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ANALYSIS OF TRAFFIC IMPACTS  
DUE TO SUMMER 1989 CONSTRUCTION

by

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Analysis of Traffic Impacts  
Due to Summer 1989 Construction

Following the DuPage 2005 subarea plan project, CATS conducted an analysis of the effect of the 1987 and 1988 highway construction projects on traffic flow in DuPage County. At the request of the Illinois State Toll Highway Authority, CATS has conducted a similar study for the 1989 highway construction season. The purpose of this effort was to anticipate construction-related traffic problems so they could be alleviated or at least not compounded by the effects of additional adjoining projects. This study included all road and public works projects scheduled to take place during the the summer of 1989 within DuPage County. A listing of the projects considered in this analysis is presented at the end of this report.

The base network and trip tables from the 2005 subarea study were used as a starting point. The base highway network was then modified to reflect any planned highway construction related disruptions. Disruptions such as street closures for reconstruction resulted in links being deleted from the network. Other improvement projects and work on the new water main along roads resulted in capacity and speed reductions for those links. The base year trips were then assigned to the adjusted highway network and the results were compared to those from the original base year traffic assignment.

Map 1 shows where traffic volumes are expected to increase due to the effects of the construction projects. Three ranges of daily volume increases are shown. Some problem areas are immediately noticed. Several roads in the North-South tollway corridor, from Maple and Ogden in the south to Crescent and Hill further north, have increased volumes due to construction related reductions in the capacity on these and other cross streets. Also, the lane closures on I-88 between Highland and IL 53 result in additional increases in traffic on US 34 and IL 56. There are also problems further west between I-88 and Roosevelt Road where the closures of portions of Naperville Road and Winfield Road caused increased demand on alternate north-south streets.

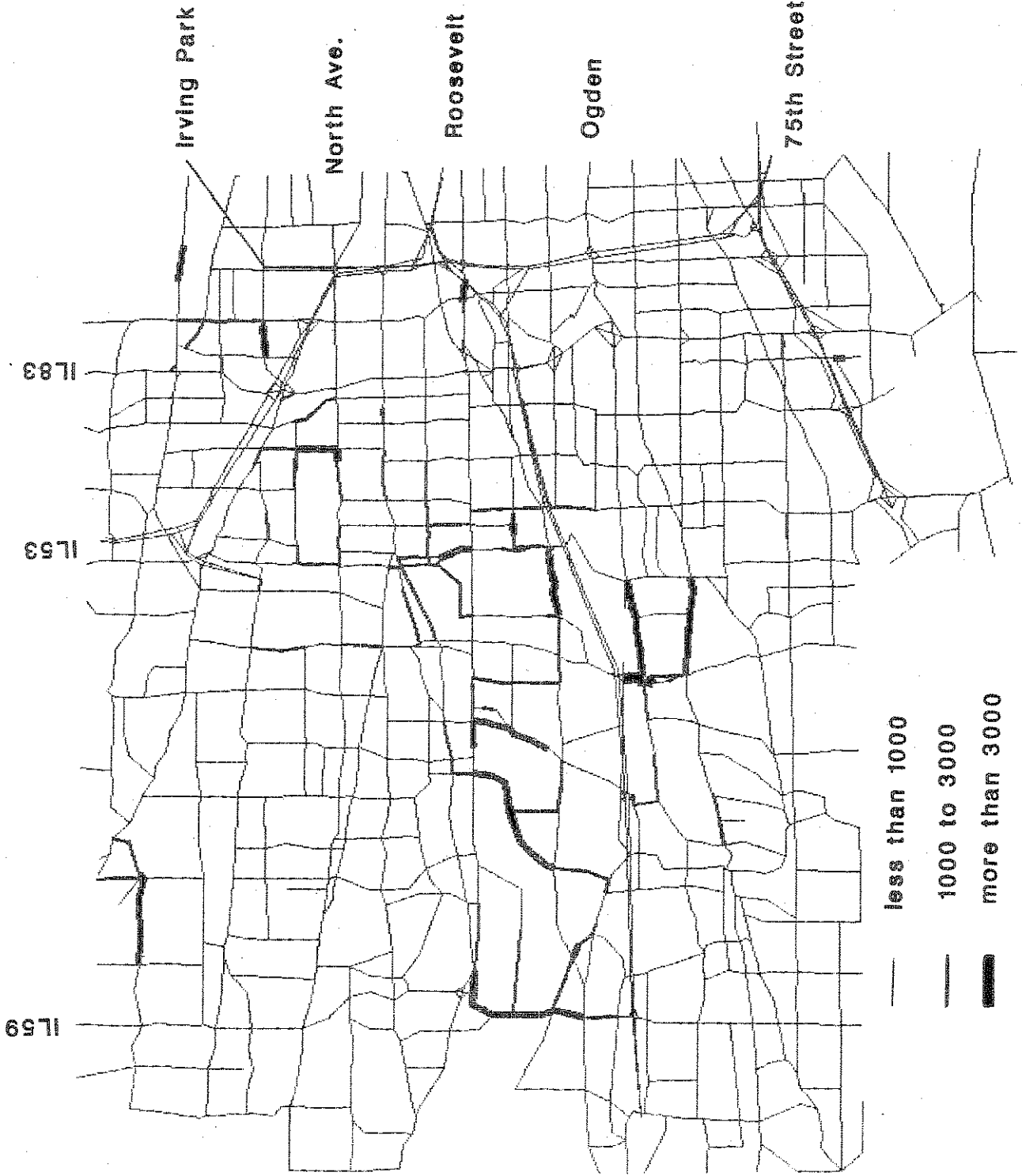
Increases in congestion can be even more indicative of possible problem areas than volume increases. Map 2 details construction-related increases in congestion. The different ranges of congestion are based on changes in the V/C ratios. The V/C ratios are calculated for the peak hour, after the daily volumes have been factored to the peak hour. A good example of the significance of congestion is seen on I-88 between Highland and IL 53. Even though there was little, if any, change in volume, the reduction in capacity will cause significant increases in congestion here. Also, in the North-South tollway corridor, streets such as Crescent & Hill that have only slight increases in volume show significant increases in congestion.

