

**A Discussion Paper
Regarding**

**THE CONVERSION OF DOWNTOWN
ONE-WAY STREETS
BACK TO
TWO-WAY STREETS**

Prepared by

**Planning Department
City of Great Falls, Montana**

June 2007



*1st Avenue South as a two-way street, showing angle parking
-1940s -*

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I. STATEMENT OF PURPOSE

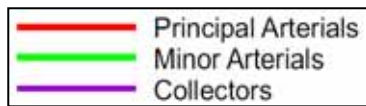
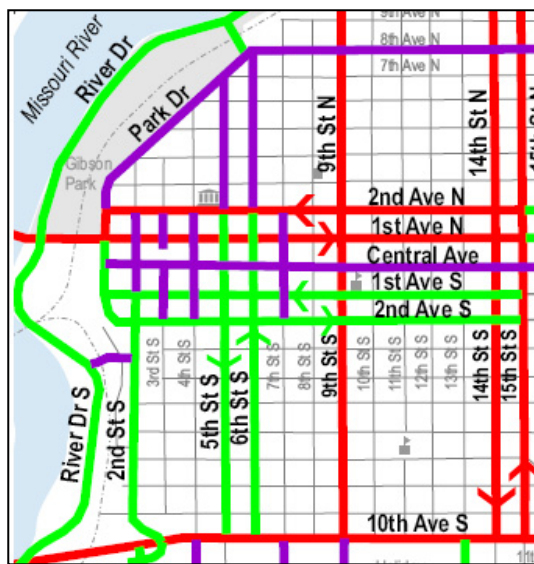
The Great Falls Business Improvement District (BID) has requested the City and other interested parties investigate the possibility of converting two downtown, one-way couplets back to two-way streets. The couplets and segments in question are 5th and 6th Streets from 8th Avenue North to 10th Avenue South, and 1st and 2nd Avenues South from Park Drive to 15th Street. A copy of the BID request is attached as **Exhibit 1**.

This paper is intended to provide relevant information to 1) assist open public discussion, 2) identify and frame the issues, and 3) weigh the question on whether to proceed with possible conversions.

II. BACKGROUND AND HISTORY

A “one-way couplet” is a pair of one-way streets, separated by a city block, that provide traffic movement in opposite directions in greater volumes than a traditional two-way street. The establishment of downtown one-way couplets occurred in Great Falls and across the country after WWII in response to increased traffic congestion and an increase in the number and frequency of accidents.

Like the rest of the nation after WWII, Great Falls experienced an increased dependence on



the personal automobile, the discontinuance of its trolley system, and the addition of outlying residential subdivisions. During this time, subdivisions and development in the Riverview and Eastside areas expanded rapidly, but the core of Great Falls, its downtown, remained as the commercial hub of the City. Services, shopping, offices and local government were concentrated in downtown, and traffic congestion and safety became a real issue in the community. In response, a system of one-way “couplets” (pairs of adjacent one-way streets, leading in opposite directions) was established to increase vehicular flow and improve safety. The downtown couplets and roadway types are illustrated in the display on the left.

By 1970, the City was expanding outward and the downtown was seeing a need for more efficient circulation patterns and better connection to outlying districts such as 10th Avenue South. That year, the City considered instituting a grid of one-way streets downtown, along with reversing the direction of the existing one-ways. However, this system was never put into place.

By the 1980s, the City's shopping and services had become largely decentralized by relocating and spreading to arterials away from downtown Great Falls, resulting in automobile-oriented commercial strips and malls. This shift resulted in a gradual change in land-use types downtown to those that generate less traffic – the office and specialty retail we see today. Over time, this has decreased traffic on some of the downtown couplets. This reduction in traffic, as well as new studies on the effect one-way streets have on adjoining land uses, has raised the question of whether the couplets are still needed and/or still serving their intended purpose.

III. DESCRIPTION OF DOWNTOWN COUPLETS AND ADJOINING LAND USES

A. 5th and 6th Streets Couplet

Fifth and Sixth Streets were established as a north/south one-way couplet between 10th Avenue South and 8th Avenue North to facilitate smoother traffic flow and to provide more direct access to and from downtown. They function as minor arterials, carrying traffic between the surrounding principal arterials and downtown, particularly to and from 10th Avenue South. Higher traffic volumes on the couplet exist between 10th Avenue South and downtown than exist on the blocks north of downtown, and the peak volumes occur in the downtown area. Volumes are lower on the north end due to a number of reasons:

- the east-west roads that the couplet serves in this area carry lower traffic volumes than 10th Avenue South;
- the adjoining residential area is smaller than that south of downtown;
- the adjoining uses are strictly residential, which generate less traffic than typical commercial uses;
- the northern ends of the couplet are difficult to access/exit due to the oblique angle at which they intersect Park Drive and 8th Avenue North;
- and, the traffic signal timing through downtown is irregular, which may discourage use of the couplet by through-traffic.

As with most arterials, especially those leading to or from 10th Avenue South, commercial uses have been established along these streets over the years. **Exhibit 2** shows a mixture of residential and commercial uses along the segments between downtown and 10th Avenue South. Through downtown (between 3rd Avenue North and 3rd Avenue South), the uses are exclusively commercial. North of downtown, the uses are strictly residential.

B. 1st and 2nd Avenues South Couplet

First and Second Avenues South were converted to one-ways in the 1950s to reduce downtown congestion and to facilitate east/west traffic to and from the residential areas to the east. This couplet ends on the east at the 14th/15th Street North/South couplet, and on the west at Park Drive. Park Drive also terminates on the south at this couplet, turning into 2nd Avenue South. They function as minor arterials, carrying traffic around the core of downtown and providing connections to principal arterials.

Although originally dominated by compact commercial uses, the urban renewal of the 1960s and 1970s and simultaneous development of more distant commercial areas such as 10th Avenue South greatly reduced commercial activity along the western segments of 1st and 2nd Avenues South. These segments are now characterized by an even mix of commercial structures and parking lots, which are the end result of razed buildings. The commercial uses are largely service or office, with limited retail. Generally, the western portions of 1st Avenue South have more retail and office than 2nd Avenue South, while 2nd Avenue South has more service and wholesale uses. See **Exhibit 3**.

The uses in the eastern portions of the couplet are predominantly residential. Residences begin on 2nd Avenue South at 7th Street and continue to 15th Street. 1st Avenue South has a scattering of commercial and office uses between 9th and 10th Streets, and a credit union between 14th and 15th Streets, but is otherwise residential in character from 10th Street eastward.

C. 1st and 2nd Avenues North Couplet

A second east/west one-way couplet running through downtown, 1st and 2nd Avenues North, was also designed to carry traffic to and from downtown. However, it also carries higher cross-town traffic volumes than the 1st and 2nd Avenue South Couplet. Its length from Park Drive on the west to Malmstrom Air Force Base on the east encourages its use by cross-town motorists, as well as by drivers with downtown destinations. Because of the couplet's importance to the City-wide street system and because of its higher traffic volumes, its conversion to two-way traffic is not being proposed.

IV. CHARACTERISTICS OF ONE-WAY AND TWO-WAY ROADWAYS

Generally, supporters of the conversion of one-way roadways are interested in promoting the health and vitality of retail districts bordering the roadways and are less interested in the movement of traffic, (although the two are, to some degree, interrelated). A two-way design can be used to:

- slow traffic;
- increase business accessibility and exposure due to the dual direction-of-approach and reduced speed of the vehicles;
- allow for a more "traditional" streetscape;
- increase parking capacity through angle parking; and,
- provide easier internal circulation within a given district or area

Supporters of one-way roadways are mainly interested in the efficient movement of vehicles. This can, in turn, provide for:

- reduced congestion;
- higher speeds and smoother traffic flow;
- easier coordination of traffic signals;
- better air quality due to reduced vehicle idling times; and,
- typically (though this is debated), safer pedestrian crossings

One-ways are also considered to be safer for pedestrians crossing the street at intersections, since the potential for conflict only comes from one direction.

Clearly, communities need to carefully consider the potential positive and negative impacts of converting one-ways and consider the impacts within the specific context of the adjoining neighborhoods and service area. For example, traffic volumes, adjacent land uses, and the system-wide function of roadways need to be identified and evaluated. A one-way couplet carrying 35,000 vehicles per day and serving as a major arterial should not be considered for reversion to two-way traffic, but a one-way couplet serving as a minor arterial or collector and carrying less than 5,000 vehicles per day could be a good candidate for a conversion.

To aid in understanding this issue, Table 1 provides a comparison of the pros and cons of one-way streets versus two-way streets. This is a general listing and is not meant to be specific to the roadways in question, nor is it all-inclusive. A complete review of the relevance of each item to the subject roadways should be carefully considered and additional impacts not shown on the list should be brainstormed.

V. EXISTING CONDITIONS

The existing characteristics of the couplets in question and of adjacent land uses need to be looked at in order to make an informed decision on whether or not to proceed with any possible conversion. Recent and projected trends also need to be considered.

A. Traffic Volumes

Within the Great Falls Traffic Count Program, traffic volume counts have been gathered over the years for specific locations in the subject area. Traffic count data for the past fifteen years at selected downtown locations have been tabulated and graphed for the purpose of determining traffic volume changes and/or trends. The data illustrate traffic volume increases and decreases. It helps to identify roadway characteristics and to determine whether the couplets are still serving high enough volumes to warrant one-way operations. The referenced traffic data is included in **Appendix A**, attached. Volumes are noted as vehicles per day.

In reviewing the data, some specific observations may be noted:

1. 5th and 6th Streets have the highest traffic volumes between Central Avenue and 1st Avenue North. The lowest volumes occur at the extreme north end of the couplet between 6th and 7th Avenues North.
2. Traffic volumes on 1st and 2nd Avenues South are highest traffic between 4th and 5th Streets. The lowest volumes occur in the residential areas between 11th and 12th Streets.
3. Generally, traffic on 1st and 2nd Avenues South peaked in the mid to late 1990s, and has decreased since.
4. Generally, traffic on most segments of 5th and 6th Streets has remained constant, with some overall decrease over time. Some segments have seen a steady decrease. For instance, one segment of 6th Street, between Central Avenue and 1st Avenue

North, has seen a marked decrease since the late 1980s (from a high of 4,720 to 2,453 – a decrease of nearly 50%).

5. All observed counts are relatively low levels for one-way roadways. The highest noted count since 1990 is 5,360 on 1st Avenue South between 4th and 5th Streets, taken in 1999. The lowest count is on 5th Street – a count of 759 in 2004 between 6th and 7th Avenues North.

B. Downtown Traffic Circulation & Parking

One-ways can both help and hinder circulation. Routes from downtown locations to other downtown locations can be less congested, though more circuitous, on one-way streets. Shoppers and other users of downtown can be frustrated by the need to go a block or two blocks out of their way to get to their destination via one-ways, especially if they are “trip chaining” (stringing together a series of destinations). However, downtown drivers can also be frustrated by certain characteristics of two-way streets: slower speeds, conflicts with angle-parked cars and conflicts with and delays caused by turning vehicles.

During the development of the *2003 Great Falls Area Transportation Plan*, the effect of converting 5th and 6th Streets to two-ways was considered in the Plan’s traffic model. Downtown parking availability and demand were also investigated. The conclusions of this investigation were presented in the Transportation Plan, and are summarized below. The complete review is provided in **Appendix B**.

Summary of CBD Access, Circulation and Parking Analysis

The CBD in Great Falls is currently functioning well in terms of vehicle Level of Service and parking availability. The completed study shows very few areas where parking utilization rates are between 80 and 100 percent. In the few areas where this is present, available parking can be found less than a block away. The “rule-of-thumb” is that parking should be within a 600-hundred foot to 1,000-foot radius of a user’s destination, whether that destination is work related, retail, recreational, etc. The downtown parking situation presently allows for this recommended distance, and given the small change in traffic volumes projected over the next twenty years, will continue to do so. Additionally, the parking utilization rates that are observed in the CBD, for both on-street and off-street parking, generally range from 30 to 60 percent, well below the level at which parking would be perceived as a problem. The number of ADA accessible parking spots is also more than required as discussed in Section 6.4.

Regarding access and circulation within the CBD, it is not recommended that any changes be made to the roadway directional system in the downtown area. From a transportation system standpoint, there is no direct benefit realized in changing the directional flow characteristics of any of the CBD roadways. The modeling completed showed only slight changes in traffic volumes, and only amounted to proportionate changes to adjacent roadways (i.e. if one roadway gained 1,000 vpd, the adjacent roadway appeared to lose 1,000 vpd). If the local government deems it necessary to continue with further analysis pertinent to changing downtown circulation, many factors outside of the scope of this area-wide, macroscopic Transportation Plan are likely to come into consideration, including existing and future land uses, available funding, and economic justifications. (*Source: Chapter 6, Section 6.5, 2003 Great Falls Area Transportation Plan*)

C. Downtown Goals & Objectives

Specific goals and objectives should serve as the basis to help guide any major modifications or undertakings downtown. A downtown development or redevelopment

plan has not been prepared since 1988. Therefore, no recent, specific goals and objectives are available to help strengthen the interest to make street conversions.

D. Travel Speeds

Excessive speeds are sometimes an important reason to eliminate one-way roadways. Wider travel lanes, few turning-movement conflicts and the opportunity to pass slower-moving vehicles all contribute to faster speeds than on a two-way roadway. Even though faster speeds usually means more efficient traffic flow, slower speeds are sometimes more desirable in a traditional downtown, retail and pedestrian-oriented district.

Although speed data are not available for all segments of the roadways, the data that is available indicate that most of the vehicles are not driving at excessive speeds, as shown in **Table 1**.

TABLE 1 – TRAVEL SPEEDS

LOCATION	SPEED LIMIT	85 TH PERCENTILE*
2 nd Ave S (between 4 th & 5 th Sts)	25 MPH**	30.1 MPH
5 th St N (between Central Ave & 1 st Ave N)	30 MPH	25.11 MPH
5 th St S (between 6 th & 7 th Aves S)	30 MPH	34.58 MPH

* 85% of the vehicles are traveling at or below this speed.

** not posted

E. Curb Cuts

Curb cuts (or driveway approaches) to adjacent properties are “points of potential conflict” between vehicles. Curb cuts on two-way roadways increase the number of possible conflicts due to turning movements. A number of curb cuts exist along each of the roadways. If conversion is undertaken, each of these curb cuts should be reviewed for need. 1st and 2nd Avenues South through downtown, in particular, have a number of curb cuts. **Exhibit 3** also shows existing curb cuts on the downtown stretches of those roadways.

F. Duplication

The close proximity of the couplets to other main routes may indicate unnecessary redundancy. The 1st and 2nd Avenues North couplet is two blocks from the 1st and 2nd Avenues South couplet, and provides for better continuity of travel for east/west through traffic. The 5th and 6th Streets couplet is equidistant from 2nd Street and 9th Street, both of which are two-way, north/south arterials. The closest north/south one-way couplet is 14th and 15th Streets, located eight blocks to the east. However, duplicate or “redundant” routes can also be beneficial in that they provide travel alternatives that help to reduce congestion and travel delays. This holds true if the alternate route is not too far removed and provides for similar travel-times.

VI. ISSUE IDENTIFICATION

Whenever major operational changes are made to a roadway, issues and potential impacts should be identified and considered. Some identified issues are presented in this section, along with a preliminary list of specific potential impacts.

A. Adjoining Property Owner Support/Opposition

The opinion of adjoining and other affected property owners, businesses and residents are important. A method for early and meaningful discussion and input should be devised. As an example, because of the location of its downtown transfer facility on 1st Avenue South, the Transit District should be involved in early discussions.

B. Public Involvement

The primary users of the one-way couplets and overall roadway system are the general traveling public. As such, a method for meaningful public involvement should be devised.

C. Citywide Roadway System Impacts

The conversion of some of the segments of one-way streets could have significant impacts on the overall citywide roadway system. System impacts could generally be identified through computer traffic modeling or through consultation between the Montana Department of Transportation and City. A full discussion and consideration of identified impacts should take place.

D. Preliminary List of Potential Impacts

The following is a preliminary list of existing conditions and operations that may be impacted by a return to two-way streets.

1. Bus Depot. Great Falls Transit District buses currently exit the depot onto 1st Avenue South, a westbound one-way street. Conversion to a two-way street would require dealing with vehicles traveling from both directions. Although not insurmountable, this would increase turning movement conflicts. Depending on the origin and destination of each bus, alternative accesses may be needed to accommodate depot ingress and egress.
2. Fire Station. Egress may be improved for emergency vehicles accessing and exiting Fire Station #1 by allowing for immediate eastbound movements. Possible positive and negative impacts should be identified.
3. Circulation. General downtown circulation may be improved, especially at the confluence of north/south and east/west one-ways. Another area of improvement could be near non-through streets such as 3rd Street North and 3rd Avenue South.



Conversions could also result in reduction of traffic volumes on streets adjacent to one-ways that are currently being used to facilitate internal circulation – especially 4th and 7th Streets, Central Avenue and 3rd Avenue South.

4. Curb cuts. Some curb cuts were located based on the roadway serving as a one-way street. Conversion to a two-way street could cause some curb cuts to be located too close to intersections. A vehicle turning left into such a curb cut could cause traffic to back up into the intersection, causing delays and unsafe conditions for both motorists and pedestrians. An example could be the driveway for the parking lot located just west of the parking garage at the corner of 1st Avenue South and 3rd Street.
5. Drive-up mailboxes. Several postal drop boxes are located on the south side of 1st Avenue South, between 2nd and 3rd Streets. The usefulness of these boxes is dependent on a one-way street operation, since the drop is best accomplished from the driver's side of the vehicle. These boxes could no longer be used in the current configuration and would need to be relocated or eliminated.
6. Park Drive/1st Avenue South intersection. The east approach lanes at the intersection of 1st Avenue South and Park Drive would need to be reconfigured and striped. The east approach, through/right turn channelization island may also need to be redesigned and realigned. Also, the north leg includes two southbound lanes, one of which would conflict with a northbound lane from the south leg, if conversion takes place.
7. 2nd St./2nd Avenue South intersection. The intersection of 2nd Avenue South and 2nd Street South would be affected. The west leg is two-lanes while the east leg is three.
8. Striping and lane configuration. The configuration of lanes, especially along the wider sections, would need to be carefully considered. Extensive pavement striping would be needed to delineate new driving lanes, stop bars, crosswalks and on-street parking spaces. A striping plan should be prepared before any conversion.
9. Parking garage ramp. The exit driveway from the former Sears parking ramp may create a unique safety concern. Currently, vehicles that may be encroached upon by vehicles exiting the ramp can avoid a crash by moving over a lane. However, with conversion to a two-way street, a single westbound lane would not provide this option. A stop/merge lane, no access onto 1st Avenue South or other treatments may need to be considered.
10. Traffic signals and related equipment. Signals would need to be removed, modified or added at several intersections to accommodate two-way traffic. An example could be the addition of a new signal at the intersection of 6th Street and 10th Avenue South, where currently there is no any need to accommodate southbound-to-eastbound traffic onto 10th Avenue South. Removal of some signals could ensure smoother flow of 2-way traffic, but could also impact pedestrian safety.
11. Traffic control signs and informational signage. Signs would need to be modified, added or removed to accommodate the directional changes that would occur with a street conversion.
12. Roadway classifications/function. Due to similar functional characteristics and parallel service that 5th and 6th Streets would provide if converted to two-way streets, both may not need to continue as through streets. If this were the case, what criteria would be used to decide which should remain as the arterial? Some business owners may object



to a change of status on their street, particularly if it was not selected as the arterial. Conversely, residents along the streets may be in favor of a non-arterial street designation and function. Similarly, 1st and 2nd Avenues may see either reduced or increased traffic, depending upon new traffic patterns. Business owners may object to a reduction in volumes on their street.

