

Color coding:
Purple = Disagree
Blue = Agree, already in report
Green = Agree, will add to final report

DISPOSITION OF COMMENTS

Draft Physical Inventory of Existing Conditions
Willow Road Study
Illinois Route 43 (Waukegan Road) to Interstate 94 (Edens Expressway)

Comments Prepared by: Village of Northfield/Cooper Civil Engineering, Ltd.
November 19, 2010

Responses Prepared by: IDOT/TranSystems
March 15, 2011

Introduction to Comments:

Below find our comments (*Northfield/Cooper Civil Engineering, Ltd.*) regarding the Physical Inventory information that was presented at the September CAG meeting. It was presented as introductory information, with no discussion of the topic at the meeting. The comments below represent our initial review of the draft inventory, for Village consideration and follow-up at the November 18, 2010 CAG meeting.

Disposition:

These comments from the Village of Northfield will be considered in the preparation of the final Physical Inventory.

Comment 1:

The draft inventory indicates that the information includes existing alignment, pavement type and condition, and intersection geometry are example areas that are included in the inventory. We would expect the same rigor and objective approach used in all subject areas of this inventory. This is not the case, especially with respect to the identification of multiple deficiencies that exist throughout the project length. Example is, for instance, in the vicinity of Sunset Ridge, speed limit, merge, excess pavement, inadequate left turn bay storage plus taper, gravel shoulder, inadequate turning radii, and school crossing are not given any attention in the inventory. It is misleading to isolate inadequacies and be selective about those that are included and evaluated with some rigor. We recommend revamping the inventory to provide more complete descriptions and evaluation of the variety of inadequacies that exist throughout the project, especially at chronically neglected locations, such as Sunset Ridge.

Disposition 1:

We are unsure of the basis for this comment. Speed limits, lane drops/merges, turn bay storage and taper lengths, shoulder type, and turning radii were discussed at every location (pages 2-4 and 8-14). The crosswalks at each of the signalized intersections were also discussed. However, at the request of CAG members, additional information regarding school crossings has been copied from the Draft Traffic and Crash Analyses and restated in the Physical Inventory.

Comment 2:

We agree that design speed is 5 mph over the posted speed limit. However, the inventory does not assess the appropriateness of the existing posted speed limit. The expectation is a rigorous and objective approach to this important subject, just as the inventory approach to turning radii and left turn storage.

Disposition 2:

The industry standard for setting design speed assumes that the posted speed limit on a roadway is appropriate. The Illinois Department of Transportation conducted speed studies which were transmitted to the Village on February 22, 2011. The results of those studies indicate that the presently posted speed limits on Willow Road between Illinois Route 43 and Interstate 94 are proper but there is a violation rate of 62.3 percent and 64.2 percent. This information is attached to this disposition.

Comment 3:

Further to Item 2 above, speed limit appropriateness is determined by field observations of actual speed through the roadway length, as well as the expectations of the motorists and the local context of the roadway. This has not been performed for this project, and is a serious missing element.

Disposition 3:

As noted in previous comment, IDOT conducted a speed study on Willow Road and the presently posted speed limits are proper.

Comment 4:

Further to Items 2 and 3, a large section of the project length is an urban downtown. We have surveyed 19 locations, including all neighboring communities, including some that are arterials and one that is an SRA for their particular posted speed limits in their respective downtowns. We find that the posted speed limit is 25-30 mph at all locations. This is a most serious flaw in the execution of this inventory, as well as in the execution of this and the other project studies, including the earlier draft crash and traffic studies, as well as in the classification of this roadway. Willow through downtown Northfield is a 25-30 mph Class III roadway. See attached spreadsheet.