The closing of Finley Road to expedite tollway construction has been discussed. The incremental effect of this action was tested by further modifying the network to delete Finley Road near the tollway construction site. The same base year trips were then assigned to this new network. Map 3 shows the changes in traffic volume attributable to closing Finley Road. Note that these changes show only the effect closing this section would have on the traffic already rerouted due to the 1989 construction projects. This closure not only would force drivers to use alternatives such as IL 53 and Highland Avenue, but since these roads would already be congested, there would be a ripple effect, displacing some traffic as far as the Tri-State Tollway. This demonstrates the significant effects a single road closure can have on the region.

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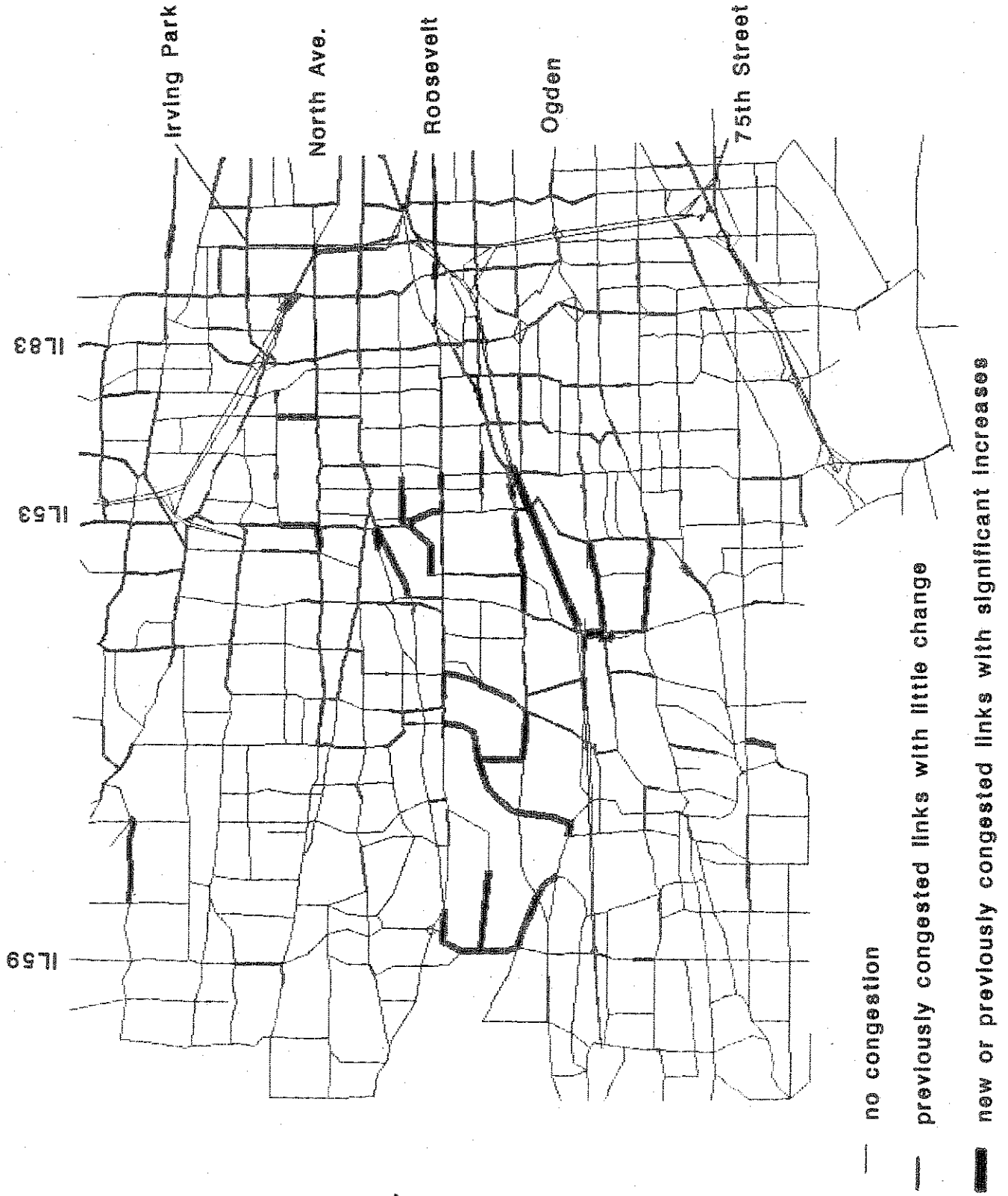
# MAP 1

