1985 QUAD-CITY STREET/HIGHWAY INTERSECTION TRAFFIC ACCIDENT REPORT

SEPTEMBER, 1985

Bi-State
Metropolitan
Planning Commission

1985 QUAD-CITY STREET/HIGHWAY

INTERSECTION TRAFFIC ACCIDENT REPORT

September, 1985

This report was prepared in cooperation with the U. S. Department of Transportation, Federal Highway Administration; the the Illinois Department of Transportation; and the Iowa Department of Transportation. The contents of this report reflect the views of the author who is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Illinois Department of Transportation, the Iowa Department of Transportation, or the Federal Highway Administration. This report does not constitute a standard, specification or regulation.

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127-24

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[1] The Policy Committee voting is restricted to one vote for each voting member with no proxy voting permitted with the following exception: the Illinois and Iowa Departments of Transportation are each allowed one designated alternate representative. These representatives have voting privileges in the absence of their designated Committee members.

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[4] The mayors of the Cities of LeClaire, Eldridge, Buffalo and Panorama Park in the Iowa portion and Milan, Silvis, Coal Valley, Carbon Cliff, Hampton, and Oak Grove in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.

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[1]The Technical Committee system allows one vote per agency with delegated representative voting permitted in the absence of an agency's listed member. The Davenport Department of Municipal Transportation has a vote in addition to the City of Davenport.

[2]The mayors of the Cities of LeClaire, Eldridge, Buffalo and Panorama Park in the Iowa portion and Milan, Silvis, Coal Valley, Carbon Cliff, Hampton, and Oak Grove in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.

[3]Transportation Technical Committee Chairman

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EXECUTIVE SUMMARY

The 1985 Quad-City Street/Highway Intersection Traffic Accident Report is the seventh traffic accident report prepared by the Bi-State Metropolitan Planning Commission. This year's accident study provides accident information for intersections with eight or more accidents. In-depth five-year summaries and diagrams were prepared for the 1984 ten highest ranked accident intersections in Illinois and in Iowa. From these summaries, the predominant accident patterns were determined.

The 1985 accident report also examines the current status of the 1983 top ranked accident intersections to determine whether improvements have been completed and were successful at these locations. This analysis is appropriate because a major purpose of this report is to reduce traffic hazards through the identification of high accident intersections.

Accident reduction may be accomplished through several means. One of these is increased awareness of high accident intersections due to efforts such as the annual traffic accident report. Increased enforcement of traffic laws and physical improvements, such as the addition of turn lanes or signalization improvements, are two additional ways reductions are achieved.

I. INTRODUCTION

A major part of the surveillance effort for the Urban Transportation Planning Process in the Quad-City Urban Area involves the collection of data on traffic accidents occurring at major street and highway intersections. Accident information is an important factor from which to work towards this area's Transportation System Management (TSM) objective of improving the safety of the local transportation system. Accident surveillance provides a source of information through which state and local officials may examine and respond to the changing traffic conditions of the existing street and highway network. For these reasons the Bi-State Metropolitan Planning Commission annually compiles a report which examines the past year's traffic safety performance for major street and highway intersections in the Quad-City Urban Area.

With respect to this area's transportation system, high accident locations are identified and analyzed so that traffic hazards at these intersections can be reduced, if not eliminated. The accident identification process is generally two-fold. First, high accident locations are specifically identified. Then, a detailed analysis is conducted to determine which locations have the greatest potential for accident reduction. This analysis involves the examination of the collision information compiled from state and local sources.

The 1985 Traffic Accident Report required the collection of data from two main sources. Accident information for individual intersections in the Iowa Quad Cities was supplied by the Iowa Department of Transportation, Office of Driver Services, Driver Safety and Improvement. Similar data for the Illinois Quad Cities was provided by the Illinois Department of Transportation, Bureau of Safety Studies and Projects.

II. SURVEILLANCE SUMMARY

The methodology used to identify the highest accident street and highway intersections in the 1985 study differs from the process that was used in the 1981-1984 studies. In the previous studies, traffic intersection locations were first ranked according to the total number of accidents. The intersections were then ranked according to the severity of the accidents, and, finally, by the accident rate.

Intersection locations were ranked in descending order according to each of these criteria. The individual ranks were then added, resulting in a total score. These were then compared to provide a relative overall ranking of the highest accident locations for the entire Quad-City Urban Area and an in-depth analysis was prepared for the fifteen highest accident intersections.

For this accident report, each intersection is awarded points based on the number of accidents, accident severity, and accident rate. Points are designated for these criteria in ranges (see Table II-1). Intersections are then ranked according to the total number of points awarded from this table. This method is similar to that used in the Federal-Aid Urban Evaluation and allows a greater differentiation between intersections with large differences than those which are similar. In past studies, intersections were ranked with points which were awarded uniformly, regardless of the magnitude of variation.

Deviating from the in-depth analysis provided for the fifteen highest accident intersections in past accident reports, in-depth analysis is provided for the ten highest accident intersections for the Iowa Quad Cities and for the Illinois Quad Cities. This modification was made due to discrepancies in the reporting of accidents to the Iowa and Illinois Departments of Transportation. Accident data which is included in the 1985 Traffic Accident Report has been collected from the Departments of Transportation (DOT). This information was

TABLE II-1: EVALUATION POINTS AWARDED TO INTERSECTIONS DURING ACCIDENT ANALYSIS

Accident Number		Accident Severity		Accident Rate*	
Accidents	Points	Severity	Points	Rate (MEV)	Points
> 29	15	> 56	15	> 3.50	15
27 - 28	14	53 - 55	14	3.26 - 3.49	14
25 - 26	13	49 - 52	13	3.01 - 3.25	13
23 - 24	12	45 - 48	12	2.76 - 3.00	12
21 - 22	11	41 - 44	11	2.51 - 2.75	11
19 - 20	10	37 - 40	10	2.26 - 2.50	10
17 - 18	9	33 - 36	9	2.01 - 2.25	9
15 - 16	8	29 - 32	8	1.76 - 2.00	8
13 - 14	7	25 - 28	7	1.51 - 1.75	7
11 - 12	6	21 - 24	6	1.26 - 1.50	6
9 - 10	5	17 - 20	5	1.01 - 1.25	5
7 - 8	4	13 - 16	4	0.76 - 1.00	4
5 - 6	3	9 - 12	3	0.51 - 0.75	3
3 - 4	2	5 - 8	2	0.26 - 0.50	2
1 - 2	1	1 - 4	1	0.01 - 0.25	1

*Accidents per million entering vehicles

reported by police authorities. In the State of Iowa, all accidents which do not involve fatal or personal injuries and involve property damage less than 500 dollars are not reported to the Iowa DOT. Illinois authorities, on the other hand, report all accidents involving property damage only valued greater than 250 dollars. This differentiation has resulted in the dominance of Illinois intersections in the fifteen highest accident locations in the past reports.

The three criteria used in identifying the leading accident intersections in the Quad Cities are described in detail below. They include:

A. The Total Number of Accidents - This is a listing of intersection locations by the total number of traffic accidents that have occurred in the subject year (1984), and is the least complicated and most often used comparison.

B. Accident Severity - The report categorizes accidents according to three types: property damage only, non-fatal and fatal personal injury. These types of accidents are then assigned weighted numerical values of 1, 3 and 12, respectively, and are then added to give each location's total severity figure for the past year.

C. Accident Rate - Another segment of the methodology which examines the potential hazard of each specific location is the accident rate. Accident rates are particularly significant in measuring accident experience, since they relate accident frequency to traffic exposure. Accident rates are normally expressed in terms of accidents per million vehicle miles (MVM) for roadway segments and accidents per million entering vehicles (MEV) for intersections. The use of accident rates provides a common denominator for comparison of accident experience between different locations or against a critical rate (3.0 is considered above average) in identifying locations with unusually high

accident experiences. The formula used in this report to determine critical accident locations is as follows:

$$R_i = \frac{2(A)(1{,}000{,}000)}{(T)(V)}$$

where R_i = intersection accident rate expressed in accidents per million entering vehicles (MEV);

A = number of accidents during the study period;

T = time period in days (in this case, 365); and

V = total average daily traffic entering and departing the intersection (most recent).

Tables II-2 and II-3 reflect the results of the ranking of the highest accident intersections (those with eight or more accidents) in Iowa and Illinois, respectively, and Figure II-1 is a map of the highest accident locations. Table II-4 is a listing of the top five accident intersections in each city.

TABLE II-2: 1985 HIGHEST ACCIDENT LOCATIONS IN THE IOWA QUAD CITY URBANIZED AREA*

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overall Ranking
	Acc.	Score	Sev.	Score	Rate	Score		
Kimberly Rd./U.S. 6 at Eastern Ave., Dav.	27	14	51	13	1.93	8	35	1
Kimberly Rd./U.S. 6 at Division St., Dav.	23	12	45	12	2.32	10	34	2
SB U.S. 61 at 53rd St., Dav.	19	10	33	9	2.48	10	29	3
Kimberly Rd./U.S. 6 at Northwest Blvd., Dav.	22	11	34	9	1.62	7	27	4
W. River Dr./U.S. 61 at Concord St., Dav.	15	8	27	7	2.89	12	27	4
Kimberly Rd. at Lincoln Rd., Bett.	16	8	24	6	2.77	12	26	6
Kimberly Rd./U.S. 6 at Jersey Ridge Rd., Dav.	18	9	40	10	1.28	6	25	7
Kimberly Rd./U.S. 6 at Brady St./U.S. 61, Dav.	19	10	38	10	0.94	4	24	8
Brady St./U.S. 61 at 53rd St., Dav.	17	9	31	8	1.56	7	24	8
Brady St./U.S. 61 at 65th St., Dav.	14	7	26	7	2.04	9	23	10
Eastern Ave. at 29th St., Dav.	11	6	21	6	2.47	10	22	11
E. Locust St. at Grand Ave., Dav.	14	7	26	7	1.43	6	20	12
Marquette St. at 4th St., Dav.	11	6	23	6	2.00	8	20	12
Middle Rd. at 18th St., Bett.	12	6	22	6	1.54	7	19	14

*Source: Iowa Department of Transportation, Office of Driver Services, Driver Safety and Improvement

**Accidents per million entering vehicles

TABLE II-2: 1985 HIGHEST ACCIDENT LOCATIONS IN THE IOWA QUAD CITY URBANIZED AREA*
(continued)

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overall Ranking
	Acc.	Score	Sev.	Score	Rate	Score		
Brady St./U.S. 61 at 3rd St., Dav.	14	7	16	4	1.79	8	19	14
U.S. 6 at Elmore Ave., Dav.	14	7	20	5	1.58	7	19	14
Spruce Hills Dr. at Utica Ridge Rd., Bett.	12	6	16	4	1.87	8	18	17
Division St. at 4th St., Dav.	9	5	28	7	1.39	6	18	17
Middle Rd. at 23rd St., Bett.	10	5	16	4	2.00	8	17	19
Harrison St/U.S. 61 at 4th St., Dav.	12	6	20	5	1.49	6	17	19
Kimberly Rd/U.S. 6 at Marquette St., Dav.	12	6	24	6	1.14	5	17	19
Gaines St. at 4th St., Dav.	11	6	17	5	1.47	6	17	19
Central Park Ave. at Washington St., Dav.	8	4	14	4	2.02	9	17	19
Harrison St./U.S. 61 at 3rd St., Dav.	11	6	15	4	1.47	6	16	24
Kimberly Rd./U.S. 6 at Davenport Ave., Dav.	11	6	23	6	0.96	4	16	24
Marquette St. at 2nd St., Dav.	8	4	14	4	1.82	8	16	24

*Source: Iowa Department of Transportation, Office of Driver Services, Driver Safety and Improvement

**Accidents per million entering vehicles

TABLE II-2: 1985 HIGHEST ACCIDENT LOCATIONS IN THE IOWA QUAD CITY URBANIZED AREA*
(continued)

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overall Ranking
	Acc.	Score	Sev.	Score	Rate	Score		
E. Locust St. at Bridge Ave., Dav.	11	6	15	4	1.14	5	15	27
Brady St./U.S. 61 at E. Central Park Ave., Dav.	11	6	15	4	1.22	5	15	27
Brady St./U.S. 61 at 35th St., Dav	11	6	15	4	1.09	5	15	27
Marquette St. at 35th St., Dav.	8	4	14	4	1.68	7	15	27
Main St. at 3rd St., Dav.	10	5	12	3	1.34	6	14	31
Spruce Hills Dr. at 18th St., Bett.	9	5	15	4	1.17	5	14	31
Brady St./U.S. 61 at 4th St., Dav.	9	5	13	4	1.08	5	14	31
Kimberly Rd./U.S. 6 at Spring St., Dav.	9	5	21	6	0.73	3	14	31
Division St. at 36th St., Dav.	8	4	14	4	1.26	6	14	31
Brady St./U.S. 61 at 14th St., Dav.	8	4	10	3	1.25	5	12	36
W. Locust St. at N. Division St. at Hickory Grove Rd., Dav.	9	5	9	3	0.72	3	11	37

*Source: Iowa Department of Transportation, Office of Driver Services, Driver Safety and Improvement

**Accidents per million entering vehicles

TABLE II-3: 1985 HIGHEST ACCIDENT LOCATIONS IN THE ILLINOIS QUAD CITY URBANIZED AREA

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overall Ranking
	Acc.	Score	Sev.	Score	Rate	Score		
42nd Ave. at 7th St. (W/NFR), E. Mol.	38	15	72	15	3.84	15	45	1
Blackhawk Rd./IL 5 at 7th St., Mol.	19	10	37	10	2.29	10	30	2
18th Ave./1st Ave./IL 84 -92 at 19th St./1st St./ IL 84, E. Mol./Silvis	21	11	39	10	2.13	9	30	2
John Deere Rd./IL 5 at Colona Rd., Uninc./R.I. Co.	18	9	30	8	2.64	11	28	4
42nd Ave. at J. F. Kennedy Dr. (W/NFR and SFR), E. Mol.	21	11	35	9	1.96	8	28	4
30th Ave./Crosstown Ave. at 19th St./1st. St., E. Mol./Silvis	15	8	29	8	2.65	11	27	6
John Deere Rd./IL 5 at 16th St., Mol.	18	9	34	9	1.51	7	25	7
23rd Ave. at SB 19th St., Mol.	16	8	32	8	1.97	8	24	8
John Deere Rd./IL 5 at 41st St., Mol.	18	9	34	9	1.35	6	24	8
23rd Ave. at 16th St., Mol.	17	9	23	6	1.99	8	23	10
5th Ave. at 17th St., R.I.	12	6	20	5	2.96	12	23	10
23rd Ave. at 53rd St., Mol.	18	9	28	7	1.62	7	23	10

*Source: Illinois Department of Transportation, Bureau of Safety Studies and Project

**Accidents per million entering vehicles

TABLE II-3: 1985 HIGHEST ACCIDENT LOCATIONS IN THE ILLINOIS QUAD CITY URBANIZED AREA*
(continued)

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overall Ranking
	Acc.	Score	Sev.	Score	Rate	Score		
19th Ave. at 16th St., Mol.	15	8	19	5	1.59	7	20	13
12th Ave. at 15th St., Mol.	11	6	17	5	2.20	9	20	13
John Deere Rd./IL 5 at 53rd St., Mol.	13	7	29	8	1.13	5	20	13
Andalusia Rd./10th Ave. at 4th St., Milan	11	6	23	6	1.65	7	19	16
12th Ave. at 19th St., Mol.	12	6	22	6	1.71	7	19	16
IL 84 at Cleveland Rd., Colona/Green Rock	12	6	20	5	1.82	8	19	16
Andalusia Rd./10th Ave. at 1st St./U.S. 67, Milan	13	7	23	6	1.43	6	19	16
39th Ave. at 16th St., Mol.	12	6	18	5	1.54	7	18	20
23rd Ave. at NB 19th St., Mol.	11	6	25	7	1.01	5	18	20
6th Ave. at 23rd St., Mol.	9	5	17	5	1.85	8	18	20
52nd Ave. at 27th St., Mol.	11	6	19	5	1.71	7	18	20
IL 5 at Barstow Rd., Uninc./R.I. Co.	10	5	24	6	1.70	7	18	20
7th Ave. at 19th St., Mol.	10	5	18	5	1.28	6	16	25
5th Ave./IL 92 at 24th St., R.I.	9	5	19	5	1.35	6	16	25

*Source: Illinois Department of Transportation, Bureau of Safety Studies and Projects

**Accidents per million entering vehicles

TABLE II-3: 1985 HIGHEST ACCIDENT LOCATIONS IN THE ILLINOIS QUAD CITY URBANIZED AR
(continued)

Location	Total Accidents		Accident Severity		Accident** Rate		Total Score	Overal Rankin
	Acc.	Score	Sev.	Score	Rate	Score		
1st Ave./U.S. 67 at 1st St./U.S. 67, Milan	11	6	17	5	1.08	5	16	25
36th Ave. at 16th St., Mol.	12	6	16	4	1.08	5	15	28
12th Ave. at 25th St., Mol.	9	5	17	5	1.12	5	15	28
4th Ave./IL 92 at 34th St., Mol.	9	5	11	3	1.64	7	15	28
17th Ave. at J. F. Kennedy Dr., E. Mol.	8	4	14	4	1.52	7	15	28
5th Ave. at 20th St., R.I.	8	4	12	3	1.75	7	14	32
7th Ave. at 30th St., R.I.	8	4	10	3	1.72	7	14	32
Blackhawk Rd./IL 5 at 30th St., R.I.	8	4	14	4	1.27	6	14	32
6th Ave./IL 92 at 19th St., Mol.	8	4	12	3	1.37	6	13	35
John Deere Rd./IL 5 at 18th St., Mol.	9	5	19	5	0.66	3	13	35
30th Ave. at J. F. Kennedy Dr., E. Mol.	8	4	16	4	1.24	5	13	35
16th Ave. at 7th St., E. Mol.	8	4	10	3	1.28	6	13	35
23rd Ave. at 27th St., Mol.	9	5	11	3	0.88	4	12	39
23rd Ave. at 42nd St., Mol.	8	4	12	3	0.91	4	11	40
John Deere Rd./IL 5 at 60th St., Mol.	8	4	12	3	0.76	4	11	40

*Source: Illinois Department of Transportation, Bureau of Safety Studies and Projec