13. Traffic speeds. Speeds could possibly decrease throughout the area. This would be a positive impact, especially in residential areas, and likely desirable to most adjoining businesses. However, this could be a negative impact to motorists due to increased congestion, increased travel delays at signals and slower travel speeds. Such results could discourage the use of some of the area arterial and collector roadways. This could, in turn, mean decreased visibility for businesses and increased traffic to other area streets, with possible congestion.
14. Parking. Some block faces could see a reduction of on-street parking availability, depending upon new lane configurations, sight-distance requirements, etc. However, there would likely not be much change unless angle-parking is contemplated. Conversion to angle parking could provide an average increase of about 9 spaces per block-face, based upon the increases seen on Central Avenue's recent conversion.

VII. COST

Costs associated with converting one-way streets to two-way streets must also be factored into the decision-making process. To generally assist in this effort, the following is an example of the type of infrastructure changes and associated costs that may be needed to convert the 1st and 2nd Avenue South couplet.

Major infrastructure items would include the installation of new traffic signals and mast arms, and the reconfiguration/channelization of some intersections, such as 1st Avenue South and Park Drive. On the couplet between Park Drive and 9th Street South, there are 10 existing signalized intersections. All would require modifications and additional equipment to accommodate travel from their opposite directions. This could mean that up to 14 new mast arms and 10 modified mast arms. Assuming a rough average cost of \$45,000-\$50,000 per intersection, signal changes on the 1st and 2nd Avenues South couplet, this could total \$500,000. Costs could be reduced if any of the signals could be eliminated.

Related public expenses would include costs for new pavement striping, installation of additional traffic control and informational signage, etc.

Area businesses may have costs, as well, to relocate existing signage, purchase new signage or relocate driveway approaches.

VIII. CONCLUSION

How one addresses the question of whether to convert one-way streets to two-ways streets or to "stay the course," is dependent on one's viewpoint of whether the benefits to property owners, business operators and residents along the roadway being considered for conversion

outweigh any negative impacts to the levels of service and traffic flow provided by a one-way street.

Given the current levels of traffic on both the 1st and 2nd Avenue South couplet and the 5th and 6th Street couplet, there appears to be ample capacity, and thus opportunity, for conversion. If designed correctly with optimal lane configurations and traffic controls, the new two-way roadways should be able to function efficiently and adequately serve the traveling public. If traffic volumes were higher on either of these couplets, this conclusion probably could not be suggested. However, it is important to remember that, based on the information and other considerations presented above, it appears their conversion could create multiple impacts, both positive and negative. These would need to be better identified, quantified and evaluated before any full or partial conversions were pursued.

Recognizing there are many involved stakeholders, including property owners, business operators, residents, and the traveling public, it is important that any conversion not have any significant NEGATIVE impacts on traffic flow and congestion; not have unacceptable costs; not have negative economic impacts; and not unreasonably impact the operation of existing businesses. Additionally, it is important that any conversion be able to demonstrate potentially POSTIVE impacts on the economic health and vitality of downtown and help return residential areas to a more residential character.

In reviewing the available literature on conversions, the most successful (i.e., those that contributed to downtown revitalization) were those that were performed in combination with other improvements, such as streetscape improvements and private reinvestment. A stated set of goals and objectives for the downtown, in association with a comprehensive set of strategies for accomplishing the goals, would help to justify the conversion and help to ensure its success.

Finally, before any decision is made regarding the conversion of any of the one-way couplets, the City should be certain that all possible impacts have been carefully identified, weighed and addressed through an open public process.

EXHIBITS

1. GREAT FALLS BID REQUEST LETTER
2. LAND USE FOR 5TH AND 6TH STREETS SOUTH
3. ADJACENT LAND USES AND CURB CUTS ON 1ST AND 2ND AVENUES SOUTH, PARK DRIVE TO 9TH STREET

May 17, 2007

Honorable Mayor Stebbins and City officials

P.O Box 5021
Great Falls, MT 59403

Please find attached a letter of interest concerning revision of the current one-way streets in the downtown area. As you will notice in the letter, our goal for the revision is to increase traffic on those streets by decreasing the confusion of how to get around them. This revision could also increase parking issues that continually plague us. It will also increase the area of the beautification project that started back in the early 90's.

Our request is that your response and suggestions be directed in the area of what we (BID) need to do to move this conversation forward in a formal manner. Please advise me of what additional steps we need to take from here. We appreciate your time, comments and interest in this potential project.

Regards,



Tonya Jorgensen – Office Manager

Board of Directors:

Bill Stuff- Board Chairman

Alison Fried – Board Vice Chairman

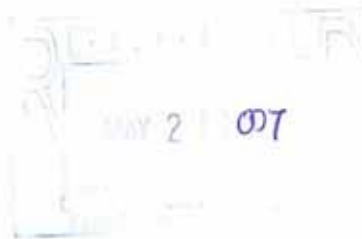
Julie Duffy – Board Treasurer

Ike Kaufman – Board Member

Tony Longin – Board Member

Phil Kiser – Board Member

Andrew Davidson – Board Member



The recent public forum by the Great Falls Development Authority was a positive step for Great Falls. As downtown property and business owners we would like to continue this trend by creating positive changes in our core business district.

Please accept this letter as a formal application to change one-way traffic, to two-way traffic, on 1st and 2nd Avenues South, and 5th and 6th Streets from Park Drive to 10th Avenue South. As directors of the Business Improvement District (BID), we have been asked by various property and business owners to return these streets and avenues to two-way traffic with angle parking on one side of the street. We would like to set a meeting date with City staff, property owners and business owners to discuss concerns, costs and implementation procedures.

In the 50's downtown had everything. We mean everything, all banking, all department stores (5), all movie theaters (4), all auto dealerships (9), all auto parts stores, all ladies and men's clothing stores, all shoe stores, all hotels (5), and all auto traffic. Most doctors' offices, insurance and real estate offices were downtown. One-ways were needed to move all that commuting traffic.

In 1955 the Warden (10th Avenue) Bridge was built. In the early 60's, Holiday Village opened. As businesses moved to 10th Avenue South and Holiday Village, so did the traffic. Today new shopping center developments are being called Lifestyle Centers. They are building these centers to duplicate the felling of old downtowns. Communities want to have the identities that downtowns give them.

Great Falls is fortunate to still have the pieces in place to have a viable downtown business district. We are blessed with multiple storied buildings and the employees they bring to our existing business base. We are cursed with parking problems that these same buildings cause. Slowing traffic is a positive way to create a viable lifestyle environment in our core business district and enable us to provide more on street angle parking.

Discussions by property and business owners with city staff have been ongoing for several years regarding these ideas. We would like to bring these discussions to an open forum as soon as possible.

Regards,

Tonya Jorgensen – Office Manager

Board of Directors:

Bill Stuff- Board Chairman

Alison Fried – Board Vice Chairman

Julie Duffy – Board Treasurer

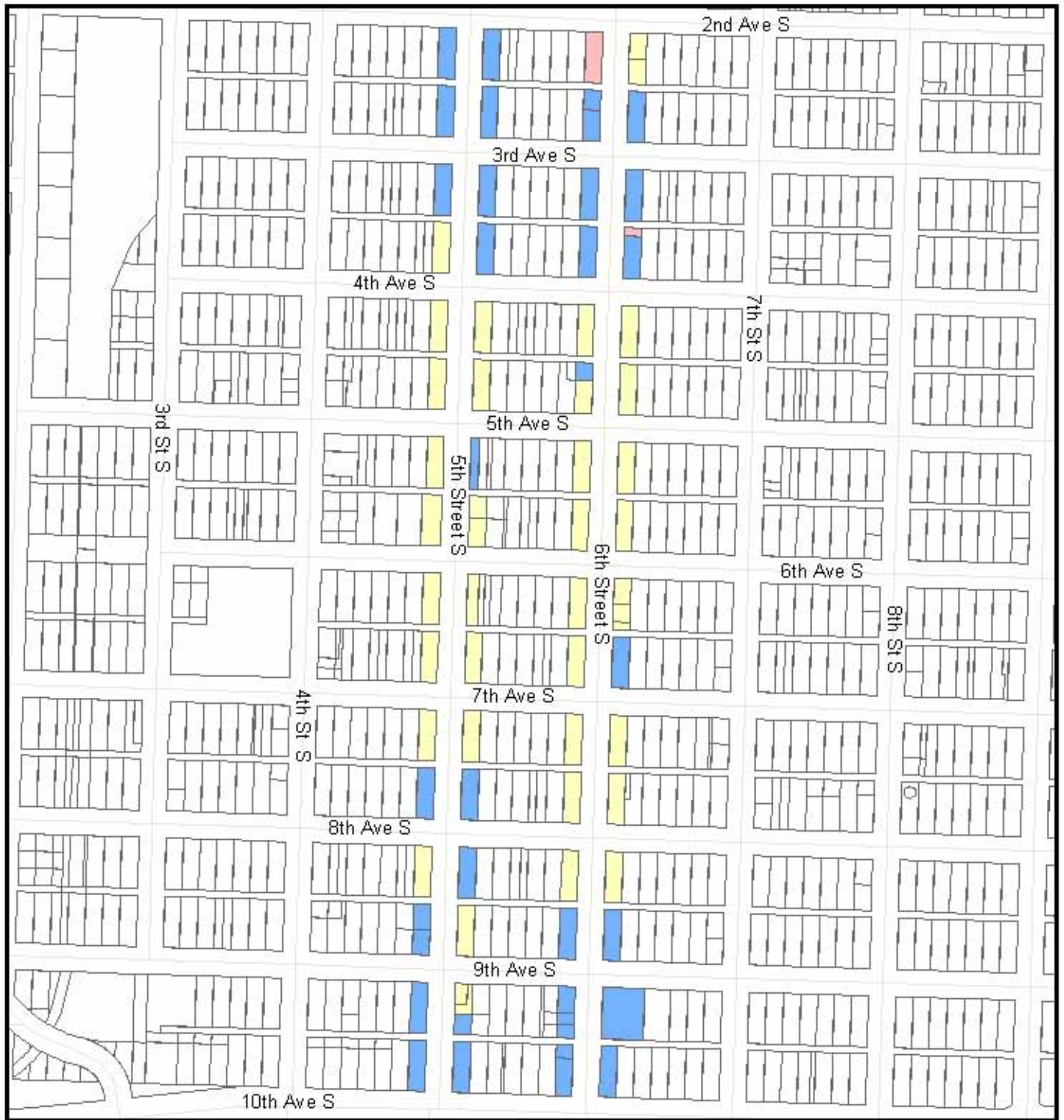
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




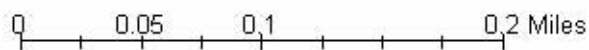


Land Use for 5th and 6th Streets South

Prepared by Great Falls City Planning
September 15, 2005

Legend

-  Vacant
-  Residential
-  Commercial



Adjacent Land Uses and Curb Cuts 1st and 2nd Avenues South, Park Drive to 9th Street



Legend

- Signal Light
- Curb Cuts
- Residential
- Commercial
- Parking Lots
- Vacant Lots

Planning Department
June 2006

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APPENDICIES

- A. TRAFFIC COUNT LOCATION MAP AND GRAPHS

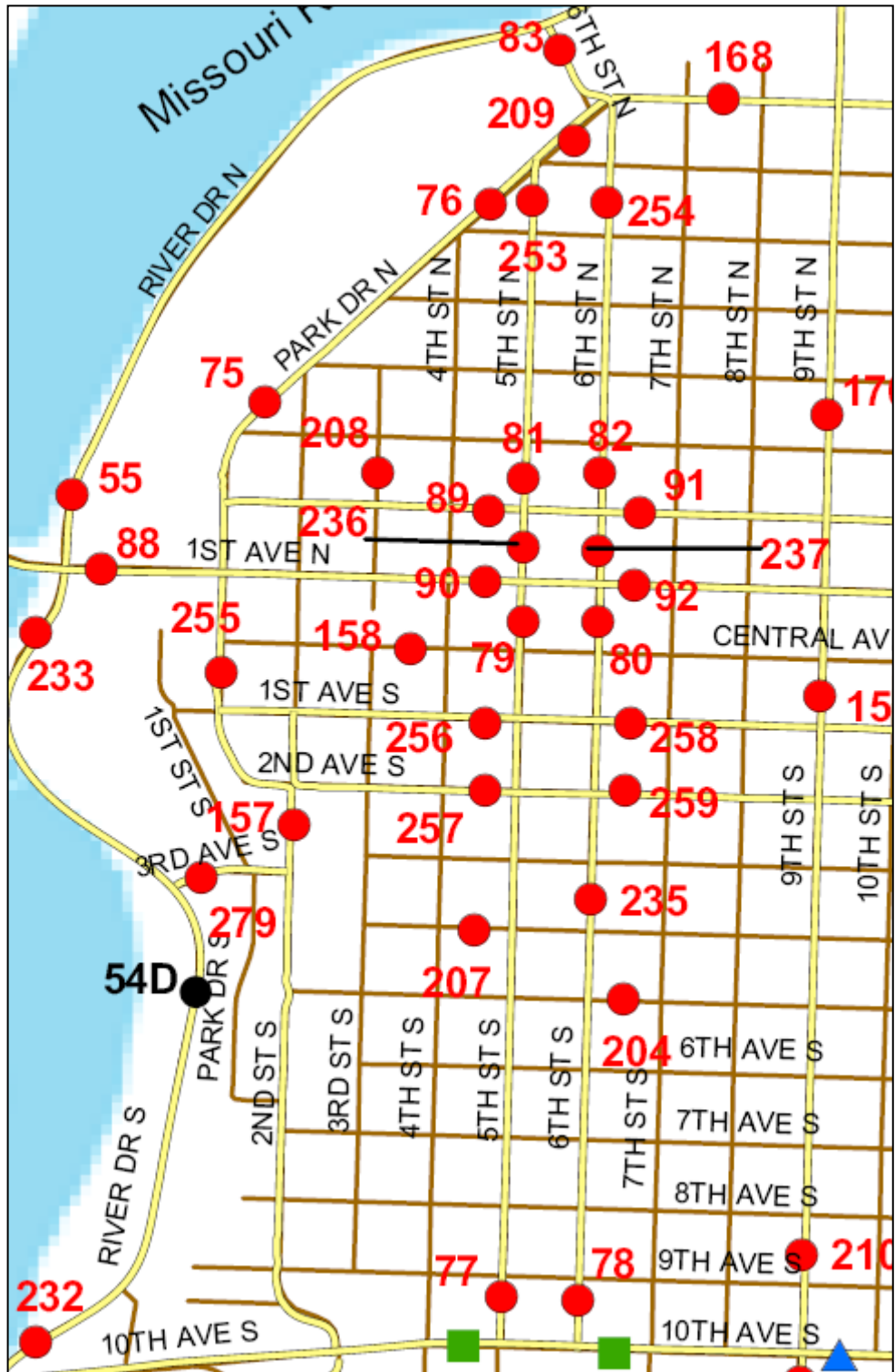
- B. CHAPTER 6: “DOWNTOWN PARKING, ACCESS AND CIRCULATION” FROM THE *2003 GREAT FALLS AREA TRANSPORTATION PLAN*

