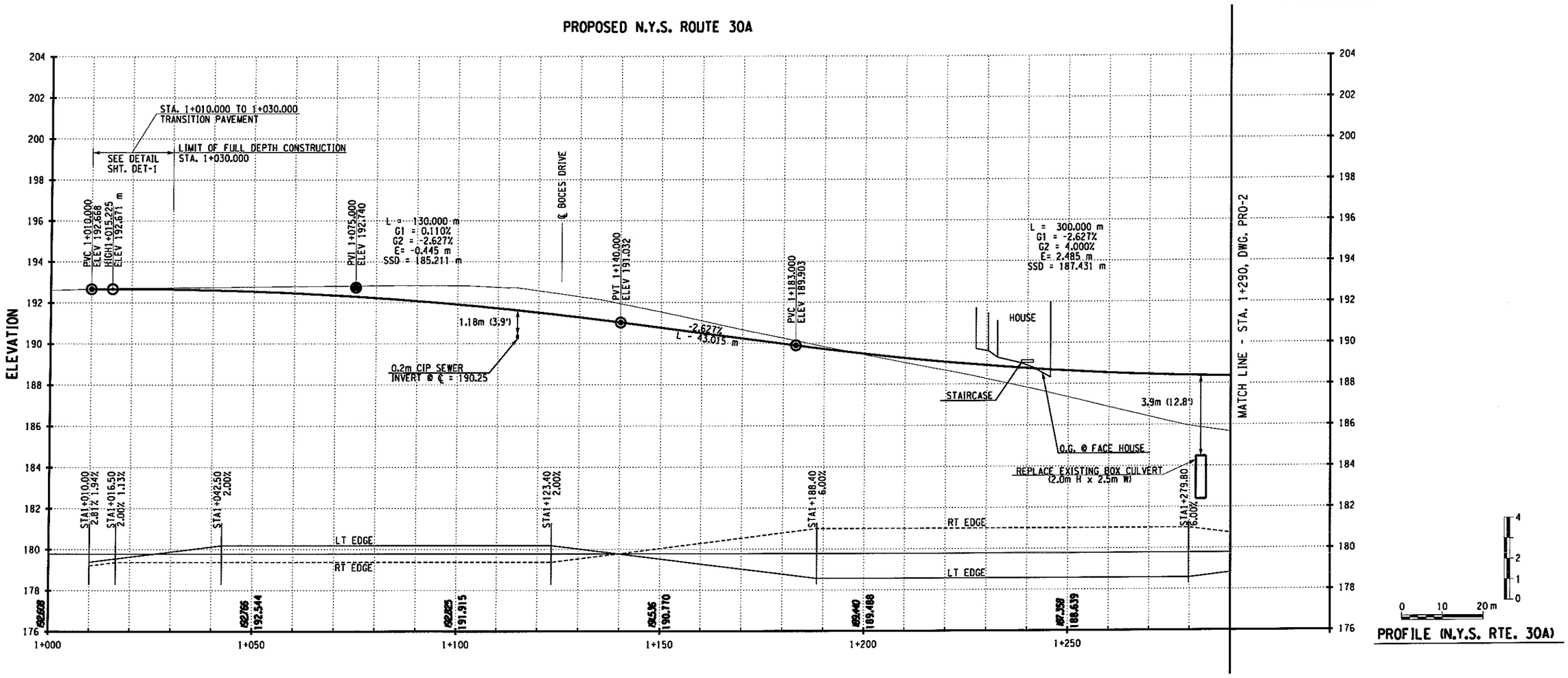
S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30A



PROFILE (N.Y.S. RTE. 30A)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A1_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PRO-1

JRM ESTIMATED BY | CJM DRAFTED BY | JLS/NAY CHECKED BY | JRM CHECKED BY
IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM

DATE = 7/23/2008
TIME = 3:54:00 PM
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

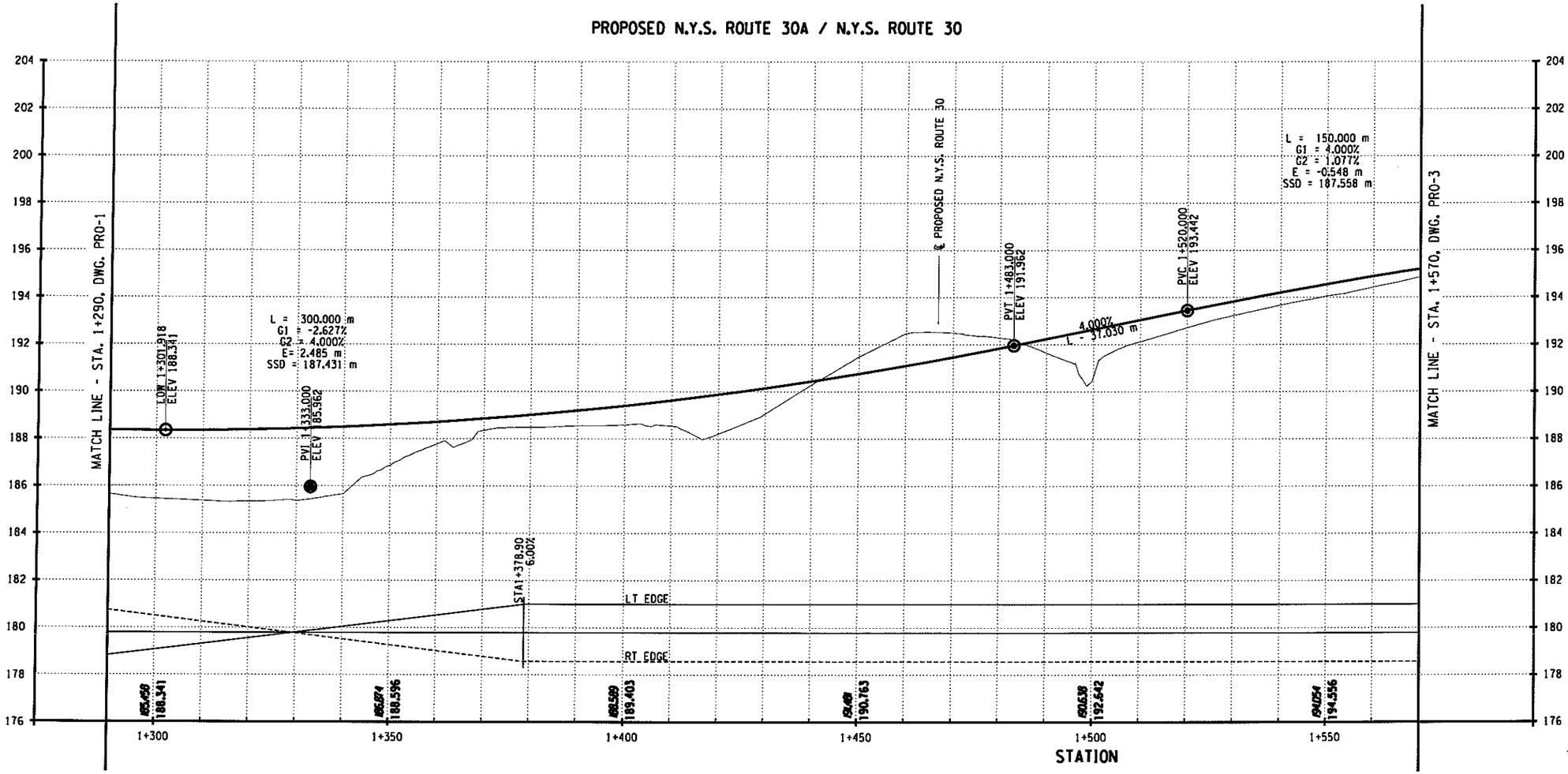
S.H. 9298, 5195, & 5086

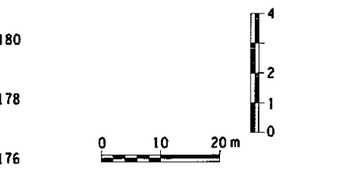
N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30A / N.Y.S. ROUTE 30





PROFILE (N.Y.S. RTE. 30A /30)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A2_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PRO-2

JRM ESTIMATED BY | CJM DRAFTED BY | JLS/NAY CHECKED BY | JRM

CJM DESIGNED BY | JRM JOB MANAGER | JRM IN CHARGE OF

DATE = 7/23/2008
TIME = 3:54:49 PM
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

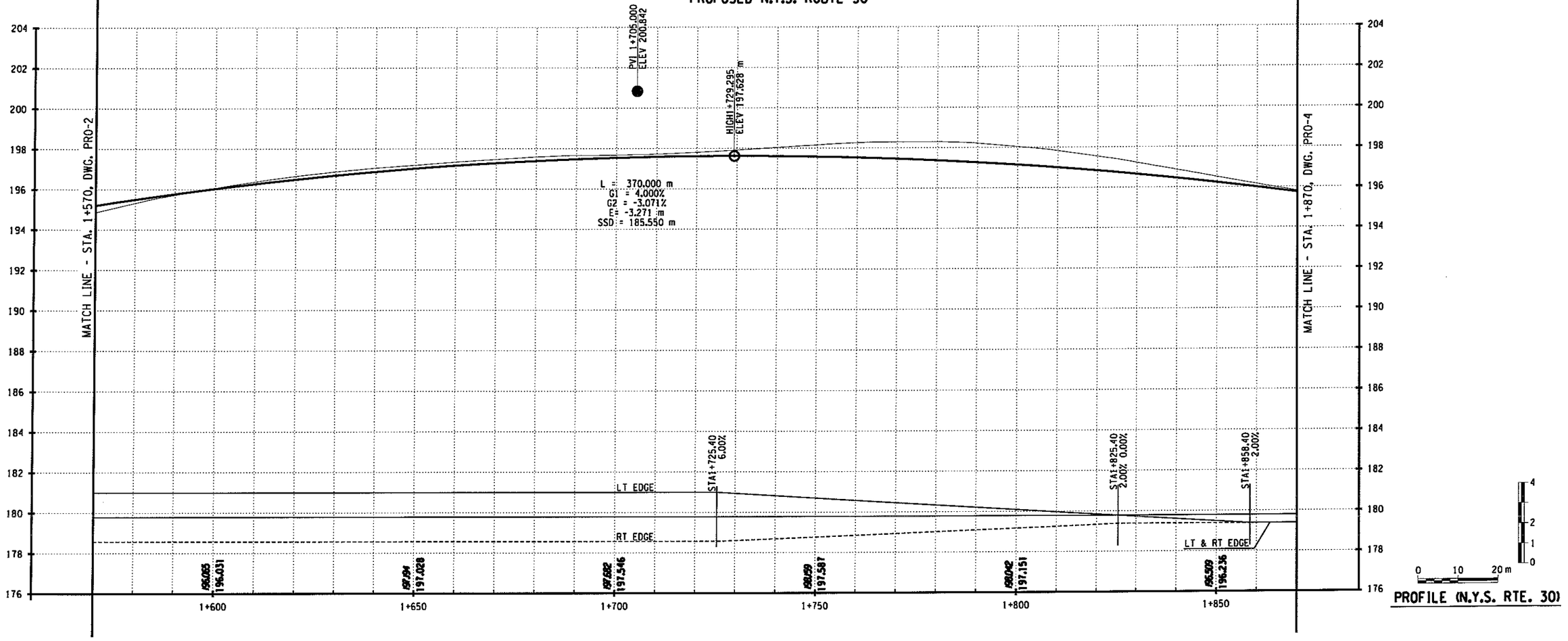
S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30



PROFILE (N.Y.S. RTE. 30)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A

PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A3_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PRO-3

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JRM
ESTIMATED BY JRM | DRAFTED BY JLS/NAY | CHECKED BY CJM

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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

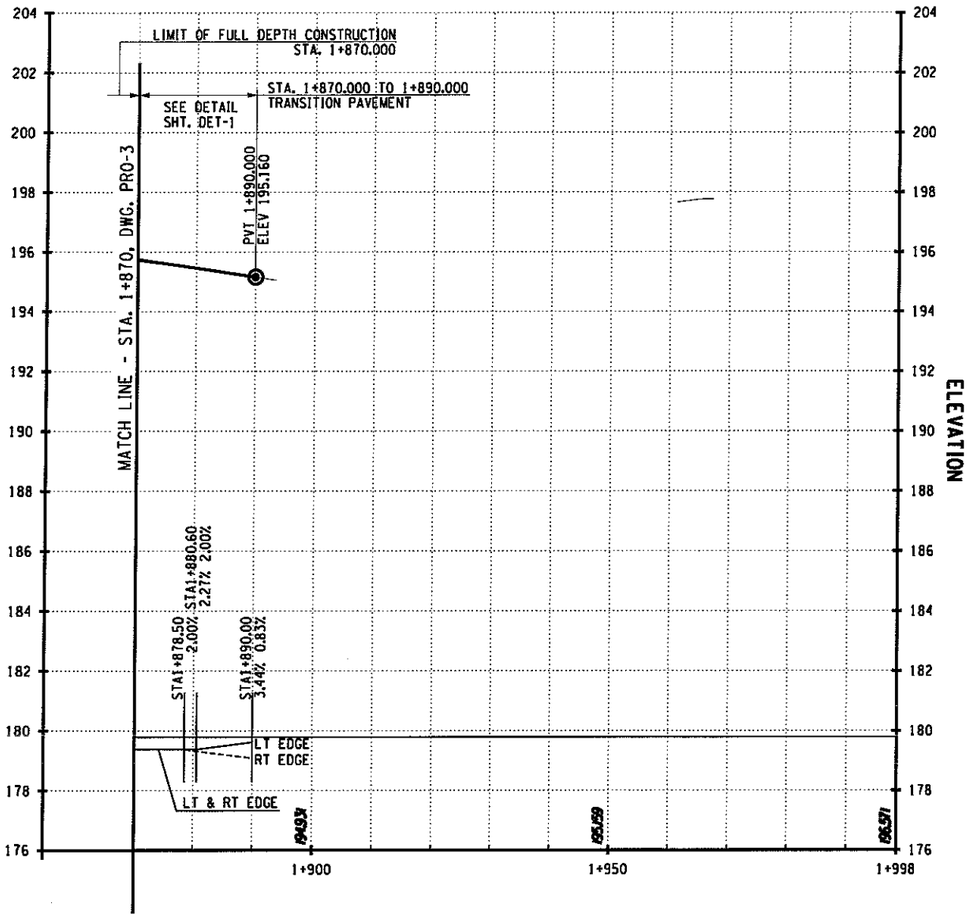
S.H. 9298, 5195, & 5086

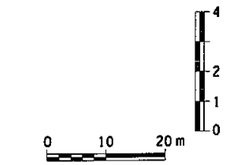
N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30





PROFILE (N.Y.S. RTE. 30)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A3_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PRO-4

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | DRAFTED BY JLS/NAY | ESTIMATED BY CJM | CHECKED BY JRM

DATE = 7/23/2008
TIME = 3:55:55 PM
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

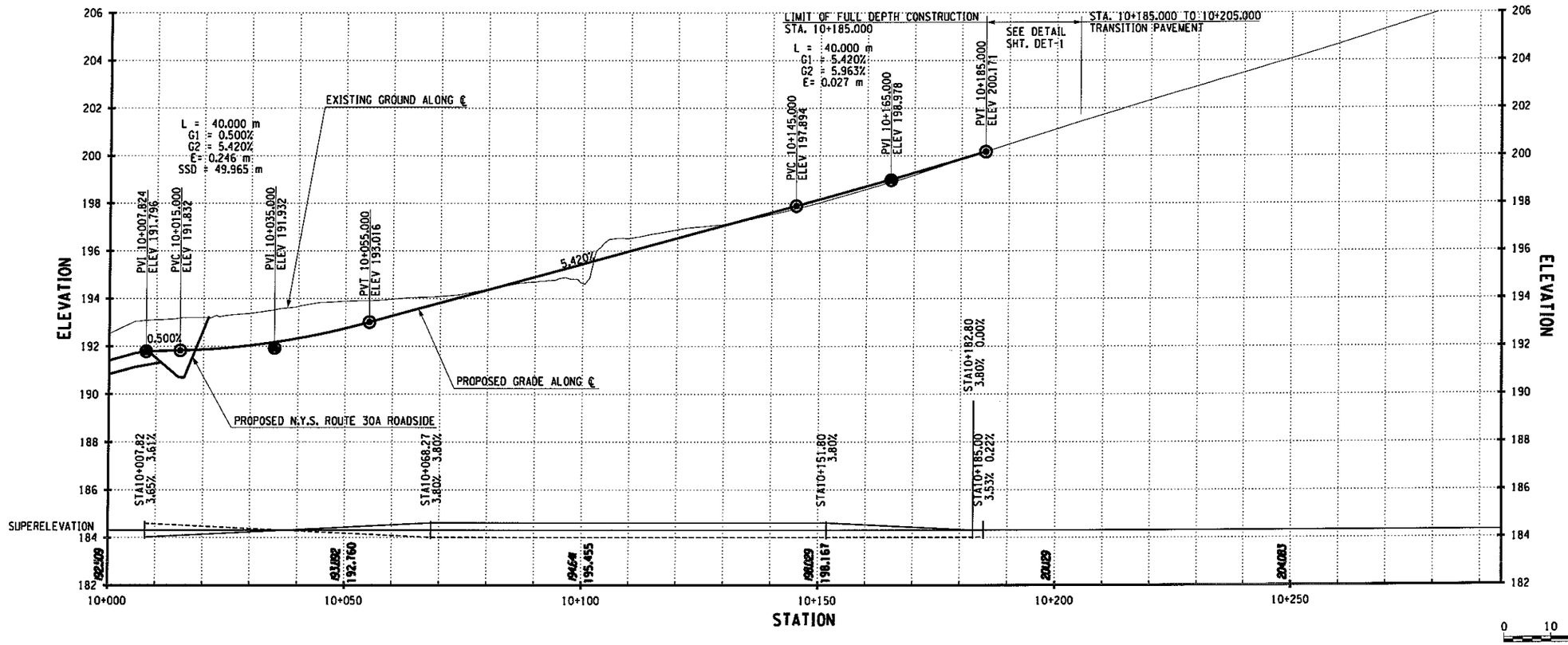
S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30