**Accidents per million entering vehicles

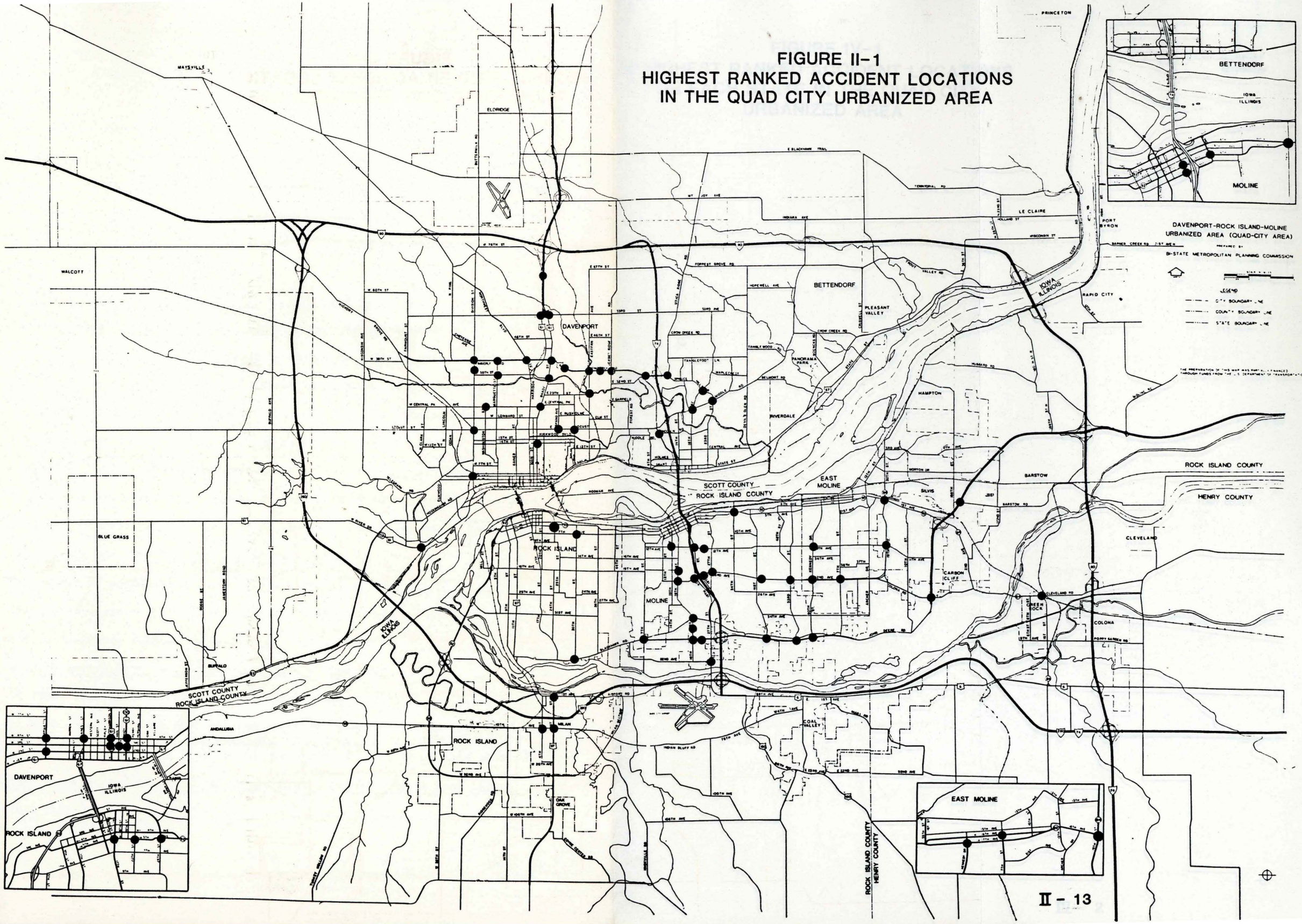
TABLE II-4: 1985 HIGHEST ACCIDENT LOCATIONS BY CITY

Locations	Accidents	Severity	Accident Rate
Davenport			
Kimberly Road/U.S. 6 at Eastern Avenue	27	51	1.93
Kimberly Road/U.S. 6 at Division Street	23	45	2.32
SB U.S. 61 at 53rd Street	19	33	2.48
Kimberly Road/U.S. 6 at Northwest Boulevard	22	34	1.62
West River Drive/U.S. 61 at Concord Street	15	27	2.89
Bettendorf			
Kimberly Road at Lincoln Road	16	24	2.77
Middle Road at 18th Street	12	22	1.54
Spruce Hills Drive at Utica Ridge Road	12	16	1.87
Middle Road at 23rd Street	10	16	2.00
Spruce Hills Drive at 18th Street	9	15	1.17
Rock Island			
5th Avenue at 17th Street	12	20	3.19
5th Avenue/IL 92 at 24th Street	9	19	1.35
5th Avenue at 20th Street	8	12	1.75
7th Avenue at 30th Street	8	10	1.72
Blackhawk Road/IL 5 at 30th Street	8	14	1.27
Moline			
Blackhawk Road/IL 5 at 7th Street	19	37	2.29
John Deere Road/IL 5 at 16th Street	18	34	1.51
23rd Avenue at SB 19th Street	16	32	1.96
John Deere Road/IL 5 at 41st Street	18	34	1.34

TABLE II-4: 1985 HIGHEST ACCIDENT LOCATIONS BY CITY
(continued)

Locations	Accidents	Severity	Acciden Rate
Moline			
23rd Avenue at 16th Street	17	23	1.99
23rd Avenue at 53rd Street	18	28	1.62
East Moline			
42nd Avenue at 7th Street (W/NFR)	38	72	3.84
18th Avenue/IL 84-92 at 19th Street	21	39	2.13
42nd Avenue at J. F. Kennedy Drive (W/NFR and SFR)	21	35	1.96
30th Avenue at 19th Street	15	29	2.65
17th Avenue/IL 92 at J. F. Kennedy Drive	8	14	1.52
Milan			
Andalusia Road/10th Avenue at 1st Street/ U.S. 67	13	23	1.43
Andalusia Road/10th Avenue at 4th Street	11	23	1.65
1st Avenue/U.S. 67 at 1st Street/U.S. 67	11	17	1.08
Silvis			
1st Avenue/IL 84-92 at 1st Street	21	39	2.13
Crosstown Avenue at 1st Street	15	29	2.65
Colona/Green Rock			
IL 84 at Cleveland Road	12	20	1.82
Rock Island County			
John Deere Road/IL 5 at Colona Road	18	30	2.63
IL 5 at Barstow Road	10	24	1.70

FIGURE II-1
HIGHEST RANKED ACCIDENT LOCATIONS
IN THE QUAD CITY URBANIZED AREA



III. CURRENT STATUS OF THE TOP RANKED ACCIDENT INTERSECTIONS FROM THE 1984 TRAFFIC ACCIDENT REPORT

A major purpose for the yearly publication of the intersection traffic accident report is to identify the high accident locations in the Quad City Urban Area so that traffic hazards at these intersections can be reduced. To determine whether improvements have been completed and are successful at these locations, it is helpful to examine the current status of the previous year's top accident intersections.

1. Andalusia Road/10th Avenue and U.S. 67/1st Street - Milan.

   The accidents totaled 26 at this location in 1983 and totaled 13 in 1984, a 50 percent decrease. There were no improvements made at this location, however, Andalusia Road and West 4th Street (an intersection just west of this location) was under construction. Also, east of this intersection the roadway was closed to through traffic due to bridge reconstruction. These two conditions, which existed for greater than half of 1984, may have impeded traffic. Despite the lower number of accidents at this location, the predominant accident pattern was that of rear end accidents, as in the past.

2. 23rd Avenue and 19th Streets (southbound) - Moline.

   The number of accidents at this location was 17 in 1983 and 16 in 1984. This intersection was in the top ten accident intersections in Illinois in 1984 and is discussed further in Section IV of this report.

3. Brady Street/U.S. 61 and West 65th Street - Davenport.

   In 1983, this intersection had 19 accidents and in 1984 14 accidents occurred at this location. The 1984 top ten accident intersections in Iowa included this intersection which is analyzed further in Section IV of this report.

4. John Deere Road/Illinois 5 and Colona Road - Unincorporated Rock Island County.

   This intersection was in the 1984 top ten accident intersections in Illinois

with 18 total accidents, while in 1983 this location had 20 accidents. Addi tional information on this intersection is included in Section IV of this study.

5. 42nd Avenue and 7th Street (with North Frontage Road) - East Moline.

This intersection had a total of 22 accidents in 1983 which increased to 38 accidents in 1984. This location was ranked number one in the 1984 Illinois top ten accident intersections and is further discussed in Section IV of thi study.

6. West River Drive/U.S. 61 and Concord Street - Davenport.

The total number of accidents in 1983 at this intersection was 16 and in 1984 the total was 15. This location was in the 1984 Iowa top ten accident intersections and additional information on this location may be found in Section IV of this report.

7. 42nd Avenue and Archer Drive (with North Frontage Road) - East Moline.

This location involves a north and south frontage road in addition to the main intersection. In the past, accidents at the North Frontage Road have been included in the total number of accidents at this location. It is felt that there is an adequate distance between the intesections of the North Frontage Road at Archer Drive and 42nd Street at Archer Drive to allow these intersections to operate separately. Therefore, the accidents at the North Frontage Road will no longer be included in the total number of accidents at this location. This affects the 1983 total number of accidents by two, chang ing the number from 18 to 16. The 1984 total at this location was seven (not including the North Frontage Road).

8. 42nd Avenue and John F. Kennedy Drive (with North and South Frontage Roads) - East Moline.

The number of accidents totaled 22 at this intersection in 1983, while in 1984 the number of accidents was 21. This location was included in the top

ten accident intersections in Illinois for 1984 and is analyzed further in Section IV of this report.

9. Blackhawk Road/Illinois 5 and 38th Street - Rock Island.

In 1983, there were 16 accidents at this intersection. In 1984 the total number of accidents was four, which is a 75 percent reduction from the previous year. This change might have been caused by surface improvements completed in 1984 at this location which smoothed the surface of the road. Also, the signalization was altered at this intersection, increasing the time of the red phase of the signals on 38th Street. This would allow for a better flow of traffic on Blackhawk Road. Between 1980 and 1983 the predominant accident pattern has been that of rear end accidents among westbound vehicles; however, in 1984 no accidents of this type occurred.

10. 18th Avenue/Illinois 84-92 and 19th Street - East Moline.

This location exhibited 21 accidents in 1983 and 1984 and was in the Illinois top ten accident intersections for 1984. More detailed information on this intersection may be found in Section IV of this study.

11. 23rd Avenue and 16th Street - Moline.

There were 16 accidents at this intersection in 1983 and in 1984 there were 17. The number of accidents which have occurred at this location has remained constant over the last several years and the predominant accident pattern of left-turning southbound vehicles has continued. Section IV of this report includes further information on this intersection.

12. Brady Street/U.S. 61 and East 53rd Street - Davenport.

The total number of accidents at this intersection was 18 in 1983 and 17 in 1984. In Iowa, this location was one of the top ten accident intersections for 1984. Although the numbers have not varied greatly, several changes were made in this interseciton in 1984 and are further discussed in Section IV of this report.

13. Illinois 5 and Barstow Road - Unincorporated.

The total number of accidents at this intersection was ten in both 1983 and 1984. Illinois 5 and Barstow Road was included in the highest accident intersections for 1983 because of a low traffic volume which yields a highe accident rate and a high severity due to the occurence of a fatal accident. The predominant accident pattern at this location has involved left-turning vehicles based on 1980, 1982, 1983 and 1984 data. Eighty percent of accidents in 1984 involved left-turning vehicles.

14. Cleveland Road and Illinois 84 - Colona/Green Rock.

In 1983 and 1984 this intersection had 12 total accidents. For these years left-turning movements were the predominant accident pattern. In 1984, 83 percent of accidents which occurred involved left-turning vehicles, as compared to 75 percent in 1983.

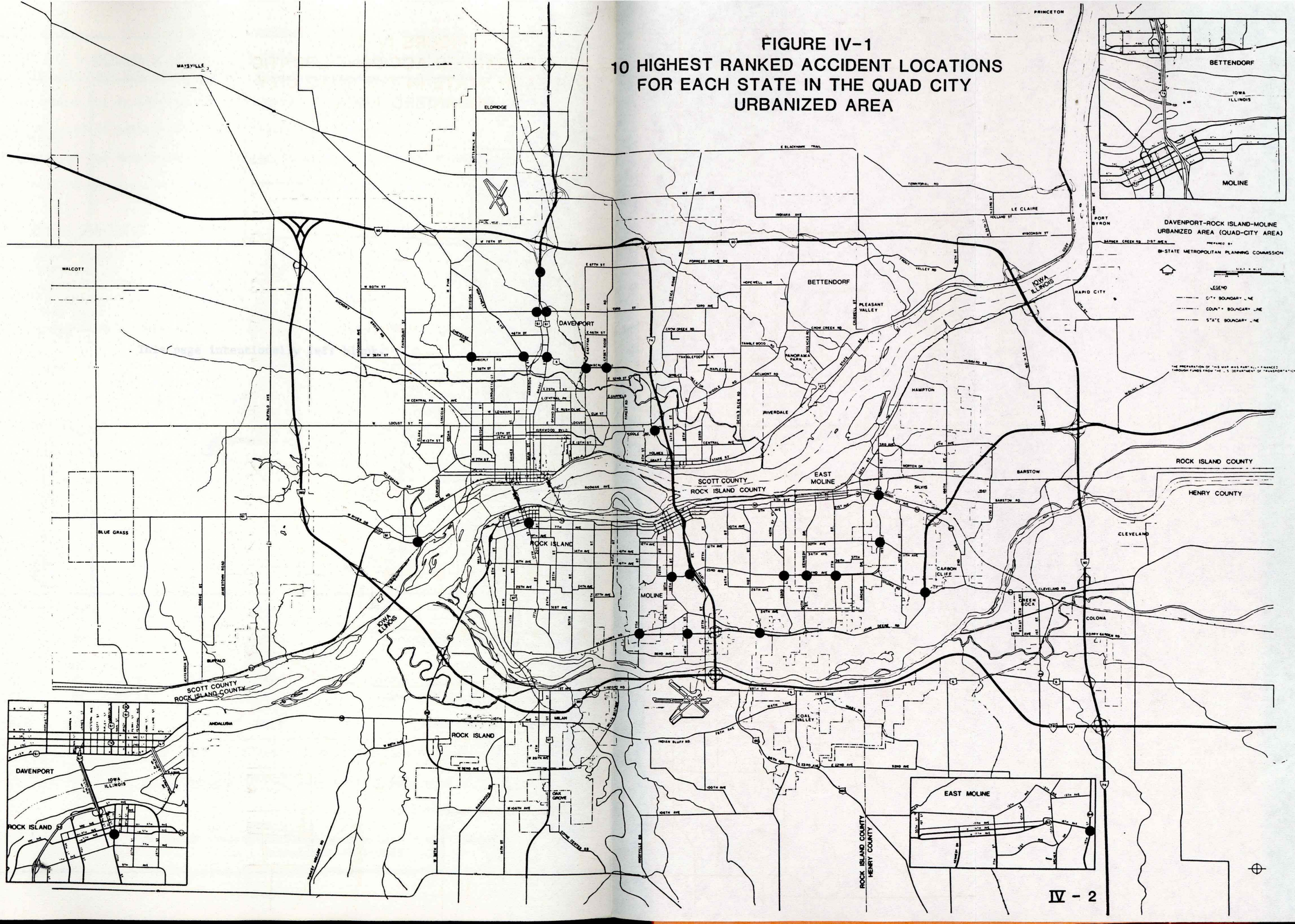
15. 23rd Avenue and 53rd Street - Moline.

Accidents at this location totaled 17 in 1983 and 18 in 1984. This intersection was included in the Illinois top ranked accident intersections and is discussed in further detail in Section IV of this study.

IV. ANALYSIS OF THE 1985 TEN HIGHEST RANKED ACCIDENT LOCATIONS IN ILLINOIS AND IN IOWA

Since communities are most concerned about the higher accident intersections, additional information is provided about each of the ten highest ranked accident locations in Illinois and in Iowa. The information includes a collision diagram of the 1984 accidents. The narrow solid black lines indicate the various accident patterns for 1984. The wider striped line is the predominant accident pattern from past years. In addition to the diagram, an accident history table has been prepared. This table provides information such as the number of accidents, their severity, and the accident rate experienced over the past years. Also provided for each of these intersections is a table listing the types of collisions, road surface conditions, and light conditions for those accidents occurring in 1984. A brief summary is given of all known information including recently completed improvements and those expected to be made in the near future. The Appendix lists potential improvements by types of accidents. Physical improvements may not eliminate all accidents, for many accidents are simply due to driver error and may not be attributed to any defect in the intersection design. Therefore, before any improvements are made, further study of the intersections should be undertaken.

