
MEMORANDUM

DATE: October 25, 2007

TO: City Council

FROM: Marvin Krout, Planning Director, Lincoln/Lancaster County
Planning Department

RE: Bike Lanes

CC: Mayor Chris Beutler
Karl Fredrickson, Public Works & Utilities
Trish Owen, Mayor's Office
Roger Figard, Public Works & Utilities-Engineering Services
Kent Morgan, Planning Department
Randy Hoskins, Public Works & Utilities-Engineering Services
Scott Opfer, Public Works & Utilities-Engineering Services
David Cary, Planning Department

The City Council, in August of last year, approved an amendment to Title 10 of the Lincoln Municipal Code allowing bike lanes on city streets, with the proviso that a review of the lanes proposed for 11th Street and 14th Street downtown be completed in one year. Attached is a copy of the memorandum sent to Mayor Beutler as directed by the City Council. Also attached is a short report prepared last month which updates the information in the original report.

The two studies show increasing use of these streets by bicyclists, with no increase in crashes, fewer bicyclists on the sidewalks and no signs of increased traffic congestion. It appears as though bicyclists as well as drivers have become more comfortable with navigating these streets over the past year. Planning and Public Works staff recommend the continued operation of these bike lanes and investigation of opportunities for additional bike lanes. The cost of additional striping for these lanes is nominal if done as part of the overall restriping of these streets, which is done semi-annually.

q:\Multi-modal trans\BikeLanes\Memoradum to City Council October 2007

Update to Bike Lane Report to Mayor Beutler dated August 1, 2007

September 2007 Bike Lane User Counts

On Thursday, September 20, and Wednesday, September 26, bike lane user counts were conducted on 11th and 14th Street respectively. On September 20, 14th Street bike lane use was counted, and on September 26, 11th Street was counted. On each day a morning 2-hour count (7:00-9:00 a.m.), a midday 2-hour count (11:00 a.m.-1:00 p.m.), and an afternoon 2-hour count (4:00-6:00 p.m.) was conducted. The following are the results of these counts.

14th Street - September 20, 2007

- Total Usage During 6-Hour Count Period = 171 bikers/22 on sidewalks
- 7:00-9:00 - 71 bikers using bike lane, 6 using sidewalks, no bikers riding in wrong direction, no motor vehicles observed using bike lanes illegally. Conditions were sunny and 66 degrees.
- 11:00-1:00 - 46 bikers using bike lane, 7 using sidewalks, no bikers riding in wrong direction, no motor vehicles observed using bike lanes illegally. Conditions were sunny and 80 degrees.
- 4:00-6:00 - 32 bikers using bike lane, 9 using sidewalks, no bikers riding in wrong direction, 1 motor vehicle observed using bike lanes illegally. Conditions were sunny and 90 degrees.

11th Street - September 26, 2007

- Total Usage During 6-Hour Count Period - 117 bikers/27 on sidewalks
- 7:00-9:00 - 5 bikers using bike lane, 5 using sidewalks, no bikers riding in wrong direction, 1 motor vehicle observed using bike lanes illegally. Conditions were sunny and 50 degrees.
- 11:00-1:00 - 29 bikers using bike lane, 9 using sidewalks, no bikers riding in wrong direction, 3 motor vehicles observed using bike lanes illegally. Conditions were sunny and 65 degrees.
- 4:00-6:00 - 56 bikers using bike lane, 13 using sidewalks, no bikers riding in wrong direction, 3 motor vehicles observed using bike lanes illegally. Conditions were sunny and 72 degrees.

General Observations

- It was observed during these count periods that the 14th Street bike lane appears to have more usage throughout the day with the morning period being a peak period of use. On 11th Street it appears that the late afternoon period, when students and workers are going home, is by far the peak period and there is less usage during other periods of the day, especially the early morning period.
- There was a significant increase in bicycle activity on the 14th Street bike lane compared to the first count results from April. It appears that bikers have grown more comfortable with using the bike lanes over time.