PROFILE (N.Y.S. RTE. 30)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A4_PLT.DGN	9
DATE: AUGUST 2008	DRAWING NO.: PRO-5

DATE = 7/23/2008
TIME = 3:56:37 PM
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IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | DRAFTED BY JLS/NAY | ESTIMATED BY CJM | CHECKED BY JRM | CHECKED BY JRM

APPENDIX I

Intersection of NYS Route 30 & 443
Preliminary Plans
Preliminary Profiles
Preliminary Typical Sections

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

JRM ESTIMATED BY | CJM DRAFTED BY | JLS/NAY CHECKED BY | JRM

JRM JOB MANAGER | JRM DESIGNED BY | CJM CHECKED BY

IN CHARGE OF

DATE = 7/23/2008
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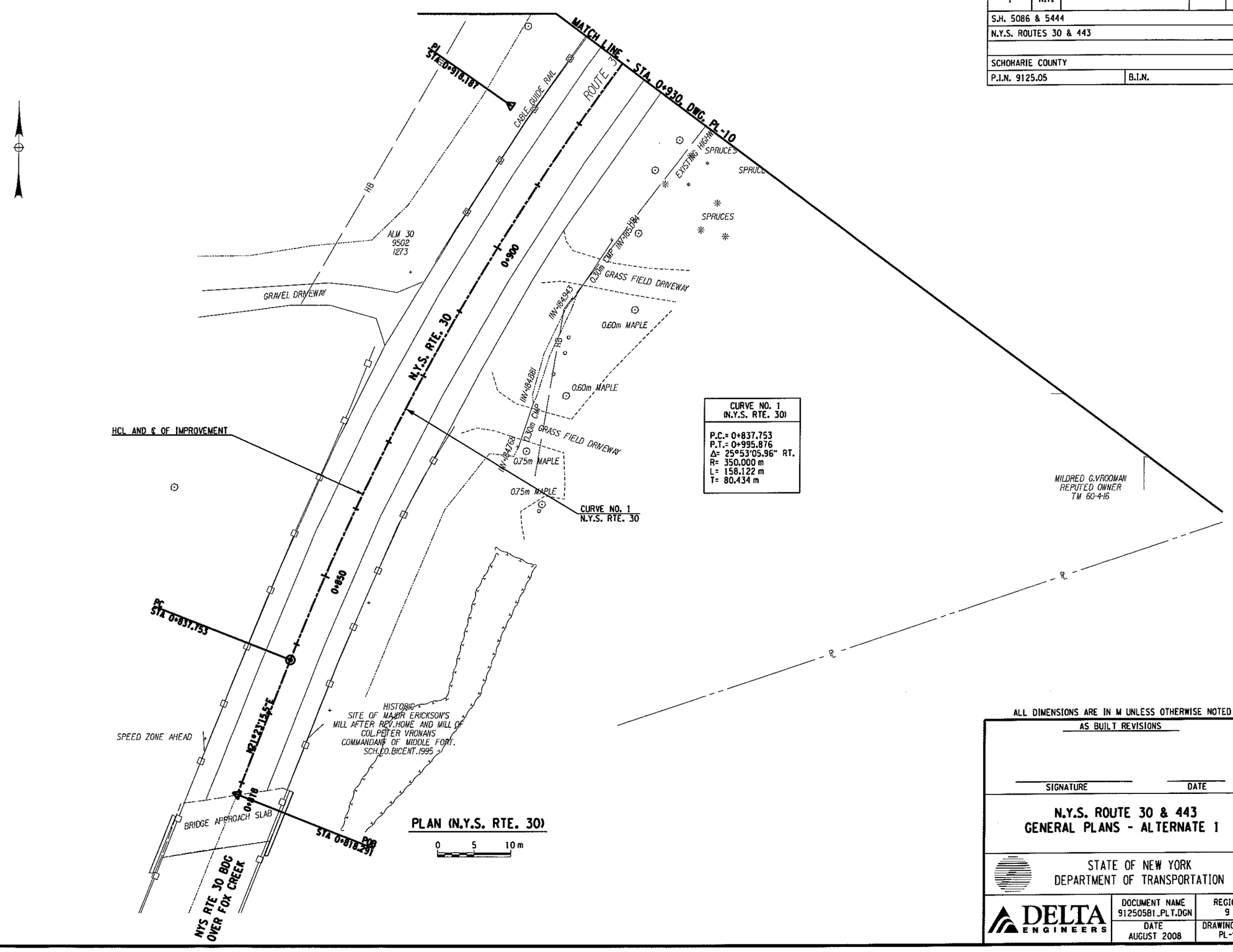

CURVE NO. 1 (N.Y.S. RTE. 30)
P.C.= 0+837.753
P.T.= 0+995.876
Δ= 25°53'05.96" RT.
R= 350.000 m
L= 158.122 m
T= 80.434 m

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
9125058l_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-9

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 5086 & 5444				
N.Y.S. ROUTES 30 & 443				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		

VROMAN II SITE
NYSM #10147

MATCH LINE - STA. 1+010, DWG. PL-11

MATCH LINE - STA. 0+930, DWG. PL-9

MATCH LINE - STA. 100+070, DWG. PL-11

PT STA 0+995.876

1+000

R = 1100

R = 250

N.Y.S. RTE. 30
S.H. 5444

EXISTING HIGHWAY BOUNDARY

SPEED LIMIT 30

TRANSITION PAVEMENT
SEE DETAIL SHEET -

0+950

EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)

CURVE NO. 1
COVERED BRIDGE ROAD

HCL AND ℄ OF IMPROVEMENT

LIMIT OF FULL DEPTH RECONSTRUCTION
BEGIN LANE SHIFT
N.Y.S. RTE. 30 STA. 0+950.000

CURVE NO. 1
N.Y.S. RTE. 30

LIMIT OF WORK
LIMIT OF PAVING
N.Y.S. RTE. 30
STA. 0+930.000

MILDRED G.VROOMAN
REPUTED OWNER
TM 60-4-16

GRAVEL DRIVEWAY

VROMAN I SITE
NYSM
#10146
&
#10148

COVERED BRIDGE ROAD
(FORMER S.H. 5444)

HISTORIC ELIGIBLE
BUILDING 'O' - 1995 REPORT

LIMIT OF FULL DEPTH RECONSTRUCTION
MATCH EXISTING PAVEMENT
COVERED BRIDGE ROAD STA 100+003.500

PC STA 100+000.612

100+000

L 102.25 m

ASPHALT DRIVEWAY

LIMIT OF WORK
LIMIT OF PAVING
COVERED BRIDGE ROAD
STA. 99+983.5

SLATE WALK

BARRICADES

NM 13+1
MTCO 14/1

NM 13+1
MTCO 14

POB
STA 99+974.210

PT STA 100+060.434

CABLE GUIDE RAIL

STOP SIGN

100+050

EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)

WETLAND BB

0.9m POPLAR

0.5 APPLE

INV-187.275

INV-188.937

PROPOSED PE
(DRAINAGE)

SEE PAVEMENT
TRANSITION DETAIL
SHEET DET-1

GREGORY HURD &
LARRY STANLEY
(REPUTED OWNERS)
TM 72-1-10

MTCO 13

ASPHALT PAVEMENT

WOODS

FOX CREEK

CLUMPS OF 0.3m POPLARS

1.0m LOCUST

0.05m SAPLING

0.30m BLACK WALNUT

0.15m MAPLE

TRIPLE 0.30m MAPLE

SAPLINGS

CENTRAL BRIDGE
GALLUPVILLE

NORTH 30

CURVE NO. 1 (COVERED BRIDGE ROAD)
P.C. = 100+008.246
P.T. = 100+060.434
Δ = 33°13'25.5" RT.
R = 90.000 m
L = 52.188 m
T = 26.850 m
eMAX = 6.00%

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B2_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-10

DRAFTED BY JRM
DESIGNED BY CJM
CHECKED BY JLS/NAY
ESTIMATED BY CJM
CHECKED BY JRM
JOB MANAGER JRM
IN CHARGE OF JRM

DATE = 7/29/2008
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

JRM — DRAFTED BY
JLS/NAY — CHECKED BY
CJM — ESTIMATED BY
JRM — JOB MANAGER
JRM — DESIGNED BY
CJM — CHECKED BY
JRM — IN CHARGE OF

DATE = 7/23/2008
TIME = 4:22:03 PM
FILE NAME = T:\1997\1997.104.000 ROSA\97104.03\NY RTE 443\Drawings\Highway\plans\912505B3_pl1.dgn

CURVE NO. 2
(N.Y.S. RTE. 30)

P.C. = 1+111.892
P.T. = 1+141.785
Δ = 0°10'16.6" RT.
R = 10000.000 m
L = 29.894 m
T = 14.947 m
eMAX = 6.00%

CURVE NO. 1
(N.Y.S. RTE. 443)

P.C. = 10+053.201
P.T. = 10+166.699
Δ = 25°48'18.9" LT.
R = 252.000 m
L = 113.497 m
T = 57.728 m
eMAX = 6.00%

MATCH LINE - STA. 1+140, DWG. PL-14

MATCH LINE - STA. 1+010, DWG. PL-10

MATCH LINE - STA. 10+090, DWG. PL-12

MATCH LINE - STA. 100+070, DWG. PL-10

VISIT HOWE CAVERNS 30 TO 7N 8 MILES

EXISTING HIGHWAY BOUNDARY

VROMAN II SITE
NYSM #10147

N.Y.S. RTE. 30, S.H. 5444

N.Y.S. RTE. 30 S.H. 5086

FORMER S.H. 5444

N.Y.S. RTE. 443
S.H. 5086

CURVE NO. 2
N.Y.S. RTE. 30

CURVE NO. 1
N.Y.S. RTE. 443

STA. 1+138.867
BEGIN LANE SHIFT

REMOVE EXISTING
0.61 m CIP

EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYPICAL)

WETLAND AA

HCL AND ℄ OF IMPROVEMENT

RELOCATE SIGN

PROPOSED STORMWATER TREATMENT BASIN

R=17.0

R=24.0

R = 1100

NOTE: RADII DESIGNED FOR WB-20 VEHICLE MOVEMENT

NOTE: RADII DESIGNED FOR SU VEHICLE MOVEMENT

HISTORIC SCHOHARIE
VISIT OLD STONE MUSEUM
VASELL PARK & PICNIC

STA 100+119.014

STOP

STOP SIGN

TRIPLE

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B3_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-11

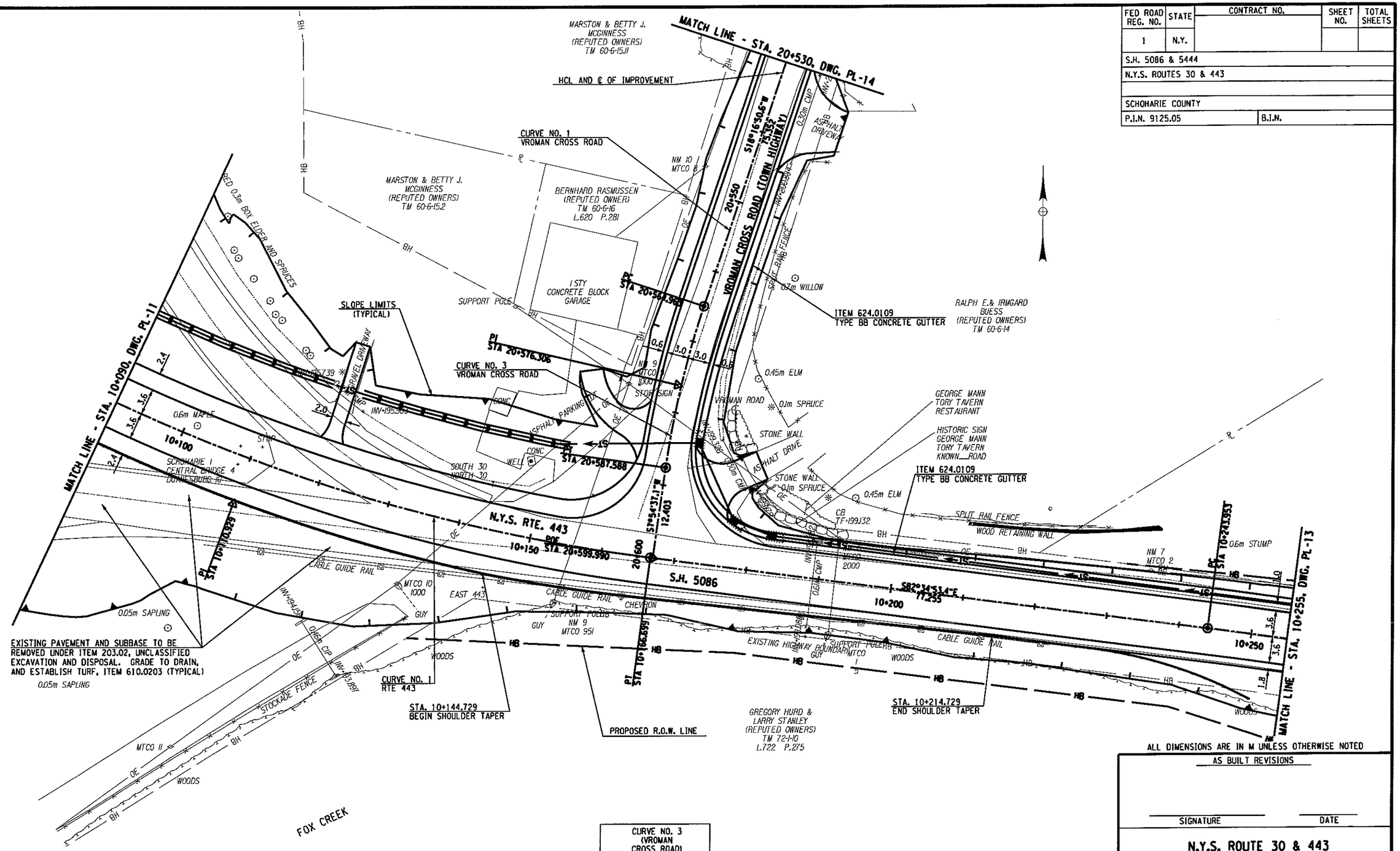
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

CURVE NO. 3 (VROMAN CROSS ROAD)
P.C. = 20+564.963
P.T. = 20+587.588
Δ = 10°22'13.5" LT.
R = 125.000 m
L = 22.625 m
T = 11.343 m

PLAN (N.Y.S. RTE. 443)

0 5 10 m

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B4_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-12

DATE = 7/29/2008
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IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY JRM
ESTIMATED BY CJM DRAFTED BY JLS/NAY CHECKED BY JRM

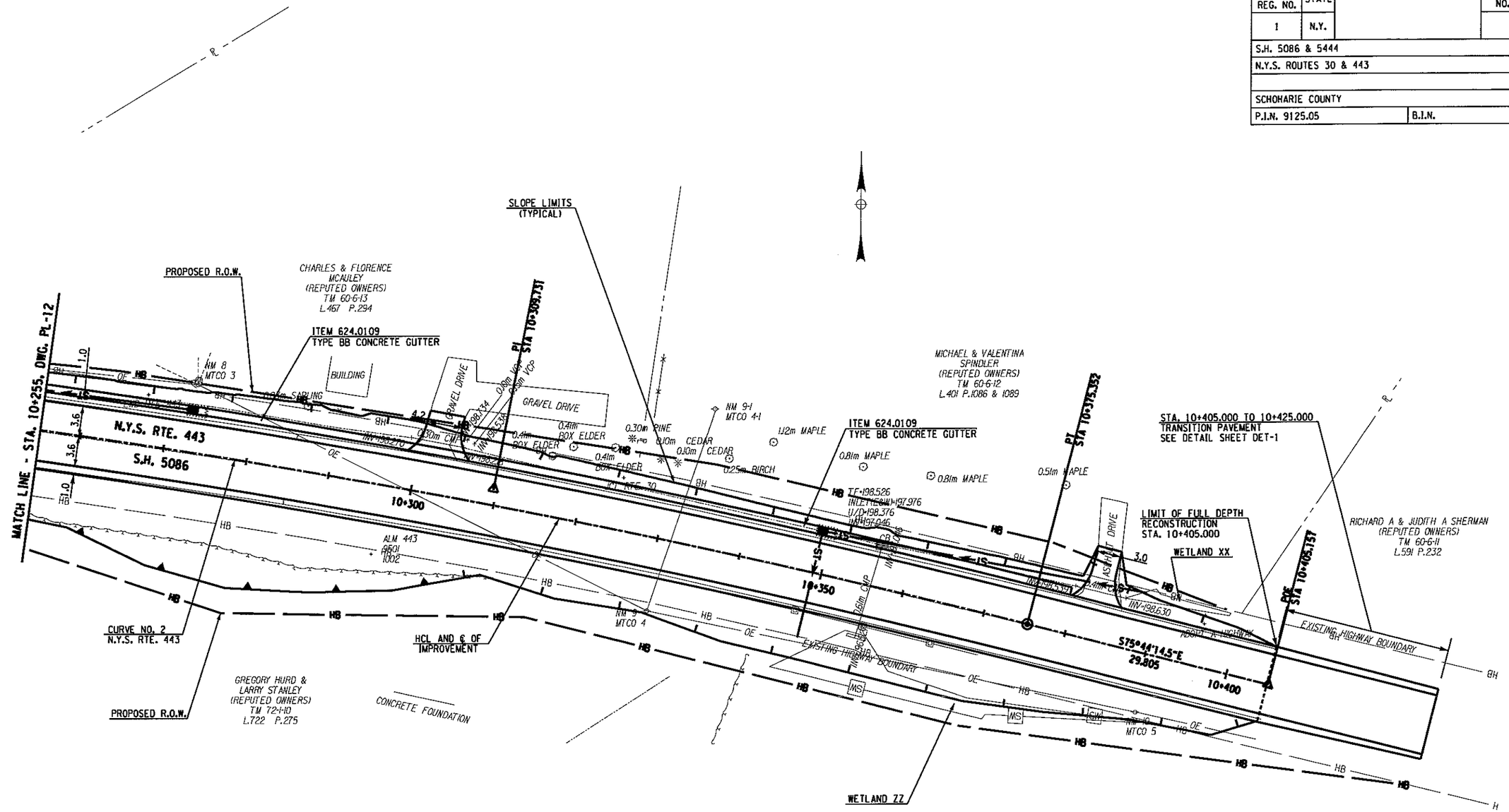
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 443)