FIGURE IV-1
10 HIGHEST RANKED ACCIDENT LOCATIONS FOR EACH STATE IN THE QUAD CITY URBANIZED AREA



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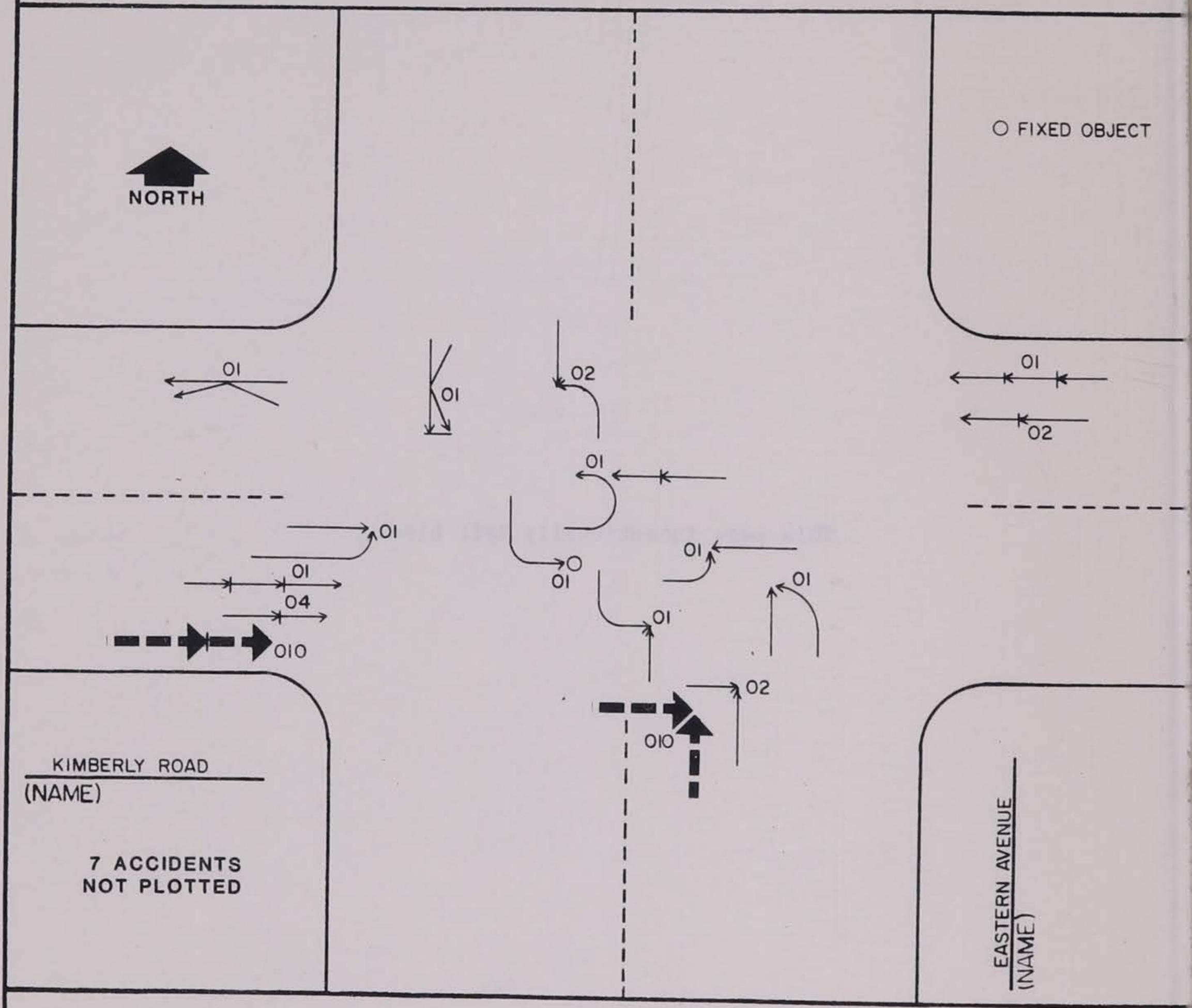
KIMBERLY ROAD/U.S. 6 AND EASTERN AVENUE - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	27	20	20	20	27
Fatal	0	0	0	0	0
Personal Injury	11	4	7	4	12
Property Damage	16	16	13	16	15
Accident Rate	1.93	1.43	1.43	1.43	1.93

Predominant Accident Patterns: Rear End, Right Angle

Rank in Iowa 1984 Intersection Traffic Accidents: 1

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

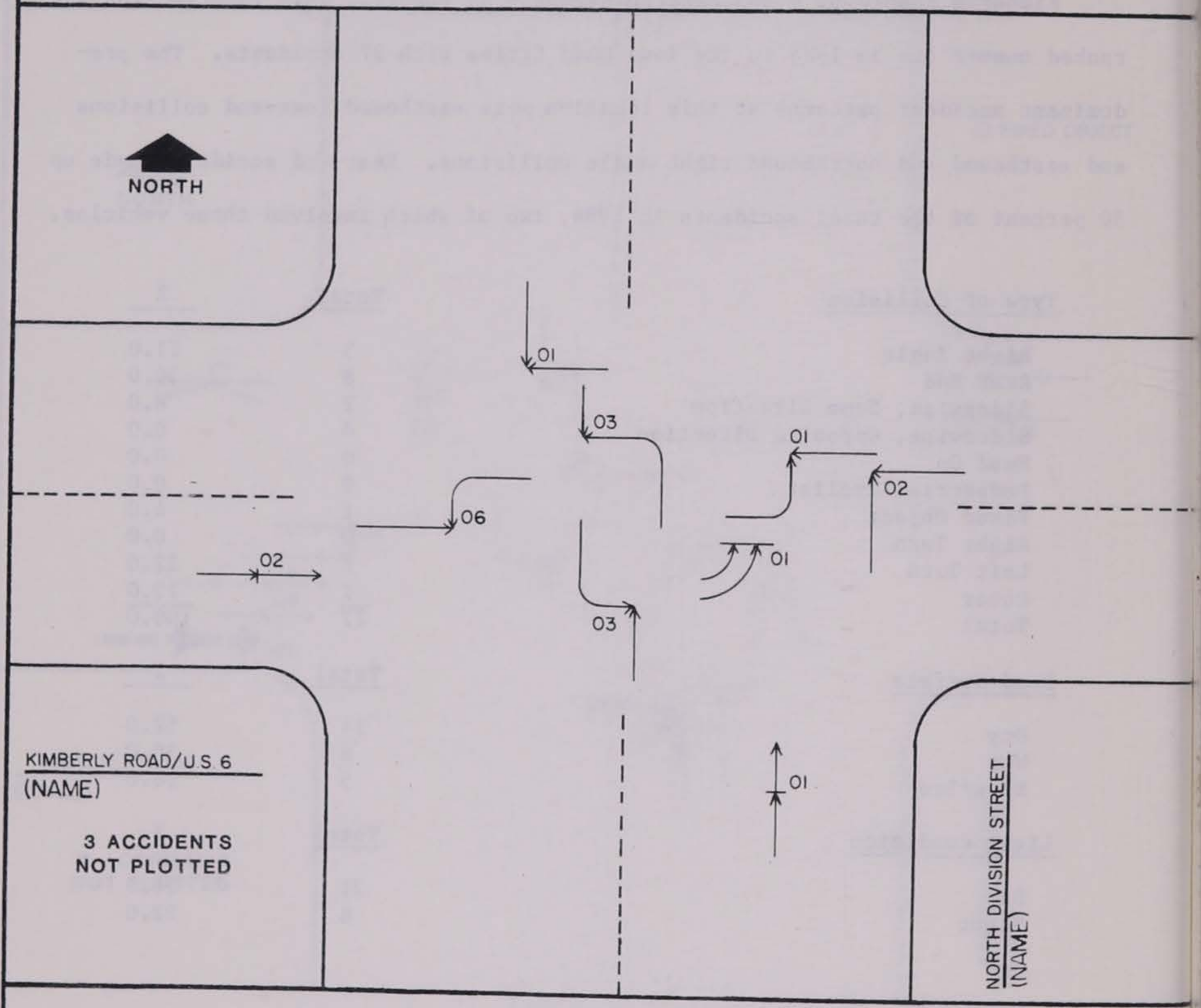
Kimberly Road/U.S. 6 and Eastern Avenue - Davenport. This intersection was ranked number one in 1984 in the Iowa Quad Cities with 27 accidents. The predominant accident patterns at this location were eastbound rear-end collisions and eastbound and northbound right angle collisions. Rear-end accidents made up 30 percent of the total accidents in 1984, two of which involved three vehicles.

Type of Collision	Total	%
Right Angle	3	11.0
Rear End	8	30.0
Sideswipe, Same Direction	2	8.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	1	4.0
Right Turn	0	0.0
Left Turn	6	22.0
Other	7	25.0
Total	27	100.0

Road Surface	Total	%
Dry	14	52.0
Wet	8	30.0
Snow/Ice	5	18.0

Light Condition	Total	%
Day	21	78.0
Night	6	22.0

KIMBERLY ROAD/U.S. 6 AND NORTH DIVISION STREET - DAVENPOR



	1980	1981	1982	1983	1984
Total Accidents	10	15	6	7	23
Fatal	0	0	0	0	0
Personal Injury	4	4	0	2	11
Property Damage	6	11	6	5	12
Accident Rate	1.01	1.52	0.61	0.71	2.32

Predominant Accident Pattern: None

Rank in Iowa 1984 Intersection Traffic Accidents: 2

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

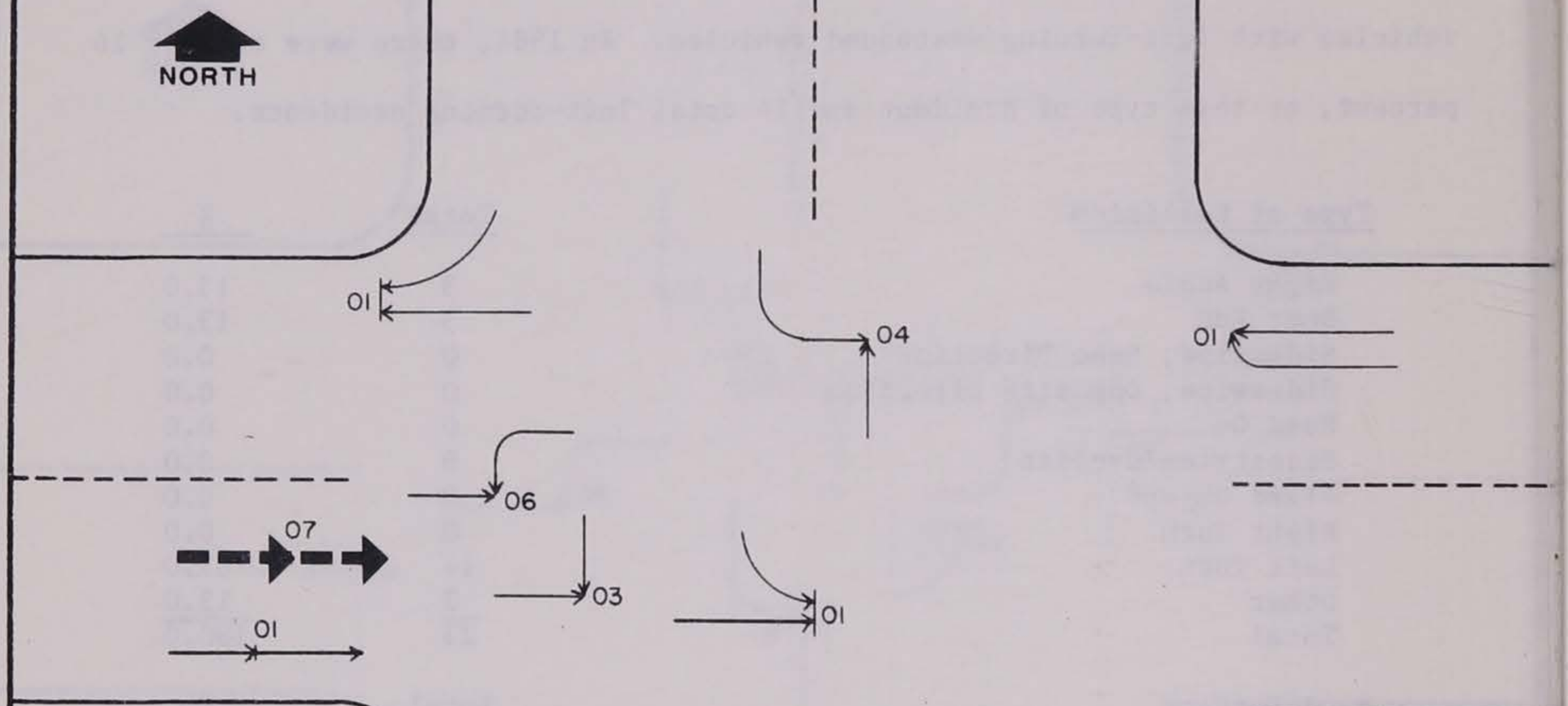
Kimberly Road/U.S. 6 and North Division Street - Davenport. There was no predominant accident pattern at this intersection over the past five years. However, the predominant accident pattern in 1984 involved the collision of eastbound vehicles with left-turning westbound vehicles. In 1984, there were six, or 26 percent, of this type of accident and 14 total left-turning accidents.

Type of Collision	Total	%
Right Angle	3	13.0
Rear End	3	13.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	14	61.0
Other	3	13.0
Total	23	100.0

Road Surface	Total	%
Dry	15	65.0
Wet	6	26.0
Snow/Ice	2	9.0

Light Condition	Total	%
Day	19	83.0
Night	4	17.0

KIMBERLY ROAD/U.S. AND NORTHWEST BOULEVARD/HARRISON STREET - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	19	13	9	8	22
Fatal	0	0	0	0	0
Personal Injury	3	5	1	2	6
Property Damage	16	8	8	6	16
Accident Rate	1.40	0.95	0.66	0.59	1.62

Predominant Accident Pattern: Rear End

Rank in Iowa 1984 Intersection Traffic Accidents: 4

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Kimberly Road/U.S. 6 and Northwest Boulevard/Harrison Street - Davenport.

The accidents at this intersection increased from eight to 22 from 1983 to 1984. Extensive construction occurred at this location through August, 1984, in conjunction with the implementation of the U.S. 61 one-way system extension. The improvements at this location involved the elimination of the protected left turns for the north and south approaches, the addition of one through lane and one dedicated right turn lane on the east and west approaches and an additional left turn lane on the east approach. Over 75 percent of the accidents which were experienced in the past year at this intersection occurred before September, 1984, which was previous to the completion of these changes.

The predominant accident pattern between 1980 and 1984 involved eastbound rear-end collisions. Unfortunately, many accident descriptions contained unknowns which prevented the illustration of these accidents on the diagram, therefore, the predominant accident pattern is based on the accidents which could be drawn.

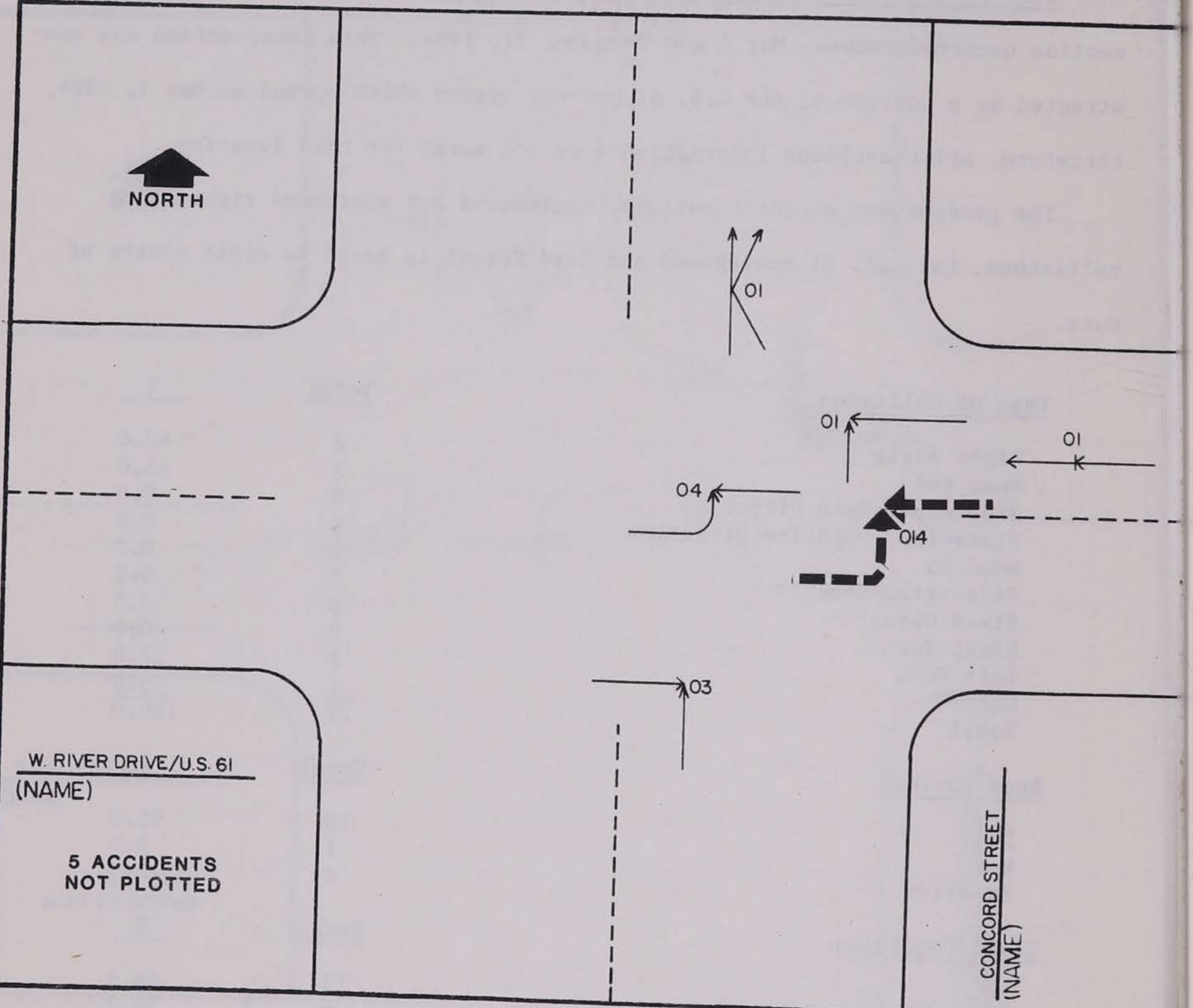
In 1984, 50 percent, or 11, of the accidents at this location included left-turning vehicles with six of these involving the collision of eastbound vehicles with left-turning westbound vehicles. Five of these six collisions occurred between January and July. In August, a protected left turn signal phase was installed at this intersection.