- C. ALTERNATIVES

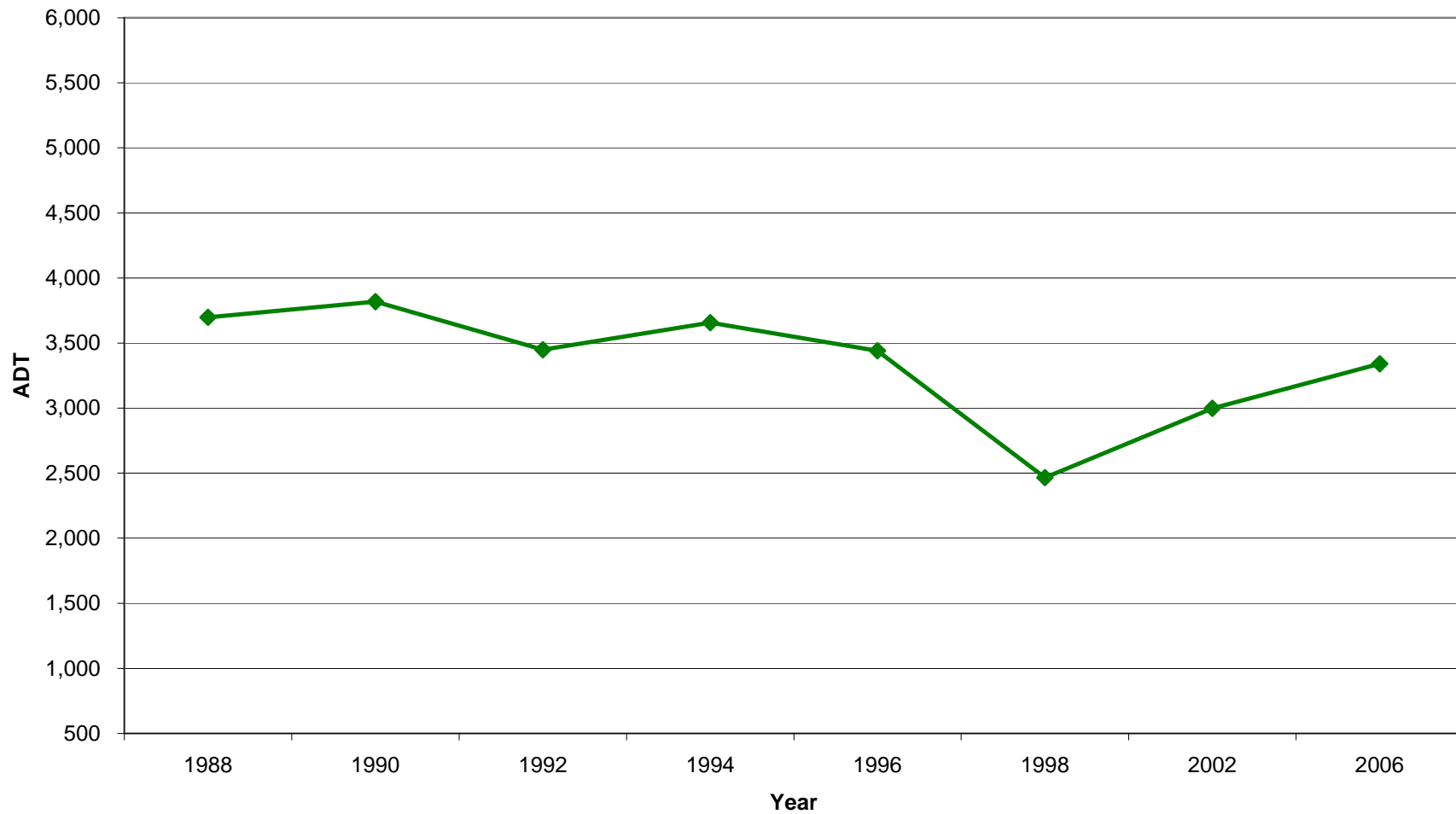
APPENDIX A

TRAFFIC COUNT LOCATION MAP AND GRAPHS

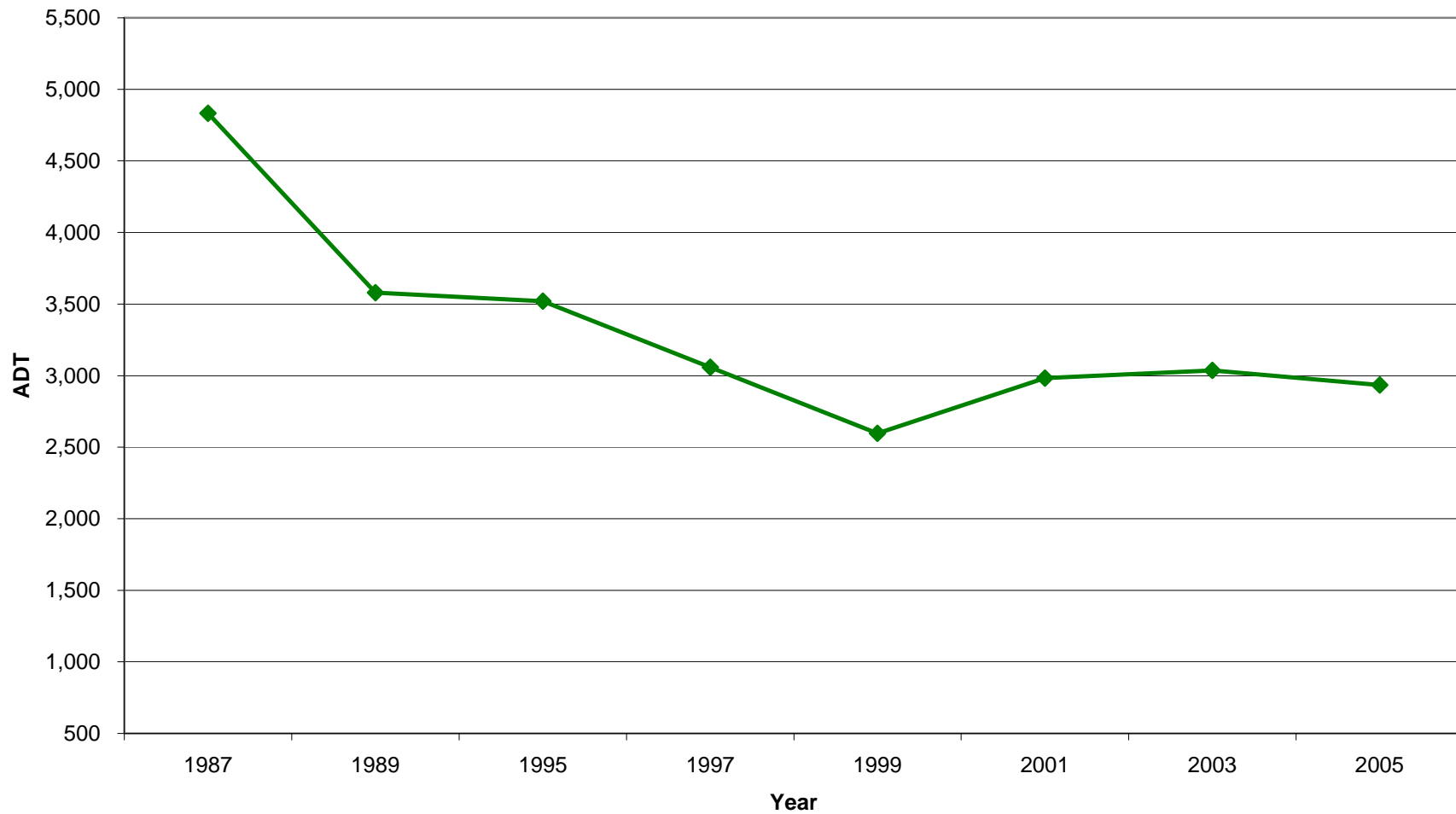
LOCATION AND IDENTIFICATION OF TRAFFIC COUNT SITES IN AND NEAR DOWNTOWN



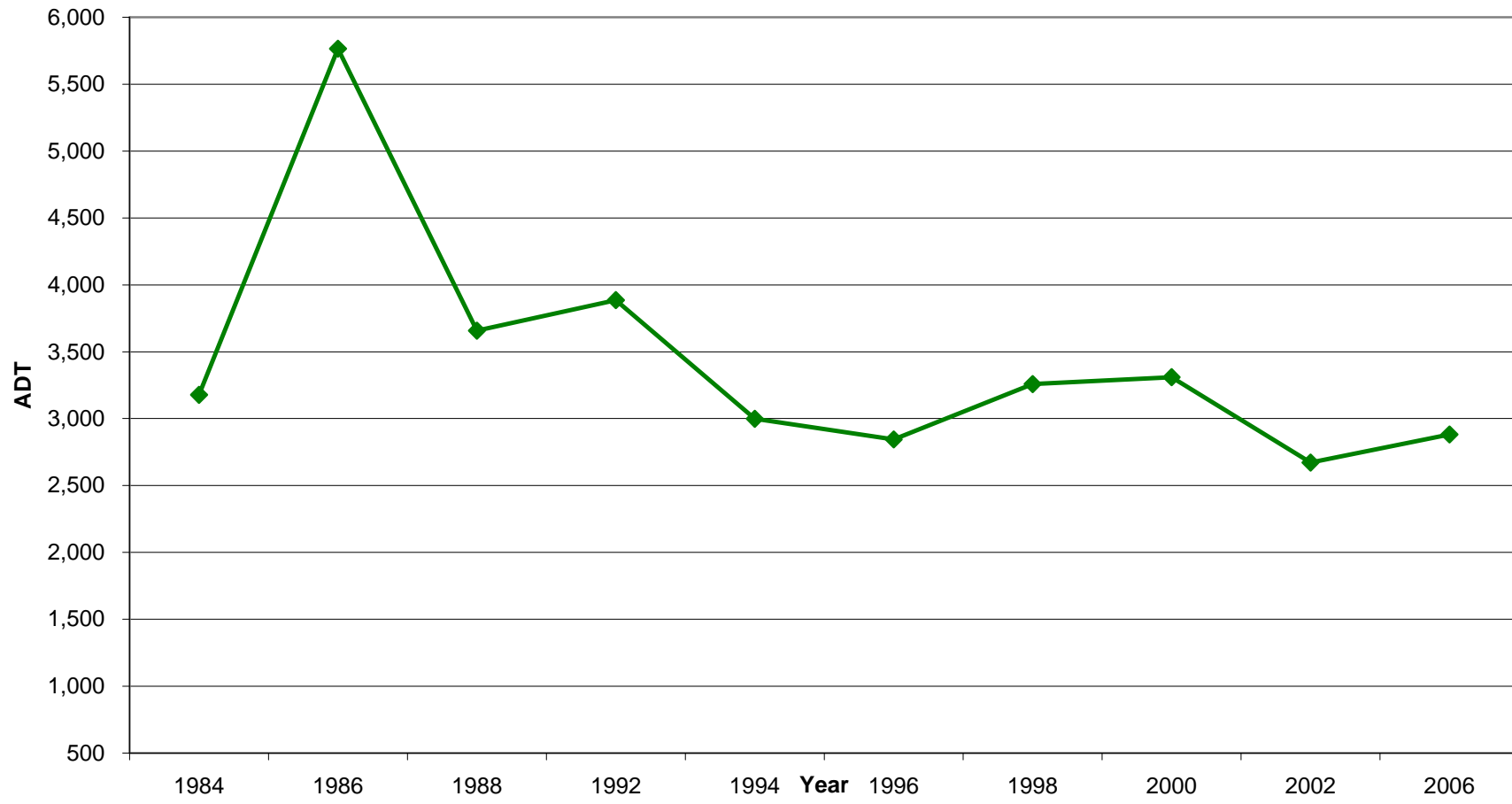
Count Station 77 - 5th Street South just north of 10th Ave South



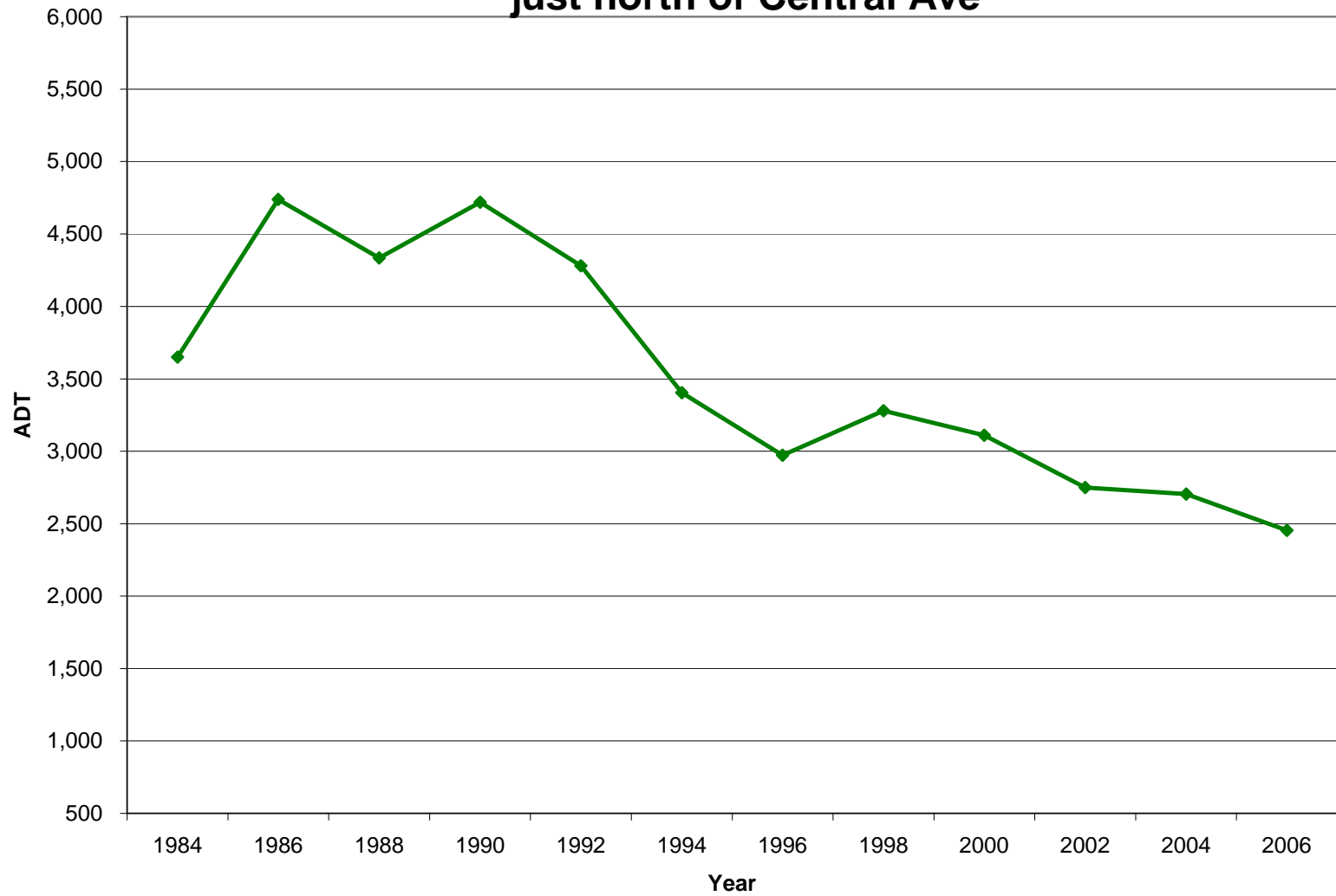
Count Station 78 - 6th Street South just north of 10th Ave South



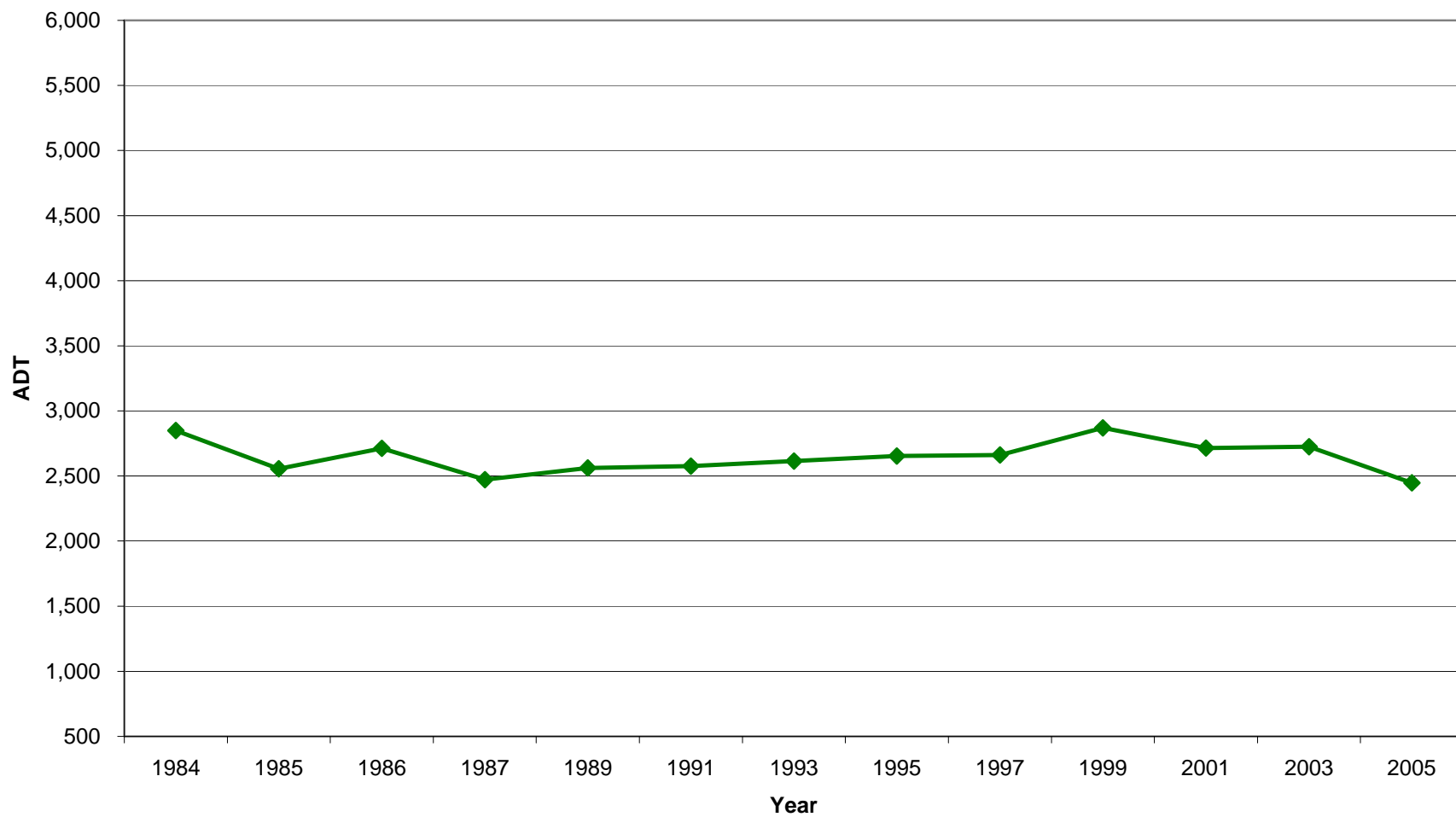
Count Station 79 - 5th Street North just north of Central Ave