0 5 10 m

CURVE NO. 2 (N.Y.S. RTE. 443)
P.C.C. = 10+243.953
P.T. = 10+375.352
Δ = 6°50'38.9" RT.
R = 1100.000 m
L = 131.398 m
T = 65.777 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
9125085_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-13

ESTIMATED BY JRM | DRAFTED BY CJM | JLS/NAY CHECKED BY | DESIGNED BY CJM | JOB MANAGER JRM | IN CHARGE OF JRM

DATE = 7/29/2008
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

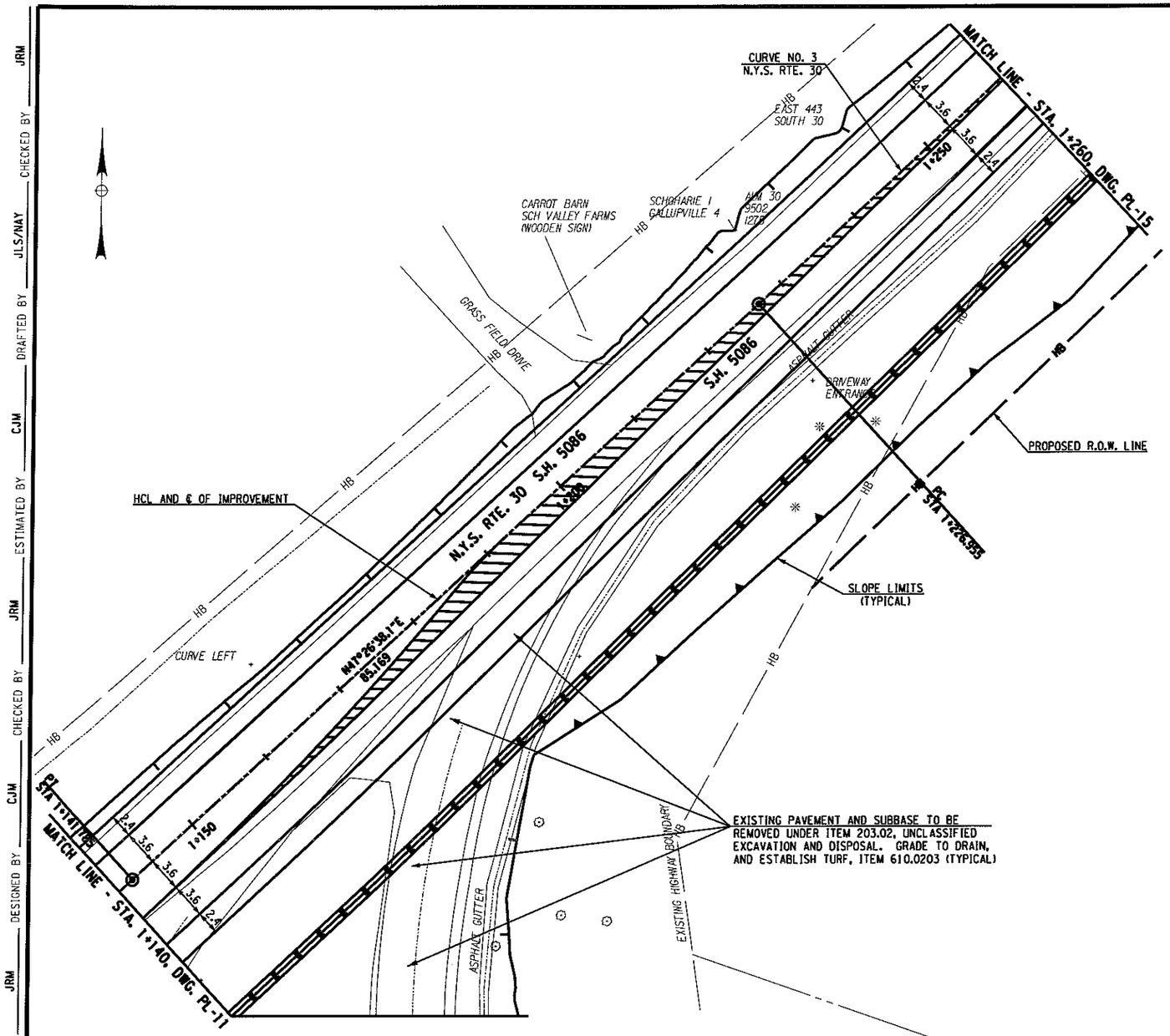
SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

E 1665500
N 427400

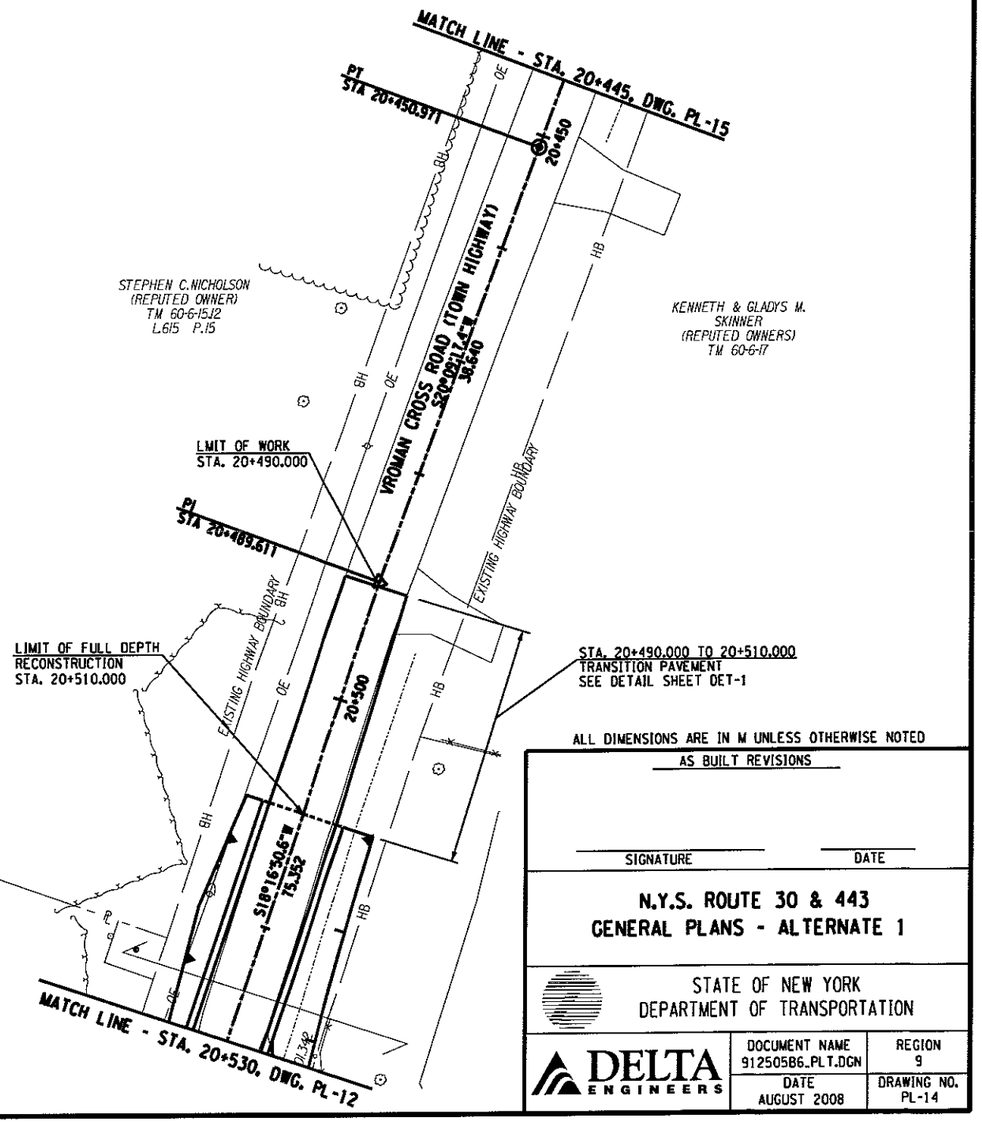
CURVE NO. 3 (N.Y.S. RTE. 30)

P.C. = 1+226.955
P.C.C. = 1+363.135
Δ = 4°01'18.9" LT.
R = 1940.000 m
L = 136.180 m
T = 68.118 m
eMAX = 6.00%



PLAN (N.Y.S. RTE. 30)

0 5 10 m



ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE _____ DATE _____

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B6_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-14

JRM ESTIMATED BY | CJM DRAFTED BY | JLS/NAY CHECKED BY | JRM DESIGNED BY | JRM JOB MANAGER | JRM IN CHARGE OF

DATE = 7/23/2008
TIME = 3:12:31 PM
FILE NAME = T:\1997\1997.104.000 RDSA\97104.03\NY RTE 443\Drawings\Highway\plans\912505B6_plt.dgn

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

ESTIMATED BY	CJM
DRAFTED BY	JLS/NAY
CHECKED BY	JRM
DESIGNED BY	CJM
JOB MANAGER	JRM
IN CHARGE OF	JRM

DATE = 7/23/2008
TIME = 4:22:18 PM
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CURVE NO. 4
(N.Y.S. RTE. 30)

P.C.C. = 1+363.135
P.C.C. = 1+425.904
Δ = 7°59'31.4" LT.
R = 450.000 m
L = 62.770 m
T = 31.436 m

CURVE NO. 4
N.Y.S. RTE. 30

HCL AND ℄ OF IMPROVEMENT

STA. 1+314.425
LIMIT OF WORK

STA. 1+294.425 TO 1+314.425
TRANSITION PAVEMENT
SEE DETAIL SHT. DET-1

JCT 443

NORTH 30

CENTURY 21
RURAL ESTATES
295-8547

CURVE NO. 3
N.Y.S. RTE. 30

LIMIT OF FULL DEPTH RECONSTRUCTION
END LANE SHIFT
N.Y.S. RTE. 30 STA. 1+294.425

N.Y.S. RTE. 30 S.H. 5086

EXISTING HIGHWAY BOUNDARY

ASPHALT GUTTER

SPEED LIMIT 30

PROPOSED R.O.W.

E 186500
N 427400

MATCH LINE - STA. 1+260, DWG. PL-14

MATCH LINE - STA. 20+445, DWG. PL-14

MATCH LINE STA. 1+370, DWG. PL-16

MATCH LINE - STA. 20+338, DWG. PL-16

PCC STA 1+363.135

PT STA 20+339.751

PC STA 20+395.475

PI STA 20+423.226

S22°16'28"E 55.725

RICHARD & SUSAN BALL
(REPUTED OWNERS)
TM 60-6-19
L.817 P.269

CURVE NO. 2
VROMAN CROSS ROAD

JOSEPH M.& CATHIE J. LUZ
(REPUTED OWNERS)
TM 60-6-18

NIAGRA MOHAWK POWER CORPORATION
(REPUTED OWNER)
TM 60-6-26

VROMAN CROSS ROAD (TOWN HIGHWAY)

CURVE NO. 2
(VROMAN CROSS ROAD)

P.C. = 20+395.475
P.T. = 20+450.971
Δ = 2°07'11.3" LT.
R = 1500.000 m
L = 55.496 m
T = 27.751 m

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B7_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-15

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

CURVE NO. 5
(N.Y.S. RTE. 30)

P.C.C. = 1+425.904
P.T. = 1+555.499
Δ = 6°03'09.7" LT.
R = 1226.758 m
L = 129.594 m
T = 64.857 m

CURVE NO. 4
N.Y.S. RTE. 30

MATCH LINE
STA. 1+370. DWG. PL-15

MATCH LINE - STA. 20+338. DWG. PL-15

EXISTING HIGHWAY BOUNDARY

CURVE NO. 5
N.Y.S. RTE. 30

1+400

PI STA 1+465.776

PCC STA 1+425.904

1+450

1+500

N.Y.S. RTE. 30
S.H. 5086

1+550

PT STA 1+555.499

STEPHEN C.NICHOLSON
(REPUTED OWNER)
TM 60-6-15.12

PI STA 20+322.905

PC STA 20+306.055

20+306 VROMAN CROSS ROAD (TOWN HIGHWAY)

HW 205885

205641

GRAVEL DRIVEWAY

RICHARD & SUSAN BALL
(REPUTED OWNERS)
TM 60-6-19
L.817 P.269

ERIC H.& KATHIE B.STEIN
REPUTED OWNERS
TM 60-6-21
L.732 P.331

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
GENERAL PLANS - ALTERNATE 1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B8_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-16

DESIGNED BY JRM | DRAFTED BY CJM | CHECKED BY JLS/NAY | ESTIMATED BY JRM | JOB MANAGER JRM | IN CHARGE OF JRM | CHECKED BY CJM

DATE = 8/1/2008
TIME = 9:13:39 AM
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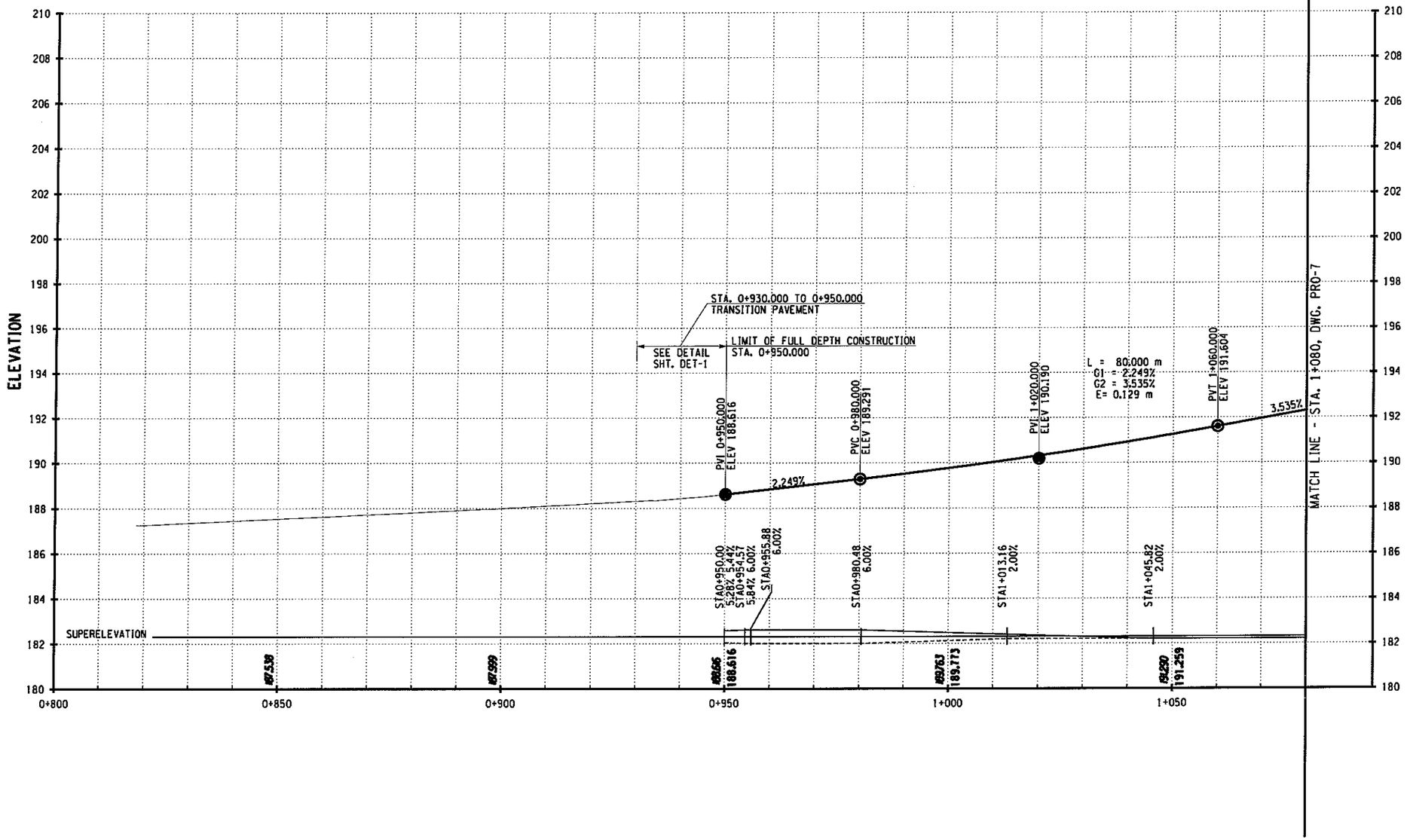
PROPOSED N.Y.S. ROUTE 30 (SOUTH)



0 10 20 m

4 2 1 0

PROFILE (N.Y.S. RTE. 30)