Type of Collision	Total	%
Right Angle	3	14.0
Rear End	1	4.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	2	9.0
Left Turn	11	50.0
Other	5	23.0
Total	22	100.0

Road Surface	Total	%
Dry	18	82.0
Wet	4	18.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	20	91.0
Night	2	9.0

W. RIVER DRIVE/U.S. 61 AND CONCORD STREET - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	14	8	3	16	15
Fatal	0	0	0	0	0
Personal Injury	4	3	0	8	6
Property Damage	10	5	3	8	9
Accident Rate	2.70	1.54	0.58	3.08	2.89

Predominant Accident Pattern: Left Turn

Rank in Iowa 1984 Intersection Traffic Accidents: 4

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

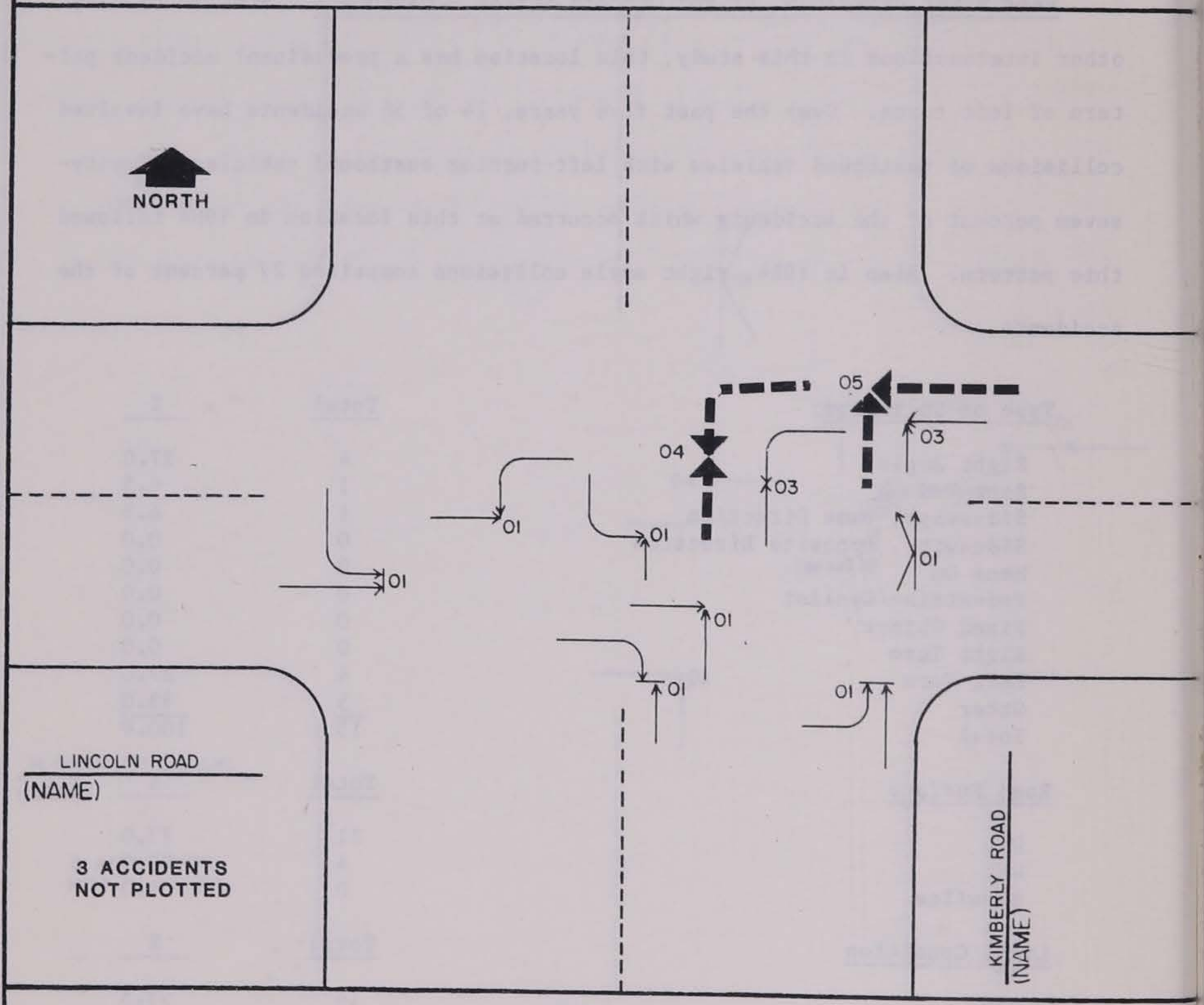
West River Drive/U.S. 61 and Concord Street - Davenport. Similar to many other intersections in this study, this location has a predominant accident pattern of left turns. Over the past five years, 14 of 56 accidents have involved collisions of westbound vehicles with left-turning eastbound vehicles. Twenty-seven percent of the accidents which occurred at this location in 1984 followed this pattern. Also in 1984, right angle collisions comprised 27 percent of the accidents.

Type of Collision	Total	%
Right Angle	4	27.0
Rear End	1	6.5
Sideswipe, Same Direction	1	6.5
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	4	27.0
Other	5	33.0
Total	15	100.0

Road Surface	Total	%
Dry	11	73.0
Wet	4	27.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	14	93.5
Night	1	6.5

KIMBERLY ROAD AND LINCOLN ROAD - BETTENDORF



	1980	1981	1982	1983	1984
Total Accidents	4	1	3	4	16
Fatal	0	0	0	0	0
Personal Injury	1	0	1	1	4
Property Damage	3	1	2	3	12
Accident Rate	0.69	0.17	0.52	0.69	2.77

Predominant Accident Patterns: Right Angle, Left Turn

Rank in Iowa 1984 Intersection Traffic Accidents: 6

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

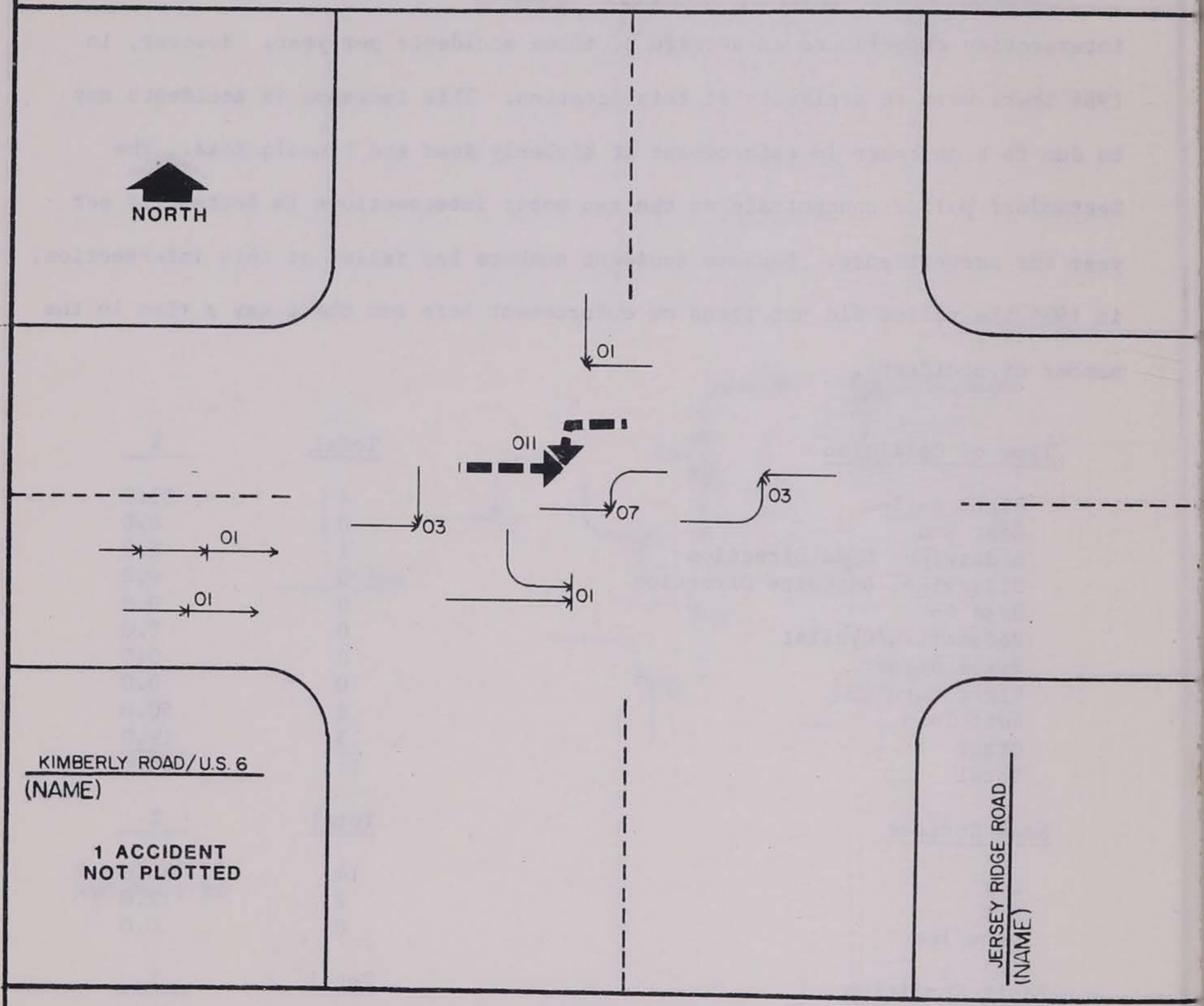
Kimberly Road and Lincoln Road - Bettendorf. Between 1980 and 1983, this intersection experienced an average of three accidents per year. However, in 1984 there were 16 accidents at this location. This increase in accidents may be due to a decrease in enforcement at Kimberly Road and Lincoln Road. The Bettendorf police concentrate on the ten worst intersections in Bettendorf per year for surveillance. Because accident numbers had fallen at this intersection, in 1984 the police did not focus on enforcement here and there was a rise in the number of accidents.

Type of Collision	Total	%
Right Angle	4	25.0
Rear End	0	0.0
Sideswipe, Same Direction	1	6.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	8	50.0
Other	3	19.0
Total	16	100.0

Road Surface	Total	%
Dry	14	88.0
Wet	2	12.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	14	88.0
Night	2	12.0

KIMBERLY ROAD/U.S. 6 AND JERSEY RIDGE ROAD - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	19	16	14	18	18
Fatal	0	0	0	0	0
Personal Injury	9	4	6	4	11
Property Damage	10	12	8	14	7
Accident Rate	1.35	1.14	1.00	1.28	1.28

Predominant Accident Pattern: Left Turn

Rank in Iowa 1984 Intersection Traffic Accidents: 7

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Kimberly Road/U.S. 6 and Jersey Ridge Road - Davenport. Eighteen accidents occurred at this intersection in 1983 and in 1984. The predominant accident pattern at this location in the past five years involved the collision of east-bound vehicles with left-turning westbound vehicles. Seven of these accidents occurred in 1984.

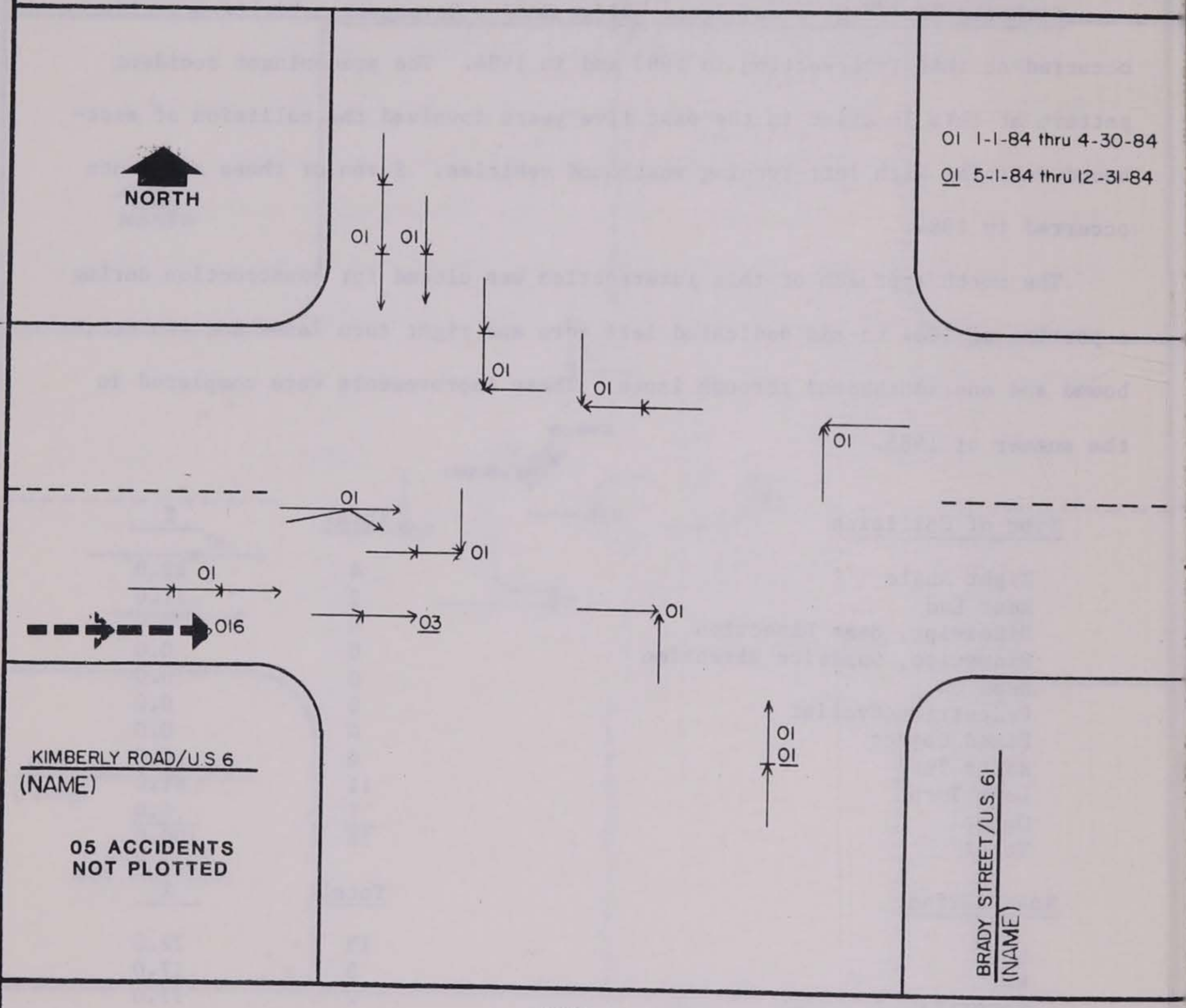
The north approach of this intersection was closed for construction during a portion of 1984 to add dedicated left turn and right turn lanes and two north-bound and one southbound through lanes. These improvements were completed in the summer of 1985.

Type of Collision	Total	%
Right Angle	4	22.0
Rear End	2	11.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	11	61.0
Other	1	6.0
Total	18	100.0

Road Surface	Total	%
Dry	13	72.0
Wet	3	17.0
Snow/Ice	2	11.0

Light Condition	Total	%
Day	11	61.0
Night	7	39.0

KIMBERLY ROAD/U.S. 6 AND BRADY STREET/U.S. 61 - DAVENPOR



	1980	1981	1982	1983	1984
Total Accidents	28	30	18	16	19
Fatal	0	0	0	0	1
Personal Injury	6	7	2	5	4
Property Damage	22	23	16	11	14
Accident Rate	1.39	1.49	0.89	0.79	0.94

Predominant Accident Pattern: Rear End

Rank in Iowa 1984 Intersection Traffic Accidents: 8

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Brady Street/U.S. 61 and Kimberly Road/U.S. 6 - Davenport. In May, 1984, Brady Street was converted to a northbound one-way to complete the U.S. 61 one-way couplet with southbound Harrison Street/U.S. 61. Accidents which occurred after this change are underlined on the accident diagram. Also, the accident rate was calculated with two-way volumes on Brady Street because one-way volumes were not available.

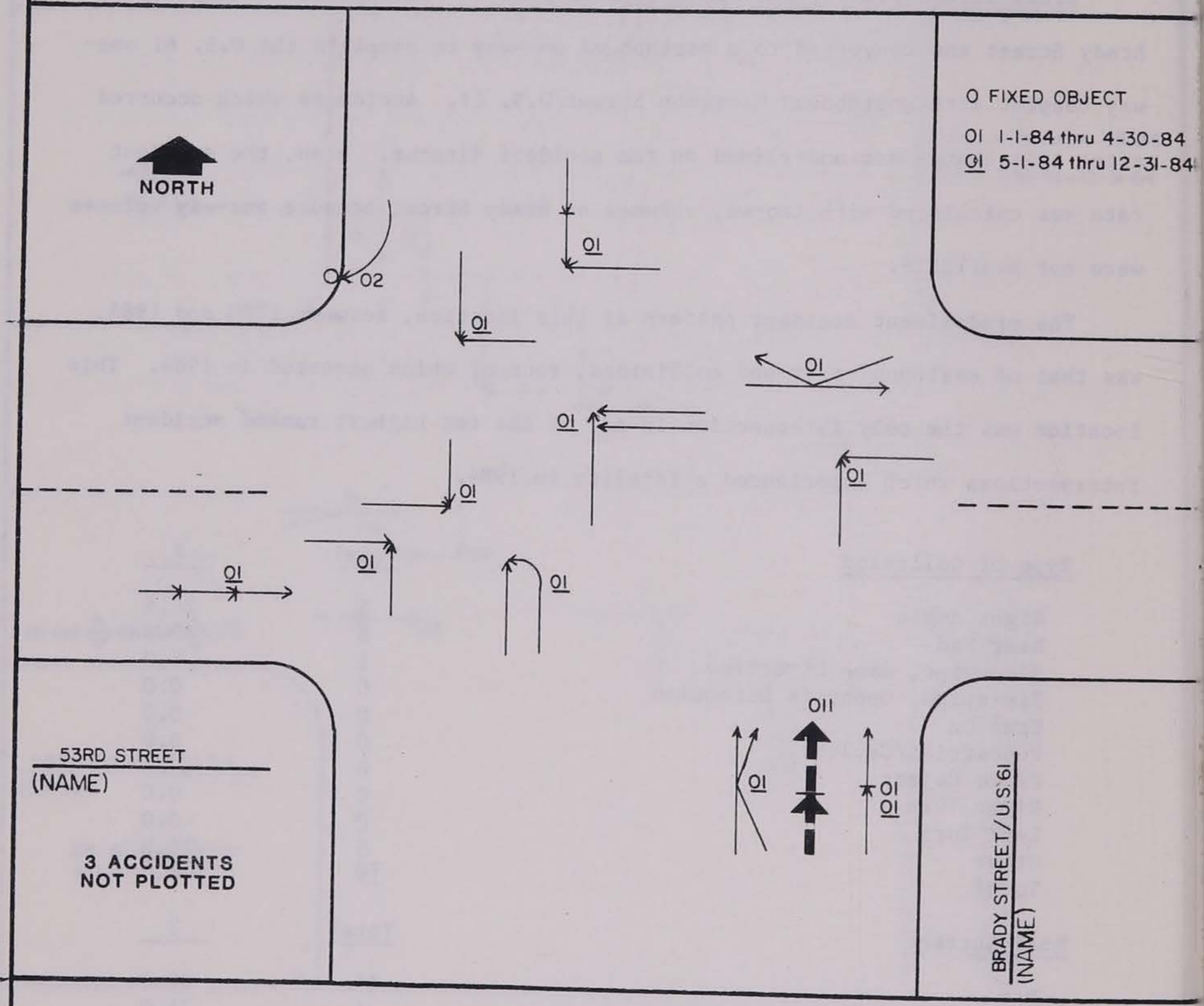
The predominant accident pattern at this location, between 1980 and 1984, was that of eastbound rear-end collisions, four of which occurred in 1984. This location was the only intersection in any of the ten highest ranked accident intersections which experienced a fatality in 1984.