Disposition 4:

Based on the speed limit study performed by IDOT, this section is appropriately posted at 35 mph and, as noted in this comment and per the analysis provided at the October 12, 2010 TAC meeting, Willow Road is a Class II roadway. Of the 1.8 mile project length, 0.22 miles (1,200 feet) of the project is within the commercial area at the east end of the project limits. A typical urban downtown, such as those listed in the attached spreadsheet which was provided with the comments, has buildings located within 10 to 15 feet of the roadway and sidewalks adjacent to the roadway. For Northfield, the buildings are set back from the roadway by 50 feet or more. The urban downtowns listed in the spreadsheet also have moderate to heavy pedestrian activity whereas this section of Willow Road has light to moderate pedestrian activity. Finally, as noted in the spreadsheet, most of these other roadways are minor arterials while Willow Road is a Strategic Regional Arterial and carries much heavier traffic volumes than the other roadways. Therefore, while other downtowns may have posted speed limits of 25 to 30 mph, the characteristics of the downtowns in the spreadsheet are different from this section of Willow Road and the 35 mph speed limit is appropriate for Willow Road.

Comment 5:

We notice that project study documents fail to provide a consistent identification of the project length. What is it? 1.6, 1.8, 1.9, 2.0, or some other length?

Disposition 5:

In the Physical Inventory, we initially listed the length as 2 miles considering the limits to be from west of Illinois Route 43 to east of the Interstate 94 interchange. We have decided to use a project length of 1.8 miles (from centerline of Illinois Route 43 to the point where the Interstate 94 westbound ramp joins eastbound Willow Road). All project documents will be updated to use that as the project length.

Comment 6:

The inventory fails to mention that the speed limit changes just west of Sunset Ridge, within the drop Jane merge. Speed limit change should occur further west, say west of Three Lakes or west of Waukegan Road.

Disposition 6:

This was stated on page 2 under Design Standards and on page 3 in Section 4. Additional information has been added to both of those statements.

Comment 7:

Further to Item 6, it is much more appropriate to provide the EB merge at a location west of Waukegan Road, where 1900 ft are available to accommodate the traffic movements most effectively, separating the points of conflicts and multiple decisions. Note that the state and ISTHA did precisely this on the EB flyover ramp of the Spur, rather than merging lanes on the Edens mainline.

Disposition 7:

This comment proposes to move the eastbound lane reduction prior to the Waukegan Road intersection which would provide only one eastbound through lane at the intersection, thereby affecting the operation and capacity of that intersection. It is not standard design practice to provide a lane drop in advance of an intersection. In addition, freeway facility operations and design cannot be directly compared to arterials. However, suggesting a potential design solution could be considered in the alternatives analysis.

Comment 8:

Yet further to Item 6 and 7, the present merge area and Sunset Ridge intersection also contains drives in close proximity, adding to the problem at this location. We note that the 1900 ft length west of Waukegan Road contains no drives whatsoever.

Disposition 8:

Again, the suggested potential design solution can be considered in the alternative analysis.

Comment 9:

Yet further to Items 6, 7, and 8 above, the conflict with school crossing can be helped a bit by moving the merge, and the fact that minimum merge length is met is irrelevant and misleading, given the variety of deficiencies near Sunset Ridge.

Disposition 9:

Again, the suggested potential design solution can be considered in the alternative analysis. The purpose of the Physical Inventory is to identify the existing geometric deficiencies based on the current design standards, and hence evaluation of the minimum merge length is appropriate as part of this document.

Comment 10:

Signalized intersection cycle times do not coincide, thereby contributing to the considerable traffic progression difficulties along this project length, particularly between Three Lakes and Sunset Ridge. We are not aware of this being mentioned in the draft inventory, as it should. We note that it is also appropriate to include this deficiency in the traffic study.

Disposition 10:

The inability to interconnect the signals to provide progression is stated on Pages 5 and 6 in the description of each signalized intersection.

Comment 11:

The discussion of the vertical alignment (profile) of the existing road seems to incorrectly identify the high point of the project. We believe the high point is the crest vertical curve that exists at Waukegan Road. The approaches to this intersection also limit sight distances, thereby contributing to traffic and safety issues, whether or not the existing road meets minimum standards.