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE | DATE

N.Y.S. ROUTE 30 & 443
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
DATE AUGUST 2008	DRAWING NO. PRO-6

DESIGNED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY CJM
ESTIMATED BY CJM | JOB MANAGER JRM
IN CHARGE OF JRM

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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

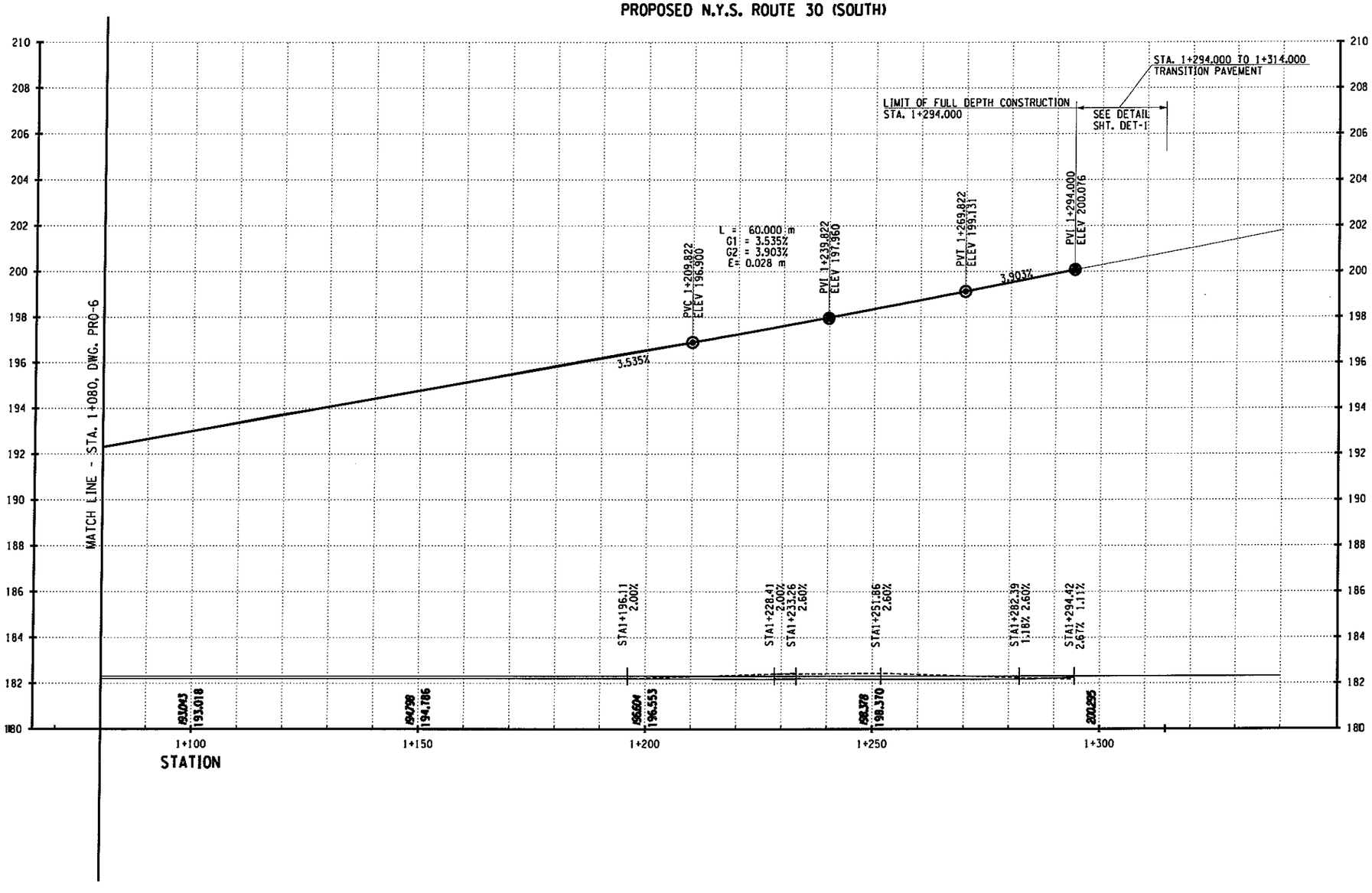
S.H. 5086 & 5444

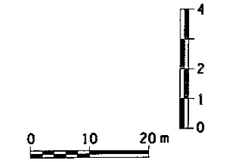
N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 30 (SOUTH)





PROFILE (N.Y.S. RTE. 30)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE _____ DATE _____

N.Y.S. ROUTE 30 & 443
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
	9
DATE	DRAWING NO.
AUGUST 2008	PRO-7

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ESTIMATED BY JRM | JOB MANAGER JRM | IN CHARGE OF JRM

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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

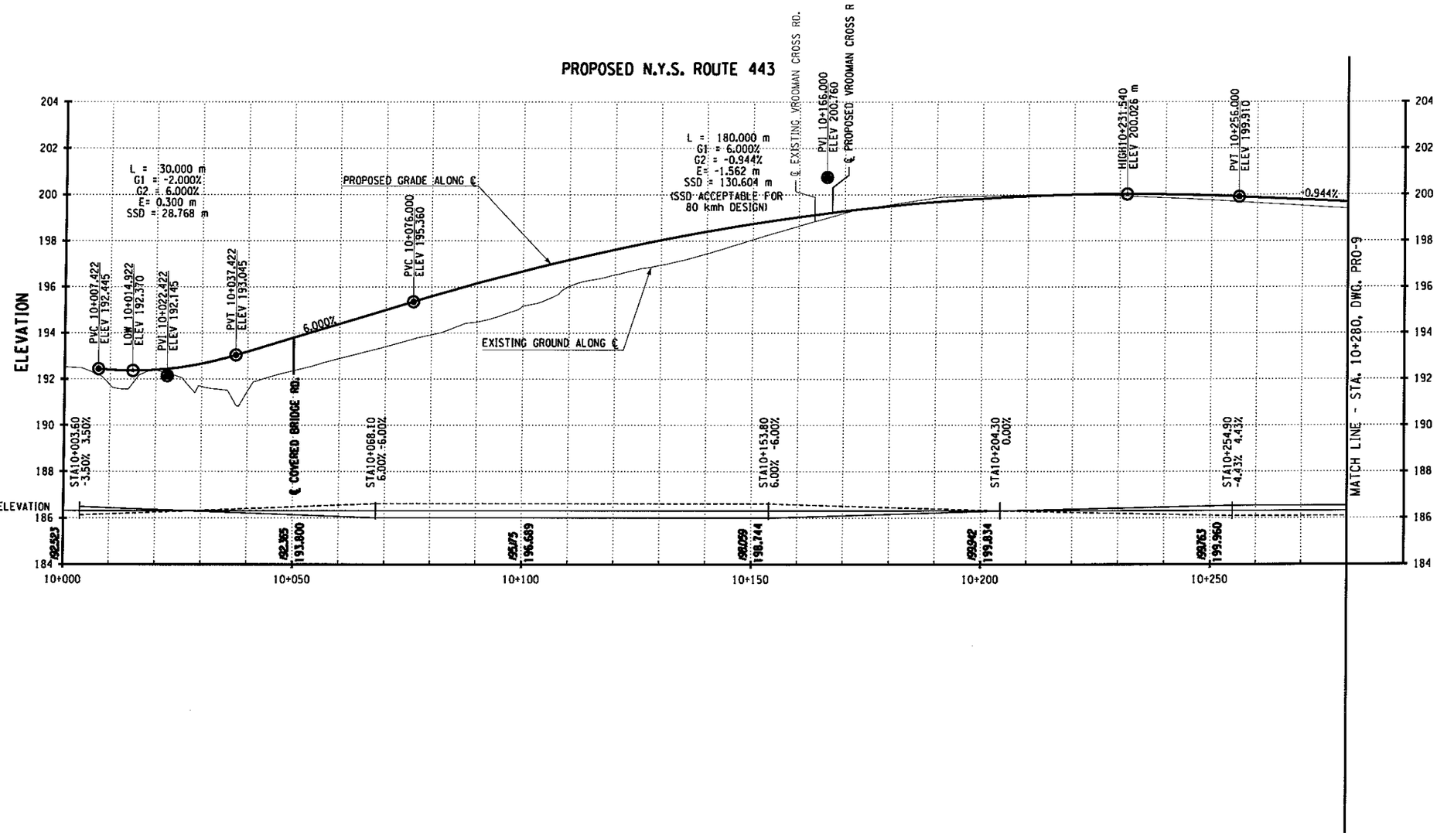
S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

PROPOSED N.Y.S. ROUTE 443



0 10 20 m

4 2 1 0

PROFILE (N.Y.S. RTE. 443)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
	9
DATE	DRAWING NO.
AUGUST 2008	PRO-8

DESIGNED BY CJM | DRAFTED BY JLS/NAY | ESTIMATED BY CJM | CHECKED BY JRM
JOB MANAGER JRM | CHECKED BY CJM
IN CHARGE OF JRM

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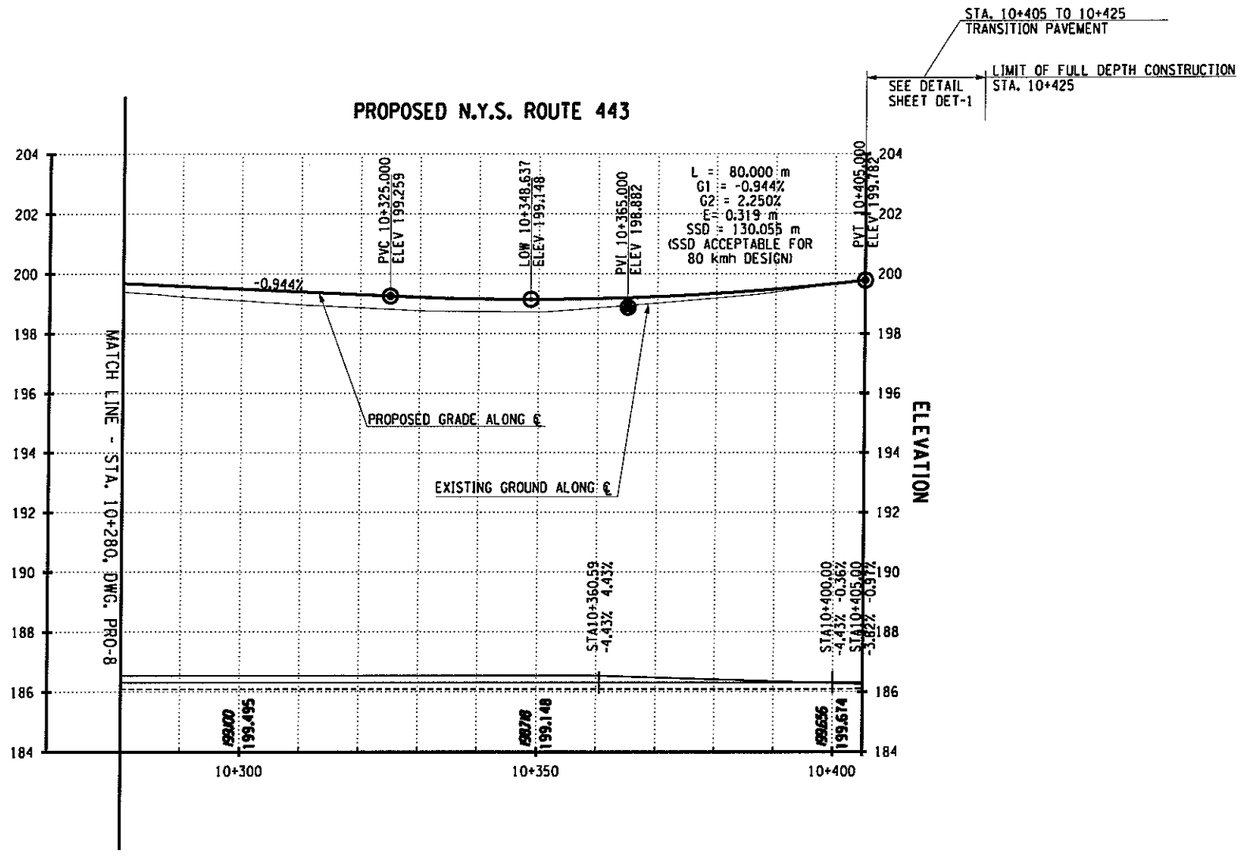
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

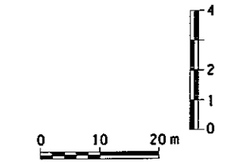
S.H. 5086 & 5444

N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.





PROFILE (N.Y.S. RTE. 443)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
	9
DATE	DRAWING NO.
AUGUST 2008	PRO-9

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY

CHECKED BY JRM | ESTIMATED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY JRM

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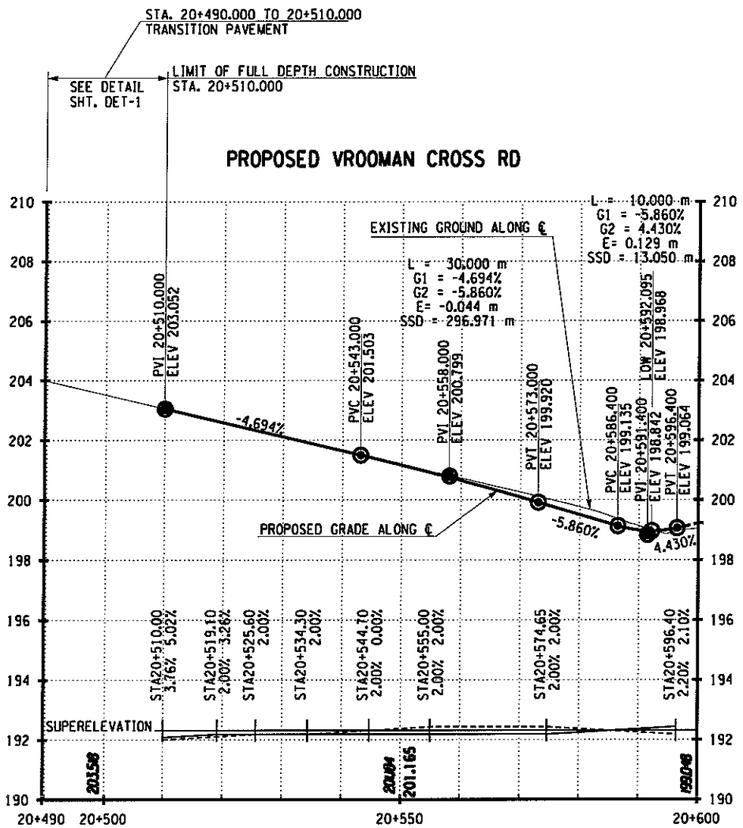
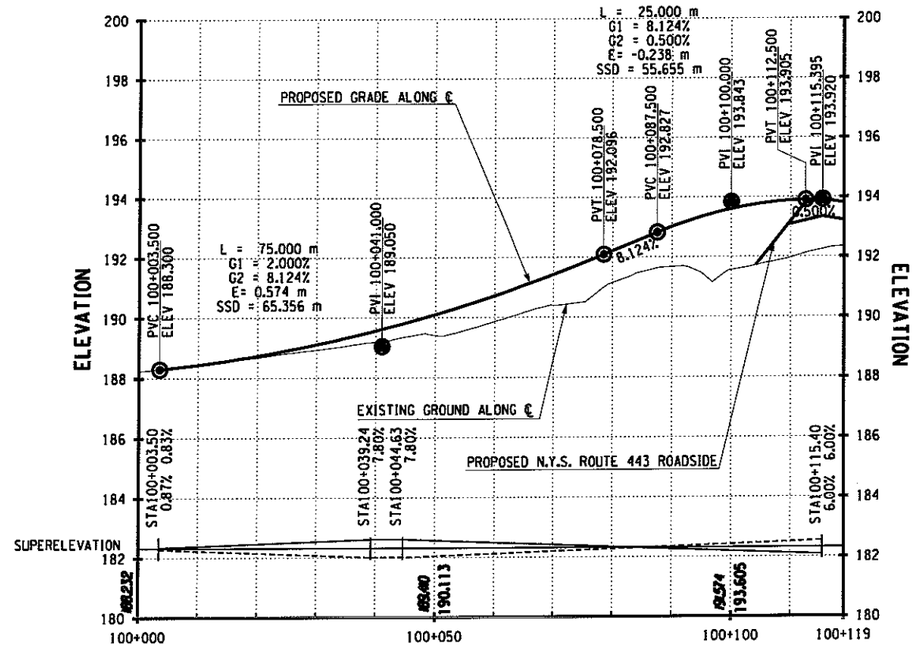
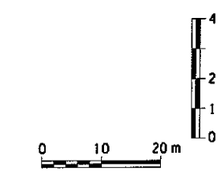
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 5086 & 5444				
N.Y.S. ROUTES 30 & 443				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		







PROFILE (VROOMAN CROSS ROAD)
PROFILE (COVERED BRIDGE ROAD)

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443

PROFILE

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
	9
DATE	DRAWING NO.
AUGUST 2008	PRO-10