## Increased Traffic Volumes Due To Construction Projects



# MAP 2

Changes In Congestion Levels Due To Construction Projects



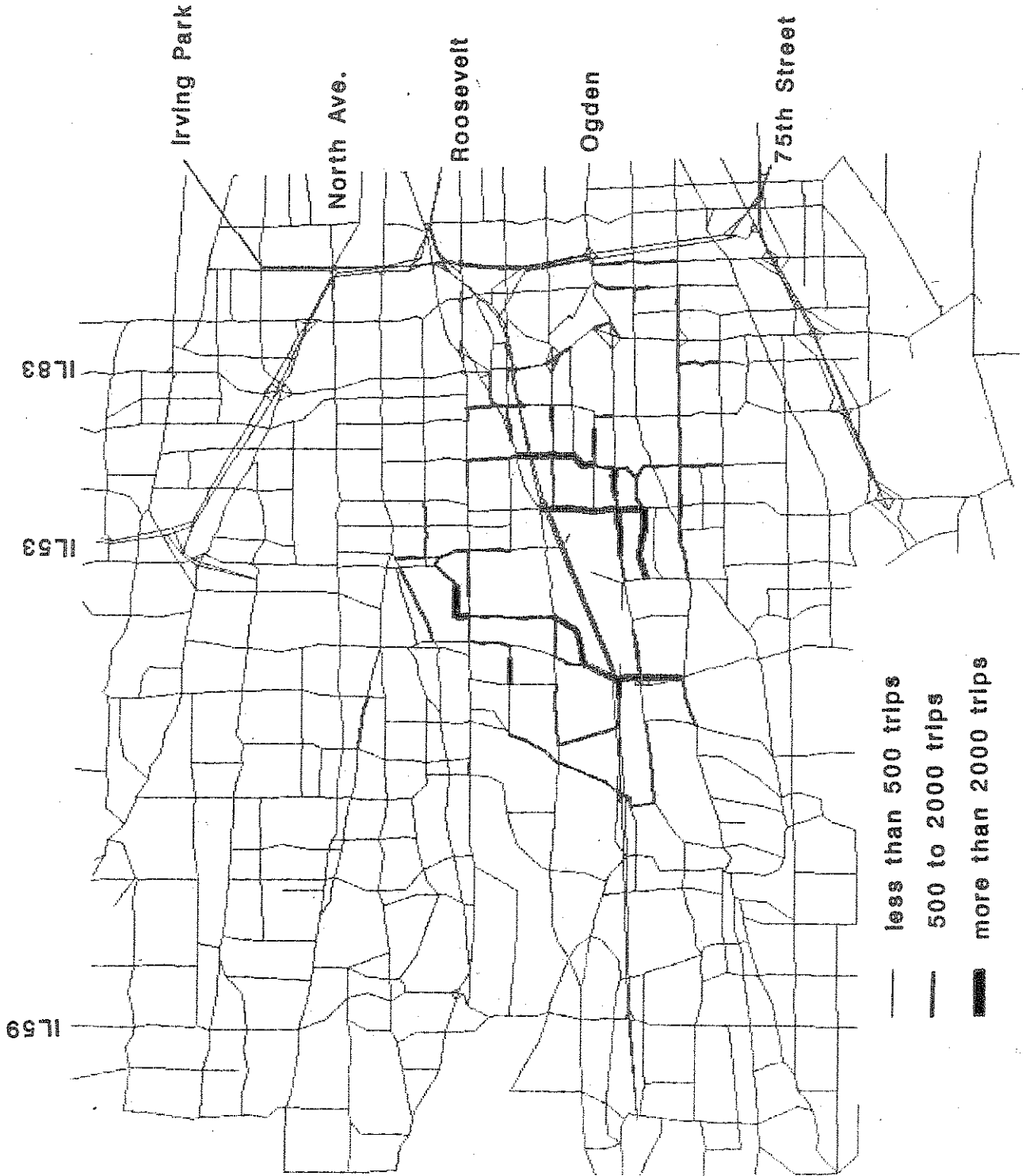
— no congestion

— previously congested links with little change

— new or previously congested links with significant increases

# MAP 3

Traffic Pattern for Trips Diverted by Closing Finley Rd.



1989 DuPage County Roadway Construction

<u>Responsible Agency</u>	<u>Location &amp; Affected Municipality</u>	<u>Project Description</u>
IDOT	I-290: IL 53 to Thorndale-Army Trail Road (Itasca, Addison)	Add lane project Some lane restrictions
	IL 83: Salt Creek to Elmhurst (Villa Park, Elmhurst)	Temporary lane closures from 9:00 a.m. - 3:30 p.m.
IDOT & Tollway	Roosevelt Rd.: bridge replacement work over IL 53 (Glen Ellyn)	One lane closed each direction on Roosevelt Rd. IL 53 traffic detoured
Tollway	E/W Tollway: I-88: Highland to Rt. 53 (Downers Grove; Lisle)	Lane restrictions, 2 lanes only each direction
	Warrenville Rd. at N/S Tollway (Lisle, Downers Grove)	Closed to traffic
Minimal delays associated with Tollway construction can be expected at the following locations:		
N/S Tollway at Ogden; Maple; North; St. Charles; Boughton; 75th; and 63rd.		
DuPage County	Devon Ave.: Bartlett to Ontarioville (Bartlett; Hanover Park)	Detour; closed to traffic
	Grace Street: Annoreno to Rt. 64 (Addison; Lombard)	Detour; closed to traffic
	County Farm Rd.: Army Trail to Rt. 38 (Carol Stream; Winfield, Wheaton)	Open to traffic Intermittent disruptions
	Naperville Rd.: Rt. 38 to Blanchard (Wheaton)	Detour; closed to traffic