- Similar to what was observed during the first counts in April, there appears to be a significant amount of east/west bike traffic with most of that activity being on M and N Streets respectively.
- It was observed that the vast majority of bikers use the entire length of the 14th Street bike lane from K to R Street, while on 11th Street, many more bikers are using a portion of the bike lane and are turning on to or off of 11th at some point between Q to L.
- It appears that since last April, there are significantly fewer motor vehicles using the bike lanes illegally (i.e. as a through lane) on both 11th and 14th. It appears that drivers have learned how to navigate around the bike lanes properly over time.
- There also are less bikers using Downtown sidewalks on these 2 streets compared to April which suggests that many bikers have grown accustomed to using the bike lanes.
- There were no traffic back-ups or congestion issues observed on either street during these count periods.

q:\Multi-Modal trans\BikeLanes\Update to Bike Lane Report September 2007

MEMORANDUM

DATE: August 1, 2007

TO: Mayor Chris Beutler

FROM: David Cary, Planning Department

RE: Bike Lanes

CC: Karl Fredrickson, Public Works & Utilities
Marvin Krout, Planning Department
Trish Owen, Mayor's Office
Roger Figard, Public Works & Utilities-Engineering Service
Kent Morgan, Planning Department
Randy Hoskins, Public Works & Utilities-Engineering Services
Scott Opfer, Public Works & Utilities-Engineering Services

The purpose of this memo is to provide information on the implementation of Downtown bike lanes on 11th Street and 14th Street last August. This memo also provides information on initial findings of having such facilities on Downtown Lincoln streets. Also, as part of the approval of the change to the Lincoln Municipal Code to allow bike lanes on Lincoln streets, an amendment was passed by the City Council that required a review of Title 10 of the Lincoln Municipal Code relating to bicycle lanes by no later than August 1, 2007. This memo intends to meet this requirement.

Bike Lane Concept Approved in Planning Documents

The concept of bike lanes on Downtown Lincoln streets has been considered and approved in multiple public processes and documents. In 2002, the City/County Comprehensive Plan formally included bike lanes as a concept to try on Downtown Lincoln streets in both a north/south and an east/west manner. This concept was further studied and supported in the City's Multi-Modal Transportation study in 2004. The Downtown Master Plan's public process included the bike lane concept and employed the consulting services of a bicycle planning expert to assist in the bicycle findings. The Downtown Master Plan was approved and adopted into the Comprehensive Plan in 2005 with the direction to implement bike lanes on 11th and 12th Streets for a north/south pair, and on M and N Streets for an east/west pair. The latest update to the Comprehensive Plan in 2006 further affirmed the application of bike lanes as part of Lincoln's transportation system.

Bike Lane Design and Implementation

In 2006, numerous meetings with city staff, downtown business representatives, representatives from the bicycling community, the Downtown Lincoln Association, and

the public were held. The purpose of these meetings was to work on street design plans, develop an amendment to the Lincoln Municipal Code, and have general discussions on how to implement bike lanes in Downtown Lincoln. Those involved in the numerous meetings held include the following (not all individuals listed attended every meeting):

- City Staff: Ann Harrell, Mayor's Office; Lynn Johnson and Terry Genrich, Parks and Recreation; Randy Hoskins and Scott Opfer, Public Works & Utilities-Engineering Services; David Cary, Planning; Dallas McGee and Jeff Cole, Urban Development; Joy Citta, Lincoln Police Department; John McQuinn, Law Department
- Elected Official: Annette McRoy
- Private Interests: Craig Madson, USBank; Beth Thacker, Mayor's Pedestrian and Bicycle Advisory Committee; Polly McMullen, Downtown Lincoln Association; Drew Stange, NAI FMA Realty; Ed Swotek, TierOne Bank; Jason Albers, Great Plains Trails Network; Michele Waite, UNL; Susan Rodenburg, Bicycle Advocate

Meetings of a working group intent on developing a north/south bike lane plan that could be implemented in Downtown Lincoln began meeting in April of 2006. This group met 5 times in April, May, and June. Discussions concentrated on the design of the bike lane proposals on 11th Street and 12th Street. Topics under discussion included the width of the bike lanes, striping plans, signing plans, and how best to address a range of issues such as vehicular turning movements, bus activity, and on-street parking.