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DRAFTED BY JLS/NAY CHECKED BY CJM ESTIMATED BY JRM

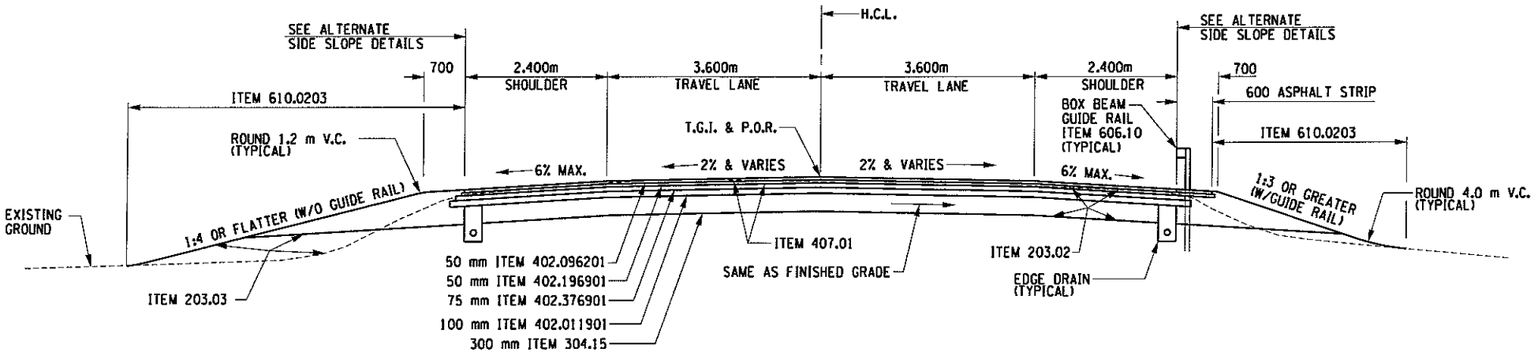
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 5086 & 5444

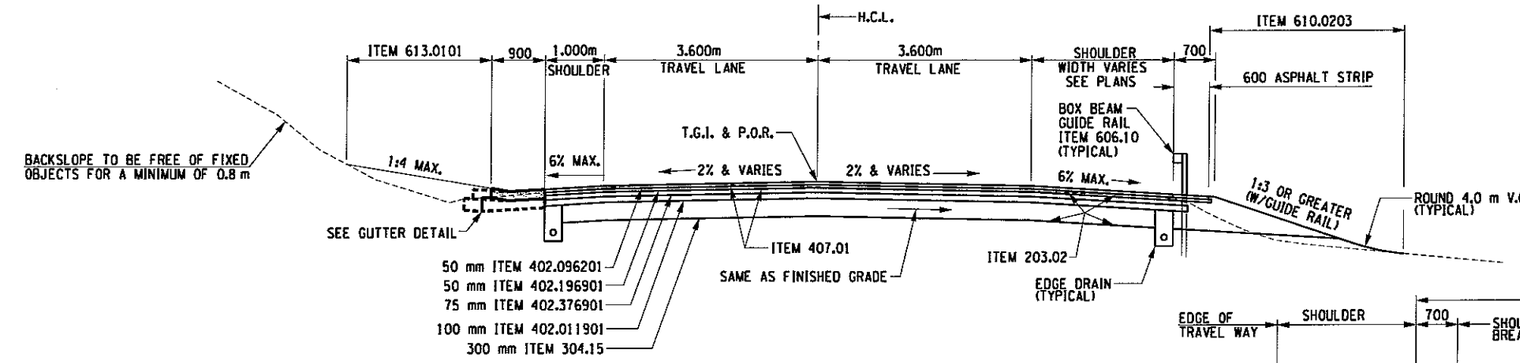
N.Y.S. ROUTES 30 & 443

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



NYS RTE 443 STA. 10+007.422 TO 10+164.0 +/-



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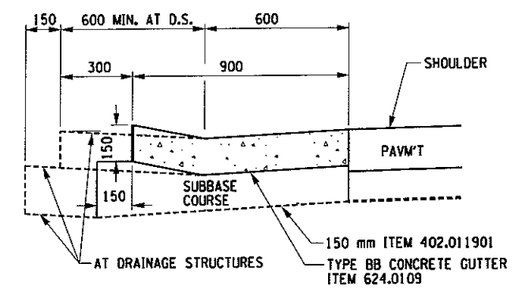
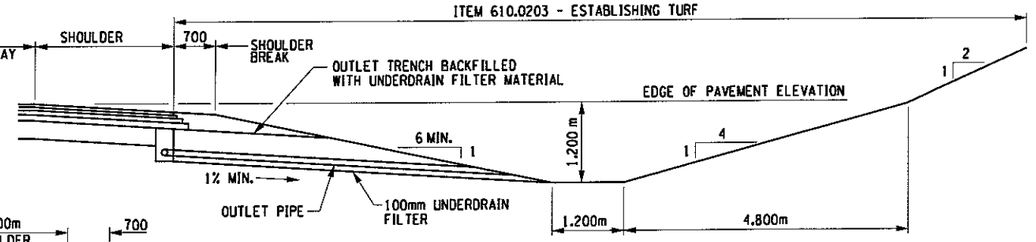
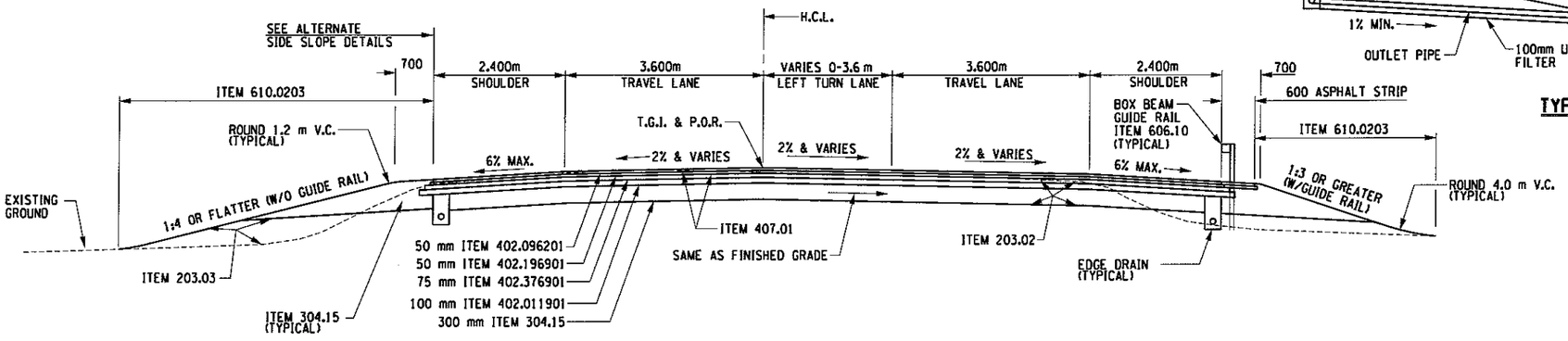


GUTTER DETAIL



TYPE 1 DITCH DETAIL



NYS RTE 30 STA. 0+950 TO 1+294.425

NOTE: TACK COAT, ITEM 407.01, TO BE PLACED BETWEEN ALL LIFTS

ITEM NO.	DESCRIPTION	UNIT	ITEM NO.	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CM			
203.03	EMBANKMENT IN PLACE	CM			
206.02	TRENCH AND CULVERT EXCAVATION	CM			
304.15	SUBBASE COURSE, OPTIONAL TYPE	CM			
402.011901	TYPE 2 F9, ASPHALT TREATED PERMEABLE BASE COURSE	MT			
402.096201	9.5mm F2, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
402.196901	19mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
402.376901	37.5mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
407.01	TACK COAT	L			
605.0901	UNDERDRAIN FILTER TYPE 1	CM			
605.1701	OPTIONAL UNDERDRAIN PIPE	M			
606.10	BOX BEAM GUIDE RAILING	M			
610.0203	ESTABLISHING TURF	SQM			
613.0101	TOPSOIL	CM			
624.0109	TYPE BB CONCRETE GUTTER	CM			

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
TYPICAL SECTIONS
RTE 30 / 443 INTERSECTION

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
9125058I_TYP.DGN	9
DATE	DRAWING NO.
AUGUST 2008	TYP-2

DESIGNED BY JRM | DRAFTED BY JLS/NAY | CHECKED BY CJM | ESTIMATED BY CJM | JOB MANAGER JRM | IN CHARGE OF JRM

DATE = 7/23/2008
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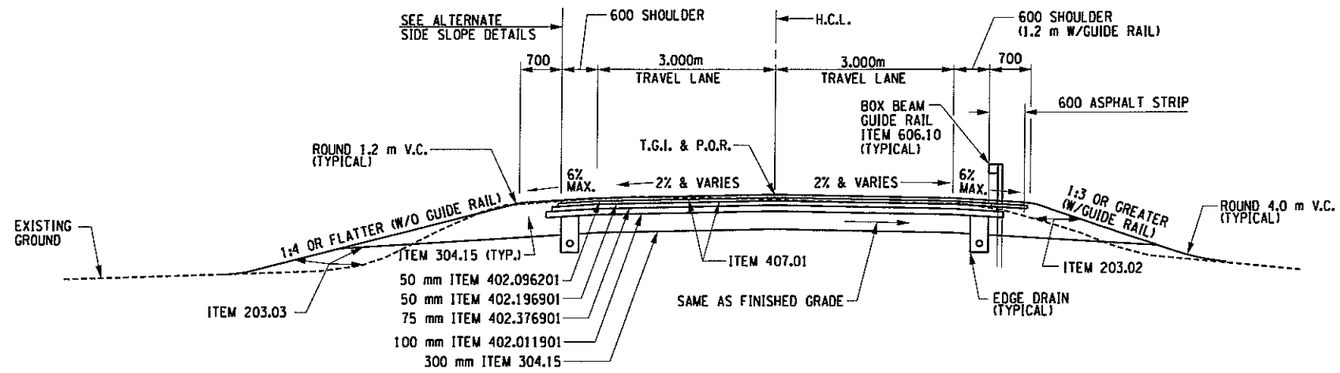
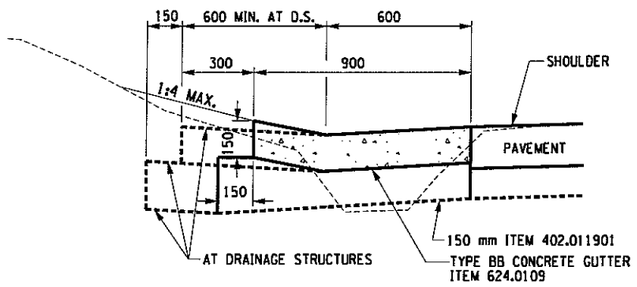
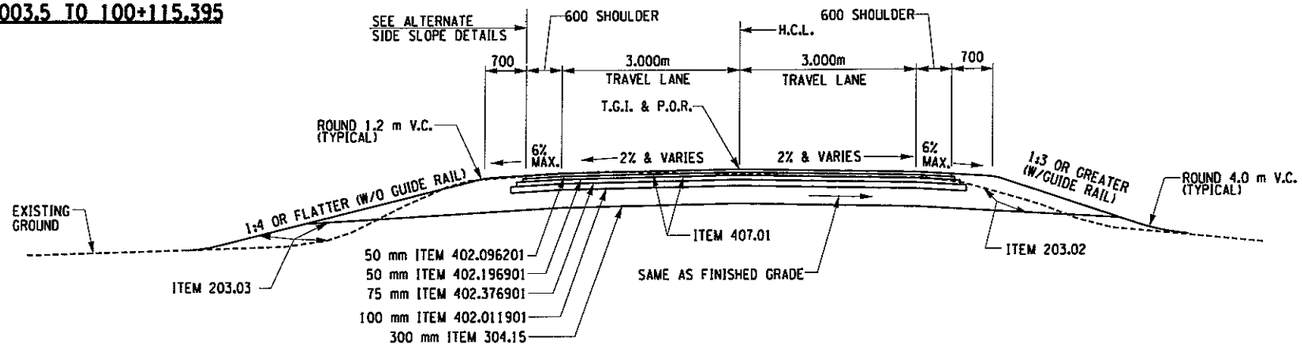
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 5086 & 5444				
N.Y.S. ROUTES 30 & 443				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		



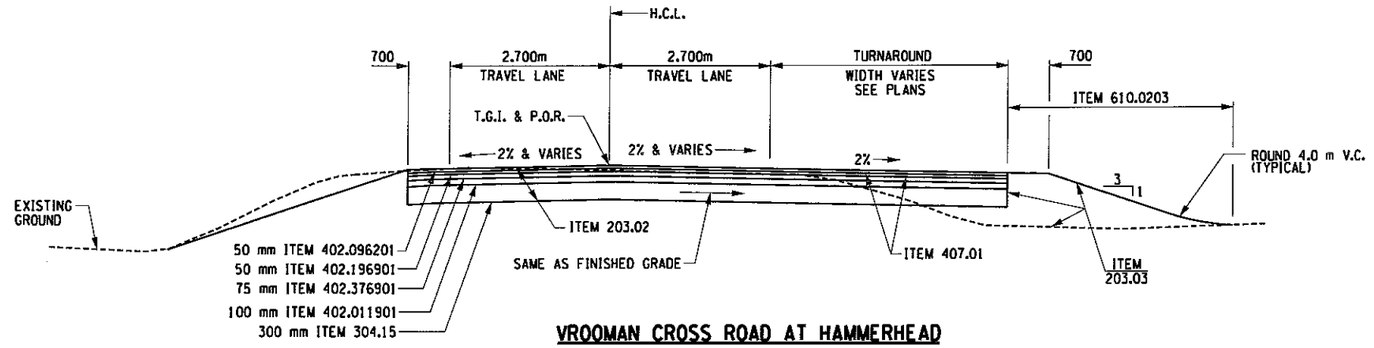
COVERED BRIDGE ROAD STA. 100+003.5 TO 100+115.395



VROOMAN CROSS ROAD LT STA. 20+544.4 TO 20+596.4



VROOMAN CROSS ROAD STA. 20+510.000 TO 20+596.400 +/-



VROOMAN CROSS ROAD AT HAMMERHEAD

NOTE: TACK COAT, ITEM 407.01, TO BE PLACED BETWEEN ALL LIFTS

ITEM NO.	DESCRIPTION	UNIT	ITEM NO.	DESCRIPTION	UNIT
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CM			
203.03	EMBANKMENT IN PLACE	CM			
206.02	TRENCH AND CULVERT EXCAVATION	CM			
304.15	SUBBASE COURSE, OPTIONAL TYPE	CM			
402.011901	TYPE 2 F9, ASPHALT TREATED PERMEABLE BASE COURSE	MT			
402.096201	9.5mm F2, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
402.196901	19mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
402.376901	37.5mm F9, SUPERPAVE HMA, 60 SERIES COMPACTION	MT			
407.01	TACK COAT	L			
605.0901	UNDERDRAIN FILTER TYPE 1	CM			
605.1701	OPTIONAL UNDERDRAIN PIPE	M			
606.10	BOX BEAM GUIDE RAILING	M			
610.0203	ESTABLISHING TURF	SQM			
613.0101	TOPSOIL	CM			
624.0109	TYPE BB CONCRETE GUTTER	CM			

ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTE 30 & 443
TYPICAL SECTIONS
RTE 30 / 443 INTERSECTION

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505B2_TYP.DGN	9
DATE	DRAWING NO.
AUGUST 2008	TYP-3

JRM — ESTIMATED BY
CJM — DRAFTED BY
JLS/NAY — CHECKED BY
JRM — DESIGNED BY
JRM — JOB MANAGER
IN CHARGE OF

DATE = 7/23/2008
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APPENDIX J

Non-Feasible Alternatives – NYS Route 30 & 30A

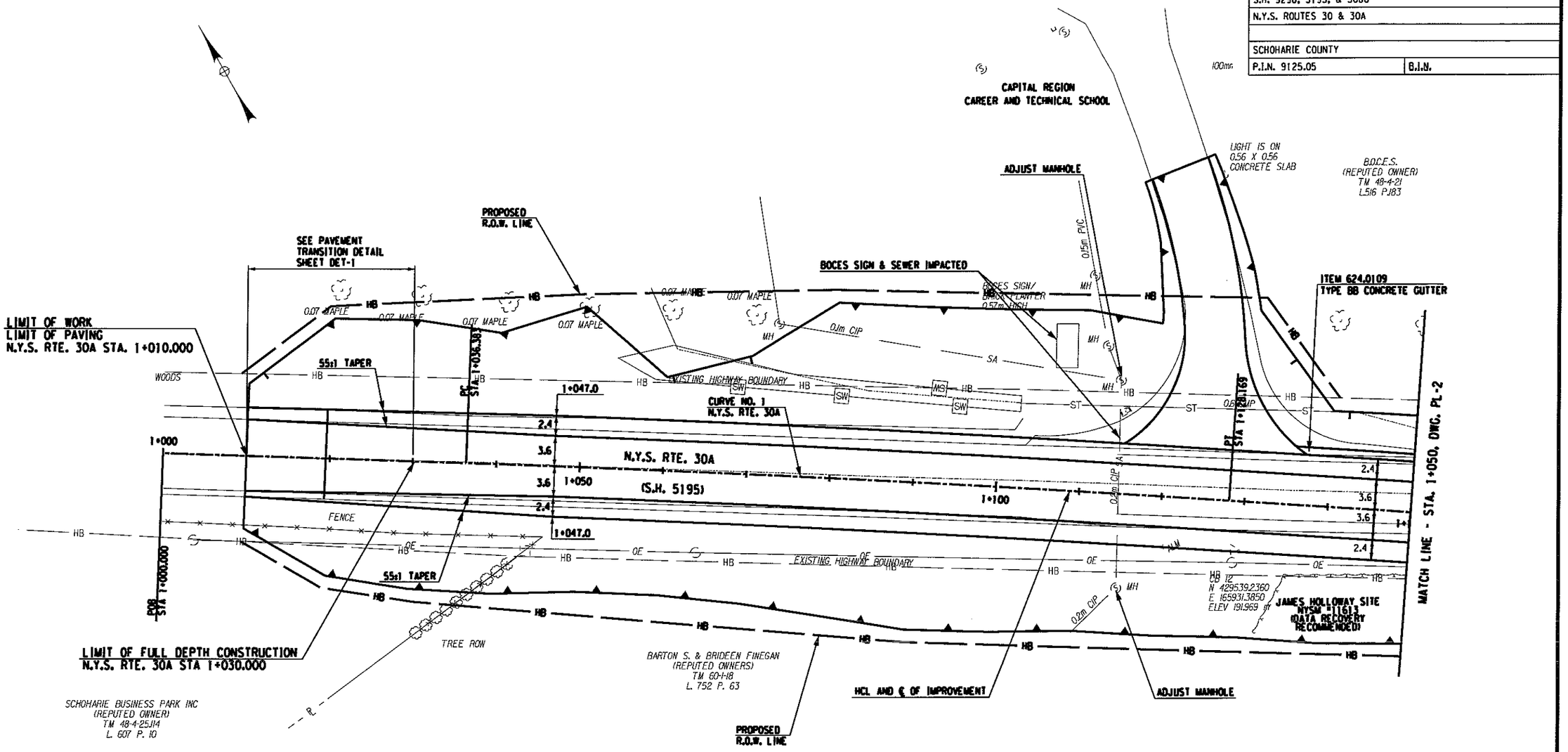
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