Disposition 11:

In Section 4.3 it is stated that the vertical profile generally slopes downward from the west end of the project to the Middle Fork North Branch of the Chicago River bridge. Since Illinois Route 43 (Waukegan Road) is the west project limit, we believe this point is already noted.

The following is the spreadsheet referred to in Comment 4 of the Physical Inventory Comments submitted by Cooper Civil Engineering, Ltd.

**Willow Road Phase I Project
Comparison of Existing Downtown Posted Speed Limits
in Various Communities**

COMMUNITY	DOWNTOWN LOCATION	EXISTING SPEED LIMIT	REMARKS
Northfield	Willow Rd. segment @ Central/Happ	35 mph	SRA 107
Glenview	Waukegan Rd. segment @ Glenview Rd.	30 mph	SRA 302
Glenview	Glenview Rd. segment @ Waukegan Rd.	25 mph	Minor arterial.
Skokie	Lincoln Ave. segment @ Oakton St.	30 mph	
Skokie	Oakton St. segment @ Lincoln Ave.	30 mph	Minor Arterial
Skokie	Oakton St segment @ Skokie Blvd.	30 mph	Minor Arterial
Evanston	Central St. segment @ Green Bay Rd	25 mph	Minor Arterial
Evanston	Ridge Ave.segment @ Davis St.	30 mph	Minor Arterial
Evanston	Davis St segment between Ridge and Chicago	25 mph	
Evanston	Chicago Ave. segment @ Davis St.	30 mph	Minor Arterial
Northbrook	Shermer Rd segment @ Walters Ave.	25 mph	Principal Arterial
Northbrook	Walters Rd segment @ Shermer Rd.	30 mph	
Winnetka	Green Bay Rd. segment @ Elm St.	25 mph	Minor Arterial
Winnetka	Green Bay Rd. segment @ Tower Rd.	20 mph	Minor Arterial
Winnetka	Elm St. segment @ Green Bay Rd.	25 mph	Assumed (sign not observed)
Winnetka	Tower Rd. segment @ Green Bay Rd.	25 mph	Assumed (sign not observed)
Kenilworth	Green Bay Rd. segment @ Kenilworth Ave.	30 mph	Minor Arterial
Kenilworth	Kenilworth Ave. segment @ Green Bay Rd.	25 mph	
Wilmette	Green Bay Rd. segment @ Wilmette Ave.	30 mph	Minor Arterial
Wilmette	Wilmette Ave. Segment @ Green Bay Rd.	30 mph	Minor Arterial

Notes:

1. Posted speed limit signs observed by CJB, Cooper Civil Engineering, Ltd. on Sept.23, 2010.
2. All posted downtown speed limits are 5 or 10 mph lower than downtown Northfield.
3. Waukegan Rd segment in Glenview is an SRA route, with posted speed limit 30 mph.



Illinois Department of Transportation

Division of Highways / Region 1 / District 1
201 West Center Court / Schaumburg, Illinois / 60196-1096
Telephone 847/705-4000

ST 3.3 (C) Speed Studies - Willow Road

February 22, 2011

Mr. Fred Gougler
Village President
Village of Northfield
361 Happ Road
Northfield, IL 60093-3482

Dear Mr. Gougler:

As a follow up to the November, 2010 public meeting, a traffic and engineering speed study was conducted on Willow Road from Waukegan Road to Happ Road to determine the appropriateness of the existing speed limit along this section of highway.

The study results indicate the presently posted speed limit on this section of Willow Road to be proper but also showed violation rate of 62.3% and 64.2% percent. Copies of the speed data sheets have been enclosed for your information. This information is being provided to assist you in your program to provide selective enforcement.

If you have any questions or need additional information, please contact Mr. Cory Jucius, Arterial Traffic Operations Engineer at (847) 705-4470.