Type of Collision	Total	%
Right Angle	5	26.5
Rear End	8	42.0
Sideswipe, Same Direction	1	5.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	0	0.0
Other	5	26.5
Total	19	100.0

Road Surface	Total	%
Dry	11	58.0
Wet	4	21.0
Snow/Ice	4	21.0

Light Condition	Total	%
Day	9	47.0
Night	10	53.0

BRADY STREET/U.S.61 AND 53RD STREET - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	18	17	8	18	17
Fatal	0	0	0	0	0
Personal Injury	7	6	2	6	7
Property Damage	11	11	6	12	10
Accident Rate	1.65	1.56	0.64	1.65	1.56

Predominant Accident Pattern: Rear End

Rank in Iowa 1984 Intersection Traffic Accidents: 8

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Brady Street/U.S. 61 and East 53rd Street - Davenport. This intersection was a portion of a major roadway improvement project in the recent past. With the completion of the extension of the U.S. 61 one-way system on May 1, 1984, southbound traffic was prohibited from Brady Street at this intersection. For this reason, accidents which occurred after this improvement are underlined to distinguish them from accidents which were experienced when Brady Street was two-way. Also, it is important to note that two-way volumes were used in the calculation of the accident rate at this intersection because one-way volumes have not been gathered.

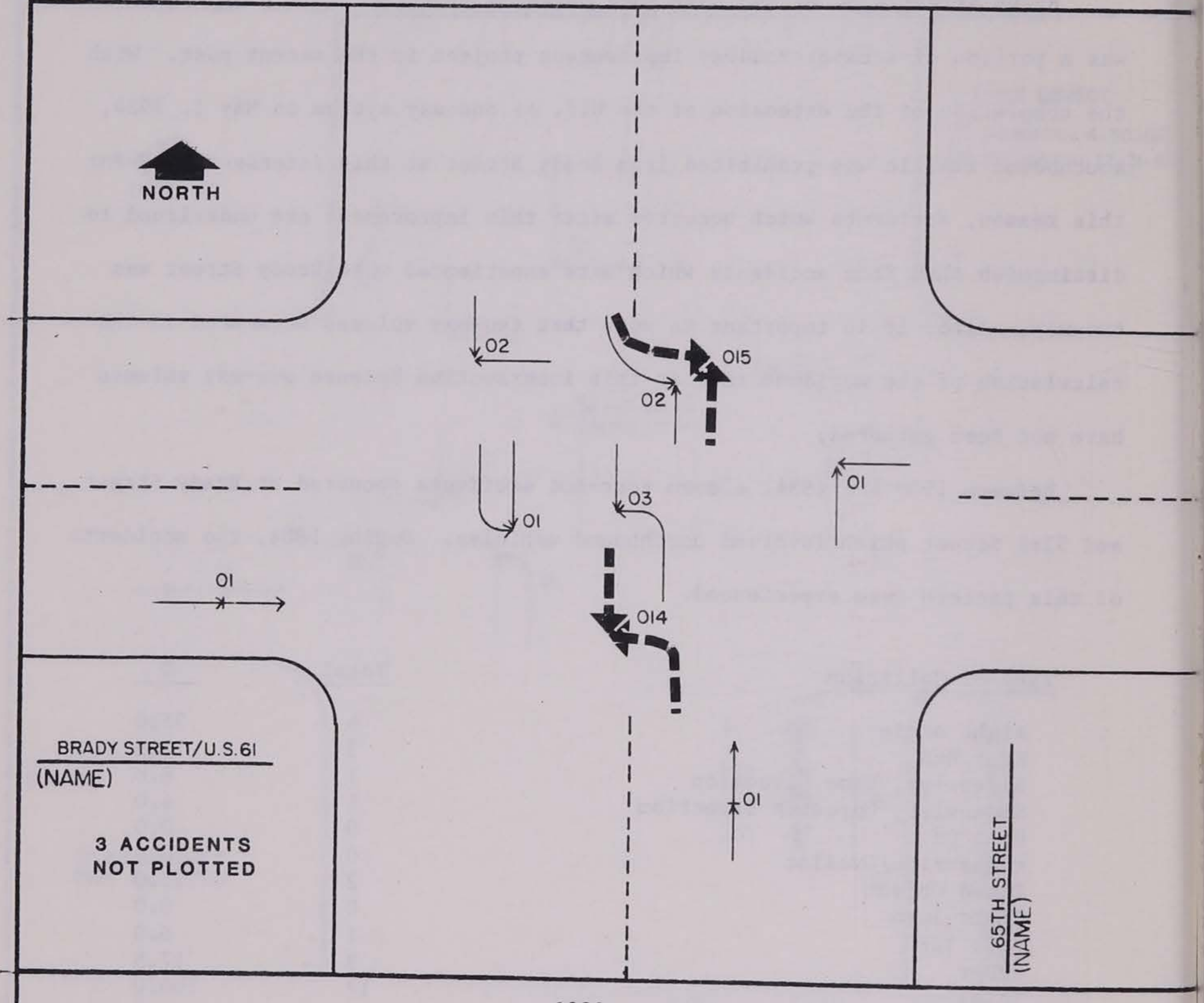
Between 1980 and 1984, eleven rear-end accidents occurred at Brady Street and 53rd Street which involved northbound vehicles. During 1984, two accidents of this pattern were experienced.

Type of Collision	Total	%
Right Angle	6	35.0
Rear End	3	17.5
Sideswipe, Same Direction	1	6.0
Sideswipe, Opposite Direction	1	6.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	2	12.0
Right Turn	0	0.0
Left Turn	1	6.0
Other	3	17.5
Total	17	100.0

Road Surface	Total	%
Dry	13	76.0
Wet	2	12.0
Snow/Ice	2	12.0

Light Condition	Total	%
Day	11	65.0
Night	6	35.0

BRADY STREET/U.S. 61 AND 65TH STREET - DAVENPORT



	1980	1981	1982	1983	1984
Total Accidents	25	18	10	19	14
Fatal	0	0	0	0	0
Personal Injury	8	7	6	10	6
Property Damage	17	11	4	9	8
Accident Rate	3.64	2.62	1.46	2.77	2.04

Predominant Accident Pattern: Left Turn

Rank in Iowa 1984 Intersection Traffic Accidents: 10

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Brady Street/U.S. 61 and West 65th Street - Davenport. This intersection has shown wide fluctuations in the number of accidents over the past five years, ranging from 25 in 1980 to 10 in 1982. There were 14 accidents in 1984, a 23 percent decrease in accidents from 1985. Throughout the study period, this location was a portion of a major roadway improvement project. Construction included the implementation of a slip-ramp to accommodate northbound traffic desiring to turn west. With this improvement, direct left turns by northbound traffic have been prohibited. It is important to note that the volumes used for the calculation of the accident rate at this location were collected before these improvements were implemented.

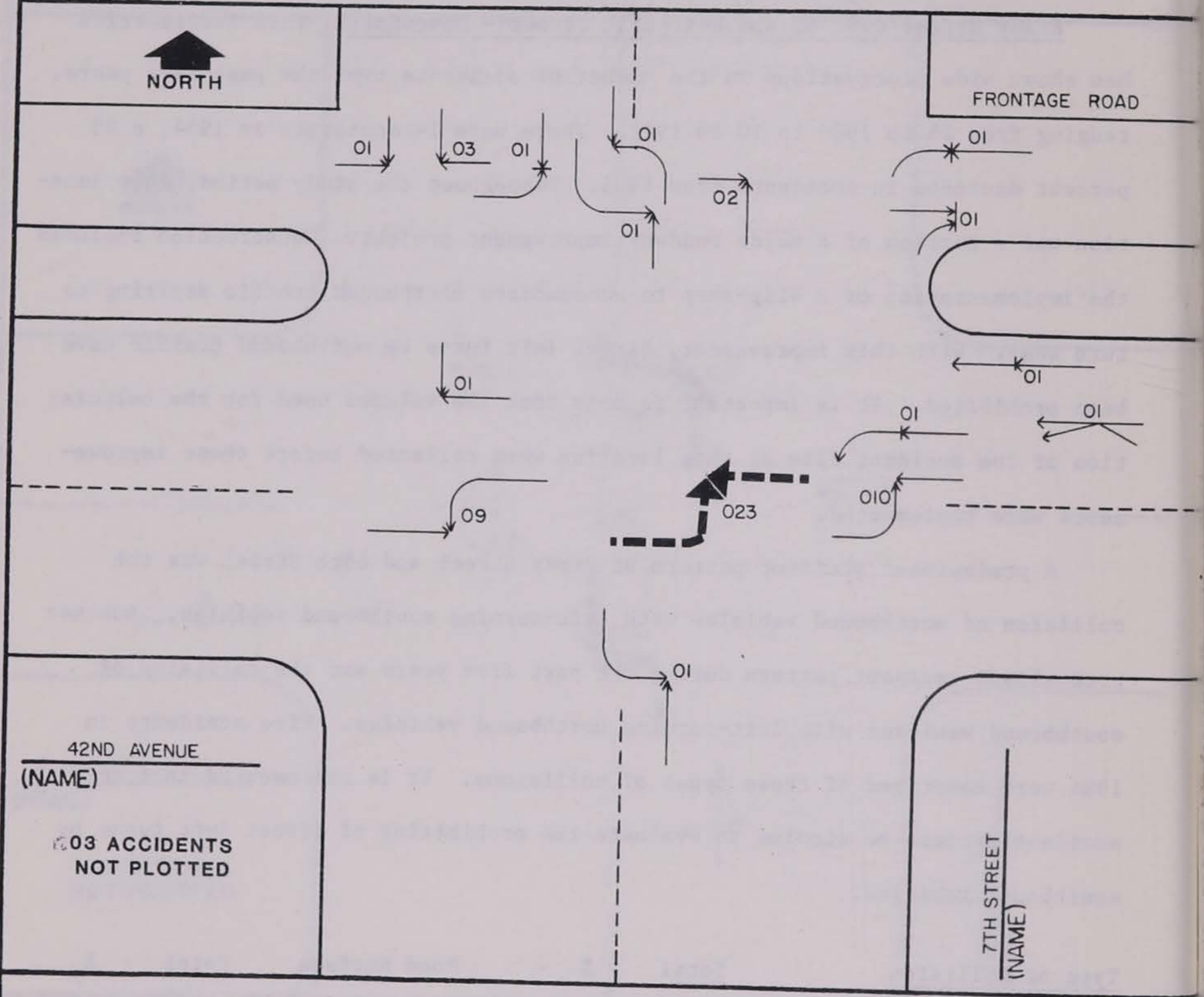
A predominant accident pattern at Brady Street and 65th Street was the collision of northbound vehicles with left-turning southbound vehicles. Another predominant accident pattern during the past five years was the collision of southbound vehicles with left-turning northbound vehicles. Five accidents in 1984 were comprised of these types of collisions. It is recommended that this accident pattern be studied to evaluate the prohibiting of direct left turns by southbound vehicles.

Type of Collision	Total	%
Right Angle	3	21.5
Rear End	2	14.0
Sideswipe Same Direction	0	0.0
Sideswipe Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	6	43.0
Other	3	21.5
Total	14	100.0

Road Surface	Total	%
Dry	11	79.0
Wet	2	14.0
Snow/Ice	1	7.0

Light Condition	Total	%
Day	14	100.0
Night	0	0.0

42ND AVENUE AND 7TH STREET - E. MOLINE



	1980	1981	1982	1983	1984
Total Accidents	42	39	32	22	38
Fatal	0	0	0	0	0
Personal Injury	13	10	9	9	17
Property Damage	29	29	23	13	21
Accident Rate	4.25	3.94	3.24	2.22	3.84

Predominant Accident Pattern: Left Turn

Rank in Illinois 1984 Intersection Traffic Accidents: 1

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

42nd Avenue and 7th Street (with North Frontage Road) - East Moline. The total number of accidents at this intersection has increased by 72 percent from 22 accidents in 1983 to 38 in 1984. In 1983 a thorough study of this intersection was conducted by the Illinois Department of Transporation to determine alternatives which could reduce traffic accidents. The study recommended an increase in law enforcement. Increased enforcement at 42nd Avenue and 7th Street appears to have been effective in 1983, however, accidents have increased recently. Improvements have included the replacement of malfunctioning signals in early 1983 and the addition of a permissive left turn signal on 42nd Avenue in 1984, however, these changes seem to have been ineffective.

The large number of conflicting traffic patterns result from the nearby frontage road. In the 1983 Quad City Street/Highway Intersection Traffic Accident Report it was determined that, due to the closeness of the North Frontage Road, it was considered part of the 7th Street at 42nd Avenue intersection. While information was provided which allowed these to be separated, they are combined to allow for a more detailed analysis.

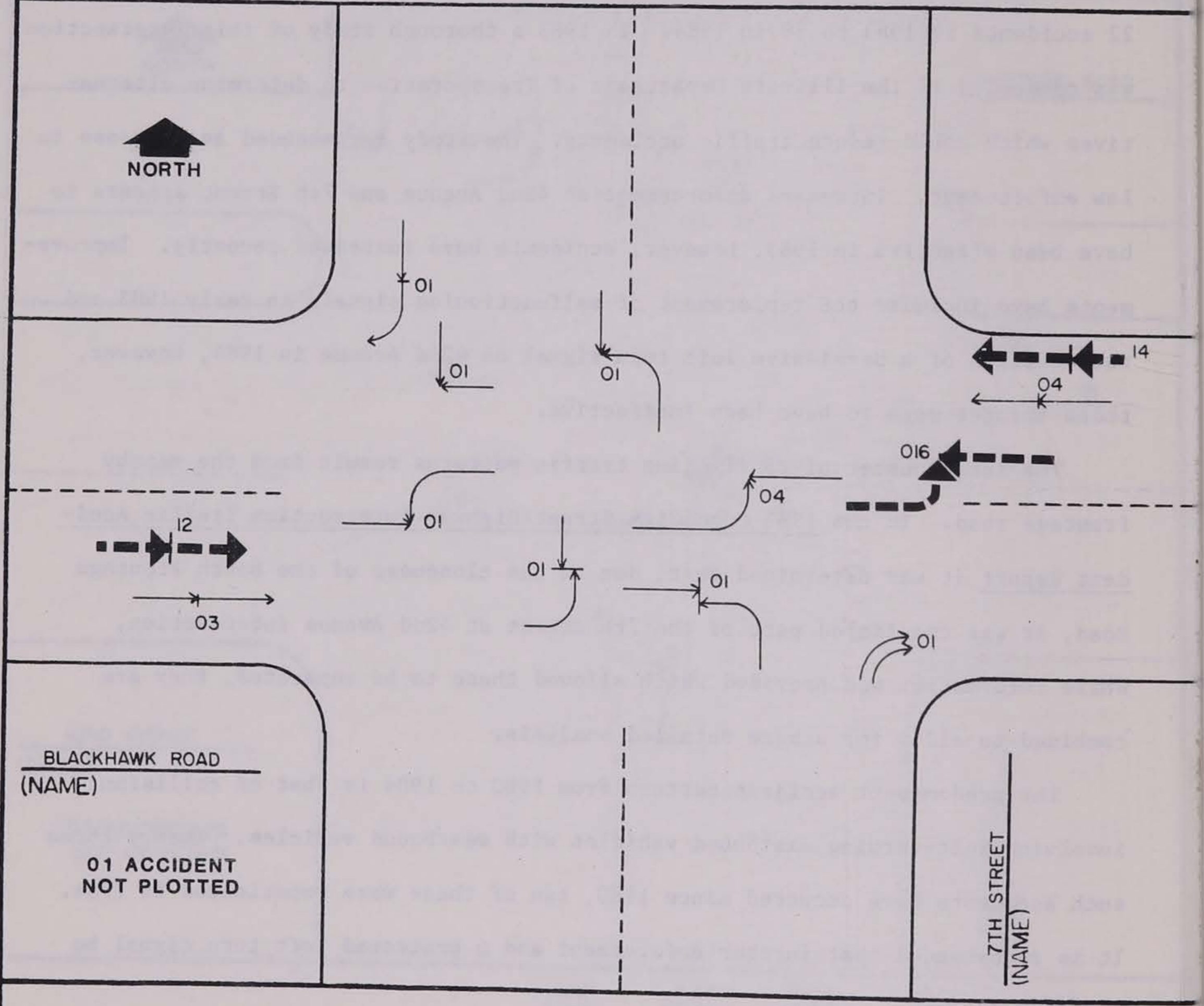
The predominant accident pattern from 1980 to 1984 is that of collisions involving left-turning eastbound vehicles with westbound vehicles. Twenty-three such accidents have occurred since 1980, ten of these were experienced in 1984. It is recommended that further enforcement and a protected left turn signal be considered.

Type of Collision	Total	%
Right Angle	7	18.0
Rear End	1	3.0
Sideswipe Same Direction	1	3.0
Sideswipe Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	1	3.0
Right Turn	2	5.0
Left Turn	26	68.0
Other	0	0.0
Total	38	100.0

Road Surface	Total	%
Dry	25	66.0
Wet	9	24.0
Snow/Ice	4	10.0

Light Condition	Total	%
Day	32	84.0
Night	6	16.0

BLACKHAWK ROAD/ILLINOIS 5 AND 7TH STREET - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	16	15	7	18	19
Fatal	0	0	0	0	0
Personal Injury	4	8	6	8	9
Property Damage	12	7	1	10	10
Accident Rate	1.93	1.81	0.84	2.17	2.29

Predominant Accident Patterns: Left Turn, Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 2

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

Blackhawk Road/Illinois 5 and 7th Street - Moline. During the past five years, the accidents at this location have ranged from 7 in 1982 to 19 in 1984. One of the predominant accident patterns, which totaled 16, during this period has been collisions of eastbound left-turning vehicles with westbound vehicles. Four, or 22 percent, of this type of accident occurred in 1984.

Another predominant accident pattern during the past five years involved westbound and eastbound rear-end collisions which totaled 14 and 12, respectively. In 1984, seven accidents fell into this category.