During these meetings it became clear that there was resistance from some business representatives to placing a bike lane on 12th Street for the northbound movement. After discussion of this issue, it was determined that if 12th Street, which is the preferred location for the bike lane as identified in the Downtown Master Plan, was not available for bike lane implementation, then 14th would be the next most logical northbound street for this use. Staff did note during these discussions that there were additional design concerns with 14th Street as compared to 12th Street.

It was decided by this group that informational meetings for property owners, businesses, and interested parties on both 11th and 14th Street would be useful to help determine the viability of bike lane implementation on those streets. A meeting was held on May 31st to discuss the 14th Street proposal, and another meeting was held on June 1st to discuss the 11th Street proposal. After general support was heard at these meetings, the final design for these two streets was completed and a public open house was scheduled for July 13th. At this open house 33 members of the public attended and were provided background information on what bike lanes entailed, the design proposals for 11th and 14th Streets, and drafts of the proposed Municipal Code change.

Additional meetings were held with individual interests such as with representatives of the State of Nebraska-Department of Administrative Services and the Nebraska Capitol Commission to inform them of the bike lane proposal.

Lincoln Municipal Code Change Approval

The Lincoln Municipal Code change that amended language to allow bike lanes on city streets was approved by the City Council on July 31, 2006, following a public hearing on July 24th. Formal support was received from the Mayor's Pedestrian and Bicycle Advisory Committee and the Great Plains Trails Network. Additional support was heard from individuals at the public hearing including Ian Davis, a bicycling enthusiast who provided signatures from 1,000 Lincoln residents in support of bike lanes. The City Council approved the Code change 5-1 with an amendment to provide a review of Title 10 of the Lincoln Municipal Code relating to bicycle lanes by August 1, 2007. The Mayor approved this action on August 2, 2006.

Installation of Bike Lanes

The bike lane striping, signage, and markings were installed over a three week period from the end of August in to September 2006 at an estimated cost of \$20,000. Additional striping of on-street angle parking spots was done to extend the length of the parking stalls to help indicate that there was no travel lane between the striped bike lane and the parking lane on both 11th and 14th Streets after observations indicated some driver confusion at particular locations. Semi-annual restriping of the bike lane lines and markings occurred in April 2007.

Informational Outreach

Efforts to provide the driving and bicycling public information on the installation and use of the bike lanes have been extensive and are on-going. Such efforts include the following:

- Informational flyers were created and distributed to downtown businesses as part of the Work Well program and to UNL students through the ASUN, the student government organization
- A city website was created to provide information on the bike lane project
- UNL sent an E-News e-mail to every student, faculty member, and staff member to provide information on the new bike lanes
- A press release from the City's Citizen Information Center was sent out when the bike lanes were installed
- Information was distributed to the local bicycle shops in Lincoln
- Information was provided to the State Driver Education program
- A 15 minute video was created on the bike lanes and has been distributed to all interested parties and has run on Channel 5 extensively. The video is also available through the bike lane web page.
- All interested citizens have been provided information on a request basis

- Lincoln Police Department officers have provided direction and information to both drivers and bikers on 11th and 14th Streets

Bicycle Traffic and Crash Information

Data provided by Public Works & Utilities-Engineering Services staff provides information on the number of crashes and bicycle activity on both 14th Street and 11th Street respectively. Crash data was collected for the 6-month period immediately prior to bike lane installation and for the 6-month period immediately following bike lane installation. Bicycle crashes were unchanged during the two data collection periods (1 crash during each period). Bicycle activity has increased at all intersections on 11th and 14th Streets where data was collected before and after bike lanes were installed. This data is attached at the end of this memo.

Bike Lane Usage Counts

On Friday April 27, 2007, bicycle user counts were conducted on both 14th Street and 11th Street. Counts were taken between the hours of 7:00-9:00 AM, 11:00 AM -1:00 PM, and 4:00-6:00 PM. The weather was mostly cloudy throughout the day with temperatures ranging between 45-65 degrees with occasional rain showers.

A total of 132 bicyclists were observed using 11th Street during the 6-hour count period with 87 using the bike lane and 45 using the sidewalk. The majority of the sidewalk use was observed between M and O Streets. A total of 104 bicyclists were observed using 14th Street during the 6-hour period with 93 using the bike lane and 11 using the sidewalk. Usage was highest on 14th Street during the morning count period, while on 11th Street usage was highest during the evening count period.