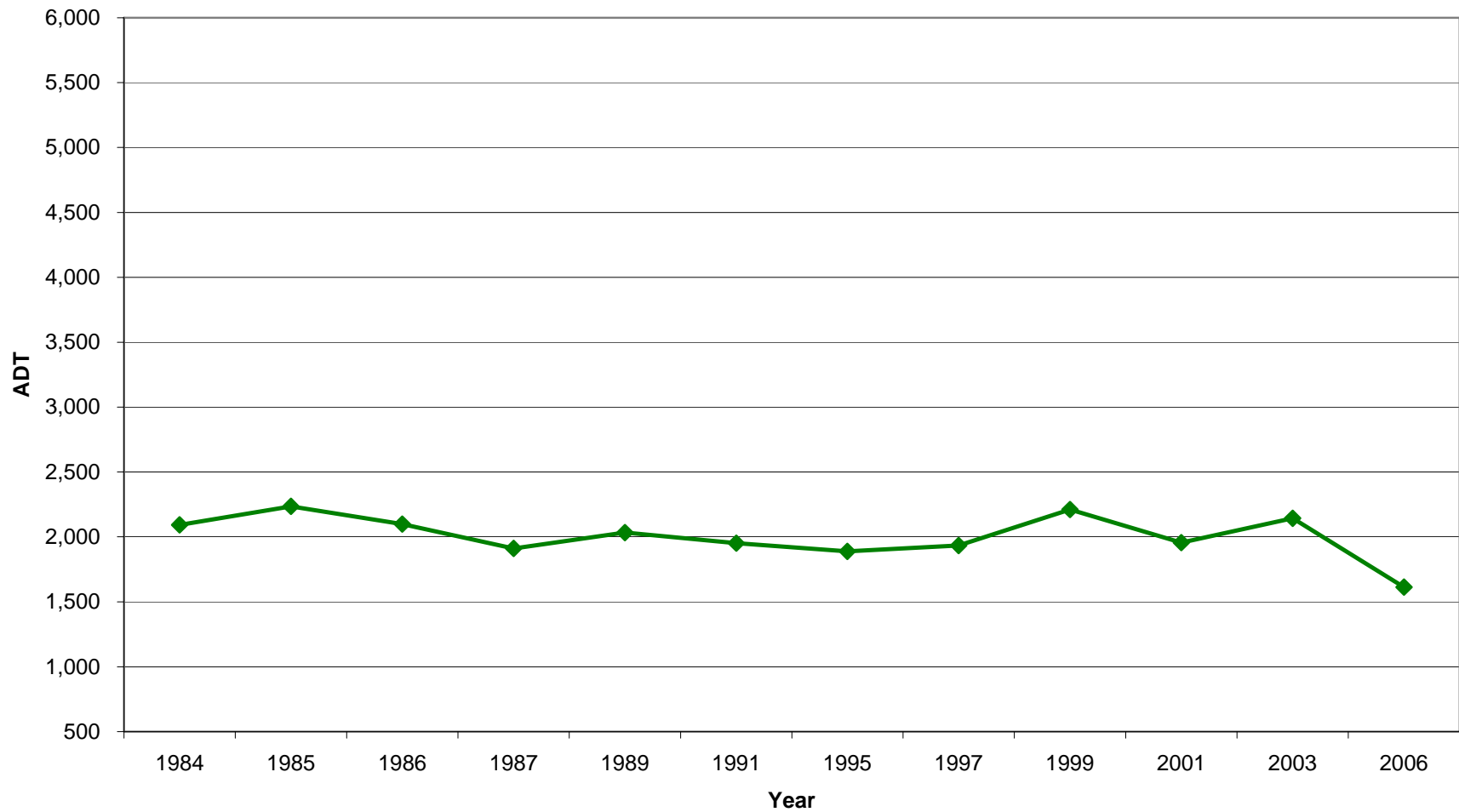
Count Station 80 - 6th Street North just north of Central Ave



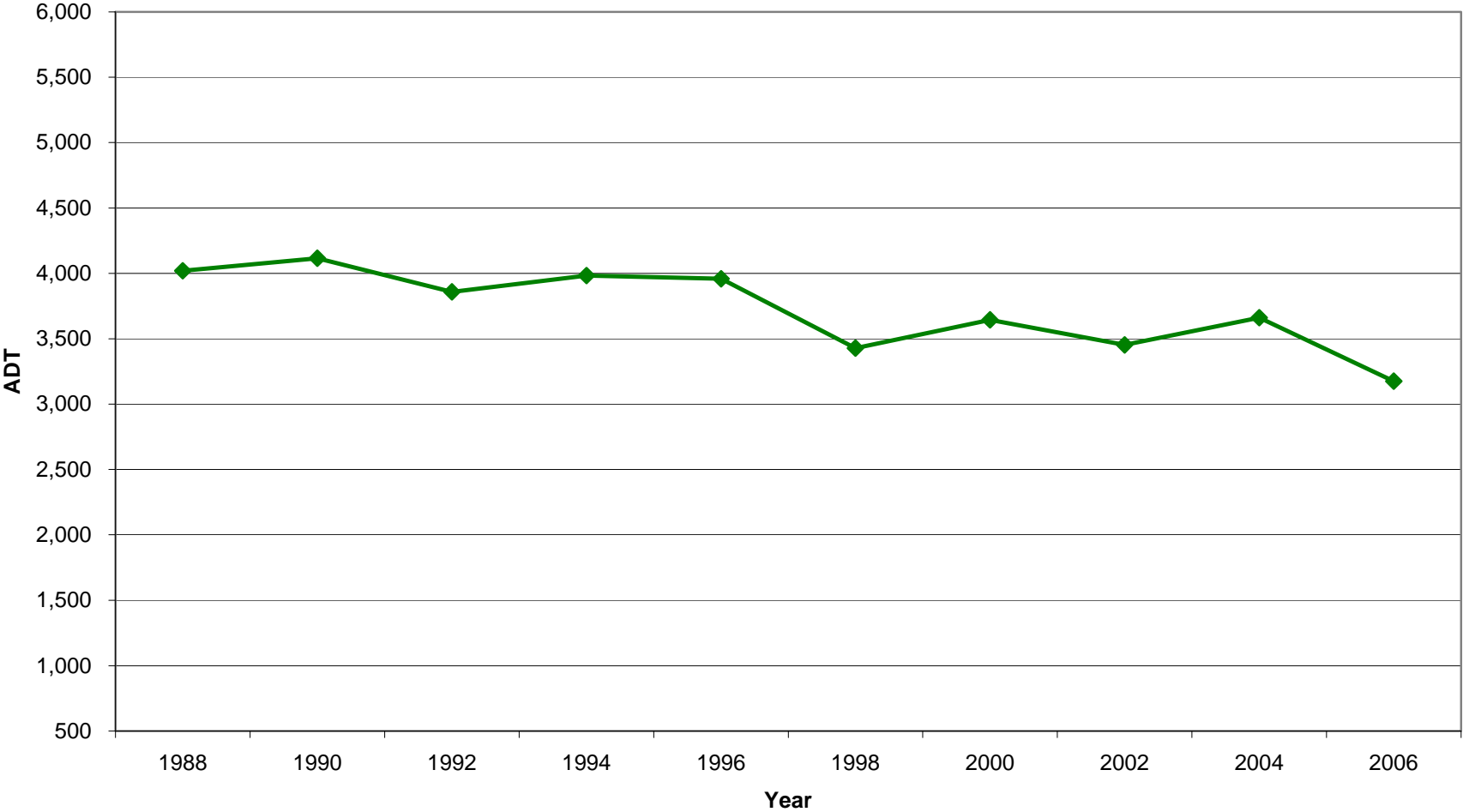
Count Station 81 - 5th Street North just north of 2nd Ave North



Count Station 82 - 6th Street North just north of 2nd Ave North



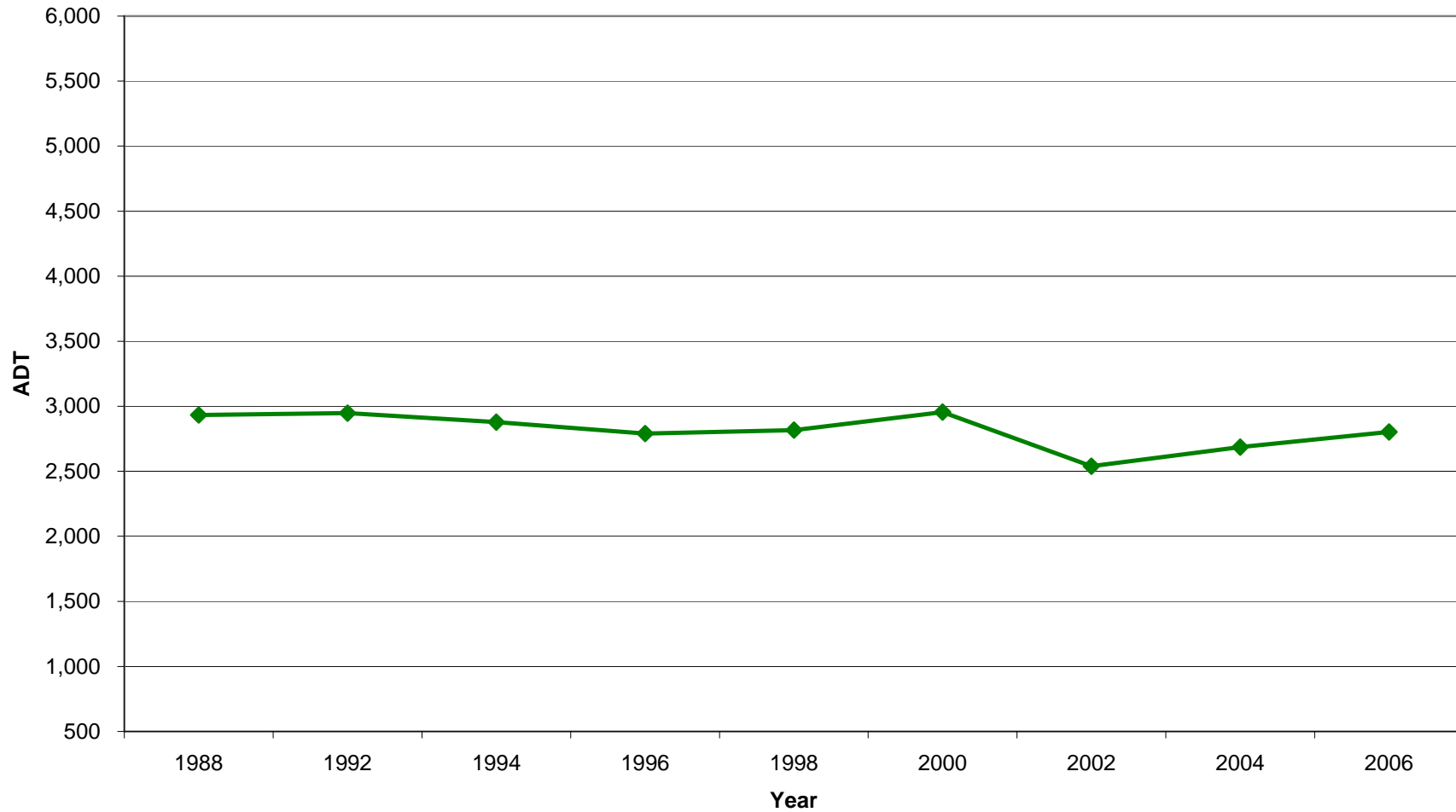
Count Station 235 - 6th Street South between 3rd & 4th Aves South



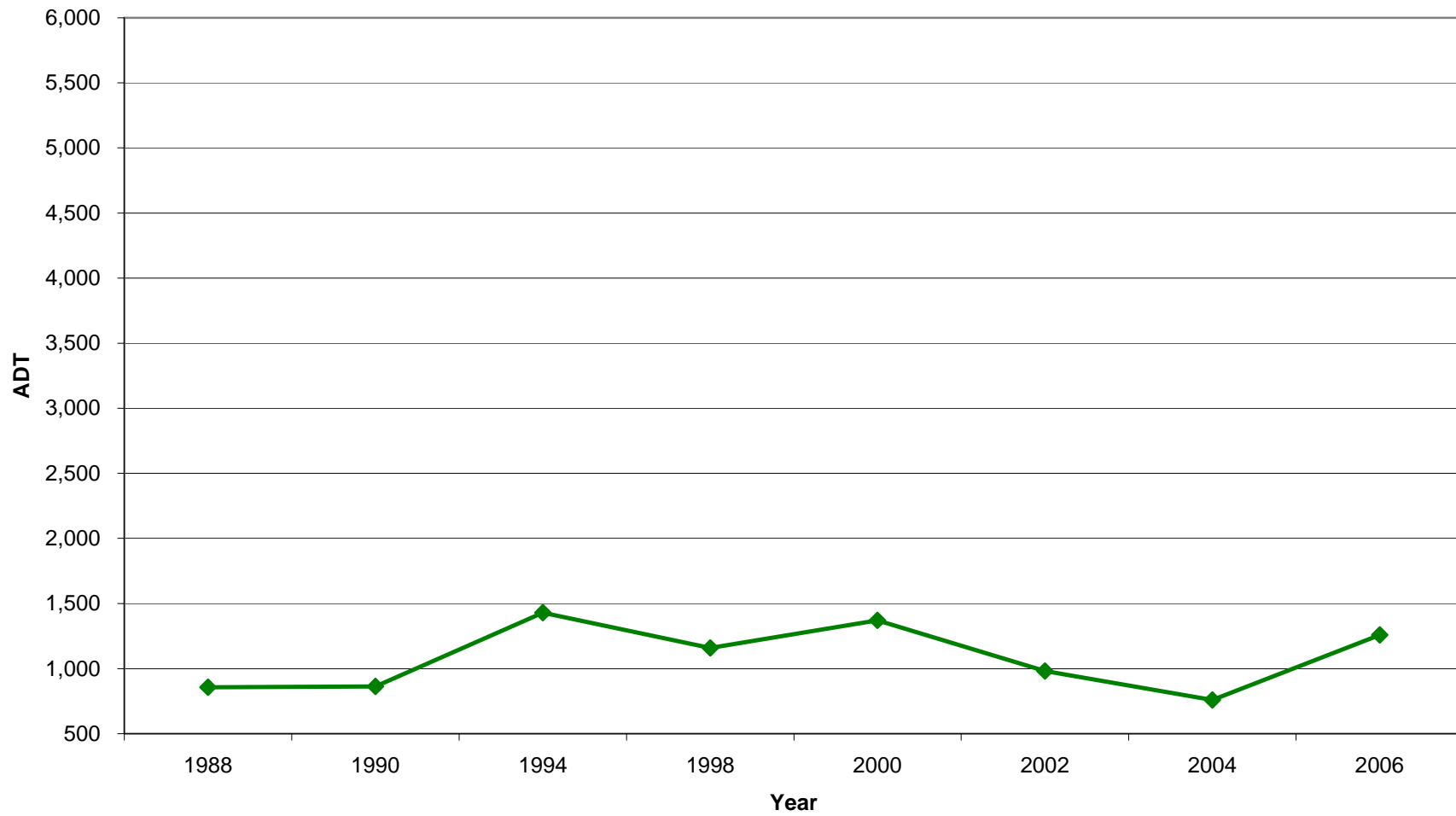
Count Station 236 - 5th Street North between 1st & 2nd Aves North



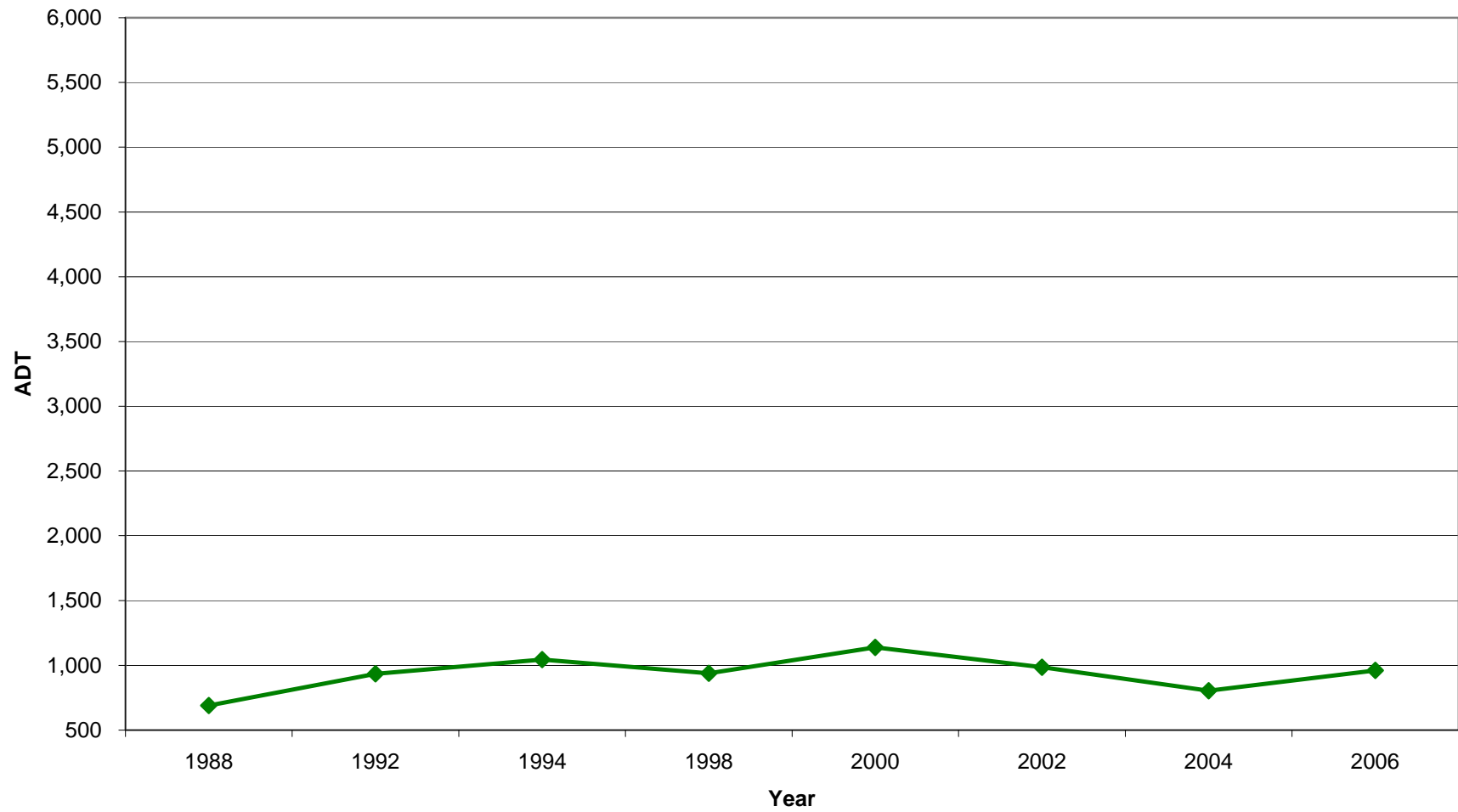
Count Station 237 - 6th Street North between 1st & 2nd Aves North