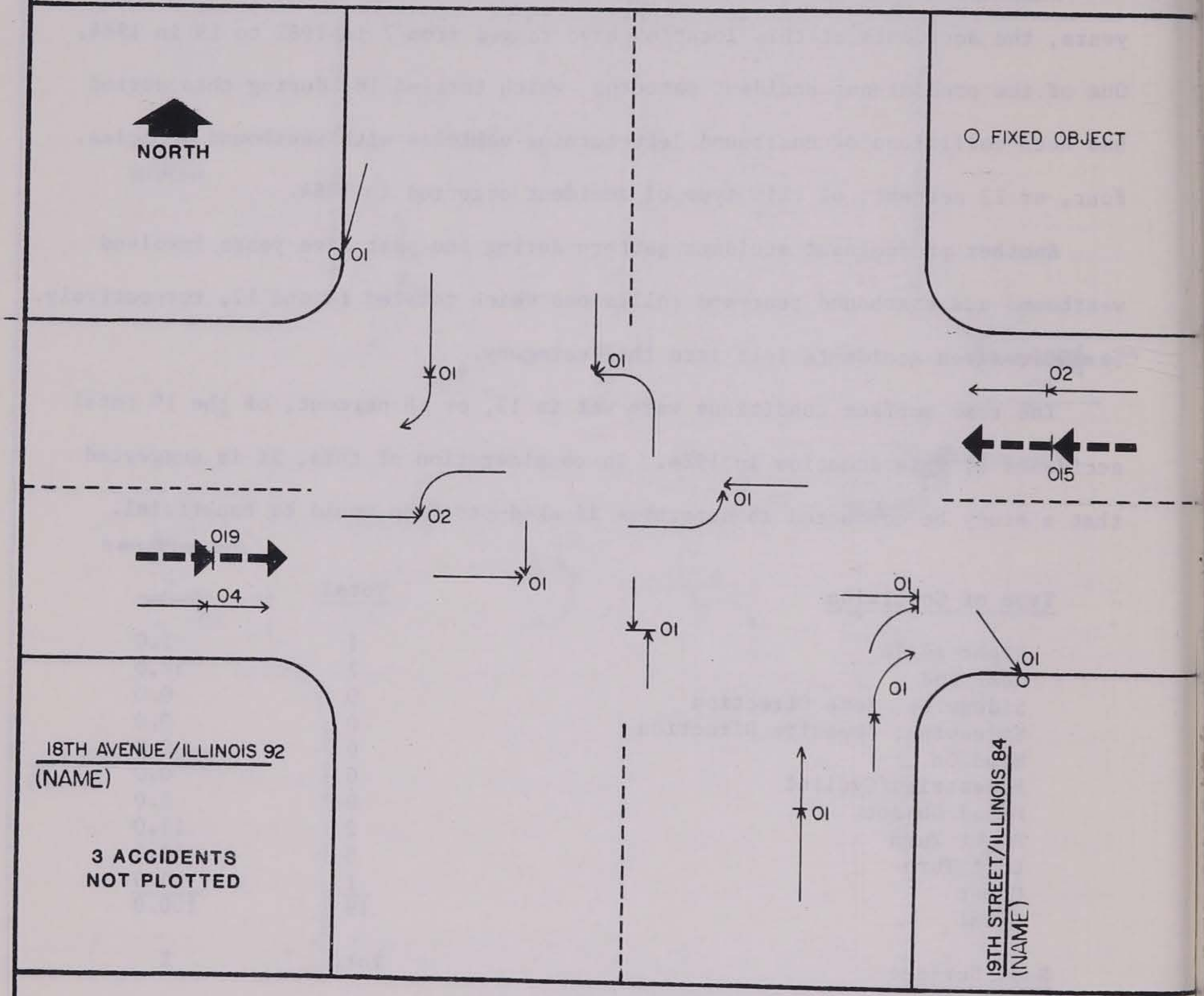
The road surface conditions were wet in 13, or 68 percent, of the 19 total accidents at this location in 1984. In consideration of this, it is suggested that a study be conducted to determine if skid-proofing would be beneficial.

Type of Collision	Total	%
Right Angle	1	5.0
Rear End	7	37.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	2	11.0
Left Turn	8	42.0
Other	1	5.0
Total	19	100.0

Road Surface	Total	%
Dry	6	32.0
Wet	13	68.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	13	68.0
Night	6	32.0

18TH AVENUE/ILLINOIS 92 AND 19TH STREET/ILLINOIS 84 - E. MOLI



	1980	1981	1982	1983	1984
Total Accidents	32	26	22	21	21
Fatal	0	0	0	0	0
Personal Injury	9	7	9	6	9
Property Damage	23	19	13	15	12
Accident Rate	3.25	2.64	2.23	2.13	2.13

Predominant Accident Pattern: Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 2

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

18th Avenue/Illinois 84-92 and 19th Street - East Moline. Twenty-one accidents occurred at this location in 1983 and 1984. This number represents a 34 percent decrease from the total of 32 in 1980.

The predominant accident pattern involves rear-end collisions of eastbound and westbound vehicles. Rear-end accidents comprised 33 percent of those occurring in 1984, while left-turning movements were involved in 28 percent of the accidents.

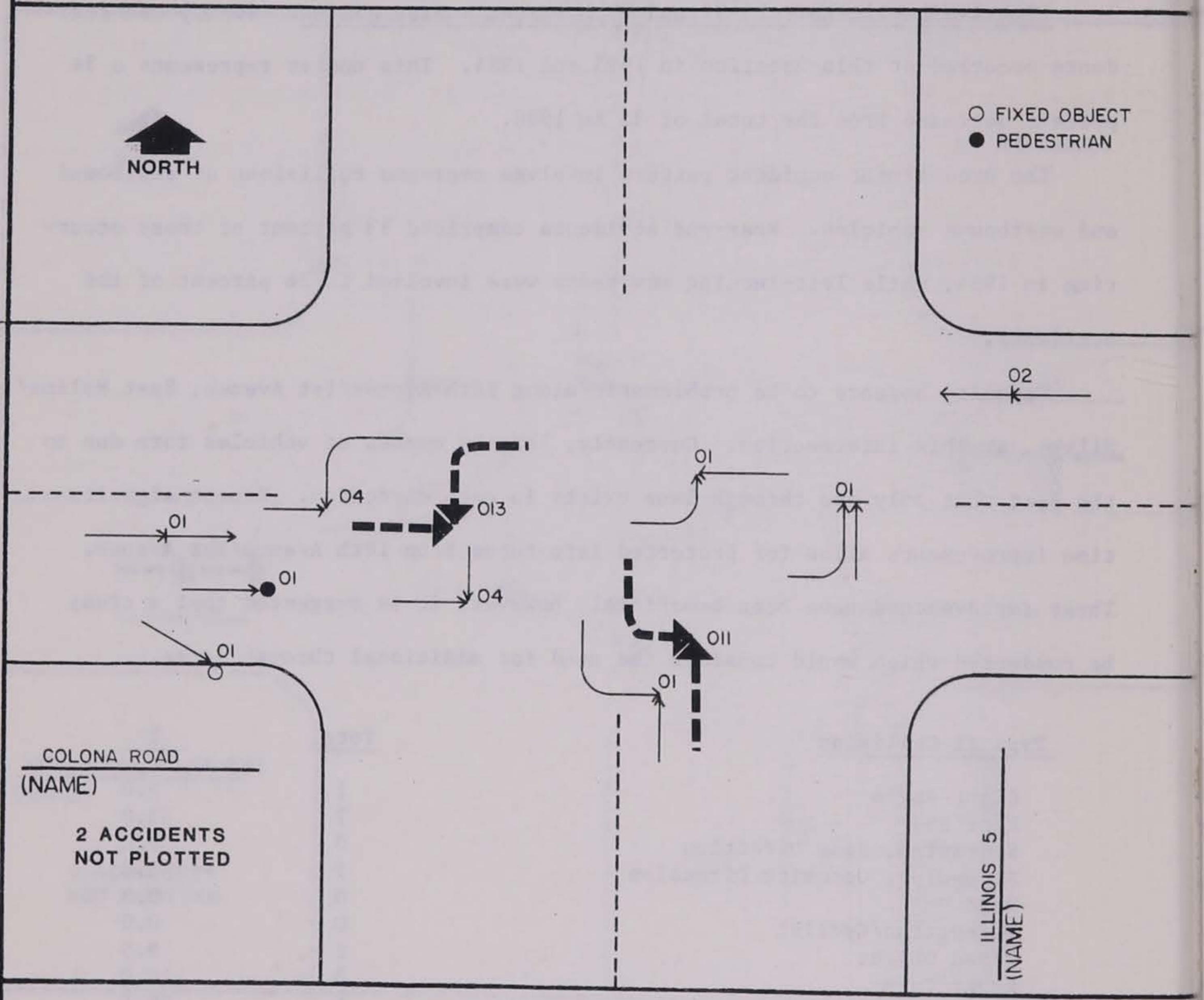
Capacity appears to be problematic along 18th Avenue/1st Avenue, East Moline/Silvis, at this intersection. Currently, lengthy queues of vehicles form due to the fact that only one through lane exists in each direction. Recent signalization improvements allow for protected left turns from 18th Avenue/1st Avenue. These improvements have been beneficial, however, it is suggested that a study be conducted which would consider the need for additional through lanes.

Type of Collision	Total	%
Right Angle	1	5.0
Rear End	7	33.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	1	5.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	2	9.5
Right Turn	3	14.0
Left Turn	6	28.5
Other	1	5.0
Total	21	100.0

Road Surface	Total	%
Dry	10	48.0
Wet	10	48.0
Snow/Ice	1	4.0

Light Condition	Total	%
Day	12	57.0
Night	9	43.0

JOHN DEERE ROAD/ILLINOIS 5 AND COLONA ROAD - UNINCORP



	1980	1981	1982	1983	1984
Total Accidents	18	13	13	20	18
Fatal	0	0	0	0	0
Personal Injury	10	6	5	8	6
Property Damage	8	7	8	12	12
Accident Rate	2.64	1.93	1.91	2.83	2.64

Predominant Accident Pattern: Left Turn

Rank in Illinois 1984 Intersection Traffic Accidents: 4

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

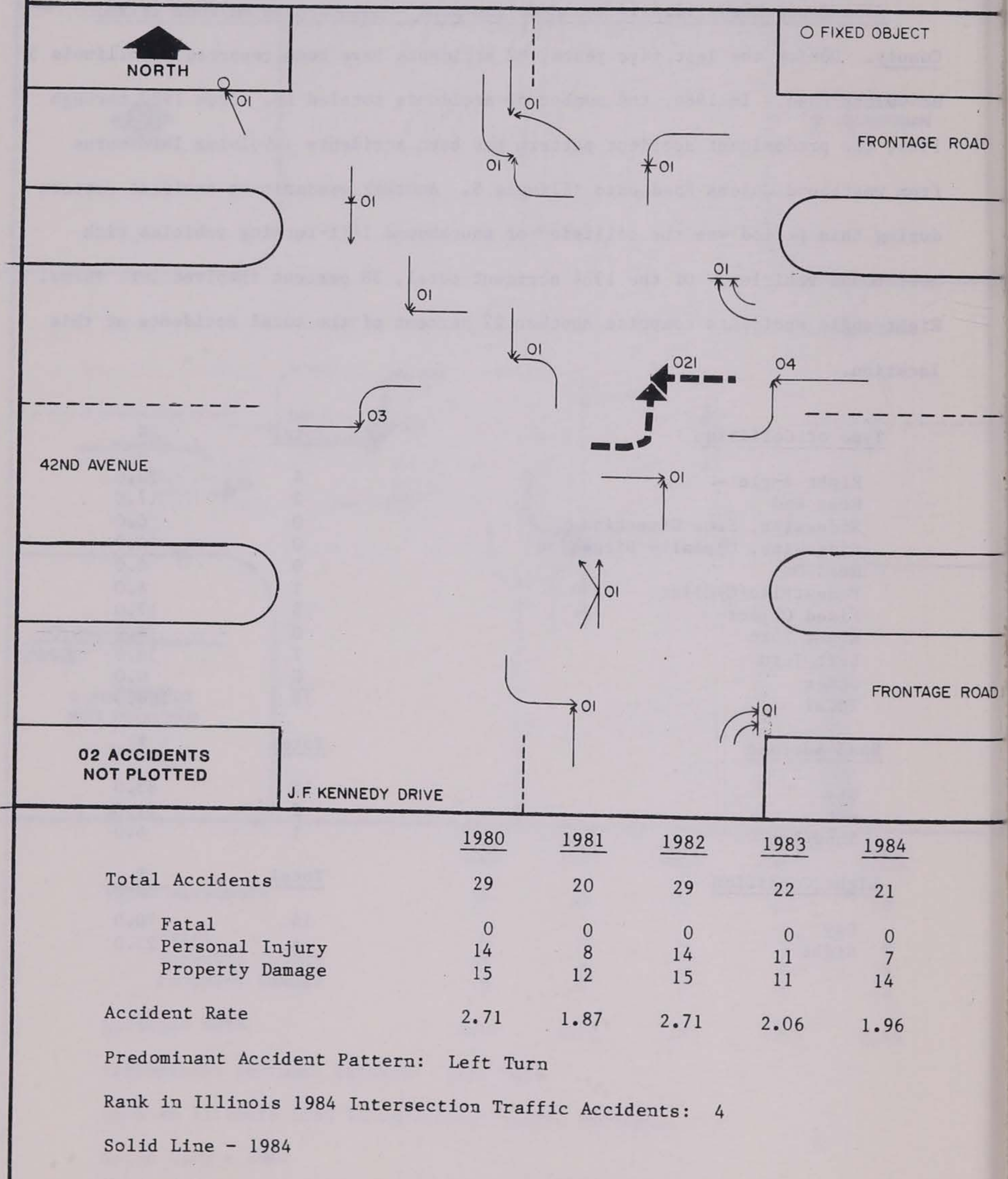
John Deere Road/Illinois 5 and Colona Road - Unincorporated/Rock Island County. During the last five years, 82 accidents have been reported at Illinois 5 at Colona Road. In 1984, the number of accidents totaled 18. From 1980 through 1984, the predominant accident pattern has been accidents involving left turns from westbound Colona Road onto Illinois 5. Another predominant accident pattern during this period was the collision of southbound left-turning vehicles with northbound vehicles. Of the 1984 accident total, 38 percent involved left turns. Right-angle accidents comprise another 22 percent of the total accidents at this location.

Type of Collision	Total	%
Right Angle	4	22.0
Rear End	3	17.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	1	6.0
Fixed Object	3	17.0
Right Turn	0	0.0
Left Turn	7	38.0
Other	0	0.0
Total	18	100.0

Road Surface	Total	%
Dry	15	83.0
Wet	2	11.0
Snow/Ice	1	6.0

Light Condition	Total	%
Day	14	78.0
Night	4	22.0

42ND AVENUE AND J. F. KENNEDY DRIVE - E. MOLINE



	1980	1981	1982	1983	1984
Total Accidents	29	20	29	22	21
Fatal	0	0	0	0	0
Personal Injury	14	8	14	11	7
Property Damage	15	12	15	11	14
Accident Rate	2.71	1.87	2.71	2.06	1.96

Predominant Accident Pattern: Left Turn

Rank in Illinois 1984 Intersection Traffic Accidents: 4

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

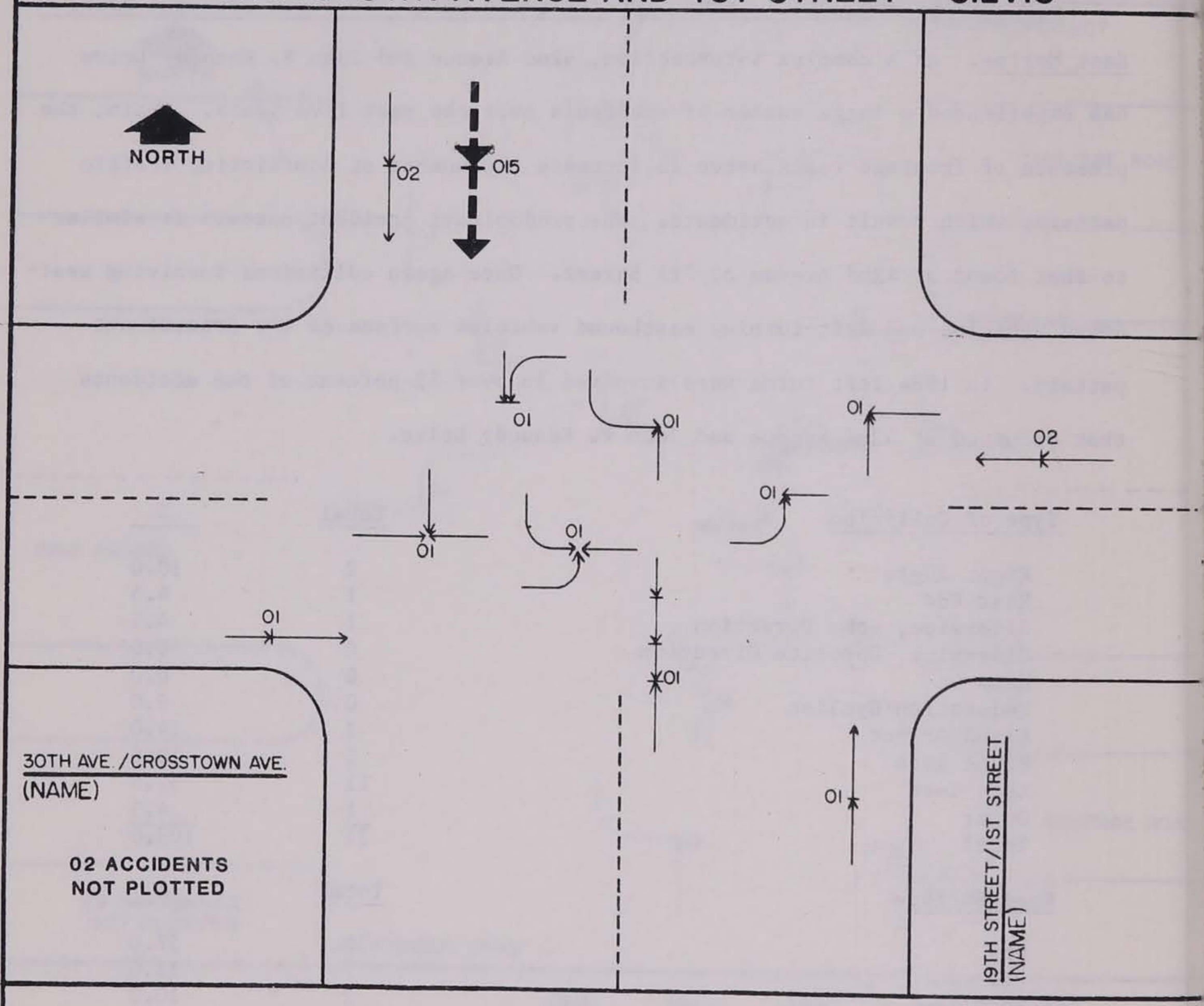
42nd Avenue and John F. Kennedy Drive (with North and South Frontage Road) - East Moline. As a complex intersection, 42nd Avenue and John F. Kennedy Drive has experienced a large number of accidents over the past five years. Again, the presence of frontage roads serve to increase the number of conflicting traffic patterns which result in accidents. The predominant accident pattern is similar to that found at 42nd Avenue at 7th Street. Once again collisions involving westbound vehicles and left-turning eastbound vehicles surface as the predominant pattern. In 1984 left turns were involved in over 52 percent of the accidents that occurred at 42nd Avenue and John F. Kennedy Drive.