Three bicyclists were observed riding in the bike lanes in the wrong direction on 11th Street. Eight motorists were observed using the bike lane illegally on 14th Street, while 53 motorists were observed using them illegally on 11th Street. Most of the offenders on 11th Street were using the bike lane illegally between N and O Streets. Those on 14th Street were using the bike lane illegally between M and N Streets.

Recommendation

Staff recommends the continued operation and maintenance of bike lanes on 11th and 14th Streets in Downtown Lincoln. Despite the design constraints and some public criticism, bicycling has increased on these streets with no increased crashes, which indicates a successful program. Future costs are limited to restriping semi-annually, and most of this cost would need to occur regardless of whether the bike lanes were included. Additional study of the use and impacts of these facilities should also continue to ensure the most effective application of this concept. Also, consideration should be given to additional applications of the bike lane concept in Lincoln.

Q:\Multi-modal trans\BikeLanes\MEMORANDUM to Mayor August 2007.wpd

11th & "M" Street Traffic Volumes

11th & "M" Bicyclists

	Before Bike Lanes	After Bike Lanes		Before Bike Lanes	After Bike Lanes
AM Lefts	100	92	AM	5	4
AM Thrus	423	382	Noon	8	16
AM Rights	0	0	PM	19	41
Noon Lefts	186	162			
Noon Thrus	491	440			
Noon Rights	0	0			
PM Lefts	293	198			
PM Thrus	763	724			
PM Rights	0	0			