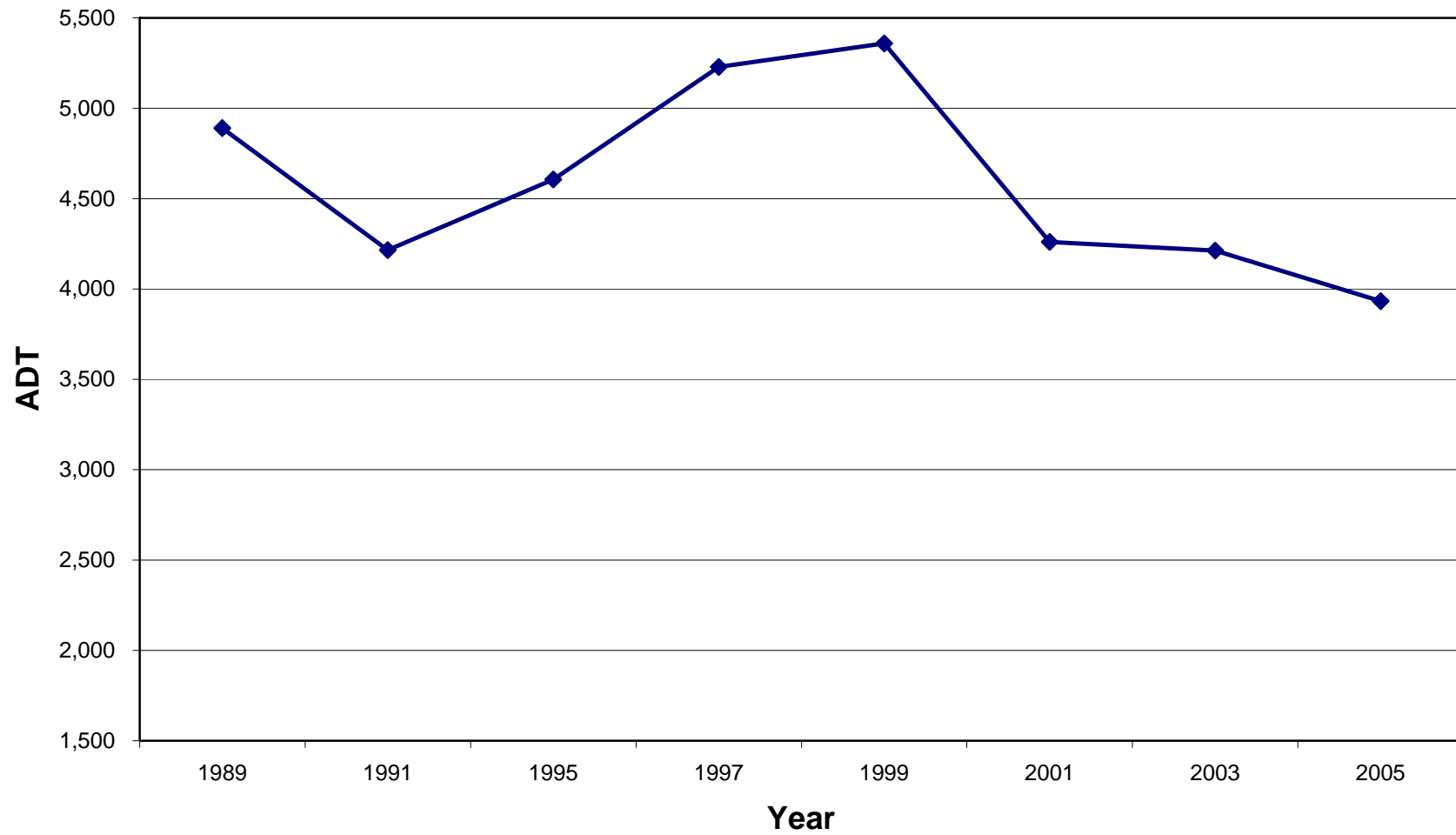
Count Station 253 - 5th Street North between 6th & 7th Aves North



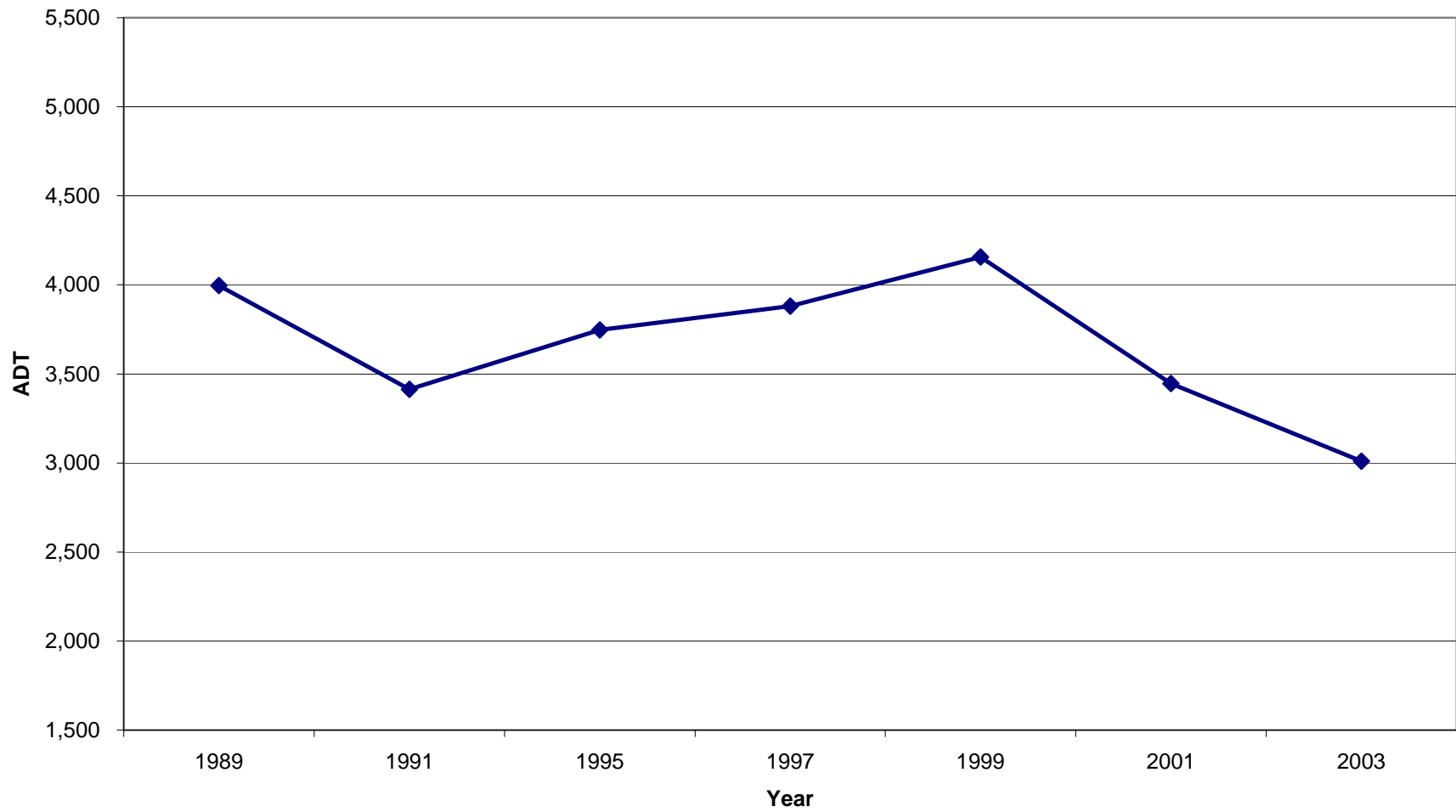
Count Station 254 - 6th Street North between 6th & 7th Aves North



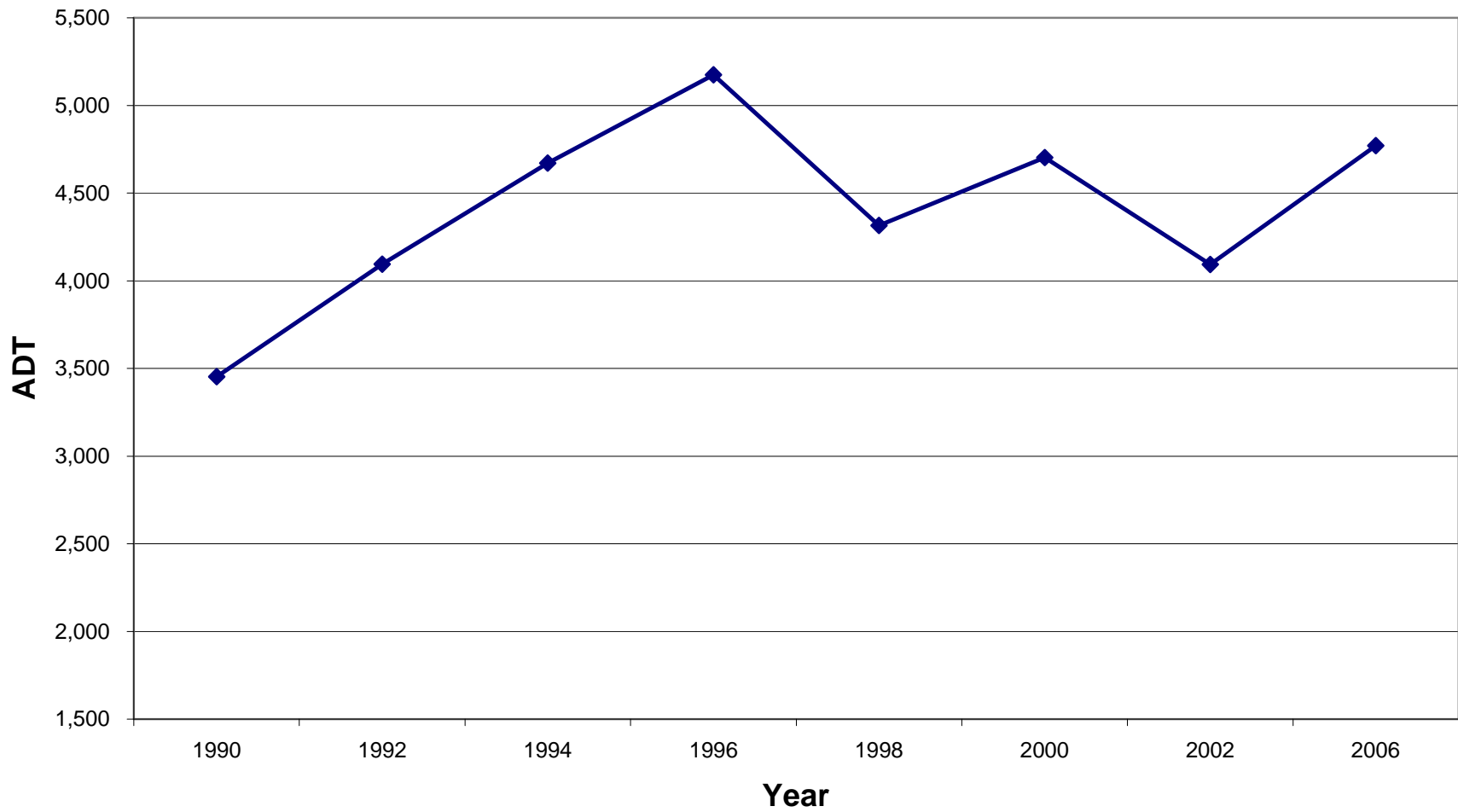
Count Station 256 - 1st Ave South between 4th & 5th Streets South



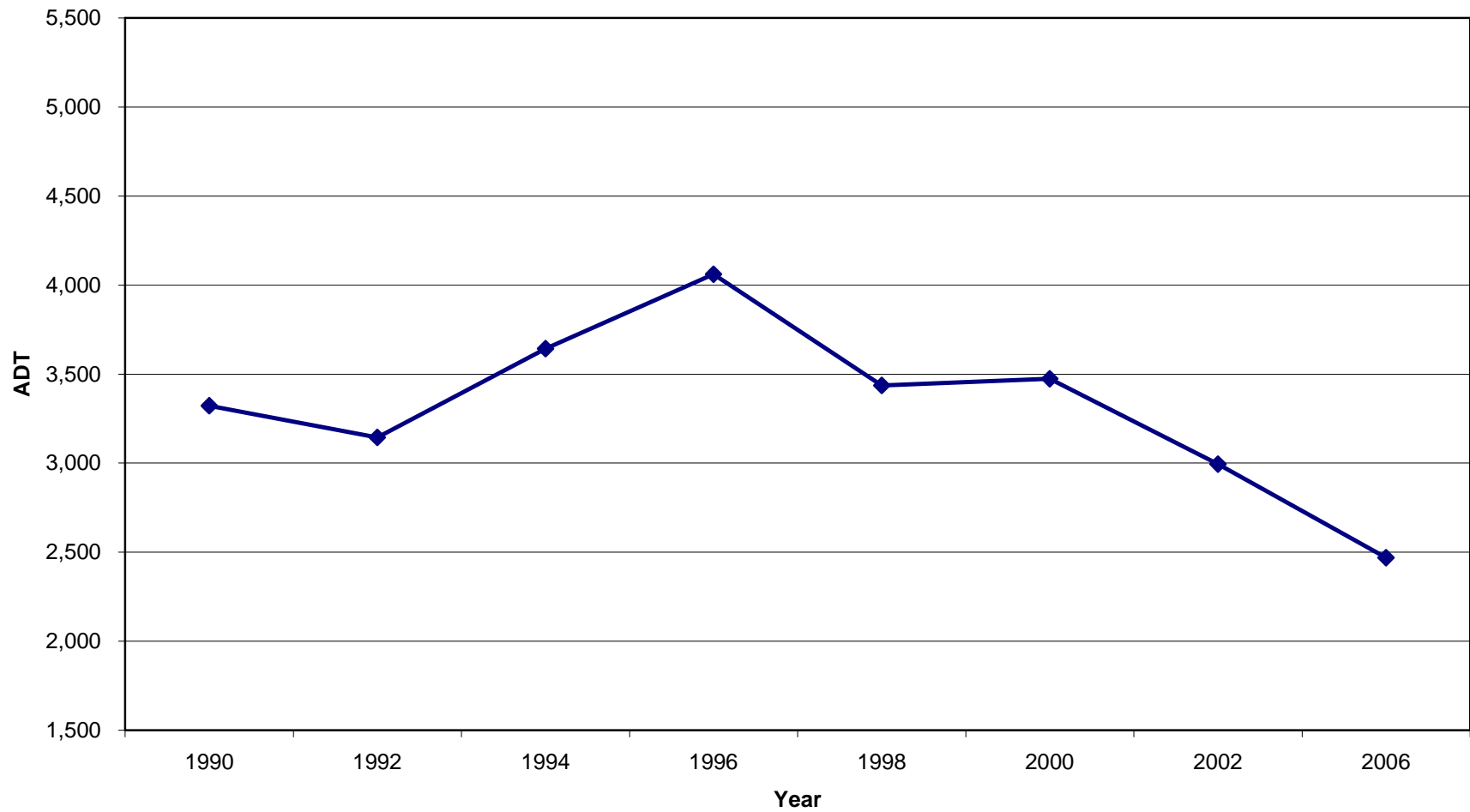
Count Station 257 - 2nd Ave South between 4th & 5th Streets South



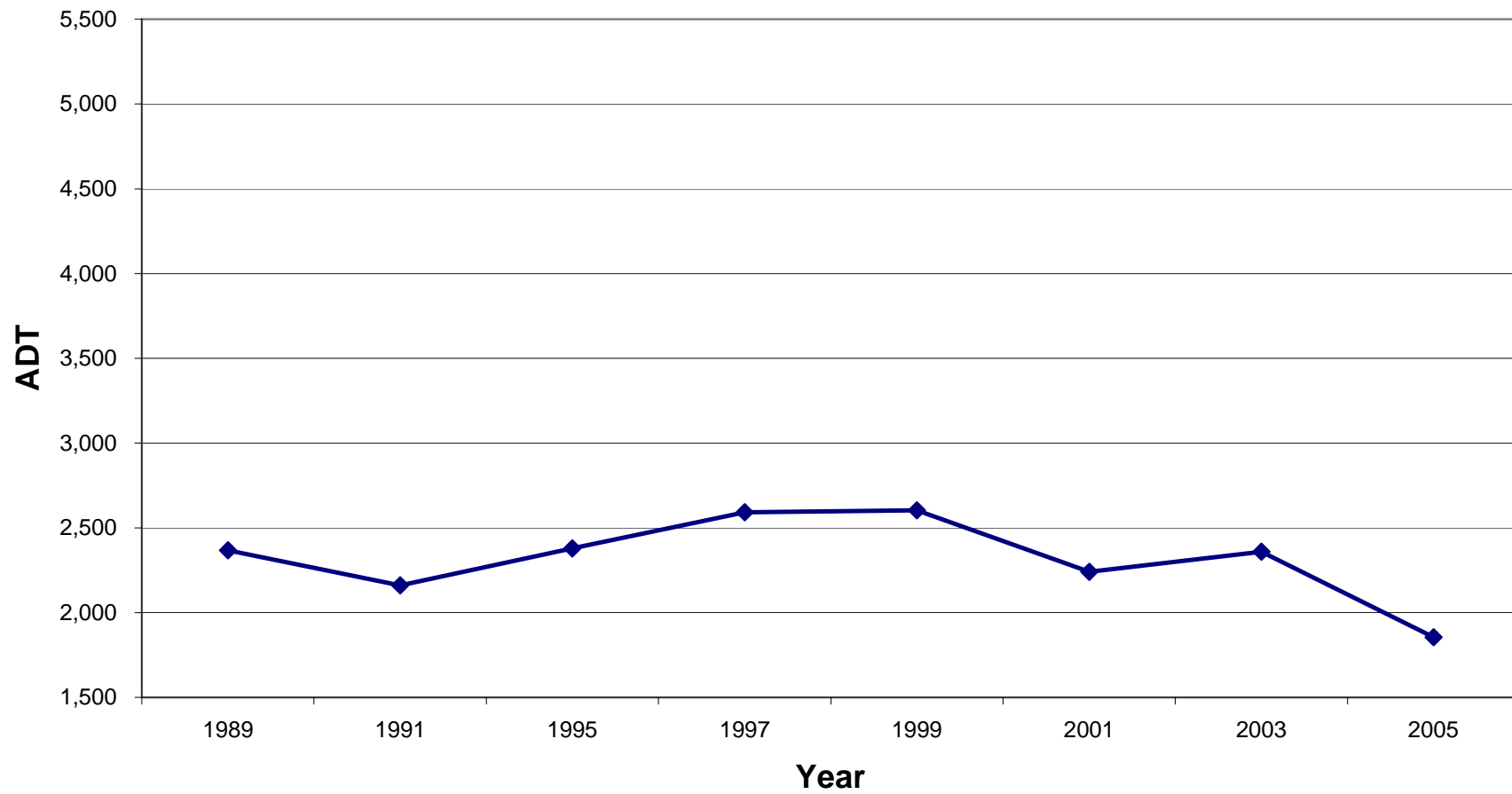
Count Station 258-1st Ave South between 6th & 7th Streets South