Very truly yours,

Diane M. O'Keefe, P.E.
Deputy Director of Highways,
Region One Engineer

By: 
Stephen M. Travia, P.E.
Bureau Chief of Traffic

Enclosures

cc: Chief William Lustig, Northfield Police Department



Illinois Department of Transportation

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ST 3.3 (C) Speed Studies - Willow Road

February 22, 2011

Ms. Sandra Frum
Village President
Village of Northbrook
1225 Cedar Lane
Northbrook, IL 60062

Dear Ms. Frum:

As a follow up to the November, 2010 public meeting, a traffic and engineering speed study was conducted on Willow Road from Waukegan Road to Happ Road to determine the appropriateness of the existing speed limit along this section of highway.

The study results indicate the presently posted speed limit on this section of Willow Road to be proper but also showed violation rate of 62.3% and 64.2% percent. Copies of the speed data sheets have been enclosed for your information. This information is being provided to assist you in your program to provide selective enforcement.

If you have any questions or need additional information, please contact Mr. Cory Jucius, Arterial Traffic Operations Engineer at (847) 705-4470.

Very truly yours,

Diane M. O'Keefe, P.E.
Deputy Director of Highways,
Region One Engineer

By: 
Stephen M. Travia, P.E.
Bureau Chief of Traffic

Enclosures

cc: Chief Charles Wernick, Northbrook Police Department

SPUI SPEED STUDY

CITY: NORTHFIELD ROUTE: WILLOW RD.