11th & "O" Street Traffic Volumes

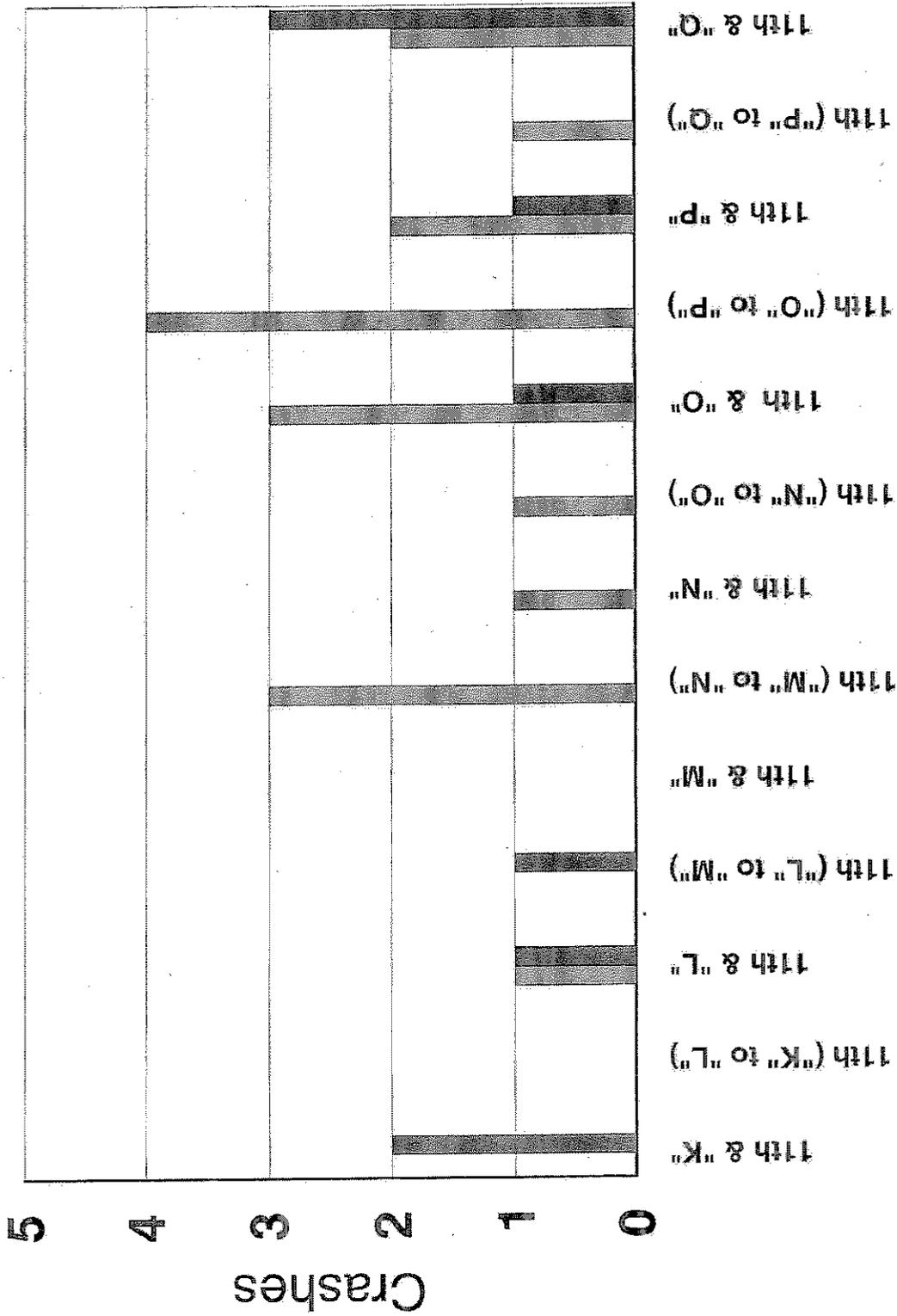
11th & "O" Bicyclists

	Before Bike Lanes	After Bike Lanes		Before Bike Lanes	After Bike Lanes
AM Lefts	41	38	AM	1	2
AM Thrus	267	273	Noon	0	9
AM Rights	45	44	PM	1	16
Noon Lefts	40	57			
Noon Thrus	227	241			
Noon Rights	64	120			
PM Lefts	76	47			
PM Thrus	361	345			
PM Rights	129	121			

Crashes on 11th Street

	Before Bike Lanes (Feb. '06 to July '06)	After Bike Lanes (Aug. 06 to Jan. '07)
11th & "K"	0	2 (1 Car/Ped at 11th & K)
11th ("K" to "L")	0	0
11th & "L"	1	1
11th ("L" to "M")	0	1
11th & "M"	0	0
11th ("M" to "N")	3	0
11th & "N"	1 Car/Bike at 11th & N	0
11th ("N" to "O")	1	0
11th & "O"	3	1
11th ("O" to "P")	4	0
11th & "P"	2	1
11th ("P" to "Q")	1	0
11th & "Q"	2	3

11th Street Corridor



Before Bike Lanes (Feb. '06 to July '06)
 After Bike Lanes (Aug. 06 to Jan. '07)

Street Segments

14th & "M" Street Traffic Volumes

14th & "M" Bicyclists

	Before Bike Lanes	After Bike Lanes		Before Bike Lanes	After Bike Lanes
AM Lefts	0	0	AM	0	33
AM Thrus	519	589	Noon	0	14
AM Rights	218	240	PM	0	14
Noon Lefts	0	0			
Noon Thrus	532	537			
Noon Rights	152	171			
PM Lefts	0	0			
PM Thrus	594	558			
PM Rights	191	239			

14th & "O" Street Traffic Volumes

14th & "O" Bicyclists

	Before Bike Lanes	After Bike Lanes		Before Bike Lanes	After Bike Lanes
AM Lefts	92	67	AM	1	2
AM Thrus	317	275	Noon	3	9
AM Rights	103	63	PM	4	16
Noon Lefts	126	97			
Noon Thrus	402	347			
Noon Rights	147	145			
PM Lefts	216	141			
PM Thrus	526	439			
PM Rights	238	241			

Crashes on 14th Street

Before Bike Lanes (Feb. '06 to July '06) After Bike Lanes (Aug. 06 to Jan. '07)

14th & "K"	10	2
14th ("K" to "L")	0	0
14th & "L"	2	1
14th ("L" to "M")	1	0
14th & "M"	0	1
14th ("M" to "N")	0	0
14th & "N"	4 (1 Car/Ped at 14th & N)	0
14th ("N" to "O")	2	1
14th & "O"	7 (2 Car/Ped at 14th & O)	5 (1 Car/Ped at 14th & O) (1 Car/Bike at 14th & O)
14th ("O" to "P")	4	2
14th & "P"	2	2
14th ("P" to "Q")	1	1
14th & "Q"	2	0

14th Street Corridor