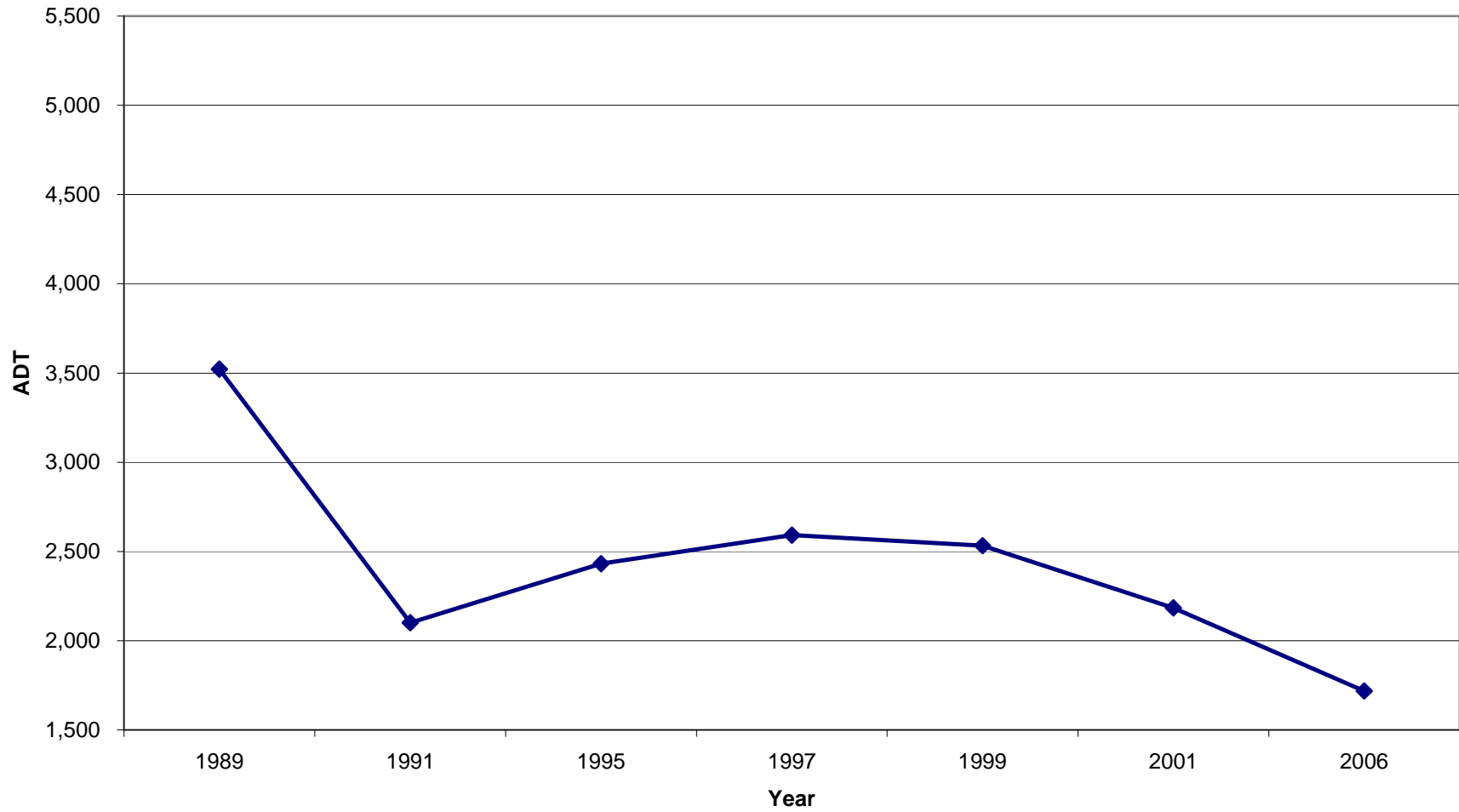
Count Station 259 - 2nd Ave South between 6th & 7th Streets South



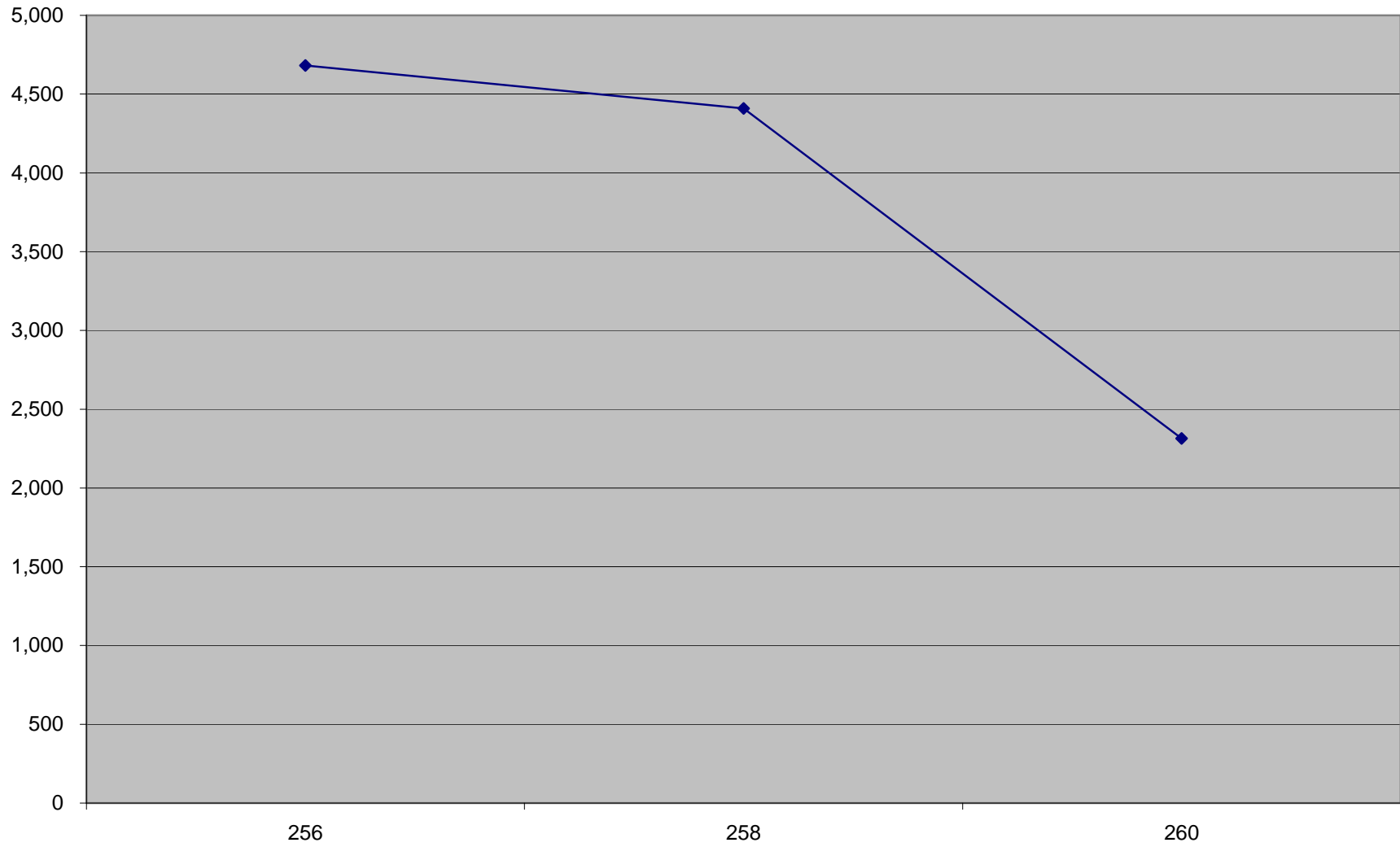
Count Station 260 -1st Ave South between 11th & 12th Streets South



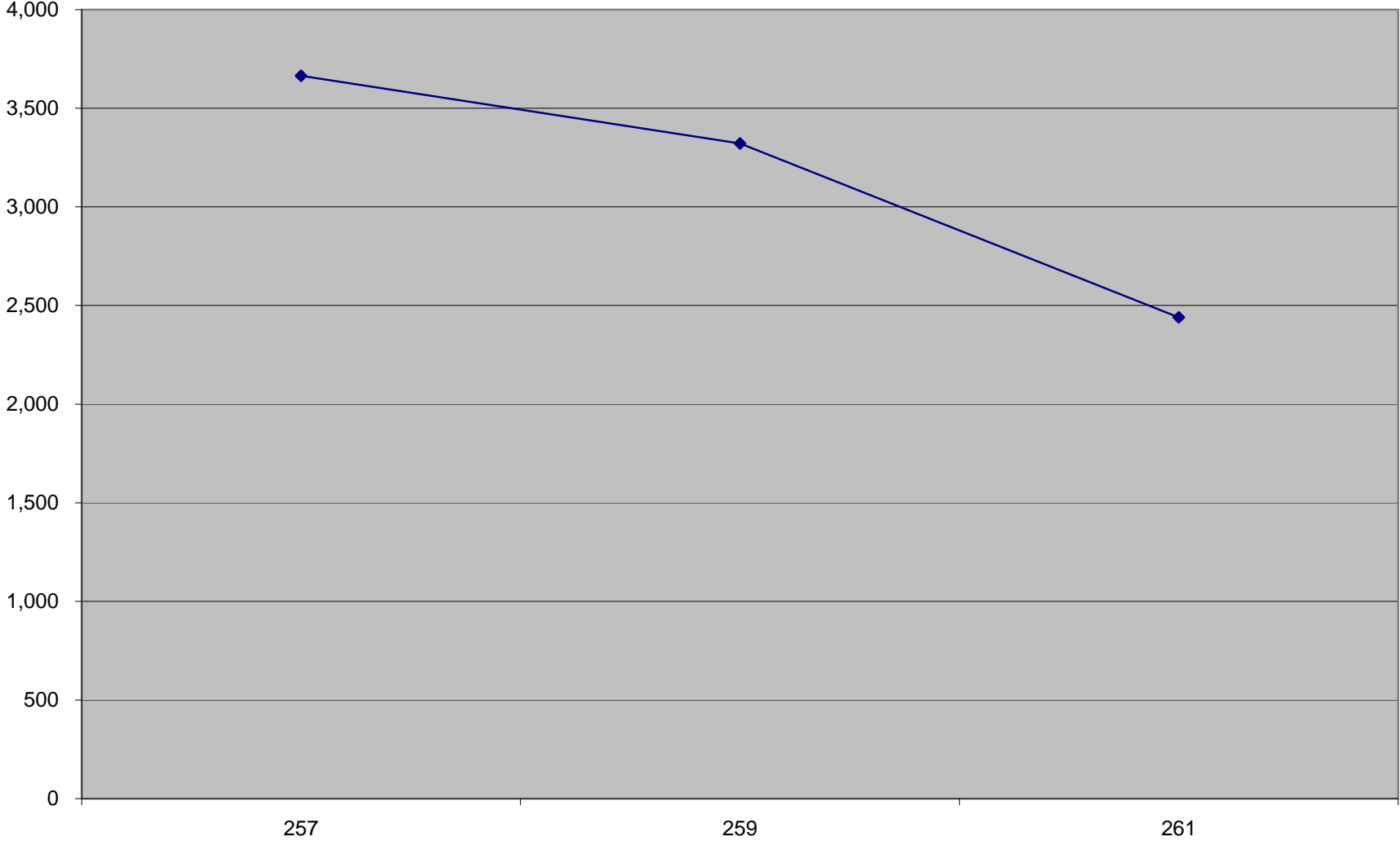
Count Station 261 - 2nd Ave South between 11th & 12th Streets South



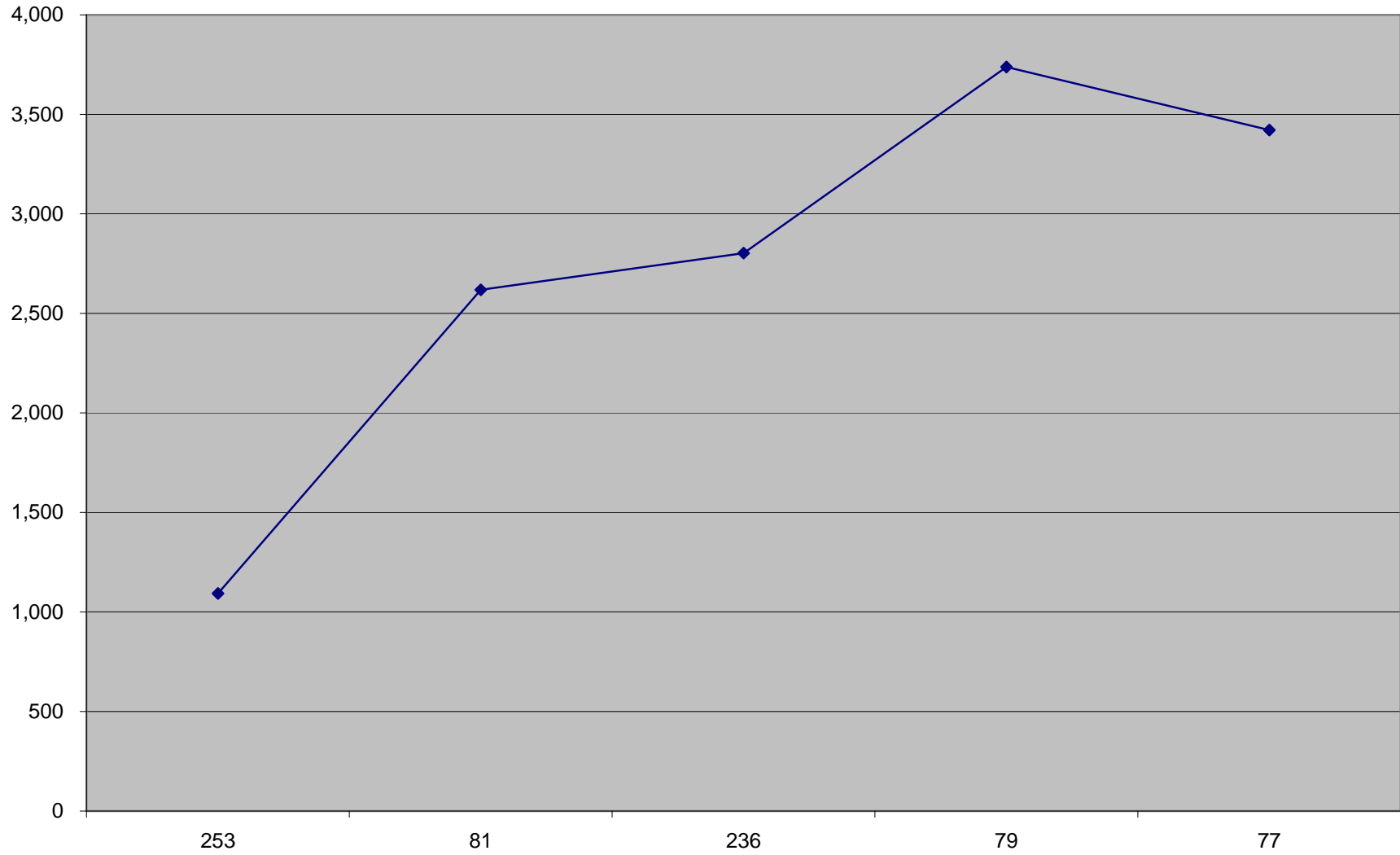
1st Ave S traffic profile, west to east



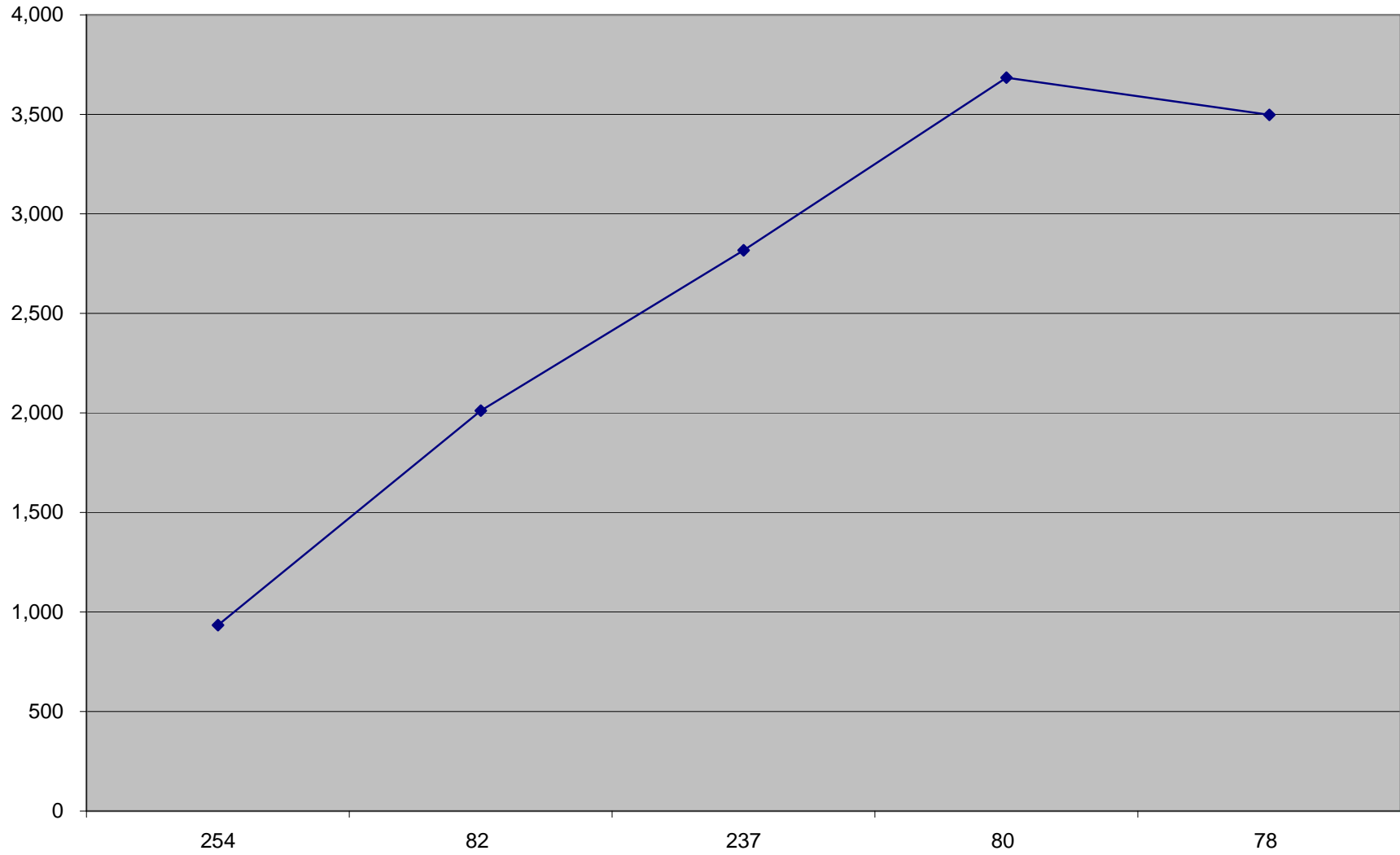
2nd Ave S traffic profile, west to east



5th Street traffic profile, north to south



6th Street traffic profile, north to south



TRAFFIC PROFILES

DESCRIPTION	COUNT LOCATION I.D. & COUNT				
	253	81	236	79	77
5th Street traffic profile, north to south (most recent)	1,259	2,447	2,910	2,881	3,340
5th Street traffic profile, north to south (multi-year average)	1,093	2,618	2,803	3,738	3,421
5th Street traffic profile, north to south (most recent 3-year average)	1,000	2,629	2,483	2,954	2,934
	254	82	237	80	78
6th Street traffic profile, north to south (most recent)	803	1,613	2,802	2,447	2,934
6th Street traffic profile, north to south (multi-year average)	933	2,011	2,816	3,685	3,497
6th Street traffic profile, north to south (most recent 3-year average)	976	1,905	2,676	2,636	2,984
	256	258	260		
1st Avenue South traffic profile, west to east (most recent)	3,932	4,771	1,855		
1st Avenue South traffic profile, west to east (multi-year average)	4,682	4,409	2,314		
1st Avenue South traffic profile, west to east (most recent 3-year average)	4,135	4,522	2,151		
	257	259	261		
2nd Avenue South traffic profile, west to east (most recent)	3,010	2,496	1,718		
2nd Avenue South traffic profile, west to east (multi-year average)	3,664	3,322	2,440		
2nd Avenue South traffic profile, west to east (most recent 3-year average)	3,538	2,988	2,145		
MULTI-YEAR AVERAGE, TRAFFIC PROFILES	253	81	236	79	77
5th Street traffic profile, north to south	1,093	2,618	2,803	3,738	3,421
	254	82	237	80	78
6th Street traffic profile, north to south	933	2,011	2,816	3,685	3,497
	256	258	260		
1st Avenue South traffic profile, west to east	4,682	4,409	2,314		
	257	259	261		
2nd Avenue South traffic profile, west to east	3,664	3,322	2,440		

APPENDIX B

CHAPTER 6: “DOWNTOWN PARKING, ACCESS AND CIRCULATION” FROM THE *2003 GREAT FALLS AREA TRANSPORTATION PLAN*

Chapter 6: Downtown Parking, Access, and Circulation

6.1 Downtown Access and Circulation

RPA examined the access into and out of the downtown area and the circulation within in the area, as part of the evaluation of traffic patterns in the Central Business District (CBD). A network of two-way roadways and one-way couplets provide access and circulation to CBD. For the east / west routes, one-way couplets exist on 2nd Avenue North / 1st Avenue North and 1st Avenue South / 2nd Avenue South. Central Avenue is a two-way facility. On the north / south routes, all streets are two-way roadways with the exception of the one-way couplet of 5th Street north / 6th Street North.