CURVE 1 (RTE 30A)
P.C. = 1+036.383
P.T. = 1+128.169
Δ = 2°03'15.4 RT.
R = 2560.000 m
L = 91.786 m
T = 45.898 m
eMAX = 6.00%

PLAN (N.Y.S. RTE. 30A)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A11_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-1

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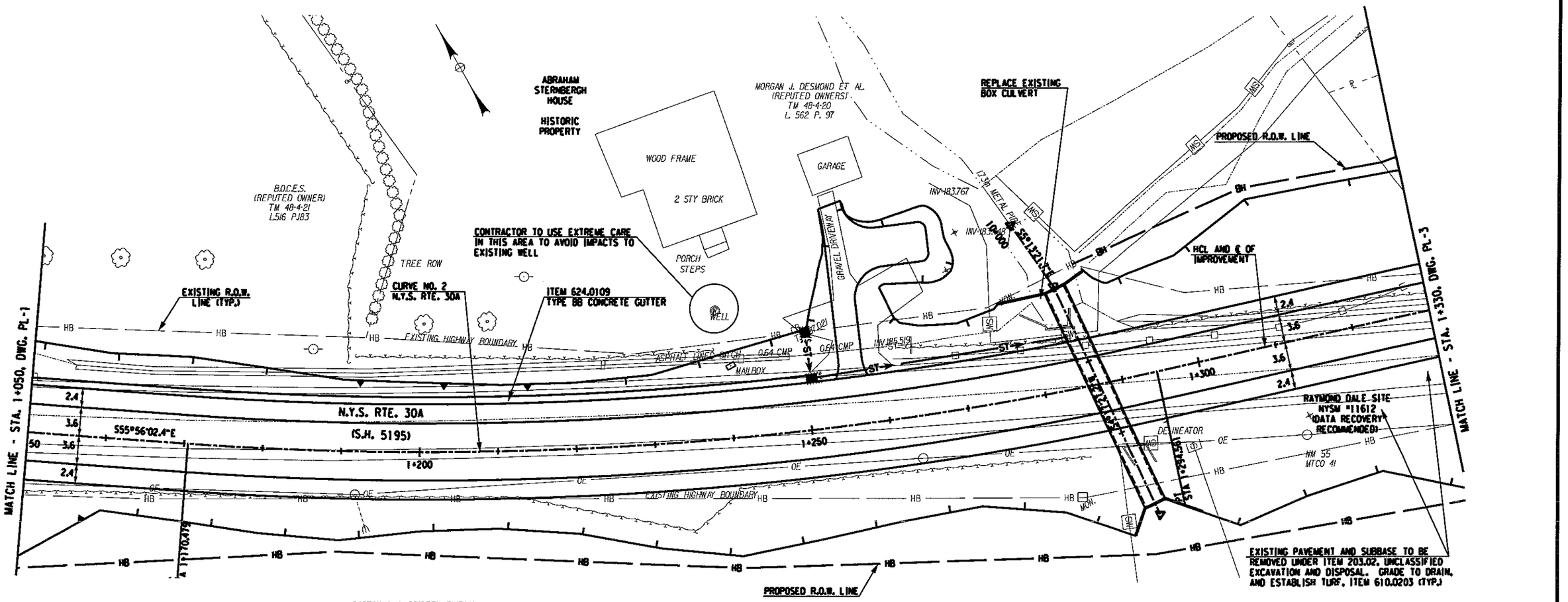
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 30A)

0 5 10 m

CURVE NO. 2 (N.Y.S. RTE. 30A)
P.C. = 1+170.479
P.T. = 1+294.561
Δ = 16°16'06.7" LT.
R = 437.000 m
L = 124.081 m
T = 62.461 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
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IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | DRAFTED BY JLS/NAY | ESTIMATED BY CJM | CHECKED BY JRM | CHECKED BY

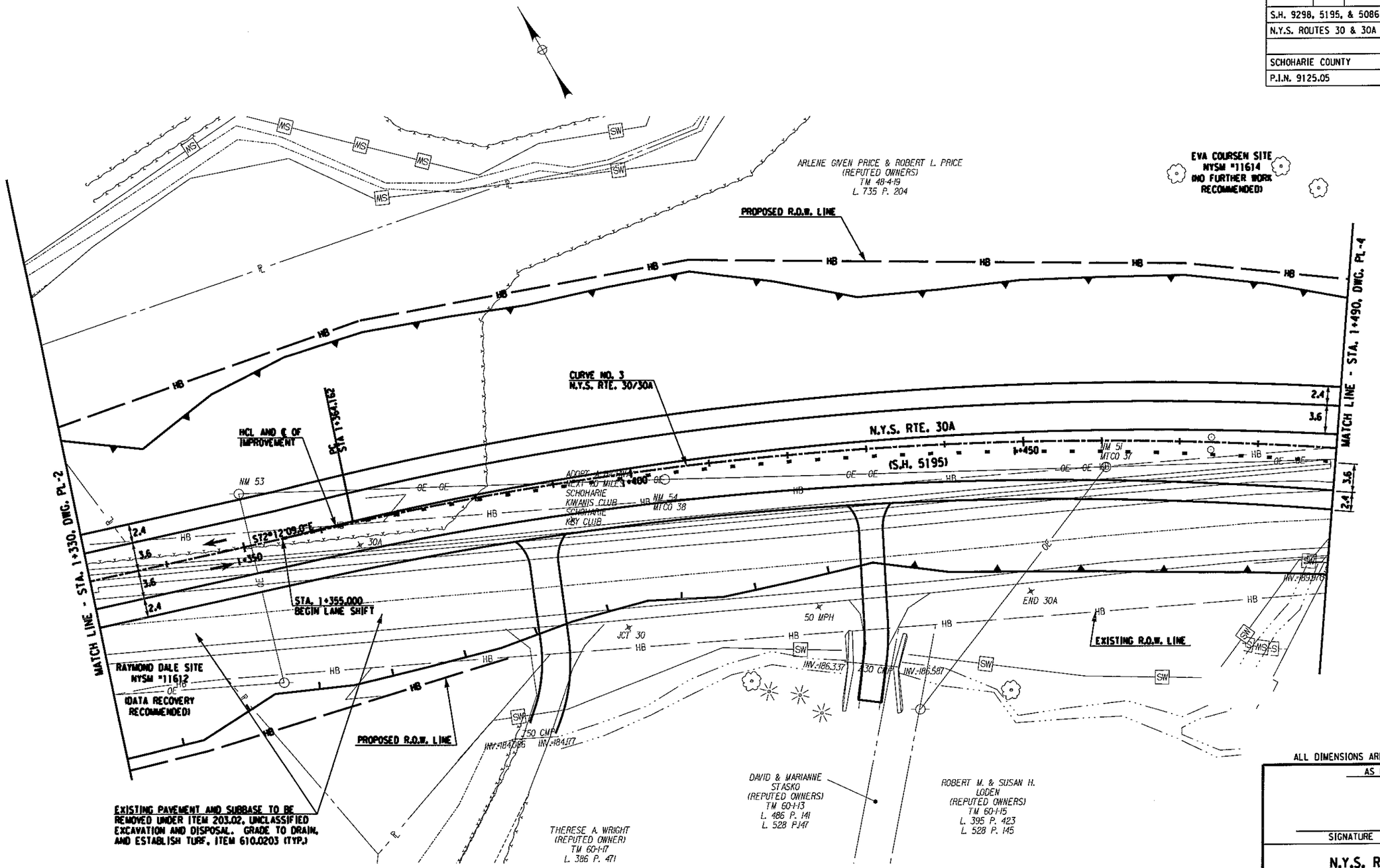
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 30A)

0 5 10 m

CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A13_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-3

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JLS/NAY | DRAFTED BY CJM | ESTIMATED BY JRM

DATE = 7/23/2008
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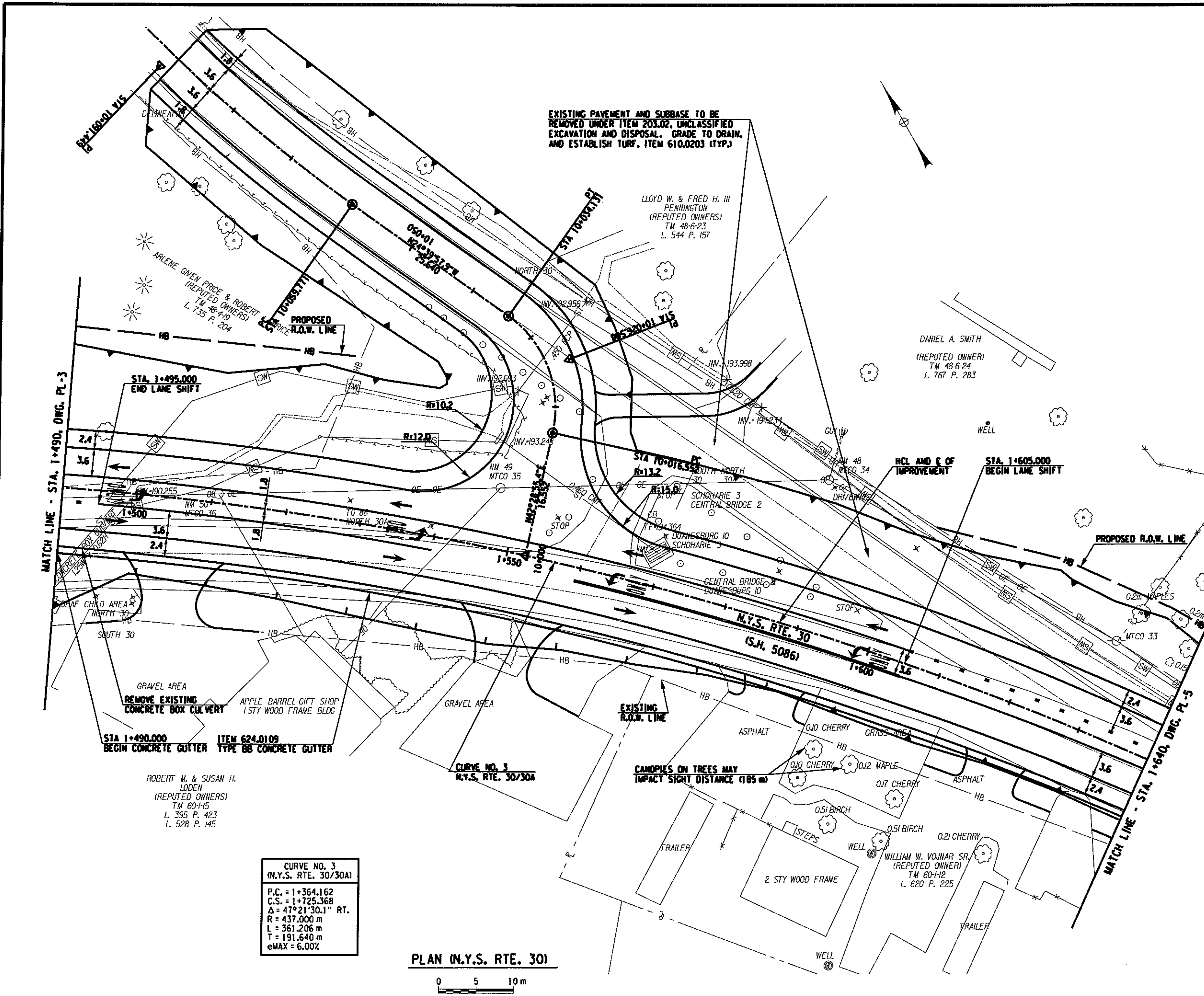
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYP.)
LLOYD W. & FRED H. III PENNINGTON (REPUTED OWNERS) TM 48-6-23 L. 544 P. 157
ARLENE GWEN PRICE & ROBERT PRICE (REPUTED OWNERS) TM 48-4-19 L. 735 P. 204
DANIEL A. SMITH (REPUTED OWNER) TM 48-6-24 L. 767 P. 283
PROPOSED R.O.W. LINE
STA. 1+495.000 END LANE SHIFT
STA. 1+605.000 BEGIN LANE SHIFT
HCL AND ℄ OF IMPROVEMENT
MATCH LINE - STA. 1+490, DWG. PL-3
MATCH LINE - STA. 1+640, DWG. PL-5
N.Y.S. RTE. 30 (S.H. 5086)
GRAVEL AREA
REMOVE EXISTING CONCRETE BOX CULVERT
APPLE BARREL GIFT SHOP 1 STY WOOD FRAME BLDG
STA 1+490.000 BEGIN CONCRETE GUTTER
ITEM 624.0109 TYPE BB CONCRETE GUTTER
EXISTING R.O.W. LINE
CURVE NO. 3 N.Y.S. RTE. 30/30A
CANOPIES ON TREES MAY IMPACT SIGHT DISTANCE (185 m)
ROBERT M. & SUSAN H. LODEN (REPUTED OWNERS) TM 60-1-15 L. 395 P. 423 L. 528 P. 145
WILLIAM W. VOJNAR SR. (REPUTED OWNER) TM 60-1-12 L. 620 P. 225
2 STY WOOD FRAME
TRAILER
WELL
ASPHALT
GRASS AREA
DEAF CHILD AREA

CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE | DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A14_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-4

IN CHARGE OF JRM — JOB MANAGER JRM — DESIGNED BY CJM — CHECKED BY JRM — ESTIMATED BY CJM — DRAFTED BY JLS/NAY — CHECKED BY JRM

DATE = 7/23/2008
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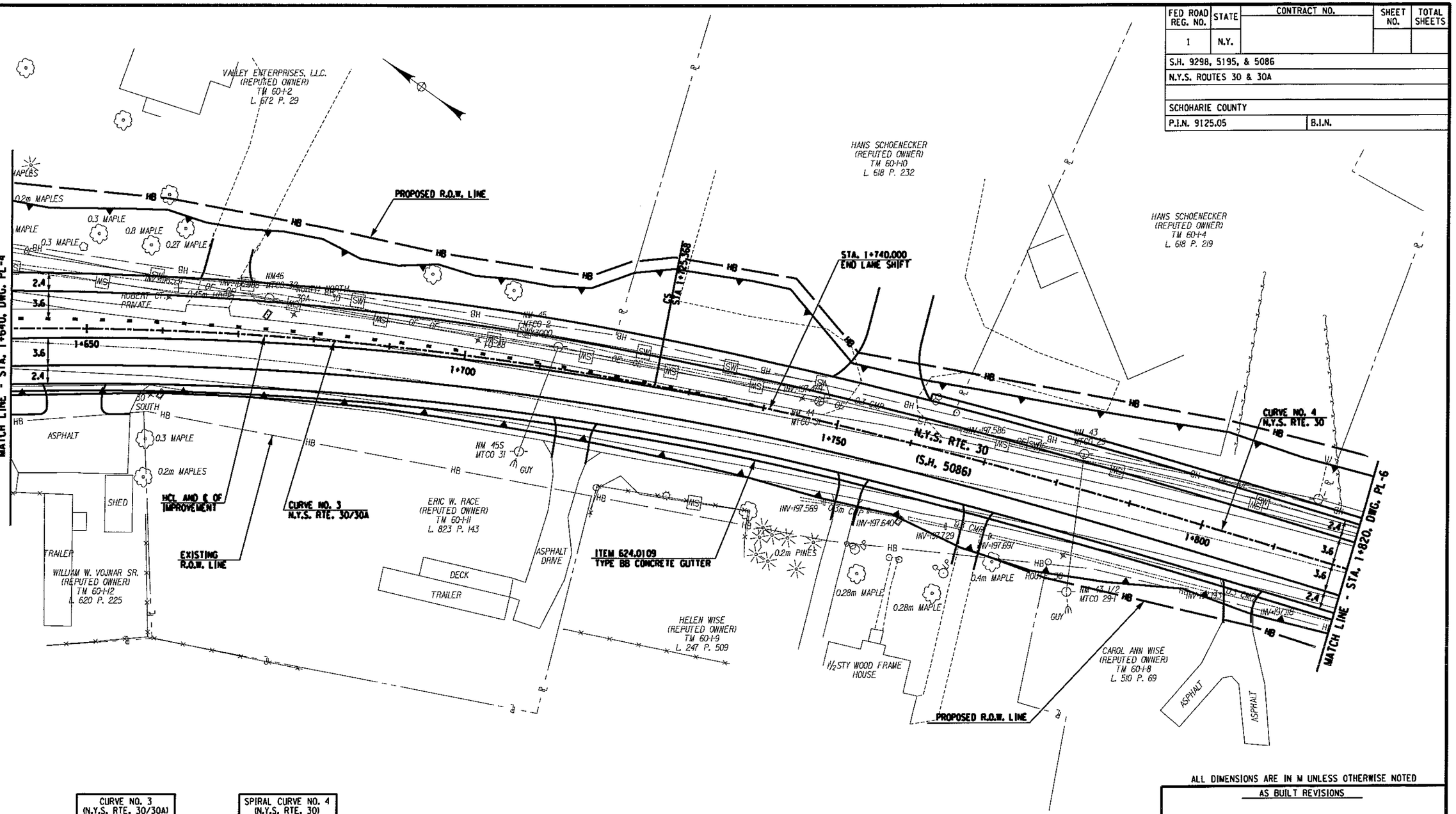
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