Type of Collision	Total	%
Right Angle	2	10.0
Rear End	1	4.5
Sideswipe, Same Direction	1	4.5
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	3	14.0
Right Turn	2	10.0
Left Turn	11	52.5
Other	1	4.5
Total	21	100.0

Road Surface	Total	%
Dry	12	57.0
Wet	7	33.0
Snow/Ice	2	10.0

Light Condition	Total	%
Day	12	57.0
Night	9	43.0

30TH AVENUE AND 19TH STREET - E. MOLINE
CROSSTOWN AVENUE AND 1ST STREET - SILVIS



	1980	1981	1982	1983	1984
Total Accidents	9	9	13	15	15
Fatal	0	0	0	0	0
Personal Injury	3	4	6	7	7
Property Damage	6	5	7	8	8
Accident Rate	1.59	1.59	2.30	2.65	2.65

Predominant Accident Pattern: Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 6

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

30th Avenue/Crosstown Avenue and 19th Street/1st Street - East Moline/Silvis.

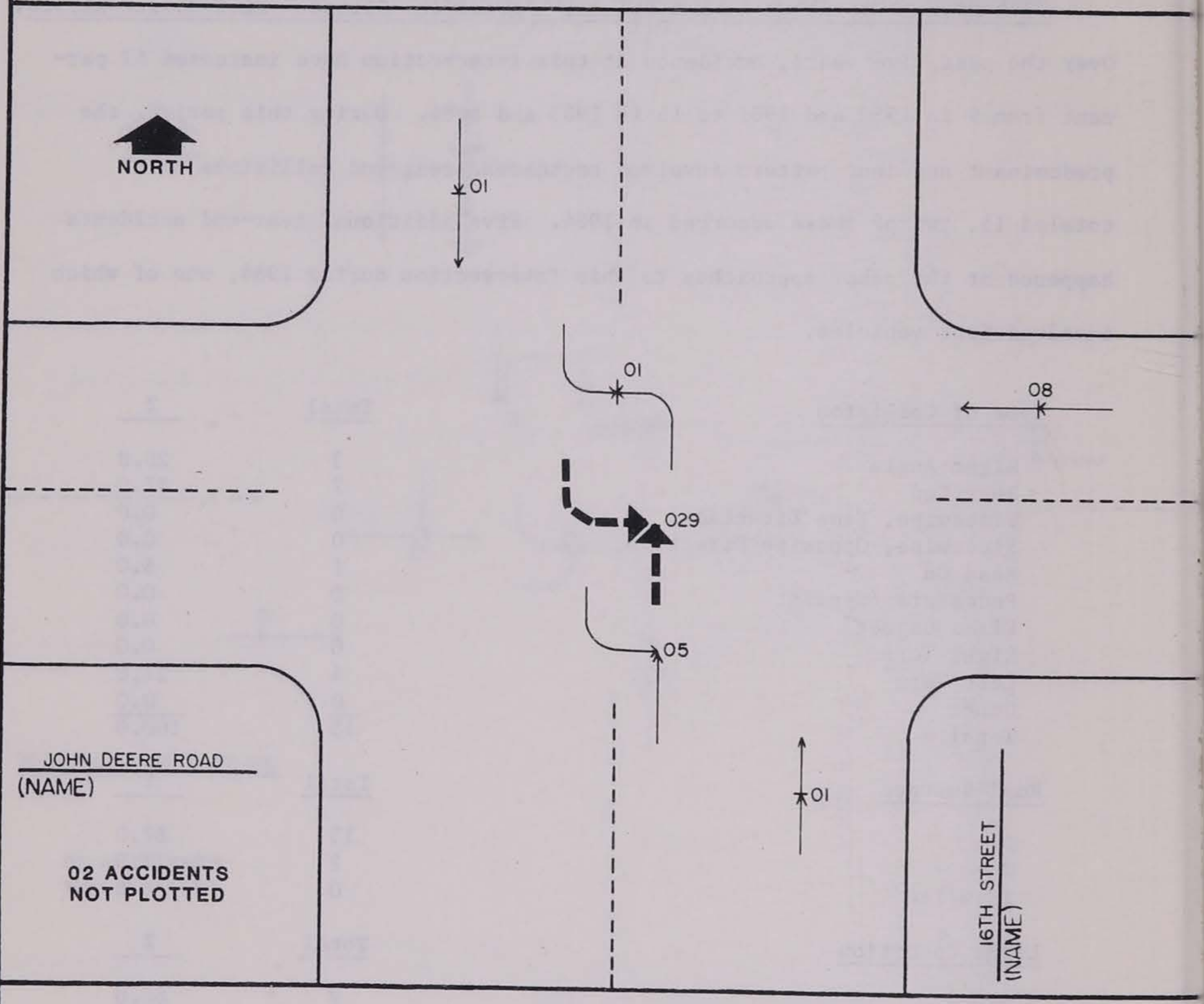
Over the past five years, accidents at this intersection have increased 67 percent from 9 in 1980 and 1981 to 15 in 1983 and 1984. During this period, the predominant accident pattern involved southbound rear-end collisions which totaled 15, two of these occurred in 1984. Five additional rear-end accidents happened at the other approaches to this intersection during 1984, one of which involved four vehicles.

Type of Collision	Total	%
Right Angle	3	20.0
Rear End	7	47.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	1	6.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	4	27.0
Other	0	0.0
Total	15	100.0

Road Surface	Total	%
Dry	13	87.0
Wet	2	13.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	9	60.0
Night	6	40.0

JOHN DEERE ROAD/ILLINOIS 5 AND 16TH STREET - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	18	17	21	14	18
Fatal	0	0	0	0	0
Personal Injury	8	8	9	3	8
Property Damage	10	9	12	11	10
Accident Rate	1.35	1.27	1.57	1.05	1.35

Predominant Accident Pattern: Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 8

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

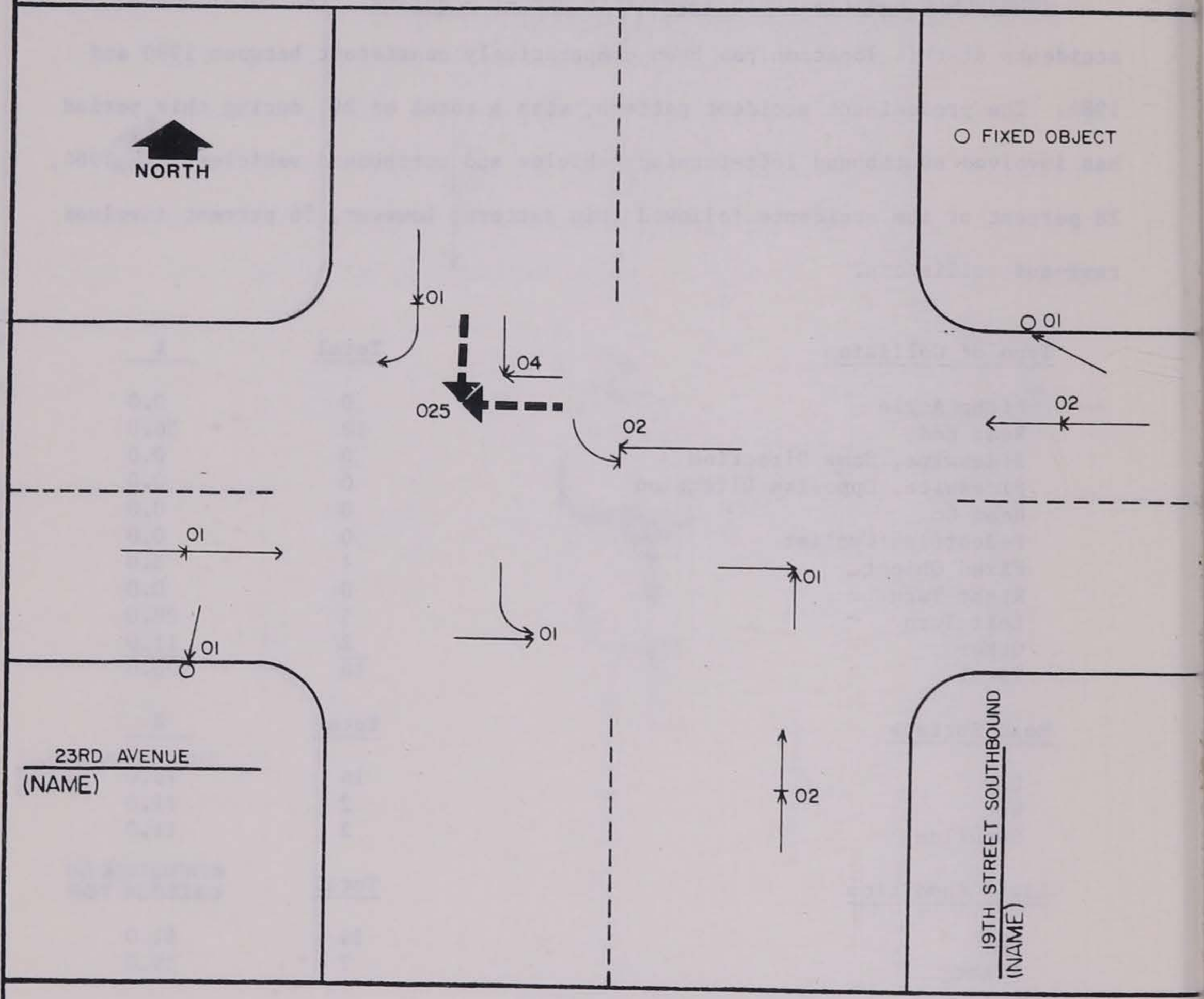
John Deere Road/Illinois 5 and 16th Street - Moline. The total number of accidents at this location has been comparatively consistent between 1980 and 1984. The predominant accident pattern, with a total of 29, during this period has involved southbound left-turning vehicles and northbound vehicles. In 1984, 28 percent of the accidents followed this pattern, however, 56 percent involved rear-end collisions.

Type of Collision	Total	%
Right Angle	0	0.0
Rear End	10	56.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	1	5.0
Right Turn	0	0.0
Left Turn	5	28.0
Other	2	11.0
Total	18	100.0

Road Surface	Total	%
Dry	14	78.0
Wet	2	11.0
Snow/Ice	2	11.0

Light Condition	Total	%
Day	11	61.0
Night	7	39.0

23RD AVENUE AND 19TH STREET SOUTHBOUND - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	35	15	12	17	16
Fatal	0	0	0	0	0
Personal Injury	15	4	5	4	8
Property Damage	20	11	7	13	8
Accident Rate	4.30	1.84	1.47	2.09	1.97

Predominant Accident Pattern: Right Angle

Rank in Illinois 1984 Intersection Traffic Accidents: 8

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

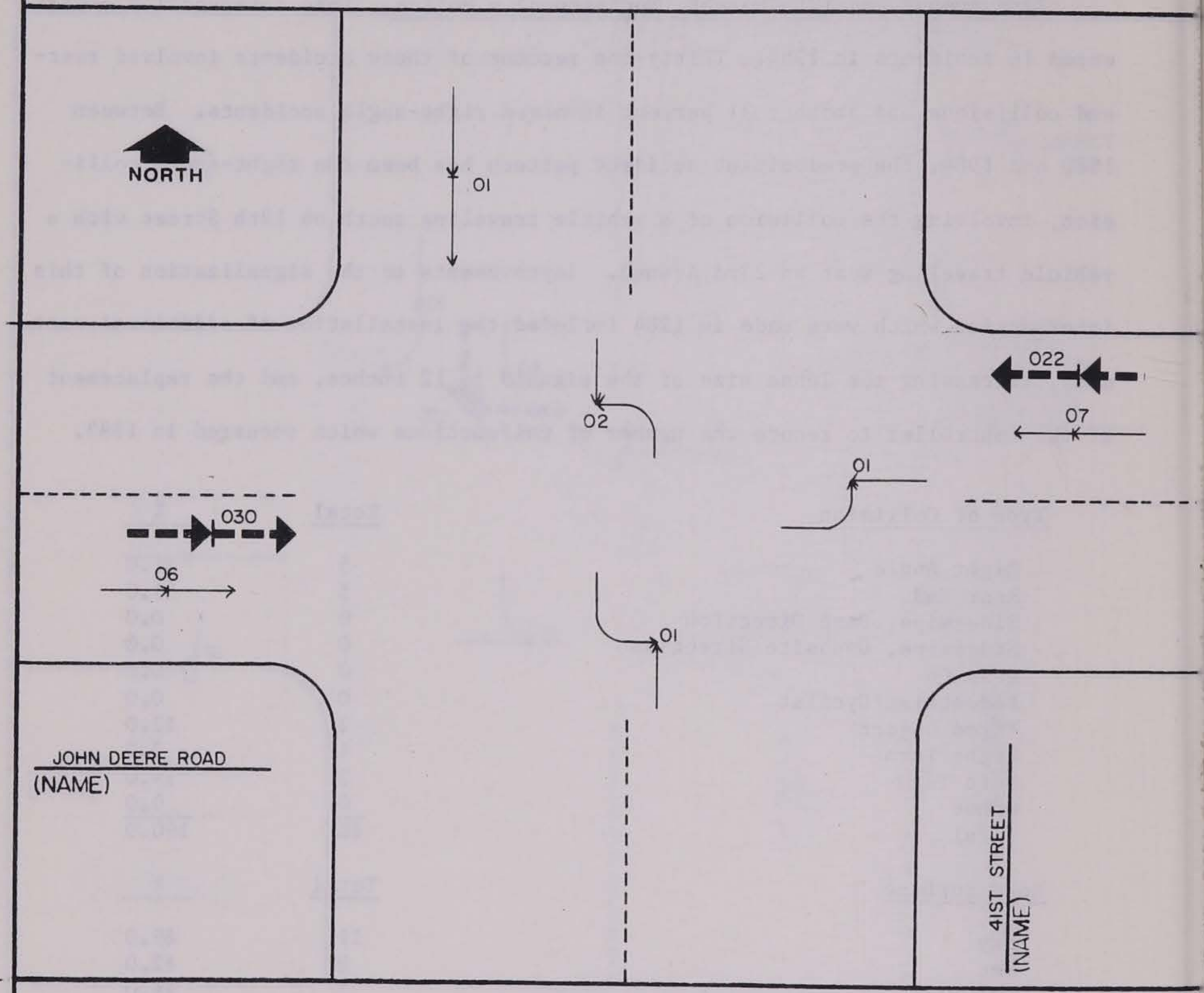
23rd Avenue and 19th Street (Southbound) - Moline. This intersection experienced 16 accidents in 1984. Thirty-one percent of these accidents involved rear-end collisions and another 31 percent involved right-angle accidents. Between 1980 and 1984, the predominant accident pattern has been the right-angle collision, involving the collision of a vehicle traveling south on 19th Street with a vehicle traveling west on 23rd Avenue. Improvements to the signalization of this intersection which were made in 1984 included the installation of additional mast arms, increasing the lense size of the signals to 12 inches, and the replacement of the controller to reduce the number of malfunctions which occurred in 1983.

Type of Collision	Total	%
Right Angle	5	31.0
Rear End	5	31.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	2	12.0
Right Turn	1	7.0
Left Turn	3	19.0
Other	0	0.0
Total	16	100.0

Road Surface	Total	%
Dry	11	69.0
Wet	2	12.0
Snow/Ice	3	19.0

Light Condition	Total	%
Day	10	63.0
Night	6	37.0

JOHN DEERE ROAD/ILLINOIS 5 AND 41ST STREET - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	18	17	21	14	18
Fatal	0	0	0	0	0
Personal Injury	8	8	9	3	8
Property Damage	10	9	12	11	10
Accident Rate	1.35	1.27	1.57	1.05	1.35

Predominant Accident Pattern: Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 8

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

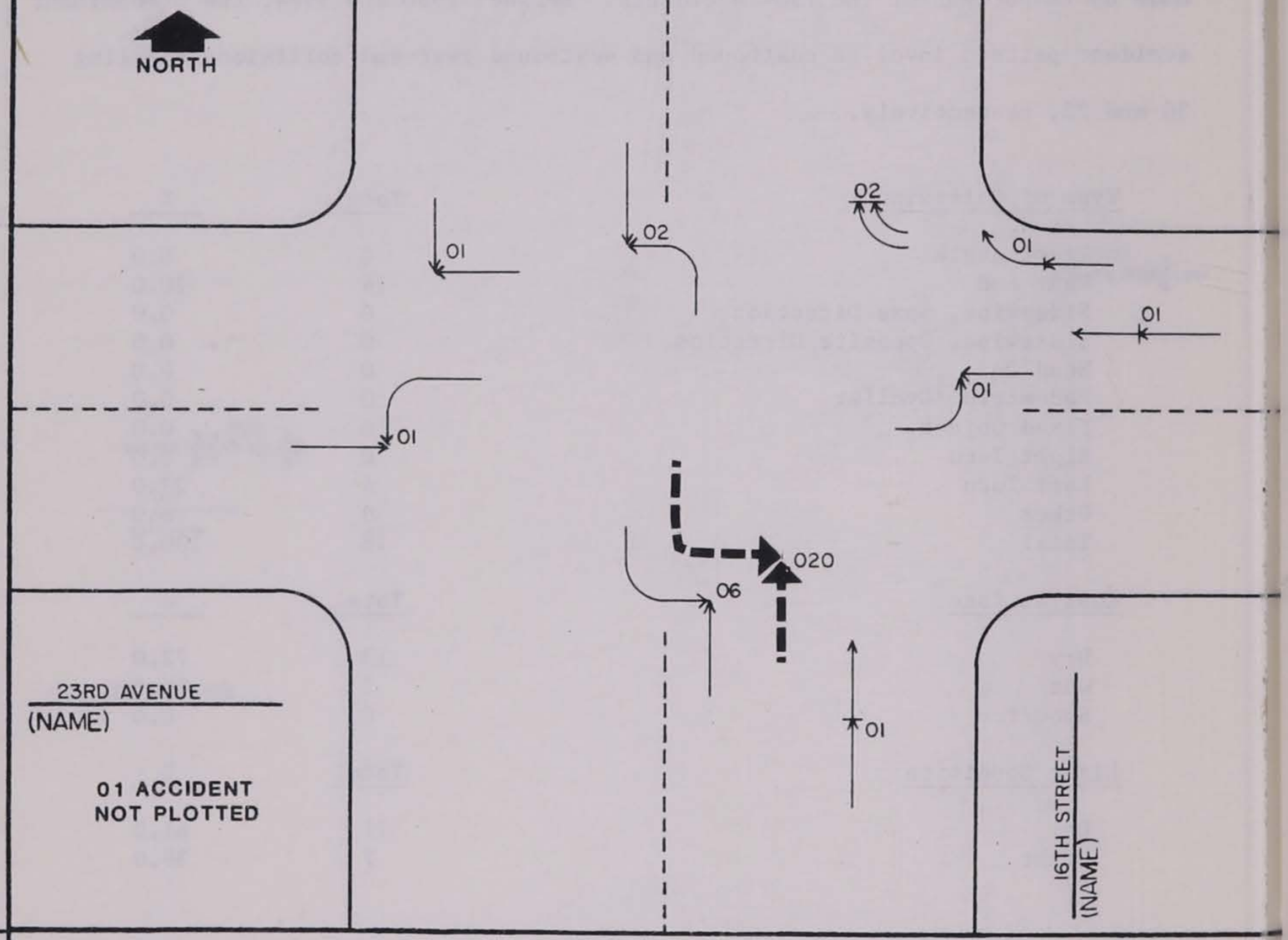
John Deere Road/Illinois 5 and 41st Street - Moline. Accidents totaled 18 at this intersection in 1984, with 14 of these being rear-end collisions, which made up 78 percent of the 1984 accidents. Between 1980 and 1984, the predominant accident pattern involved eastbound and westbound rear-end collisions totaling 30 and 22, respectively.