Part of the work undertaken with this Transportation Plan was to look at whether modifying the 5th Street North / 6th Street North one-way couplet to two-way facilities would be desirable and improve traffic flow conditions in the downtown area. This alternative was modeled under test run numbers six, seven and eight as described in **Chapter 3**. The three test runs analyzed this change between the following limits: between 8th Avenue North and 10th Avenue South (test run 6), between 2nd Avenue North and 10th Avenue South (test run 7) and between 2nd Avenue North and 2nd Avenue South (test run 8). A general summary of the test runs are shown below. Reference is made to **Chapter 3** for more detailed results of the downtown street grid.

- Test Run 6 results show an increase in traffic volumes ranging between 2,000 and 3,000 vpd on 5th Street North, over what is currently exhibited on the roadway; a decrease in traffic volumes ranging between 1,000 and 1,500 vpd on 6th Street; and minor volume fluctuations on the east / west streets in the area.
- Test Run 7 results show an increase in traffic volumes ranging between 500 and 4,500 vpd on 5th Street, south of 2nd Avenue North; a decrease in traffic volumes ranging between 500 to 1,500 vpd on 6th Street, south of 2nd Avenue South; and minor volume fluctuations on the east / west streets in the area.
- Test Run 8 results showed negligible changes on 5th Street and 6th Street, and minor fluctuations on the east / west streets in the area.

The modifications tested in the traffic model do not appear to correct any “perceived” traffic circulation problems in the CBD area, although it does appear to reduce traffic volume to some extent on 6th Street. The results of this analysis of alternative traffic circulation patterns in the CBD indicate that there is no significant advantage to altering the current traffic pattern. Although there may be some advantages to reversing the flow of the one-way couplet that are not related to traffic issues, the benefits do not appear to be great enough to warrant a change at this time. The analysis did not show that any of the circulation changes would provide significantly better flow characteristics than what is provided with the current configuration. Additionally, model results do not suggest that flow characteristics would worsen appreciably, however any change from the current condition would have to be seriously contemplated for

further affects on the adjacent land uses and benefit/costs of changing the transportation system so dramatically. Based on the model results, this modification is not recommended at this time.

6.2 Existing Parking Supply

The parking supply and demand in downtown Great Falls was inventoried in July and August of 2002. The downtown study area included the area bounded by 3rd Avenue North, 2nd Avenue South, Park Drive, and 9th Street. The inventory identified all public and private on-street and off-street parking spaces within this area.

The inventory showed that currently there are a total of 7,411 parking spaces in the downtown area. This total includes 1,244 on-street and 6,170 off-street spaces. Off-street parking for the general public is available in eight city-operated lots. A total of 1,144 parking spaces are available in these eight lots. Much of this parking is in the City's two parking garages. The City does not charge to park in the smaller lots, but parking is limited to two hours and violators can be ticketed. The current costs for parking in the CBD area is as shown on Table 6-1 below.

Table 6-1 – CBD Parking Rate Schedule (2003)

Parking Garages / Parking Lots / Meters	Hourly	All Day	Monthly
Parking Garages / Parking Lots:			
North Ramp	\$ 0.50	\$ 3.00	\$ 40.00
South Ramp	\$ 0.50	\$ 3.00	\$ 40.00
Lot No. 2	\$ 0.50	\$ 3.00	\$ 25.00
Lot No. 3	\$ 0.50	N/A	\$ 25.00
Lot No. 4	\$ 0.50	\$ 3.00	\$ 25.00
Lot No. 6	\$ 0.50	N/A	N/A
Lot No. 7	\$ 0.50	\$ 3.00	\$ 15.00
Lot No. 8	\$ 0.50	\$ 3.00	\$ 25.00
Meters:			
Meters	Time Dependent	N/A	N/A

More than 172 other off-street parking areas exist within downtown Great Falls. These lots vary greatly in size and are generally provided for use by customers and employees of local businesses, and apartment tenants. The parking inventory identified 5,029 spaces currently available in these areas.

On-street parking occurs along most block faces throughout downtown Great Falls. The inventory of parking spaces in the downtown area identified a total of 1,244 on-street parking spaces. Most of the on-street parking is metered at a rate of \$0.25 per hour with a maximum time of two hours. An additional 63 spaces have 15 minute parking time limit restrictions. The remaining have various other restrictions, such as loading zones, and handicap spaces.

The City of Great Falls has a contract with a private company to enforce downtown parking and manage the off-street parking facilities. City of Great Falls staff administers the contract, coordinates the vehicle immobilization process, collects parking citation payments, and follows through on collection efforts pertaining to delinquent parking tickets.

6.3 Existing Parking Demand

Parking utilization was monitored on two occasions: once in July and once in August, 2002. The August study occurred during the week of the Montana State Fair. The July, 2002 parking activity was monitored in the evening on Tuesday, July 30 and in the morning and afternoon of Wednesday, July 31. The August, 2002 parking activity was monitored on Thursday, August 22. The extent of parking demand in downtown Great Falls can be quantified by comparing the numbers of vehicles parked on-street and off-street to the number of available parking spaces. The current parking utilization of the various parking areas is shown graphically on **Figures 6-1, 6-2, and 6-3**.

Table 6-2 summarizes the use of the eight City-operated lots during the daytime and evening inventory periods in July and August of 2002. Note that the August inventory was taken during the week of the Montana State Fair.

Table 6-2
Utilization of City-Operated Lots

Lot # and (Block)	Capacity	Average Daytime Use- July	Average Evening Use- July	Average Evening Use- August
#6 (Blk 8)	31	66%	12%	85%
#8 (Blk 16)	60	65%	27%	68%
North Ramp Garage (Blk 27)	496	57%	14%	59%
#4 (Blk 29)	139	44%	11%	44%
#7 (Blk 32)	31	12%	10%	10%
#2 (Blk 32)	37	64%	51%	55%
South Ramp Garage (Blk 34)	311	28%	13%	25%
#3 (Blk 42)	39	32%	33%	28%
Avg. % Use of All Lots	1144	46%	16%	46%

Table 6-2 shows that in July the City-operated lots have greater utilization during the day than in the evening hours. Evening lot utilization during Fair Week was much greater than normal evening utilization.

All off-street lots in the downtown area were inventoried and are summarized in **Table 6-3**. The overall off-street parking utilization shows greater demand during the daytime compared

to the evening hours. The data also showed a significant increase in parking demand in the evening during the Montana State Fair.

Table 6-3
Summary of Off-Street Parking Use in Downtown Great Falls

Parking Inventory Period	Blocks 1-31 (North of Central Avenue)	Blocks 32-56 (South of Central Avenue)	Overall Use of All Off-Street Parking Areas
Average Daytime July	49%	54%	51%
Average Evening July	21%	31%	26%
Average Evening August (Fair)	51%	53%	52%

Table 6-4 shows that the on-street parking utilization is greatest during the daytime in July and less in the evenings. There is greater parking demand in the evenings during the Montana State Fair week in August.

Table 6-4
Summary of On-street Parking Use in Downtown Great Falls

Parking Inventory Period	Blocks 1-31 (North of Central Avenue)	Blocks 32-56 (South of Central Avenue)	Overall Use of All Off-Street Parking Areas
Average Daytime July	38%	31%	35%
Average Evening July	27%	27%	27%
Average Evening August (Fair)	38%	25%	32%

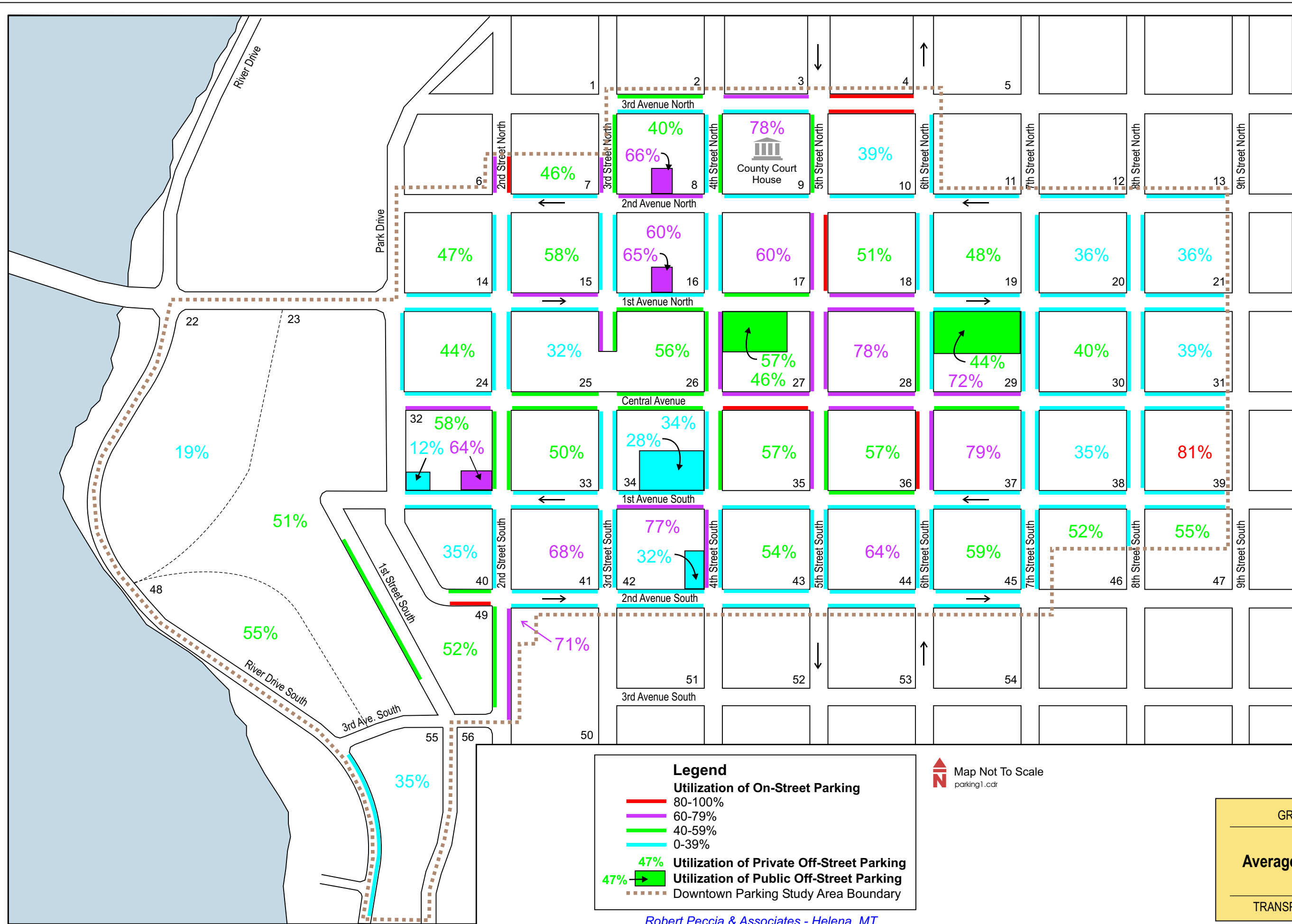
6.4 ADA Parking Supply

RPA also reviewed the number of Americans with Disabilities Act (ADA) parking spaces in the on-street and public off-street parking areas. The data showed that there are currently 18 on-street parking spaces and 36 off-street ADA parking spaces (see **Figure 6-4**). According to the Americans with Disabilities Act, the total number of ADA spaces required for areas with more than 1001 total parking spaces is 20 plus 1 for each 100 over 1000. For the entire downtown CBD this would equal 43 spaces (22 on-street and 21 off-street) for city-owned public parking and on-street parking. These spaces should be provided in each parking area, but may be provided in a different location of equivalent or greater accessibility in terms of distance from an accessible entrance, cost, and convenience. According to this study, the downtown area has a surplus of 11 ADA accessible spaces.

6.5 Summary of CBD Access, Circulation and Parking Analysis

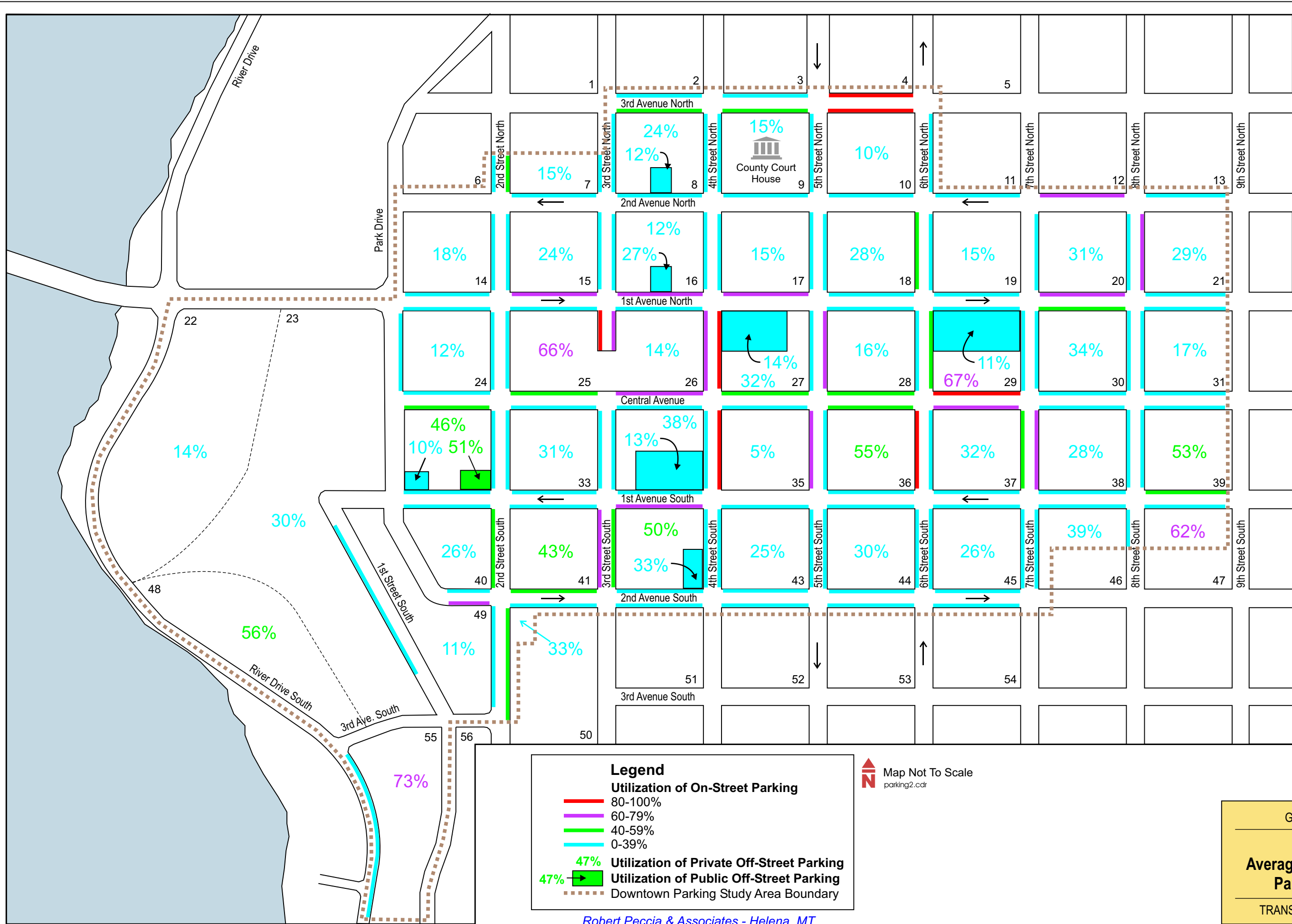
The CBD in Great Falls is currently functioning well in terms of vehicle Level of Service and parking availability. The completed study shows very few areas where parking utilization rates are between 80 and 100 percent. In the few areas where this is present, available parking can be found less than a block away. The “rule-of-thumb” is that parking needs should be within a 600-hundred foot to 1,000-foot radius of a users destination, whether that destination is work related, retail, recreational, etc.. The downtown parking situation presently allows for this recommended distance, and given the small change in traffic volumes projected over the next twenty years, will continue to do so. Additionally, the parking utilization rates that are observed in the CBD, for both on-street and off-street parking, generally range from 30 to 60 percent, well below the level at which parking would be perceived as a problem. The number of ADA accessible parking spots is also more than required as discussed in **Section 6.4**.