CURVE NO. 3 (N.Y.S. RTE. 30/30A)
P.C. = 1+364.162
C.S. = 1+725.368
Δ = 47°21'30.1" RT.
R = 437.000 m
L = 361.206 m
T = 191.640 m
eMAX = 6.00%

SPIRAL CURVE NO. 4 (N.Y.S. RTE. 30)
C.S. = 1+725.368
S.T. = 1+825.368
Δ = 6°33'20.1" RT.
ENT. R = 437.000 m
EXIT R = 0.0 m
T_L = 66.713 m
T_S = 33.375 m
L.S. = 100.000 m

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A15_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-5

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JLS/NAY | DRAFTED BY CJM | ESTIMATED BY JRM

DATE = 7/23/2008
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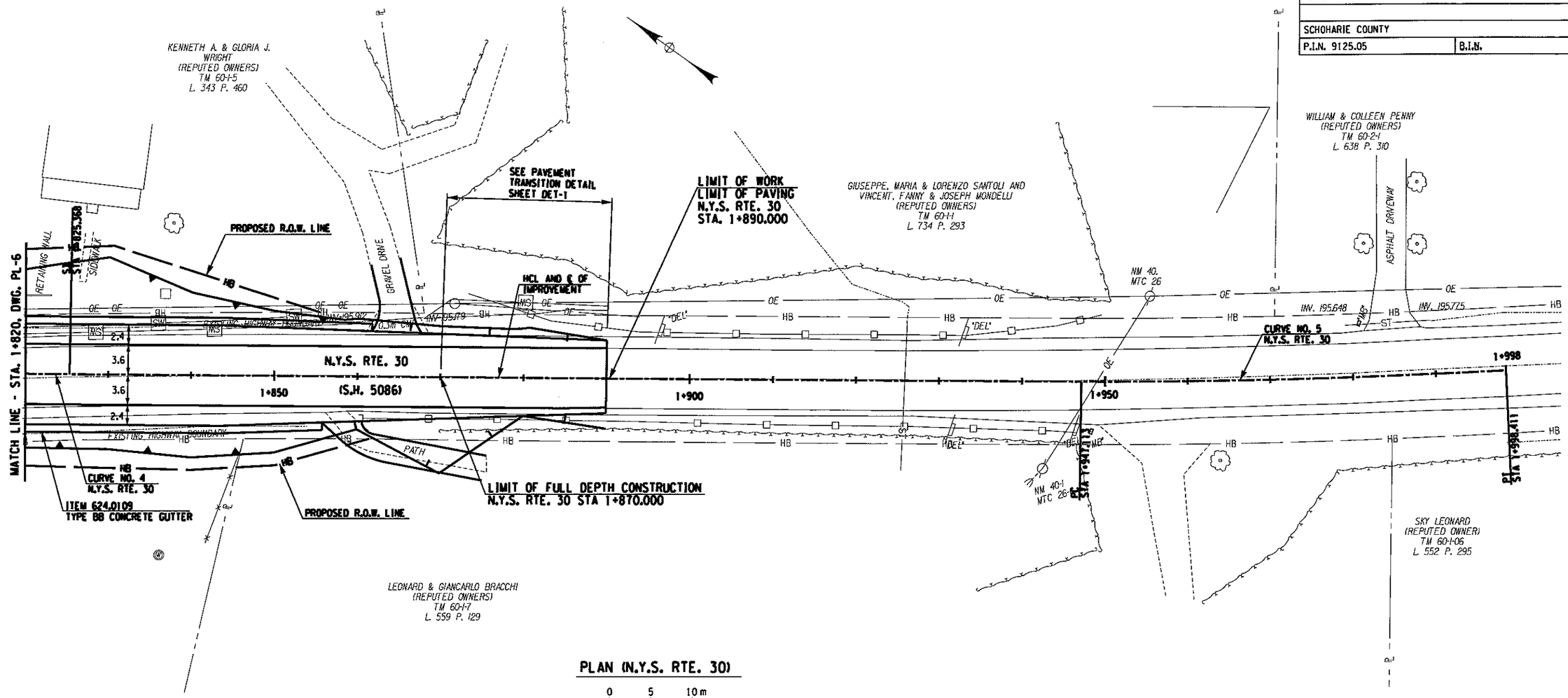
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 30)

0 5 10 m

SPIRAL CURVE NO. 4 (N.Y.S. RTE. 30)
C.S. = 1+725.368
S.T. = 1+825.368
Δ = 6°33'20.1" RT.
ENT. R = 437.000 m
EXIT R = 0.0 m
T_L = 66.713 m
T_S = 33.375 m
L.S. = 100.000 m

CURVE NO. 5 (N.Y.S. RTE. 30)
P.C. = 1+947.113
P.T. = 1+998.411
Δ = 3°21'56.7" LT.
R = 873.250 m
L = 51.298 m
T = 25.656 m
eMAX = 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1B

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A16_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-6

IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY JRM
ESTIMATED BY CJM DRAFTED BY JLS/NAY CHECKED BY JRM

DATE = 7/23/2008
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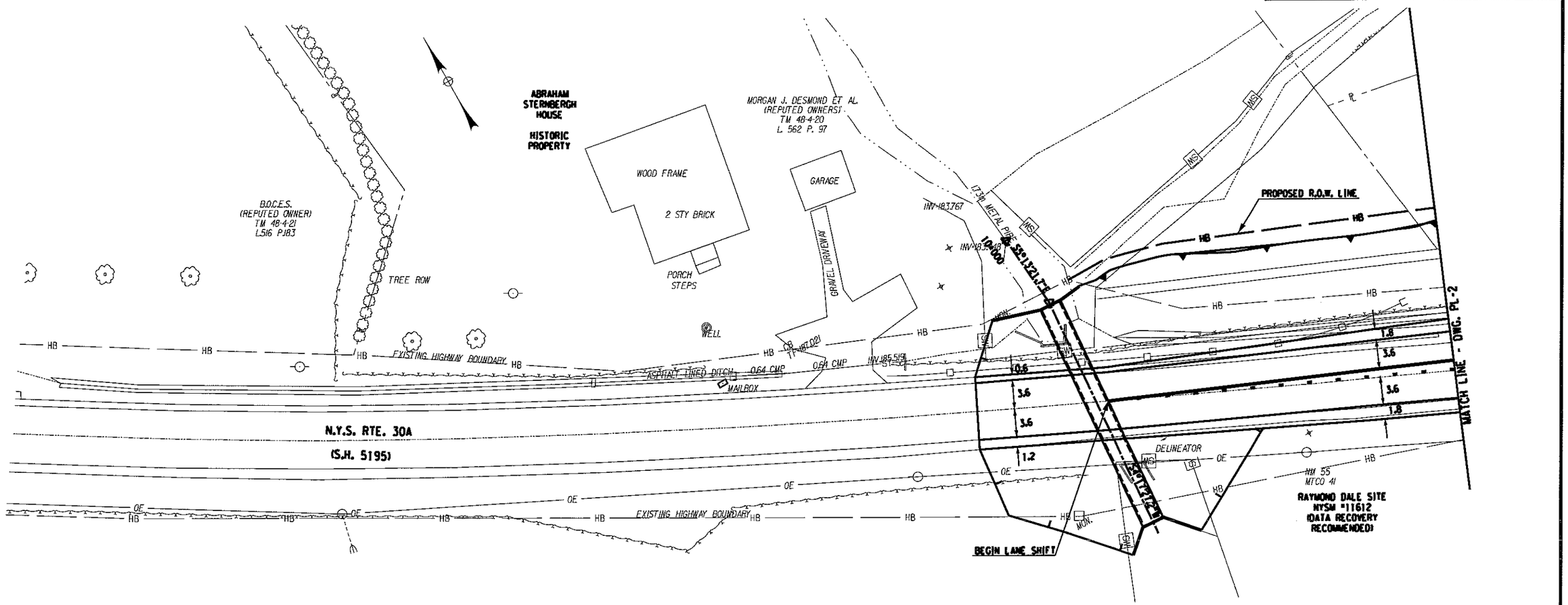
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



PLAN (N.Y.S. RTE. 30A)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A111_PLT.DGN	9
DATE: AUGUST 2008	DRAWING NO.: PL-1

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JRM | ESTIMATED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY JRM

DATE = 7/23/2008
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FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.

JRM ESTIMATED BY ____ CJM DRAFTED BY ____ JLS/NAY CHECKED BY ____ JRM

IN CHARGE OF ____ JRM JOB MANAGER ____ JRM DESIGNED BY ____ CJM CHECKED BY ____

DATE = 7/23/2008
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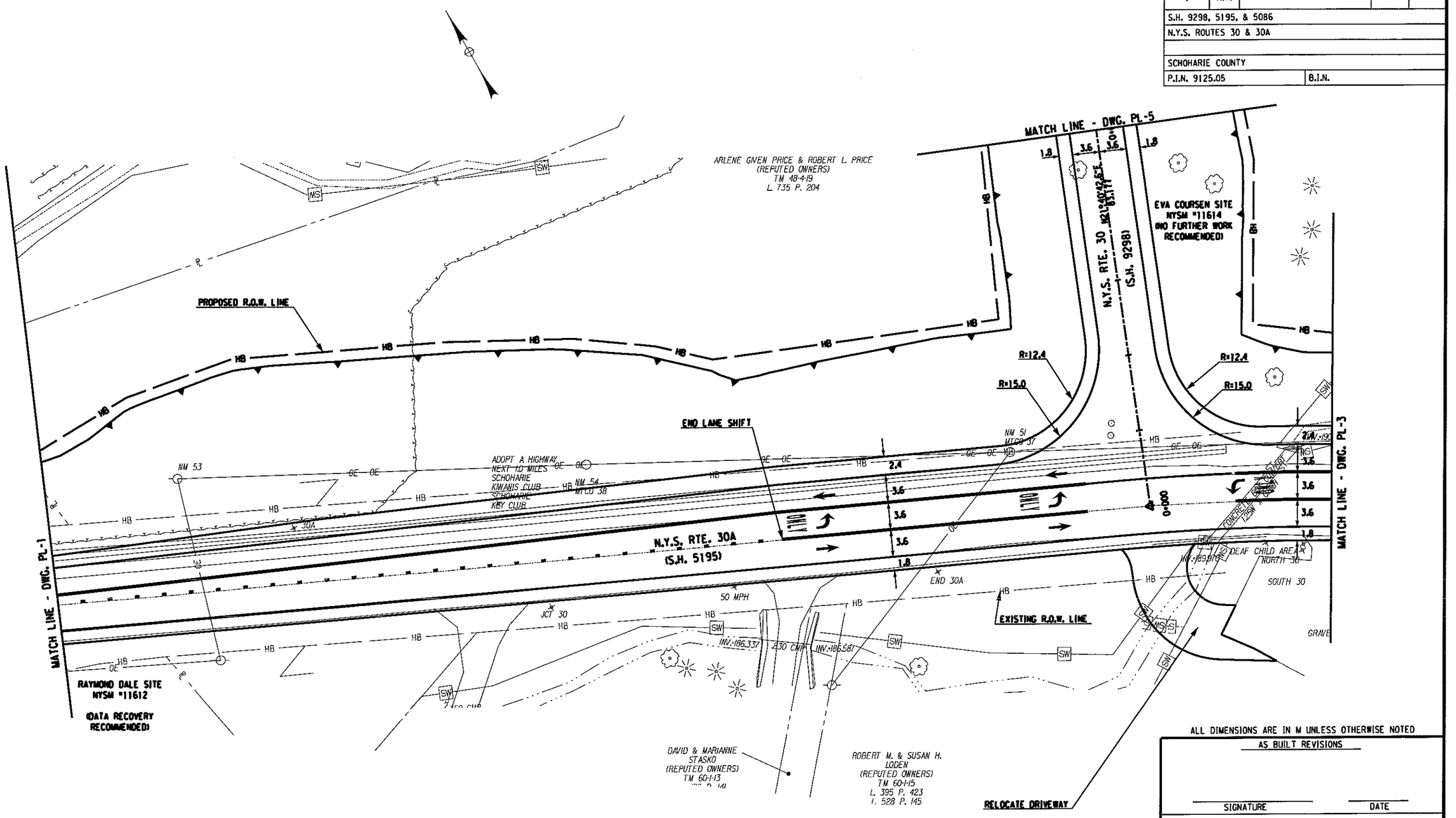


PLAN (N.Y.S. RTE. 30A)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
9125054112_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-2

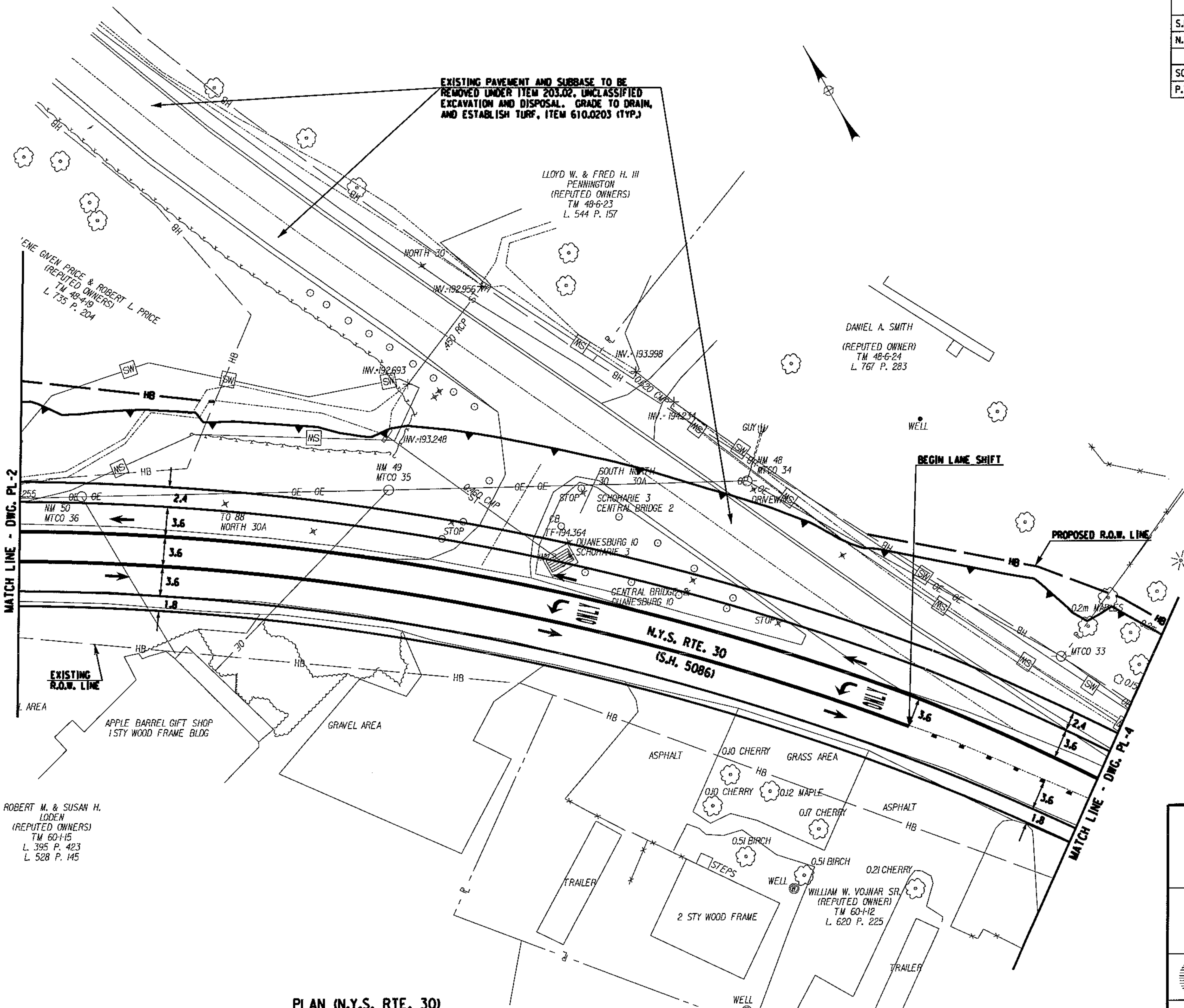
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 | B.I.N.