Type of Collision	Total	%
Right Angle	0	0.0
Rear End	14	78.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	0	0.0
Left Turn	4	22.0
Other	0	0.0
Total	18	100.0

Road Surface	Total	%
Dry	13	72.0
Wet	5	28.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	11	61.0
Night	7	39.0

23RD AVENUE AND 16TH STREET - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	21	16	18	16	17
Fatal	0	0	0	0	0
Personal Injury	6	6	5	7	3
Property Damage	15	10	13	9	14
Accident Rate	2.47	1.88	2.12	1.88	1.99

Predominant Accident Pattern: Left Turn

Rank in Illinois 1984 Intersection Traffic Accidents: 10

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

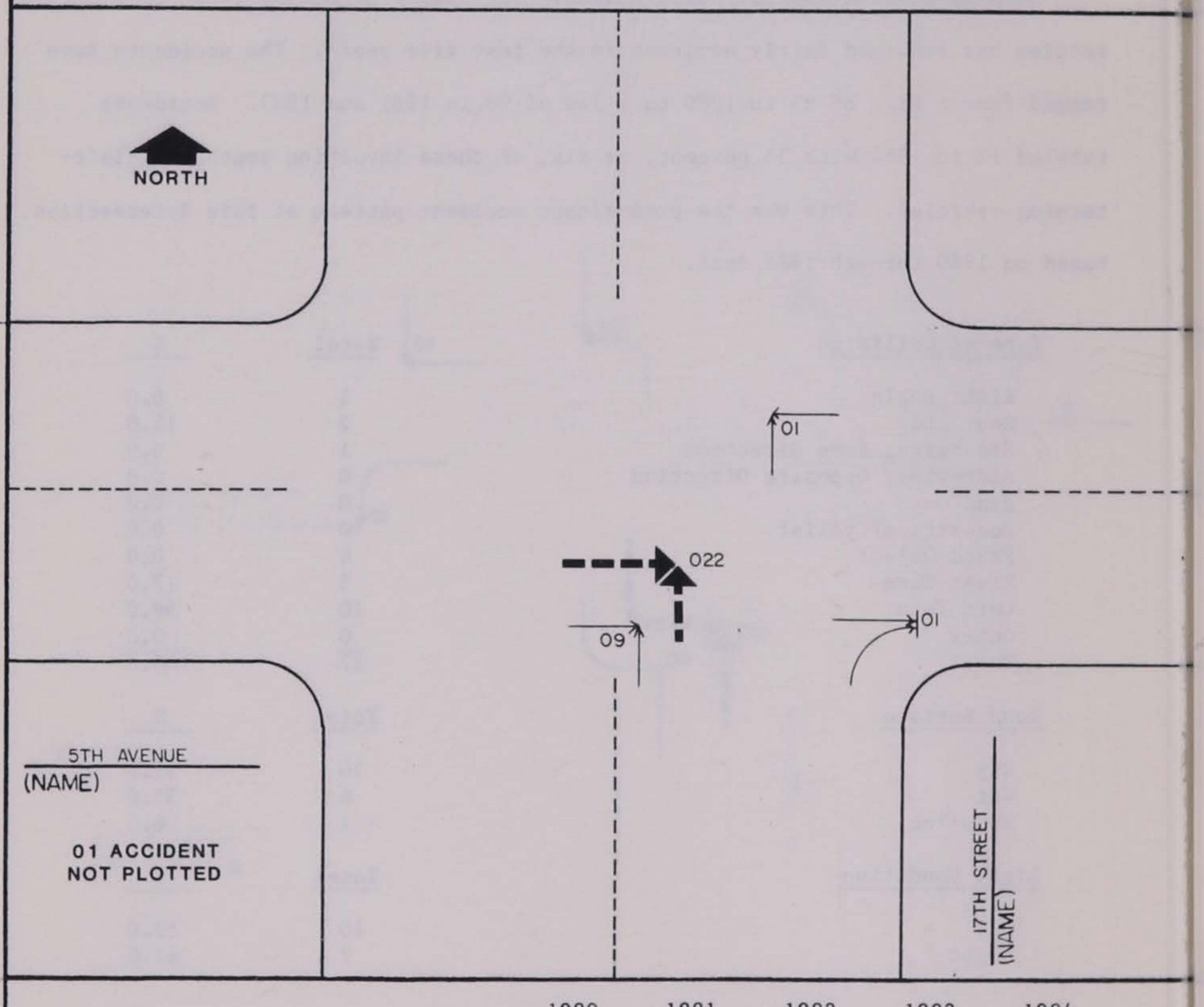
23rd Avenue and 16th Street - Moline. The number of accidents at this intersection has remained fairly constant in the past five years. The accidents have ranged from a high of 21 in 1980 to a low of 16 in 1981 and 1983. Accidents totaled 17 in 1984 with 35 percent, or six, of these involving southbound left-turning vehicles. This was the predominant accident pattern at this intersection, based on 1980 through 1984 data.

Type of Collision	Total	%
Right Angle	1	6.0
Rear End	2	12.0
Sideswipe, Same Direction	1	6.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	3	17.0
Left Turn	10	59.0
Other	0	0.0
Total	17	100.0

Road Surface	Total	%
Dry	10	59.0
Wet	6	35.0
Snow/Ice	1	6.0

Light Condition	Total	%
Day	10	59.0
Night	7	41.0

5TH AVENUE AND 17TH STREET - ROCK ISLAND



	1980	1981	1982	1983	1984
Total Accidents	--	9	7	4	12
Fatal	--	0	0	0	0
Personal Injury	--	0	2	0	4
Property Damage	--	9	5	4	8
Accident Rate	—	2.22	1.73	0.99	2.96

Predominant Accident Pattern: Right Angle

Rank in Illinois 1984 Intersection Traffic Accidents: 10

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1981-1984 Accidents

5th Avenue and 17th Street Rock Island. Relatively few accidents have occurred at this location between 1981 and 1984. The number of accidents in 1984 was 12, which is 33 percent higher than in any of the previous three years. However, this total still falls much below the average number of accidents per intersection for the 1984 ten highest ranked accident locations in Illinois, which is 19. The reason for the appearance of 5th Avenue and 17th Street in Illinois highest accident intersections is a low traffic volume, which in turn yields a high accident rate.

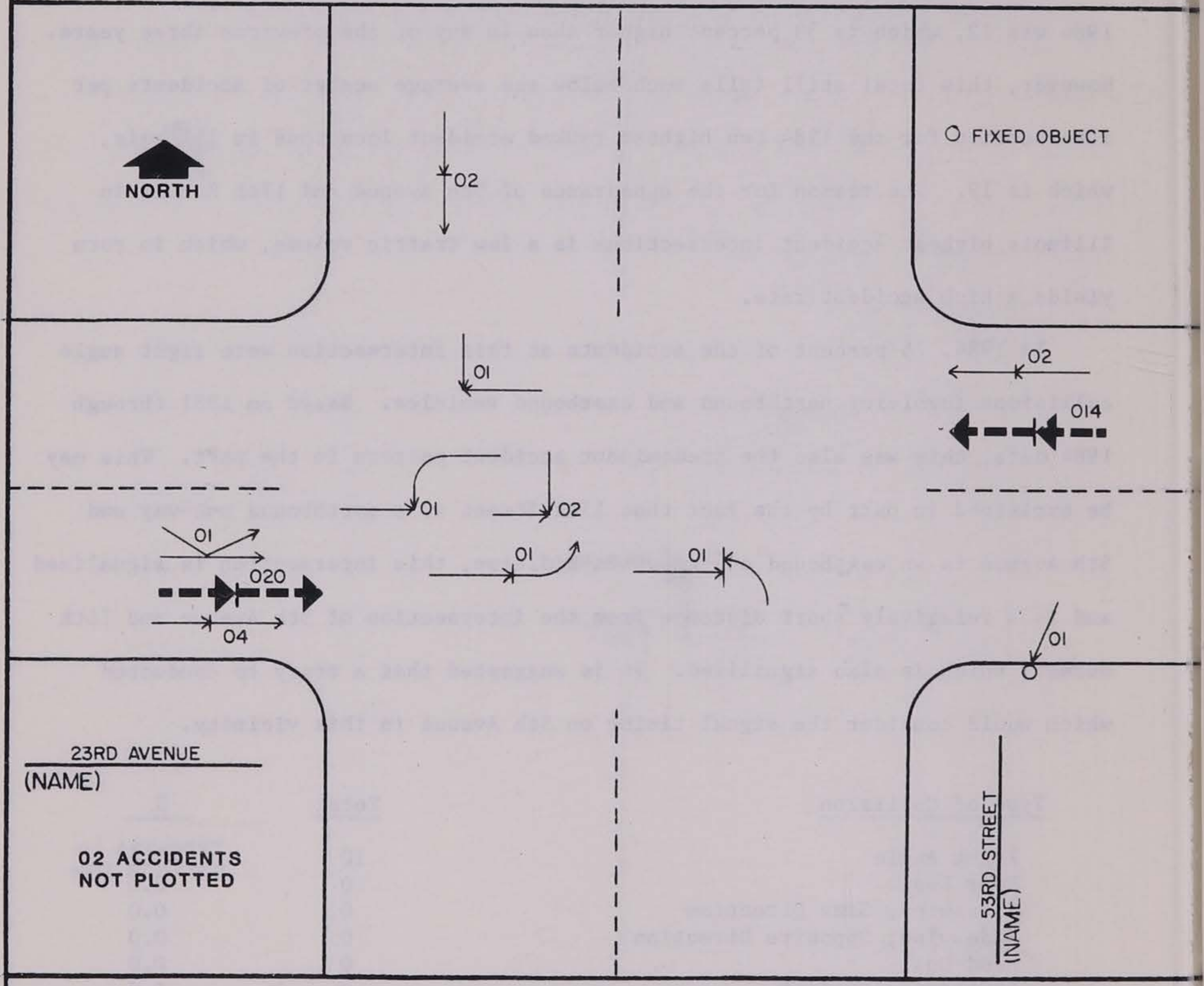
In 1984, 75 percent of the accidents at this intersection were right angle collisions involving northbound and eastbound vehicles. Based on 1981 through 1984 data, this was also the predominant accident pattern in the past. This may be explained in part by the fact that 17th Street is a northbound one-way and 5th Avenue is an eastbound one-way. In addition, this intersection is signalized and is a relatively short distance from the intersection of 5th Avenue and 16th Street, which is also signalized. It is suggested that a study be conducted which would consider the signal timing on 5th Avenue in this vicinity.

Type of Collision	Total	%
Right Angle	10	84.0
Rear End	0	0.0
Sideswipe, Same Direction	0	0.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	0	0.0
Right Turn	1	8.0
Left Turn	0	0.0
Other	1	8.0
Total	12	100.0

Road Surface	Total	%
Dry	7	58.0
Wet	5	42.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	12	100.0
Night	0	0.0

23RD AVENUE AND 53RD STREET - MOLINE



	1980	1981	1982	1983	1984
Total Accidents	36	23	22	17	18
Fatal	0	0	0	0	0
Personal Injury	17	7	5	7	5
Property Damage	19	16	17	10	13
Accident Rate	3.24	2.07	1.98	1.53	1.62

Predominant Accident Pattern: Rear End

Rank in Illinois 1984 Intersection Traffic Accidents: 10

Solid Line - 1984

Striped Line - Predominant Accident Pattern based on 1980-1984 Accidents

23rd Avenue and 53rd Street - Moline. The number of accidents at this intersection has leveled out in the past two years to 17 and 18 in 1983 and 1984, respectively.

Based on accidents which occurred between 1980 and 1984, the predominant accident pattern at this intersection was one involving rear-end collisions of westbound vehicles. Rear-end accidents were involved in 44 percent of the reported accidents in 1984.

Type of Collision	Total	%
Right Angle	3	17.0
Rear End	8	44.0
Sideswipe, Same Direction	1	5.0
Sideswipe, Opposite Direction	0	0.0
Head On	0	0.0
Pedestrian/Cyclist	0	0.0
Fixed Object	3	17.0
Right Turn	0	0.0
Left Turn	3	17.0
Other	0	0.0
Total	18	100.0

Road Surface	Total	%
Dry	10	56.0
Wet	8	44.0
Snow/Ice	0	0.0

Light Condition	Total	%
Day	10	56.0
Night	8	44.0

APPENDIX

POTENTIAL IMPROVEMENTS

GENERAL COUNTERMEASURES FOR ACCIDENT PATTERNS AND THEIR PROBABLE CAUSES

ACCIDENT PATTERN	PROBABLE CAUSE	GENERAL COUNTERMEASURE
Right-angle collisions at unsignalized intersections	Restricted sight distance	Remove sight obstructions Restrict parking near corners Install stop signs (see MUTCD) Install warning signs (see MUTCD) Install/improve street lighting Reduce speed limit on approaches* Install signals (see MUTCD) Install yield signs (see MUTCD) Channelize intersection
	Large total intersection volume	Install signals (see MUTCD) Reroute through traffic
	High approach speed	Reduce speed limit on approaches* Install rumble strips
Right-angle collisions at signalized intersections	Poor visibility of signals	Install advanced warning devices (see MUTCD) Install 12-in. signal lenses (see MUTCD) Install overhead signals Install visors Install back plates Improve location of signal heads Add additional signal heads Reduce speed limit on approaches*
	Inadequate signal timing	Adjust amber phase Provide all-red clearance phase Add multi-dial controller Install signal actuation Retime signals Provide progression through a set of signalized intersections
Left-turn collisions at intersections	Large volume of left turns	Provide left turn signal phases Prohibit left turns Reroute left turn traffic Channelize intersection Install STOP signs (see MUTCD) Create one-way streets Provide turning guidelines (if there is a dual left turn lane)

*Spot speed study should be conducted to justify speed limit reduction.

ACCIDENT PATTERN	PROBABLE CAUSE	GENERAL COUNTERMEASURE
	Restricted sight distance	Remove obstacles Install warning signs Reduce speed limit on approaches
Fixed-object collisons	Objects near traveled way	Remove obstacles near roadway Install barrier curbing Install breakaway feature to light poles, signposts, etc. Protect objects with guardrail
Fixed-object collisons and/ or vehicles running off roadway	Slippery pavements	Overlay existing pavement Provide adequate drainage Groove existing pavement Reduce speed limit* Provide "SLIPPERY WHEN WET" signs
	Roadway design inadequate for traffic conditions	Widen lanes Relocate islands Close curb lane
	Poor delineation	Improve/install pavement markings Install roadside delineators Install advance warning signs (e.g., curves)
Sideswipe collisions between vehicles traveling in opposite directions or head-on collisions	Roadway design inadequate for traffic conditions	Install/improve pavement markings Channelize intersections Create one-way streets Remove constrictions such as parked vehicles Install median divider Widen lanes
Collisions between vehicles traveling in same direction such as sideswipe, turning or lane changing	Roadway design inadequate for traffic conditions	Widen lanes Channelize intersections Provide turning bays Install advance route or street signs Install/improve pavement lane lines Remove parking
Collisions with parked cars or cars being parked	Large parking turnovers	Prohibit parking Change from angle to parallel parking Reroute through traffic Create one-way streets Create off-street parking Reduce speed limit*

*Spot speed study should be conducted [illegible]

ACCIDENT PATTERN	PROBABLE CAUSE	GENERAL COUNTERMEASURE
	Roadway design inadequate	Widen lanes Change from angle to parallel parking Prohibit parking Reroute through traffic
Rear-end collisions at unsignalized intersections	Pedestrian crossing	Install/improve signing or marking of pedestrian crosswalks Relocate crosswalk
	Driver not aware of intersection	Install/improve warning signs
	Slippery surface	Overlay pavement Provide adequate drainage Groove pavement Reduce speed limit on approaches* Provide "SLIPPERY WHEN WET" signs
	Large numbers of turning vehicles	Create left- or right-turn lanes Prohibit turns Increase curb radii
Rear-end collisons at signalized intersections	Poor visibility of signals	Install/improve advance warning devices Install overhead signals Install 12 in. signal lenses (see MUTCD) Install visors Install back plates Relocate signals Add additional signal heads Remove obstacles Reduce speed limits on approaches*
	Inadequate signal timing	Adjust amber phase Provide progression through a set of signalized intersections
	Pedestrian crossings	Install/improve signing or marking of pedestrian crosswalks Provide pedestrian "WALK" phase
	Slippery surface	Overlay pavement Provide adequate drainage Groove pavement Reduce speed limit on approaches* Provide "SLIPPERY WHEN WET" signs
	Unwarranted signals	Remove signals (see MUTCD)

*Spot speed study should be conducted to justify speed limit reduction.

ACCIDENT PATTERN	PROBABLE CAUSE	GENERAL COUNTERMEASURE
	Large turning volumes	Create left-or right-turn lanes Prohibit turns Increase curb radii
Night accidents	Poor visibility	Install/improve street lighting Install/improve delineation markings Install/improve warning signs
Wet pavement accidents	Slippery pavement	Overlay with skid resistant surface Provide adequate drainage Groove existing pavement Reduce speed limit* Provide "SLIPPERY WHEN WET" signs

*Spot speed study should be conducted to justify speed limit reduction.