	Winfield Rd: Rt. 38 to Warrenville Rd. (Warrenville)	Closed to traffic
	River Road: Diehl to Brookdale (Naperville)	Partial detour McDowell to Diehl
	Yackley Ave.: Warrenville to Rt. 34 (Lisle)	Detour; closed to traffic
	Plainfield Rd.: County Line to Adams (Buir Ridge)	Open to traffic

1989 DuPage County Roadway Construction  
Continued

<u>Responsible Agency</u>	<u>Location &amp; Affected Municipality</u>	<u>Project Description</u>
DuPage Water Commission	75th St.: Clyde Drive to Plainfield Rd. to IL 53 then west parkway to 58th Street (Naperville; Woodridge; Darien; Willowbrook)	South transmission line construction; some disruptions
	Butterfield Rd.: IL 83 and Finley Road (Oakbrook; Oakbrook Terrace; Highland Hills; Downers Grove)	Southwest transmission line construction; intermittent disruptions
	Chicago, Minnesota, & St. Paul RR ROW Roselle Rd. to Church, then south to Lake, then Church to West Ave to Butterfield Rd. along West (Roselle; Bensenville; Elmhurst)	North line construction; some intermittent disruptions
	High Street from the former ICG tracks to Butterfield Road (Elmhurst)	Northwest line construction Some intermittent disruptions
Elmhurst	York Street @ Madison	Signalization intermittent disruption
Downer's Grove	S curve on Maple Avenue, west of Dunham	3 block project; traffic maintained one lane each direction
Lombard	Main @ Madison	One block on either side; intermittent disruption
Naperville	Naper Blvd.: 75th to Cassen; River Rd. @ Ogden Ave intersection	One lane each direction; intermittent disruption