Regarding access and circulation within the CBD, it is not recommended that any changes be made to the roadway directional system in the downtown area. From a transportation system standpoint, there is no direct benefit realized in changing the directional flow characteristics of any of the CBD roadways. The modeling completed showed only slight changes in traffic volumes, and only amounted to proportionate changes to adjacent roadways (i.e. if one roadway gained 1,000 vpd, the adjacent roadway appeared to lose 1,000 vpd). If the local government deems it necessary to continue with further analysis pertinent to changing downtown circulation, many factors outside of the scope of this area-wide, macroscopic Transportation Plan are likely to come into consideration, including existing and future land uses, available funding, and economic justifications.



Robert Peccia & Associates - Helena, MT

GREAT FALLS AREA
Figure 6-1
Average Weekday Parking Utilization
 TRANSPORTATION PLAN - 2003



14%

30%

56%

73%

24%
12%

15%

10%

18%

24%

12%
27%

15%

28%

15%

31%

29%

12%

66%

14%

14%
32%

16%

11%
67%

34%

17%

46%
10% 51%

31%

38%
13%

5%

55%

32%

28%

53%

26%

43%

50%
33%

25%

30%

26%

39%

62%

11%

33%

51

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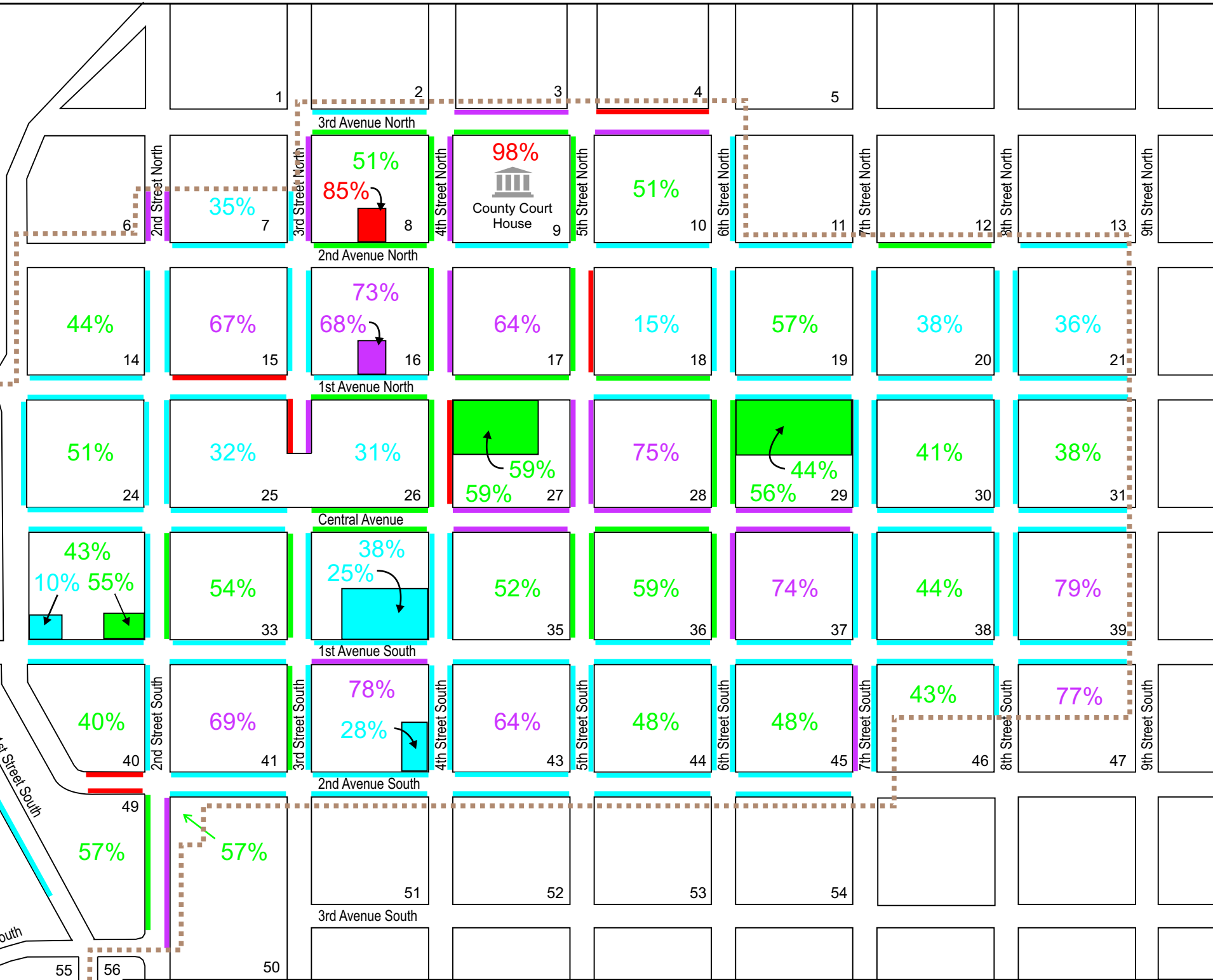
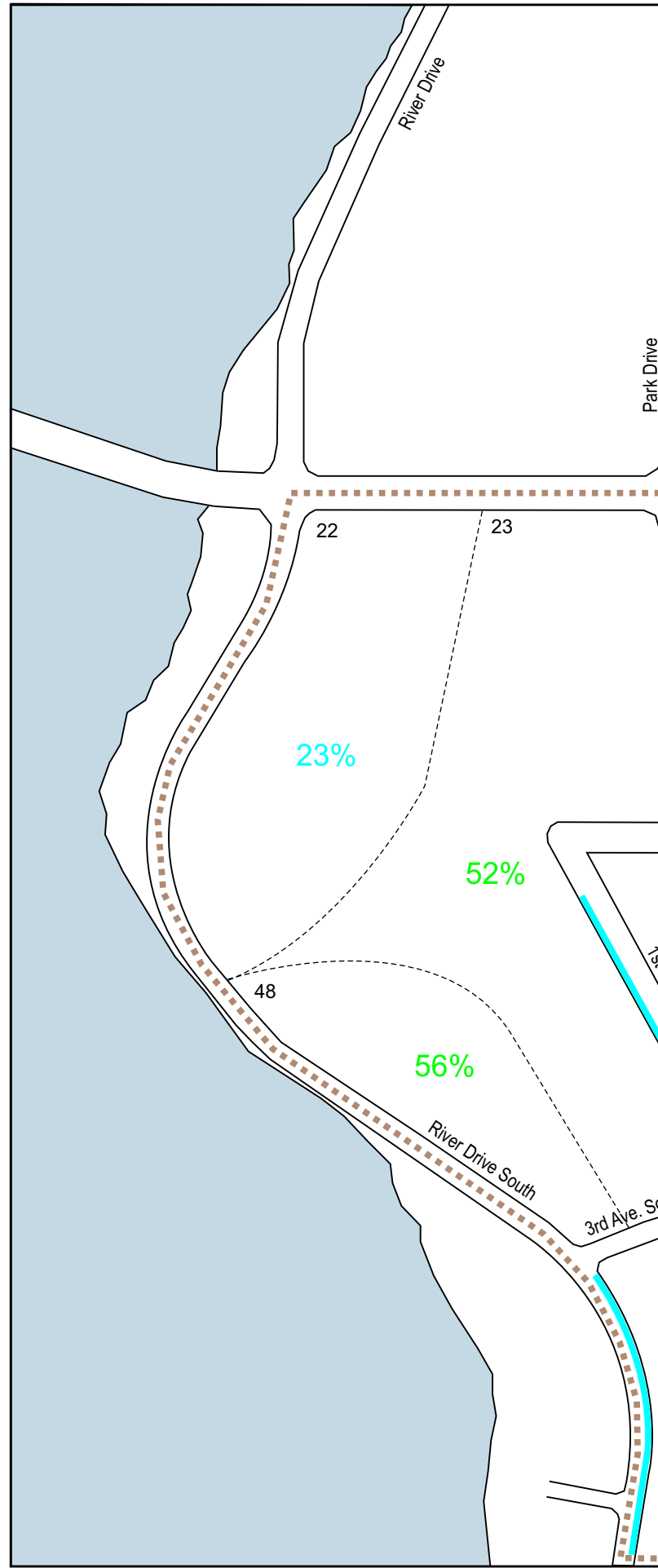
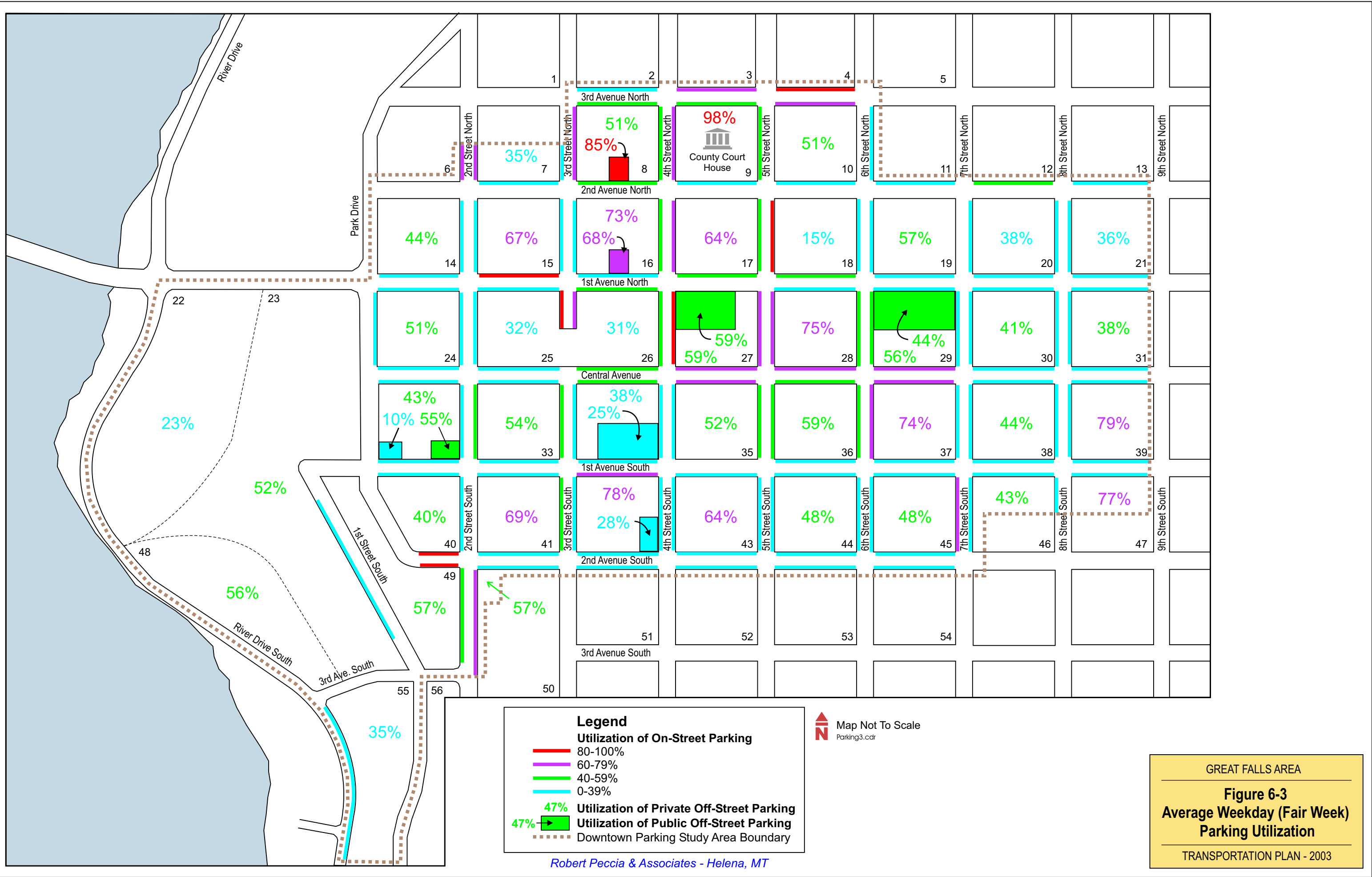
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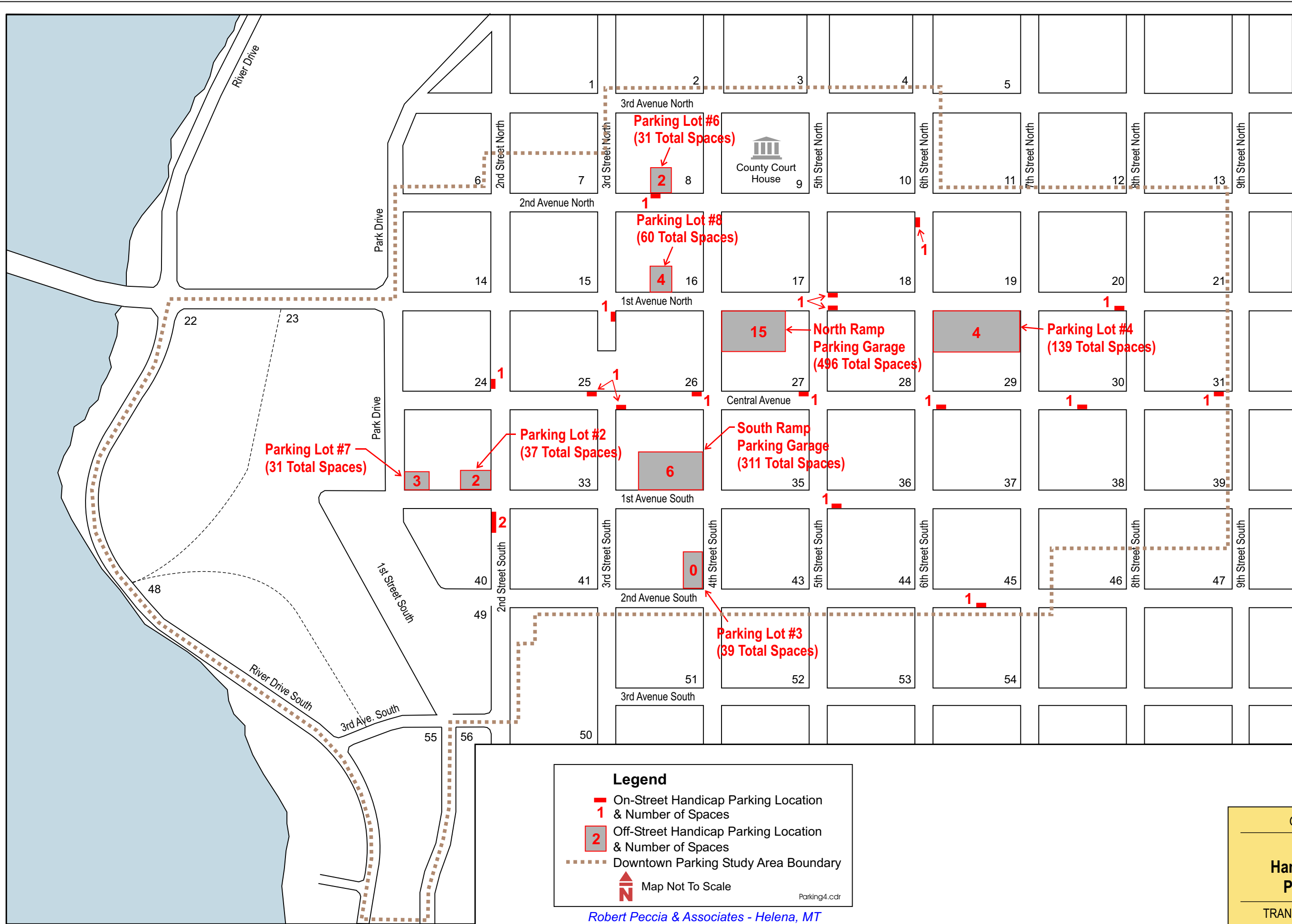


GREAT FALLS AREA

Figure 6-3
Average Weekday (Fair Week)
Parking Utilization

TRANSPORTATION PLAN - 2003

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GREAT FALLS AREA

Figure 6-4
Handicap Accessible
Parking Inventory

TRANSPORTATION PLAN - 2003

APPENDIX C

ALTERNATIVES

1 - RETAIN ONE-WAY DESIGNATION BUT ALLOW FOR ANGLE PARKING

Some segments of the one-ways may be appropriate for an approach that retains the one-way designation, but reduces the travel lanes from three to two. This reduction would allow for angle parking and bulb-outs. This alternative would be most beneficial in those blocks where additional parking is desired. The Downtown Parking Utilization Study done as part of the 2003 Transportation Plan identifies blocks that have heavy on-street parking usage. In reviewing the Study, some initial recommendations of blocks that could benefit from angle parking are:

- 1st Avenue South from 6th Street to 3rd Street
- 5th Street from 3rd Avenue North to 1st Avenue South
- 6th Street from 1st Avenue South to 2nd Avenue North

If this alternative is thought to be a possible option, a more careful look at appropriate blocks for conversion should be done. At a minimum, the following points should be taken into consideration:

- Convert consecutive instead of isolated blocks, in order to establish district character
- Perform conversion in conjunction with streetscape improvements to again establish district character and enhance the driving, walking and shopping experience
- Are there any negative impacts to neighboring properties of conversion?
- Expected utilization is important – if the new angled spaces are not utilized, criticism is inevitable.



Example of a one-way roadway with angle parking and corner pedestrian bulb-outs

2 – PARTIAL CONVERSION OF 1ST / 2ND AVENUES SOUTH

Conversion of portions of the Avenues may be preferred. Conversion of some segments may:

- be more economical (fewer signals would be impacted, no roadway or intersection reconfigurations would be necessary, etc.)
- provide greater area benefits (such as improving downtown circulation)
- have a lesser impact upon the greater transportation network
- have a lesser negative impact or greater positive impact upon neighboring uses
- have greater support of neighboring residents and businesses
- have less public opposition
- be done in association with streetscape improvements

Many of the above bulleted items are interrelated, but each should be considered during any partial conversion effort.

Taking into consideration safe flow of traffic and logical transition points, some of the more obvious conversion options are:

- Park Drive to 15th Street South (full length);
- Park Drive to 9th Street South; and,
- 9th Street South to 15th Street South

3 – PARTIAL CONVERSION OF 5TH/6TH STREETS

Like the Avenues in #2 above, the 5th/6th Streets couplet may benefit from a partial conversion, for the same reasons.

Again taking into consideration safe flow of traffic and logical transition points, some of the more obvious conversion options are:

- 10th Avenue South to 8th Avenue North (full length);
- 2nd Avenue North to 8th Avenue North; and,
- 10th Avenue South to 2nd Avenue North