TWP: NORTHFIELD CO: COOK

TO: W/OF EDGEMOOD LA

FROM: 7.43

TRAFFIC CHECKED: WB NB SB

METER ON E W/O S SIDE

WEATHER 20s JULY

DATE 4/10 DAY M

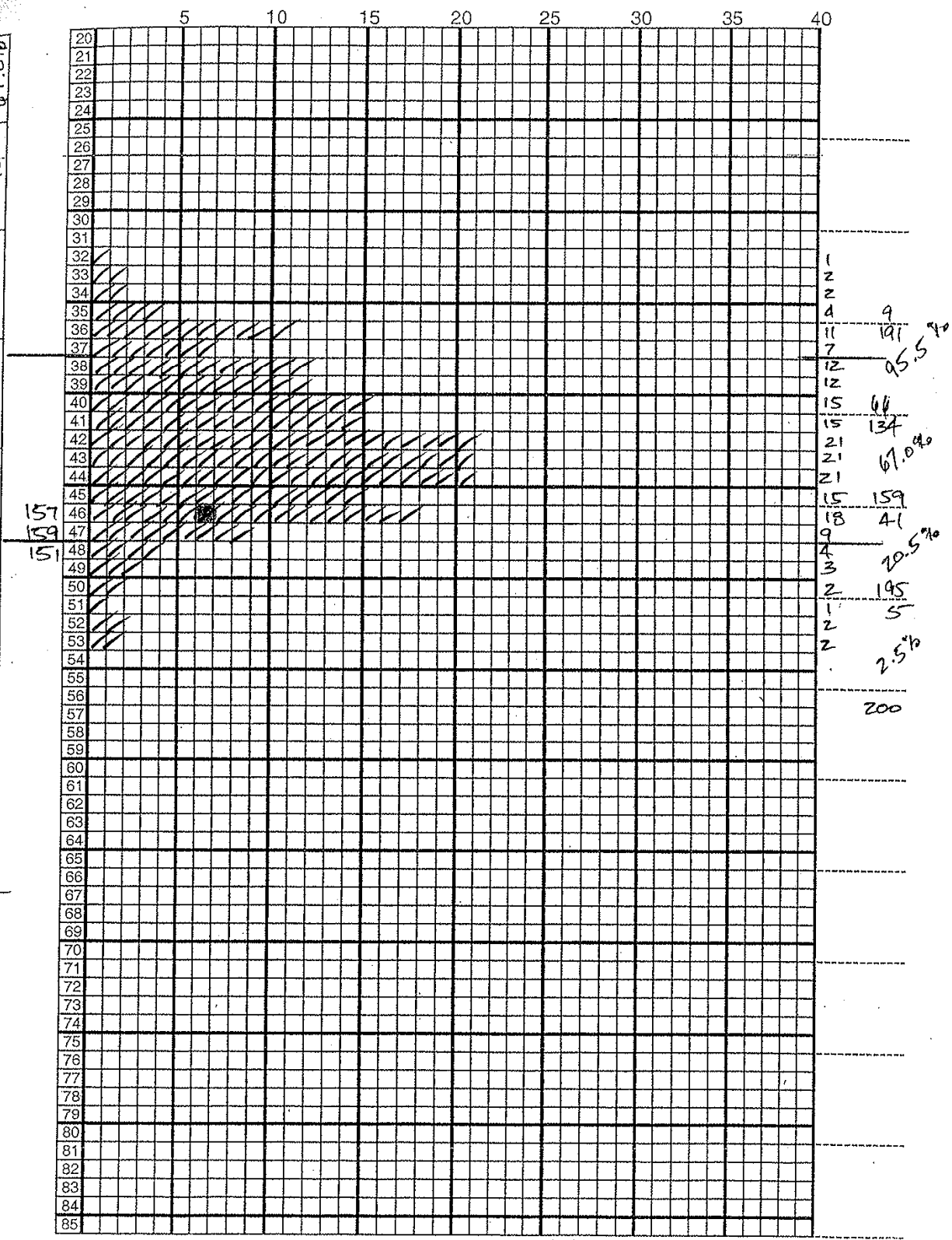
HOURS 4:58A TO 10:33A

RECORDED BY das

CHECK NO. 1E

POSTED LIMIT MPH. 40

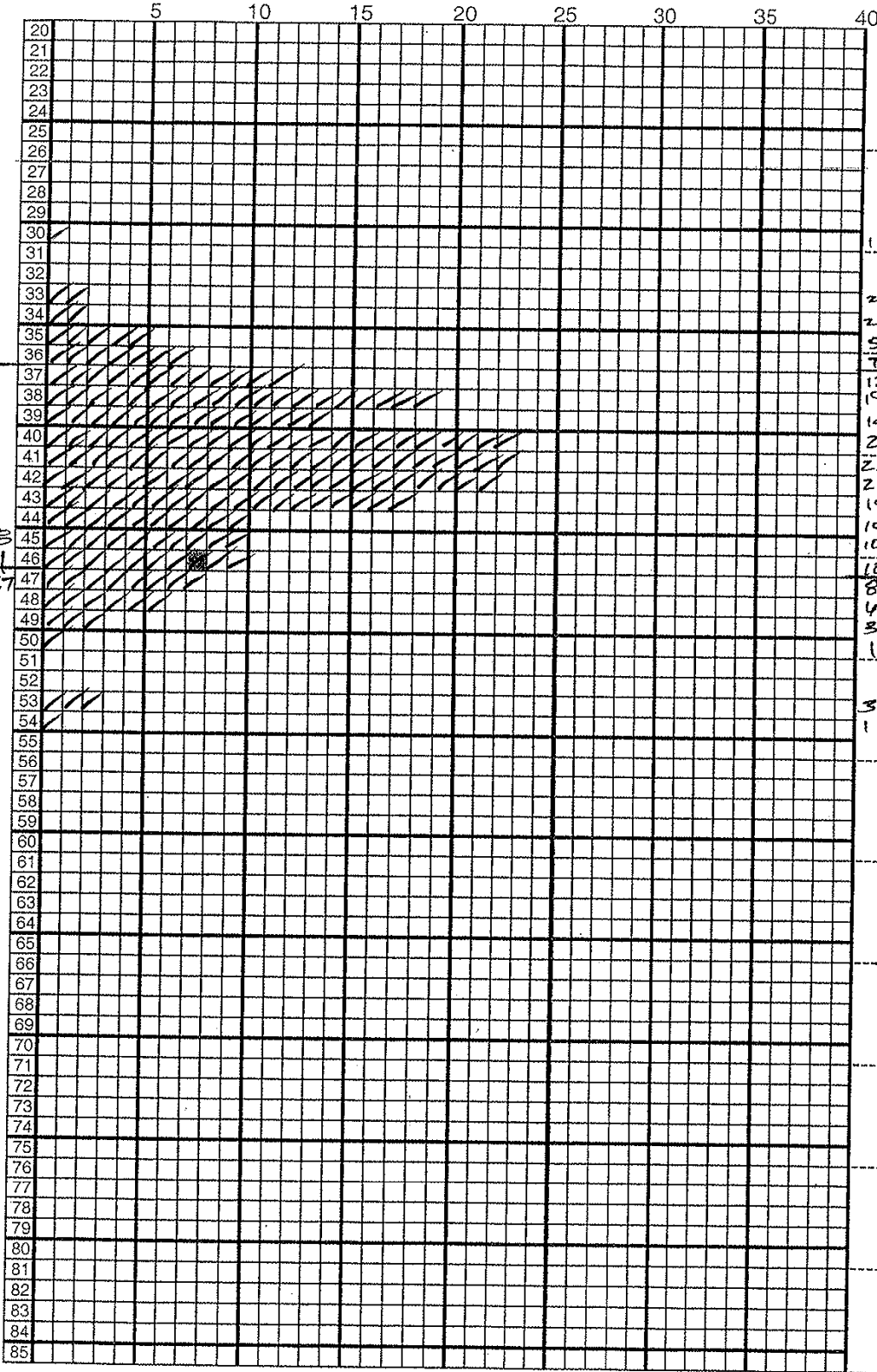
VIOLATION RATE 67.0%



ABOVE 85 LIST INDIVIDUALLY: _____

SPOT SPEED STUDY

TWP: NORTHFIELD CO: COOK ROUTE: WILLOW RD. TO: W/OF EDGEWOOD LA
 RECORDER: das DATE: 12/6/10 DAY: W HOURS: 9:51 AM TO 9:52 AM
 CHECK NO.: ## TYP: 12 WETNESS: GREY WEATHER: 209S PAVEMENT: WET TRAFFIC CHECKED: EB 85th PERCENTILE: 46 10 MPH PACE UPPER LIMIT: 40 VIOLATION RATE: 57.5%
 FROM: 17.43 METER ON: E W SIDE MILES: 0.2 W N S OF: THREE LAKES DR. POSTED LIMIT MPH: 40



ABOVE 85 LIST INDIVIDUALLY:

SPOT SPEED STUDY

CITY: NORTFIELD ROUTE: WILLOW RD.
 TWP: NORTFIELD CO: COOK FROM: WILF EDGEMOOD LA TO: WAPP RD.
 CHECK NO. 2 RECORDER das DATE 12/10/10 DAY HOURS 3:15 P M TO 4:03 P
 WEATHER 20° GREY PAVEMENT WET DAMP (DRY) FT. MILE 0 E W N S OF CHAPEL HILL LA METER ON WILLOW RD. E W S SIDE
 TRAFFIC CHECKED: EB WB NB SB
 85th PERCENTILE 43 10 MPH PACE UPPER LIMIT 43 POSTED LIMIT MPH. 35 VIOLATION RATE 85.0%