EXISTING PAVEMENT AND SUBBASE TO BE REMOVED UNDER ITEM 203.02, UNCLASSIFIED EXCAVATION AND DISPOSAL. GRADE TO DRAIN, AND ESTABLISH TURF, ITEM 610.0203 (TYP.)
LLOYD W. & FRED H. III PENNINGTON (REPUTED OWNERS) TM 48-6-23 L. 544 P. 157
DANIEL A. SMITH (REPUTED OWNER) TM 48-6-24 L. 767 P. 283
BEGIN LANE SHIFT
PROPOSED R.O.W. LINE
MATCH LINE - DWG. PL-2
MATCH LINE - DWG. PL-4
N.Y.S. RTE. 30 (S.H. 5086)
EXISTING R.O.W. LINE
APPLE BARREL GIFT SHOP 1 STY WOOD FRAME BLDG
GRAVEL AREA
ASPHALT
GRASS AREA
ROBERT M. & SUSAN H. LODEN (REPUTED OWNERS) TM 60-1-15 L. 395 P. 423 L. 528 P. 145
WILLIAM W. VOJNAR SR. (REPUTED OWNER) TM 60-1-12 L. 620 P. 225
2 STY WOOD FRAME
TRAILER
WELL
STEPS

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLANS - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A113_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-3

IN CHARGE OF JRM | JOB MANAGER JRM | DESIGNED BY CJM | CHECKED BY JRM | ESTIMATED BY CJM | DRAFTED BY JLS/NAY | CHECKED BY JRM

DATE = 7/23/2008
TIME = 4:15:20 PM
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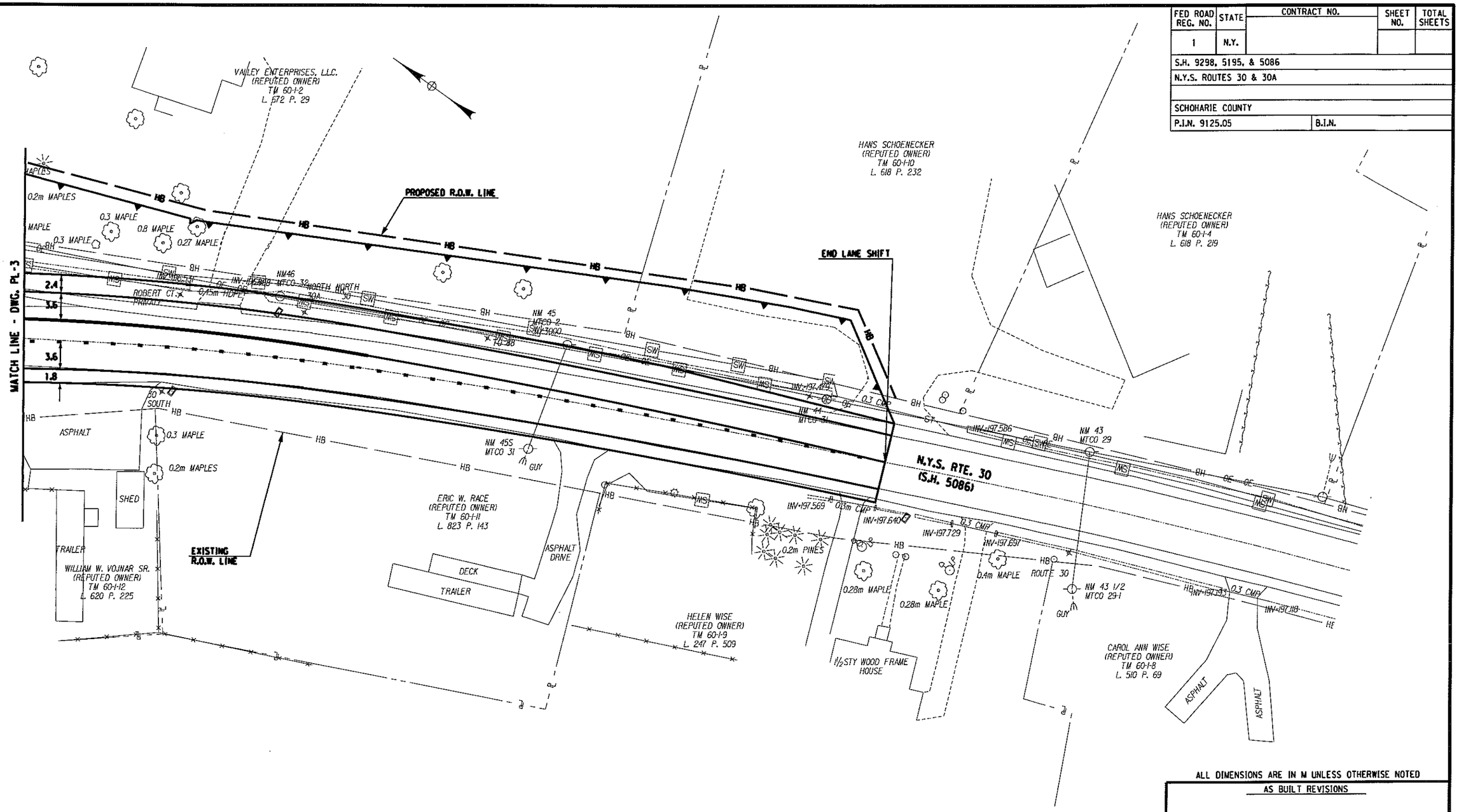
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			

S.H. 9298, 5195, & 5086

N.Y.S. ROUTES 30 & 30A

SCHOHARIE COUNTY

P.I.N. 9125.05 B.I.N.



PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A114_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-4

IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY JRM
DRAFTED BY JLS/NAY CHECKED BY CJM ESTIMATED BY JRM CHECKED BY

DATE = 7/23/2008
TIME = 4:15:47 PM
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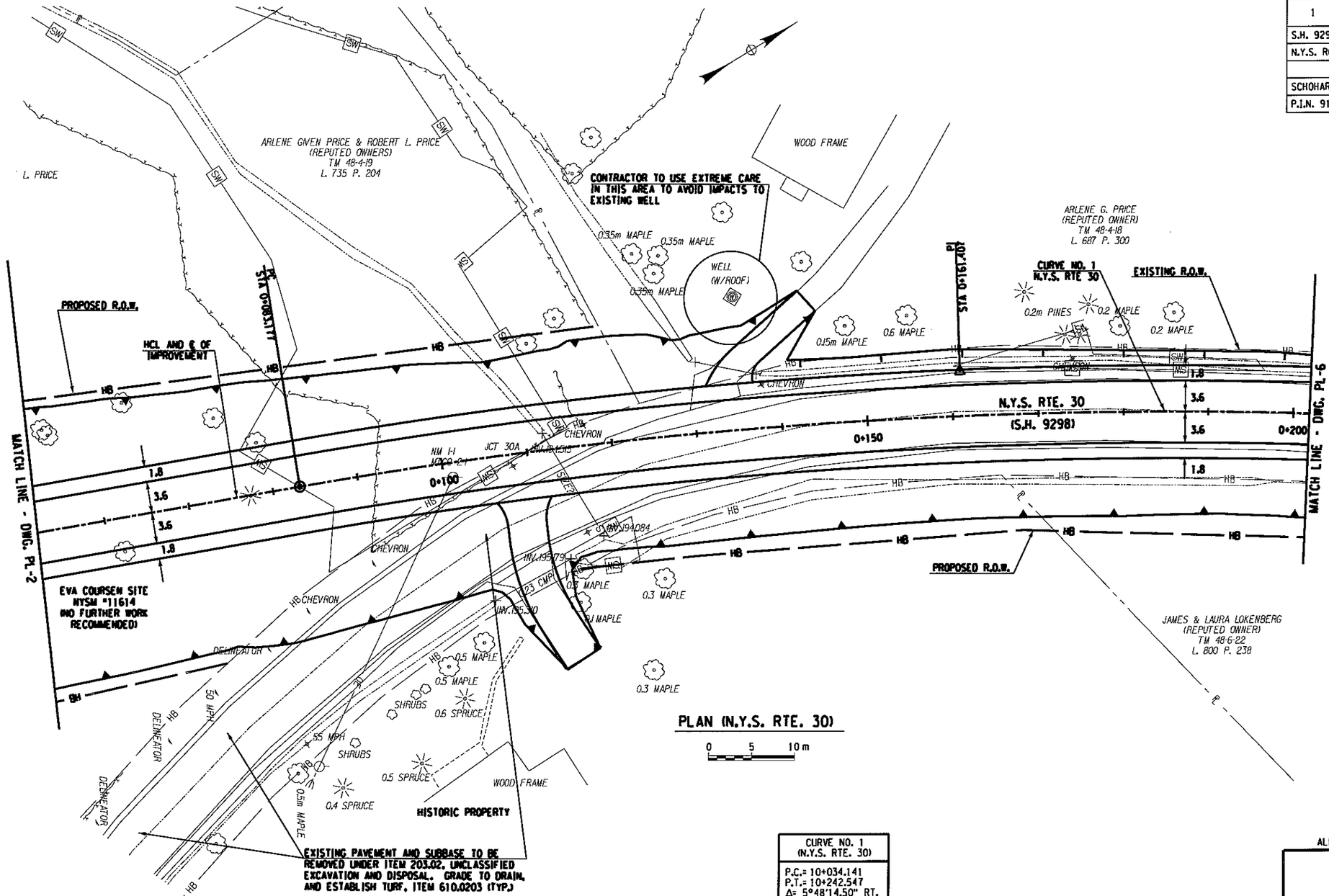
FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 9298, 5195, & 5086				
N.Y.S. ROUTES 30 & 30A				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		



PLAN (N.Y.S. RTE. 30)

0 5 10 m

CURVE NO. 1 (N.Y.S. RTE. 30)
P.C.= 10+034.141
P.T.= 10+242.547
Δ= 5°48'14.50" RT.
R= 800.000 m
L= 81.040 m
T= 40.554 m
eMAX= 6.00%

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A115_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-5

DATE = 7/23/2008
TIME = 4:16:13 PM
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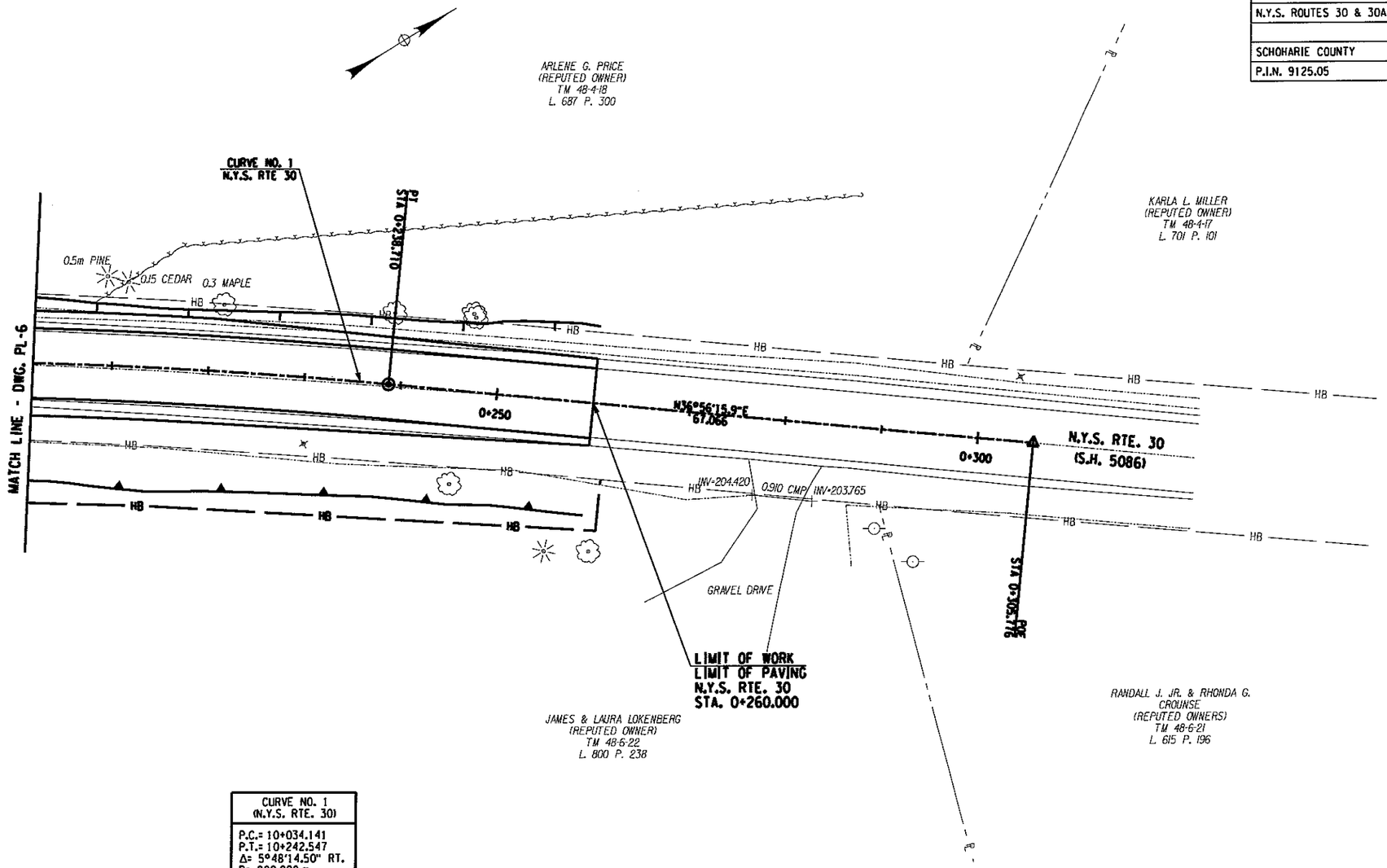
IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM DRAFTED BY JLS/NAY CHECKED BY JRM CHECKED BY

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.			
S.H. 9298, 5195, & 5086				
N.Y.S. ROUTES 30 & 30A				
SCHOHARIE COUNTY				
P.I.N. 9125.05		B.I.N.		



CURVE NO. 1 (N.Y.S. RTE. 30)
P.C.= 10+034.141
P.T.= 10+242.547
Δ= 5°48'14.50" RT.
R= 800.000 m
L= 81.040 m
T= 40.554 m
eMAX= 6.00%

PLAN (N.Y.S. RTE. 30)

0 5 10 m

ALL DIMENSIONS ARE IN M UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

N.Y.S. ROUTES 30 & 30A
GENERAL PLAN - ALT 1C

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

DELTA ENGINEERS

DOCUMENT NAME	REGION
912505A116_PLT.DGN	9
DATE	DRAWING NO.
AUGUST 2008	PL-6

DATE = 7/23/2008
TIME = 4:16:37 PM
FILE NAME = T:\1997\1997.104.000 RDSA\97104.03\Design Report\updated dr plans 0207\912505A116_pl+.dgn

IN CHARGE OF JRM JOB MANAGER JRM DESIGNED BY CJM CHECKED BY JRM
ESTIMATED BY CJM DRAFTED BY JLS/NAY CHECKED BY JRM

APPENDIX K

Pedestrian Generator Checklists

Attachment A RTE 30/304

PEDESTRIAN GENERATOR CHECKLIST

Note: The term "generator" in this document refers to both pedestrian generators (where pedestrians originate) and destinations (where pedestrians travel to)

A check of yes indicates a potential need to accommodate pedestrians and coordination with the Regional Bicycle and Pedestrian Coordinator is necessary during project scoping. Answers to the following questions should be checked with the local municipality to ensure accuracy.

1.	Is there an existing or planned sidewalk, trail, or pedestrian crossing facility?	YES☐ NO☒
2.	Are there bus stops, transit stations, or depots/terminals located in or within 800 m of the project area?	YES☐ NO☒
3.	Is there more than occasional pedestrian activity? Evidence of pedestrian activity may include a worn path.	YES☐ NO☒
4.	Are there existing or approved plans for generators of pedestrian activity in or within 800 m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as schools, parks, playgrounds, places of employment, places of worship, post offices, municipal buildings, restaurants, shopping centers or other commercial areas, or multiuse paths?	YES☐ NO☒
5.	Are there existing or approved plans for seasonal generators of pedestrian activity in or within 800 m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as ski resorts, state parks, camps, amusement parks?	YES☐ NO☒
6.	Is the project located in a residential area within 800 m of existing or planned pedestrian generators such as those listed in #4?	YES☐ NO☒
7.	From record plans, were pedestrian facilities removed during a previous highway reconstruction project?	YES☐ NO☒
8.	Did a study of secondary impacts indicate that the project promotes or is likely to promote commercial and/or residential development within the intended life cycle of the project?	YES☐ NO☒
9.	Does the community's comprehensive plan call for development of pedestrian facilities in the area?	YES☐ NO☒

Note: This checklist should be revisited due to a project delay or if site conditions or local planning changes during the project development process.

Attachment A RTE 30/443

PEDESTRIAN GENERATOR CHECKLIST

Note: The term "generator" in this document refers to both pedestrian generators (where pedestrians originate) and destinations (where pedestrians travel to)

A check of yes indicates a potential need to accommodate pedestrians and coordination with the Regional Bicycle and Pedestrian Coordinator is necessary during project scoping. Answers to the following questions should be checked with the local municipality to ensure accuracy.

1.	Is there an existing or planned sidewalk, trail, or pedestrian crossing facility?	YES☐ NO☒
2.	Are there bus stops, transit stations, or depots/terminals located in or within 800 m of the project area?	YES☐ NO☒
3.	Is there more than occasional pedestrian activity? Evidence of pedestrian activity may include a worn path.	YES☐ NO☒
4.	Are there existing or approved plans for generators of pedestrian activity in or within 800 m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as schools, parks, playgrounds, places of employment, places of worship, post offices, municipal buildings, restaurants, shopping centers or other commercial areas, or multiuse paths?	YES☐ NO☒
5.	Are there existing or approved plans for seasonal generators of pedestrian activity in or within 800 m of the project that promote or have the potential to promote pedestrian traffic in the project area, such as ski resorts, state parks, camps, amusement parks?	YES☐ NO☒
6.	Is the project located in a residential area within 800 m of existing or planned pedestrian generators such as those listed in #4?	YES☐ NO☒
7.	From record plans, were pedestrian facilities removed during a previous highway reconstruction project?	YES☐ NO☒
8.	Did a study of secondary impacts indicate that the project promotes or is likely to promote commercial and/or residential development within the intended life cycle of the project?	YES☐ NO☒
9.	Does the community's comprehensive plan call for development of pedestrian facilities in the area?	YES☐ NO☒

Note: This checklist should be revisited due to a project delay or if site conditions or local planning changes during the project development process.