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19 5
8 192
3 8
2 A.0%
200

ABOVE 85 LIST INDIVIDUALLY: _____

SPOT SPEED STUDY

CITY: NORTHFIELD TWP: NORTHFIELD CO: COOK ROUTE: WILLOW RD FROM: WIFE EMERSON LN TO: HAPP RD

RECORDED: 12/19/10 METER ON: WHITTIER LN WILLOW RD

TRAFFIC CHECKED: EB WB NB SB

PAVEMENT: WET WEATHER: 20% grey

DATE: 12/19/10 DAY HOURS: 8:22 A TO 9:05 A

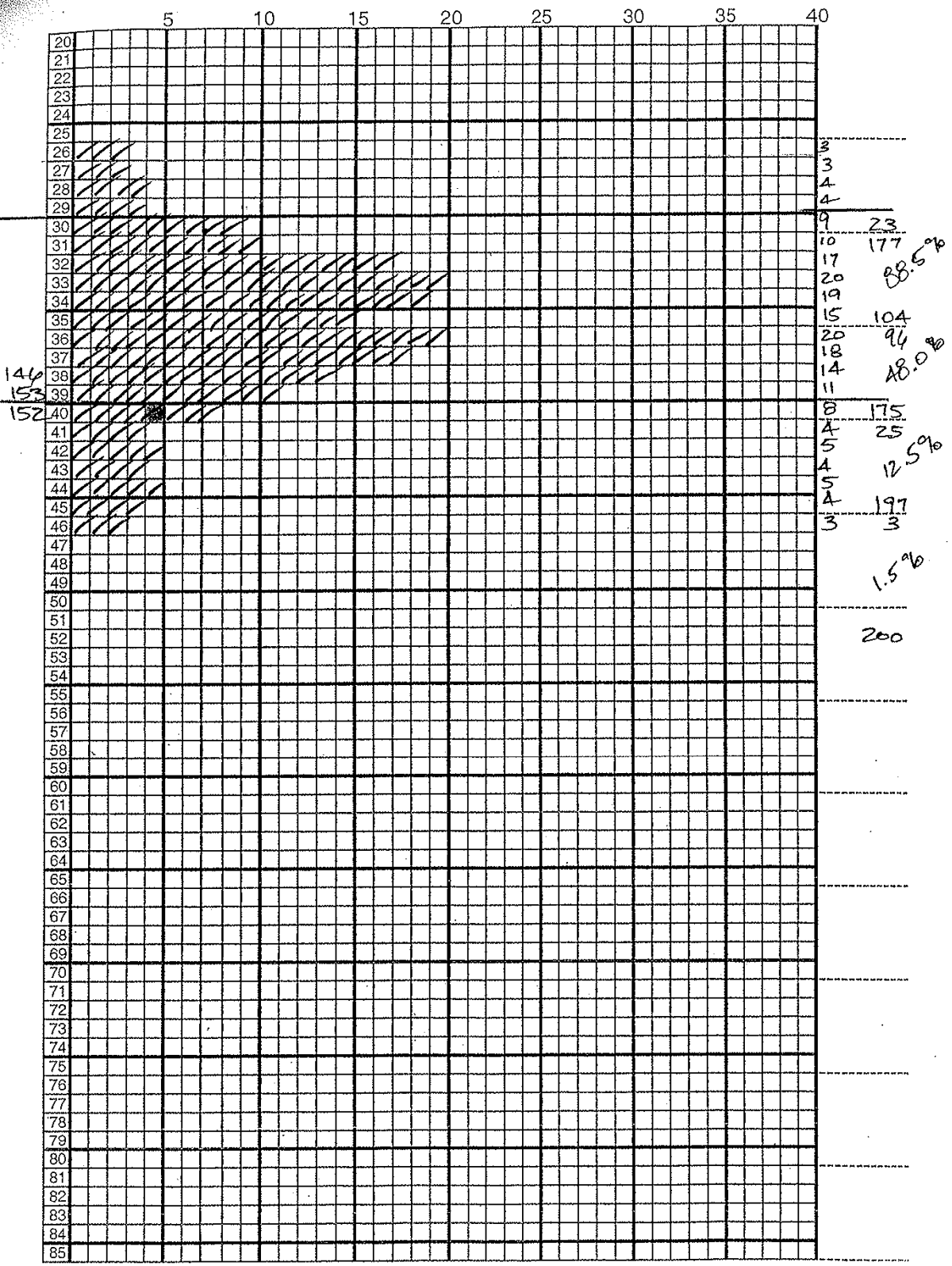
RECORDER: das

VIOLATION RATE: 48.0%

POSTED LIMIT MPH: 35

10 MPH PACE UPPER LIMIT: 39

85th PERCENTILE: 40



ABOVE 85 LIST INDIVIDUALLY: _____
